

Strategies for New York City affordable housing development: Three alternative strategies

3: Strategy one: Market-driven approach for private sites

4: Strategy two: Government-driven approach for private sites

5: Strategy three: Government-driven approach for public sites

5: Strategy three: Government-driven approach for public sites

An Infill building program for Affordable Housing utilizing public housing authority land and similar publicly owned/publicly developed sites

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5. Strategy Three: Government-driven approach for public sites: An Infill building program for Affordable Housing utilizing public housing authority land and similar publicly owned/ publicly developed sites

A. Overview

i. The New York City Public Housing Authority (NYC/PHA)

The NYC/PHA is the oldest and largest public housing authority in the United States. It has constructed and managed over 300 estates comprised of over 3,000 individual buildings in all five boroughs (see map). These estates are home to 175,000 families, or almost one-half million people. While originally conceived as “way-stations” for the urban working poor, the scarcity of private affordable housing in many instances has restricted “upwardly-mobile” public housing tenants’ choices to the estate or substandard private housing (“upwardly-mobile,” in the sense that many families’ economic conditions improve during their tenure in the project).

The demand for public housing has grown as market forces have reduced the supply of decent affordable housing. The waiting list, as of June 1989, contained 95,200 applicant families which translate approximately into an equal number of units. Assuming the current average family size in public housing is 2.7 persons per household, 257,000 people are in need of decent affordable housing. Unfortunately, with the virtual elimination of the federally sponsored public housing program, very little new public housing has been built in recent years, increasing the pressure to double up in units producing situations of extreme crowding and offering little for those in need of decent housing. In recent years the PHA, by both design and necessity, has concentrated on the rehabilitation of small individual buildings, as well as a few small-scale housing projects.

With new site acquisition at a halt, underbuilt public housing estates in stable or relatively stable neighborhoods could be a potential resource in the City’s effort to house its low-income population. While the concept had the potential for success at Frederick Douglass Houses, further study was necessary to determine whether this approach to the provision of affordable

housing was applicable elsewhere. Put another way, was this a case of one NYC/PHA estate or is the concept of utilizing the unbuilt floor area allowed under current zoning applicable on a larger scale as a matter of public policy. Current zoning is emphasized, as this concept does not contemplate rezoning to increase the density on PHA estates, which would result in their being denser than their neighborhood context.

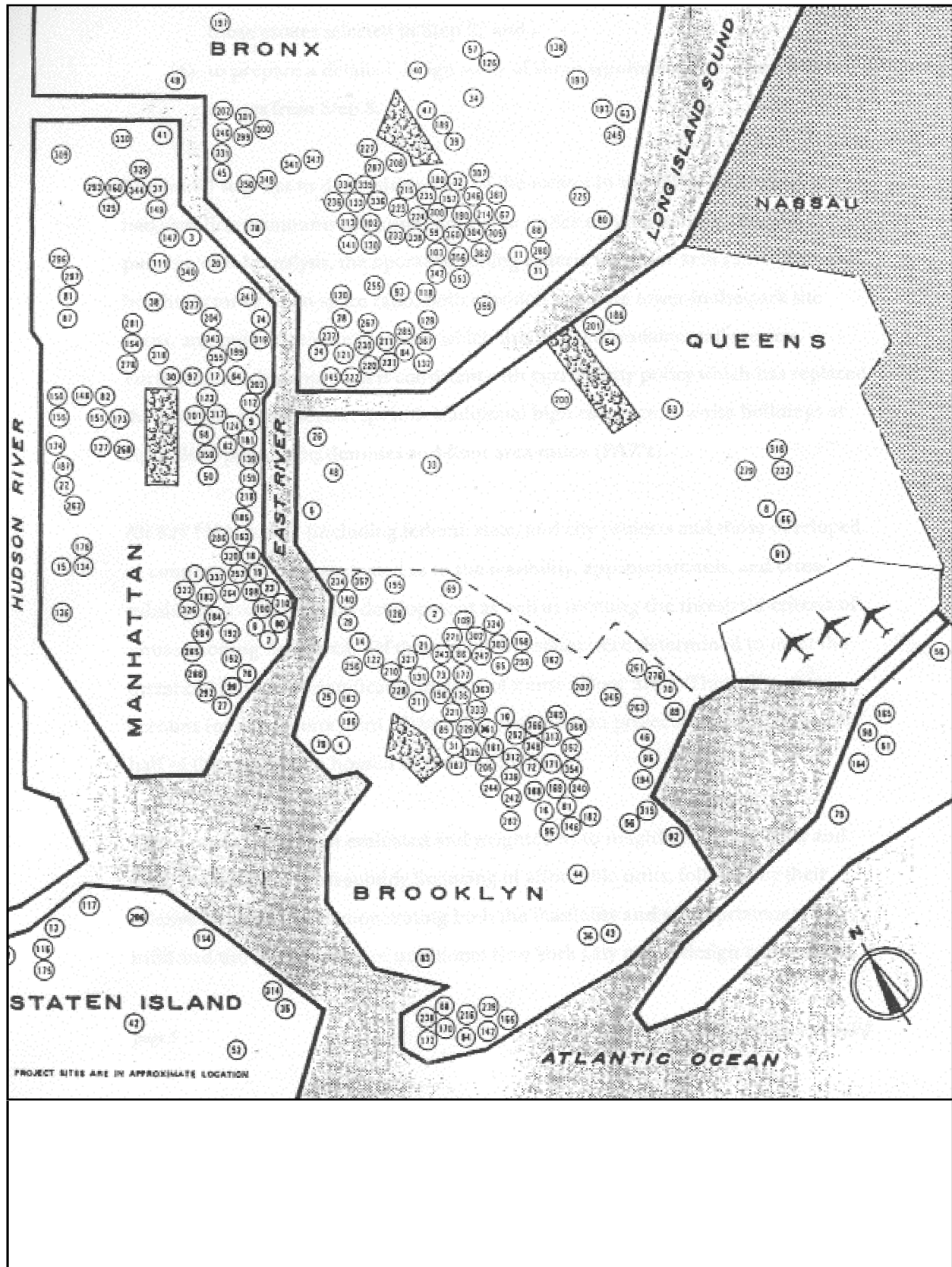
The alternative strategies are simple and derive from the urban design conventions typical of the City’s traditional neighborhoods:

1. *To reassert the street pattern* by breaking up the superblocks into smaller component blocks. Whenever possible, this has been done by recreating the original right-of-ways. These new right-of-ways can be either the traditional roadbed/sidewalk or pedestrian/vehicular parking (much like Columbia University’s campus walk at 116th Street between Broadway and Amsterdam Avenue), streets with no public through access. The new streets would create frontage for the new and existing buildings to be accessed from the street, rather than ambiguous open space. In sum, the re-establishment of neighborhood urban design conventions of smaller block sizes and the freedom of movement by residents and nonresidents through the estate on clearly defined public right-of-ways will re-integrate the estate into its neighborhood context without sacrificing either security or privacy.
2. To use buildings to define open spaces and create distinctions between public and private space. When used in combination with the existing buildings, they should transform the existing buildings from objects in space to objects defining spaces to be shared in common by residents and non-residents.
3. To develop a hierarchy of open spaces from public to private and from communal to individual. The hierarchy begins with public or publicly-accessible spaces with frontage on building entrances (pedestrian/vehicular parking streets and pedestrian streets), proceeds to semi-private spaces which front the public spaces (stoops, front yards and terraces associated with units

and playgrounds), and is completed by private spaces (backyards and terraces associated with the units and playgrounds and tot lots in communal backyards). The creation of these spatial and perceptual distinctions should, whenever possible, use the neighborhood conventions of building defining space.

4. Develop a unique "sense of place" for all residents by designing a diversity of spaces, each with its own scale. The spaces which in their outlines are similar should be individuated by the specifics of the landscape and playground/ tot lot design for each defined space (often a courtyard arrangement would have a playground/tot lot reflecting the private to public hierarchy in open space facilities with large playing fields in public space). The decentralization of the playgrounds/tot lots into the private communal backyards or courtyards will allow parents to more closely watch their children from inside the dwelling. Finally, these spaces should be sunny and attractive and allow a degree of personalization and proprietorship not currently typical of public housing, for example, allotment gardens.

Figure 88: Index: Location of New York City Housing Authority projects



Figures 89-92: Infill location possibilities

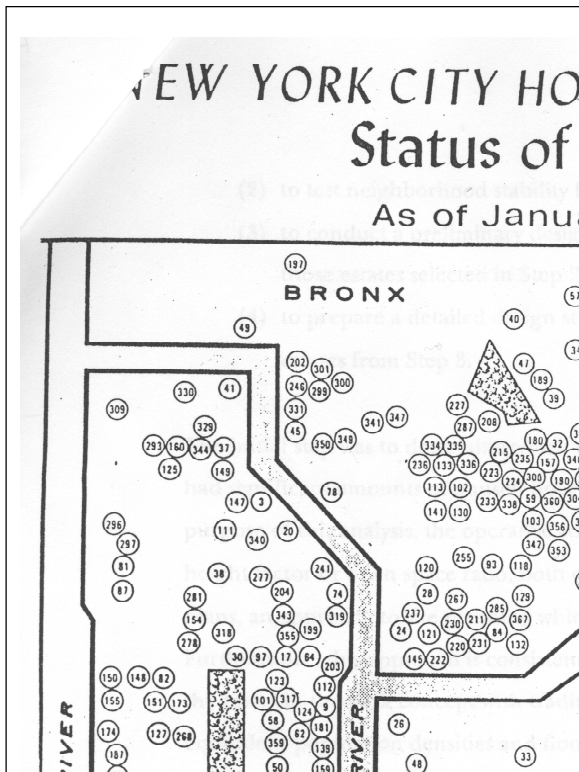


Figure 89: James Weldon Johnson

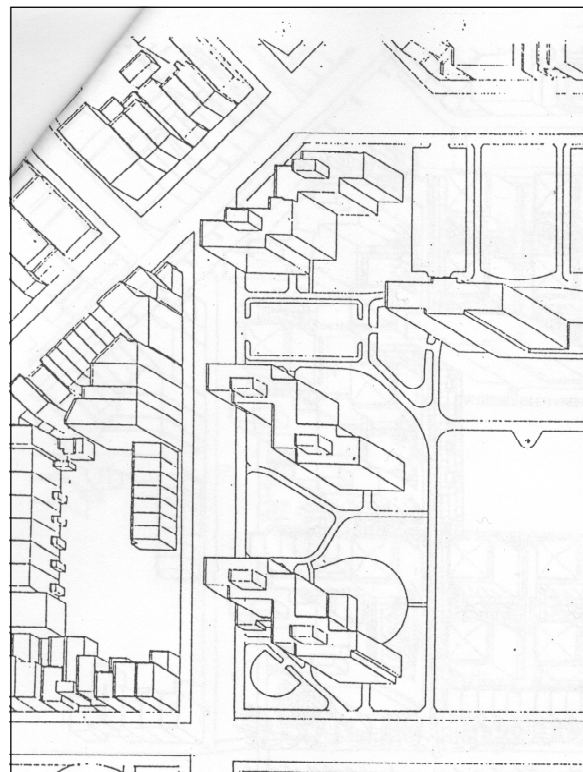


Figure 90: Gowanus

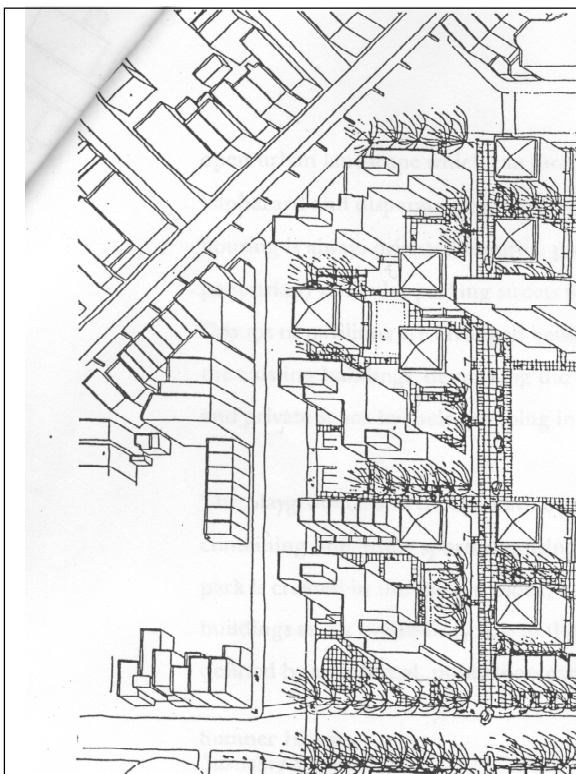


Figure 91: Marcy

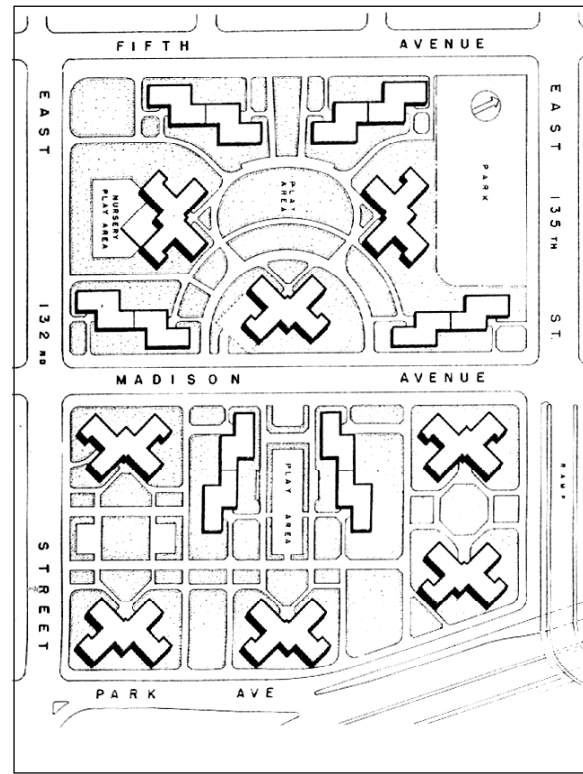


Figure 92: Abraham Lincoln

Figures 93-96: Infill location possibilities

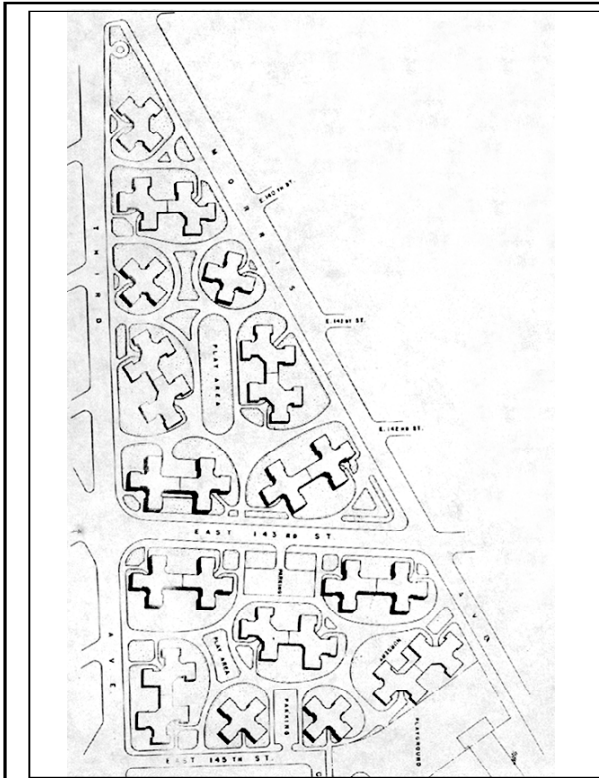


Figure 93: Morrisania

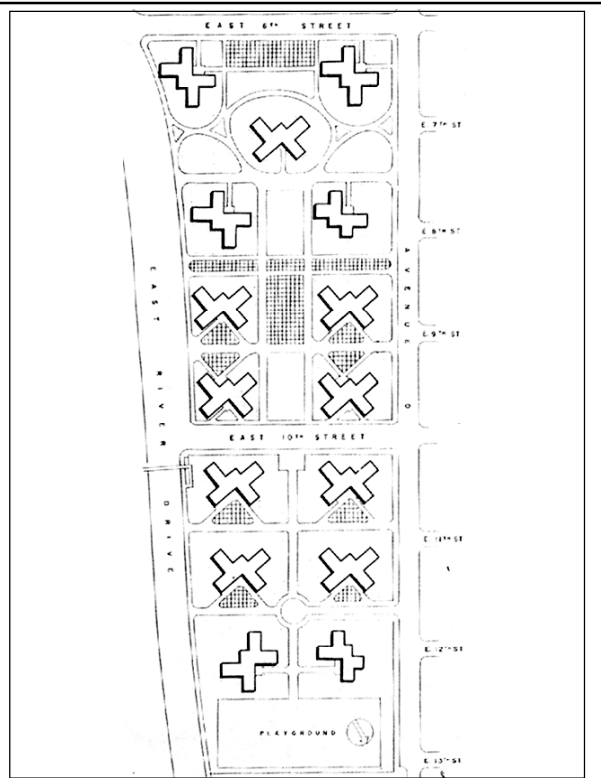


Figure 94: Jacob R.

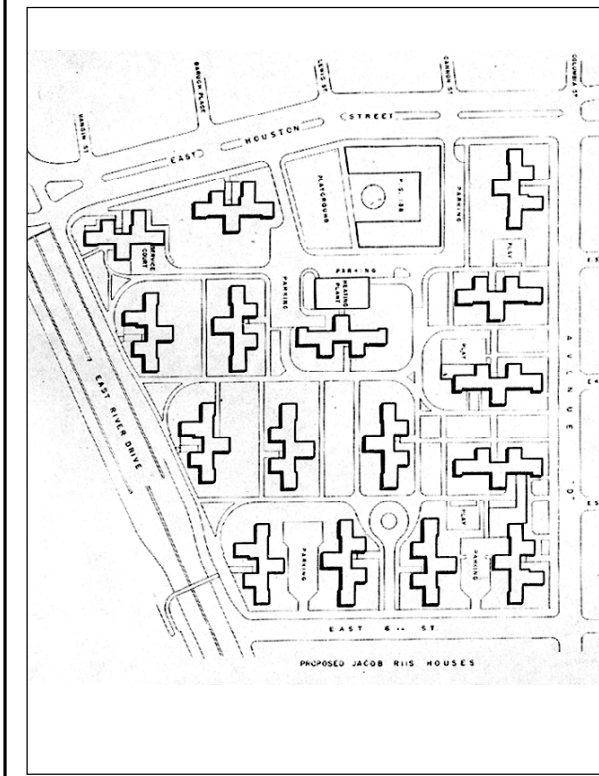


Figure 95: Lillian Wala

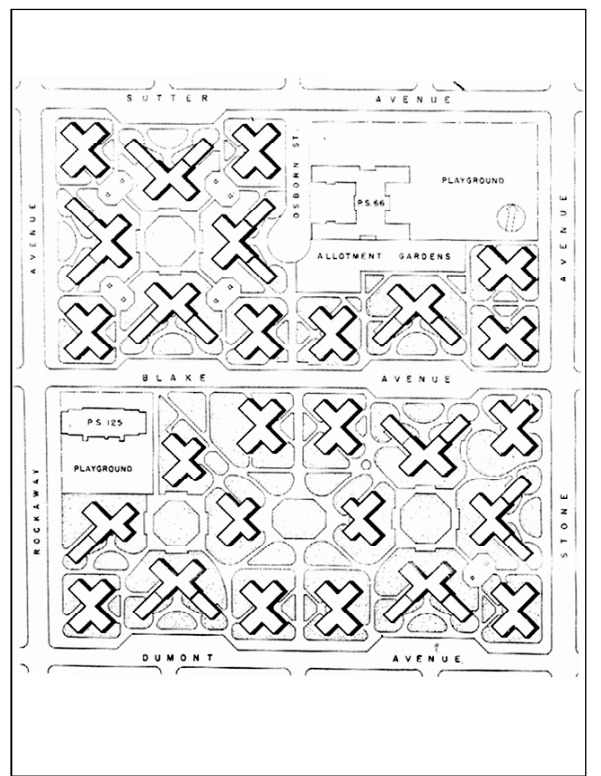


Figure 96: Brownsville

Figures 97-100: Infill location possibilities

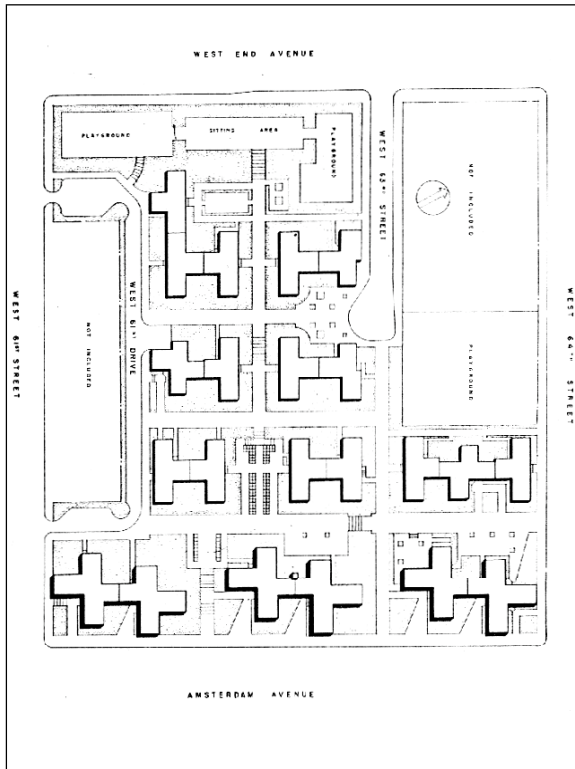


Figure 97: Amsterdam

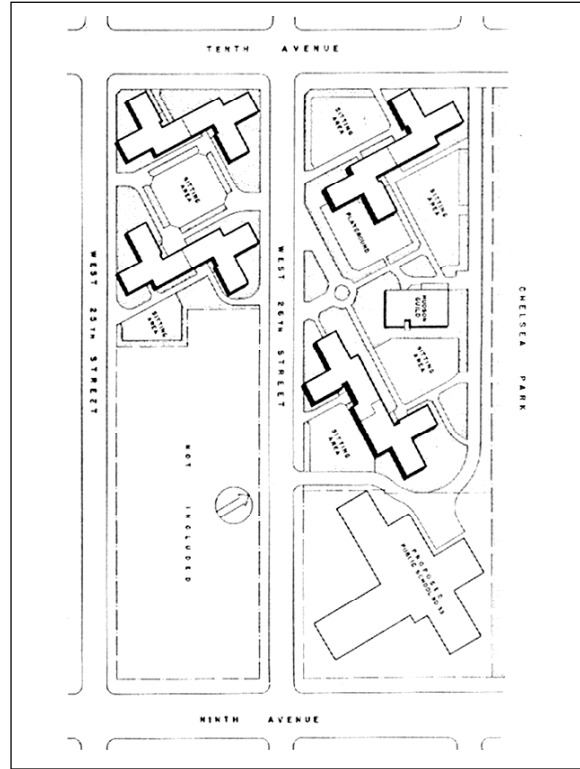


Figure 98: John Love Joy Elliot

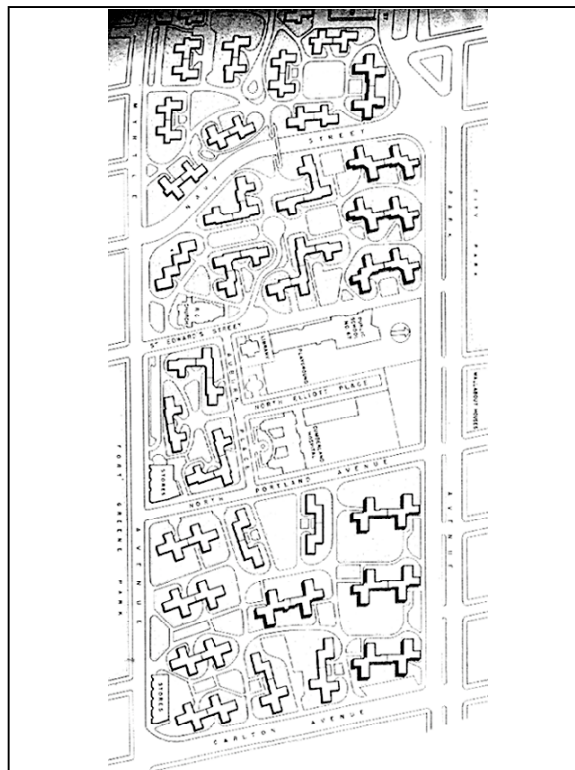


Figure 99: Fort Greene

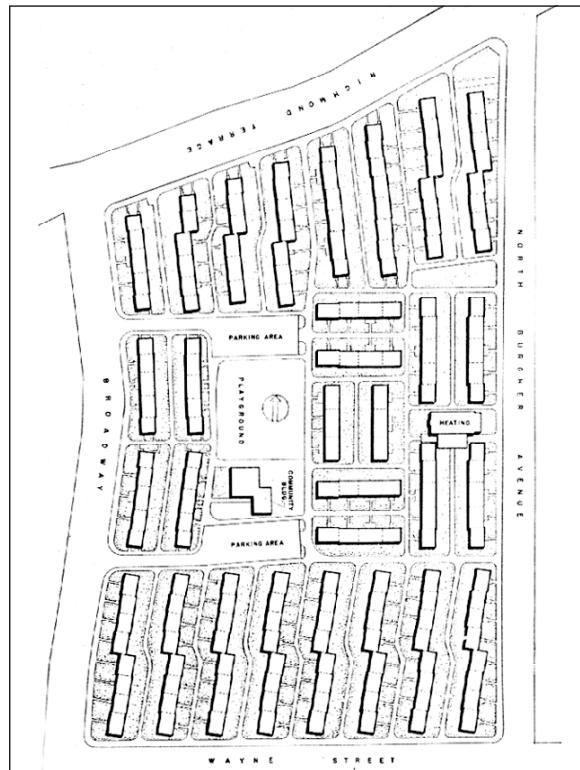


Figure 100: Edwin Markam

Figures 101-104: Infill location possibilities

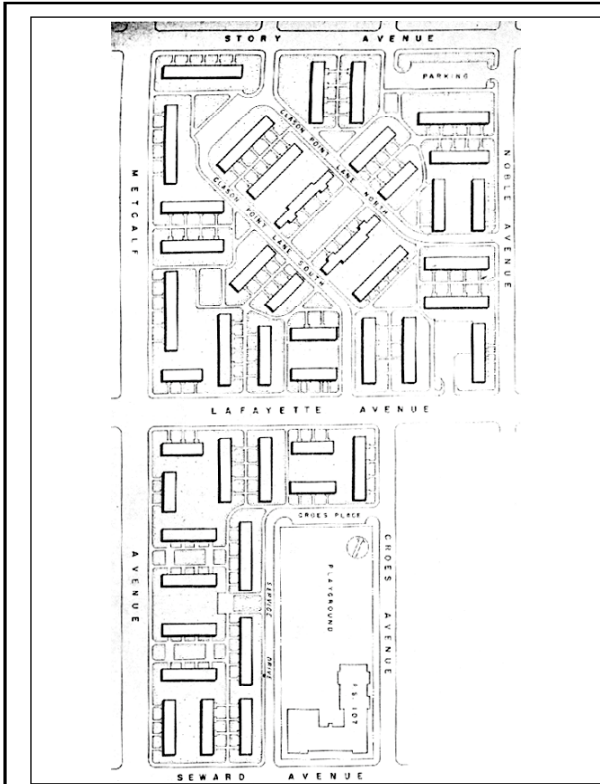


Figure 101: Classon Point Gardens

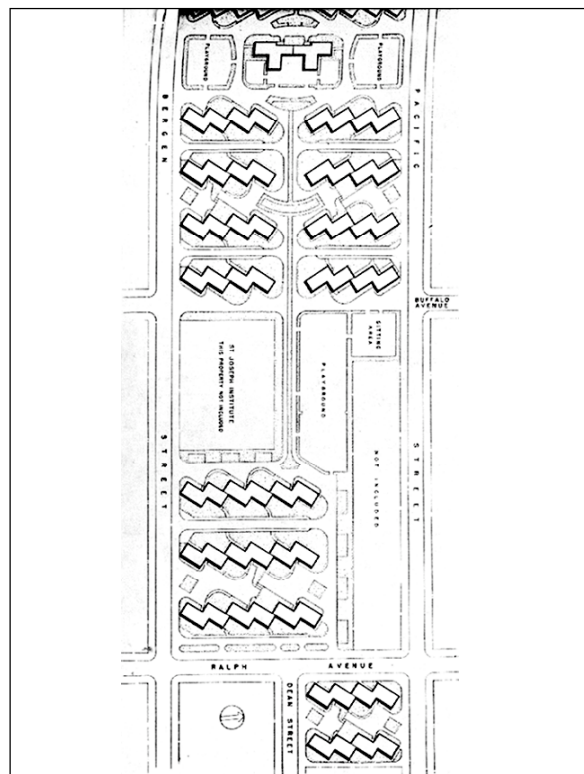


Figure 102: Kingsborough

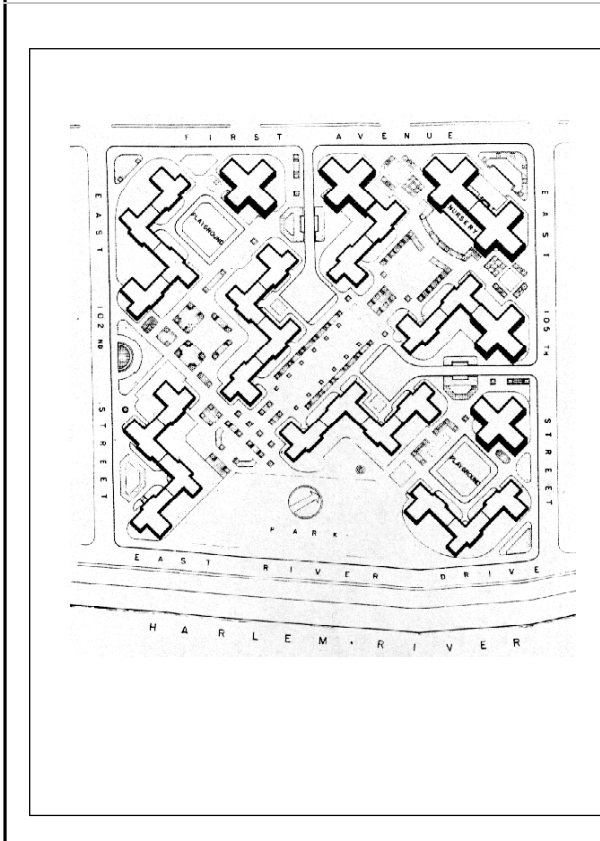


Figure 103: East River

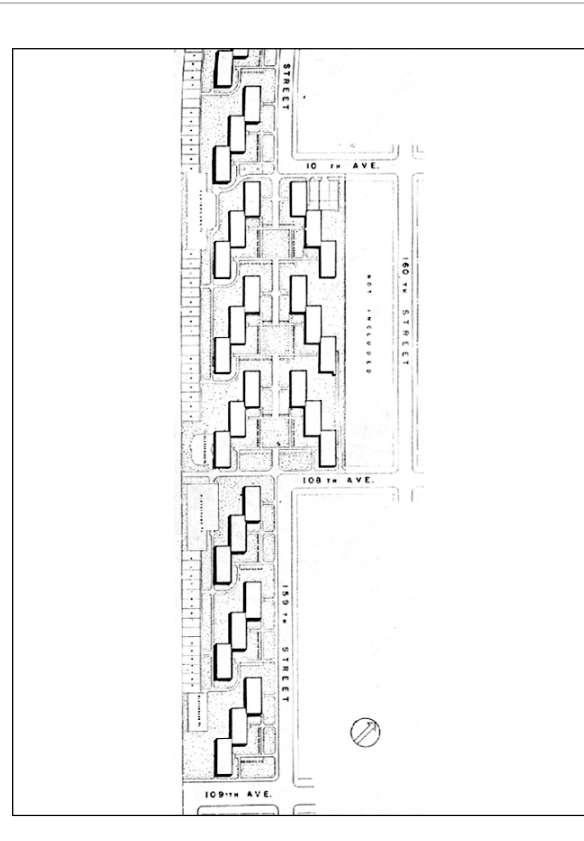


Figure 104: South Jamaica

Figures 105-108: Infill location possibilities

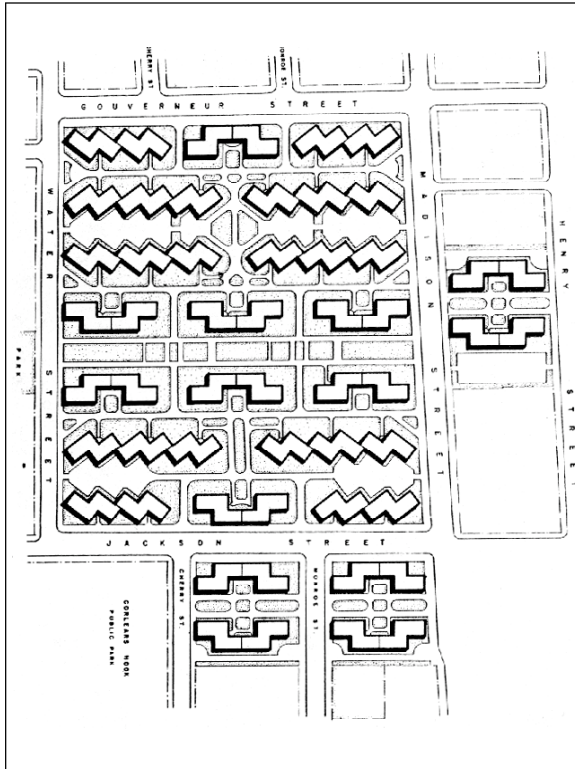


Figure 105: Vladeck IV. City Houses

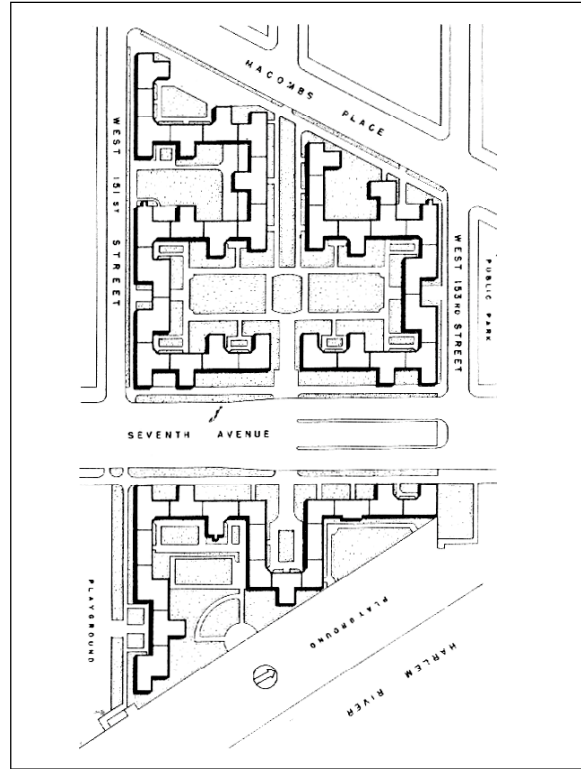


Figure 106: Harlem River Houses

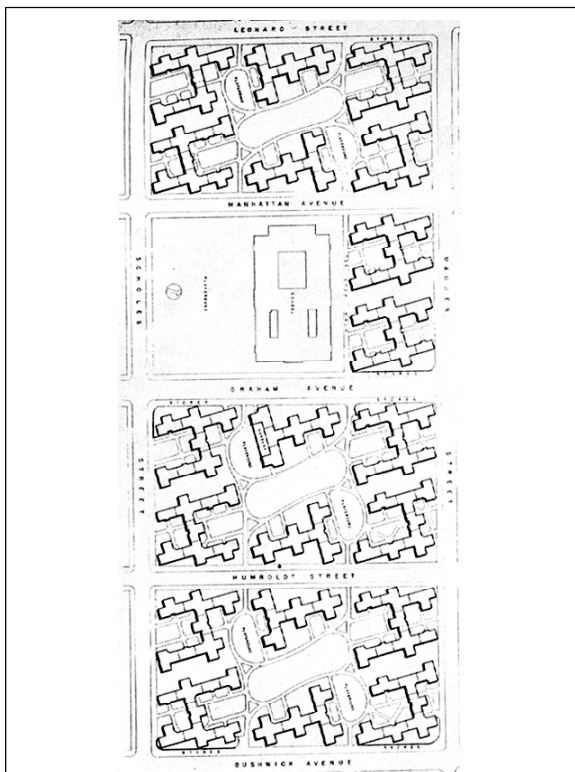


Figure 107: Williamsburg Houses

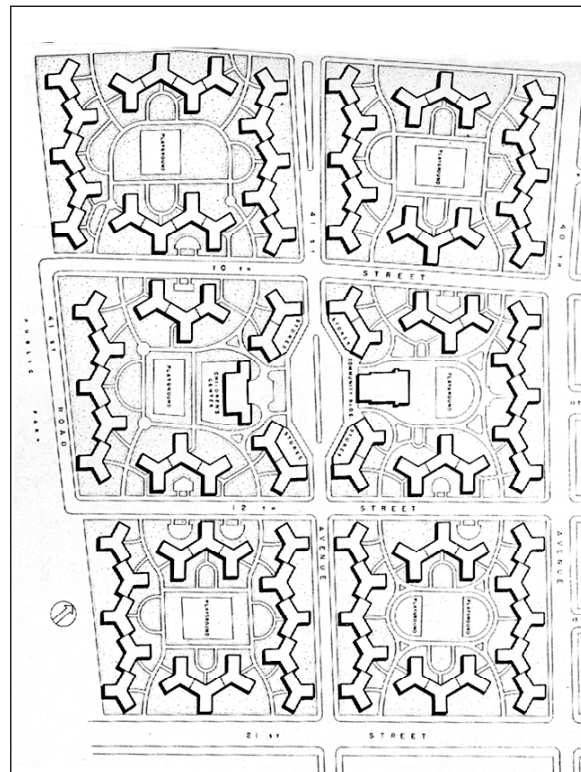


Figure 108: Queens Bridge Houses

Figure 109: Infill location possibilities

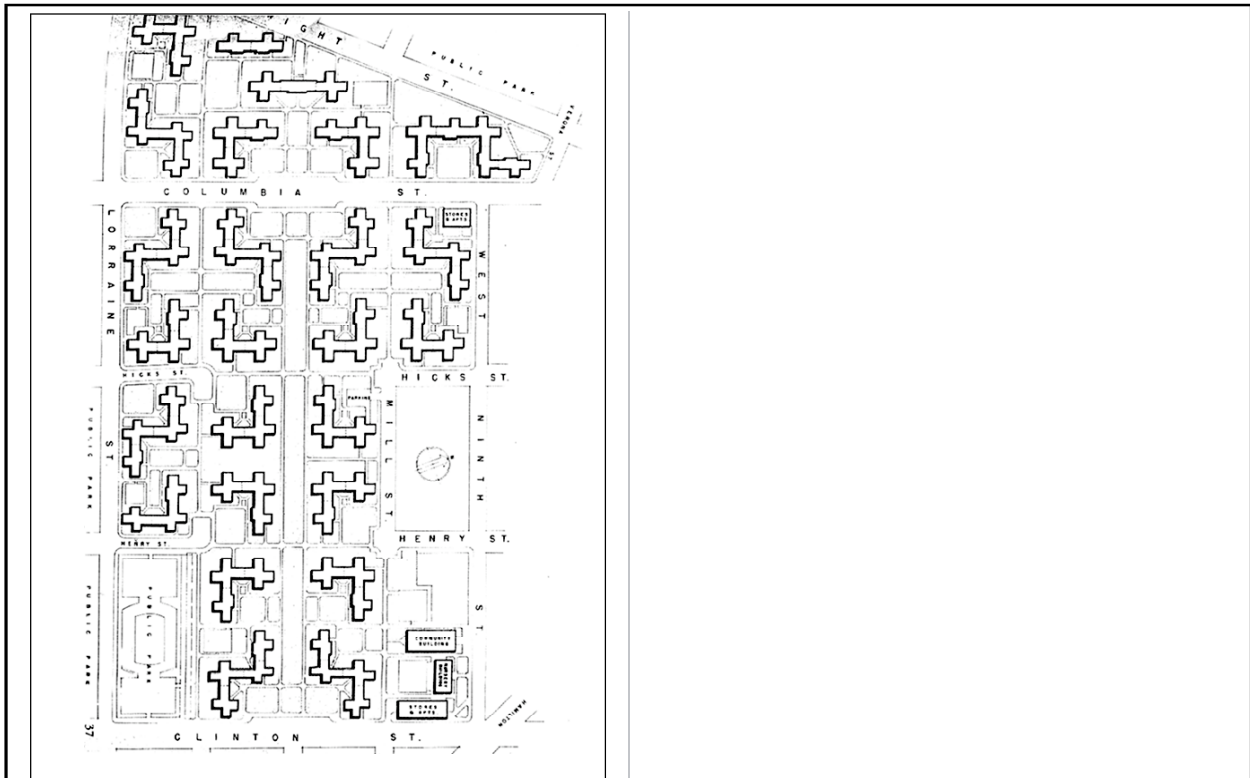


Figure 109: Red Hook Houses

B. Hypothetical infill model

Subsidized and NYCHA housing developments that were constructed under the 1961 “tower-in-the-park” regulations are very often underbuilt – that is, there is a differential between the amount of floor area allowed under current zoning and what has been built on the site. Many sites are upwards of 25 to 50 percent under-built under current zoning. Much of this unused floor area could be built if there were a minor text change to the Zoning Resolution that regards “height factor” zoning sites.

This information led to the hypothesis that the unused floor area could be used to construct new affordable housing on these sites. Not only would this approach ameliorate some of the demand for affordable housing but assuming the infill is done with care and sensitivity, could improve the quality of life for the residents and the development’s relationship to its neighborhood context by:

- a) integrating the “tower-in-the-park” developments with low-rise perimeter block development characteristic of most New York City neighborhoods;
- b) reorganizing the undefined and ambiguous open space with defined, defensible, and usable open spaces where residents would have a sense of proprietorship;
- c) providing prototypical models for infill, since so many of “tower-in-the-park” sites are based on prototypical designs;
- d) providing housing for upwardly mobile and stable NYCHA families who would relocate on-site, reinforcing neighborhood stability and heterogeneity;
- e) providing affordable housing at a variety of tenures; and
- f) helping to make the infill housing affordable housing through low or no acquisition costs and potential cross subsidies.

All of this can be achieved by:

- 1) retaining or relocating existing recreation facilities and providing additional facilities to accommodate the new population;
- 2) creating private outdoor space in the form of terraces and backyards for both existing and new ground floor units;
- 3) redistributing existing parking from large centralized lots to smaller parking lots and on-street parking on the new private streets as well as provide for additional parking for sites that are not

within easy walking distance of a subway; which can be done to retain and conserve the existing landscapes and mature trees to the extent possible.

Figure 110 and 111: Existing site

Typical “tower-in-the-park” site prime for infill.

Figure 112 and 113: Proposed infill

The infill plan uses rowhouses, the predominant neighborhood building type. The new rowhouses all front reintroduced private streets with curbside parking that coincides with the former roadbeds of demapped streets. The rowhouse also re-creates the grain, interval and rhythm of front doors and stoops typical of the neighborhood. The infill rowhouse use approximately 50 percent of the unused floor area.

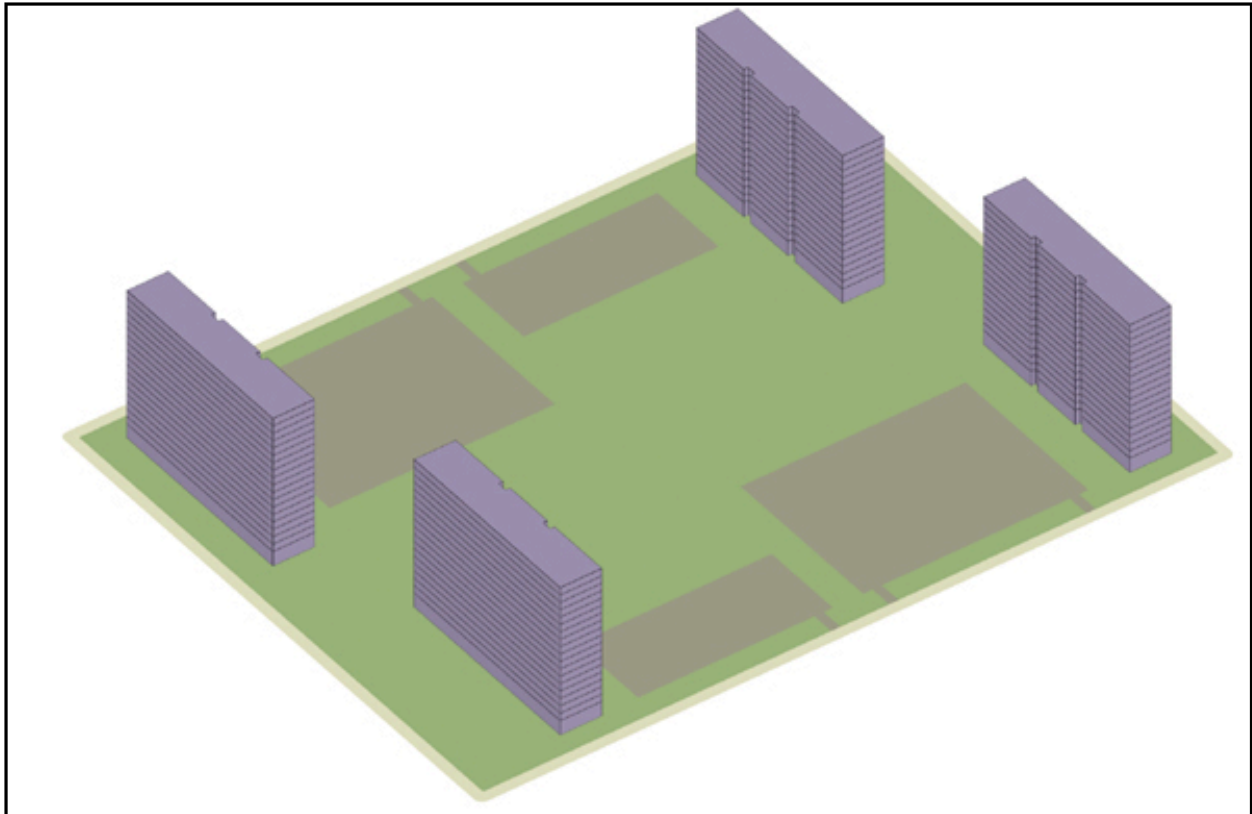


Figure 110: Existing site -Axonometric plan

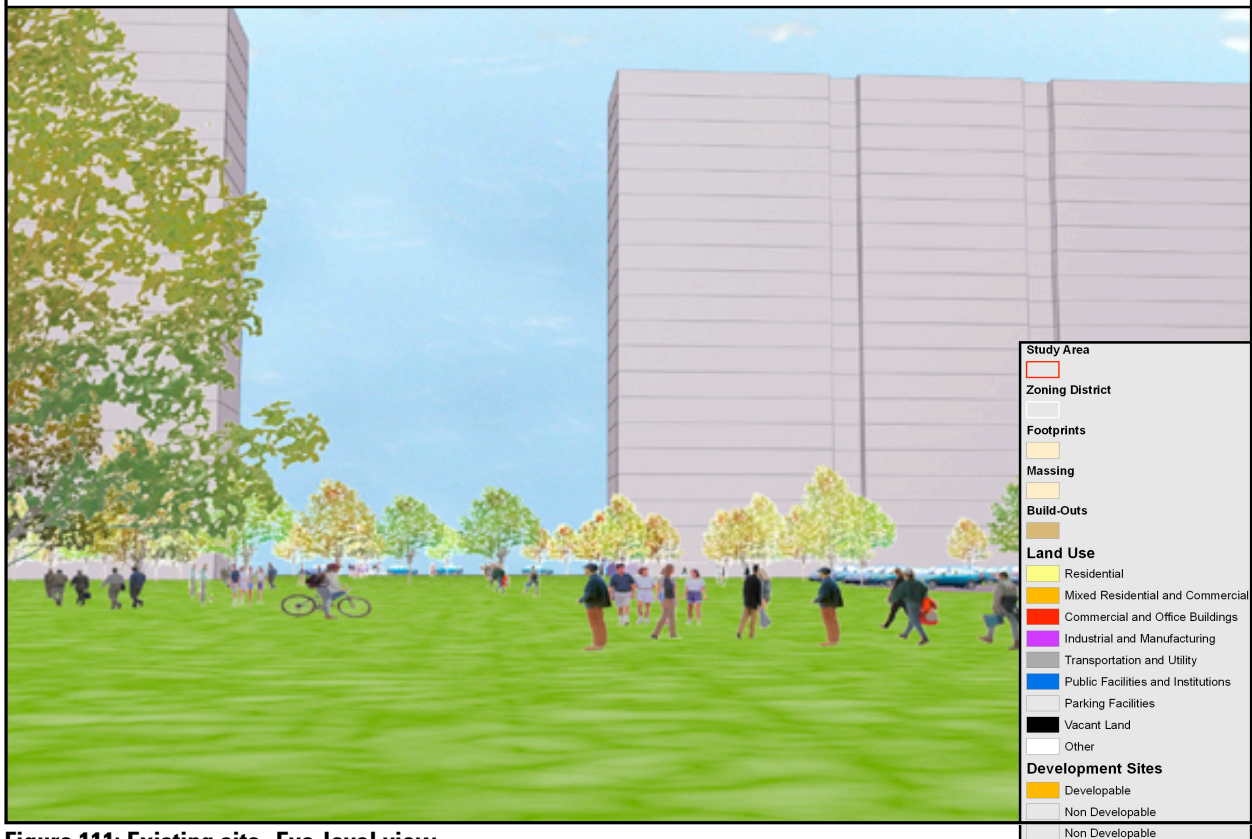


Figure 111: Existing site -Eye-level view

	Study Area
	Zoning District
	Footprints
	Massing
	Build-Outs
	Land Use
	Residential
	Mixed Residential and Commercial
	Commercial and Office Buildings
	Industrial and Manufacturing
	Transportation and Utility
	Public Facilities and Institutions
	Parking Facilities
	Vacant Land
	Other
	Development Sites
	Developable
	Non Developable
	Non Developable

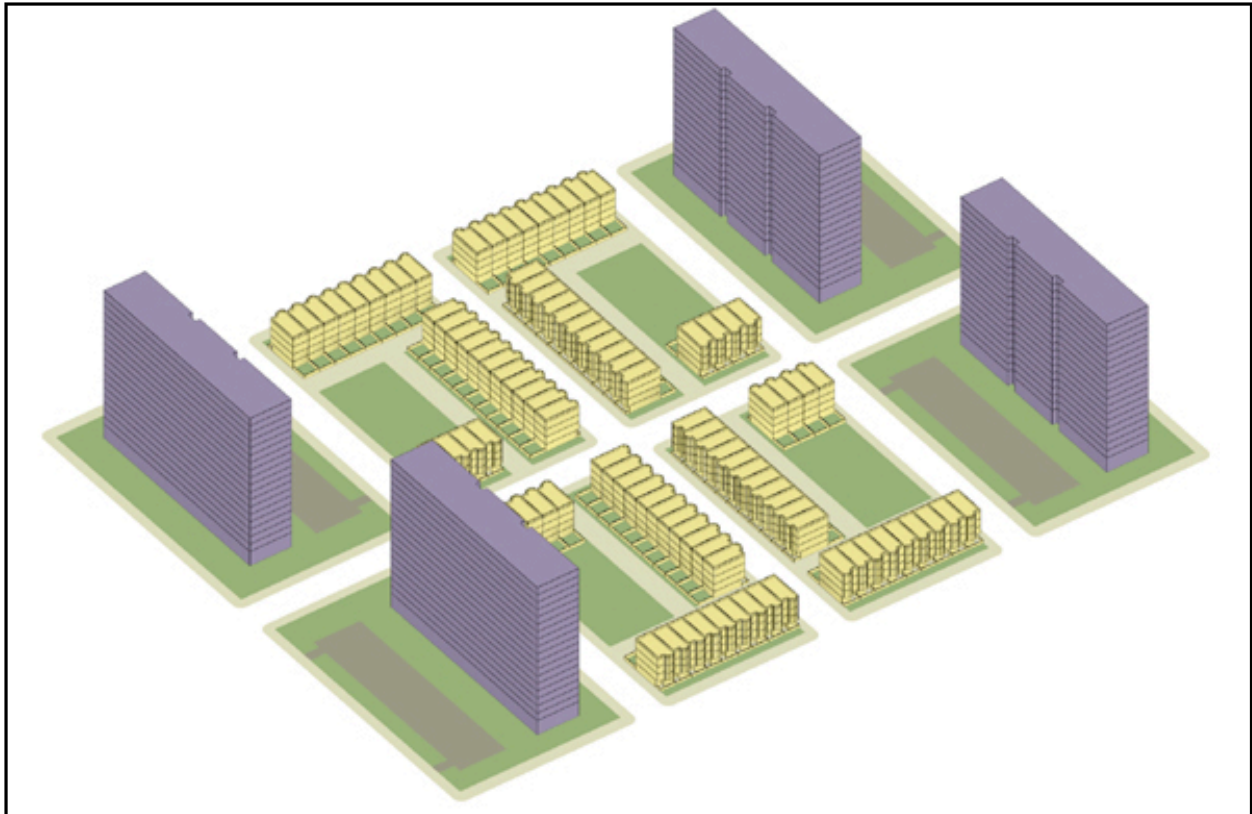


Figure 112: Proposed infill -Axonometric plan



Figure 113: Proposed infill -Eye-level view

Table 32: Infill Yields

<i>Infill Housing on a "Tower-in-the-Park" Site</i>			
Lot Area	080,128	sq.ft.	(722.24' x 950.00')
Zoning District	R0		
Maximum Floor Area Ratio at HF 13-15 s	2.43		
Maximum Zoning Floor Area	1,007,291	ZFA	
Gross Floor Area	1,717,310	GFA	(ZFA + 3% mech)
TOTAL EXISTING ZFA	1,044,810	ZFA	(ZFA x 4)
Typical Floor / GFA	14,100	GFA	
Typical 19s Building / GFA	209,040	GFA	
Typical 19s Building / ZFA	201,204	ZFA	(GFA - 3% mech)
Existing HF	19		
Floor Area Ratio at HF 19s	2.39		
Maximum ZFA at 2.39	1,039,840	ZFA	
Gross Floor Area	1,089,041	GFA	(ZFA + 3% mech)
Open Space Ratio at HF 19 / FAR 2.39	30.5		
Required Open Space at FAR 2.39	010,500	sq.ft.	
Existing Building Coverage	50,040	sq.ft.	(14,100 s.f. x 4)
Open Space Provided	029,488	sq.ft.	
Excess Open Space at FAR 2.39 / HF 19 / OSR 30.5	12,988	sq.ft.	
Existing Unused ZFA	595,030	sq.ft.	
<i>Yield with Proposed Infill</i>			
Gross Floor Area Generated with Four Story Row Houses	300,800	GFA	
Units @ 900 GFA per Unit	334	Housing Units	
Zoning Floor Area Generated	291,770	(3% mech Deduction)	
Unused ZFA after Proposed Infill	303,254	sq.ft.	
<i>Parking</i>			
Net on-street parking	525	Spaces (approx)	
Net on-site parking	200	Spaces (approx)	
Existing on-site parking lost	082	Spaces (approx)	
Net change in parking	43	Spaces (approx)	

C. Geographic options in New York City: Case-study: Sumner

i. Existing Conditions

Sumner houses is located in Brooklyn's Bedford-Stuyvesant neighborhood. The surrounding context is a mélange of fragments of traditional Brooklyn streetscapes of small apartments, rowhouses and semi-detached houses, interspersed with modernist superblocks and tower-in-the-park site plans and building forms.

The estate is built on two contiguous blocks beginning west of the retail shopping on Broadway (see the existing site plan that follows). The western half of the estates was developed simultaneously with the public school and adjoining playground and schoolyard. Sumner was developed using two housing types: the high-rise slab and the six- to seven-story linear crankshaft (which predominates). The buildings are all oriented north-south along a central, gently sloping, open space all framed by two high-rise slabs. The estate is landscaped and well-maintained, containing many play and sitting areas.

ii. Proposed conditions

The alternative site plan interventions utilize the four-story rowhouse and free-standing pavilion in recognition of the need to develop a humanly-scaled and open urban landscape which can mediate between the urban fragments of a haphazard and disparate neighborhood (see the alternative site plan that follows). The new housing is always oriented toward a public sidewalk or either of the two east-west pedestrian/vehicular parking streets which divide the superblock into thirds. Groups of pavilions are arranged between the "parallels" (long sides) formed by the existing buildings, demarking the boundaries between public, semi-private, and private space by their grouping in combination with walls, gates and fences.

The playgrounds and tot lots have been decentralized with each courtyard containing one, while sports requiring playing fields use the schoolyard. A large park is created in the eastern block, bounded on three sides by low- and mid-rise buildings and a twelve-story slab to the east. The western end of the park is defined by an internal, publicly-accessible north-south pedestrian street.

Figure 114: Sumner: Existing

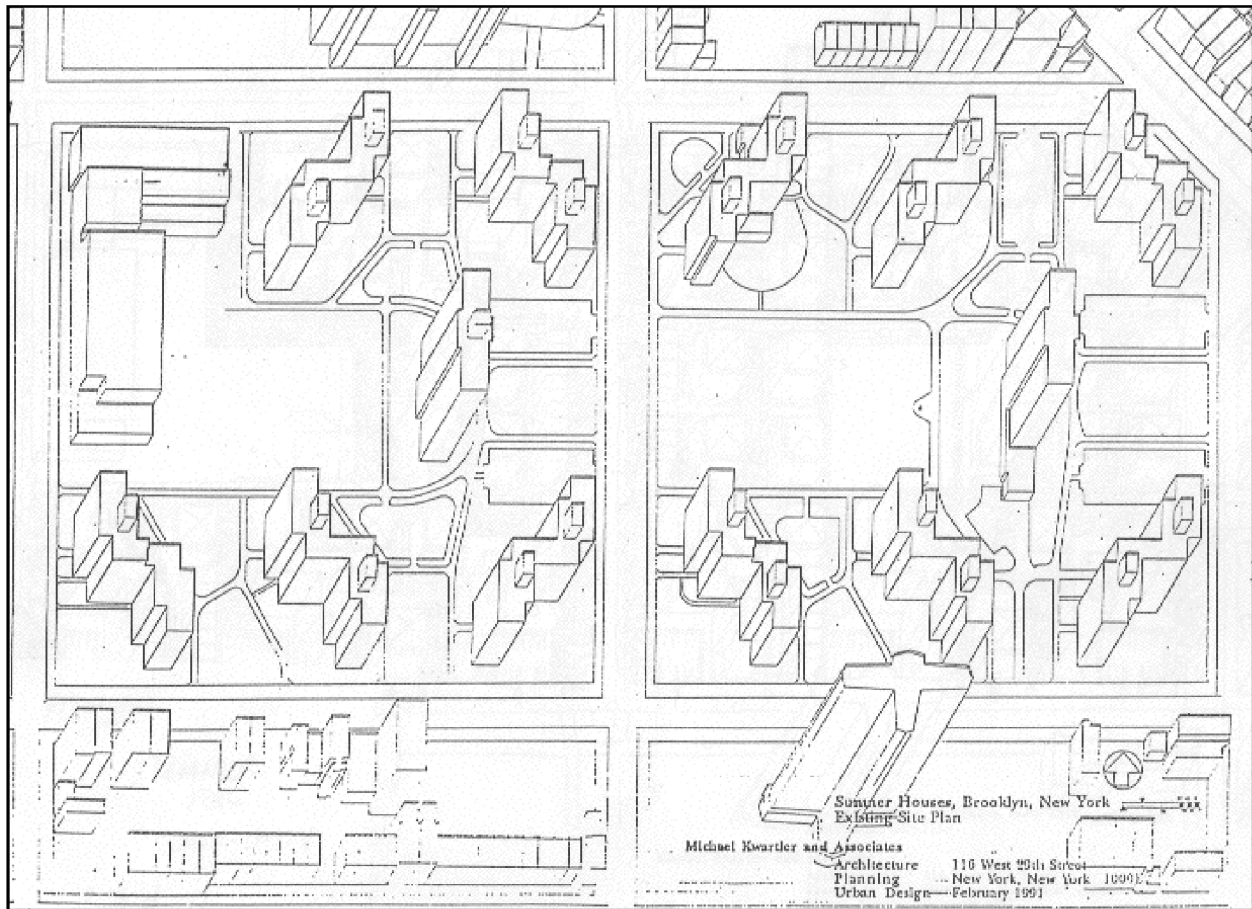
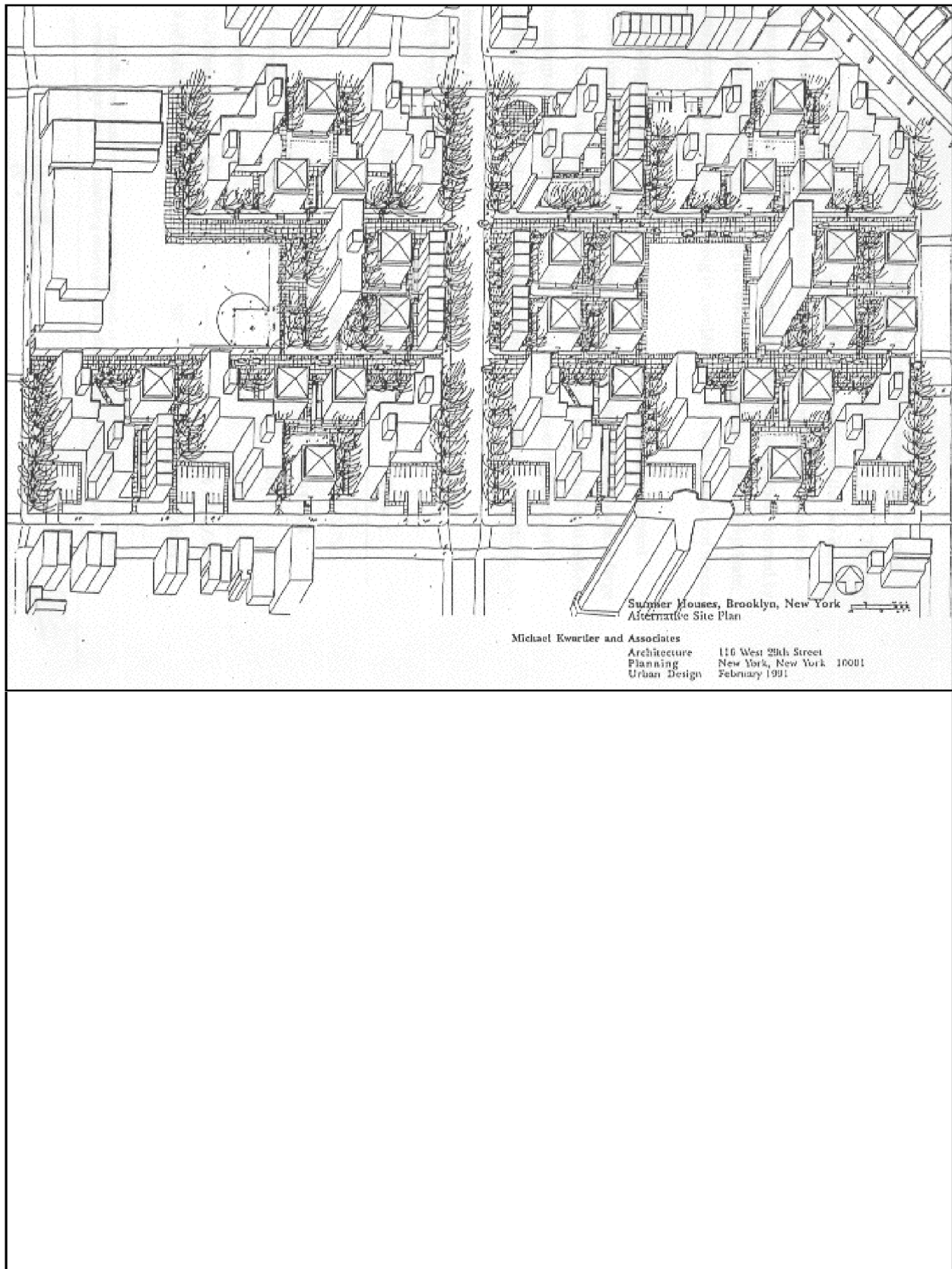


Figure 115: Sumner: Proposed infill



D. Example: Baruch Houses

The utilization of housing authority sites

Premise of old design/tower or buildings in parks

Some of the housing authority projects are very distinguished and should not be tampered with. Other projects could benefit from more careful interaction in the existing street- grid structures of their areas.

A potential source of additional housing within New York City is the group of housing developments owned and managed by the New York City Housing Authority (NYCHA). Many of these developments represent a "tower-in-the-park" concept once espoused by Le Corbusier. Innovative site planning could create an opportunity to reintegrate these developments into the urban fabric of the City by reintroducing streets, sidewalks and new townhouses or low-rise moderate, middle and market-rate housing on the sites. These large properties represent a potential for both economic integration as well as re-integration to the traditional City grid.

A prototype of NYCHA housing studied for this report is the Baruch Houses development, located on the Lower East Side of Manhattan. Figure 116 shows the development's existing site plan which includes residential buildings, large open spaces and at-grade parking areas. Figures 117a and b show the possibility of introducing both new streets and new housing within the existing development. Figures 118a, b and c illustrate different potential housing types for the site. On this site, one could achieve as many as 300 new units.

NYCHA has over 68 large housing developments which have more than 1000 housing units each. Assuming only 150 units (half of Baruch) could be achieved on these 68 properties one could estimate the possibility of approximately 10,000 new housing units created throughout New York City. If half of these were affordable (between 50 percent and 135 percent of median income) the NYCHA properties might have the potential of adding as many as 5,000 units to the city's pool of affordable housing.

Figure 116: Baruch Houses: Existing site plan



Figure 117a: Baruch Houses: Alternative: Plan



Figure 117b: Baruch Houses: Alternative: View



Figure 118a: Baruch Houses: Potential housing type 1



Figure 118b: Baruch Houses: Potential housing type 2



Figure 118c: Baruch Houses: Potential housing type 3



6: Limits to acceptable density

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6: Limits to acceptable density

A. Overview

The conceptual frameworks for judging Strategy One and its potential applicability to the problem of affordable housing in New York City lies in two areas: the economic consequences of the suggested rezoning, and the physical consequences. This section on density presents an example from one of the most famous projects of the past generation in New York City as to how density options may be viewed and evaluated.

Arverne is a stretch of 300 acres of city-owned land set against the Atlantic Ocean in Queens. The history of the degeneration of Arverne is well-known and need not be repeated here. A series of attempts by the City planning and housing development agencies to organize renewal efforts for this extraordinary stretch of land go back more than twenty years in a number of iterations. Two such iterations are presented here for comparison: A high-density plan presented to New York City in 1988 by a distinguished group of New York City professionals on behalf of a then-active New York City residential developer; and the plan as finally accepted, some dozen years later, and now in the process of actual construction.

The adopted plan, depicted below, has considerable merits: picturesque, reminiscent of waterfront conditions and imagery, it is certain to be successful in providing a certain level of units, both market and affordable to Arverne: ____ units. The other scheme presents the 1988 submission proposal, which carried with three alternate density levels of 10,000, 12,500 and 15,000. In selecting the far lower density approach, the City was acting in good faith on supporting a plan it believed the private sector would be able to implement. But was this the correct approach? How is the higher density to be evaluated in utilizing efficiently and for the greatest return for the greatest number of potential units and residents of an extraordinary publicly owned resource?

This issue is the underlying physical issue to be resolved in judging the questions of how much density is appropriate for the commercial corridors and manufacturing districts, which provide the focus for rezoning in Strategy One. This report argues that the higher levels of density are very appropriated if the

urban design considerations are handled with the level of skill presented by the Arverne submission of 1988.

In Oceana, ironically, more than a decade later, the Muss Organization, an experienced residential development firm in New York City, came to the same relative conclusion. In developing new market-rate condominium housing for Brighton Beach it turned to established, New York-precedent building and planning models for development against the Brooklyn ocean front. In so doing, and in rejecting the temptation to under build, they created an extraordinarily successful market-rate project that has brought new life to the entire Brighton Beach community. And they have done so at a level of density that may serve as an example, if not as an exact model, in the context of Strategy One.

B. Case-study: Arverne



Figure 120a: 1988 Arverne Plan Proposal:
© James Stewart Polshek and Henry Wollman
Density: 10,000-15,000 units

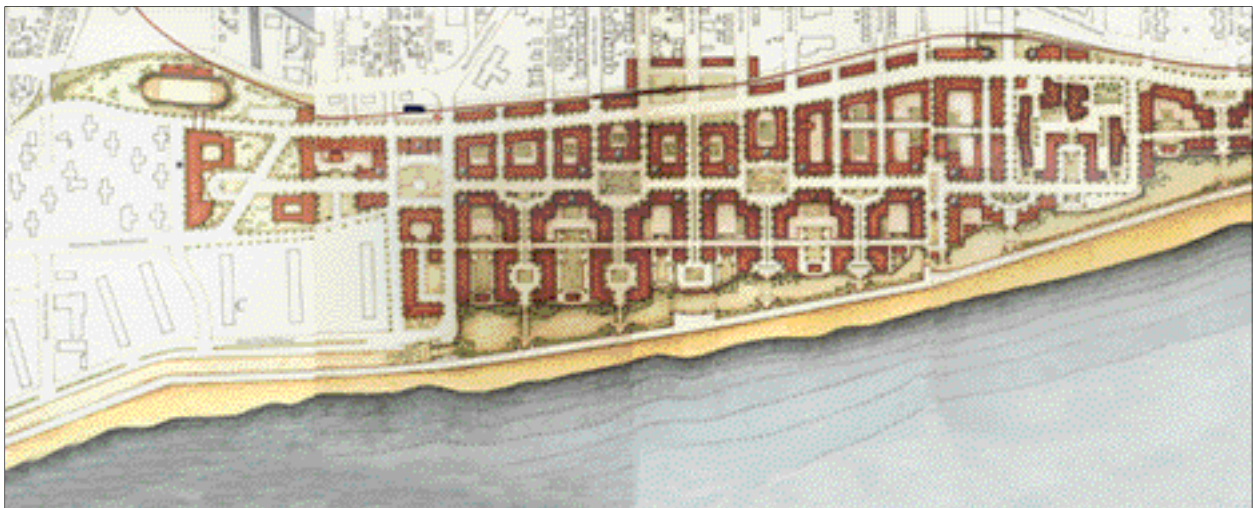


Figure 120b: Detail
1988 Arverne Plan Proposal
© James Stewart Polshek and Henry Wollman
Density: 10,000-15,000 units

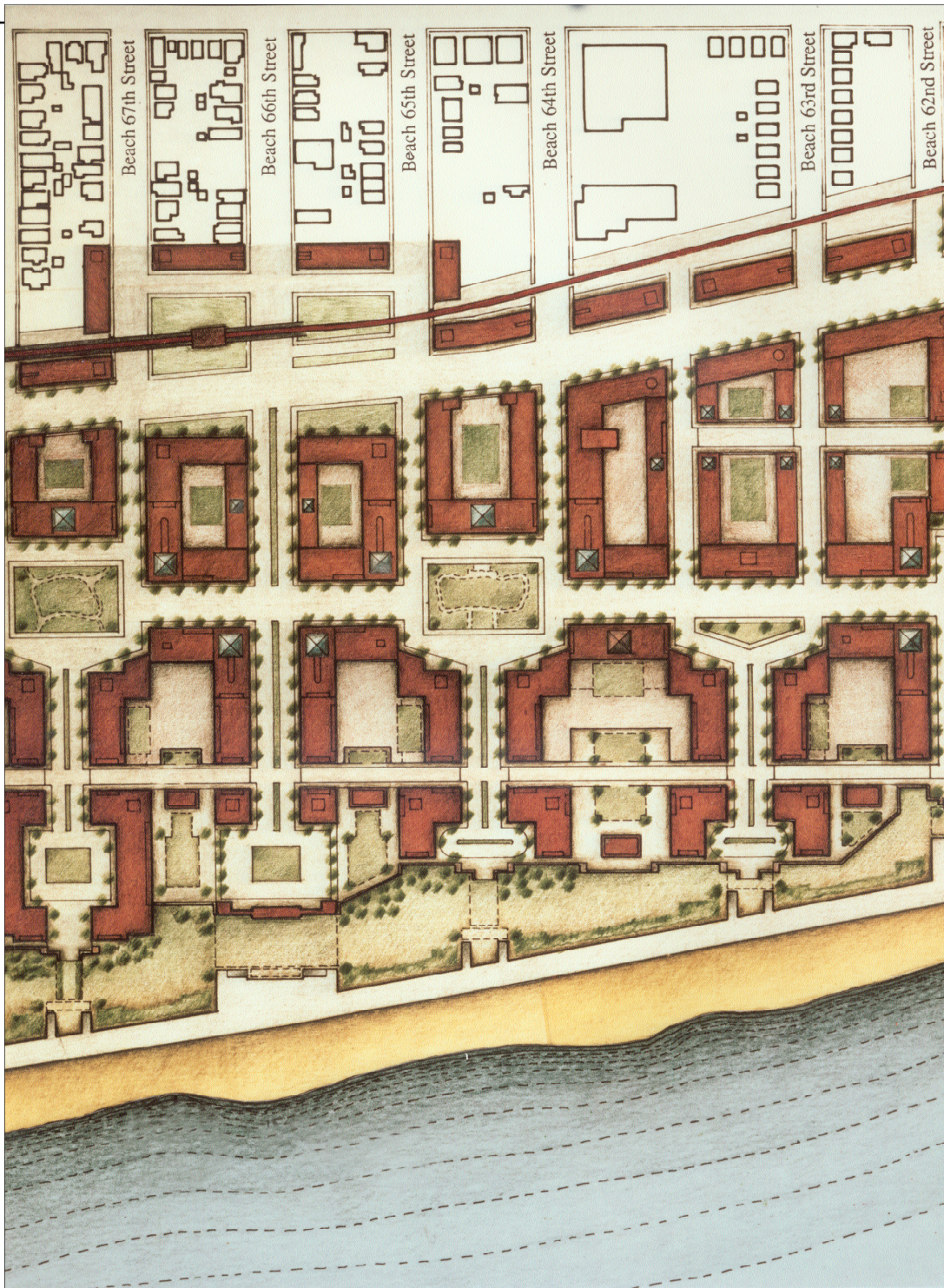


Figure 120c: Detail
 1988 Arverne Plan Proposal
 ©James Stewart Polshek and Henry Wollman
 Density: 10,000-15,000 units



Figure 121a: The Beechwood Organization Development Plan, 2003

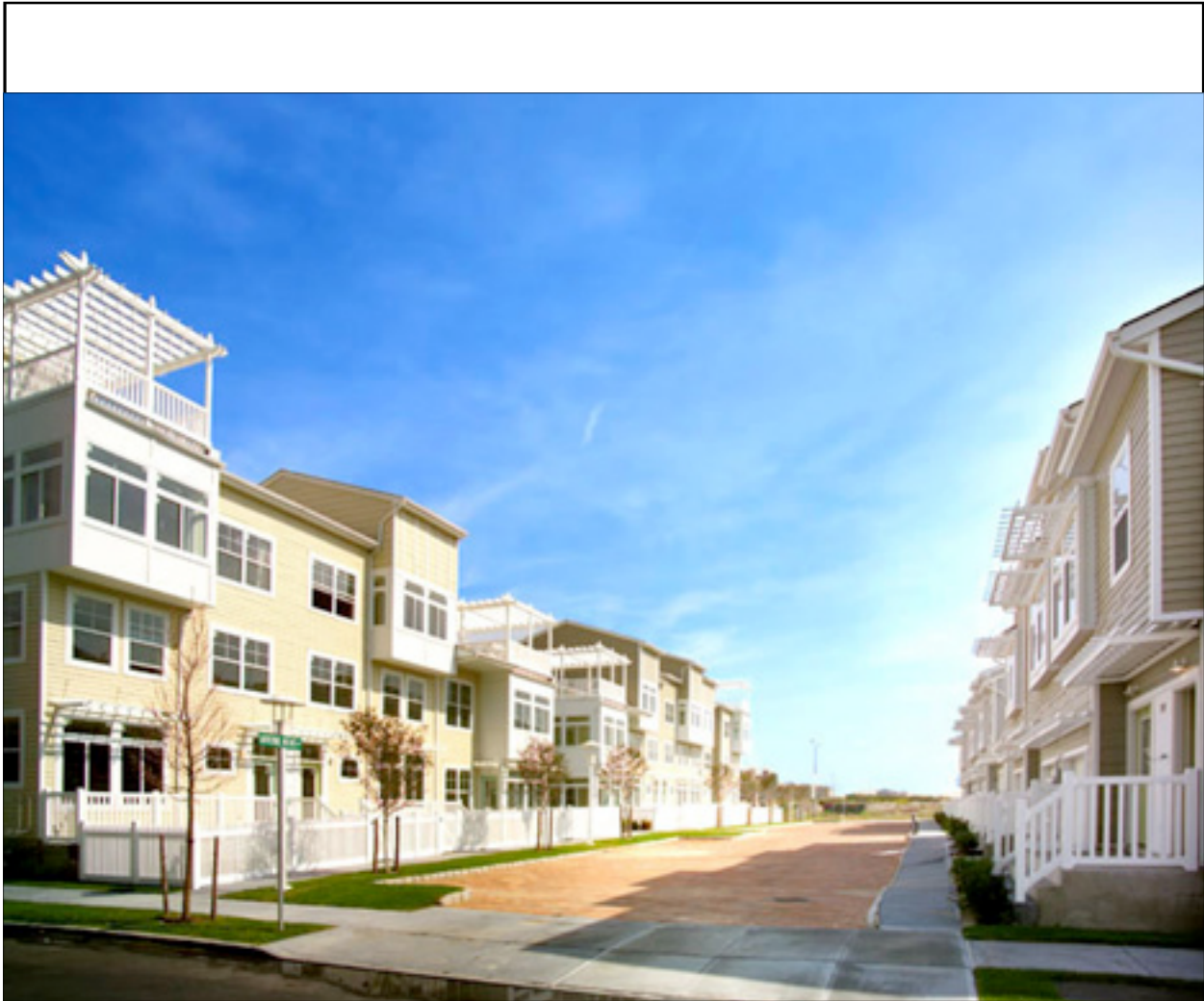


Figure 121b: Depiction: The Beechwood Organization Development Plan, 2003 Arverne



Figure 122a: Depictions
1988, Arverne Development Plan
Density 10,000-15,000 units



Figure 122b: Depictions
1988, Arverne Development Plan
Density 10,000-15,000 units



Figure 123: Oceana, Muss Development, Brighton Beach, Brooklyn, 2005

7: Conclusion

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7: Conclusion

A. Review and summary recommendations

i. Inclusionary alternatives

The above discussion suggests the following parameters for an expanded inclusionary housing program in New York City:

1. The program should be voluntary, offering density bonuses as the primary incentive. Some regulations regarding parking, bulk and height, and setbacks may have to be relaxed to accommodate the bonus density.
2. The program should allow off-site, as well as on-site, satisfaction of inclusionary requirements. To promote community-level integration, however, some geographic restrictions should be retained.
3. There should be several, if not a full “sliding scale,” set-aside and income-level restrictions from which developers can choose. Flexibility in matching the inclusionary benefits and obligations according to different market conditions should be maximized.
4. Specific areas of the city should be mapped as inclusionary zones based on good planning principles. Those areas should be where infrastructure investment has been, or will be, made since the 1961 Zoning Resolution and so could consequently accommodate higher density, or those areas which patterns of land use suggest that higher residential densities now make more sense.

ii. Alternative strategies

Part Three, in addition to presenting the conclusions and recommendations of the inclusionary housing component of this study, also engages three long-term alternative strategies for advancing the production of affordable housing, each focused on a different solution to the question of how land is assembled for affordable residential development.

Strategy 1: Market-driven:

the rezoning of selected commercial corridors

and manufacturing districts for enhanced residential development

Strategy 2: Government-Driven:

The Recreation of a “ Mitchell-Lama Style” new housing development program

Strategy 3: Public-Sites Driven:

An Infill building program for Affordable Housing utilizing public housing authority land and similar publicly owned/publicly developed sites

Among these three strategies, Strategy One is the principal focus of Part Three. Strategy One seeks to establish, at root, a new organization over a long-term basis for the residential development market in New York City, and through this new organization, to enable affordable housing to be developed within a mixed-income framework. Such a large goal within a city of the scale of New York can only be partially accomplished, but the benefit of Strategy One is to attack the problem of affordable housing production from such a structural basis.

iii. Foreword: The next stages for investigation

Additional study is required to further test and to perfect the model presented in Strategy One, and to quantify the yields and costs of Strategies Two and Three. The Institute is in the process of crafting proposals for private foundation financing for such studies, and through them to further refine the alternative strategies presented here.