

(RE)CODING NYC'S HOUSING  
GSAPP HOUSING LAB  
2020

# **FINANCIAL FEASIBILITY**

**PRO FORMAS FOR AFFORDABLE ROOFTOP  
MODIFICATIONS OF NEW LAW TENEMENTS**

# INTRODUCTION

Intervening in existing buildings to expand affordability in accessible urban locations can transform lives and increase resilience. It is also financially feasible - and in New York City, can be a low-risk, high-reward venture with positive social and financial returns. The interventions require design ingenuity and can gain traction through small tweaks to existing regulations -detailed in the companion chapter 1 of this business plan. Yet meaningful expansions can also occur without any major regulatory shifts.

The analyses below detail- using 2020 estimates and assumptions - how two scenarios of these interventions can get built. While not as lucrative as market-rate developments, they are both feasible investments capable of generating meaningful returns. If bundled at scale, these types of interventions could be a significant development opportunity for institutional investors or wealthy nonprofits to act as equity partners in New York City. Given the economic forecast, the demand for affordable housing will increase. Combined with the already-weakening market for upper-middle income housing, and increased financing opportunities, affordable housing development will continue to attract interest.

Using a New Law Tenement building owned by a co-op as a case study, two scenarios for building expansion and adaptation test the financial feasibility of increasing affordable housing opportunities. These scenarios reflect both the economic incentive for outside investors in the existing housing stock of NYC and the supplementary income for internal investment. Using a 11% levered IRR (internal rate of return)<sup>1</sup> as a minimum threshold for both scenarios to meet in order to attract outside partners in the creation of affordable housing via ADUs and SROs, factors such as rent levels, holding period, and unit mix can be adjusted to create combinations of scenarios that best suit the developer of the project. Both scenarios are contingent upon zoning variances and appeals.

Located between 130th and 135th street in West Harlem, the 6 story walk up apartment selected as a case study was built in 1905 with an existing GSF of 19,872 SF and an existing RSF of 15,990 SF<sup>2</sup>. The structure is a typical example of a New Law Tenement building. It is assumed that the current unit mix is 3 one bedroom and 3 two bedroom units on each floor, for a total of 36 units in the building. For both scenarios, it is assumed that the building is currently composed of co-op rentals with rent levels set at 120% AMI<sup>3</sup>. Therefore, the acquisition cost for an outside developer based on an annual existing rent for the building of \$632,567.88<sup>4</sup> and a valuation cap rate of 4.75%<sup>5</sup> would be \$13.3 million. Although the total development costs vary due to the differences in the scope of work, both scenarios will take advantage of the Freddie Mac Conventional Multifamily Loan Products offered to co-ops<sup>6</sup>.

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1 11% levered metric based on conversation with Ernst Valerie (affordable housing developer) said that institutional investors or wealthy nonprofits such as workers' unions' organizations are happy with a 6% unlevered / 11% levered IRR ( we should probably find a more published metric?)

2 Check with other teams... is this taken from ZOLA? StreetEasy?

3 120% AMI was the lowest rent level that would allow the acquisition to pencil out... but we should also look at income levels for the area. AMI Levels are set annually by HPD

<https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page>

4 See spreadsheet appendix

5 Based on recent market sales pulled from RCA Analysis

6 Freddie Mac product is Fixed Rate, Fully Amortizing 30 year loan for 5-10 year terms at 75% - 80% LTB (1.25X-1.30X DSCR) based on loan term

Scenario 1, the creation of accessory dwelling units (ADU) through the addition of rooftop modular units, is less physically intrusive to the existing building and offers a more attractive economic incentive. Using an average unit size of 400 SF and a circulation footprint of the same, 7 new units can potentially be added to the existing roof of the building. With construction costs totaling \$1.9 million<sup>1</sup>, and a loan underwritten at 80% LTV, Scenario 1 will require \$12.3 million in debt and \$7.1 million in equity (63% / 37% respective split). Assuming that the new ADU units will be rented at market rate, they will provide an additional \$224,000 of annual income<sup>2</sup>. To meet the minimum 11% IRR threshold, an outside investor would have to keep the investment for a minimum of 7 years. If sold in year 7 with an exit cap rate of 5.50%<sup>3</sup>, Scenario 1 would provide a 14.6% levered IRR and a 1.89 levered equity multiple<sup>4</sup>. Assuming that the existing operating expenses for the co-op are on average around \$322,757,000<sup>5</sup>, the new income from the ADU units would reduce existing costs by 52.04%.

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1 See spreadsheet appendix for Cost PSF sourced from RSM means and contractor data

2 See spreadsheet appendix. Assume 2% rent growth.

3 ?? Based on RCA or industry standard for market growth / inflation?

4 Both metrics include income from existing units

5 See spreadsheet appendix



Scenario 2, the conversion of the top floor of the building to SRO (Single Resident Occupancy) units and the addition of communal spaces on the roof, proposes a combination of two housing typologies to allow for increased affordability through added density. Working with the existing exterior envelope and interior circulation, SRO units are 160 SF on average and provide a kitchenette in each unit. The existing floor plate and facade penetrations cater to an interior renovation of 12 SRO units and a shared communal bathroom. Using metrics suggested by a NYU Furman Center publication on 21st Century SROs<sup>1</sup> which request 1 kitchen for every 6 people (rooms in this case) at 80 SF per kitchen, and one shared bathroom for every 6 people / rooms at 65 SF per bathroom, a minimum allowance of 166 SF of communal kitchen and 135 SF of communal bathroom space is required. In addition, flexible living / working space is combined with these communal facilities accessible only by SRO residents on the new added level. A rooftop terrace available to the entire building is also provided on the top level along the street perimeter and provides a visual setback. With construction costs totaling \$3.8 million<sup>2</sup>, and a loan underwritten at 80% LTV, Scenario 2 will require \$13.8 million in debt and \$6.38 in equity (68% / 32% respective split). To compare the two scenarios, a holding period of 7 years is also used to evaluate the level of affordability that the SRO units can provide given that a minimum levered return of 11% is required. Assuming that the existing units on Floors 1 - 5 are rented at 120% AMI, the new SRO rents can be as affordable as 60% AMI. If the property is sold in year 7 with an exit cap rate of 5.50%<sup>3</sup>, Scenario 2 would provide a 12.1% IRR and a 2.22 levered equity multiple<sup>4</sup>. Assuming that the existing operating expenses for the co-op are on average around \$322,757,000<sup>5</sup>, the new income from the SRO units would reduce existing costs by 36%.

1 [https://furmancenter.org/files/Small\\_Units\\_in\\_NYC\\_Working\\_Paper\\_for\\_Posting\\_UPDATED.pdf](https://furmancenter.org/files/Small_Units_in_NYC_Working_Paper_for_Posting_UPDATED.pdf)

2 See spreadsheet appendix for Cost PSF sourced from RSM means and contractor data

3 ?? Based on RCA or industry standard for market growth / inflation?

4 Both metrics include income from existing unit

5 See spreadsheet appendix

# EXECUTIVE SUMMARY

To make change at scale in the New York City affordable market, the proposal to re-think and utilize rooftops of existing walkup buildings must demonstrate that it can be implemented.

The following document outlines the process to explore financial feasibility -without explicit subsidies- for the addition of units on top of a typical walk-up building in New York City. While the Housing Lab team envisions that any project going forward would ideally include subsidy in exchange for deeper affordability and longer-term regulatory guarantees, this document explores the possibility of development and construction without any public program.

An important note for any reader: **as of the spring of 2021, all updates on this document were transitioned into two products:** (1) a downloadable spreadsheet and (2) an interactive calculator linked to a map of possible as-of-right rooftop additions on this building typology. These two products will ideally make all of the research that went into this product easy and compelling to access for a wider array of actors in the sector - and enable them to update, tweak and view scenarios that match their capacities, ambitions or portfolio in any given moment.

Further, the work to move the walkup additions into reality has transitioned at the Lab in 2021, to focus on the feasibility of a City government-initiated program with subsidy and regulations on one hand, and specific designs for climate-adaptive, cost-effective and healthy-materials prioritizing modular rooftop units. These and other products from the lab can be viewed on the Housing Lab internet portal. As always, the work of the Lab is only as good as our conversations with practitioners, and we welcome any outreach from real estate development and finance and related firms and initiatives.

The two development scenarios outlined in this document -and again, which are available in a more current format as a downloadable spreadsheet or interactive calculator at the Housing Lab's website are:

- 1)The addition of rooftop modular units, and
- 2) The conversion of a floor of existing units to Single Room Occupancy (SRO) units with new communal amenities.

	<b>SCENARIO 1: ADUs</b>	<b>SCENARIO 2: SROs</b>
EXISTING UNITS	36 (6 Stories)	30 (Top story is converted into SRO units)
NEW UNITS CREATED	7	12 (Common amenities are provided on the roof)
ACQUISITION COST	\$13.3 MILLION	\$13.3 MILLION
TOTAL CONSTRUCTION COSTS	\$1.9 MILLION	\$3.8 MILLION
DEBT EQUITY	\$12.3 MILLION (63%) \$7.1 MILLION (37%)	\$13.8 MILLION (68%) \$6.4 MILLION (32%)
LEVERED PROFIT* (Incl. Income from Existing Units)	\$3.6 MILLION	\$1.87 MILLION
LEVERED IRR* (Incl. Income from Existing Units)	14.6%	12.1%
LEVERED EQUITY MULTIPLE* (Incl. Income from Existing Units)	1.89x	2.22x
AVERAGE ANNUAL OPERATING EXPENSE REDUCTION VIA ADD'L UNIT INCOME	52.04%	64%

\*Financial analysis based on a 7-year holding period (sale of asset at Year 7), using an institutional fixed-rate fully-amortizing loan with a 30 year amortization period. Acquisition, valuation, and terminal cap rates based on market comparables.



# NEW LAW TENEMENTS

New Law tenements were built between 1901 to 1930, the result of a stringent housing reform law that mandated new, improved standards for light, ventilation, and fire safety.

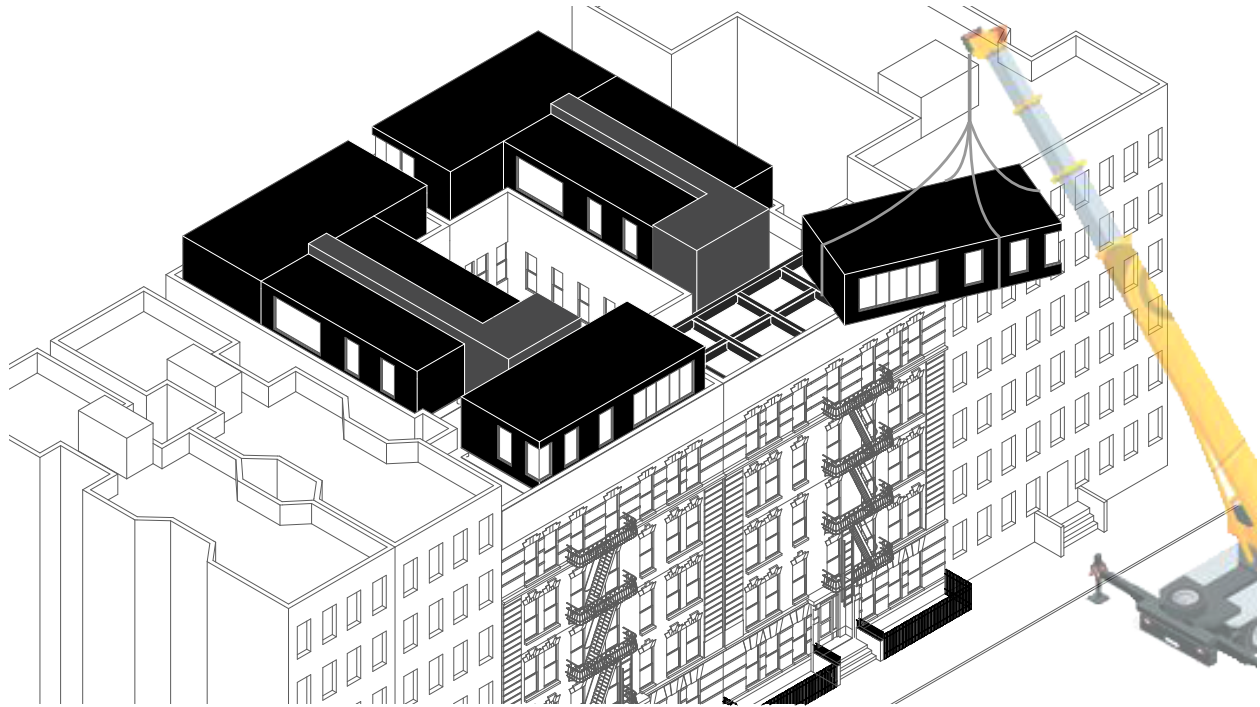
New Law tenements are a substantial portion of New York City's housing stock: the properties highlighted in black on the map to the right depicts all New Law Tenement buildings still in use as of 2019. These buildings are currently estimated to provide over 600,000 housing units in the city. XX% of these buildings are estimated to be owned by co-ops.

**By large, these buildings have remained unadapted to contemporary needs in unit types.**

**This document is intended to be a resource for those who own and manage New Law Tenements and are looking for the affordable expansion or conversion of units in their buildings.**

A financial feasibility of two unit expansion and conversion scenarios will be followed by a step-by-step breakdown of the method to achieve the feasibility calculations.

# ROOFTOP ADDITIONAL DWELLING UNITS



Accessory dwelling units (ADUs) are supplementary housing units built on the lot of an existing dwelling. Such units can be located either within the dwelling itself (“internal ADUs”) or as new stand-alone construction (“external ADUs”). Rooftop Accessory Dwelling Units are external ADUs that take advantage of the historically underused flat roof construction of tenement buildings to add density and unit diversity in existing neighborhoods.

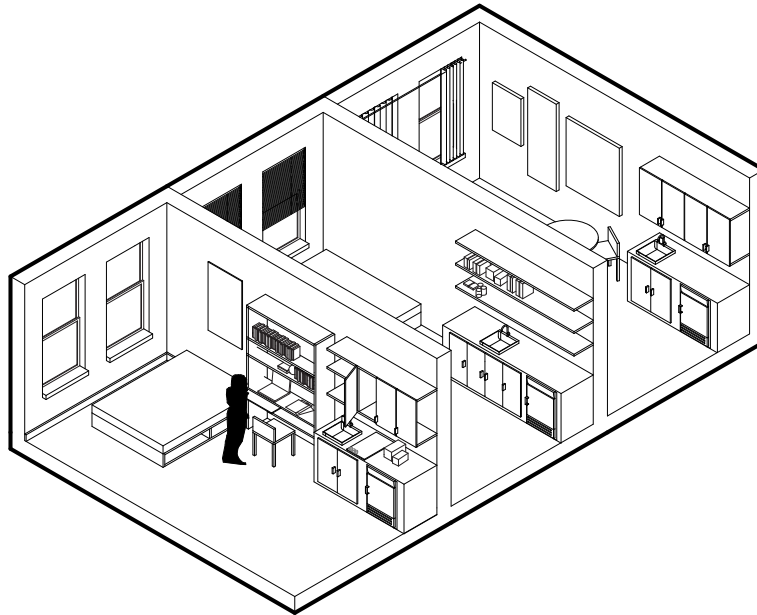
## Advantages

- + Minimal base building modifications and on-site construction required if pre-fabrication method is utilized for additions.
- + Incremental expansion possible.

## Disadvantages

- + Application for zoning / code variances and appeals are required.
- + Base building structural conditions and capacity may be a limiting factor.

# CONVERSION TO SINGLE ROOM OCCUPANCIES



Single Room Occupancies (SROs) are units in multifamily residential buildings, in which residents occupy a single bedroom (or sometimes two small rooms). Typically under 300 square feet, SRO units do not include a complete bathroom or kitchen, and residents often share access to a bathroom, kitchen, or other living areas.

## Advantages

- + Smaller square footage and increased floor density allows for lower rent PSF.
- + Dedicated communal space on the roof can also be shared by existing tenants.

## Disadvantages

- + Application for zoning / code variances and appeals are required.



# CASE STUDY BUILDING: (WEST HARLEM)



## ZONING DISTRICT

R7A

## BUILDING CLASS

Walk-up Apartments

C6 - Cooperative

## LOT FRONTAGE X DEPTH

50 ft x 99.92 ft

## LOT AREA

4,996 ft<sup>2</sup>





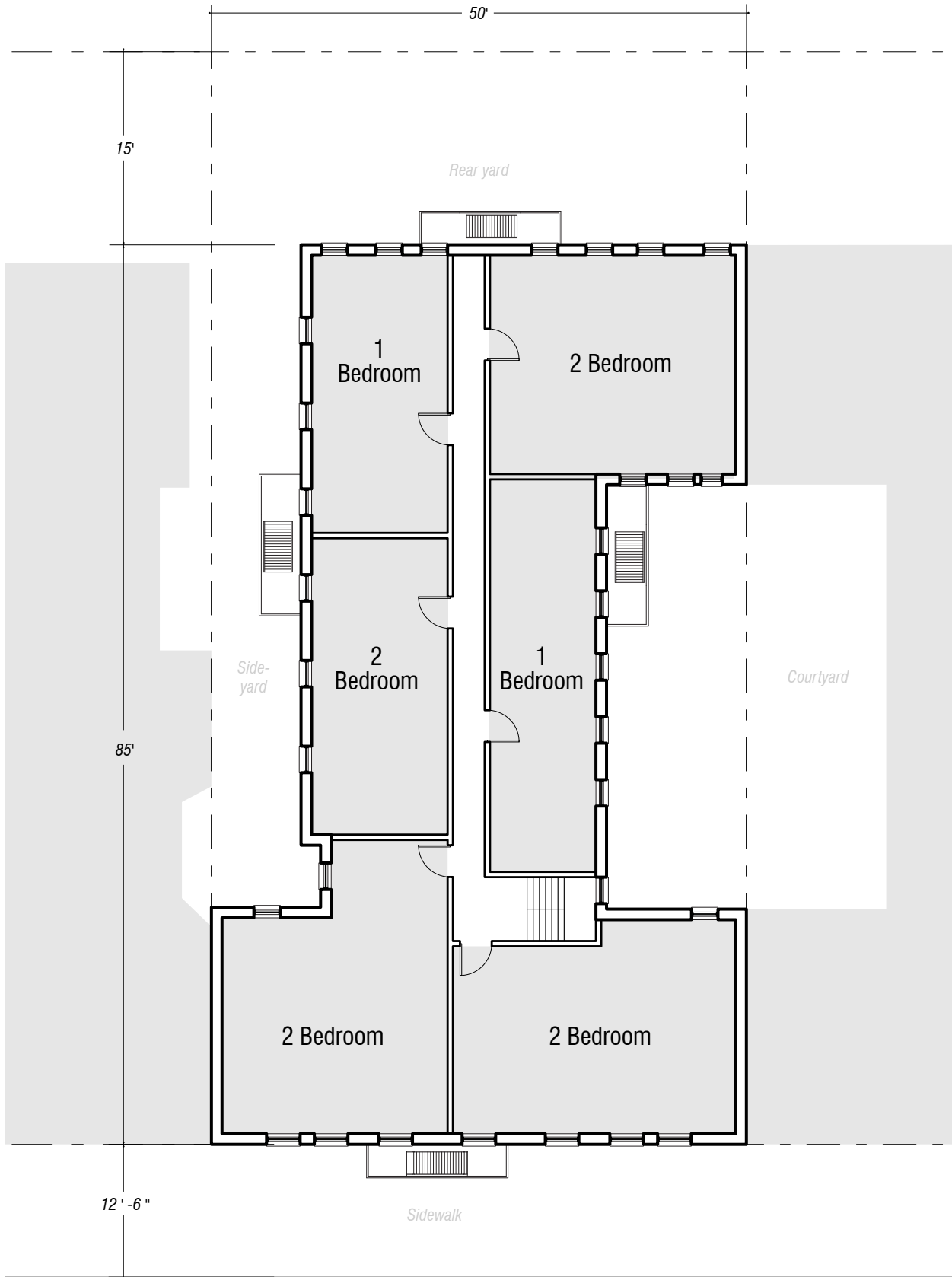
**YEAR BUILT**  
1905

**STORIES**  
6

**EXISTING GROSS SQUARE FOOTAGE**  
19,872 ft<sup>2</sup>

**EXISTING RENTABLE SQUARE FOOTAGE**  
15,990 ft<sup>2</sup>

**OWNERSHIP MODEL**  
HDFC CO-OP



541 West 133rd Street: Typical floor plan



541 West 133rd Street: Existing laundry room

## EXISTING UNITS

36

## UNIT BREAKDOWN

- 0 Studio
- 12 1 Bedroom
- 24 2 Bedroom

## RENT VS. OWN BREAKDOWN

- 26 Lived in by unit owner
- 10 Rented out by co-op board
- 2 Subleased out by unit owner

## RENT/MAINTENANCE FEES/EXPENSES

\$350 to \$500, dependent on unit.

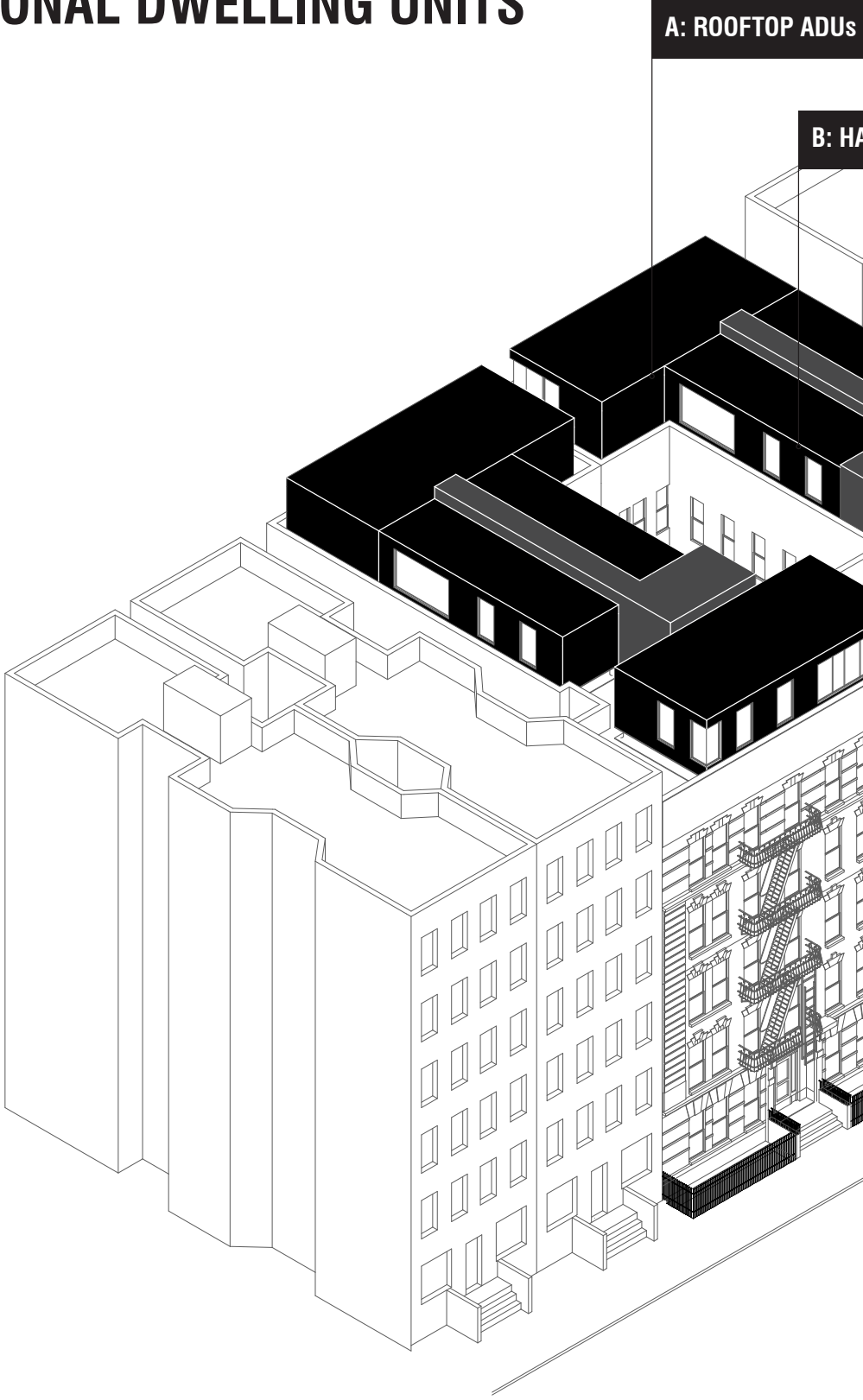
## AMENITIES

Laundry on site (basement)

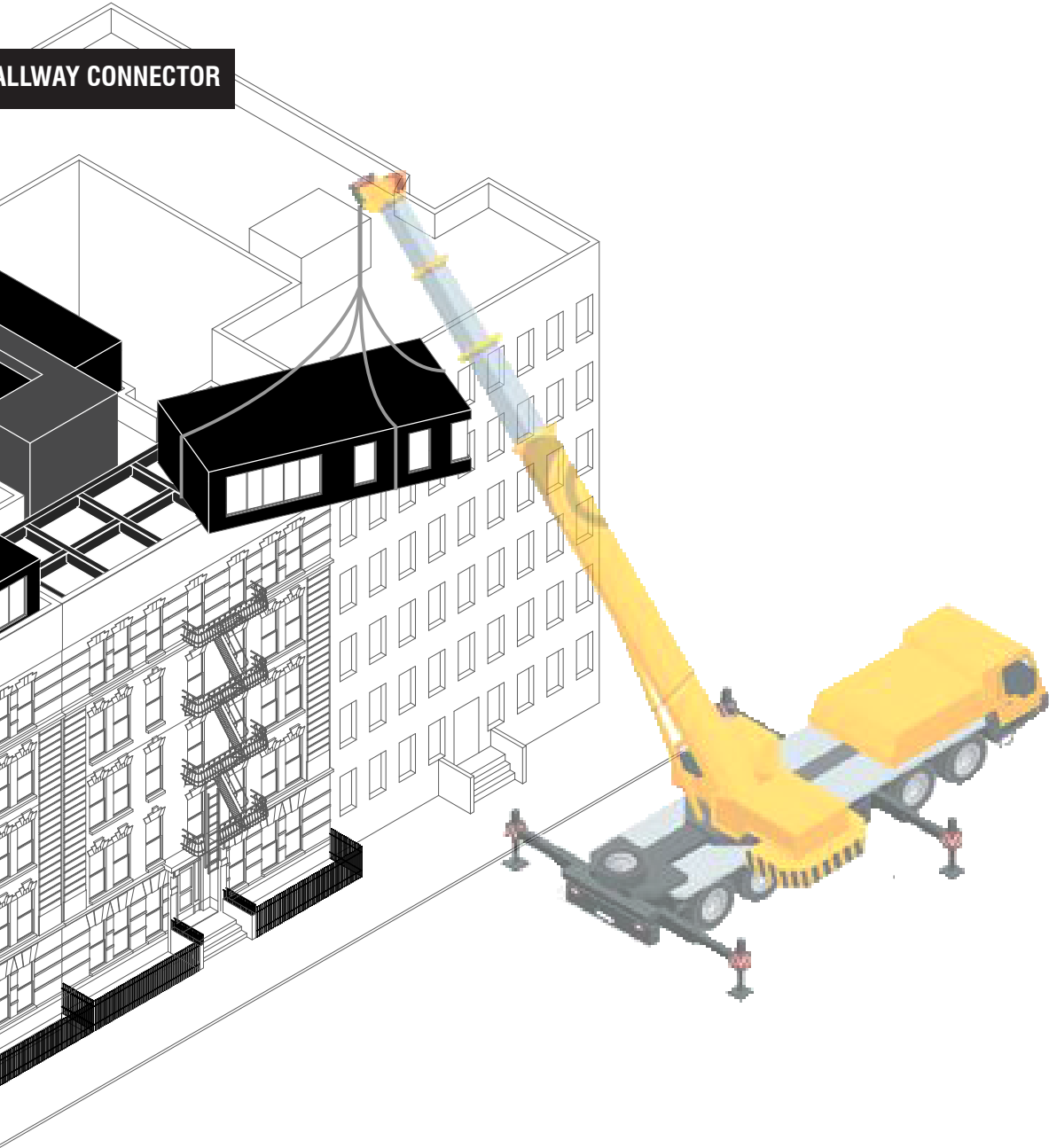
# SCENARIO 01: ROOFTOP ADDITIONAL DWELLING UNITS

A: ROOFTOP ADUs

B: HA



**HALLWAY CONNECTOR**



# SCENARIO 01: FINANCIAL / INTERVENTION SUMMARY

## **A: MODULAR ADUs ON ROOFTOP** **\$1,048,320**

Average Unit Size: min. 400 ft<sup>2</sup> per HPD standards

Rent: Market Rate

Key Cost Items: Tie-in to existing building MEP, installation of elevator, cost of material, crane for deployment, structural modifications to support additional weight of units

## **B: PREFABRICATED HALLWAY CONNECTOR** **\$144,000**

## **C: ELEVATOR** **\$40,000**

May result in modification or loss of +/- 1 existing unit per floor to accommodate. Costs may increase.

## **MISC/OTHER** **\$743,648**

Includes costs of structural modifications, MEP tie-ins, crane fees, and soft costs (architectural drawings, permits, legal contracts, etc.)

**TOTAL DEVELOPMENT COST: \$1,975,968**

**IN-PLACE RENTS\***

\*ASSUMED 120% AMI RATE

**\$1,115,640** (annual income)**\$2,582** (monthly avg per unit)**NEW-UNIT RENTS\***

\*ASSUMED MARKET RATE

**\$224,000** (annual income)**\$2,667** (monthly avg per unit)**EXISTING OPERATING EXPENSES****\$322,757,000** (annual avg)**OpEx OFFSET VIA NEW INCOME****52.04%** (avg annual reduction)**TIMELINE**

24 Months Construction --&gt; 6 Months Lease-Up --&gt;

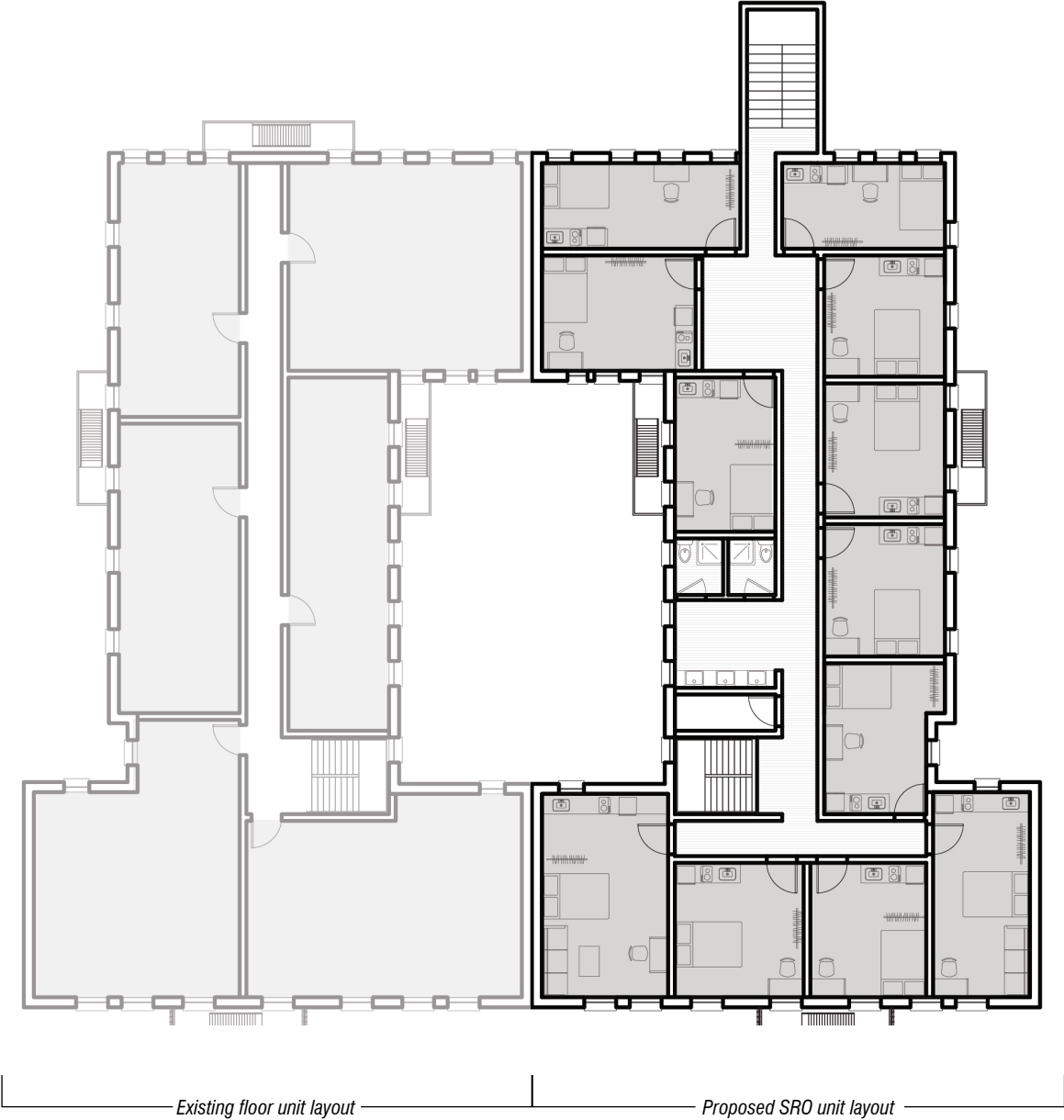
Stabilization at Year 4 --&gt; Asset Sale at Year 7

**TOTAL LEVERED PROFIT: \$3,606,748**

# SCENARIO 02: SINGLE RESIDENT OCCUPANCIES

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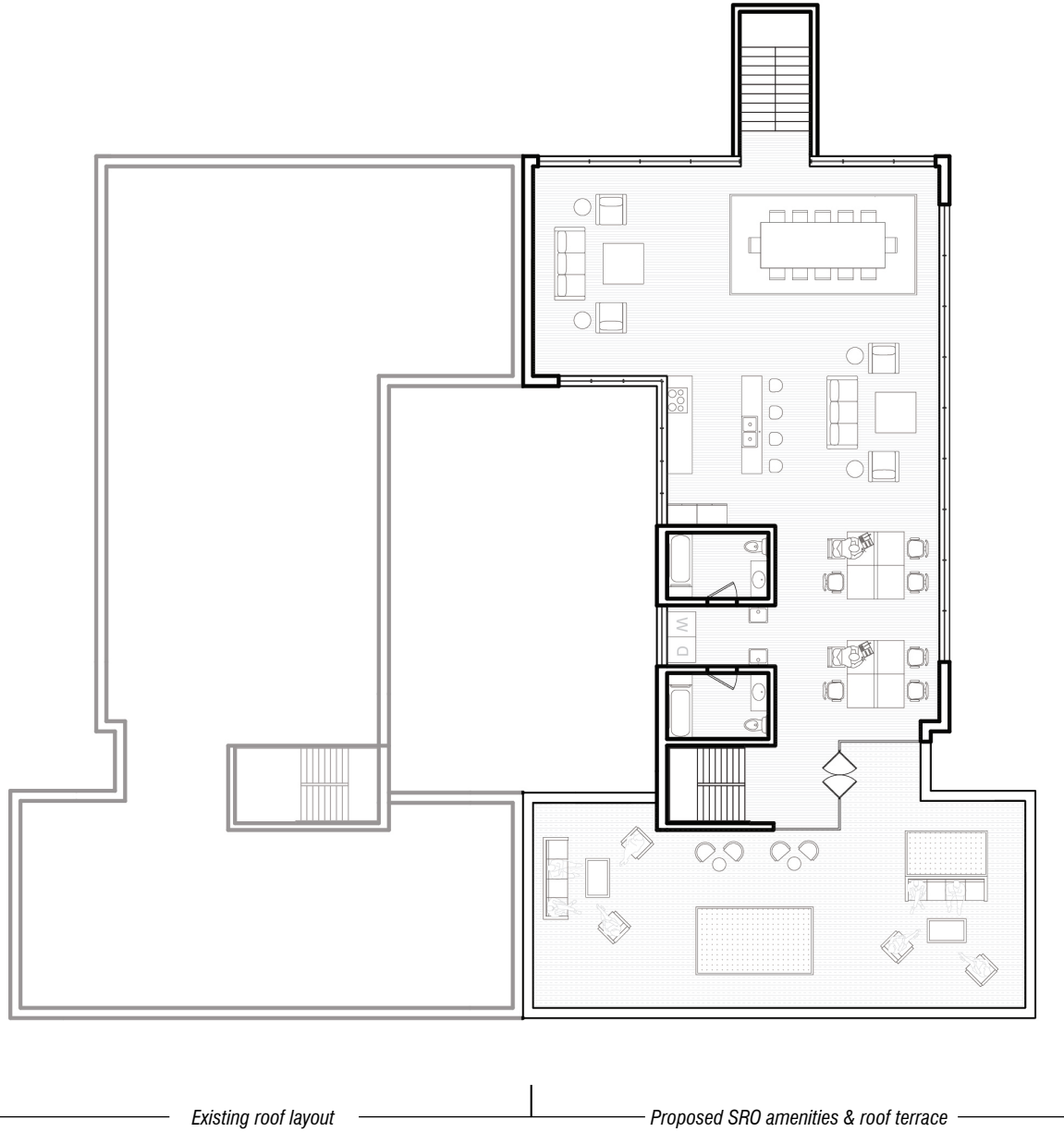
20



## UNIT BREAKDOWN

12 Units; Average 160 SF / Unit





## AMENITIES

Kitchen / 166 SF

Bathroom / 135 SF

Common Space / 2,012 SF

Rooftop Deck / 1, 000 SF

# SCENARIO 02: SROs + AMENITIES ON ROOFTOP OF NEW LAW TENEMENT FINANCIAL / INTERVENTION SUMMARY

## **A: DEMOLITION OF EXISTING FLOOR INTERIOR \$36,432**

Top Floor (Level 6) Conversion into SROs

## **B: SRO CONSTRUCTION ON LEVEL 6 \$1,556,640**

## **C: ROOFTOP AMENITIES \$1,556,640**

- + 1 Kitchen for every 6 people / rooms at 80 SF
- + 1 Bathroom for every 6 people / rooms at 65 SF
- + Flexible Living / Dining / Workspace
- + Rooftop Deck (1000 SF)

## **MISC/OTHER \$689,942**

Includes crane fees, and soft costs (architectural drawings, permits, legal contracts, etc.)

**TOTAL DEVELOPMENT COST: \$3,839,654**

**IN-PLACE RENTS\***

\*ASSUMED 120% AMI RATE

**\$929,700** (annual income)**\$2,582** (monthly avg per unit)**NEW-UNIT RENTS\***

\*MIN 60% AMI STUDIO RENT

**\$123,264** (annual income)**\$856** (monthly avg per unit)**EXISTING OPERATING EXPENSES****\$317,195** (annual avg)**OpEx OFFSET VIA NEW INCOME****64%** (avg annual reduction)**TIMELINE**

24 Months Construction --&gt; 6 Months Lease-Up --&gt;

Stabilization at Year 4 --&gt; Asset Sale at Year 7

**TOTAL LEVERED PROFIT: \$1,873,563**

# SCENARIO 1 BREAKDOWN + SOURCES

## SOURCES & USES

<b>Sources</b>	\$	%	PSF
Debt	\$12,351,858	63.33%	\$621.57
Equity	\$7,150,571	36.67%	\$359.83
<b>Total</b>	<b>\$19,502,429</b>	<b>100.00%</b>	<b>\$981.40</b>

<b>Uses</b>	\$	%	PSF
Acquisition Price	\$13,330,549	68.35%	\$670.82
Closing Costs	\$133,305		
Construction Costs	\$1,975,968	10.13%	\$99.43
Interest Reserve	\$4,062,606	20.83%	\$204.44
<b>Total</b>	<b>\$19,502,429</b>	<b>100.00%</b>	<b>\$981.40</b>

### **Acquisition Costs:**

- Valuation determined via market analysis
- Resources: Real Capital Analytics and Trepp (data tools offering information on location-specific transactions and loans)

### **Construction Costs:**

- Data gathered via RS Means, a cost-estimating software

### **Debt Assumptions:**

- Freddie Mac Conventional Multifamily Loan Products
- Freddie Mac offers co-op eligible Fixed-Rate, Fully-Amortizing Loans for 5-10 year terms (maximum amort. is 30 years) at 75%-80% LTV (1.25x-1.30x DSCR) based on loan term.

### **Other resources:**

Local brokers and contractors can offer valuable insight and estimates concerning market trends, transactions, and costs.

# SCENARIO 2 BREAKDOWN + SOURCES

<b>SOURCES &amp; USES</b>			
<b>Sources</b>	\$	%	PSF
Debt	\$13,832,036	68.41%	\$696.06
Equity	\$6,386,316	31.59%	\$321.37
<b>Total</b>	<b>\$20,218,352</b>	<b>100.00%</b>	<b>\$1,017.43</b>

<b>Uses</b>			
Acquisition Price	\$13,317,219	65.87%	\$670.15
Closing Costs	\$133,172	0.66%	\$6.70
Construction Costs	\$3,839,654	18.99%	\$193.22
Interest Reserves	\$2,928,307	14.48%	\$147.36
<b>Total</b>	<b>\$20,218,352</b>	<b>100.00%</b>	<b>\$1,017.43</b>

### Acquisition Costs:

- Valuation determined via market analysis
- Resources: Real Capital Analytics and Trepp (data tools offering information on location-specific transactions and loans)

### Construction Costs:

- Data gathered via RS Means, a cost-estimating software

### Debt Assumptions:

- Freddie Mac Conventional Multifamily Loan Products
- Freddie Mac offers co-op eligible Fixed-Rate, Fully-Amortizing Loans for 5-10 year terms (maximum amort. is 30 years) at 75%-80% LTV (1.25x-1.30x DSCR) based on loan term.

### Other resources:

Local brokers and contractors can offer valuable insight and estimates concerning market trends, transactions, and costs.

# RISKS & MITIGANTS

RISK	MITIGANT
A zoning amendment is required to permit the construction and occupation of these additional units.	The amendments required for these interventions are modest and present an attainable and easily implemented means of increasing density at a conservative scale.
NIMBY - "Not In My Backyard": Adverse reactions from the surrounding community in response to new development.	The increase in units is modest and presents very little impact in terms of placing stress on infrastructure and neighborhood amenities.
COVID-19: Increasing concerns regarding density and potential loss of city population to suburbs.	Again, the population increase is not significant, and the housing crisis in New York City has persisted for years. While vacancy may be temporary, the longterm is promising.
Economic Crisis Impending: National unemployment and distressed debt environment may result in cautious lenders.	Multifamily is one of the safest arenas to lend and develop currently and historically in New York City's rental market.
CLT - Cross Laminated Timber: While not explicitly modeled financially in this analysis, the use of CLT can greatly reduce construction time and material costs. However, the material is not currently legal for use in New York City.	The material has been used in multiple American cities such as Seattle, WA, with outstanding success. There are many industry professionals already researching and advocating for the use of CLT in New York City.

# RISKS & MITIGANTS

RISK	MITIGANT
A zoning amendment is required to permit the construction and occupation of these additional units.	The amendments required for these interventions are modest and present an attainable and easily implemented means of increasing density at a conservative scale.
NIMBY - "Not In My Backyard": Adverse reactions from the surrounding community in response to new development.	The increase in units is modest and presents very little impact in terms of placing stress on infrastructure and neighborhood amenities.
COVID-19: Increasing concerns regarding density and potential loss of city population to suburbs.	The housing crisis in New York City has persisted for years. While vacancy may be temporary, the misalignment of demand and supply of affordable housing is a long term issue.
Economic Crisis Impending: National unemployment and distressed debt environment may result in cautious lenders.	Multifamily is one of the safest arenas to lend and develop currently and historically in New York City's rental market.
Effective demand among households: household incomes, particularly in lower and middle-income brackets will almost likely fall over the coming two years. Many households will be unable to afford even the lower-end of units.	This will be offsetted by anticipated downward mobility into those same income groups, meaning that there will be little change. Additional federal support for rental housing subsidies appears to be likely especially if there is a change in party administration in early 2021; all major democratic contenders have prioritized increasing rental subsidies. New units that meet construction standards and are also affordable will be well-positioned should those come through.
Lending rates shift significantly and other financial variables - e.g. exchange rates with impact on cost of materials - vacillate with unpredictability that could significantly increase project costs.	Interest rates appear unlikely to rise. The impacts on the construction sector from global economic uncertainty and unpredictability have no current assistance in federal emergency funding, but it is plausible that subsequent relief packages include some form of increased support in particular for affordable housing.
The process of approval by co-op boards is lengthy, decreasing feasibility of interventions at scale and driving up project time and cost.	This approach would work best when paired with partners with strong networks and connections in the existing walk-up co-op ecosystem in New York, such as UHAB.

# CONCLUSION

- This initial analysis suggests surprising financial feasibility that can supply additional units available to moderate-income New Yorkers in accessible and well-located neighborhoods at a lower cost than new construction.
- The feasibility assumptions are enabled in part by the unique stock of 'New Law Tenements'; multifamily buildings of remarkably similar construction and structural characteristics.
- Nonetheless, many questions remain, including the legal structure for co-ops, load-bearing studies, possibilities of bundling interventions across multiple buildings in the same neighborhood, as well as modular unit construction for the (future) rooftop affordable market.



# ANNEXES

# ANNEX A

## Scenario 2 Cash Flow

### Building Assumptions

Year Built	1905
GSF	19,872
RSF	18,056
Efficiency Ratio	81%
Floors	6
Existing Units	38
Units / Floor	6
SF / Floor	3312

### SF Breakdown (Scenario 2)

Existing Residential (Modified) Floor	5
Existing Residential (Modified) SF	13,414
New Residential Units	12
Total Residential Units	42
SFA Unit (Exist)	447
SFA Unit (New)	160
SFBased Spaces (New)	3,312
Total New Construction	6,524

### Development Costs

Acquisition Cost	\$13,317,219	\$460
Closing Cost	413,172	1%
Total Construction Costs	\$13,830,391	\$590
Total Development Costs	\$17,230,045	\$2,610

\*Acquisition Cost Based on NOI of Existing Units Pre - Demolition

Existing PCI	\$1,115,640
EGI at 81% Occupancy	\$908,688.40
Less Operating Expenses	(\$271,100.52)
Existing NOI	\$632,587.88

### Investment Assumptions

Exit Year	7
Exit Cap Rate	5.50%
Sales Costs	8%
Const. Period	2 Years
Valuation Cap Rate	4.75%
Hurdle Rate of Return	8.50%

**Operating Assumptions**

Rent Growth	2%
Stabilized OpCo	95%
OpEx Rate	30%

**Loan Assumptions**

Freddie Mac Fixed Rate Amortizing Loan	
Interest Rate	4.50%
Amortization	30
LTV	80%
Min DSCR	1.25x
Loan Amount	\$13,832,038
Monthly PMT	470,065
Annual PMT	\$841,019
Loan Payback	*****

**Returns**

Valuation at Sale	\$14,624,253
Unlevered IRR	2.6%
Levered IRR	12.1%
Unlevered EM	1.16x
Levered EM	2.22x
Unlevered Profit	\$3,037,858
Levered Profit	\$1,873,583

**SOURCES & USES**

Sources	\$	%	POF
Debt	\$13,832,038	68.41%	\$696.06
Equity	\$6,396,315	31.59%	\$321.37
<b>Total</b>	<b>\$20,228,352</b>	<b>100.00%</b>	<b>\$1,017.43</b>

**Uses**

Acquisition Price	\$18,317,219	65.87%	\$870.15
Closing Costs	\$133,172	0.66%	\$6.70
Construction Cost	\$3,839,654	18.99%	\$193.22
Interest Reserves	\$2,328,307	11.48%	\$117.35
<b>Total</b>	<b>\$20,228,352</b>	<b>100.00%</b>	<b>\$1,017.43</b>

OPERATING CASH FLOW			Y0	Y1	Y2	Y3	Y4
Existing Building Interior							
<b>POTENTIAL GROSS INCOME</b>							
Roadside/1	Total Potential Rent		\$123,700	\$146,204	\$187,260	\$200,885	
	Rent Growth Fees		0%	0%	0%	0%	
Commutal	Total Potential Rent		\$123,700	\$146,204	\$187,260	\$200,885	
	Rent Growth Fees						
	<b>Total</b>		\$123,700	\$146,204	\$187,260	\$200,885	
<b>EFFECTIVE GROSS INCOME</b>							
Roadside/1	Discount		7%	6%	6%	5%	
	Lease		\$86,071	\$102,929	\$118,594	\$137,215	
Commutal	Discount						
	Lease						
	<b>Total</b>		\$86,071	\$102,929	\$118,594	\$137,215	
<b>OPERATING EXPENSES</b>							
Roadside/1	Expense		(\$195,221)	(\$241,247)	(\$201,160)	(\$291,162)	
Commutal	Expense						
	<b>Total</b>		(\$195,221)	(\$241,247)	(\$201,160)	(\$291,162)	
	<b>AOI</b>		1884,350	\$181,376	\$183,374	\$256,662	
<b>SRO</b>							
<b>POTENTIAL GROSS INCOME</b>							
Roadside/1	Total Potential Rent		\$100,254	\$121,729	\$160,244	\$180,609	
	Rent Growth Fees		0%	0%	0%	0%	
	<b>Total</b>		\$100,254	\$121,729	\$160,244	\$180,609	
<b>EFFECTIVE GROSS INCOME</b>							
Roadside/1	Discount		0%	50%	15%	35%	
	Lease		\$0	\$111,265	\$113,007	\$124,266	
	<b>Total</b>		\$0	\$111,265	\$113,007	\$124,266	
<b>OPERATING EXPENSES</b>							
Roadside/1	Expense		\$0	(\$11,653)	(\$11,702)	(\$11,260)	
	<b>Total</b>		\$0	(\$11,653)	(\$11,702)	(\$11,260)	
	<b>AOI</b>		\$0	\$111,005	\$111,305	\$106,566	
	<b>Total</b>		(\$195,221)	(\$183,706)	(\$120,852)	(\$126,462)	
<b>Total Building</b>							
<b>COMBINED NOI</b>							
	Existing Interior		1884,350	\$181,376	\$183,374	\$256,662	
	SRO		\$0	\$111,005	\$111,305	\$106,566	
	<b>Total</b>		1884,350	\$292,382	\$294,679	\$363,228	
<b>Unlevered Cash Flow</b>							
<b>NOI</b>			1884,350	\$292,382	\$294,679	\$363,228	
Acquire Costs		(\$13,317,216)					
Closing Costs		(\$133,112)					
Construction Costs		(\$1,513,227)	(\$1,213,227)	\$0	\$0	\$0	
Sales Proceeds		\$0	\$0	\$0	\$0	\$0	
Sales Costs		\$0	\$0	\$0	\$0	\$0	
<b>Unlevered Cashflow</b>		(\$15,070,216)	(\$1,454,517)	\$292,382	\$294,679	\$363,228	
<b>Levered Cash Flow</b>							
<b>Unlevered Cash Flow</b>		(\$15,070,216)	(\$1,454,517)	\$292,382	\$294,679	\$363,228	
Loan Proceeds		\$13,838,056					
Debt Service			(\$541,013)	(\$541,013)	(\$541,013)	(\$541,013)	
Loan Payback			\$0	\$0	\$0	\$0	
<b>Levered Cash Flow</b>		(\$1,536,162)	(\$2,157,476)	(\$248,631)	(\$246,334)	(\$177,785)	
Loan Interest Returns		\$0	\$2,157,476	\$248,631	\$246,334	\$177,785	
<b>Net Levered Cash Flow</b>		(\$1,536,162)	\$0	\$0	\$0	\$0	
<b>Return:</b>							

	Y5	Y6	Y7	Y8	Y9	Y10	Y11
	\$1,006,001	\$1,026,464	\$1,148,588	\$1,267,900	\$1,188,282	\$1,111,078	\$1,103,288
	2%	2%	2%	2%	2%	2%	2%
	\$1,006,001	\$1,026,464	\$1,148,588	\$1,267,900	\$1,188,282	\$1,111,078	\$1,103,288
	\$1,006,001	\$1,026,464	\$1,148,588	\$1,267,900	\$1,188,282	\$1,111,078	\$1,103,288
	55%	55%	55%	55%	55%	55%	55%
	\$553,321	\$573,141	\$634,544	\$694,500	\$654,327	\$605,524	\$596,614
	\$553,321	\$573,141	\$634,544	\$694,500	\$654,327	\$605,524	\$596,614
	(\$295,888)	(\$282,542)	(\$288,500)	(\$304,381)	(\$288,448)	(\$285,857)	(\$282,398)
	(\$295,888)	(\$282,542)	(\$288,500)	(\$304,381)	(\$288,448)	(\$285,857)	(\$282,398)
	\$553,324	\$572,599	\$636,250	\$711,175	\$724,375	\$755,667	\$753,844
	\$100,425	\$106,090	\$103,885	\$14,592	\$144,425	\$147,312	\$150,258
	2%	2%	2%	2%	2%	2%	2%
	\$100,425	\$106,090	\$103,885	\$14,592	\$144,425	\$147,312	\$150,258
	55%	55%	55%	55%	55%	55%	55%
	\$55,213	\$58,250	\$57,117	\$8,326	\$79,234	\$81,001	\$82,632
	\$55,213	\$58,250	\$57,117	\$8,326	\$79,234	\$81,001	\$82,632
	(\$33,888)	(\$33,757)	(\$33,568)	(\$40,554)	(\$41,951)	(\$41,554)	(\$42,884)
	(\$33,888)	(\$33,757)	(\$33,568)	(\$40,554)	(\$41,951)	(\$41,554)	(\$42,884)
	\$66,718	\$78,502	\$79,212	\$6,266	\$65,191	\$76,366	\$77,622
	(\$284,834)	(\$251,529)	(\$237,355)	(\$344,715)	(\$259,605)	(\$255,841)	(\$258,544)
	\$553,324	\$572,599	\$636,250	\$711,175	\$724,375	\$755,667	\$753,844
	\$66,718	\$78,502	\$79,212	\$6,266	\$65,191	\$76,366	\$77,622
	\$157,348	\$173,101	\$799,565	\$904,334	\$860,421	\$936,823	\$955,218
	\$157,348	\$173,101	\$799,565	\$904,334	\$860,421	\$936,823	\$955,218
	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	#####	\$0	\$0	\$0	\$0
	\$0	\$0	\$677,435	\$0	\$0	\$0	\$0
	\$157,348	\$173,101	#####	\$0	\$0	\$0	\$0
	\$157,348	\$173,101	#####	\$0	\$0	\$0	\$0
	(\$241,071)	(\$241,071)	(\$241,071)	\$0	\$0	\$0	\$0
	\$0	\$0	#####	\$0	\$0	\$0	\$0
	(\$113,071)	(\$57,316)	\$2,471,745	\$0	\$0	\$0	\$0
	\$113,071	\$57,316	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$2,471,745	\$0	\$0	\$0	\$0

# ANNEX B

## Scenario 2 Development Budget

### SRO Converted Units

Avg Rentable Unit Size	160 sf
Gross Unit Size	198
Circulation Space	69 sf
# Additional Units	12.42 units
<b>Total SF</b>	<b>3,312</b>

### SRO Shared Areas ( On Rooftop)

Kitchen	166 sf
Bathroom	135 sf
Common Space	2,012 sf
Rooftop Deck	1,000 sf
<b>Total Shared Areas</b>	<b>3,312 sf</b>

	<b>\$/SF</b>	<b>Total</b>
Construction Costs	\$360	\$2,384,640
Structural Costs/SF	\$60	\$397,440
MEP Tie-In	\$50	\$331,200
Demolition Costs / SF	\$11	\$36,432
<b>Total Costs</b>	<b>\$481</b>	<b>\$3,149,712</b>

Crane Fees	\$20,000
Monthly Cost	\$30,000
Other Crane Fees	\$50,000

<b>Total Hard Costs</b>		<b>\$3,199,712</b>
<b>Total Soft Costs</b>	20%	<b>639,942</b>
<b>Total Construction Costs</b>		<b>\$3,839,654</b>

# ANNEX

**Note that most of the following numbers reflect updates from the digital version as of spring 2021; as a result they may not coincide exactly with the summary drafted in the pages above. Please visit the Housing Lab's webpage to access and download the most recent interactive version, or to see the interactive calculator / map.**

# ANNEX: PRO FORMA CALCULATIONS

Address: 5XX, W 133 St, New York, NY 10027

ASSUMPTIONS

Building Assumptions

Year Built	1905
GSF	19,672
RF	17,269
Efficiency Ratio	8.7%
Floors	6
Existing Units	30

Development Costs

Acquisition Cost	\$640,000
Closing Cost	\$25,600
<b>Total Construction Costs</b>	<b>\$2,039,284</b>
<b>Total Development Costs</b>	<b>\$2,704,884</b>
	584%

Permanent Loan Assumptions

Lender	Freddie Mac
Interest Rate	4.50%
Amortization	30
LTV	55%
Min DSCR	1.20x
Loan Amount	\$1,487,686
Monthly PMT	\$7,538
Annual PMT	\$90,455

Other Sources

Source	
Interest Rate	
Amortization	
Loan Amount	
Monthly PMT	
Annual PMT	

Square Footage Breakdown

Existing Residential	17,269
New ADU + Circulation	3,200
New Residential Units	7
Total Residential Units	37
SF/Unit (Exis)	576,288
SF/Unit (New)	400
Total Ad'd Square Footage	3,200

Investment Assumptions

Exit Year	7
Exit Cap Rate	5.50%
Sales Costs	6%
Const. Period	2 Years
Valuation Cap Rate	4.75%
Hurdle Rate of Return	8.50%

Construction Loan Assumptions

Interest Rate	6%
LTV	80%
Loan Amount	\$2,163,907.10
Monthly Pmt	\$10,819.54
Usage	50%
Interest Rate	4.50%
Term	24
<b>Total Interest Expense</b>	<b>\$97,376</b>

Operating Assumptions

Rent Growth	2%
Stabilized Occ	95%
OpEx Ratio	23%
Expense Growth	3%

OPERATING CASH FLOW

Existing Building Interior

POTENTIAL GROSS INCOME

		Y0	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
Residential	Base Rent		\$1,033,740	\$1,033,740	\$1,033,740	\$1,033,740	\$1,033,740	\$1,033,740	\$1,033,740	\$1,033,740	\$1,033,740
	Rent Growth Rate		2%	2%	2%	2%	2%	2%	2%	2%	2%
	Rent Growth		50	\$20,675	\$41,763	\$63,273	\$85,253	\$107,592	\$130,419	\$153,702	\$177,451
	<b>Total</b>		\$1,033,740	\$1,054,415	\$1,075,503	\$1,097,013	\$1,118,953	\$1,141,332	\$1,164,159	\$1,187,442	\$1,211,191

EFFECTIVE GROSS INCOME

Residential	Occupancy		83%	83%	95%	95%	95%	95%	95%	95%	95%
	Vacancy Loss		(\$172,290)	(\$175,736)	(\$53,775)	(\$54,881)	(\$55,948)	(\$57,067)	(\$58,208)	(\$59,372)	(\$60,560)
	<b>Total</b>		\$861,450	\$878,679	\$1,021,728	\$1,042,163	\$1,063,006	\$1,084,266	\$1,105,951	\$1,128,070	\$1,150,632

OPERATING EXPENSES

Residential	Expenses		(\$235,176)	(\$242,231)	(\$249,498)	(\$256,983)	(\$264,692)	(\$272,633)	(\$280,812)	(\$289,237)	(\$297,914)
	<b>NOI</b>		\$626,274	\$636,448	\$772,230	\$785,179	\$798,313	\$811,633	\$825,139	\$838,834	\$852,718

Accessory Dwelling Units

POTENTIAL GROSS INCOME

Residential	Base Rent		\$138,684	\$138,684	\$138,684	\$138,684	\$138,684	\$138,684	\$138,684	\$138,684	\$138,684
	Rent Growth Rate		2%	2%	2%	2%	2%	2%	2%	2%	2%
	Rent Growth		50	\$2,774	\$5,603	\$8,489	\$11,432	\$14,434	\$17,497	\$20,620	\$23,806
	<b>Total</b>		\$138,684	\$141,458	\$144,287	\$147,173	\$150,116	\$153,118	\$156,181	\$159,304	\$162,490

EFFECTIVE GROSS INCOME

Residential	Occupancy		0%	95%	95%	95%	95%	95%	95%	95%	95%
	Vacancy Loss		(\$138,684)	(\$7,073)	(\$7,214)	(\$7,359)	(\$7,506)	(\$7,656)	(\$7,809)	(\$7,965)	(\$8,125)
	<b>Total</b>		\$0	\$134,385	\$137,072	\$139,814	\$142,610	\$145,462	\$148,372	\$151,339	\$154,366

OPERATING EXPENSES

Residential	Expenses		\$0	(\$31,551)	(\$32,497)	(\$33,472)	(\$34,476)	(\$35,510)	(\$36,576)	(\$37,673)	(\$38,803)
	<b>NOI</b>		\$0	\$102,834	\$104,575	\$106,342	\$108,134	\$109,952	\$111,796	\$113,666	\$115,563

COMBINED NOI

			\$626,274	\$739,282	\$876,805	\$891,521	\$906,447	\$921,585	\$936,935	\$952,500	\$968,280
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UNLEVERED CASH FLOW

	NOI		\$0	\$102,834	\$104,575	\$106,342	\$108,134	\$109,952	\$111,796	\$113,666	\$115,563
	Acquisition Cost		(\$640,000)								
	Closing Costs		(\$25,600)								
	Construction Costs		(\$2,039,284)	(\$1,835,355)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Construction Interest Expense			(\$97,376)							
	Operating Reserve			(\$30,501)							
	Sales Proceeds		\$0	\$0	\$0	\$0	\$0	\$0	\$2,066,655	\$0	\$0
	Sales Costs		\$0	\$0	\$0	\$0	\$0	\$0	(\$123,899)	\$0	\$0
	<b>Unlevered Cash Flow</b>		(\$869,528)	(\$1,963,233)	\$102,834	\$104,575	\$106,342	\$108,134	\$109,952	\$2,054,452	\$113,666

LEVERED CASH FLOW

	Equity		\$845,075	\$0							
	Loan Proceeds		\$0	\$1,987,686							
	Debt Service				(\$90,455)	(\$90,455)	(\$90,455)	(\$90,455)	(\$90,455)	(\$90,455)	(\$90,455)
	DSCR				1.14	1.16	1.18	1.20	1.22	1.24	
	Loan Payback		\$0	\$0	\$0	\$0	\$0	\$0	(\$1,294,676)	\$0	\$0
	<b>Levered Cash Flow</b>		(\$869,528)	\$24,454	\$12,380	\$14,121	\$15,887	\$17,679	\$19,497	\$669,319	\$23,211

Net Levered Cash Flow

	Loan Interest Reserve		\$869,528	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<b>Net Levered Cash Flow</b>		\$0	\$24,454	\$12,380	\$14,121	\$15,887	\$17,679	\$19,497	\$669,319	\$23,211

Returns

<b>Unlevered Cash Flow</b>	
Profit	(\$246,472)
IRR	-1.6%
Equity Multiple	.91x

<b>Levered Cash Flow</b>	
Profit	(\$96,192)
IRR	-1.8%
Equity Multiple	.89x





# ASSUMPTIONS

Address **5XX W 13Xrd St, New York, NY 10027**

## ASSUMPTIONS

## PROJECT SIZE

### Building Assumptions

Year Built	1905
GSF	19,872
RSF	17,289
Efficiency Ratio	87%
Floors	6
SF/Floor	3,312
Existing Units	30
<b>SF Breakdown</b>	
Existing Residential	17,289
New ADU + Circulation	3,312
Total Residential Units	7
37	
SF/Unit (Exist)	576,288
SF/Unit (New)	416
Total Add'l SF	3,312

	GSF	% of Total	NSF	Efficiency
<b>EXISTING</b>				
Residential	17,289	74.57%	-	-
Amenity	1,292	5.57%	-	-
Circulation	1,292	5.57%	-	-
Commercial	-	-	-	-
<b>NEW</b>				
Residential	2,912	12.56%	-	-
Amenity	-	-	-	-
Circulation	400	1.73%	-	-
Commercial	-	-	-	-
<b>LESS</b>				
Units Lost to ReDev	-	-	-	-
<b>Total</b>	<b>23,184</b>	<b>100.00%</b>	<b>-</b>	<b>-</b>

## UNIT MIX

EXISTING	Total Units	Unit Dist %
Studio	0	0%
One Bedroom	15	41%
Two Bedroom	15	41%
Three Bedroom	0	0%
<b>ADU</b>		
Studio	0	0%
One Bedroom	7	19%
Two Bedroom	0	0%
Three Bedroom	0	0%
<b>Total</b>	<b>37</b>	<b>100%</b>

<b>ADU RENT 80% AMI</b>						
SF/Unit	# Units	Total SF	Rent/Unit (Mos.)	Rent/Unit (Ann.)	\$/SF	Total Rent
Studio	350	0	\$1,314	\$15,768	\$45	\$0
One Bedroom	500	7	\$1,651	\$19,812	\$40	\$138,684
Two Bedroom	650	0	\$1,974	\$23,688	\$36	\$0
Three Bedroom	850	0	\$2,273	\$27,276	\$32	\$0
<b>Total/Average</b>	<b>500</b>	<b>7</b>	<b>\$1,803</b>	<b>\$86,544</b>	<b>\$38</b>	<b>\$138,684</b>

<b>EXISTING UNIT RENT 120% AMI</b>						
SF/Unit	# Units	Total SF	Rent/Unit (Mos.)	Rent/Unit (Ann.)	\$/SF	Total Rent
Studio	350	0	\$2,284	\$25,008	\$71	\$0
One Bedroom	500	15	\$2,614	\$31,368	\$63	\$470,520
Two Bedroom	650	15	\$3,129	\$37,548	\$58	\$563,220
Three Bedroom	850	0	\$3,608	\$43,296	\$51	\$0
<b>Total/Average</b>	<b>30</b>	<b>17,250</b>	<b>\$2,859</b>	<b>\$37,220</b>	<b>\$61</b>	<b>\$1,033,740</b>

<b>TOTAL POTENTIAL RENT</b>	
MARKET RATE ADU	\$138,684
OPTION 2 (120%)	\$1,033,740
<b>TOTAL</b>	<b>\$1,172,424</b>

Unit Size	30% AMI	40% AMI	50% AMI	60% AMI	70% AMI	80% AMI	90% AMI	100% AMI	110% AMI	120% AMI	130% AMI	165% AMI
Studio	\$419	\$598	\$777	\$956	\$1,135	\$1,314	\$1,547	\$1,726	\$1,905	\$2,084	\$2,263	\$2,889
One-bedroom	\$532	\$756	\$980	\$1,204	\$1,427	\$1,651	\$1,942	\$2,166	\$2,390	\$2,614	\$2,838	\$3,621
Two-bedroom	\$631	\$900	\$1,168	\$1,437	\$1,705	\$1,974	\$2,323	\$2,592	\$2,860	\$3,129	\$3,397	\$4,337
Three-bedroom	\$722	\$1,032	\$1,343	\$1,653	\$1,963	\$2,273	\$2,677	\$2,987	\$3,297	\$3,608	\$3,918	\$5,004

### 2020 NYC Rents

Unit Size	30% AMI	40% AMI	50% AMI	60% AMI	70% AMI	80% AMI	90% AMI	100% AMI	110% AMI	120% AMI	130% AMI	165% AMI
Studio	\$397	\$567	\$738	\$909	\$1,080	\$1,250	\$1,472	\$1,643	\$1,814	\$1,985	\$2,155	\$2,753
One-bedroom	\$503	\$717	\$930	\$1,143	\$1,356	\$1,570	\$1,847	\$2,060	\$2,273	\$2,487	\$2,700	\$3,446
Two-bedroom	\$598	\$854	\$1,110	\$1,366	\$1,622	\$1,878	\$2,211	\$2,467	\$2,723	\$2,979	\$3,235	\$4,131
Three-bedroom	\$683	\$978	\$1,274	\$1,570	\$1,865	\$2,161	\$2,545	\$2,841	\$3,136	\$3,432	\$3,728	\$4,762

<https://www1.nyc.gov/site/hpd/services-and-information/area-median-income.page>

Address 5XX W 133rd St, New York, NY 10027

**ASSUMPTIONS**

**Building Assumptions**

Year Built	1905
GSF	19,872
USF	#REF!
RSF	17,289
Efficiency Ratio	87%
Floors	6
Area Per Floor	3,312

**Accessory Dwelling Units**

Avg Unit Size	400 sf
Circulation Space	400 sf
# Additional Units	7 units
# Circulation Units	1 units
Total Add'l SF	3,200

	\$/SF	Total	* Based on RSM Means Comparison of Similar Base Building in NYC
Construction Costs	\$400	\$1,280,000	
Structural Costs/SF	\$60	\$192,000	
Elevator		\$40,000	
MEP Tie-In	\$50	\$160,000	
Total Costs	\$510	\$1,672,000	

	\$ PSF	Total	* Based on Modular ADU comparisons; FullStack Modular, factory at Brooklyn Navy Yard would be alternates *Includes compact plumbing and mechanical core that connects to onsite infrastructure
Construction / Design / Engineering Costs			
General Contractor and Other Site Costs			
Transportation and Installation			

Total Hard Costs	\$472	\$1,510,580.65	\$472.06
Contingency	10%	\$151,058.06	
Total Soft Costs	25%	\$377,645.16	* Permitting Fees, Design and Engineering
Total Construction Costs		\$2,039,284	

Legal

Total Hard Costs		\$1,672,000
Total Soft Costs	25%	\$418,000
Total Construction Costs		\$2,090,000

# SENSITIVITY TESTING

## Returns

Valuation at Sale	\$2,066,655
Unlevered Profit	(\$246,472)
Unlevered IRR	-1.58%
Unlevered EM	.91x
Levered Profit	(\$96,192)
Levered IRR	-1.78%
Levered EM	.89x

## Construction Costs

Construction Cost PSF	\$ 660
Total Construction Costs	\$ 2,112,000

		\$ 660	\$ 635	\$ 610	\$ 585	\$ 560
Valuation at Sale	\$2,066,655	\$3,338,026	\$3,338,026	\$3,338,026	\$3,338,026	\$3,338,026
Unlevered Profit	(\$246,472)	\$1,322,385	\$1,405,185	\$1,487,985	\$1,570,785	\$1,653,585
Unlevered IRR	-1.58%	6.98%	7.54%	8.11%	8.71%	9.33%
Unlevered EM	.91x	1.46x	1.51x	1.55x	1.6x	1.66x
Levered Profit	(\$96,192)	\$646,612	\$749,011	\$851,410	\$953,809	\$1,056,208
Levered IRR	-1.78%	9.94%	11.39%	12.82%	14.23%	15.63%
Levered EM	.89x	1.73x	1.85x	1.98x	2.11x	2.24x
DSCR	1.14	1.20	1.23	1.27	1.31	1.35

## Rent

Rent Per Unit Per Month	\$ 2,667
Total Rental Income	\$ 224,000

		\$ 2,667	\$ 2,717	\$ 2,767	\$ 2,817	\$ 2,867
Valuation at Sale	\$2,066,655	\$3,338,026	\$3,400,614	\$3,463,202	\$3,525,789	\$3,588,377
Unlevered Profit	(\$246,472)	\$1,322,385	\$1,400,710	\$1,479,035	\$1,557,360	\$1,635,685
Unlevered IRR	-1.58%	6.98%	7.34%	7.69%	8.04%	8.38%
Unlevered EM	.91x	1.46x	1.49x	1.52x	1.55x	1.57x
Levered Profit	(\$96,192)	\$646,612	\$724,937	\$803,262	\$881,587	\$959,912
Levered IRR	-1.78%	9.94%	10.88%	11.79%	12.67%	13.51%
Levered EM	.89x	1.73x	1.82x	1.9x	1.99x	2.08x
DSCR	1.14	1.20	1.22	1.24	1.26	1.29

## Loan to Value

LTV	80%
Loan Amount	\$1,487,686
Equity	\$845,075

		80%	75%	70%	65%	60%
Valuation at Sale	\$2,066,655	\$3,338,026	\$3,338,026	\$3,338,026	\$3,338,026	\$3,338,026
Unlevered Profit	(\$246,472)	\$1,322,385	\$1,322,385	\$1,322,385	\$1,322,385	\$1,322,385

Unlevered IRR	-1.58%	6.98%	6.98%	6.98%	6.98%	6.98%
Unlevered EM	.91x	1.46x	1.46x	1.46x	1.46x	1.46x
Levered Profit	(\$96,192)	\$646,612	\$688,848	\$731,084	\$773,320	\$815,555
Levered IRR	-1.78%	9.94%	9.46%	9.08%	8.76%	8.49%
Levered EM	.89x	1.73x	1.78x	1.75x	1.7x	1.65x
DSCR	1.14	1.20	1.28	1.37	1.47	1.59

Minimum DSCR 1.20

**Rent & LTV**

		LTV					
		1.14	80%	75%	70%	65%	60%
Monthly Rent Per Unit	\$	2,667	1.20	1.28	1.37	1.47	1.59
	\$	2,717	1.22	1.30	1.39	1.50	1.62
	\$	2,767	1.24	1.32	1.42	1.53	1.65
	\$	2,817	1.26	1.35	1.44	1.56	1.68
	\$	2,867	1.29	1.37	1.47	1.58	1.71

**Construction Costs & LTV**

		LTV					
		1.14	80%	75%	70%	65%	60%
Construction Costs	660	1.20	1.28	1.37	1.47	1.59	
	635	1.23	1.31	1.41	1.52	1.64	
	610	1.27	1.35	1.45	1.56	1.69	
	585	1.31	1.40	1.50	1.61	1.75	
	560	1.35	1.44	1.55	1.67	1.80	

# ACKNOWLEDGEMENTS

IDC Foundation  
Dean Amale Andraos  
Associate Dean Leah Cohen

**Contributions by:**

Bernadette Baird-Zars  
Eric Iglesias  
Jiazhen Lin  
Maria Perez Benavides  
Erin Purcell  
Ian Wach

**Sincere appreciation to practitioners and reviewers who provided input and guidance:**

John Lyons (Lyons McConnell)  
Patrice Derrington (GSAPP)  
Brock Armstrong (MBS)  
Daniella Greville (Forsyth Street Advisors)  
Laurel Tinsley (Urban Initiatives)  
Cecily King (Kipling Development)  
Dina Levy (NYS Homes and Community  
Renewal)

