G. The financing structure

i. Pricing affordable housing

The model developed thus far for Strategy One is a condominium for-sale, which enables both affordable and market units to be acquired by their residents. A rental model will also be proposed in a later integration of this study.

ii. Income tiers

The affordable units will serve the following income tiers:

- 10 percent of the units shall be affordable to families with incomes between 120 percent and 180 percent of the city median, an average of 150 percent of median, or $92,400 for a family of four;
- 10 percent of the units shall be affordable to families with incomes between 60 percent and 120 percent of median, an average of 90 percent of median, or $56,520 for a family of four;
- 10 percent of the units shall be affordable to families with incomes at 60 percent of median or less, of median, an average of 50 percent of median, or $31,400 for a family of four.

iii. Unit prices

The affordable apartments would be available to family incomes, in each of the above tier ranges, with 35 percent of family income devoted to mortgage paydown, plus an average of approximately $460 per month devoted to maintenance and reserves. Within the pro-forma model adopted within this study, the prices of apartments within these three income tiers would be:

- At the Tier One range (family-of-four income at 60 percent or less of the New York City median), a family with income at exactly 50 percent would be able to afford an 800sf two-bedroom apartment with a unit purchase price of $80,000 or $100 per square foot;
- At the Tier Two range (family-of-four income between 60 percent and 120 percent of the New York City median), a family with income at exactly 90 percent would be able to afford an 875sf two-bedroom apartment with a unit purchase price of $210,000 or $240 per square foot;
- At the Tier Three range (family-of-four income between 120 percent and 180 percent of the New York City median), a family with income at exactly 150 percent would be able to afford a 950sf two-bedroom apartment with a unit purchase price of $420,000 or $442 per square foot.

iv. Down payments

The required down-payment for units within the model constructed for this study would be as follows:

- At the Tier One range (family-of-four income at 60 percent or less of the New York City median) no down payment would be required; 100% of the price of the apartment would be financed;
- At the Tier Two range (family-of-four income between 60 percent and 120 percent of the New York City median), a 5 percent down payment would be required; 95 percent of the price of the apartment would be financed; $10,500 would be required for the purchase of an 875sf two-bedroom apartment with a unit purchase price of $210,000;
- At the Tier Three range (family-of-four income between 120 percent and 180 percent of the New York City median), a 10% down payment would be required; 90 percent of the price of the apartment would be financed; $42,000 would be required for the purchase of an 950sf two-bedroom apartment with a unit purchase price of $420,000.

v. Financing the acquisition of affordable units

A dedicated pool of debt-financing dollars would be created to be administered by a joint-bank entity such as the model provided by the Community Preservation Corporation. Underwriting requirements for specific loans at the three income levels would be established, along with appropriate insurance components. Purchasers would be required to comply with these standards, including standards of credit-worthiness, in order to be eligible for a mortgage loan. The great advantage of the pooled special capital approach would be two: the developer is assured that a pool of mortgage capital is indeed available and that the review process is administered by an external bank-like entity; the prospective purchaser is able to purchase with a much lower downpayment than in a traditional market transaction.

Within this financing structure the developer is responsible for administering the acquisition of the affordable units by prospective purchasers within the overall marketing plan for the development. Experienced developers who are capable of building projects at the scale proposed here should be sufficiently able to incorporate this affordable acquisition program into their marketing plan.

vi. Summary of monthly payments and income-tax benefits

The monthly profile of payments required for the acquisition of the two-bedroom apartment within this study for a family of four would be as follows:

At the Tier One range (family-of-four income at 60 percent or less of the New York City median):

Total Mortgage at outset:	$80,000
Monthly mortgage payment at 6% interest:	$ 479.64
Monthly maintenance payment to the condominium:	$ 462.50
Monthly allocation of annual real estate taxes:	$ 366.00
Total monthly payment	$1,308.14

At the Tier Two range (family-of-four income between 60 percent and 120 percent of the New York City median):

Total Mortgage at outset:	$200,000
Monthly mortgage payment at 6% interest:	$ 1,196.10
Monthly maintenance payment to the condominium:	$ 462.50
Monthly allocation of annual real estate taxes:	$ 962.00
Total monthly payment	$2,620.60

At the Tier Three range (family-of-four income between 120 Percent and 180 percent of the New York City median):

Total Mortgage at outset:	$380,000
Monthly mortgage payment at 6% interest:	$ 2,266.30
Monthly maintenance payment to the condominium:	$ 462.50
Monthly allocation of annual real estate taxes:	$ 1924
Total monthly payment	$4652.80

H. Economics of Development

i. Proforma returns

The following proformas provide an initial basis for evaluating the profit potential to the private market established by rezonings at various levels of density within the designated corridors and districts as provided for in Strategy One. The assumptions in regard to the range of land valuations, the contribution of commercial development within each project, and other variables are presented in both the proformas assumptions that follow immediately, as well as each pro-forma option.

There are four sets of these options, for development at four levels of land-valuation: Land valued at $75 per sf, at $100 per sf, at $125 per sf and at $150 per sf. For each land valuation level, a development pattern with and without commercial space (presumably retail space on the ground level) is analyzed. These four levels have been chosen as presenting the critical range within Brooklyn, the Bronx, Queens and Staten Island among the commercial corridors and their segments as depicted in Strategy One and the accompanying section of the Housing Atlas.

How much profit is too much profit? How much profit should be "allowed " as a benefit of city zoning? These issues form an underlying context for evaluating the appropriate density levels. This report suggests the following, as a prelude to a much broader discussion of the "level of profit" issue.

The goal of Strategy One is to enable the private development community to undertake, with no public subsidies of any sort, the development of affordable housing along side market housing. It may very well be necessary for cash-on-cash returns to be close to 200 percent, and for integral-rates-of-return to be close to 40 percent, for private industry to be able to take the kinds of risks of mixed-income housing, designed and built to quality standards, of the kind proposed in Strategy One. These issues of "realistic returns" must be considered in an open way in evaluating how the private market can actually work to take on the responsibilities of affordable housing development in a systematic and long-term market-structured manner.

ii. Assumptions

a. Development time frame

Acquisition: Month 1
Approval Completed: Month 9
Construction Starts: Month 10
Construction ends: Month 27
Marketing starts: Month 27
Marketing ends: Month 36

b. Development program

Buildable Square Feet

This number is represented by the ground floor area of the site multiplied by the FAR coefficient.

Commercial area

Commercial area, if any, is represented by the ground floor area of the site and is the equivalent of 1 FAR for each iteration.

c. Apartment distribution and yield

Apartment distribution and total unit yields are built upon the following unit sizes:

- A 15 percent lobby/common area/hallway, core deduction is taken from the gross square feet of ground-and-above built area;
- For Market units, the average two-bedroom size is calculated at 1200 sf;
- For Tier One affordable units, the average two-bedroom size is calculated at 800 sf;
- For Tier Two affordable units, the average two-bedroom size is calculated at 875 sf;
- For Tier Three affordable units, the average two-bedroom size is calculated at 950 sf.

d. Development costs

Land costs/ Acquisitions

Four ranges of land costs per square foot of developable residential floor area are assumed:
$75, $100, $125 and $150 per sf.

Hard costs:

Construction costs are assumed at $170 per sf, comparable to the construction cost coefficient presented in Part 2 of this report.

Total construction costs: 161 percent

- For FAR 6, a $5 per sf premium has been added.
- For FAR 7, a $10 per sf has been added.
- For FAR 8, a $15 per sf has been added.

Soft costs (as a % of hard costs):
- Fees, permits, legal, accounting: 0.5 percent
- Architecture and engineering: 3.3 percent
- Marketing: 3.1 percent
- Insurance (1.0% of hard): 1.0 percent
- Developer's overhead ($25,000/month): 0.9 percent
- Development fee (3.0% of hard): 3.0 percent
- Real estate taxes during construction: 6.6 percent
- Loan costs, title insurance, recording tax, etc.: 10.0 percent
- Soft cost contingency (5.0 percent of soft excluding mortgage fees): 1.1 percent
- Input interest: 31.6 percent

Finance costs
Finance costs are built upon the components as presented in each assumption chart. Acquisition and construction loan interest is calculated at 7.50 percent. The construction loan carries through to the end of the sellout period, but paydown begins at month 2 following the initial closings, approximately month 28.
- Mortgage qualifying percent of income: 35 percent
- Monthly maintenance and reserves: $462.50
- Annual mortgage interest rate for purchaser: 6.0 percent
- Developer acquisition loans/construction loan interest rate: 7.5 percent
- Percent of land finance cost: 60 percent

e. Revenue
Residential pricing: Affordable sales prices
Affordable sales prices are calculated at different levels associated with each base land cost:

For projects developed on land at the $75 per sf level, the sales prices of the above-sized two-bedroom units are:
- Tier One: Affordable for family incomes at 40 percent of median: $50,000 or $63 per sf;
- Tier Two: Affordable for family incomes at 60 percent of median: $120,000 or $137 per sf;
- Tier Three: Affordable for family incomes at 80 percent of median: $190,000 or $200 per sf.

For projects developed on land at the $100 per sf level, the sales prices are:
- Tier One: Affordable for family incomes at 43 percent of median: $50,000 or $63 per sf;
- Tier Two: Affordable for family incomes at 70 percent of median: $150,000 or $171 per sf
- Tier Three: Affordable for family incomes at 103 percent of median: $270,000 or $284 per sf.

For projects developed on land at the $125 per sf level, the sales prices are:
- Tier One: Affordable for family incomes at 46 percent of median: $60,000 or $75 per sf;
- Tier Two: Affordable for family incomes at 80 percent of median: $180,000 or $206 per sf;
- Tier Three: Affordable for family incomes at 126 percent of median: $340,000 or $358 per sf.

For projects developed on land at the $150 per sf level, the sales prices are:
- Tier One: Affordable for family incomes at 50 percent of median: $80,000 or $100 per sf
- Tier Two: Affordable for family incomes at 90 percent of median: $210,000 or $240 per sf
- Tier Three: Affordable for family incomes at 150 percent of median: $420,000 or $442 per sf.

Area median income $62,800

Market sales prices
Market sales prices are calculated at different levels associated with each base land cost:
- @ $75 per sf level, the sales price of the above-sized two-bedroom unit is: $493,800/$412 per sf.
- @ $100 per sf level, the sales price of the above-sized two-bedroom unit is: $558,700/$466per sf.
- @ $125 per sf level, the sales price of the above-sized two-bedroom unit is: $623,600/$520 per sf.
- @ $150 per sf level, the sales price of the above-sized two-bedroom unit is: $688,500/$574 per sf.

Land price, as an indicator of the desirability of location, feeds the model and influences Area Median Income levels, Market Rate Unit Pricing, and Commercial Pricing. The price of the commercial space is set at an 11 percent premium to the residential space. Thus, as land price increases or decreases, likewise commercial pricing increases or decreases.

f. Commercial price
The price of the commercial space is set at $600 per square foot predicated on a per square foot per year rent in the $50's. This number serves as a commercial

average for a widespread group of commercial corridor and manufacturing zone conditions prevalent in Brooklyn, the Bronx, Queens and Staten Island, although not every condition is represented.

These values do not correspond with existing zoning categories, such as R6, R7, or their commercial equivalents within the framework of the current zoning resolution. The given floor area ratios (FARs) represent in each instance a multiple of the total ground-floor area of a site for calculating total developable square feet for a project.

g. Profit

In its simplest form, profit is the difference between cost and revenue. Cost includes each of the components of hard and soft costs, including construction loan interest and land cost (see below). Revenue consists of the product of the weighted average sales price per square foot of each of the four tiers of residential units and the residential floor area, plus the price per square foot of commercial space times the commercial floor area (if any). The price of commercial space is a function of residential pricing. Residential pricing is a function of land price. We also have included a small revenue adjustment factor which, in essence, increases the unit pricing for taller buildings at the rate of 2 percent per incremental FAR.

On a cash basis, equity is assumed to go in (land is purchased) at time zero. An acquisition-construction loan is put in place that finances the remaining 60 percent of land cost and 100 percent of the hard and soft construction costs, including construction loan interest.

h. Equity

It is assumed that in each instance 40% of the acquisition cost of the land is paid rather than financed. For example, with an FAR of 2.0 and a land cost of $75.00 per FAR, the 60,000 square foot development project will have equity of $1,800,000 (40% X $75.00 X 60,000). Equity: 40 percent of land cost.

i. Cash on cash

The Cash-on-Cash metric (profit as a percentage of equity invested) produces one measure of financial performance. Profit, as the numerator, measures the return on equity. The time value of money does not enter the cash-on-cash calculation.

j. IRR

As it is in Part Two of the Affordable Housing Study, a total construction and sell-out cycle of 36 months is assumed (9 months for permits, 18 months for construction, and 9 months for sales). The equity is assumed invested at time zero. The return of and on equity transpires in equal installments over the final 9 months of the three-year process as the units are sold. The IRR is that discount rate that equates the eventual cash returns to initial equity invested.

iii. Model site

Figure 15: Model Site shows the model 30,000sf site.

i***v. Proformas***

Proformas indicating the model returns to a prospective developer from this approach are provided as follows:

a. Financial analysis using $75/sf land acquisition:
   - -for residential with ground floor retail: FAR 2-8 (Figure 16)
   - -for residential w/out ground floor retail: FAR 2-8 (Figure 17)

b. Financial analysis using $100/sf land acquisition:
   - -for residential with ground floor retail: FAR 2-8 (Figure 18)
   - -for residential w/out ground floor retail: FAR 2-8 (Figure 19)

c. Financial analysis using $125/sf land acquisition:
   - -for residential with ground floor retail: FAR 2-8 (Figure 20)
   - -for residential w/out ground floor retail: FAR 2-8 (Figure 21)

d. Financial analysis using $150/sf land acquisition:
   - -for residential with ground floor retail: FAR 2-8 (Figure 22)
   - -for residential w/out ground floor retail: FAR 2-8 (Figure 23)