NYC Property Tax Exemption Program: Existing Policies and Future Planning

by

Jenny Chiani Wu

Bachelor of Architecture, 2007
University of Texas at Austin

Submitted to the Program in Real Estate Development in Conjunction with the Center for Real Estate in Partial Fulfillment of the Requirements for the Degree of Master of Science in Real Estate Development

at the

Massachusetts Institute of Technology

September 2012

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Signature of Author____

Center for Real Estate
July 30, 2012

Certified by____

W. Tod McGrath
Lecturer, Center for Real Estate
Thesis Supervisor

Accepted by____

David Geltner
Chair, MSRED Committee,
Interdepartmental Degree Program in Real Estate Development

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Abstract

New York City's tax expenditures relate to real property tax totaled $4.5 billion in fiscal year 2012. The largest expenditure relates to the "421-a" tax exemption program for new multi-family residential real estate development, which costs the New Yorkers nearly $1 billion in foregone tax revenue (Office of Tax Policy, FY 2012). The 421-a program was originally established in the 1970s to spur new multi-family developments. Initially, developers received full tax exemption on the assessed value of the new construction, which then decreased by a phase-out schedule where their property taxes were payable in full at the end of benefit period. As the private development market recovered, the city calibrated the program to (i) exclude certain neighborhoods from receiving benefits for strictly market-rate development and (ii) to spur affordable housing development by offering benefits of the program if a certain percentage of the total units constructed were affordable.

Despite the success of the strategy in delivering 142,044 residential units in 2012 (Office of Tax Policy, FY 2012), the program has been subjected to increasing scrutiny as New York City's need for real estate tax revenue has increased. It is unclear how many of these units would have been built without the exemption. Many opponents have argued for the termination of the program because it has not produced benefits commensurate with the huge tax expenditures New York City has made, and that the beneficiaries had been landowners who captured the value of the abatements through higher land prices. As the program approaches its potential renewal in June 15, 2015, it is worthwhile to conduct a detailed analysis of the efficacy and cost of the current program.

The thesis offers a thorough yet intelligible case study of a co-op building in Chelsea of how the property taxes would be calculated and the program's impact on the financial feasibility of the development. Different scenarios are created that follows each of the program reforms to understand the actual value of the property tax exemptions to developers and the ways in which such value is distributed. In the current environment where many New Yorkers find themselves facing a daunting housing market with decreased production and increased demand for affordable units, the program should strengthen its benefits to steer more developers towards creating affordable housing. Alternative financial models based on the case study suggest that the return of an improved negotiable certificate program can make the 421-a program a more effective affordable housing incentive without additional cost to the city.

Thesis Supervisor: W. Tod McGrath
Title: Lecturer, Center for Real Estate

Acknowledgments

It would not have been possible to complete this thesis without the help and support of:

my advisor, Tod McGrath, for his patient guidance and thoughtful advice,
my professors for their insights and generosity to help me learn,
my classmates for providing a stimulating and fun environment to learn and grow,
my family for their unconditional love and support,
my friends for their understanding and encouragement,
and Kevin for standing by my side and believing in me.

My sincere thanks to you all.

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1.0 Introduction

1.1 Background

Section 421 of the New York State's Real Property Tax Law was enacted to stimulate multi-family residential housing development by giving the developers a 10-year partial tax exemption on the added value of the property. Initial taxes are based on the property's preconstruction assessment; full taxes are then phased in at the rate of 20 percent every two years. Long criticized as a give-away to luxury housing developers, the program was questioned whether it was given to buildings that might not have otherwise existed. Eventually, the program evolved to link benefits to provision of affordable housing. In the latest version, in order to qualify for the program, developers in the exclusion zone must reserve 20 percent of their units for low-income tenants. Previously, developers had the alternate option to purchase low-cost certificates from developers who had created affordable housing elsewhere.

The objective of this thesis is to examine the impact, value and cost of 421-a program on its intended targets. Specifically, the thesis provides a guide on program details and uses a case study of a cooperative building in Chelsea to identify the value of the property tax deduction that's given to the developers and the value to the city of the benefits received. Is the economic/social value greater than the cost of tax exemptions? Different development scenarios are also created to gain a general understanding of how the program has evolved and whether in its present form, the 421-a is a misuse of tax dollars. With the analysis, the thesis traces the economic value of the tax abatement benefits. Does it go to the project to reduce the development cost for developers; or does it go to the seller of the land with an increase in the value of land by an amount as great as the perceived value of the tax abatement? How can we insure it goes to the project? To supplement the case study, multiple developers and city officials are surveyed regarding the future of the program about whether the program remains a much-needed tool to address core multi-family housing issues. The thesis then proposes alternatives, possible reforms, and new priorities that should be brought into the property tax incentive program to make it more efficient. Finally, it sets out next steps on the effective use of the program in the future.

1.2 Methodology

The thesis combines a qualitative investigation with quantitative analysis. Literature on the property tax incentive programs, as well as legislation, memos, and research reports are reviewed. A survey of stakeholders in this issue, including city and state officials, legal experts, the Citizen Housing and Planning Council, prominent affordable housing and market rate housing developers, as well as other interest groups are interviewed and their insights are reflected throughout. Additionally, housing data and property tax information from New York City's Department of Housing and Preservation Development and Department of Finance are reviewed to analyze the potential value and cost of the program. All of the financial analysis is carried out using a multi-family case study to assess the program's impact on the feasibility of a project. Real estate brokers and the developer provided the details on the project.

1.3 Organization

This thesis is divided into three parts. The first part provides an overview of how property taxes are calculated in New York City, and the City's real estate related revenues and expenditures.

The second part of the thesis examines the legislative history behind the section 421-a program, the intended effects the City wanted to achieve, and the application process. The thesis documents the evolution of the program and uses financial models of the case study to identify each reform's impact on the developer's bottom line. The analysis then acts as a guide for further research to identify the minimum amount of subsidy that's actually needed.

The last part of the thesis assesses the lessons that have been learned over time and identifies opportunities to better align the incentives programs with the City's objectives. Two alternatives, negotiable certificates and inclusionary zoning, are evaluated in details for their effectiveness in reinforcing or replacing the 421-a program. Lastly, recommendations are made based on the findings as to whether the program should be continued, modified, or terminated.

2.0 Understanding Real Estate Property Tax in NYC

"In this world nothing can be said to be certain, except death and taxes"
– *Benjamin Franklin*

2.1 Calculating Property Taxes

For real estate tax purposes, all properties in New York City are divided into four tax classes based on property use (NYC Finance, 2012):

Class 1: Residential properties up to 3 units and most condominiums that are 3 stories or less
Class 2: All other residential properties, such as cooperatives, condominiums and apartments
Class 3: Property owned by utilities
Class 4: All commercial and industrial properties

Table 1: Distribution of Real Property By Class FY 2012 (NYC Office of Management and Budget)

FY 2012	Class 1	Class 2	Class 3	Class 4
# of Parcels	702,564	243,661	303	92,771
% Share	67.60%	23.44%	0.03%	8.93%

There are three factors that determine the amount of tax imposed on a property: the market evaluation, the assessment ratio, and the tax rate.

To calculate a property's annual real estate property tax, the NYC Department of Finance (DOF) has to first determine the Market Value (MV) of the property. Valuation is done by one of the three approaches:

Sales: This is a common approach for smaller residential properties where the market value is determined by prices of similar properties that were sold.

Income: This is commonly used for commercial and residential properties with more than 11 units. State law requires that most condos and coops be valued as if they are residential rental buildings, regardless of their sales price. The property's income producing potential is determined based on information owners provide about properties in the Real Property Income & Expense (RPIE) filing, or market data. DOF then either divides the net income by a cap rate or multiplies the gross income by a multiplier.

The appropriate cap rate is developed by a "band of investment" approach and variable include the mortgage equity ratio (ratio of the mortgage to the equity for a property), the property's mortgage interest rate, and rate of return on owner's equity. DOF then uses either the Aaa or Baa bond rate to estimate the owner's rate of return (NYC Office of Management and Budget). The following formulas are used to estimate the cap rate:

<u>Rate of Return on Owner's Equity</u> =	Aaa or Baa Bond Rate + Illiquidity Factor + Management Factor
<u>Cap Rate</u> =	(Mortgage Ratio x Mortgage Rate) + (Equity Ratio x Rate of Return on Owner's Equity)

Gross Income Multiplier is developed for each of the deciles with properties grouped based on the gross income per square foot. The DOF employs the "income capitalization" approach to estimate the market value of all properties within the decile, and then determines the multiplier by dividing the market value per square foot by the median income per square foot within the decile range.

Cost: This is often used for new construction and renovations, specialty properties and utilities where the market value is determined by estimates of land value and cost of constructing, reproducing or replacing the building.

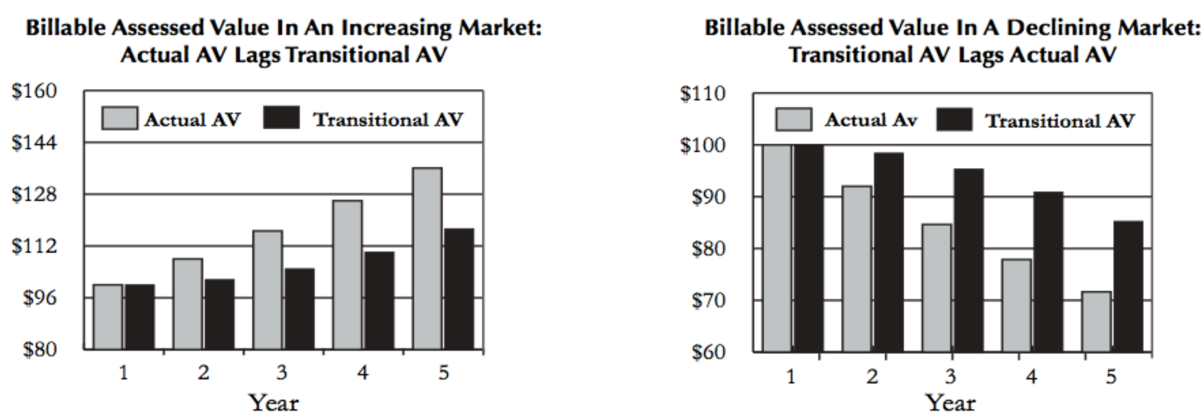
Once the Market Value (MV) is determined, it is multiplied by a "level of assessment" ratio established by the State Law to derive the Assessment Value (AV). The table below shows the latest assessment ratio, which indicates that substantial amount of real estate taxation, is transferred from Class 1 to the other 3 classes. As a result, the current tax structure is often considered to be discriminatory that over-tax multi-family buildings and under-tax single family homes.

Table 2: Assessment Ratio FY 2011 (NYC Finance, 2012)

FY 2011	Class 1	Class 2	Class 3	Class 4
Assessment Ratio	6%	45%	45%	45%

The State Law further limits how much the AV can increase from one year to the next. For Class 1 property with less than 10 units, the AV cannot increase more than 6% each year or more than 20% in 5 years. For Class 2 property with less than 10 units, the AV cannot increase more than 8% each year or more than 30% in 5 years. In both cases, the lowest increase in AV governs. For Class 2 properties with 11 or more units and Class 4 properties, there are no limitations on AV increases; however, any increase must be phased in over a 5-year period. This adjusted AV is called transitional assessed value.

Figure 1: Actual Assessed Value vs. Transitional Assessed Value (NYC Office of Management and Budget)



Any exemptions from programs such as the 421-a are then subtracted from the lower of actual AV or transitional AV to determine the taxable value, which is then multiplied by tax rate for the year to establish the property tax levy – the actual tax value to be paid.

Throughout the thesis, financial analysis on a real multi-family building in West Chelsea, "The Marais" is used to demonstrate the impact of changes in the 421-a program. "The Marais" is a 15 story, 107 units, luxury cooperative apartment building that was completed in 2003 by the Hudson Companies and received 10-year tax exemption under the 421-a program (Appendix 2). The project is selected because despite the astronomically high real estate prices in the area, the development was in the as-of-right zone to receive 421-a benefits without any requirement for affordable housing onsite or offsite. Additionally, "the Marais" was originally designed as a rental building and, in response to the changing marketplace; it was later converted to a cooperative as the building's superstructure rose. It is believed that this project represents a typical multi-family development project in New York City and can be used as a proxy for the program as a whole.

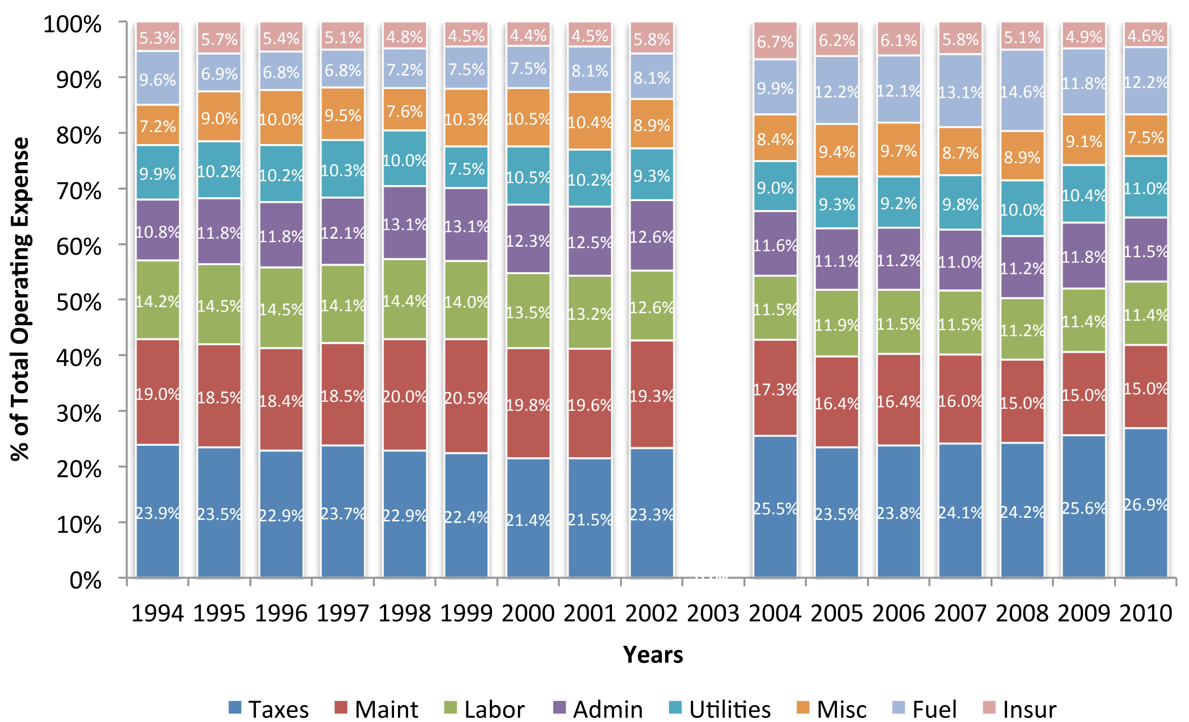
The table below shows how real estate tax for "The Marais" is calculated. In Year 1 (2004/05), Department of Finance determined that the market value of the building is $12.6 million. The building is considered a Class 2 property and has an assessment ratio of 45%; therefore, its assessed value is $5.67 million. The building enrollment in the 421-a program means that the building is shielded from the increase in assessment due to the new construction. As a result, it only needs to pay taxes on the base year assessed value, $313,000, until the exemption benefit starts to phase out. Without any property tax exemptions, the property would be paying $692,647 (=$5,670,000 x 12.216%) of property tax. The example below assumes no phase-out of the benefit and no change in tax rate; therefore, the tax owed remained the same even though the market value changed significantly. However, the limitation on increases in assessed value is demonstrated here as the actual assessed value continued to increase in year 3 even though the market value decreased.

Table 3: Class 2 Property Example Based on "The Marais"

		Year 1	Year 2 (up 30%)	Year 3 (dn 10%)
Market Value		$ 12,600,000	$ 16,380,000	$ 14,742,000
Class 2 Assessment Ratio	x	45%	45%	45%
Assessed Value if No Limit		$ 5,670,000	$ 7,371,000	$ 6,633,900
Actual Assessed Value		$ 5,670,000	$ 6,010,200	$ 6,350,400
Exemption Value	-	$ 5,357,000	$ 5,697,200	$ 6,037,400
Taxable Value		$ 313,000	$ 313,000	$ 313,000
Class 2 Tax Rate	x	12.216%	12.216%	12.216%
Tax		$ 38,236	$ 38,236	$ 38,236

Real estate taxes are often considered to be a significant barrier to new construction. Per NYC Rent Guidelines Board's annual Income and Expense Reports, real estate taxes are the single largest expense in the operation of a stabilized unit[1] and account for roughly a quarter of the unit's operation costs.

Figure 2: Average monthly expense per rent-stabilized unit per month



Source: NYC Rent Guidelines Board Income and Expense Reports

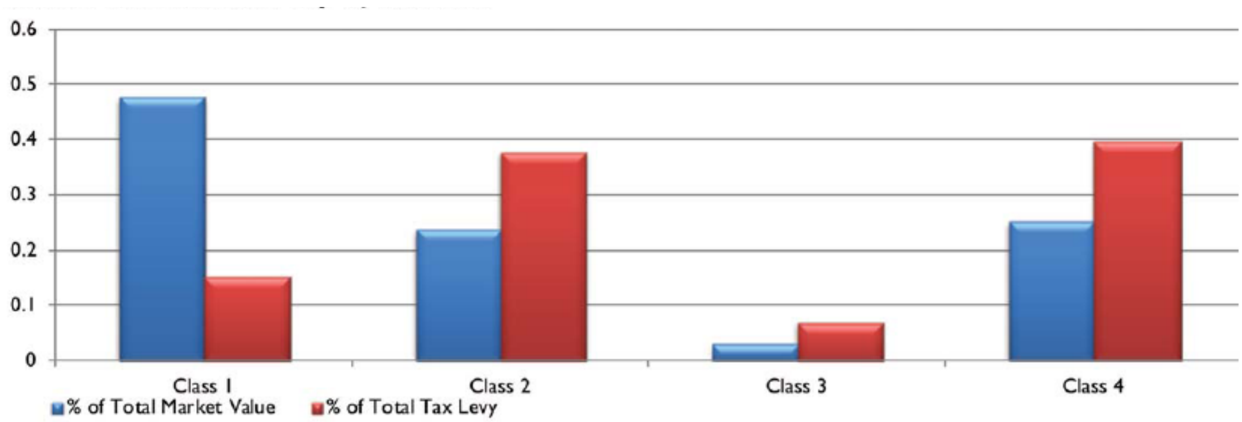
Furthermore, the fundamental structure of the property tax is inflexible. Based on Chapter 1057 of the Laws of 1981, also known as S.7000-A, each class must yields essentially the same share of total property tax levy that it did in 1991 (Scanlon & Cohen, 2009). The DOF do so by tweaking the variables. Once each class tax levy is set using class share, the tax rate for each class is then determined by dividing the levy for such tax class by the taxable value of that tax class.

Table 4: Tax Levy FY 2011 (Office of Tax Policy, 2011)

FY 2011	Class 1	Class 2	Class 3	Class 4
Tax Levy ($ millions)	$2,765	$6,856	$1,394	$7,308
Percent of Levy	15.1%	37.4%	7.6%	39.9%

[1] This data does not extract the commercial space in the building from the apartments, there fore the operating costs may be comparatively higher if not absorbed by the commercial tenants.

Figure 3: Market Value and Tax Levy by Tax Class (Real Estate Board of New York, 2011)

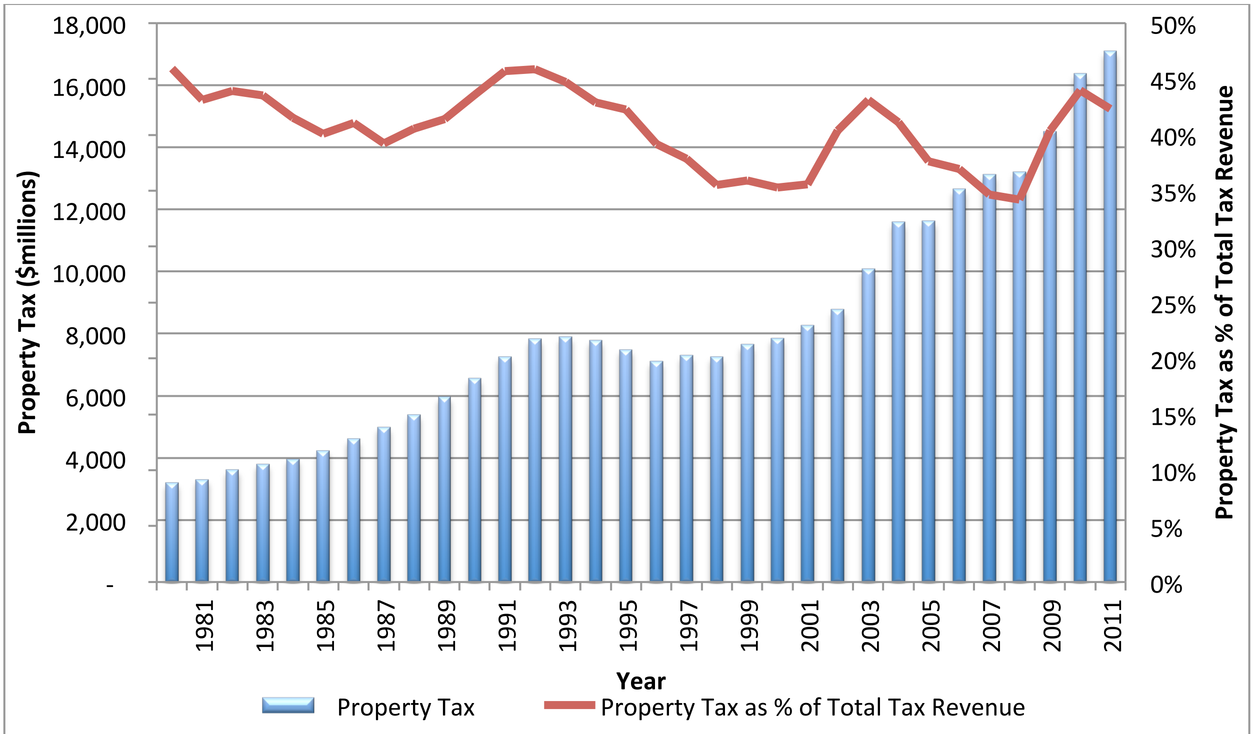


Rather than taking on the politics to address the tax policies, incentives such as the 421-a program was designed to correct the disparities in tax law and generate construction that would not otherwise occur.

2.2 NYC Tax Revenue by Type

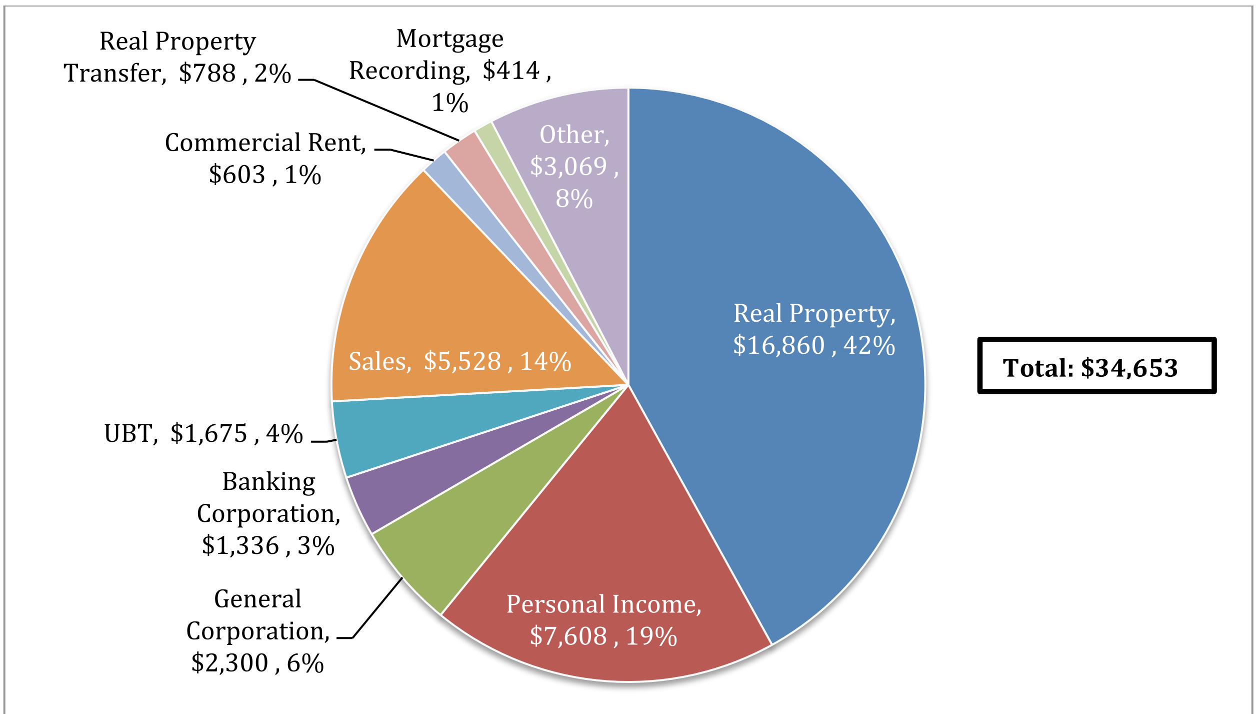
Real estate is a vital component of the New York City's economy as property tax is the largest single source of city tax revenue. Historically, property tax has accounted for roughly 35% to 45% of the city's total tax revenue (Figure 4). In fiscal year 2012, it accounts for 42% of the total tax revenue, or $16,860 million, more than twice that of personal income tax revenue (Figure 5). It is also a relatively stable source of revenue as it is less impacted by short-term economic changes.

Figure 4: Historic Property Tax Share of the Total Tax Revenue



Source: Comprehensive Annual Financial Reports of the Comptroller

Figure 5: NYC Tax Revenue by Type FY 2012 ($ Millions)

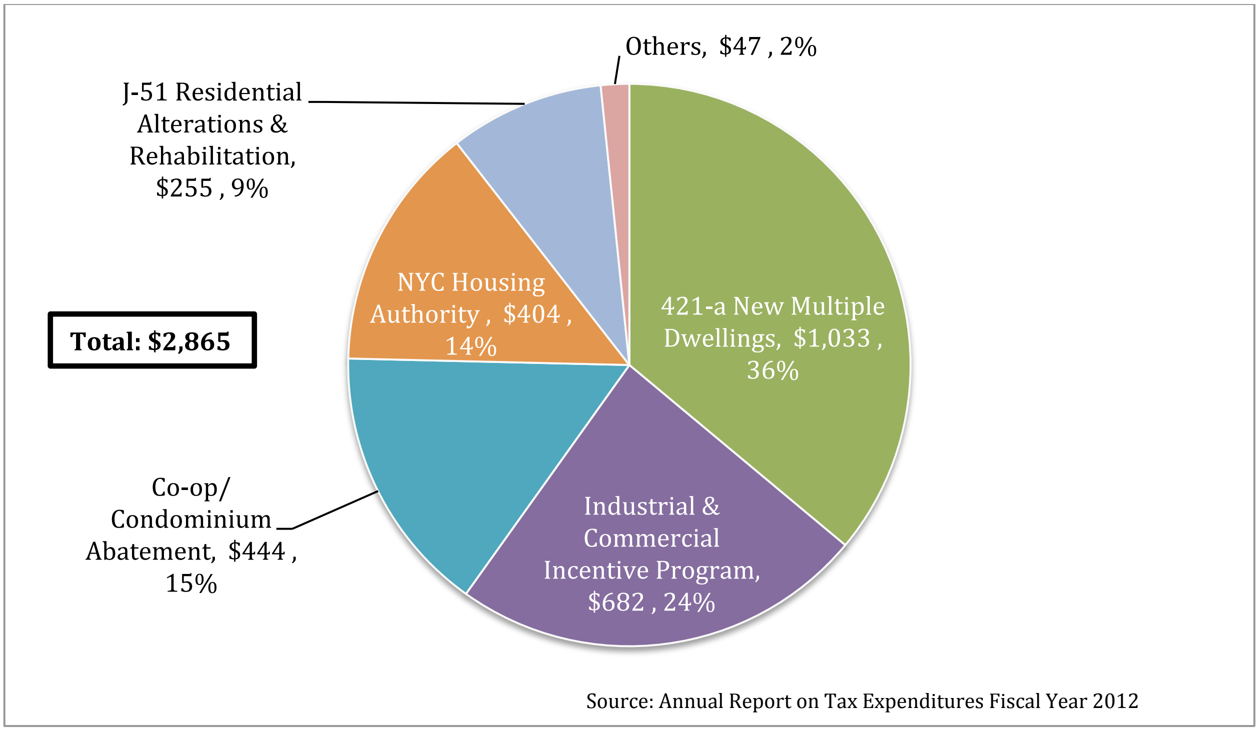


Source: Fiscal Year 2012 Adopted Budget

2.3 NYC Real Estate Tax Expenditure by Program

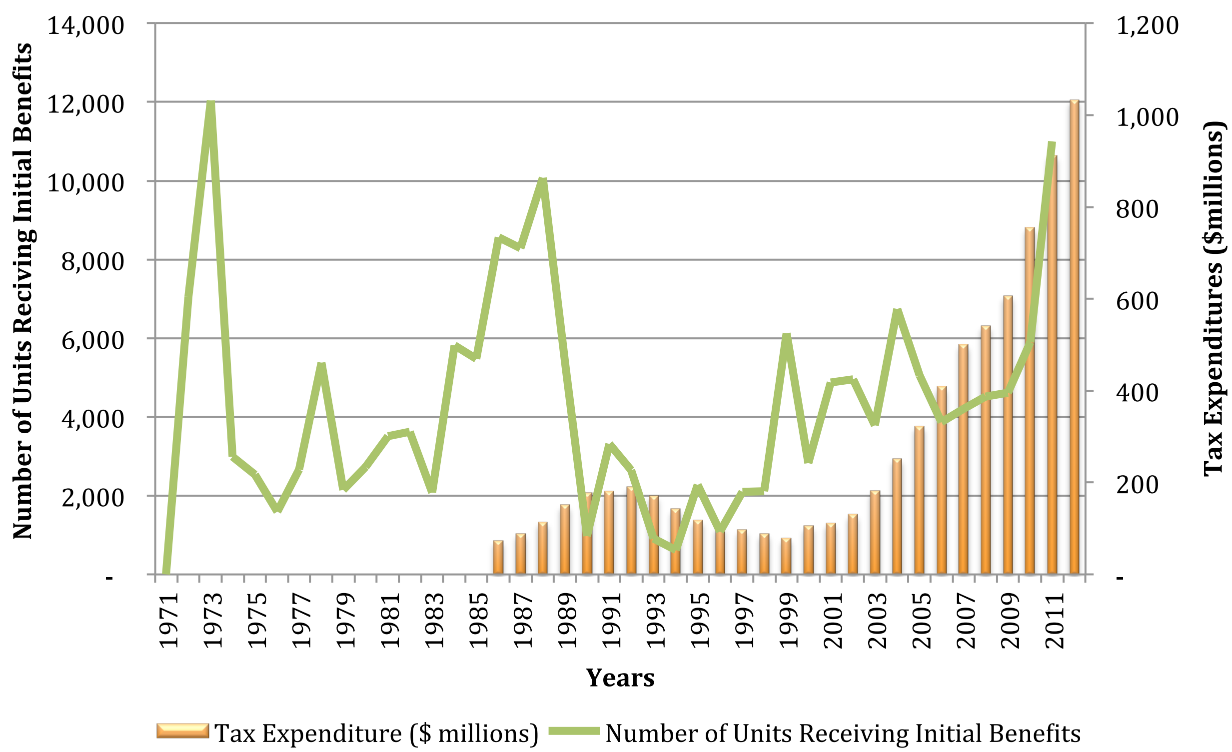
The 421-a program is the largest New York City real estate tax expenditure. In fiscal year 2012, the 421-a program costs the city more than $1 billion in lost tax revenue with 142,044 units received the property tax exemptions. This is up from $912 million as recently as FY 2011, and doubled from $500 million in FY 2007 (Office of Tax Policy, FY 2012).

Figure 6: NYC Real Estate Tax Expenditure Programs FY 2012 ($ Millions)



The cost of the program to the city of New York has grown tremendously throughout the program's history (Figure 7). A housing boom and real estate bubble had pushed property values to record highs, and the issuance of negotiable certificates made the tax exemptions "portable" between low-income and market-rate housing escalated the cost of the 421-a program. The number of units and annual tax expenditures has also increased steadily since the mid 90's, indicating that projects are being added faster to the program than they are transitioning out of the program.

Figure 7: NYC Real Estate 421-a Tax Exemption Program



Source: NYC Department of Housing Preservation and Development, Office of Development, Tax Incentive Programs, Annual Report on Tax Expenditures, NYC Department of Finance

3.0 About the Program

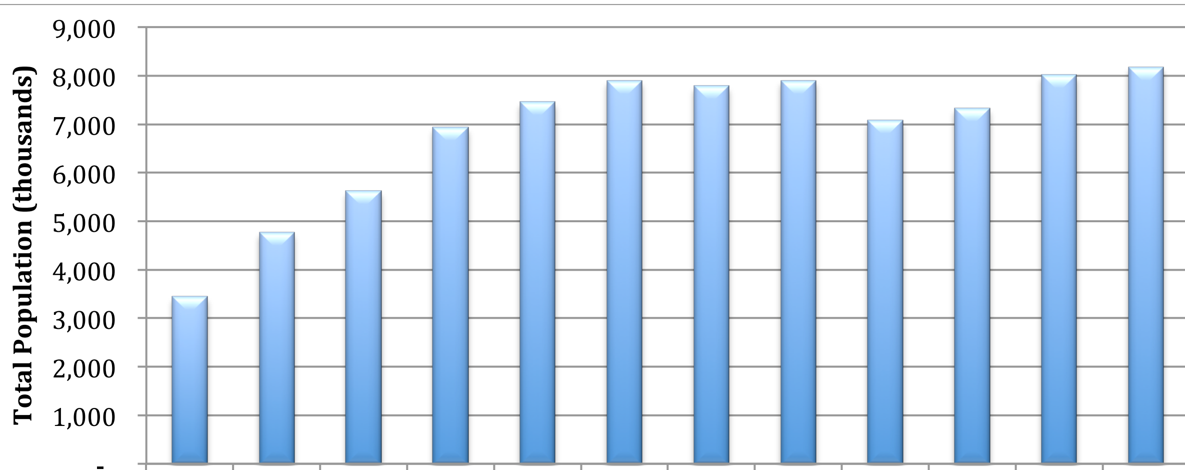
"Because our population is growing, demand has outstripped supply, and for many New Yorkers, incomes are not keeping pace with increasing rents. The problem before us is no longer abandonment but affordability"

– *Mayor Michael Bloomberg (March 2006)*

3.1 1970s Inception – Chasing the Market

The 1970s are regarded by some as New York's nadir for it is "dirty, dangerous, and destitute" (Tannenbaum, 2004). The city was notorious for high rates of crime, arson, and other social disorders. The city's population was shrinking (Figure 8), and a number of major employers had left the City or had announced their imminent departure. Economically, the city found itself drowning in debt and on the verge of bankruptcy. The residential real estate market was troubled and the construction of new multi-family housing had virtually ceased outside of Manhattan and Staten Island after the Comprehensive Amendment to the New York City Zoning Resolution was passed in 1961 (Marcus, 1991).

Figure 8: Historic Population in New York City (1900-2010)

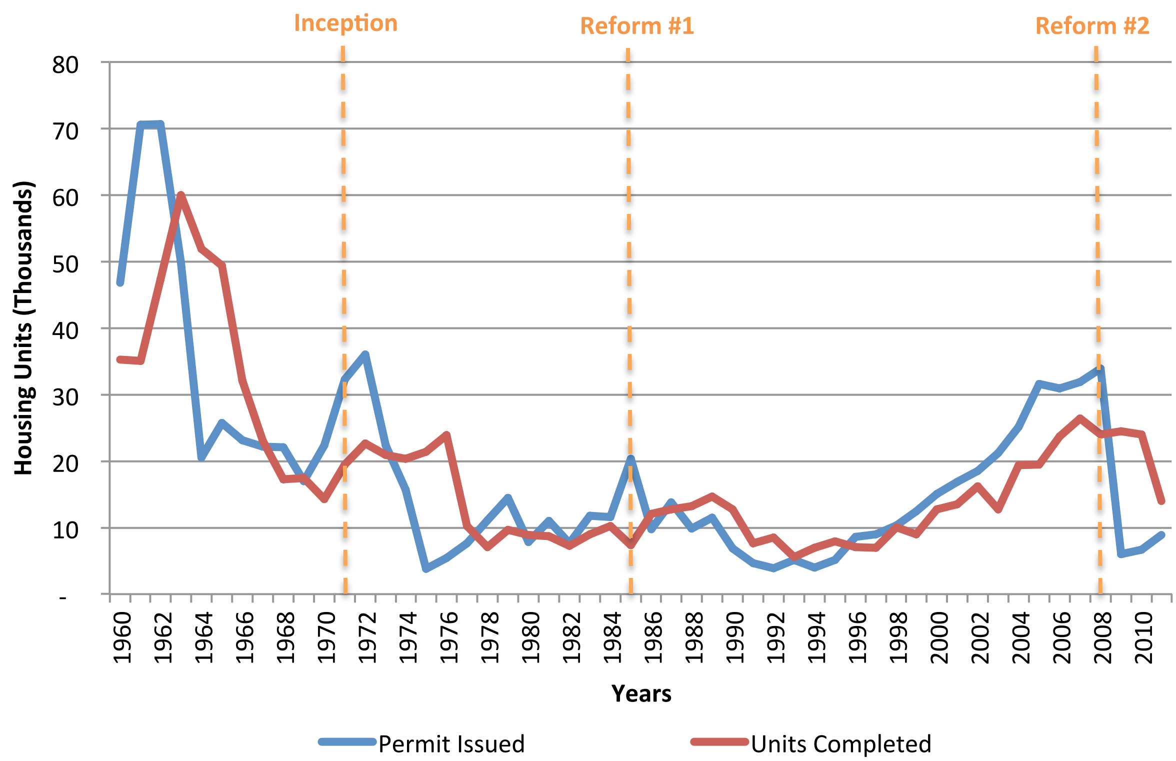


	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
Population	3,437,202	4,766,883	5,620,048	6,930,446	7,454,995	7,891,957	7,781,984	7,894,862	7,071,639	7,322,564	8,008,288	8,175,133
Changes	0.0%	38.7%	17.9%	23.3%	7.6%	5.9%	-1.4%	1.5%	-10.4%	3.5%	9.4%	2.1%

Year

Source: U.S. Census Bureau

Figure 9: Permits Issued and New Dwelling Units Completed in NYC, 1960-2011



Source:
Permit Issued: U.S. Bureau of the Census, Manufacturing and Construction Division, Building Permits Branch.
Unit Completed: NYC Department of City Planning, Certificates of Occupancy issued in Newly Constructed Buildings

From a peak of over 70,686 in 1962, the number of permits issued for housing units in New York City fell sharply to only 3,810 in 1975 (Figure 9). Despite a growing economy, robust demand, and escalating sales and rental prices, housing production remained small throughout the 1980s and 1990s and took nearly 30 years, in 2005, to finally return to the 1971 level. There are three factors that could have contributed to the changes in housing supply: expected profit, zoning regulations, and cost of development:

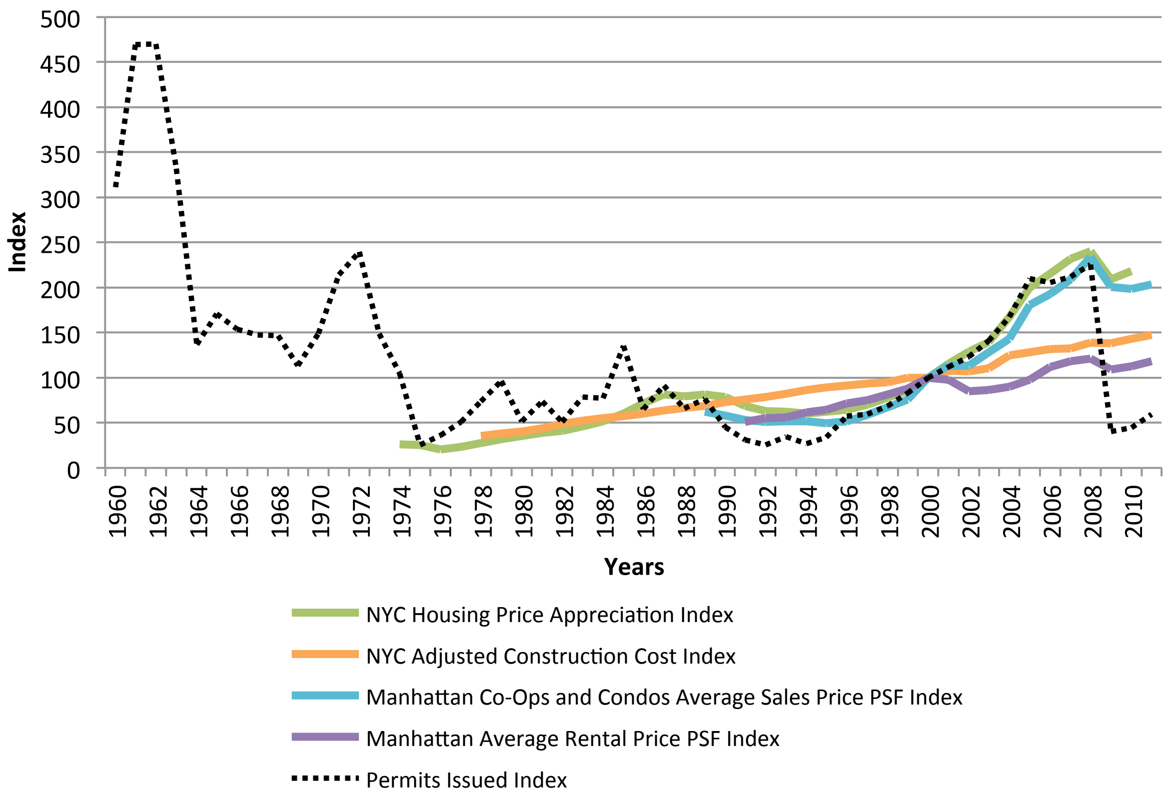
Expected Profit. Considering there is no lack of capital or development talent in NYC, expected profits would not have a major impact on the low level of permits and construction.

Zoning Regulations. Based on phone interviews with the Department of City Planning, residential districts are the most common zoning districts in NYC and account for about 75% of the city's zoned land area. Residences are also permitted in all commercial districts except for two, and many higher density commercial districts in Manhattan are substantially residential in character. NYC has generally permitted and encouraged new housing development (DCP, 2012). Therefore, even though the amendment to the NYC Zoning resolution may have caused the initial drop in housing activity in the early 1960s, it does not explain subsequent drop in the 1970s and the low level of permits and construction throughout the 1980s and the 1990s.

Development Cost. This cost can be broken down into land, hard and soft cost. Land cost is difficult to obtain; but, if construction cost growth relative to rental income or sales price growth could be ruled out as major factor, we could then determine whether the housing activity changes are caused by land sellers trying to capitalize the value of changes in housing prices and subsidy programs.

The chart below consists of four indexes constructed from available historic data on housing prices and construction costs. All four indexes are normalized to be equal to 100 in the base year of 2000. The housing price appreciation index is created by the Furman Center that measures the average price changes in repeated sales of the same condominium units. Since it is based on price changes for the same properties, the index captures price appreciation while controlling for variations in the quality of the housing sold in each period. The adjusted construction cost index is normalized based on Engineering News Record's historical Construction Cost Index which includes 200 hours of common labor that is multiplied by the city's average rate for wages and fringe benefits. Considering soft costs are roughly 25% of the hard cost, it is believed that the adjusted construction cost index represents the historical changes in hard and soft cost of construction. The indexes are overlaid with the permits issued index, which is also normalized to be equal to 100 in the base year of 2000.

Figure 10: Overview of NYC's Housing Market, 1974-2011



Source:
Housing Price Appreciation Index: NYC Department of Finance, Furman Center; Construction Cost Index: Engineering News Record; Manhattan Average Sales and Rental Price PSF: Miller Samuels, Inc.

While some of the drop in housing activity is explained by unique financial circumstances and regulatory changes, the chart above shows that despite the steady rise in construction costs, the changes in permit issued are very volatile and closely follows the changes in housing prices. This implies that construction costs may not be the significant variable affecting housing supply.

Faced with a declining residential construction and looming fiscal crisis, New York State enacted Section 421-a of the Real Property Tax Law in 1971 as a property tax exemption program to stimulate construction of much-needed residential housing stock and related economic activity. The 421-a program was initially available for new housing developments with a minimum of three units on sites that were vacant, underutilized, or had a "nonconforming" zoning use three months prior to the start of construction (Konopko, 1986). It was designed to encourage developers to build housing by offering a decreasing exemption from paying increases in property taxes due to new construction.

The program is available for condos, coops, or rentals. There are no restrictions on sales prices for condos and co-ops, however, the rental units must be registered under the rent-stabilization system for the duration of the exemption. For these units, initial rents are set at market value for the area, and the tenants are protected from sharp increases in rent and have the right to renew their leases (Konopko, 1986). In July 1971, the rent increase allowed for rent-stabilized apartments was 7% on one-year leases and 9% on two-year leases. Additional annual increase of 2.2% is also permitted to offset the gradual loss of tax benefits (The City of New York Rent Guidelines Board, 2012). When the exemptions expire, rents may increase to market rates upon vacancy.

The example below illustrates how the tax exemption program works. Before construction began, the site for "The Marais" had an assessed value of $313,280, leading to an annual tax bill of about $34,000. With the new building complete, the property was estimated to have increased in assessed value by almost $7.43 million so the owner would have had to pay an additional $937,300 in property taxes. However, under the 421-a property tax exemption program, the owner would not be taxed on the increase in assessed value resulting from new construction and would initially only have to pay around $40,000 (a slight increase from $34,000 due to an increase in tax rate) in property tax.

The benefit amount for newly constructed multi-family property is calculated by the following formula:

Benefit Amount = (Assessed Value – Base Year Assessed Value) x Phase Out Percentage

Assessed Value is based upon Actual Assessed Value (Market Value estimated by Department of Finance) or Transitional Assessed Value (reflects the phase-in of assessment changes as the law requires), whichever is lower.

Table 5: Financial Example of "the Marais" (NYC Finance, 2012)

"The Marais" (520 W. 23rd Street)

BBL	1-694-42	
Stories	15	
Units	107	
Lot Size	12,097	(122.50 x 98.75)
Gross SF	95,656	
Developer	Hudson Companies	
Owner	Frank Guidara	
Completed	February-03	

Year	421-a Year		Estimated Market Value (000s)	Actual Assessed Value (000s) [a]	Transitional Assessed Value (000s) [b]	Base Year Assessed Value (000s)	Benefit Phase-out Schedule	Exemption Value (000s)	Taxable Value (000s)	Class 2 Tax Rate	Tax Paid (000s)	Tax Saved (000s)
2000/01	**Base Year**	Construction	$ 696	$ 313					$ 313	10.847%	$ 34	
2001/02	**-2**	Construction	$ 5,501 [c]	$ 2,475	$ 2,475	$ 313	100%	$ 2,162	$ 313	10.792%	$ 34	$ 233
2002/03	**-1**	Construction	$ 11,003 [c]	$ 4,951	$ 4,951	$ 313	100%	$ 4,638	$ 313	11.541%	$ 36	$ 535
2003/04	**0**	Construction	$ 17,200	$ 7,740	$ 7,740	$ 313	100%	$ 7,427	$ 313	12.620%	$ 40	$ 937
2004/05	**1**	Post-Construction	$ 12,600	$ 5,670	$ 7,260	$ 313	100%	$ 5,357	$ 313	12.216%	$ 38	$ 654
2005/06	**2**	Post-Construction	$ 13,600	$ 6,120	$ 6,975	$ 313	100%	$ 5,807	$ 313	12.396%	$ 39	$ 720
2006/07	**3**	Post-Construction	$ 13,200	$ 5,940	$ 6,642	$ 313	80%	$ 4,501	$ 1,439	12.737%	$ 183	$ 573
2007/08	**4**	Post-Construction	$ 11,800	$ 5,310	$ 6,156	$ 313	80%	$ 3,997	$ 1,313	11.928%	$ 157	$ 477
2008/09	**5**	Post-Construction	$ 13,100	$ 5,895	$ 5,787	$ 313	60%	$ 3,284	$ 2,503	12.596%	$ 315	$ 414
2009/10	**6**	Post-Construction	$ 14,200	$ 6,390	$ 5,931	$ 313	60%	$ 3,371	$ 2,560	13.241%	$ 339	$ 446
2010/11	**7**	Post-Construction	$ 14,400	$ 6,480	$ 6,003	$ 313	40%	$ 2,276	$ 3,727	13.353%	$ 498	$ 304
2011/12	**8**	Post-Construction	$ 15,627	$ 7,032	$ 6,221	$ 313	40%	$ 2,363	$ 3,858	13.433%	$ 518	$ 317
2012/13	**9**	Post-Construction	$ 21,558	$ 9,701	$ 7,010	$ 313	20%	$ 1,339	$ 5,670	13.686% [e]	$ 776	$ 183
2013/14	**10**	Post-Construction	$ 22,399 [d]	$ 10,079	$ 7,570	$ 313	20%	$ 1,451	$ 6,119	13.943% [e]	$ 853	$ 202
	Total							$ 47,974			$ 3,826	$ 5,997
	Per Unit							$ 448			$ 36	$ 56
2014/15	**11**		$ 23,272 [d]	$ 10,473	$ 8,176	$ 313	0%	$ -	$ 8,176	14.206% [e]	$ 1,161	$ -

Notes:
[a] class 2 assessment ratio of 45%
[b] reflect the phase-in of assessment changes as the law requires
[c] assume steady growth between 2001 to 2003
[d] assume 3.9% market value growth rate based on average market value growth from 2003-2012
[e] assume 1.882% tax rate growth based on average tax rate growth from 2000-2011

The following cost/benefit analysis is conducted based on previous property tax calculations for "The Marais".

From the City's perspective:

Opponents of the program would argue that for every $1 of tax foregone during the exemption period, the city receives increased tax revenue of only $0.55.

Tax Received with the project:	$ 3,826,000
Tax Received without the project:	$ 520,000 (= $40,000/yr x 13)
Additional Tax Revenue:	$ 3,306,000

Tax Foregone:	$ 5,997,000
Delta – Lost Tax Revenue to the City:	($ 2,691,000)
Percentage of increased tax revenue to tax foregone:	55.1%

On the other hand, proponents of the program would argue that for every $1 of tax benefits given to developers, the city generates $1.55 of tax base that otherwise wouldn't be generated.

New property tax for the parcel:	$ 9,823,000
Old property tax for the parcel:	$ 520,000 (= $40,000/yr x 13)
Increased Tax Base:	$ 9,303,000
Tax Benefits to Developers:	$ 5,997,000
Delta – Increased Tax Base to the City:	$ 3,306,000
Percentage of increased tax base to tax benefits:	155.1%

While the tax benefits phase out over time, the developer receives a partial tax exemption for 10 years; this translates into an estimated total saving of $6 million, or $56,000 per unit developed, over the lifetime of the exemption. Using a discount rate of 4.5% based on NYC's 10-year municipal bond yield in February 2003 (Bank of America) the present value of the stream of tax expenditures from the city's perspective would have been about $4.657 million, or $43,519 per unit.

From the Developer's perspective:

Conversely, from the observed 2003 cap rate of 5.7% for Manhattan apartments (Real Capital Analytics), and expected annual inflation over the next 10 years of about 2.0%[2] (as a proxy for the expected average annual growth in cash flows and asset value), the developers' discount rate can be estimated at about 7.7% (= cap rate + growth rate). This implies the present value of the stream of tax benefits from the developer's perspective would be about $3.958 million, or $36,986 per unit.

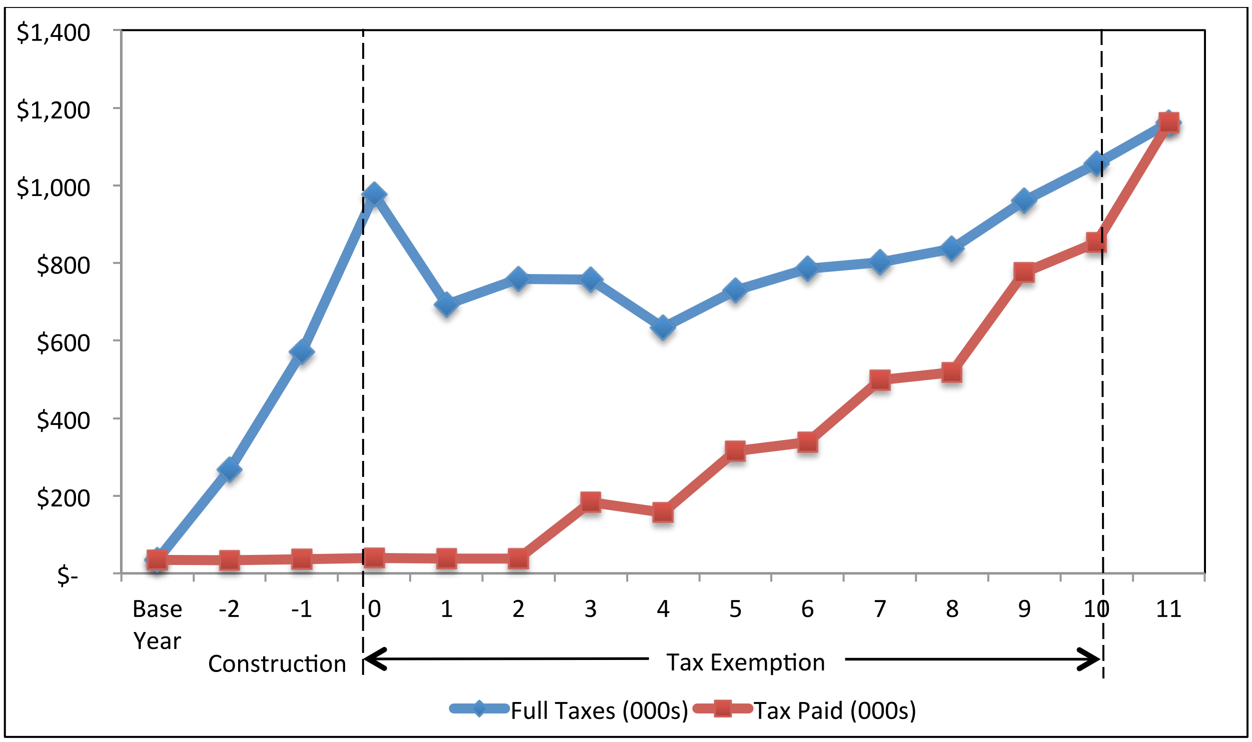
[2] 2003's 10-yr treasury yield curve of 4.01% minus 10-yr treasury inflation-protected securities (TIPS) of 2.06% (Source: US Department of Treasury historical data)

Table 6: Comparison of Tax Implications

	City	Developer
Discount Rate	4.5%	7.7%
PV of Total Tax Foregone/Benefit	$4.657 million	$3.958 million
PV of Tax Foregone/Benefit per Unit	$43,519	$36,986

Total Development Cost for "the Marais" was $202,355 per unit (Table 7). The property tax benefits from 421-a exemption would reduce the developer's cost for a new unit to $165,369. As a rental building, the full exemption is worth approximately $3,699 per year or $308 per month. Based on average rent of $40.43 per SF in 2004 for Manhattan residences (Citi Habitat, 2004) and an average of 710 SF per unit, the program can lower the initial rent by 13% (=$308/$2392 rent per month). Therefore, with the 421-a property tax exemptions, developments of housing units are made possible in areas where the market could not otherwise support the price or rents required for new construction to happen.

Figure 11: "The Marais" Full taxes and taxes paid [3]



[3] Developer could not identify reason for the drop of $4.6 million, 27% in MV, a year after completion. It is speculated that the tech bubble burst may be a factor.

Table 7: Total Development Cost for "The Marais"

Coop Building								
Building Description								
Gross Building Area (sf)			90,700					
Net Residential (sf)			75,827		83.6% eff			
Retail (sf)			4,250					
Total Housing Unit			107					
Development Costs ($)								
			Total		**per Unit**		**per GSF**	**% of TDC**
Land Cost								
Ground Lease Construction Period (assume 2 yrs)			$ 1,350,000	[a]	$ 12,617		$ 15	6%
Hard Cost								
Construction Costs			$ 18,000,000	[b]	$ 168,224		$ 198	83%
Soft Cost								
A&E, Legal, and Others (assume 13% of Hard Costs)			$ 1,671,359		$ 15,620		$ 18	8%
Developers Fee								
assume 3% of total costs			$ 630,641		$ 5,894		$ 7	3%
Total Development Cost			**$ 21,652,000**	[c]	**$ 202,355**		**$ 239**	**100%**
Sales Revenue ($)								
Condo Sales								
For Sale Proceeds	$ 677 [d]	/SF	$ 51,345,675					
Selling Commissions	4.00%		$ (2,053,827)					
Gross Revenue			**$ 49,291,848**					
Net Revenue			**$ 27,639,848**					
Net Revenue/Total Development Cost			**128%**					

Notes:

[a] *$ 675,000 annual ground lease payment per interview with project's developer, 2 years of construction assumed*

[b] *$ 18 million in total hard cost per interview with project's developer*

[c] *Total Development Cost per interview with project's developer*

[d] *recorded sales data from 2003-2005 from*

The recorded sales data (DG Neary Realty) from sales agent for "the Marais" suggested an average sales price for the cooperative was $677 per SF (Appendix 4) whereas the reported sales price for new condominiums in the area was $788 per SF (Garbarine, 2002). Using the average sales price, the estimated market value for "the Marais" was significantly higher than the market value valued by the Department of Finance for tax purposes.

Building's Market Value based on Sales Price:	$51,334,879 ($677 psf)
DOF's Valuation of market value for tax purposes:	$17,200,000 (2003/04)
Values not captured by the city for purposes of real estate taxation:	$34,134,879 (66% of MV)

Furthermore, since the state law requires cooperatives to be valued as residential buildings, and "the Marais" was originally designed as a rental building, it is worthwhile to analyze the project as a market-rate rental development. Assumptions on rent, growth, and vacancy are made from published city and brokerage reports, while project specifications and development cost are kept the same as before. Considering the typical hold period for most multi-family investment is ten years, subsequent evaluations of the project all assumes property to be sold in Year 10. The projected cash flow below shows that as a rental building without subsidy, "the Marais" has a negative NPV of $185,929 and an unlevered IRR of 7.58%. Consequently, the developer would not proceed with the project without any 421-a tax benefits.

Table 8: Baseline Scenario - "the Marais" as a market-rate rental without real estate tax exemption (Appendix 5)

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (21,652,000)	$ (21,652,000)
1	$ 2,851,219	$ 480,462	$ 5,120,835	0%	$ 5,120,835	$ 625,561	$ -	$ 1,745,196	$ 696,400	$ 1,048,796		$ 1,048,796
2	$ 2,974,392	$ 490,071	$ 5,366,132	0%	$ 5,366,132	$ 667,864	$ -	$ 1,816,457	$ 696,400	$ 1,120,057		$ 1,120,057
3	$ 3,102,885	$ 499,873	$ 5,622,507	0%	$ 5,622,507	$ 712,942	$ -	$ 1,890,071	$ 696,400	$ 1,193,671		$ 1,193,671
4	$ 3,236,930	$ 509,870	$ 5,890,449	0%	$ 5,890,449	$ 760,974	$ -	$ 1,966,086	$ 696,400	$ 1,269,686		$ 1,269,686
5	$ 3,376,765	$ 520,068	$ 6,170,467	0%	$ 6,170,467	$ 812,151	$ -	$ 2,044,547	$ 696,400	$ 1,348,147		$ 1,348,147
6	$ 3,522,642	$ 530,469	$ 6,463,093	0%	$ 6,463,093	$ 866,676	$ -	$ 2,125,497	$ 696,400	$ 1,429,097		$ 1,429,097
7	$ 3,674,820	$ 541,078	$ 6,768,881	0%	$ 6,768,881	$ 924,764	$ -	$ 2,208,978	$ 696,400	$ 1,512,578		$ 1,512,578
8	$ 3,833,572	$ 551,900	$ 7,088,412	0%	$ 7,088,412	$ 986,643	$ -	$ 2,295,029	$ 696,400	$ 1,598,629		$ 1,598,629
9	$ 3,999,182	$ 562,938	$ 7,422,288	0%	$ 7,422,288	$ 1,052,559	$ -	$ 2,383,685	$ 696,400	$ 1,687,285		$ 1,687,285
10	$ 4,171,947	$ 574,197	$ 7,771,141	0%	$ 7,771,141	$ 1,122,770	$ -	$ 2,474,980	$ 696,400	$ 1,778,580	$ 25,796,347	$ 27,574,927
11	$ 4,352,175	$ 585,680	$ 8,135,628	0%	$ 8,135,628	$ 1,197,553	$ -	$ 2,568,941				
12	$ 4,540,189	$ 597,394	$ 8,516,437	0%	$ 8,516,437	$ 1,277,200	$ -	$ 2,665,594				
13	$ 4,736,325	$ 609,342	$ 8,914,283	0%	$ 8,914,283	$ 1,362,025	$ -	$ 2,764,958				
14	$ 4,940,934	$ 621,529	$ 9,329,916	0%	$ 9,329,916	$ 1,452,358	$ -	$ 2,867,047				
15	$ 5,154,383	$ 633,959	$ 9,764,114	0%	$ 9,764,114	$ 1,548,554	$ -	$ 2,971,869				
16	$ 5,377,052	$ 646,639	$10,217,693	0%	$10,217,693	$ 1,650,988	$ -	$ 3,079,426				
17	$ 5,609,341	$ 659,571	$10,691,502	0%	$10,691,502	$ 1,760,059	$ -	$ 3,189,711				
18	$ 5,851,664	$ 672,763	$11,186,427	0%	$11,186,427	$ 1,876,192	$ -	$ 3,302,709				
19	$ 6,104,456	$ 686,218	$11,703,394	0%	$11,703,394	$ 1,999,840	$ -	$ 3,418,398				
20	$ 6,368,169	$ 699,942	$12,243,368	0%	$12,243,368	$ 2,131,482	$ -	$ 3,536,744				
21	$ 6,643,273	$ 713,941	$12,807,357	0%	$12,807,357	$ 2,271,631	$ -	$ 3,657,701				
Unlevered IRR												**7.58%**
PV of investment benefits @ 7.7% discount rate												**$ 21,466,071**
NPV of investment benefits @ 7.7% discount rate												**$ (185,929)**
PV of Total 421-a RE Tax Foregone by the city @ 4.5% discount rate												**$ -**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ -**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**n/a**
Negotiable Certificates (buy - /sell +)												**$ -**
MV of Low-Income Housing Tax Credit												**$ -**

This scenario is set as the baseline for subsequent scenarios to trace the economic value of the property tax exemption benefits as the program undergoes several reforms. In reality, "the Marais" did receive a 10-year property tax exemption that made the project feasible. The revised projected cash flow below reveals that the property tax benefits had turned "the Marais into a positive NPV project with an increased unlevered IRR to 7.91%. The present value of the 421-a property tax benefit was $3.2 million.

Table 9: Actual Case - "the Marais" as a market-rate rental with a 10-year real estate tax exemption (Appendix 6)

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (21,652,000)	$ (21,652,000)
1	$ 2,851,219	$ 480,462	$ 5,120,835	100%	$ 313,000	$ 38,236	$ 587,325	$ 2,332,521	$ 696,400	$ 1,636,121		$ 1,636,121
2	$ 2,974,392	$ 490,071	$ 5,366,132	100%	$ 313,000	$ 38,956	$ 628,908	$ 2,445,365	$ 696,400	$ 1,748,965		$ 1,748,965
3	$ 3,102,885	$ 499,873	$ 5,622,507	80%	$ 1,374,901	$ 174,339	$ 538,602	$ 2,428,673	$ 696,400	$ 1,732,273		$ 1,732,273
4	$ 3,236,930	$ 509,870	$ 5,890,449	80%	$ 1,428,490	$ 184,543	$ 576,431	$ 2,542,516	$ 696,400	$ 1,846,116		$ 1,846,116
5	$ 3,376,765	$ 520,068	$ 6,170,467	60%	$ 2,655,987	$ 349,579	$ 462,573	$ 2,507,119	$ 696,400	$ 1,810,719		$ 1,810,719
6	$ 3,522,642	$ 530,469	$ 6,463,093	60%	$ 2,773,037	$ 371,854	$ 494,822	$ 2,620,319	$ 696,400	$ 1,923,919		$ 1,923,919
7	$ 3,674,820	$ 541,078	$ 6,768,881	40%	$ 4,186,529	$ 571,963	$ 352,801	$ 2,561,778	$ 696,400	$ 1,865,378		$ 1,865,378
8	$ 3,833,572	$ 551,900	$ 7,088,412	40%	$ 4,378,247	$ 609,413	$ 377,231	$ 2,672,259	$ 696,400	$ 1,975,859		$ 1,975,859
9	$ 3,999,182	$ 562,938	$ 7,422,288	20%	$ 6,000,430	$ 850,925	$ 201,634	$ 2,585,320	$ 696,400	$ 1,888,920		$ 1,888,920
10	$ 4,171,947	$ 574,197	$ 7,771,141	20%	$ 6,279,512	$ 907,261	$ 215,510	$ 2,690,490	$ 696,400	$ 1,994,090	$ 20,094,756	$ 22,088,846
11	$ 4,352,175	$ 585,680	$ 8,135,628	0%	$ 8,135,628	$ 1,197,553	$ -	$ 2,568,941				
12	$ 4,540,189	$ 597,394	$ 8,516,437	0%	$ 8,516,437	$ 1,277,200	$ -	$ 2,665,594				
13	$ 4,736,325	$ 609,342	$ 8,914,283	0%	$ 8,914,283	$ 1,362,025	$ -	$ 2,764,958				
14	$ 4,940,934	$ 621,529	$ 9,329,916	0%	$ 9,329,916	$ 1,452,358	$ -	$ 2,867,047				
15	$ 5,154,383	$ 633,959	$ 9,764,114	0%	$ 9,764,114	$ 1,548,554	$ -	$ 2,971,869				
16	$ 5,377,052	$ 646,639	$10,217,693	0%	$10,217,693	$ 1,650,988	$ -	$ 3,079,426				
17	$ 5,609,341	$ 659,571	$10,691,502	0%	$10,691,502	$ 1,760,059	$ -	$ 3,189,711				
18	$ 5,851,664	$ 672,763	$11,186,427	0%	$11,186,427	$ 1,876,192	$ -	$ 3,302,709				
19	$ 6,104,456	$ 686,218	$11,703,394	0%	$11,703,394	$ 1,999,840	$ -	$ 3,418,398				
20	$ 6,368,169	$ 699,942	$12,243,368	0%	$12,243,368	$ 2,131,482	$ -	$ 3,536,744				
21	$ 6,643,273	$ 713,941	$12,807,357	0%	$12,807,357	$ 2,271,631	$ -	$ 3,657,701				
Unlevered IRR												**7.91%**
PV of investment benefits @ 7.7% discount rate												**$ 21,958,401**
NPV of investment benefits @ 7.7% discount rate												**$ 306,401**
PV of Total 421-a RE Tax Foregone by the city @ 4.5% discount rate												**$ 3,643,419**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 3,207,763**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**n/a**
Negotiable Certificates (buy - /sell +)												**$ -**
MV of Low-Income Housing Tax Credit												**$ -**

3.2 1980s Reform #1 – Subsidize Affordable Homes, not Trump Tower

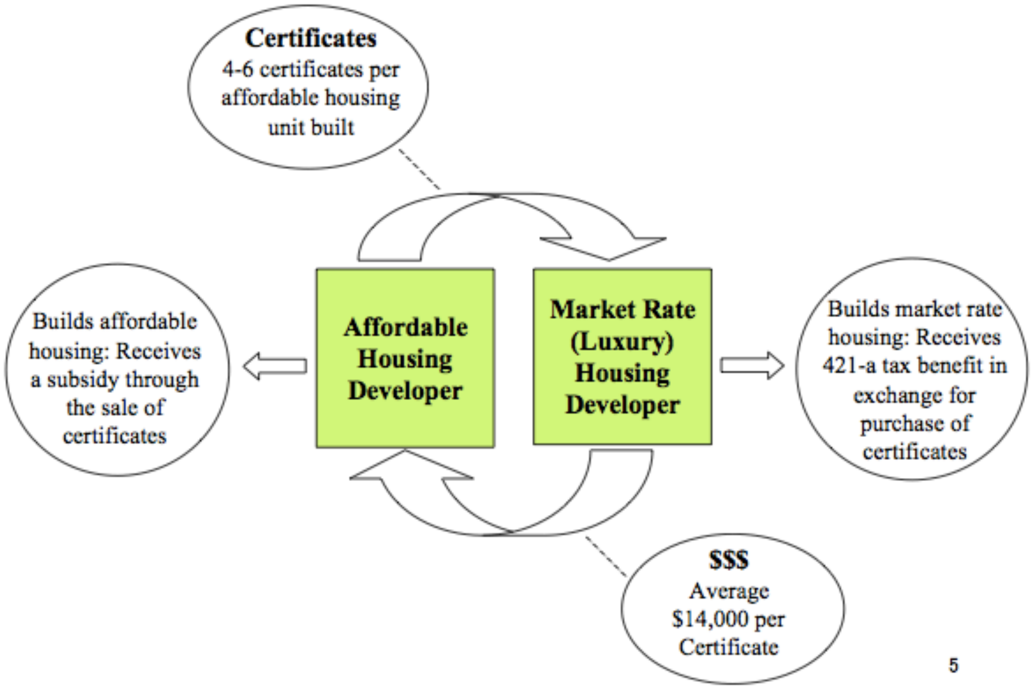
From 1971 through 1987, more than 60,000 units were constructed using the 421-a program with an estimated "lost" taxes of $550 million (Knakal, 2011). Even with such achievement, the original intent of the program was continuously shrouded in controversy as many claimed that the exemptions were given to projects that would have been built without such incentives. July 5, 1984, represented the tipping point when the Court of Appeals ruled that the site for the Trump Tower on Fifth Avenue and 56th Street qualified for the "underutilized sites" definition and was, therefore, eligible for $20 million tax benefits (Hinds, 1987). Three months later, the city responded to the ruling and criticism by reforming the program to exclude midtown Manhattan from receiving benefits for pure market-rate development. This exclusion zone is mapped as "Geographic Exclusion Area" (GEA) that is between 14th and 96th streets in Manhattan, as well as Greenpoint/Williamsburg areas of Brooklyn. The city determined that these areas have enough market demand that incentives were unnecessary to attract development. Furthermore, an affordable housing component was added to the 421-a program to encourage the development of affordable housing by leveraging the strong real estate market to create affordable housing. The commissioner of the Department of Housing Preservation and Development, Shaun Donovan, explained that the higher the value of the new building, the greater the benefit in property tax exemptions, and the 421-a program could take advantage of this to transfer some of the value for social good such as affordable housing (Hevesi, 2005). Consequently, all new developments in the exclusion area are required to develop or contribute to affordable housing on site or elsewhere in the city in order to be eligible for the 421-benefits. Additionally, incentives for housing development in Northern Manhattan and the outer boroughs were extended to 15 to 25 years if they contributed to affordable housing stock.

These amendments subdivided the 421-a program into four distinct exemptions with different exemption period depending on location of the building and various provisions for affordable housing:

10-year exemptions. Offered to developers in the GEA who subcontracted affordable housing development elsewhere in the city through the purchase of "negotiable certificates". For each affordable unit constructed and maintained as affordable through a regulatory period, the builder received four to six negotiable tax-abatement certificates from the Department of Housing Preservation & Development. The units must be developed without other government subsidy (with the exception of tax exempt bond financing, low income housing tax credits and real property tax benefits), and free of private debt unless they were subordinate and subject to the 421-a written agreement between the Housing Preservation & Development (HPD) and the developer (NYC Department of Housing Preservation & Development, 2007). Each certificate provided a 10-year tax exemption for a market-rate unit. The affordable housing builders then sold these certificates to market-rate housing developers in the "exclusion zone", the price of which reduced the cost of the affordable rental units (Figure 12).

Figure 12: Certificate Program

Source: (Grathwol, 2008)



The number of negotiable certificates generated was determined based on income eligibility requirement benchmarked by Area Median Income (AMI), midpoint family income calculated each year by U.S. Department of Housing and Urban Development. In 1990[4], the AMI is $36,900 (U.S. Department of Housing and Urban Development, 1995). Units rented to household earning <60% of AMI were considered to be low-income and would receive 5 certificates. Units rented to households earning between 60% and 100% of AMI, and an average household income of less than 80% AMI, were considered to be moderate-income and would receive 4 certificates. Units that were set-aside for homeless households would receive 6 certificates. If developers avail themselves of these certificates, it implied that the sum of the capitalized value of the below-market apartment rents and the present value of the property tax exemption benefits exceeded the cost of developing the affordable units.

Outside of this exclusion zone, in lower Manhattan and between 96th and 110th Street, developers continued to receive 10-year as-of-right exemption for market-rate multi-family development with no affordability requirement.

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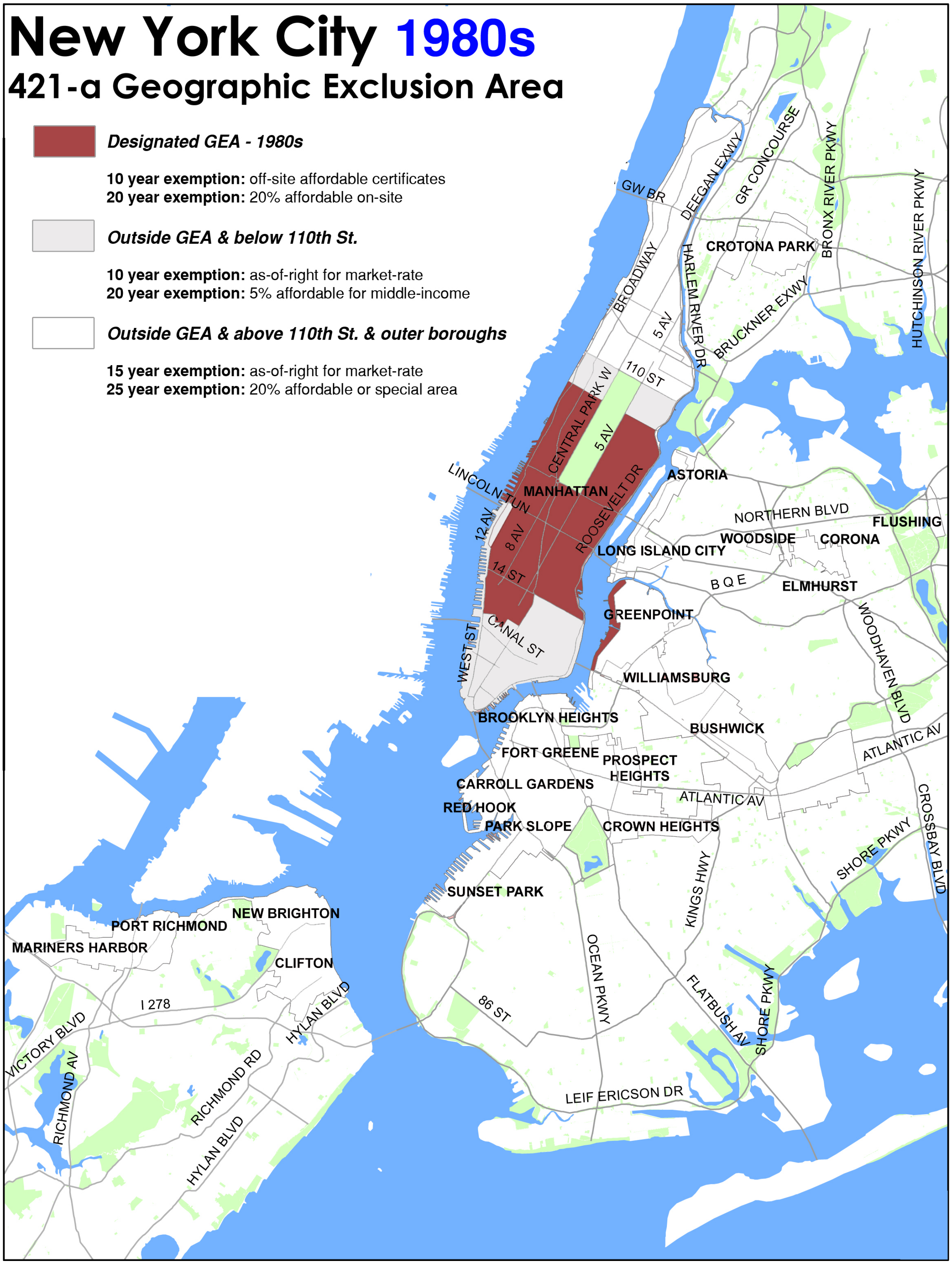
[4] Area Median Income data in 1985 could not be found, as a result, the closest data is referenced here

20-year exemptions. Offered to developers south of 110th Street who set aside at least 20% of their units, on site, for low-income households earning no more than 80% Area Median Income (AMI). If these units are reserved as rental to low-income tenants making 50% or less of the local AMI, the development can participate in the 80/20 program and use tax-exempt bond financing that generates 4% "as of right" Low Income Housing Tax Credits (LIHTC). Developers can then syndicate these housing tax credits to generate equity (NYS Homes & Community Renewal, 2012). For projects receiving substantial government assistance, a 20-year tax exemption was also available if 5% of the units are set-aside for middle-income households.

15-year exemptions. Offered to any project above 110th Street or in all outer boroughs for new, market-rate multi-family development.

25-year exemptions. Offered to projects in designated "Neighborhood Preservation Program" (NPP) area or locations eligible for Rehabilitation Mortgage Insurance Corporation" (REMIC) loans to further spur housing developments for seriously distressed areas. For buildings that are receiving substantial government assistance, 25-year exemption was also available if 20% of units are set-aside for low-income households (Pratt Center for Community Development / Habitat for Humanity NYC, 2006).

Figure 13: 421-a Geographic Exclusion Area in 1980s



The property tax exemption program is further divided into two benefit periods: construction and completion. The construction period exemption is 100%, up to three years. Upon completion, the exemption will decrease at a set percentage as per the following chart:

Figure 14: Phase-Out Schedule for Post-Construction Benefits

Source: (NYC Department of Finance, 421-a Application)

PHASE-OUT SCHEDULE FOR POST-CONSTRUCTION BENEFITS				
BENEFIT YEAR	10 YEARS (CODE 5110)	15 YEARS (CODE 5113)	20 YEARS (CODE 5116)	25 YEARS (CODE 5114)
1	100%	100%	100%	100%
2	100%	100%	100%	100%
3	80%	100%	100%	100%
4	80%	100%	100%	100%
5	60%	100%	100%	100%
6	60%	100%	100%	100%
7	40%	100%	100%	100%
8	40%	100%	100%	100%
9	20%	100%	100%	100%
10	20%	100%	100%	100%
11	Fully Taxable	100%	100%	100%
12		80%	100%	100%
13		60%	80%	100%
14		40%	80%	100%
15		20%	60%	100%
16		Fully Taxable	60%	100%
17			40%	100%
18			40%	100%
19			20%	100%
20			20%	100%
21			Fully Taxable	100%
22				80%
23				60%
24				40%
25				20%
26				Fully Taxable

Continuing with "The Marais" example, the phase-out schedule for each exemption periods translates into the following benefits:

Table 10: Phase-Out Schedule for Post-Construction Benefits based on "The Marais" example

Class 2 Assessment Ratio	45%
Base Year Assessed Value	$313
Market Value Growth Rate	3.900%
Tax Rate Growth Rate	1.882%
Units	107

				10 Year		15 Year		20 Year		25 Year	
Benefit Year	Tax Rate	Market Value (000s)	Assessd Value (000s)	Exemption Value (000s)	Tax Saved (000s)	Exemption Value (000s)	Tax Saved (000s)	Exemption Value (000s)	Tax Saved (000s)	Exemption Value (000s)	Tax Saved (000s)
1	12.216%	$ 12,600	$ 5,670	$ 5,357	$ 654	$ 5,357	$ 654	$ 5,357	$ 654	$ 5,357	$ 654
2	12.396%	$ 13,600	$ 6,120	$ 5,807	$ 720	$ 5,807	$ 720	$ 5,807	$ 720	$ 5,807	$ 720
3	12.737%	$ 13,200	$ 5,940	$ 4,502	$ 573	$ 5,627	$ 717	$ 5,627	$ 717	$ 5,627	$ 717
4	11.928%	$ 11,800	$ 5,310	$ 3,998	$ 477	$ 4,997	$ 596	$ 4,997	$ 596	$ 4,997	$ 596
5	12.596%	$ 13,100	$ 5,787	$ 3,284	$ 414	$ 5,474	$ 690	$ 5,474	$ 690	$ 5,474	$ 690
6	13.241%	$ 14,200	$ 5,931	$ 3,371	$ 446	$ 5,618	$ 744	$ 5,618	$ 744	$ 5,618	$ 744
7	13.353%	$ 14,400	$ 6,003	$ 2,276	$ 304	$ 5,690	$ 760	$ 5,690	$ 760	$ 5,690	$ 760
8	13.433%	$ 15,627	$ 6,221	$ 2,363	$ 317	$ 5,908	$ 794	$ 5,908	$ 794	$ 5,908	$ 794
9	13.686%	$ 21,558	$ 7,010	$ 1,339	$ 183	$ 6,697	$ 916	$ 6,697	$ 916	$ 6,697	$ 916
10	13.943%	$ 22,399	$ 7,570	$ 1,451	$ 202	$ 7,257	$ 1,012	$ 7,257	$ 1,012	$ 7,257	$ 1,012
11	14.206%	$ 23,272	$ 8,176	$ -	$ -	$ 7,863	$ 1,117	$ 7,863	$ 1,117	$ 7,863	$ 1,117
12	14.473%	$ 24,180	$ 10,881	$ -	$ -	$ 8,454	$ 1,224	$ 10,568	$ 1,530	$ 10,568	$ 1,530
13	14.746%	$ 25,123	$ 11,305	$ -	$ -	$ 6,595	$ 973	$ 8,794	$ 1,297	$ 10,992	$ 1,621
14	15.023%	$ 26,103	$ 11,746	$ -	$ -	$ 4,573	$ 687	$ 9,147	$ 1,374	$ 11,433	$ 1,718
15	15.306%	$ 27,121	$ 12,204	$ -	$ -	$ 2,378	$ 364	$ 7,135	$ 1,092	$ 11,891	$ 1,820
16	15.594%	$ 28,178	$ 12,680	$ -	$ -	$ -	$ -	$ 7,420	$ 1,157	$ 12,367	$ 1,929
17	15.887%	$ 29,277	$ 13,175	$ -	$ -	$ -	$ -	$ 5,145	$ 817	$ 12,862	$ 2,043
18	16.186%	$ 30,419	$ 13,689	$ -	$ -	$ -	$ -	$ 5,350	$ 866	$ 13,376	$ 2,165
19	16.491%	$ 31,606	$ 14,223	$ -	$ -	$ -	$ -	$ 2,782	$ 459	$ 13,910	$ 2,294
20	16.801%	$ 32,838	$ 14,777	$ -	$ -	$ -	$ -	$ 2,893	$ 486	$ 14,464	$ 2,430
21	17.117%	$ 34,119	$ 15,354	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,041	$ 2,575
22	17.440%	$ 35,450	$ 15,952	$ -	$ -	$ -	$ -	$ -	$ -	$ 12,511	$ 2,182
23	17.768%	$ 36,832	$ 16,574	$ -	$ -	$ -	$ -	$ -	$ -	$ 9,757	$ 1,734
24	18.102%	$ 38,269	$ 17,221	$ -	$ -	$ -	$ -	$ -	$ -	$ 6,763	$ 1,224
25	18.443%	$ 39,761	$ 17,892	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,516	$ 648
26	18.790%	$ 41,312	$ 18,590	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Pre-Construction				$ 14,228	$ 1,706	$ 14,228	$ 1,706	$ 14,228	$ 1,706	$ 14,228	$ 1,706
Total				$ 47,976	$ 5,997	$ 102,524	$ 13,672	$ 139,756	$ 19,503	$ 239,974	$ 36,337
Per Unit				$ 448	$ 56	$ 958	$ 128	$ 1,306	$ 182	$ 2,243	$ 340
Discount Rate *					4.50%		4.76%		4.96%		5.55%
PV					$4,657		$8,731		$10,887		$15,135
PV per Unit					$43.5		$81.6		$101.7		$141.5

* Discount Rate based on NYC's 10 year and 30 year municipal bond yield in Februay 2003 (Bank of America), 15 year and 20 year are estimated

"The Marais" is located on 10th avenue and, therefore, remains outside the exclusion zone after this reform (western boundary of the GEA is at 8th Avenue). Therefore, in reality, it received a 10-year exemption with all market-rate housing units (Table 9). However, to study the effect of legislative changes on the project, the following assumes that the building is located in the exclusion zone with the requirement of sponsoring affordable housing. Within the GEA, the developer for "the Marais" would have two options to receive the 421-a tax exemptions:

Purchasing the negotiable certificates – receive 10-year exemption that generates a total of $3.2 million tax savings for the project or $29,979 per unit (Table 9), by paying $0.39 per dollar of benefits received.

PV Benefit Per Market-Rate Unit:	$29,979 (7.7% discount rate)
Average Certificate Price:	$11,750 [5]
Ratio of Price to Benefit:	0.39

By purchasing 1 certificate per each of the 107 units in "The Marais", the market-rate developer would have received roughly $1.95 million in net benefit.

Total Cost of Purchasing Certificates:	$1,257,250 (=$11,750 x 107)
PV of Total Benefit received:	$3,207,763 (7.7% discount rate)
Market-Rate Developer's Profits:	$1,950,513

On the contrary, if a similar building as "the Marais" was built by an affordable housing developer for 100% low-income housing units for households earning 60% of AMI, the certificates granted to each affordable units would only cover 37% of the lost revenue from the below market-rate units. With 5 certificates generated per each of the 107 affordable units, the affordable housing developer would incur a loss of $10.9 million for developing affordable housing units instead of market-rate units.

[5] Average certificate price in 2005 as reported in interviews with housing developers

Table 11: Revenue loss for developing 100% affordable housing @ 60% of AMI

Year	Effective Gross Income for Affordable Housing Developers	Effective Gross Income for Market-Rate Housing Developers	Loss of EGI for building below market-rate units	
0				
1	$ 768,950	$ 2,851,219	$ (2,082,269)	
2	$ 792,019	$ 2,974,392	$ (2,182,373)	
3	$ 815,779	$ 3,102,885	$ (2,287,106)	
4	$ 840,252	$ 3,236,930	$ (2,396,677)	
5	$ 865,460	$ 3,376,765	$ (2,511,305)	
6	$ 891,424	$ 3,522,642	$ (2,631,218)	
7	$ 918,167	$ 3,674,820	$ (2,756,653)	
8	$ 945,712	$ 3,833,572	$ (2,887,860)	
9	$ 974,083	$ 3,999,182	$ (3,025,099)	
10	$ 1,003,305	$ 4,171,947	$ (3,168,641)	
PV of Revenue Loss compared to market-rate @ 7.7% discount rate				**$ (17,142,307)**
PV of Revenue Loss compared to market-rate @ 7.7% discount rate				**$ (160,208) per unit**

PV of Lost Revenue per Affordable Unit: $ 160,208 (per table above)

Certificates Benefit per Affordable Unit: $ 58,750 (=$11,750 x 5)

Cost not covered by Certificate per Affordable Unit: $ 101,458

Affordable Developer's Cost: $10,856,006 (=$101,458 x 107)

To cover 100% of the lost revenue incurred by affordable housing developer, the market-rate developer should have paid $32,042 per certificate. However, the total cost of purchasing 107 certificates at this price would be more than the present value of the total property tax benefits received. Therefore, the market-rate developer would only be willing to pay no more than $0.94 per dollar of benefits received.

PV Benefit received Per Market-Rate Unit: $29,979 (7.7% discount rate)

Certificate Price required to offset lost revenue by Affordable housing developer: $32,042 (=160,208 ÷ 5)

Ratio of Price to Benefit: 0.94

Setting aside 20% of the units as affordable units – receive a 20-year exemption, the developer must keep 80% of the units rent-stabilized and the other 20% affordable for households with incomes at 80% or less of the local AMI through the duration of the exemption period. In Year 21, all units are de-regulated and can receive market-rate rents. Scenario-A below examines affordable units at 80% of AMI, the projected cash flow is summarized below (see Appendix 7 for assumptions and details):

Table 12: Scenario-A --"The Marais" with 20% affordable units @ 80% AMI and 20-year real estate tax exemption

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (21,652,000)	$ (21,652,000)
1	$ 2,489,590	$ 480,462	$ 4,339,717	100%	$ 313,000	$ 38,236	$ 491,904	$ 1,970,892	$ 696,400	$ 1,274,492		$ 1,274,492
2	$ 2,564,278	$ 490,071	$ 4,480,287	100%	$ 313,000	$ 38,956	$ 518,657	$ 2,035,251	$ 696,400	$ 1,338,851		$ 1,338,851
3	$ 2,641,206	$ 499,873	$ 4,625,281	100%	$ 313,000	$ 39,689	$ 546,803	$ 2,101,645	$ 696,400	$ 1,405,245		$ 1,405,245
4	$ 2,720,443	$ 509,870	$ 4,774,837	100%	$ 313,000	$ 40,436	$ 576,415	$ 2,170,137	$ 696,400	$ 1,473,737		$ 1,473,737
5	$ 2,802,056	$ 520,068	$ 4,929,095	100%	$ 313,000	$ 41,197	$ 607,566	$ 2,240,792	$ 696,400	$ 1,544,392		$ 1,544,392
6	$ 2,886,118	$ 530,469	$ 5,088,201	100%	$ 313,000	$ 41,972	$ 640,336	$ 2,313,677	$ 696,400	$ 1,617,277		$ 1,617,277
7	$ 2,972,701	$ 541,078	$ 5,252,305	100%	$ 313,000	$ 42,762	$ 674,807	$ 2,388,861	$ 696,400	$ 1,692,461		$ 1,692,461
8	$ 3,061,882	$ 551,900	$ 5,421,562	100%	$ 313,000	$ 43,567	$ 711,066	$ 2,466,415	$ 696,400	$ 1,770,015		$ 1,770,015
9	$ 3,153,739	$ 562,938	$ 5,596,130	100%	$ 313,000	$ 44,387	$ 749,204	$ 2,546,414	$ 696,400	$ 1,850,014		$ 1,850,014
10	$ 3,248,351	$ 574,197	$ 5,776,173	100%	$ 313,000	$ 45,222	$ 789,316	$ 2,628,932	$ 696,400	$ 1,932,532	$ 28,896,710	$ 30,829,242
11	$ 3,345,801	$ 585,680	$ 5,961,861	100%	$ 313,000	$ 46,073	$ 831,504	$ 2,714,048				
12	$ 3,446,175	$ 597,394	$ 6,153,367	100%	$ 313,000	$ 46,940	$ 875,873	$ 2,801,841				
13	$ 3,549,561	$ 609,342	$ 6,350,872	80%	$ 1,520,574	$ 232,331	$ 738,027	$ 2,707,888				
14	$ 3,656,047	$ 621,529	$ 6,554,560	80%	$ 1,561,312	$ 243,044	$ 777,283	$ 2,791,474				
15	$ 3,765,729	$ 633,959	$ 6,764,622	60%	$ 2,893,649	$ 458,922	$ 613,923	$ 2,672,847				
16	$ 3,878,701	$ 646,639	$ 6,981,254	60%	$ 2,980,302	$ 481,561	$ 646,479	$ 2,750,501				
17	$ 3,995,062	$ 659,571	$ 7,204,659	40%	$ 4,447,995	$ 732,239	$ 453,808	$ 2,603,251				
18	$ 4,114,913	$ 672,763	$ 7,435,046	40%	$ 4,586,227	$ 769,204	$ 477,805	$ 2,672,947				
19	$ 4,238,361	$ 686,218	$ 7,672,629	20%	$ 6,200,703	$ 1,059,557	$ 251,518	$ 2,492,586				
20	$ 4,365,512	$ 699,942	$ 7,917,630	20%	$ 6,396,704	$ 1,113,620	$ 264,782	$ 2,551,949				
21	$ 6,643,273	$ 713,941	$12,807,357	0%	$12,807,357	$ 2,271,631	$ -	$ 3,657,701				
Unlevered IRR												**9.27%**
PV of investment benefits @ 7.7% discount rate												**$ 24,276,361**
NPV of investment benefits @ 7.7% discount rate												**$ 2,624,361**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate												**$ 7,738,928**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 4,154,118**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ (3,964,835)**
Negotiable Certificates (buy - /sell +)												**$ -**
MV of Low-Income Housing Tax Credit												**$ -**

Compared to the baseline scenario, setting aside 20% of affordable units to receive a 20-year 421-a tax exemption resulted in a better NPV for the developer (+$2.6 million instead of -$499,408) and an improved unlevered IRR (9.27% instead of 7.58%). The property tax savings from the 421-a program is more than enough to offset the revenue loss from below-market rate units, and thus provide developers enough incentive to elect to include affordable housing on-site.

Developers often sought to couple the 421-a property tax exemptions with the tax-exempt financing from a government agency, such as the New York State's Housing Finance Agency (HFA). Scenario-B below examines setting the affordable units at 50% of AMI, which qualifies for the 80/20 New Construction Housing Program. The 80/20 program provides volume-cap multi-family tax-exempt bonds and Low Income Housing Tax Credits (LIHTC) to developers. All depreciable development costs attributed to low-income housing are eligible for tax credits, and the annual tax credits are roughly equal to 4% of this qualified amount each year over a 10-year period. Hence, "the Marais" can receive a total of $1.38 million in LIHTC. Assuming investors in the market offered to purchase the tax credits at $0.90 for every dollar of future tax benefits, $1.24 million of equity is generated for the development. The affordable units probably account for $4.33 million (=20% of TDC). The value of the housing tax credits, $1.24 million, covers roughly 29% of that amount.

Table13: Low-Income Housing Tax Credits (LIHTC) for "the Marais"

80/20 Low-Income Housing Tax Credit (LIHTC)			
Eligible Basis (total development costs - land cost)		$ 20,302,000	
Applicable Fraction (% of Low-income Units to Total Units)	x	20%	
Qualified Basis		$ 4,060,400	
Housing Tax Credits Rate	x	3.4%	[a]
Annual Tax Credit for 10 years		$ 138,054	
Total Tax Credit		$ 1,380,536	
Market Price per dollar of tax credits	x	$ 0.90	[b]
Market Value of the Tax Credits		$ 1,242,482	

[a] *Source: IRS; applicable federal rate - average monthly rate in 2003*

[b] *Source: IBO; Department of Housing Preservation and Development; Housing Development Corporation*

The projected cash flow for Scenario-B with 80/20 program is summarized below (see Appendix 8 for assumptions and details):

Table 14: Scenario-B --"The Marais" with 20% affordable units @ 50% AMI, 80/20 program and 20-year real estate tax exemption

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (20,409,518)	$ (20,409,518)
1	$ 2,411,360	$ 480,462	$ 4,170,739	100%	$ 313,000	$ 38,236	$ 471,261	$ 1,892,662	$ 696,400	$ 1,196,262		$ 1,196,262
2	$ 2,483,700	$ 490,071	$ 4,306,239	100%	$ 313,000	$ 38,956	$ 496,995	$ 1,954,673	$ 696,400	$ 1,258,273		$ 1,258,273
3	$ 2,558,211	$ 499,873	$ 4,446,012	100%	$ 313,000	$ 39,689	$ 524,072	$ 2,018,650	$ 696,400	$ 1,322,250		$ 1,322,250
4	$ 2,634,958	$ 509,870	$ 4,590,189	100%	$ 313,000	$ 40,436	$ 552,561	$ 2,084,652	$ 696,400	$ 1,388,252		$ 1,388,252
5	$ 2,714,007	$ 520,068	$ 4,738,908	100%	$ 313,000	$ 41,197	$ 582,534	$ 2,152,742	$ 696,400	$ 1,456,342		$ 1,456,342
6	$ 2,795,427	$ 530,469	$ 4,892,309	100%	$ 313,000	$ 41,972	$ 614,068	$ 2,222,986	$ 696,400	$ 1,526,586		$ 1,526,586
7	$ 2,879,290	$ 541,078	$ 5,050,536	100%	$ 313,000	$ 42,762	$ 647,241	$ 2,295,449	$ 696,400	$ 1,599,049		$ 1,599,049
8	$ 2,965,668	$ 551,900	$ 5,213,740	100%	$ 313,000	$ 43,567	$ 682,139	$ 2,370,202	$ 696,400	$ 1,673,802		$ 1,673,802
9	$ 3,054,638	$ 562,938	$ 5,382,073	100%	$ 313,000	$ 44,387	$ 718,848	$ 2,447,314	$ 696,400	$ 1,750,914		$ 1,750,914
10	$ 3,146,277	$ 574,197	$ 5,555,695	100%	$ 313,000	$ 45,222	$ 757,462	$ 2,526,859	$ 696,400	$ 1,830,459	$ 28,606,261	$ 30,436,720
11	$ 3,240,666	$ 585,680	$ 5,734,768	100%	$ 313,000	$ 46,073	$ 798,077	$ 2,608,912				
12	$ 3,337,886	$ 597,394	$ 5,919,462	100%	$ 313,000	$ 46,940	$ 840,795	$ 2,693,551				
13	$ 3,438,022	$ 609,342	$ 6,109,949	80%	$ 1,472,390	$ 224,968	$ 708,579	$ 2,603,712				
14	$ 3,541,163	$ 621,529	$ 6,306,410	80%	$ 1,511,682	$ 235,319	$ 746,380	$ 2,684,315				
15	$ 3,647,398	$ 633,959	$ 6,509,027	60%	$ 2,791,411	$ 442,708	$ 589,601	$ 2,570,731				
16	$ 3,756,820	$ 646,639	$ 6,717,991	60%	$ 2,874,997	$ 464,546	$ 620,956	$ 2,645,636				
17	$ 3,869,524	$ 659,571	$ 6,933,498	40%	$ 4,285,299	$ 705,455	$ 435,952	$ 2,504,498				
18	$ 3,985,610	$ 672,763	$ 7,155,750	40%	$ 4,418,650	$ 741,098	$ 459,067	$ 2,571,750				
19	$ 4,105,178	$ 686,218	$ 7,384,954	20%	$ 5,970,563	$ 1,020,231	$ 241,687	$ 2,398,729				
20	$ 4,228,334	$ 699,942	$ 7,621,325	20%	$ 6,159,660	$ 1,072,352	$ 254,465	$ 2,456,039				
21	$ 6,643,273	$ 713,941	$12,807,357	0%	$12,807,357	$ 2,271,631	$ -	$ 3,657,701				
Unlevered IRR												**9.66%**
PV of investment benefits @ 7.7% discount rate												**$ 23,538,905**
NPV of investment benefits @ 7.7% discount rate												**$ 3,129,388**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate												**$ 7,424,758**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 3,983,121**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ (4,563,963)**
Negotiable Certificates (buy - /sell +)												**$ -**
MV of Low-Income Housing Tax Credit												**$ 1,242,482**

The 80-20 configuration has proven to be more appealing to developers. Even though the property tax savings from the 421-a program is not enough to offset the revenue loss for below market-rate at 50% of AMI, the project can take advantage of the Low Income Housing Tax Credits (LIHTC). The financial benefit associated with LIHTC in the beginning offset some of the construction cost and made it beneficial for the project to set aside 20% of its units for affordable housing on-site. Compared to the scenario #1A, the NPV generated is higher (+$3.1 million instead of +$2.6 million) and the unlevered IRR is much higher (9.66% instead of 9.27%).

Table 15: Comparison of the original program and the program after 1980s reform

		1971 original	1985 reform	1985 reform
	Baseline	**Actual**	**Scenario-A**	**Scenario-B**
	100% Market	**100% Market**	**80% Stabilize**	**80% Stabilize.**
			20% Afford.	**20% Afford.**
Affordability Requirement			**80% AMI**	**50% AMI**
Affordability Length			**20 yr**	**20 yr**
Low Income Housing Tax Credits (LIHTC)				**LIHTC**
Negotiable Certificates (NC)				
Inclusionary Zoning (IZ)				
Tax Exemption Benefit Period		**10 yr**	**20 yr**	**20 yr**
Unlevered IRR	7.58%	7.91%	9.27%	9.66%
PV of investment benefits @ 7.7% discount rate	$21,466,071	$21,958,401	$24,276,361	$23,538,905
NPV of investment benefits @ 7.7% discount rate	($185,929)	$306,401	$2,624,361	$3,129,388
PV of Total 421-a RE Tax Foregone by the city @ 4.5% (10yr), 4.76% (15yr), and 4.96% (20yr)	$0	$3,643,419	$7,738,928	$7,424,758
PV of 421-a RE Tax Benefit @ 7.7% discount rate	$0	$3,207,763	$4,154,118	$3,983,121
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	n/a	n/a	($3,964,835)	($4,563,963)
Negotiable Certificates (buy - /sell +)	$0	$0	$0	$0
MV of Low-Income Housing Tax Credit	$0	$0	$0	$1,242,482
Developer's Net Benefit for electing to include affordable housing	$0	$3,207,763	$189,282	$661,640

3.3 2000s Reform #2 – Squeezing out more affordable housing

The real estate housing market in the 2000s had improved. The number of new housing permits issued annually had grown steadily and dramatically, from permits for 3,882 in 1992 to permits for 31,559 units in 2005 [Figure 9]. According to the 2003 fiscal brief by the NYC's Independent Budget Office, between 1985 and 2002, 192,000 apartments have been built in the city and 36% of these (69,000 units) were constructed under the 421-a program. However, of these, only 8% (5,500 units) were affordable to low- or moderate-income families (NYC Independet Budget Office, 2003).

In 2005, report on tax expenditure from NYC Department of Finance indicated that Manhattan had the biggest share of the 421-a program, which received 78% of all 421-a benefits but accounted for only 44% of the units that received benefits. This could be explained by higher land values and a larger share of high-value condominium units in Manhattan that led to higher subsidies per unit. Many investigations of the city tax records also pointed out that the beneficiaries of the 421-a program were not always the lower- and middle-income families intended by the original lawmakers. According to an article in the New York Post, celebrities, including Calvin Klein, Natalie

Portman, and Derek Jeter, were saving $134,450, $130,000, and $26,300 respectively in their annual real estate taxes (Montefinise, 2006).

Table 16: Borough Distribution of 421-a benefits

Source: (NYC Finance, 2005)

Borough	Exempt AV ($ millions)	Percent of Exempt AV	Number of Units	Percent of Units
Manhattan	2,051.41	78.2%	21,195	44.1%
Bronx	84.37	3.2%	4,682	9.7%
Brooklyn	246.14	9.4%	11,388	23.7%
Queens	226.60	8.6%	9,714	20.2%
Staten Island	15.95	0.6%	1,099	2.3%
Total	2,624.47	100.0%	48,078	100.0%

The tax benefits from the 421-a program are disproportionally valuable for luxury housing units because the exemption applies to tax assessments that are based on property values. As a result, developers continued to be accused of using 421-a exemptions to fund luxury housing, and forcing the majority of New York City households, as well as occupants of older buildings, to carry a disproportionate share of the city's property tax load. The continued rising of the real estate tax expenditure on the 421-a program only made it more controversial. In an article issued by Pratt Center, an opponent of the program, indicated that the taxes forgiven in 2010 alone under the 421-a program would be "enough to prevent all the teacher layoffs slated for this year, keep every firehouse open, prevent a planned $100 million cut to city libraries, and still leave $150 million in change" (Pratt Center for Community Development, 2011)

As a result, a series of significant programmatic and policy changes were made to the 421-a program:

February 23, 2006: Mayor Bloomberg formed a 26-member task force, including for-profit and non-profit housing advocates, affordable housing and market-rate developers, City Council representatives and City agencies staff members, to address the citywide debate between community development and affordable housing, and luxury development. Its goal was to realign it with the current housing market and focus on increasing incentives for affordable housing development.

December 28, 2006: Mayor Bloomberg signed the major reforms to the 421-a tax exemption program into "City Law" – Local Law No.58 of 2006.

August 17, 2007: State legislation continued further reforms to the 421-a exemption program and Governor Spitzer signed legislation into "State Law" – Chapters 618, 619, and 620 of the Laws of 2007.

December 28, 2007: The State legislation delayed the effectiveness of many "City Law" provisions until July 1, 2008, however, the following provisions from the "City Law" went into effect (Office of Development, 2010):

- **Elimination of as-of-right 25 year benefits in NPP/REMIC areas**
  No automatic extended benefits for projects within the NPP/REMIC area to ensure that incentives for affordable housing are provided citywide. Market-rate development would receive the standard 15-year benefit. The extended 25-year benefits are only granted to projects in these areas that meet on-site affordable housing requirements (at least 20% of the units must be affordable to persons at or below 80% AMI) or that receive substantial governmental assistance pursuant to an affordable housing program.

- **Reservation of benefits to building with a minimum of four units**
  Three-unit buildings are only eligible for benefits if they are constructed with substantial governmental assistance pursuant to an affordable housing program.

- **Requirement for prevailing wage**
  This applied for all persons employed in care or maintenance work at a building receiving benefits who were regularly scheduled to work at least 8 hours a week in the building. This did not apply to projects with less than 50 units or buildings with at least 50% of the units affordable to those at or below 125% AMI and where rental units would remain affordable throughout the benefit period.

- **Elimination of "negotiable certificates"**
  No new written agreements for negotiable certificates projects would be issued. Any property within the GEA must provide on-site affordable housing in order to receive any

benefit. Existing certificates would not expire, and can still be used with limitations (Pincus, 2009). Department of Housing Preservation and Development granted 3,586 certificates through 9 agreements with affordable housing between January 1 and December 26, 2006. These 2006 certificates would give full tax abatement. Additional 10,585 certificates were created through 20 agreements signed between December 26, 2006 and December 27, 2007 (Pincus, 2009). These 2007 certificates would only cover up to first $65,000 in assessed value.

- **Establishment of a $400 million Affordable Housing Trust Fund**
  Dedicated fund to finance affordable housing development outside the GEA with focus on city's 15 poorest neighborhoods.

- **Review of exclusion zone boundaries (GEA) every two years**
  Performed by Boundary Review Commission with members appointed by the Mayor and City Council.

February 19, 2008: Governor Spitzer signed Chapter 15 of the Laws of 2008.

July 1, 2008: The following provisions went into effect:

- **Expansion of "Geographic Exclusion Area" to include areas in all five boroughs where new market-rate housing is particularly strong:**
  - <u>Manhattan:</u> All of Manhattan is now covered.
  - <u>Bronx:</u> Portions of Claremont and Crotona Park.
  - <u>Brooklyn:</u> Downtown Brooklyn as well as portions of Red Hook, Sunset Park, East Williamsburg, Bushwick, East New York, Crown Heights, Weeksville, Highland Park, Ocean Hill, Prospect Heights, Carroll Gardens, Cobble Hill, Boerum Hall, and Park Slope.
  - <u>Queens:</u> Portions of Long Island City, Astoria, Woodside, Jackson Heights ,and the East River Waterfront.
  - <u>Staten Island:</u> Portions of St. George, Stapleton, New Brighton, and Port Richmond.

Any projects within the GEA that commence construction after July 1, 2008 will only be eligible for 421-a tax benefits if one of the following is met:

- It receives substantial government assistance pursuant to an affordable housing program, at least 20% of the units must meet one of the following requirements:
  - If ≤ 25 units, initial and subsequent rentals upon vacancy must be affordable at or below 120% of AMI, or
  - If > 25 units, initial and subsequent rentals upon vacancy must be affordable at or below 120% of AMI and can't exceed an average of 90% of AMI, or
  - Homeownership units at initial sale must be affordable at or below 125% of AMI.
- It sets aside at least 20% of units for affordable housing onsite, initial rental or sale and at all subsequent rentals upon vacancy must be affordable at or below 60% of AMI.
- It has purchased negotiable certificates from agreement executed prior to December 28, 2007.
  - If certificate is purchased prior to December 28, 2006, construction must commence on or before June 30, 2009. Construction that commenced after such date will be subject to the AV cap.
  - If certificate is purchased between December 28, 2006 and December 27, 2007, construction must commence on or before June 30, 2008. Construction that commenced after such date will be subject to the AV cap.

- **Requirement of community preference for 50% of affordable units within the GEA**
  Residents of the community board in which the building receiving benefits is located would have priority for purchase or rental of 50% of the affordable units upon initial occupancy.

- **Specification of unit and bedroom mix for affordable units, unless pre-empted by federal requirements. One of the following requirements must be met:**
  - Comparable number of bedrooms as market rate units and a unit mix proportional to the market rate units.
  - At least 50% of affordable units must have 2+ bedrooms and no more than 50% of the remaining units can be smaller than 1 bedroom.

- Floor area of affordable units must be no less than 20% of the total floor area of all dwelling units.

- **Requirement for 35-year affordability and rent stabilization within the GEA**
  Affordable rental units must be kept affordable and remain rent-stabilized for 35 years after completion of construction. After 35 years, tenants with leases would remain as rent stabilized tenants for the duration of their occupancy. Homeownership must be affordable upon initial sale.

- **Limitation on maximum benefits a residential unit can receive (Assessed Value Cap)**
  Only the first $65,000 of assessed value (AV) or approximately $144,445 (= $65,000 ÷ 45% of assessment ratio) of Market Value (MV) per unit, is eligible for exemption. Owners would receive benefits on the billable exempt assessed value below the AV cap, and pay taxes on portion of AV above this AV cap. This cap increases by 3%, compounded annually, on each taxable status date following August 17, 2008, the first anniversary of the effective date of the State Law. Additionally, non-residential space would collectively be considered as equivalent to a single residential dwelling unit and would be subject to the AV Cap.

  This amendment serves several purposes. First, it reduces excess tax benefit that accrues to high value properties, and reduces the risk of future excess benefits in areas outside the expanded GEA. It also encourages on-site affordable housing development as projects that qualify for extended benefits (20% affordable units on site or governmentally-assisted) are not subject to the AV cap. Based on the 421-a task force report, the AV Cap would preempt overuse of tax subsidy while minimizing the risk of dampening development" (NYC Department of Housing Preservation and Development, 2006).

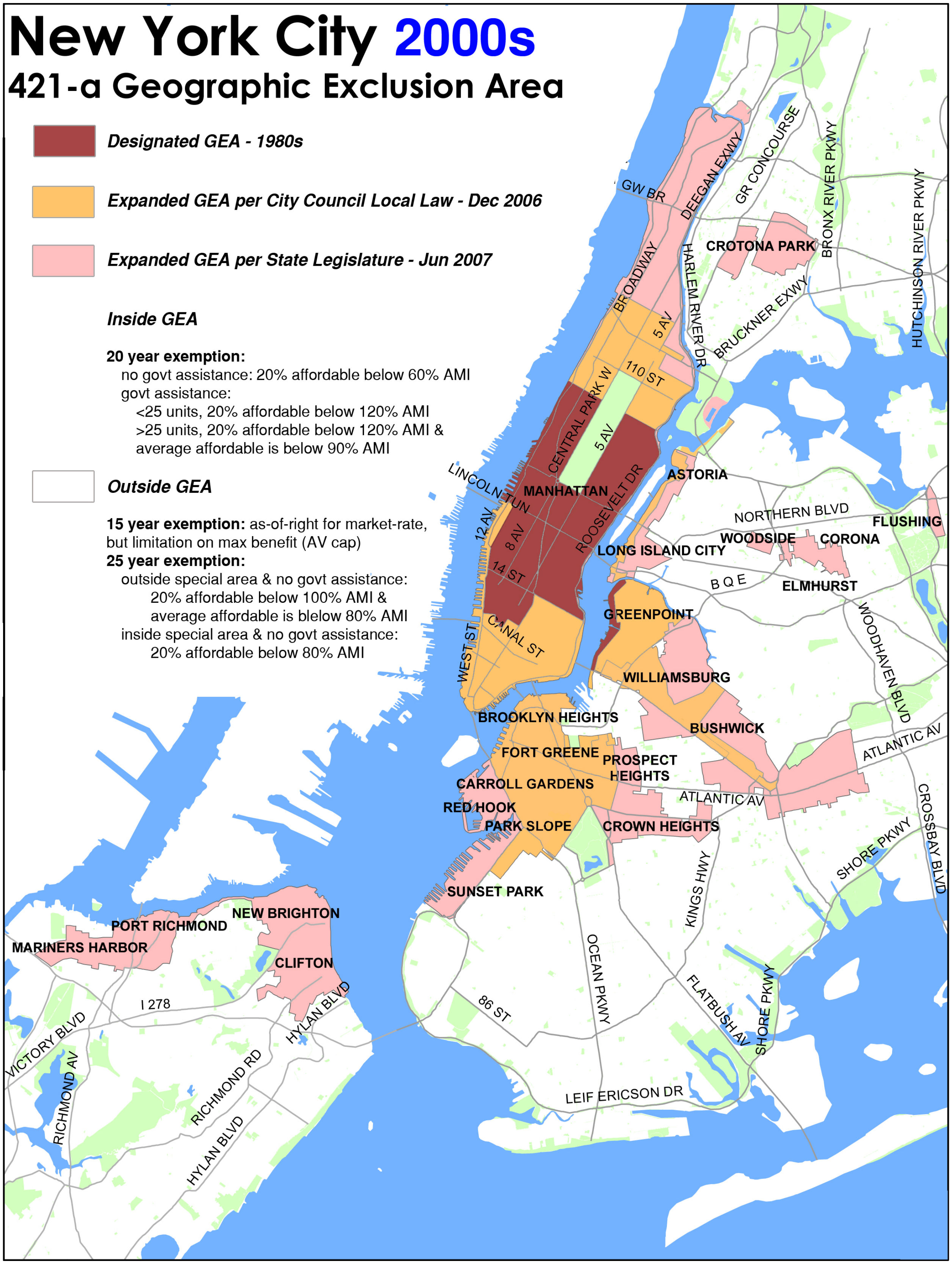
In the case of "the Marais", almost all the exempted assessed value is less than allowed $7,333,000 ($313,000 base year AV + $65,000 x (107 units + 1 non-residential unit)), except for the year of construction completion and year 10. Even though the building was completed prior to the amendment, assessed value from year of construction completion is used below to demonstrate the effect of AV Cap.

Table 17: Example of effect of AV cap on Tax Payments (Office of Development, 2010)

		Per Building (Without AV Cap)	Per Unit (Without AV Cap)	Per Unit (With AV Cap)
Calculations of Exempt AV before AV Cap				
Post-Construction Billable AV (AV of newly constructed building)		$ 7,740,000	$ 72,336	$ 72,336
Pre-Construction AV (AV of property in year prior to construction)	-	$ 313,000	$ 2,925	$ 2,925
Exempt AV (Post-Construction - Pre-construction)		$ 7,427,000	$ 69,411	$ 69,411
Calculations of AV subject to AV Cap				
Exempt AV without AV Cap		$ 7,427,000	$ 69,411	$ 69,411
AV Cap	-	n/a	n/a	$ 65,000
Exempt AV above AV Cap		$ -	$ -	$ 4,411
Calculations of AV subject to Taxes				
Pre-Construction AV (Mini-Tax AV)		$ 313,000	$ 2,925	$ 2,925
Exempt AV above AV Cap	+	$ -	$ -	$ 4,411
Total Taxable AV		$ 313,000	$ 2,925	$ 7,336
Tax Rate	x	12.620%	12.620%	12.620%
Tax		$ 39,501	$ 369	$ 926

In the year of construction completion, the building receives 100% construction benefits and only pays property taxes on its pre-construction assessed value. This translates into $69,411 of exempt AV and property tax of $369 per unit without the AV Cap. With the AV Cap, each unit not only pays the $369 for its share of the pre-construction assessed value, it also has to pay full taxes on the exempted AV that's above $65,000. The additional AV of $4,411 that is not exempted added $557 of taxes per unit. As a result, the annual property tax is now $926 per unit, 2.5 times more than without the AV Cap.

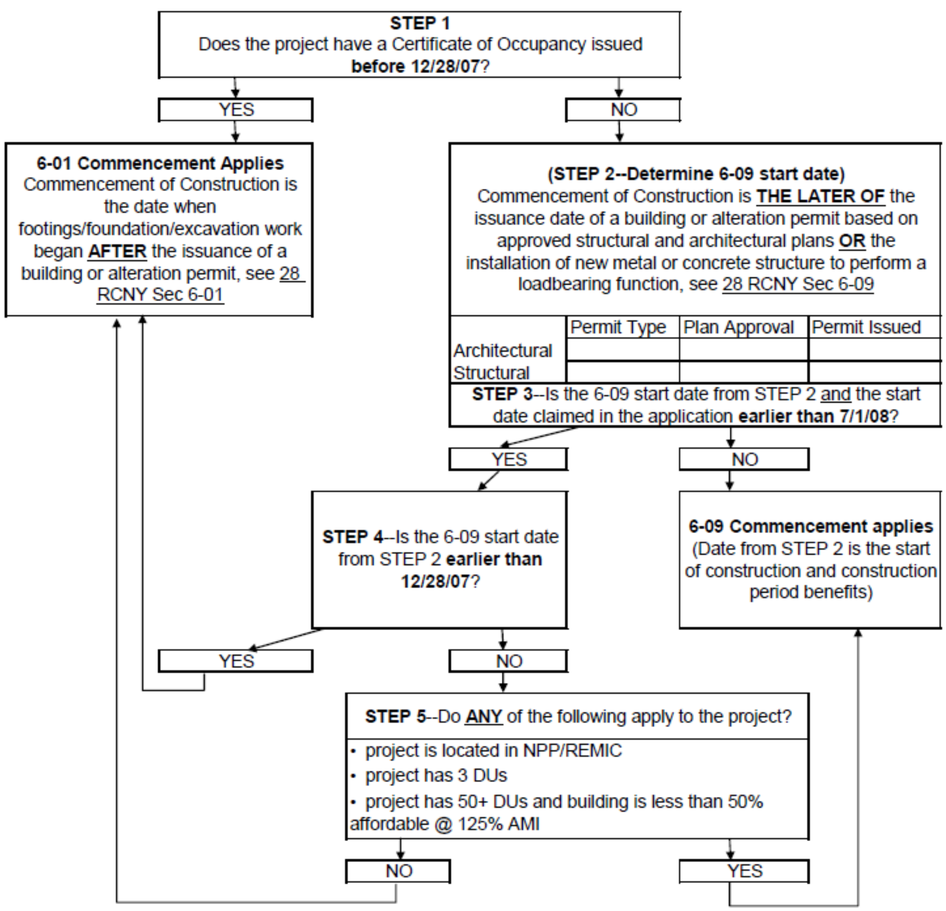
Figure 15: 421-a Geographic Exclusion Area in 2000s



Grandfathering

Per NYC Department of Housing Preservation and Development, "any projects that commenced construction prior to December 28, 2007 or July 1, 2008, respectively, will not be subject to these new provisions and will still be eligible to receive 421-a tax benefits pursuant to the prior law. Any project that commenced construction after the relevant date will be subject to the new provisions" (Office of Development, 2010). A project is deemed to have commenced on the date following the issuance by the NYC Department of Buildings of a "building or alteration permit for a multiple dwelling on which the excavation and the construction of initial footings and foundations commence in good faith" (Stempel Bennett Claman & Hochberg, P.C., 2012). Excavation of a project site is not enough.

Figure 16: Commencement of construction standard applied to projects



Source: (Office of Development, 2010)

In the two years leading up to the grandfathering deadline, Pratt Center's analysis showed that developers initiated construction of 271 sites with more than 7,800 market-rate housing units in the expanded exclusion area. Out of those, 123 sites were built and occupied at the time of the report. Pratt Center estimated an annual tax abatement of $12.2 million which translated into $82,000 per unit over the next 15 years and a total of $159 million over the life of the benefit. In the 2011 renewal (as discussed below), the new provision allowed the 148 vacant sites to remain eligible for 421-a benefit for an "extended construction period" of three years. As a result, all of these 271 sites have no affordable housing obligation.

Figure 17: Projects built before Reform #2

421-a Tax Abatements in Expanded "Exclusion Zone" July 2006 - June 2008

Permitted 2006-2008	Developments	Residential Units	Annual Tax Abatement	15-Year Cycle
Received Abatement	123	2,219	$12.2 million	$158.7 million
Currently Vacant	148	5,642*	$30.9 million**	$413.8 million

Source: Department of Buildings Monthly Permit Reports July 2006 to June 2008, Individual New Building Permits from Building Information System (BIS), and Pratt Center for Community Development 2011.

* Number of residential units derived from individual new building permits filed with New York City Department of Buildings.
** Value calculated using an average of $5,468 abatement granted to developed properties, multiplied by total number of units in planned developments.

Source: (Pratt Center for Community Development, 2011)

3.4 2010s Expirations & Renewal

June 10, 2010: Mayor Bloomberg signed Local Law No.16 of 2010, which "retroactively eliminated the requirement that in order for a building to have commenced construction, a building or alteration permit issued by the Department of Buildings must have been based upon plumbing plans approved by such department" (Office of Development, 2010).

December 28, 2010: 421-a program lapsed.

June 24, 2011: New York State Legislature renewed the 421-a program for four years without the prevailing wage requirement. In addition, construction period for new units that commenced between January 1, 2007 and June 30, 2009 was also extended from 3 years to 6 years. However, the exemption benefits would remain for a total of 3 years during the construction.

June 15, 2015: 421-a program set to expire.

3.5 Summary of the Current 421-a Program

Currently, new construction housing developments can participate in the 421-a Partial Tax Exemption Program and/or the 421-a Affordable Housing Program. The following table outlines the basic eligibility and structure for the program:

Table 18: Summary Chart (Forsyth Street Advisors and Enterprise, 2011)

	421-a (without affordable housing)	421-a (with affordable housing)			
		Inside Geographic Exclusion Area		Outside Geographic Exclusion Area	
Legislative Category	As-of-right (with HPD application and approval)				
Eligible Development	New Construction of multiple dwellings on lots which were vacant, predominantly vacant or improved with a non-conforming use three years prior to the start of construction				
Development Size	4-units minimum	3-units minimum			
Application Cost	$100 fee + 0.4% of Total Development Cost (TDC)				
Sponsor Requirement	None				
Geographic Limitations	Outside Geographic Exclusion Area	None if meet affordable housing requirement			
Incentive Type	Tax exemption on the difference between the assessed value upon completion and assessed value one year before construction start date				
Incentive Cap	Only the first $65,000 of an apartment's billable exempt assessed value. Owner pays full taxes on any AV above the cap. The $65,000 cap is increased by 3%, compounded annually, on each taxable status date following August 17, 2008 ($68,959 in 2010)	None			
Commercial Space	Tax exemption will be reduced by the extent to which the project's floor area of commercial, community facility, and accessory use space exceeds 12% of Aggregate Floor Area				
Affordability Requirement	None	**Substantial government assistance**	**No substantial government assistance**	**Inside former NPP/REMIC areas**	**Outside former NPP/REMIC areas**
		If < 25 units, 20% of units must be affordable ≤120% AMI If > 25 units, 20% of units must be affordable ≤120% of	At least 20% of the units must be affordable ≤60% AMI	If no substantial government assistance → at least 20% of the units must be affordable ≤80% AMI If utilizing	If no substantial government assistance → at least 20% of the units must be affordable ≤100% AMI, but average income in

		AMI, provided that average affordability within the project is ≤90% AMI Homeownership units at initial sale must be affordable ≤125% AMI		substantial government assistance → such assistance must be provided pursuant to an affordable housing program	affordable housing units must ≤80% AMI If utilizing substantial government assistance → such assistance must be provided pursuant to an affordable housing program
Bedroom Mix (Affordable to Market ratio)	N/A	Unless preempted by federal requirements, mixed-income projects are required to comply with one of the mix requirements: Affordable units with a comparable number of bedrooms and unit mix to the market rate units, or >50% of affordable units must have 2+ bedrooms and <50% of remaining units can be smaller than 1 bedroom, or Floor area of affordable units >20% of total floor area of all dwelling units			
Minimum Affordability Length	N/A	Must kept affordable and remain rent-stabilized for 35 years, after which time, tenants with leases will remain rent stabilized for the duration of their occupancy. Rent stabilized units are not eligible for a 2.2% per annum rent increase during the phase out period of the tax exemption		Must kept rent stabilized for the term of the exemption, after which time, tenants with leases will remain rent stabilized for the duration of their occupancy. All units are subject to a 2.2% per annum rent increase during the phase out period of the tax exemption	
Duration	15 years (11 years full + 4 years phase out @ 20%/year)	20 years (12 years full + 8 years phase out @ 20%/every 2 years)		25 years (21 years full + 4 years phase out @ 20%/year)	

Without any affordable housing, only developments with more than four units and located outside the Geographic Exclusion Area (GEA) are eligible for a 15-year partial property tax exemption that is subject to AV Cap. With at least 20% of affordable housing, developments with more than three units are eligible for 20-25 year partial tax exemption, depending on its location. The affordability requirement varies depending on the projects' geographic location and whether substantial government assistances are received. The minimum affordability length is 35 years for projects inside the GEA, compared to 25 years for projects outside the GEA. 2.2% annual increase in rent is also offered to projects outside the GEA during the phase out period of tax exemption to partially compensate for increasing tax liability.

3.6 Overview of the Application Process

To take advantage of the 421-a program, developers must file the application between the start of the construction and the issuance of building's Certificate of Occupancy. The application to apply for the exemption is available through the city's Department of Housing and Preservation Development (HPD) and Department of Finance (DOF), which have been administering the program since it was created.

HPD determines eligibility of the projects and approves the application with issuance of two Certificates of Eligibility if the project satisfies all current statutory and regulatory requirements: a Preliminary Certificate of Eligibility prior to construction and a Final Certificate of Eligibility post construction. Both certificates must be submitted to the DOF which administers the benefit. A single commencement of construction date will be applied to each project to determine applicability of new statues and rules as well as to determine the beginning of construction period benefits. After the DOF processes the Preliminary Certificate, projects can start to receive up to three years of full exemption during the construction period.

3.7 Comparing program structure before and after the reforms

"The Marais" is revisited using the current structure of the 421-a program to trace the changes of property tax exemptions to the developers. To compare with scenarios from the previous reform in the 80s, the same two scenarios are created here. The first scenario, Current-A, followed the minimum requirement from the reform and sets aside 20% of units as affordable housing for low-income households making 60% of the AMI. The second scenario, Current-B, took advantage of the 80/20 program by setting aside the affordable units for those making 50% of the AMI. Both cases satisfied the requirement that 80% of market-rate units are rent-stabilized during the tax exemption periods and 20% of affordable units are kept affordable and rent-stabilized for 35 years. The projected cash flows are summarized below:

Table 19: Current-A --"The Marais" with 20% affordable units @ 80% AMI and 20-year real estate tax exemption (Appendix 9)

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (21,652,000)	$ (21,652,000)
1	$ 2,437,437	$ 480,462	$ 4,227,065	100%	$ 313,000	$ 38,236	$ 478,142	$ 1,918,738	$ 696,400	$ 1,222,338		$ 1,222,338
2	$ 2,510,560	$ 490,071	$ 4,364,255	100%	$ 313,000	$ 38,956	$ 504,215	$ 1,981,533	$ 696,400	$ 1,285,133		$ 1,285,133
3	$ 2,585,876	$ 499,873	$ 4,505,768	100%	$ 313,000	$ 39,689	$ 531,649	$ 2,046,315	$ 696,400	$ 1,349,915		$ 1,349,915
4	$ 2,663,453	$ 509,870	$ 4,651,738	100%	$ 313,000	$ 40,436	$ 560,512	$ 2,113,147	$ 696,400	$ 1,416,747		$ 1,416,747
5	$ 2,743,356	$ 520,068	$ 4,802,304	100%	$ 313,000	$ 41,197	$ 590,878	$ 2,182,092	$ 696,400	$ 1,485,692		$ 1,485,692
6	$ 2,825,657	$ 530,469	$ 4,957,606	100%	$ 313,000	$ 41,972	$ 622,824	$ 2,253,216	$ 696,400	$ 1,556,816		$ 1,556,816
7	$ 2,910,427	$ 541,078	$ 5,117,793	100%	$ 313,000	$ 42,762	$ 656,430	$ 2,326,586	$ 696,400	$ 1,630,186		$ 1,630,186
8	$ 2,997,739	$ 551,900	$ 5,283,014	100%	$ 313,000	$ 43,567	$ 691,781	$ 2,402,273	$ 696,400	$ 1,705,873		$ 1,705,873
9	$ 3,087,672	$ 562,938	$ 5,453,425	100%	$ 313,000	$ 44,387	$ 728,967	$ 2,480,347	$ 696,400	$ 1,783,947		$ 1,783,947
10	$ 3,180,302	$ 574,197	$ 5,629,187	100%	$ 313,000	$ 45,222	$ 768,080	$ 2,560,883	$ 696,400	$ 1,864,483	$ 26,098,805	$ 27,963,289
11	$ 3,275,711	$ 585,680	$ 5,810,466	100%	$ 313,000	$ 46,073	$ 809,219	$ 2,643,957				
12	$ 3,373,982	$ 597,394	$ 5,997,430	100%	$ 313,000	$ 46,940	$ 852,488	$ 2,729,648				
13	$ 3,475,202	$ 609,342	$ 6,190,257	80%	$ 1,488,451	$ 227,422	$ 718,395	$ 2,638,437				
14	$ 3,579,458	$ 621,529	$ 6,389,126	80%	$ 1,528,225	$ 237,894	$ 756,681	$ 2,720,035				
15	$ 3,686,841	$ 633,959	$ 6,594,225	60%	$ 2,825,490	$ 448,113	$ 597,708	$ 2,604,769				
16	$ 3,797,447	$ 646,639	$ 6,805,745	60%	$ 2,910,098	$ 470,217	$ 629,464	$ 2,680,591				
17	$ 3,911,370	$ 659,571	$ 7,023,885	40%	$ 4,339,531	$ 714,383	$ 441,904	$ 2,537,416				
18	$ 4,028,711	$ 672,763	$ 7,248,849	40%	$ 4,474,509	$ 750,466	$ 465,313	$ 2,605,482				
19	$ 4,149,573	$ 686,218	$ 7,480,846	20%	$ 6,047,277	$ 1,033,340	$ 244,964	$ 2,430,015				
20	$ 4,274,060	$ 699,942	$ 7,720,093	20%	$ 6,238,675	$ 1,086,108	$ 257,904	$ 2,488,009				
21	$ 5,597,205	$ 713,941	$10,547,851	0%	$10,547,851	$ 1,870,864	$ -	$ 3,012,400				
22	$ 5,835,275	$ 728,220	$11,031,238	0%	$11,031,238	$ 1,993,425	$ -	$ 3,113,629				
23	$ 6,083,516	$ 742,784	$11,535,981	0%	$11,535,981	$ 2,123,869	$ -	$ 3,216,863				
24	$ 6,342,367	$ 757,640	$12,063,010	0%	$12,063,010	$ 2,262,697	$ -	$ 3,322,030				
25	$ 6,612,281	$ 772,793	$12,613,295	0%	$12,613,295	$ 2,410,442	$ -	$ 3,429,046				
26	$ 6,893,733	$ 788,249	$13,187,847	0%	$13,187,847	$ 2,567,672	$ -	$ 3,537,813				
27	$ 7,187,218	$ 804,014	$13,787,722	0%	$13,787,722	$ 2,734,989	$ -	$ 3,648,216				
28	$ 7,493,252	$ 820,094	$14,414,022	0%	$14,414,022	$ 2,913,035	$ -	$ 3,760,123				
29	$ 7,812,373	$ 836,496	$15,067,895	0%	$15,067,895	$ 3,102,491	$ -	$ 3,873,386				
30	$ 8,145,143	$ 853,226	$15,750,540	0%	$15,750,540	$ 3,304,082	$ -	$ 3,987,834				
31	$ 8,492,146	$ 870,290	$16,463,207	0%	$16,463,207	$ 3,518,579	$ -	$ 4,103,276				
32	$ 8,853,993	$ 887,696	$17,207,202	0%	$17,207,202	$ 3,746,801	$ -	$ 4,219,496				
33	$ 9,231,323	$ 905,450	$17,983,884	0%	$17,983,884	$ 3,989,618	$ -	$ 4,336,254				
34	$ 9,624,797	$ 923,559	$18,794,675	0%	$18,794,675	$ 4,247,957	$ -	$ 4,453,282				
35	$ 10,035,111	$ 942,030	$19,641,054	0%	$19,641,054	$ 4,522,801	$ -	$ 4,570,279				
36	$ 12,528,406	$ 960,871	$24,985,875	0%	$24,985,875	$ 5,861,851	$ -	$ 5,705,684				
Unlevered IRR												**8.26%**
PV of investment benefits @ 7.7% discount rate												**$ 22,544,416**
NPV of investment benefits @ 7.7% discount rate												**$ 892,416**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate												**$ 7,529,481**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 4,040,120**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ (4,364,254)**
Negotiable Certificates (buy - /sell +)												**$ -**
MV of Low-Income Housing Tax Credit												**$ -**

Table 20: Current-B --"The Marais" with 20% affordable units @ 50% AMI, 80/20 program and 20-year real estate tax exemption (Appendix 10)

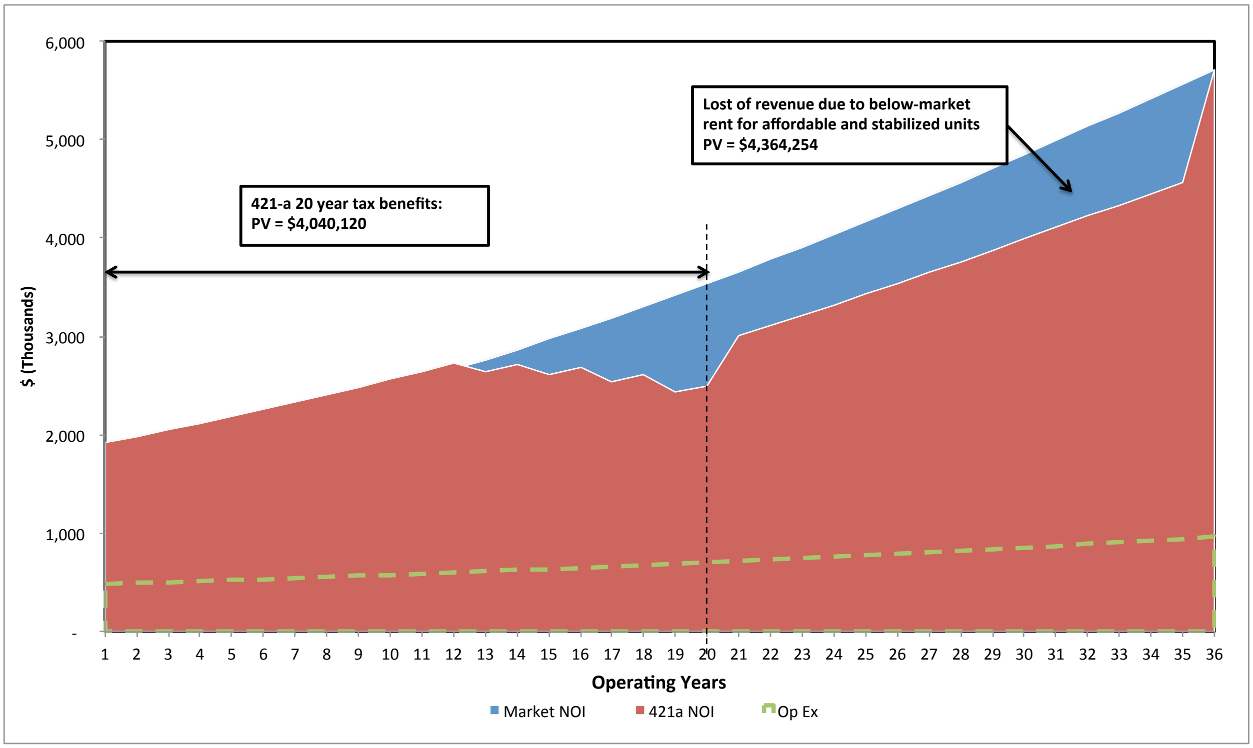
Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (20,409,518)	$ (20,409,518)
1	$ 2,411,360	$ 480,462	$ 4,170,739	100%	$ 313,000	$ 38,236	$ 471,261	$ 1,892,662	$ 696,400	$ 1,196,262		$ 1,196,262
2	$ 2,483,700	$ 490,071	$ 4,306,239	100%	$ 313,000	$ 38,956	$ 496,995	$ 1,954,673	$ 696,400	$ 1,258,273		$ 1,258,273
3	$ 2,558,211	$ 499,873	$ 4,446,012	100%	$ 313,000	$ 39,689	$ 524,072	$ 2,018,650	$ 696,400	$ 1,322,250		$ 1,322,250
4	$ 2,634,958	$ 509,870	$ 4,590,189	100%	$ 313,000	$ 40,436	$ 552,561	$ 2,084,652	$ 696,400	$ 1,388,252		$ 1,388,252
5	$ 2,714,007	$ 520,068	$ 4,738,908	100%	$ 313,000	$ 41,197	$ 582,534	$ 2,152,742	$ 696,400	$ 1,456,342		$ 1,456,342
6	$ 2,795,427	$ 530,469	$ 4,892,309	100%	$ 313,000	$ 41,972	$ 614,068	$ 2,222,986	$ 696,400	$ 1,526,586		$ 1,526,586
7	$ 2,879,290	$ 541,078	$ 5,050,536	100%	$ 313,000	$ 42,762	$ 647,241	$ 2,295,449	$ 696,400	$ 1,599,049		$ 1,599,049
8	$ 2,965,668	$ 551,900	$ 5,213,740	100%	$ 313,000	$ 43,567	$ 682,139	$ 2,370,202	$ 696,400	$ 1,673,802		$ 1,673,802
9	$ 3,054,638	$ 562,938	$ 5,382,073	100%	$ 313,000	$ 44,387	$ 718,848	$ 2,447,314	$ 696,400	$ 1,750,914		$ 1,750,914
10	$ 3,146,277	$ 574,197	$ 5,555,695	100%	$ 313,000	$ 45,222	$ 757,462	$ 2,526,859	$ 696,400	$ 1,830,459	$ 26,036,431	$ 27,866,889
11	$ 3,240,666	$ 585,680	$ 5,734,768	100%	$ 313,000	$ 46,073	$ 798,077	$ 2,608,912				
12	$ 3,337,886	$ 597,394	$ 5,919,462	100%	$ 313,000	$ 46,940	$ 840,795	$ 2,693,551				
13	$ 3,438,022	$ 609,342	$ 6,109,949	80%	$ 1,472,390	$ 224,968	$ 708,579	$ 2,603,712				
14	$ 3,541,163	$ 621,529	$ 6,306,410	80%	$ 1,511,682	$ 235,319	$ 746,380	$ 2,684,315				
15	$ 3,647,398	$ 633,959	$ 6,509,027	60%	$ 2,791,411	$ 442,708	$ 589,601	$ 2,570,731				
16	$ 3,756,820	$ 646,639	$ 6,717,991	60%	$ 2,874,997	$ 464,546	$ 620,956	$ 2,645,636				
17	$ 3,869,524	$ 659,571	$ 6,933,498	40%	$ 4,285,299	$ 705,455	$ 435,952	$ 2,504,498				
18	$ 3,985,610	$ 672,763	$ 7,155,750	40%	$ 4,418,650	$ 741,098	$ 459,067	$ 2,571,750				
19	$ 4,105,178	$ 686,218	$ 7,384,954	20%	$ 5,970,563	$ 1,020,231	$ 241,687	$ 2,398,729				
20	$ 4,228,334	$ 699,942	$ 7,621,325	20%	$ 6,159,660	$ 1,072,352	$ 254,465	$ 2,456,039				
21	$ 5,550,108	$ 713,941	$10,446,119	0%	$10,446,119	$ 1,852,820	$ -	$ 2,983,346				
22	$ 5,786,764	$ 728,220	$10,926,455	0%	$10,926,455	$ 1,974,490	$ -	$ 3,084,054				
23	$ 6,033,550	$ 742,784	$11,428,054	0%	$11,428,054	$ 2,103,999	$ -	$ 3,186,767				
24	$ 6,290,902	$ 757,640	$11,951,846	0%	$11,951,846	$ 2,241,845	$ -	$ 3,291,417				
25	$ 6,559,272	$ 772,793	$12,498,795	0%	$12,498,795	$ 2,388,561	$ -	$ 3,397,919				
26	$ 6,839,134	$ 788,249	$13,069,912	0%	$13,069,912	$ 2,544,710	$ -	$ 3,506,176				
27	$ 7,130,981	$ 804,014	$13,666,250	0%	$13,666,250	$ 2,710,893	$ -	$ 3,616,074				
28	$ 7,435,328	$ 820,094	$14,288,905	0%	$14,288,905	$ 2,887,749	$ -	$ 3,727,485				
29	$ 7,752,711	$ 836,496	$14,939,025	0%	$14,939,025	$ 3,075,957	$ -	$ 3,840,259				
30	$ 8,083,691	$ 853,226	$15,617,804	0%	$15,617,804	$ 3,276,238	$ -	$ 3,954,227				
31	$ 8,428,850	$ 870,290	$16,326,489	0%	$16,326,489	$ 3,489,359	$ -	$ 4,069,201				
32	$ 8,788,799	$ 887,696	$17,066,382	0%	$17,066,382	$ 3,716,138	$ -	$ 4,184,965				
33	$ 9,164,172	$ 905,450	$17,838,840	0%	$17,838,840	$ 3,957,441	$ -	$ 4,301,282				
34	$ 9,555,633	$ 923,559	$18,645,279	0%	$18,645,279	$ 4,214,190	$ -	$ 4,417,883				
35	$ 9,963,871	$ 942,030	$19,487,176	0%	$19,487,176	$ 4,487,367	$ -	$ 4,534,473				
36	$ 12,528,406	$ 960,871	$24,985,875	0%	$24,985,875	$ 5,861,851	$ -	$ 5,705,684				
Unlevered IRR												**8.93%**
PV of investment benefits @ 7.7% discount rate												**$ 22,315,001**
NPV of investment benefits @ 7.7% discount rate												**$ 1,905,483**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate												**$ 7,424,758**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 3,983,121**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ (4,563,963)**
Negotiable Certificates (buy - /sell +)												**$ -**
MV of Low-Income Housing Tax Credit												**$ 1,242,482**

Under the current setup, setting aside 20% of units as affordable units for low-income households in order to receive tax benefit is still worthwhile to the developers. Compared to the baseline scenario where the project was 100% market-rate housing without property tax benefits, the participation in the 421-a Affordable Housing Program in Current-A scenario resulted in a slightly positive NPV for the developer (+$892,416 instead of -$185,929) and a higher IRR (8.26% instead of 7.58%). The present value of the property tax benefits received did not cover the revenue loss because the current program structure requires a minimum affordability length of 35 years whereas the tax exemption only lasts 20 years. Therefore, when compared to Scenario-A where the affordability length matched the tax exemption period, the impact of the mismatch is significant as the IRR, NPV, and the PV of investment benefits are all slightly lower. The participation of 80/20 program in Current-B scenario created a better result to steer developers toward creating affordable housing because of the additional incentive built into the program. The combination of 421-a property tax benefits and the low-income housing tax credits exceeded the revenue loss, and left the developer with an unlevered IRR of 8.93% and positive NPV of $1.91 million. The results from the two scenarios suggest that Low-Income Housing Tax Credits are necessary to make developers elect to include affordable housing on-site.

Table 21: Comparison of Current Program Structure with previous scenarios

		1971 original	*1985 reform*	*1985 reform*	*2007 reform*	*2007 reform*
	Baseline	**Actual**	**Scenario-A**	**Scenario-B**	**Current - A**	**Current - B**
	100% Market	**100% Market**	**80% Stabilize**	**80% Stabilize.**	**80% Stabilize.**	**80% Stabilize.**
			20% Afford.	**20% Afford.**	**20% Afford.**	**20% Afford.**
Affordability Requirement			**80% AMI**	**50% AMI**	**60 % AMI**	**50 % AMI**
Affordability Length			**20 yr**	**20 yr**	**35 yr**	**35 yr**
Low Income Housing Tax Credits (LIHTC)				**LIHTC**		**LIHTC**
Negotiable Certificates (NC)						
Inclusionary Zoning (IZ)						
Tax Exemption Benefit Period		**10 yr**	**20 yr**	**20 yr**	**20 yr**	**20 yr**
Unlevered IRR	7.58%	7.91%	9.27%	9.66%	8.26%	8.93%
PV of investment benefits @ 7.7% discount rate	$21,466,071	$21,958,401	$24,276,361	$23,538,905	$22,544,416	$22,315,001
NPV of investment benefits @ 7.7% discount rate	($185,929)	$306,401	$2,624,361	$3,129,388	$892,416	$1,905,483
PV of Total 421-a RE Tax Foregone by the city @ 4.5% (10yr), 4.76% (15yr), and 4.96% (20yr)	$0	$3,643,419	$7,738,928	$7,424,758	$7,529,481	$7,424,758
PV of 421-a RE Tax Benefit @ 7.7% discount rate	$0	$3,207,763	$4,154,118	$3,983,121	$4,040,120	$3,983,121
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	n/a	n/a	($3,964,835)	($4,563,963)	($4,364,254)	($4,563,963)
Negotiable Certificates (buy - /sell +)	$0	$0	$0	$0	$0	$0
MV of Low-Income Housing Tax Credit	$0	$0	$0	$1,242,482	$0	$1,242,482
Developer's Net Benefit for electing to include affordable housing	$0	$3,207,763	$189,282	$661,640	($324,134)	$661,640

Figure 18: "The Marais" under current 421-a program (Current-A scenario shown here)



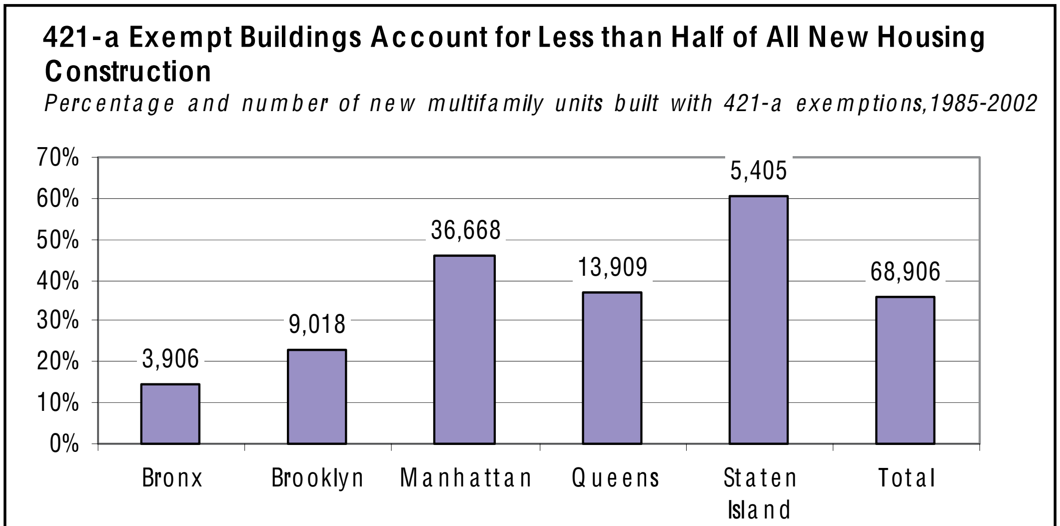
4.0 Assessment of the Program

> *"Tax exemption is nothing more or less than a government subsidy which is made up annually from the contributions of taxpayers. It is however a concealed subsidy, the true extent of which is not realized by taxpayers"*
> *– Taxation Committee of Citizens Housing Council (Citizen Housing Council, 1938)*

4.1 Boosting Construction and Affordability

The 421-a program had two broad goals: to stimulate the production of housing and to ensure that a portion of the new housing stocks is affordable to low- and moderate-income New Yorkers. The program was designed to provide a tax break for new housing development and yet a significant share of construction occurred without the benefit of the 421-a tax exemption.

Figure 19: Percentage and number of new multi-family units built with 421-a exemptions, 1985-2002



SOURCES: IBO, Department of Finance.
NOTE: Projects built without a 421-a benefit may have received other forms of construction subsidies.

Even though Manhattan had the most expensive construction cost, only 46% of the units were built using the 421-a exemption. There are a variety of reasons why new construction might occur without 421-a exemptions, such as the site didn't meet the eligibility criteria for exemption, or developers preferred to avoid lengthy period of rent regulation. Additionally, as demonstrated in scenario Current-A, the property tax benefits received did not exceed or equal the cost of the affordable housing requirements attached to the program.

With a predicted population of 9.1 million by 2030, or an additional million more New Yorkers, demand for new housing is likely to remain strong (NYC Department of City Planning, 2006). Housing construction has also been lagging behind the increasing demand and has pushed up housing prices in the city. At the same time, New York faces a very serious housing affordability crisis where more than 10,000 rent-regulated apartments are lost each year because of vacancy decontrol and other sunset provisions or loopholes in rent laws (Silver, 2011). The figure below showed that in 1981, 63% of the rental units were subject to rent regulation. Over the past 30 years, this share dropped to 47%, representing a net loss of about 231,000 units. Additionally, income of the New Yorkers has not kept pace with rising housing costs. The tight affordable housing market is evident in the extremely low vacancy rates, particularly in lower-rent units, growing waiting lists for subsidized housing, and record-high homelessness.

Figure 20: Housing Stock in NYC, 1981-2011 (includes both Occupied and Vacant Available Units)

	1981	**1991**	**2002**	**2011**
Total Housing Units	2,730,789	2,789,804	3,081,772	3,187,574
Owner Units	754,745	858,108	997,003	1,014,940
Rental Units	1,976,044	1,931,696	2,084,769	2,172,634
Rent-Regulated	1,238,387	1,134,995	1,101,720	1,025,214
Rent-Stabilized	*952,832*	*1,010,584*	*1,042,397*	*986,840*
Rent-Controlled	*285,555*	*124,411*	*59,324*	*38,374*
Public Housing	166,061	174,253	178,075	185,534
Market Rate and Other Rental Units*	571,596	622,448	804,973	961,886
Share Regulated	62.7%	58.8%	52.8%	47.2%

*Market Rate and Other Rental Units includes Market Rate, Mitchell-Lama, *In Rem*, and other subsidized housing units

Source: (Furman Center for Real Estate and Urban Policy, 2011)

The U.S. Department of Housing and Urban Development (HUD) defines affordability as housing for which the household has to "pay no more than 30% of its annual income" (U.S. Department of Housing and Urban Development, 2012). This means for a household with an income of $60,000 a year, an affordable housing program would allow them to pay no more than $1,500 a month or $18,000 a year to maintain this 30% level. However, in the latest NYC Housing and Vacancy Survey, 29.8% of all renter households paid more than half their household's incomes on gross rent and

22.9% of all renter households lived below the federal property level, which is 4.4% higher than the corresponding rate of 18.5% for all households (Lee D. M., 2008).

Therefore, while the justification for tax incentives to induce market rate construction may have dissipated, the need for more affordable housing remains. Furthermore, since the disparity in effective property tax rates for coops and condos remains higher than that for Class 1 properties, there remains a need to provide relief for the construction of new multi-family housing.

4.2 Ongoing Debate

The frequently asked question of whether the 421-a property tax exemption is really needed to encourage housing developing is not a new debate among policy makers, housing advocate groups, and developers. Developers often claim that NYC needs to provide this tax break to stimulate residential construction, especially in less popular areas. In a survey conducted by Citizens Housing & Planning Council (CHPC), industry leaders agreed that the "tax incentive program have helped the building…of a substantial amount of housing in NYC that would not otherwise have occurred" (Shultz, Perine, & Feibusch, 2011). For profit developers indicated that program provides incentive to attract capital to the construction process, "by making the project more financially viable, incentives made investors more likely to fund the initial construction of a project" (Shultz, Perine, & Feibusch, 2011). Similarly, non-profit developers advocated for the program by stating that it is "an ongoing operational subsidy" which keeps rents low over time (Shultz, Perine, & Feibusch, 2011). The survey participants also agreed that the current property tax system presents a significant barrier to new construction. Considering it is unlikely that the political system will address the tax discrimination in the near future, the 421-a program is essential to reduce taxes to a level that makes project feasible and to "predict with reasonable accuracy actual real estate taxes for new construction projects" (Shultz, Perine, & Feibusch, 2011). It is difficult to fully evaluate this claim, as we do not know how many projects would have gone forward without the tax exemption. However, evidence from the base case scenario (Table 8) suggests that it may be difficult for new market-rate housing development to take place in city without some sort of subsidy.

Developers also maintain that besides an increased supply of housing and economic activity associated with the construction, the incentive to build housing contributes to the city's property tax base. Each additional unit is a taxable asset that eventually swells the city's tax revenue. If new units were not constructed, the tax collections would have remained at the level prior to new construction. Therefore, the temporary tax benefit should not be counted as cost to the city, because any property taxes eventually paid as a result of construction represent a gain for the city. Thus, the annual expenditure reported by the Department of Finance overstates the real “cost” of the program since only the tax savings given to projects that would have been built without 421-a should be counted as cost.

While the developers use the 421-a program to ease the burden of property tax, the policy makers and affordable housing advocates aim to ensure the construction of housing, especially affordable housing. The city is characterized by low vacancy rate and high construction cost; therefore, any addition to housing unit is beneficial to the city, especially without massive city subsidies. However, it remains unclear whether the tax exemption program is the most efficient and cost effective method of providing assistance to affordable housing. According to the 2011 report by the Pratt Center, in its entire history the 421-a program has created just 5,700 affordable housing units (Pratt Center for Community Development, 2011).

Evidences from the previous financial model (Table 19) suggest that the current property tax benefits from the 421-a Affordable Housing program alone may not give enough incentive for developers to set aside 20% of their units for affordable housing. The primary reason for this is due to the mismatch between rent restrictions and tax abatements. The 421-a property tax benefits expire within 25 years but rent regulations do not. In the current structure of the program, affordable units must be kept affordable and rent-stabilized for 35 years. The term imbalance resulted in insufficient property tax benefits to offset the developers’ loss of revenue from the below-market units.

4.3 Existing Proposals

Over the course of the lengthy debates, there had been many proposals from various groups. With the 421-a program set to expire in the not-so-distant future, opponents of the program have called on the city to let it expire. The exemptions already granted would be honored, but the city would no longer grant new ones. However, the expiration of the program would have many unintended and possibly adverse consequences. First, removing the tax benefits completely will increase the cost of construction for new housing units, which invariably will be passed along to renters or buyers and/or reflected in lower land sale prices. As a result, removal of property tax benefits will exacerbate the city's pressing need for more affordable housing. Additionally, if the market is not strong enough to support the increased costs, new multi-family housing will not be built at all without additional subsidies.

Other less extreme proposals suggested targeting the tax incentives to individuals and not the building. One proposition indicated that the amount of benefits should be based on the income of the tenants. A similar tenant-based tax exemption program already exists such as the Senior Citizen Rent Increase Exemption Program (SCRIE), where tax incentive is allocated based on the income of the tenant or the rent of the unit. This will lower the actual tax expenditure as only affordable units receive a tax break but not the market rate units and, therefore, the loss of revenue due to the below-market rent can be offsets by the lowered operating expenses. However, this can be offset by the higher administration overhead required to review the eligibility of tenants on a regular basis. Similar suggestions have been made to restrict income on tenants of buildings that receives property tax benefits from the 421-a program.

On the other hand, developers requested tax benefits be prolonged for rent-restricted units. The mismatch between the length of regulatory agreement and tax exemption benefit period makes the 421-a less attractive as developers would have affordable housing units that continue to be rent restricted when their tax incentives expire. Therefore, an extended or prorated tax exemption for rent-restricted units will avoid an abrupt change in the building's operation expense.

4.4 Other Tax Incentives

Unlike the 421-a program, other commonly used tax incentives are all tied either to major capital investments, specific ownership or financing structure. Below are brief summary of the other residential property tax incentive programs in New York City. Along with 421-a, over one quarter of NYC's residential housing stock, or 757,000 housing units, received tax benefits through one of these four programs (Forsyth Street Advisors and Enterprise, 2011).

J-51. Established in 1950s to encourage needed upgrades to existing housing. In particular, the rehabilitation of Old Law tenements that did not have central heating, central hot water, or indoor plumbing, and could not afford the required upgrade under rent control systems. Under the program, owners can recover approximately 75% of the cost of improvements through abatement of current tax liabilities, which lasts 14-34 years depending on development type and affordability.

Article XI of the New York Private Housing Finance Law. Established in 1966 to reduce or eliminate taxes on residential property operated by non-profit Housing Development Fund Companies (HDFCs). It is designed to ensure that subsidy is not used to pay local real estate taxes especially if the project is receiving federal housing subsidy. The program is not granted as-of-right, and requires the approval of City Council for each project. Once approved, property owners are assigned Payment in Lieu of Taxes (PILOT) or "shelter rent" payment determined by HPD, which is significantly lower than full taxes, often as low as $0. The incentive is calibrated to term of project's regulatory agreement and can last as long as 40 years.

420-c of the New York Real Property Tax Law. Passed in 1993 to address the need for tax exemptions for housing developed by non-profit organizations and financed with federal Low Income Housing Tax Credits (LIHTC) program. It is granted as-of-right but cannot be combined with other tax incentives such as 420-a and 420-b under the requirements of the LIHTC program. Similar to Article XI, the property owners are assigned a Payment in Lieu of Taxes (PILOT) or "shelter rent" payment determined by HPD, which is significantly lower than full taxes, often as low as $0. The incentive is calibrated to term of project's regulatory agreement and can last as long as 60 years.

These three programs provide options to reduce the operating gap when the 421-a tax benefits expires, as listed below:

- Apply to transfer property to Article XI, if the owner is willing to change its ownership structure to a non-profit Housing Development Fund Company (HDFC).
- Apply to transfer property to 420-c, if it is once used or currently rehabbing with Low Income Housing Tax Credits (LIHTC).
- Rehabilitate the property to qualify for J-51, but the new benefit only offers an exemption and abatement on the increase in the current assessed value resulting from the rehab, and may not be substantial enough.

Additionally, if the property is a rental building with no other regulatory agreements in place, it can be converted to condo ownership which results in loss of affordable rental units.

4.5 Alternatives

Since the authority of state and local government to issue tax-exempt "private activity" bonds had been limited and may not always be available even to developers who are willing to build "80/20" projects (Citizens Housing and Planning council of New York, 2002), the intention of this section is to study alternatives to make the 421-a program more effective as a stand-alone incentive, or to couple it with other benefits such as inclusionary zoning that are not constrained by federal law.

Negotiable Certificate. This was previously used in the 421-a affordable housing program, which provided equity to affordable housing developers through the sale of negotiable certificate to the developers of market-rate housing.

However, the negotiable certificate program was inefficient, as the certificates were not selling for close to their value to the developers. The previous study on "the Marais" as a rental building suggested that the developer only paid 39 cents per dollar of tax benefit, and pocketed $1.95 million in net benefit. Furthermore, the price per certificate fluctuated and relied on strong housing market to drive the demand for certificates. In 1999, market-rate developers paid on average about $17,000 to $18,000 per certificate (Lee R. R., 1999). By 2008, a certificate was worth close to $40,000 each, but that value has dropped to as low as $12,000 in 2009 (Pincus, 2009) because developers were unable to obtain financing for their projects. A study by Independent Budget Office estimated, in some cases, developers contributed as little as 12 to 15 cents towards affordable housing for every dollar of tax break (Pratt Center for Community Development / Habitat for Humanity NYC, 2006).

In 2005, the price range for 10-year 421-a negotiable certificates was consistently reported in interviews with housing developers and housing advocacy organizations to be $10,500 to $13,000. Assuming five certificates were given per affordable units, the subsidy for each affordable unit generated through the certificate was likely between $52,500 and $65,000. Since developments receiving 10-year 421-a tax exemptions in the exclusion zone must purchase certificates from affordable housing developers and 7,675 housing units received approximately $119 million in tax exemptions, this means these developments helped to finance approximately 1,918 units of affordable housing (Office of the Policy Management, 2006). Based on these calculations, the average city's expenditure per affordable unit was roughly $62,000, which was roughly in the range of subsidy the affordable housing developers are receiving. Meanwhile, the "the Marais" (Table 5) in reality suggests that the tax exemption is worth, on average, $56,000 per market-rate unit in lifetime tax benefits, much more than the certificate price purchased by the developers. Therefore, the certificate program leverages only between 19% and 23% of the investment value of the tax benefits for affordable housing.

Since the certificates did not efficiently capture for the city the value of benefits received by the market-rate developers, the system was ended in 2007 and replaced with a $400 million Affordable Housing Trust Fund – financed half from Battery Park City revenue and half from city capital fund. It is hard to tell if the fund is more efficient than the negotiable certificate because the amount of subsidy per unit the fund would provide is unclear. While the dedicated fund intends to capture the lost revenue and direct it toward construction of affordable housing, many are hesitant about its effectiveness. According to Peter Fine of Atlantic Development Group, which has accounted for two-thirds of New York's total certificate units, stated that the elimination of certificates caused the company to shift gears as "the new system won't have as much fluidity" and "takes longer to get deals done because of the extra layers of bureaucracy", compared to the certificate program which were used a consistent formula (Hughes, 2008). Furthermore, as pointed out by the 421-a task force, a dedicated affordable housing fund would be subject to volatility of the annual appropriation process and therefore a constant stream of funding may not be guaranteed (NYC Department of Housing Preservation and Development, 2006).

Eliminating the negotiable certificate program would also eliminate the possibility of off-site affordable housing. While on-site affordable housing eliminates gentrification, it is also more costly than off-site options. The earlier financial model (Table 19) indicated that the current 20-year tax benefit alone offered to developers was not powerful financial incentive for the inclusion of 20% of the units for low and moderate-income households. If there was no regulatory agreement on the other 80% of the units and the market is strong enough to absorb the below-market rents for "cross-subsidization", the developers would be inclined to include those below-market units. Yet as the program is designed now, the affordability gap will likely continue to increase without deeper subsidies.

If the value of 421-a negotiable certificates can be increased, the 421-a certificates can remain an effective tool for creating affordable housing in New York City. These certificates were undervalued because there was little oversight of the certificate process and relatively few buyers and sellers. The certificates were sold through private transactions between the affordable housing developer and the market-rate developer and thus there was inherent risk for both parties. According to Carol Lamberg, Settlement Housing Fund, nonprofit group that has built low-income homes in New York since 1969, the chief drawback of the program was that the certificates were awarded after the completion of affordable housing (Hughes, 2008). Therefore, the market-rate developer's tax benefit depended on the affordable housing developer to finish construction. As a result, the market-rate developer would factor the risk of non-completion by lowering the purchase price and by paying most of the price upon completion. Since most certificates are not sold before construction completes, this made only a small number of well-capitalized affordable housing developers able to utilize the program, as he/she must have sufficient resources for construction until the certificate equity arrives. During the crisis in 2009, many market-rate developers walked away from their purchase agreement and gave up their down payments because they could not get financing for their projects. Additionally, the program favors affordable housing developers with "well-established networks who know how to navigate the program, since most affordable housing developers do not have the networks to connect to market-rate certificate purchasers" (NYC Department of Housing Preservation and Development, 2006).

Programmatic changes for the certificate program are required to better leverage the funds for affordable housing by increasing the price for the certificates:

1. <u>Establish a regulated marketplace for certificate</u> – With city agency's oversight of the marketplace, transactions are no longer private and more transparent. Additionally, this would increase the number of developer participants in the program and not favor certain affordable housing developers. As a result, better pricing on the certificate can be achieved.

2. <u>Guarantee the tax credit relief</u> – Department of Housing Preservation and Development (HPD) can act as intermediary between the affordable housing developer and the market-rate housing developer. HPD can grant certificates prior to completing construction if the project has a Guaranteed Maximum Price contract and the construction lender has a completion bond requirement. Additionally, if the affordable housing developer fails to complete the project, HPD can place a lien on the land. This shifts the performance risk to the affordable housing developer and reduces transaction risk incurred previously by the

market-rate developers. As a result, the price of the certificates should increase, perhaps substantially.

3. Set a minimum price for certificates – The HPD should regulate the number of certificates issued each year and set a minimum price for their purchase. For instance, in the case of "the Marais", the present value for the lifetime tax benefit for a market-rate unit is $56,000. The minimum price can be set to at least half of such the lifetime tax benefit, achieving a better value for the certificates. Earlier example of purchasing negotiable certificate in Section 3.2 indicated that market-rate developer could pay up to $0.94 per $1 of certificate benefit in exchange for property tax exemptions. Additionally, the regulation of certificate quantity will make the program more competitive and thus drive up the certificates' prices.

4. Change ratio of certificates generated – a study by the 421-a task force indicated that certificates for moderate-income housing were barely generated because "the higher rent can't cover the additional equity required when tax credits are not used" (NYC Department of Housing Preservation and Development, 2006). With the previously quoted certificate price of $10,500 to $13,000 each, four certificates generate less than $52,000 per unit towards construction of an affordable unit. As a result, the 421-a task force recommended changing the ratio of certificates to improve the productivity, the value, and competitiveness of the program.

Table 22: Number of Certificates Generated as recommended by 421-a task force

	Previously	Proposed
Low Income Units (<60% of AMI)	5	3
Moderate Income Units (60% to 100% of AMI)	4	
Moderate income units (60% to 80% AMI)		5
Moderate income units (80% to 100% AMI)		4

5. Issue certificates for mix-income housing – previously, a negotiable certificate was only issued to affordable housing developers and was criticized for the absence of social and economic integration. By allowing a mixed-income project to generate a certificate (not just low-income project), the social implication is addressed.

All of these changes would increase the minimum price for certificates to better capture the tax revenue previously lost through the gap between certificate revenue and property tax benefit granted. By improving the certificate program, more affordable units can be generated with less direct subsidy from the city. Even though the prices might still be below the value of the tax benefits received, the increased subsidy will encourage development of affordable housing with adequate gains for market-rate developers to participate in the 421-a affordable housing program.

Using the Marais's current structure with 80% rent-stabilized housing and 20% affordable housing with required affordability length of 35 years, two different scenarios are examined with the improved certificate program reinstated. In addition to receiving property tax benefits, Alternative-1A provided the developer with 5 certificates for each of the affordable unit provided on-site, which are then sold to development with inclusionary zoning program (discussed in a later section) or other mixed-income housing development that is not eligible for the 421-a property tax exemption program. Each certificate is assumed to be traded at $0.75 per $1 of property tax benefits and presented the development with an additional $2.4 million in equity that gave the developer a strong incentive to include affordable housing on site.

Table 23: Alternative 1A - "the Marais" with 20% affordable units @ 60% AMI, negotiable certificate, and 20-yr real estate tax exemption (Appendix 11)

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (19,246,178)	$ (19,246,178)
1	$ 2,437,437	$ 480,462	$ 4,227,065	100%	$ 313,000	$ 38,236	$ 478,142	$ 1,918,738	$ 696,400	$ 1,222,338		$ 1,222,338
2	$ 2,510,560	$ 490,071	$ 4,364,255	100%	$ 313,000	$ 38,956	$ 504,215	$ 1,981,533	$ 696,400	$ 1,285,133		$ 1,285,133
3	$ 2,585,876	$ 499,873	$ 4,505,768	100%	$ 313,000	$ 39,689	$ 531,649	$ 2,046,315	$ 696,400	$ 1,349,915		$ 1,349,915
4	$ 2,663,453	$ 509,870	$ 4,651,738	100%	$ 313,000	$ 40,436	$ 560,512	$ 2,113,147	$ 696,400	$ 1,416,747		$ 1,416,747
5	$ 2,743,356	$ 520,068	$ 4,802,304	100%	$ 313,000	$ 41,197	$ 590,878	$ 2,182,092	$ 696,400	$ 1,485,692		$ 1,485,692
6	$ 2,825,657	$ 530,469	$ 4,957,606	100%	$ 313,000	$ 41,972	$ 622,824	$ 2,253,216	$ 696,400	$ 1,556,816		$ 1,556,816
7	$ 2,910,427	$ 541,078	$ 5,117,793	100%	$ 313,000	$ 42,762	$ 656,430	$ 2,326,586	$ 696,400	$ 1,630,186		$ 1,630,186
8	$ 2,997,739	$ 551,900	$ 5,283,014	100%	$ 313,000	$ 43,567	$ 691,781	$ 2,402,273	$ 696,400	$ 1,705,873		$ 1,705,873
9	$ 3,087,672	$ 562,938	$ 5,453,425	100%	$ 313,000	$ 44,387	$ 728,967	$ 2,480,347	$ 696,400	$ 1,783,947		$ 1,783,947
10	$ 3,180,302	$ 574,197	$ 5,629,187	100%	$ 313,000	$ 45,222	$ 768,080	$ 2,560,883	$ 696,400	$ 1,864,483	$ 26,098,805	$ 27,963,289
11	$ 3,275,711	$ 585,680	$ 5,810,466	100%	$ 313,000	$ 46,073	$ 809,219	$ 2,643,957				
12	$ 3,373,982	$ 597,394	$ 5,997,430	100%	$ 313,000	$ 46,940	$ 852,488	$ 2,729,648				
13	$ 3,475,202	$ 609,342	$ 6,190,257	80%	$ 1,488,451	$ 227,422	$ 718,395	$ 2,638,437				
14	$ 3,579,458	$ 621,529	$ 6,389,126	80%	$ 1,528,225	$ 237,894	$ 756,681	$ 2,720,035				
15	$ 3,686,841	$ 633,959	$ 6,594,225	60%	$ 2,825,490	$ 448,113	$ 597,708	$ 2,604,769				
16	$ 3,797,447	$ 646,639	$ 6,805,745	60%	$ 2,910,098	$ 470,217	$ 629,464	$ 2,680,591				
17	$ 3,911,370	$ 659,571	$ 7,023,885	40%	$ 4,339,531	$ 714,383	$ 441,904	$ 2,537,416				
18	$ 4,028,711	$ 672,763	$ 7,248,849	40%	$ 4,474,509	$ 750,466	$ 465,313	$ 2,605,482				
19	$ 4,149,573	$ 686,218	$ 7,480,846	20%	$ 6,047,277	$ 1,033,340	$ 244,964	$ 2,430,015				
20	$ 4,274,060	$ 699,942	$ 7,720,093	20%	$ 6,238,675	$ 1,086,108	$ 257,904	$ 2,488,009				
21	$ 5,597,205	$ 713,941	$10,547,851	0%	$10,547,851	$ 1,870,864	$ -	$ 3,012,400				
22	$ 5,835,275	$ 728,220	$11,031,238	0%	$11,031,238	$ 1,993,425	$ -	$ 3,113,629				
23	$ 6,083,516	$ 742,784	$11,535,981	0%	$11,535,981	$ 2,123,869	$ -	$ 3,216,863				
24	$ 6,342,367	$ 757,640	$12,063,010	0%	$12,063,010	$ 2,262,697	$ -	$ 3,322,030				
25	$ 6,612,281	$ 772,793	$12,613,295	0%	$12,613,295	$ 2,410,442	$ -	$ 3,429,046				
26	$ 6,893,733	$ 788,249	$13,187,847	0%	$13,187,847	$ 2,567,672	$ -	$ 3,537,813				
27	$ 7,187,218	$ 804,014	$13,787,722	0%	$13,787,722	$ 2,734,989	$ -	$ 3,648,216				
28	$ 7,493,252	$ 820,094	$14,414,022	0%	$14,414,022	$ 2,913,035	$ -	$ 3,760,123				
29	$ 7,812,373	$ 836,496	$15,067,895	0%	$15,067,895	$ 3,102,491	$ -	$ 3,873,386				
30	$ 8,145,143	$ 853,226	$15,750,540	0%	$15,750,540	$ 3,304,082	$ -	$ 3,987,834				
31	$ 8,492,146	$ 870,290	$16,463,207	0%	$16,463,207	$ 3,518,579	$ -	$ 4,103,276				
32	$ 8,853,993	$ 887,696	$17,207,202	0%	$17,207,202	$ 3,746,801	$ -	$ 4,219,496				
33	$ 9,231,323	$ 905,450	$17,983,884	0%	$17,983,884	$ 3,989,618	$ -	$ 4,336,254				
34	$ 9,624,797	$ 923,559	$18,794,675	0%	$18,794,675	$ 4,247,957	$ -	$ 4,453,282				
35	$ 10,035,111	$ 942,030	$19,641,054	0%	$19,641,054	$ 4,522,801	$ -	$ 4,570,279				
36	$ 12,528,406	$ 960,871	$24,985,875	0%	$24,985,875	$ 5,861,851	$ -	$ 5,705,684				
Unlevered IRR												**9.91%**
PV of investment benefits @ 7.7% discount rate												**$ 22,544,416**
NPV of investment benefits @ 7.7% discount rate												**$ 3,298,239**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate												**$ 7,529,481**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 4,040,120**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ (4,364,254)**
Negotiable Certificates (buy - /sell +)												**$ 2,405,822**
MV of Low-Income Housing Tax Credit												**$ -**

Compared to the current structure of the program (Table 19) where the net benefit for developer to include affordable housing is negative, this alternative gave the developer a much stronger incentive with a net benefit of $2 million, a higher unlevered IRR (9.91% instead of 8.26%) and a much higher NPV ($3.3 million instead of $892,400). However, this alternative seemed to favor the developer as his/her return for the project has improved yet the city's expenditure remained the same. Thus, Alternative-1B below proposed reducing the property tax exemption period to 15 year[6] while offering developer the same amount of negotiable certificate for sale. The affordability requirement has also been changed to 50% of the AMI.

Table 24: Alternative-1B --"The Marais" with 20% affordable units @ 50% AMI, negotiable certificate, and 15-year real estate tax exemption (Appendix 12)

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (19,246,178)	$ (19,246,178)
1	$ 2,411,360	$ 480,462	$ 4,170,739	100%	$ 313,000	$ 38,236	$ 471,261	$ 1,892,662	$ 696,400	$ 1,196,262		$ 1,196,262
2	$ 2,483,700	$ 490,071	$ 4,306,239	100%	$ 313,000	$ 38,956	$ 496,995	$ 1,954,673	$ 696,400	$ 1,258,273		$ 1,258,273
3	$ 2,558,211	$ 499,873	$ 4,446,012	100%	$ 313,000	$ 39,689	$ 524,072	$ 2,018,650	$ 696,400	$ 1,322,250		$ 1,322,250
4	$ 2,634,958	$ 509,870	$ 4,590,189	100%	$ 313,000	$ 40,436	$ 552,561	$ 2,084,652	$ 696,400	$ 1,388,252		$ 1,388,252
5	$ 2,714,007	$ 520,068	$ 4,738,908	100%	$ 313,000	$ 41,197	$ 582,534	$ 2,152,742	$ 696,400	$ 1,456,342		$ 1,456,342
6	$ 2,795,427	$ 530,469	$ 4,892,309	100%	$ 313,000	$ 41,972	$ 614,068	$ 2,222,986	$ 696,400	$ 1,526,586		$ 1,526,586
7	$ 2,879,290	$ 541,078	$ 5,050,536	100%	$ 313,000	$ 42,762	$ 647,241	$ 2,295,449	$ 696,400	$ 1,599,049		$ 1,599,049
8	$ 2,965,668	$ 551,900	$ 5,213,740	100%	$ 313,000	$ 43,567	$ 682,139	$ 2,370,202	$ 696,400	$ 1,673,802		$ 1,673,802
9	$ 3,054,638	$ 562,938	$ 5,382,073	100%	$ 313,000	$ 44,387	$ 718,848	$ 2,447,314	$ 696,400	$ 1,750,914		$ 1,750,914
10	$ 3,146,277	$ 574,197	$ 5,555,695	100%	$ 313,000	$ 45,222	$ 757,462	$ 2,526,859	$ 696,400	$ 1,830,459	$ 25,615,221	$ 27,445,680
11	$ 3,240,666	$ 585,680	$ 5,734,768	100%	$ 313,000	$ 46,073	$ 798,077	$ 2,608,912				
12	$ 3,337,886	$ 597,394	$ 5,919,462	80%	$ 1,434,292	$ 215,099	$ 672,636	$ 2,525,392				
13	$ 3,438,022	$ 609,342	$ 6,109,949	60%	$ 2,631,780	$ 402,113	$ 531,434	$ 2,426,567				
14	$ 3,541,163	$ 621,529	$ 6,306,410	40%	$ 3,909,046	$ 608,509	$ 373,190	$ 2,311,125				
15	$ 3,647,398	$ 633,959	$ 6,509,027	20%	$ 5,269,822	$ 835,775	$ 196,534	$ 2,177,663				
16	$ 3,756,820	$ 646,639	$ 6,717,991	0%	$ 6,717,991	$ 1,085,501	$ -	$ 2,024,680				
17	$ 3,869,524	$ 659,571	$ 6,933,498	0%	$ 6,933,498	$ 1,141,408	$ -	$ 2,068,545				
18	$ 3,985,610	$ 672,763	$ 7,155,750	0%	$ 7,155,750	$ 1,200,165	$ -	$ 2,112,682				
19	$ 4,105,178	$ 686,218	$ 7,384,954	0%	$ 7,384,954	$ 1,261,918	$ -	$ 2,157,042				
20	$ 4,228,334	$ 699,942	$ 7,621,325	0%	$ 7,621,325	$ 1,326,818	$ -	$ 2,201,573				
21	$ 5,550,108	$ 713,941	$10,446,119	0%	$10,446,119	$ 1,852,820	$ -	$ 2,983,346				
22	$ 5,786,764	$ 728,220	$10,926,455	0%	$10,926,455	$ 1,974,490	$ -	$ 3,084,054				
23	$ 6,033,550	$ 742,784	$11,428,054	0%	$11,428,054	$ 2,103,999	$ -	$ 3,186,767				
24	$ 6,290,902	$ 757,640	$11,951,846	0%	$11,951,846	$ 2,241,845	$ -	$ 3,291,417				
25	$ 6,559,272	$ 772,793	$12,498,795	0%	$12,498,795	$ 2,388,561	$ -	$ 3,397,919				
26	$ 6,839,134	$ 788,249	$13,069,912	0%	$13,069,912	$ 2,544,710	$ -	$ 3,506,176				
27	$ 7,130,981	$ 804,014	$13,666,250	0%	$13,666,250	$ 2,710,893	$ -	$ 3,616,074				
28	$ 7,435,328	$ 820,094	$14,288,905	0%	$14,288,905	$ 2,887,749	$ -	$ 3,727,485				
29	$ 7,752,711	$ 836,496	$14,939,025	0%	$14,939,025	$ 3,075,957	$ -	$ 3,840,259				
30	$ 8,083,691	$ 853,226	$15,617,804	0%	$15,617,804	$ 3,276,238	$ -	$ 3,954,227				
31	$ 8,428,850	$ 870,290	$16,326,489	0%	$16,326,489	$ 3,489,359	$ -	$ 4,069,201				
32	$ 8,788,799	$ 887,696	$17,066,382	0%	$17,066,382	$ 3,716,138	$ -	$ 4,184,965				
33	$ 9,164,172	$ 905,450	$17,838,840	0%	$17,838,840	$ 3,957,441	$ -	$ 4,301,282				
34	$ 9,555,633	$ 923,559	$18,645,279	0%	$18,645,279	$ 4,214,190	$ -	$ 4,417,883				
35	$ 9,963,871	$ 942,030	$19,487,176	0%	$19,487,176	$ 4,487,367	$ -	$ 4,534,473				
36	$ 12,528,406	$ 960,871	$24,985,875	0%	$24,985,875	$ 5,861,851	$ -	$ 5,705,684				
Unlevered IRR												**9.64%**
PV of investment benefits @ 7.7% discount rate												**$ 22,114,396**
NPV of investment benefits @ 7.7% discount rate												**$ 2,868,218**
PV of Total 421-a RE Tax Foregone by the city @ 4.76% discount rate												**$ 6,076,281**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 3,983,121**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ (4,563,963)**
Negotiable Certificates (buy - /sell +)												**$ 2,405,822**
MV of Low-Income Housing Tax Credit												**$ -**

This scenario resulted in a slightly lower return than Alternative-1A, however, the shorter property tax exemption period reduced the burden on the city by leveraging on other development to

[6] Reduction to 10 year and 10 year with extended partial tax exemption for affordable units were studied and both yielded negative NPV as well as low unlevered IRR in the range of 6.6% to 7.4%.

sponsor affordable housing. Compared to the current structure where the developer looks to "double-dip" in federal low-income housing credit (Current-B) to make the project looks attractive, the return of the negotiable certificate provides a better incentive for developer to include lower-income units in their project, and allows the city to collect full property taxes sooner.

Inclusionary Zoning. In 1987, the city enacted its inclusionary housing program as another incentive for market-rate developers to contribute to the inventory of affordable housing. Developments are offered additional floor area, within the height and bulk regulations permitted in the zoning district, in exchange for a proportionate amount of affordable housing. Affordable units can be provided either on-site, or off-site through new construction, rehabilitation, or preservation of existing affordable units. In order to receive the density bonus, the affordable units must be created no later than the development receiving the bonus. Besides the density bonus, other cost offsets are offered to the developers includes zoning variances, expedited permits, reduced parking requirements, waivers or deferrals of certain municipal fees (Policy Link and Pratt Center, 2004). Additionally, the program can be combined with city, state, and federal programs, such as the 80/20 program for low-income housing tax credits (LIHTC). Similar to the 421-a program, the inclusionary housing program requires units to be subject to rent stabilization. While the 421-a requires affordable units remain affordable for a maximum 35 years, this program requires the affordable units to remain affordable in perpetuity.

The current inclusionary zoning program is only applicable to certain zoning districts and the bonus square footage is offered on a sliding scale according to the type and location of the affordable units. Regardless, to study whether the inclusionary zoning program can be a good alternative to the 421-a program, "the Marais" case is reexamined and assumed to receives the typical 20% of additional floor area for setting aside 20% of the units on-site as low-income housing. The projected cash flow below showed that without any property tax benefits, the density bonus alone is not sufficient for the developer to set aside 20% of the units at below-market rents.

Table 25: Alternative-1B -- "The Marais" with 20% affordable units @ 50% AMI, 80/20 program, and inclusionary zoning (Appendix 12)

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (24,491,421)	$ (24,491,421)
1	$ 2,981,600	$ 571,454	$ 5,205,914	0%	$ 5,205,914	$ 635,955	$ -	$ 1,774,191	$ 700,800	$ 1,073,391		$ 1,073,391
2	$ 3,071,048	$ 582,883	$ 5,374,435	0%	$ 5,374,435	$ 668,897	$ -	$ 1,819,267	$ 700,800	$ 1,118,467		$ 1,118,467
3	$ 3,163,179	$ 594,541	$ 5,548,259	0%	$ 5,548,259	$ 703,527	$ -	$ 1,865,111	$ 700,800	$ 1,164,311		$ 1,164,311
4	$ 3,258,075	$ 606,432	$ 5,727,548	0%	$ 5,727,548	$ 739,929	$ -	$ 1,911,714	$ 700,800	$ 1,210,914		$ 1,210,914
5	$ 3,355,817	$ 618,561	$ 5,912,474	0%	$ 5,912,474	$ 778,194	$ -	$ 1,959,062	$ 700,800	$ 1,258,262		$ 1,258,262
6	$ 3,456,492	$ 630,932	$ 6,103,209	0%	$ 6,103,209	$ 818,417	$ -	$ 2,007,143	$ 700,800	$ 1,306,343		$ 1,306,343
7	$ 3,560,186	$ 643,550	$ 6,299,933	0%	$ 6,299,933	$ 860,696	$ -	$ 2,055,940	$ 700,800	$ 1,355,140		$ 1,355,140
8	$ 3,666,992	$ 656,421	$ 6,502,832	0%	$ 6,502,832	$ 905,136	$ -	$ 2,105,434	$ 700,800	$ 1,404,634		$ 1,404,634
9	$ 3,777,002	$ 669,550	$ 6,712,096	0%	$ 6,712,096	$ 951,846	$ -	$ 2,155,605	$ 700,800	$ 1,454,805		$ 1,454,805
10	$ 3,890,312	$ 682,941	$ 6,927,921	0%	$ 6,927,921	$ 1,000,942	$ -	$ 2,206,428	$ 700,800	$ 1,505,628	$ 26,026,036	$ 27,531,665
11	$ 4,007,021	$ 696,600	$ 7,150,510	0%	$ 7,150,510	$ 1,052,545	$ -	$ 2,257,876				
12	$ 4,127,232	$ 710,532	$ 7,380,072	0%	$ 7,380,072	$ 1,106,781	$ -	$ 2,309,919				
13	$ 4,251,049	$ 724,742	$ 7,616,822	0%	$ 7,616,822	$ 1,163,784	$ -	$ 2,362,522				
14	$ 4,378,580	$ 739,237	$ 7,860,981	0%	$ 7,860,981	$ 1,223,694	$ -	$ 2,415,649				
15	$ 4,509,937	$ 754,022	$ 8,112,778	0%	$ 8,112,778	$ 1,286,658	$ -	$ 2,469,258				
16	$ 4,645,236	$ 769,102	$ 8,372,448	0%	$ 8,372,448	$ 1,352,831	$ -	$ 2,523,303				
17	$ 4,784,593	$ 784,484	$ 8,640,234	0%	$ 8,640,234	$ 1,422,374	$ -	$ 2,577,734				
18	$ 4,928,130	$ 800,174	$ 8,916,386	0%	$ 8,916,386	$ 1,495,460	$ -	$ 2,632,497				
19	$ 5,075,974	$ 816,178	$ 9,201,161	0%	$ 9,201,161	$ 1,572,266	$ -	$ 2,687,531				
20	$ 5,228,254	$ 832,501	$ 9,494,825	0%	$ 9,494,825	$ 1,652,981	$ -	$ 2,742,772				
21	$ 6,878,756	$ 849,151	$13,023,947	0%	$13,023,947	$ 2,310,047	$ -	$ 3,719,558				
22	$ 7,172,810	$ 866,134	$13,622,420	0%	$13,622,420	$ 2,461,671	$ -	$ 3,845,005				
23	$ 7,479,474	$ 883,457	$14,247,397	0%	$14,247,397	$ 2,623,063	$ -	$ 3,972,954				
24	$ 7,799,289	$ 901,126	$14,900,033	0%	$14,900,033	$ 2,794,846	$ -	$ 4,103,317				
25	$ 8,132,822	$ 919,149	$15,581,535	0%	$15,581,535	$ 2,977,682	$ -	$ 4,235,991				
26	$ 8,480,662	$ 937,532	$16,293,161	0%	$16,293,161	$ 3,172,276	$ -	$ 4,370,854				
27	$ 8,843,423	$ 956,282	$17,036,223	0%	$17,036,223	$ 3,379,375	$ -	$ 4,507,766				
28	$ 9,221,747	$ 975,408	$17,812,093	0%	$17,812,093	$ 3,599,776	$ -	$ 4,646,563				
29	$ 9,616,304	$ 994,916	$18,622,197	0%	$18,622,197	$ 3,834,325	$ -	$ 4,787,063				
30	$ 10,027,790	$ 1,014,814	$19,468,028	0%	$19,468,028	$ 4,083,921	$ -	$ 4,929,055				
31	$ 10,456,935	$ 1,035,111	$20,351,141	0%	$20,351,141	$ 4,349,523	$ -	$ 5,072,301				
32	$ 10,904,497	$ 1,055,813	$21,273,159	0%	$21,273,159	$ 4,632,147	$ -	$ 5,216,538				
33	$ 11,371,269	$ 1,076,929	$22,235,774	0%	$22,235,774	$ 4,932,874	$ -	$ 5,361,465				
34	$ 11,858,076	$ 1,098,468	$23,240,754	0%	$23,240,754	$ 5,252,856	$ -	$ 5,506,753				
35	$ 12,365,780	$ 1,120,437	$24,289,941	0%	$24,289,941	$ 5,593,314	$ -	$ 5,652,029				
36	$ 12,895,280	$ 1,142,846	$25,385,258	0%	$25,385,258	$ 5,955,549	$ -	$ 5,796,886				
Unlevered IRR												**5.64%**
PV of investment benefits @ 7.7% discount rate												**$ 20,938,977**
NPV of investment benefits @ 7.7% discount rate												**$ (3,552,444)**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate												**$ -**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ -**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ (196,795)**
Negotiable Certificates (buy - /sell +)												**$ -**
MV of Low-Income Housing Tax Credit												**$ 1,490,979**

The scenario above suggested the importance of property tax exemption to the financial feasibility of a mixed-income housing development. If the negotiable certificate program returned, the development can purchase certificates from another mixed-income development that received certificate instead of density bonus, such as the ones in Alternative-1A and 1B. With a 15-year property tax exemption, the project will generate a positive NPV.

Table 26: Alternative-2B -- "The Marais" with 20% affordable units @ 60% AMI, inclusionary zoning, and 15-year real estate tax exemption (Appendix 14)

Year	Effective Gross Income	Operating Expenses	Actual Assessd Value	Tax Exemption %	Taxable Value	Total Real Estate Tax Paid	Total Real Estate Tax Saved	Net Operating Income	Capital Reserve + Ground Lease	Property Before-Tax CF (Operations)	Property Before-Tax CF (Reversion)	Property Before-Tax CF
0											$ (28,388,222)	$ (28,388,222)
1	$ 3,007,676	$ 571,454	$ 5,262,239	100%	$ 313,000	$ 38,236	$ 604,599	$ 2,397,986	$ 700,800	$ 1,697,186		$ 1,697,186
2	$ 3,097,906	$ 582,883	$ 5,432,450	100%	$ 313,000	$ 38,956	$ 637,162	$ 2,476,067	$ 700,800	$ 1,775,267		$ 1,775,267
3	$ 3,190,844	$ 594,541	$ 5,608,013	100%	$ 313,000	$ 39,689	$ 671,415	$ 2,556,614	$ 700,800	$ 1,855,814		$ 1,855,814
4	$ 3,286,569	$ 606,432	$ 5,789,096	100%	$ 313,000	$ 40,436	$ 707,445	$ 2,639,701	$ 700,800	$ 1,938,901		$ 1,938,901
5	$ 3,385,166	$ 618,561	$ 5,975,868	100%	$ 313,000	$ 41,197	$ 745,341	$ 2,725,409	$ 700,800	$ 2,024,609		$ 2,024,609
6	$ 3,486,721	$ 630,932	$ 6,168,505	100%	$ 313,000	$ 41,972	$ 785,201	$ 2,813,817	$ 700,800	$ 2,113,017		$ 2,113,017
7	$ 3,591,323	$ 643,550	$ 6,367,188	100%	$ 313,000	$ 42,762	$ 827,122	$ 2,905,010	$ 700,800	$ 2,204,210		$ 2,204,210
8	$ 3,699,062	$ 656,421	$ 6,572,104	100%	$ 313,000	$ 43,567	$ 871,211	$ 2,999,074	$ 700,800	$ 2,298,274		$ 2,298,274
9	$ 3,810,034	$ 669,550	$ 6,783,446	100%	$ 313,000	$ 44,387	$ 917,578	$ 3,096,098	$ 700,800	$ 2,395,298		$ 2,395,298
10	$ 3,924,335	$ 682,941	$ 7,001,412	100%	$ 313,000	$ 45,222	$ 966,338	$ 3,196,172	$ 700,800	$ 2,495,372	$ 30,999,343	$ 33,494,716
11	$ 4,042,065	$ 696,600	$ 7,226,206	100%	$ 313,000	$ 46,073	$ 1,017,614	$ 3,299,392				
12	$ 4,163,327	$ 710,532	$ 7,458,038	80%	$ 1,742,008	$ 261,247	$ 857,227	$ 3,191,549				
13	$ 4,288,227	$ 724,742	$ 7,697,127	60%	$ 3,266,651	$ 499,116	$ 676,938	$ 3,064,369				
14	$ 4,416,874	$ 739,237	$ 7,943,695	40%	$ 4,891,417	$ 761,431	$ 475,138	$ 2,916,205				
15	$ 4,549,380	$ 754,022	$ 8,197,974	20%	$ 6,620,979	$ 1,050,064	$ 250,106	$ 2,745,294				
16	$ 4,685,861	$ 769,102	$ 8,460,200	0%	$ 8,460,200	$ 1,367,010	$ -	$ 2,549,750				
17	$ 4,826,437	$ 784,484	$ 8,730,618	0%	$ 8,730,618	$ 1,437,254	$ -	$ 2,604,699				
18	$ 4,971,230	$ 800,174	$ 9,009,482	0%	$ 9,009,482	$ 1,511,074	$ -	$ 2,659,983				
19	$ 5,120,367	$ 816,178	$ 9,297,050	0%	$ 9,297,050	$ 1,588,651	$ -	$ 2,715,539				
20	$ 5,273,978	$ 832,501	$ 9,593,591	0%	$ 9,593,591	$ 1,670,175	$ -	$ 2,771,302				
21	$ 6,925,853	$ 849,151	$13,125,675	0%	$13,125,675	$ 2,328,091	$ -	$ 3,748,611				
22	$ 7,221,319	$ 866,134	$13,727,200	0%	$13,727,200	$ 2,480,605	$ -	$ 3,874,580				
23	$ 7,529,439	$ 883,457	$14,355,320	0%	$14,355,320	$ 2,642,933	$ -	$ 4,003,049				
24	$ 7,850,753	$ 901,126	$15,011,194	0%	$15,011,194	$ 2,815,697	$ -	$ 4,133,930				
25	$ 8,185,830	$ 919,149	$15,696,031	0%	$15,696,031	$ 2,999,563	$ -	$ 4,267,118				
26	$ 8,535,259	$ 937,532	$16,411,092	0%	$16,411,092	$ 3,195,237	$ -	$ 4,402,491				
27	$ 8,899,658	$ 956,282	$17,157,693	0%	$17,157,693	$ 3,403,470	$ -	$ 4,539,906				
28	$ 9,279,670	$ 975,408	$17,937,206	0%	$17,937,206	$ 3,625,061	$ -	$ 4,679,201				
29	$ 9,675,964	$ 994,916	$18,751,064	0%	$18,751,064	$ 3,860,858	$ -	$ 4,820,190				
30	$ 10,089,241	$ 1,014,814	$19,600,761	0%	$19,600,761	$ 4,111,766	$ -	$ 4,962,661				
31	$ 10,520,229	$ 1,035,111	$20,487,856	0%	$20,487,856	$ 4,378,742	$ -	$ 5,106,376				
32	$ 10,969,690	$ 1,055,813	$21,413,975	0%	$21,413,975	$ 4,662,809	$ -	$ 5,251,068				
33	$ 11,438,417	$ 1,076,929	$22,380,815	0%	$22,380,815	$ 4,965,051	$ -	$ 5,396,437				
34	$ 11,927,239	$ 1,098,468	$23,390,146	0%	$23,390,146	$ 5,286,621	$ -	$ 5,542,150				
35	$ 12,437,018	$ 1,120,437	$24,443,814	0%	$24,443,814	$ 5,628,747	$ -	$ 5,687,834				
36	$ 12,968,655	$ 1,142,846	$25,543,748	0%	$25,543,748	$ 5,992,731	$ -	$ 5,833,078				
Unlevered IRR												**7.78%**
PV of investment benefits @ 7.7% discount rate												**$ 28,545,994**
NPV												**$ 157,771**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate												**$ 7,660,249**
PV of 421-a RE Tax Benefit @ 7.7% discount rate												**$ 5,095,729**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate												**$ 2,909**
Negotiable Certificates (buy - /sell +)												**$ (2,405,822)**
MV of Low-Income Housing Tax Credit												**$ -**

5.0 Conclusions

"Property tax incentives are one of the most powerful tools local government has, providing substantial leverage to ensure affordability"

– *Association for Neighborhood and Housing Development, Inc.*

5.1 New Directions

Considering today's economy where the need for affordable housing is likely the most acute, the 421-a property tax exemption program should be renewed with its primary goal set to promoting affordability.

As a production incentive, the cost-effectiveness of the 421-a program have been studied and the results from the current structure program (Table 19) suggest that developers may be reluctant to opt-in to the 421-a affordable housing program unless additional subsidy such as the LIHTC can be obtained (Table 20). The mismatch in the term of the regulatory agreement and the property tax benefits made the project less attractive for developers to set aside valuable market-rate apartment for low-income tenants, even with the property tax exemptions. Based on the study of different alternatives in the previous section, the combination of the property tax exemptions with an improved negotiable certificate program appears to be a stronger incentive to encourage developers to elect to sponsor affordable housing for low-income households. Alternative 1B is recommended as it leverages greater resources for the production of affordable housing units while reducing the city's real estate tax expenditure.

Table 27: Comparing the Alternatives

	2007 reform	*2007 reform*	*alternatives*	*alternatives*	*alternatives*	*alternatives*
	Current - A	**Current - B**	**Alternative 1A**	**Alternative 1B**	**Alternative 2A**	**Alternative 2B**
	80% Stabilize.	**80% Stabilize.**	**80% Stabilize.**	**80% Stabilize.**	**80% Stabilize.**	**80% Stabilize.**
	20% Afford.	**20% Afford.**	**20% Afford.**	**20% Afford.**	**20% Afford.**	**20% Afford.**
Affordability Requirement	**60 % AMI**	**50 % AMI**	**60 % AMI**	**50 % AMI**	**50 % AMI**	**60 % AMI**
Affordability Length	**35 yr**	**35 yr**	**35 yr**	**35 yr**	**35 yr**	**35 yr**
Low Income Housing Tax Credits (LIHTC)		**LIHTC**			**LIHTC**	
Negotiable Certificates (NC)			**NC ($0.75 per $1 benefit)**	**NC ($0.75 per $1 benefit)**		**NC ($0.75 per $1 benefit)**
Inclusionary Zoning (IZ)					**IZ**	**IZ**
Tax Exemption Benefit Period	**20 yr**	**20 yr**	**20 yr**	**15 yr**		**15 yr**
Unlevered IRR	8.26%	8.93%	9.91%	9.64%	5.64%	7.78%
PV of investment benefits @ 7.7% discount rate	$22,544,416	$22,315,001	$22,544,416	$22,114,396	$20,938,977	$28,545,994
NPV of investment benefits @ 7.7% discount rate	$892,416	$1,905,483	$3,298,239	$2,868,218	($3,552,444)	$157,771
PV of Total 421-a RE Tax Foregone by the city @ 4.5% (10yr), 4.76% (15yr), and 4.96% (20yr)	$7,529,481	$7,424,758	$7,529,481	$6,076,281	$0	$7,660,249
PV of 421-a RE Tax Benefit @ 7.7% discount rate	$4,040,120	$3,983,121	$4,040,120	$3,983,121	$0	$5,095,729
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	($4,364,254)	($4,563,963)	($4,364,254)	($4,563,963)	($196,795)	$2,909
Negotiable Certificates (buy - /sell +)	$0	$0	$2,405,822	$2,405,822	$0	($2,405,822)
MV of Low-Income Housing Tax Credit	$0	$1,242,482	$0	$0	$1,490,979	$0
Developer's Net Benefit for electing to include affordable housing	($324,134)	$661,640	$2,081,689	$1,824,981	$1,294,184	$2,692,816

In addition to the linkages between low-income housing and market-rate housing, the program should be carefully calibrated to ensure affordable housing production remains economically feasible throughout the city, particularly with the current weaker market.

First, flexibility must be provided to reflect current real estate development environment. The drawback to using exclusion zones is that local real estate markets can change quickly – if a neighborhood cools down, development may stall or cease because requiring affordable housing contribution may make the development no longer economically viable. It is also impractical to impose uncertainty on developers if the exclusion zone boundaries are revised every two years. Perhaps an alternative method can link affordable housing contributions to projects if the project attributes meet specified benchmarks. For instance, developers would be required to contribute to affordable housing if selling prices or rents exceed stipulated affordable housing criteria.

Second, create more flexibility in the on-site program to accommodate the wide variety of market conditions found in New York City. Similar to the sliding scale offered in the inclusionary zoning program, establishing a sliding scale of set-aside percentages and tenant eligibility limits would allow developers to match the affordability requirement to the specific site, market, and financing requirements of their projects. For instance, developers could have the option to set aside 10% for households making less than 60% of the AMI or 30% of the households making less than 120% of AMI.

Lastly, align the 421-a program goal with the Mayor's "The New Housing Marketplace Plan". The ambitious plan dedicated $7.5 billion to new construction, rehabilitation, and preservation for 165,000 units of affordable housing within a 10-year period (Department of Housing Preservation and Development, 2004-2013). Besides new construction of affordable housing, the plan also focuses on preserving existing stock. If every affordable unit is kept affordable the need for new construction and more funding will be reduced. The 421-a affordable housing program could follow this plan and reposition the program to encourage preservation by extending the property tax benefits for affordable housing units that remains in the building after tax benefits have expired.

5.2 Conclusion

The 421-a property tax exemption program has been "an essential jump-start to the city's stalled housing market and an important boon to the city's economy during a dire moment in its financial history" (Pratt Center for Community Development, 2011). The program has been successful in its original goal as a strategic investment in incentivizing housing market activity, and was critical in the creation of 116,835 new housing units in New York City from 1986 to 2011 (NYC Department of Finance). Given the city's property tax structure, this thesis has demonstrated that the tax benefits are critical and the costs have arguably been worth it as developers depended on the property tax relief to ameliorate the discrimination in real estate assessment policies.

With New York City's housing costs marching dramatically upward, it is increasingly difficult for many New Yorker's to afford housing. Consequently, the latest reform targeted the incentives on the city's most needed benefits: affordable housing and new development in targeted areas. In the midst of such housing crisis and with other affordable units rapidly lost, the city cannot afford to lose this resource. Therefore, the thesis recommends continuing the program but it should be overhauled to create a stronger incentive to ensure that affordable housing is created in mixed-income communities. Developers should have incentives to build mixed-income housing but the current property tax exemption alone is not very attractive. If an improved negotiable certificate program and the 421-a property tax exemptions could be used jointly again, there could be a synergistic effect in stimulating affordable housing development. Developers of other mixed-income buildings that could not qualify for the property tax exemptions could purchase the certificates in order to offset the revenue loss from setting aside valuable market-rate units as affordable units. For developers that received the property tax exemptions, the incentive for doubling up would be similar to an extension of tax exemption period to match the affordability length required, without additional tax expenditures from the city. As a result, the financial burden of including affordable housing on-site is relieved and developers are confident to opt-in to the 421-a affordable housing program.

The thesis offered initial studies on setting the price for the negotiable certificates and reducing the property tax exemption periods. However, the challenge remains for policymakers to determine the adequate amount of property tax incentives to maximize the number of affordable units, while avoiding the prospect of giving away more than is required. With continued reforms, the 421-a property tax exemption program has the potential to be turned into a powerful mechanism to vastly increase the production of low and moderate-income housing for the New Yorkers.

5.2 Further Research

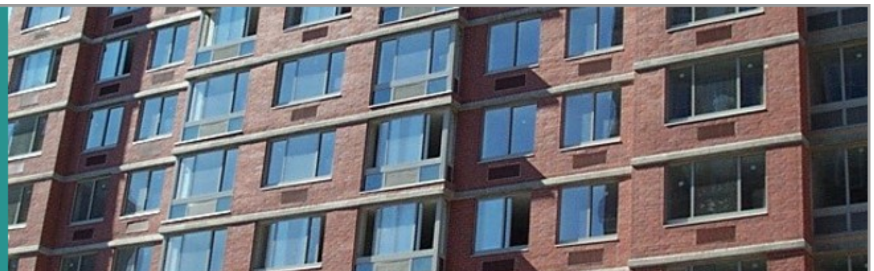
This thesis focused on one case study and specifically examined its property before tax cash flows. The example of "the Marais" is a good proxy of new multi-family developments in the exclusion area, however, New York City has a wide variety of market conditions and it would be beneficial to analyze other developments. Even though the market in Chelsea is in fact high enough to allow "the Marais" to be a positive NPV project with the 20% affordable housing requirement, other areas may not be strong enough that developers would choose not to satisfy the affordable housing requirement in the absence of deeper subsidies. Secondly, Independent Budget Office (IBO)'s analysis shows approximately 800 units of new rental housing have recently been built without the 421-a tax incentives. More research should be done on these parcels to determine why they were able to develop without tax benefits. Lastly, some studies have been completed that estimated the number of affordable housing units created with the 421-a program. The thesis analyzed how the amount of property tax exemptions affects the developers' decision to include affordable housing on-site, but did not go into fine details on other barriers to construction of affordable housing units. Is 20% the right number of units to set aside? Can this number be increased with no adverse effect or decreased to get more developers to opt-in to the program? A one-size fits all strategy that mandates below-market housing citywide in exchange for property tax exemptions may not be the right strategy.

6.0 Appendices

Appendix 1: Project Description of "The Marais" from developer's website

Source: (The Hudson Companies Incorporated, 2012)

Hudson



HOME WHAT WE DO PROJECTS TEAM NEWS CONTACT

The Marais

520 West 23rd Street, New York, NY

The Marais is a 107-unit luxury cooperative apartment building completed in 2003. Rising 15 stories with dramatic city views, the building contains studios, one-bedroom, and two-bedroom units. Many have washers and dryers and more than half have private outdoor space. Designed by SLCE Architects, the Marais was the first residential building to adjoin The High Line, now an internationally renowned elevated park. The ground floor contains 4,250 square feet of retail space leased to an art gallery and dry cleaner.

The Marais was the first development following the 1999 rezoning of a portion of West Chelsea along 23rd Street to permit residential use. Instead of purchasing the site, Hudson negotiated an advantageous rent for the property pursuant to a 75 year ground lease.

Originally planned as a rental project, Hudson changed the program to coops during construction to take advantage of the rapidly improving market for ownership units in the area, and in recognition of the niche demand for rental-sized, for-sale apartments. Hudson was successful in overcoming initial lender resistance to providing coop end loans to purchasers in a building on a ground lease. Roslyn Savings Bank provided construction financing, and the building received at 10-year partial exemption from real estate taxes under NYC's 421-a program.

PROJECT SUMMARY

- 90,700 gross square feet
- 107 co-operative apartments
- Completed February 2003
- Concrete poured-in-place construction
- Design by SLCE Architects
- Construction management by Monadnock Construction Inc.
- Financed by Roslyn Savings Bank
- Marketing and sales by DG Neary Realty

LINES OF BUSINESS

> Market-Rate Residential
> Affordable Residential
> Housing for Institutions

AREAS OF EXPERTISE

> New Construction
> Renovation & Conversion
> Green Building
> Public-Private Partnerships
> Joint Venture Development
> Distressed Asset Intervention
> Property Management

The Hudson Companies Incorporated 826 Broadway, 11th Floor New York, NY 10003 212-777-9500 info@hudsoninc.com

Appendix 2: Property Data of "The Marais" from Department of Finance

Source: (NYC Finance, 2012)

Finance Home > Property Portal > Search Property > **Exemption Details**

Property Tax Benefit Information   Exemptions

Property Information - (BBL : 1-00694-0042)	
Owner Name(s)	GUIDARA, FRANK GUIDARA, WILLIAM
Address	520 WEST 23rd STREET
Zip Code	10011
Borough	Manhattan
Year Built	2003
Number of Buildings	1
Number of Stories	15
Number of Units	110
Building Dimensions	8.00 X 10.00 (80 Square Feet)
Lot Size	122.50 X 98.75 (12,097 Square Feet)
Corner	
Building Area	95,656 Square Feet
Current Tax Year	From July 1, 2011 to June 30, 2012
Building Class	D4 - Elevator apartments__COOPERATIVES OTHER THAN CONDOMIN
Tax Class	2
Tax Rate	13.433 %
Market Value	$15,627,000
Assessed Value	$6,221,430
Proposed Assessed Value	$7,099,650
Land Assessed Value	$540,000
Proposed Land Assessed Value	$540,000

421A Exemption - Click here to see details.		
Benefit Name	421A-Newly constructed Multiple Dwelling Residential Property	
Benefit Amount	$2,363,260	View Calculation Method
Benefit Year	Year 8 of 10	
Benefit Type	Completion	
Benefit Start Date	July 01, 2004	
Benefit End Date	June 30, 2014	
Ineligible Commercial %	00.0000%	
Base Year	Year ending June 30, 2000	
Base Year Assessed Value	$313,280	
Proposed Benefit Amount	$1,357,274	View Calculation Method
Proposed Benefit for Tax Year	From July 1, 2012 to June 30, 2013	

Appendix 3: Property Tax Rates

Source: NYC Department of Finance

Year	Class 1	Class 2	Class 3	Class 4
11/12	18.205%	13.433%	12.473%	10.152%
10/11	17.364%	13.353%	12.631%	10.312%
09/10	17.088%	13.241%	12.743%	10.426%
08/09 (avg)	16.199%	12.596%	12.137%	10.241%
07/08	15.434%	11.928%	11.577%	10.059%
06/07	16.118%	12.737%	12.007%	10.997%
05/06	15.746%	12.396%	12.309%	11.306%
04/05	15.094%	12.216%	12.553%	11.558%
03/04	14.550%	12.620%	12.418%	11.431%
02/03 (avg)	13.048%	11.541%	11.586%	10.678%
01/02	11.609%	10.792%	10.541%	9.712%
00/01	11.255%	10.847%	10.540%	9.768%
99/00	11.167%	10.851%	9.398%	9.989%
98/99	10.961%	10.739%	8.800%	10.236%
97/98	10.849%	11.046%	8.282%	10.164%
96/97	10.785%	11.056%	7.840%	10.252%
95/96	10.725%	10.807%	7.922%	10.402%
94/95	10.694%	10.552%	7.702%	10.608%
93/94	10.900%	10.369%	7.404%	10.724%
92/93	10.888%	9.910%	12.794%	10.698%
91/92	10.888%	9.885%	13.083%	10.631%
90/91	9.920%	9.228%	15.200%	10.004%
89/90	9.452%	9.229%	12.903%	9.539%
88/89	9.452%	9.272%	11.289%	9.582%
87/88	9.330%	9.150%	9.942%	9.460%
86/87	9.330%	9.150%	9.172%	9.460%
85/86	9.100%	9.150%	9.051%	9.460%
84/85	9.100%	9.150%	9.051%	9.460%
83/84	9.100%	9.057%	9.237%	9.323%
82/83	8.950%	8.950%	9.109%	9.294%
81/82	8.950%	8.950%	8.950%	8.950%

Appendix 4: Past Sales and Listed Rental Price for "The Marais"

Floor	Unit #	Type	SF	Closing price	Date	Price $/SF	Listing rental/mo	Date	Rent $/SF/yr
2	2A	1 bed	667						
	2B	2 bed	894	$ 1,045,000	08				
	2C	2 bed	891	$ 490,000	03	$ 550			
	2D	2 bed	835						
	2E	1 bed	608	$ 301,000	03	$ 495	$ 2,895	11	$ 57
	2F	1 bed	626	$ 379,000	03	$ 605			
	2G	1 bed	614	$ 449,000	03	$ 731	$ 3,800	09	$ 74
	2H	1 bed	655	$ 399,000	03	$ 609			
3	3A	1 bed	667	$ 634,000	06		$ 3,500	12	$ 63
	3B	2 bed	894	$ 502,000	03	$ 562			
	3C	2 bed	891	$ 512,000	03	$ 575			
	3D	2 bed	835	$ 462,000	03	$ 553			
	3E	1 bed	608						
	3F	1 bed	626	$ 582,500	06		$ 3,200	08	
	3G	1 bed	650	$ 735,000	08		$ 2,995	12	$ 55
	3H	1 bed	619						
4	4A	1 bed	687				$ 2,800	09	$ 49
	4B	2 bed	894	$ 519,000	03	$ 581			
	4C	2 bed	900	$ 517,000	03	$ 574			
	4D	2 bed	835	$ 479,000	03	$ 574			
	4E	1 bed	650	$ 549,000	06				
	4F	1 bed	665	$ 350,000	03	$ 526			
	4G	1 bed	622	$ 354,000	03	$ 569	$ 3,195	10	$ 62
	4H	1 bed	650	$ 340,000	03	$ 523			
5	5A	1 bed	687						
	5B	2 bed	900	$ 755,000	04	$ 839			
	5C	2 bed	891	$ 830,000	06		$ 3,900	09	$ 53
	5D	2 bed	900	$ 499,000	03	$ 554	$ 4,500	10	
	5E	1 bed	650	$ 330,000	03	$ 508			
	5F	1 bed	626	$ 365,000	03	$ 583	$ 3,495	12	
	5G	1 bed	622						
	5H	1 bed	650	$ 680,000	06				
6	6A	1 bed	687				$ 3,495	11	
	6B	2 bed	894	$ 559,000	04	$ 625	$ 4,300	10	$ 58
	6C	2 bed	1000	$ 545,000	03	$ 545			
	6D	2 bed	835	$ 515,000	03	$ 617	$ 3,995	10	
	6E	1 bed	608	$ 439,000	05	$ 722			
	6F	1 bed	625				$ 3,495	12	$ 67
	6G	1 bed	622						
	6H	1 bed	650	$ 710,000	09				
7	7A	1 bed	667	$ 685,000	11		$ 3,495	12	$ 63
	7B	2 bed	894	$ 969,000	08				
	7C	2 bed	891	$ 564,000	03	$ 633	$ 3,950	08	$ 53
	7D	2 bed	855	$ 855,000	06				
	7E	1 bed	600	$ 343,000	03	$ 572	$ 2,800	10	$ 56
	7F	1 bed	626	$ 739,500	09				
	7G	1 bed	622				$ 2,850	09	$ 55
	7H	1 bed	650	$ 372,000	03	$ 572			
8	8A	1 bed	700				$ 2,999	09	$ 51
	8B	2 bed	894	$ 577,000	03	$ 645	$ 4,795	12	
	8C	2 bed	891	$ 574,000	03	$ 644			
	8D	2 bed	835	$ 552,000	03	$ 661			
	8E	1 bed	587	$ 348,000	03	$ 593			
	8F	1 bed	626				$ 2,990	10	

	8G	1 bed	622	$ 419,000	03	$ 674			
	8H	1 bed	650	$ 400,000	03	$ 615	$ 3,100	08	$ 57
9	9A	1 bed	700	$ 406,000	03	$ 580	$ 2,990	10	
	9B	2 bed	894						
	9C	2 bed	891						
	9D	2 bed	835	$ 557,000	03	$ 667			
	9E	1 bed	587	$ 350,000	03	$ 596	$ 3,000	10	
	9F	1 bed	626	$ 425,000	03	$ 679			
	9G	1 bed	650	$ 428,000	03	$ 658			
	9H	1 bed	690	$ 416,000	03	$ 603	$ 3,200	11	$ 56
10	10A	1 bed	700	$ 436,000	03	$ 623	$ 3,159	10	
	10B	2 bed	894	$ 639,000	04	$ 715	$ 4,200	08	$ 56
	10C	2 bed	891	$ 599,000	03	$ 672			
	10D	2 bed	835	$ 584,000	03	$ 699			
	10E	1 bed	600	$ 610,000	03	$ 1,017	$ 2,950	10	
	10F	1 bed	600	$ 427,000	03	$ 712			
	10G	1 bed	650	$ 850,000	05	$ 1,308			
	10H	1 bed	650	$ 749,000	05	$ 1,152	$ 3,195	10	
11	11A	studio	469	$ 625,000	06		$ 2,500	10	
	11B	2 bed	900			$ -	$ 4,200	10	$ 56
	11C	1 bed	600	$ 529,000	03	$ 882	$ 3,700	08	$ 74
	11D	studio	469	$ 364,000	03	$ 776			
	11E	1 bed	644	$ 625,000	04	$ 970			
	11F	2 bed	964	$ 1,200,000	07				
	11G	1 bed	622	$ 660,000	04	$ 1,061			
12	12A	studio	496	$ 499,000	06				
	12B	2 bed	900	$ 659,000	03	$ 732			
	12C	1 bed	577	$ 399,000	03	$ 692			
	12D	studio	450	$ 499,000	06		$ 2,195	10	$ 59
	12E	1 bed	644	$ 459,000	03	$ 713			
	12F	2 bed	964				$ 5,995		$ 75
	12G	1 bed	622	$ 434,000	03	$ 698			
14	14A	studio	496	$ 570,000	06		$ 2,495	07	
	14B	2 bed	900	$ 695,000	03	$ 772			
	14C	1 bed	577	$ 412,000	03	$ 714	$ 3,495	11	
	14D	studio	450	$ 267,000	03	$ 593	$ 2,400	10	$ 64
	14E	1 bed	644	$ 469,000	03	$ 728			
	14F	2 bed	964	$ 999,000	11				
	14G	1 bed	600	$ 439,000	03	$ 732			
15	15A	studio	500	$ 549,000	07				
	15B	2 bed	850	$ 685,000	03	$ 806			
	15C	1 bed	577	$ 424,000	03	$ 735	$ 3,000	10	$ 62
	15D	studio	450	$ 273,000	03	$ 607			
	15E	1 bed	644	$ 489,000	03	$ 759	$ 3,595	11	
	15F	2 bed	1000	$ 777,000	03	$ 777			
	15G	1 bed	600	$ 452,000	03	$ 753	$ 3,000	10	$ 60
16	16A	studio	500	$ 526,200	06				
	16B	2 bed	850	$ 678,000	03	$ 798			
	16C	1 bed	577						
	16D	studio	450	$ 464,500	06				
	16E	1 bed	644	$ 489,000	03	$ 759			
	16F	2 bed	1000						
	16G	1 bed	600						
	Total		75,827	(estimated)					
	Avg/SF					$ 677	[a]		$60

Source: ***DG Neary Realty (Sales Agent for the Marais) / Prudential Douglas Elliman Real Estate***
NYC Department of Finance, Office of the City Register (purple),

Appendix 5: Baseline Scenario --"The Marais" as market-rate rental without real estate tax exemptions

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03 [b]	Going-In Cap	8.06%	NY AMI	$ 58,600 [j]
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85 [b]	Reversion Cap	9.56%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41 [b]	Discount Rate	7.70%	Affordable Vacancy	2.19% [d]
Studio Rentable SF	4,730	10 Units	Market Rent Growth	4.32% [c]	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54% [d]
1 Bedroom Rentable SF	38,016	60 Units	Market Vacancy	3.86% [d]	Multiplier	4.80 [h]	Rent Stablization Growth	3.00% [k]
2 Bedroom Rentable SF	33,081	37 Units	Retail Rent	$ - [e]	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000 [a]
Affordable Rentable SF	-		Op Ex	$ 6.00 [f]	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00% [f]
Retail SF	4,250		Inflation	2.00% [g]	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200 [f]
Development Cost	$ 21,652,000 [a]				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Market Unit: Studio Rental Income	4,730		$ 208,262	$ 217,259	$ 226,644	$ 236,435	$ 246,649	$ 257,305	$ 268,420	$ 280,016	$ 292,113	$ 304,732
Market Unit: Studio Vacancy	(183)		$ (8,039)	$ (8,386)	$ (8,748)	$ (9,126)	$ (9,521)	$ (9,932)	$ (10,361)	$ (10,809)	$ (11,276)	$ (11,763)
Market Unit: 1 Bedroom Rental Income	38,016		$ 1,552,954	$ 1,620,041	$ 1,690,027	$ 1,763,036	$ 1,839,199	$ 1,918,653	$ 2,001,539	$ 2,088,005	$ 2,178,207	$ 2,272,305
Market Unit: 1 Bedroom Vacancy	(1,467)		$ (59,944)	$ (62,534)	$ (65,235)	$ (68,053)	$ (70,993)	$ (74,060)	$ (77,259)	$ (80,597)	$ (84,079)	$ (87,711)
Market Unit: 2 Bedroom Rental Income	33,081		$ 1,204,479	$ 1,256,513	$ 1,310,794	$ 1,367,420	$ 1,426,493	$ 1,488,117	$ 1,552,404	$ 1,619,468	$ 1,689,429	$ 1,762,412
Market Unit: 2 Bedroom Vacancy	(1,277)		$ (46,493)	$ (48,501)	$ (50,597)	$ (52,782)	$ (55,063)	$ (57,441)	$ (59,923)	$ (62,511)	$ (65,212)	$ (68,029)
Affordable Unit: Rental Income	-		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Affordable Unit: Vacancy	-		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,851,219**	**$ 2,974,392**	**$ 3,102,885**	**$ 3,236,930**	**$ 3,376,765**	**$ 3,522,642**	**$ 3,674,820**	**$ 3,833,572**	**$ 3,999,182**	**$ 4,171,947**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 2,370,757	$ 2,484,320	$ 2,603,013	$ 2,727,060	$ 2,856,698	$ 2,992,173	$ 3,133,741	$ 3,281,672	$ 3,436,244	$ 3,597,750
Real Estate Tax												
Market Value			$11,379,633	$11,924,737	$12,494,460	$13,089,887	$13,712,149	$14,362,429	$15,041,959	$15,752,026	$16,493,973	$ 17,269,201
Actual Assessd Value			$ 5,120,835	$ 5,366,132	$ 5,622,507	$ 5,890,449	$ 6,170,467	$ 6,463,093	$ 6,768,881	$ 7,088,412	$ 7,422,288	$ 7,771,141
Tax Exemption %			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Exemption Value			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Taxable Value			$ 5,120,835	$ 5,366,132	$ 5,622,507	$ 5,890,449	$ 6,170,467	$ 6,463,093	$ 6,768,881	$ 7,088,412	$ 7,422,288	$ 7,771,141
Total Real Estate Tax Paid			$ 625,561	$ 667,864	$ 712,942	$ 760,974	$ 812,151	$ 866,676	$ 924,764	$ 986,643	$ 1,052,559	$ 1,122,770
Total Real Estate Tax Saved			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenses			**$ 1,106,023**	**$ 1,157,935**	**$ 1,212,814**	**$ 1,270,844**	**$ 1,332,219**	**$ 1,397,145**	**$ 1,465,842**	**$ 1,538,543**	**$ 1,615,497**	**$ 1,696,967**
Net Operating Income			**$ 1,745,196**	**$ 1,816,457**	**$ 1,890,071**	**$ 1,966,086**	**$ 2,044,547**	**$ 2,125,497**	**$ 2,208,978**	**$ 2,295,029**	**$ 2,383,685**	**$ 2,474,980**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates												
Low-Income Housing Tax Credit												
Property Before-Tax CF (Operations)			$ 1,048,796	$ 1,120,057	$ 1,193,671	$ 1,269,686	$ 1,348,147	$ 1,429,097	$ 1,512,578	$ 1,598,629	$ 1,687,285	$ 1,778,580
Property Before-Tax CF (Reversion)		$ (21,652,000)										$ 25,796,347
PV of remaining 421-a Tax Benefit for buyer												$ -
Property Before-Tax CF		$ (21,652,000)	$ 1,048,796	$ 1,120,057	$ 1,193,671	$ 1,269,686	$ 1,348,147	$ 1,429,097	$ 1,512,578	$ 1,598,629	$ 1,687,285	$ 27,574,927

Unlevered IRR	**7.58%**
PV of investment benefits @ 7.7% discount rate	**$ 21,466,071**
NPV of investment benefits @ 7.7% discount rate	**$ (185,929)**
PV of Total 421-a RE Tax Foregone by the city @ 4.5% discount rate	**$ -**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ -**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**n/a**
Negotiable Certificates (buy - /sell +)	**$ -**
MV of Low-Income Housing Tax Credit	**$ -**

Notes:

[a] *See Total Development Cost for "The Marais" (Table 7)*
[b] *Citi Habitat the Black and White Book, Manhattan Rental Price per SF in 2004*
[c] *Compounded growth rate per Samuel Miller Appraisers & Consultants, Manhattan Rental Price per SF from 1992 to 2011*
[d] *New York City Rental Market Vacancy Rate in 2002 per NYC Housing and Vacancy Survey by US. Census Bureau*
[e] *Retail income donated to coop to reduce common charges, reflected in operating expense*
[f] *per interview with developer*
[g] *Expected inflation derived from 10-yr treasury yield minus 10-yr TIP, Federal Reserve historic average in 2003*
[h] *Average multiplier used by DOF for the building*
[j] *FY 2003 NY AMI per US HUD*
[k] *allowed one-year lease growth in 2008 per NYC Rent Guidelines Board*

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%
$ 317,896	$ 331,630	$ 345,956	$ 360,901	$ 376,492	$ 392,757	$ 409,724	$ 427,424	$ 445,888	$ 465,151	$ 485,245
$ (12,271)	$ (12,801)	$ (13,354)	$ (13,931)	$ (14,533)	$ (15,160)	$ (15,815)	$ (16,499)	$ (17,211)	$ (17,955)	$ (18,730)
$ 2,370,469	$ 2,472,873	$ 2,579,701	$ 2,691,144	$ 2,807,402	$ 2,928,682	$ 3,055,201	$ 3,187,185	$ 3,324,872	$ 3,468,506	$ 3,618,346
$ (91,500)	$ (95,453)	$ (99,576)	$ (103,878)	$ (108,366)	$ (113,047)	$ (117,931)	$ (123,025)	$ (128,340)	$ (133,884)	$ (139,668)
$ 1,838,549	$ 1,917,974	$ 2,000,830	$ 2,087,266	$ 2,177,436	$ 2,271,501	$ 2,369,630	$ 2,471,998	$ 2,578,788	$ 2,690,192	$ 2,806,408
$ (70,968)	$ (74,034)	$ (77,232)	$ (80,568)	$ (84,049)	$ (87,680)	$ (91,468)	$ (95,419)	$ (99,541)	$ (103,841)	$ (108,327)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 4,352,175	**$ 4,540,189**	**$ 4,736,325**	**$ 4,940,934**	**$ 5,154,383**	**$ 5,377,052**	**$ 5,609,341**	**$ 5,851,664**	**$ 6,104,456**	**$ 6,368,169**	**$ 6,643,273**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941
$ 3,766,494	$ 3,942,795	$ 4,126,983	$ 4,319,405	$ 4,520,423	$ 4,730,413	$ 4,949,769	$ 5,178,901	$ 5,418,238	$ 5,668,226	$ 5,929,332
$ 18,079,173	$18,925,415	$19,809,519	$20,733,146	$21,698,032	$22,705,984	$23,758,893	$24,858,727	$26,007,542	$27,207,485	$28,460,794
$ 8,135,628	$ 8,516,437	$ 8,914,283	$ 9,329,916	$ 9,764,114	$10,217,693	$10,691,502	$11,186,427	$11,703,394	$12,243,368	$12,807,357
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 8,135,628	$ 8,516,437	$ 8,914,283	$ 9,329,916	$ 9,764,114	$10,217,693	$10,691,502	$11,186,427	$11,703,394	$12,243,368	$12,807,357
$ 1,197,553	$ 1,277,200	$ 1,362,025	$ 1,452,358	$ 1,548,554	$ 1,650,988	$ 1,760,059	$ 1,876,192	$ 1,999,840	$ 2,131,482	$ 2,271,631
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 1,783,233	**$ 1,874,594**	**$ 1,971,367**	**$ 2,073,887**	**$ 2,182,513**	**$ 2,297,626**	**$ 2,419,630**	**$ 2,548,955**	**$ 2,686,058**	**$ 2,831,425**	**$ 2,985,572**
$ 2,568,941	**$ 2,665,594**	**$ 2,764,958**	**$ 2,867,047**	**$ 2,971,869**	**$ 3,079,426**	**$ 3,189,711**	**$ 3,302,709**	**$ 3,418,398**	**$ 3,536,744**	**$ 3,657,701**

Appendix 6: Actual Case - “the Marais” as a market rate rental with 10-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	10.77%	NY AMI	$ 58,600
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	12.27%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	4,730	10 Units	Market Rent Growth	$ 0.04	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	38,016	60 Units	Market Vacancy	$ 0.04	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	33,081	37 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	-		Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 21,652,000				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Market Unit: Studio Rental Income	4,730		$ 208,262	$ 217,259	$ 226,644	$ 236,435	$ 246,649	$ 257,305	$ 268,420	$ 280,016	$ 292,113	$ 304,732
Market Unit: Studio Vacancy	(183)		$ (8,039)	$ (8,386)	$ (8,748)	$ (9,126)	$ (9,521)	$ (9,932)	$ (10,361)	$ (10,809)	$ (11,276)	$ (11,763)
Market Unit: 1 Bedroom Rental Income	38,016		$ 1,552,954	$ 1,620,041	$ 1,690,027	$ 1,763,036	$ 1,839,199	$ 1,918,653	$ 2,001,539	$ 2,088,005	$ 2,178,207	$ 2,272,305
Market Unit: 1 Bedroom Vacancy	(1,467)		$ (59,944)	$ (62,534)	$ (65,235)	$ (68,053)	$ (70,993)	$ (74,060)	$ (77,259)	$ (80,597)	$ (84,079)	$ (87,711)
Market Unit: 2 Bedroom Rental Income	33,081		$ 1,204,479	$ 1,256,513	$ 1,310,794	$ 1,367,420	$ 1,426,493	$ 1,488,117	$ 1,552,404	$ 1,619,468	$ 1,689,429	$ 1,762,412
Market Unit: 2 Bedroom Vacancy	(1,277)		$ (46,493)	$ (48,501)	$ (50,597)	$ (52,782)	$ (55,063)	$ (57,441)	$ (59,923)	$ (62,511)	$ (65,212)	$ (68,029)
Affordable Unit: Rental Income	-		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Affordable Unit: Vacancy	-		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,851,219**	**$ 2,974,392**	**$ 3,102,885**	**$ 3,236,930**	**$ 3,376,765**	**$ 3,522,642**	**$ 3,674,820**	**$ 3,833,572**	**$ 3,999,182**	**$ 4,171,947**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 2,370,757	$ 2,484,320	$ 2,603,013	$ 2,727,060	$ 2,856,698	$ 2,992,173	$ 3,133,741	$ 3,281,672	$ 3,436,244	$ 3,597,750
Real Estate Tax												
Market Value			$11,379,633	$11,924,737	$12,494,460	$13,089,887	$13,712,149	$14,362,429	$15,041,959	$15,752,026	$16,493,973	$ 17,269,201
Actual Assessd Value			$ 5,120,835	$ 5,366,132	$ 5,622,507	$ 5,890,449	$ 6,170,467	$ 6,463,093	$ 6,768,881	$ 7,088,412	$ 7,422,288	$ 7,771,141
Tax Exemption %			100%	100%	80%	80%	60%	60%	40%	40%	20%	20%
Exemption Value			$ 4,807,835	$ 5,053,132	$ 4,247,606	$ 4,461,959	$ 3,514,480	$ 3,690,056	$ 2,582,353	$ 2,710,165	$ 1,421,858	$ 1,491,628
Taxable Value			$ 313,000	$ 313,000	$ 1,374,901	$ 1,428,490	$ 2,655,987	$ 2,773,037	$ 4,186,529	$ 4,378,247	$ 6,000,430	$ 6,279,512
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 174,339	$ 184,543	$ 349,579	$ 371,854	$ 571,963	$ 609,413	$ 850,925	$ 907,261
Total Real Estate Tax Saved			$ 587,325	$ 628,908	$ 538,602	$ 576,431	$ 462,573	$ 494,822	$ 352,801	$ 377,231	$ 201,634	$ 215,510
Total Expenses			**$ 518,698**	**$ 529,027**	**$ 674,212**	**$ 694,414**	**$ 869,646**	**$ 902,323**	**$ 1,113,041**	**$ 1,161,313**	**$ 1,413,862**	**$ 1,481,457**
Net Operating Income			**$ 2,332,521**	**$ 2,445,365**	**$ 2,428,673**	**$ 2,542,516**	**$ 2,507,119**	**$ 2,620,319**	**$ 2,561,778**	**$ 2,672,259**	**$ 2,585,320**	**$ 2,690,490**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates												
Low-Income Housing Tax Credit												
Property Before-Tax CF (Operations)			$ 1,636,121	$ 1,748,965	$ 1,732,273	$ 1,846,116	$ 1,810,719	$ 1,923,919	$ 1,865,378	$ 1,975,859	$ 1,888,920	$ 1,994,090
Property Before-Tax CF (Reversion)		$ (21,652,000)										$ 20,094,756
PV of remaining 421-a Tax Benefit for buyer												$ -
Property Before-Tax CF		$ (21,652,000)	$ 1,636,121	$ 1,748,965	$ 1,732,273	$ 1,846,116	$ 1,810,719	$ 1,923,919	$ 1,865,378	$ 1,975,859	$ 1,888,920	$ 22,088,846

Unlevered IRR	**7.91%**
PV of investment benefits @ 7.7% discount rate	**$ 21,958,401**
NPV of investment benefits @ 7.7% discount rate	**$ 306,401.40**
PV of Total 421-a RE Tax Foregone by the city @ 4.5% discount rate	**$ 3,643,419**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 3,207,763**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**n/a**
Negotiable Certificates (buy - /sell +)	**$ -**
MV of Low-Income Housing Tax Credit	**$ -**

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%
$ 317,896	$ 331,630	$ 345,956	$ 360,901	$ 376,492	$ 392,757	$ 409,724	$ 427,424	$ 445,888	$ 465,151	$ 485,245
$ (12,271)	$ (12,801)	$ (13,354)	$ (13,931)	$ (14,533)	$ (15,160)	$ (15,815)	$ (16,499)	$ (17,211)	$ (17,955)	$ (18,730)
$ 2,370,469	$ 2,472,873	$ 2,579,701	$ 2,691,144	$ 2,807,402	$ 2,928,682	$ 3,055,201	$ 3,187,185	$ 3,324,872	$ 3,468,506	$ 3,618,346
$ (91,500)	$ (95,453)	$ (99,576)	$ (103,878)	$ (108,366)	$ (113,047)	$ (117,931)	$ (123,025)	$ (128,340)	$ (133,884)	$ (139,668)
$ 1,838,549	$ 1,917,974	$ 2,000,830	$ 2,087,266	$ 2,177,436	$ 2,271,501	$ 2,369,630	$ 2,471,998	$ 2,578,788	$ 2,690,192	$ 2,806,408
$ (70,968)	$ (74,034)	$ (77,232)	$ (80,568)	$ (84,049)	$ (87,680)	$ (91,468)	$ (95,419)	$ (99,541)	$ (103,841)	$ (108,327)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 4,352,175	**$ 4,540,189**	**$ 4,736,325**	**$ 4,940,934**	**$ 5,154,383**	**$ 5,377,052**	**$ 5,609,341**	**$ 5,851,664**	**$ 6,104,456**	**$ 6,368,169**	**$ 6,643,273**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941
$ 3,766,494	$ 3,942,795	$ 4,126,983	$ 4,319,405	$ 4,520,423	$ 4,730,413	$ 4,949,769	$ 5,178,901	$ 5,418,238	$ 5,668,226	$ 5,929,332
$ 18,079,173	$18,925,415	$19,809,519	$20,733,146	$21,698,032	$22,705,984	$23,758,893	$24,858,727	$26,007,542	$27,207,485	$28,460,794
$ 8,135,628	$ 8,516,437	$ 8,914,283	$ 9,329,916	$ 9,764,114	$10,217,693	$10,691,502	$11,186,427	$11,703,394	$12,243,368	$12,807,357
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 8,135,628	$ 8,516,437	$ 8,914,283	$ 9,329,916	$ 9,764,114	$10,217,693	$10,691,502	$11,186,427	$11,703,394	$12,243,368	$12,807,357
$ 1,197,553	$ 1,277,200	$ 1,362,025	$ 1,452,358	$ 1,548,554	$ 1,650,988	$ 1,760,059	$ 1,876,192	$ 1,999,840	$ 2,131,482	$ 2,271,631
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 1,783,233	**$ 1,874,594**	**$ 1,971,367**	**$ 2,073,887**	**$ 2,182,513**	**$ 2,297,626**	**$ 2,419,630**	**$ 2,548,955**	**$ 2,686,058**	**$ 2,831,425**	**$ 2,985,572**
$ 2,568,941	**$ 2,665,594**	**$ 2,764,958**	**$ 2,867,047**	**$ 2,971,869**	**$ 3,079,426**	**$ 3,189,711**	**$ 3,302,709**	**$ 3,418,398**	**$ 3,536,744**	**$ 3,657,701**

Appendix 7: Scenario-A --"The Marais" with 20% affordable units @ 80% AMI and 20-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	9.10%	NY AMI	$ 58,600
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	10.60%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	3,784	8 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	30,413	48 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	26,465	29 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 21,652,000				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	3,784		$ 166,610	$ 171,608	$ 176,756	$ 182,059	$ 187,520	$ 193,146	$ 198,940	$ 204,909	$ 211,056	$ 217,388
Stablized Unit: Studio Vacancy	(146)		$ (6,431)	$ (6,624)	$ (6,823)	$ (7,027)	$ (7,238)	$ (7,455)	$ (7,679)	$ (7,909)	$ (8,147)	$ (8,391)
Stablized Unit: 1 Bedroom Rental Income	30,413		$ 1,242,363	$ 1,279,634	$ 1,318,023	$ 1,357,563	$ 1,398,290	$ 1,440,239	$ 1,483,446	$ 1,527,950	$ 1,573,788	$ 1,621,002
Stablized Unit: 1 Bedroom Vacancy	(1,174)		$ (47,955)	$ (49,394)	$ (50,876)	$ (52,402)	$ (53,974)	$ (55,593)	$ (57,261)	$ (58,979)	$ (60,748)	$ (62,571)
Stablized Unit: 2 Bedroom Rental Income	26,465		$ 963,583	$ 992,491	$ 1,022,266	$ 1,052,934	$ 1,084,522	$ 1,117,057	$ 1,150,569	$ 1,185,086	$ 1,220,639	$ 1,257,258
Stablized Unit: 2 Bedroom Vacancy	(1,022)		$ (37,194)	$ (38,310)	$ (39,459)	$ (40,643)	$ (41,863)	$ (43,118)	$ (44,412)	$ (45,744)	$ (47,117)	$ (48,530)
Affordable Unit: Rental Income	15,165		$ 213,286	$ 219,685	$ 226,275	$ 233,064	$ 240,055	$ 247,257	$ 254,675	$ 262,315	$ 270,185	$ 278,290
Affordable Unit: Vacancy	(332)		$ (4,671)	$ (4,811)	$ (4,955)	$ (5,104)	$ (5,257)	$ (5,415)	$ (5,577)	$ (5,745)	$ (5,917)	$ (6,095)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,489,590**	**$ 2,564,278**	**$ 2,641,206**	**$ 2,720,443**	**$ 2,802,056**	**$ 2,886,118**	**$ 2,972,701**	**$ 3,061,882**	**$ 3,153,739**	**$ 3,248,351**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 2,009,128	$ 2,074,207	$ 2,141,334	$ 2,210,572	$ 2,281,988	$ 2,355,649	$ 2,431,623	$ 2,509,982	$ 2,590,801	$ 2,674,154
Real Estate Tax												
Market Value			$ 9,643,816	$ 9,956,193	$10,278,402	$10,610,748	$10,953,544	$11,307,114	$11,671,789	$12,047,915	$12,435,844	$ 12,835,940
Actual Assessd Value			$ 4,339,717	$ 4,480,287	$ 4,625,281	$ 4,774,837	$ 4,929,095	$ 5,088,201	$ 5,252,305	$ 5,421,562	$ 5,596,130	$ 5,776,173
Tax Exemption %			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Exemption Value			$ 4,026,717	$ 4,167,287	$ 4,312,281	$ 4,461,837	$ 4,616,095	$ 4,775,201	$ 4,939,305	$ 5,108,562	$ 5,283,130	$ 5,463,173
Taxable Value			$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 39,689	$ 40,436	$ 41,197	$ 41,972	$ 42,762	$ 43,567	$ 44,387	$ 45,222
Total Real Estate Tax Saved			$ 491,904	$ 518,657	$ 546,803	$ 576,415	$ 607,566	$ 640,336	$ 674,807	$ 711,066	$ 749,204	$ 789,316
Total Expenses			**$ 518,698**	**$ 529,027**	**$ 539,561**	**$ 550,306**	**$ 561,264**	**$ 572,441**	**$ 583,840**	**$ 595,467**	**$ 607,325**	**$ 619,419**
Net Operating Income			**$ 1,970,892**	**$ 2,035,251**	**$ 2,101,645**	**$ 2,170,137**	**$ 2,240,792**	**$ 2,313,677**	**$ 2,388,861**	**$ 2,466,415**	**$ 2,546,414**	**$ 2,628,932**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates												
Low-Income Housing Tax Credit												
Property Before-Tax CF (Operations)			$ 1,274,492	$ 1,338,851	$ 1,405,245	$ 1,473,737	$ 1,544,392	$ 1,617,277	$ 1,692,461	$ 1,770,015	$ 1,850,014	$ 1,932,532
Property Before-Tax CF (Reversion)		$ (21,652,000)										$ 24,574,055
PV of remaining 421-a Tax Benefit for buyer												$4,322,656
Property Before-Tax CF		$ (21,652,000)	$ 1,274,492	$ 1,338,851	$ 1,405,245	$ 1,473,737	$ 1,544,392	$ 1,617,277	$ 1,692,461	$ 1,770,015	$ 1,850,014	$ 30,829,242

Unlevered IRR	**9.27%**
PV of investment benefits @ 7.7% discount rate	**$ 24,276,361**
NPV of investment benefits @ 7.7% discount rate	**$ 2,624,361**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate	**$ 7,738,928**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 4,154,118**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ (3,964,835)**
Negotiable Certificates (buy - /sell +)	**$ -**
MV of Low-Income Housing Tax Credit	**$ -**

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%
$ 223,909	$ 230,627	$ 237,545	$ 244,672	$ 252,012	$ 259,572	$ 267,359	$ 275,380	$ 283,642	$ 292,151	$ 485,245
$ (8,643)	$ (8,902)	$ (9,169)	$ (9,444)	$ (9,728)	$ (10,019)	$ (10,320)	$ (10,630)	$ (10,949)	$ (11,277)	$ (18,730)
$ 1,669,632	$ 1,719,721	$ 1,771,312	$ 1,824,452	$ 1,879,185	$ 1,935,561	$ 1,993,628	$ 2,053,437	$ 2,115,040	$ 2,178,491	$ 3,618,346
$ (64,448)	$ (66,381)	$ (68,373)	$ (70,424)	$ (72,537)	$ (74,713)	$ (76,954)	$ (79,263)	$ (81,641)	$ (84,090)	$ (139,668)
$ 1,294,975	$ 1,333,825	$ 1,373,839	$ 1,415,055	$ 1,457,506	$ 1,501,231	$ 1,546,268	$ 1,592,656	$ 1,640,436	$ 1,689,649	$ 2,806,408
$ (49,986)	$ (51,486)	$ (53,030)	$ (54,621)	$ (56,260)	$ (57,948)	$ (59,686)	$ (61,477)	$ (63,321)	$ (65,220)	$ (108,327)
$ 286,639	$ 295,238	$ 304,095	$ 313,218	$ 322,614	$ 332,293	$ 342,262	$ 352,530	$ 363,105	$ 373,999	$ -
$ (6,277)	$ (6,466)	$ (6,660)	$ (6,859)	$ (7,065)	$ (7,277)	$ (7,496)	$ (7,720)	$ (7,952)	$ (8,191)	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,345,801	**$ 3,446,175**	**$ 3,549,561**	**$ 3,656,047**	**$ 3,765,729**	**$ 3,878,701**	**$ 3,995,062**	**$ 4,114,913**	**$ 4,238,361**	**$ 4,365,512**	**$ 6,643,273**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941
$ 2,760,121	$ 2,848,781	$ 2,940,219	$ 3,034,519	$ 3,131,769	$ 3,232,062	$ 3,335,490	$ 3,442,151	$ 3,552,143	$ 3,665,569	$ 5,929,332
$ 13,248,580	$13,674,150	$14,113,049	$14,565,689	$15,032,493	$15,513,898	$16,010,353	$16,522,323	$17,050,286	$17,594,733	$28,460,794
$ 5,961,861	$ 6,153,367	$ 6,350,872	$ 6,554,560	$ 6,764,622	$ 6,981,254	$ 7,204,659	$ 7,435,046	$ 7,672,629	$ 7,917,630	$12,807,357
100%	100%	80%	80%	60%	60%	40%	40%	20%	20%	0%
$ 5,648,861	$ 5,840,367	$ 4,830,298	$ 4,993,248	$ 3,870,973	$ 4,000,952	$ 2,756,664	$ 2,848,818	$ 1,471,926	$ 1,520,926	$ -
$ 313,000	$ 313,000	$ 1,520,574	$ 1,561,312	$ 2,893,649	$ 2,980,302	$ 4,447,995	$ 4,586,227	$ 6,200,703	$ 6,396,704	$12,807,357
$ 46,073	$ 46,940	$ 232,331	$ 243,044	$ 458,922	$ 481,561	$ 732,239	$ 769,204	$ 1,059,557	$ 1,113,620	$ 2,271,631
$ 831,504	$ 875,873	$ 738,027	$ 777,283	$ 613,923	$ 646,479	$ 453,808	$ 477,805	$ 251,518	$ 264,782	$ -
$ 631,754	**$ 644,334**	**$ 841,672**	**$ 864,573**	**$ 1,092,882**	**$ 1,128,199**	**$ 1,391,810**	**$ 1,441,967**	**$ 1,745,775**	**$ 1,813,562**	**$ 2,985,572**
$ 2,714,048	**$ 2,801,841**	**$ 2,707,888**	**$ 2,791,474**	**$ 2,672,847**	**$ 2,750,501**	**$ 2,603,251**	**$ 2,672,947**	**$ 2,492,586**	**$ 2,551,949**	**$ 3,657,701**

Appendix 8: Scenario-B --"The Marais" with 20% affordable units @ 50% AMI, 80/20 program and 20-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	8.74%	NY AMI	$ 58,600
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	10.24%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	3,784	8 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	30,413	48 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	26,465	29 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 21,652,000				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	3,784		$ 166,610	$ 171,608	$ 176,756	$ 182,059	$ 187,520	$ 193,146	$ 198,940	$ 204,909	$ 211,056	$ 217,388
Stablized Unit: Studio Vacancy	(146)		$ (6,431)	$ (6,624)	$ (6,823)	$ (7,027)	$ (7,238)	$ (7,455)	$ (7,679)	$ (7,909)	$ (8,147)	$ (8,391)
Stablized Unit: 1 Bedroom Rental Income	30,413		$ 1,242,363	$ 1,279,634	$ 1,318,023	$ 1,357,563	$ 1,398,290	$ 1,440,239	$ 1,483,446	$ 1,527,950	$ 1,573,788	$ 1,621,002
Stablized Unit: 1 Bedroom Vacancy	(1,174)		$ (47,955)	$ (49,394)	$ (50,876)	$ (52,402)	$ (53,974)	$ (55,593)	$ (57,261)	$ (58,979)	$ (60,748)	$ (62,571)
Stablized Unit: 2 Bedroom Rental Income	26,465		$ 963,583	$ 992,491	$ 1,022,266	$ 1,052,934	$ 1,084,522	$ 1,117,057	$ 1,150,569	$ 1,185,086	$ 1,220,639	$ 1,257,258
Stablized Unit: 2 Bedroom Vacancy	(1,022)		$ (37,194)	$ (38,310)	$ (39,459)	$ (40,643)	$ (41,863)	$ (43,118)	$ (44,412)	$ (45,744)	$ (47,117)	$ (48,530)
Affordable Unit: Rental Income	15,165		$ 133,304	$ 137,303	$ 141,422	$ 145,665	$ 150,035	$ 154,536	$ 159,172	$ 163,947	$ 168,865	$ 173,931
Affordable Unit: Vacancy	(332)		$ (2,919)	$ (3,007)	$ (3,097)	$ (3,190)	$ (3,286)	$ (3,384)	$ (3,486)	$ (3,590)	$ (3,698)	$ (3,809)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,411,360**	**$ 2,483,700**	**$ 2,558,211**	**$ 2,634,958**	**$ 2,714,007**	**$ 2,795,427**	**$ 2,879,290**	**$ 2,965,668**	**$ 3,054,638**	**$ 3,146,277**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 1,930,898	$ 1,993,629	$ 2,058,339	$ 2,125,088	$ 2,193,939	$ 2,264,958	$ 2,338,211	$ 2,413,768	$ 2,491,700	$ 2,572,081
Real Estate Tax												
Market Value			$ 9,268,309	$ 9,569,420	$ 9,880,026	$10,200,421	$10,530,907	$10,871,798	$11,223,414	$11,586,088	$11,960,162	$ 12,345,988
Actual Assessd Value			$ 4,170,739	$ 4,306,239	$ 4,446,012	$ 4,590,189	$ 4,738,908	$ 4,892,309	$ 5,050,536	$ 5,213,740	$ 5,382,073	$ 5,555,695
Tax Exemption %			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Exemption Value			$ 3,857,739	$ 3,993,239	$ 4,133,012	$ 4,277,189	$ 4,425,908	$ 4,579,309	$ 4,737,536	$ 4,900,740	$ 5,069,073	$ 5,242,695
Taxable Value			$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 39,689	$ 40,436	$ 41,197	$ 41,972	$ 42,762	$ 43,567	$ 44,387	$ 45,222
Total Real Estate Tax Saved			$ 471,261	$ 496,995	$ 524,072	$ 552,561	$ 582,534	$ 614,068	$ 647,241	$ 682,139	$ 718,848	$ 757,462
Total Expenses			**$ 518,698**	**$ 529,027**	**$ 539,561**	**$ 550,306**	**$ 561,264**	**$ 572,441**	**$ 583,840**	**$ 595,467**	**$ 607,325**	**$ 619,419**
Net Operating Income			**$ 1,892,662**	**$ 1,954,673**	**$ 2,018,650**	**$ 2,084,652**	**$ 2,152,742**	**$ 2,222,986**	**$ 2,295,449**	**$ 2,370,202**	**$ 2,447,314**	**$ 2,526,859**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates												
Low-Income Housing Tax Credit		$ 1,242,482										
Property Before-Tax CF (Operations)			$ 1,196,262	$ 1,258,273	$ 1,322,250	$ 1,388,252	$ 1,456,342	$ 1,526,586	$ 1,599,049	$ 1,673,802	$ 1,750,914	$ 1,830,459
Property Before-Tax CF (Reversion)		$ (20,409,518)										$ 24,455,498
PV of remaining 421-a Tax Benefit for buyer												$4,150,764
Property Before-Tax CF		$ (20,409,518)	$ 1,196,262	$ 1,258,273	$ 1,322,250	$ 1,388,252	$ 1,456,342	$ 1,526,586	$ 1,599,049	$ 1,673,802	$ 1,750,914	$ 30,436,720

Unlevered IRR	**9.66%**
PV of investment benefits @ 7.7% discount rate	**$ 23,538,905**
NPV of investment benefits @ 7.7% discount rate	**$ 3,129,388**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate	**$ 7,424,758**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 3,983,121**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ (4,563,963)**
Negotiable Certificates (buy - /sell +)	**$ -**
MV of Low-Income Housing Tax Credit	**$ 1,242,482**

2014 Year 11	2015 Year 12	2016 Year 13	2017 Year 14	2018 Year 15	2019 Year 16	2020 Year 17	2021 Year 18	2022 Year 19	2023 Year 20	2024 Year 21
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%
$ 223,909	$ 230,627	$ 237,545	$ 244,672	$ 252,012	$ 259,572	$ 267,359	$ 275,380	$ 283,642	$ 292,151	$ 485,245
$ (8,643)	$ (8,902)	$ (9,169)	$ (9,444)	$ (9,728)	$ (10,019)	$ (10,320)	$ (10,630)	$ (10,949)	$ (11,277)	$ (18,730)
$ 1,669,632	$ 1,719,721	$ 1,771,312	$ 1,824,452	$ 1,879,185	$ 1,935,561	$ 1,993,628	$ 2,053,437	$ 2,115,040	$ 2,178,491	$ 3,618,346
$ (64,448)	$ (66,381)	$ (68,373)	$ (70,424)	$ (72,537)	$ (74,713)	$ (76,954)	$ (79,263)	$ (81,641)	$ (84,090)	$ (139,668)
$ 1,294,975	$ 1,333,825	$ 1,373,839	$ 1,415,055	$ 1,457,506	$ 1,501,231	$ 1,546,268	$ 1,592,656	$ 1,640,436	$ 1,689,649	$ 2,806,408
$ (49,986)	$ (51,486)	$ (53,030)	$ (54,621)	$ (56,260)	$ (57,948)	$ (59,686)	$ (61,477)	$ (63,321)	$ (65,220)	$ (108,327)
$ 179,149	$ 184,524	$ 190,059	$ 195,761	$ 201,634	$ 207,683	$ 213,914	$ 220,331	$ 226,941	$ 233,749	$ -
$ (3,923)	$ (4,041)	$ (4,162)	$ (4,287)	$ (4,416)	$ (4,548)	$ (4,685)	$ (4,825)	$ (4,970)	$ (5,119)	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,240,666	**$ 3,337,886**	**$ 3,438,022**	**$ 3,541,163**	**$ 3,647,398**	**$ 3,756,820**	**$ 3,869,524**	**$ 3,985,610**	**$ 4,105,178**	**$ 4,228,334**	**$ 6,643,273**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941
$ 2,654,985	$ 2,740,492	$ 2,828,680	$ 2,919,634	$ 3,013,438	$ 3,110,181	$ 3,209,953	$ 3,312,847	$ 3,418,960	$ 3,528,391	$ 5,929,332
$ 12,743,929	$13,154,360	$13,577,665	$14,014,244	$14,464,504	$14,928,869	$15,407,774	$15,901,667	$16,411,009	$16,936,278	$28,460,794
$ 5,734,768	$ 5,919,462	$ 6,109,949	$ 6,306,410	$ 6,509,027	$ 6,717,991	$ 6,933,498	$ 7,155,750	$ 7,384,954	$ 7,621,325	$12,807,357
100%	100%	80%	80%	60%	60%	40%	40%	20%	20%	0%
$ 5,421,768	$ 5,606,462	$ 4,637,559	$ 4,794,728	$ 3,717,616	$ 3,842,995	$ 2,648,199	$ 2,737,100	$ 1,414,391	$ 1,461,665	$ -
$ 313,000	$ 313,000	$ 1,472,390	$ 1,511,682	$ 2,791,411	$ 2,874,997	$ 4,285,299	$ 4,418,650	$ 5,970,563	$ 6,159,660	$12,807,357
$ 46,073	$ 46,940	$ 224,968	$ 235,319	$ 442,708	$ 464,546	$ 705,455	$ 741,098	$ 1,020,231	$ 1,072,352	$ 2,271,631
$ 798,077	$ 840,795	$ 708,579	$ 746,380	$ 589,601	$ 620,956	$ 435,952	$ 459,067	$ 241,687	$ 254,465	$ -
$ 631,754	**$ 644,334**	**$ 834,310**	**$ 856,848**	**$ 1,076,667**	**$ 1,111,184**	**$ 1,365,027**	**$ 1,413,861**	**$ 1,706,449**	**$ 1,772,295**	**$ 2,985,572**
$ 2,608,912	**$ 2,693,551**	**$ 2,603,712**	**$ 2,684,315**	**$ 2,570,731**	**$ 2,645,636**	**$ 2,504,498**	**$ 2,571,750**	**$ 2,398,729**	**$ 2,456,039**	**$ 3,657,701**

Appendix 9: Current-A --"The Marais" with 20% affordable units @ 60% AMI and 20-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	8.86%	NY AMI	$ 58,600
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	10.36%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	3,784	8 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	30,413	48 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	26,465	29 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 21,652,000				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	3,784		$ 166,610	$ 171,608	$ 176,756	$ 182,059	$ 187,520	$ 193,146	$ 198,940	$ 204,909	$ 211,056	$ 217,388
Stablized Unit: Studio Vacancy	(146)		$ (6,431)	$ (6,624)	$ (6,823)	$ (7,027)	$ (7,238)	$ (7,455)	$ (7,679)	$ (7,909)	$ (8,147)	$ (8,391)
Stablized Unit: 1 Bedroom Rental Income	30,413		$ 1,242,363	$ 1,279,634	$ 1,318,023	$ 1,357,563	$ 1,398,290	$ 1,440,239	$ 1,483,446	$ 1,527,950	$ 1,573,788	$ 1,621,002
Stablized Unit: 1 Bedroom Vacancy	(1,174)		$ (47,955)	$ (49,394)	$ (50,876)	$ (52,402)	$ (53,974)	$ (55,593)	$ (57,261)	$ (58,979)	$ (60,748)	$ (62,571)
Stablized Unit: 2 Bedroom Rental Income	26,465		$ 963,583	$ 992,491	$ 1,022,266	$ 1,052,934	$ 1,084,522	$ 1,117,057	$ 1,150,569	$ 1,185,086	$ 1,220,639	$ 1,257,258
Stablized Unit: 2 Bedroom Vacancy	(1,022)		$ (37,194)	$ (38,310)	$ (39,459)	$ (40,643)	$ (41,863)	$ (43,118)	$ (44,412)	$ (45,744)	$ (47,117)	$ (48,530)
Affordable Unit: Rental Income	15,165		$ 159,965	$ 164,764	$ 169,706	$ 174,798	$ 180,042	$ 185,443	$ 191,006	$ 196,736	$ 202,638	$ 208,718
Affordable Unit: Vacancy	(332)		$ (3,503)	$ (3,608)	$ (3,717)	$ (3,828)	$ (3,943)	$ (4,061)	$ (4,183)	$ (4,309)	$ (4,438)	$ (4,571)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,437,437**	**$ 2,510,560**	**$ 2,585,876**	**$ 2,663,453**	**$ 2,743,356**	**$ 2,825,657**	**$ 2,910,427**	**$ 2,997,739**	**$ 3,087,672**	**$ 3,180,302**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 1,956,975	$ 2,020,488	$ 2,086,004	$ 2,153,583	$ 2,223,289	$ 2,295,188	$ 2,369,348	$ 2,445,840	$ 2,524,734	$ 2,606,105
Real Estate Tax												
Market Value			$ 9,393,478	$ 9,698,344	$10,012,818	$10,337,196	$10,671,786	$11,016,903	$11,372,872	$11,740,030	$12,118,723	$ 12,509,305
Actual Assessd Value			$ 4,227,065	$ 4,364,255	$ 4,505,768	$ 4,651,738	$ 4,802,304	$ 4,957,606	$ 5,117,793	$ 5,283,014	$ 5,453,425	$ 5,629,187
Tax Exemption %			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Exemption Value			$ 3,914,065	$ 4,051,255	$ 4,192,768	$ 4,338,738	$ 4,489,304	$ 4,644,606	$ 4,804,793	$ 4,970,014	$ 5,140,425	$ 5,316,187
Taxable Value			$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 39,689	$ 40,436	$ 41,197	$ 41,972	$ 42,762	$ 43,567	$ 44,387	$ 45,222
Total Real Estate Tax Saved			$ 478,142	$ 504,215	$ 531,649	$ 560,512	$ 590,878	$ 622,824	$ 656,430	$ 691,781	$ 728,967	$ 768,080
Total Expenses			**$ 518,698**	**$ 529,027**	**$ 539,561**	**$ 550,306**	**$ 561,264**	**$ 572,441**	**$ 583,840**	**$ 595,467**	**$ 607,325**	**$ 619,419**
Net Operating Income			**$ 1,918,738**	**$ 1,981,533**	**$ 2,046,315**	**$ 2,113,147**	**$ 2,182,092**	**$ 2,253,216**	**$ 2,326,586**	**$ 2,402,273**	**$ 2,480,347**	**$ 2,560,883**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates												
Low-Income Housing Tax Credit												
Property Before-Tax CF (Operations)			$ 1,222,338	$ 1,285,133	$ 1,349,915	$ 1,416,747	$ 1,485,692	$ 1,556,816	$ 1,630,186	$ 1,705,873	$ 1,783,947	$ 1,864,483
Property Before-Tax CF (Reversion)		$ (21,652,000)										$ 24,495,936
PV of remaining 421-a Tax Benefit for buyer												$1,602,870
Property Before-Tax CF		$ (21,652,000)	$ 1,222,338	$ 1,285,133	$ 1,349,915	$ 1,416,747	$ 1,485,692	$ 1,556,816	$ 1,630,186	$ 1,705,873	$ 1,783,947	$ 27,963,289

Unlevered IRR	**8.26%**
PV of investment benefits @ 7.7% discount rate	**$ 22,544,416**
NPV of investment benefits @ 7.7% discount rate	**$ 892,416**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate	**$ 7,529,481**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 4,040,120**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ (4,364,254)**
Negotiable Certificates (buy - /sell +)	**$ -**
MV of Low-Income Housing Tax Credit	**$ -**

2014 Year 11	2015 Year 12	2016 Year 13	2017 Year 14	2018 Year 15	2019 Year 16	2020 Year 17	2021 Year 18	2022 Year 19	2023 Year 20	2024 Year 21	2025 Year 22	2026 Year 23
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59	$ 107.02	$ 111.64
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18	$ 99.29	$ 103.58
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83	$ 88.50	$ 92.32
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52	$ 81.91	$ 84.37
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78	$ 75.99	$ 78.27
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76	$ 67.73	$ 69.77
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40	$ 26.16	$ 26.95
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05	$ 19.62	$ 20.21
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88	$ 16.35	$ 16.84
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%	18.071%	18.411%
$ 223,909	$ 230,627	$ 237,545	$ 244,672	$ 252,012	$ 259,572	$ 267,359	$ 275,380	$ 283,642	$ 292,151	$ 388,196	$ 404,966	$ 422,461
$ (8,643)	$ (8,902)	$ (9,169)	$ (9,444)	$ (9,728)	$ (10,019)	$ (10,320)	$ (10,630)	$ (10,949)	$ (11,277)	$ (14,984)	$ (15,632)	$ (16,307)
$ 1,669,632	$ 1,719,721	$ 1,771,312	$ 1,824,452	$ 1,879,185	$ 1,935,561	$ 1,993,628	$ 2,053,437	$ 2,115,040	$ 2,178,491	$ 2,894,676	$ 3,019,727	$ 3,150,179
$ (64,448)	$ (66,381)	$ (68,373)	$ (70,424)	$ (72,537)	$ (74,713)	$ (76,954)	$ (79,263)	$ (81,641)	$ (84,090)	$ (111,735)	$ (116,561)	$ (121,597)
$ 1,294,975	$ 1,333,825	$ 1,373,839	$ 1,415,055	$ 1,457,506	$ 1,501,231	$ 1,546,268	$ 1,592,656	$ 1,640,436	$ 1,689,649	$ 2,245,127	$ 2,342,116	$ 2,443,296
$ (49,986)	$ (51,486)	$ (53,030)	$ (54,621)	$ (56,260)	$ (57,948)	$ (59,686)	$ (61,477)	$ (63,321)	$ (65,220)	$ (86,662)	$ (90,406)	$ (94,311)
$ 214,979	$ 221,428	$ 228,071	$ 234,913	$ 241,961	$ 249,220	$ 256,696	$ 264,397	$ 272,329	$ 280,499	$ 288,914	$ 297,581	$ 306,509
$ (4,708)	$ (4,849)	$ (4,995)	$ (5,145)	$ (5,299)	$ (5,458)	$ (5,622)	$ (5,790)	$ (5,964)	$ (6,143)	$ (6,327)	$ (6,517)	$ (6,713)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,275,711	**$ 3,373,982**	**$ 3,475,202**	**$ 3,579,458**	**$ 3,686,841**	**$ 3,797,447**	**$ 3,911,370**	**$ 4,028,711**	**$ 4,149,573**	**$ 4,274,060**	**$ 5,597,205**	**$ 5,835,275**	**$ 6,083,516**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941	$ 728,220	$ 742,784
$ 2,690,030	$ 2,776,588	$ 2,865,860	$ 2,957,929	$ 3,052,882	$ 3,150,808	$ 3,251,799	$ 3,355,948	$ 3,463,354	$ 3,574,117	$ 4,883,264	$ 5,107,055	$ 5,340,732
$ 12,912,146	$13,327,623	$13,756,126	$14,198,059	$14,653,834	$15,123,879	$15,608,634	$16,108,552	$16,624,102	$17,155,763	$23,439,668	$24,513,862	$25,635,513
$ 5,810,466	$ 5,997,430	$ 6,190,257	$ 6,389,126	$ 6,594,225	$ 6,805,745	$ 7,023,885	$ 7,248,849	$ 7,480,846	$ 7,720,093	$10,547,851	$11,031,238	$11,535,981
100%	100%	80%	80%	60%	60%	40%	40%	20%	20%	0%	0%	0%
$ 5,497,466	$ 5,684,430	$ 4,701,806	$ 4,860,901	$ 3,768,735	$ 3,895,647	$ 2,684,354	$ 2,774,339	$ 1,433,569	$ 1,481,419	$ -	$ -	$ -
$ 313,000	$ 313,000	$ 1,488,451	$ 1,528,225	$ 2,825,490	$ 2,910,098	$ 4,339,531	$ 4,474,509	$ 6,047,277	$ 6,238,675	$10,547,851	$11,031,238	$11,535,981
$ 46,073	$ 46,940	$ 227,422	$ 237,894	$ 448,113	$ 470,217	$ 714,383	$ 750,466	$ 1,033,340	$ 1,086,108	$ 1,870,864	$ 1,993,425	$ 2,123,869
$ 809,219	$ 852,488	$ 718,395	$ 756,681	$ 597,708	$ 629,464	$ 441,904	$ 465,313	$ 244,964	$ 257,904	$ -	$ -	$ -
$ 631,754	**$ 644,334**	**$ 836,764**	**$ 859,423**	**$ 1,082,072**	**$ 1,116,856**	**$ 1,373,955**	**$ 1,423,229**	**$ 1,719,558**	**$ 1,786,051**	**$ 2,584,805**	**$ 2,721,645**	**$ 2,866,653**
$ 2,643,957	**$ 2,729,648**	**$ 2,638,437**	**$ 2,720,035**	**$ 2,604,769**	**$ 2,680,591**	**$ 2,537,416**	**$ 2,605,482**	**$ 2,430,015**	**$ 2,488,009**	**$ 3,012,400**	**$ 3,113,629**	**$ 3,216,863**

2027 Year 24	2028 Year 25	2029 Year 26	2030 Year 27	2031 Year 28	2032 Year 29	2033 Year 30	2034 Year 31	2035 Year 32	2036 Year 33	2037 Year 34	2038 Year 35	2039 Year 36
$ 116.47	$ 121.50	$ 126.75	$ 132.22	$ 137.93	$ 143.89	$ 150.11	$ 156.59	$ 163.36	$ 170.42	$ 177.78	$ 185.46	$ 193.47
$ 108.06	$ 112.72	$ 117.59	$ 122.67	$ 127.97	$ 133.50	$ 139.27	$ 145.28	$ 151.56	$ 158.11	$ 164.94	$ 172.06	$ 179.50
$ 96.31	$ 100.47	$ 104.81	$ 109.34	$ 114.06	$ 118.99	$ 124.13	$ 129.49	$ 135.09	$ 140.92	$ 147.01	$ 153.36	$ 159.99
$ 86.90	$ 89.50	$ 92.19	$ 94.95	$ 97.80	$ 100.74	$ 103.76	$ 106.87	$ 110.08	$ 113.38	$ 116.78	$ 120.29	
$ 80.62	$ 83.04	$ 85.53	$ 88.10	$ 90.74	$ 93.46	$ 96.27	$ 99.15	$ 102.13	$ 105.19	$ 108.35	$ 111.60	
$ 71.86	$ 74.01	$ 76.23	$ 78.52	$ 80.88	$ 83.30	$ 85.80	$ 88.38	$ 91.03	$ 93.76	$ 96.57	$ 99.47	
$ 27.76	$ 28.59	$ 29.45	$ 30.33	$ 31.24	$ 32.18	$ 33.14	$ 34.14	$ 35.16	$ 36.22	$ 37.30	$ 38.42	
$ 20.82	$ 21.44	$ 22.09	$ 22.75	$ 23.43	$ 24.13	$ 24.86	$ 25.60	$ 26.37	$ 27.16	$ 27.98	$ 28.82	
$ 17.35	$ 17.87	$ 18.40	$ 18.96	$ 19.53	$ 20.11	$ 20.71	$ 21.34	$ 21.98	$ 22.63	$ 23.31	$ 24.01	
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18.757%	19.110%	19.470%	19.836%	20.210%	20.590%	20.978%	21.372%	21.775%	22.184%	22.602%	23.027%	23.461%
$ 440,711	$ 459,750	$ 479,611	$ 500,330	$ 521,945	$ 544,493	$ 568,015	$ 592,553	$ 618,151	$ 644,855	$ 672,713	$ 701,774	$ 915,114
$ (17,011)	$ (17,746)	$ (18,513)	$ (19,313)	$ (20,147)	$ (21,017)	$ (21,925)	$ (22,873)	$ (23,861)	$ (24,891)	$ (25,967)	$ (27,088)	$ (35,323)
$ 3,286,266	$ 3,428,233	$ 3,576,333	$ 3,730,830	$ 3,892,002	$ 4,060,137	$ 4,235,535	$ 4,418,510	$ 4,609,389	$ 4,808,515	$ 5,016,243	$ 5,232,945	$ 6,823,760
$ (126,850)	$ (132,330)	$ (138,046)	$ (144,010)	$ (150,231)	$ (156,721)	$ (163,492)	$ (170,554)	$ (177,922)	$ (185,609)	$ (193,627)	$ (201,992)	$ (263,397)
$ 2,548,846	$ 2,658,956	$ 2,773,823	$ 2,893,652	$ 3,018,658	$ 3,149,064	$ 3,285,104	$ 3,427,020	$ 3,575,067	$ 3,729,510	$ 3,890,625	$ 4,058,700	$ 5,292,545
$ (98,385)	$ (102,636)	$ (107,070)	$ (111,695)	$ (116,520)	$ (121,554)	$ (126,805)	$ (132,283)	$ (137,998)	$ (143,959)	$ (150,178)	$ (156,666)	$ (204,292)
$ 315,704	$ 325,175	$ 334,930	$ 344,978	$ 355,328	$ 365,988	$ 376,967	$ 388,276	$ 399,924	$ 411,922	$ 424,280	$ 437,008	$ -
$ (6,914)	$ (7,121)	$ (7,335)	$ (7,555)	$ (7,782)	$ (8,015)	$ (8,256)	$ (8,503)	$ (8,758)	$ (9,021)	$ (9,292)	$ (9,570)	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 6,342,367	**$ 6,612,281**	**$ 6,893,733**	**$ 7,187,218**	**$ 7,493,252**	**$ 7,812,373**	**$ 8,145,143**	**$ 8,492,146**	**$ 8,853,993**	**$ 9,231,323**	**$ 9,624,797**	**$10,035,111**	**$12,528,406**
$ 757,640	$ 772,793	$ 788,249	$ 804,014	$ 820,094	$ 836,496	$ 853,226	$ 870,290	$ 887,696	$ 905,450	$ 923,559	$ 942,030	$ 960,871
$ 5,584,727	$ 5,839,488	$ 6,105,485	$ 6,383,205	$ 6,673,158	$ 6,975,877	$ 7,291,917	$ 7,621,855	$ 7,966,297	$ 8,325,872	$ 8,701,238	$ 9,093,080	$11,567,535
$26,806,689	$28,029,544	$29,306,326	$30,639,382	$32,031,160	$33,484,211	$35,001,200	$36,584,905	$38,238,226	$39,964,187	$41,765,943	$43,646,786	$55,524,166
$12,063,010	$12,613,295	$13,187,847	$13,787,722	$14,414,022	$15,067,895	$15,750,540	$16,463,207	$17,207,202	$17,983,884	$18,794,675	$19,641,054	$24,985,875
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$12,063,010	$12,613,295	$13,187,847	$13,787,722	$14,414,022	$15,067,895	$15,750,540	$16,463,207	$17,207,202	$17,983,884	$18,794,675	$19,641,054	$24,985,875
$ 2,262,697	$ 2,410,442	$ 2,567,672	$ 2,734,989	$ 2,913,035	$ 3,102,491	$ 3,304,082	$ 3,518,579	$ 3,746,801	$ 3,989,618	$ 4,247,957	$ 4,522,801	$ 5,861,851
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,020,337	**$ 3,183,235**	**$ 3,355,920**	**$ 3,539,003**	**$ 3,733,129**	**$ 3,938,987**	**$ 4,157,308**	**$ 4,388,870**	**$ 4,634,497**	**$ 4,895,068**	**$ 5,171,516**	**$ 5,464,832**	**$ 6,822,722**
$ 3,322,030	**$ 3,429,046**	**$ 3,537,813**	**$ 3,648,216**	**$ 3,760,123**	**$ 3,873,386**	**$ 3,987,834**	**$ 4,103,276**	**$ 4,219,496**	**$ 4,336,254**	**$ 4,453,282**	**$ 4,570,279**	**$ 5,705,684**

Appendix 10: Current-B --"The Marais" with 20% affordable units @ 50% AMI, 80/20 program, and 20-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	8.74%	NY AMI	$ 58,600
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	10.24%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	3,784	8 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	30,413	48 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	26,465	29 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 21,652,000				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	3,784		$ 166,610	$ 171,608	$ 176,756	$ 182,059	$ 187,520	$ 193,146	$ 198,940	$ 204,909	$ 211,056	$ 217,388
Stablized Unit: Studio Vacancy	(146)		$ (6,431)	$ (6,624)	$ (6,823)	$ (7,027)	$ (7,238)	$ (7,455)	$ (7,679)	$ (7,909)	$ (8,147)	$ (8,391)
Stablized Unit: 1 Bedroom Rental Income	30,413		$ 1,242,363	$ 1,279,634	$ 1,318,023	$ 1,357,563	$ 1,398,290	$ 1,440,239	$ 1,483,446	$ 1,527,950	$ 1,573,788	$ 1,621,002
Stablized Unit: 1 Bedroom Vacancy	(1,174)		$ (47,955)	$ (49,394)	$ (50,876)	$ (52,402)	$ (53,974)	$ (55,593)	$ (57,261)	$ (58,979)	$ (60,748)	$ (62,571)
Stablized Unit: 2 Bedroom Rental Income	26,465		$ 963,583	$ 992,491	$ 1,022,266	$ 1,052,934	$ 1,084,522	$ 1,117,057	$ 1,150,569	$ 1,185,086	$ 1,220,639	$ 1,257,258
Stablized Unit: 2 Bedroom Vacancy	(1,022)		$ (37,194)	$ (38,310)	$ (39,459)	$ (40,643)	$ (41,863)	$ (43,118)	$ (44,412)	$ (45,744)	$ (47,117)	$ (48,530)
Affordable Unit: Rental Income	15,165		$ 133,304	$ 137,303	$ 141,422	$ 145,665	$ 150,035	$ 154,536	$ 159,172	$ 163,947	$ 168,865	$ 173,931
Affordable Unit: Vacancy	(332)		$ (2,919)	$ (3,007)	$ (3,097)	$ (3,190)	$ (3,286)	$ (3,384)	$ (3,486)	$ (3,590)	$ (3,698)	$ (3,809)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,411,360**	**$ 2,483,700**	**$ 2,558,211**	**$ 2,634,958**	**$ 2,714,007**	**$ 2,795,427**	**$ 2,879,290**	**$ 2,965,668**	**$ 3,054,638**	**$ 3,146,277**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 1,930,898	$ 1,993,629	$ 2,058,339	$ 2,125,088	$ 2,193,939	$ 2,264,958	$ 2,338,211	$ 2,413,768	$ 2,491,700	$ 2,572,081
Real Estate Tax												
Market Value			$ 9,268,309	$ 9,569,420	$ 9,880,026	$10,200,421	$10,530,907	$10,871,798	$11,223,414	$11,586,088	$11,960,162	$ 12,345,988
Actual Assessd Value			$ 4,170,739	$ 4,306,239	$ 4,446,012	$ 4,590,189	$ 4,738,908	$ 4,892,309	$ 5,050,536	$ 5,213,740	$ 5,382,073	$ 5,555,695
Tax Exemption %			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Exemption Value			$ 3,857,739	$ 3,993,239	$ 4,133,012	$ 4,277,189	$ 4,425,908	$ 4,579,309	$ 4,737,536	$ 4,900,740	$ 5,069,073	$ 5,242,695
Taxable Value			$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 39,689	$ 40,436	$ 41,197	$ 41,972	$ 42,762	$ 43,567	$ 44,387	$ 45,222
Total Real Estate Tax Saved			$ 471,261	$ 496,995	$ 524,072	$ 552,561	$ 582,534	$ 614,068	$ 647,241	$ 682,139	$ 718,848	$ 757,462
Total Expenses			**$ 518,698**	**$ 529,027**	**$ 539,561**	**$ 550,306**	**$ 561,264**	**$ 572,441**	**$ 583,840**	**$ 595,467**	**$ 607,325**	**$ 619,419**
Net Operating Income			**$ 1,892,662**	**$ 1,954,673**	**$ 2,018,650**	**$ 2,084,652**	**$ 2,152,742**	**$ 2,222,986**	**$ 2,295,449**	**$ 2,370,202**	**$ 2,447,314**	**$ 2,526,859**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates												
Low-Income Housing Tax Credit		$ 1,242,482										
Property Before-Tax CF (Operations)			$ 1,196,262	$ 1,258,273	$ 1,322,250	$ 1,388,252	$ 1,456,342	$ 1,526,586	$ 1,599,049	$ 1,673,802	$ 1,750,914	$ 1,830,459
Property Before-Tax CF (Reversion)		$ (20,409,518)										$ 24,455,498
PV of remaining 421-a Tax Benefit for buyer												$1,580,933
Property Before-Tax CF		$ (20,409,518)	$ 1,196,262	$ 1,258,273	$ 1,322,250	$ 1,388,252	$ 1,456,342	$ 1,526,586	$ 1,599,049	$ 1,673,802	$ 1,750,914	$ 27,866,889

Unlevered IRR	**8.93%**
PV of investment benefits @ 7.7% discount rate	**$ 22,315,001**
NPV of investment benefits @ 7.7% discount rate	**$ 1,905,483**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate	**$ 7,424,758**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 3,983,121**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ (4,563,963)**
Negotiable Certificates (buy - /sell +)	**$ -**
MV of Low-Income Housing Tax Credit	**$ 1,242,482**

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**	**Year 22**	**Year 23**
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59	$ 107.02	$ 111.64
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18	$ 99.29	$ 103.58
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83	$ 88.50	$ 92.32
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52	$ 81.91	$ 84.37
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78	$ 75.99	$ 78.27
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76	$ 67.73	$ 69.77
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40	$ 26.16	$ 26.95
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05	$ 19.62	$ 20.21
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88	$ 16.35	$ 16.84
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%	18.071%	18.411%
$ 223,909	$ 230,627	$ 237,545	$ 244,672	$ 252,012	$ 259,572	$ 267,359	$ 275,380	$ 283,642	$ 292,151	$ 388,196	$ 404,966	$ 422,461
$ (8,643)	$ (8,902)	$ (9,169)	$ (9,444)	$ (9,728)	$ (10,019)	$ (10,320)	$ (10,630)	$ (10,949)	$ (11,277)	$ (14,984)	$ (15,632)	$ (16,307)
$ 1,669,632	$ 1,719,721	$ 1,771,312	$ 1,824,452	$ 1,879,185	$ 1,935,561	$ 1,993,628	$ 2,053,437	$ 2,115,040	$ 2,178,491	$ 2,894,676	$ 3,019,727	$ 3,150,179
$ (64,448)	$ (66,381)	$ (68,373)	$ (70,424)	$ (72,537)	$ (74,713)	$ (76,954)	$ (79,263)	$ (81,641)	$ (84,090)	$ (111,735)	$ (116,561)	$ (121,597)
$ 1,294,975	$ 1,333,825	$ 1,373,839	$ 1,415,055	$ 1,457,506	$ 1,501,231	$ 1,546,268	$ 1,592,656	$ 1,640,436	$ 1,689,649	$ 2,245,127	$ 2,342,116	$ 2,443,296
$ (49,986)	$ (51,486)	$ (53,030)	$ (54,621)	$ (56,260)	$ (57,948)	$ (59,686)	$ (61,477)	$ (63,321)	$ (65,220)	$ (86,662)	$ (90,406)	$ (94,311)
$ 179,149	$ 184,524	$ 190,059	$ 195,761	$ 201,634	$ 207,683	$ 213,914	$ 220,331	$ 226,941	$ 233,749	$ 240,762	$ 247,984	$ 255,424
$ (3,923)	$ (4,041)	$ (4,162)	$ (4,287)	$ (4,416)	$ (4,548)	$ (4,685)	$ (4,825)	$ (4,970)	$ (5,119)	$ (5,273)	$ (5,431)	$ (5,594)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,240,666	**$ 3,337,886**	**$ 3,438,022**	**$ 3,541,163**	**$ 3,647,398**	**$ 3,756,820**	**$ 3,869,524**	**$ 3,985,610**	**$ 4,105,178**	**$ 4,228,334**	**$ 5,550,108**	**$ 5,786,764**	**$ 6,033,550**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941	$ 728,220	$ 742,784
$ 2,654,985	$ 2,740,492	$ 2,828,680	$ 2,919,634	$ 3,013,438	$ 3,110,181	$ 3,209,953	$ 3,312,847	$ 3,418,960	$ 3,528,391	$ 4,836,166	$ 5,058,544	$ 5,290,766
$ 12,743,929	$13,154,360	$13,577,665	$14,014,244	$14,464,504	$14,928,869	$15,407,774	$15,901,667	$16,411,009	$16,936,278	$23,213,599	$24,281,010	$25,395,676
$ 5,734,768	$ 5,919,462	$ 6,109,949	$ 6,306,410	$ 6,509,027	$ 6,717,991	$ 6,933,498	$ 7,155,750	$ 7,384,954	$ 7,621,325	$10,446,119	$10,926,455	$11,428,054
100%	100%	80%	80%	60%	60%	40%	40%	20%	20%	0%	0%	0%
$ 5,421,768	$ 5,606,462	$ 4,637,559	$ 4,794,728	$ 3,717,616	$ 3,842,995	$ 2,648,199	$ 2,737,100	$ 1,414,391	$ 1,461,665	$ -	$ -	$ -
$ 313,000	$ 313,000	$ 1,472,390	$ 1,511,682	$ 2,791,411	$ 2,874,997	$ 4,285,299	$ 4,418,650	$ 5,970,563	$ 6,159,660	$10,446,119	$10,926,455	$11,428,054
$ 46,073	$ 46,940	$ 224,968	$ 235,319	$ 442,708	$ 464,546	$ 705,455	$ 741,098	$ 1,020,231	$ 1,072,352	$ 1,852,820	$ 1,974,490	$ 2,103,999
$ 798,077	$ 840,795	$ 708,579	$ 746,380	$ 589,601	$ 620,956	$ 435,952	$ 459,067	$ 241,687	$ 254,465	$ -	$ -	$ -
$ 631,754	**$ 644,334**	**$ 834,310**	**$ 856,848**	**$ 1,076,667**	**$ 1,111,184**	**$ 1,365,027**	**$ 1,413,861**	**$ 1,706,449**	**$ 1,772,295**	**$ 2,566,761**	**$ 2,702,710**	**$ 2,846,783**
$ 2,608,912	**$ 2,693,551**	**$ 2,603,712**	**$ 2,684,315**	**$ 2,570,731**	**$ 2,645,636**	**$ 2,504,498**	**$ 2,571,750**	**$ 2,398,729**	**$ 2,456,039**	**$ 2,983,346**	**$ 3,084,054**	**$ 3,186,767**

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Year 24	**Year 25**	**Year 26**	**Year 27**	**Year 28**	**Year 29**	**Year 30**	**Year 31**	**Year 32**	**Year 33**	**Year 34**	**Year 35**	**Year 36**
$ 116.47	$ 121.50	$ 126.75	$ 132.22	$ 137.93	$ 143.89	$ 150.11	$ 156.59	$ 163.36	$ 170.42	$ 177.78	$ 185.46	$ 193.47
$ 108.06	$ 112.72	$ 117.59	$ 122.67	$ 127.97	$ 133.50	$ 139.27	$ 145.28	$ 151.56	$ 158.11	$ 164.94	$ 172.06	$ 179.50
$ 96.31	$ 100.47	$ 104.81	$ 109.34	$ 114.06	$ 118.99	$ 124.13	$ 129.49	$ 135.09	$ 140.92	$ 147.01	$ 153.36	$ 159.99
$ 86.90	$ 89.50	$ 92.19	$ 94.95	$ 97.80	$ 100.74	$ 103.76	$ 106.87	$ 110.08	$ 113.38	$ 116.78	$ 120.29	
$ 80.62	$ 83.04	$ 85.53	$ 88.10	$ 90.74	$ 93.46	$ 96.27	$ 99.15	$ 102.13	$ 105.19	$ 108.35	$ 111.60	
$ 71.86	$ 74.01	$ 76.23	$ 78.52	$ 80.88	$ 83.30	$ 85.80	$ 88.38	$ 91.03	$ 93.76	$ 96.57	$ 99.47	
$ 27.76	$ 28.59	$ 29.45	$ 30.33	$ 31.24	$ 32.18	$ 33.14	$ 34.14	$ 35.16	$ 36.22	$ 37.30	$ 38.42	
$ 20.82	$ 21.44	$ 22.09	$ 22.75	$ 23.43	$ 24.13	$ 24.86	$ 25.60	$ 26.37	$ 27.16	$ 27.98	$ 28.82	
$ 17.35	$ 17.87	$ 18.40	$ 18.96	$ 19.53	$ 20.11	$ 20.71	$ 21.34	$ 21.98	$ 22.63	$ 23.31	$ 24.01	
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18.757%	19.110%	19.470%	19.836%	20.210%	20.590%	20.978%	21.372%	21.775%	22.184%	22.602%	23.027%	23.461%
$ 440,711	$ 459,750	$ 479,611	$ 500,330	$ 521,945	$ 544,493	$ 568,015	$ 592,553	$ 618,151	$ 644,855	$ 672,713	$ 701,774	$ 915,114
$ (17,011)	$ (17,746)	$ (18,513)	$ (19,313)	$ (20,147)	$ (21,017)	$ (21,925)	$ (22,873)	$ (23,861)	$ (24,891)	$ (25,967)	$ (27,088)	$ (35,323)
$ 3,286,266	$ 3,428,233	$ 3,576,333	$ 3,730,830	$ 3,892,002	$ 4,060,137	$ 4,235,535	$ 4,418,510	$ 4,609,389	$ 4,808,515	$ 5,016,243	$ 5,232,945	$ 6,823,760
$ (126,850)	$ (132,330)	$ (138,046)	$ (144,010)	$ (150,231)	$ (156,721)	$ (163,492)	$ (170,554)	$ (177,922)	$ (185,609)	$ (193,627)	$ (201,992)	$ (263,397)
$ 2,548,846	$ 2,658,956	$ 2,773,823	$ 2,893,652	$ 3,018,658	$ 3,149,064	$ 3,285,104	$ 3,427,020	$ 3,575,067	$ 3,729,510	$ 3,890,625	$ 4,058,700	$ 5,292,545
$ (98,385)	$ (102,636)	$ (107,070)	$ (111,695)	$ (116,520)	$ (121,554)	$ (126,805)	$ (132,283)	$ (137,998)	$ (143,959)	$ (150,178)	$ (156,666)	$ (204,292)
$ 263,087	$ 270,979	$ 279,109	$ 287,482	$ 296,106	$ 304,990	$ 314,139	$ 323,563	$ 333,270	$ 343,268	$ 353,567	$ 364,174	$ -
$ (5,762)	$ (5,934)	$ (6,112)	$ (6,296)	$ (6,485)	$ (6,679)	$ (6,880)	$ (7,086)	$ (7,299)	$ (7,518)	$ (7,743)	$ (7,975)	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 6,290,902	**$ 6,559,272**	**$ 6,839,134**	**$ 7,130,981**	**$ 7,435,328**	**$ 7,752,711**	**$ 8,083,691**	**$ 8,428,850**	**$ 8,788,799**	**$ 9,164,172**	**$ 9,555,633**	**$ 9,963,871**	**$12,528,406**
$ 757,640	$ 772,793	$ 788,249	$ 804,014	$ 820,094	$ 836,496	$ 853,226	$ 870,290	$ 887,696	$ 905,450	$ 923,559	$ 942,030	$ 960,871
$ 5,533,262	$ 5,786,479	$ 6,050,885	$ 6,326,967	$ 6,615,234	$ 6,916,215	$ 7,230,465	$ 7,558,560	$ 7,901,103	$ 8,258,722	$ 8,632,074	$ 9,021,841	$11,567,535
$26,559,657	$27,775,101	$29,044,250	$30,369,444	$31,753,123	$33,197,833	$34,706,231	$36,281,087	$37,925,294	$39,641,866	$41,433,953	$43,304,836	$55,524,166
$11,951,846	$12,498,795	$13,069,912	$13,666,250	$14,288,905	$14,939,025	$15,617,804	$16,326,489	$17,066,382	$17,838,840	$18,645,279	$19,487,176	$24,985,875
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$11,951,846	$12,498,795	$13,069,912	$13,666,250	$14,288,905	$14,939,025	$15,617,804	$16,326,489	$17,066,382	$17,838,840	$18,645,279	$19,487,176	$24,985,875
$ 2,241,845	$ 2,388,561	$ 2,544,710	$ 2,710,893	$ 2,887,749	$ 3,075,957	$ 3,276,238	$ 3,489,359	$ 3,716,138	$ 3,957,441	$ 4,214,190	$ 4,487,367	$ 5,861,851
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 2,999,485	**$ 3,161,354**	**$ 3,332,959**	**$ 3,514,907**	**$ 3,707,843**	**$ 3,912,453**	**$ 4,129,463**	**$ 4,359,650**	**$ 4,603,834**	**$ 4,862,891**	**$ 5,137,749**	**$ 5,429,398**	**$ 6,822,722**
$ 3,291,417	**$ 3,397,919**	**$ 3,506,176**	**$ 3,616,074**	**$ 3,727,485**	**$ 3,840,259**	**$ 3,954,227**	**$ 4,069,201**	**$ 4,184,965**	**$ 4,301,282**	**$ 4,417,883**	**$ 4,534,473**	**$ 5,705,684**

Appendix 11: Alternative-1A --"The Marais" with 20% affordable units @ 60% AMI, negotiable certificate, and 20-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	8.86%	NY AMI	$ 58,600
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	10.36%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	3,784	8 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	30,413	48 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	26,465	29 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 21,652,000				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	3,784		$ 166,610	$ 171,608	$ 176,756	$ 182,059	$ 187,520	$ 193,146	$ 198,940	$ 204,909	$ 211,056	$ 217,388
Stablized Unit: Studio Vacancy	(146)		$ (6,431)	$ (6,624)	$ (6,823)	$ (7,027)	$ (7,238)	$ (7,455)	$ (7,679)	$ (7,909)	$ (8,147)	$ (8,391)
Stablized Unit: 1 Bedroom Rental Income	30,413		$ 1,242,363	$ 1,279,634	$ 1,318,023	$ 1,357,563	$ 1,398,290	$ 1,440,239	$ 1,483,446	$ 1,527,950	$ 1,573,788	$ 1,621,002
Stablized Unit: 1 Bedroom Vacancy	(1,174)		$ (47,955)	$ (49,394)	$ (50,876)	$ (52,402)	$ (53,974)	$ (55,593)	$ (57,261)	$ (58,979)	$ (60,748)	$ (62,571)
Stablized Unit: 2 Bedroom Rental Income	26,465		$ 963,583	$ 992,491	$ 1,022,266	$ 1,052,934	$ 1,084,522	$ 1,117,057	$ 1,150,569	$ 1,185,086	$ 1,220,639	$ 1,257,258
Stablized Unit: 2 Bedroom Vacancy	(1,022)		$ (37,194)	$ (38,310)	$ (39,459)	$ (40,643)	$ (41,863)	$ (43,118)	$ (44,412)	$ (45,744)	$ (47,117)	$ (48,530)
Affordable Unit: Rental Income	15,165		$ 159,965	$ 164,764	$ 169,706	$ 174,798	$ 180,042	$ 185,443	$ 191,006	$ 196,736	$ 202,638	$ 208,718
Affordable Unit: Vacancy	(332)		$ (3,503)	$ (3,608)	$ (3,717)	$ (3,828)	$ (3,943)	$ (4,061)	$ (4,183)	$ (4,309)	$ (4,438)	$ (4,571)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,437,437**	**$ 2,510,560**	**$ 2,585,876**	**$ 2,663,453**	**$ 2,743,356**	**$ 2,825,657**	**$ 2,910,427**	**$ 2,997,739**	**$ 3,087,672**	**$ 3,180,302**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 1,956,975	$ 2,020,488	$ 2,086,004	$ 2,153,583	$ 2,223,289	$ 2,295,188	$ 2,369,348	$ 2,445,840	$ 2,524,734	$ 2,606,105
Real Estate Tax												
Market Value			$ 9,393,478	$ 9,698,344	$10,012,818	$10,337,196	$10,671,786	$11,016,903	$11,372,872	$11,740,030	$12,118,723	$ 12,509,305
Actual Assessd Value			$ 4,227,065	$ 4,364,255	$ 4,505,768	$ 4,651,738	$ 4,802,304	$ 4,957,606	$ 5,117,793	$ 5,283,014	$ 5,453,425	$ 5,629,187
Tax Exemption %			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Exemption Value			$ 3,914,065	$ 4,051,255	$ 4,192,768	$ 4,338,738	$ 4,489,304	$ 4,644,606	$ 4,804,793	$ 4,970,014	$ 5,140,425	$ 5,316,187
Taxable Value			$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 39,689	$ 40,436	$ 41,197	$ 41,972	$ 42,762	$ 43,567	$ 44,387	$ 45,222
Total Real Estate Tax Saved			$ 478,142	$ 504,215	$ 531,649	$ 560,512	$ 590,878	$ 622,824	$ 656,430	$ 691,781	$ 728,967	$ 768,080
Total Expenses			**$ 518,698**	**$ 529,027**	**$ 539,561**	**$ 550,306**	**$ 561,264**	**$ 572,441**	**$ 583,840**	**$ 595,467**	**$ 607,325**	**$ 619,419**
Net Operating Income			**$ 1,918,738**	**$ 1,981,533**	**$ 2,046,315**	**$ 2,113,147**	**$ 2,182,092**	**$ 2,253,216**	**$ 2,326,586**	**$ 2,402,273**	**$ 2,480,347**	**$ 2,560,883**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates	21,871	$ 2,405,822										
Low-Income Housing Tax Credit												
Property Before-Tax CF (Operations)			$ 1,222,338	$ 1,285,133	$ 1,349,915	$ 1,416,747	$ 1,485,692	$ 1,556,816	$ 1,630,186	$ 1,705,873	$ 1,783,947	$ 1,864,483
Property Before-Tax CF (Reversion)		$ (19,246,178)										$ 24,495,936
PV of remaining 421-a Tax Benefit for buyer												$1,602,870
Property Before-Tax CF		$ (19,246,178)	$ 1,222,338	$ 1,285,133	$ 1,349,915	$ 1,416,747	$ 1,485,692	$ 1,556,816	$ 1,630,186	$ 1,705,873	$ 1,783,947	$ 27,963,289

Unlevered IRR	**9.91%**
PV of investment benefits @ 7.7% discount rate	**$ 22,544,416**
NPV of investment benefits @ 7.7% discount rate	**$ 3,298,239**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate	**$ 7,529,481**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 4,040,120**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ (4,364,254)**
Negotiable Certificates (buy - /sell +)	**$ 2,405,822**
MV of Low-Income Housing Tax Credit	**$ -**

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**	**Year 22**	**Year 23**
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59	$ 107.02	$ 111.64
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18	$ 99.29	$ 103.58
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83	$ 88.50	$ 92.32
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52	$ 81.91	$ 84.37
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78	$ 75.99	$ 78.27
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76	$ 67.73	$ 69.77
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40	$ 26.16	$ 26.95
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05	$ 19.62	$ 20.21
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88	$ 16.35	$ 16.84
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%	18.071%	18.411%
$ 223,909	$ 230,627	$ 237,545	$ 244,672	$ 252,012	$ 259,572	$ 267,359	$ 275,380	$ 283,642	$ 292,151	$ 388,196	$ 404,966	$ 422,461
$ (8,643)	$ (8,902)	$ (9,169)	$ (9,444)	$ (9,728)	$ (10,019)	$ (10,320)	$ (10,630)	$ (10,949)	$ (11,277)	$ (14,984)	$ (15,632)	$ (16,307)
$ 1,669,632	$ 1,719,721	$ 1,771,312	$ 1,824,452	$ 1,879,185	$ 1,935,561	$ 1,993,628	$ 2,053,437	$ 2,115,040	$ 2,178,491	$ 2,894,676	$ 3,019,727	$ 3,150,179
$ (64,448)	$ (66,381)	$ (68,373)	$ (70,424)	$ (72,537)	$ (74,713)	$ (76,954)	$ (79,263)	$ (81,641)	$ (84,090)	$ (111,735)	$ (116,561)	$ (121,597)
$ 1,294,975	$ 1,333,825	$ 1,373,839	$ 1,415,055	$ 1,457,506	$ 1,501,231	$ 1,546,268	$ 1,592,656	$ 1,640,436	$ 1,689,649	$ 2,245,127	$ 2,342,116	$ 2,443,296
$ (49,986)	$ (51,486)	$ (53,030)	$ (54,621)	$ (56,260)	$ (57,948)	$ (59,686)	$ (61,477)	$ (63,321)	$ (65,220)	$ (86,662)	$ (90,406)	$ (94,311)
$ 214,979	$ 221,428	$ 228,071	$ 234,913	$ 241,961	$ 249,220	$ 256,696	$ 264,397	$ 272,329	$ 280,499	$ 288,914	$ 297,581	$ 306,509
$ (4,708)	$ (4,849)	$ (4,995)	$ (5,145)	$ (5,299)	$ (5,458)	$ (5,622)	$ (5,790)	$ (5,964)	$ (6,143)	$ (6,327)	$ (6,517)	$ (6,713)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,275,711	**$ 3,373,982**	**$ 3,475,202**	**$ 3,579,458**	**$ 3,686,841**	**$ 3,797,447**	**$ 3,911,370**	**$ 4,028,711**	**$ 4,149,573**	**$ 4,274,060**	**$ 5,597,205**	**$ 5,835,275**	**$ 6,083,516**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941	$ 728,220	$ 742,784
$ 2,690,030	$ 2,776,588	$ 2,865,860	$ 2,957,929	$ 3,052,882	$ 3,150,808	$ 3,251,799	$ 3,355,948	$ 3,463,354	$ 3,574,117	$ 4,883,264	$ 5,107,055	$ 5,340,732
$ 12,912,146	$13,327,623	$13,756,126	$14,198,059	$14,653,834	$15,123,879	$15,608,634	$16,108,552	$16,624,102	$17,155,763	$23,439,668	$24,513,862	$25,635,513
$ 5,810,466	$ 5,997,430	$ 6,190,257	$ 6,389,126	$ 6,594,225	$ 6,805,745	$ 7,023,885	$ 7,248,849	$ 7,480,846	$ 7,720,093	$10,547,851	$11,031,238	$11,535,981
100%	100%	80%	80%	60%	60%	40%	40%	20%	20%	0%	0%	0%
$ 5,497,466	$ 5,684,430	$ 4,701,806	$ 4,860,901	$ 3,768,735	$ 3,895,647	$ 2,684,354	$ 2,774,339	$ 1,433,569	$ 1,481,419	$ -	$ -	$ -
$ 313,000	$ 313,000	$ 1,488,451	$ 1,528,225	$ 2,825,490	$ 2,910,098	$ 4,339,531	$ 4,474,509	$ 6,047,277	$ 6,238,675	$10,547,851	$11,031,238	$11,535,981
$ 46,073	$ 46,940	$ 227,422	$ 237,894	$ 448,113	$ 470,217	$ 714,383	$ 750,466	$ 1,033,340	$ 1,086,108	$ 1,870,864	$ 1,993,425	$ 2,123,869
$ 809,219	$ 852,488	$ 718,395	$ 756,681	$ 597,708	$ 629,464	$ 441,904	$ 465,313	$ 244,964	$ 257,904	$ -	$ -	$ -
$ 631,754	**$ 644,334**	**$ 836,764**	**$ 859,423**	**$ 1,082,072**	**$ 1,116,856**	**$ 1,373,955**	**$ 1,423,229**	**$ 1,719,558**	**$ 1,786,051**	**$ 2,584,805**	**$ 2,721,645**	**$ 2,866,653**
$ 2,643,957	**$ 2,729,648**	**$ 2,638,437**	**$ 2,720,035**	**$ 2,604,769**	**$ 2,680,591**	**$ 2,537,416**	**$ 2,605,482**	**$ 2,430,015**	**$ 2,488,009**	**$ 3,012,400**	**$ 3,113,629**	**$ 3,216,863**

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Year 24	**Year 25**	**Year 26**	**Year 27**	**Year 28**	**Year 29**	**Year 30**	**Year 31**	**Year 32**	**Year 33**	**Year 34**	**Year 35**	**Year 36**
$ 116.47	$ 121.50	$ 126.75	$ 132.22	$ 137.93	$ 143.89	$ 150.11	$ 156.59	$ 163.36	$ 170.42	$ 177.78	$ 185.46	$ 193.47
$ 108.06	$ 112.72	$ 117.59	$ 122.67	$ 127.97	$ 133.50	$ 139.27	$ 145.28	$ 151.56	$ 158.11	$ 164.94	$ 172.06	$ 179.50
$ 96.31	$ 100.47	$ 104.81	$ 109.34	$ 114.06	$ 118.99	$ 124.13	$ 129.49	$ 135.09	$ 140.92	$ 147.01	$ 153.36	$ 159.99
$ 86.90	$ 89.50	$ 92.19	$ 94.95	$ 97.80	$ 100.74	$ 103.76	$ 106.87	$ 110.08	$ 113.38	$ 116.78	$ 120.29	
$ 80.62	$ 83.04	$ 85.53	$ 88.10	$ 90.74	$ 93.46	$ 96.27	$ 99.15	$ 102.13	$ 105.19	$ 108.35	$ 111.60	
$ 71.86	$ 74.01	$ 76.23	$ 78.52	$ 80.88	$ 83.30	$ 85.80	$ 88.38	$ 91.03	$ 93.76	$ 96.57	$ 99.47	
$ 27.76	$ 28.59	$ 29.45	$ 30.33	$ 31.24	$ 32.18	$ 33.14	$ 34.14	$ 35.16	$ 36.22	$ 37.30	$ 38.42	
$ 20.82	$ 21.44	$ 22.09	$ 22.75	$ 23.43	$ 24.13	$ 24.86	$ 25.60	$ 26.37	$ 27.16	$ 27.98	$ 28.82	
$ 17.35	$ 17.87	$ 18.40	$ 18.96	$ 19.53	$ 20.11	$ 20.71	$ 21.34	$ 21.98	$ 22.63	$ 23.31	$ 24.01	
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18.757%	19.110%	19.470%	19.836%	20.210%	20.590%	20.978%	21.372%	21.775%	22.184%	22.602%	23.027%	23.461%
$ 440,711	$ 459,750	$ 479,611	$ 500,330	$ 521,945	$ 544,493	$ 568,015	$ 592,553	$ 618,151	$ 644,855	$ 672,713	$ 701,774	$ 915,114
$ (17,011)	$ (17,746)	$ (18,513)	$ (19,313)	$ (20,147)	$ (21,017)	$ (21,925)	$ (22,873)	$ (23,861)	$ (24,891)	$ (25,967)	$ (27,088)	$ (35,323)
$ 3,286,266	$ 3,428,233	$ 3,576,333	$ 3,730,830	$ 3,892,002	$ 4,060,137	$ 4,235,535	$ 4,418,510	$ 4,609,389	$ 4,808,515	$ 5,016,243	$ 5,232,945	$ 6,823,760
$ (126,850)	$ (132,330)	$ (138,046)	$ (144,010)	$ (150,231)	$ (156,721)	$ (163,492)	$ (170,554)	$ (177,922)	$ (185,609)	$ (193,627)	$ (201,992)	$ (263,397)
$ 2,548,846	$ 2,658,956	$ 2,773,823	$ 2,893,652	$ 3,018,658	$ 3,149,064	$ 3,285,104	$ 3,427,020	$ 3,575,067	$ 3,729,510	$ 3,890,625	$ 4,058,700	$ 5,292,545
$ (98,385)	$ (102,636)	$ (107,070)	$ (111,695)	$ (116,520)	$ (121,554)	$ (126,805)	$ (132,283)	$ (137,998)	$ (143,959)	$ (150,178)	$ (156,666)	$ (204,292)
$ 315,704	$ 325,175	$ 334,930	$ 344,978	$ 355,328	$ 365,988	$ 376,967	$ 388,276	$ 399,924	$ 411,922	$ 424,280	$ 437,008	$ -
$ (6,914)	$ (7,121)	$ (7,335)	$ (7,555)	$ (7,782)	$ (8,015)	$ (8,256)	$ (8,503)	$ (8,758)	$ (9,021)	$ (9,292)	$ (9,570)	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 6,342,367	**$ 6,612,281**	**$ 6,893,733**	**$ 7,187,218**	**$ 7,493,252**	**$ 7,812,373**	**$ 8,145,143**	**$ 8,492,146**	**$ 8,853,993**	**$ 9,231,323**	**$ 9,624,797**	**$10,035,111**	**$12,528,406**
$ 757,640	$ 772,793	$ 788,249	$ 804,014	$ 820,094	$ 836,496	$ 853,226	$ 870,290	$ 887,696	$ 905,450	$ 923,559	$ 942,030	$ 960,871
$ 5,584,727	$ 5,839,488	$ 6,105,485	$ 6,383,205	$ 6,673,158	$ 6,975,877	$ 7,291,917	$ 7,621,855	$ 7,966,297	$ 8,325,872	$ 8,701,238	$ 9,093,080	$11,567,535
$26,806,689	$28,029,544	$29,306,326	$30,639,382	$32,031,160	$33,484,211	$35,001,200	$36,584,905	$38,238,226	$39,964,187	$41,765,943	$43,646,786	$55,524,166
$12,063,010	$12,613,295	$13,187,847	$13,787,722	$14,414,022	$15,067,895	$15,750,540	$16,463,207	$17,207,202	$17,983,884	$18,794,675	$19,641,054	$24,985,875
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$12,063,010	$12,613,295	$13,187,847	$13,787,722	$14,414,022	$15,067,895	$15,750,540	$16,463,207	$17,207,202	$17,983,884	$18,794,675	$19,641,054	$24,985,875
$ 2,262,697	$ 2,410,442	$ 2,567,672	$ 2,734,989	$ 2,913,035	$ 3,102,491	$ 3,304,082	$ 3,518,579	$ 3,746,801	$ 3,989,618	$ 4,247,957	$ 4,522,801	$ 5,861,851
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,020,337	**$ 3,183,235**	**$ 3,355,920**	**$ 3,539,003**	**$ 3,733,129**	**$ 3,938,987**	**$ 4,157,308**	**$ 4,388,870**	**$ 4,634,497**	**$ 4,895,068**	**$ 5,171,516**	**$ 5,464,832**	**$ 6,822,722**
$ 3,322,030	**$ 3,429,046**	**$ 3,537,813**	**$ 3,648,216**	**$ 3,760,123**	**$ 3,873,386**	**$ 3,987,834**	**$ 4,103,276**	**$ 4,219,496**	**$ 4,336,254**	**$ 4,453,282**	**$ 4,570,279**	**$ 5,705,684**

Appendix 12: Alternative-1B --"The Marais" with 20% affordable units @ 50% AMI, negotiable certificate, and 15-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	8.74%	NY AMI	$ 58,600
Gross SF	90,700		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	10.24%	Affordability	30.00%
Net Residential SF	75,827	107 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	3,784	8 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	30,413	48 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	26,465	29 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 21,652,000				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	3,784		$ 166,610	$ 171,608	$ 176,756	$ 182,059	$ 187,520	$ 193,146	$ 198,940	$ 204,909	$ 211,056	$ 217,388
Stablized Unit: Studio Vacancy	(146)		$ (6,431)	$ (6,624)	$ (6,823)	$ (7,027)	$ (7,238)	$ (7,455)	$ (7,679)	$ (7,909)	$ (8,147)	$ (8,391)
Stablized Unit: 1 Bedroom Rental Income	30,413		$ 1,242,363	$ 1,279,634	$ 1,318,023	$ 1,357,563	$ 1,398,290	$ 1,440,239	$ 1,483,446	$ 1,527,950	$ 1,573,788	$ 1,621,002
Stablized Unit: 1 Bedroom Vacancy	(1,174)		$ (47,955)	$ (49,394)	$ (50,876)	$ (52,402)	$ (53,974)	$ (55,593)	$ (57,261)	$ (58,979)	$ (60,748)	$ (62,571)
Stablized Unit: 2 Bedroom Rental Income	26,465		$ 963,583	$ 992,491	$ 1,022,266	$ 1,052,934	$ 1,084,522	$ 1,117,057	$ 1,150,569	$ 1,185,086	$ 1,220,639	$ 1,257,258
Stablized Unit: 2 Bedroom Vacancy	(1,022)		$ (37,194)	$ (38,310)	$ (39,459)	$ (40,643)	$ (41,863)	$ (43,118)	$ (44,412)	$ (45,744)	$ (47,117)	$ (48,530)
Affordable Unit: Rental Income	15,165		$ 133,304	$ 137,303	$ 141,422	$ 145,665	$ 150,035	$ 154,536	$ 159,172	$ 163,947	$ 168,865	$ 173,931
Affordable Unit: Vacancy	(332)		$ (2,919)	$ (3,007)	$ (3,097)	$ (3,190)	$ (3,286)	$ (3,384)	$ (3,486)	$ (3,590)	$ (3,698)	$ (3,809)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,411,360**	**$ 2,483,700**	**$ 2,558,211**	**$ 2,634,958**	**$ 2,714,007**	**$ 2,795,427**	**$ 2,879,290**	**$ 2,965,668**	**$ 3,054,638**	**$ 3,146,277**
Expenses												
Operating Expenses	80,077		$ 480,462	$ 490,071	$ 499,873	$ 509,870	$ 520,068	$ 530,469	$ 541,078	$ 551,900	$ 562,938	$ 574,197
Taxable Income			$ 1,930,898	$ 1,993,629	$ 2,058,339	$ 2,125,088	$ 2,193,939	$ 2,264,958	$ 2,338,211	$ 2,413,768	$ 2,491,700	$ 2,572,081
Real Estate Tax												
Market Value			$ 9,268,309	$ 9,569,420	$ 9,880,026	$10,200,421	$10,530,907	$10,871,798	$11,223,414	$11,586,088	$11,960,162	$ 12,345,988
Actual Assessd Value			$ 4,170,739	$ 4,306,239	$ 4,446,012	$ 4,590,189	$ 4,738,908	$ 4,892,309	$ 5,050,536	$ 5,213,740	$ 5,382,073	$ 5,555,695
Tax Exemption %			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Exemption Value			$ 3,857,739	$ 3,993,239	$ 4,133,012	$ 4,277,189	$ 4,425,908	$ 4,579,309	$ 4,737,536	$ 4,900,740	$ 5,069,073	$ 5,242,695
Taxable Value			$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 39,689	$ 40,436	$ 41,197	$ 41,972	$ 42,762	$ 43,567	$ 44,387	$ 45,222
Total Real Estate Tax Saved			$ 471,261	$ 496,995	$ 524,072	$ 552,561	$ 582,534	$ 614,068	$ 647,241	$ 682,139	$ 718,848	$ 757,462
Total Expenses			**$ 518,698**	**$ 529,027**	**$ 539,561**	**$ 550,306**	**$ 561,264**	**$ 572,441**	**$ 583,840**	**$ 595,467**	**$ 607,325**	**$ 619,419**
Net Operating Income			**$ 1,892,662**	**$ 1,954,673**	**$ 2,018,650**	**$ 2,084,652**	**$ 2,152,742**	**$ 2,222,986**	**$ 2,295,449**	**$ 2,370,202**	**$ 2,447,314**	**$ 2,526,859**
Capital Reserve	107		$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400	$ 21,400
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates		$ 2,405,822										
Low-Income Housing Tax Credit												
Property Before-Tax CF (Operations)			$ 1,196,262	$ 1,258,273	$ 1,322,250	$ 1,388,252	$ 1,456,342	$ 1,526,586	$ 1,599,049	$ 1,673,802	$ 1,750,914	$ 1,830,459
Property Before-Tax CF (Reversion)		$ (19,246,178)										$ 24,455,498
PV of remaining 421-a Tax Benefit for buyer												$1,159,723
Property Before-Tax CF		$ (19,246,178)	$ 1,196,262	$ 1,258,273	$ 1,322,250	$ 1,388,252	$ 1,456,342	$ 1,526,586	$ 1,599,049	$ 1,673,802	$ 1,750,914	$ 27,445,680

		10 yr	*10 yr + 25 yr (20%)*	*10 yr + 25 yr (40%)*	*15 yr*	*20 yr*
Unlevered IRR	**9.64%**	**6.58%**	**7.35%**	**7.23%**	**9.79%**	**9.91%**
PV of investment benefits @ 7.7% discount rate	**$ 22,114,396**	**$ 16,663,795**	**$17,564,286**	**$18,612,721**	**$22,341,048**	**$22,544,416**
NPV of investment benefits @ 7.7% discount rate	**$ 2,868,218**	**$ (1,339,900)**	**$ (439,409)**	**$ (633,457)**	**$ 3,094,871**	**$ 3,298,239**
PV of Total 421-a RE Tax Foregone by the city @ 4.76% discount rate	**$ 6,076,281**	**$ 2,823,999**	**$ 5,944,640**	**$ 9,634,691**	**$ 6,162,557**	**$ 7,529,481**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 3,983,121**	**$ 2,493,541**	**$ 2,493,541**	**$ 2,641,484**	**$ 4,040,120**	**$ 4,040,120**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ (4,563,963)**	**$ (4,364,254)**	**$ (4,364,254)**	**$(4,364,254)**	**$ (4,364,254)**	**$(4,364,254)**
Negotiable Certificates (buy - /sell +)	**$ 2,405,822**	**$ 2,405,822**	**$ 2,405,822**	**$ 2,405,822**	**$ 2,405,822**	**$ 2,405,822**
MV of Low-Income Housing Tax Credit	**$ -**	**$ 1,242,482**	**$ 1,242,482**	**$ -**	**$ -**	**$ -**

2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**	**Year 22**	**Year 23**
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59	$ 107.02	$ 111.64
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18	$ 99.29	$ 103.58
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83	$ 88.50	$ 92.32
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52	$ 81.91	$ 84.37
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78	$ 75.99	$ 78.27
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76	$ 67.73	$ 69.77
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40	$ 26.16	$ 26.95
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05	$ 19.62	$ 20.21
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88	$ 16.35	$ 16.84
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%	18.071%	18.411%
$ 223,909	$ 230,627	$ 237,545	$ 244,672	$ 252,012	$ 259,572	$ 267,359	$ 275,380	$ 283,642	$ 292,151	$ 388,196	$ 404,966	$ 422,461
$ (8,643)	$ (8,902)	$ (9,169)	$ (9,444)	$ (9,728)	$ (10,019)	$ (10,320)	$ (10,630)	$ (10,949)	$ (11,277)	$ (14,984)	$ (15,632)	$ (16,307)
$ 1,669,632	$ 1,719,721	$ 1,771,312	$ 1,824,452	$ 1,879,185	$ 1,935,561	$ 1,993,628	$ 2,053,437	$ 2,115,040	$ 2,178,491	$ 2,894,676	$ 3,019,727	$ 3,150,179
$ (64,448)	$ (66,381)	$ (68,373)	$ (70,424)	$ (72,537)	$ (74,713)	$ (76,954)	$ (79,263)	$ (81,641)	$ (84,090)	$ (111,735)	$ (116,561)	$ (121,597)
$ 1,294,975	$ 1,333,825	$ 1,373,839	$ 1,415,055	$ 1,457,506	$ 1,501,231	$ 1,546,268	$ 1,592,656	$ 1,640,436	$ 1,689,649	$ 2,245,127	$ 2,342,116	$ 2,443,296
$ (49,986)	$ (51,486)	$ (53,030)	$ (54,621)	$ (56,260)	$ (57,948)	$ (59,686)	$ (61,477)	$ (63,321)	$ (65,220)	$ (86,662)	$ (90,406)	$ (94,311)
$ 179,149	$ 184,524	$ 190,059	$ 195,761	$ 201,634	$ 207,683	$ 213,914	$ 220,331	$ 226,941	$ 233,749	$ 240,762	$ 247,984	$ 255,424
$ (3,923)	$ (4,041)	$ (4,162)	$ (4,287)	$ (4,416)	$ (4,548)	$ (4,685)	$ (4,825)	$ (4,970)	$ (5,119)	$ (5,273)	$ (5,431)	$ (5,594)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,240,666	**$ 3,337,886**	**$ 3,438,022**	**$ 3,541,163**	**$ 3,647,398**	**$ 3,756,820**	**$ 3,869,524**	**$ 3,985,610**	**$ 4,105,178**	**$ 4,228,334**	**$ 5,550,108**	**$ 5,786,764**	**$ 6,033,550**
$ 585,680	$ 597,394	$ 609,342	$ 621,529	$ 633,959	$ 646,639	$ 659,571	$ 672,763	$ 686,218	$ 699,942	$ 713,941	$ 728,220	$ 742,784
$ 2,654,985	$ 2,740,492	$ 2,828,680	$ 2,919,634	$ 3,013,438	$ 3,110,181	$ 3,209,953	$ 3,312,847	$ 3,418,960	$ 3,528,391	$ 4,836,166	$ 5,058,544	$ 5,290,766
$ 12,743,929	$13,154,360	$13,577,665	$14,014,244	$14,464,504	$14,928,869	$15,407,774	$15,901,667	$16,411,009	$16,936,278	$23,213,599	$24,281,010	$25,395,676
$ 5,734,768	$ 5,919,462	$ 6,109,949	$ 6,306,410	$ 6,509,027	$ 6,717,991	$ 6,933,498	$ 7,155,750	$ 7,384,954	$ 7,621,325	$10,446,119	$10,926,455	$11,428,054
100%	80%	60%	40%	20%	0%	0%	0%	0%	0%	0%	0%	0%
$ 5,421,768	$ 4,485,169	$ 3,478,170	$ 2,397,364	$ 1,239,205	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 313,000	$ 1,434,292	$ 2,631,780	$ 3,909,046	$ 5,269,822	$ 6,717,991	$ 6,933,498	$ 7,155,750	$ 7,384,954	$ 7,621,325	$10,446,119	$10,926,455	$11,428,054
$ 46,073	$ 215,099	$ 402,113	$ 608,509	$ 835,775	$ 1,085,501	$ 1,141,408	$ 1,200,165	$ 1,261,918	$ 1,326,818	$ 1,852,820	$ 1,974,490	$ 2,103,999
$ 798,077	$ 672,636	$ 531,434	$ 373,190	$ 196,534	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 631,754	**$ 812,493**	**$ 1,011,455**	**$ 1,230,038**	**$ 1,469,734**	**$ 1,732,140**	**$ 1,800,979**	**$ 1,872,928**	**$ 1,948,136**	**$ 2,026,760**	**$ 2,566,761**	**$ 2,702,710**	**$ 2,846,783**
$ 2,608,912	**$ 2,525,392**	**$ 2,426,567**	**$ 2,311,125**	**$ 2,177,663**	**$ 2,024,680**	**$ 2,068,545**	**$ 2,112,682**	**$ 2,157,042**	**$ 2,201,573**	**$ 2,983,346**	**$ 3,084,054**	**$ 3,186,767**

2027	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**
Year 24	**Year 25**	**Year 26**	**Year 27**	**Year 28**	**Year 29**	**Year 30**	**Year 31**	**Year 32**	**Year 33**	**Year 34**	**Year 35**	**Year 36**
$ 116.47	$ 121.50	$ 126.75	$ 132.22	$ 137.93	$ 143.89	$ 150.11	$ 156.59	$ 163.36	$ 170.42	$ 177.78	$ 185.46	$ 193.47
$ 108.06	$ 112.72	$ 117.59	$ 122.67	$ 127.97	$ 133.50	$ 139.27	$ 145.28	$ 151.56	$ 158.11	$ 164.94	$ 172.06	$ 179.50
$ 96.31	$ 100.47	$ 104.81	$ 109.34	$ 114.06	$ 118.99	$ 124.13	$ 129.49	$ 135.09	$ 140.92	$ 147.01	$ 153.36	$ 159.99
$ 86.90	$ 89.50	$ 92.19	$ 94.95	$ 97.80	$ 100.74	$ 103.76	$ 106.87	$ 110.08	$ 113.38	$ 116.78	$ 120.29	
$ 80.62	$ 83.04	$ 85.53	$ 88.10	$ 90.74	$ 93.46	$ 96.27	$ 99.15	$ 102.13	$ 105.19	$ 108.35	$ 111.60	
$ 71.86	$ 74.01	$ 76.23	$ 78.52	$ 80.88	$ 83.30	$ 85.80	$ 88.38	$ 91.03	$ 93.76	$ 96.57	$ 99.47	
$ 27.76	$ 28.59	$ 29.45	$ 30.33	$ 31.24	$ 32.18	$ 33.14	$ 34.14	$ 35.16	$ 36.22	$ 37.30	$ 38.42	
$ 20.82	$ 21.44	$ 22.09	$ 22.75	$ 23.43	$ 24.13	$ 24.86	$ 25.60	$ 26.37	$ 27.16	$ 27.98	$ 28.82	
$ 17.35	$ 17.87	$ 18.40	$ 18.96	$ 19.53	$ 20.11	$ 20.71	$ 21.34	$ 21.98	$ 22.63	$ 23.31	$ 24.01	
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18.757%	19.110%	19.470%	19.836%	20.210%	20.590%	20.978%	21.372%	21.775%	22.184%	22.602%	23.027%	23.461%
$ 440,711	$ 459,750	$ 479,611	$ 500,330	$ 521,945	$ 544,493	$ 568,015	$ 592,553	$ 618,151	$ 644,855	$ 672,713	$ 701,774	$ 915,114
$ (17,011)	$ (17,746)	$ (18,513)	$ (19,313)	$ (20,147)	$ (21,017)	$ (21,925)	$ (22,873)	$ (23,861)	$ (24,891)	$ (25,967)	$ (27,088)	$ (35,323)
$ 3,286,266	$ 3,428,233	$ 3,576,333	$ 3,730,830	$ 3,892,002	$ 4,060,137	$ 4,235,535	$ 4,418,510	$ 4,609,389	$ 4,808,515	$ 5,016,243	$ 5,232,945	$ 6,823,760
$ (126,850)	$ (132,330)	$ (138,046)	$ (144,010)	$ (150,231)	$ (156,721)	$ (163,492)	$ (170,554)	$ (177,922)	$ (185,609)	$ (193,627)	$ (201,992)	$ (263,397)
$ 2,548,846	$ 2,658,956	$ 2,773,823	$ 2,893,652	$ 3,018,658	$ 3,149,064	$ 3,285,104	$ 3,427,020	$ 3,575,067	$ 3,729,510	$ 3,890,625	$ 4,058,700	$ 5,292,545
$ (98,385)	$ (102,636)	$ (107,070)	$ (111,695)	$ (116,520)	$ (121,554)	$ (126,805)	$ (132,283)	$ (137,998)	$ (143,959)	$ (150,178)	$ (156,666)	$ (204,292)
$ 263,087	$ 270,979	$ 279,109	$ 287,482	$ 296,106	$ 304,990	$ 314,139	$ 323,563	$ 333,270	$ 343,268	$ 353,567	$ 364,174	$ -
$ (5,762)	$ (5,934)	$ (6,112)	$ (6,296)	$ (6,485)	$ (6,679)	$ (6,880)	$ (7,086)	$ (7,299)	$ (7,518)	$ (7,743)	$ (7,975)	$ -
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 6,290,902	**$ 6,559,272**	**$ 6,839,134**	**$ 7,130,981**	**$ 7,435,328**	**$ 7,752,711**	**$ 8,083,691**	**$ 8,428,850**	**$ 8,788,799**	**$ 9,164,172**	**$ 9,555,633**	**$ 9,963,871**	**$12,528,406**
$ 757,640	$ 772,793	$ 788,249	$ 804,014	$ 820,094	$ 836,496	$ 853,226	$ 870,290	$ 887,696	$ 905,450	$ 923,559	$ 942,030	$ 960,871
$ 5,533,262	$ 5,786,479	$ 6,050,885	$ 6,326,967	$ 6,615,234	$ 6,916,215	$ 7,230,465	$ 7,558,560	$ 7,901,103	$ 8,258,722	$ 8,632,074	$ 9,021,841	$11,567,535
$26,559,657	$27,775,101	$29,044,250	$30,369,444	$31,753,123	$33,197,833	$34,706,231	$36,281,087	$37,925,294	$39,641,866	$41,433,953	$43,304,836	$55,524,166
$11,951,846	$12,498,795	$13,069,912	$13,666,250	$14,288,905	$14,939,025	$15,617,804	$16,326,489	$17,066,382	$17,838,840	$18,645,279	$19,487,176	$24,985,875
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$11,951,846	$12,498,795	$13,069,912	$13,666,250	$14,288,905	$14,939,025	$15,617,804	$16,326,489	$17,066,382	$17,838,840	$18,645,279	$19,487,176	$24,985,875
$ 2,241,845	$ 2,388,561	$ 2,544,710	$ 2,710,893	$ 2,887,749	$ 3,075,957	$ 3,276,238	$ 3,489,359	$ 3,716,138	$ 3,957,441	$ 4,214,190	$ 4,487,367	$ 5,861,851
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 2,999,485	**$ 3,161,354**	**$ 3,332,959**	**$ 3,514,907**	**$ 3,707,843**	**$ 3,912,453**	**$ 4,129,463**	**$ 4,359,650**	**$ 4,603,834**	**$ 4,862,891**	**$ 5,137,749**	**$ 5,429,398**	**$ 6,822,722**
$ 3,291,417	**$ 3,397,919**	**$ 3,506,176**	**$ 3,616,074**	**$ 3,727,485**	**$ 3,840,259**	**$ 3,954,227**	**$ 4,069,201**	**$ 4,184,965**	**$ 4,301,282**	**$ 4,417,883**	**$ 4,534,473**	**$ 5,705,684**

Appendix 13: Alternative-2A --"The Marais" with 20% affordable units @ 50% AMI, 80/20 program, and inclusionary zoning

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	6.83%	NY AMI	$ 58,600
Gross SF	108,840		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	8.33%	Affordability	30.00%
Net Residential SF	90,992	129 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	4,730	10 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	38,016	60 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	33,081	37 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 25,982,400				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	4,730		$ 208,262	$ 214,510	$ 220,945	$ 227,573	$ 234,401	$ 241,433	$ 248,676	$ 256,136	$ 263,820	$ 271,735
Stablized Unit: Studio Vacancy	(183)		$ (8,039)	$ (8,280)	$ (8,528)	$ (8,784)	$ (9,048)	$ (9,319)	$ (9,599)	$ (9,887)	$ (10,183)	$ (10,489)
Stablized Unit: 1 Bedroom Rental Income	38,016		$ 1,552,954	$ 1,599,542	$ 1,647,528	$ 1,696,954	$ 1,747,863	$ 1,800,299	$ 1,854,308	$ 1,909,937	$ 1,967,235	$ 2,026,252
Stablized Unit: 1 Bedroom Vacancy	(1,467)		$ (59,944)	$ (61,742)	$ (63,595)	$ (65,502)	$ (67,468)	$ (69,492)	$ (71,576)	$ (73,724)	$ (75,935)	$ (78,213)
Stablized Unit: 2 Bedroom Rental Income	33,081		$ 1,204,479	$ 1,240,614	$ 1,277,832	$ 1,316,167	$ 1,355,652	$ 1,396,322	$ 1,438,211	$ 1,481,358	$ 1,525,798	$ 1,571,572
Stablized Unit: 2 Bedroom Vacancy	(1,277)		$ (46,493)	$ (47,888)	$ (49,324)	$ (50,804)	$ (52,328)	$ (53,898)	$ (55,515)	$ (57,180)	$ (58,896)	$ (60,663)
Affordable Unit: Rental Income	15,165		$ 133,300	$ 137,299	$ 141,418	$ 145,661	$ 150,031	$ 154,532	$ 159,168	$ 163,943	$ 168,861	$ 173,927
Affordable Unit: Vacancy	(332)		$ (2,919)	$ (3,007)	$ (3,097)	$ (3,190)	$ (3,286)	$ (3,384)	$ (3,486)	$ (3,590)	$ (3,698)	$ (3,809)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 2,981,600**	**$ 3,071,048**	**$ 3,163,179**	**$ 3,258,075**	**$ 3,355,817**	**$ 3,456,492**	**$ 3,560,186**	**$ 3,666,992**	**$ 3,777,002**	**$ 3,890,312**
Expenses												
Operating Expenses	95,242		$ 571,454	$ 582,883	$ 594,541	$ 606,432	$ 618,561	$ 630,932	$ 643,550	$ 656,421	$ 669,550	$ 682,941
Taxable Income			$ 2,410,146	$ 2,488,164	$ 2,568,638	$ 2,651,643	$ 2,737,256	$ 2,825,560	$ 2,916,636	$ 3,010,570	$ 3,107,452	$ 3,207,371
Real Estate Tax												
Market Value			$11,568,699	$11,943,189	$12,329,464	$12,727,885	$13,138,831	$13,562,687	$13,999,852	$14,450,738	$14,915,768	$ 15,395,380
Actual Assessd Value			$ 5,205,914	$ 5,374,435	$ 5,548,259	$ 5,727,548	$ 5,912,474	$ 6,103,209	$ 6,299,933	$ 6,502,832	$ 6,712,096	$ 6,927,921
Tax Exemption %			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Exemption Value			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Taxable Value			$ 5,205,914	$ 5,374,435	$ 5,548,259	$ 5,727,548	$ 5,912,474	$ 6,103,209	$ 6,299,933	$ 6,502,832	$ 6,712,096	$ 6,927,921
Total Real Estate Tax Paid			$ 635,955	$ 668,897	$ 703,527	$ 739,929	$ 778,194	$ 818,417	$ 860,696	$ 905,136	$ 951,846	$ 1,000,942
Total Real Estate Tax Saved			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Expenses			**$ 1,207,409**	**$ 1,251,781**	**$ 1,298,068**	**$ 1,346,361**	**$ 1,396,755**	**$ 1,449,349**	**$ 1,504,246**	**$ 1,561,557**	**$ 1,621,396**	**$ 1,683,883**
Net Operating Income			**$ 1,774,191**	**$ 1,819,267**	**$ 1,865,111**	**$ 1,911,714**	**$ 1,959,062**	**$ 2,007,143**	**$ 2,055,940**	**$ 2,105,434**	**$ 2,155,605**	**$ 2,206,428**
Capital Reserve	129		$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates												
Low-Income Housing Tax Credit		$ 1,490,979										
Property Before-Tax CF (Operations)			$ 1,073,391	$ 1,118,467	$ 1,164,311	$ 1,210,914	$ 1,258,262	$ 1,306,343	$ 1,355,140	$ 1,404,634	$ 1,454,805	$ 1,505,628
Property Before-Tax CF (Reversion)		$ (24,491,421)										$ 26,026,036
PV of remaining 421-a Tax Benefit for buyer												$0
Property Before-Tax CF		$ (24,491,421)	$ 1,073,391	$ 1,118,467	$ 1,164,311	$ 1,210,914	$ 1,258,262	$ 1,306,343	$ 1,355,140	$ 1,404,634	$ 1,454,805	$ 27,531,665

Unlevered IRR	**5.64%**
PV of investment benefits @ 7.7% discount rate	**$ 20,938,977**
NPV of investment benefits @ 7.7% discount rate	**$ (3,552,444)**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate	**$ -**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ -**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ (196,795)**
Negotiable Certificates (buy - /sell +)	**$ -**
MV of Low-Income Housing Tax Credit	**$ 1,490,979**

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22	Year 23
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59	$ 107.02	$ 111.64
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18	$ 99.29	$ 103.58
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83	$ 88.50	$ 92.32
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52	$ 81.91	$ 84.37
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78	$ 75.99	$ 78.27
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76	$ 67.73	$ 69.77
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40	$ 26.16	$ 26.95
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05	$ 19.62	$ 20.21
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88	$ 16.35	$ 16.84
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%	18.071%	18.411%
$ 279,887	$ 288,283	$ 296,932	$ 305,840	$ 315,015	$ 324,465	$ 334,199	$ 344,225	$ 354,552	$ 365,189	$ 485,245	$ 506,208	$ 528,076
$ (10,804)	$ (11,128)	$ (11,462)	$ (11,805)	$ (12,160)	$ (12,524)	$ (12,900)	$ (13,287)	$ (13,686)	$ (14,096)	$ (18,730)	$ (19,540)	$ (20,384)
$ 2,087,040	$ 2,149,651	$ 2,214,141	$ 2,280,565	$ 2,348,982	$ 2,419,451	$ 2,492,035	$ 2,566,796	$ 2,643,800	$ 2,723,114	$ 3,618,346	$ 3,774,658	$ 3,937,723
$ (80,560)	$ (82,977)	$ (85,466)	$ (88,030)	$ (90,671)	$ (93,391)	$ (96,193)	$ (99,078)	$ (102,051)	$ (105,112)	$ (139,668)	$ (145,702)	$ (151,996)
$ 1,618,719	$ 1,667,281	$ 1,717,299	$ 1,768,818	$ 1,821,883	$ 1,876,539	$ 1,932,836	$ 1,990,821	$ 2,050,545	$ 2,112,062	$ 2,806,408	$ 2,927,645	$ 3,054,120
$ (62,483)	$ (64,357)	$ (66,288)	$ (68,276)	$ (70,325)	$ (72,434)	$ (74,607)	$ (76,846)	$ (79,151)	$ (81,526)	$ (108,327)	$ (113,007)	$ (117,889)
$ 179,145	$ 184,519	$ 190,054	$ 195,756	$ 201,629	$ 207,678	$ 213,908	$ 220,325	$ 226,935	$ 233,743	$ 240,755	$ 247,978	$ 255,417
$ (3,923)	$ (4,041)	$ (4,162)	$ (4,287)	$ (4,416)	$ (4,548)	$ (4,685)	$ (4,825)	$ (4,970)	$ (5,119)	$ (5,273)	$ (5,431)	$ (5,594)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 4,007,021	**$ 4,127,232**	**$ 4,251,049**	**$ 4,378,580**	**$ 4,509,937**	**$ 4,645,236**	**$ 4,784,593**	**$ 4,928,130**	**$ 5,075,974**	**$ 5,228,254**	**$ 6,878,756**	**$ 7,172,810**	**$ 7,479,474**
$ 696,600	$ 710,532	$ 724,742	$ 739,237	$ 754,022	$ 769,102	$ 784,484	$ 800,174	$ 816,178	$ 832,501	$ 849,151	$ 866,134	$ 883,457
$ 3,310,421	$ 3,416,700	$ 3,526,306	$ 3,639,343	$ 3,755,916	$ 3,876,133	$ 4,000,108	$ 4,127,956	$ 4,259,797	$ 4,395,752	$ 6,029,605	$ 6,306,676	$ 6,596,017
$ 15,890,022	$16,400,160	$16,926,270	$17,468,846	$18,028,395	$18,605,439	$19,200,520	$19,814,190	$20,447,024	$21,099,612	$28,942,104	$30,272,044	$31,660,881
$ 7,150,510	$ 7,380,072	$ 7,616,822	$ 7,860,981	$ 8,112,778	$ 8,372,448	$ 8,640,234	$ 8,916,386	$ 9,201,161	$ 9,494,825	$13,023,947	$13,622,420	$14,247,397
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 7,150,510	$ 7,380,072	$ 7,616,822	$ 7,860,981	$ 8,112,778	$ 8,372,448	$ 8,640,234	$ 8,916,386	$ 9,201,161	$ 9,494,825	$13,023,947	$13,622,420	$14,247,397
$ 1,052,545	$ 1,106,781	$ 1,163,784	$ 1,223,694	$ 1,286,658	$ 1,352,831	$ 1,422,374	$ 1,495,460	$ 1,572,266	$ 1,652,981	$ 2,310,047	$ 2,461,671	$ 2,623,063
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 1,749,145	**$ 1,817,313**	**$ 1,888,526**	**$ 1,962,931**	**$ 2,040,680**	**$ 2,121,933**	**$ 2,206,859**	**$ 2,295,634**	**$ 2,388,443**	**$ 2,485,482**	**$ 3,159,198**	**$ 3,327,805**	**$ 3,506,520**
$ 2,257,876	**$ 2,309,919**	**$ 2,362,522**	**$ 2,415,649**	**$ 2,469,258**	**$ 2,523,303**	**$ 2,577,734**	**$ 2,632,497**	**$ 2,687,531**	**$ 2,742,772**	**$ 3,719,558**	**$ 3,845,005**	**$ 3,972,954**

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36
$ 116.47	$ 121.50	$ 126.75	$ 132.22	$ 137.93	$ 143.89	$ 150.11	$ 156.59	$ 163.36	$ 170.42	$ 177.78	$ 185.46	$ 193.47
$ 108.06	$ 112.72	$ 117.59	$ 122.67	$ 127.97	$ 133.50	$ 139.27	$ 145.28	$ 151.56	$ 158.11	$ 164.94	$ 172.06	$ 179.50
$ 96.31	$ 100.47	$ 104.81	$ 109.34	$ 114.06	$ 118.99	$ 124.13	$ 129.49	$ 135.09	$ 140.92	$ 147.01	$ 153.36	$ 159.99
$ 86.90	$ 89.50	$ 92.19	$ 94.95	$ 97.80	$ 100.74	$ 103.76	$ 106.87	$ 110.08	$ 113.38	$ 116.78	$ 120.29	
$ 80.62	$ 83.04	$ 85.53	$ 88.10	$ 90.74	$ 93.46	$ 96.27	$ 99.15	$ 102.13	$ 105.19	$ 108.35	$ 111.60	
$ 71.86	$ 74.01	$ 76.23	$ 78.52	$ 80.88	$ 83.30	$ 85.80	$ 88.38	$ 91.03	$ 93.76	$ 96.57	$ 99.47	
$ 27.76	$ 28.59	$ 29.45	$ 30.33	$ 31.24	$ 32.18	$ 33.14	$ 34.14	$ 35.16	$ 36.22	$ 37.30	$ 38.42	
$ 20.82	$ 21.44	$ 22.09	$ 22.75	$ 23.43	$ 24.13	$ 24.86	$ 25.60	$ 26.37	$ 27.16	$ 27.98	$ 28.82	
$ 17.35	$ 17.87	$ 18.40	$ 18.96	$ 19.53	$ 20.11	$ 20.71	$ 21.34	$ 21.98	$ 22.63	$ 23.31	$ 24.01	$ 24.73
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18.757%	19.110%	19.470%	19.836%	20.210%	20.590%	20.978%	21.372%	21.775%	22.184%	22.602%	23.027%	23.461%
$ 550,889	$ 574,687	$ 599,514	$ 625,413	$ 652,431	$ 680,616	$ 710,018	$ 740,691	$ 772,689	$ 806,069	$ 840,891	$ 877,218	$ 915,114
$ (21,264)	$ (22,183)	$ (23,141)	$ (24,141)	$ (25,184)	$ (26,272)	$ (27,407)	$ (28,591)	$ (29,826)	$ (31,114)	$ (32,458)	$ (33,861)	$ (35,323)
$ 4,107,833	$ 4,285,291	$ 4,470,416	$ 4,663,538	$ 4,865,003	$ 5,075,171	$ 5,294,418	$ 5,523,137	$ 5,761,737	$ 6,010,644	$ 6,270,304	$ 6,541,181	$ 6,823,760
$ (158,562)	$ (165,412)	$ (172,558)	$ (180,013)	$ (187,789)	$ (195,902)	$ (204,365)	$ (213,193)	$ (222,403)	$ (232,011)	$ (242,034)	$ (252,490)	$ (263,397)
$ 3,186,058	$ 3,323,695	$ 3,467,279	$ 3,617,065	$ 3,773,322	$ 3,936,330	$ 4,106,379	$ 4,283,775	$ 4,468,834	$ 4,661,888	$ 4,863,281	$ 5,073,375	$ 5,292,545
$ (122,982)	$ (128,295)	$ (133,837)	$ (139,619)	$ (145,650)	$ (151,942)	$ (158,506)	$ (165,354)	$ (172,497)	$ (179,949)	$ (187,723)	$ (195,832)	$ (204,292)
$ 263,080	$ 270,972	$ 279,101	$ 287,474	$ 296,099	$ 304,982	$ 314,131	$ 323,555	$ 333,262	$ 343,259	$ 353,557	$ 364,164	$ 375,089
$ (5,761)	$ (5,934)	$ (6,112)	$ (6,296)	$ (6,485)	$ (6,679)	$ (6,879)	$ (7,086)	$ (7,298)	$ (7,517)	$ (7,743)	$ (7,975)	$ (8,214)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 7,799,289	**$ 8,132,822**	**$ 8,480,662**	**$ 8,843,423**	**$ 9,221,747**	**$ 9,616,304**	**$10,027,790**	**$10,456,935**	**$10,904,497**	**$11,371,269**	**$11,858,076**	**$12,365,780**	**$12,895,280**
$ 901,126	$ 919,149	$ 937,532	$ 956,282	$ 975,408	$ 994,916	$ 1,014,814	$ 1,035,111	$ 1,055,813	$ 1,076,929	$ 1,098,468	$ 1,120,437	$ 1,142,846
$ 6,898,163	$ 7,213,674	$ 7,543,130	$ 7,887,141	$ 8,246,339	$ 8,621,388	$ 9,012,976	$ 9,421,825	$ 9,848,684	$10,294,340	$10,759,608	$11,245,343	$11,752,434
$33,111,184	$34,625,633	$36,207,024	$37,858,274	$39,582,428	$41,382,660	$43,262,285	$45,224,758	$47,273,686	$49,412,831	$51,646,120	$53,977,647	$56,411,685
$14,900,033	$15,581,535	$16,293,161	$17,036,223	$17,812,093	$18,622,197	$19,468,028	$20,351,141	$21,273,159	$22,235,774	$23,240,754	$24,289,941	$25,385,258
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$14,900,033	$15,581,535	$16,293,161	$17,036,223	$17,812,093	$18,622,197	$19,468,028	$20,351,141	$21,273,159	$22,235,774	$23,240,754	$24,289,941	$25,385,258
$ 2,794,846	$ 2,977,682	$ 3,172,276	$ 3,379,375	$ 3,599,776	$ 3,834,325	$ 4,083,921	$ 4,349,523	$ 4,632,147	$ 4,932,874	$ 5,252,856	$ 5,593,314	$ 5,955,549
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,695,972	**$ 3,896,831**	**$ 4,109,807**	**$ 4,335,657**	**$ 4,575,183**	**$ 4,829,241**	**$ 5,098,736**	**$ 5,384,634**	**$ 5,687,960**	**$ 6,009,803**	**$ 6,351,323**	**$ 6,713,751**	**$ 7,098,394**
$ 4,103,317	**$ 4,235,991**	**$ 4,370,854**	**$ 4,507,766**	**$ 4,646,563**	**$ 4,787,063**	**$ 4,929,055**	**$ 5,072,301**	**$ 5,216,538**	**$ 5,361,465**	**$ 5,506,753**	**$ 5,652,029**	**$ 5,796,886**

Appendix 14: Alternative-2B --"The Marais" with 20% affordable units @ 60% AMI, inclusionary zoning, and 15-year real estate tax exemption

PROPERTY DETAILS			GENERAL ASSUMPTIONS					
Property Name	The Marais		Market Rent - Studio	$ 44.03	Going-In Cap	9.23%	NY AMI	$ 58,600
Gross SF	108,840		Market Rent - 1 Bedroom	$ 40.85	Reversion Cap	10.73%	Affordability	30.00%
Net Residential SF	90,992	129 Units	Market Rent - 2 Bedrooms	$ 36.41	Discount Rate	7.70%	Affordable Vacancy	2.19%
Studio Rentable SF	4,730	10 Units	Market Rent Growth	4.32%	Assess. Ratio	45.00%	Rent Stabilized Unit Vacancy	2.54%
1 Bedroom Rentable SF	38,016	60 Units	Market Vacancy	3.86%	Multiplier	4.80	Rent Stablization Growth	3.00%
2 Bedroom Rentable SF	33,081	37 Units	Retail Rent	$ -	Tax Rate	12.22%	Ground Lease Payment (annual)	$ 675,000
Affordable Rentable SF	15,165	22 Units	Op Ex	$ 6.00	Tax Growth	1.88%	Ground Lease Escalation (every 10 yrs)	9.00%
Retail SF	4,250		Inflation	2.00%	Base Year AV	$ 313,000	Capital Reserve (per unit)	$ 200
Development Cost	$ 25,982,400				Sales Commission	4.00%		

PROJECTED CASH FLOW			2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
	SF											
Studio Market Rent/ SF			$ 44.03	$ 45.93	$ 47.92	$ 49.99	$ 52.15	$ 54.40	$ 56.75	$ 59.20	$ 61.76	$ 64.43
1 Bedroom Market Rent/ SF			$ 40.85	$ 42.61	$ 44.46	$ 46.38	$ 48.38	$ 50.47	$ 52.65	$ 54.92	$ 57.30	$ 59.77
2 Bedroom Market Rent/ SF			$ 36.41	$ 37.98	$ 39.62	$ 41.34	$ 43.12	$ 44.98	$ 46.93	$ 48.95	$ 51.07	$ 53.28
Studio Stabilized Rent/ SF			$ 44.03	$ 45.35	$ 46.71	$ 48.11	$ 49.56	$ 51.04	$ 52.57	$ 54.15	$ 55.78	$ 57.45
1 Bedroom Stabilized Rent/ SF			$ 40.85	$ 42.08	$ 43.34	$ 44.64	$ 45.98	$ 47.36	$ 48.78	$ 50.24	$ 51.75	$ 53.30
2 Bedroom Stabilized Rent/ SF			$ 36.41	$ 37.50	$ 38.63	$ 39.79	$ 40.98	$ 42.21	$ 43.48	$ 44.78	$ 46.12	$ 47.51
Affordable Rent/ SF (80% AMI)			$ 14.06	$ 14.49	$ 14.92	$ 15.37	$ 15.83	$ 16.30	$ 16.79	$ 17.30	$ 17.82	$ 18.35
Affordable Rent/ SF (60% AMI)			$ 10.55	$ 10.86	$ 11.19	$ 11.53	$ 11.87	$ 12.23	$ 12.59	$ 12.97	$ 13.36	$ 13.76
Affordable Rent/SF (50% AMI)			$ 8.79	$ 9.05	$ 9.33	$ 9.61	$ 9.89	$ 10.19	$ 10.50	$ 10.81	$ 11.13	$ 11.47
Retail Rent/ SF			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Tax Rate			12.216%	12.446%	12.680%	12.919%	13.162%	13.410%	13.662%	13.919%	14.181%	14.448%
Income												
Stablized Unit: Studio Rental Income	4,730		$ 208,262	$ 214,510	$ 220,945	$ 227,573	$ 234,401	$ 241,433	$ 248,676	$ 256,136	$ 263,820	$ 271,735
Stablized Unit: Studio Vacancy	(183)		$ (8,039)	$ (8,280)	$ (8,528)	$ (8,784)	$ (9,048)	$ (9,319)	$ (9,599)	$ (9,887)	$ (10,183)	$ (10,489)
Stablized Unit: 1 Bedroom Rental Income	38,016		$ 1,552,954	$ 1,599,542	$ 1,647,528	$ 1,696,954	$ 1,747,863	$ 1,800,299	$ 1,854,308	$ 1,909,937	$ 1,967,235	$ 2,026,252
Stablized Unit: 1 Bedroom Vacancy	(1,467)		$ (59,944)	$ (61,742)	$ (63,595)	$ (65,502)	$ (67,468)	$ (69,492)	$ (71,576)	$ (73,724)	$ (75,935)	$ (78,213)
Stablized Unit: 2 Bedroom Rental Income	33,081		$ 1,204,479	$ 1,240,614	$ 1,277,832	$ 1,316,167	$ 1,355,652	$ 1,396,322	$ 1,438,211	$ 1,481,358	$ 1,525,798	$ 1,571,572
Stablized Unit: 2 Bedroom Vacancy	(1,277)		$ (46,493)	$ (47,888)	$ (49,324)	$ (50,804)	$ (52,328)	$ (53,898)	$ (55,515)	$ (57,180)	$ (58,896)	$ (60,663)
Affordable Unit: Rental Income	15,165		$ 159,960	$ 164,759	$ 169,702	$ 174,793	$ 180,037	$ 185,438	$ 191,001	$ 196,731	$ 202,633	$ 208,712
Affordable Unit: Vacancy	(332)		$ (3,503)	$ (3,608)	$ (3,716)	$ (3,828)	$ (3,943)	$ (4,061)	$ (4,183)	$ (4,308)	$ (4,438)	$ (4,571)
Retail	4,250		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Effective Gross Income			**$ 3,007,676**	**$ 3,097,906**	**$ 3,190,844**	**$ 3,286,569**	**$ 3,385,166**	**$ 3,486,721**	**$ 3,591,323**	**$ 3,699,062**	**$ 3,810,034**	**$ 3,924,335**
Expenses												
Operating Expenses	95,242		$ 571,454	$ 582,883	$ 594,541	$ 606,432	$ 618,561	$ 630,932	$ 643,550	$ 656,421	$ 669,550	$ 682,941
Taxable Income			$ 2,436,222	$ 2,515,023	$ 2,596,303	$ 2,680,137	$ 2,766,605	$ 2,855,789	$ 2,947,772	$ 3,042,641	$ 3,140,484	$ 3,241,394
Real Estate Tax												
Market Value			$11,693,865	$12,072,110	$12,462,252	$12,864,658	$13,279,706	$13,707,788	$14,149,306	$14,604,676	$15,074,325	$ 15,558,693
Actual Assessd Value			$ 5,262,239	$ 5,432,450	$ 5,608,013	$ 5,789,096	$ 5,975,868	$ 6,168,505	$ 6,367,188	$ 6,572,104	$ 6,783,446	$ 7,001,412
Tax Exemption %			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Exemption Value			$ 4,949,239	$ 5,119,450	$ 5,295,013	$ 5,476,096	$ 5,662,868	$ 5,855,505	$ 6,054,188	$ 6,259,104	$ 6,470,446	$ 6,688,412
Taxable Value			$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000	$ 313,000
Total Real Estate Tax Paid			$ 38,236	$ 38,956	$ 39,689	$ 40,436	$ 41,197	$ 41,972	$ 42,762	$ 43,567	$ 44,387	$ 45,222
Total Real Estate Tax Saved			$ 604,599	$ 637,162	$ 671,415	$ 707,445	$ 745,341	$ 785,201	$ 827,122	$ 871,211	$ 917,578	$ 966,338
Total Expenses			**$ 609,690**	**$ 621,839**	**$ 634,230**	**$ 646,868**	**$ 659,757**	**$ 672,904**	**$ 686,312**	**$ 699,988**	**$ 713,937**	**$ 728,163**
Net Operating Income			**$ 2,397,986**	**$ 2,476,067**	**$ 2,556,614**	**$ 2,639,701**	**$ 2,725,409**	**$ 2,813,817**	**$ 2,905,010**	**$ 2,999,074**	**$ 3,096,098**	**$ 3,196,172**
Capital Reserve	129		$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800	$ 25,800
Ground Lease Payment			$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000	$ 675,000
Negotiable Certificates		$ (2,405,822)										
Low-Income Housing Tax Credit												
Property Before-Tax CF (Operations)			$ 1,697,186	$ 1,775,267	$ 1,855,814	$ 1,938,901	$ 2,024,609	$ 2,113,017	$ 2,204,210	$ 2,298,274	$ 2,395,298	$ 2,495,372
Property Before-Tax CF (Reversion)		$ (28,388,222)										$ 29,521,271
PV of remaining 421-a Tax Benefit for buyer												$1,478,072
Property Before-Tax CF		$ (28,388,222)	$ 1,697,186	$ 1,775,267	$ 1,855,814	$ 1,938,901	$ 2,024,609	$ 2,113,017	$ 2,204,210	$ 2,298,274	$ 2,395,298	$ 33,494,716

Unlevered IRR	**7.78%**
PV of investment benefits @ 7.7% discount rate	**$ 28,545,994**
NPV of investment benefits @ 7.7% discount rate	**$ 157,771**
PV of Total 421-a RE Tax Foregone by the city @ 4.96% discount rate	**$ 7,660,249**
PV of 421-a RE Tax Benefit @ 7.7% discount rate	**$ 5,095,729**
PV of Revenue Loss compared to Baseline Scenario @ 7.7% discount rate	**$ 2,909**
Negotiable Certificates (buy - /sell +)	**$ (2,405,822)**
MV of Low-Income Housing Tax Credit	**$ -**

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Year 11	**Year 12**	**Year 13**	**Year 14**	**Year 15**	**Year 16**	**Year 17**	**Year 18**	**Year 19**	**Year 20**	**Year 21**	**Year 22**	**Year 23**
$ 67.21	$ 70.11	$ 73.14	$ 76.30	$ 79.60	$ 83.04	$ 86.62	$ 90.36	$ 94.27	$ 98.34	$ 102.59	$ 107.02	$ 111.64
$ 62.35	$ 65.05	$ 67.86	$ 70.79	$ 73.85	$ 77.04	$ 80.37	$ 83.84	$ 87.46	$ 91.24	$ 95.18	$ 99.29	$ 103.58
$ 55.58	$ 57.98	$ 60.48	$ 63.10	$ 65.82	$ 68.66	$ 71.63	$ 74.73	$ 77.95	$ 81.32	$ 84.83	$ 88.50	$ 92.32
$ 59.17	$ 60.95	$ 62.78	$ 64.66	$ 66.60	$ 68.60	$ 70.66	$ 72.77	$ 74.96	$ 77.21	$ 79.52	$ 81.91	$ 84.37
$ 54.90	$ 56.55	$ 58.24	$ 59.99	$ 61.79	$ 63.64	$ 65.55	$ 67.52	$ 69.54	$ 71.63	$ 73.78	$ 75.99	$ 78.27
$ 48.93	$ 50.40	$ 51.91	$ 53.47	$ 55.07	$ 56.73	$ 58.43	$ 60.18	$ 61.99	$ 63.85	$ 65.76	$ 67.73	$ 69.77
$ 18.90	$ 19.47	$ 20.05	$ 20.65	$ 21.27	$ 21.91	$ 22.57	$ 23.25	$ 23.94	$ 24.66	$ 25.40	$ 26.16	$ 26.95
$ 14.18	$ 14.60	$ 15.04	$ 15.49	$ 15.95	$ 16.43	$ 16.93	$ 17.43	$ 17.96	$ 18.50	$ 19.05	$ 19.62	$ 20.21
$ 11.81	$ 12.17	$ 12.53	$ 12.91	$ 13.30	$ 13.69	$ 14.11	$ 14.53	$ 14.96	$ 15.41	$ 15.88	$ 16.35	$ 16.84
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
14.720%	14.997%	15.279%	15.567%	15.860%	16.158%	16.462%	16.772%	17.088%	17.409%	17.737%	18.071%	18.411%
$ 279,887	$ 288,283	$ 296,932	$ 305,840	$ 315,015	$ 324,465	$ 334,199	$ 344,225	$ 354,552	$ 365,189	$ 485,245	$ 506,208	$ 528,076
$ (10,804)	$ (11,128)	$ (11,462)	$ (11,805)	$ (12,160)	$ (12,524)	$ (12,900)	$ (13,287)	$ (13,686)	$ (14,096)	$ (18,730)	$ (19,540)	$ (20,384)
$ 2,087,040	$ 2,149,651	$ 2,214,141	$ 2,280,565	$ 2,348,982	$ 2,419,451	$ 2,492,035	$ 2,566,796	$ 2,643,800	$ 2,723,114	$ 3,618,346	$ 3,774,658	$ 3,937,723
$ (80,560)	$ (82,977)	$ (85,466)	$ (88,030)	$ (90,671)	$ (93,391)	$ (96,193)	$ (99,078)	$ (102,051)	$ (105,112)	$ (139,668)	$ (145,702)	$ (151,996)
$ 1,618,719	$ 1,667,281	$ 1,717,299	$ 1,768,818	$ 1,821,883	$ 1,876,539	$ 1,932,836	$ 1,990,821	$ 2,050,545	$ 2,112,062	$ 2,806,408	$ 2,927,645	$ 3,054,120
$ (62,483)	$ (64,357)	$ (66,288)	$ (68,276)	$ (70,325)	$ (72,434)	$ (74,607)	$ (76,846)	$ (79,151)	$ (81,526)	$ (108,327)	$ (113,007)	$ (117,889)
$ 214,973	$ 221,423	$ 228,065	$ 234,907	$ 241,954	$ 249,213	$ 256,690	$ 264,390	$ 272,322	$ 280,492	$ 288,906	$ 297,574	$ 306,501
$ (4,708)	$ (4,849)	$ (4,995)	$ (5,144)	$ (5,299)	$ (5,458)	$ (5,622)	$ (5,790)	$ (5,964)	$ (6,143)	$ (6,327)	$ (6,517)	$ (6,712)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 4,042,065	**$ 4,163,327**	**$ 4,288,227**	**$ 4,416,874**	**$ 4,549,380**	**$ 4,685,861**	**$ 4,826,437**	**$ 4,971,230**	**$ 5,120,367**	**$ 5,273,978**	**$ 6,925,853**	**$ 7,221,319**	**$ 7,529,439**
$ 696,600	$ 710,532	$ 724,742	$ 739,237	$ 754,022	$ 769,102	$ 784,484	$ 800,174	$ 816,178	$ 832,501	$ 849,151	$ 866,134	$ 883,457
$ 3,345,466	$ 3,452,796	$ 3,563,485	$ 3,677,637	$ 3,795,358	$ 3,916,759	$ 4,041,953	$ 4,171,056	$ 4,304,190	$ 4,441,477	$ 6,076,702	$ 6,355,185	$ 6,645,982
$ 16,058,235	$16,573,419	$17,104,727	$17,652,656	$18,217,719	$18,800,444	$19,401,374	$20,021,070	$20,660,111	$21,319,091	$29,168,167	$30,504,889	$31,900,712
$ 7,226,206	$ 7,458,038	$ 7,697,127	$ 7,943,695	$ 8,197,974	$ 8,460,200	$ 8,730,618	$ 9,009,482	$ 9,297,050	$ 9,593,591	$13,125,675	$13,727,200	$14,355,320
100%	80%	60%	40%	20%	0%	0%	0%	0%	0%	0%	0%	0%
$ 6,913,206	$ 5,716,031	$ 4,430,476	$ 3,052,278	$ 1,576,995	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 313,000	$ 1,742,008	$ 3,266,651	$ 4,891,417	$ 6,620,979	$ 8,460,200	$ 8,730,618	$ 9,009,482	$ 9,297,050	$ 9,593,591	$13,125,675	$13,727,200	$14,355,320
$ 46,073	$ 261,247	$ 499,116	$ 761,431	$ 1,050,064	$ 1,367,010	$ 1,437,254	$ 1,511,074	$ 1,588,651	$ 1,670,175	$ 2,328,091	$ 2,480,605	$ 2,642,933
$ 1,017,614	$ 857,227	$ 676,938	$ 475,138	$ 250,106	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 742,673	**$ 971,779**	**$ 1,223,858**	**$ 1,500,669**	**$ 1,804,086**	**$ 2,136,112**	**$ 2,221,738**	**$ 2,311,248**	**$ 2,404,829**	**$ 2,502,676**	**$ 3,177,242**	**$ 3,346,740**	**$ 3,526,389**
$ 3,299,392	**$ 3,191,549**	**$ 3,064,369**	**$ 2,916,205**	**$ 2,745,294**	**$ 2,549,750**	**$ 2,604,699**	**$ 2,659,983**	**$ 2,715,539**	**$ 2,771,302**	**$ 3,748,611**	**$ 3,874,580**	**$ 4,003,049**

2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Year 24	**Year 25**	**Year 26**	**Year 27**	**Year 28**	**Year 29**	**Year 30**	**Year 31**	**Year 32**	**Year 33**	**Year 34**	**Year 35**	**Year 36**
$ 116.47	$ 121.50	$ 126.75	$ 132.22	$ 137.93	$ 143.89	$ 150.11	$ 156.59	$ 163.36	$ 170.42	$ 177.78	$ 185.46	$ 193.47
$ 108.06	$ 112.72	$ 117.59	$ 122.67	$ 127.97	$ 133.50	$ 139.27	$ 145.28	$ 151.56	$ 158.11	$ 164.94	$ 172.06	$ 179.50
$ 96.31	$ 100.47	$ 104.81	$ 109.34	$ 114.06	$ 118.99	$ 124.13	$ 129.49	$ 135.09	$ 140.92	$ 147.01	$ 153.36	$ 159.99
$ 86.90	$ 89.50	$ 92.19	$ 94.95	$ 97.80	$ 100.74	$ 103.76	$ 106.87	$ 110.08	$ 113.38	$ 116.78	$ 120.29	
$ 80.62	$ 83.04	$ 85.53	$ 88.10	$ 90.74	$ 93.46	$ 96.27	$ 99.15	$ 102.13	$ 105.19	$ 108.35	$ 111.60	
$ 71.86	$ 74.01	$ 76.23	$ 78.52	$ 80.88	$ 83.30	$ 85.80	$ 88.38	$ 91.03	$ 93.76	$ 96.57	$ 99.47	
$ 27.76	$ 28.59	$ 29.45	$ 30.33	$ 31.24	$ 32.18	$ 33.14	$ 34.14	$ 35.16	$ 36.22	$ 37.30	$ 38.42	
$ 20.82	$ 21.44	$ 22.09	$ 22.75	$ 23.43	$ 24.13	$ 24.86	$ 25.60	$ 26.37	$ 27.16	$ 27.98	$ 28.82	$ 29.68
$ 17.35	$ 17.87	$ 18.40	$ 18.96	$ 19.53	$ 20.11	$ 20.71	$ 21.34	$ 21.98	$ 22.63	$ 23.31	$ 24.01	$ 24.73
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18.757%	19.110%	19.470%	19.836%	20.210%	20.590%	20.978%	21.372%	21.775%	22.184%	22.602%	23.027%	23.461%
$ 550,889	$ 574,687	$ 599,514	$ 625,413	$ 652,431	$ 680,616	$ 710,018	$ 740,691	$ 772,689	$ 806,069	$ 840,891	$ 877,218	$ 915,114
$ (21,264)	$ (22,183)	$ (23,141)	$ (24,141)	$ (25,184)	$ (26,272)	$ (27,407)	$ (28,591)	$ (29,826)	$ (31,114)	$ (32,458)	$ (33,861)	$ (35,323)
$ 4,107,833	$ 4,285,291	$ 4,470,416	$ 4,663,538	$ 4,865,003	$ 5,075,171	$ 5,294,418	$ 5,523,137	$ 5,761,737	$ 6,010,644	$ 6,270,304	$ 6,541,181	$ 6,823,760
$ (158,562)	$ (165,412)	$ (172,558)	$ (180,013)	$ (187,789)	$ (195,902)	$ (204,365)	$ (213,193)	$ (222,403)	$ (232,011)	$ (242,034)	$ (252,490)	$ (263,397)
$ 3,186,058	$ 3,323,695	$ 3,467,279	$ 3,617,065	$ 3,773,322	$ 3,936,330	$ 4,106,379	$ 4,283,775	$ 4,468,834	$ 4,661,888	$ 4,863,281	$ 5,073,375	$ 5,292,545
$ (122,982)	$ (128,295)	$ (133,837)	$ (139,619)	$ (145,650)	$ (151,942)	$ (158,506)	$ (165,354)	$ (172,497)	$ (179,949)	$ (187,723)	$ (195,832)	$ (204,292)
$ 315,696	$ 325,167	$ 334,922	$ 344,969	$ 355,318	$ 365,978	$ 376,957	$ 388,266	$ 399,914	$ 411,911	$ 424,269	$ 436,997	$ 450,107
$ (6,914)	$ (7,121)	$ (7,335)	$ (7,555)	$ (7,781)	$ (8,015)	$ (8,255)	$ (8,503)	$ (8,758)	$ (9,021)	$ (9,291)	$ (9,570)	$ (9,857)
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 7,850,753	**$ 8,185,830**	**$ 8,535,259**	**$ 8,899,658**	**$ 9,279,670**	**$ 9,675,964**	**$10,089,241**	**$10,520,229**	**$10,969,690**	**$11,438,417**	**$11,927,239**	**$12,437,018**	**$12,968,655**
$ 901,126	$ 919,149	$ 937,532	$ 956,282	$ 975,408	$ 994,916	$ 1,014,814	$ 1,035,111	$ 1,055,813	$ 1,076,929	$ 1,098,468	$ 1,120,437	$ 1,142,846
$ 6,949,627	$ 7,266,681	$ 7,597,728	$ 7,943,376	$ 8,304,262	$ 8,681,048	$ 9,074,426	$ 9,485,118	$ 9,913,877	$10,361,488	$10,828,771	$11,316,581	$11,825,809
$33,358,210	$34,880,070	$36,469,094	$38,128,206	$39,860,457	$41,669,031	$43,557,246	$45,528,568	$47,586,610	$49,735,143	$51,978,101	$54,319,588	$56,763,884
$15,011,194	$15,696,031	$16,411,092	$17,157,693	$17,937,206	$18,751,064	$19,600,761	$20,487,856	$21,413,975	$22,380,815	$23,390,146	$24,443,814	$25,543,748
0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$15,011,194	$15,696,031	$16,411,092	$17,157,693	$17,937,206	$18,751,064	$19,600,761	$20,487,856	$21,413,975	$22,380,815	$23,390,146	$24,443,814	$25,543,748
$ 2,815,697	$ 2,999,563	$ 3,195,237	$ 3,403,470	$ 3,625,061	$ 3,860,858	$ 4,111,766	$ 4,378,742	$ 4,662,809	$ 4,965,051	$ 5,286,621	$ 5,628,747	$ 5,992,731
$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
$ 3,716,823	**$ 3,918,711**	**$ 4,132,768**	**$ 4,359,752**	**$ 4,600,469**	**$ 4,855,774**	**$ 5,126,580**	**$ 5,413,853**	**$ 5,718,622**	**$ 6,041,980**	**$ 6,385,089**	**$ 6,749,184**	**$ 7,135,577**
$ 4,133,930	**$ 4,267,118**	**$ 4,402,491**	**$ 4,539,906**	**$ 4,679,201**	**$ 4,820,190**	**$ 4,962,661**	**$ 5,106,376**	**$ 5,251,068**	**$ 5,396,437**	**$ 5,542,150**	**$ 5,687,834**	**$ 5,833,078**

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