From Housing to Assets: How Billionaires' Row Redefined the NYC Apartment in the Early 21st Century

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1 Introduction

New York City's skyline is iconic. No matter which angle is taken or which buildings are shown, everyone can instantly recognize it. In recent years, there has been a very dramatic addition to this skyline. Five prominent slender towers have taken shape on the south side of Central Park. The locations of these towers began collectively being referred to as Billionaires' Row by media outlets. Billionaires' Row is a specific stretch of Midtown Manhattan, centered along West 57th Street, stretching from 53rd to 59th Street, and extending from Eighth Avenue to Park Avenue. This stretch, with five buildings—432 Park Avenue, Central Park Tower, the MoMA Tower, One57, and Steinway Tower—collectively represents a movement in New York City development toward expensive luxury buildings as financial assets rather than as places of residence. This paper aims to examine the emergence of these residential towers by analyzing zoning and tax laws, outlining their development process, and identifying the primary beneficiaries. With this information, an answer can be presented to the question: Has Billionaires' Row changed housing development in New York City from a place of shelter and residence to a financial asset?

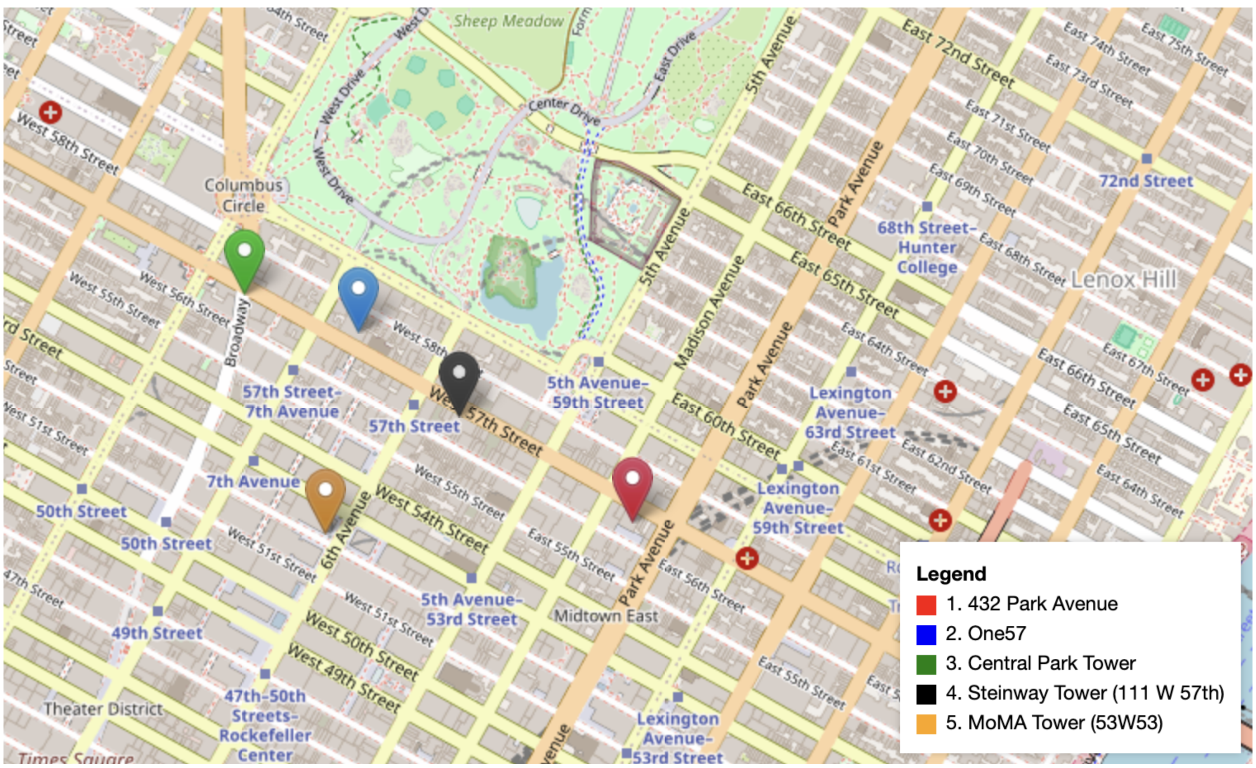
1.1 The Five Buildings

As stated above, the five buildings that this paper will examine are: 432 Park Avenue, Central Park Tower, the MoMA Tower, One57, and Steinway Tower. An overview of each building is provided in Table 1. In this table, the building name, address, height, opening date, and primary developer are identified. To see the location of each building on a map, refer to Figure 1. These two figures offer a quick overview and an understanding of where each building is located[1].

Table 1: Billionaires' Row Buildings Overview

Building	Address	Height (ft)	Opened	Developer
Central Park Tower	217 West 57th St	1550	2020	Extell Development
One57	157 West 57th St	1005	2014	Extell Development
Steinway Tower	111 West 57th St	1438	2021	JDS Development Group
432 Park Avenue	432 Park Ave at 56th St	1398	2015	CIM Group
MoMA Tower	53 West 53rd St	1050	2019	Hines Land Group

Figure 1: Map Showing The Five Buildings Locations[2]



[1]Photographs of each building are present in Appendix A.1 Photographs and Maps

[2]The map was created using OpenStreetMap in a HTML file. For a zoomed-out version, see Figure 5 in Appendix A.1 Photographs and Maps

1.2 Zoning Regulation and Tax Laws

To understand the emergence of these five buildings, an initial overview of certain property zoning and tax laws must be analyzed. The first comprehensive zoning ordinance in New York City, establishing height, bulk, use, and setback regulations, was the 1916 Zoning Resolution[3]. The goal was to regulate building height and ensure light and air for the surrounding streets. The 1916 Zoning Resolution was replaced by the 1961 Zoning Resolution, which allowed for more flexible development patterns and introduced the idea of floor-area ratio (FAR)[4], calculated by the equation below:

$$\text{FAR} = \frac{\text{Total Floor Area of Building}}{\text{Lot Area}}$$

Buildings now had a limit on the total floor area directly related to the lot area, which essentially created a height limit dependent on the lot size. Under the 1961 Zoning Resolution, owners were allowed to transfer development rights, but only between adjacent lots through zoning mergers. The transfer of development rights changed further during the 1980s, as the Zoning Resolution for New York City began allowing transfers within the surrounding area. "Surrounding area" is defined in the current New York City Zoning Resolution as follows.

> *The "surrounding area" shall mean all zoning lots on the block on which the landmark building or other structure is located, as well as all zoning lots across a street or street intersection from the block.*

With updated regulations permitting developers to purchase development rights not only from adjacent lots but also from others on the same block, buildings could now be constructed significantly taller than what their original lot size would otherwise allow. These changes are particularly relevant in areas governed by specialized zoning rules.

Manhattan is divided into special districts, each governed by its own distinct rules, though all generally adhere to the broader framework established by the New York City Zoning Resolution. The relevant section for the Special Midtown District—the district in which all five buildings are located—is Section 81-212. Section 81-212, Special Provisions for Transfer of Development Rights, outlines the conditions under which development rights may be transferred within the Special Midtown District, stating[5]:

[3] City Planning Commission of New York City, *The City of New York Building Zone Resolution: July 25, 1916* (New York, NY: City of New York, 1916).

[4] New York City Department of City Planning, *New York City Zoning Resolution* (New York, NY: City of New York, 1961).

[5] New York City Department of City Planning, *Zoning Resolution of the City of New York, Article VIII Chapter 1, §81-212: Special Provisions for Transfer of Development Rights from Landmark Sites* (New York, NY: City of New York, 2025).

In the Special Midtown District, a transfer of development rights from granting lots to receiving lots within the surrounding area, as defined in Section 75-421 (Definitions), shall be permitted in accordance with the provisions of this Section.

This section goes on to describe the process by which development rights must be transferred, as well as any additional restrictions if the transfer is happening in another special district. Section 81-212 has been updated and amended a significant number of times since its inception in the 1980s, with the most recent amendment occurring on 12/5/2024. This section opened the door for developers to acquire small lots and purchase development rights from surrounding areas, allowing them to achieve a larger FAR and build taller towers than their original lots would typically permit.

The zoning regulations are only part of the required legal framework. The second part is tax codes and laws. For these specific buildings, New York State Senate Law 421-a (pre-2016) applies. This law was enacted in 1971. The goal was to give tax breaks to buildings that built affordable housing. An amendment was added in 2006 to allow buildings in the Geographic Exclusion Area (the area south of 110th Street in Manhattan) to meet the affordable housing requirement by building units off-site, using negotiable certificates issued by Housing Preservation and Development[6]. The ten-year tax exemption was defined according to the following terms.

(A) except as otherwise provided herein there shall be full exemption from taxation during the period of construction or the period of three years immediately following commencement of construction, whichever expires sooner, and for two years following such period;

(B) followed by two years of exemption from eighty per cent of such taxation;

(C) followed by two years of exemption from sixty per cent of such taxation;

(D) followed by two years of exemption from forty per cent of such taxation;

(E) followed by two years of exemption from twenty per cent of such taxation;

This old section of 421-a shows a demonstrable, large tax break that was given to certain developments. The old 421-a expired in 2015 and was then rebranded as the "Affordable New York Housing Program" in 2017, with added requirements that no longer allow for the off-site construction of affordable housing[7]. During the initial period of construction, for a maximum

[6]New York State Legislature, *Real Property Tax Law §421-a: Tax Exemption for New Multiple Dwellings* (Albany, NY: New York State Senate, 1971).

[7]New York State Legislature, *Affordable Housing Development Incentive (Formerly Real Property Tax Law §421-a)*, Reflects updates under the "Affordable New York Housing Program" (Albany, NY: New York State Senate, 2017).

of three years, each building was able to receive a complete tax exemption, as well as partial exemptions for the following ten years. With both the ability to purchase development rights and the means to secure a complete tax exemption during construction—and added tax benefits for the next ten years—developers saw an opportunity too good to be missed.

2 Emergence: A Case Study of Central Park Tower

Following the legal and financial changes that enabled luxury tower development, major real estate firms began assembling land parcels and development rights. This section uses Central Park Tower as a case study to illustrate the mechanics common to Billionaires' Row development. All five developments follow closely the same strategy of emergence, so an assumption was made that analyzing one would be representative of all five buildings. All information gathered pertaining to land acquisition, costs, and easements came from the New York City Department of Finance, Office of the City Register[8].

2.1 Land Acquisition and Transfers

The initial step was acquiring the land, which Extell Rock LLC, a subsidiary of Extell Development, did in June of 2005, with the transfer date of 06/30/2005. In this acquisition, Extell Rock LLC also took on any debt associated with the previous owner. The deed was then transferred to Broadway Trio LLC, a partner of Extell Rock LLC, a year later. With the property in hand, as well as the amendments to Section 81-212, Extell Rock LLC could begin to buy developmental rights from the surrounding area.

Table 2: Land Acquisition and Transfers for Central Park Tower

Date	Event	Details
06/30/2005	Land acquired by Extell Rock LLC	$15,187,096
06/19/2006	Transferred to Broadway Trio LLC	—
08/21/2013	Deed transferred to Broadway 57th/58th Retail Investor LLC	$102,500,000

2.2 Financial and Easement Structure

A joint analysis of Table 3 and Table 4 shows the procurement of development rights from the surrounding area. Initially starting with 258,906 square feet of development rights, Extell Rock LLC, over the next two years, began buying up other surrounding lots' development

[8]New York City Department of Finance, Office of the City Register, *ACRIS Property Records: Mortgages and Easements for Central Park Tower*, Accessed July 31, 2025 (New York, NY: New York City Department of Finance, 2025), `https://a836-acris.nyc.gov/CP/`.

rights for a total sum of $36,768,976, acquiring a total of 1,140,270 square feet of development rights. Most notably among these transactions was one from St. Thomas Church on 53rd Street, four streets and two avenues away from Central Park Tower. Extell Rock LLC was able to do this because of St. Thomas Church's landmark classification under the Zoning Regulations. The final procurement on the list, dated July 21, 2014, was a construction easement acquired from the American Fine Arts Society, permitting the use of airspace above its building to operate a crane for the construction of Central Park Tower.

Table 3: Easements and Development Rights Acquired for Central Park Tower[9]

Date	**Grantor**	**Address**	**Price**	**Dev. Rights (sq ft)**
06/20/2005	N/A	217 W 57th St	—	258,906
12/09/2005	American Fine Arts Society	215 W 57th St	$23,100,000	138,269
01/23/2006	Osborne Tenants Corp	1740 Broadway	$7,727,666	238,940
11/16/2006	St. Thomas Church	1 W 53rd St	$2,225,910	250,924
02/14/2007	200 W 58th Street LLC	200 W 58th St	$3,715,400	253,231
07/21/2014	American Fine Arts Society	215 W 57th St	$1,500,000	—

Total Development Rights Acquired: 1,140,270 square feet

Much of the procurement activity is reflected in the mortgage records, though it is challenging to distinguish the portion of debt attributable to previous owners of the lot from the debt incurred specifically for acquiring development rights. The mortgage history shows multiple consolidations and refinancing events, starting with an initial mortgage of $55 million in 2005 from New York Community Bank, followed by a second mortgage and easement deal totaling $23.1 million later that year. Subsequent consolidations with Eurohypo AG increased the mortgage balance to over $256 million by early 2007, just prior to the transfer. The mortgage was then transferred to HSBC Bank USA in 2012, and a new $300 million mortgage was issued by BREDS II Mortgage Corp in 2013.

[9]This can be further guaranteed by finding in Appendix A.6 Figure 18

Table 4: Mortgage and Financial History for Central Park Tower

Date	Action	Amount	Lender
2005	Initial mortgage	$55,000,000	New York Community Bank
12/09/2005	Second mortgage / easement deal	$23,100,000	New York Community Bank
07/12/2006	Consolidated mortgage	$179,684,048	Eurohypo AG
09/28/2006	Consolidated previous mortgages	$239,885,785	Eurohypo AG
11/16/2006	Further consolidation	$250,365,000	Eurohypo AG
04/26/2007	Final consolidation before transfer	$256,010,978	Eurohypo AG
12/31/2012	Mortgage transferred	$247,284,252	HSBC Bank USA
07/22/2013	New mortgage issued	$300,000,000	BREDS II Mortgage Corp

The mortgage figures do not perfectly align with the acquisition costs of development rights for several reasons. First, property owners often finance more than just development rights; they may also be securing loans for the underlying land acquisition, refinancing existing debt (as stated in the land acquisition deal, all previous debt was transferred to the new owners), or covering other expenses such as legal fees or site improvements. Additionally, some mortgages may include funds allocated for pre-development costs like architectural planning, zoning applications, or environmental studies. Another factor is that not all financial activity related to the building is captured through mortgages—there may be private loans, equity investments, or other types of financing that are not publicly recorded as mortgages.

Furthermore, it is important to note that no mortgages appear to be linked to the actual construction costs of the building itself. This suggests that construction financing may have been arranged through alternative means such as construction loans, private equity, or internal capital, which are often documented separately from long-term mortgages. As a result, the mortgage data primarily reflects acquisition and refinancing activity rather than the total project financing.

3 Financial Outcomes

Although the construction processes themselves are beyond the scope of this discussion, post-completion cost estimates have been made available for each building. However, these figures remain imprecise, as the developments were primarily financed through private loans and likely supplemented by private equity and similar funding sources, making it difficult to ascertain exact expenditures. This section will again focus primarily on Central Park Tower, under the same assumptions outlined in Section 2. Supplementary graphs for the remaining buildings are provided in Appendix Sections A.3–A.6. While general trends across these buildings will be briefly discussed, detailed analysis and interpretation fall outside the scope of this section. All data used to produce the graphs and pie chart herein were sourced from the NYC Department of Finance. For a detailed explanation of the data analysis methods, refer to Appendix A.2.

3.1 Analysis of Central Park Tower

When looking at the available data for Central Park Tower, a few key metrics are publicly available, which for this analysis are assessed tax and sale data for each unit. From these two metrics, occupancy rate, average sale price, average assessed tax, and owner information can be obtained. With this finalized dataset, it becomes possible to analyze emerging trends related to occupancy, pricing, taxation, and ownership.

When examining Central Park Tower, the first interesting metric is the occupancy vacancy percentage of 45%. This relatively high percentage is likely attributable to the building's recent completion in 2020. While the elevated vacancy rate may introduce some bias into the metrics due to the smaller sample size, the available data remains broadly representative of the purchasing demographic, unit sale prices, and assessed tax values.

The average sale price of $16,113,128.99 and the current average assessed tax on the building, just over $2,800,000, clearly illustrate the significant tax breaks granted to the occupants. It is also noteworthy to observe the steep increase in assessed taxes from 2022 onward; prior to 2022, taxes were assessed at zero (see Figure 2)[10]. The average unit only has about 17.5% of its true home value assessed for taxes. To get the average effective tax, you then multiply by the tax rate, which in New York City for a Class 2 building is 0.12267. This results in an effective average tax rate of about 2%, which is typical of what you would see in broader New York.

A closer examination of the histogram of sold units (Figure 3) reveals a clear skew toward lower priced units, which is expected given that only a small number of units—primarily the penthouses—command the exorbitant prices.

The rapid increase in average assessed value between 2022 and 2024, as shown in Figure 2, contrasts sharply with the zero assessed value prior to 2022. This pattern strongly reflects the impact of the 421-a program, which granted substantial tax benefits to the building during that time.

[10] All the information used to create any graphs and pie charts is from the New York City property information portal from the financial department (NYC Department of Finance, *Property Information Portal: Parcel Information for Central Park Tower, One57, Steinway Tower, 432 Park Avenue, and MoMA Tower*, Accessed July 31, 2025 [New York, NY: NYC Department of Finance, 2025], `https://propertyinformationportal.nyc.gov/parcels/unit/1012921462`). For specifics on how each graph and pie chart was created, see Appendix section A.2. For further graphs and pie charts for each building, see Appendix Sections A.3 to A.6.

Figure 2: Central Park Tower Average Taxable Cost Per Unit

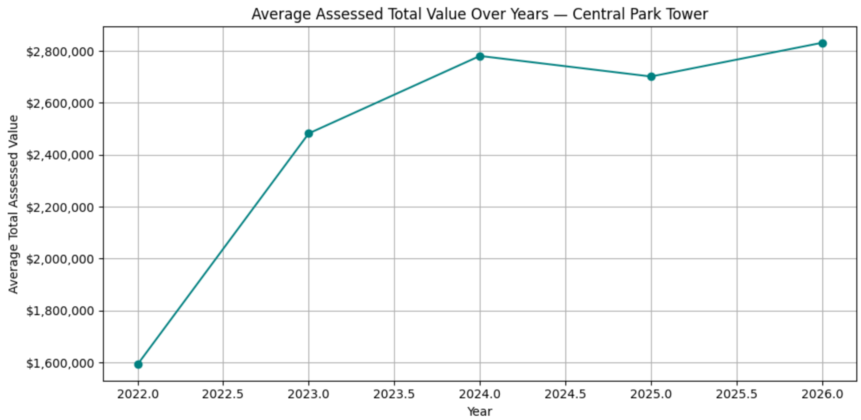
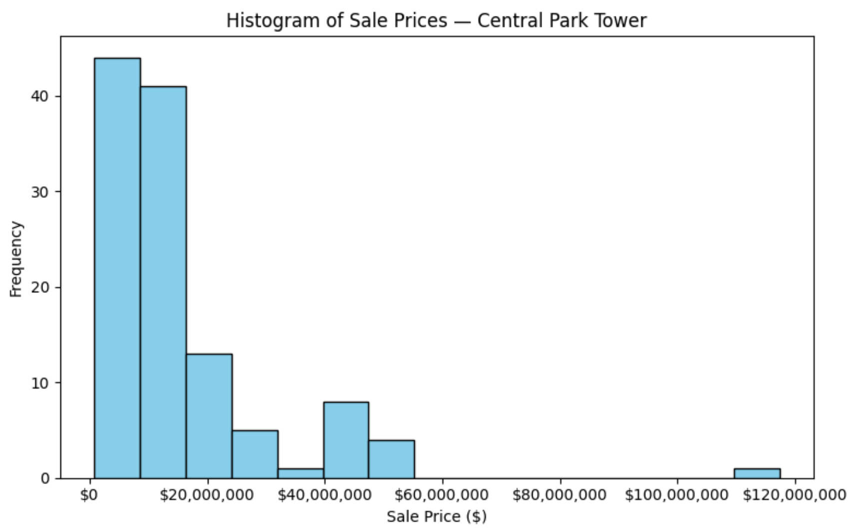
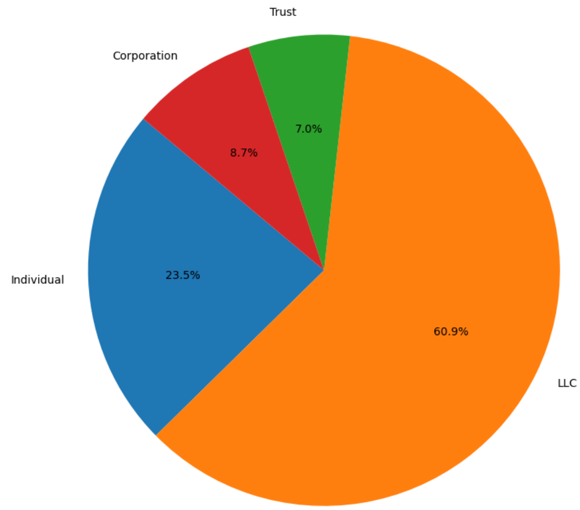


Figure 3: Histogram Showing Cost of Sold Units in Central Park Tower



Finally, analyzing the buyer categories, you can see that 60.9% of the buyers purchased through an LLC. The next sizable group is individuals at 23.5%, followed by corporations and trusts at 7% and 8.7%, respectively. The predominance of LLC ownership suggests that these properties are primarily held as investments. While LLC ownership often results in higher taxes, it also limits liability and facilitates shared ownership. Examples of buyer names in the sales documents include Central Park Tower 38D LLC, Central Park Tower 35C LLC, and Brad Stadler 2021 Irrevocable Trust 3; Meredith Stadler, As Trustee. These designations underscore the use of these units as investment assets rather than primary residences.

Figure 4: Central Park Pie Graph Showing Category of Buyer



3.2 General Analysis of The Five Buildings

This section analyzes all five buildings to find averages and general trends across all the developments. To see specific graphs and the pie chart for each building, refer to Appendix Sections A.3–A.6. All averages are calculated using the final individual averages for each building, not total units across all five buildings.

The average vacancy rate for all five buildings is roughly 22%, representing a significant number of units that have not been sold. For specifics on each building, see Table 5. The average vacancy rate across all five buildings is heavily inflated due to significantly higher vacancies at Central Park Tower and The MoMA Tower compared to the other three. This elevated vacancy rate can be attributed to two main factors: first, the relative age of the five buildings, and second, the higher costs associated with them. These higher prices reduce the potential pool of owners, especially considering that all five are high-end developments launched around the same time.

Table 5: Summary of Apartment Sales and Vacancy Rates by Building

Building	Vacant Apartments	Total Sale Value	Average Sale Price
432 Park Avenue	4.90%	$2,693,610,798	$19,952,672.58
Central Park Tower	35.36%	$1,885,236,092	$16,113,128.99
MoMA Tower	43.56%	$593,736,783	$6,453,660.68
One57	2.21%	$2,096,552,565	$15,882,973.98
Steinway Tower	23.81%	$902,303,968	$18,797,999.33

An examination of the owner profiles for the buildings (Table 6) reveals that the majority of units are purchased through limited liability companies (LLCs). As discussed in subsection 3.1, acquiring property via an LLC typically signifies investment purposes rather than primary residence. Additionally, just over 10% of the units were acquired by corporations, further underscoring the characterization of these properties primarily as financial assets.

Table 6: Ownership Distribution by Building Type

Building	**Individual**	**Corporation**	**Trust**	**LLC**
432 Park Avenue	0.093	0.112	0.047	0.748
Central Park Tower	0.235	0.087	0.070	0.609
One57	0.248	0.093	0.078	0.574
Steinway Tower	0.170	0.210	0.128	0.681
The MoMA Tower	0.341	0.044	0.099	0.505
Average	**0.217**	**0.109**	**0.084**	**0.623**

The average effective tax rate for all five buildings is roughly 1.08%, which was calculated using the formula below. This rate reflects the proportion of assessed taxes relative to the sale prices of the units. This relatively low effective tax rate may indicate the impact of available tax incentives or assessment practices that reduce the overall tax burden on these high-value properties.

$$\text{Effective Tax Rate}^{11} = \frac{\text{Assessed Value} \times 0.12267}{\text{Sale Price}}$$

This average is skewed because of the high effective tax rates at Central Park Tower and The MoMA Tower. See Table 7 for individual rates for each development. Some of the developments have significantly lower effective tax rates than others. The low effective tax rate for some, and not others, can be correlated to developments that have high vacancy. As the vacancy in these buildings decreases, the average effective tax rate should also increase. Specifically, looking at the effective tax rates of the other three buildings, it can be expected that the effective tax rate for all five buildings will be under 1% after more units have been sold. The low tax rates of 432 Park Avenue, One57, and Steinway Tower clearly show the benefits of Section 421-a working for these developments.

[11] The value .12267 represents the current tax rate in Manhattan for a Class 2 apartment.

Table 7: Sale Price, Assessed Value, and Effective Tax Rate (Class 2 Rate = 0.12267)

Building	Sale Price ($M)	Assessed Value ($M)	Effective Tax Rate
432 Park Avenue	19.95	0.90	0.006
Central Park Tower	16.10	2.80	0.021
One57	15.90	1.20	0.009
Steinway Tower	18.80	1.20	0.008
The MoMA Tower	6.40	0.50	0.010
Average	**15.43**	**1**.32	**.**0108

The broader trend in all graphs shows the average assessed value per unit increasing over time. This trend is less clear in more recent developments, but for those completed more than five years ago, the trend is visible (Appendix A.3–A.6 shows all graphs). In particular, One57's average assessed value over time, shown in Figure 10, shows a very clear stepwise increase aligning with what is expected from 421-a.

In summary, the five developments analyzed show clear patterns in terms of vacancy, ownership structure, and taxation. High vacancy rates—especially in Central Park Tower and The MoMA Tower—point to broader market challenges tied to pricing, timing, and target demographics. Ownership trends heavily favor LLCs, reinforcing the notion that these units are often treated as investment vehicles rather than primary residences. Finally, while the average effective tax rate currently sits around 1.1%, it is expected to decline as vacancy rates fall and more units are sold, aligning more closely with the lower rates observed in the majority of the buildings.

4 Conclusion

The emergence of Billionaires' Row transformed the landscape of housing development in New York City, shifting developments from residential shelter to financial asset. This shift was enabled by regulatory, financial, and market forces, as evidenced through the case study of Central Park Tower and the broader analysis of its peer towers. The relaxation and expansion of zoning laws, most notably the amendment of Section 81-212 allowing the transfer of development rights from surrounding lots, and the generous tax incentives provided by the pre-2016 421-a tax exemption program created an unprecedented opportunity for developers to maximize the scale and luxury of residential buildings with minimal financial burden.

This transformation is most evident through the data. A significant proportion of units remain vacant, many properties are purchased through LLCs, indicating investment and ownership structures outside of traditional residential property, and the average sale prices reach into the tens of millions of dollars, far beyond the reach of typical residential demand. This all points toward a significant shift, turning developments from housing into assets.

However, this transformation was not static. The original 421-a program expired in 2015, and its replacement with the "Affordable New York Housing Program" in 2017 marked a critical policy shift aimed at addressing some of the affordability and equity concerns raised by these developments. The new 421-a now requires developers to have affordable units on-site if they wish to receive the tax benefits, realigning the incentive with the goals of bringing more affordable housing to Manhattan.

In sum, Billionaires' Row has reshaped but not entirely redefined New York City's housing development. This case study underscores the powerful role that zoning and tax policy play in guiding urban forms. With changes in tax programs and increased focus on affordable housing, the New York City apartment represents more of an asset now than it did before these developments, though not entirely. Moving forward, the lessons from Billionaires' Row and the evolution of 421-a highlight the ongoing challenge for policymakers: balancing the city's need for economic vitality with the desire to create inclusive, livable communities for all residents.

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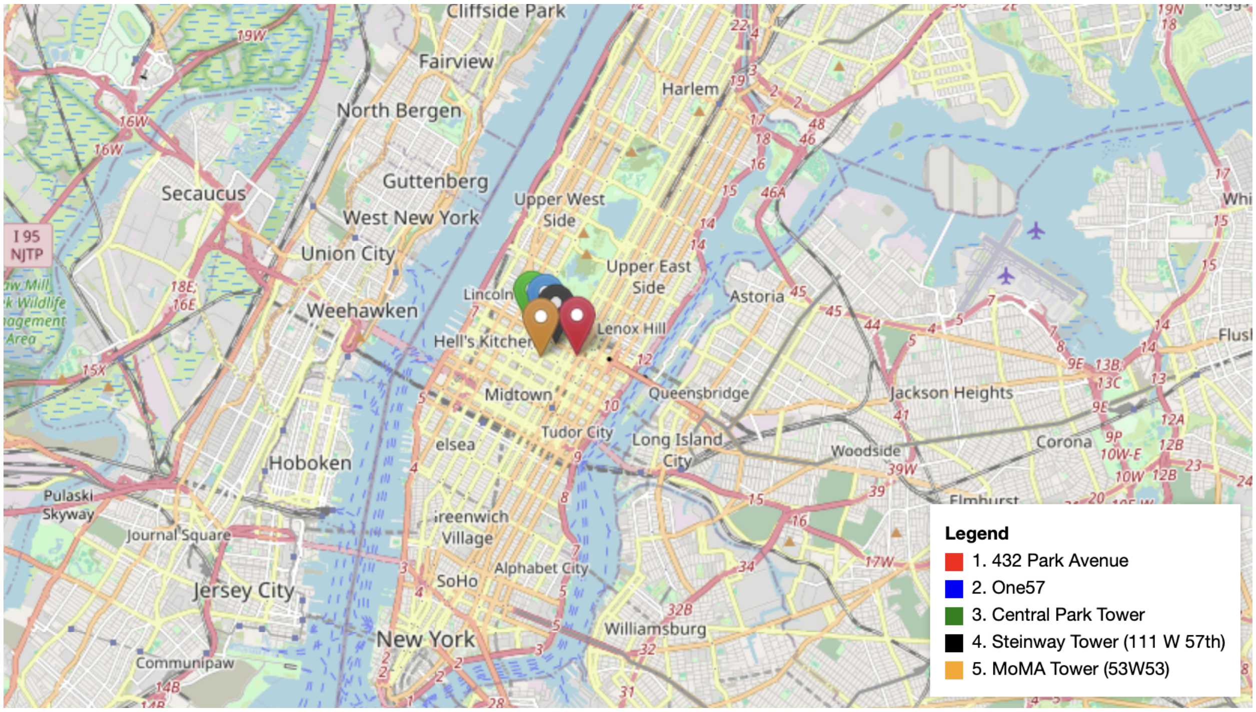
A Appendix

A.1 Photographs and Maps

Billionaires' Row Buildings and Visual Profiles from each building website[12]

Central Park Tower	**One57**
	
Steinway Tower	**432 Park Avenue**
	
MoMA Tower	
	

Figure 5: Zoomed Out Map Showing Five Buildings



A.2 Explanation on Data Gathering

Figures 8 through 17 (shown in sections A.3 to A.6) were derived from data collected via the NYC Department of Finance portal[13]. Each unit's data was manually downloaded from the Assessed Value History and Sales sections of the respective building pages. The data was consolidated into a single CSV file for analysis. To generate the cost histogram and pie chart of buyer categories, information from the Sales section was used. Specifically, the price of each unit was determined from its first deed transfer. If the first deed transfer did not list a sale price—typically in cases where ownership was transferred within the same controlling entity (e.g., between LLCs)—the next available deed transfer with a listed price was used.

[12] Images of each building sourced from official websites: Extell Development Company and Shanghai Municipal Investment Group, *Central Park Tower* (Central Park Tower, 2025), `https://centralparktower.com/`, Extell Development Company, *One57 Residences*, Accessed July 30, 2025 (One57, 2025), `https://one57.com/gallery`, JDS Development Group and Property Markets Group, *111 West 57th Street (Steinway Tower)*, Accessed July 30, 2025 (111 West 57th Street, 2025), `https://111w57.com/`, CIM Group and Macklowe Properties, *432 Park Avenue Residences*, Accessed July 30, 2025 (432 Park Avenue, 2025), `https://www.432parkavenue.com/#residences`, and Hines and Pontiac Land Group, *53 West 53 (MoMA Tower)*, Accessed July 30, 2025 (53 West 53, 2025), `https://53w53.com/`.

[13] NYC Department of Finance, *Property Information Portal: Parcel Information for Central Park Tower, One57, Steinway Tower, 432 Park Avenue, and MoMA Tower*, Accessed July 31, 2025 (New York, NY: NYC Department of Finance, 2025), `https://propertyinformationportal.nyc.gov/parcels/unit/1012921462`.

If no transfer with a recorded sale price was found, the unit was considered unsold. A key assumption in this process was that most units, given the newness of the buildings, had not been sold more than once. Therefore, the data collection focused solely on the initial sale price and the first buyer. In nearly all cases, each unit had a single buyer. When a valid transfer was identified, both the sale price and the Party2 (buyer) information were extracted. The Party2 data was then used to generate the pie chart of buyer categories.

To classify each buyer, a large language model (LLM) was employed, specifically llama3.2 from META. The image that follows shows the function and specific prompt utilized. To see complete code used for this research, visit https://github.com/aiden2133.

```
def categorize_buyer(text):  1 usage  aiden2133
    prompt = f"""
Given the following text about a deed holder, classify them into one of these categories:
- Individual
- International Buyer
- Trust
- LLC
- Corporation
- Other

Text:
\"\"\"{text}\"\"\"

Respond with only the category name.
"""
    try:
        response = subprocess.run(
            args: ["ollama", "run", OLLAMA_MODEL],
            input=prompt.encode('utf-8'),
            capture_output=True,
            check=True
        )
        output = response.stdout.decode('utf-8').strip()
        return output.splitlines()[0]
    except Exception as e:
        print(f"Error in categorize_buyer: {e}")
        return "Other"
```

There are some reservations about using generative tools for analysis, but given the straightforward classification task and the number of units to classify, it seemed inefficient to do so manually. To read more about my thoughts on this matter, one can visit aablogs.com. Lastly, the graph depicting assessed value changes over time was created using data from the Assessed Value History section for each unit, taking the first year data was available through the most recent year, which was 2026.

A.3 432 Park Avenue Graphs and Charts

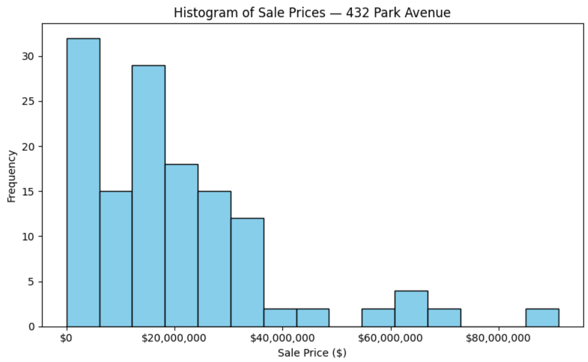


Figure 6: Histogram Showing Cost of Sold Units in 432 Park Avenue

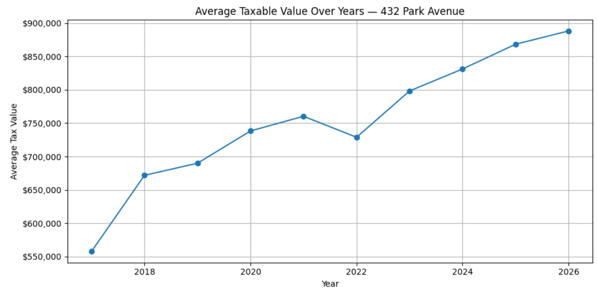


Figure 7: 432 Park Avenue Average Taxable Cost Per Unit

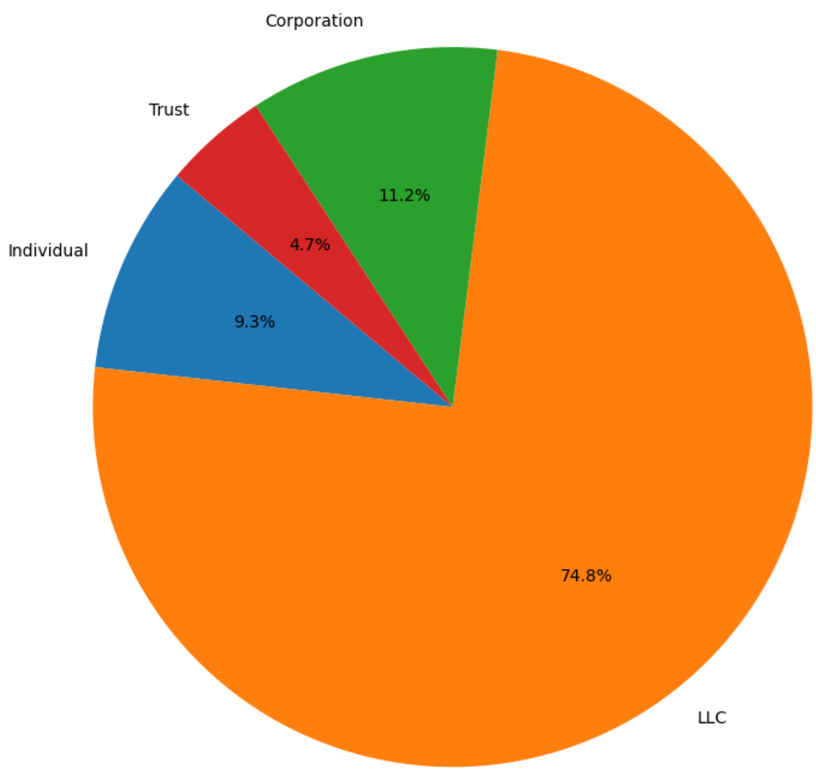


Figure 8: 432 Park Avenue Pie Graph Showing Category of Buyer

A.4 One57 Graphs and Charts

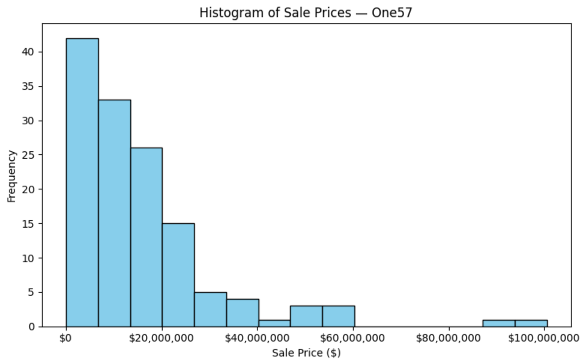


Figure 9: Histogram Showing Cost of Sold Units in One57

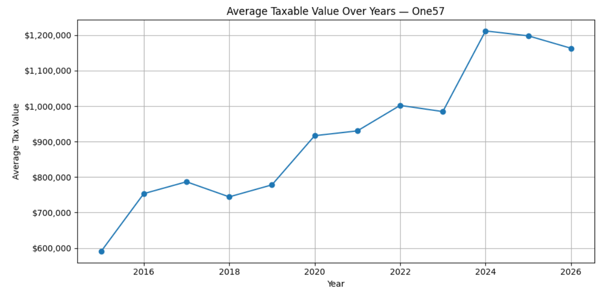


Figure 10: One57 Average Taxable Cost Per Unit

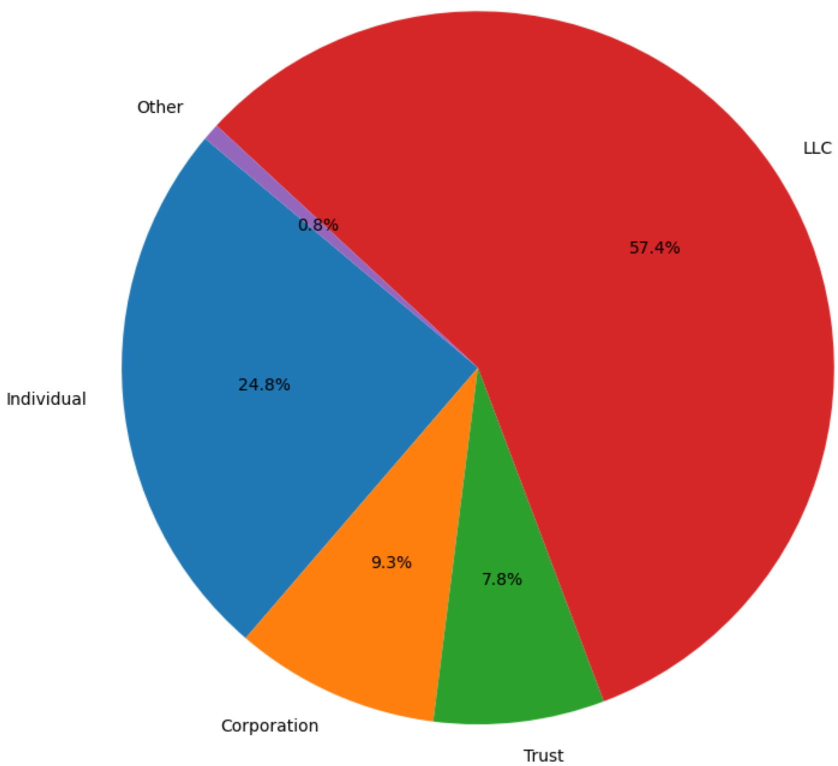


Figure 11: One57 Pie Graph Showing Category of Buyer

A.5 Steinway Tower Graphs and Charts

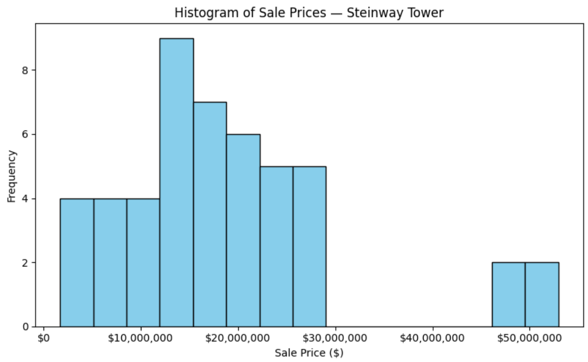


Figure 12: Histogram Showing Cost of Sold Units in Steinway Tower

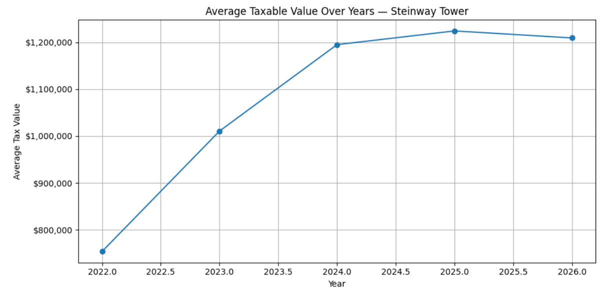


Figure 13: Steinway Tower Average Taxable Cost Per Unit

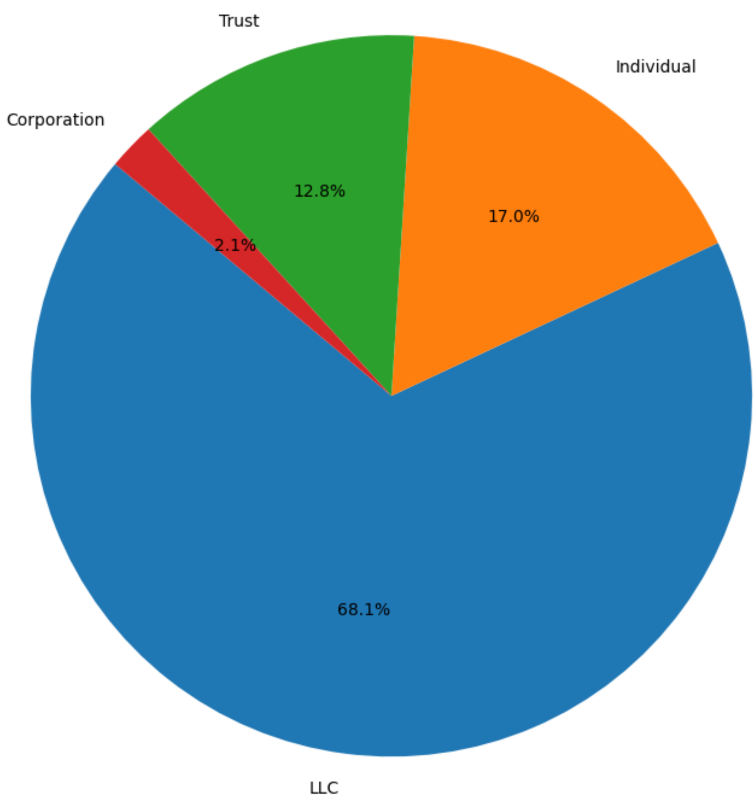


Figure 14: Steinway Tower Pie Graph Showing Category of Buyer

A.6 MoMA Tower Graphs and Charts

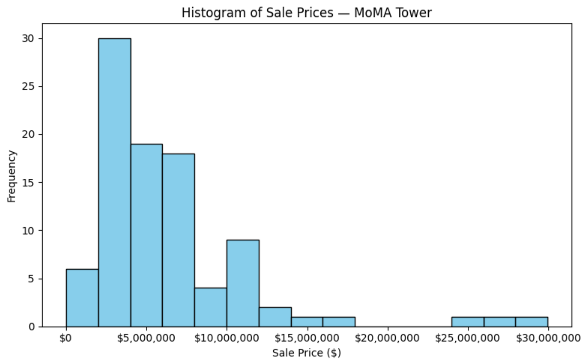


Figure 15: Histogram Showing Cost of Sold Units in MoMA Tower

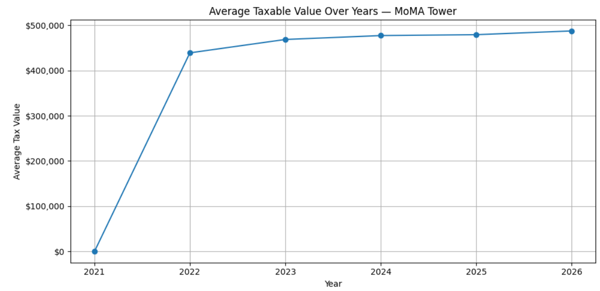


Figure 16: MoMA Tower Average Taxable Cost Per Unit

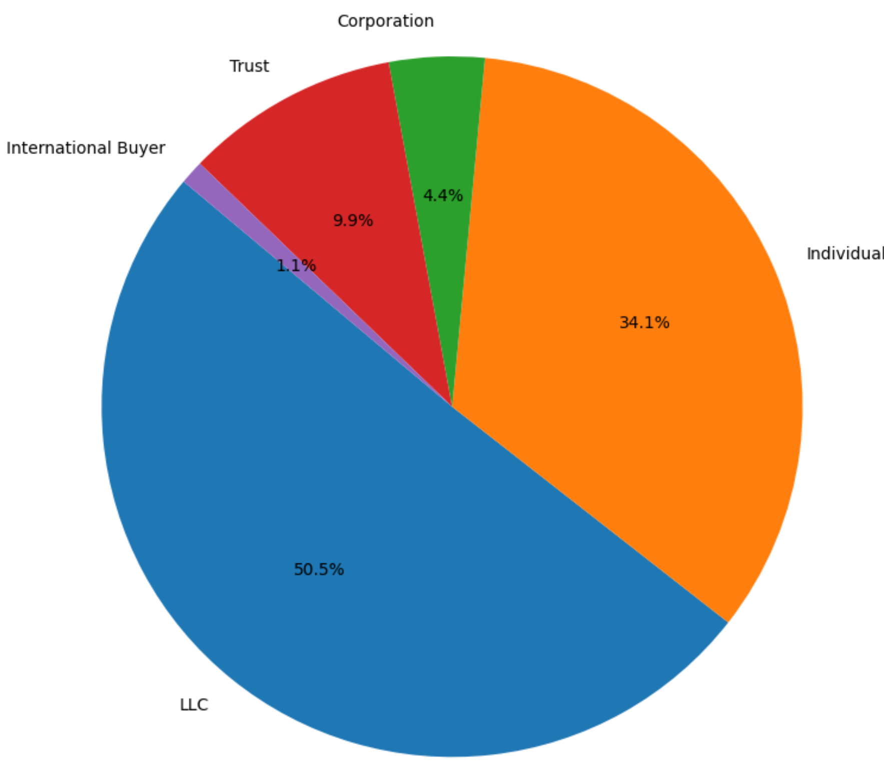


Figure 17: MoMA Tower Pie Graph Showing Category of Buyer

A.7 Specific Information from City Documents

Document below highlights the final outcome of easement deals for Central Park Tower. The total square feet aligns with what was gathered from all independent easement deals made between surrounding properties and Central Park Tower property. Information about this easement and all easement comes from New York City Department of Finance, Office of the City Register[14].

Figure 18: Allocation of Developmental Rights for Central Park Tower

Floor Area Allocation[1]

	Extell Parcel (sf)	Nordstrom Parcel (sf)	Lot 27 Land (sf)	Lot 23 Land (sf)	Lot 36 Land (sf)	Lot 37 Land (sf)	Total
1. Lot Area	40,705	N/A	17,573	15,062	10,042	7,531	90,913
2. Total Development Rights Generated by Lot Area	512,670	N/A	263,595	188,275	100,420	75,310	1,140,270
3. Retained Development Rights	337,670	175,000	162,925	52,179	86,130	63,326	N/A
4. Excess Development Rights	N/A	N/A	100,670	136,096	14,290	11,984	263,040
5. Allocation of Development Rights After Transfer	600,710	175,000	162,925	52,179	86,130	63,326	1,140,270
6. Pro Rata (%) Allocation of Development Rights After Transfer	52.68%	15.35%	14.29%	4.58%	7.55%	5.55%	100.00%

[1] Excluding Bonus Floor Area Development Rights. This Exhibit D shall be deemed modified to reflect any change in the amount of Development Rights in the Existing Zoning Lot at any time, whether such change is the result of the further inclusion of Bonus Floor Area Development Rights, any Upzoning of the Existing Zoning Lot, or the reallocation of the Extell Development Rights and Nordstrom Development Rights between Extell and Nordstrom as provided in this Agreement.

[14] New York City Department of Finance, Office of the City Register, *ACRIS Property Records: Mortgages and Easements for Central Park Tower*, Accessed July 31, 2025 (New York, NY: New York City Department of Finance, 2025), `https://a836-acris.nyc.gov/CP/`.