Reducing the Cost of New Housing Construction in New York City

2005 Update

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Preface and Acknowledgments

In 1999, the Furman Center For Real Estate and Urban Policy at New York University's School of Law and Wagner School of Public Service published *Reducing the Cost of New Housing Construction in New York City*. The report, which came to be known as the "Cost Study," immediately garnered significant local and national attention. In 2002, Mayor Michael Bloomberg announced a new housing program for the City of New York. Several of his proposals were attributed to the Cost Study.

In the six years that have passed since publication of the Cost Study, much has changed and much remains the same. New York City and its residents experienced a recession and a terrorist attack that left over 3,000 of its citizens dead and its economy shaken. The housing market, particularly its rental sector, weakened a bit following the destruction of the World Trade Center, but in the past two years has regained much of its former overheated quality. Indeed, neighborhoods which were once unthinkable locales for market rate development such as East New York, Williamsburg and Bedford Stuyvesant today are experiencing substantial interest from private developers.

We are pleased to release this update of the Cost Study. Two of the original authors of the 1999 report – Jerry Salama, an Adjunct Professor at NYU School of Law and a developer of affordable housing in Harlem, and Michael Schill, a former director of the Furman Center and now Dean of UCLA School of Law – are joined in this updated report by Jonathan Springer, a community development consultant and alumnus of the Law School and Stern School of Business. Martha Stark, the third author of the 1999 study, currently serves as New York City's Commissioner of Finance.

Over the past year, the authors have interviewed over 140 members of New York City's housing community including scores of developers, bankers, labor representatives, government officials, architects, attorneys and academics. They have collected new data on the cost of housing development in New York City and have examined what has changed over the past six years. As with the original Cost Study, the authors provide dozens of recommendations for government and the private sector to implement that are designed to bring down the cost of housing development.

The authors would like to thank all of the people they consulted in the preparation of this study (all of whom are listed in Appendix A). In addition, the Furman Center is grateful for the financial support it received from Bank of America, Citibank and the Fannie Mae Foundation. We also thank Ioan Voicu, Rachel Meltzer, Nicholas Bagley, Caroline Bhalla, Erica Tate and Drew Schinzel for their assistance. All of the conclusions and recommendations contained in this report represent the views of the authors, alone, and should not be taken to represent those of the funders, the Furman Center or its Board of Advisors.

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New York University School of Law and
Robert F. Wagner Graduate School of Public Service

Executive Summary

Housing Affordability Problems in New York City (Chapter 1)

As was the case in 1999, the major housing problem facing residents of New York City in 2005 is the affordability of housing. More than one out of every five renters in the city pay over half their incomes in rent. It is especially problematic that the vast majority of households who experience these severe housing affordability problems earn low incomes. Nevertheless, high housing costs are a significant problem for households throughout the income spectrum. While limited data suggest that housing affordability problems may have moderated a tiny bit for renters from 1999 to 2004, they worsened for owners.

One of the reasons why housing affordability problems are so intense in New York City is the imbalance that exists between the supply and demand for housing. For much of the 1980s and 1990s, the increase in household formation outpaced housing construction. Over the past five years, this imbalance has moderated with population growth rates declining and the number of housing units built each year growing. However, given the strong pent-up demand for housing in the city and the advanced age of the city's existing housing stock, New York City will face a strong challenge over the next decade as it struggles to meet demand with new supply.

The Cost of Residential Construction in New York City (Chapter 2)

The 1999 Cost Study identified the high cost of construction in New York City as the primary culprit in the imbalance of supply and demand. This remains the case in 2005. The cost of housing construction in New York City remains the highest in the nation. According to data from the R.S. Means Company, hard costs of development in New York City are 39 percent higher than the national average and eight percent higher than the next most expensive city, San Francisco. According to these data, from 1999 to 2004, housing construction prices in New York City rose slightly faster than the national average.

To obtain a more detailed picture of the cost of construction, detailed architectural specifications for three residential developments – townhouse, mid-rise and high-rise – were developed and priced for New York City and three control cities – Chicago, Los Angeles and Dallas. Once again, the data suggest that the cost of development in New York City is the highest – between three and eight percent more expensive than Los Angeles, between nine and 13 percent more expensive than Chicago and between 37 and 47 percent more expensive than Dallas. Over the past five years, however, the cost of housing construction in New York City has increased at a slightly slower pace than the cost of development in these other cities.

Labor (Chapter 3)

The major driver of high construction costs in New York City is the cost of labor. In 2003, construction wages in New York City were 52 percent above the national average. Nevertheless, in the years since 1999, the wage premium in New York City compared to other large cities narrowed. Indeed, in 2003, the median hourly construction wage in

Chicago surpassed New York City. One of the major reasons for the high cost of labor in New York City is the power of its labor unions. The muscle that unions flex in this industry is also reflected in work rules that tend to inflate the cost of development.

- Labor unions and the development community should eliminate inefficient work rules that do not affect worker safety and that have the effect of raising the cost of housing construction.

- Labor unions and the development community should negotiate lower wage rates for development outside the core of Manhattan where rents are significantly lower and for affordable housing. This agreement should also coordinate work hours and paid holidays and allow for a longer workday, greater use of apprentices and minimize overtime requirements.

- Congress should amend the Davis-Bacon Act to require the establishment of a residential wage rate in cities for mid-rise apartment buildings based upon the average of union *and* non-union wages.

- Union and non-union contractors alike should seek to diversify their membership by recruiting more minorities and women to the trades through apprenticeship programs

Availability and Cost of Vacant Land (Chapter 4)

One of the chief reasons why housing is so expensive in New York is the shortage of vacant sites upon which development can take place. From 1998 to 2004, the supply of vacant land in the City decreased by five percent. This shortage is reflected in the rapidly escalating price of vacant land; by one small measure, the median sale price of City-owned vacant land has increased at an annualized rate of 41 percent over each of the last five years.

- The city and state should create an inventory of under-utilized or obsolete state facilities and facilities owned by the private sector and develop incentives for their reuse as housing. For publicly available sites that could be used for housing, the city and state should take steps to transfer properties to the New York City Department of Housing Preservation and Development or responsible private developers.

- The city should also prepare an inventory of privately-owned vacant land that is zoned for residential use.

Brownfields (Chapter 5)

In light of the shortage of land for development of housing, brownfields – land that is or is perceived to be environmentally contaminated – may be an important resource. New York City has a substantial amount of land that fits this designation, but that land had remained fallow because of fears of legal liability. New York State's recently-enacted Brownfield Cleanup Program makes brownfield remediation and development significantly more feasible.

- The federal government should amend its brownfields programs so as not to require Davis-Bacon wages to be paid for construction.

- The state should amend its newly enacted Brownfield Cleanup Program to (1) increase the value of tax credits but have them apply only to the cost of remediation, not development, (2) make tax credits on properties owned by tax-exempt entities transferable and deductible, (3) permit credits for homeownership projects and (4) provide bonus credits for projects that are consistent with plans submitted by municipalities and community-based organizations.

- The city should (1) remediate city-owned land and fund the costs through land sales proceeds, (2) study the possibility of using a mechanism to transfer properties to responsible third parties such as the one used for *in rem* properties under the Third Party Transfer Program and (3) revamp the New Ventures Incentive Program so that it will assist private developers to assemble tracts of land.

Environmental Regulation (Chapter 6)

New York State and New York City mandate environmental reviews for public actions or grants of discretionary approvals that are required in conjunction with housing development. These environmental reviews can add substantially to the cost of development. In addition, the risk of litigation by community residents who oppose the development on grounds that may have only a tenuous connection to the environment may either chill development or cause the owners to incur substantial costs to buy off potential adversaries.

- Type II actions under the State Environmental Quality Review Act (SEQRA) (i.e. those presumed not to have significant environmental impacts and not to require additional analysis), should be expanded by the New York State Legislature to include housing developments of up to 90 units and government-supported affordable housing up to 150 units.

- New York State should amend SEQRA to limit the definition of "environment" which triggers an environmental review to traditional (ie. physical) conceptions of environmental impacts.

- New York State should reduce the incidence of non-meritorious SEQRA lawsuits by either (1) amending the law to limit standing to only those parties who are truly aggrieved or (2) eliminating the private right of action under the law.

- New York State should reduce the statute of limitations for SEQRA and create an expedited procedure for resolving challenges to housing development.

- The city should increase funding for consultants to perform CEQR reviews for area-wide rezoning efforts.

Zoning Regulation and Land Use Review Process (Chapter 7)

New York City's zoning resolution is outdated and enormously complicated. Because of this, most new development of any scale requires discretionary approvals which, in turn, implicate SEQRA review and the Uniform Land Use Review Process (ULURP). Instead of beginning the process of drafting a new zoning resolution to accommodate growth into the 21st century as was recommended in the 1999 Cost Study, the city has chosen to concentrate on area-wide re-zonings. In 1999, the Cost Study recommended that underutilized portions of the city that were zoned for industrial uses be rezoned for housing. The city has recently achieved this objective in Hudson Yards and appears on the verge of doing so in several other neighborhoods, including Brooklyn's Greenpoint/Williamsburg. More ominously, the city has also pursued a downzoning strategy in response to the political pressure of community residents in other neighborhoods such as Staten Island and Queens.

- The city should continue the area-wide rezonings that it has begun to permit additional residential development. The city should reverse the dangerous precedent it set in limiting residential uses in commercial districts where housing is usually permitted when it created the special zoning district as part of the recent Hudson Yards rezoning.

- Rather than reduce densities as it has done in several neighborhoods over the past few years, the city should use its zoning powers to increase permitted densities in neighborhoods where appropriate infrastructure and transportation exist.

- The city should reduce parking requirements, particularly for affordable housing developments and for projects catering to elderly households where residents are less likely to own automobiles.

- The state and city should streamline the land use review process by hiring additional staff at the Department of City Planning and by amending the Urban Development Action Area Project (UDAAP) statute to permit expedited disposition of vacant land for development of dwellings with five or more units provided that the project contains affordable housing.

Building Code (Chapter 8)

New York is one of the few large cities in the nation not to follow a model building code. The complexity and outdated nature of the existing 1,000 page code has had a number of impacts including: (1) increasing the cost of development, (2) reducing competition, (3) increasing opportunities for corruption and (4) reducing the opportunity to use cost-cutting improvements in technology. The 1999 Cost Study recommended adoption of a model code. In 2002, Mayor Bloomberg endorsed this idea and set into motion a process by which the city would adopt a model code after making appropriate changes to reflect the unique conditions that exist in New York City (e.g. high density). That process is ongoing.

- The city should proceed expeditiously to adopt the International Building Code with only those modifications that are necessary to reflect the truly unique nature of

development in New York. It should not allow special interest groups (e.g. city agencies, labor unions, manufacturers) to successfully obtain changes to the law that are unnecessary and that would have the impact of reducing the benefits gained from adoption of the code.

- The city should also adopt the International Fire Code.

- The city should eliminate its materials and equipment acceptance (MEA) process and promote competition among different types of materials and manufacturers.

Permitting Approval Process – The Department of Buildings (Chapter 9)

The 1999 Cost Study described a Department of Buildings (DOB) that was inefficient, ineffective and, in some instances, corrupt. After a series of incidents that took place after the report was published, Mayor Bloomberg announced the appointment of a new commissioner with a mandate to modernize the department. The management of the department has improved in some respects, but much more needs to be done. The Buildings Department is still one of the major drivers of the high cost of housing in New York City rather than an agency dedicated to reducing expense and facilitating development.

- The city should increase and upgrade the staff of the DOB. The culture of the staff which promotes delays because of a pervasive fear of decision-making must also be changed. Finally, staff training and policies should be consistent across the five boroughs.

- The pre-filing of plans should be folded into the plan examination submission process and further automated.

- The DOB should track and make public performance indicators that are tied to meaningful customer service outputs.

- The DOB should create a uniform set of directives that provides definitive rulings on each substantive topic.

- Additional investments in computer systems should be made to automate internal processing functions and make available more records on the web. The successful pilot for handheld devices should be expanded throughout the agency.

- Enforcement must be reorganized to encourage immediate removal of safety violations rather than churning of fees and penalties.

- The process for obtaining a certificate of occupancy should be streamlined and automated. The recent elimination of temporary certificates of occupancy should not be expanded.

New York City Affordable Housing Development Programs (Chapter 10)

The New York City Department of Housing Preservation and Development (HPD) and the New York City Housing Development Corporation (HDC) together play a critical role in the development of affordable housing in New York City. HPD is most likely the largest municipal producer of affordable housing in the country. The 1999 Cost Study did not consider how HPD and HDC themselves affected the cost of housing built under their programs. This report reviews the efficiency of these agencies in the administration of their programs and recommends ways to optimize the use of resources in connection with new construction of affordable housing.

- HPD's Bureau of Design and Review should limit itself to ensuring that developers comply with the requirements of the zoning resolution, the building code and HPD's design guidelines. Staff should not mandate additional design requirements.

- HPD should create incentives for developers participating in its programs to economize, such as allowing developers to reduce their equity contributions or increase their developer's fee by a portion of the amount they are able to save.

- HPD and its legal staff should coordinate both within the agency and with other agencies to expedite the conversion of construction loans to permanent loans.

- HPD should identify vacant and under-utilized city-owned land and work with the Deputy Mayor for Economic Development and Rebuilding to facilitate transfer to HPD of land for housing development.

- HPD should work with other agencies of city government to identify situations in which the condemnation of private property in close proximity to city-owned land (or the threat of condemnation) would create sufficiently large sites on which to build housing in a cost-effective manner.

- HDC should lower its rates on bonds for affordable housing and allow for more flexible structuring in order to otherwise reduce financing costs.

Inclusionary Zoning (Chapter 11)

New York City's current voluntary inclusionary zoning ordinance is flawed for a variety of reasons and has produced only modest amounts of housing. At present, a variety of inclusionary requirements have been proposed for Hudson Yards, which was recently rezoned, and Greenpoint/Williamsburg, which is currently undergoing rezoning. Our analysis of a proposed mandatory inclusionary zoning ordinance suggests that requiring developers to include low- or moderate-income housing in market rate developments is feasible under several different market conditions without chilling housing development. On the other hand, since returns are highly sensitive to required set-asides and the income thresholds of residents, there is a possibility under changed market conditions that an ill-

designed requirement could either make development of all housing infeasible or substantially reduce the number of units built.

- The city should modify its existing Inclusionary Housing Program to (1) allow the program to be used with 421-a tax abatements, tax-exempt bond financing and the Low Income Housing Tax Credit, (2) allow off-site units to be built at greater distances from the market rate housing, (3) allow affordable units to be managed by responsible for-profit entities and (4) allow rents from affordable units to be used to repay project debt.

- If the city were to adopt a mandatory inclusionary zoning program it should proceed with caution and (1) set program requirements only after carefully analyzing the impact of the requirements on the supply of *both* market rate and affordable housing, (2) implement affordability mandates on a neighborhood-by-neighborhood basis to insure that they are attuned to market conditions, are financially feasible and do not lead to substantially less total housing production, (3) implement a safety valve provision which triggers an automatic modification of the affordability requirements if market conditions change substantially and (4) relax affordability requirements for rental units (versus homeownership) so as to encourage both types of housing.

Taxes and Fees (Chapter 12)

New York City's system of property taxation inhibits the construction of new housing by taxing vacant land at the lowest rate and multifamily housing at the highest rate. In addition, the City and State impose significant taxes on housing developments regardless of their affordability to low- and moderate-income households. Furthermore, various city agencies impose excessive fines and fees on developers during the construction process.

- The State Legislature should authorize New York City to create a special tax class for vacant land in order to tax it at a higher rate.

- The state and city should waive or reduce real property transfer, mortgage recording and sales taxes on affordable housing projects, especially projects where the City or State has provided significant funding.

- The city should reduce permit fees for construction of housing and waive permit fees for affordable housing projects, especially those that are part of an HPD or HDC program.

Scaffold Law/Insurance Premiums (Chapter 13)

The New York State Scaffold Law imposes absolute liability on contractors and owners for falls and other gravity-related personal injuries on construction sites. The law provides that if a construction worker is injured as a result of a contractor's failure to comply with the safety measures prescribed, the contractor cannot introduce evidence of the worker's comparative negligence. New York is the only state in the nation with these liability rules.

Some observers believe that the Scaffold Law is related to higher insurance losses and insurance rates for contractors.

- The State should amend the Scaffold Law to allow the recovery of injured construction workers to be reduced in proportion to their comparative negligence and the State Insurance Department should ensure that insurance rates are reduced to reflect this cost saving.

Green Building (Chapter 14)

Green building, the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance and demolition of buildings, is just beginning to become commonplace. These practices sometimes entail substantial up-front costs, but may generate long-term benefits. In 2000, New York State enacted a Green Building Tax Credit – the first of its kind in the country – which had its sunset in 2004.

- New York State should reauthorize the Green Building Tax Credit program and draft regulations that provide guidance on how the credit could be passed on to condominium and cooperative apartment buyers.

- The New York State Energy Research and Development Authority should delegate its underwriting to third parties that already underwrite housing construction projects and create "one stop shopping" so that developers can access all green building benefits for which they may be eligible from a single portal.

Corruption in the Construction Industry (Chapter 15)

The existence of corruption in the construction industry has been well documented in court records, investigative reports and the press. Illegal practices which can generate costs for housing developers include solicitation of bribes and embezzlement by union officials, bid rigging, violence threatened by local labor coalitions if they do not receive "no-show" jobs and bribes of municipal employees. The extent of the problem of corruption is hotly contested although some observers believe that the incidence of organized crime infiltration of unions and the construction industry has diminished in recent years as a result of repeated investigations of scandals and well-publicized prosecutions.

- Federal, state and local criminal enforcement agencies should continue to investigate and prosecute corruption in the real estate industry wherever it is found.

- The city should take whatever steps it can to simplify the building process primarily through reform of the Department of Buildings and the adoption of a model building code. The real estate industry and labor unions should follow the recommendations set forth in this Report to simplify and streamline residential development. A more streamlined and simple development process will result in fewer opportunities for threatened delay and extortion.

Part I:
Housing Affordability and the Cost of Housing Construction in New York City

Part I of this Report describes the conditions that make it necessary for New York City to take steps to reduce the cost of housing construction. Specifically, in Chapter 1, data are presented to demonstrate that large proportions of all households in the city pay extremely high shares of their income for rent or the costs of homeownership. Importantly, high housing cost-to-income burdens are not only a problem of the city's poor families; instead they affect households throughout the income spectrum. One of the principal causes of unaffordable housing is that despite a recent upturn in housing production, demand still far outstrips the supply of housing in New York City. The high cost of construction in the city is one of the prime culprits behind the relatively low level of housing production. Chapter 2 documents the hard costs (materials and labor) of housing construction in New York City and compares it to other cities.

Chapter 1:
Update on Housing Affordability Problems in New York City

In the six years that have elapsed since *Reducing the Cost of New Housing Construction in New York City* was published, the situation has not improved significantly with respect to the housing problems facing New York City residents.[1] Affordability remains the biggest problem facing households in the city. According to data set forth in Table 1 from the 2002 New York City Housing and Vacancy Survey (the last year for which data are available), the median rent-to-income burden for renters in New York was 26.5 percent. But this median figure masks the fact that 22.7 percent of all renters paid more than half their incomes in rent.

Table 1
Housing Affordability in New York City: 1996 and 2002

Affordability Measure	1996	2002
Median Rent-to-income Ratio	27.8%	26.5%
Proportion of Renters paying > 50% of income on housing	25.3%	22.7%
Proportion of Homeowners paying > 60% of income on housing	11.2%	14.3%

Note: Care should be taken in comparing 1996 and 2002 data since sampling frames were different in the two years.
Source: 1996 and 2002 New York City Housing and Vacancy Surveys

Because the Housing and Vacancy Survey employed a different sampling frame in 2002 from the one used in 1996, direct comparisons of rent-to-income burdens are somewhat perilous.[2] Nevertheless, the data suggest that housing cost burdens for renters have eased a bit. In 1996, 25.3 percent of all renters paid more than half their incomes for rent. Similarly, median rent-to-income burden was higher in 1996 (27.8 percent). Part of the reason for this reduction in rent-to-income burdens is that incomes rose faster than rents at least among those New Yorkers who were toward the bottom of the income scale.

Regardless of whether affordability problems have improved between 1996 and 2002, they are still quite severe for a large proportion of New York City residents. Since the vast majority of these 421,000 renter households who pay more than half their incomes for housing earn low incomes, there is very little left after rent payments for other necessities such as food, clothing and health care. Increasingly, research is showing a relationship between inadequate or unaffordable housing and other outcomes such as educational attainment, birth weight and disease.

Unaffordable housing also poses significant risks to the city's economy. Employers frequently express the view that the high cost of housing in the New York metropolitan area threatens their competitiveness. Wage rates must be higher to compensate employees either for the greater expense of housing or for the time they spend commuting to and from work.

[1] For detailed information about housing problems and conditions in New York City *see* C.K. Bhalla et. al., *State of New York City's Housing and Neighborhoods 2004* (Furman Center for Real Estate and Urban Policy 2005).
[2] For a description of this issue see http://www.census.gov/hhes/www/housing/nychvs/2002/statement.html.

To the extent these wage rates are passed through to consumers, they may threaten the ability of New York City to compete in a global market.

Indeed, available indicators do suggest that low income New Yorkers are suffering as a result of unaffordable rental housing. Waiting lists for public housing and Section 8 subsidies typically stretch to ten or more years. In addition, the rate of homelessness among families (as reflected in shelter utilization) is at record highs.[3]

Problems of severe affordability burdens are somewhat less pronounced for homeowners than renters although they have increased since 1996. As set forth in Table 1, between 1996 and 2002, the proportion of homeowners that paid more than 60 percent of their incomes for housing increased from 11.2 percent to 14.3 percent. The increase in homeownership burdens is a function of several dynamics. First, home prices in New York escalated substantially over the past decade. While the full brunt of this price escalation was lessened by relatively low interest rates, it still had an impact on affordability. In addition, the proportion of homeowners has increased from 30.0 percent of all New Yorkers in 1996 to 32.7 percent in 2002. A significant portion of this increase in homeownership is attributable to the purchase of homes by low and moderate income households.

Reducing the Cost of New Housing Construction in New York City, published in 1999 (the "1999 Cost Study"), compared New York City housing costs to a variety of large American cities, most particularly Chicago, Dallas and Los Angeles.[4] According to 2002 data from the Census Bureau's American Community Survey set forth in Table 2, while monthly housing costs for renters in New York City are the highest among the four cities, housing cost burdens are actually slightly higher in Los Angeles. This difference—one percentage point—is quite small. For owner households the picture is reversed with 20 percent of all New York City homeowners paying more than half their incomes for housing compared to 19 percent of homeowners in Los Angeles.

[3] *See* Department of Homeless Services, "Average Daily Census (Family System) (2004) (http://www.nyc.gov/html/dhs/downloads/pdf/histdata.pdf) (showing 9,203 in the shelter system in 2003).

[4] For a description of the considerations that led to the selection of these comparison cities see pages 18 to 23 of the 1999 Cost Study.

Table 2

Housing Affordability: New York City Compared to Other Cities, 2003

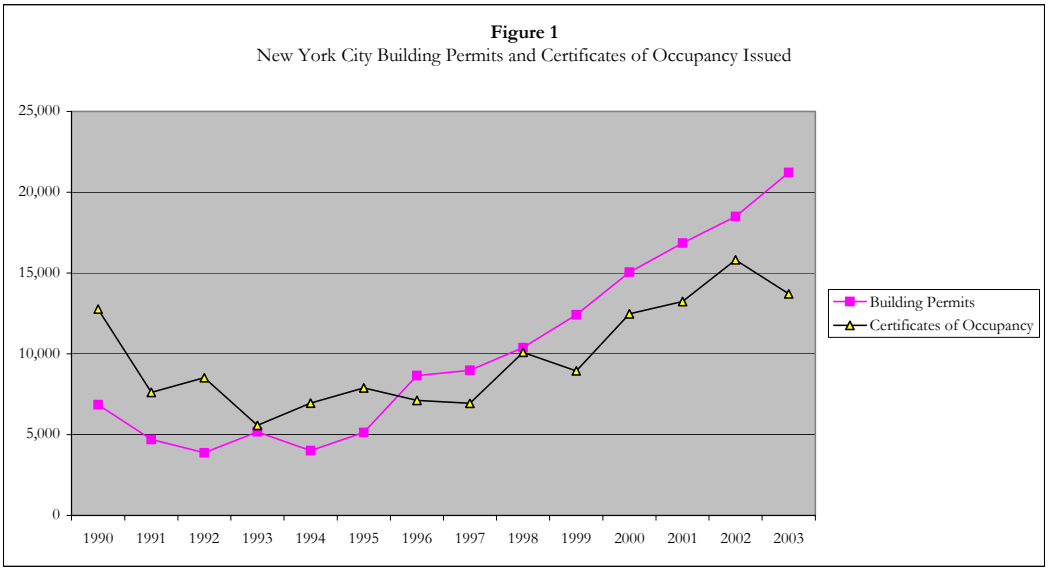
	New York City	All Central Cities	Chicago	Dallas	Los Angeles
Renter Households					
Median Monthly Housing Costs	$ 816	$ 642	$ 742	$ 696	$ 791
Median Housing Cost Burden	30%	31%	29%	29%	31%
Proportion of Households Paying More than					
30% of Income for Housing	48%	47%	44%	46%	49%
50% of Income for Housing	25%	23%	24%	20%	26%
Owner Households					
Median Monthly Housing Costs	$ 1,406	$ 748	$ 1,124	$ 880	$ 1,526
Median Housing Cost Burden	26%	19%	24%	21%	26%
Proportion of Households Paying More than					
30% of Income for Housing	42%	25%	38%	28%	41%
50% of Income for Housing	20%	11%	15%	9%	19%

Source: American Community Survey 2003 (data for specific cities), American Housing Survey - National Data 2003

In our 1999 report, affordability problems were attributed to an imbalance of supply and demand. Figure 1 demonstrates that the situation has improved. From 1990 to 1999, the average number of housing units each year authorized by building permits was 7,020. The average for the first four years of the twenty-first century was 17,906, a jump of 155 percent over the rate of construction for the 1990s. Of course, not all units for which building permits are issued are, in the end, constructed. Figure 1 also shows the number of units for which a certificate of occupancy was issued. During the 1990s, the average number of housing units completed in New York City each year was only 8,243. In the first four years of this decade – 2000, 2001, 2002 and 2003 – the average number of units produced was 13,808, an increase of 67.5 percent. This increase in housing development, primarily in the boroughs outside of Manhattan, has not gone without notice.[5]

[5] *See*, e.g., Josh Barbanel, "New Home Building Going Strong in the City," *New York Times*, Sep. 12, 2004, at 11-2; Josh Barbanel, "New Housing Spur Sweeping Boroughs Outside Manhattan," *New York Times*, Jan. 30, 2004, at A-1.

Figure 1
New York City Building Permits and Certificates of Occupancy Issued



Source: U.S. Bureau of the Census, Building Permits Survey
New York City Department of City Planning

The recent upsurge in housing production suggests that for the first time in over two decades, New York City is producing housing faster than its population is growing. According to Census estimates, from 2000 to 2003, the city's population increased by 68,664 or an average of 22,888 per year.[6] Since the average household size in the city is 2.59,[7] this translates into an increased demand for housing of approximately 8,800 units per year, less than current production numbers.

Despite this good news, there is reason to remain concerned about facilitating new construction of housing. First, as documented in the 1999 Cost Study, for the better part of two decades, the production of housing in New York City consistently fell behind new household formation adding to a pent-up demand for housing in the city. In addition, the housing stock in New York City is the oldest in the nation. This means that as housing depreciates it will need to be replaced even if population growth were to remain modest. Indeed, this point is underlined by recent data collected by the Rent Guidelines Board showing that the number of demolitions in New York City has risen dramatically in recent years from 717 buildings in 1999 to 2,250 in 2003.[8]

Furthermore, the current upsurge in housing construction occurred during a period of extremely low interest rates. Interest rates have already begun to rise and every indication from the Federal Reserve suggests that they will continue to increase in the near future. Furthermore, with increases in commodity prices, caused in part by competition from fast growing economies such as China, attention to the cost side of housing development is both timely and prudent.

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[6] This represents a significant slowdown in growth from the 1990s, when according to Census figures New York City's population grew by approximately 68,571 persons per year. Because of under-counting in 1990, it is possible that the actual average annual population growth in the city during the 1990s, might have been half that number (which would still be much greater than growth rates in 2000-2003).

[7] *See* New York City, Department of City Planning, "Demographic Characteristics—New York City 1990 and 2000 Census" (http://www.nyc.gov/html/dcp/pdf/census/demonyc.pdf).

[8] *See* New York City Rent Guidelines Board, *Housing NYC: Rents, Markets and Trends, 2004* (Table G.8).

Chapter 2:
The Cost of Residential Construction in New York City

I. Background

By any measure, New York is the most expensive major city in the United States in which to build new housing. This was the case in 1999, when we first examined housing construction costs, and it remains the case today. This chapter reviews the extent to which costs have risen in New York City over the past six years and documents the current cost differential between New York and other cities.

This chapter compares data on "hard" construction costs, which include labor and materials but not land or "soft" costs such as architects' fees, taxes during construction, appraisals, title insurance, environmental tests and financing costs. Although soft costs contribute to the cost of development, they are a much smaller component of total development costs. For purposes of this analysis, soft costs are not included for two reasons. First, comparable data sources across different cities do not exist for soft costs. More fundamentally, soft costs tend to be extremely idiosyncratic depending upon the type of financing used and prevalent interest rates and therefore are quite difficult to compare across jurisdictions.[9]

The estimates presented in this chapter of how much more it costs to construct housing in New York City relative to other cities should therefore be viewed as conservative. It is virtually certain that soft costs in New York City are higher than in most other cities. For example, the cost of professional services is significantly higher in New York City than elsewhere in the country. This soft cost differential is compounded by the fact that, as described in Chapters 6 and 7, New York City has public review processes which add soft costs for discretionary approvals that exist only in certain other cities. Elements of soft costs that could be reduced, leading to a reduction in total development costs, are therefore discussed throughout this Report.

Finally, the cost comparison estimates presented in this section do not include the price of land. Reliable sources of vacant land prices do not exist in a format that would permit inter-city comparisons. In addition, the value of land varies dramatically within cities depending upon the location selected (e.g. downtown versus periphery). Once again, however, anecdotal information suggests that land values in New York City are among the highest in the nation. Therefore, if land prices were to be included in the development cost comparisons, they would further inflate the amount by which New York City's costs exceed those in other cities.

II. Hard Costs

Hard cost data in the 1999 Cost Study and in this Report are provided using two different methodologies: construction cost indices and cost estimation for actual projects, described

[9] However, Part II of this Report reviews certain soft costs such as environmental reviews and describes them qualitatively.

below. Both methodologies show New York City to be the most expensive city for housing construction.

A. Construction Cost Indices

R.S. Means is a national construction index that documents the cost of labor and materials in cities across the United States. The data are updated quarterly based on new projects around the country. A national average is then determined and city-specific multipliers are set. These data unfortunately fail to account for local building code requirements. Not surprisingly, local developers report that R.S. Means consistently underreports the cost of housing construction in New York City. R.S. Means data are nonetheless presented here because they provide a broad-brush geographic comparison.

Construction cost data from R.S. Means suggest that the hard cost of construction in New York City is the highest in the nation (even excluding land costs). Table 3 includes the hard cost per square foot for new construction of three prototypical buildings in the twenty largest cities: low-rise garden apartments with wood joists and brick face (three stories, 32 units); a mid-rise building with concrete frame and brick face (six stories, 42 units); and a high-rise tower of steel construction (15 stories, 50 units). Separate costs are provided for each of New York City's five boroughs and Newark, New Jersey is included for the sake of comparison to a nearby city. With respect to all three prototypes, costs in New York City are the highest in the nation. The next most expensive city is San Francisco, where the price per square foot is seven percent lower than New York. As Table 4 indicates, costs in New York City are estimated to be 19 percent higher than in Chicago, 24 percent higher than in Los Angeles and 56 percent higher than in Dallas. The cost of new construction for these three prototypes in New York City is 34 percent more expensive than the average of the 19 next largest cities, and 39 percent more expensive than the national average.

Table 3

R.S. Means Hard Cost per Square Foot, 2nd Quarter 2004

	3-Story	6-Story	15-Story	Percent of
City	**$/SF**	**$/SF**	**$/SF**	**National Average**
National Average	$ 86.03	$ 107.37	$ 124.97	100%
New York City	119.10	148.73	173.10	139%
Manhattan	119.10	148.73	173.10	139%
Brooklyn	116.81	145.83	169.71	136%
Queens	115.25	143.90	167.48	134%
Staten Island	115.25	143.90	167.48	134%
Bronx	114.03	142.38	165.73	133%
San Francisco	110.68	138.18	160.84	129%
San Jose	106.84	133.35	155.22	124%
Boston	104.96	131.03	152.48	122%
Philadelphia	101.65	126.89	147.74	118%
Newark	101.22	126.37	147.10	118%
Chicago	100.36	125.30	145.85	117%
Los Angeles	96.32	120.24	140.00	112%
Detroit	96.07	119.94	139.60	112%
San Diego	94.50	118.02	137.36	110%
Milwaukee	90.30	112.73	131.23	105%
Columbus	85.75	107.07	124.61	100%
Indianapolis	84.49	105.44	122.73	98%
Baltimore	83.42	104.16	121.24	97%
Houston	79.22	98.90	115.11	92%
Phoenix	78.94	98.57	114.73	92%
Memphis	78.31	97.73	113.73	91%
Dallas	76.29	95.25	110.85	89%
San Antonio	74.09	92.45	107.61	86%
Jacksonville	73.13	91.28	106.23	85%
Austin	72.08	90.00	104.74	84%

Source: R.S. Means Construction Cost Data, 2nd Quarter 2004

Table 4
R.S. Means Hard Costs, 2nd Quarter 2004

3-Story Garden Apartments, 32 Units

	Cost Per Square Foot	Cost Per Apartment	Comparison to New York
New York	$ 119.10	$ 133,987	
Chicago	100.36	112,902	119%
Los Angeles	96.32	108,365	124%
Dallas	76.29	85,824	156%

6-Story, 42 Units

	Cost Per Square Foot	Cost Per Apartment	Comparison to New York
New York	$ 148.73	$ 212,465	
Chicago	125.30	179,002	119%
Los Angeles	120.24	171,777	124%
Dallas	95.25	136,072	156%

15-Story, 50 Units

	Cost Per Square Foot	Cost Per Apartment	Comparison to New York
New York	$ 173.10	$ 328,899	
Chicago	145.85	277,119	119%
Los Angeles	140.00	265,995	124%
Dallas	110.85	210,613	156%

Source: R.S. Means Construction Cost Data, 2nd Quarter 2004

New York's position as the most expensive city is nothing new. A similar analysis in the 1999 Cost Study likewise found New York to be the most expensive major city at that time, 33 percent more expensive than the average of 21 other cities. According to R.S. Means, hard costs are estimated to have risen an average of 2.7 percent annually from 1999 to 2004 for an average of 30 cities, but an average of 2.9 percent annually for New York City during the same timeframe.[10]

B. Project Cost Estimates

In an effort to obtain more systematic comparative data on the cost of residential construction in New York City for the 1999 Cost Study, the Furman Center retained an architectural firm to prepare detailed prototypes of three different development projects that are roughly similar to those priced above with R.S. Means data. A construction cost estimator was retained to estimate the hard costs for each of the components of the three developments on a line item-by-line item basis in New York City and in three control cities: Chicago, Dallas and Los Angeles (the "Control Cities").[11]

[10] R.S. Means Historical Cost Indexes; includes estimated data for January 2004.
[11] A number of criteria were utilized in selecting the Control Cities. First, the Furman Center obtained detailed information about 21 cities, including: population; density; number of housing units overall; number of units in buildings with five or more units; number of residential permits issued; the estimated cost of construction; and

Each of the three prototype developments for which cost estimates were obtained is shown in Appendix B. A summary of the cost comparisons is set forth below, and detailed cost estimates are in Appendix C.[12]

1. St. Mary's – Townhouse Prototype

The first prototype is a project with eight attached three-story townhomes, for a total of 24 units. It is typical of the new affordable housing that has been subsidized by the New York City Department of Housing Preservation and Development in boroughs outside Manhattan. The hard cost of building such an individual townhouse in New York City is $385,636 or $169 per square foot. The cost of building this house in New York City is eight percent higher than in Los Angeles, 13 percent higher than in Chicago and 42 percent higher than in Dallas.

As Table 5 indicates, the higher cost of construction in New York City is largely attributable to higher labor costs. The cost differential is disproportionately due to labor in Chicago (61 percent) and Dallas (51 percent), but to materials in Los Angeles (54 percent).

Also as shown in Table 5, between 1999 and 2004, costs for building the townhouse prototype increased an average of 5.3 percent annually in New York, but between 5.6 and 6.0 percent annually in the Control Cities.

hourly union wage rates for sample trades. Second, the Furman Center reduced the list to three cities using a two-part test. The city had to be building a substantial number of residential units as evidenced by the number of building permits compared to the number of units overall. The city also had to be somewhat similar to New York based on housing stock and density or to have other similarities to the New York City construction and housing industries.

Using this methodology, the Furman Center identified Chicago, Dallas and Los Angeles. Chicago was the most similar to New York in terms of density and like New York it is a union town, though its union wage rates are lower. Dallas has experienced a lot of new residential construction in recent years relative to its existing housing stock. In addition, Dallas is an open shop town and the Furman Center believed it would be important to highlight some of the differences between union and non-union labor costs. Los Angeles, aside from being the second-largest city, has in place a rent regulation ordinance that the Furman Center thought might be useful to compare to New York City's rent regulation provisions.

[12] The 1999 cost estimates were provided by Zaxon, Inc. In 2004, a different firm – Accu-Cost Construction Consultants, Inc. – revisited the 1999 estimates and provided new estimates for 2004. Accu-Cost priced these estimates for mid-year 1999 and 2004 with a three percent escalation to account construction commencement 12 months later. Developers and/or architects consulted in the Control Cities opined that the prototypes would likely be built with non-union labor, with the exception of the high-rise prototype in New York, Chicago and Los Angeles, which would likely be built with union labor. Cost estimators report, however, that there is no reliable database of non-union labor costs. Therefore, to most closely approximate the cost of non-union labor, the prototypes were priced assuming union wages but no fringe benefits with the exception of the high rise tower in New York, Chicago and Los Angeles, which were priced including both union wages and fringe benefits.

Table 5
Project Cost Estimate -- Town Homes

	2004 Cost Per Square Foot	2004 Cost Per Town House	2004 Comparison to New York	1999 Cost Per Square Foot	1999 Comparison to New York	1999 to 2004 Annualized Increase
LABOR						
New York	$ 83.08	$ 189,420		$ 63.38		5.6%
Los Angeles	77.06	175,706	108%	58.31	109%	5.7%
Chicago	71.12	162,154	117%	54.26	117%	5.6%
Dallas	57.57	131,261	144%	42.03	151%	6.5%
MATERIALS						
New York	$ 86.06	$ 196,216		$ 67.09		5.1%
Los Angeles	78.87	179,826	109%	60.59	111%	5.4%
Chicago	78.40	178,758	110%	59.80	112%	5.6%
Dallas	61.83	140,976	139%	47.37	142%	5.5%
TOTAL COST						
New York	$ 169.14	$ 385,636		$ 130.47		5.3%
Los Angeles	155.94	355,532	108%	118.89	110%	5.6%
Chicago	149.52	340,912	113%	114.07	114%	5.6%
Dallas	119.40	272,237	142%	89.40	146%	6.0%

Source: Accu-Cost Construction Consultants, Inc.

2. 625 Tinton – Mid-Rise Prototype

The second prototype is a six-story elevator building with a total of 43 units. The hard cost of constructing such a building in New York City is $184 per square foot or $270,660 per unit. This is four percent higher than in Los Angeles, 11 percent higher than in Chicago and 37 percent higher than in Dallas.

Labor is disproportionately responsible for these higher hard costs in New York City. As is shown in Table 6, labor is responsible for 72 percent of the differential in Chicago, 63 percent in Dallas, and 59 percent in Los Angeles.

Also as shown in Table 6, between 1999 and 2004, costs for building the mid-rise prototype increased an average of 4.6 percent annually in New York, but between 4.9 and 5.3 percent annually in the Control Cities.

Table 6

Project Cost Estimate -- Mid-Rise

	2004 Cost Per Square Foot	2004 Cost Per Apartment	2004 Comparison to New York	1999 Cost Per Square Foot	1999 Comparison to New York	1999 to 2004 Annualized Increase
LABOR						
New York	$ 98.12	$ 144,214		$ 79.27		4.4%
Los Angeles	93.67	137,672	105%	74.29	107%	4.7%
Chicago	85.44	125,572	115%	67.39	118%	4.9%
Dallas	66.80	98,174	147%	51.03	155%	5.5%
MATERIALS						
New York	$ 86.03	$ 126,445		$ 67.77		4.9%
Los Angeles	82.96	121,939	104%	65.04	104%	5.0%
Chicago	81.19	119,333	106%	62.88	108%	5.2%
Dallas	67.57	99,312	127%	52.83	128%	5.0%
TOTAL COST						
New York	$ 184.15	$ 270,660		$ 147.04		4.6%
Los Angeles	176.63	259,611	104%	139.33	106%	4.9%
Chicago	166.63	244,905	111%	130.26	113%	5.0%
Dallas	134.37	197,487	137%	103.86	142%	5.3%

Source: Accu-Cost Construction Consultants, Inc.

3. 330 East 57th Street – High-Rise Prototype

The last prototype is a 15-story luxury high-rise building with a total of 15 units. It would cost $298 per square foot or $570,332 per unit in hard costs to construct this building in New York City.[13] This is three percent higher than in Los Angeles, nine percent higher than in Chicago and 47 percent higher than in Dallas.

As Table 7 indicates, the higher cost of construction in New York City is largely attributable to higher labor costs. The cost differential is disproportionately due to labor in Dallas (63 percent) and Chicago (62 percent), but to materials in Los Angeles (60 percent).

Also as shown in Table 7, between 1999 and 2004, costs for building the high-rise prototype increased an average of 4.8 percent annually in New York, and between 4.8 and 5.4 percent annually in the Control Cities.[14]

[13] The cost of the high-rise is high relative to the other prototypes for three reasons: (1) it is a luxury building; (2) it has a floorplate of only 1,800 square feet, which is a relatively small amount across which to spread infrastructure costs, such as the elevator; and (3) unlike the other two prototypes, it is assumed to be built with full union labor (*see* Note 12, above).

[14] It is interesting to note that the second most expensive city is Chicago according to R.S. Means but Los Angeles according to Accu-Cost. This difference is attributable to the different methodology employed by each. For instance, Accu-Cost assumed different (more expensive) materials to comply with earthquake-related building requirements in Los Angeles, whereas R.S. Means simply estimates the cost of the same materials in each city.

Table 7
Project Cost Estimate -- High-Rise

	2004 Cost Per Square Foot	2004 Cost Per Apartment	2004 Comparison to New York	1999 Cost Per Square Foot	1999 Comparison to New York	1999 to 2004 Annualized Increase
LABOR						
New York	$ 155.30	$ 296,770		$ 123.21		4.7%
Los Angeles	151.65	289,792	102%	114.68	107%	5.7%
Chicago	140.03	267,580	111%	106.51	116%	5.6%
Dallas	94.83	181,212	164%	75.48	163%	4.7%
MATERIALS						
New York	$ 143.16	$ 273,562		$ 112.34		5.0%
Los Angeles	137.65	263,042	104%	108.38	104%	4.9%
Chicago	133.97	256,005	107%	104.25	108%	5.1%
Dallas	108.18	206,725	132%	84.86	132%	5.0%
TOTAL COST						
New York	$ 298.46	$ 570,332		$ 235.56		4.8%
Los Angeles	289.30	552,834	103%	223.06	106%	5.3%
Chicago	273.99	523,585	109%	210.76	112%	5.4%
Dallas	203.01	387,937	147%	160.34	147%	4.8%

Source: Accu-Cost Construction Consultants, Inc.

C. Reasons for Cost Increases

Labor accounts for roughly half of hard costs. Construction wages have increased nationwide over the last five years. In New York City, union wages in the construction industry have increased, but it appears that non-union wages have decreased.[15] Because the wage data from R.S. Means and the cost estimates developed by Accu-Cost are based largely on union wages, however, this decrease for New York City is not reflected by either source.[16] To the extent a housing project is built without union or prevailing wage labor, then, the labor cost estimates in this chapter may be somewhat overstated. The cost of labor is discussed in greater detail in Chapter 3.

Materials account for the other half of hard costs. The rising cost of materials has also contributed to the increasing cost of construction in recent years. On a national basis, the cost of inputs to the construction industries has increased an average of one to two percent annually over the last five years.[17] Due to recent price spikes, however, the cost of inputs increased by an estimated 8.6 percent from mid-2003 to mid-2004.[18] One culprit is plywood,

[15] *See* Chapter 3 for a discussion of union and non-union wage trends in New York City.
[16] *See* Note 12, above.
[17] Bureau of Labor Statistics (BLS), Producer Price Index, Inputs to Construction Industries, July 1999 to June 2004 indicates increase of two percent; Engineering News-Record Materials Cost Index indicates an increase of 1.5 percent from August 1999 to August 2004.
[18] Ibid.

whose cost increased by 40.6 percent from June 2003 to March 2004, apparently due to a combination of increased demand from home builders domestically and from the Department of Defense for military use in rebuilding Iraq.[19] Another is steel products, such as reinforced bars (known as "rebar," used in concrete) whose cost increased nationally by 23.5 percent during the same period, presumably due to increased demand from China.[20] Of course, the cost of construction materials fluctuates with the market and it is possible that some of these prices will come down in the future as supply increases or demand decreases or substitutes are found.[21]

III. Conclusion

The data in this section consistently demonstrate that the hard cost of housing construction in New York City remains the highest in the nation. We have gauged the size of the difference using two alternative methodologies: construction cost indices and cost estimation for actual projects. Using the index methodology, the data from R.S. Means show that the cost of construction in New York is 39 percent higher than the national average, and between 19 and 56 percent higher than in the Control Cities. Using the cost estimates methodology, the Accu-Cost estimates indicate somewhat lower differentials: depending on the type of construction, the cost per square foot in New York is estimated to be between three and eight percent higher than in Los Angeles, between nine and 13 percent higher than in Chicago and between 37 and 47 percent higher than in Dallas. Although New York City is still the most expensive city in which to build housing, the differentials between New York and other cities have narrowed slightly since 1999 because hard costs in other cities have risen at a slightly faster rate during the same period. Nonetheless, if soft costs and land acquisition prices were to be included, the cost difference between New York and other cities would widen substantially.

[19] "ENR's 20-City Average First Quarter Prices," *Engineering News-Record*, March 22, 2004 at 25 (hereinafter "ENR's First Quarter Prices.") *See also* Bernard Simon, "Prices for Plywood, and Its Alternative, Keep Pushing Higher," *New York Times*, April 10, 2004 at C1 (hereinafter "Prices for Plywood").

[20] *See* ENR's First Quarter Prices. *See also* Tim Grogan, "Inflation's Sneak Attack," *Engineering News-Record*, March 22, 2004 at 24 (noting that China increased its usage of steel by 38 million tons – one-third of total U.S. capacity – in 2003 alone).

[21] *See* Prices for Plywood (using Bloomberg Financial Markets to show that prices for oriented-strand board – known as "OSB," a substitute for plywood – actually dropped in late 2003 to levels close to those earlier that year, but shot up subsequently).

Part II:
Reducing the Cost of Housing Construction in New York City

Part II of this Report describes what New York City can do to reduce the cost of new housing construction. In the sections that follow, a variety of substantive areas are addressed ranging from zoning regulations to the permitting process at the New York City Department of Buildings. Each section contains a set of proposals; some are incremental and will be easy to implement while others are expansive and politically controversial. Importantly, any effort to attack the high cost of construction in New York City will require the joint efforts of government, the real estate industry, labor and the advocacy community.

Many of the proposals recommended in this Part are designed to reduce the costs imposed by government regulation, labor and inefficient industry practices. Even if all of these proposals were to be adopted, the benefits would not necessarily flow through to the ultimate consumers of housing. Instead, given the relatively inelastic supply of vacant land in New York City, many of the cost savings proposed could be capitalized into the value of land. Therefore, at the same time the city attacks burdensome building code and environmental regulations, it must also take steps to increase the amount of land available for new housing development. A number of the policy recommendations contained in this section are explicitly designed to achieve this objective.

Chapter 3:
Labor

I. Statement of the Issue

Labor is one of the most significant components of housing construction costs, generally constituting half of hard costs. The cost of labor in New York City is among the highest in the country, although it has declined recently both in absolute terms and relative to other cities. In many cases, the high cost of labor benefits employees directly in the form of wages and benefits. In certain cases, however, the high cost of labor arises from inefficiencies and in such cases there are opportunities for savings.

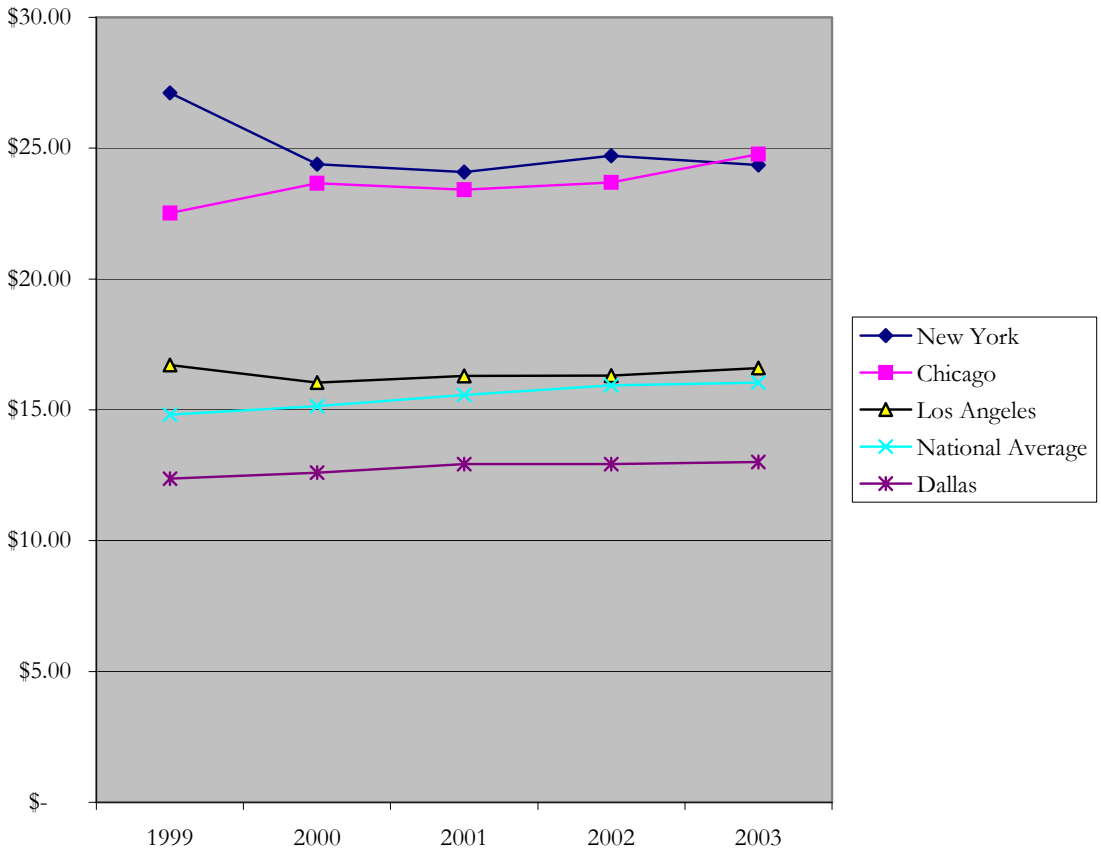
II. Recent Developments

Median hourly construction wages increased an average of 1.6 percent per year nationally from 1999 to 2003.[22] During the same time, however, metropolitan New York experienced an average decrease of 2.1 percent, including a ten percent drop from 1999 to 2000.[23] As a result of this decrease, the wage gap between New York and the rest of the country (including the three Control Cities) has narrowed over the last five years, as shown in Figure 2. For the first time during that period, the median hourly construction wage in Chicago surpassed that of New York in 2003. Despite this decrease, construction wages in New York remain among the highest in the nation; in 2003, they were 52 percent above the national average.

[22] Bureau of Labor Statistics Occupational Employment Statistics, data from 1999 and May 2003, the most recent date for which data are available. New York metropolitan area includes Westchester, Putnam and Rockland counties. The industry categorization includes some mine workers and others not involved in construction. These statistics include both union and non-union workers.

[23] Ibid. The wage decrease is corroborated by BLS Current Employment Statistics data for average (i.e. mean) weekly earnings in building construction, although such data include non-construction employees of construction firms according to the New York State Department of Labor (DOL). The wage decrease is contradicted by New York State DOL Covered Employment and Wages (ES202) program average annual wages data, but DOL reports that such data likewise include non-construction employees and management of construction firms.

Figure 2
Hourly Median Wage
in Construction & Extraction Occupations



Source: Bureau of Labor Statistics
Occupational Employment Statistics for Construction and Extraction Occupations, 1999 through May 2003

Two factors are important to consider in interpreting this data. First, the data include both union and non-union wages paid. Since union hourly rates in New York increased during the same period (see below), it stands to reason that non-union wages fell by an amount greater than indicated by the data. Second, the data include both straight time and overtime wages. The decrease in median hourly wages could therefore result from a decrease in non-union hourly wage rates, from a decrease in the proportion of overtime hours worked, or from a combination of the two.

A drop in non-union rates can probably be explained by the construction business cycle. The initial drop occurred during a construction boom in 2000 and was accompanied by a 13 percent increase in the total number of employees in the industry. The median wage probably dropped in 2000 due to the addition of many lower-skilled, lesser-paid, non-union

workers to the workforce that year.[24] The subsequent failure of wages to recover can most likely be explained by a contraction in the construction industry and perhaps by a decrease in the proportion of overtime hours worked.[25]

A. Labor Unions

Labor unions figure more prominently in New York City than in most other cities and in construction more so than in many other industries. Whereas in 2003, only 12.9 percent of wage and salary workers were unionized nationally, that figure was 22.1 percent in the New York metropolitan area.[26] These figures represent an across-the-board decrease in unionization from 1999, when 13.9 percent of workers were unionized nationally, including 23.7 percent in the New York area.[27] Nationally, 16 percent of the construction industry was unionized in 2003, while 28.1 percent of the construction industry was unionized in the New York area. Those numbers decreased from 1999, when 19.1 percent of the workers in the construction industry nationally were unionized and 31.8 percent of the construction workers in the New York area were unionized. No data are available on the percentage of unionized construction workers in New York City, in particular, but given the likelihood that the city is more heavily unionized than the region, that figure may be higher than the 28.1 percent regional unionization rate.[28]

It is likewise difficult to determine the proportion of housing construction that is performed by union labor in New York City, but developers and unions agree that this percentage has recently decreased.[29] There is a higher incidence of unionization for luxury developments, large developments, and construction in Manhattan, in part because unions are likely to target such high visibility sites and picket if these sites are built with non-union labor. Affordable housing city-wide and market rate housing in the outer boroughs are less likely to be built with union labor; developers report that the rents and sales prices of such developments are simply unable to support the higher development costs arising from union labor.

Union officials claim in interviews that unions have a larger share of the residential construction industry in New York than in any other city. They estimate that unions have 50 to 60 percent market share, down from 80 to 85 percent as recently as ten years ago. Union officials attribute this decline to a recent influx of foreign investment, which is less inclined

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[24] A drop in wage rates does not necessarily mean a decrease in wages for a worker with a given skill level, but most likely lower wages for entry-level workers.

[25] These explanations were offered to the authors by New York State Department of Labor economists.

[26] Data are from the Bureau of Labor Statistics Current Population Survey (CPS). Data for the New York consolidated metropolitan statistical area are derived from the CPS and provided by Barry T. Hirsch and David A. Macpherson, www.unionstats.com, accessed January 6, 2005.

[27] Since 1950, when unions represented approximately 35 percent of the national workforce, there has been a downward trend in union membership in most states and most industries. *See* Christine Haughney, "Breaking Tradition; Nonunion Jobs Shake Up Historical Patterns," *Crain's New York Business*, March 15, 2004 at 3 (hereinafter Haughney).

[28] In 2001, the number of union members in the construction industry in metropolitan New York City was approximately 150,000 according to the Building & Construction Trades Council of Greater New York. It is unclear what percentage of all construction workers this number represents. It should also be noted that this figure includes retirees, certain maintenance and service workers, and people working outside New York City.

[29] Haughney at 3.

to use union labor. Others point to a new wave of non-union contractors who gained experience during the recent housing boom and are now competing for work with unionized firms. Certain trades – particularly those associated with high-rise construction – appear to remain predominantly unionized, and developers remark in interviews that union labor tends to be superior to non-union labor in the mechanical and electrical trades. But non-union firms have recently made inroads in trades such as carpentry/sheetrock and some developers feel that such firms compete with their union counterparts on quality.

Developers generally agree in interviews that union labor is of higher quality than non-union labor. Unions contend that higher quality translates into lower housing maintenance costs over time.[30] Developers also report that unionized subcontractors generally perform with fewer delays, in part because they tend to be better capitalized and are therefore less sensitive to funding delays. Union contractors also appear to have better safety records than non-union contractors.[31] Union officials additionally claim that unionization benefits the public coffers because unionized workers have medical benefits and therefore make fewer demands on the public health system.

These benefits come at a cost. Developers estimate that union projects cost ten to 25 percent more than non-union projects. These higher costs are a function of wages, fringe benefits, work rules and coordination among various trades. The work rules and coordination are discussed in more detail below.

Union wages are higher than non-union wages in all industries, but more so in construction. In 2003, union wages exceeded non-union wages by 52 percent in the construction industry, in contrast to 21 percent across all industries.[32]

Table 8 lists the June 2004 hourly union pay scale for 18 trades involved in construction projects. Consistent with the R.S. Means construction data presented in Chapter 2, pay scales (wages and fringe) in New York City are the highest in the country for every trade. For example, the bricklayers' hourly wage rate in New York City of $57.28 is 17 percent higher than the next most expensive city, Boston. Bricklayers in New York City earn 57 percent more, on average, than the hourly wage for the 20 cities for which data are available. Across all 18 trades, New York's wages are 63 percent higher than the 20-city average.

[30] No data are available to substantiate this claim.

[31] Haughney at 3.

[32] Nationally, median weekly earnings of full-time wage and salary workers in 2003 were as follows: throughout the private sector: $717 union and $592 non-union; in construction: $884 union and $580 non-union. Bureau of Labor Statistics, Current Population Survey.

Table 8

2004 Comparison of Union Wage Rates for Construction Trades

TRADE	Chicago	Dallas	Los Angeles	New York	20-City Average
Bricklayers	$ 42.06	$ 23.73	$ 37.90	$ 57.28	$ 36.37
Carpenters	42.97	20.68	35.68	64.01	35.77
Cement Masons	43.18	23.73	34.61	58.46	34.85
Electricians	48.74	N/A	46.55	71.36	43.75
Elevator Constructors	44.05	N/A	41.28	57.24	42.40
Glaziers	40.37	N/A	40.77	54.42	36.95
Insulation Workers	45.62	N/A	39.01	61.35	39.32
Ironworkers					
Reinforcing	45.26	22.60	42.15	68.05	38.50
Structural	48.84	22.60	42.15	75.03	39.39
Laborers					
Building	36.89	13.81	31.33	47.72	28.21
Millwrights	42.97	N/A	37.04	67.78	37.68
Operating Engineers					
Crane Operators	46.63	25.77	40.70	61.74	37.44
Heavy Equipment	46.08	25.77	44.18	60.08	36.93
Small Equipment	44.03	24.77	42.85	48.70	33.56
Painters	40.74	N/A	33.47	47.42	32.94
Pipefitters*	45.72	28.97	40.78	67.89	40.64
Plasterers	40.75	N/A	33.53	52.56	34.21
Plumbers*	45.36	28.97	40.78	68.42	40.85
Roofers	37.77	N/A	30.17	51.35	32.13
Sheet Metal Workers	46.73	27.74	42.96	66.97	41.61
Teamsters (Truck Drivers)	34.78	N/A	37.83	52.24	31.03
Average of Trades Above	$ 43.31	$ 24.10	$ 38.84	$ 60.00	$ 36.88
New York Rate as Percentage of Average of Comparison Cities	139%	249%	154%		163%

Sources: Engineering News Record, June 28, 2004. Wage Rates includes base rate plus fringe benefits.

* Los Angeles Pipefitters and Plumbers wage rates from Construction Labor Research Council.

Over the past six years, construction union pay scales have increased in New York at a rate slightly higher than the average of the 20 cities for which data are available. As shown in Table 9, the average annual increase for the 18 trades examined from 1998 to 2004 was 12 percent higher for New York than for the 20-city average (3.98 percent instead of 3.55 percent).[33]

[33] The increased wage rates in New York were roughly in line with the increase in the national Employment Cost Index for private industry for all workers (3.92 percent) and for construction workers (3.86 percent) for the same period.

Table 9

Comparison of Union Wage Rate Increase for Construction Trades: 1998 to 2004 Annualized

TRADE	Chicago	Dallas	Los Angeles	New York	20-City Average
Bricklayers	3.51%	4.67%	2.56%	3.64%	3.74%
Carpenters	4.17%	2.32%	2.94%	4.04%	3.75%
Cement Masons	4.01%	4.34%	1.26%	3.72%	3.74%
Electricians	3.35%	N/A	3.74%	5.04%	4.08%
Elevator Constructors	2.04%	N/A	1.14%	4.16%	3.51%
Glaziers	2.66%	N/A	4.92%	4.88%	4.51%
Insulation Workers	3.39%	N/A	1.60%	3.64%	2.85%
Ironworkers					
Reinforcing	3.34%	3.03%	2.72%	5.90%	3.44%
Structural	3.25%	3.03%	2.72%	4.21%	3.36%
Laborers					
Building	4.39%	1.32%	2.31%	4.93%	3.59%
Millwrights	4.17%	N/A	3.31%	4.34%	3.69%
Operating Engineers					
Crane Operators	3.40%	4.74%	1.91%	2.92%	3.34%
Heavy Equipment	4.28%	4.74%	3.38%	2.23%	3.22%
Small Equipment	3.45%	4.96%	3.20%	0.36%	3.17%
Painters	3.65%	N/A	2.51%	3.62%	3.28%
Pipefitters	3.40%	4.90%	1.87%	4.79%	3.32%
Plasterers	3.90%	N/A	1.21%	5.47%	3.69%
Plumbers	3.34%	4.90%	1.87%	3.65%	3.30%
Roofers	2.64%	N/A	1.04%	3.61%	3.29%
Sheet Metal Workers	3.84%	4.05%	2.87%	4.92%	3.89%
Teamsters (Truck Drivers)	3.64%	N/A	3.08%	3.48%	3.71%
Average of Trades Above	3.51%	3.91%	2.48%	3.98%	3.55%

Sources: Engineering News-Record, September 28, 1998 and June 28, 2004. Wage Rates includes base rate plus fringe benefits. 2004 Los Angeles Pipefitters and Plumbers wage rates from Construction Labor Research Council.

Collective bargaining agreements may contain lower wage rates for construction of small residential buildings (for instance, buildings under four stories). Union officials believe there has been a recent increase in the number of trades with collective bargaining agreements that have such residential rates, motivated by a desire to regain market share. However, only one trade publishes a residential rate, and the more expensive rate that applies to commercial construction generally also applies to residential building regardless of project size, location, skill required or anticipated rent or sales prices.[34]

Work rules also have a major effect on cost. Some work rules create make-work positions, as shown in the following examples. Hoists must be operated by two people: an engineer to transport materials and an elevator operator to transport workers. A master mechanic or maintenance foreman must be on the site at any time a certain number of pieces of equipment are being operated, although that individual may not have any work to do or even know how to operate the machinery. An operating engineer may be required to be on the

[34] Plumbers Local No. 1 publishes a residential rate for one-, two- and three-family homes that is 70 percent of the commercial rate and provides for a longer workday. *See* "Catalog of Prevailing Rates & Fringe Benefits for the Construction Industry, 2003-04 Edition," published by the Building and Construction Trades Council of Greater New York.

site all day, even though his/her only job is to start a compressor or pump in the morning. A heating or sprinkler job that could be done by one person may require two by contract. Other work rules require developers to pay the expense of unions enforcing their own rules. For example, all trades require that a union shop steward be employed at all times – which could mean as many as 15 or 16 such people at a time, given the number of trades needed for a project – most of whom do not do construction work themselves. Additionally, the teamsters union requires that a foreman be present on the job every time a shipment is received, primarily in order to verify that the truckers are union members.

Labor unions recognize that certain work rules make them less competitive with non-union labor and have perhaps contributed to declining union market share in the construction industry. In early 2004, unions agreed with contractors to launch a program to re-evaluate work rules.[35] In renegotiating their collective bargaining agreements, Local 3 of the electricians' union and Local 1 of the plumbers' union recently removed standby provisions requiring that their members be on a construction site any time other trades are working on the site. Other unions appear likely to make similar concessions as their collective bargaining agreements are renewed. Such concessions would appear to be a way to make union labor more efficient and thus to recover some of organized labor's lost market share in the construction industry.

In a further effort to gain market share in residential construction (and affordable housing, in particular) union leaders are considering rolling out a residential agreement superseding the collective bargaining agreements in each of the individual trades that would make union labor more attractive to developers.[36] Such an agreement may alter work rules by providing for a higher ratio of apprentices (who are paid at a lower rate) to experienced tradespeople, a longer workday, elimination of standby services, and/or allowing shift work instead of overtime work. It is not yet clear whether such an agreement would apply on the basis of geography (e.g. outside core Manhattan), building type (for buildings under a certain height), or for affordable housing, in particular. If developers anticipate that such an agreement will result in significant cost savings associated with union labor, this agreement will bear the potential to increase union market share in residential construction.

Finally, the existence of approximately 50 locals representing 15 different trades can prevent an organized flow of work on construction jobs. Ironically, organized labor's effect on New York's construction industry is to add a certain degree of disorganization. Each trade union has its own set of rules including work hours and paid holidays. There are jurisdictional requirements that add costs to a project by creating a need to hire workers from a particular trade to perform certain functions. For instance, plumbers must install all bathroom fixtures and accessories and electricians must install mailboxes. There is an average of over three locals per trade, the existence of which increases the potential for work stoppages. This disorganization has an impact on construction because it means that jobs must be perfectly staged or an entire project could be delayed.

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[35] Haughney at 3.

[36] A similar agreement between the construction trade unions and the City was announced recently with regard to school construction. The agreement reduced the pay differentials for work done outside regular hours. Susan Saulny, "Unions Win Mayor's Promise on School Jobs in Leased Quarters," *New York Times*, January 7, 2004 at B4.

B. Prevailing Wage

Even if a developer does not use union labor for a residential development project, s/he must pay prevailing wages under the Davis-Bacon Act for projects that are financed, in part, by the federal government.[37] Housing projects that are financed in part by New York State are not defined as "public work" and therefore are not subject to the state's prevailing wage law.[38]

Prevailing wages are set based on the wage paid to a certain percentage of workers in a particular job classification.[39] In New York City, prevailing wages consist of union wages plus fringe benefits in all trades for which collective bargaining agreements exist.[40] Although prevailing wage laws allow for the calculation of a residential rate that differs from the commercial rate, as noted above only one trade union has negotiated a residential rate, and this rate has not been incorporated into prevailing wage schedules.[41] Because union pay scales are higher in New York City than elsewhere, New York also tends to have higher prevailing wage rates than other cities.

Prevailing wages increase construction labor costs in a manner similar to union wages, but without the imposition of costs relating to union work rules. Prevailing wage contracts may be performed by either union or non-union contractors. Regardless of whether a contractor on a prevailing wage job is unionized, it must certify that it pays prevailing wages.

To the extent employees on prevailing wage jobs are actually paid prevailing wages, the cost of labor is higher than non-prevailing wage work, but the employees benefit directly. However, construction industry sources and law enforcement officials report that there appears to be rampant underpayment of prevailing wages by non-union contractors, in particular. Such contractors bill for work based on prevailing wage rates, but actually pay their employees at non-union rates, which can be less than half the prevailing wage rates. In such cases, the imposition of prevailing wage requirements increase the cost of housing development to the federal and/or state governments without benefiting anyone other than the contractors who pocket their employees' wages.

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[37] The Davis-Bacon Act (40 U.S.C. §276a) requires workers on federal construction projects valued at more than $2,000 to be paid, at a minimum, wages and fringe benefits that the Secretary of Labor determines to be prevailing in the locality where the contract is to be performed. For projects funded with HOME funds by the U.S. Department of Housing and Urban Development, however, Davis-Bacon wages apply only for projects with 12 or more housing units. 42 U.S.C. §12836.

[38] *See* N.Y. Lab. Law, §220 and In Re Vulcan Affordable Housing Corp. v. Hartnett, 151 A.D.2d 84 (3rd Dep't 1989).

[39] Under federal Davis-Bacon Act regulations, it is 50 percent. 29 C.F.R. 1.2. Under the New York State prevailing wage statute, it is 30 percent. N.Y. Lab. Law, §220.

[40] There are relatively few trades in the construction industry without collective bargaining agreements. One example of a non-unionized trade is security (i.e. security guards).

[41] The Office of the New York City Comptroller includes a residential rate for New York City plumbers in its schedule of rates for City-funded projects under the State prevailing wage law, but neither the State itself nor the federal government incorporate this rate into their prevailing wage schedules for New York City.

C. Diversity

Construction in New York City has long been known as a white male industry. In 2000, 55.5 percent of the construction workers who worked in New York City were white, in contrast to 47.7 percent of the overall workforce.[42] In the same year, 97.5 percent of New York City construction workers were male, in contrast to 54.5 percent of the overall workforce.[43]

Data are not readily available to indicate whether unionized firms are any less diverse (or more discriminatory) than their non-unionized counterparts. Construction industry workers report that at least in certain trades, it is clear that women and minority underrepresentation is more pronounced in unionized firms than in non-unionized firms. And to the extent claims of discrimination are publicized, they tend to be in the form of civil rights actions against unions, in particular.[44]

The underrepresentation of women and minorities potentially has an adverse effect on housing construction. Most obviously, the quality of any group of workers is not maximized if qualified individuals are not hired because of their gender or the color of their skin. And, as described in Chapter 15, discrimination in the construction industry has given rise to "coalitions" that seek jobs for minorities and women and sometimes employ corrupt and/or violent practices in the process.

Some unions have responded by placing an emphasis on organizing worksites that are primarily minority and immigrant. For instance, the Mason Tenders' District Council, which includes general laborers, reports that two-thirds of its members belong to minority groups. Other unions respond through the implementation of apprenticeship programs that are intended, in part, to introduce women and minorities to the construction trades. Union officials report that 51 percent of participants in their apprenticeship programs in New York City are minority members.[45] Together with management representatives, the labor unions started a program in 2001 to recruit New York City public high school seniors and prepare them for union apprenticeships. Of the 435 participants in this program who have entered union apprenticeships, 83 percent were black and Latino.[46] In his 2005 State of the City

[42] U.S. Census Bureau, Equal Employment Opportunity worksite data for New York City: Total Employed at Work and Construction and Extractive Craft Workers.

[43] U.S. Census Bureau, Equal Employment Opportunity worksite data for New York City: Total Employed at Work and Construction and Extractive Craft Workers.

[44] For instance, the United States Equal Employment Opportunity Commission initiated a civil rights case against Local 28 of the Sheet Metal Workers' union in 1971 and proved that the union discriminated against minorities. The case remained unresolved in 2004. *See* Roysworth Grant, Equal Employment Opportunity Commission, et. al. v. Local 638, Local 28, Sheet Metal Workers' International Association, 373 F.3d 104 (2d Cir., 2004).

[45] Union officials claim that the comparable rate for non-union apprenticeship programs was only 30 percent in 1999. Although union apprenticeship programs have grown recently, it will take several years before minorities and women entering as apprentices are more broadly represented in more senior (and better paid) positions. For instance, in New York City, the United Brotherhood of Carpenters & Joiners of America reports that its apprentices are 65 percent minority, but its journeymen are only 37 percent minority.

[46] There has been less success recruiting women. According to the program, "Construction Skills 2000," only five percent of program participants placed in apprenticeships have been women.

address, Mayor Michael Bloomberg announced the establishment of a commission to further promote diversity in the construction industry.[47]

III. Recommendations

Our 2005 recommendations follow. Those that remain largely the same from the 1999 Cost Study are indicated with "1999").

A. Labor Unions

1. As their collective bargaining agreements are renewed, labor unions should:
   - Eliminate inefficient work rules that do not affect worker safety, such as standby services, make-work positions, and paid union steward jobs; **(1999)** and
   - Negotiate lower residential rates that apply outside core Manhattan, for affordable housing and for mid-rise apartment buildings in order to help unions gain a greater share of this market that cannot otherwise support the cost of union labor. **(1999)**
2. Union leadership should:
   - Negotiate a residential agreement for outside core Manhattan, affordable housing and mid-rise apartment buildings (up to seven stories) that supersedes the collective bargaining agreements in each of the individual trades. This agreement should coordinate the work hours and paid holidays among the various trades and alter work rules by providing for a higher ratio of apprentices to experienced tradespeople, a longer workday, elimination of standby services, and allowing shift work instead of overtime work; **(1999)** and
   - Merge small locals into larger ones in order to reduce the potential for work stoppages and eliminate jurisdictional requirements that add costs to a project by creating a need to hire workers from additional trades, such as those that require plumbers to install all bathroom fixtures and accessories and electricians to install mailboxes. **(1999)**

B. Prevailing Wage

1. The federal Davis-Bacon Act and state prevailing wage laws should be amended as follows:
   - To require the establishment of a residential wage rate in cities for mid-rise apartment buildings (up to seven stories) in order to reflect the lower profit inherent in such projects relative to high-rise and commercial projects. The establishment of such a rate

[47] Jim Rutenberg, "For Bloomberg, This Speech Is an Election-Year Speech, " *New York Times*, January 11, 2005 at B1.

would facilitate the development of affordable housing with the use of government funds; **(1999)**

- To require that the calculation of residential wage rates reflect the actual average costs of construction (including both union and non-union wages); **(1999)** and

2. Federal and state authorities should step up investigation and enforcement of wage underpayment by non-union contractors with prevailing wage construction contracts.

C. Women and Minority Recruitment

Union and non-union contractors alike should seek to diversify their membership to better reflect the fabric and complexion of New York City by recruiting more minorities and women to the trades through apprenticeship programs **(1999)**.

Chapter 4:
Availability and Cost of Vacant Land in New York City

I. Statement of the Issue

As an older and mostly built city, there is a limited supply of vacant land in New York City that is zoned for dense residential development that would make a significant contribution to housing production. While the vast majority of the remaining parcels of vacant land in the city are zoned for residential use, the land is scattered and is mostly zoned for one-, two- and three-family residential developments. Because the supply of land zoned for multi-family housing is limited, the cost of acquiring vacant land that is zoned for high density is commensurately high. In the last five years, the supply of vacant land in New York has decreased by five percent and in the case of City-owned land, its cost has increased by as much as 41 percent per land square foot annually. The high cost of land is a significant contributor to the high cost of new housing construction in New York City.

II. Recent Developments

A. Availability of Vacant Land Zoned Residential

According to the New York City Department of Finance (DOF), there are currently 41,460 parcels of vacant land (*see* Table 10), representing 711 million square feet of land (*see* Table 11) on the property tax rolls. Of this vacant land, 69 percent, or 492 million square feet, is zoned for residential use.[48] An additional six percent, or 43 million square feet, is zoned for commercial use, which as a general matter may be built with residential uses as-of-right.[49] Table 12 provides a breakdown of this vacant land by borough. By square footage, Staten Island has the most vacant land that is zoned for residential use and Manhattan has the least.

[48] The DOF Operations Research Group ran special reports for the Furman Center, numbered 4450 and 5564.
[49] Commercial zones within certain Special Districts may include restrictions on residential development.

Table 10

Number of Vacant Land Parcels in New York City

	Residential		Non-Residential		Total	
	# of Parcels	% of Parcels	# of Parcels	% of Parcels	# of Parcels	% of Parcels
2004						
Bronx	4,914	14%	915	15%	5,829	14%
Brooklyn	9,754	28%	2,306	37%	12,060	29%
Manhattan	1,415	4%	456	7%	1,871	5%
Queens	9,532	27%	1,322	21%	10,854	26%
Staten Island	9,550	27%	1,296	21%	10,846	26%
City-Wide	35,165	100%	6,295	100%	41,460	100%
1998						
Bronx	5,177	15%	2,002	16%	7,179	15%
Brooklyn	9,562	27%	5,498	44%	15,060	32%
Manhattan	802	2%	1,467	12%	2,269	5%
Queens	9,670	28%	1,893	15%	11,563	24%
Staten Island	9,677	28%	1,754	14%	11,431	24%
City-Wide	34,888	100%	12,614	100%	47,502	100%
1998 to 2004						
Bronx	(263)	-5%	(1,087)	-54%	(1,350)	-19%
Brooklyn	192	2%	(3,192)	-58%	(3,000)	-20%
Manhattan	613	76%	(1,011)	-69%	(398)	-18%
Queens	(138)	-1%	(571)	-30%	(709)	-6%
Staten Island	(127)	-1%	(458)	-26%	(585)	-5%
City-Wide	277	1%	(6,319)	-50%	(6,042)	-13%

Source: New York City Department of Finance, Operations Research Group
Report Number 4450 Square Feet Vacant Land by Zoning, 1998 and July 28, 2004

Table 11
Vacant Land by Zoning Category, City-Wide

	2004		1998		1998 to 2004	
Major Zoning	**Land Size (SF)**	**% of Total**	**Land Size (SF)**	**% of Total**	**Change**	**% Change**
Commercial	43,469,981	6%	44,914,422	6%	(1,444,441)	-3%
Manufacturing	172,716,428	24%	178,559,887	24%	(5,843,459)	-3%
Residential	492,444,534	69%	524,004,693	70%	(31,560,159)	-6%
All Other	2,401,996	0%	1,698,403	0%	703,593	41%
Total	711,032,939	100%	749,177,405	100%	(38,144,466)	-5%
Residential Zoning						
Sub-category	**Land Size (SF)**	**% of Residential**	**Land Size (SF)**	**% of Residential**	**Change**	**% Change**
R-unspecified	8,550	0%	-	0%	8,550	
R1	37,658,000	8%	26,547,732	5%	11,110,268	42%
R2	19,059,019	4%	14,164,914	3%	4,894,105	35%
R3	279,700,551	57%	280,598,503	54%	(897,952)	0%
R4	76,309,808	15%	87,108,976	17%	(10,799,168)	-12%
R5	27,374,785	6%	41,321,301	8%	(13,946,516)	-34%
R6	34,637,279	7%	51,223,201	10%	(16,585,922)	-32%
R7	14,180,114	3%	17,404,522	3%	(3,224,408)	-19%
R8	3,516,383	1%	5,443,015	1%	(1,926,632)	-35%
R9	45	0%	6,226	0%	(6,181)	-99%
R10		0%	186,303	0%	(186,303)	-100%
Total	492,444,534	100%	524,004,693	100%	(31,560,159)	-6%
Manufacturing Zoning						
Sub-category	**Land Size (SF)**	**% of Manufacturing**	**Land Size (SF)**	**% of Manufacturing**	**Change**	**% Change**
M1	78,090,774	45%	88,864,088	50%	(10,773,314)	-12%
M2	17,887,397	10%	20,209,265	11%	(2,321,868)	-11%
M3	76,738,257	44%	69,486,534	39%	7,251,723	10%
Total	172,716,428	100%	178,559,887	100%	(5,843,459)	-3%

Source: New York City Department of Finance, Operations Research Group
Report Number 4450 Square Feet Vacant Land by Zoning, 1998 and July 28, 2004

Table 12

Vacant Land by Zoning Category, by Borough in 2004

	BRONX		BROOKLYN		MANHATTAN		QUEENS		STATEN ISLAND	
Major Zoning	**Land Size (SF)**	**% of Total**	**Land Size (SF)**	**% of Total**	**Land Size (SF)**	**% of Total**	**Land Size (SF)**	**% of Total**	**Land Size (SF)**	**% of Total**
Commercial	3,715,622	7%	28,555,887	21%	3,454,788	17%	4,794,003	2%	2,949,681	1%
Manufacturing	15,414,591	30%	10,508,276	8%	4,613,579	22%	22,335,832	11%	119,844,150	40%
Residential	32,051,252	63%	99,369,974	72%	11,593,734	56%	171,203,532	86%	178,226,042	59%
All Other	3,712	0%	117,993	0%	874,823	4%	895,876	0%	509,592	0%
Total	51,185,177	100%	138,552,130	100%	20,536,924	100%	199,229,243	100%	301,529,465	100%
Residential Zoning										
Sub-category	**Land Size (SF)**	**% of Residential**	**Land Size (SF)**	**% of Residential**	**Land Size (SF)**	**% of Residential**	**Land Size (SF)**	**% of Residential**	**Land Size (SF)**	**% of Residential**
R-unspecified	-	0%	-	0%	-	0%	-	0%	8,550	0%
R1	2,302,162	7%	51,950	0%	2,654,818	23%	7,905,800	5%	24,743,270	14%
R2	1,159,046	4%	357,538	0%	-	0%	14,262,078	8%	3,280,357	2%
R3	6,131,504	19%	11,526,402	12%	-	0%	113,504,523	66%	148,538,122	83%
R4	7,457,923	23%	50,775,582	51%	-	0%	17,639,672	10%	436,631	0%
R5	2,600,504	8%	17,658,116	18%	8,300	0%	5,999,185	4%	1,108,680	1%
R6	5,108,754	16%	17,608,511	18%	75,657	1%	11,733,925	7%	110,432	0%
R7	6,168,843	19%	1,309,346	1%	6,544,998	56%	156,927	0%	-	0%
R8	1,122,516	4%	82,529	0%	2,309,916	20%	1,422	0%	-	0%
R9	-	0%	-	0%	45	0%	-	0%	-	0%
R10		0%		0%		0%		0%		0%
Total	32,051,252	100%	99,369,974	100%	11,593,734	100%	171,203,532	100%	178,226,042	100%
Manufacturing Zoning										
Sub-category	**Land Size (SF)**	**% of Manufacturing**	**Land Size (SF)**	**% of Manufacturing**	**Land Size (SF)**	**% of Manufacturing**	**Land Size (SF)**	**% of Manufacturing**	**Land Size (SF)**	**% of Manufacturing**
M1	5,355,729	35%	5,536,487	53%	1,297,281	28%	16,034,425	72%	49,866,852	42%
M2	2,018,216	13%	869,766	8%	3,071,752	67%	950,493	4%	10,977,170	9%
M3	8,040,646	52%	4,102,023	39%	244,546	5%	5,350,914	24%	59,000,128	49%
Total	15,414,591	100%	10,508,276	100%	4,613,579	100%	22,335,832	100%	119,844,150	100%

Source: New York City Department of Finance, Operations Research Group
Report Number 4450 Square Feet Vacant Land by Zoning, July 28, 2004

The supply of vacant land in the city decreased by five percent, or 38 million square feet, from 1998 to 2004. This decrease occurred disproportionately for vacant land zoned for residential use, which fell by six percent, or 31.6 million square feet, in contrast to land zoned for all other purposes, which fell by only three percent. Similarly, the number of vacant parcels dropped by 13 percent during this timeframe.

B. Availability of City-Owned Vacant Land

In the past, a reliable source of vacant land was the City itself, which acquired thousands of acres of land and buildings through *in rem* tax foreclosure actions. The City returns such properties to private ownership through auctions by the Department of Citywide Administrative Services (DCAS) and disposition programs managed by City agencies such as the Department of Housing Preservation and Development (HPD). The City stopped acquiring properties through tax foreclosure in 1994 and continues to return existing City-owned properties to private ownership. In 2003, the City owned 131 million square feet of vacant land.[50] What remains is no longer a stable source of land for development. For example, at its most recent auction in August 2004, DCAS auctioned 62 parcels of vacant land (down from 302 properties in its 1999 auctions), and many of the parcels sold were irregularly shaped lots. Moreover, DCAS does not anticipate conducting another auction in the immediate future.

C. Availability of Land Zoned Dense Residential[51]

Of the land that is vacant and zoned for residential use, most is designated R1 through R5 and therefore only allows for the as-of-right construction of one-, two- and three-family homes. The overwhelming majority is zoned for R3 development. Vacant land designated R6 and above, which allows mid-rise and high-rise development, constitutes only 10.6 percent, or 52 million square feet, of vacant residentially-zoned land, representing a 30 percent decrease in the square footage of such land from 1998. Moreover, while the average size of vacant lots zoned R1 through R5 is 17,595 square feet (100 feet by 176 feet), the average size of vacant lots zoned R6 and above is only 5,156 square feet (100 feet by 52 feet), which makes development more economically challenging on densely-zoned vacant lots.[52] Despite the city-wide trend in the reduction of vacant land for mid- or high-rise residential development, recent rezonings apparently resulted in an additional 33,000 square feet zoned R6 in Manhattan, and 264,000 square feet zoned R6 or R7 in Brooklyn. While there are areas outside Manhattan where high-rise development would be appropriate, less

[50] The exact figure was 131,039,747 square feet (or 7,808 lots) according to the New York City Department of City Planning Primary Land Use Taxlot Output. These data do not include vacant land owned by the police or fire departments; school sites or yards; libraries, hospitals and museums; the Port Authority of New York and New Jersey; the State and Federal governments and other miscellaneous vacant land.

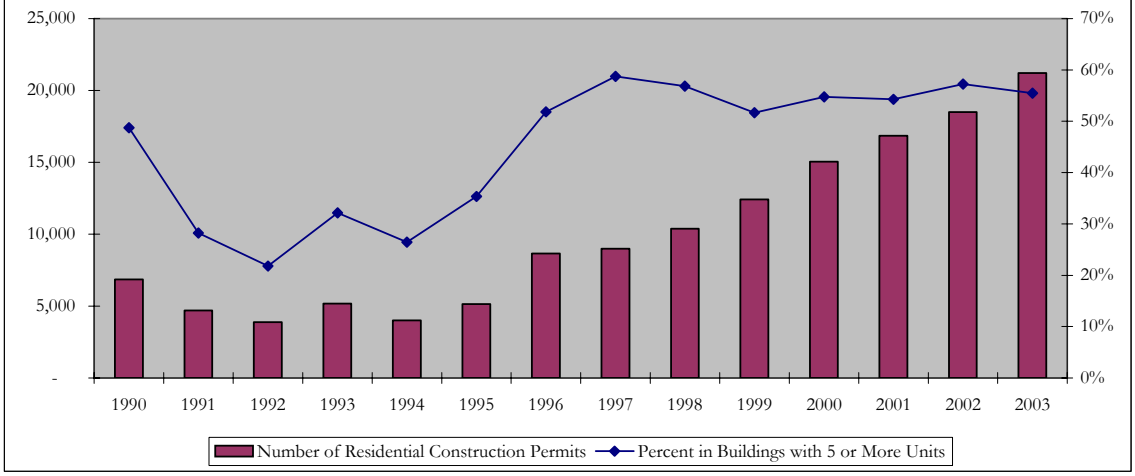
[51] New York City's Zoning Resolution includes ten major residential zones. The residential zones are designated R1 through R10. Low-rise development is allowed as-of-right in the lower numbered R zones, R1 through R5. Mid-rise and high-rise developments can be built in R zones with designations of R6 and higher.

[52] Since these figures are means, there may be a few large (buildable) lots and numerous small (unbuildable) lots.

than one percent of the vacant residential land in these boroughs is zoned R8 through R10 for as-of-right high-rise development.

Despite a recent building boom, there has been a modest decline in the proportion of units in dense buildings in New York City. From 1992 to 2003, the City experienced an increase in residential building permits issued, as shown in Figure 3. This increase was accompanied by an increase in the proportion of permits issued for units in new buildings with five or more units, from 22 percent in 1992 to 56 percent in 2003. However, the proportion of units in all existing buildings in the housing stock city-wide with five or more units declined slightly from 62.2 percent in 1990 to 60.8 percent in 2000, with density decreases in all boroughs except Manhattan, as shown in Table 13. The proportion of building permits for dense residential buildings apparently has not been sufficient to offset the loss of units from such buildings that have been taken out of service primarily through demolition. Partly because of zoning that allows only low-density construction, these buildings cannot be replaced at the same density. While the total housing stock increased during the ten year period of 1990 to 2000 covered by the available data, it increased with many small, low-density developments. As New York City is running out of vacant land, the City will not be able to maintain current density and meet the growing demand for housing.

Figure 3
Residential Construction Permits for New York City, 1990 - 2003



Source: U.S. Census Bureau, Building Permits Survey

Table 13
Number of Residential Units in Buildings as of 1990 and 2000

Total and by Number of Units in Building				
	1990		2000	
	Total	Percent of Units in Buildings with 5 or More Units	Total	Percent of Units in Buildings with 5 or More Units
New York City	2,992,169	62.2%	3,200,912	60.8%
Bronx	440,955	74.2%	490,659	72.9%
Brooklyn	873,671	51.6%	930,866	50.9%
Manhattan	785,127	95.7%	798,144	96.4%
Queens	752,690	41.2%	817,250	39.4%
Staten Island	139,726	14.8%	163,993	13.8%

Source: U.S. Census Bureau

D. Cost of Vacant Land

By all measures, the cost of vacant land in New York is high and has recently reached new heights. One measure of land cost is the sale price of privately-owned land, as recorded by DOF. From January 2001 through July 2004, DOF recorded 1,971 sales of vacant land in New York City. Eighty-eight percent of these parcels were zoned for residential use, as Table 14 illustrates. While two-thirds of the vacant residential parcels sold for less than $50 per square foot, the remaining one-third sold for more, including 17 percent that sold for at least $100 per square foot. [53] These sales prices represent a significant increase over the period from January 1996 through November 1998. During that prior period, no sales of $100 per square foot or more were recorded in any zoning class, as shown in Table 15. During the latter period, in contrast, not only did 17 percent of parcels across all zoning classes sell for at least $100 per square foot, but nearly a quarter of parcels in Manhattan sold for over $200 per square foot.[54]

[53] These prices represent the sales price divided by the square footage of the vacant parcel of land. However, developers usually consider land costs per FAR (Floor Area Ratio) square foot because it takes into account the zoning on the land. DOF was unable to calculate the sales information per FAR square foot.

[54] The Furman Center has obtained sales data from appraisals provided to a major New York City bank by the real estate firms of Miller Cicero, KTR Newmark, and Cushman & Wakefield for a limited number of mostly vacant properties for the period January 2001 to mid-2004, which indicate the following average sale price per FAR square foot (number of sales noted in parentheses): Bronx (8): $15.71; Brooklyn (9): $47.46; Manhattan (36): $127.31; Queens (5): $41.03.

Table 14

Vacant Land Sales Prices (January 2001 - July 2004)
by Sales Price per Land Square Foot
by Zoning Designation

Zoning	Under $50	$50 to $99.99	$100 to $199.99	$200+	Total
Number of Sales					
Commercial	54	8	10	8	80
Manufacturing	175	28	13	19	235
Residential	1,712	413	321	118	2,564
Unavailable	30	0	4	1	35
Total	1,971	449	348	146	2,914
Percent of Sales					
Commercial	68%	10%	13%	10%	3%
Manufacturing	74%	12%	6%	8%	8%
Residential	67%	16%	13%	5%	88%
Unavailable	86%	0%	11%	3%	1%
Total	68%	15%	12%	5%	100%

Source: New York City Department of Finance, Operations Research Group Report Number 5564

Table 15

Vacant Land Sales Prices: Comparison Over Time
by Sales Price per Land Square Foot for All Zoning Designations
by Borough

	Under $50	$50 to $99.99	$100 to $199.99	$200+
Period 1: January 1996 - November 1998				
Bronx	84%	16%		
Brooklyn	86%	14%		
Manhattan	37%	63%		
Queens	81%	19%		
Staten Island	57%	43%		
City Wide	68%	32%		
Period 2: January 2001 - July 2004				
Bronx	86%	8%	5%	1%
Brooklyn	69%	14%	11%	6%
Manhattan	25%	29%	23%	24%
Queens	65%	17%	13%	5%
Staten Island	66%	18%	14%	2%
City Wide	68%	15%	12%	5%
Change from Period 1 (1/96-11/98) to Period 2 (1/01-7/04)				
Bronx	3%	-49%		
Brooklyn	-20%	2%		
Manhattan	-34%	-54%		
Queens	-20%	-14%		
Staten Island	16%	-58%		
City Wide	-1%	-51%		

Source: New York City Department of Finance, Operations Research Group Report Number 5564

Another measure of the cost of vacant land is the price obtained by the City for City-owned land. The median sale price of City-owned vacant land appears to have increased by an extraordinary annualized average of 41 percent per land square foot and 60 percent per FAR square foot over each of the last five years.[55] In the August 2004 DCAS auction, the median price was $56.42 per land square foot and $62.57 per FAR square foot, as shown in Table 16.[56] In contrast, the median price was $10.29 per land square foot and $5.93 per FAR square foot in 1999.

[55] FAR is the Floor Area Ratio permitted by zoning; to the extent zoning allows a ratio greater than one built square foot per land square foot, the price per land square foot will exceed the price per FAR square foot.

[56] The prices in 2004 may not be fully representative because they include only two sales in Manhattan, four in the Bronx and none in Staten Island. They may actually be lower than market, considering that nine of the 62 lots sold lacked street frontage, and others carried certain encumbrances. At the same time, since the City announced that this would be the last sale for the foreseeable future, speculative bidding may have influenced some of the other prices.

Table 16

Vacant Land Public Auction Results

		Price/ Land SF		Price/FAR	
Borough	**# Sales**	**Median**	**Mean**	**Median**	**Mean**
August 4, 2004					
Bronx	4	$ 39.95	$ 37.65	$ 17.96	$ 14.24
Brooklyn	27	100.00	103.21	65.18	60.84
Manhattan	2	625.31	625.31	181.78	181.78
Queens	29	34.44	44.26	62.69	64.12
Staten Island	0				
City Wide	62	$ 56.42	$ 88.25	$ 62.57	$ 63.27
May 12 & November 17, 1999					
Bronx	86	$ 7.84	$ 10.61	$ 3.24	$ 5.11
Brooklyn	103	10.73	13.63	5.56	8.19
Manhattan	34	42.89	67.08	12.41	25.30
Queens	64	8.04	11.07	12.40	14.81
Staten Island	15	2.92	4.99	5.72	7.02
City Wide	302	$ 10.29	$ 17.73	$ 5.93	$ 10.52
Annualized Change 1999 to 2004					
Bronx		38%	29%	41%	23%
Brooklyn		56%	50%	64%	49%
Manhattan		71%	56%	71%	48%
Queens		34%	32%	38%	34%
Staten Island		N/A	N/A	N/A	N/A
City Wide		41%	38%	60%	43%

Sources: Department of Citywide Administrative Services
and New York City Zoning Resolution

E. Reuse of Obsolete Institutional Properties

In addition to vacant land, land with obsolete facilities may be available for redevelopment as housing. The shifting of the health care delivery system away from lengthy in-patient stays toward out-patient treatment has resulted in under-utilized hospital and health facility space. Hospitals are consolidating space and this trend will likely continue. Likewise, de-institutionalization of the residential population of State-owned facilities during the 1980s resulted in the closure of certain psychiatric facilities in New York City, some of which remain vacant to this day. Finally, certain religious institutions may have vacant land or buildings that have become obsolete. In some cases, these properties are already being redeveloped as housing.[57] Although some of these institutional properties are owned by private organizations, others are owned by the State and City.

III. Recommendations

Our 2005 recommendations follow. Those that remain largely the same from the 1999 Cost Study are indicated with "1999."

A. Rezone for Residential Density

As discussed in more detail in Chapter 7, the City Planning Commission should continue to rezone land especially in the boroughs outside Manhattan. Rezoning land to allow more intensive residential development will facilitate the construction of mid- and high-rise buildings and may make these projects more economically feasible. If the cost of land is spread over many more units, some projects that would not have been feasible at lower densities would be feasible with zoning permitting greater density;[58] **(1999)**

B. Facilitate Residential Conversion of Obsolete Institutional Properties

In order to encourage the reuse for residential development of closed hospitals, long-term vacant psychiatric facilities and other obsolete institutional sites, the City should create an inventory of these properties and a plan for their reuse. The City, in cooperation with appropriate State agencies, should develop incentives for the renovation of these facilities, where appropriate for housing; **(1999)**

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[57] For instance, HPD plans to redevelop a Health and Hospitals Corporation former nurse's residence at the Sea View Hospital into approximately 100 units of senior housing. *The New Housing Marketplace: Creating Housing for the Next Generation, Progress Report 2003* (January 2004), at 14. The Archdiocese of New York has considered redeveloping St. Thomas the Apostle Roman Catholic Church in Harlem as a 57-unit home for the elderly. David W. Dunlap, "Underused Harlem Church, Elegant and Endangered," *The New York Times*, August 5, 2004, at B3.

[58] Although increasing density allowances (thus effectively increasing the supply of vacant land) would normally be expected to decrease its cost, in New York increasing density may have the opposite effect. *See* Edwin McDowell, "Harlem; Buildings Can Be Higher; Prices, It Seems, Follow Suit," *The New York Times*, December 3, 2003, at C7. It is likely, however, that even if zoning for increased density increases the price of land per land square foot, it reduces the price of land per FAR square foot (in other words, the cost of land associated with each buildable square foot of a potential building).

C. Inventory of Vacant Land

As discussed in more detail in Chapter 12, the City should prepare an inventory of privately-owned vacant land that is zoned for residential use; and

D. Department of Housing Preservation and Development (HPD)

As discussed in more detail in Chapter 10, HPD should use its power of eminent domain to condemn certain privately-owned properties near city-owned lots in order to create land assemblages suitable for development and implement a process to identify vacant land controlled by other City agencies that are suitable for housing development. Additionally, control of City-owned land should be consolidated under the Deputy Mayor for Economic Development and Rebuilding in order to facilitate the transfer to HPD of City-owned land that is appropriate for housing development.

Chapter 5:
Brownfields

I. Statement of the Issue

As the supply of vacant land in New York decreases, many remaining parcels are brownfields – land that is in fact or is perceived to be environmentally contaminated. This contamination may arise from a range of factors, including industrial uses, landfill, illegal dumping, and leaks from underground storage tanks. There is no City inventory of brownfields due to the stigma that such an inventory would create. By one estimate, however, there are 4,000 acres of brownfields in New York City.[59] Once remediated, these brownfields may be appropriate for development, including in certain cases for housing.

The ownership and remediation of brownfields present two challenges: liability and cost. Under federal and state law, owners of contaminated land may be strictly liable for remediation even if they were not responsible for the contamination. Moreover, lending institutions are reluctant to finance construction loans and permanent mortgages on such properties because of the risk that they will become liable if they foreclose. Assessing the extent of contamination and remediating it can also be costly, adding to the relative cost of developing on brownfields as opposed to clean land.

II. Recent Developments

Over the past five years, there have been positive developments at the federal, state and local levels with regard to both the liability and cost associated with developing brownfield sites.

A. Brownfield Cleanup Program

The most important of these developments is the adoption by the State of the Brownfield Cleanup Program (BCP) in 2003, as recommended in the 1999 Cost Study.[60] For the first time in New York, this legislation provides for the establishment of cleanup standards, liability relief, and significant financial incentives for remediation and development. Prior to passage of the BCP, New York had been the only industrial state in the Northeast and Midwestern United States without a statutory voluntary clean-up program.

Under the new law, a developer who participates successfully in the BCP will receive a commitment from the State to not pursue further enforcement action against the site. If the

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[59] According to the New York City Mayor's Office of Environmental Coordination, in 1997 there were approximately 5,000 to 6,000 vacant or abandoned industrially-zoned properties, containing between 3,000 and 4,000 acres in New York City, and the universe of brownfields would be a subset of this land. http://nyc.gov/html/moec/html/resource.html. Visited October 21, 2004. According to the New York City Department of Finance, in 2004 there were 4,680 parcels of vacant land zoned for manufacturing, totaling 172,716,428 square feet (or 3,965 acres). *See* Chapter 4. Although it is possible that some vacant land zoned for manufacturing is not contaminated, it is also possible that other types of vacant land and indeed land with existing buildings are contaminated.

[60] *See* 2003 N.Y. ALS 1; 2003 N.Y. Laws 1, enacted October 7, 2003, amending the Environmental Conservation Law, the Tax Law, and several other laws; collectively, the "Brownfield Cleanup Program." The BCP was amended in 2004 N.Y. ALS 577, 2003 N.Y. Laws 1, enacted October 5, 2004.

Department of Environmental Conservation (DEC) finds the site poses a significant threat to the environment, it will prescribe a cleanup plan. If DEC finds only a "non-significant threat," the owner may choose the amount of cleanup to be undertaken based on the intended use of the property. Government officials anticipate that most brownfields in New York City will be cleaned up under a standard that will require the top two feet of soil to be cleaned to specified standards if the property is used for residential purposes.[61] Under BCP, a timeline is provided, requiring timely government action. DEC is required to notify applicants whether they are accepted into the program within 45 days and to approve proposed remediation plans within a similar timeframe. There are also several opportunities for public input, including at least two 30-day and one 45-day public comment periods. Because BCP only began operation in mid-2004, it is too early to tell whether this process works efficiently or if it could be improved in some respects.

1. Tax Credits

Perhaps more significant than avoidance of state enforcement action are the three state tax credits associated with brownfield remediation, all of which are refundable (i.e., a developer who has insufficient tax liability in a given year to take full advantage of the credit receives payment from the state in the amount of the unused credit). First, there is a development credit of between ten and 22 percent of the cost of remediation and development on a brownfield site, regardless of scope (the richer credit goes to projects with higher levels of cleanup and to sites located in areas of high poverty and unemployment).[62] Because it applies only to depreciable property, the credit will benefit developers of commercial buildings and rental but not homeownership housing. Additionally, because the credit is for development as well as remediation costs, large development projects that require little or no remediation may claim a significant number of credits.[63] A more cost-effective way to incentivize brownfield remediation would be to increase the percentage of the credit, but have it apply only to the cost of remediation.

Second, there is a one-time credit of up to $30,000 for the cost of environmental remediation insurance.[64] Third, there is a ten-year credit ranging between 25 and 100 percent of real property taxes paid, depending on the number of full-time employees at the site.[65] Because this credit requires at least 25 full-time employees, residential housing developers are unlikely to benefit from it.

Only taxable developers may claim these tax credits and in real estate partnerships they may only claim credits in proportion to their ownership. This means that if a non-taxable entity

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[61] This is known as "Track Four." See the DEC's *Draft Brownfield Cleanup Program Guide*, May 2004.

[62] N.Y. Tax Law §21.

[63] Although the tax credits are as-of-right and therefore not capped, the budgetary impact of the tax credits was estimated at $135 million when the BCP was initially passed. One of the first projects submitted for the program is a 52-story office tower near Times Square that will serve as the headquarters of the New York Times. This project alone would be entitled to an estimated $170 million in development tax credits (with relatively minimal environmental remediation involved). Elizabeth Cady Brown, "Dirty Business: Ratner Seeks Toxic Tax Breaks," *City Limits Weekly*, Issue #440, June 28, 2004. *See also* Sam Smith, "'Cleaning Up' on Toxic Land; Brownfields a Tax Bonanza," *New York Post*, June 20, 2004 at 2.

[64] N.Y. Tax Law §23.

[65] N.Y. Tax Law §22.

such as a municipality, a not-for-profit organization or a pension fund is part owner of a partnership, credits are lost in proportion to ownership by that entity. Such treatment contrasts with certain tax credits offered by other states which are transferable to third parties.[66]

2. Liability Relief

Buyers and financers of brownfields also benefit from recently reduced liability. Under the federal 2002 Brownfields Revitalization Act,[67] a "bona fide purchaser" who knowingly buys contaminated land can avoid federal liability for cleanup if it complies with certain due diligence requirements.[68] However, such purchasers remain liable under state law. In 2003, as part of its Brownfields legislation, the state limited the liability of an innocent purchaser of contaminated land, but the buyer remains liable if it had reason to know the property was contaminated at the time of purchase. Buyers who knowingly buy land they did not contaminate can only be shielded from state liability by participating in the Brownfield Cleanup Program. Additionally, the BCP shields foreclosing lenders from liability so long as they do not participate in management of the property and seek to sell it quickly.

3. Municipalities

As a result of the new state legislation, municipalities now have additional resources and greater flexibility in dealing with brownfield sites. Localities acquiring brownfields through *in rem* foreclosure are not liable for cleanup so long as they do not participate in development and notify DEC within ten days of learning of any contamination. Municipalities that nonetheless opt to remediate tax-foreclosed brownfields under the BCP may pass on to the ultimate buyers of remediated land the right to collect property tax credits and development tax credits for development undertaken subsequently; this additional value to land buyers is likely to be reflected in the sale price and thus to help compensate municipalities for their cleanup efforts.[69] Separately, the New York City Council may consider legislation that would authorize the City to transfer tax-delinquent brownfields from their current owners to responsible third parties that would commit to remediate and redevelop those sites.[70]

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[66] For instance, the Missouri Brownfield Remediation Tax Credit may be transferred by a municipality or other non-taxable entity to a taxable entity, according to the Missouri Department of Economic Development.

[67] Small Business Liability Relief and Brownfields Revitalization Act, Public Law 107-118, January 11, 2002.

[68] 42 U.S.C. 9601 (35)(B)(i)(I) (2002).

[69] Although New York City no longer forecloses on tax-delinquent property, it could take advantage of the BCP to remediate brownfields on which it foreclosed in the past.

[70] Such a bill is being prepared by Councilmember David Yassky and it is modeled on the Third Party Transfer program, under which the New York City Department of Housing Preservation and Development transfers tax-delinquent residential properties directly from the current owner to a responsible third party that commits to renovate and maintain the property as affordable housing. Under Local Law 37 of 1996, the Third Party Transfer program can transfer vacant lots that are Class One and Class Two (which are mostly zoned for residential use; *see* Chapter 12), but not Class Four, which includes vacant land zoned for manufacturing use (and most likely includes the majority of brownfields). If such legislation is enacted, the BCP can be used to remediate brownfields even prior to transfer to the ultimate owner, who will still be able to benefit from the development tax credit.

B. Funding Sources

There are several new funding sources to cover the cost of environmental assessment and remediation at all three levels of government.

1. Federal

At the federal level, the Environmental Protection Agency (EPA) administers a series of remediation grants authorized in 2002. In 2003, EPA awarded $750,000 to capitalize the New York Metro Brownfields Redevelopment Fund, which intends to finance remediation and related predevelopment costs in New York City.[71] EPA also awarded $400,000 to the New York City Department of Housing Preservation and Development (HPD) for environmental assessment of two sites in Brooklyn with potential for housing development. Additionally, the U.S. Department of Housing and Urban Development (HUD) administers the Brownfields Economic Development Initiative, which provides grants to development projects – usually commercial or mixed use projects – that take advantage of Section 108 loan guarantees. New York City began to benefit from this program for the first time in 2002 and 2003, receiving over $2 million in grants for two mixed-use projects that will total over 100 residential units.

Construction work funded by both the EPA and HUD programs described above are subject to Davis-Bacon wages, which are essentially union wage rates. As indicated in Chapter 3, such wages are estimated to add significantly to construction costs. Although these grant dollars are welcomed in New York City, these funds cannot be stretched as far as they could be without wage restrictions.

2. State

At the state level, the New York Clean Water/Clean Air Bond Act has been amended to make it easier for municipalities to borrow funds for environmental assessment and remediation of city-owned properties. Passed in 1996 with $200 million in bonding authority, only $27 million was obligated by mid-2004 due to the program's onerous requirements. Previously, municipalities not only had to repay the bonds, but were also required to share any profits of sale with the State when remediated properties were subsequently sold; this requirement has been eliminated. In the past, the program required a 25 percent local match, but now requires only a ten percent match, which may now be raised using funding from other government agencies. In addition, community-based organizations are now eligible for bond proceeds so long as they work in partnership with local government. Despite reports that New York City has dropped certain bond projects in the past due to the requirements, it is possible that bond proceeds will become more attractive to the City now that it no longer must share profits of sale with the State and if it is able to use HUD or EPA grant funds to meet its ten percent match.

As part of its Brownfields legislation, New York State enacted the Brownfield Opportunity Area (BOA) grant program, although the governor and legislature have not yet agreed on a

[71] Federal funds, together with a $150,000 match from New York City, will serve as a loan loss reserve that is expected to leverage private funds. The Fund is scheduled to be launched in the first quarter of 2005.

funding level for the program.[72] Under BOA, municipalities and community-based organizations may receive grants to cover up to 90 percent of the cost of comprehensive area-wide plans for brownfield redevelopment. In the first round of applications, the City of New York has submitted two joint applications with community-based organizations for BOA funding – one for Inwood and another for East Williamsburg – and several additional community-based organizations have submitted applications.

3. Local

At the local level, in October 2003 HPD launched the New Ventures Incentive Program (New VIP), which will provide loans between $400,000 and $5 million at 25 basis points over the prime rate for a period of up to two years for the acquisition and remediation of brownfields that will be developed for housing. HPD and the New York City Housing Development Corporation will take the first $8 million in losses on a fund that is currently funded by seven financial institutions at $40 million, but which is expected to grow to $200 million over five years. New VIP had not yet closed its first loan by the end of 2004. The program has not developed environmental underwriting criteria, and this raises a question as to whether New VIP will be equipped to remediate land with more than superficial contamination. Additionally, the fact that New VIP's loan committee requires the unanimous approval of all seven participating institutions causes some participating lenders to question whether this structure is workable. If the loan approval process is improved, New VIP could prove an efficient tool for HPD to finance the acquisition of privately-owned lots that are interspersed among City-owned lots in order to assemble larger tracts of land for housing development.

III. Recommendations

As we list our recommendations (with those repeated from the 1999 Cost Study marked as such), we note that a tremendous amount of progress has occurred with regard to brownfields in the last five years. In particular, passage of the state Brownfield Cleanup Program, as recommended in the 1999 Cost Study, will potentially open up thousands of acres of brownfields for housing development in New York City. Our recommendations follow:

A. Federal Government

The federal government should:

1. Amend the Brownfields Economic Development Initiative and EPA brownfields grant programs so as not to require that Davis-Bacon wages be paid for construction performed under these programs; and
2. Amend the Brownfields Economic Development Initiative legislation to allow grants to be issued to projects that do not have Section 108 loans.

[72] $15 million has been authorized for a total of six programs, but more than a year after the BCP was signed into law, the State executive and legislative branches still have not reached an understanding as to how much of this amount will fund BOA.

B. New York State

The State should amend the Brownfield Cleanup Program as follows:

1. The development tax credit should be modified:
   - To apply in an increased amount (percentage), but only to the costs of remediation – as opposed to development – as a more cost effective way to incentivize brownfield remediation;
   - To apply to housing development for homeownership;
2. The tax credits should be made transferable so that credits are not lost to the extent that projects are owned by tax-exempt entities like municipalities, pension funds and not-for-profit organizations;
3. The tax credit program should be amended to provide a bonus credit to developers who build projects consistent with Brownfield Opportunity Area plans submitted by municipalities and community-based organizations; and
4. The State executive and legislative branches should set the funding levels for the Brownfield Opportunity Area program.

C. New York City

The City should:

1. Continue applying for EPA and HUD grants to remediate city-owned properties **(1999)** and use such funds to match bond proceeds available under the newly-amended state Clean Water/Clean Air Bond Act;
2. Remediate city-owned land under the Brownfield Cleanup Program and fund these costs through the proceeds of land sales which will increase due to the development tax credits and property tax credits that are available to the buyers of remediated land;
3. Study the possibility of creating a program for tax-delinquent brownfields analogous to the Third Party Transfer program for occupied housing under which these properties would be transferred to responsible third parties that commit to remediation and redevelopment, rather than selling the tax liens on such properties;
4. Set environmental underwriting criteria for New VIP and designate a single entity to make loan decisions under those criteria, without requiring unanimity of the participating lenders; and
5. Use the New VIP program to assist private developers to assemble tracts of land suitable for development.

Chapter 6:
Environmental Regulation

I. Statement of the Issue

Of all major topics covered in this 2005 Cost Study, the area of environmental regulation has seen the least improvement in the last five years since the 1999 Cost Study was completed. As described in more detail in the last report, New York State law requires environmental review of any public actions or grants of discretionary approvals that are required in conjunction with a housing development. Therefore, any project that is not built "as-of-right" under the Zoning Resolution (i.e. involves a change in use or bulk) or that receives affordable housing subsidies or publicly-owned land/buildings requires review under the State Environmental Quality Review Act (SEQRA).[73] In New York City, this review is performed pursuant to the City Environmental Quality Review (CEQR), which is an Executive Order implementation of SEQRA.[74] The expense and delay of complying with CEQR is what must be considered in reducing the cost of new residential construction in New York City. This becomes more important as the inventory of available City-owned land for housing development dries up (as discussed in Chapter 4). In those cases, more and more residential projects are likely to be developed on land that is either not zoned for residential use or requires some other type of discretionary approval that will trigger a CEQR review.

Environmental review under CEQR is meant to provide information to government decision-makers so that they take potential environmental consequences into account when making public decisions. These environmental consequences include not only physical environmental impacts such as air quality and noise, but also softer social impacts as discussed below. Claims of both physical impacts as well as these broader and more amorphous environmental factors have invited litigation that has been used by project opponents to halt or delay development, whether or not they truly are concerned about the environmental impacts. In interviews with project developers, attorneys and consultants, the consensus remains that this litigation or the threat of litigation remains the largest impediment to developing projects that would trigger a CEQR review.

Review under CEQR is triggered by either (a) a request for financing or discretionary approval made by the developer of a project or (b) citywide action to change zoning that is typically sponsored by the Department of City Planning (DCP). The irony of the triggers for CEQR review is that the exact same housing project that could be built as-of-right will require CEQR review if subsidies are being provided to make the housing affordable. Market rate housing of the same size with the same environmental impact would have no CEQR review. This creates a disincentive to build affordable housing which has in fact caused some developers to switch affordable projects to market rate housing.[75] Wherever

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[73] For more detail about the history and background of SEQRA, *see* Stewart E. Sterk, *Environmental Review in the Land Use Process: New York's Experience with SEQRA*, 13 Cardozo Law Review 2041 (1992) (hereinafter Sterk).

[74] Executive Order No. 91, August 24, 1977.

[75] *See* Rachelle Garbarine, "New Chelsea Rental Complex, and More to Come," *The New York Times*, March 5, 2004 at B8. Douglaston Development of Queens proposed to build an 80-20 mixed income development with 337 apartments on a site at 555 West 23rd Street in Manhattan. The application for the bond financing from

CEQR is triggered, the application must be reviewed for environmental impacts by the "lead agency," that is the agency that is being asked to grant the discretionary approval or the financing assistance.[76] Other agencies may submit data or analyses on areas of expertise, e.g. Landmarks Preservation Commission for archaeological analyses or the Department of Environmental Protection (DEP) for air quality analyses.

The SEQRA statute and regulations specify the environmental factors that must be considered and analyzed as part of the application.[77] In addition to physical environmental issues such as impacts on the natural or built environment, SEQRA requires analysis of the project's impact on (a) existing patterns of population concentration, distribution or growth and (b) existing community or neighborhood character.[78] SEQRA also specifies the thresholds of environmental impacts that may be considered exempt because they will have minimal incremental impact ("Type II actions"). The threshold levels for exempt projects are typically based on projects that might be developed on "greenfields" or unbuilt property rather than in a dense built environment such as New York City.[79] Whereas construction of a project in an unspoiled natural setting is likely to cause much more environmental damage than the same size project in already-dense New York City, CEQR does not recognize these differences. Therefore, projects that would be deemed very small by New York City standards, and that would likely have no or minimal environmental impacts, do not qualify as exempt actions.

Depending on the complexity of the project or its location, the CEQR review requires a project developer (or DCP in the case of larger zoning actions) to retain consultants to perform each of the subsidiary analyses and to draft, if necessary, a Draft Environmental Impact Statement and a Final Environmental Impact Statement. This necessarily adds

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the New York State Housing Finance Agency triggered a SEQRA review on an otherwise as-of-right project. In this review, the State's Department of Parks, Recreation and Historic Preservation determined that the two vacant warehouses on the site that were to be demolished to permit the housing construction were eligible to be listed on the National Register of Historic Places. This listing would prohibit the development of the housing and prompted the developer to withdraw the subsidized housing application, demolish the two warehouses immediately and develop the site for market rate housing only. On this site alone, 67 units of affordable housing were lost based on the SEQRA requirements.

[76] The City imposes a fee for the filing of a CEQR application that varies by the square footage of the project proposed (this cost is in addition to fees paid to consultants and experts who are necessarily engaged to pursue the application). Ranging from $370 to $253,000, this additional "soft cost" does not vary either by whether a project is market rate or affordable or whether it is located in a valuable market area or a low income community. See http://www.nyc.gov/html/dcp/html/luproc/ceqrfee.html.

[77] *New York Environmental Conservation Law* Article 8 and Regulations at 6 NYCRR 617.

[78] Joan Leary Matthews, U*nlocking the Courthouse Doors: Removal of the "Special Harm" Standing Requirement Under SEQRA*, 65 Albany Law Review 421, 2001. See note 9: Compare *N.Y. Envtl. Conserv. Law 8-0105(6)* (defining "environment" as "the physical conditions which will be affected by a proposed action, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance, existing patterns of population concentration, distribution, or growth, and existing community or neighborhood character"), with Council on Environmental Quality Terminology & Index, *40 C.F.R. 1508.14* (2001) (defining "human environment" as "the natural and physical environment and the relationship of people with that environment").

[79] More extensive tests and analyses are required as part of the environmental review in New York City as many areas are defined as at or near "critical intersections" of traffic volume. This adds more cost and delay even though the marginal impact of additional development or replacement development in a very densely-built city like New York are minimal compared to destruction of a true "natural environment" that is unbuilt in a suburban or rural setting.

substantial expense to the budget of building a housing project and to the uncertainty of obtaining the necessary approval. When DCP performs this work for a larger area-wide rezoning, DCP staff must perform this work itself or it must retain consultants to do this. Given limited staff, DCP had been constrained in the number of area-wide rezoning initiatives it could undertake. As noted in the Zoning Regulation and Land Use Review chapter, DCP has been able to expand these initiatives substantially (despite the time and expense involved with CEQR) in the last three years because of new City funding to hire consultants to perform these analyses. Even with this increased funding, DCP staff has indicated that it is tapped out as it undertakes larger and more complex initiatives like the Hudson Yards rezoning proposal.

The uncertainty associated with a lead agency determination regarding environmental impacts and required mitigation, if any, continues to be a problem. Those who oppose a project for any reason (even one unrelated to environmental impacts) may sue the project sponsor and the lead agencies claiming lack of compliance with the CEQR process. Even frivolous claims may be litigated for years, delaying a project beyond its market feasibility or causing the developer and/or the city to incur large legal and consulting expenses. While lower court decisions that strike down a project based on CEQR are often overturned, this may take years. While the number of cases litigated annually is relatively small,[80] the uncertainty and delay leads to greater risk in building housing, chilling other projects from being developed as well. One leading SEQRA commentator notes that there is often a "lottery-like quality" to the lower court decisions.[81] To try to avoid this litigation outcome, project sponsors and lead agencies will go to great lengths to perform analyses that assure procedural compliance with CEQR even where these analyses do not improve the quality of environmental review.

As discussed above, DCP must comply with CEQR when undertaking area-wide rezoning initiatives, which have recently increased in number. As part of CEQR, DCP must identify areas that will require mitigation efforts to minimize potential environmental impacts if property owners redevelop their property at a later time. Because DCP proposes an area-wide rezoning, without specific redevelopment proposals by property owners, DCP denotes these properties on the zoning map with an "E." When the property owner files plans to redevelop their property as housing, for example, s/he must obtain approval for mitigation of the environmental conditions noted on the zoning map. This condition is imposed as part of the citywide rezoning, even though the developer is not seeking a discretionary approval on his or her own. DEP has established a process for identifying and remediating hazardous materials that may be in the soil, if that is the basis for the "E" designation. Developers have complained, however, that DEP has adopted very high clean-up standards that assumes the most susceptible human uses of the redeveloped property. As with the recently-adopted brownfields statute (*see* Chapter 5) a sliding scale could be used depending on the expected use of the property. In addition, DEP has not established a remediation process where the "E" designation is placed on the property because of concerns of either noise or air quality. This has led to delays in review and approval of remediation proposals

[80] Michael B. Gerrard, *Judicial Review Under SEQRA: A Statistical Study*, 65 Albany Law Review 365, 2001 (hereinafter Gerrard).
[81] Id.

for those projects (as opposed to hazardous materials). In addition, standard processing of "E" requests to DEP have been delayed due to understaffing.

II. Recommendations

There are many ways to improve the environmental review process to insure that effective analysis of environmental consequences is undertaken while eliminating abuses and delays.[82] These changes require amendments to the statute, regulations or procedures of SEQRA and CEQR, as noted below. Many of these recommendations remain valid from the 1999 Cost Study (indicated with "1999") and would effect great savings primarily by reducing the risk and uncertainty of development and the "soft costs" of consultants and lawyers. Others are new and just as critical.

A. Expand Definition of Type II Projects

According to the SEQRA regulatory regime, once a project or proposal is deemed to be an "action" that affects the "environment," the lead agency must make an assessment of the potential size of environmental consequences. This assessment determines the types of additional analyses required. Small run-of-the-mill projects are presumed not to have significant adverse environmental impacts and not to require additional analysis; these are known as Type II projects.

Type II actions have historically encompassed only very small projects with nominal environmental impacts. Recognizing that these thresholds had been set unreasonably low, in September of 1995, the State Department of Environmental Conservation amended the SEQRA regulations to recognize other actions which should be classified as Type II.[83] While this is a laudable first step, the regulations should be amended again to recognize the reality that the Type II thresholds are still too low. For example, development of no more than a three family house is currently deemed to be a Type II action. Given the built environment and the density of housing in New York, this cut-off is ridiculously low and should be increased to encompass a single development of no more than a certain number of housing units. Various measures could be used to define this higher cutoff. For example, a new housing project in a mid-rise zone like R7-2 on a medium size site of 100' by 200' would permit development of 70 to 90 units.[84] Concerns that lowering

[82] Many analysts have recommended ways of improving SEQRA. *See* for example, Sterk, *supra*; Philip Weinberg, *SEQRA's Too Valuable to Trash: A Reply to Stewart Sterk*, 14 Cardozo Law Review 1959 (1993); Michael B. Gerrard and Monica Jahan Bose, *Possible Ways to 'Reform' SEQRA*, New York Law Journal, Jan. 23, 1998 (hereinafter Gerrard and Bose); Stephen L. Kass and Jean M. McCarroll, *Reforming SEQRA – A Counter-Proposal*, New York Law Journal, Mar. 31, 1998.

[83] These include: actions of the Governor, commercial structures up to 4,000 square feet, school building expansions up to 10,000 square feet, one to three-family residences in approved subdivisions; accessory structures, among others.

[84] One might consider another reference by which to define the new standard for a Type II project. The city's CEQR Manual establishes thresholds of the number of units in a residential project that would require traffic studies to determine whether a project might be deemed to have "significant impacts" on the environment

the Type II threshold would lead to out-of-scale projects being built are unfounded. All projects would still have to comply, by law, with zoning, landmark, building code and all other regulatory requirements; they would simply not trigger an additional environmental review. Even the cumulative impacts of several such projects would be limited by the constraints of existing zoning regulations.

In addition to an expansion of the Type II definition to recognize the size of a project, the definition should be changed to acknowledge the types of development that the City would like to encourage. For example, there are strong rationales for considering exemptions for construction of housing for low and moderate income people. If a project could be built without a CEQR review as market rate housing, it should not trigger an *environmental* review simply because subsidies or financial assistance are provided to the same physical project. This only invites NIMBYism. Similarly, given the shortage of affordable housing in New York City, there is a strong political argument for support of these amendments to SEQRA even for discretionary planning and zoning actions for affordable housing. Indeed given the larger scale and density of New York, a much higher threshold for affordable housing development, say 140 to 180 housing units (or twice the number proposed above for market rate housing), should be considered a Type II action provided that the affordable housing project is built with "governmental assistance," be it federal, state or city financing or tax benefits. This proviso should be defined by reference to the income of the household served, such as a maximum of 165 percent of the area median (through either home sales prices affordable to this income level or rents at or below 30 percent of this income level). **(1999)**

B. Change the Definition of the "Environment"

The term "environment" is so broadly defined in SEQRA that virtually any action will trigger an environmental review, even on grounds that bear little relationship to the traditional definition of the physical environment. Two components have spawned litigation or the threat of litigation in New York City:[85]

based on its location. If a project exceeds these thresholds, e.g. 240 units in Manhattan 60th Street and south or 100 units outside of densely-built neighborhoods, a traffic study is required. Projects above these thresholds may be "Type II Actions," "Unlisted Actions" or "Type I Actions" potentially requiring a full Environmental Impact Statement, depending on the results of these and all other environmental studies. Projects below these thresholds are not, however, by definition automatically Type II projects. If the City changed the definition of Type II projects for housing, these thresholds would be an ideal proxy for the density of neighborhoods. See *Mayor's Office of Environmental Coordination*, "City Environmental Quality Review Technical Manual," 2001, Chapter 3O and Table 3O-1.

[85] *See*, for example, *Chinese Staff & Workers Association v. City of New York*, 502 N.E.2d 176 (Ct. App. 1986). In more recent court cases in this area, plaintiffs have claimed impacts on both traditional physical environmental grounds and these more "social" factors (*See* Michael B. Gerrard, "Judicial Review Under SEQRA: A Statistical Study," 65 Albany Law Review 365, 2001), but developers and consultants find it more feasible to respond to and implement mitigation alternatives related to the physical attributes of the project than to prove that the new housing will not potentially change the patterns of population.

- existing patterns of population concentration, distribution or growth, and
- existing community or neighborhood character.

These terms are so expansive and vague that non-environmental arguments become the basis of the environmental review and subsequent litigation. To focus environmental review on the natural environment, these two factors out of the eleven included in SEQRA should be deleted.[86] **(1999)**

C. Restrict Standing to Sue Under SEQRA

Even with full compliance with the SEQRA process, project sponsors and government agencies may find themselves embroiled in lengthy and expensive litigation. As one commentator notes, "most SEQRA litigants do not want more extensive consideration of environmental issues; what they want is a different decision."[87] With this predisposition, opponents of the project will be able to use the environmental review process to halt the development even though there has been full compliance with SEQRA.[88] This is due to the fact that New York courts have very broadly interpreted who may sue under SEQRA, that is, who has standing to sue. To overcome this problem while maintaining the protections of the environmental statute, two options should be considered:[89]

- amend SEQRA to restrict standing to those parties that are truly aggrieved and suffering because of an environmental harm, rather than a procedural defect, or
- eliminate the private right of action so that only a governmental watchdog of the environment (separate from a lead agency, such as the Attorney General) could sue for a potential violation of SEQRA. In essence, only the government decision makers who must vote on a project would be the "aggrieved party" eligible to sue through this watchdog.[90] This avenue would require that the watchdog actor establish a forum for public participation so that s/he collects all available information before deciding whether or not to sue.

The first approach, while more desirable substantively, still requires a developer and/or the city to defend a lawsuit and argue the question of standing in order to dismiss the action. There is no easy way for judges to bar access to the court unless hearings are first held to determine whether the

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[86] *See* Appendix D for a listing of these factors.

[87] Sterk, *supra,* at 2075.

[88] *See* Gerrard and Bose, *supra*, for a list of New York cases where a lower court has struck down an Environmental Impact Statement, but then been reversed on appeal after time-consuming and expensive litigation.

[89] While there is a very large legal literature on the standards for standing to sue in environmental litigation, the proposals, counter-proposals and counter-counter-proposals are beyond the scope of this Report. The authors only recommend that the legislature consider alternatives that will protect the environment where true impacts could cause harm while preventing frivolous litigation designed for delay.

[90] In a similar vein, experts in this field have suggested elimination of judicial review, to be replaced by substantive review of critical SEQRA decisions by a newly-created entity, the New York State Environmental Review Board. See Gerrard and Bose, *supra*. *But see* Stephen L. Kass and Jean M. McCarroll, "Reforming SEQRA—A Counter-Proposal," *New York Law Journal*, March 31, 1998, at 3.

plaintiff has the right to bring the lawsuit under this test for standing to sue. These hearings, however, should be more expeditious than a full-blown trial. If the statute requiring posting of bonds by plaintiffs seeking preliminary injunctions were amended to require meaningful bonds related to the damage associated with delaying a project, this might also mitigate the likelihood of frivolous actions.[91] The second approach overcomes this problem by drawing a bright line about the party authorized to sue, but may be much more difficult to have enacted through the Albany political process. At the very least, SEQRA should be enforced so as to require parties to exhaust administrative remedies and raise objections during the agency review process before being permitted to sue. Again, however, court hearings (albeit shorter than a full trial) must be held to determine compliance with these requirements before a lawsuit can be dismissed. **(1999)**

D. Reduce Statute of Limitations and Accelerate Environmental Litigation

Plaintiffs currently have 120 days to sue a project sponsor and/or lead agency claiming a violation of SEQRA. During this statute of limitations period, a project sponsor (and lender) typically will not take any significant action to move the project forward for fear of the cost and delay associated with potential litigation. This is simply lost time waiting for the tolling of a legal deadline. The statute of limitations for challenging an action of the Board of Standards and Appeals (a related city body) is 30 days,[92] evincing the determination that this is a sufficient period of time to bring an action challenging a project, especially if the eventual plaintiff has participated during the SEQRA review process. SEQRA should be amended to provide a 30-day statute of limitations for legal challenges.

In a related context, New York State has also recognized that delays attributable to legal challenges can doom time-sensitive real estate development projects. State law provides for a preference over all other civil actions and proceedings for litigation relating to actions taken by the Board of Standards and Appeals.[93] Recognizing that delay can be tantamount to loss of a project, the legislature has established a procedure to expedite review of these claims. In a similar vein, court review of actions pursuant to SEQRA should have a preference so that litigation delay will not doom a project that eventually wins on the merits.[94] **(1999)**

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[91] *See* Gerrard *supra* "New York Civil Procedure Law and Rules (*C.P.L.R.) section 6312(b)* n76 requires that no preliminary injunction may be granted without the posting of a bond by the plaintiff. There is no SEQRA exemption to this rule. Some courts in issuing preliminary injunctions have required only nominal bonds, but others have required bonds that are so large that the plaintiffs were unable to post them, the injunction never went into effect, and the project was built."

[92] *See* N.Y. Gen. City Law, sec. 82(1)(a).

[93] N.Y. Gen. City Law, sec. 82(3).

[94] This is similar to, but more expansive than, the expedited litigation processes provided for review of affordable housing projects in Connecticut and Massachusetts.

E. Provision of Information about CEQR Reviews

While the standards of review in the State environmental statute and regulations lead to the higher cost of residential development, there are also delays (and costs) associated with the administration of the environmental review process in New York City. In a positive development, the CEQR Technical Manual drafted by the Mayor's Office of Environmental Coordination (OEC) has been roundly praised as providing excellent guidance for preparing and reviewing CEQR applications. The manual is now available on-line on their website as are some CEQR forms. OEC plans to add other forms to the website in the near future.

Despite this excellent technical manual, the delay that remains is attributable to the back and forth between the City environmental review agencies and the project sponsor/lead agency relating to additional required analyses. The indicators in the Mayor's Management Report (MMR) for both the Departments of City Planning and Environmental Protection, issued twice a year, do not provide the actual time elapsed between submission of an application and completion of the review.[95] In order to measure progress in shortening the time for this review over time, the MMR should be revised to disclose the actual length of time taken to complete the review. In addition, other indicators should be included which provide the reasons, by category, for the delay in review of any project beyond three months. These categories will provide government decision makers and the public with the information needed to monitor and, if necessary, improve the administrative system. If the agencies are unable, over time, to shorten the time necessary for review, other measures must be considered in order to achieve the mandate of encouraging critical housing development. As in other areas, the city should consider a provision that applications would be deemed approved after a certain reasonable time (say 45 days) after a sponsor's submission of all requested information. **(1999)**

F. Amend Procedure for Remediation of "E" Designations

As noted above, DEP uses very high standards for remediation of hazardous materials which should be amended to track the process used in the newly-enacted brownfield statute. In addition, DEP must work to establish a procedure for remediation of noise or air quality issues that are identified by DCP as part of its area-wide rezoning actions. This will necessarily mean an increase in staffing in this division to clear up the backlog and delays in reviews of development applications.

[95] Some experts have advocated a process by which a project sponsor would "self-certify" the completion of an environmental review. This would eliminate delays encountered by staff limitations in certifying agencies. The project sponsor would still have an incentive to assure that the environmental review is complete and accurate to protect against potential legal challenges to the project. While this is a more expansive (and probably more difficult to implement) recommendation than that made in this Report, it is one worth considering if certification delays become a larger problem.

G. Continue to Increase Funding for Consultants for Area-wide Rezoning Actions

Many of the important actions by DCP to rezone areas to permit residential development have been made possible through a budget for consultants to perform CEQR reviews that are necessary precursors to the rezoning actions. Given the large number of these actions, this budget line is tapped out and must be increased if these reviews are to continue as required.

H. Coordination of HPD and DHCR Projects

Finally, while the volume of city-owned property has decreased, when affordable housing projects are developed on this property using State subsidies, both the City (typically through the Department of Housing Preservation and Development, HPD) and the State (typically through the Division of Housing and Community Renewal, DHCR) perform separate CEQR and SEQRA reviews respectively. One agency could and should easily delegate the "lead agency" status and responsibility to the other and eliminate one of the processes.

Chapter 7:
Zoning Regulation and Land Use Review Process

I. Statement of the Issue

The Zoning Resolution of the City of New York remains one of the longest and most complicated zoning ordinances in the country. Multiple levels of analysis are still required in order to fully understand the development potential and restrictions affecting a parcel of land. The confusing language of the Resolution often leads to difficulties in obtaining clear interpretations of its provisions. Any proposal to amend the Zoning Resolution or to obtain discretionary relief is subject to the unique land use review process known as ULURP. This section will analyze the impact of both zoning regulation and the land use review process on the development of new construction housing in New York City.

II. Zoning Resolution

The New York City Zoning Resolution, like most zoning codes in the United States, regulates three areas that affect the cost of new housing construction:

1. permitted uses, typically classified as residential, commercial or manufacturing,
2. the size, bulk, rear yards and setbacks of buildings, and
3. ancillary needs such as required parking.

A. Uses

Permitted uses under zoning have become a very important aspect of zoning reform in the last several years. Generally speaking, a residential project cannot be built in a manufacturing zone as-of-right. As New York City has lost thousands of manufacturing jobs since the 1960s and manufacturers have moved out of the city, there is an opportunity to reuse these buildings and these sites for housing. While the City would like to maintain a balance between preserving areas and companies with viable manufacturing jobs and the need for housing sites, the trend is unmistakable.[96] Consistent with the recommendations contained in the 1999 Cost Study, the Department of City Planning ("DCP") has initiated, and the City Planning Commission and the City Council have adopted, a record number of area-wide rezoning actions in the last five years.[97] These actions have changed permitted

[96] The Department of City Planning has been able to achieve this balance in some neighborhoods by adopting the zoning designation "MX" that allows both manufacturing and residential uses. This would allow existing manufacturing uses to remain as conforming uses while permitting residential redevelopment of obsolete sites in the same area. By the same token, however, advocates for manufacturing uses have noted that "MX" zones are mixed in name only as housing can afford to pay higher rents or higher land purchase prices than manufacturing uses, effectively displacing this latter use. *See* N.Y. Industrial Retention Network, "Zoning for Jobs. Making Space for New York's Working Economy," http://www.nyirn.org/BalancedMixedUseZones.pdf and Laura Wolf-Powers, NYC Inc: Twilight Zoning, *City Limits*, December 2003 http://www.citylimits.org/content/articles/articleView.cfm?articlenumber=1058

[97] In addition to the efforts of the City Planning Commission, the Board of Standards and Appeals (BSA) has had a high volume of requests for variances to permit residential construction in manufacturing zones. *See* The Municipal Art Society of New York, Inc. "Zoning Variances and the New York City Board of Standards and

uses from manufacturing to residential or to mixed uses in several neighborhoods. Under State law and the City Charter, these actions all require reviews under the City Environmental Quality Review (CEQR) and the Uniform Land Use Review Process (ULURP). The burden of complying with these processes limits the volume and size of rezoning actions that can be undertaken, as discussed in more detail in Chapter 6.

Despite these burdens, the City has adopted (or is expected to adopt shortly) an admirable number of rezoning actions to permit changes of use. These include the following major actions: Hudson Square, Frederick Douglass Boulevard, East Harlem and Chelsea in Manhattan, Morrisania in the Bronx, Downtown Brooklyn, Greenpoint-Williamsburg, Park Slope, Bridge Plaza and Flushing/Bedford in Brooklyn, and North Corona, Hunter's Point and Long Island City in Queens.[98] While DCP has been flexible in allowing residential or mixed-uses in formerly manufacturing districts, DCP is now proposing a dangerous precedent in use restrictions as part of the Hudson Yards rezoning. In this area on the lower west side of Manhattan, DCP proposes to rezone primarily manufacturing land into residential and commercial uses in accordance with a highly-lauded master plan. DCP proposes to create a special zoning district that would limit residential uses in commercial (typically, offices) districts where residential uses are usually permitted. As the demand for housing exceeds that for offices, DCP probably fears that residential uses will displace office development. Therefore, the city is in essence mandating the development of office buildings through zoning. Similar to the manufacturing zoning that DCP has worked so hard to undo in recent years, this change would freeze commercial uses even if the market does not need more office uses. In the foreseeable future, given the vacancy rate that continues in office uses,[99] it is likely to result in no offices and no housing.

B. Bulk and Density

The permitted size of a new building under the Zoning Resolution is determined by three primary factors: (a) Floor-Area Ratio (FAR) which is a measure of density, (b) height and (c) setback/rear yard requirements. (See Appendix E for a summary of permitted FAR, height and other requirements in each zoning district). As New York City continues to grow and retain and attract jobs and new talent, housing demand increases. Increased density through higher FAR ratios in both newly-rezoned areas and existing areas is critical to addressing that demand. Bowing to political pressures, DCP has sometimes been timid in picking sufficiently dense FAR ratios in rezoning actions. For example, in 2003, the city rezoned a 57 block area of East Harlem, stretching from 99th Street to 122nd Street, east of Lexington Avenue. In its own environmental evaluation, DCP estimated that the rezoning would only

Appeals," March 2004. In these cases, City Planning has not yet caught up to changes in the market and in use. When the real estate market runs ahead of zoning, City Planning will either rezone or fight a rear-guard action to keep the existing zoning and then the BSA will be very active in considering individual applications as a safety valve.

98 The CEQR review requires DCP to identify the projected number of housing units that will be built in the ten years after passage of the zoning change. For actions recently approved or currently proposed, DCP forecasts a total of 44,215 potential new housing units throughout New York City. *See* Policy Link/Pratt Institute Center for Community and Economic Development, "Increasing Housing Opportunity in New York City," Fall 2004, Appendix A.

99 The Real Estate Board of New York report lists the office vacancy rate at 12.2 percent in Midtown South as of September 2004, citing CB Richard Ellis.

result in the addition of 383 apartment units over a ten year period in this entire area.[100] Given the extraordinary environmental, planning, community and political effort expended in each rezoning, DCP must be more aggressive in selecting FAR ratios that will permit long term growth and expansion, especially where available infrastructure exists.

In New York City, an analysis of infrastructure should necessarily focus on the availability of mass transportation rather than highways that might encourage driving to work. There are several nodes, especially in Queens and Brooklyn, with excellent subway access that should be identified for the next area-wide rezoning actions to increase the FAR ratios.[101] The last city-wide increase in FAR ratios took place in 1987 and should be reconsidered given housing demand and available transit resources.[102] Even where it is likely that the permitted use in an area will be changed in the foreseeable future from manufacturing to residential, many developers will seek variances to permit development of housing in the manufacturing district (before the rezoning) because of the relatively low FAR ratios that are expected after the rezoning.[103] In some cases, a likely consequence of highly restrictive FAR ratios has been illegal conversions. Homeowners, especially of one- and two-family houses in Queens and Brooklyn, have illegally added one or two rental units to their homes.[104] Given the widespread nature of this abuse, the limited enforcement resources, the hidden nature of the problem and the inequity of displacing innocent tenants in illegal units, another safety valve relating to changes in the Zoning Resolution (and the Building Code) are required to permit greater density. With new or rehabilitated buildings permitted at a greater FAR, homeowners would have options other than illegal conversions to expand their homes.

An equally troubling trend has been recent "downzonings" by DCP, especially in Staten Island, northern and eastern Bronx and Queens. Certainly, there is extraordinary political pressure from homeowners who fear growth, but the City must resist this tendency in the name of "preserving neighborhood character." The recent downzoning around St. George in Staten Island and along the route of the Staten Island Railway is ironic given that this is the transportation hub and access route of the Island and could sustain continued development. While there will be strong advocates in favor of preventing change, DCP must be willing to permit reasonable zoning that will allow more than a suburban residential pattern where public transit is available.

Various developers have noted that height limits on certain side streets of Manhattan have similarly not kept up with the evolving context and the need for greater permitted development. The American Institute of Architect's New York Chapter Housing Task

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[100] New York City Department of City Planning, Chart of Rezoning Actions provided to authors, citing Environmental Assessment Statement Number 03DCP025Y.

[101] Examples of nodes with excellent transportation access include Roosevelt Avenue/Jackson Heights, Jamaica Center and Queens Plaza/Long Island City in Queens; Borough Hall, Atlantic Terminal, Crown Heights and Broadway Junction/Bushwick in Brooklyn; and The Hub/Third Avenue, Fordham Road and West Farms/Tremont in the Bronx.

[102] In 1987, the FAR ratios were increased between 17 percent and 23 percent in R6 through R8 zones.

[103] Older manufacturing buildings typically have floor plates and square footage that would only be permitted by the higher FAR ratios in R8 to R10 zones. When these areas are rezoned to R6 or R7-2, the permitted FAR is in the 3.0 to 3.44 range even when development is done pursuant to the Quality Housing Program. *See* New York City Zoning Resolution, Sections 23-142 and 23-145.

[104] While a portion of the restrictions on conversions relates to needed changes in the Building Code, the Zoning Resolution also limits these conversions.

Force has proposed thoughtful changes that would embrace the context of the neighborhoods while allowing reasonable development.[105] Modest changes in the technical requirements related to certain rear yards, side yards, courts and minimum distances would increase the feasibility of housing development, especially on infill sites, while having a modest impact on density. Setback requirements must also be reconsidered as they relate to mid-rise buildings (i.e. those built in R6, R7 or R8 zones). To develop a residential building under the Quality Housing Program of the Zoning Resolution in these zones, a developer is required to set back the building at rather low heights, ranging from 40 feet to 85 feet, depending on the zone.[106] The setbacks often make it economically infeasible to develop above the setback height even though the overall building height may not have been reached. The Zoning Resolution divides streets into "wide streets," typically the equivalent of "avenues" and "narrow streets," typically the equivalent of "streets." While the setback requirements may make sense on "narrow streets," in some cases existing buildings on that block are not set back and there should be an opportunity to request a waiver based on the context of that particular block. On "wide streets," given the context of larger buildings, the setback requirement should be removed altogether so that the existing height limitation will instead control the size of buildings. In addition, even the 30-foot rear yard requirement may affect the viability of a building. While the open space between buildings in the rear may be desirable in some cases, in others DCP might consider altering rear yard requirements in exchange for development of community benefits. In some discretionary actions, the City Planning Commission has permitted the addition of a limited amount of square footage to the rear of an apartment building on the first floor only. In exchange for the developer giving this space to a non-profit community organization, a small increase in the FAR is permitted. This type of limited exchange bonus could serve many purposes if adopted on an as-of-right basis.

In a specialized area of affordable housing, there has been recognition of the need to change codes to permit more buildings with efficiency or studio apartments, including a 1999 report by DCP. As the need for housing for singles continues to grow in New York City, this model would address an important segment of the affordable housing market. Given the depth of the non-profit sector (and the burgeoning responsible for-profit sector), the Zoning Resolution (and Building Code) limits on the sizes and concentration of studio units should be reconsidered. The specific changes needed are set forth in the Recommendations section below.

C. Parking Requirements

The largest and most difficult zoning constraint affecting the development of new housing has been the requirement of building on-site parking spaces. Ironically, the Zoning Resolution generally does not permit parking on-site as part of housing in developments south of 96th Street in Manhattan but requires them everywhere else. The concept is that residents south of 96th Street should not add to the congestion and traffic of the core of Manhattan, given the availability of mass transit. Many other areas with similar congestion and access to mass transit, however, still do require the development of on-site parking.

[105] *See* AIA New York Chapter Housing Task Force, "Ten Steps to Create More Affordable Housing in New York City," Spring 2003 (hereinafter "AIA Report") at 16.
[106] *See* New York City Zoning Resolution Section 23-632.

Given the configuration of sites and their limited sizes, these requirements simply render certain sites infeasible. This is especially true with mixed-use buildings where there may be retail uses on the ground floor and housing above, where parking requirements are even higher.[107] Citing statistics demonstrating the growth of car ownership in New York City, DCP has capitulated to this trend and actually increased parking requirements in areas outside of the core of Manhattan. In a further erosion of its anti-congestion policy, DCP has actually proposed another dangerous precedent by requiring parking for the new residential developments as part of the Hudson Yards rezoning. Requiring parking makes sense in neighborhoods where access to mass transit is limited or difficult such as in certain areas of Staten Island, Queens and Brooklyn. The City, however, should recognize that the future of New York City should not be based upon a suburban model as that will only result in extraordinary increases of congestion.[108] Building more parking will only encourage households to keep cars that they already own and convince others to acquire cars.

Analysis of parking requirements is even more important as it relates to the development of affordable housing.[109] Limited subsidies are usually the final dollars provided by government agencies to render projects affordable. With the elimination of parking requirements for affordable housing, these marginal dollars could be redirected to assist a greater number of units throughout the City. The requirement of parking for elderly low-income housing had become a major impediment to development of these projects because of the Zoning Resolution. While the Zoning Resolution reduces parking requirements for elderly affordable housing projects to 10 to 35 percent of normal requirements, this is one area where parking should be eliminated entirely given the expected population of these developments.[110] For other housing projects with "governmental assistance," the Zoning Resolution reduces parking to 25 to 80 percent of normal requirements,[111] but more relief is needed even for these developments. For example, as the New York City Housing Authority reviews its inventory of sites with excess and unused FAR that could be developed into additional affordable housing, they too are finding that parking requirements are making some projects infeasible.

III. Land Use Review Process (ULURP and UDAAP)

It is fair to say that there have been no major improvements in New York City's land use review process since the 1999 Cost Study. This Charter-mandated process, known as the Uniform Land Use Review Process (ULURP), is required whenever either a developer or the City itself proposes to undertake any discretionary planning action not permitted "as of

[107] AIA Report at 5.

[108] The Quality Housing Program of the Zoning Resolution permits a reduction in the parking requirements for projects that comply with the requirements for larger apartments and provide trash rooms and laundry rooms. This is ironic as these amenities do nothing to reduce the demand for parking, but maybe this ironic linkage should be expanded further.

[109] Given the high cost of land in strong market areas, affordable housing is typically not built in Manhattan south of 96th Street where parking is not required and is typically not built in R8 to R10 zones where the higher permitted density allows the cost of parking to be spread over more housing units.

[110] New York City Zoning Resolution, Section 25-25.

[111] Id.

right" by the Zoning Resolution.[112] Any of the area-wide rezoning actions sponsored by DCP, as discussed above, require review and approval through the ULURP process. The process begins once an applicant files a ULURP application with DCP.[113] To advance to the next step, DCP must certify that the application is "complete and ready to proceed."[114] The complaints from the development community five years ago remain the same as today that this step in the process is the most fraught with delays. Given limited staff at DCP and requests for project enhancements or changes, there can be delays and extra costs in completing the analysis to "certify" an individual project to proceed. As the City laudably takes on more area-wide planning actions, DCP staff is spread ever thinner. There is also no recourse as applicants fear angering the review staff if they complain about delays.

In the 1999 Cost Study, the authors recommended that DCP report the amount of time it takes for the agency to review ULURP (and CEQR) applications so that their performance could be measured publicly. Beginning Fiscal Year (FY) 2004 (July 1, 2003 to June 30, 2004), DCP in fact disclosed this statistic in the Mayor's Management Report for the first time. Of 610 land use applications received, 71 percent were processed and referred within six months of receipt, another 14 percent were completed within 12 months and the remaining 15 percent were completed in more than 13 months.[115] As the number of applications has increased in this fiscal year, the percent processed within six months fell slightly from 74 percent in FY2002 and 77 percent in FY2003. Obviously, the sponsors of those applications that took longer than six months or a year are the ones who have raised the concerns about the cost of delays in ULURP certification.

Once the ULURP application is certified, it proceeds through a Charter-mandated gauntlet of review by the Community Board (or the Borough Board, if more than one Community Board is affected by the action), the Borough President, the City Planning Commission, the City Council and the Mayor. Each entity is given a set deadline to review and make a decision on the application so that the total process takes between six and seven months.[116] Of course, each entity may request amendments or concessions from the applicant as it wends its way through the process that the applicant may choose to provide or risk rejection. It is the combination of these concessions with the delay in beginning the process and the risk and uncertainty of completing the process that adds cost and delay to any project that requires discretionary action. The City Planning Commission and the City Council have been able to minimize some of the costs in the last five years as they adopt more comprehensive rezoning actions, obviating the need for individual ULURP actions.

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[112] Charter of the City of New York, Section 197-c. While ULURP review is also triggered when the City sells City-owned land or interests in City-owned land, this is becoming less critical in the housing development process as the Department of Housing Preservation and Development (HPD) depletes its stock of City-owned land (*see* Chapter 10).

[113] The City imposes a fee for the filing of a ULURP application that varies by the square footage of the project proposed (this cost is in addition to fees paid to consultants and experts who are necessarily engaged to pursue the application). Ranging from $1,350 to $20,250, this additional "soft cost" does not vary either by whether a project is market rate or affordable or whether it is located in a valuable market area or a low income community. See http://www.nyc.gov/html/dcp/html/luproc/ulurpfee.html.

[114] Charter of the City of New York, Section 197-c (c).

[115] City of New York, Mayor's Management Report, September 30, 2004 at 148.

[116] *See* Appendix F for a flow chart of the ULURP Process.

A related land use review process, known as the Urban Development Action Area Project or UDAAP, was created by the State Legislature in 1979 as a safety valve for the delays and costs associated with ULURP.[117] UDAAP provides an expedited review process that may be used when the City is taking a discretionary action only to sell City-owned buildings that will be rehabilitated for the same use and/or for City-owned land that will be used to construct one- to four-family housing. While the UDAAP process is accelerated and there is no need to certify that the application is complete, until recently it did not have a strict deadline for the City Council to either approve or deny an application. Uncontroversial projects often became hostage to larger battles between the City Council and the Mayor or his agencies, unrelated to the project at hand. In the 1999 Cost Study, we recommended that the State law be amended to provide a 60-day deadline for the City Council to act, akin to the deadline in the ULURP process. In 2003, UDAAP was in fact amended to provide that any project that has not been acted upon by the City Council within 150 days after submission will be deemed approved.[118] While five months is longer than seems reasonable, it does at least provide some certainty and closure to the process.

When UDAAP was first passed, it provided tremendous assistance to HPD in administering its programs to rehabilitate vacant buildings, build new housing on vacant land and dispose of both of these to private non-profit, for-profit and tenant-led organizations. As the stock of City-owned land and buildings dwindle, UDAAP will be less critical on a volume basis, but it should be expanded to allow greater flexibility to respond to the variety of issues that will arise as HPD parses through the difficult remaining pieces of land and buildings in its portfolio. Especially where Federal or State funding is available to subsidize the construction of new housing, it would be important to permit accelerated disposition of City-owned property in order to meet subsidy deadlines. For example, the Federal government provides funding to subsidize the development of housing for the elderly (Section 202) and housing for the disabled (Section 811). Because of the delays attendant to ULURP and because UDAAP may only be used for a maximum of four-family housing, these larger projects often languish even though the proposed projects comply fully with zoning requirements. With strict deadlines for use of these Federal subsidies, the City and the non-profit applicants must often request, and hopefully receive, extensions for the subsidy grants while the land use review process is being completed.

IV. Recommendations

Our recommendations follow. Those repeated from 1999 are indicated as "1999."

A. Rezoning for Residential or Mixed-Uses

Continue the efforts and initiatives of the Department of City Planning (DCP) and the City Planning Commission to rezone neighborhoods in New York City to permit residential and mixed-use development. These initiatives may require the City to increase funding to retain consultants necessary to perform the studies and analyses currently required under CEQR. **(1999)**

[117] New York State General Municipal Law, Article 16.
[118] New York State General Municipal Law, Section 695 (7).

B. Remove Limits on Residential Uses in Zoning

It is important that the City Planning Commission reverse the dangerous precedent it set in limiting residential uses in commercial districts where housing is usually permitted when it created the special zoning district as part of the recent Hudson Yards rezoning.

C. Change Bulk and Density

On the whole, DCP has selected reasonable bulk designations in the rezoning actions recently adopted. In some cases, however, unrealistically low densities have been selected that will require rezoning again in the future to reflect the reality of New York's growth. In the larger area of permitted zoning densities, the entire Administration, not just DCP, must resist the political pressures to "downzone" neighborhoods that reduce growth. An acceptable mix of bulks can be adopted without going backwards in these neighborhoods. By recognizing the importance of mass transit in New York City, rezoning actions should continue to highlight those areas as development nodes with increased densities and avoid the temptation to accommodate a suburban automobile-centric planning policy.

D. Increase Density in Medium and High Density Zones

A modest increase in the density permitted in medium and high density zones (R6 to R10) is an easy and unobtrusive way to have a large cumulative impact on housing production in the city. Even if the definitions of floor area ratio (and other zoning limitations) permitted in each of these zones were increased by only ten percent (provided transportation and school infrastructure is available), this would lead to a significant increase in the number of units produced across the city with an almost imperceptible increase in the size of each individual development. One need not worry that these buildings will be out of place as these are the same zones in which the requirement of the Quality Housing provisions of the Zoning Resolution are either mandatory (if mapped) or optional, assuring development of desirable buildings from a planning perspective. **(1999)**

E. Adopt Technical Changes to Permit Better Developments and Singles Housing

We endorse the technical changes recommended by the American Institute of Architects New York Chapter Housing Task Force that will permit better-designed housing developments without increasing bulk.[119] Recognizing the constraints of some development sites, especially in-fill housing which is now prevalent in New York City, the Task Force proposes reasonable technical changes to permit contextual designs. While the AIA Task Force did not reach consensus on changes to permit more singles housing, we do recommend these changes in the Zoning Resolution to reduce the minimum size of dwelling units, to increase the maximum number of dwelling units and to reduce parking requirements in this key component of affordable housing.

[119] *See* AIA Report for a full description of these changes.

F. Reduce Parking Requirements

Despite the political pressure to capitulate to car owners, it is important that DCP adopt a broader vision of New York City as one accessible primarily by mass transportation. Zoning and other provisions of law should not encourage the development of on-site parking as part of housing development wherever there is access to mass transit. Given the likelihood that residents of affordable housing developments are even less likely to own cars than market rate developments, we recommend that parking requirements be significantly reduced or eliminated for these projects. The same provision should be revised to reduce required parking to 20 percent of the usual requirement for projects developed with "governmental assistance." This will create an enormous incentive for developers to create affordable housing on a site that would otherwise not be feasible. The Zoning Resolution provisions that provide for reduced parking requirements for elderly housing projects should be revised to eliminate required parking altogether. **(1999)**

G. Expand Trained Staff in the ULURP Certification Process

The most effective way to reduce the costs and delays attendant to the ULURP process is for the City to continue area-wide rezoning and planning actions that obviate the need for individual applications. For other actions that require individual applications, DCP should expand and train new staff to permit more expeditious review, approval and certification of ULURP applications, especially given the recent increase in the volume of applications. Given that DCP charges significant fees for these applications, DCP should dedicate this revenue to hiring sufficient staff to permit timely and qualified review of applications.

H. Expand Projects Eligible for UDAAP

UDAAP should permit disposition of vacant land for development of dwellings with five or more units, as long as the project contains affordable housing. This proviso should be defined by reference to the income of the household served, such as a maximum of 165 percent of the area median (through either home sales prices affordable to this income level or rents at or below 30 percent of this income level). This level of density will more efficiently contribute to housing production in the city and allow the most effective use of Federal and State housing subsidies within their deadlines. These projects would still be subject to the other requirements of the UDAAP statute including the City Council findings that the UDAAP designation and disposition will help the growth and sound redevelopment of the city and that the site will be built in accordance with zoning requirements.

Chapter 8:
The Building Code

I. Statement of the Issue

The same basic New York City Building Code that existed at the time of the 1999 Cost Study remains in effect today. In general, building codes provide minimum standards for construction and specify permitted building materials in order to protect public safety. Clarity and consistency are important as professionals and building code officials must interpret and apply its provisions. To call the current New York City Building Code cumbersome and obtuse is charitable. The misinterpretations and confusions that this 1,000 page code generates lead to extraordinary delays and increased costs that could be avoided relative to a code that is well-organized and well-written. The Code falls short even from the perspective of ensuring public safety as it is difficult to enforce and more difficult for development professionals to interpret its requirements.

A. Adoption of a Model Building Code

In the 1999 Cost Study, the authors recommended that New York City adopt a new Building Code based on one of the model codes used in other jurisdictions. This was a far-reaching recommendation as most parties interviewed thought this too ambitious a goal, despite their desire for that outcome. Fortunately, it appears as though New York City is on the brink of adopting a new building code based on the International Building Code (IBC). Adoption of a new code based on a model code was recommended for several reasons that remain valid today:

- The current Building Code was last overhauled in 1968 and extraordinary advances have been made in materials and technology that are not reflected in, or permitted by, the Code. The model codes are updated every three years by national code research organizations and the jurisdiction has the option to amend its local code to reflect some or all of these changes.

- The International Building Code, in particular, has been adopted by 44 states (including New York State) and Washington D.C.[120] so that architects, developers and contractors from these other jurisdictions would be able to easily enter the New York City market, potentially increasing competition and reducing the cost of all housing construction over time.

- Preliminary estimates of the cost savings from New York State adopting a building code based on the IBC model code ranges from six percent to 13 percent of hard costs[121] over the analogy of the current New York City Building Code. This is due primarily to the less expensive methodologies permitted in the code. Model codes are typically performance-based (i.e., they specify the outcome to be achieved such as

[120] *See* http://www.iccsafe.org/government/adoption.html. Last accessed December 12, 2004.
[121] Robert C. Thompson, R.A., A.I.A., "New York State: Building A Case For Standards," Standards Engineering Society, 2002.

ensuring a certain level of wind resistance) rather than prescription-based as in the current Code (i.e., it specifies how the wind resistance must be achieved). With a performance-based code, manufacturers and contractors will be encouraged to innovate and develop alternative methods that might be less expensive but just as effective.

- Model codes are written in a fashion that makes them "comprehensive, coordinated and contemporary."[122] This is the standard established by the American Institute of Architects for a model building code that is to be the basis for any local code.

- Model codes, including the IBC, are backed up by extensive organizations that provide technical assistance in interpreting and applying the model code, as well as training for local officials in adopting and using the model code. These organizations also provide commentary and case studies to explain the application of the model code.

- While the model code provides clear and organized provisions, the local jurisdiction is free to modify the substantive provisions of the model code to reflect the unique density of New York City.

II. Recent Developments

A. Progress on Adoption of a Model Building Code

Substantial progress has been made in the proposed adoption of a new building code based on a model code. In November of 2002, the Mayor appointed an Advisory Commission to consider adopting the IBC, together with modifications that would be necessary to reflect the needs of New York City.[123] As a first step, the Advisory Commission analyzed and determined which of the major model codes to adopt as the baseline code: the International Building Code 2000 ("IBC 2000") or the National Fire Protection Association 5000 ("NFPA 5000"). The Commission used the following criteria: (a) comprehensiveness, (b) accessibility to users, (c) services provided by the issuing organization, (d) ease of adaptation to New York City and (e) other advantages.[124] Based on the above criteria, the Commission recommended a model code as a baseline not its substantive content. Because the content, including all fire and safety requirements, could be modified to reflect the unique density of New York City, the Commission turned over this analysis to thirteen Technical Committees. Over the last two years, these committees, comprised of architects, engineers, government officials (including the Fire Department) and representatives from the labor, construction

[122] The American Institute of Architects Codes and Standards Committee, "C3 2002," October 18, 2002.
[123] In a City Council hearing of the Housing and Buildings Committee on November 30, 2004 to consider potential adoption of either IBC 2000 or NFPA 5000 as a base model code, advocates for the NFPA 5000 saw the specification of the IBC in the Mayoral resolution appointing the Advisory Commission as evidence of a foregone conclusion to adopt IBC 2000 over NFPA 5000. The report of the Commission, adopted after public hearings, however, sets forth a thoughtful and substantive review of the merits of the two codes before they endorsed adoption of the IBC 2000. See http://www.nyc.gov/html/dob/pdf/ibc.pdf. Last accessed December 14, 2004.
[124] See http://www.nyc.gov/html/dob/pdf/ibc.pdf at 8. Last accessed December 14, 2004.

and real estate communities, have worked extensively to review every major provision and, in most cases, reached consensus on modifications necessary for New York City.

The proposal to adopt a building code based on a model code will be considered in two steps: first, adoption of the model code that will serve as the baseline and second, adoption of any substantive amendments to modify the baseline code to reflect the unique density of New York City. This second step is where New York City risks adding extraordinary burdens to the cost of new housing construction. As various special interests lobby for their favored provisions, the new code might very well become a shiny Christmas tree that topples over from too many ornaments. While more safety and more redundant means of egress would always seem desirable, they add very large costs to construction. Balance and judgment must be used to limit the impulse to adopt everything. For example, New York City currently has one of the most stringent fire protection codes for new construction of multi-family housing as these codes require the redundant fire prevention and protection systems of (1) sprinklers to extinguish the fire, (2) fire ratings of building materials to contain the fire in limited locations and (3) two means of egress to assure that occupants can escape the fire. Even though these redundant systems are currently expensive, if they were transferred to the new model building code, the City could be assured of having extraordinary fire protection without imposing even more costs and requirements that may exist in a model code.[125]

While adding many new provisions to a baseline model code would add new costs, retaining some of the existing provisions that have worked well in New York City but are not included in the model code would reduce costs on residential new construction. Again, reflecting the unique density of New York City, these would facilitate construction on small and infill sites which are those left in many neighborhoods of New York City. The Residential Committee of the model code process identified several of those to be recommended for adoption.[126] In addition, even small expansions of certain parameters in the model code would go far in allowing additional small scale affordable housing developments on limited parcels of land in New York City. For example, the American Institute of Architects has proposed a thoughtful set of changes that would allow four-story walk-up housing on vacant lots as small as 50 feet by 100 feet so as to re-knit the streetscape of some communities that have previously suffered from abandonment or arson.[127]

[125] While there are many factors that lead to reduced deaths from fires, it is interesting to note that in 2004 New York City had the lowest number of civilian deaths from fire since the year 1919. *See* Winnie Hu, "04 Fire Deaths May Be Fewest in 80 Years," *The New York Times*, December 24, 2004 at B3.

[126] These include permitting the continuance of so-called "scissor stairs" (two interlocking stairs in one shaft that qualify as two means of egress), the continuance of the requirement of standpipe systems for buildings taller than seven stories rather than three, and adjustment of permitted distances and sizes for travel distances to stairs, the size and width of stairs and the distance of "dead-end corridors" to a means of egress. These requirements, currently in the New York City Building Code, if allowed to continue would serve to make housing development more economically feasible, especially on small sites or awkwardly shaped sites.

[127] *See* AIA New York Chapter Housing Task Force, "Ten Steps to Create More Affordable Housing in New York City," Spring 2003 (hereinafter "AIA Report") at 10 and Appendix B. Their report also includes a very helpful proposal to allow more economically feasible construction of infill housing on small lots between existing buildings.

B. National Electrical Code and International Fire Code

The consideration and adoption of a model building code has a successful precedent in New York City. In a similar approach, DOB undertook this two-step process in 2001 to replace the existing antiquated electrical code with the National Electrical Code. The City Council unanimously adopted the 1999 National Electrical Code as a model code and then adopted the New York City modifications that will make it a workable code in New York.[128] It is expected that this new code will be "more convenient, less confusing and less expensive for practitioners."[129] Showing the benefit of the three year cycle of updates based on national model codes, in 2003, the City adopted the 2002 National Electrical Code with New York City modifications, reflecting technological changes that evolved over that period.[130]

In a movement to simplify all codes throughout New York City, the Fire Department has also announced that it has begun an analysis to adopt the International Fire Code as the basis for New York's Code. This code, which addresses hazardous conditions from the handling, storage and use of hazardous materials as well as the use and occupancy of buildings and locations, would again be subject to updating every three years as technology and materials change in the field of fire protection.

C. Permitted Materials and Equipment

Another important function of a building code is to specify which materials and equipment are allowed to be used in the construction of housing. As the New York City Building Code is not based on a model building code, DOB has had to establish its own process for analyzing and approving materials to be used in construction. Under this process, every manufactured item or system installed in a building must have a Materials, Equipment and Acceptance (MEA) number assigned by DOB. In other jurisdictions that have a building code based on a model code, the national organization that issues the code certifies products and materials to be incorporated into a building. The national organization may perform the tests itself or may rely on tests performed by nationally-recognized safety organizations such as Underwriters Laboratories Inc. for electrical equipment.

The disadvantage of the current MEA process is that the manufacturer of every building product must separately apply for and obtain an MEA number so that its product may be used in New York City. It is an expensive process that requires tests that only well-capitalized manufacturers can afford to undertake.[131] Whereas national model code organizations and national safety organizations may have performed tests on products for

[128] New York City Local Law 64 of 2001.

[129] The City of New York, Mayor's Management Report, September 2004 at 95. Until a side-by-side analytical comparison is completed, it is difficult to be assured of the cost savings, aside from the simplification of the code itself. In some cases, initial costs may be slightly higher while manufacturers and contractors adjust to new alternatives; in the long term, savings are expected.

[130] New York City Local Law 81 of 2003.

[131] A manufacturer must submit: (1) a typed description of the product, (2) photographs, (3) drawings, (4) schematics, (5) sales brochures, (6) a completed MEA-1 application form, (7) a sample of the product, (8) results of laboratory tests, (9) a $600 MEA fee payable to DOB and (10) a completed MEA-2 form certified by the testing laboratory that the lab report is genuine. See www.nyc.gov/html/dob/html/mea.html. Last accessed December 16, 2004.

nation-wide acceptance of a product, the manufacturer must still apply to the MEA Division of DOB for approval in New York City. In some classes of materials, this means that only a limited number of manufacturers are approved, decreasing competition and increasing prices for those materials.[132] In addition, commodity prices may increase sharply, as has happened in the last year for steel, plywood and concrete because of high demand in both China and for rebuilding in Iraq. With limited materials approved under the MEA process, builders have few options to substitute less expensive materials or equipment made with other commodities.

If the product testing and approval process were completed as part of the certification of a model code, many more products would be available and would have been tested by reputable national organizations. The products of manufacturers that could not afford, or did not want to be subjected to the local New York City process, would still be available to New York City. Especially as technological innovation leads to more and better products on the market, the adoption every three years of an updated model code would allow New York City to take advantage of the testing by national model code organizations of these new products.

One of the most controversial debates regarding materials permitted in the construction of housing relates to plastic, or more specifically polyvinyl chloride (PVC), piping for plumbing and sprinkler systems. PVC piping is currently permitted in one- and two-family houses in New York City, but not in multi-family housing. While PVC piping is substantially less expensive to purchase and install than iron piping, opposition from plumbers and firefighters has prevented its expansion as a permitted material. The opposition of firefighters is based on concerns of toxicity that might be released if PVC piping burned during a fire.[133] Obviously, New York City must ensure that its materials are safe, but the fact that PVC piping is used in low density housing in New York City and in all kinds of housing in a majority of jurisdictions in the United States, is counterevidence that PVC is safe for this use. Rather than resolve this and other materials issues in the political arena, scientific and safety organizations are best able to make recommendations on these issues.

III. Recommendations

Our recommendations appear below. Those repeated from 1999 are indicated as "1999."

A. Adopt a New Building Code Based on a Model Code

There are extraordinary advantages to a building code based on a model code. A clearer, better organized and more technologically advanced code will lower costs and encourage greater entry of builders and architects into the market over the long run. With the support and training of the national organizations that research and draft these codes, the DOB permit approval

[132] For example, in reviewing the "Index of Accepted Materials and Equipment" issued by the New York City Department of Buildings, we find in alphabetical order that the following items have only the limited number of approved manufacturers as shown in parentheses: Adhesives for bonding insulation to ducts (1), Concrete admixtures (3), Concrete—pre-qualified (1) and so on through "z."

[133] *See*, for example, Bob Port, "Three Decades after an Infamous New York Telephone Co. Blaze, Cancer Ravages Heroes," *Daily News (New York)*, March 14, 2004 at 6 and Deborah Wallace, *In the Mouth of the Dragon: Toxic Fires in the Age of Plastics*, Avery Publishing Group, 1990.

process (*see* Chapter 9) should also improve dramatically. We recommend adoption of the International Building Code as the model code based on the following: (1) the fact that 44 jurisdictions including New York State have already done so, (b) the national technical resources available to support its implementation and (c) the tremendous work and commitment of 400 professionals over the last two years to analyze and adapt the IBC to the needs of New York City. **(1999)**

B. Only Modify the Model Code Modestly

While New York City is unique in its density, its high rise housing stock is no longer incomparable to other large cities such as Los Angeles, Boston, Houston and Miami, among others. While the City should modify the model code to assure safe occupancy of buildings, the temptation must be avoided to render the building code substantially more stringent than either the national models or the current New York City Building Code. These temptations may arise from a desire for safety at any cost as well as from the political influence of interest groups ranging from manufacturers to labor unions. The opportunity to enact a new building code should also be used to incorporate modifications that will permit economically feasible construction of affordable housing on small and infill sites without compromising basic safety.

C. Adopt the International Fire Code

The success in adopting the National Electrical Code, and hopefully a model building code, should be expanded to the International Fire Code. By basing all of New York City's codes on national or international model codes, New York City will be able to benefit from the technical knowledge, support and innovation in all these fields, as they develop across the entire nation.

D. Eliminate the MEA Process

As part of the adoption of a model building code, New York City must eliminate the quixotic, stifling and expensive MEA process. Greater competition in the types of materials and approved manufacturers will invariably reduce materials costs while assuring safety through tests by independent labs.

Chapter 9:
Permitting Approval Process – The Department of Buildings

I. Statement of the Issue

A developer or contractor seeking to build new residential housing in New York City is required to complete the following critical processes with the New York City Department of Buildings (DOB):

A. Pre-filing and Plan Review for Issuance of Permits
B. Construction Inspections
C. Sign-offs and Issuance of Certificates of Occupancy (CO)

In the 1999 Cost Study, the authors reviewed the opportunities for delays and increased costs at each of these stages. We will update our review of each of these stages to identify any improvements made in the last five years and to recommend additional changes. As a general improvement, it must be noted that DOB has implemented a web-based Building Information System (BIS) which for the first time provides detailed information to the public about the status of a project in all the above stages. BIS now makes it possible to track down and correct snafus by providing extensive screens of information regarding Plan Review History, Plan Review Objections, Violations, Permits Filed, Inspection Results, Open Items Needed to Obtain a CO and actual copies of the CO. Whereas developers and contractors previously were required to pay "expediters" (more on this topic later) to obtain this information, it is now readily available. The issue of the procedures and processes used by DOB to complete each of these stages continues to generate delays and costs, however, as will be explained in more detail in the analysis of each major area.[134]

One recurring concern that was raised by virtually everyone interviewed for this Report is that in the last two to three years, there has been an extraordinary reluctance of DOB staff to make decisions at every level and in every aspect of the process. The fear of making the wrong decision and being punished therefore or being accused of being corrupt has led employees to not make decisions or to deny requests in the hope that someone at the next level will decide the substantive issue. Given the past history of some corrupt DOB employees, DOB and the Department of Investigation have pursued a campaign to assure that decisions are made with integrity.[135] The pendulum has swung so far to that side, however, that all too often DOB employees are not making decisions at all.

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[134] A recent documentation by DOB staff shows that there are currently 1,025 possible steps from pre-filing of an application to issuance of a Certificate of Occupancy for a new building. In addition, there are currently 131 possible items required to be submitted throughout this full process. In early 2005, DOB proposes to reduce this to 110 possible required items and to issue a Reference Guide clearly specifying the items and why and when each is needed.

[135] *See*, for example, Michael Cooper, "Measures to Curb Corruption at 2 Agencies are Announced," *The New York Times*, September 27, 2002 at B5; Robert F. Worth, "3 Inspectors Faced Charges Once Before," *The New York Times*, June 27, 2002 at B1, Jose Martinez, "Indict 19 in Bldgs. Dept." *Daily News (New York)*, June 26, 2002 at 24, Jennifer Steinhauer, "Bloomberg Moves Away From Shift of Inspectors," *The New York Times*, February 22, 2002 at B1 and Natalie Keith, "Industry counterpunches DOB proposal; real estate industry; New York City Department of Buildings," *Real Estate Weekly,* January 31, 2001 at 1.

In discussing "DOB," it is important to recognize that there are five separate fiefdoms in each of the Borough Offices. While we will analyze the procedures typical of DOB, we must recognize that there is still an autonomous Buildings Department office in every borough. Although the various Codes that the Buildings Department is charged with interpreting and enforcing make few distinctions among boroughs, officials in each borough do interpret the Code and regulations differently. These inconsistent interpretations across DOB offices before projects start can lead to project re-design to accommodate the local interpretations by architects who may work in all five boroughs.

Another generic cost related to the complexity and arcane nature of the filing and Code interpretation process is the need to hire "expediters." While DOB does not recommend their use, most developers feel they must hire an expediter to file plans and requests for permits. Most expediters are former Buildings Department employees who may rely on their relationships with former colleagues to get things accomplished. The fees paid to expediters add to the cost of construction in New York City.[136]

A. Pre-filing and Plan Review for Issuance of Permits

To begin the process of obtaining approval to build new housing, a registered architect must file detailed plans showing the work proposed.[137] DOB currently has a mandatory "pre-filing" process that is meant to identify missing items and problems early and to calculate DOB fees payable with the application. DOB itself has recognized the numerous problems associated with the pre-filing process including delays in professionals being able to obtain meetings with staff and mistakes made by staff in this process.[138] DOB has considered eliminating the pre-filing process altogether as a means of preventing these mistakes and delays.

Once the architect or expediter has actually filed the application, he or she will make an appointment with DOB plan examiners to review and ultimately approve the work proposed.[139] One frequent complaint from the development community is that there are

[136] The order of magnitude of these costs may be approximated by the admission by one developer that he adds up to $200,000 to the development budget of large projects to pay expediters premium fees in order to make sure that his projects are not delayed.

[137] In addition to a DOB construction permit, a contractor must apply for and obtain separately permits from the Department of Transportation (DOT) to close sidewalks and/or portions of the street during construction and to permit use of equipment, such as a crane, on the street. Professionals interviewed for this Report complained that it is often difficult to obtain DOT approval to close one side of a sidewalk or to use cranes before 9 a.m. The latter requirement means that more days are needed to move the same amount of materials at a crane cost of $3,000 per day.

[138] *See* NYC Department of Buildings, Strategic Plan 2003-2005 at 17. For initial application filings, DOB allows the architect or filing professional to bring all the filing information to the Borough Office on a diskette that has eliminated some of the data inputting errors that was delaying some projects. This process, known as "PC filing" is not "electronic filing" via the Internet but physical submission of electronic data on a diskette. The PC filing process, however, is not allowed for Post-Approval Amendments (PAAs) and is unlikely to be allowed until the BIS system with which it must interface is replaced (see discussion of BIS below). If DOB staff does make errors in the inputting of data, the applicant must file a PAA and pay another application fee in order to correct the error. To reduce the impact of these delays, DOB staff will launch two new initiatives in the first quarter of 2005 to reduce the circumstances in which applicants are required to file PAAs at all.

[139] This process does not apply if the application is "professionally certified" by the architect. This alternative process is discussed in more detail later in this chapter.

long delays in obtaining the first review by an examiner and that appointments, once made, are too short to review any "objections." The 20-minute appointments (40 minutes for larger projects) were insufficient to complete the plan review, requiring the professionals to get in line to request additional appointments, if they could even get through on the telephone line to request an appointment. DOB, for its part, was frustrated that some of the appointments resulted in "no shows" as expediters made multiple appointments simply to try and reserve spots for review of the application. As of September, 2004, DOB has automated the appointment system using the 311 Call Center system. Professionals may now call "311" and request appointments 24 hours per day, seven days per week. It is meant to avoid duplicate appointment requests and to automate the follow-up scheduling for the particular plan examiner to complete the review of the application. Given the recent implementation of this appointment scheduling system, it is too early to tell whether delays attributable to the inability to obtain prompt appointments will be minimized. DOB has begun collecting unpublished data based on this new system whereby they estimate there is a wait of one to eight business days (depending on the borough) to obtain either an initial or follow-up appointment.

Another regular complaint is that plan examiners are not properly trained in Building Code requirements and raise "objections" to work proposed on the plans that professionals know are not correct based on the Code.[140] Because the interpretations of the Code, known as Policy and Procedures Notices (PPNs), are not indexed or organized in a substantive manner, it is very difficult to resolve these objections. Applicants often must request a "reconsideration" and begin moving up the DOB Borough Office hierarchy in order to have these errors corrected.[141] Again, delays are involved in scheduling appointments within the DOB hierarchy. To prevent some of these errors, DOB, in March of 2004, established a uniform "objections" sheet that requires plan examiners to identify the section of the Building Code on which they base each objection. In addition, DOB has created a standard form to Request Appointments for Reconsideration that allows the lowest person within the hierarchy of the Borough Office to make the decision before leading to further reviews or delays. Again, we will have to await data from these recently-adopted procedures to determine whether delays and errors are reduced. The fear of decision-making discussed above, however, rises to the level of the Borough Commissioner in some offices making it inevitable that additional reviews will be necessary to obtain the correct interpretation of the Code.

While the most recent Mayor's Management Report discloses that the average number of business days to complete first plan review is only 5.2 for new buildings and 6.0 for major renovations,[142] this figure only reflects the time after DOB receives a corrected and complete application. Professionals report that DOB invariably finds "clerical mistakes" in a preliminary application. Therefore, the average does not reflect the number of times that the

[140] Problems also arise as there are conflicting interpretations of the same issues between the Zoning Resolution and the Building Code, such as alternative definitions of permitted distances between a wall and a window and between walls.

[141] DOB indicators show that applicants who are willing to spend the time and effort to seek a reconsideration are generally correct. Of 653 Reconsideration Requests filed in the first 11 months of 2004, 72 percent were accepted and another 13 percent were referred to the Borough Office for further review and decision.

[142] The City of New York, Mayor's Management Report, October 2004 at 95.

developer has had to re-file an application or the number of days that have elapsed between review of each filing.

The last major complaint relating to plan examination relates to "lost" folders. It is almost a matter of DOB lore that at some point during the review process, the application folder and the microfiche copy of the folder will be lost at DOB and processing will be halted.[143] While "check-out" procedures have been established, folders still disappear, often requiring the applicant to re-create the folder in order to continue processing the application. If folders were backed up with "Computer-Aided Design" (CAD) files at DOB, the temporary disappearance of a physical file would no longer delay the permit approval process.

Some of the delays inherent in plan examination and review are avoided when architects or engineers professionally certify and submit applications. This process, permitted by DOB since 1995, allows a Registered Architect or Professional Engineer to self-certify the plans' compliance with applicable laws and Codes. Through the end of Fiscal Year (FY) 2004, i.e. June 30, 2004, 39.6 percent of all applications were self-certified.[144] This initiative has led to a large increase in productivity as many developers and architects have sought to avoid the DOB process with its attendant delays. To discourage false certifications, a percentage of these applications are audited for review, reaching 26.1 percent in FY2004.[145] Of those audited, 10.6 percent resulted in revocation of building permits. Despite the apparent relative ease of this process, some developers and architects remain reluctant to use professional certification because of the risk of audit and required changes or stopped-work far into project development. While professional certification is a valuable safety valve, it remains important to continue improving the plan examination process as a parallel manner of obtaining plan approvals.

The web-based features of DOB's computer systems have far outstripped the functionality of the internal processing and computer tracking systems. There is an impressive array of application forms and sample documents now available on DOB's website. Given limited resources, it appears that DOB has prioritized computer systems available to the general public. However, the multiple computer tracking systems within DOB operations remains an extraordinarily antiquated system that slows down operations and lacks the ability to coordinate processes between units. Complaints continue that certain DOB Borough Offices sometimes simply close because the computers are "down" and they are waiting to have them fixed. DOB issued a procurement offering through the Department of Information Technology and Telecommunications to replace this antiquated system, but has recently delayed award of the contract because the agency's equipment infrastructure must first be upgraded to support this system. While there will be "growing pains" once the system is implemented and rolled out, this comprehensive solution is the only long term hope for better tracking and improvement of the agency's operations.

The delays at the pre-filing and plan examination stage result in increased costs in the following areas: (a) increased costs of labor and materials as labor and commodity prices

[143] This complaint was made of both applications filed for plan examination review and applications reviewed on audit that were professionally certified by a registered architect or licensed engineer.
[144] The City of New York, Mayor's Management Report, September 2004 at 95.
[145] Ibid.

rise, (b) the potential loss of a contractor or subcontractor who takes on other projects while waiting for the approval, (c) carrying costs for acquisition and pre-development expenses pending construction start and (d) the loss of potential revenue from the project that will be generated once it is complete.

B. Construction Inspections

Once a developer or contractor begins construction, DOB must inspect and approve certain elements of the work, namely general construction, plumbing, electrical, Builder's Pavement Plan (sidewalks and streets) and elevators.[146] Some inspections are performed during the progress of the work and the rest are performed when it is all complete. One of the continuing complaints has been the delays in scheduling inspections. DOB recognizes the need to increase staffing and improve scheduling to remedy this problem. According to DOB, the average number of business days to obtain a requested plumbing inspection appointment as of November 19, 2004 ranged from 12 to 20 depending on the Borough.[147]

Once an inspection is completed, further delays ensue in assuring that the results of the inspection are reflected in the computer records of DOB. To improve this aspect, DOB began a pilot in February of 2004 to automate the scheduling system and to provide handheld computerized devices to plumbing inspectors to report results of the inspections directly into the web-based DOB computer system. Despite glitches in the initial implementation of the new handheld devices (including periods when they were completely "down"),[148] there is great optimism in the development and contractor communities that this innovation will improve inspections. While one would expect an increase in the average number of inspections performed per day per inspector, this indicator has remained basically flat.[149] Experts suspect that the quality, rather than the quantity, of plumbing inspections has improved as handheld devices allow for better monitoring of inspectors. As plumbing inspections are improving, the inefficiencies of the construction and electrical inspectors, however, remain given the existing manual system. DOB had hoped to expand this pilot to other inspection areas, but has put the expansion on hold pending implementation of the larger computer system with which the handheld devices must interface. DOB has received funding approval to expand the automated scheduling system to other inspections, however, to improve the efficiency of scheduling inspections.

Related to plumbing inspections, DOB has allowed self-certification of this work by licensed plumbers since 1994. Under this procedure, the plumber notifies DOB that s/he will self-

[146] The other function that takes place during construction is renewal of building permits. Permits are timed to expire when the contractor's insurance policy expires. Currently, permits on projects without outstanding civil penalties can only be renewed by mail or in the Manhattan office which maintains insurance records. If the records were maintained on a computer network, permits could be renewed more efficiently or conveniently in each Borough Office. To achieve this, DOB plans to implement a pilot program in February of 2005 to allow contractors to register and renew the simplest permits on-line electronically.

[147] New York City Department of Buildings, Citywide Service Level of Plumbing/Sprinkler Inspection Appointments as of November 19, 2004. Report dated December 15, 2004. Because other types of inspections are not automated, there is no data available yet on the wait for those inspections.

[148] *See*, for example, Winnie Hu, "Balky Old New York Goes High-Tech, Using Gadgets to Improve Services," *The New York Times,* March 14, 2004 at 35.

[149] New York City Department of Buildings, Citywide Service Level of Plumbing Inspections Productivity from October 2003 to October 2004. Report dated December 15, 2004.

certify the work. With current staffing, DOB is able to respond within two business days whether it will accept the self-certification, allowing the construction project to keep moving. Contractors have praised this innovation in the inspection system which is analogous to the architect and engineer professional certification system for building plans.

One area that remains problematic is the interpretation of the Code as applied during inspections. Complaints continue that some inspectors are not properly trained and reject certain work upon inspection by misinterpreting the Code or DOB policy.[150] To challenge this misinterpretation, the contractor must make an appointment with an inspection supervisor and may have to go as high up the chain of command as the Borough Commissioner. Many contractors have said that they simply perform the additional or different work requested by the inspector despite the extra cost in order to avoid delays in project construction. After the corrective work is completed, however, the applicant must request another inspection (again with a wait of 12 to 20 business days depending on the borough) which is often performed by a new inspector who may have an entirely different interpretation of this or other Code requirements.[151] Analogous complaints have been made regarding inspectors from the Department of Transportation as it relates to inspections of sidewalks, curbs and streets shown on the Builder's Pavement Plan and regarding inspectors from the New York City Fire Department as it relates to inspection of fire standpipe systems. Again, the inspectors may require work beyond that shown on approved plans or beyond that required by applicable codes. This issue can only be resolved through increased training of inspectors and expedited reviews of challenged decisions.

Providing the results of the inspection to the applicant in the field at the time of the inspection has also helped move projects forward. With their handheld devices, plumbing inspectors provide summary pass/fail receipts and within one day, the detailed inspection results are available on the web. Since January of 2004, construction inspectors have provided detailed results of the inspection in the field in Manhattan and Staten Island, with a Citywide expansion expected in the first quarter of 2005. No results are provided by electrical, elevator or sidewalk inspectors.

C. Enforcement

During the construction process, enforcement agents and inspectors from various permitting agencies may inspect a construction site either in response to a complaint or as part of a regular route of inspections to ensure that violations do not exist. These agencies include DOB, DOT, the Department of Health and the Department of Sanitation. If the inspectors find a condition that is contrary to the applicable code, they may issue a violation that usually includes a financial penalty or may issue a "stop work order" to halt all construction. Builders continue to complain that these permitting agencies are over-zealous in their efforts

[150] In some cases, DOB policy is not written to specify precisely which items must be installed in order to pass the requisite inspection that is necessary for a sign-off. This is especially true in the plumbing division where inspectors have different interpretations of the methodology of counting fixtures and gas risers that are to be delineated on the "Schedule B" form, invariable leading to the need to file an amended Schedule B. However, as noted in Note 138**,** DOB will implement new initiatives in early 2005 to prevent Schedule B delays.

[151] One professional estimates that, depending on the DOB division and the availability of inspectors, it can take up to a month to obtain an appointment for a re-inspection.

to find violations and impose fines. The Department of Buildings, for example, issued 42,407 Notices of Violation in Fiscal Year 2004 (June 30, 2003 to July 1, 2004).[152]

The following is an example of unnecessary violations issued by the BEST squad (the Enforcement Division of DOB) provided by builders interviewed for this Report. On most construction sites, actual field conditions arise that require a building to be built differently than as shown on the plan. The architect of record usually approves any such changes, all of which will be reflected on what are called "as-built plans" that are filed with a Post-Approval Amendment request with DOB at the completion of the project. Even though these changes may not affect the safety or structure of the project during construction, builders complain that DOB will issue violations (with fines payable) for these changes rather than simply giving notice to the builder that any such changes must be reflected on the final plans when they are filed.

While the builders interviewed for this Report insist that they seek to ensure safety at their construction sites, they stated that the enforcement procedures of the permitting agencies in fact does not effect safety so much as impose financial penalties. For example, on large construction sites, inspectors from the federal Occupational Safety and Health Administration (OSHA) will in fact perform a walkthrough with the builder to make observations and recommend changes to improve site safety. These inspectors do not give violations unless the builder fails to implement the required safety changes. By contrast, builders note that many City permitting inspectors do not even get out of their cars when they identify a violating condition. Instead, the results of their inspections are written up and mailed to the builder and may arrive days or weeks later. If the inspectors were truly concerned about the safety condition, the builders note, the inspectors should meet with an on-site representative at that time to request correction of the violation. Since the mailed violation may not arrive for some time, the inspector may return for days following and continue imposing new violations for the same condition that will pile up on the project. This practice leads some builders to suspect that the inspectors are seeking to meet a violation quota (formal or informal) rather than to have the violating conditions corrected immediately. These violations carry fines, requiring the builder to hire a consultant or lawyer to appeal them at a hearing of the Environmental Control Board that enforces collection. Alternately, a builder will simply pay the fine at face value and add it to the cost of development rather than spend the time and money to pursue the challenge.

If an inspector deems a condition to be so severe as to warrant immediate correction, s/he may issue a "stop work order" to halt all construction. Builders complain that it can take days or weeks to obtain an appointment to show that either the basis for the order is incorrect or that the condition has been corrected. This loss of construction time obviously leads to large costs to a project in terms of time and money.

D. Sign-offs and Issuance of Certificate of Occupancy (CO)

In order to occupy a completed building, the applicant must obtain either a Temporary Certificate of Occupancy or a Permanent Certificate of Occupancy. Most newly-constructed housing is funded with a bank construction loan, together with developer's equity. The

[152] The City of New York, Mayor's Management Report, September 2004 at 92.

construction loan is funded piece-meal as the work is completed so that at the time that the developer applies for a CO, the construction loan is usually fully funded with the exception of contractor retainage. The largest cost of delay, therefore, is incurred as the construction interest accrues while the developer is waiting for a CO that will allow the building to be occupied and rent to be paid or units to be sold. Developers also incur the cost of insurance (which has skyrocketed post 9/11), security and utilities. In order for the CO to be issued, all applicable units of DOB must sign off on the completion and all existing violations of record must be removed. Given the relatively large costs incurred at the end of the project, more process engineering must be done to determine which violations can be removed and which signoffs can be approved earlier in the process.[153]

Prior to the full computerization of DOB records, it was difficult to obtain a clear picture of the violations that DOB still believed were "open" of record. The BIS system now allows for web-based disclosure of these violations; in fact, as of December 6, 2004, DOB implemented a new initiative to identify violations to the owner so that s/he can plan for their removal. The plan examiner gives the first notice when s/he issues objections and the Borough Office sends the second notice after the first construction inspection. A process for identifying these violations, however, has not been established for the almost 40 percent of the cases where the architect or engineer professionally certifies the plans.

Knowing the violations is one thing; removing them is another. The applicant must submit a certificate of correction showing that the violation has been corrected.[154] This process may get delayed when the applicant is attempting to show that the failure to file an annual boiler inspection is no longer relevant since the building has an entirely new boiler or that a very old elevator violation for an elevator that is no longer in the building failed an inspection. As of June 2004, DOB established a process to try to remove violations where it is obvious that the condition that led to the violation has been corrected. For example, an applicant may use DOB's own computer record that an elevator passed a comprehensive subsequent inspection to request removal of an earlier elevator violation. Similarly, an application for construction of a new building where an older building with boiler violations has been previously demolished will be the trigger for removal of these violations on the older building. This pilot program on boiler and elevator violations is being considered for expansion to other areas by the summer of 2005.

The larger source of delay and increased costs relates to coordinating all the divisions that need to sign off so that the CO can be issued. The results of inspections are transmitted by

[153] In early 2005, DOB plans to reduce the number of possible "Required Items" from 131 to 110 but DOB staff agrees that more work must be done to remove even more incorrect or obsolete items. DOB did adopt a changed procedure in March of 2004 that has prevented past delays in issuing COs. Previously, if a retail tenant on the ground floor, for example, had an "open" building permit application for work being performed in that store, the building's developer could not obtain a CO for the rest of the residential building above until the retail tenant closed its application. This procedure has been changed so that a CO can be obtained for the remainder of the building while the CO for the retail space is pending.

[154] The Environmental Control Board (ECB) is the New York City agency that adjudicates and enforces the payment of financial penalties that may accompany violations issued by city agencies, including DOB. A violation with a penalty will therefore end up on the systems of both the ECB and DOB. Correction of the condition on the DOB computer system does not remove the ECB violation. The penalty must be paid or successfully challenged in a separate hearing.

the inspector either electronically (the plumbing inspector) or manually (all other divisions). The division chief must then review the relevant folder and input a sign-off into the DOB system. Getting each of these sign-offs reflected in the computer leads to delays in issuing CO's. In April of 2004, DOB issued a streamlined process for obtaining a CO, reducing the steps needed from 88 to 45.[155] Obviously, 45 steps remains an onerous process that could be truly streamlined with full automation of the paper flow.

In one of the final steps of this process, a DOB staff member must confirm that all the items and sign-offs needed for a CO have been completed in order to issue the CO. Contractors have complained that some DOB staff have been confused about which items are needed for a CO. In March of 2004, therefore, DOB established a uniform two-page checklist with the 77 potential items that could be necessary to obtain a CO for one- or two-family houses. The very fact that there are 77 potential items on a one- or two-family house is a cause for concern. This form, however, does provide uniformity to the review. Complaints now remain that if there are one or two items missing on the checklist, the applicant must meet again with a DOB staff person who will begin once again to review all 77 items rather than the two that might be missing. DOB is working to train staff to avoid these duplicative reviews, especially since a different interpretation might result from a second review and other items might now be considered "open," requiring additional submissions and reviews.

Developers prefer to obtain a Permanent CO (PCO) rather than a Temporary CO (TCO) which must be renewed every three months, but they often seek TCOs as these allow occupancy of the building while certain administrative procedures are completed. The procedures include primarily the sign-off on the electrical work and the removal of violations. With better coordination of these two items earlier in the CO process, it would be possible for all developers to seek PCOs rather than TCOs. The problem with a TCO is that an unscrupulous developer who is selling homes or apartments to buyers might fail to complete the procedures that are necessary to eventually obtain a PCO after the sale is closed. Because of the prevalence of this problem in Staten Island, DOB has stopped issuing TCOs for one- and two-family houses and required developers to obtain PCOs.[156] While preventing hardship to homebuyers, this has driven up the cost of housing as the units sit vacant while these processes are completed. These costs are necessarily passed onto homebuyers either in the current project or in a developer's cost projection for future projects.

II. Recommendations

It is obvious from the above narrative that DOB has undertaken and continues to introduce numerous initiatives and innovations in the last few years to simplify the process from pre-

[155] DOB plans to implement another initiative in March of 2005 to automatically produce an electronic and validated CO document that would draw data from the data fields on the BIS computer system. Unnecessary data fields on the document would also be eliminated.

[156] DOB recently increased the escrow that a developer must post in the limited circumstances when they are permitted to obtain a TCO rather than a PCO for a one- or two-family house in Staten Island from $2,500 per house to $6,500. An even steeper increase in the escrow (which is refundable) could provide the right incentive for a developer to complete the process while allowing others to obtain TCOs so that houses or apartments could be sold or rented while the process is completed.

filing of plans through issuance of a Certificate of Occupancy. There is clearly a senior management team dedicated to attempting to "re-engineer" the process but which is still dependent on a large field staff to implement these reforms. Given the fear of decision-making evident in the culture of DOB, however, the value of some of these innovations is being lost in the implementation stage. Recommendations repeated from the 1999 Cost Study are indicated with "1999."

A. Focus on the Culture of DOB Staff

As noted, there is a pervasive level of fear of decision-making throughout the agency leading to unnecessary delays. While integrity is crucial, staff must be given written reassurance that they will not be prosecuted or punished for incorrect decisions unless these decisions rise to the level of gross negligence. This reassurance must be followed by strong and constant reinforcement signals from all levels of top management.

B. Continue Increasing and Upgrading Staff

In 2002, DOB had approximately 125 vacancies for staff members, leading to long delays in processing. In the last two years, DOB has hired 324 new staff members, 50 of whom are registered architects or engineers. Because of retirements and resignations, this has led to a net increased headcount of 125 staff members, continuing to leave a need to fill funded vacancies.[157] DOB generates substantial revenue from the fees it charges, totaling $99.4 million in FY 2004, but only spent $59.7 million.[158] More of this "profit" should be spent to create a top-notch and well-staffed department that will be able to prevent delays in obtaining appointments for plan examination, inspections and sign-offs for Certificates of Occupancy.

C. Unify Training Across Boroughs

DOB has established forums in which staff from all boroughs meet together to discuss procedures and interpretations. More must be done to reduce to writing the outcome of these meetings so that the five independent fiefdoms operate simply as field offices of the same commander.

D. Automate and Eliminate Pre-filing

The pre-filing procedure should be folded into the plan examination submission process which should be further automated. With electronic filing of applications with CAD submissions, the need for data inputting will be minimized. Electronic forms should be established with clear checklists that each applicant would be required to complete. As part of this automation, DOB should reevaluate each of the items now required as part of the application. Some items have already been eliminated and more can be. In addition, those items that can be submitted later in the process when the information is likely to be more certain should be allowed in order to expedite plan reviews and approvals.

[157] New York City Department of Buildings, 2002/2003 Initiatives, December 16, 2004 at 7.
[158] The City of New York, Mayor's Management Report, September 2004 at 96.

E. Document Value of Innovations

DOB has undertaken an unprecedented number of process innovations. The outcomes of these innovations should be measured with concrete indicators that are collected by Borough Office (and if possible, by unit or employee). The indicators should be specifically tied to customer service outputs such as the major milestones of plan review, inspections and issuance of Certificates of Occupancy. These indicators will allow managers to reallocate responsibilities, evaluate the value of the innovations and continue to make new innovations as weaknesses are identified. Productivity increases can also be used to document the increased value of certain types of employees to support higher salaries commensurate with their larger outputs and responsibilities.

F. Replace Policy and Procedures Notices with Directives

Policy and Procedures Notices (PPNs) are currently filed in chronological order with no index. Without searching the entire data base, a professional has no idea if a PPN on a particular subject has been overruled by another later one. While it is a large undertaking, all the PPNs on each substantive topic should be reviewed and then subsumed into a single Commissioner's Directives establishing the definitive ruling on that topic. In particular, one of the first Directives should establish conclusively the methodology for counting (or sampling) fixtures and risers to be included in Schedule B filings which leads to long delays in obtaining Certificates of Occupancy.

G. Commit the Resources Necessary for an Agency-wide Computer System

DOB has made extraordinary strides in the computerization of its systems and in making records available on the web. Staff has begun the procurement process for an internal processing and tracking system (that includes electronic filing) that must proceed as soon as possible. The necessary infrastructure investments should be undertaken to make processing seamless and electronic. As interim measures, DOB should allow PC filing of Post-Approval Amendments (PAAs) and should expand its planned initiative to permit electronic renewal of all permits. **(1999)**

H. Create Electronic Folders

To prevent delays from "lost" application folders, DOB should establish a system (possibly as part of its Agency-wide Computer System referenced above) for applicants to submit electronic folders that are available throughout the DOB computer network that simply could not get "lost."

I. Expand Handheld Devices to All Inspectors

DOB has wisely implemented a pilot program to get the "kinks" out of a process for quickly reporting inspection results by one unit of inspectors. The results of this pilot should be used to expand these devices to all inspectors. While investment in the central computer system is necessary to support them, this should be a priority of the information technology agenda of the agency.

J. Training, Training, Training

of plan examination, inspection and administrative staff is the only hope for resolving mistaken interpretations of the Code. With the introduction of numerous service innovations in the last year and proposed for the next year, constant training will be needed simply to assure proper implementation. DOB has developed a detailed course curriculum for its staff and established an ambitious schedule of training sessions. While most courses are taught by internal staff, DOB should consider the whole range of training options as some employees may learn better than others from different systems. Experiments with dedicated DOB trainers, outsourced trainers and peer-to-peer training should all be tried. At all levels of staff, an expectation of the equivalent of continuing education should be established to assure that all staff participates. As a final phase, staff should be tested and evaluated to assure full comprehension.

K. Enforcement and Fines Imposed During Construction

The city agencies responsible for imposing fines should establish clear and consistent guidelines that describe when fines will be issued on construction projects. Inspectors should perform walk-through inspections and recommend safety improvements which, except in the case of immediately hazardous conditions, should result in violations only if the builder fails to correct the conditions. All inspectors should be required to provide a copy of the violation to an on-site representative at the time the violation is issued to ensure correction of the condition and to minimize unnecessary fines. A special procedure should be established in all agencies authorized to issue a "stop work order" for an appeal of such order within one business day of its issuance. Inspection supervisors should spot-check the bases for violations and "stop-work orders" to ensure that arbitrary or obvious errors do not delay construction.

L. Violation Removal

As DOB has begun, it should expand preemptory removal of obviously incorrect or obsolete violations. DOB should consider establishing a system that would allow self-certification of violation removal by architects or other professionals. The DOB and ECB computer systems of violation tracking must be linked to allow "one-stop shopping" whereby an applicant can correct the condition and pay the penalty to effect joint removals of violations on both systems related to the same underlying condition.

M. Continue Streamlining and Automating the CO Process

DOB recognizes the cumbersome process involved in obtaining sign-offs and issuing CO's. Continued process engineering must be used to eliminate more steps and to automate submissions. DOB should evaluate which items could be eliminated and which could be satisfied early in the CO process to prevent delays in issuing final CO's. As tempting as it may be, in order to protect against unscrupulous developers, the TCO option should not be eliminated as this is the only outlet for housing developers to avoid

substantial losses from completed but unoccupied buildings. If need be, the escrow required when issuing TCOs should be significantly increased to a figure on the order of $15,000 to $20,000 per house to provide the incentive for the developer to obtain the PCO.

Chapter 10:
New York City
Affordable Housing Development Programs

I. Statement of the Issue

One of the biggest drivers of new housing construction in New York City is its Department of Housing Preservation and Development (HPD) and the financing provided by the New York City Housing Development Corporation (HDC). HPD is most likely the largest municipal producer of affordable housing in the country[159] and is largely responsible for the rebuilding of many once-devastated low-income neighborhoods. Of the new construction building permits issued in New York City in fiscal year 2004, approximately 23 percent participated in City-run affordable housing programs.[160]

HPD's mission is to preserve and develop affordable housing. In the most recent fiscal year, HPD and HDC together funded construction starts on 10,201 units under the New Housing Marketplace Plan, of which 51 percent were new construction and the remainder rehabilitation.[161] HPD's tools consist of contribution of vacant City-owned land, allocation of the federal Low Income Housing Tax Credit and grant dollars, provision of low-interest loans and coordination with HDC's financing activity. Additionally, HPD administers the City's real estate tax incentive programs and its existing inclusionary housing program (*see* Chapter 11).

In the case of HPD- and HDC-funded projects, it is the taxpayer who suffers from the high cost of housing construction and any inefficiencies on the part of these two organizations. In this chapter, we therefore review the efficiency of HPD and HDC in the administration of their programs and recommend ways to optimize the use of resources in connection with new construction of affordable housing.[162]

A. Design versus Cost Control

As a funder of affordable housing, HPD seeks to assure that the housing produced meets quality and design standards. HPD has therefore established guidelines to ensure that all housing units it funds meet minimum standards for room sizes and amenities such as

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[159] *See* Arnold H. Lubasch, "Reports Contrast Housing in New York City," *New York Times*, July 30, 1989 at 31 (citing a report conducted by the New School for Social Research upon commission by the City, which found that New York City spent much more money to build and rehabilitate affordable housing than all of the next 50 largest cities combined).

[160] According to the U.S. Census Bureau's Building Permits Survey, permits for 22,797 new housing units were issued from July 2003 through June 2004. During the same period, construction started on 3,112 new units as part of HPD programs and 2,056 new units as part of HDC programs. *The Mayor's Management Report Fiscal 2004* (hereinafter "*MMR*") at 106. The percentage quoted above is approximate because the timing of building permit issuance does not necessarily coincide with the start of construction.

[161] *MMR* at 106.

[162] Although the New York State Division of Housing and Community Renewal and the United States Department of Housing and Urban Development play similar roles on the state and national levels, respectively, this Report focuses on HPD and HDC because they play the largest and most important housing development role in New York City.

kitchen counters and storage. However, HPD's Bureau of Design and Review not only seeks to ensure compliance with these guidelines, but also suggests revisions to achieve design changes above basic standards. Different HPD reviewers may have different standards, and the suggestions are sometimes uneconomical: for instance, redesigning an apartment to have one large bedroom rather than two smaller ones, despite compliance with HPD guidelines for two-bedroom apartments. Some developers report that HPD staff mistakenly claim that their suggested revisions are in fact mandatory under HPD's guidelines, resulting in delays, multiple reviews and increased costs to developers.

Of course, HPD recognizes that it has limited resources and seeks to optimize their use. One way to do so is to control development costs so as to limit the subsidies required to create affordable housing. It is common wisdom that the cost of a government-funded project is likely to increase to absorb the amount of the subsidy available. In an effort to guarantee the lowest cost, HPD generally chooses developers on the basis of competitive bids. However, competitive bidding sometimes lead to artificially low bids that ultimately result in higher costs through change orders (despite the agency's use of "Guaranteed Maximum Price" contracts). Some observers note that HPD had greater success controlling costs when it negotiated contracts on a case-by-base basis with contractors who were selected based on their qualifications.

HPD generally sets a limit on hard costs and soft costs in its programs. Because the developer's fee in these programs is generally a function of unsubsidized total development costs, there is no incentive for developers to control costs. As a result, the cost limits become not so much upper limits as a prescription for what the costs will be. HPD might have greater success controlling costs if it were to implement market-based incentives for cost reduction that enabled developers to capture part of any cost savings they might realize. For instance, developers who propose costs below the limits of a given program might be able to reduce their equity requirement or increase their developer's fee by half the amount of the cost savings.

B. Loan Conversion Delays

Additional costs to developers (albeit less so to HPD) result from delays in conversion from construction to permanent financing once construction is complete and a Certificate of Occupancy is issued on HPD projects. HPD generally plans for a three month conversion period to allow for proper documentation of tax abatements, tax credits and permanent loans, but HPD does not track actual conversion lags. Developers report that loan conversion invariably takes longer than three months. Delays can be costly. One developer interviewed for this Report estimated that on one delayed project, he incurred additional costs of $1,900 per day, including construction loan interest, insurance, and security. Certain delays are caused by the Department of Buildings (DOB), which is slow to remove old building code violations (in many cases, for buildings that have long since been demolished), and HPD has sought to improve coordination with DOB to expedite violations removal. Other delays are caused by HPD, whose program staff may be slow to finalize underwriting on tax credit deals and whose understaffed legal department is slow to prepare closing documents. HPD appears less concerned about such delays, on the theory that developers would rather pay a construction interest-only loan rather than an amortizing permanent loan. In fact, permanent loan closing delays increase the total cost of a project by adding the

above interest and other costs, deferring the triggering of City subsidies at conversion and – in the case of tax credit deals – postponing the final payment of investor equity.

C. Land Sale Proceeds

Whereas in the past HPD used to sell vacant land and buildings to affordable housing developers for a nominal sum, as land prices have increased in recent years, HPD has found that developers are willing to pay for certain lots and has begun to charge accordingly. HPD estimates that on average it receives $14 million annually in proceeds from the sale of vacant land.[163] Such funds generally go back to the City's general fund.[164] At best, in the case of a big project, HPD may receive credit for such funds toward the inevitable annual expense budget reductions. But such funds do not remain within HPD so that it may replenish its supply of land. If these funds were so deployed, it would provide funding for HPD to condemn and purchase privately-owned lots that are interspersed among City-owned lots in order to assemble parcels of land suitable for housing development.

D. Land Availability

In December 2002, the Mayor unveiled the "New Marketplace" plan to preserve and create over 65,000 units of affordable housing within five years,[165] of which approximately 25,000 units will be newly-constructed and the remainder will be renovated.[166]

All of HPD's new construction projects to date have been developed on City-owned land – generally, land to which the City gained title through *in rem* tax foreclosure. In the five year period beginning in mid-1998, HPD developed 11,795 new construction units on City-owned land. With the advent of the Third Party Transfer program, the City has not taken title to land since 1994, and HPD's inventory of *in rem* vacant lots therefore dwindled to approximately 2,500 properties in 2004. HPD estimates that its remaining vacant land can accommodate over 7,000 of the new units to be built under the New Marketplace program.[167] The remaining units are expected to be built on privately-owned land acquired through the New Ventures Incentive Program[168] (*see* Chapter 5) for the acquisition of land in manufacturing areas rezoned for residential use and on a combination of other privately-owned land and City-owned land controlled by other agencies.

The remaining lots of City-owned land are often interspersed among privately-owned land and/or buildings. On blocks where relatively few lots are privately-owned, affordable

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163 Data provided by HPD staff for fiscal years 2001 through 2004. HPD does not keep track of the imputed value of land sold to developers for nominal cost, but believes the value of such land far exceeds the proceeds from land sold at higher rates.

164 The $14 million figure does not include a total of $1.5 million from fiscal years 2001 through 2004 in proceeds from land acquired with federal funds. HPD does retain such sale proceeds because by law they must go back into Community Development Block Grant-eligible activities.

165 *The New Marketplace: Creating Housing for the Next Generation*, December 2002 (hereinafter "*New Marketplace*") at 8.

166 *The New Housing Marketplace: Creating Housing for the Next Generation, Progress Report 2003* (January 2004) (hereinafter "*Progress Report 2003*") at 33.

167 *New Marketplace* at 8.

168 *New Marketplace* at 12.

housing is more economically feasible if development can include these privately-owned lots. In such situations, HPD generally advises would-be affordable housing developers to negotiate purchase of the privately-owned lots. It would be more cost effective, however, for HPD to use its power of eminent domain to condemn such properties (or to use the threat of condemnation) to create land assemblages suitable for development. If HPD lacks funds to compensate the property owners itself, it can arrange for compensation by the affordable housing developers to whom it plans to transfer title of these properties, as HPD has already done in a limited number of cases.

In a time of rising land costs, land from other City agencies represents a good opportunity for affordable housing development. Such agencies include: the New York City Housing Authority, which has under-utilized floor area ratio on its sites;[169] the Health and Hospitals Corporation, which has partially-utilized facilities; Department of Transportation municipal parking lots; and the Economic Development Corporation. The City does not have in place a systematic way to identify such land, although the 1999 Cost Study recommended that the City create an inventory of such properties. The New Marketplace plan calls for the disposition of City-owned property to be centralized under the Deputy Mayor for Economic Development and Rebuilding, but this has not yet been done. This centralization would potentially facilitate the transfer to HPD of land controlled by other City agencies that is appropriate for housing development.

E. New York City Housing Development Corporation (HDC)

With a governing board that is controlled by the Mayor and the Governor, HDC is a public benefit corporation that issues housing bonds. In 2004, HDC financed the construction of 3,689 units of affordable housing and 410 units of market rate housing by issuing $445 million in tax-exempt and $107 million in taxable bonds and lending $91 million of its reserves at low interest.[170] HDC generated a surplus of $65 million from a combination of fees and interest rate spreads in 2003, and its net assets exceeded $777 million by the end of that year. HDC appears to play an increasingly prominent role in HPD's programs; it is anticipated to fund 78 percent of New Marketplace new housing construction.[171] Specifically, HDC has committed a total of $500 million to fund development under the New Marketplace plan, of which $450 million will be used to build 10,000 new (or renovated) units.

Because HDC issues tax-exempt bonds, its cost of capital is lower than conventional lenders. However, the benefit of low interest rates is not fully passed on to borrowers. Moreover,

[169] In 1991, Mark Kwartler and Associates estimated that NYCHA held land suitable for 15,000 additional units of housing without changing bulk allowances. "Building in Your Backyard: Affordable Land for Affordable Housing" (1991).

[170] Data provided by HDC staff. Beginning August 2004, HDC considers housing to be affordable if 75 percent of units are affordable to people at or below 175 percent of area median income (AMI) and the remainder are affordable to people at or below 250 percent of AMI. However, most of the affordable units financed by HDC are affordable to households earning less than those amounts.

[171] The NYC Independent Budget Office estimates New Marketplace new construction costs at $837.2 million, of which HDC will provide $450 million from its reserves and an additional $200 million loan for the New Venture Incentive Program. "Priorities Shift in City's Plans for Spending on Housing," (NYC Independent Budget Office, Inside the Budget, Number 124, December 4, 2003 at 3).

this potential benefit is eroded further when HDC issues permanent bonds at construction commencement and the bond proceeds must be reinvested (generally at lower interest rates) until permanent loan closing. Depending on interest rates, this cost of "negative arbitrage" may exceed 300 basis points. Developers could be spared the cost of negative arbitrage if HDC would more readily issue floating-rate bonds during construction, to be taken out by fixed rate bonds upon conversion to permanent loan or if it would permit borrowers to obtain conventional construction loan financing from a bank and simply provide a "forward commitment" for permanent financing funded with bond proceeds.[172] Some developers report that the only reason they choose HDC financing is that doing so results in a longer real estate tax abatement.[173] Additionally, some developers suspect that HDC sets its rates so that its products will be just barely more attractive than conventional financing. If true, this practice may not be objectionable in relation to HDC's market rate activity insofar as proceeds from such deals are used to subsidize affordable housing, but it does not make sense to charge high rates to affordable housing projects.

HDC finances primarily rentals and to a far lesser extent cooperatives. Whereas homeownership (including cooperatives) represented 14 percent of HPD new construction completions in fiscal year 2004, cooperatives accounted for only five percent of HDC activity in calendar year 2003.[174] HDC has claimed that its resources were best deployed for rental housing, noting that financing requested per unit for rentals is significantly smaller than for homeownership projects as homeownership developers recover their investment up front, whereas rental developers collect their return over time. In a promising move in December 2004, however, HDC introduced a new program to finance affordable cooperative developments. To the extent the City's priorities for affordable housing development involve not only rental housing but also cooperatives, HDC's reserves should be made available through this new program to finance cooperative development.

II. Recommendations

HPD has been one of the nation's most innovative and productive public agencies in the development of affordable housing. In order to more effectively deploy its limited resources, we make the following recommendations. Those that remain outstanding from the 1999 Cost Study are indicated with "1999."

A. Bureau of Design and Review

HPD's Bureau of Design and Review should limit itself to its mission of ensuring compliance with the NYC Building Code, Zoning Resolution and HPD's Design Guidelines. It should not mandate recommendations to achieve housing quality above design guidelines;

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[172] Of course, this structure would expose the developer to the risk that a rise in long-term interest rates during the construction period would offset any savings to be had from avoidance of negative arbitrage.

[173] Receipt of governmental assistance results in a tax abatement of longer duration under Section 421-a. *See* Chapter 11.

[174] Cooperatives represented five percent of activity by number of units (223 of 4,316 units) and under two percent of dollar activity ($14 million of $794 million) for new activity – as opposed to refinancings – in 2003. According to the *MMR*, construction was completed on 7,991 units, of which 1,628 units were in homeownership buildings, and 67 percent of the 1,628 units (e.g. 1,091 units) were owner-occupied. *MMR* at 106. It is not clear what percentage homeownership HPD intends to fund going forward.

B. Cost Saving Measures

1. Negotiated Bids: HPD should perform an empirical analysis to understand the impact of change orders on competitively bid contracts and determine whether there may be cases in which negotiated bids would ultimately be more cost effective than competitive bids;
2. Market-based Incentives: To the extent developers are able to develop projects with hard and/or soft costs below HPD's limits, their equity requirements should be decreased or developer's fee increased by half the amount of the reduction in order to encourage saving of limited subsidy funds;

C. Delays in Loan Conversion

1. Coordination with DOB: DOB now lists all pre-existing building violations on its website. HPD should work with DOB to remove these violations within 90 days of construction closing in order to prevent loan conversion delays;
2. Mayor's Management Report: The Mayor's Management Report should track the number of days from construction completion to conversion to permanent financing on HPD projects;
3. HPD legal staff should be increased in order to eliminate delays in conversion to permanent financing;

D. Land Sale Proceeds

HPD should be allowed to retain proceeds from the sale of City-owned land to subsidize the acquisition of privately-owned lots that are interspersed among City-owned lots in order to assemble larger parcels of land suitable for development;

E. Land Availability

1. On blocks where relatively few lots are privately-owned, HPD should use its power of eminent domain to condemn such properties (or the threat of condemnation) in order to create land assemblages suitable for development. If HPD lacks funds to compensate the property owners itself, it can arrange for compensation by the affordable housing developers to whom it plans to transfer title of these properties, provided the project is economically feasible; **(1999)**
2. HPD should implement a process to identify vacant land and underutilized buildings controlled by other City agencies that are suitable for housing development; **(1999)**
3. The Deputy Mayor for Economic Development and Rebuilding should consolidate control of City-owned land in order to facilitate the transfer to HPD of City-owned land controlled by other City agencies that is appropriate for housing development;

F. New York City Housing Development Corporation (HDC)

1. For affordable housing projects, HDC should lower its rates on bonds;
2. For developers who are willing and able to assume the risk of rising interest rates, HDC should more readily issue floating-rate bonds during the construction period or issue "forward commitments" for permanent financing that will enable borrowers to obtain construction financing from a bank in order to avoid the cost of negative arbitrage; and
3. HDC should expand its new program to finance affordable cooperative developments in order to facilitate HPD homeownership programs.

Chapter 11:
Inclusionary Zoning

I. Statement of the Issue

Inclusionary zoning (IZ) programs either require or provide incentives to developers to make a certain percentage of newly developed or rehabilitated housing units affordable to people of low or moderate income. New York City currently has a voluntary IZ program that has produced approximately 600 units of affordable housing since its inception in 1987. New York City Councilmember David Yassky and Brooklyn's Community Board One, which includes Greenpoint and Williamsburg, have proposed a mandatory IZ program in areas that are to be rezoned from manufacturing to residential uses. The New York City Department of City Planning (DCP) and Department of Housing Preservation and Development (HPD) have responded with a proposal for a voluntary program that would give a density bonus to developers choosing to build affordable housing in Greenpoint/Williamsburg.[175] Regardless of the particular plan that is chosen, if any, it is important that the plan not be overly restrictive and thus risk freezing housing development.

A. Background

Inclusionary zoning programs originated in the 1970s in response to housing discrimination uncovered in the prior decade and the programs proliferated in the 1990s, partly in response to the real estate boom.[176] An estimated 350 to 400 local jurisdictions currently have either voluntary or mandatory programs, with a concentration of programs in three states: Massachusetts, California and New Jersey.[177] The movement for inclusionary zoning has gained momentum recently, with Boston, San Francisco, Denver, San Diego and Sacramento all having adopted or expanded mandatory programs in the last five years.[178] Typical programs require a set-aside of ten or 15 percent of units as affordable to households at 80 percent of area median income in projects with ten or more units. In exchange for this set-aside, typical voluntary programs provide some form of compensation, such as increased density allowances.

Inclusionary zoning raises both legal and economic issues, discussed in turn below.

From a legal perspective, it is important to determine whether an IZ program involves an unconstitutional taking of property rights. The Supreme Court has not reviewed any IZ programs *per se*, but has held in the context of individually negotiated dedications of land (e.g. easements), that for such actions to be a valid exercise of police power, there must be some "essential nexus" between the required dedication and its avowed public purpose,[179]

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[175] As described below in Note 190, a similar program has recently been enacted as part of the rezoning of Hudson Yards in Manhattan. This chapter focuses on Greenpoint/Williamsburg as a case study, but the issues are similar across neighborhoods.

[176] *See generally* Douglas R. Porter, *Inclusionary Zoning for Affordable Housing*, Urban Land Institute (2004) at 5-21.

[177] Id. at 16. These states have either fair share requirements or "builder's remedies," allowing developers to skirt local zoning restrictions for certain projects containing affordable housing.

[178] Nick Brunick, Lauren Goldberg and Susannah Levine, "Large Cities and Inclusionary Zoning," Business and Professional People for the Public Interest (November 2003) at 15, available at www.bpichicago.org.

[179] Nollan v. California Coastal Commission, 483 U.S. 825 at 837 (1987).

and that the burdens placed on a landowner must be "roughly proportional" to the benefits to be garnered by the municipality.[180] Courts are split, however, as to whether this two-part test applies to legislated impact fees, which include mandatory IZ programs.[181] Because of this split, the level of scrutiny that a court would apply to a mandatory IZ program is uncertain and could potentially be the subject of litigation.

Assuming for the sake of argument that a court would apply the two-part test to a mandatory IZ program, a carefully-considered program would likely stand up to the test. With regard to "essential nexus," in the case of mandatory programs it appears there is a nexus between the exaction (requiring affordable set-asides) and the burdens that new market rate developments could place on a community (e.g., potential displacement of low- and middle-income residents and the creation of a need for workforce housing to supply the teachers, firefighters, police, nannies and housekeepers that market rate development requires).[182] With regard to "rough proportionality," the Supreme Court has held that although "no precise mathematical calculation is required… a city must make some sort of individualized determination" that a requirement "is related both in nature and extent to the impact of the proposed development."[183] While it is true that an IZ program does place a particularized burden on developers to create affordable housing, a municipality may reasonably believe that the development of large swaths of purely market rate housing could adversely affect housing affordability by decreasing the supply of affordable housing, displacing residents and/or creating a need for additional workforce housing. If New York City were to implement an IZ program, it would therefore be advised to set the program requirements only after carefully analyzing the impact of the market rate development on the community's supply of, and demand for, affordable housing.

From an economic perspective, inclusionary zoning raises the question of who should bear the cost of building affordable housing. Proponents claim it is appropriate for landowners

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[180] Dolan v. City of Tigard, 512 U.S. 374 at 391(1994).

[181] More courts appear to oppose application of this two-part (Nollan/Dolan) test to legislated impact fees. *See*, e.g, Ehrlich v. City of Culver City, 911 P.2d 429 (Cal. 1996) (holding that Nollan/Dolan applied to fees imposed on an individualized, discretionary basis, but not applying Nollan/Dollan to an across-the board legislatively imposed art fee); Rogers Machinery, Inc. v. Washington County, 45 P.3d 966 (Ore. Ct. App. 2002), *cert. denied,* 538 U.S. 906 (2003) (holding Dolan does not apply to fees imposed on broad classes of property owners pursuant to a legislatively set formula); San Remo Hotel, L.P. v. City & County of San Francisco, 41 P.3d 87 (Cal. 2002) (same); McCarthy v. City of Leawood, 894 P.2d 836 (Kan. 1995) (same); Home Builders Ass'n of Central Arizona v. City of Scottsdale, 930 P.2d 993 (Ariz. 1997) (same); Parking Ass'n of Georgia v. City of Atlanta, 450 S.E.2d 200 (Ga. 1994) (same) (*see* Justice Thomas' dissent from denial of cert, at 515 U.S. 1116 (1995) lamenting the state and lower courts' views on this issue). *But see* Home Builders Ass'n of Dayton v. City of Beavercreek, 729 N.E.2d 349, 355 (Ohio 2000); and Town of Flower Mound v. Stafford Estates Lmtd Partnership, 71 S.W.3d 18 (Tex. Ct. App. 2002). It is noteworthy that the Supreme Court recently granted cert in San Remo, but declined to review the second question presented, which was: "2. Is deferential scrutiny, akin to the rational basis test, appropriate for exactions imposed by legislation even though exactions imposed by administrative adjudications are subject to heightened scrutiny under Nollan v. California Coastal Commission and Dolan v. City of Tigard?" 125 S. Ct. 685 (2004). *See generally*, J. David Breemer, "The Evolution of the 'Essential Nexus:' How State Courts Have Applied Nollan and Dolan and Where They Should Go from Here," 59 Wash. & Lee L. Rev. 373 (2002).

[182] Some could argue that the nexus is weaker in New York City, where rent control and stabilization laws already serve to protect residents from displacement. The nexus likewise becomes weaker if the affordable housing is permitted to be placed off-site, so the community preservation argument is weakened.

[183] Dolan, 512 U.S. at 391.

to bear this cost, especially to the extent they benefit from government action allowing for an increase in housing density or a change in permitted use and thus in land value. Opponents claim that although affordable housing may be a worthwhile goal, it is a public benefit and as such should be funded by the general public rather than by landowners, in particular. Some opponents claim the rationale for a change in use or density should be for zoning or city planning purposes and that government should not effectively tax the increased value resulting from increased density, just as it does not compensate landowners when density is decreased. More ominously, opponents warn that mandatory programs will make development less profitable and therefore freeze housing production.

A policy analysis of who should bear the cost of affordable housing development is beyond the scope of this study. The question of whether mandatory IZ programs will dampen or freeze housing development is, however, germane to the cost of new housing construction.

B. Effects on Development of Inclusionary Zoning Programs

Empirically, the effects on development of existing IZ programs have not been studied widely. One 20-year study of 28 cities in California with and without IZ programs found no correlation between a city's adoption of inclusionary zoning and a reduction in housing development activity.[184] Three possible explanations for the apparent lack of dampening on housing development are worth noting.[185] First, many IZ programs provide compensatory measures to developers to defray the cost of building affordable units, whether in the form of density bonuses, relaxed development standards or subsidies. Second, some of these programs are in fast-growing real estate markets, in which high market rate rents and sales prices cross-subsidize affordable units. Third, land prices likely adjust downward to reflect the inclusionary zoning requirements, thereby leaving the economics of what is built on the land unaffected.

Two studies performed by the Reason Foundation, a libertarian think tank, claim that IZ programs in California have adversely affected housing development. A study of 45 jurisdictions in the Bay Area found a 31 percent average decrease in new building permits in the year following IZ adoption, and a study of eight cities in Los Angeles and Orange counties found a 61 percent decrease in new building permits in the seven years after IZ adoption.[186] Critics of these studies, however, point out that they lacked a comparison to cities without IZ, that they failed to consider the effect of economic or other factors on

[184] David Rosen, "Inclusionary Housing and its Impact on Housing and Land Markets," in *Inclusionary Zoning: The California Experience*, National Housing Conference Affordable Housing Policy Review, Vol. 3, Issue 1 (February 2004) at 41. In one of the cities surveyed, Oceanside, California, residential permit activity dropped immediately after passage of inclusionary zoning in 1991, but the author of the study attributes the drop to a dramatic increase in vacancy rates due to the Gulf War, in view of the fact that the city is located next to U.S. Marine Corps Camp Pendleton. *Id.* at 38.

[185] Nicholas Brunick, "The Impact of Inclusionary Zoning on Development," Business and Professional People for the Public Interest (undated) at 14-15, available at www.bpichicago.org.

[186] Benjamin Powell and Edward Stringham: "Housing Supply and Affordability: Do Affordable Housing Mandates Work?" (Reason Public Policy Institute, Policy Study 318, April 2004) at 20; Benjamin Powell and Edward Stringham: "Do Affordable Housing Mandates Work? Evidence from Los Angeles County and Orange County" (Reason Public Policy Institute, Policy Study 320, June 2004) at 16. Both publications available at www.rppi.org.

housing production levels, and that given the multi-year planning process for housing developments, the effects of a new policy are unlikely to be seen in a single year.[187]

Conceptually, voluntary programs are generally unlikely to dampen development since they are by definition optional. Voluntary programs that are implemented alongside restrictions of as-of-right zoning or systematic underzoning of an area, however, may effectively be mandatory programs. For instance, an action that decreases the as-of-right density but allows developers who "volunteer" to build a certain number of units of affordable housing to build to the old as-of-right density would essentially be a mandatory program. Such "voluntary" programs may stifle development if sufficient additional benefits are not provided to offset newly-imposed requirements. Such voluntary programs, if any, should be analyzed as mandatory programs.

Mandatory programs will dampen development if they reduce developer return expectations below certain thresholds so that developers choose to abstain from building or are unable to obtain financing to permit development. If these thresholds appear unachievable, developers will reduce the price they are willing to pay for land, thus reducing the value of the land itself. If land prices adjust downward to reflect a decrease in value resulting from imposition of an IZ mandate, such a mandate is financially feasible provided it enables developers to achieve their expected threshold returns.

In the short term, however, it is important to consider not only land's ultimate residual value but also current land prices. Landowners may be reluctant to sell below a certain price – whether it be the price at which the land was initially acquired, the price the landowner believes the land may be worth under some hypothetical future rezoning, or some price in between. It is therefore possible that a mandatory regime that is financially feasible may nonetheless dampen development in the short term because landowners may not agree to sell land at prices reflective of its decreased value.[188]

C. Existing New York City Programs

New York City has had a voluntary IZ program since 1987.[189] The "Inclusionary Housing" program was adopted as an amendment to the City's Zoning Resolution and applies only in dense residential districts, providing a maximum density bonus of up to 20 percent in areas zoned R10, for an increase of floor area ratio (FAR) from 10.0 to 12.0.[190] This bonus allows

[187] Victoria Basolo and Nico Calavita, "Policy Claims With Weak Evidence: A Critique of the Reason Foundation Study on Inclusionary Housing Policy in the San Francisco Bay Area" (unpublished, June 2004).

[188] To the extent landowners refuse to lower their sales prices, developers may only be able to build new housing under a mandatory IZ regime if they can pass on these high land costs to market rate renters and buyers. Since there is less demand for housing at higher rents/sales prices, fewer housing units will be developed unless landowners lower their sales prices.

[189] Prior to 1987, the City had inclusionary zoning programs in four neighborhoods (Lincoln Center, Yorkville, Manhattan Bridge, and Clinton Special District), none of which produced any affordable units, according to DCP.

[190] *See* NYC Zoning Resolution, art. 2, ch. 3, sec. 23-90, adopted May 21, 1987. In January 2005, the Inclusionary Housing program was amended as part of the rezoning of Hudson Yards in Manhattan to allow *inter alia*, a greater FAR bonus and combination of the program with other benefits, including tax abatements and permanent tax-exempt bond financing. As a result of these changes, HPD estimates that 25 percent of

up to four additional square feet of market rate housing for every one square foot of additional housing that is affordable to households at 80 percent of median income. For a site that allows 100,000 square feet of development as-of-right, for instance, the Inclusionary Housing program allows an additional 20,000 square feet of housing provided that 4,000 of these additional square feet are affordable housing.

Despite allowing additional market rate square footage, the Inclusionary Housing program is otherwise very restrictive. Under the Zoning Resolution, the program cannot be paired with other government subsidies such as Section 8 operating assistance, the affordable housing component of the 421-a real estate tax abatement (described below) and permanent tax-exempt bond financing.[191] If affordable units are built on-site, they must be distributed evenly throughout the development. If affordable units are built off-site, they must be within the same community district or within a half-mile radius of the market rate housing in an adjacent community district.[192] Additionally, the program favors not-for-profits as managers of the affordable units and rents from these units may not be used to pay debt other than that which is incurred to make subsequent improvements to the affordable units.[193] In other words, the developer must pay outright for the development of the affordable units and generally turns them over to a not-for-profit organization that uses rents to pay operating costs but not principal or interest.

Because of these restrictions, the Inclusionary Housing program has produced only 603 units of affordable housing from its inception through October 2004, with another 167 units in the pipeline.[194] There are relatively few R10 districts throughout the city, none of which has any vacant land (*see* Chapter 4). Land costs in those districts are high and developers report that it is very difficult to find affordable land on which to develop off-site affordable housing in the same community district or within a half mile in an adjacent community district.[195] For on-site housing, developers are unable to fully capture the potential for cross-subsidy because some of the affordable units must be located on higher floors (e.g. floors with higher potential market prices or rents). Perhaps most importantly, many developers perceive the inability to combine the program with other forms of government subsidy or to allow debt on the affordable units as tending to counteract the benefit of the additional market rate square footage.

More successful in generating affordable units has been the City's 421-a tax exemption program. The program applies primarily in the Manhattan core (defined roughly as south of

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units built under the rezoning will be affordable to low- and moderate-income New Yorkers. *See* Charles V. Bagli, "Council Approves West Side Rezoning Plan," *New York Times*, January 20, 2005 at B7.

[191] These benefits, however, can be paired with the affordable units themselves. *See* NYC Zoning Resolution, art. 2, ch. 3, sec. 23-92

[192] In the Clinton Special District, affordable units must be within the Special District.

[193] The Zoning Resolution provides that the affordable units will be managed by a not-for-profit organization, unless the developer is unable to secure a qualified not-for-profit. According to HPD, 68 percent of completed Inclusionary Housing projects are managed by not-for-profit organizations.

[194] Of the 603 units already built, 494 (82 percent) were built off-site, according to HPD's Tax Incentive Program.

[195] *See* Julia Vitullo-Martin, "Thinking About Inclusionary Zoning," August 2004, accessed January 6, 2005 at http://www.manhattan-institute.org/email/crd_newsletter08-04.html (quoting a nonprofit developer urging city officials to permit affordable units to be built in areas with lower land costs).

96th Street, north of Houston Street in the west and north of 14th Street in the east).[196] If affordable units are built on-site, 20 percent of the total units developed must be set aside for households at 80 percent of area median income (AMI), and developers receive a 20-year real estate tax abatement on the entire project. Developers may build affordable housing off-site, in which case they receive four "negotiable housing certificates" for each unit affordable to people at 80 percent of AMI, five certificates for each unit affordable to people at 60 percent of AMI, and six certificates for each unit set aside for homeless use. Each certificate provides a ten-year tax exemption for a market rate unit in the Manhattan core. Instead of building this affordable housing themselves, market rate developers may, in essence, pay affordable housing developers to do so by purchasing negotiable housing certificates from them. From its inception in 1985 through November 2004, 3,227 affordable units were built off-site throughout the City and another 323 units were under construction.[197]

By itself, the 421-a negotiable housing certificate program is less valuable to developers than the Inclusionary Housing program.[198] The reason that more affordable units have nonetheless been developed under the 421-a certificate program is that unlike the Inclusionary Housing program, the affordable units need not be built nearby and the program can be combined with permanent tax-exempt bond financing. Moreover, tax-exempt bonds also come with an as-of-right four percent Low Income Housing Tax Credit (LIHTC). As a result, almost all 421-a affordable projects are financed with tax-exempt bonds.

D. Greenpoint/Williamsburg Proposals

In New York City, the Campaign for Inclusionary Zoning advocates adoption of mandatory inclusionary zoning in areas that are being (or have recently been) rezoned to residential use or for increased density. The Campaign proposes an "Affordable Housing Zoning District" that could be mapped onto any new or existing residential (or mixed-use) zone of R6 or higher. There would be a sliding scale of affordability requirements, ranging from 20 percent of units affordable to people at 50 percent of AMI to 50 percent of units affordable to people at 120 percent of AMI. As in the existing Inclusionary Housing program, it would be possible to build affordable units off-site, so long as they are within the same community district or a half-mile radius of the market rate housing, but doing so would increase the percentage of affordable units required. Unlike the existing Inclusionary Housing program, however, developers would be able to get real estate tax abatements and tax-exempt bond financing on these projects and management of the affordable units by for-profit developers would not be discouraged.

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[196] Elsewhere in the City, 421-a confers a 15-year tax exemption as-of-right (or a 25-year exemption if a project receives a government loan or tax-exempt financing), but developers choosing to set aside 20 percent of units as affordable to families of low and moderate income can receive a 25-year exemption. N.Y. R.P.T.L. §421-a.

[197] This information was provided by the HPD's Tax Incentive Program. The number of affordable units developed on-site is likely comparable if not higher, although complete statistics are not available.

[198] The present value of a 10-year tax exemption is estimated at $22,559 per unit ("Worth the Cost? Evaluating the 421-a Property Tax Exemption," New York City Independent Budget Office Fiscal Brief, January 2003). The Inclusionary Housing density bonus (four market rate square feet to one affordable square foot) is arguably more valuable than $22,559/unit.

Brooklyn Community Board One and New York City Councilmember David Yassky have proposed that the Affordable Housing Zoning District be adopted as a zoning text amendment to the City's Zoning Resolution and that it be applied to the areas of Greenpoint/Williamsburg that are currently being rezoned. HPD has considered this proposal and prepared analyses of the impacts of various IZ plans. Assuming land costs at $40 per zoning square foot (ZSF),[199] HPD claims that developer return on equity under such a program would be under four percent, implying that such a program would dampen development if land costs do not fall.[200] In contrast, PolicyLink and the Pratt Institute Center for Community and Environmental Development (PICCED) have produced a financial model that assumes land costs of up to $74.50 per ZSF and finds that a mandatory requirement of 20 percent affordable units would result in an annualized return of 19 percent.[201] They therefore conclude that such a program is feasible on both large condominium and apartment sites, and that a voluntary incentive of 20 percent affordable units would be viable on small apartment sites.

In response to the proposal for a mandatory IZ program throughout rezoned Greenpoint/Williamsburg, HPD and DCP have proposed an expansion of the existing voluntary Inclusionary Housing program and its application to parts of the neighborhood. Specifically, DCP proposes an "Affordable Housing Bonus and Incentives Alternative" that would allow a FAR bonus and height increase for developments that would include affordable housing.[202]

The HPD/DCP proposed plan for Greenpoint/Williamsburg is more generous than the existing Inclusionary Housing program in that it would allow developers to take advantage of tax-exempt bond financing. Additionally, the City is considering allowing the affordable units to not be dispersed throughout the development, thereby affording developers a richer cross-subsidy from market rate units with river views and/or on high floors. HPD and DCP believe that developers will combine the Inclusionary Housing program with tax-exempt bond financing and the nine percent LIHTC to create between 900 and 1,500 affordable units along the waterfront.

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[199] Price per zoning square foot [ZSF] = price/(land square footage x maximum floor area permitted by zoning).

[200] It is not clear what assumptions HPD used in calculating this return on equity.

[201] Karoleen Feng, Brad Lander and Lalima Rose, "Increasing Housing Opportunity in New York City: The Case for Inclusionary Zoning: A Report by PolicyLink and Pratt Institute Center for Community and Environmental Development (Fall 2004) at 44-45, available at www.picced.org (hereinafter "PICCED Report") (using term "buildable square foot," which appears to correspond to ZSF, as defined supra in Note 199).

[202] This Alternative is a work in progress that has developed during the latter half of 2004. The first version of the Alternative was published by DCP in the work scope for the environmental impact statement (EIS) for the proposed rezoning published on June 4, 2004. In the June version, total FAR along the waterfront could be increased from 4.3 to 4.71 and the height of towers could be increased in exchange for ten percent of the units being affordable to households at 80 percent of area median income. In October 2004, HPD officials proposed a lower as-of-right waterfront FAR of 4.0, with an 18 percent FAR bonus (to 4.7) for those who develop between 15 and 25 percent affordable units. HPD likewise indicated that an incentive plan would be developed for upland sites. "Greenpoint-Williamsburg Affordable Housing Program," PowerPoint presentation by HPD and DCP to Brooklyn Community Board One Housing Task Force on October 21, 2004.

In making these changes to the existing Inclusionary Housing program, HPD appears to have drawn the proper conclusion from the relative success of the 421-a program in generating affordable units. As a voluntary program, the proposed plan poses no threat of dampening development. There is nonetheless concern on the part of some developers that in developing the Inclusionary Housing program for Greenpoint/Williamsburg, HPD and DCP have recently decreased the proposed as-of-right waterfront FAR from 4.3 to 4.0 and thus created a *de facto* mandatory IZ program.

E. Financial Model: Mandatory Inclusionary Zoning Program in Greenpoint/Williamsburg

As an example of how to determine the effect on development of a mandatory IZ program, the Furman Center prepared a financial model for such a program in Greenpoint/Williamsburg.[203] The model does not forecast the effect on development of any particular program. Rather, unlike the HPD and Policy Link/PICCED models discussed above, the Furman Center's model seeks to determine the effect upon developer return of changes in certain market conditions, namely: land costs, construction costs, interest rates, and rents/sales prices. The purpose of the model is to demonstrate the relationship between those market conditions and the likely success or failure of mandatory IZ programs, generally.

The financial model explores the feasibility of developing two hypothetical sites in Greenpoint/Williamsburg as either condominium units or rental apartments.[204] Site One is a high-rise tower on the waterfront, zoned R8. Site Two is a mid-rise building developed upland, zoned R6A. The model considers a straightforward market rate development and compares it to six IZ regimes: three requiring that ten percent of units be affordable (to households at 60, 80, and 100 percent of AMI), and three requiring that 20 percent of units be affordable (again, to households at 60, 80, and 100 percent of AMI). Although the model assumes that developers would take advantage of existing as-of-right real estate tax abatements under all scenarios, no density bonuses are assumed because the regimes examined are all mandatory. The assumptions used in the model are based on current market conditions and are found in Appendix G.

One important assumption is threshold return. While there is wide variation in returns expected by housing developers, we asked developers in interviews for this Report to state their return expectations. Based on these interviews, we assumed pre-tax internal rate of return (IRR) requirements of 18 percent for rentals and 30 percent for condominiums.[205] Any project with an expected return below these thresholds is assumed to be infeasible.

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[203] The model was developed by two students, Nicholas Bagley and Rachel Meltzer, who adapted it for this Report.

[204] The model does not consider the development of either site as cooperative apartments. Under current market conditions, cooperative apartments would most likely be more feasible than rental apartments but less feasible than condominium units in most cases.

[205] Threshold IRRs for condominiums are generally higher than for rentals to compensate for higher perceived risk: because condominium developers' returns come from one-time sales, their returns are affected more dramatically by a short-term change in market conditions than those of rental developers, who have recurring annual income.

Another important assumption is the price of land. By most accounts, the cost of land in Greenpoint/Williamsburg has risen recently more than in the rest of the city. Prior to 2002, the price of waterfront land per appears to have averaged less than $22 per saleable square foot (SSF).[206] In the past two years, that price is reported to have risen to between $76 and $147 per SSF in anticipation of rezoning.[207] For purposes of this model, the current cost of land is assumed to be a very conservative $60 per SSF along the waterfront (Site One) and $40 per SSF upland (Site Two).[208]

Few of the six IZ affordability regimes modeled are likely to be viable at current land costs insofar as land prices have risen in anticipation of market rate development under the rezoning. If a mandatory IZ regime is implemented, land prices will fall to reflect the reduction in return potential for a given development.[209] It is difficult to determine in advance to what precise level land prices will fall. This model therefore compares results at current land costs to results with a land cost of $0 per SSF. Obviously, it is unrealistic that the price of land would fall as low as $0 per SSF. The returns at that land price are presented solely as a comparison to show which scenarios might be feasible in a range between $0 and $60 per SSF for waterfront land and $0 and $40 per SSF for upland sites. As indicated above, if the price of land does not fall to a level at which developer return thresholds can be met, then development will be dampened.

Figure 4 and Table 17 show that assuming current land costs of $60 per SSF, Site One on the waterfront supports all six of the IZ regimes contemplated if developed as a condominium, but none if developed as a rental. If land costs drop to $40 per SSF, however, Site One on the waterfront supports three of the six regimes as a rental. Figure 4 and Table 17 also show that Site Two upland supports all six of the IZ regimes at current land costs of $40 per SSF if developed as a condominium, but none of the regimes if developed as a rental, even if land costs drop to $0 per SSF. Again, these models make assumptions about the variables associated with housing development. The charts and tables are meant to test the sensitivity of development feasibility to changes in these variables.

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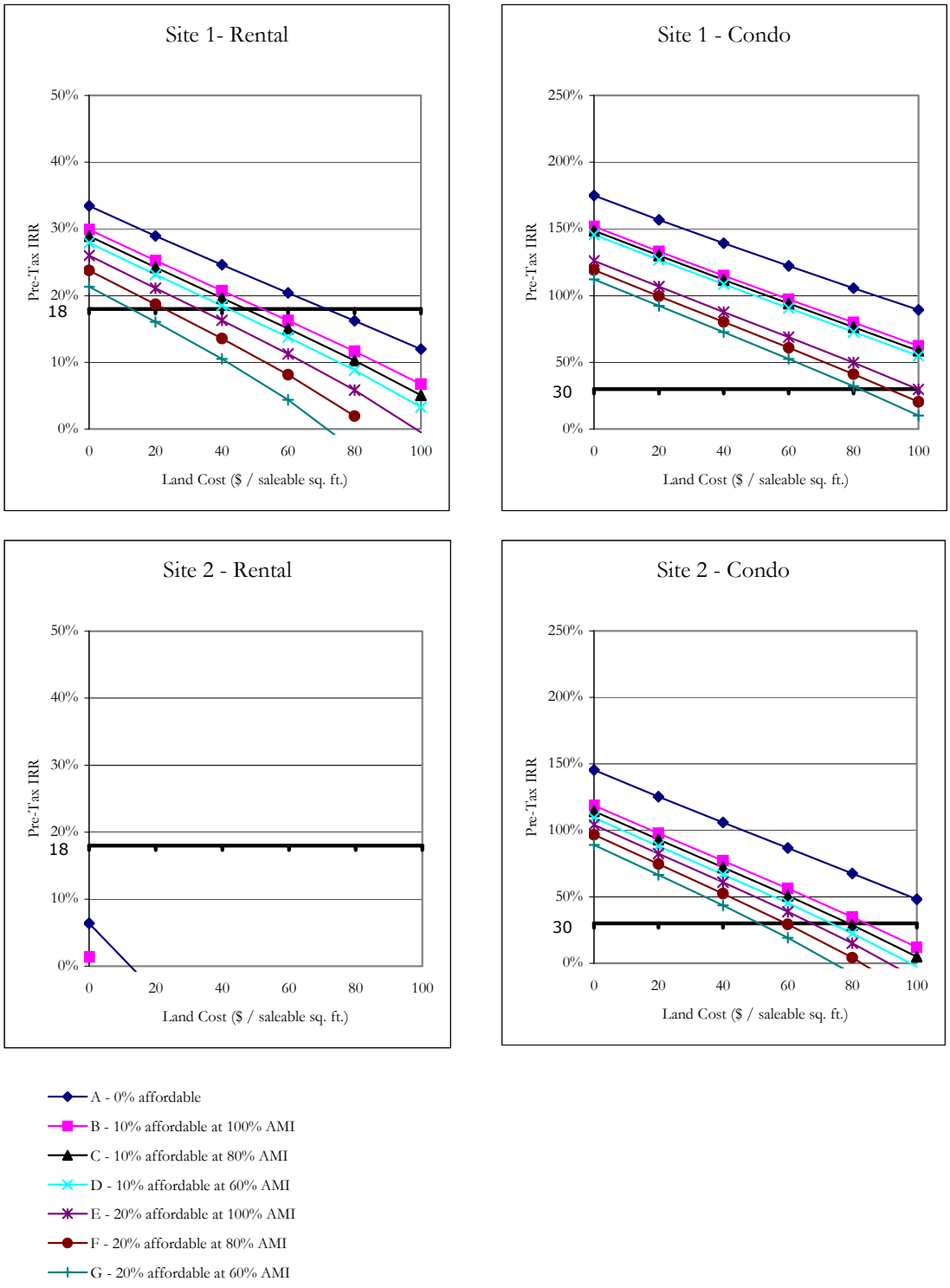
[206] Price/saleable square foot [SSF] = price/(land square footage x maximum floor area permitted by zoning x percentage of maximum that is usable). In the real estate industry, usable area is generally assumed to be 85 percent of maximum floor area permitted by zoning. According to PICCED, assuming a floor area ratio of 4.3, land sale prices along the waterfront between 1987 and 2002 averaged $7.83 per ZSF. PICCED Report at 45. This would translate into $9.21 per SSF. A developer interviewed for this Report indicates that it paid $18.00 per ZSF (or $21.18 per SSF) in 2001.

[207] Several sources in the real estate industry reported a range from $65 to $125 per ZSF, which would translate to $76 to $147 per SSF.

[208] Figure 4 shows returns at land prices up to $100 per SSF.

[209] Land prices are unlikely to fall below the value of the "highest and best use," which would include any alternative uses of the land permissible by zoning, including commercial uses.

Figure 4
Land Cost Sensitivity Analysis



Each of the tables below shows the number of IZ regimes that are feasible under a given set of assumptions, which also corresponds to the number of the most stringent regime feasible

(see Key below). The higher the number appearing in the table, the more stringent the IZ regime that is feasible.

Key to tables:

0 = 0% of units affordable (i.e. market rate development)
1 = 10% of units affordable at 100% of area median income (AMI)
2 = 10% of units affordable at 80% of AMI
3 = 10% of units affordable at 60% of AMI
4 = 20% of units affordable at 100% of AMI
5 = 20% of units affordable at 80% of AMI
6 = 20% of units affordable at 60% of AMI
N = No development is feasible

Table 17
Number of IZ Regimes Feasible at Varying Land Costs

Land Price/SSF:	$ -	$ 20	$ 40	$ 60	$ 80	$ 100
Site 1 - Rental	6	6	3	0	N	N
Site 1 - Condo	6	6	6	6	6	4
Site 2 - Rental	N	N	N	N	N	N
Site 2 - Condo	6	6	6	4	1	0

Baseline case is shaded. See Appendix G for IRRs.

The model tests the sensitivity of developer return to fluctuations in construction hard costs (Table 18), permanent loan interest rates (Table 19) and housing market price conditions (e.g. achievable rents and sales prices) (Table 20). These analyses show that investor return is quite sensitive to construction hard costs and housing market conditions and somewhat less sensitive to permanent loan interest rates. A worsening of market conditions may render a particular affordability regime financially infeasible. For instance, an increase in permanent interest rates from the current seven percent to 11 percent renders Site One entirely infeasible as a rental development. Conversely, an improvement in market conditions makes feasible projects that are currently infeasible. For instance, Site Two becomes feasible as a rental development under all of the affordability regimes if land costs drop to $0 per SSF and either hard costs decrease by 25 percent (to $139 per square foot) or rents increase by 25 percent (to $32.50 per square foot) – all highly unlikely occurrences.

Table 18

Number of IZ Regimes Feasible at Varying Hard Costs

Hard Cost Variation:	-25%	-10%	Base	+10%	+25%
Site 1 - Rental - $60/SSF land	6	4	0	N	N
Site 1 - Rental - $0/SSF land	6	6	6	6	6
Site 1 - Condo - $60/SSF land	6	6	6	5	2
Site 1 - Condo - $0/SSF land	6	6	6	6	6
Site 2 - Rental - $40/SSF land	N	N	N	N	N
Site 2 - Rental - $0/SSF land	6	N	N	N	N
Site 2 - Condo - $40/SSF land	6	6	6	4	0
Site 2 - Condo - $0/SSF land	6	6	6	6	4

Baseline case is shaded. See Appendix G for IRRs.

Table 19

Number of IZ Regimes Feasible at Varying Interest Rates

Interest Rate:	7%	8%	9%	10%	11%
Site 1 - Rental - $60/SSF land	0	N	N	N	N
Site 1 - Rental - $0/SSF land	6	5	3	0	N
Site 1 - Condo - $60/SSF land	6	6	6	6	6
Site 1 - Condo - $0/SSF land	6	6	6	6	6
Site 2 - Rental - $40/SSF land	N	N	N	N	N
Site 2 - Rental - $0/SSF land	N	N	N	N	N
Site 2 - Condo - $40/SSF land	6	6	6	6	6
Site 2 - Condo - $0/SSF land	6	6	6	6	6

Baseline case is shaded. See Appendix G for IRRs.

Table 20

Number of IZ Regimes Feasible at Varying Housing Market Prices

Housing Market Price Variation:	-25%	-10%	Base	+10%	+25%
Site 1 - Rental - $60/SSF land	N	N	0	5	6
Site 1 - Rental - $0/SSF land	N	3	6	6	6
Site 1 - Condo - $60/SSF land	N	4	6	6	6
Site 1 - Condo - $0/SSF land	4	6	6	6	6
Site 2 - Rental - $40/SSF land	N	N	N	N	0
Site 2 - Rental - $0/SSF land	N	N	N	0	6
Site 2 - Condo - $40/SSF land	N	2	6	6	6
Site 2 - Condo - $0/SSF land	0	6	6	6	6

Baseline case is shaded. See Appendix G for IRRs.

The model also tests the sensitivity of developer return to an increase in required developer equity from ten to 20 percent (Table 21).[210] If the sites are developed as condominiums, certain affordability regimes are no longer feasible under the higher equity requirement at current land costs, but all affordability regimes are theoretically feasible in the unlikely event that land costs drop to $0 per SSF. If Site One is developed as a rental, it is entirely infeasible under the higher equity requirement at current land costs, but three of the six affordability regimes are theoretically feasible in that unlikely event that land cost drops to $0 per SSF.

Table 21

Number of IZ Regimes Feasible at Varying Equity Requirements

Equity Requirement:	10%	20%
Site 1 - Rental - $60/SSF land	0	N
Site 1 - Rental - $0/SSF land	6	3
Site 1 - Condo - $60/SSF land	6	3
Site 1 - Condo - $0/SSF land	6	6
Site 2 - Rental - $40/SSF land	N	N
Site 2 - Rental - $0/SSF land	N	N
Site 2 - Condo - $40/SSF land	6	0
Site 2 - Condo - $0/SSF land	6	6

Baseline case is shaded. See Appendix G for IRRs.

[210] An equity requirement of 20 percent is perhaps more realistic for market rate developments, but developments with affordability requirements often allow for lower developer equity.

The financial model shows that financial feasibility under IZ mandates is very much a function of market conditions (including hard costs, sales/rent levels and interest rates) and the particular IZ affordability regime considered. One affordability regime may enable developers to achieve their target returns, where a more stringent one may not. Market conditions may make a particular regime feasible in one neighborhood but not in another neighborhood. A mandatory regime that is financially feasible today may become infeasible in the future given a change in market conditions, and vice versa.

The model also shows the importance of land price. Implementation of an IZ regime should theoretically reduce land value and thus prices. However, some landowners may refuse to sell below a certain price, especially if they believe the IZ requirements may be lifted in the future. If a landowner refuses to sell land at a price that would render development feasible, housing development will be dampened. Without knowing the bottom line price of all landowners, one cannot say at what land price short of $0 per SSF would development be stifled. Of course, IZ regimes under which developers fail to achieve threshold returns even with free land would freeze development entirely.

Finally, the model demonstrates that at both the waterfront and upland sites, development as condominium units is generally more feasible than as rental apartments, despite a higher threshold return for condominiums. This is attributable to condominium purchase prices that are high relative to apartment rents under current market conditions. If macroeconomic conditions change, rents could increase relative to sales prices, and either site could become more feasible as a rental rather than condominium development.

These results suggest that if the City considers adopting a mandatory IZ program, it should proceed with caution. Because feasibility varies by neighborhood, programs should only be implemented on a neighborhood-by-neighborhood basis, with affordability requirements attuned to local market conditions. Programs should be implemented only if they are determined to be financially feasible both at present and under likely future market conditions. Additionally, there should be a safety valve provision that automatically modifies the affordability requirements in a predetermined manner if market conditions (construction hard costs, market sale/rental prices, or interest rates) change by more than a certain amount – say 25 percent. Under current market conditions, if the City does not wish to discourage rental development, it should consider relaxing affordability requirements for rentals relative to homeownership development. Regardless of the programs implemented and their built-in safety valves, the City should make clear to landowners that these programs will remain in effect for the long term – say, at least ten years – so as to encourage land prices to adjust to reflect the land's true value in order to not dampen development.

II. Recommendations

Our recommendations follow:

A. Modification of Existing Inclusionary Housing Program

If the City wishes to encourage development of affordable housing units, it should modify the existing Inclusionary Housing program as follows:

1. Amend the Zoning Resolution to allow the existing Inclusionary Housing program to be combined with other government subsidies, including the affordable housing component of the 421-a tax abatement program and permanent tax-exempt bond financing;
2. Allow off-site units to be built at a greater distance from the market rate housing to facilitate the identification of cheaper land – say, within two miles or in the same borough;
3. Allow affordable units to be managed by responsible for-profit entities without a preference for management by not-for-profits;
4. Allow the use of rents from affordable units to be used to repay project debt;
5. Remove restrictions regarding unit distribution within a project; and
6. Expand applicability of the program to areas zoned R6 and above.

B. Mandatory Inclusionary Zoning Program

If the City implements any mandatory zoning program, it should proceed with caution in order to minimize the risk that such a program will materially diminish the total amount of housing (both affordable and market rate) that would otherwise be built. Specifically, the City should:

1. Set program requirements only after carefully analyzing the impact of the market rate development on the community's supply of, and demand for, affordable housing;
2. Implement affordability mandates on a neighborhood-by-neighborhood basis, with affordability requirements attuned to local market conditions only as areas are rezoned for increased density or converted to residential from other uses;
3. Implement programs only if they are determined to be financially feasible both at present and under likely market conditions for the next ten years;
4. Implement a safety valve provision triggering an automatic modification of the affordability requirements if market conditions (construction hard costs, market sale/rental prices, or interest rates) change by more than a certain amount – say 25 percent;
5. Under current market conditions, if the City does not wish to discourage rental development, it should consider relaxing affordability requirements for rentals relative to homeownership development; and
6. Make clear to landowners that these programs and their built-in safety valves will remain in effect for the long term – say, at least ten years – so as to encourage land prices to adjust to reflect the land's true value.

Chapter 12:
Taxes and Fees

I. Statement of the Issue

There are three main categories of taxes and fees incurred in developing new residential projects in New York City. First, real estate taxes are paid on vacant land while assembling parcels or while constructing a project. Second, taxes are paid as part of "soft costs" to close on the purchase of property for construction. Third, permit fees and penalties are paid to various agencies to allow construction.[211]

A. Taxes on Vacant Land

The amount of taxes on vacant parcels of land may have an impact on whether or not an owner decides to build on the land or hold it for future use. If taxes on vacant land are high, then an owner will be more likely to either sell the land or build on it to reduce her/his carrying costs.[212] By contrast, if improvements are taxed more than vacant land, owners of vacant land have less of an incentive to develop the land. The real property tax system in New York City, in fact, provides this incentive.

Almost 70 percent of the vacant land in New York City is zoned for residential use.[213] Vacant land in New York City that is zoned for residential use is considered Class One property [214] and is assessed[215] and taxed[216] at the lowest possible rate. Residential improvements, on the other hand, are taxed at the highest rate. For example, a vacant parcel

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[211] In the "Taxes and Fees" Chapter of the 1999 Cost Study, the authors included an extensive analysis of the impact of the real property tax on the operating costs of residential property in New York City. The inequities that existed then remain today and show no sign of being reformed. *See* Statement of Marcia Van Wagner of Citizens Budget Commission before the New York City Council Committee on Finance on Oversight: The Inequitable Property Tax Treatment of Class 2 Coops and Condos, February 26, 2004, Eric Lipton, "City Backs Off Overhaul Effort on Assessments," *The New York Times*, January 20, 2004, at B1 and Eric Lipton "Tax on Homes is Inequitable, Study Finds," *The New York Times*, July 29, 2003, at B1. While property taxes (and all other operating expenses) affect the underwriting of projects for financing, the authors of this 2005 Update have determined, for consistency purposes, to analyze only construction and developments rather than operating costs.

[212] Henry George, a self-taught journalist, publicist and author of "Progress and Poverty," was an early advocate of a land taxation policy that would provide an incentive to development.

[213] The Department of Finance Operations Research Group ran a special report for the Furman Center. The Report Project Number is 4450.

[214] Real Property Tax Law Section 1802 requires New York City to separate properties into four tax classes for property tax purposes. Class One includes one-, two- and three-family homes, small condominiums and certain vacant land. Class Two includes all other primarily residential properties like apartment buildings, cooperatives and condominiums. Class Three includes property owned by utility companies. Class Four includes all other properties such as office buildings, stores, warehouses, hotels and vacant land not classified in the other three classes.

[215] Class One properties are assessed at eight percent of market value whereas properties in the other classes are assessed at 45 percent of market value. *See* New York City Department of Finance website at www.nyc.gov/html/dof/html/assessment.html#def. Last accessed January 8, 2005.

[216] The effective tax rate for vacant land that is zoned residential is 92 cents per $100 of market value. The effective tax rate for residential buildings that are not one-, two- and three-family homes is over six times higher at $5.68 per $100 of market value. New York City Department of Finance, "Fiscal Year 2005 Tentative Roll Assessment Guidelines, Corrected February 20, 2004.

of land that is zoned for residential use would be taxed at eight percent of its market value. If that same parcel were developed into a six-story apartment building it would be taxed at 45 percent of its market value. This disparity may make landowners more likely (at the margin) to hold their properties vacant.

For developments undertaken on city-owned land, taxes are assessed as soon as the land is transferred to a private owner. Therefore, the budget for construction must be increased (typically with city subsidies) to pay real property taxes that are, in almost all cases, abated or exempted upon completion of construction.

B. Taxes to "Close" on Housing Developments

New York City and New York State impose significant transfer taxes and "closing" fees in order to purchase land and develop housing. A developer of a residential project must include in "soft costs" a significant budget for real property transfer taxes, mortgage recording taxes and sales taxes at both the state and city levels.

1. Real Property Transfer Tax

Both the city and state impose a tax on each deed that is transferred between a buyer and a seller. The seller is liable for the tax. The city's real property transfer tax rate is one percent for residential transfers of less than $500,000 and 1.425 percent for residential transfers over $500,000.[217] The state tax rate is four tenths of one percent on all residential transfers of less than one million dollars and an additional one percent for transfers over one million dollars.[218] In a hypothetical example, the real property transfer taxes due on a transfer of a $5 million vacant site for a development project would be $141,250.

2. Mortgage Recording Tax

The city and state also impose taxes on real estate mortgages. The combined tax rate is two percent for mortgages under $500,000, two and one-eighth percent for mortgages over $500,000 on one-, two- and three-family homes, and two and three-quarter percent for other mortgages over $500,000.[219] For the same hypothetical development project with a $5 million land transfer price, hard costs of $18.5 million[220] and combined soft costs and profit equal to 35 percent of hard costs (or $6.475 million), the total development cost would be almost $30 million. If this project had an 80 percent loan-to-value mortgage of $24 million, the mortgage recording tax due would be almost $660,000.

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[217] New York City Department of Finance, Form NYC-RPT, June 24, 2004.
[218] New York State Department of Taxation and Finance, Combined Transfer Tax Return, et. al, Form TP-584, November 2004.
[219] New York State Department of Taxation and Finance, Mortgage Recording Tax Return Form MT-15, January 2005.
[220] For this hypothetical example, we assume a mid-size building of 100,000 total square feet at a hard cost of $185 per square foot. *See* Chapter 11 for a discussion of varying hard cost estimates.

3. Sales Tax

In building a new residential project, the developer must pay sales taxes on the materials incorporated into the building. The combined city and state sales tax rate is 8.625 percent. For the same hypothetical project with hard construction costs totaling $18.5 million, one can assume that half the cost is attributable to materials and half to labor. For the half attributable to materials, the sales tax on that project would be almost $800,000.

The total state and city taxes for development of a mid-size residential project in New York City with a total development cost of $30 million would total $1.6 million which must be added into, and funded from, the development budget.

C. Permit Fees and Fines During Construction

In order to authorize construction, various city agencies issue permits and assess permit fees. In addition to the Department of Buildings (DOB), the Department of Environmental Protection and the Department of Transportation charge fees. These may be paid either by the owner or by the contractor and then passed onto the owner in the total hard cost price. A typical new project will require payment of a permit application fee, demolition permit fee, sidewalk shed permit fee, fence permit fee, sewer connection fee, builder's pavement plan filing fee, certificate of occupancy fee, Post-Approval Amendment fee and others depending on the project. The DOB new construction permit fee alone is assessed at the rate of 25.53 cents per square foot of the total floor area of the proposed building.[221] For the same hypothetical building with $18.5 million of hard costs and a total floor area of 100,000 square feet, the DOB application fee alone would be $25,530.[222]

As noted in Chapter 9, builders may also incur fines from violations issued by agents of these permitting agencies. In the example of DOB, the bulk of the revenue to that agency is derived from a combination of application permit fees and fines associated with violations. DOB generated total revenues in Fiscal Year 2004 of $99.4 million but only spent $59.7 million on operations. Clearly, a portion of this $40 million annual "profit" from fees and violations should be spent to improve DOB operations and the remainder should be returned in lower permit fees for new construction of housing or through a policy that leads to more reasonable fines as recommended in more detail in Chapter 9.

II. Recommendations

Our recommendations appear below. Those similar to recommendations from the 1999 Cost Study are so indicated with "1999."

[221] New York City Building Code, Section 26-212.

[222] These permit fees do not cover what are called DOB "controlled inspections" which are certifications that certain types of work have been properly performed, most notably concrete and steel work. These inspections, in fact, are not performed by the DOB inspector or the project architect but are typically performed by an independent testing and engineering firm. Given the number of inspections and tests required, our hypothetical building of 100,000 square feet would conservatively incur additional controlled inspection fees in the range of $150,000 to $180,000 as part of a soft cost budget.

A. Real Estate Taxes on Vacant Land

The city should remove the bias that exists in the property tax system toward keeping land vacant. The city should create a tax system that encourages residential development.

1. To better understand what land is available, the city should prepare an inventory of the privately owned residentially-zoned vacant land and under-utilized properties in the city. If resources are not available for this large undertaking, this initiative should at least focus on privately-owned land located near city-owned land and obsolete institutional properties.
2. The New York State Legislature should authorize New York City to create a special tax class for vacant land. **(1999)**
3. Vacant land that is part of a city-funded housing program should be exempt from real property taxes during construction. **(1999)**

B. Taxes to "Close" on Housing Developments

The city and state should waive or reduce real property transfer, mortgage recording and sales taxes on affordable housing projects,[223] especially projects where the city or state has provided significant funding. **(1999)**

C. Permit Fees

The city should reduce permit fees for construction of housing and should waive permit fees for affordable housing projects, especially those that are part of a Department of Housing Preservation and Development or New York City Housing Development Corporation program. The definition of affordable housing would reference the income of the household served, such as a maximum of 165 percent of the area median income. **(1999)**

[223] When title to property is held by a Housing Development Fund Company (HDFC), the owner is exempt from sales taxes and a portion of transfer taxes. A mortgage made to the City of New York is exempt from the mortgage recording tax. These provisions should be expanded to include all participants in affordable housing projects, not just HDFCs.

Chapter 13:
Scaffold Law/Insurance Premiums

I. Statement of the Issue

General liability insurance premiums for contractors in New York State appear to be among the highest in the nation. Developers report that premiums have increased substantially (in some cases by over 250 percent) since 2000 and that many providers have simply stopped writing policies in New York City.[224] Part of the reason for this may be that New York is the only state with a "Scaffold Law."[225] The Scaffold Law imposes absolute liability on contractors and owners for falls and other gravity-related personal injuries on construction sites. If a construction worker who is injured as the result of a contractor or subcontractor's failure to comply with the safety measures required by the Scaffold Law, the contractor or subcontractor cannot introduce evidence of the worker's comparative negligence to reduce the damage award.[226] The most often cited, albeit perhaps rare cases, involve injured workers whose alleged inebriation could not be introduced into evidence because it was not the sole proximate cause of their injuries.[227]

The Scaffold Law was enacted in 1885, but its effect on contractors' general liability insurance became more pronounced after 1996, when changes to the New York State workers' compensation law shifted the payment burden for employee lawsuits from the state workers' compensation fund to employers. An insurance association found that 1999 loss costs in New York City were 171 percent higher than those in Philadelphia and estimated that the Scaffold Law may be responsible for one-third of these higher loss costs.[228] These data suggest that the Scaffold Law adds unnecessarily to the cost of housing construction.

Proponents of the Scaffold Law claim that it has concrete safety benefits and does not necessarily increase costs. New York State has among the lowest reported construction injury rates in the country, and falls from an elevation generally account for one-third of construction fatalities.[229] Proponents of the Scaffold Law believe these data indicate that the law serves to increase worker safety. Additionally, they question the relationship between loss costs and insurance premiums, noting that premiums failed to decline following court rulings that limited employer liability and claiming that premiums are related more to

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[224] Meg Fletcher, "Liability Rates Spur Search for Solution; N.Y. Explores Residual Market Option," *Crain's New York Business*, November 17, 2003 at 3.

[225] N.Y. Labor Law §240.

[226] The prohibition against using contributory negligence as a defense arises from a court interpretation. *See* Koenig v. Patrick Constr. Corp., 298 NY 313, 316-317, 83 N.E.2d 133 (1948). *See also* Blake v. Neighborhood Housing Services of New York City, 1 N.Y.3d 280, 803 N.E.2d 757, 771 N.Y.S.2d 484 (2003). Injured workers may not recover under the Scaffold Law if the court finds their alleged negligent actions to be the sole proximate cause of their injuries. Weininger v. Hagedorn & Co., 91 N.Y.2d 958 at 960, mot. for rearg. denied, 92 N.Y.2d 875 (1998).

[227] *See*, for instance, Sergeant v. Murphy Family Trust, 284 A.D.2d 991, 726 N.Y.S.2d 537 (4th Dept. 2001).

[228] "New York Scaffold Act Claim Costs," American Insurance Association, Memorandum, November 6, 2001.

[229] *See* Glenn von Nostitz, "Safe at Any Height: New York State's 'Scaffold Law' Saves Lives," New York State Trial Lawyers Association (May 2004), citing Bureau of Labor Statistics data (at 7) and Occupational Safety and Health Administration data (at 3).

insurance industry financial performance than to loss costs.[230] They fear that allowing consideration of workers' comparative negligence will disadvantage workers who compromise their own safety in a rush to get a job done whether in response to external pressure or financial incentives to work quickly.

While it is likely that New York's relatively low construction injury rate is in part attributable to provisions of the Scaffold Law requiring contractors and owners to protect construction workers, it is unreasonable to absolve workers of any responsibility for their own safety. At the same time, it is important to ensure that – if the law is amended to allow consideration of comparative negligence – the beneficiaries of this amendment not be insurance companies but rather contractors and owners. It is in this spirit that the following recommendation is made.

II. Recommendation

The state legislature should amend the Scaffold Law to allow the recovery of injured construction workers to be reduced in proportion to their comparative negligence. The state legislature should also direct the state insurance department to make an actuarially appropriate reduction in employers' liability insurance rates to take into account the lower loss costs that are expected to result from this amendment.[231]

[230] Trial attorneys believe there was a significant decline in the number of Scaffold Law cases and the amount of recoveries after Weininger (*see* Note 226, above) in 1998, but no concomitant decline in premiums. The New York State Trial Lawyers Association notes that insurance industry executives have admitted insurance premiums were reduced too low in the 1980s. The Association observes that insurance premiums across the board were raised in 2002 to compensate for poor investment returns from the prior year, and that in the year following September 11, 2001, insurance premiums in New York City rose for commercial property insurance (74 percent), commercial directors and officers insurance (nearly 50 percent), and business interruption insurance (52 percent).

[231] A bill to this effect was submitted in the New York State Senate by Senator William J. Larkin, Jr. in January 2003 and has been referred to the Insurance Committee.

Chapter 14:
Green Building

I. Statement of the Issue

"Green" or "sustainable" building is an environmentally sensitive approach to developing buildings; it is the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance and demolition.[232] In terms of construction, this means creating buildings that are energy efficient, conserve water and other natural resources, and protect indoor environmental quality. Green buildings cost more to build, but advocates claim it is short-sighted to consider only the "first cost" of construction because this up-front investment is returned in the form of lower operating costs over a building's life cycle.[233]

Housing developers are often reluctant to incur the additional costs of green building. Those who build housing for sale do not benefit financially from the long-term savings in operating costs unless prospective homebuyers are willing to pay more for green homes.[234] Even developers who maintain property as rentals may not fully recognize the long-term benefits of green building and may therefore be reluctant to pay for green building.

II. Recent Developments

In order to defray the up-front costs of green building, various forms of government incentives have recently become available. If administered properly, these incentives offer real benefits to offset the associated costs, as described below.

In 2000, New York State enacted the Green Building Tax Credit, which is the first program in the country to provide a state tax credit for the construction of sustainable buildings.[235] It is a credit against the building owner's state income tax in an amount between five and eight percent of most development costs spread over five years.[236] To qualify, residential buildings must contain at least two dwelling units and 20,000 square feet of interior space, and the

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[232] Definition provided, in part, by the U.S. Green Building Council.

[233] The New York City Department of Design and Construction estimates that green buildings cost two to three percent more to build and that the payback period is under ten years. Additionally, a study of California state buildings found that incremental up-front costs of sustainable building were between zero and two percent, which resulted in savings of 20 percent of total construction costs over the 20 year life of a building, taking into account both financial benefits (lower energy, waste disposal, and water costs, lower environmental and emissions costs, lower operations and maintenance costs) as well as benefits from increased productivity and health. Greg Kats, "The Costs and Financial Benefits of Green Buildings: A Report to California's Sustainable Building Task Force" (October 2003), available at http://www.usgbc.org/Docs/Resources/CA_report_GBbenefits.pdf, visited October 20, 2004.

[234] Theoretically, buyers should be willing to pay more up front in order to realize long-term savings. To the extent buyers are not yet willing to do so, it may be due to a lack of information regarding these savings, or a failure of the market to value these savings.

[235] As the pioneer, New York's tax credit has become the model for the rest of the country. Maryland has since adopted a green building credit and other states are considering similar credits.

[236] N.Y. Tax Law §19. The credit ranges from five percent for buildings in which only occupied spaces are energy efficient to eight percent for buildings that are entirely energy efficient that are located in state Empire Zones or federal Empowerment Zones or Enterprise Communities.

credit is calculated at a maximum of $150 per square foot for the base building and $75 per square foot for tenant space. By October 2004, the New York State Department of Environmental Conservation (DEC) had set aside $18.5 million in credits for five buildings, three of which are residential buildings in New York City. Although the credit seems to work well for rental housing, the logistics of developers' passing on the remaining value of the credit to homebuyers have not yet been established. The program sunset at the end of 2004, so new buildings may not enter the program unless it is reauthorized by the state legislature.

Additional programs to fund green building are administered by the New York State Energy Research and Development Authority (NYSERDA), a public benefit corporation that is funded, in part, by utility surcharges. NYSERDA launched a program in 2002 to fund energy efficient measures in multifamily buildings that provided $3.1 million in funding to over 1,000 units through the end of 2003.[237] Developers have expressed frustration at the slowness of this funding stream, which generally takes six to eight months because NYSERDA requires a detailed energy review of each project. Recently, however, NYSERDA entered into an agreement with the New York City Department of Housing Preservation and Development (HPD) to provide over $7 million of funding for the energy efficient rehabilitation of 5,000 units over three years, in which NYSERDA's underwriting role is delegated to HPD. This arrangement is expected to speed up the funding process, and – if successful – may serve as a model for the delegation of NYSERDA's underwriting function.

NYSERDA also administers benefits for one- to four-family homes. Builders of energy efficient homes are eligible for grants of $850 per single family home. Low-income buyers of such homes are also eligible for grants of up to $500 per homeowner. These grants are unfortunately paid after the homes are already built, and would be more useful if the funds could be accessed during construction. Additionally, NYSERDA's compartmentalization into program areas (heating versus electrical systems, multi-family versus single family) makes it difficult for developers to receive "one stop shopping" for energy efficient building.

III. Recommendations

Our recommendations are as follows:

A. The State should:

1. Reauthorize the Green Building Tax Credit program, which sunset at the end of 2004; and
2. Draft regulations or guidance detailing how the Green Building Tax Credit can be passed on to condominium buyers and cooperative shareholders in order to encourage developers of such properties to take advantage of the Credit.

[237] "New York Energy $mart Program Evaluation and Status Report: Report to the System Benefits Charge Advisory Group," Draft May 2004 at A-39.

B. NYSERDA should:

1. Delegate its underwriting to third parties, including government and private sector entities that already underwrite housing construction projects;
2. During construction, allow developers of energy efficient one- to four-family homes to access the grants that currently go to homebuyers after construction, so long as the homes are affordable to people of low income; and
3. Create "one stop shopping" so that developers can access all green building benefits for which they may be eligible from a single portal.

Chapter 15:
Corruption in the Construction Industry

I. Statement of the Issue

The construction process in New York City is enormously complicated, in part due to the tremendous fragmentation of the construction industry in which multiple contractors and unions are typically involved in every project. Because many jobs are large and the number of players so numerous, the potential for delay is high. The cost of delay is tremendous, arising from high carrying charges for land and construction loans as well as the risks attributable to changes in market conditions. These substantial costs of delay create an incentive for owners/developers to be willing to make payments to avoid work stoppages. Large government bureaucracies, strong unions and organized crime penetration of unions and contractors create a number of opportunities for corruption.

The existence of extortion and illegal practices in the construction industry has been well documented in court records, investigatory reports and the press.[238] Although this Report does not detail instances of illegal activities exhaustively, illustrations of several of the types of corrupt activities follow, some of which have driven up the cost of residential construction in New York.

A. Solicitation of Bribes and Embezzlement by Union Officials

Periodically, organized crime infiltration of union leadership is exposed and charges are brought against union officials for using their positions of authority to derive illicit, personal gain. In the 1980s, prosecutors estimated that the mob controlled 16 of the 31 unions representing general laborers.[239] Most recently, officials of several major construction unions have been indicted or charged with accepting bribes from contractors in exchange for allowing non-union labor to work on a job.[240] Other corrupt practices involve union officials accepting bribes in exchange for overlooking onerous work rule requirements. As shown by the U.S. Attorney's ten-year civil racketeering case against the United Brotherhood of Carpenters, even court appointment of a trustee does not guarantee elimination of corruption at the top levels of a corrupt union.[241] Despite their illegality, such practices do not necessarily increase the cost of construction, and indeed may in some cases reduce its cost by enabling contractors or developers to circumvent certain collective bargaining provisions.

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[238] *See*, for example, New York State Organized Crime Task Force, *Corruption and Racketeering in the New York Construction Industry*, 73-99 (1990).

[239] Steven Malanga, "How to Run the Mob Out of Gotham," *City Journal*, Winter 2001 at 44-55.

[240] The president of the New York District Council of Carpenters was convicted of such a charge. Barbara Ross, "2 Guilty in Union-Bribe Probe," *Daily News*, April 28, 2004, at 18. Several officials of Local 8 of the Roofers, Waterproofers and Allied Workers Union were indicted on such charges. Robert Gearty and Owen Moritz, "Union Bigs Indicted in Roofer Racket," *Daily News*, July 28, 2004 at 34. Additionally, several officials of Local 15 of the International Union of Operating Engineers pled guilty to charges of taking bribes from contractors. Tom Robbins, "The Mob's Engineers," *Village Voice*, December 21, 2004, at 20.

[241] James B. Jacobs and Kristin Stohner, "Ten Years of Court-Supervised Reform: A Chronicle and Assessment," 6 Cal. Crim. Law Rev. 3 (2004). *See* Note 240, above, regarding Carpenters' union conviction.

B. Bid Rigging

In some instances, contractors influenced by organized crime have formed cartels to rig bids on construction jobs. By agreeing which contractors will submit bids and how much they will bid, the market advantages of competitive bidding are lost. Organized crime operatives benefit from the receipt of kickbacks from contracting firms, sometimes known as a "mob tax" of five percent or more, thereby increasing the cost of construction to developers and owners.[242] In the last 30 years, federal and state investigators uncovered cartels among concrete suppliers as well as drywall and window replacement contractors among others.[243] A combination of criminal prosecution and civil racketeering charges may have broken up some of these cartels, but other cartels continue to exist.[244]

C. Coalitions

As indicated in Chapter 3, local coalitions of minority laborers have formed in certain neighborhoods with the stated aim of obtaining construction jobs for their members. Sometimes coalitions assigned jobs to their members on the basis of their length of unemployment. Other times, however, coalitions obtained work (either real or "no-show" jobs) with the threat of violence to contractors and assigned jobs to their members in exchange for kickbacks. Turf wars among rival coalitions sometimes resulted in violence between coalitions. Although an incident of such inter-coalition violence was reported in 2002, coalitions otherwise have not made the news recently and developers report that coalitions are less of a presence now than they were five years ago.[245] Former coalition leaders attribute the wane of coalitions to the increasing diversity of certain labor unions – particularly unions of general laborers – which erodes the coalitions' underlying claim that minorities are underrepresented in the construction trades.

D. Bribes of Municipal Employees

Because construction projects frequently require government approvals or permits, opportunities are abundant for official corruption. In many instances, contractors have bribed municipal inspectors to either expedite the processing of approvals or overlook problems on job sites. In the past five years, the Department of Buildings (DOB) has suffered two such scandals. In 2000, DOB's Deputy Commissioner of Operations was indicted for accepting money and favors to expedite DOB approvals and four other high

[242] The Manhattan District Attorney issued a press release on September 6, 2000 describing an arrangement whereby construction contractors paid organized crime officials at least five percent of the value of their contracts with public agencies and private developers. *See also* Selwyn Rabb, "Irregularities in Concrete Industry Inflate Building Costs, Experts Say," *New York Times*, April 26, 1982 at A1 (noting that as a result of corruption, the price of concrete was more expensive in New York than elsewhere in the country, including 70 percent higher than in other Northeastern cities).

[243] James B. Jacobs, *Gotham Unbound: How New York City was Liberated from the Grip of Organized Crime* (New York University Press, 1999) at 209-213.

[244] In April 2004, federal prosecutors brought charges against over 20 suspects in a bid-rigging scheme involving Local 530 of the Operative Plasterers and Cement Masons Union. Murray Weiss, "Mafia Bust Blitz – Union Crackdown Set," *The New York Post*, April 20, 2004 at 7.

[245] Rocco Parascandola, "2 Arrests Linked to Street Brawl," *Newsday*, May 1, 2002 at A16.

ranking department officials were indicted at the same time.[246] In 2002, 15 of DOB's 24 plumbing inspectors were charged with extorting hundreds of thousands of dollars to approve projects throughout the city.[247] This led DOB to implement operational changes such as hand-held computers and electronic records in its inspection process in order to improve inspector accountability, described in more detail in Chapter 9.[248] Such automation may make it more difficult for municipal employees to engage in corruption. However, automation does not eliminate the conditions that breed corruption – namely, employees who are underpaid by industry standards.[249] The focus on preventing corruption can also lead to a culture of indecision, also discussed in more detail in that same chapter.

E. Extent and Effects of Corruption

It is difficult to quantify the prevalence of corruption in the construction industry. Developers and builders are reluctant to discuss the topic because some fear retribution, many turn a blind eye to the practice (since payoffs are typically made by contractors rather than developers) and because payoffs may be a price they are willing to pay to insure that construction proceeds in a timely manner. Some observers believe that federal and state prosecutions may have decreased the incidence of mob infiltration and union corruption in recent years, but law enforcement officials note that a crackdown on one trade may simply displace corruption to other trades.

It is likewise difficult to quantify the impact of corruption on the cost of housing construction. Although certain corrupt practices such as bid rigging clearly increase the cost, other corrupt practices may actually lower the cost of building housing. Arguably, certain corrupt practices exist precisely because they decrease the cost of navigating a bureaucracy, complying with regulations or contending with labor unions. Again, reducing the difficulties associated with these elements would undermine the conditions that lead to corruption.

In 1999, then-Mayor Giuliani proposed legislation aimed at eliminating corruption in the construction industry by establishing a government agency that would license construction managers. Although it brought public attention to the problem, the proposal drew fire from the construction industry and ultimately did not prevail.

II. Recommendations

Sustained efforts by federal, state, and local investigators and prosecutors appear to have decreased corruption and weakened the grasp of organized crime on the construction

[246] Patricia Hurtado and Dan Janison, "Leveling a Department/ 5 Indicted at Buildings Agency; Rudy Creates Panel to Probe It," *Newsaday*, September 29, 2000 at A3.
[247] William K. Rashbaum, "Plumbing Inspectors Are Latest Charged in New York Graft," *New York Times*, June 26, 2002 at A1.
[248] Winnie Hu, "Balky Old New York Goes High-Tech, Using Gadgets to Improve Services," *New York Times*, March 14, 2004 at 35.
[249] Natalie Keith, "Industry Counterpunches DOB Proposal," *Real Estate Weekly*, January 3, 2001 at 1, citing "Protecting Public Safety, Preserving Public Trust," published by the Real Estate Board of New York, which notes construction inspector pay differential between DOB and the private sector, as well as a decrease in the number of construction inspectors at the same time that the number of building permits issued by DOB increased.

industry. Nevertheless, extortion and illegal practices persist in the residential construction industry and could regain their former strength in the absence of continued vigilance and law enforcement efforts. Although the extent to which these practices is common and the costs that they generate are uncertain, they may be substantial. There are several approaches to alleviating the problem of corruption, all of which have merit and should be pursued simultaneously.

Our recommendations follow. Those that are repeated from the 1999 Cost Study are indicated with "1999."

A. Continued Prosecutions by Local, State and Federal Law Enforcement Agencies

The results of these efforts, to date, have been impressive and should be continued. Nevertheless, each prosecution takes a very long time, the standard of proof for conviction is high and the costs of investigations are substantial. Therefore, an approach based solely upon criminal law enforcement is unlikely to be sufficient to rid the industry of illegal practices and prevent their resurgence; **(1999)**

B. Women and Minority Recruitment

As discussed in greater detail in Chapter 3, union and non-union contractors alike should seek to diversify their membership to better reflect the fabric and complexion of New York City by recruiting more minorities and women to the trades through apprenticeship programs; **(1999)** and

C. Simplify the Construction Process

One of the reasons the construction industry is ripe for corruption is that the construction process requires the coordination of so many individual entities (e.g. trade unions, contractors, subcontractors) and government agencies. Due to the time sensitivity of construction, any one of these entities could find itself in the position to extort payoffs by threatening delay. In other chapters of this Report, recommendations are made to simplify the New York City Zoning Resolution to permit more development to occur in New York "as of right," to revise the Building Code to reduce complexity and to simplify and expedite the process of obtaining building permits and certificates of occupancy. To the extent these proposals are adopted, the number of instances in which public bribery and extortion occurs should be reduced. Furthermore, the more simplified the construction process can become, the fewer opportunities will exist for the various private participants in the construction process to gain leverage and extort money. **(1999)**

Summary of Recommendations

Set forth below is a list of the recommendations contained in this Report together with the body that has ultimate authority for implementing them. Abbreviations are as follows:

- Construction Unions (UNIONS)
- District Attorneys for the Five Boroughs (DA)
- New York City Council (NYCC)
- New York City Department of Buildings (DOB)
- New York City Department of City Planning (DCP)
- New York City Department of Environmental Protection (DEP)
- New York City Department of Finance (DOF)
- New York City Department of Housing Preservation and Development (HPD)
- New York City Department of Transportation (DOT)
- New York City Fire Department (NYFD)
- New York City Housing Development Corporation (HDC)
- New York City Mayor (MAYOR)
- New York City Office of Management and Budget (OMB)
- New York City Planning Commission (CPC)
- New York State Attorney General (NYSAG)
- New York State Department of Environmental Conservation (DEC)
- New York State Department of Labor (NYDOL)
- New York State Department of Taxation and Finance (TAX)
- New York State Division of Housing and Community Renewal (DHCR)
- New York State Energy Research and Development Authority (NYSERDA)
- New York State Legislature (NYSL)
- United States Congress (CONGRESS)
- United States Department of Justice (DOJ)
- United States Department of Labor (USDOL)
- United States Department of Housing and Urban Development (HUD)
- United States Environmental Protection Agency (EPA)

Labor (Chapter 3)

A. Labor Unions [UNIONS]

1. As their collective bargaining agreements are renewed, labor unions should:
   - Eliminate inefficient work rules that do not affect worker safety, such as standby services, make-work positions, and paid union steward jobs; **(1999)**
   - Negotiate lower residential rates that apply outside core Manhattan, for affordable housing and for mid-rise apartment buildings in order to help unions gain a greater share of this market that cannot otherwise support the cost of union labor; **(1999)**
2. Union leadership should:
   - Negotiate a residential agreement for outside core Manhattan, affordable housing and mid-rise apartment buildings (up to seven stories) that supersedes the collective bargaining agreements in each of the individual trades. This agreement should coordinate the work hours and paid holidays among the various trades and alter work rules by providing for a higher ratio of apprentices to experienced tradespeople, a longer workday, elimination of standby services, and allowing shift work instead of overtime work; **(1999)** and
   - Merge small locals into larger ones in order to reduce the potential for work stoppages and eliminate jurisdictional requirements that add costs to a project by creating a need to hire workers from additional trades, such as those that require plumbers to install all bathroom fixtures and accessories and electricians to install mailboxes. **(1999)**

B. Prevailing Wage

1. The federal Davis-Bacon Act and state prevailing wage laws should be amended as follows: **[CONGRESS, NYSL]**
   - To require the establishment of a residential wage rate in cities for mid-rise apartment buildings (up to seven stories) in order to reflect the lower profit inherent in such projects relative to high-rise and commercial projects. The establishment of such a rate would facilitate the development of affordable housing with the use of government funds; **(1999)**
   - To require that the calculation of residential wage rates reflect the actual average costs of construction (including both union and non-union wages); **(1999)** and
2. Federal and state authorities should step up investigation and enforcement of wage underpayment by non-union contractors with prevailing wage construction contracts. **[DOJ, DA, NYSAG, NYDOL, USDOL]**

C. Women and Minority Recruitment

Union and non-union contractors alike should seek to diversify their membership to better reflect the fabric and complexion of New York City by recruiting more minorities and women to the trades through apprenticeship programs **(1999)**. **[UNIONS]**

Availability and Cost of Vacant Land (Chapter 4)

A. Rezone for Residential Density

As discussed in more detail in Chapter 7, the City Planning Commission should continue to rezone land especially in the boroughs outside Manhattan. Rezoning land to allow more intensive residential development will facilitate the construction of mid- and high-rise buildings and may make these projects more economically feasible. If the cost of land is spread over many more units, some projects that would not have been feasible at lower densities would be feasible with zoning permitting greater density; **(1999) [CPC]**

B. Facilitate Residential Conversion of Obsolete Institutional Properties

In order to encourage the reuse for residential development of closed hospitals, long-term vacant psychiatric facilities and other obsolete institutional sites, the City should create an inventory of these properties and a plan for their reuse. The City, in cooperation with appropriate State agencies, should develop incentives for the renovation of these facilities, where appropriate for housing; **(1999) [MAYOR, HPD]**

C. Inventory of Vacant Land

As discussed in more detail in Chapter 12, the City should prepare an inventory of privately-owned vacant land that is zoned for residential use; and **[DOF, HPD]**

D. Department of Housing Preservation and Development (HPD)

As discussed in more detail in Chapter 10, HPD should use its power of eminent domain to condemn certain privately-owned properties near city-owned lots in order to create land assemblages suitable for development and implement a process to identify vacant land controlled by other City agencies that are suitable for housing development. Additionally, control of City-owned land should be consolidated under the Deputy Mayor for Economic Development and Rebuilding in order to facilitate the transfer to HPD of City-owned land that is appropriate for housing development. **[MAYOR, HPD]**

Brownfields (Chapter 5)

A. Federal Government

The federal government should:

1. Amend the Brownfields Economic Development Initiative and EPA brownfields grant programs so as not to require that Davis-Bacon wages

be paid for construction performed under these programs; and **[HUD, EPA]**

2. Amend the Brownfields Economic Development Initiative legislation to allow grants to be issued to projects that do not have Section 108 loans. **[HUD]**

B. New York State

The State should amend the Brownfield Cleanup Program as follows:

1. The development tax credit should be modified:
   - To apply in an increased amount (percentage), but only to the costs of remediation – as opposed to development – as a more cost effective way to incentivize brownfield remediation;
   - To apply to housing development for homeownership; **[NYSL]**
2. The tax credits should be made transferable so that credits are not lost to the extent that projects are owned by tax-exempt entities like municipalities, pension funds and not-for-profit organizations; **[NYSL]**
3. The tax credit program should be amended to provide a bonus credit to developers who build projects consistent with Brownfield Opportunity Area plans submitted by municipalities and community-based organizations; and **[NYSL]**
4. The State executive and legislative branches should set the funding levels for the Brownfield Opportunity Area program. **[NYSL, DEC]**

C. New York City

The City should:

1. Continue applying for EPA and HUD grants to remediate city-owned properties **(1999)** and use such funds to match bond proceeds available under the newly-amended state Clean Water/Clean Air Bond Act; **[MAYOR, HPD]**
2. Remediate city-owned land under the Brownfield Cleanup Program and fund these costs through the proceeds of land sales which will increase due to the development tax credits and property tax credits that are available to the buyers of remediated land; **[HPD, OMB]**
3. Study the possibility of creating a program for tax-delinquent brownfields analogous to the Third Party Transfer program for occupied housing under which these properties would be transferred to responsible third parties that commit to remediation and redevelopment, rather than selling the tax liens on such properties; **[NYCC, HPD]**
4. Set environmental underwriting criteria for New Ventures Incentive Program (New VIP) and designate a single entity to make loan decisions under those criteria, without requiring unanimity of the participating lenders; and **[HPD, HDC]**
5. Use the New VIP program to assist private developers to assemble tracts of land suitable for development. **[HPD, HDC]**

Environmental Regulation (Chapter 6)

A. Expand Definition of Type II Projects

The New York State Legislature should expand the definition of Type II actions under the State Environmental Quality Review Act (SEQRA) (i.e. those presumed not to have significant environmental impacts and not to require additional analysis), to include housing developments of up to 90 units and government-supported affordable housing up to 150 units. **[NYSL]**

B. Change the Definition of the "Environment"

New York State should amend SEQRA to limit the definition of "environment" which triggers an environmental review to traditional (i.e. physical) conceptions of environmental impacts. **(1999) [NYSL]**

C. Restrict Standing to Sue Under SEQRA

New York State should reduce the incidence of non-meritorious SEQRA lawsuits by either (1) amending the law to limit standing to only those parties who are truly aggrieved or (2) eliminating the private right of action under the law. **(1999) [NYSL]**

D. Reduce Statute of Limitations and Accelerate Environmental Litigation

New York State should reduce the statute of limitations for SEQRA and create an expedited procedure for resolving challenges to housing development. **(1999) [NYSL]**

E. Provision of Information about CEQR Reviews

The Departments of City Planning and Environmental Protection should amend the statistics provided in the Mayor's Management Report to disclose the actual time elapsed between submission of a CEQR application and completion of the review and the reasons for delays. If the agencies are unable, over time, to shorten the review time, the New York State Legislature should adopt a provision that applications will be deemed approved after a certain reasonable time (say 45 days) after a sponsor's submission of all requested information. **(1999) [DCP, DEP, NYSL]**

F. Amend Procedure for Remediation of "E" Designations

DEP should reduce the standards for remediation of hazardous materials which should be amended to track the process used in the newly-enacted brownfield statute and establish a procedure for remediation of noise or air quality issues on "E" designations. Staff should be increased to clear up the backlog and delays in reviews of development applications. **[DEP, OMB]**

G. Continue to Increase Funding for Consultants for Area-wide Rezoning Actions

The city should increase funding for consultants to perform CEQR reviews for area-wide rezoning efforts. **[DCP, OMB]**

H. Coordination of HPD and DHCR Projects

The Department of Housing Preservation and Development and the State Division of Housing and Community Renewal should delegate the "lead agency" status and responsibility for CEQR and SEQRA review to one of the two agencies for jointly-sponsored projects. **[DHCR, HPD]**

Zoning Regulation and Land Use Review Process (Chapter 7)

A. Rezoning for Residential or Mixed-Uses

Continue the efforts and initiatives of the Department of City Planning and the City Planning Commission to rezone neighborhoods in New York City to permit residential and mixed-use development. These initiatives may require the City to increase funding to retain consultants necessary to perform the studies and analyses currently required under CEQR. **(1999) [DCP, CPC, OMB]**

B. Remove Limits on Residential Uses in Zoning

It is important that the City Planning Commission reverse the dangerous precedent it set in limiting residential uses in commercial districts where housing is usually permitted when it created the special zoning district as part of the recent Hudson Yards rezoning. **[CPC]**

C. Change Bulk and Density

The entire Administration, not just the Department of City Planning, must resist the political pressures to "downzone" neighborhoods that reduce growth. By recognizing the importance of mass transit in New York City, rezoning actions should continue to highlight those areas as development nodes with increased densities and avoid the temptation to accommodate a suburban automobile-centric planning policy. **[MAYOR, NYCC, DCP]**

D. Increase Density in Medium and High Density Zones

The City Planning Commission should adopt a modest increase in the density permitted in medium and high-density zones (R6 to R10) as an easy and unobtrusive way to have a large cumulative impact on housing production in the city. An increase in the definitions of floor area ratio (and other zoning limitations) permitted in each of these zones should be increased by ten percent provided transportation and school infrastructure is available. **(1999) [CPC]**

E. Adopt Technical Changes to Permit Better Developments and Singles Housing

The technical changes recommended by the American Institute of Architects New York Chapter Housing Task Force that will permit better-designed

housing developments without increasing bulk should be adopted, including proposed changes to permit more singles housing. **[CPC, DOB]**

F. Reduce Parking Requirements

Zoning and other provisions of law should not encourage the development of on-site parking as part of housing development wherever there is access to mass transit. Given the likelihood that residents of affordable housing and elderly housing developments are even less likely to own cars than market rate developments, we recommend that parking requirements be significantly reduced or eliminated for these projects. **(1999) [CPC]**

G. Expand Trained Staff in the ULURP Certification Process

The Department of City Planning should expand and train new staff to permit more expeditious review, approval and certification of ULURP applications. **[DCP, OMB]**

H. Expand Projects Eligible for UDAAP

The New York State Legislature should amend UDAAP to permit disposition of vacant land for development of dwellings with five or more units, as long as the project contains affordable housing. **[NYSL]**

Building Code (Chapter 8)

A. Adopt a New Building Code Based on a Model Code

The City should adopt the International Building Code as the model code based on the following: (1) the fact that 44 jurisdictions including New York State have already done so, (b) the national technical resources available to support its implementation and (c) the tremendous work and commitment of 400 professionals over the last two years to analyze and adapt the IBC to the needs of New York City. **(1999) [NYCC, MAYOR, DOB]**

B. Only Modify the Model Code Modestly

While the City should modify the model code to assure safe occupancy of buildings, the temptation must be avoided to render the building code substantially more stringent than either the national models or the current New York City Building Code. The opportunity to enact a new building code should also be used to incorporate modifications that will permit economically feasible construction of affordable housing on small and infill sites without compromising basic safety. **[NYCC, MAYOR]**

C. Adopt the International Fire Code

The City should adopt the International Fire Code. **[NYFD, NYCC, MAYOR]**

D. Eliminate the MEA Process

The City should eliminate its materials and equipment acceptance (MEA) process and promote competition among different types of materials and manufacturers. **[DOB, NYCC, MAYOR]**

Permitting Approval Process – The Department of Buildings (Chapter 9)
[DOB, unless otherwise noted]

A. Focus on the Culture of DOB Staff

The top management of the Department of Buildings must give employees constant and written reassurance that they will not be prosecuted or punished for incorrect decisions unless these decisions rise to the level of gross negligence. Decision-making at every level must be reinforced

B. Continue Increasing and Upgrading Staff

DOB should spend more of the "profit" between revenues collected and expenses incurred to create a top-notch and well-staffed department that will be able to prevent delays in obtaining appointments for plan examination, inspections and sign-offs for Certificates of Occupancy.

C. Unify Training Across Boroughs

DOB must reduce to writing forums in which staff from all boroughs meet together to discuss procedures and interpretations so that the five independent fiefdoms operate simply as field offices of the same commander.

D. Automate and Eliminate Pre-filing

DOB should fold the pre-filing procedure into the plan examination submission process which should be further automated. DOB should implement electronic filing of applications with CAD submissions in order to minimize data inputting. Electronic forms should be established with clear checklists with DOB reevaluating each of the items now required as part of the application.

E. Document Value of Innovations

The DOB should track and make public performance indicators that are tied to meaningful customer service outputs. These indicators will allow managers to reallocate responsibilities, evaluate the value of the innovations and continue to make new innovations as weaknesses are identified. Productivity increases can also be used to document the increased value of certain types of employees to support higher salaries. **[and OMB]**

F. Replace Policy and Procedures Notices with Directives

The Department of Buildings should review all Policy and Procedures Notices (PPNs) which are currently filed in chronological order with no index into a single Commissioner's Directives establishing the definitive ruling on that topic. In particular, one of the first Directives should establish conclusively the methodology for counting (or sampling) fixtures and risers to be included in Schedule B filings.

G. Commit the Resources Necessary for an Agency-wide Computer System

DOB should accelerate the procurement process for an internal processing and tracking computer system (that includes electronic filing) and should make the necessary infrastructure investments which are needed to permit this system to be implemented. As interim measures, DOB should allow PC filing of Post-Approval Amendments (PAAs) and should expand its planned initiative to permit electronic renewal of all permits. **(1999)**

H. Create Electronic Folders

To prevent delays from "lost" application folders, DOB should establish a system (possibly as part of its Agency-wide Computer System referenced above) for applicants to submit electronic folders that are available throughout the DOB computer network that simply could not get "lost."

I. Expand Handheld Devices to All Inspectors

DOB should expand the handheld device pilot to all inspectors. While investment in the central computer system is necessary to support them, this should be a priority of the information technology agenda of the agency.

J. Training, Training, Training

of plan examination, inspection and administrative staff is the only hope for resolving mistaken interpretations of the Code. Experiments with dedicated DOB trainers, outsourced trainers and peer-to-peer training should all be tried. At all levels of staff, an expectation of the equivalent of continuing education should be established to assure that all staff participates. As a final phase, staff should be tested and evaluated to assure full comprehension.

K. Enforcement and Fines Imposed During Construction

The city agencies responsible for imposing fines should establish clear and consistent guidelines that describe when fines will be issued on construction projects. Inspectors should perform walk-through inspections and recommend safety improvements which, except in the case of immediately hazardous conditions, should result in violations only if the builder fails to correct the conditions. All inspectors should be required to provide a copy of the violation to an on-site representative at the time the violation is issued to ensure correction of the condition and to minimize unnecessary fines. A special procedure should be established in all agencies authorized to issue a "stop work order" for an appeal of such order within one business day of its issuance. Inspection supervisors should spot-check the bases for violations and "stop-work orders" to ensure that arbitrary or obvious errors do not delay construction. **[and DOT, NYFD]**

L. Violation Removal

DOB should expand its preemptory removal of obviously incorrect or obsolete violations and should link its violation removal computer system with that of the ECB to allow "one-stop shopping" for violation removal.

DOB should consider establishing a system that would allow self-certification of violation removal by architects or other professionals.

M. Continue Streamlining and Automating the CO Process

The process for obtaining a certificate of occupancy should be streamlined and automated. The recent elimination of temporary certificates of occupancy should not be expanded.

New York City Affordable Housing Development Programs (Chapter 10)
[HPD, unless otherwise noted]

A. Bureau of Design and Review

HPD's Bureau of Design and Review should limit itself to its mission of ensuring compliance with the NYC Building Code, Zoning Resolution and HPD's Design Guidelines. It should not mandate recommendations to achieve housing quality above design guidelines;

B. Cost Saving Measures

1. Negotiated Bids: HPD should perform an empirical analysis to understand the impact of change orders on competitively bid contracts and determine whether there may be cases in which negotiated bids would ultimately be more cost effective than competitive bids;
2. Market-based Incentives: To the extent developers are able to develop projects with hard and/or soft costs below HPD's limits, their equity requirements should be decreased or developer's fee increased by half the amount of the reduction in order to encourage saving of limited subsidy funds;

C. Delays in Loan Conversion

1. Coordination with DOB: DOB now lists all pre-existing building violations on its website. HPD should work with DOB to remove these violations within 90 days of construction closing in order to prevent loan conversion delays; **[and DOB]**
2. Mayor's Management Report: The Mayor's Management Report should track the number of days from construction completion to conversion to permanent financing on HPD projects; **[and MAYOR]**
3. HPD legal staff should be increased in order to eliminate delays in conversion to permanent financing;

D. Land Sale Proceeds

HPD should be allowed to retain proceeds from the sale of City-owned land to subsidize the acquisition of privately-owned lots that are interspersed among City-owned lots in order to assemble larger parcels of land suitable for development; **[and MAYOR]**

E. Land Availability

1. On blocks where relatively few lots are privately-owned, HPD should use its power of eminent domain to condemn such properties (or the threat of condemnation) in order to create land assemblages suitable for development. If HPD lacks funds to compensate the property owners itself, it can arrange for compensation by the affordable housing developers to whom it plans to transfer title of these properties, provided the project is economically feasible; **(1999)**
2. HPD should implement a process to identify vacant land and underutilized buildings controlled by other City agencies that are suitable for housing development; **(1999)**
3. The Deputy Mayor for Economic Development and Rebuilding should consolidate control of City-owned land in order to facilitate the transfer to HPD of City-owned land controlled by other City agencies that is appropriate for housing development; **[and MAYOR]**

F. New York City Housing Development Corporation (HDC) [and HDC]

1. For affordable housing projects, HDC should lower its rates on bonds;
2. For developers who are willing and able to assume the risk of rising interest rates, HDC should more readily issue floating-rate bonds during the construction period or issue "forward commitments" for permanent financing that will enable borrowers to obtain construction financing from a bank in order to avoid the cost of negative arbitrage; and
3. HDC should expand its new program to finance affordable cooperative developments in order to facilitate HPD homeownership programs.

Inclusionary Zoning (Chapter 11)
[NYCC, HPD, DCP]

A. Modification of Existing Inclusionary Housing Program

If the City wishes to encourage development of affordable housing units, it should modify the existing Inclusionary Housing program as follows:

1. Amend the Zoning Resolution to allow the existing Inclusionary Housing program to be combined with other government subsidies, including the affordable housing component of the 421-a tax abatement program and permanent tax-exempt bond financing;
2. Allow off-site units to be built at a greater distance from the market rate housing to facilitate the identification of cheaper land – say, within two miles or in the same borough;
3. Allow affordable units to be managed by responsible for-profit entities without a preference for management by not-for-profits;
4. Allow the use of rents from affordable units to be used to repay project debt;

5. Remove restrictions regarding unit distribution within a project; and
6. Expand applicability of the program to areas zoned R6 and above.

B. Mandatory Inclusionary Zoning Program

If the City implements any mandatory zoning program, it should proceed with caution in order to minimize the risk that such a program will materially diminish the total amount of housing (both affordable and market rate) that would otherwise be built. Specifically, the City should:

1. Set program requirements only after carefully analyzing the impact of the market rate development on the community's supply of, and demand for, affordable housing;
2. Implement affordability mandates on a neighborhood-by-neighborhood basis, with affordability requirements attuned to local market conditions only as areas are rezoned for increased density or converted to residential from other uses;
3. Implement programs only if they are determined to be financially feasible both at present and under likely market conditions for the next ten years;
4. Implement a safety valve provision triggering an automatic modification of the affordability requirements if market conditions (construction hard costs, market sale/rental prices, or interest rates) change by more than a certain amount – say 25 percent;
5. Under current market conditions, if the City does not wish to discourage rental development, it should consider relaxing affordability requirements for rentals relative to homeownership development; and
6. Make clear to landowners that these programs and their built-in safety valves will remain in effect for the long term – say, at least ten years – so as to encourage land prices to adjust to reflect the land's true value.

Taxes and Fees (Chapter 12)

A. Real Estate Taxes on Vacant Land

The city should remove the bias that exists in the property tax system toward keeping land vacant. The city should create a tax system that encourages residential development.

1. To better understand what land is available, the city should prepare an inventory of the privately owned residentially-zoned vacant land and under-utilized properties in the city. If resources are not available for this large undertaking, this initiative should at least focus on privately-owned land located near city-owned land and obsolete institutional properties. **[DOF, HPD]**
2. The New York State Legislature should authorize New York City to create a special tax class for vacant land. **(1999) [NYSL]**
3. Vacant land that is part of a city-funded housing program should be exempt from real property taxes during construction. **(1999) [NYSL]**

B. Taxes to "Close" on Housing Developments

The city and state should waive or reduce real property transfer, mortgage recording and sales taxes on affordable housing projects, especially projects where the city or state has provided significant funding. **(1999) [NYSL, NYCC, MAYOR]**

C. Permit Fees

The city should reduce permit fees for construction of housing and should waive permit fees for affordable housing projects, especially those that are part of a Department of Housing Preservation and Development or New York City Housing Development Corporation program. **(1999) [DOB, NYCC, MAYOR]**

Scaffold Law/Insurance Premiums (Chapter 13)

The state legislature should amend the Scaffold Law to allow the recovery of injured construction workers to be reduced in proportion to their comparative negligence. The state legislature should also direct the state insurance department to make an actuarially appropriate reduction in employers' liability insurance rates to take into account the lower loss costs that are expected to result from this amendment. **[NYSL]**

Green Building (Chapter 14)

A. The State should:

1. Reauthorize the Green Building Tax Credit program, which sunset at the end of 2004; and **[NYSL]**
2. Draft regulations or guidance detailing how the Green Building Tax Credit can be passed on to condominium buyers and cooperative shareholders in order to encourage developers of such properties to take advantage of the Credit. **[DEC, TAX]**

B. The New York State Energy Research and Development Authority (NYSERDA) should: [NYSERDA]

1. Delegate its underwriting to third parties, including government and private sector entities that already underwrite housing construction projects;
2. During construction, allow developers of energy efficient one- to four-family homes to access the grants that currently go to homebuyers after construction, so long as the homes are affordable to people of low income; and
3. Create "one stop shopping" so that developers can access all green building benefits for which they may be eligible from a single portal.

Corruption in the Construction Industry (Chapter 15)

A. Continued Prosecutions by Local, State and Federal Law Enforcement Agencies

The results of these efforts, to date, have been impressive and should be continued. Nevertheless, each prosecution takes a very long time, the standard of proof for conviction is high and the costs of investigations are substantial. Therefore, an approach based solely upon criminal law enforcement is unlikely to be sufficient to rid the industry of illegal practices and prevent their resurgence; **(1999) [DOJ, DA]**

B. Women and Minority Recruitment

As discussed in greater detail in Chapter 3, union and non-union contractors alike should seek to diversify their membership to better reflect the fabric and complexion of New York City by recruiting more minorities and women to the trades through apprenticeship programs; **(1999)** and **[UNIONS]**

C. Simplify the Construction Process

One of the reasons the construction industry is ripe for corruption is that the construction process requires the coordination of so many individual entities (e.g. trade unions, contractors, subcontractors) and government agencies. Due to the time sensitivity of construction, any one of these entities could find itself in the position to extort payoffs by threatening delay. In other chapters of this Report, recommendations are made to simplify the New York City Zoning Resolution to permit more development to occur in New York "as of right," to revise the Building Code to reduce complexity and to simplify and expedite the process of obtaining building permits and certificates of occupancy. To the extent these proposals are adopted, the number of instances in which public bribery and extortion occurs should be reduced. Furthermore, the more simplified the construction process can become, the fewer opportunities will exist for the various private participants in the construction process to gain leverage and extort money. **(1999) [NYCC, CPC, DOB, UNIONS]**

List of Recommendations by Implementing Body

Construction Unions (UNIONS)

Labor	• As their collective bargaining agreements are renewed, labor unions should: o Eliminate inefficient work rules that do not affect worker safety, such as standby services, make-work positions, and paid union steward jobs; **(1999)** o Negotiate lower residential rates that apply outside core Manhattan, for affordable housing and for mid-rise apartment buildings in order to help unions gain a greater share of this market that cannot otherwise support the cost of union labor; **(1999)** • Union leadership should: o Negotiate a residential agreement for outside core Manhattan, affordable housing and mid-rise apartment buildings (up to seven stories) that supersedes the collective bargaining agreements in each of the individual trades. This agreement should coordinate the work hours and paid holidays among the various trades and alter work rules by providing for a higher ratio of apprentices to experienced tradespeople, a longer workday, elimination of standby services, and allowing shift work instead of overtime work; **(1999)** and o Merge small locals into larger ones in order to reduce the potential for work stoppages and eliminate jurisdictional requirements that add costs to a project by creating a need to hire workers from additional trades, such as those that require plumbers to install all bathroom fixtures and accessories and electricians to install mailboxes. **(1999)** • Women and Minority Recruitment: Union and non-union contractors alike should seek to diversify their membership to better reflect the fabric and complexion of New York City by recruiting more minorities and women to the trades through apprenticeship programs **(1999)**.
Corruption in the Construction Industry	• Women and Minority Recruitment: As discussed in greater detail in Chapter 3, union and non-union contractors alike should seek to diversify their membership to better reflect the fabric and complexion of New York City by recruiting more minorities and women to the trades through apprenticeship programs. **(1999)** • Simplify the Construction Process: One of the reasons the construction industry is ripe for corruption is that the construction process requires the coordination of so many individual entities (e.g. trade unions, contractors, subcontractors) and government agencies. Due to the time sensitivity of construction, any one of these entities could find itself in the position to extort payoffs by threatening delay. In other chapters of this Report, recommendations are made to simplify the New York City Zoning Resolution to permit more development to occur in New York "as of right," to revise the Building Code to reduce complexity and to simplify and expedite the process of obtaining building permits and certificates of occupancy. To the extent these proposals are adopted, the number of instances in which public bribery and extortion occurs should be reduced. Furthermore, the more simplified the construction process can become, the fewer opportunities will exist for the various private participants in the construction process to gain leverage and extort money. **(1999)** [with NYCC, CPC, DOB]

District Attorneys for the Five Boroughs (DA)

Labor	• Prevailing Wage: Federal and state authorities should step up investigation and enforcement of wage underpayment by non-union contractors with prevailing wage construction contracts. [with DOJ, NYSAG, NYDOL, USDOL]
Corruption in the Construction Industry	• Continued Prosecutions by Local, State and Federal Law Enforcement Agencies: The results of these efforts, to date, have been impressive and should be continued. Nevertheless, each prosecution takes a very long time, the standard of proof for conviction is high and the costs of investigations are substantial. Therefore, an approach based solely upon criminal law enforcement is unlikely to be sufficient to rid the industry of illegal practices and prevent their resurgence. **(1999)** [with DOJ]

New York City Council (NYCC)

Brownfields	• Study the possibility of creating a program for tax-delinquent brownfields analogous to the Third Party Transfer program for occupied housing under which these properties would be transferred to responsible third parties that commit to remediation and redevelopment, rather than selling the tax liens on such properties. [with HPD]
Zoning Regulation and Land Use Review	• Change Bulk and Density: The entire Administration, not just the Department of City Planning, must resist the political pressures to "downzone" neighborhoods that reduce growth. By recognizing the importance of mass transit in New York City, rezoning actions should continue to highlight those areas as development nodes with increased densities and avoid the temptation to accommodate a suburban automobile-centric planning policy. [with MAYOR, DCP]
Building Code	• Adopt a New Building Code Based on a Model Code: The City should adopt the International Building Code as the model code based on the following: (1) the fact that 44 jurisdictions including New York State have already done so, (b) the national technical resources available to support its implementation and (c) the tremendous work and commitment of 400 professionals over the last two years to analyze and adapt the IBC to the needs of New York City. **(1999)** [with MAYOR, DOB] • Only Modify the Model Code Modestly: While the City should modify the model code to assure safe occupancy of buildings, the temptation must be avoided to render the building code substantially more stringent than either the national models or the current New York City Building Code. The opportunity to enact a new building code should also be used to incorporate modifications that will permit economically feasible construction of affordable housing on small and infill sites without compromising basic safety. [with MAYOR] • Adopt the International Fire Code: The City should adopt the International Fire Code. [with NYFD, MAYOR] • Eliminate the MEA Process: The City should eliminate its materials and equipment acceptance (MEA) process and promote competition among different types of materials and manufacturers. [with DOB, MAYOR]
Inclusionary Zoning	• Modification of Existing Inclusionary Housing Program [with DCP, HPD]: If the City wishes to encourage development of affordable housing units, it should modify the existing Inclusionary Housing program as follows: o Amend the Zoning Resolution to allow the existing Inclusionary Housing program to be combined with other government subsidies, including the affordable housing component of the 421-a tax abatement program and

	permanent tax-exempt bond financing; o Allow off-site units to be built at a greater distance from the market rate housing to facilitate the identification of cheaper land – say, within two miles or in the same borough; o Allow affordable units to be managed by responsible for-profit entities without a preference for management by not-for-profits; o Allow the use of rents from affordable units to be used to repay project debt; o Remove restrictions regarding unit distribution within a project; and o Expand applicability of the program to areas zoned R6 and above. • Mandatory Inclusionary Zoning Program [with DCP, HPD]: If the City implements any mandatory zoning program, it should proceed with caution in order to minimize the risk that such a program will materially diminish the total amount of housing (both affordable and market rate) that would otherwise be built. Specifically, the City should: o Set program requirements only after carefully analyzing the impact of the market rate development on the community's supply of, and demand for, affordable housing; o Implement affordability mandates on a neighborhood-by-neighborhood basis, with affordability requirements attuned to local market conditions only as areas are rezoned for increased density or converted to residential from other uses; o Implement programs only if they are determined to be financially feasible both at present and under likely market conditions for the next ten years; o Implement a safety valve provision triggering an automatic modification of the affordability requirements if market conditions (construction hard costs, market sale/rental prices, or interest rates) change by more than a certain amount – say 25 percent; o Under current market conditions, if the City does not wish to discourage rental development, it should consider relaxing affordability requirements for rentals relative to homeownership development; and o Make clear to landowners that these programs and their built-in safety valves will remain in effect for the long term – say, at least ten years – so as to encourage land prices to adjust to reflect the land's true value.
Taxes and Fees	• Taxes to "Close" on Housing Developments: The city and state should waive or reduce real property transfer, mortgage recording and sales taxes on affordable housing projects, especially projects where the city or state has provided significant funding. **(1999)** [with NYSL, MAYOR] • Permit Fees: The city should reduce permit fees for construction of housing and should waive permit fees for affordable housing projects, especially those that are part of a Department of Housing Preservation and Development or New York City Housing Development Corporation program. **(1999)** [with DOB, MAYOR]
Corruption in the Construction Industry	• Simplify the Construction Process: One of the reasons the construction industry is ripe for corruption is that the construction process requires the coordination of so many individual entities (e.g. trade unions, contractors, subcontractors) and government agencies. Due to the time sensitivity of construction, any one of these entities could find itself in the position to extort payoffs by threatening delay. In other chapters of this Report, recommendations are made to simplify the New York City Zoning Resolution to permit more development to occur in New York "as of right," to revise the Building Code to reduce complexity and to simplify and expedite the process of obtaining building permits and certificates of occupancy. To the extent these proposals are adopted, the number of instances in which public

	bribery and extortion occurs should be reduced. Furthermore, the more simplified the construction process can become, the fewer opportunities will exist for the various private participants in the construction process to gain leverage and extort money. **(1999)** [with CPC, DOB, UNIONS]

New York City Department of Buildings (DOB)

Zoning Regulation and Land Use Review	• Adopt Technical Changes to Permit Better Developments and Singles Housing: The technical changes recommended by the American Institute of Architects New York Chapter Housing Task Force that will permit better-designed housing developments without increasing bulk should be adopted, including proposed changes to permit more singles housing. [with CPC]
Building Code	• Adopt a New Building Code Based on a Model Code: The City should adopt the International Building Code as the model code based on the following: (1) the fact that 44 jurisdictions including New York State have already done so, (b) the national technical resources available to support its implementation and (c) the tremendous work and commitment of 400 professionals over the last two years to analyze and adapt the IBC to the needs of New York City. **(1999)** [with NYCC, MAYOR] • Eliminate the MEA Process: The City should eliminate its materials and equipment acceptance (MEA) process and promote competition among different types of materials and manufacturers. [with NYCC, MAYOR]
Permitting Approval Process – The Department of Buildings	• Focus on the Culture of DOB Staff: The top management of the Department of Buildings must give employees constant and written reassurance that they will not be prosecuted or punished for incorrect decisions unless these decisions rise to the level of gross negligence. Decision-making at every level must be reinforced • Continue Increasing and Upgrading Staff: DOB should spend more of the "profit" between revenues collected and expenses incurred to create a top-notch and well-staffed department that will be able to prevent delays in obtaining appointments for plan examination, inspections and sign-offs for Certificates of Occupancy. • Unify Training Across Boroughs: DOB must reduce to writing forums in which staff from all boroughs meet together to discuss procedures and interpretations so that the five independent fiefdoms operate simply as field offices of the same commander. • Automate and Eliminate Pre-filing: DOB should fold the pre-filing procedure into the plan examination submission process which should be further automated. DOB should implement electronic filing of applications with CAD submissions in order to minimize data inputting. Electronic forms should be established with clear checklists with DOB reevaluating each of the items now required as part of the application. • Document Value of Innovations: The DOB should track and make public performance indicators that are tied to meaningful customer service outputs. These indicators will allow managers to reallocate responsibilities, evaluate the value of the innovations and continue to make new innovations as weaknesses are identified. Productivity increases can also be used to document the increased value of certain types of employees to support higher salaries. [with OMB] • Replace Policy and Procedures Notices with Directives: The Department of Buildings should review all Policy and Procedures Notices (PPNs) which are

	currently filed in chronological order with no index into a single Commissioner's Directives establishing the definitive ruling on that topic. In particular, one of the first Directives should establish conclusively the methodology for counting (or sampling) fixtures and risers to be included in Schedule B filings. • Commit the Resources Necessary for an Agency-wide Computer System: DOB should accelerate the procurement process for an internal processing and tracking computer system (that includes electronic filing) and should make the necessary infrastructure investments which are needed to permit this system to be implemented. As interim measures, DOB should allow PC filing of Post-Approval Amendments (PAAs) and should expand its planned initiative to permit electronic renewal of all permits. **(1999)** • Create Electronic Folders: To prevent delays from "lost" application folders, DOB should establish a system (possibly as part of its Agency-wide Computer System referenced above) for applicants to submit electronic folders that are available throughout the DOB computer network that simply could not get "lost." • Expand Handheld Devices to All Inspectors: DOB should expand the handheld device pilot to all inspectors. While investment in the central computer system is necessary to support them, this should be a priority of the information technology agenda of the agency. • Training, Training, Training: of plan examination, inspection and administrative staff is the only hope for resolving mistaken interpretations of the Code. Experiments with dedicated DOB trainers, outsourced trainers and peer-to-peer training should all be tried. At all levels of staff, an expectation of the equivalent of continuing education should be established to assure that all staff participates. As a final phase, staff should be tested and evaluated to assure full comprehension. • Enforcement and Fines Imposed During Construction: The city agencies responsible for imposing fines should establish clear and consistent guidelines that describe when fines will be issued on construction projects. Inspectors should perform walk-through inspections and recommend safety improvements which, except in the case of immediately hazardous conditions, should result in violations only if the builder fails to correct the conditions. All inspectors should be required to provide a copy of the violation to an on-site representative at the time the violation is issued to ensure correction of the condition and to minimize unnecessary fines. A special procedure should be established in all agencies authorized to issue a "stop work order" for an appeal of such order within one business day of its issuance. Inspection supervisors should spot-check the bases for violations and "stop-work orders" to ensure that arbitrary or obvious errors do not delay construction. [with DOT, NYFD] • Violation Removal: DOB should expand its preemptory removal of obviously incorrect or obsolete violations and should link its violation removal computer system with that of the ECB to allow "one-stop shopping" for violation removal DOB should consider establishing a system that would allow self-certification of violation removal by architects or other professionals. • Continue Streamlining and Automating the CO Process: The process for obtaining a certificate of occupancy should be streamlined and automated. The recent elimination of temporary certificates of occupancy should not be expanded.

New York City Affordable Housing Development Programs	• Delays in Loan Conversion: DOB now lists all pre-existing building violations on its website. HPD should work with DOB to remove these violations within 90 days of construction closing in order to prevent loan conversion delays. [with HPD]
Taxes and Fees	• Permit Fees: The city should reduce permit fees for construction of housing and should waive permit fees for affordable housing projects, especially those that are part of a Department of Housing Preservation and Development or New York City Housing Development Corporation program. **(1999)** [with NYCC, MAYOR]
Corruption in the Construction Industry	• Simplify the Construction Process: One of the reasons the construction industry is ripe for corruption is that the construction process requires the coordination of so many individual entities (e.g. trade unions, contractors, subcontractors) and government agencies. Due to the time sensitivity of construction, any one of these entities could find itself in the position to extort payoffs by threatening delay. In other chapters of this Report, recommendations are made to simplify the New York City Zoning Resolution to permit more development to occur in New York "as of right," to revise the Building Code to reduce complexity and to simplify and expedite the process of obtaining building permits and certificates of occupancy. To the extent these proposals are adopted, the number of instances in which public bribery and extortion occurs should be reduced. Furthermore, the more simplified the construction process can become, the fewer opportunities will exist for the various private participants in the construction process to gain leverage and extort money. **(1999)** [with NYCC, CPC, UNIONS]

New York City Department of City Planning (DCP)

Environmental Regulation	• Provision of Information about CEQR Reviews: The Departments of City Planning and Environmental Protection should amend the statistics provided in the Mayor's Management Report to disclose the actual time elapsed between submission of a CEQR application and completion of the review and the reasons for delays. If the agencies are unable, over time, to shorten the review time, the New York State Legislature should adopt a provision that applications will be deemed approved after a certain reasonable time (say 45 days) after a sponsor's submission of all requested information. **(1999**) [with DEP, NYSL] • Continue to Increase Funding for Consultants for Area-wide Rezoning Actions: The city should increase funding for consultants to perform CEQR reviews for area-wide rezoning efforts. [with OMB]
Zoning Regulation and Land Use Review	• Rezoning for Residential or Mixed-Uses: Continue the efforts and initiatives of the Department of City Planning and the City Planning Commission to rezone neighborhoods in New York City to permit residential and mixed-use development. These initiatives may require the City to increase funding to retain consultants necessary to perform the studies and analyses currently required under CEQR. **(1999)** [with CPC, OMB] • Change Bulk and Density: The entire Administration, not just the Department of City Planning, must resist the political pressures to "downzone" neighborhoods that reduce growth. By recognizing the importance of mass transit in New York City, rezoning actions should continue to highlight those areas as development nodes with increased densities and avoid the temptation to accommodate a suburban automobile-centric planning policy. [with MAYOR, NYCC]

	• Expand Trained Staff in the ULURP Certification Process: The Department of City Planning should expand and train new staff to permit more expeditious review, approval and certification of ULURP applications. [with OMB]
Inclusionary Zoning	• Modification of Existing Inclusionary Housing Program [with NYCC, HPD]: If the City wishes to encourage development of affordable housing units, it should modify the existing Inclusionary Housing program as follows: o Amend the Zoning Resolution to allow the existing Inclusionary Housing program to be combined with other government subsidies, including the affordable housing component of the 421-a tax abatement program and permanent tax-exempt bond financing; o Allow off-site units to be built at a greater distance from the market rate housing to facilitate the identification of cheaper land – say, within two miles or in the same borough; o Allow affordable units to be managed by responsible for-profit entities without a preference for management by not-for-profits; o Allow the use of rents from affordable units to be used to repay project debt; o Remove restrictions regarding unit distribution within a project; and o Expand applicability of the program to areas zoned R6 and above. • Mandatory Inclusionary Zoning Program [with NYCC, HPD]: If the City implements any mandatory zoning program, it should proceed with caution in order to minimize the risk that such a program will materially diminish the total amount of housing (both affordable and market rate) that would otherwise be built. Specifically, the City should: o Set program requirements only after carefully analyzing the impact of the market rate development on the community's supply of, and demand for, affordable housing; o Implement affordability mandates on a neighborhood-by-neighborhood basis, with affordability requirements attuned to local market conditions only as areas are rezoned for increased density or converted to residential from other uses; o Implement programs only if they are determined to be financially feasible both at present and under likely market conditions for the next ten years; o Implement a safety valve provision triggering an automatic modification of the affordability requirements if market conditions (construction hard costs, market sale/rental prices, or interest rates) change by more than a certain amount – say 25 percent; o Under current market conditions, if the City does not wish to discourage rental development, it should consider relaxing affordability requirements for rentals relative to homeownership development; and o Make clear to landowners that these programs and their built-in safety valves will remain in effect for the long term – say, at least ten years – so as to encourage land prices to adjust to reflect the land's true value.

New York City Department of Environmental Protection (DEP)

Environmental Regulation	• Provision of Information about CEQR Reviews: The Departments of City Planning and Environmental Protection should amend the statistics provided in the Mayor's Management Report to disclose the actual time elapsed between submission of a CEQR application and completion of the review and the reasons for delays. If the agencies are unable, over time, to shorten the review time, the New York State Legislature should adopt a provision that applications will be deemed approved after a certain reasonable time (say 45 days) after a sponsor's submission of all requested information. (1999) [with DCP, NYSL]

	• Amend Procedure for Remediation of "E" Designations: DEP should reduce the standards for remediation of hazardous materials which should be amended to track the process used in the newly-enacted brownfield statute and establish a procedure for remediation of noise or air quality issues on "E" designations. Staff should be increased to clear up the backlog and delays in reviews of development applications. [with OMB]

New York City Department of Finance (DOF)

Availability and Cost of Vacant Land	• Inventory of Vacant Land: As discussed in more detail in Chapter 12, the City should prepare an inventory of privately-owned vacant land that is zoned for residential use; [with HPD]
Taxes and Fees	• Real Estate Taxes on Vacant Land: The city should remove the bias that exists in the property tax system toward keeping land vacant. The city should create a tax system that encourages residential development. o To better understand what land is available, the city should prepare an inventory of the privately owned residentially-zoned vacant land and under-utilized properties in the city. If resources are not available for this large undertaking, this initiative should at least focus on privately-owned land located near city-owned land and obsolete institutional properties. [with HPD]

New York City Department of Housing Preservation and Development (HPD)

Availability and Cost of Vacant Land	• Facilitate Residential Conversion of Obsolete Institutional Properties: In order to encourage the reuse for residential development of closed hospitals, long-term vacant psychiatric facilities and other obsolete institutional sites, the City should create an inventory of these properties and a plan for their reuse. The City, in cooperation with appropriate State agencies, should develop incentives for the renovation of these facilities, where appropriate for housing; **(1999)** [with MAYOR] • Inventory of Vacant Land: As discussed in more detail in Chapter 12, the City should prepare an inventory of privately-owned vacant land that is zoned for residential use. [with DOF] • Department of Housing Preservation and Development (HPD): As discussed in more detail in Chapter 10, HPD should use its power of eminent domain to condemn certain privately-owned properties near city-owned lots in order to create land assemblages suitable for development and implement a process to identify vacant land controlled by other City agencies that are suitable for housing development. Additionally, control of City-owned land should be consolidated under the Deputy Mayor for Economic Development and Rebuilding in order to facilitate the transfer to HPD of City-owned land that is appropriate for housing development. [with MAYOR]
Brownfields	• Continue applying for EPA and HUD grants to remediate city-owned properties **(1999)** and use such funds to match bond proceeds available under the newly-amended state Clean Water/Clean Air Bond Act. [with MAYOR] • Remediate city-owned land under the Brownfield Cleanup Program and fund these costs through the proceeds of land sales which will increase due to the development tax credits and property tax credits that are available to the buyers of remediated land. [with OMB]

	• Study the possibility of creating a program for tax-delinquent brownfields analogous to the Third Party Transfer program for occupied housing under which these properties would be transferred to responsible third parties that commit to remediation and redevelopment, rather than selling the tax liens on such properties. [with NYCC] • Set environmental underwriting criteria for New Ventures Incentive Program (New VIP) and designate a single entity to make loan decisions under those criteria, without requiring unanimity of the participating lenders. [with HDC] • Use the New VIP program to assist private developers to assemble tracts of land suitable for development. [with HDC]
Environmental Regulation	• Coordination of HPD and DHCR Projects: The Department of Housing Preservation and Development and the State Division of Housing and Community Renewal should delegate the "lead agency" status and responsibility for CEQR and SEQRA review to one of the two agencies for jointly-sponsored projects. [with DHCR]
New York City Affordable Housing Development Programs	• Bureau of Design and Review: HPD's Bureau of Design and Review should limit itself to its mission of ensuring compliance with the NYC Building Code, Zoning Resolution and HPD's Design Guidelines. It should not mandate recommendations to achieve housing quality above design guidelines. • Cost Saving Measures o Negotiated Bids: HPD should perform an empirical analysis to understand the impact of change orders on competitively bid contracts and determine whether there may be cases in which negotiated bids would ultimately be more cost effective than competitive bids. o Market-based Incentives: To the extent developers are able to develop projects with hard and/or soft costs below HPD's limits, their equity requirements should be decreased or developer's fee increased by half the amount of the reduction in order to encourage saving of limited subsidy funds. • Delays in Loan Conversion o Coordination with DOB: DOB now lists all pre-existing building violations on its website. HPD should work with DOB to remove these violations within 90 days of construction closing in order to prevent loan conversion delays. [with DOB] o Mayor's Management Report: The Mayor's Management Report should track the number of days from construction completion to conversion to permanent financing on HPD projects. [with MAYOR] o HPD legal staff should be increased in order to eliminate delays in conversion to permanent financing. • Land Sale Proceeds: HPD should be allowed to retain proceeds from the sale of City-owned land to subsidize the acquisition of privately-owned lots that are interspersed among City-owned lots in order to assemble larger parcels of land suitable for development. [with MAYOR] • Land Availability o On blocks where relatively few lots are privately-owned, HPD should use its power of eminent domain to condemn such properties (or the threat of condemnation) in order to create land assemblages suitable for development. If HPD lacks funds to compensate the property owners

	itself, it can arrange for compensation by the affordable housing developers to whom it plans to transfer title of these properties, provided the project is economically feasible. (1999) o HPD should implement a process to identify vacant land and underutilized buildings controlled by other City agencies that are suitable for housing development. (1999) o The Deputy Mayor for Economic Development and Rebuilding should consolidate control of City-owned land in order to facilitate the transfer to HPD of City-owned land controlled by other City agencies that is appropriate for housing development. [with MAYOR] • New York City Housing Development Corporation [with HDC] o For affordable housing projects, HDC should lower its rates on bonds. o For developers who are willing and able to assume the risk of rising interest rates, HDC should more readily issue floating-rate bonds during the construction period or issue "forward commitments" for permanent financing that will enable borrowers to obtain construction financing from a bank in order to avoid the cost of negative arbitrage. o HDC should expand its new program to finance affordable cooperative developments in order to facilitate HPD homeownership programs.
Inclusionary Zoning	• Modification of Existing Inclusionary Housing Program [with NYCC, DCP]: If the City wishes to encourage development of affordable housing units, it should modify the existing Inclusionary Housing program as follows: o Amend the Zoning Resolution to allow the existing Inclusionary Housing program to be combined with other government subsidies, including the affordable housing component of the 421-a tax abatement program and permanent tax-exempt bond financing; o Allow off-site units to be built at a greater distance from the market rate housing to facilitate the identification of cheaper land – say, within two miles or in the same borough; o Allow affordable units to be managed by responsible for-profit entities without a preference for management by not-for-profits; o Allow the use of rents from affordable units to be used to repay project debt; o Remove restrictions regarding unit distribution within a project; and o Expand applicability of the program to areas zoned R6 and above. • Mandatory Inclusionary Zoning Program [with NYCC, DCP]: If the City implements any mandatory zoning program, it should proceed with caution in order to minimize the risk that such a program will materially diminish the total amount of housing (both affordable and market rate) that would otherwise be built. Specifically, the City should: o Set program requirements only after carefully analyzing the impact of the market rate development on the community's supply of, and demand for, affordable housing; o Implement affordability mandates on a neighborhood-by-neighborhood basis, with affordability requirements attuned to local market conditions only as areas are rezoned for increased density or converted to residential from other uses; o Implement programs only if they are determined to be financially feasible both at present and under likely market conditions for the next ten years; o Implement a safety valve provision triggering an automatic modification of the affordability requirements if market conditions (construction hard costs, market sale/rental prices, or interest rates) change by more than a certain amount – say 25 percent;

New York City Housing Authority	Joe Farro Irene Fanos Sherry Schuh Constantino Sagonas
New York State	
District Attorney's Office for Manhattan	Michael Scotto
Division of Housing and Community Renewal	Deborah Boatright Ellen Coyle Ernest Langhorne

Academics/Intermediaries/Labor Unions/Trade Associations	
Associated Business Owners of Greater New York	Nick LaPorte
Association for Neighborhood and Housing Development	Astrid Andre Adrian di Lollo
Association of Professional and Specialty Workers Local #279	Lavon Chambers
Building and Construction Trades Council	Ed Malloy
Building Trades Employers' Association	Lou Colletti
Carpenters' Labor-Management Corporation Trust	Richard Dwyer Elly Spicer
Citizens Housing and Planning Council	Frank Braconi
Community Service Society	Vic Bach
Enterprise Foundation	Alex Avitable Leo Baez Rafael Cestero Bill Frey Lydia Tom
Housing First!	Joe Weisbord
Local Initiatives Support Corporation	Jorge Dominguez Ruta Dunica
Municipal Art Society	Eva Hanhardt
New Partners for Community Revitalization	Jody Kass
New York Building Congress	Richard Anderson
New York University School of Law	Ronald Goldstock James Jacobs
Partnership for New York City	Patty Noonan
Pratt Institute Center for Community and Environmental Development	Brad Lander
Real Estate Board of New York	Marolyn Davenport Michael Slattery
State University of New York	Peter Salins
United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry	James Hart

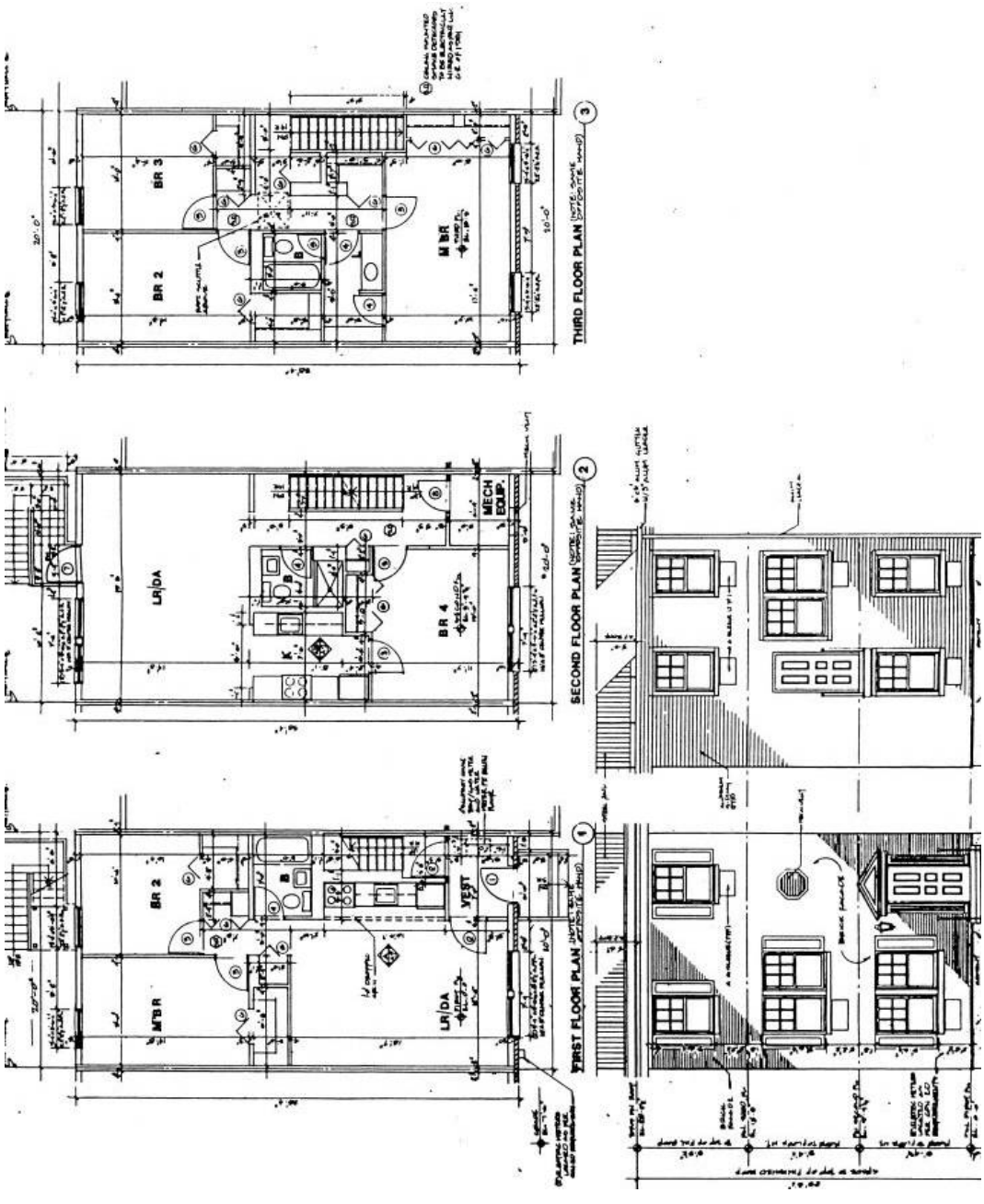
Financial Institutions	
Banco Popular Dominicana	Richard Roberto
Bank of America	Diane Borradaile Bernard Tyminski Craig Van Steenbergen
Bank of New York	John Bazzano
Citibank	Marc Jahr
Community Preservation Corporation	Jack Greene John McCarthy
Fannie Mae	Naomi Bayer
JP Morgan Chase	Joe Reilly

Architects and Attorneys	
Allen Cappelli, Esq.	Allen Cappelli
Curtis and Ginsberg Architects	Mark Ginsberg
DeLaCour and Ferrara Architects	Wids DeLaCour Dick Ferrara
Fried, Frank, Harris, Shriver and Jacobson	Melanie Meyers
Herbert Mandel, Architect	Herb Mandel
Meltzer/Mandl Architects	David Mandl
Nixon Peabody	John Kelly
Paul, Hastings, Janofsky and Walker	Paul Selver
Weil Gotshal and Manges	Ken Lowenstein

Other	
Consolidated Edison	Michael Rollins

Appendix B:
Elevations for Prototype Housing Developments

Townhouse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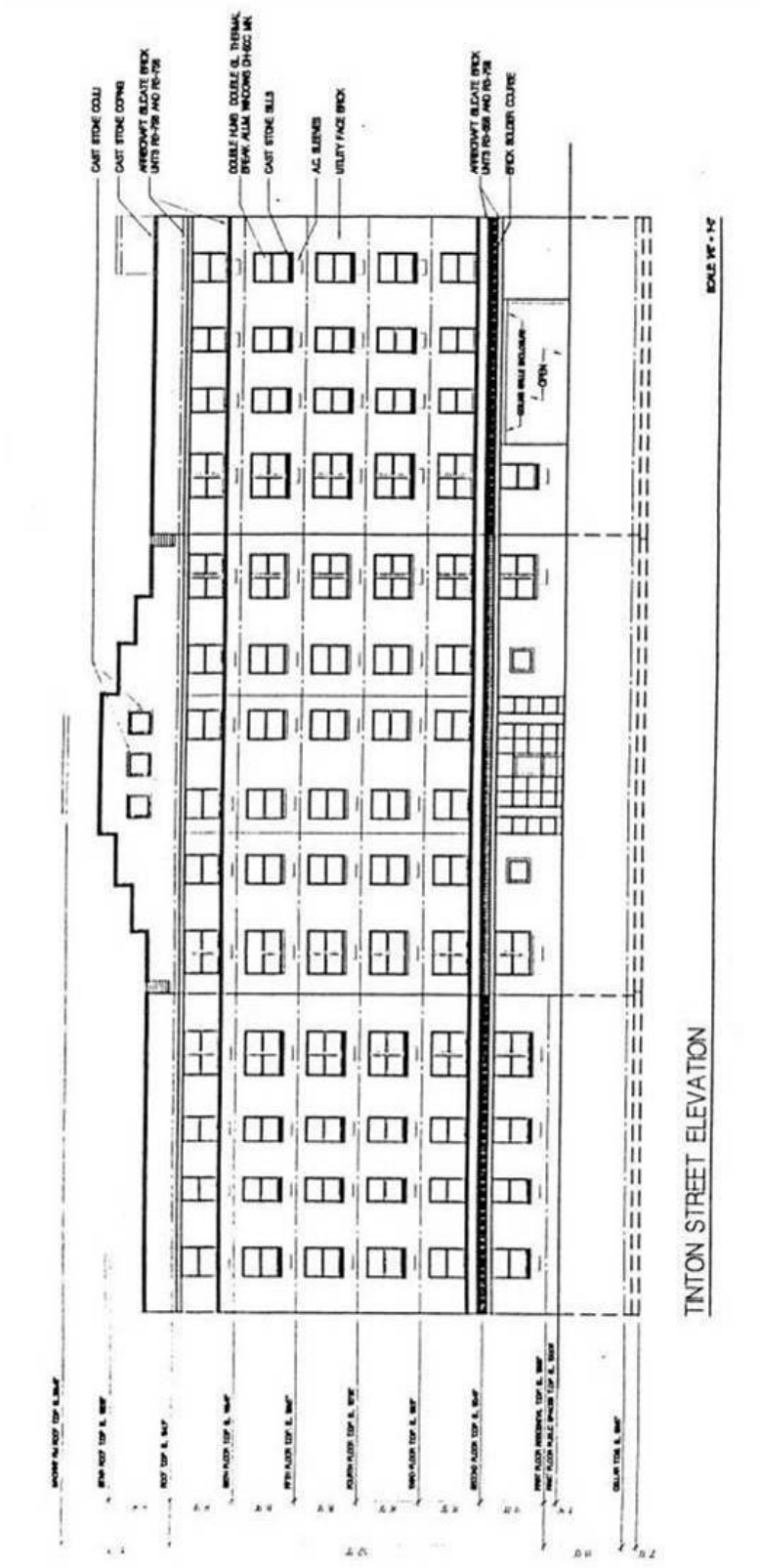
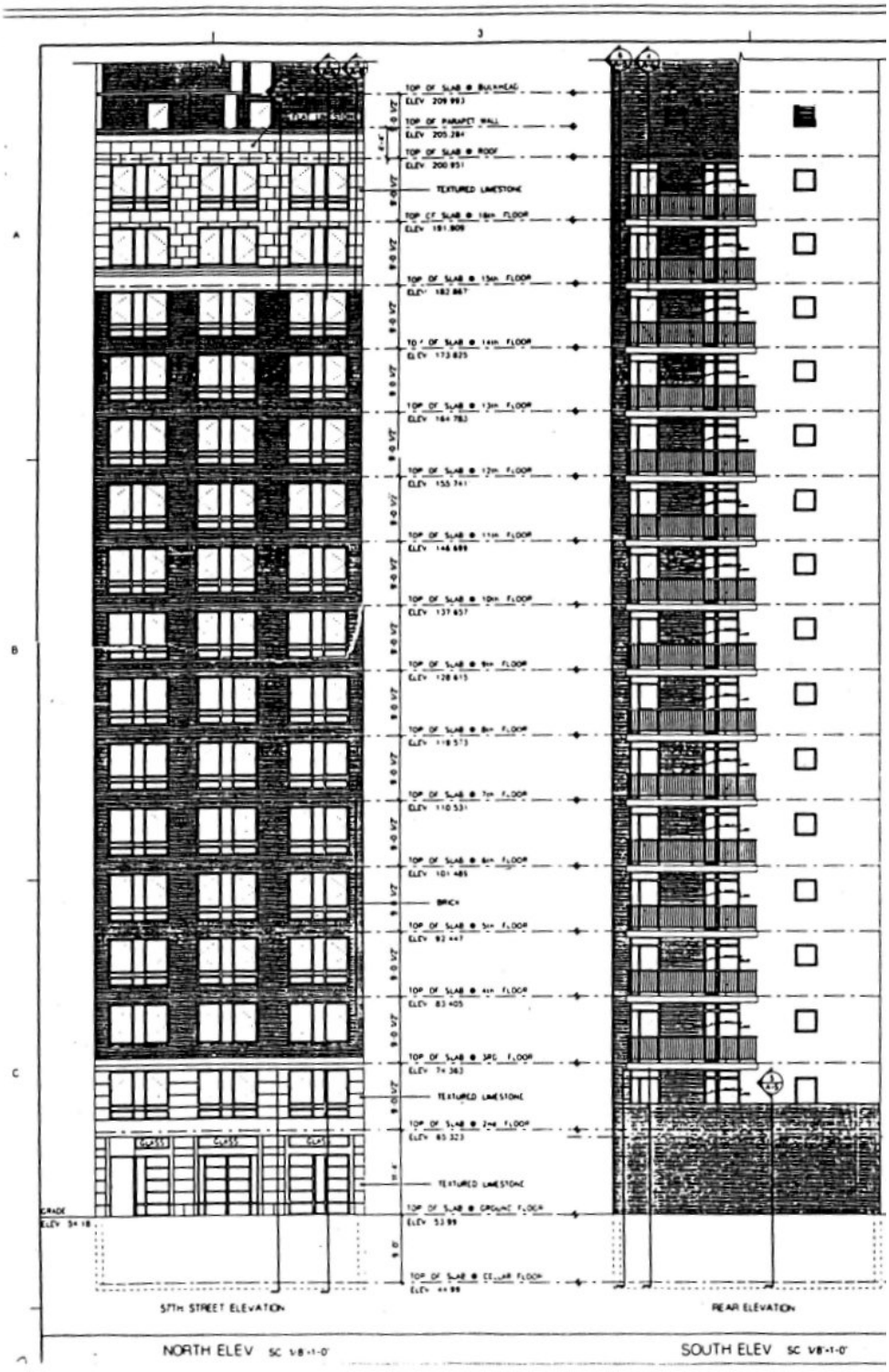
BR 2
M BR
THIRD FLOOR PLAN
LR/DA
MECH EQUIP.
BR 4
SECOND FLOOR PLAN
BR 2
M'BR
VEST
LR/DA
FIRST FLOOR PLAN

Mid-Rise



High-Rise


57th STREET ELEVATION
REAR ELEVATION
NORTH ELEV
SOUTH ELEV

Appendix C:
Detailed Prototype Cost Estimates

Town House Labor per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 3.61	$ 3.39	6%	$ 2.40	50%	$ 1.61	124%
Superstructure	9.98	9.63	4%	8.86	13%	7.66	30%
Exterior Walls	6.05	5.82	4%	5.33	13%	4.62	31%
Roofing	2.20	2.10	5%	1.92	15%	1.19	84%
Interior Construction	12.41	11.43	9%	10.69	16%	7.28	70%
Interior Finishes	6.04	5.23	15%	4.96	22%	3.85	57%
Conveying System	-	-		-		-	
Plumbing	4.57	4.30	6%	4.12	11%	3.23	42%
HVAC	1.65	1.56	6%	1.49	11%	0.88	87%
Fire Protection	0.13	0.12	6%	0.11	11%	0.09	42%
Electric Power & Lighting	14.14	12.72	11%	12.02	18%	11.49	23%
Appliances	0.87	0.80	8%	0.77	13%	0.67	30%
Sitework	2.03	1.94	4%	1.85	10%	1.55	31%
General Conditions	6.37	5.91	8%	5.45	17%	4.41	44%
Overhead & Profit (includes homes office)	4.20	3.90	8%	3.60	17%	2.91	44%
Bond	1.11	1.03	8%	0.95	17%	0.77	44%
Design Contingency	3.77	3.49	8%	3.23	17%	2.61	44%
Construction Contingency	3.96	3.67	8%	3.39	17%	2.74	44%
Total Construction Cost	**$ 83.08**	**$ 77.06**	**8%**	**$ 71.12**	**17%**	**$ 57.57**	**44%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Town House Labor per Town House

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 8,227	$ 7,730	6%	$ 5,476	50%	$ 3,677	124%
Superstructure	22,764	21,955	4%	20,198	13%	17,455	30%
Exterior Walls	13,786	13,279	4%	12,160	13%	10,537	31%
Roofing	5,012	4,793	5%	4,369	15%	2,721	84%
Interior Construction	28,302	26,063	9%	24,367	16%	16,608	70%
Interior Finishes	13,767	11,932	15%	11,303	22%	8,772	57%
Conveying System	0	0		0		0	
Plumbing	10,425	9,812	6%	9,383	11%	7,359	42%
HVAC	3,772	3,550	6%	3,394	11%	2,013	87%
Fire Protection	289	272	6%	260	11%	204	42%
Electric Power & Lighting	32,233	29,010	11%	27,398	18%	26,191	23%
Appliances	1,978	1,833	8%	1,751	13%	1,524	30%
Sitework	4,619	4,434	4%	4,216	10%	3,535	31%
General Conditions	14,517	13,466	8%	12,428	17%	10,060	44%
Overhead & Profit (includes homes office)	9,581	8,888	8%	8,202	17%	6,640	44%
Bond	2,539	2,355	8%	2,174	17%	1,759	44%
Design Contingency	8,590	7,969	8%	7,354	17%	5,953	44%
Construction Contingency	9,020	8,367	8%	7,722	17%	6,251	44%
Total Construction Cost	**$ 189,420**	**$ 175,706**	**8%**	**$ 162,154**	**17%**	**$ 131,261**	**44%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Town House Materials per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 2.70	$ 1.93	40%	$ 1.46	85%	$ 1.11	143%
Superstructure	10.94	10.07	9%	10.39	5%	8.68	26%
Exterior Walls	8.06	7.47	8%	7.59	6%	6.70	20%
Roofing	1.16	1.08	7%	1.16	0%	0.95	23%
Interior Construction	14.71	13.14	12%	12.82	15%	10.10	46%
Interior Finishes	8.37	7.06	18%	7.70	9%	5.55	51%
Conveying System	-	-		-		-	
Plumbing	4.32	4.32	0%	4.01	8%	3.67	18%
HVAC	5.12	5.12	0%	4.76	8%	1.50	242%
Fire Protection	0.14	0.14	0%	0.13	8%	0.12	18%
Electric Power & Lighting	5.13	5.03	2%	4.77	7%	4.62	11%
Appliances	3.14	3.14	0%	3.14	0%	2.75	14%
Sitework	2.17	1.94	12%	2.15	1%	1.64	32%
General Conditions	6.60	6.04	9%	6.01	10%	4.74	39%
Overhead & Profit (includes homes office)	4.35	3.99	9%	3.97	10%	3.13	39%
Bond	1.15	1.06	9%	1.05	10%	0.83	39%
Design Contingency	3.90	3.58	9%	3.56	10%	2.80	39%
Construction Contingency	4.10	3.76	9%	3.73	10%	2.94	39%
Total Construction Cost	**$ 86.06**	**$ 78.87**	**9%**	**$ 78.40**	**10%**	**$ 61.83**	**39%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Town House Materials per Town House

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 6,167	$ 4,390	40%	$ 3,336	85%	$ 2,538	143%
Superstructure	24,936	22,962	9%	23,696	5%	19,784	26%
Exterior Walls	18,372	17,033	8%	17,312	6%	15,286	20%
Roofing	2,646	2,466	7%	2,646	0%	2,158	23%
Interior Construction	33,530	29,963	12%	29,220	15%	23,027	46%
Interior Finishes	19,077	16,107	18%	17,546	9%	12,652	51%
Conveying System	0	0		0		0	
Plumbing	9,857	9,857	0%	9,143	8%	8,356	18%
HVAC	11,678	11,678	0%	10,861	8%	3,412	242%
Fire Protection	324	324	0%	302	8%	276	18%
Electric Power & Lighting	11,687	11,463	2%	10,880	7%	10,545	11%
Appliances	7,159	7,148	0%	7,159	0%	6,262	14%
Sitework	4,947	4,426	12%	4,901	1%	3,749	32%
General Conditions	15,038	13,782	9%	13,700	10%	10,804	39%
Overhead & Profit (includes homes office)	9,925	9,096	9%	9,042	10%	7,131	39%
Bond	2,630	2,410	9%	2,396	10%	1,890	39%
Design Contingency	8,899	8,155	9%	8,107	10%	6,393	39%
Construction Contingency	9,344	8,563	9%	8,512	10%	6,713	39%
Total Construction Cost	**$ 196,216**	**$ 179,826**	**9%**	**$ 178,758**	**10%**	**$ 140,976**	**39%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Town House Total Cost per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 6.31	$ 5.32	19%	$ 3.87	63%	$ 2.73	132%
Superstructure	20.92	19.70	6%	19.25	9%	16.33	28%
Exterior Walls	14.10	13.29	6%	12.93	9%	11.33	25%
Roofing	3.36	3.18	5%	3.08	9%	2.14	57%
Interior Construction	27.12	24.57	10%	23.50	15%	17.38	56%
Interior Finishes	14.41	12.30	17%	12.65	14%	9.40	53%
Conveying System	-	-		-		-	
Plumbing	8.90	8.63	3%	8.13	9%	6.89	29%
HVAC	6.78	6.68	1%	6.25	8%	2.38	185%
Fire Protection	0.27	0.26	3%	0.25	9%	0.21	28%
Electric Power & Lighting	19.26	17.75	9%	16.79	15%	16.11	20%
Appliances	4.01	3.94	2%	3.91	3%	3.42	17%
Sitework	4.20	3.89	8%	4.00	5%	3.19	31%
General Conditions	12.96	11.95	8%	11.46	13%	9.15	42%
Overhead & Profit (includes homes office)	8.56	7.89	8%	7.56	13%	6.04	42%
Bond	2.27	2.09	8%	2.00	13%	1.60	42%
Design Contingency	7.67	7.07	8%	6.78	13%	5.42	42%
Construction Contingency	8.05	7.43	8%	7.12	13%	5.69	42%
Total Construction Cost	**$ 169.14**	**$ 155.94**	**8%**	**$ 149.52**	**13%**	**$ 119.40**	**42%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Town House Total Cost per Town House

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 14,394	$ 12,120	19%	$ 8,812	63%	$ 6,215	132%
Superstructure	47,699	44,917	6%	43,894	9%	37,239	28%
Exterior Walls	32,158	30,311	6%	29,472	9%	25,823	25%
Roofing	7,658	7,259	5%	7,015	9%	4,879	57%
Interior Construction	61,832	56,026	10%	53,587	15%	39,635	56%
Interior Finishes	32,844	28,039	17%	28,849	14%	21,425	53%
Conveying System	0	0		0		0	
Plumbing	20,282	19,669	3%	18,526	9%	15,715	29%
HVAC	15,450	15,228	1%	14,255	8%	5,425	185%
Fire Protection	613	596	3%	562	9%	480	28%
Electric Power & Lighting	43,920	40,473	9%	38,278	15%	36,736	20%
Appliances	9,136	8,982	2%	8,910	3%	7,787	17%
Sitework	9,566	8,860	8%	9,116	5%	7,285	31%
General Conditions	29,555	27,248	8%	26,128	13%	20,864	42%
Overhead & Profit (includes homes office)	19,506	17,984	8%	17,244	13%	13,770	42%
Bond	5,169	4,766	8%	4,570	13%	3,649	42%
Design Contingency	17,489	16,124	8%	15,461	13%	12,346	42%
Construction Contingency	18,364	16,930	8%	16,234	13%	12,964	42%
Total Construction Cost	**$ 385,636**	**$ 355,532**	**8%**	**$ 340,912**	**13%**	**$ 272,237**	**42%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Mid-Rise Labor per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 7.04	$ 8.08	-13%	$ 6.15	14%	$ 4.84	45%
Superstructure	15.01	13.95	8%	12.90	16%	8.19	83%
Exterior Walls	8.53	8.05	6%	7.37	16%	4.68	82%
Roofing	1.06	0.99	7%	0.81	32%	0.52	105%
Interior Construction	10.29	9.85	5%	8.86	16%	6.56	57%
Interior Finishes	6.16	5.57	11%	5.37	15%	4.44	39%
Conveying System	1.14	0.98	17%	0.98	17%	0.73	56%
Plumbing	3.73	3.51	6%	3.35	11%	2.63	42%
HVAC	5.54	5.21	6%	4.98	11%	4.47	24%
Fire Protection	0.88	0.83	6%	0.80	11%	1.04	-15%
Electric Power & Lighting	13.35	12.02	11%	11.35	18%	10.85	23%
Appliances	0.65	0.61	6%	0.55	19%	0.47	38%
Sitework	1.82	2.14	-15%	2.03	-10%	1.77	3%
General Conditions	7.52	7.18	5%	6.55	15%	5.12	47%
Overhead & Profit (includes homes office)	4.96	4.74	5%	4.32	15%	3.38	47%
Bond	1.32	1.26	5%	1.15	15%	0.90	47%
Design Contingency	4.45	4.25	5%	3.87	15%	3.03	47%
Construction Contingency	4.67	4.46	5%	4.07	15%	3.18	47%
Total Construction Cost	**$ 98.12**	**$ 93.67**	**5%**	**$ 85.44**	**15%**	**$ 66.80**	**47%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Mid-Rise Labor per Apartment

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 10,342	$ 11,874	-13%	$ 9,033	14%	$ 7,109	45%
Superstructure	22,064	20,497	8%	18,954	16%	12,043	83%
Exterior Walls	12,534	11,833	6%	10,827	16%	6,877	82%
Roofing	1,561	1,458	7%	1,183	32%	763	105%
Interior Construction	15,127	14,470	5%	13,017	16%	9,639	57%
Interior Finishes	9,051	8,191	11%	7,892	15%	6,520	39%
Conveying System	1,677	1,437	17%	1,437	17%	1,078	56%
Plumbing	5,478	5,156	6%	4,930	11%	3,867	42%
HVAC	8,138	7,660	6%	7,325	11%	6,569	24%
Fire Protection	1,299	1,223	6%	1,169	11%	1,528	-15%
Electric Power & Lighting	19,628	17,665	11%	16,684	18%	15,954	23%
Appliances	954	896	6%	803	19%	689	38%
Sitework	2,674	3,152	-15%	2,983	-10%	2,604	3%
General Conditions	11,053	10,551	5%	9,624	15%	7,524	47%
Overhead & Profit (includes homes office)	7,295	6,964	5%	6,352	15%	4,966	47%
Bond	1,933	1,845	5%	1,683	15%	1,316	47%
Design Contingency	6,540	6,244	5%	5,695	15%	4,452	47%
Construction Contingency	6,867	6,556	5%	5,980	15%	4,675	47%
Total Construction Cost	**$ 144,214**	**$ 137,672**	**5%**	**$ 125,572**	**15%**	**$ 98,174**	**47%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Mid-Rise Materials per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 2.72	$ 3.69	-26%	$ 2.46	11%	$ 1.76	54%
Superstructure	11.26	9.94	13%	10.94	3%	7.72	46%
Exterior Walls	7.30	6.95	5%	6.79	8%	4.41	66%
Roofing	0.47	0.37	26%	0.33	43%	0.33	42%
Interior Construction	11.75	11.35	4%	11.04	6%	8.53	38%
Interior Finishes	7.22	6.27	15%	6.68	8%	5.24	38%
Conveying System	2.28	2.12	8%	2.12	8%	1.79	27%
Plumbing	3.84	3.84	0%	3.57	8%	3.26	18%
HVAC	7.55	7.55	0%	7.02	8%	8.49	-11%
Fire Protection	0.35	0.35	0%	0.33	8%	0.30	18%
Electric Power & Lighting	7.25	7.10	2%	6.74	8%	6.52	11%
Appliances	1.98	1.96	1%	1.96	1%	1.66	19%
Sitework	1.95	2.08	-6%	2.24	-13%	1.76	11%
General Conditions	6.59	6.36	4%	6.22	6%	5.18	27%
Overhead & Profit (includes homes office)	4.35	4.20	4%	4.11	6%	3.42	27%
Bond	1.15	1.11	4%	1.09	6%	0.91	27%
Design Contingency	3.90	3.76	4%	3.68	6%	3.06	27%
Construction Contingency	4.10	3.95	4%	3.87	6%	3.22	27%
Total Construction Cost	**$ 86.03**	**$ 82.96**	**4%**	**$ 81.19**	**6%**	**$ 67.57**	**27%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Mid-Rise Materials per Apartment

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 4,003	$ 5,429	-26%	$ 3,614	11%	$ 2,593	54%
Superstructure	16,554	14,616	13%	16,075	3%	11,340	46%
Exterior Walls	10,736	10,210	5%	9,984	8%	6,486	66%
Roofing	692	549	26%	485	43%	488	42%
Interior Construction	17,274	16,683	4%	16,227	6%	12,544	38%
Interior Finishes	10,609	9,221	15%	9,820	8%	7,701	38%
Conveying System	3,353	3,114	8%	3,114	8%	2,635	27%
Plumbing	5,643	5,643	0%	5,248	8%	4,796	18%
HVAC	11,098	11,098	0%	10,321	8%	12,474	-11%
Fire Protection	519	519	0%	483	8%	441	18%
Electric Power & Lighting	10,657	10,434	2%	9,906	8%	9,587	11%
Appliances	2,906	2,876	1%	2,882	1%	2,445	19%
Sitework	2,863	3,062	-6%	3,298	-13%	2,584	11%
General Conditions	9,691	9,345	4%	9,146	6%	7,611	27%
Overhead & Profit (includes homes office)	6,396	6,168	4%	6,036	6%	5,023	27%
Bond	1,695	1,635	4%	1,600	6%	1,331	27%
Design Contingency	5,734	5,530	4%	5,412	6%	4,504	27%
Construction Contingency	6,021	5,807	4%	5,683	6%	4,729	27%
Total Construction Cost	**$ 126,445**	**$ 121,939**	**4%**	**$ 119,333**	**6%**	**$ 99,312**	**27%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Mid-Rise Total Cost per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 9.76	$ 11.77	-17%	$ 8.60	13%	$ 6.60	48%
Superstructure	26.27	23.89	10%	23.83	10%	15.91	65%
Exterior Walls	15.83	15.00	6%	14.16	12%	9.09	74%
Roofing	1.53	1.37	12%	1.14	35%	0.85	80%
Interior Construction	22.04	21.20	4%	19.90	11%	15.09	46%
Interior Finishes	13.38	11.85	13%	12.05	11%	9.68	38%
Conveying System	3.42	3.10	11%	3.10	11%	2.53	35%
Plumbing	7.57	7.35	3%	6.92	9%	5.89	28%
HVAC	13.09	12.76	3%	12.01	9%	12.96	1%
Fire Protection	1.24	1.19	4%	1.12	10%	1.34	-8%
Electric Power & Lighting	20.61	19.12	8%	18.09	14%	17.38	19%
Appliances	2.63	2.57	2%	2.51	5%	2.13	23%
Sitework	3.77	4.23	-11%	4.27	-12%	3.53	7%
General Conditions	14.11	13.54	4%	12.77	11%	10.30	37%
Overhead & Profit (includes homes office)	9.31	8.93	4%	8.43	11%	6.80	37%
Bond	2.47	2.37	4%	2.23	11%	1.80	37%
Design Contingency	8.35	8.01	4%	7.56	11%	6.09	37%
Construction Contingency	8.77	8.41	4%	7.93	11%	6.40	37%
Total Construction Cost	**$ 184.15**	**$ 176.63**	**4%**	**$ 166.63**	**11%**	**$ 134.37**	**37%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Mid-Rise Total Cost per Apartment

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 14,346	$ 17,304	-17%	$ 12,647	13%	$ 9,702	48%
Superstructure	38,618	35,113	10%	35,030	10%	23,382	65%
Exterior Walls	23,270	22,043	6%	20,811	12%	13,363	74%
Roofing	2,253	2,008	12%	1,669	35%	1,251	80%
Interior Construction	32,400	31,153	4%	29,244	11%	22,184	46%
Interior Finishes	19,660	17,412	13%	17,712	11%	14,221	38%
Conveying System	5,030	4,551	11%	4,551	11%	3,713	35%
Plumbing	11,121	10,798	3%	10,178	9%	8,663	28%
HVAC	19,236	18,757	3%	17,645	9%	19,043	1%
Fire Protection	1,818	1,742	4%	1,652	10%	1,970	-8%
Electric Power & Lighting	30,286	28,099	8%	26,590	14%	25,541	19%
Appliances	3,859	3,772	2%	3,685	5%	3,134	23%
Sitework	5,537	6,214	-11%	6,282	-12%	5,187	7%
General Conditions	20,743	19,897	4%	18,770	11%	15,135	37%
Overhead & Profit (includes homes office)	13,691	13,132	4%	12,388	11%	9,989	37%
Bond	3,628	3,480	4%	3,283	11%	2,647	37%
Design Contingency	12,275	11,774	4%	11,107	11%	8,956	37%
Construction Contingency	12,889	12,362	4%	11,662	11%	9,404	37%
Total Construction Cost	**$ 270,660**	**$ 259,611**	**4%**	**$ 244,905**	**11%**	**$ 197,487**	**37%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

High-Rise Labor per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 8.83	$ 10.50	-16%	$ 7.46	18%	$ 5.86	51%
Superstructure	23.03	21.71	6%	20.29	14%	12.01	92%
Exterior Walls	18.89	18.18	4%	16.87	12%	9.61	97%
Roofing	0.50	0.46	7%	0.38	29%	0.23	119%
Interior Construction	9.17	9.23	-1%	8.68	6%	6.12	50%
Interior Finishes	10.03	9.48	6%	8.91	13%	6.85	46%
Conveying System	4.49	4.13	9%	4.31	4%	2.87	56%
Plumbing	7.88	7.83	1%	7.34	7%	4.89	61%
HVAC	11.79	11.41	3%	10.69	10%	7.13	65%
Fire Protection	2.02	1.93	4%	1.81	11%	1.21	67%
Electric Power & Lighting	18.52	16.72	11%	16.10	15%	11.85	56%
Appliances	1.08	1.06	2%	1.02	5%	0.69	57%
Sitework	2.82	3.58	-21%	3.44	-18%	3.36	-16%
General Conditions	11.90	11.62	2%	10.73	11%	7.27	64%
Overhead & Profit (includes homes office)	7.86	7.67	2%	7.08	11%	4.80	64%
Bond	2.08	2.03	2%	1.88	11%	1.27	64%
Design Contingency	7.04	6.88	2%	6.35	11%	4.30	64%
Construction Contingency	7.40	7.22	2%	6.67	11%	4.52	64%
Total Construction Cost	**$ 155.30**	**$ 151.65**	**2%**	**$ 140.03**	**11%**	**$ 94.83**	**64%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

High-Rise Labor per Apartment

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 16,865	$ 20,068	-16%	$ 14,260	18%	$ 11,197	51%
Superstructure	44,006	41,491	6%	38,767	14%	22,947	92%
Exterior Walls	36,097	34,736	4%	32,233	12%	18,363	97%
Roofing	949	884	7%	734	29%	434	119%
Interior Construction	17,520	17,640	-1%	16,585	6%	11,694	50%
Interior Finishes	19,168	18,107	6%	17,035	13%	13,095	46%
Conveying System	8,583	7,897	9%	8,240	4%	5,493	56%
Plumbing	15,058	14,958	1%	14,023	7%	9,349	61%
HVAC	22,523	21,798	3%	20,435	10%	13,623	65%
Fire Protection	3,851	3,697	4%	3,466	11%	2,311	67%
Electric Power & Lighting	35,385	31,947	11%	30,764	15%	22,639	56%
Appliances	2,060	2,026	2%	1,957	5%	1,312	57%
Sitework	5,380	6,850	-21%	6,576	-18%	6,425	-16%
General Conditions	22,745	22,210	2%	20,507	11%	13,888	64%
Overhead & Profit (includes homes office)	15,011	14,658	2%	13,535	11%	9,166	64%
Bond	3,978	3,884	2%	3,587	11%	2,429	64%
Design Contingency	13,459	13,142	2%	12,135	11%	8,218	64%
Construction Contingency	14,132	13,800	2%	12,742	11%	8,629	64%
Total Construction Cost	**$ 296,770**	**$ 289,792**	**2%**	**$ 267,580**	**11%**	**$ 181,212**	**64%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

High-Rise Materials per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 3.89	$ 5.46	-29%	$ 3.71	5%	$ 2.85	36%
Superstructure	18.74	16.52	13%	17.91	5%	13.04	44%
Exterior Walls	18.47	17.30	7%	17.72	4%	10.98	68%
Roofing	0.21	0.17	26%	0.15	41%	0.15	40%
Interior Construction	12.23	11.70	4%	11.45	7%	9.38	30%
Interior Finishes	11.30	10.04	13%	10.58	7%	8.49	33%
Conveying System	9.88	9.34	6%	9.52	4%	7.19	38%
Plumbing	7.22	7.22	0%	6.71	8%	6.13	18%
HVAC	9.75	9.75	0%	9.07	8%	8.29	18%
Fire Protection	0.76	0.76	0%	0.71	8%	0.64	18%
Electric Power & Lighting	11.12	10.88	2%	8.75	27%	9.99	11%
Appliances	3.31	3.13	6%	3.17	5%	2.79	19%
Sitework	2.84	3.23	-12%	3.24	-12%	2.98	-5%
General Conditions	10.97	10.55	4%	10.27	7%	8.29	32%
Overhead & Profit (includes homes office)	7.24	6.96	4%	6.78	7%	5.47	32%
Bond	1.92	1.85	4%	1.80	7%	1.45	32%
Design Contingency	6.49	6.24	4%	6.08	7%	4.91	32%
Construction Contingency	6.82	6.55	4%	6.38	7%	5.15	32%
Total Construction Cost	**$ 143.16**	**$ 137.65**	**4%**	**$ 133.97**	**7%**	**$ 108.18**	**32%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

High-Rise Materials per Apartment

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 7,425	$ 10,438	-29%	$ 7,093	5%	$ 5,451	36%
Superstructure	35,807	31,571	13%	34,228	5%	24,927	44%
Exterior Walls	35,295	33,061	7%	33,861	4%	20,991	68%
Roofing	406	323	26%	287	41%	290	40%
Interior Construction	23,369	22,367	4%	21,877	7%	17,919	30%
Interior Finishes	21,601	19,177	13%	20,209	7%	16,224	33%
Conveying System	18,883	17,853	6%	18,197	4%	13,733	38%
Plumbing	13,791	13,791	0%	12,825	8%	11,722	18%
HVAC	18,628	18,628	0%	17,324	8%	15,833	18%
Fire Protection	1,450	1,450	0%	1,348	8%	1,232	18%
Electric Power & Lighting	21,257	20,784	2%	16,717	27%	19,092	11%
Appliances	6,326	5,977	6%	6,051	5%	5,329	19%
Sitework	5,421	6,177	-12%	6,185	-12%	5,691	-5%
General Conditions	20,966	20,160	4%	19,620	7%	15,843	32%
Overhead & Profit (includes homes office)	13,837	13,305	4%	12,949	7%	10,457	32%
Bond	3,667	3,526	4%	3,432	7%	2,771	32%
Design Contingency	12,406	11,929	4%	11,610	7%	9,375	32%
Construction Contingency	13,027	12,526	4%	12,191	7%	9,844	32%
Total Construction Cost	**$ 273,562**	**$ 263,042**	**4%**	**$ 256,005**	**7%**	**$ 206,725**	**32%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

High-Rise Total Cost per Square Foot

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 12.71	$ 15.96	-20%	$ 11.17	14%	$ 8.71	46%
Superstructure	41.77	38.23	9%	38.20	9%	25.05	67%
Exterior Walls	37.36	35.48	5%	34.59	8%	20.59	81%
Roofing	0.71	0.63	12%	0.53	33%	0.38	87%
Interior Construction	21.40	20.94	2%	20.13	6%	15.50	38%
Interior Finishes	21.33	19.51	9%	19.49	9%	15.34	39%
Conveying System	14.37	13.48	7%	13.83	4%	10.06	43%
Plumbing	15.10	15.04	0%	14.05	7%	11.03	37%
HVAC	21.53	21.15	2%	19.76	9%	15.41	40%
Fire Protection	2.77	2.69	3%	2.52	10%	1.85	50%
Electric Power & Lighting	29.64	27.59	7%	24.85	19%	21.84	36%
Appliances	4.39	4.19	5%	4.19	5%	3.47	26%
Sitework	5.65	6.82	-17%	6.68	-15%	6.34	-11%
General Conditions	22.87	22.17	3%	21.00	9%	15.56	47%
Overhead & Profit (includes homes office)	15.10	14.63	3%	13.86	9%	10.27	47%
Bond	4.00	3.88	3%	3.67	9%	2.72	47%
Design Contingency	13.54	13.12	3%	12.43	9%	9.21	47%
Construction Contingency	14.21	13.78	3%	13.05	9%	9.67	47%
Total Construction Cost	**$ 298.46**	**$ 289.30**	**3%**	**$ 273.99**	**9%**	**$ 203.01**	**47%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

High-Rise Total Cost per Apartment

	New York	Los Angeles	Comparison	Chicago	Comparison	Dallas	Comparison
Substructure	$ 24,290	$ 30,505	-20%	$ 21,353	14%	$ 16,649	46%
Superstructure	79,813	73,062	9%	72,995	9%	47,874	67%
Exterior Walls	71,393	67,797	5%	66,094	8%	39,354	81%
Roofing	1,355	1,207	12%	1,021	33%	723	87%
Interior Construction	40,890	40,007	2%	38,462	6%	29,613	38%
Interior Finishes	40,768	37,284	9%	37,243	9%	29,319	39%
Conveying System	27,467	25,750	7%	26,437	4%	19,227	43%
Plumbing	28,848	28,749	0%	26,848	7%	21,071	37%
HVAC	41,151	40,425	2%	37,759	9%	29,457	40%
Fire Protection	5,301	5,147	3%	4,814	10%	3,543	50%
Electric Power & Lighting	56,642	52,730	7%	47,481	19%	41,731	36%
Appliances	8,386	8,003	5%	8,008	5%	6,640	26%
Sitework	10,801	13,027	-17%	12,761	-15%	12,116	-11%
General Conditions	43,710	42,369	3%	40,128	9%	29,732	47%
Overhead & Profit (includes homes office)	28,849	27,964	3%	26,484	9%	19,623	47%
Bond	7,645	7,410	3%	7,018	9%	5,200	47%
Design Contingency	25,865	25,072	3%	23,745	9%	17,594	47%
Construction Contingency	27,159	26,325	3%	24,933	9%	18,473	47%
Total Construction Cost	**$ 570,332**	**$ 552,834**	**3%**	**$ 523,585**	**9%**	**$ 387,937**	**47%**

Note: Comparisons indicate the amount by which costs in New York City are more or less expensive than in the control cities.

Source: Accu-Cost Construction Consultants, Inc., mid-year 2004

Appendix D:
State Environmental Quality Review Act Summary

I. Trigger for Environmental Review

"Actions" include one or any combination of the following:

- Projects or physical activities, such as construction or other activities that may affect the environment by changing the use, appearance or condition of any natural resource or structure, that a) are directly undertaken by an agency; or b) involve funding by an agency; or c) require one or more new or modified approvals from an agency or agencies;
- Agency planning and policy making activities that may affect the environment and commit the agency to a definite course of future decisions;
- Adoption of agency rules, regulations and procedures, including local laws, codes ordinances, executive orders and resolutions that may affect the environment.

II. Definition of "Environment"

"Environment" means the physical conditions which will be affected by the proposed action, including:

- land
- air
- water
- minerals
- flora
- fauna
- noise
- objects of historic significance or
- aesthetic significance
- existing patterns of population concentration, distribution, or growth
- existing community or neighborhood character

III. Statutory Exemptions

"Action" does not include:
According to NYC CLS @ 8-0105(5)

- Enforcement proceedings or the exercise of prosecutorial discretion in determining whether or not to institute such proceedings
- Official acts of a ministerial nature, involving no exercise of discretion
- Maintenance or repair involving no substantial changes in existing structure or facility

IV. Categorical Exemptions

Type II

- Maintenance or repair involving no substantial changes in an existing structure or facility;
- Replacement, rehabilitation, or reconstruction of a structure or facility, in kind, on the same site, including upgrading buildings to meet building or fire codes, unless the building exceeds environmental thresholds;
- Construction, expansion, or granting of an area variance for a single-family home, a two-family or three-family residence on an approved lot;
- Construction, expansion or placement of minor accessory/appurtenant residential structures, including garages, carports, patios, decks, swimming pools...or other buildings not changing land use or density;
- Official acts of a ministerial nature involving no exercise of discretion, including building permits and historic preservation permits where issuance is predicated solely on the applicant's compliance or noncompliance with the relevant local building code or preservation code;
- License, lease and permit renewals, or transfers of ownership thereof, where there will be no material change in permit conditions or the scope of permitted activities
- Adoption of regulations, policies, procedures and local legislative decisions in connection with any action on the Type II list;
- Adoption of a moratorium on land development or construction;
- Interpreting an existing code, rule or regulation;
- Designation of local landmarks or their inclusion within historic districts.

V. Standing to Sue

In order to challenge an administrative action, such as an environmental determination, the plaintiff must show that the action will have a harmful effect on the challenger and that the interest to be asserted is within the zone of interest to be protected by the statute. Harmful effect may often be inferred by proximity to the proposed action. In addition, a SEQRA challenger must demonstrate that it will suffer an injury that is environmental and not solely economic in nature. *However, where the proposed action is a zoning enactment, the owners of properties specifically affected by this change need not allege likelihood of environmental harm in making a SEQRA challenge.
In the Matter of Gernatt Asphalt Products, Inc. v. *Town of Sardinia et al.* 87 N.Y. 2d
668, 664 N.E. 2d 1226, 642 N.Y.S. 2d 164, 1996.

Appendix E:
Zoning Resolution Summary

New York City Zoning Regulations – One and Two Family Zones

Type	*Description CZD = Contextual Zoning District (Under Type)*	*Max. Floor Area Ratio (+ Attic)* *Of lot size*	*Min. Open Space Ratio* *Of buildable feet*	*Max. Lot Coverage* *% of lot size*	*Min. Lot Size (Min. Lot width)* *In sq. feet*	*Min. Lot Sq. Ft. Per DU [Min. in smaller lot areas]*	*Max. DUs/Acre*	*Min. Front Yard (% depth) [Ft. for each ft. over 25)* *In feet*	*Min. Rear Yard (Except Special Provisions)* *In feet*	*Min. Side Yard [Min. Between buildings] (# required) {Zero Lot Line Requirements}* *In feet*	*Max. Height* *In feet*	*Min. Parking Spaces/ DU^^ (Higher for Lower Density Growth Mgmt Areas)*
R1-1	Detached	0.5	150%	N/A	9,500 (100)	Same	4	20	30^	15, 35 total, (2)	25	1
R1-2	Detached	0.5	150%	N/A	5,700 (60)	Same	7	20	30^	8, 20 total (2)	25	1
R2	Detached	0.5	150%	N/A	3,800 (40)	Same	11	15	30^	5, 13 total (2)	25	1
R2X CZD	Detached	0.85 (0.17)	N/A	N/A	2,850 (30)	2,850	15	15	30^	2, [8], 10 total, (2)	35	1
R3-1	Detached	0.5 (0.1)	N/A	35	3,800 (40)	1,040	42	15	30^	5, 13 total (2)	35	1
R3-1	Semi-Detached	0.5 (0.1)	N/A	35	1,700 (18)	1,040	42	15	30^	8 (1)	35	1
R3A	1 & 2 Family Detached	0.5 (0.1)	N/A	N/A	2,375 (25)	1,185	37	10	30^	8, (2) {[8](1)}	35	1
R4-1	1 & 2 Family Detached	0.75 (0.15)	N/A	N/A	2,375 (25)	970	45	10	30^	8 total (2) {8 (1)}	35	1
R4-1	1 & 2 Family Semi-Detached	0.75 (0.15)	N/A	N/A	1,700 (18)	970	45	10	30^	4, [8], (1)	35	1
R4A CZD	1 & 2 Family Detached	0.75 (0.15)	N/A	N/A	2,850 (30)	1,425	30	10	30^	2, [8], 10 total (2)	35	1
R4B CZD	A) 1 & 3 Family Detached B) 1 & 2 Family Semi-Detached & Attached	0.9	N/A	55	a) 2,375 (25) b)1,700 (25)	970	45	5	30^	a) 8, (2) {8 (1)} b) 4, [8] (1)	24	1*

*Unless the lot is in an area without curbs; !Whichever is less; +Different for lots of less than 50% wide for R1 and 40 ft. wide for R2 which were on record at the time of ordinance adoption; ^Requirement starts at 30ft in height; ^^Parking requirements for all New York City housing developments can vary by the funding source for the project.

New York City Zoning Regulations – Mid Rise Zones

Type	*Description* *CZD = Contextual Zoning District (Under Type)* *QHP = Quality Housing Program Mandatory (Under Type)* *QHP = Quality Housing Program (Under Type)*	*Max. Floor Area Ratio (+ Attic)* *Of lot size*	*Min. Open Space Ratio* *Of buildable feet*	*Max. Lot Coverage (for corner lot)* *% of lot size*	*Min. Lot Size (Min. Lot width)* *In sq. feet*	*Min. Lot Sq. Ft. Per DU*	*Max. DUs/Acre*	*Min. Front Yard (Front wall set-back)* *In feet*	*Min. Rear Yard (Except Special Provisions)* *In feet*	*Min. Side Yard [Min. Between buildings] (# required) {% Building Length}* *In feet*	*Max. Height (Max. Street wall)* *In feet*	*Parking Spaces/ DU^^* *(% if grouped)*
R3-2	General Residence District a) Semi-Detached, 1 & 2 Family b) Detached 1 & 2 Family	0.5 (0.1)	65%	35	1,700 (18) 3,800 (40)	1,450 1,040 1,040	42 30 30	15	30^	8ea (2), or {10%} 5, 13 total (2) 8, (1)	35	1
R4	General Residence District a) Semi-Detached, 1 & 2 Family b) Detached 1 & 2 Family	0.75 (0.1)	55%	45	1,700 (18) 3,800 (40)	970	45	18 or 10	30^	8ea (2), or {10%} 8, (1) 5, 13 total (2)	35	1
R4 Infill	All Houses Types a) Semi-Detached 1 & 2 Family b)Detached 1 & 2 Family	1.35	55%	55	1,700 (18) 3,800 (40)	666	65	18	30^	8ea (2), or {10%} 8, (1) 5, 13 total (2)	35 (25)	1 (66)
R5	General Residence District a) Semi-Detached, 1 & 2 Family b) Detached 1 & 2 Family	1.25	45%	55	1,700 (18) 3,800 (40)	605	72	18 or 10	30^	8ea (2), or {10%} 8, (1) 5, 13 total (2)	40 (30)	1 (85)
R5B CZD	General Residence District a) Semi-Detached, 1 & 2 Family b) Detached 1 & 2 Family	1.35	45%	55	1,700 (18) 2,375 (25)	666	65	5	30^	None 4 [8] (8 for Zero Lot Line) 8 total (2)	33 (30)	1 (66)

^Requirement starts at 30ft in height; ^^Parking requirements for all New York City housing developments can vary by the funding source for the project.

New York City Zoning Regulations – Mid Rise Zones													
Type	*Description CZD = Contextual Zoning District (Under Type) QHP = Quality Housing Program Mandatory (Under Type) QHP = Quality Housing Program (Under Type)*	*Max. Floor Area Ratio (+ Attic)*	*Min. Open Space Ratio*	*Max. Lot Coverage (for corner lot)*	*Min. Lot Size (Min. Lot width)*	*Min. Lot Sq. Ft. Per DU*	*Max. DUs/Acre*	*Min. Front Yard (Front wall set-back)*	*Min. Rear Yard (Except Special Provisions)*	*Min. Side Yard [Min. Between buildings] (# required) {% Building Length}*	*Max. Height (Max. Street wall)*	*Parking Spaces/DU^^*
		Of lot size	*Of buildable feet*	*% of lot size*	*In sq. feet*			*In feet*	*In feet*	*In feet*	*In feet*	*(% if grouped)*
R5 Infill	All Housing Types a) Semi-Detached, 1 & 2 Family b) Detached 1 & 2 Family	1.65	N/A	55	1,700 (18) 3,800 (40)	545	80	18	30^	8ea (2), or {10%} 8, (1) 5, 13 total (2)	33 (30)	1 (66)
R6A CZD QHP	General Residence District For 1, 2 Family	3.0	N/A	65 (80)	1,700 (18) 3,800 (40)	227	192	[Wide street: 8 Narrow: 15]	30^	None If provided: 8, 16 total	N/A	1 (50)
R6B CZD QHP	General Residence District For 1, 2 Family	2.0	N/A	60 (80)	1,700 (18) 3,800 (40)	338	129	5 [20]	30^	None If provided: 8, 16 total	50	1 (50)
R7A CZD QHP	General Residence District For 1, 2 Family	4.0	N/A	65 (80)	1,700 (18) 3,800 (40)	169	258	[Wide street: 8 Narrow: 15]	30^	None If provided: 8, 16 total	N/A	50% of DUs
R7B CZD QHP	General Residence District For 1, 2 Family	3.0	N/A	65 (80)	1,700 (18) 3,800 (40)	227	192	[Wide street: 8 Narrow: 15]	30^	None If provided: 8, 16 total	75	50% of DUs
^Requirement starts at 30ft in height; ^^Parking requirements for all New York City housing developments can vary by the funding source for the project.												

New York City Zoning Regulations – High Rise Zones

Type	*Description* *CZD = Contextual Zoning District (Under Type)* *QHP = Quality Housing Program Mandatory (Under Type)* *QHP = Quality Housing Program Optional (Under Type)*	*Max. Floor Area Ratio (+ Attic)* *Of lot size*	*Min. Open Space Ratio* *Of buildable feet*	*Max. Lot Coverage (for corner lot)* *% of lot size*	*Min. Lot Size (Min. Lot width)* *In sq. feet*	*Min. Lot Sq. Ft. Per DU*	*Max. DUs/Acre*	*Min. Front Yard (Front wall set-back)* *In feet*	*Min. Rear Yard (Except Special Provisions)* *In feet*	*Min. Side Yard [Min. Between buildings] (# required) {% Building Length}* *In feet*	*Max. Height (Max. Street wall)* *In feet*	*Parking Spaces/DU^^* *(% if grouped)*
R6 *QHP*	General Residence District	0.78 to 2.43	27.5 to 37.5	N/A	1,700 (18) [3,800 (40)]	(109 to 99)	(400 to 440)	None**	30^	None If provided: 8, 16 total	55-70	1 (70)
R7-1 *QHP*	General Residence District	0.87 to 3.44	15.5 to 25.5	N/A	1,700 (18) [3,800 (40)]	(84 to 77)	(519 to 565)	None**	30^	None If provided: 8, 16 total	75-80	1 (60)
R7-2 *QHP*	General Residence District	0.87 to 3.44	15.5 to 25.5	N/A	1,700 (18) [3,800 (40)]	(84 to 77)	(519 to 565)	None**	30^	None If provided: 8, 16 total	75-80	50% of DUs
R7X CZDQHP	General Residence District	5.0	N/A	70 [80]	1,700 (18) [3,800 (40)]	135	323	None	30^	None If provided: 8, 16 total	125	50% of DUs
R8 *QHP*	General Residence District	0.94 to 6.02	5.9 to 11.9	N/A	1,700 (18) [3,800 (40)]	(59 to 45)	(738 to 968)	None**	30^	None If provided: 8, 16 total	105	40% of DUs
R8A CZDQHP	General Residence District	6.02	354	70 [80]	1,700 (18) [3,800 (40)]	135	322	None	30^	None If provided: 8, 16 total	120 (85)	40% of DUs
R8B CZDQHP	General Residence District	4.0	N/A	70 [80]	1,700 (18) [3,800 (40)]	169	258	None	30^	None If provided: 8, 16 total	75 (60)	50% of DUs

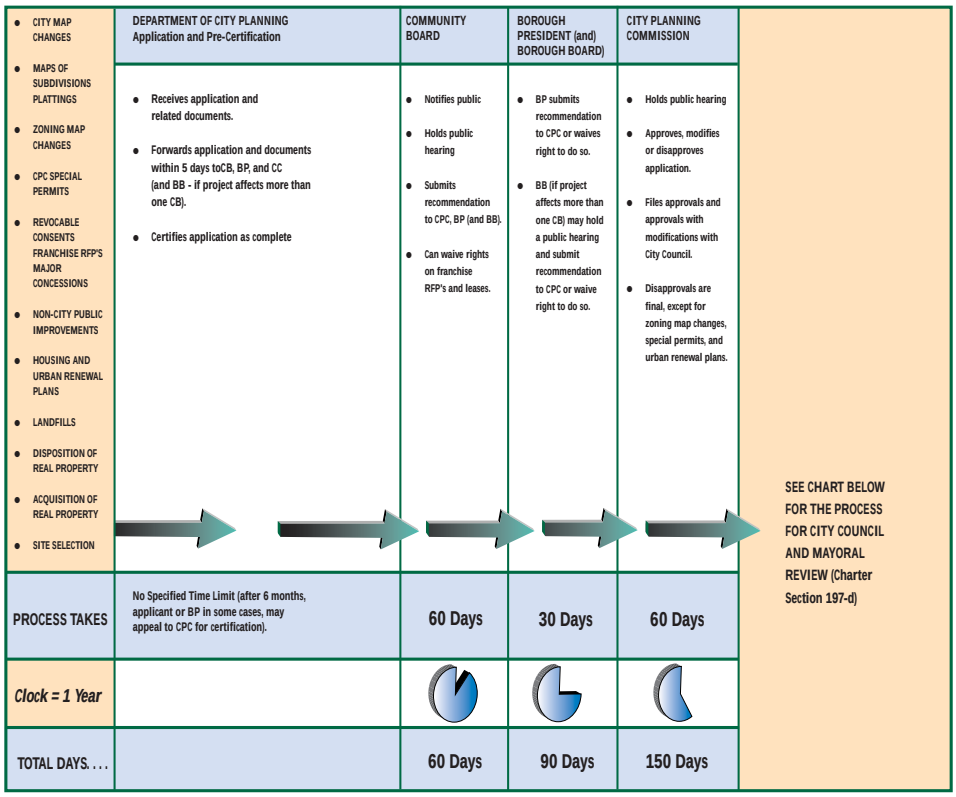
*FAR of 12.0 with a plaza, arcade or lower income housing; ^Requirements start at 30ft in height; **5ft min for structures on narrow street developed under the Quality Housing Program; ^^Parking requirements for all New York City housing developments can vary by the funding source for the project.

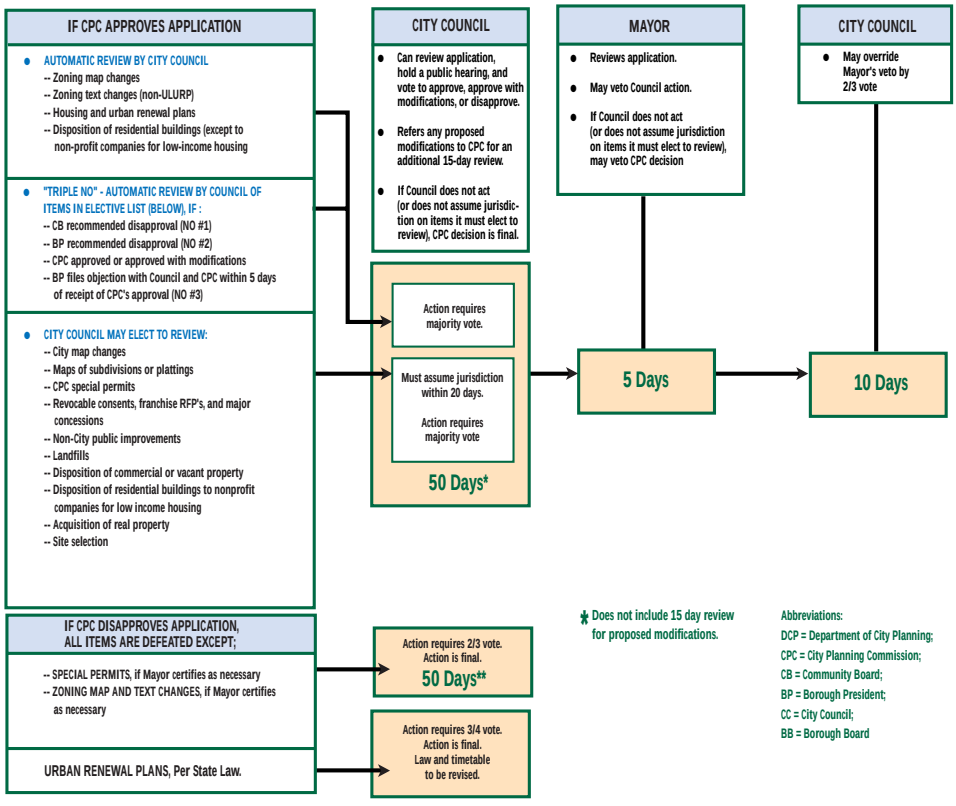
New York City Zoning Regulations – High Rise Zones												
Type	*Description* *CZD = Contextual Zoning District (Under Type)* *QHP = Quality Housing Program Mandatory (Under Type)* *QHP = Quality Housing Program Optional (Under Type)*	*Max. Floor Area Ratio (+ Attic)* *Of lot size*	*Min. Open Space Ratio* *Of buildable feet*	*Max. Lot Coverage (for corner lot)* *% of lot size*	*Min. Lot Size (Min. Lot width)* *In sq. feet*	*Min. Lot Sq. Ft. Per DU*	*Max. DUs/Acre*	*Min. Front Yard (Front wall set-back)* *In feet*	*Min. Rear Yard (Except Special Provisions)* *In feet*	*Min. Side Yard [Min. Between buildings] (# required) {% Building Length}* *In feet*	*Max. Height (Max. Street wall)* *In feet*	*Parking Spaces/DU^^* *(% if grouped)*
R8X CZD QHP	General Residence District	6.02	N/A	70 [80]	1,700 (18) [3,800 (40)]	123	354	Front: Wall Set-back: Wide Street: 8 Narrow: 15	30^	None If provided: 8, 16 total	150	50% of DUs
R9 *QHP*	General Residence District	0.99 to 7.52	1.0 to 6.2	N/A	1,700 (18) [3,800 (40)]	(45 to 41)	(968 to 1,062)	None	30^	None If provided: 8, 16 total	135-145	40% of DUs
R9A CZDQHP	General Residence District	7.52	N/A	70 [80]	1,700 (18) [3,800 (40)]	98	445	None	30^	None If provided: 8, 16 total	135-145 (102)	40% of DUs
R9X CZDQHP	General Residence District	9.0	N/A	70 [80]	1,700 (18) [3,800 (40)]	88	495	None	30^	None If provided: 8, 16 total	160-170 (120)	40% of DUs
R10 *QHP*	General Residence District	10.0*	N/A	N/A	1,700 (18) [3,800 (40)]	(30 to 24.9)	(30 to 24.9)	(1,452 to 1,749)	30^	None If provided: 8, 16 total	185-210	40% of DUs
R10A CZDQHP	General Residence District	10.0*	N/A	70 [100]	1,700 (18) [3,800 (40)]	79	79	581	30^	None If provided: 8, 16 total	185-210 (150)	40% of DUs
*FAR of 12.0 with a plaza, arcade or lower income housing; ^Requirements start at 30ft in height; **5ft min for structures on narrow street developed under the Quality Housing Program; ^^Parking requirements for all New York City housing developments can vary by the funding source for the project.												

Appendix F:
Uniform Land Use Review Process (ULURP) Flow Chart

Source: Department of City Planning website (http://www.nyc.gov/html/dcp/html/luproc/ulpro.html)

UNIFORM LAND USE REVIEW PROCEDURE





Abbreviations: DCP = Department of City Planning; CPC = City Planning Commission; CB = Community Board; BP = Borough President; CC = City Council; BB = Borough Board

Appendix G:
Inclusionary Zoning Financial Model

Mandatory Inclusionary Zoning Model Assumptions

	Site 1: High-Rise	Site 2: Mid-Rise
Site		
Zoning	R8	R6A
Floor Area Ratio (FAR)	6.02	3.0
Site Area Square Footage	30,233	10,000
Building		
# Units	204	34
Unit Distribution[250]	103 1-BR, 101 2-BR	17 1-BR, 17 2-BR
Superintendent Unit	Yes (included above)	No
Average Unit Size SF	758	750
Gross Square Footage	182,000	30,000
Efficiency Factor	Both sites: 85%	
Residential SF (SSF)	154,700	25,500
Residential Parking Ratio[251]	Both sites: 70%	
Costs		
Land/Residential SF (SSF)	$60	$40
Infrastructure	Both sites: None	
Residential Hard Costs/SF	$200 plus parking	$185 plus parking
Parking/Space	Both sites: $25,000[252]	
Soft Costs	Both sites: 20%[253] of Hard Costs	
Developer's Fee	Both sites: 10% of Hard Costs & Soft Costs	
Income		
For Rental: Rent/SF	$36 [Base]	$26 [Base]
For Condo: Price/SF	$600 [Base]	$500 [Base]
Parking/Space/Month	Both sites: $175 (rental only)	
Vacancy	Both sites: 5% (rental only)	

The following assumptions are for both Site 1 and Site 2:

Expenses	
Annual/Unit for Rental	$6,000
Annual/Unit for Condo	$7,000
Real Estate Taxes	421-a Mini Tax ($0.10 x site area x FAR)

[250] This distribution was assumed based on current market demand from smaller households; however, most government programs provide deeper subsidies for the development of larger (two- and three-bedroom) units. In a scenario with subsidies, it is likely that larger units would be developed.

[251] The parking ratio requirement is 40 percent for R8 zones and 50 percent for R6A zones built pursuant to Quality Housing as required under the Zoning Resolution. A larger ratio is assumed based on the marketing needs of projects that are located at a distance from mass transit.

[252] However, the large number of spaces for the high-rise building on Site One may require a multi-level parking structure underground that would raise the cost per parking space for this site.

[253] However, soft costs are more likely to be 25 percent of hard costs for projects with tax credit and/or bond financing.

Annual Revenue Inflator	3%
Annual Expense Inflator	4%

Financial

Developer Equity	10% [Base]
Permanent Financing	7% for 30 years[254]

Exit

Holding Period for Rental	10 years
Capitalization Rate for Rental	8%
Selling Expenses/Sale Price	5%

Inclusionary Zoning Regimes Tested

- 0% Affordability
- 10% Affordable at 60% AMI
- 10% Affordable at 80% AMI
- 10% Affordable at 100% AMI
- 20% Affordable at 60% AMI
- 20% Affordable at 80% AMI
- 20% Affordable at 100% AMI

No density bonus for inclusionary scenarios

Sensitivity Analyses

- Land/Residential SF (SSF): $0, $20, $40, $60, $80, $100
- Interest Rate for Permanent Financing: Base, +1%, +2%, +3%, +4%
- Housing Market: - 25%, -10%, Base, +10%, +25%
- Hard Costs: - 25%, -10%, Base, +10%, +25%
- Developer Equity: Base, 20%

[254] For the condominium, a ten percent down payment is assumed, with no mortgage insurance cost.

Land Cost Sensitivity Analysis

Site 1

	Rental						Condo					
Land Cost/SSF	**$ -**	**$ 20**	**$ 40**	**$ 60**	**$ 80**	**$ 100**	**$ -**	**$ 20**	**$ 40**	**$ 60**	**$ 80**	**$ 100**
100% Market	33%	29%	25%	20%	16%	12%	175%	157%	139%	122%	106%	89%
10% @ 100% AMI	30%	25%	21%	16%	12%	7%	152%	133%	115%	97%	80%	62%
10% @ 80% AMI	29%	24%	20%	15%	10%	5%	149%	130%	112%	94%	76%	59%
10% @ 60% AMI	28%	23%	18%	14%	9%	3%	146%	127%	109%	91%	73%	55%
20% @ 100% AMI	26%	21%	16%	11%	6%		126%	107%	88%	69%	50%	30%
20% @ 80% AMI	24%	19%	14%	8%	2%		119%	100%	80%	61%	41%	20%
20% @ 60% AMI	21%	16%	11%	4%			112%	92%	73%	53%	32%	10%

Site 2

	Rental						Condo					
Land Cost/SSF	**$ -**	**$ 20**	**$ 40**	**$ 60**	**$ 80**	**$ 100**	**$ -**	**$ 20**	**$ 40**	**$ 60**	**$ 80**	**$ 100**
100% Market	6%						146%	125%	106%	87%	68%	48%
10% @ 100% AMI	1%						119%	98%	77%	56%	35%	12%
10% @ 80% AMI							114%	93%	72%	51%	29%	5%
10% @ 60% AMI							110%	88%	67%	45%	23%	
20% @ 100% AMI							104%	83%	61%	39%	15%	
20% @ 80% AMI							97%	75%	52%	29%	4%	
20% @ 60% AMI							89%	67%	44%	19%		

= IRR of at least 18% (rental) or 30% (condo)

IRRs of 0% and below are not listed.

Hard Cost Sensitivity Analysis

Site 1

$0/SSF land	**Rental**					**Condo**				
Hard Cost Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market	50%	40%	33%	28%	19%	253%	204%	175%	148%	112%
10% @ 100% AMI	46%	36%	30%	24%	14%	230%	181%	152%	125%	86%
10% @ 80% AMI	45%	35%	29%	23%	13%	227%	178%	149%	122%	83%
10% @ 60% AMI	45%	34%	28%	22%	12%	224%	175%	146%	118%	80%
20% @ 100% AMI	43%	32%	26%	20%	9%	205%	156%	126%	98%	57%
20% @ 80% AMI	41%	30%	24%	17%	5%	198%	149%	119%	91%	49%
20% @ 60% AMI	39%	28%	21%	14%		192%	142%	112%	83%	41%

$60/SSF land	**Rental**					**Condo**				
Hard Cost Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market	34%	26%	20%	15%	5%	188%	147%	122%	98%	63%
10% @ 100% AMI	31%	22%	16%	10%		165%	123%	97%	72%	34%
10% @ 80% AMI	30%	21%	15%	8%		162%	120%	94%	69%	30%
10% @ 60% AMI	29%	20%	14%	7%		159%	117%	91%	65%	25%
20% @ 100% AMI	27%	18%	11%	3%		139%	96%	69%	41%	
20% @ 80% AMI	25%	15%	8%			132%	89%	61%	32%	
20% @ 60% AMI	23%	13%	4%			125%	81%	53%	23%	

Site 2

$0/SSF land	**Rental**					**Condo**				
Hard Cost Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market	28%	16%	6%			223%	174%	146%	119%	80%
10% @ 100% AMI	26%	13%	1%			197%	148%	119%	91%	49%
10% @ 80% AMI	24%	10%				193%	144%	114%	86%	44%
10% @ 60% AMI	22%	7%				188%	139%	110%	81%	38%
20% @ 100% AMI	25%	11%				183%	134%	104%	75%	32%
20% @ 80% AMI	22%	6%				177%	127%	97%	67%	22%
20% @ 60% AMI	18%					170%	120%	89%	59%	12%

$40/SSF land	**Rental**					**Condo**				
Hard Cost Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market	15%					175%	132%	106%	80%	42%
10% @ 100% AMI	12%					149%	105%	77%	49%	5%
10% @ 80% AMI	10%					145%	100%	72%	44%	
10% @ 60% AMI	7%					140%	95%	67%	38%	
20% @ 100% AMI	11%					135%	90%	61%	31%	
20% @ 80% AMI	6%					128%	82%	52%	22%	
20% @ 60% AMI	1%					120%	74%	44%	11%	

= IRR of at least 18% (rental) or 30% (condo)

IRRs of 0% and below are not listed.

Interest Rate Sensitivity Analysis

Site 1

$0/SSF land	**Rental**					**Condo**				
Interest Rate:	**7%**	**8%**	**9%**	**10%**	**11%**	**7%**	**8%**	**9%**	**10%**	**11%**
100% Market	33%	29%	24%	19%	14%	175%	175%	175%	175%	175%
10% @ 100% AMI	30%	25%	20%	15%	10%	152%	151%	150%	150%	149%
10% @ 80% AMI	29%	24%	19%	14%	9%	149%	148%	148%	147%	147%
10% @ 60% AMI	28%	23%	18%	12%	7%	146%	145%	145%	145%	145%
20% @ 100% AMI	26%	21%	15%	10%	5%	126%	124%	123%	122%	121%
20% @ 80% AMI	24%	18%	13%	7%	2%	119%	118%	117%	116%	116%
20% @ 60% AMI	21%	16%	10%	4%		112%	112%	111%	111%	111%

$60/SSF land	**Rental**					**Condo**				
Interest Rate:	**7%**	**8%**	**9%**	**10%**	**11%**	**7%**	**8%**	**9%**	**10%**	**11%**
100% Market	20%	15%	10%	4%		122%	122%	122%	122%	122%
10% @ 100% AMI	16%	10%	4%			97%	97%	96%	95%	95%
10% @ 80% AMI	15%	9%	3%			94%	93%	93%	93%	92%
10% @ 60% AMI	14%	8%	1%			91%	90%	90%	90%	90%
20% @ 100% AMI	11%	5%				69%	67%	65%	64%	62%
20% @ 80% AMI	8%	1%				61%	60%	59%	58%	57%
20% @ 60% AMI	4%					53%	52%	52%	51%	51%

Site 2

$0/SSF land	**Rental**					**Condo**				
Interest Rate:	**7%**	**8%**	**9%**	**10%**	**11%**	**7%**	**8%**	**9%**	**10%**	**11%**
100% Market	6%					146%	146%	146%	146%	146%
10% @ 100% AMI	1%					119%	118%	117%	116%	115%
10% @ 80% AMI						114%	114%	113%	112%	112%
10% @ 60% AMI						110%	109%	109%	109%	109%
20% @ 100% AMI						104%	102%	101%	99%	98%
20% @ 80% AMI						97%	96%	95%	94%	93%
20% @ 60% AMI						89%	89%	88%	88%	87%

$40/SSF land	**Rental**					**Condo**				
Interest Rate:	**7%**	**8%**	**9%**	**10%**	**11%**	**7%**	**8%**	**9%**	**10%**	**11%**
100% Market						106%	106%	106%	106%	106%
10% @ 100% AMI						77%	76%	75%	74%	73%
10% @ 80% AMI						72%	71%	71%	70%	69%
10% @ 60% AMI						67%	67%	66%	66%	66%
20% @ 100% AMI						61%	59%	57%	55%	54%
20% @ 80% AMI						52%	51%	50%	49%	48%
20% @ 60% AMI						44%	43%	42%	42%	42%

= IRR of at least 18% (rental) or 30% (condo)

IRRs of 0% and below are not listed.

Housing Market Price Sensitivity Analysis

Site 1

$0/SSF land	**Rental**					**Condo**				
Housing Market Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market	1%	25%	33%	41%	50%	84%	143%	175%	204%	242%
10% @ 100% AMI		21%	30%	37%	46%	61%	120%	152%	180%	218%
10% @ 80% AMI		20%	29%	36%	46%	56%	116%	149%	177%	215%
10% @ 60% AMI		18%	28%	35%	45%	51%	113%	146%	174%	213%
20% @ 100% AMI		17%	26%	33%	42%	33%	94%	126%	154%	191%
20% @ 80% AMI		14%	24%	31%	40%	21%	86%	119%	148%	185%
20% @ 60% AMI		10%	21%	29%	39%	8%	78%	112%	142%	180%

$60/SSF land	**Rental**					**Condo**				
Housing Market Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market		9%	20%	28%	38%	18%	88%	122%	152%	191%
10% @ 100% AMI		4%	16%	24%	34%		62%	97%	127%	166%
10% @ 80% AMI		2%	15%	24%	33%		58%	94%	125%	164%
10% @ 60% AMI			14%	23%	33%		54%	91%	122%	161%
20% @ 100% AMI			11%	20%	29%		31%	69%	100%	139%
20% @ 80% AMI			8%	18%	28%		21%	61%	93%	133%
20% @ 60% AMI			4%	15%	26%		9%	53%	86%	127%

Site 2

$0/SSF land	**Rental**					**Condo**				
Housing Market Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market			6%	19%	31%	50%	113%	146%	175%	213%
10% @ 100% AMI			1%	15%	27%	21%	86%	119%	147%	185%
10% @ 80% AMI				13%	26%	12%	80%	114%	143%	182%
10% @ 60% AMI				10%	24%	3%	75%	110%	139%	178%
20% @ 100% AMI				13%	25%	3%	71%	104%	133%	170%
20% @ 80% AMI				9%	23%		62%	97%	126%	164%
20% @ 60% AMI				4%	20%		53%	89%	120%	159%

$40/SSF land	**Rental**					**Condo**				
Housing Market Variation:	**-25%**	**-10%**	**Base**	**+10%**	**+25%**	**-25%**	**-10%**	**Base**	**+10%**	**+25%**
100% Market				6%	21%		70%	106%	136%	176%
10% @ 100% AMI					17%		40%	77%	108%	147%
10% @ 80% AMI					15%		33%	72%	104%	143%
10% @ 60% AMI					13%		27%	67%	99%	140%
20% @ 100% AMI					14%		22%	61%	92%	131%
20% @ 80% AMI					11%		10%	52%	85%	126%
20% @ 60% AMI					8%			44%	78%	120%

= IRR of at least 18% (rental) or 30% (condo)

IRRs of 0% and below are not listed.

Developer Equity Sensitivity Analysis

Site 1

$0/SSF land	**Rental**		**Condo**	
Equity Required:	**10%**	**20%**	**10%**	**20%**
100% Market	33%	22%	175%	94%
10% @ 100% AMI	30%	19%	152%	78%
10% @ 80% AMI	29%	19%	149%	76%
10% @ 60% AMI	28%	18%	146%	74%
20% @ 100% AMI	26%	17%	126%	60%
20% @ 80% AMI	24%	16%	119%	55%
20% @ 60% AMI	21%	14%	112%	50%

$60/SSF land	**Rental**		**Condo**	
Equity Required:	**10%**	**20%**	**10%**	**20%**
100% Market	20%	14%	122%	57%
10% @ 100% AMI	16%	11%	97%	40%
10% @ 80% AMI	15%	11%	94%	37%
10% @ 60% AMI	14%	10%	91%	35%
20% @ 100% AMI	11%	9%	69%	19%
20% @ 80% AMI	8%	7%	61%	14%
20% @ 60% AMI	4%	5%	53%	8%

Site 2

$0/SSF land	**Rental**		**Condo**	
Equity Required:	**10%**	**20%**	**10%**	**20%**
100% Market	6%	6%	146%	74%
10% @ 100% AMI	1%	4%	119%	55%
10% @ 80% AMI		2%	114%	52%
10% @ 60% AMI			110%	48%
20% @ 100% AMI		3%	104%	44%
20% @ 80% AMI			97%	39%
20% @ 60% AMI			89%	34%

$40/SSF land	**Rental**		**Condo**	
Equity Required:	**10%**	**20%**	**10%**	**20%**
100% Market			106%	46%
10% @ 100% AMI			77%	25%
10% @ 80% AMI			72%	22%
10% @ 60% AMI			67%	18%
20% @ 100% AMI			61%	14%
20% @ 80% AMI			52%	8%
20% @ 60% AMI			44%	1%

= IRR of at least 18% (rental) or 30% (condo)

IRRs of 0% and below are not listed.