Barbara J. Cohen
Real Estate & Planning Consultant

ECONOMIC ANALYSIS

51 Little West 12th Street
New York, New York

July 2025
NOC Oct 2025
Post Hearing Jan 2026 Post Hearing April 2026 (Revised)

Prepared For
Sheldon Lobel P.C.

PO Box 1285 • New York, New York 10156 • 917.562.4290 • bjcohen@att.net

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Manhattan

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PO Box 1285 • Murray Hill Station
New York, New York 10156
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TABLE OF CONTENTS

INTRODUCTION

The following has been prepared for Sheldon Lobel P.C. in order to assess the financial feasibility of an "as-of-right" commercial office and restaurant development scenario and a proposed residential and restaurant project for the subject property located at **51 Little West 12th Street (Block 645, Lot 21)** in the West Greenwich Village - Meatpacking District neighborhood of Manhattan. The subject site, a vacant parcel totaling 2,581 square feet, is located on the north side of Little West 12th Street between Washington Street and 10th Avenue and is situated within the M1-5 zoning district which provides for a maximum FAR of 5.0 for commercial and 6.5 FAR for certain community facility uses.

This report submission responds to comments at the BSA public hearing on February 24, 2026. The revisions can be found in the appropriate report sections and include, but not limited to:

- **Architectural Plans**: "As-of-Right" Office and Restaurant Scenario modified to incorporate restaurant use at rear part of the second floor and on the third floor to simulate the Propose Plan. Mechanical space has been reconfigured under both development scenarios. As such, the "As-of-Right" Office Scenario rises to 7 stories in height in order to maximize the FAR of 5.0. The Proposed Plan was reduced to a 9-story building at a 4.41 FAR, under the current zoning FAR of 5.0.

- **Construction Costs**: Marshall & Swift Cost Manual was utilized to estimate both the above grade building area using the **Calculator Method** and the foundation components relating to the required deep foundation system utilizing the **Segregated Method**. In effect, the piling costs are priced separately and then converted to a cost per above grade building area to match the basis for the Calculator Section in order to estimate a total construction cost for each scenario.

- **Financial Assumptions**: Property sales comparables used to inform the site value were modified to reflect additional value due to the proximity to the High Line, and the water view factor removed. The blended rate for the restaurant use under both scenarios was modified and clarified further. The construction and lease up/sellout time was reviewed, informed by Marshall & Swift, and modified. The capitalization rates assigned to the net rental income associated with the leased office and restaurant uses remain unchanged and are well below the industry guides, Realty Rates and IRR Viewpoint. The residential condominium sales comparables are based on units with two-bedrooms and private outdoor space in close proximity to the subject site, and adjustments were made to determine comparability are detailed accordingly. In particular, an upward adjustment to the residential sales comparables was applied to reflect the limited view of the High Line from the small front balcony.

- *Where applicable, this report reflects a response to the Board's comments at the public hearing on December 9, 2025. Additionally, this report also responds to the Notice of Comments dated August 27, 2025, specifically Paragraph B - Financial Feasibility.*

Subject Site Profile: Impact on Construction, Space Utilization, Marketability

Under both the "as-of-right" office and restaurant development scenario and proposed restaurant and residential plan, site conditions impact the design layouts, construction means and methods and marketability. In great detail, the Geo Technical report prepared by GZA GeoEnvironmental, the preliminary structural drawings prepared by DeSimone Consulting Engineering, and the architectural design plans demonstrate how the site conditions present challenges to overcome in order to develop the site.

Lot Size and Shape

The lot size and narrowness represent an over-arching constraint evident in many design decisions and space utilization, although profile of the subsurface conditions and adjacency issues play a significant role, particularly in the foundation design. Moreover, the small narrow site generates multiple floors to achieve the full development potential of the site and results in a more costly, less efficient building due to structural requirements compared to a shorter, wider building.

The lot size and shape can be isolated and considered unique to the subject site and play a role in determining building and structural design and premium costs. For example, the lot size and narrowness produce a slender building design. Unlike wider buildings, their height-to-width ratio, known as the slenderness ratio, makes them vulnerable to swaying and bending. The deeper, stronger supportive foundation and additional internal structural support is required to address the wind and seismic issues.

In addition to building design and construction methods, the lot size and configuration of the subject site contribute to the additional cost to development the site, as there is reduced site access, which makes material delivery and staging, waste removal, and machinery use more complex and labor-intensive, adding more construction time and cost.

Foundation Challenges

As detailed in the geotechnical report and reflected in the structural plan and executive summary, the subject site is impacted by poor soil conditions and water issues associated with the flood zone. T he support of excavation and the foundation design require a tailored approach to address not only the small site challenges, but also the subject site's location in the Flood Zone and its related subsurface soil and water issues, adjacency concerns, and overall structural components to support a tall, narrow building.

Although the subsurface conditions are shared by other properties in the area and are not unique to the subject site, they do add to the cost of development. The include the following:

Soil Capacity: The building represented in both the "as-of-right" and the proposed development scenarios cannot be supported on shallow foundations with typical footings as Uncontrolled Fill materials (Class 7) extend to a depth of 20 feet below the ground surface. As per NYC Building Code, these soils require a deep foundation with piling for proper support.

Water Table: The groundwater at the subject site was measured around 11 feet below ground surface. Assuming a 10-foot clear height for the cellar, a 4-foot pile cap, 18 inch thick cellar slab, this would extend the excavation to about 15.5 feet, which is below the groundwater table. Regardless of the groundwater issues, it is the Flood Zone AE requirements that dictate a deep foundation structural design for any development at the site.

Adjacency Issues: Given the depth of the foundations, the excavation would extend below the adjacent buildings, particularly to the western border where the age of the building and its shallow foundation pose inherent risks. Conventional pit pier underpinning for stabilization is not recommended as this could result in excessive settlement of adjacent building foundations due to the poor soils and measured groundwater elevation. Typically, an infill site would perform underpinning of an adjacent building to provide support due to any settlement during excavation, allowing for the foundation to extend to the property lot line. This is not the case at the subject site. Moreover, each scenario must install a second elevator to service the cellar level, as this issue doesn't allow for the passenger elevator to make a stop at the cellar level.

Tangent Pile Wall & Micropile Structural System: A deep foundation system is required along the site perimeter acting as a barrier abutting the adjacent building to avoid the earth movement, extensive monitoring and much uncertainty associated with this sensitive building. The tangent wall in its thickness also provides the foundational support for the building at the subject site and as such, reduces the interior space of the building. A secant (overlapping) wall structure was considered; however, the small site prevents staging the equipment to install a secant wall.

If the subject site were not in a flood zone and the subsurface conditions were not present, the approach to the foundation system may have reflected a more typical mat foundation with footings and a single 12 inch concrete wall compared to the 3 foot thick foundation wall (tangent wall system plus 12 inch concrete liner wall) required at the subject site. The required deep foundation using the tangent wall/micropile system compared to conventional footings is both a reflection of the site size and shape, the sub-surface conditions, and flood zone location of the subject site.

Space Utilization

Space utilization by all occupancies is severely impacted by the site's small size and narrow configuration. The small floorplate is reduced once the circulation core is taken into account, limiting the utility of the space itself and generating a higher than typical loss factor. For example, the ground floor commercial space is a challenge, as the display window is ineffective since the 25 feet of frontage must also accommodate the building's lobby and cellar entrance. The multi-level restaurant use is not only a reflection of the narrow site, but also the recognition of the elevated High Line. Given the flood zone designation at the subject site, the critical utilities are above grade on the second floor.

In order to overcome the challenges inherent in the subject site, the applicant requests a variance to development the proposed restaurant and residential development scenario which seeks to match the residential market as well as attract a prospective restaurant user who can operate on multi-levels and gain some benefit from the proximity to the High Line directly to the east.

Summary of Findings & Conclusion

The subject property is located at **51 Little West 12th Street** in the West Village-Meatpacking neighborhood of Manhattan and is zoned M1-5 which allows for commercial development. The small, narrow-shaped lot is a challenge for any development option. The 25 feet of lot width requires that any new development seek to strike a balance between the overall development costs, the buildable area, and the marketability of the prospective tenancy, whether it be commercial office use, restaurant use, or residential use.

The neighborhood continues its transformation with the development of the Standard Hotel, abutting the subject site to the north, and the Whitney Museum to the south on Block 644, opposite the subject site, which is now the focus of a planned mixed-use development by the NYCEDC called Gansevoort Square. This planned development for Block 644 includes the enlargement of the Whitney Museum and a 60-story residential tower at the southeast corner of Little West 12th Street and 10th Avenue. The impact of this tower and the overall development is expected to influence the marketability of the residential units at the subject site, as views of the Hudson River, extending as far as the Statue of Liberty, may be obstructed.

Both the "as-of-right" and proposed development scenarios are represented by multi-story buildings. The 7-story "as-of-right" commercial office and restaurant plan approximates 14,905 gross square feet of above grade building area, and 12,904 square feet of zoning floor area, or an FAR of 5.0. This scenario incorporates a multi-level restaurant space from the ground level to the third floor, with cellar level food preparation space and storage. A single passenger elevator is intended to serve the upper floor office tenants. An interior stair along with a small service elevator within the restaurant space is shared by restaurant staff and patrons, as the primary prep area is in the cellar and access to the second and third floor is required. Due to the limited

space and multi-levels, operational challenges for the restaurant are significant and is expected to impact the marketability of the space. This service elevator also provides access to certain building maintenance equipment.

The commercial office space on floors 4-6 reflect a higher than typical loss factor as the gross floor plate at 2,024 square feet is reduced to 1,380 net square feet once the common area core is taken into account. The 7th floor is reduced to 636 net square feet. The limited utility of the space and the distance to the nearest subway, all contribute to the competitive disadvantage in the marketplace for the "as-of-right" commercial office and restaurant development scenario. The estimated project value, which capitalizes the net operating income of the leased office and restaurant use is $11.4 million, insufficient to offset development costs of $12.9 million and does not provide for a reasonable return on investment, and therefore is not an economically viable project.

The proposed plan provides for a 9-story building and incorporates restaurant space at the ground and third floors (the second floor contains resident bike storage & mechanical systems) with a cellar level providing the support services to the multi-level restaurant. The third floor is accessed either by the interior stairs through the ground floor restaurant space or a small service elevator that is shared by restaurant staff and patrons. Outdoor terrace enhances the restaurant space at the front of the building on the third floor.

The 6 residential condominium units are represented by two bedroom/1.5 bath units, each at 770 square feet. Each unit benefits from a small balcony at the front of the building. Due to the small site, the small two-bedroom units are not comparable to the area's large units within amenity-filled buildings. As such, the potential sales revenue falls below what is reported by industry sources.

The proposed plan has a total of 17,539 gross square feet of above grade building area and 11,379 zoning square feet, or an FAR of 4.41. The project value, represented by the capitalized value of the net operating income of the leased restaurant space, plus the total sales revenue generated from the residential condominium apartments, approximates $19.0 million, sufficient to offset the total development costs that approximate $16.6 million to generate a reasonable return.

The proposed development scenario provides for a return on project cost on a condominium basis of 6.3% annually over the construction and sell-out time periods. The projected return, which reflects modest expectations for a condominium project, is measured against the tax implications of a buy and sell transaction and the risks associated with real estate development as measured against alternative investments.

Exhibit 1 below summarizes the development cost and project value for each scenario.

Exhibit 1

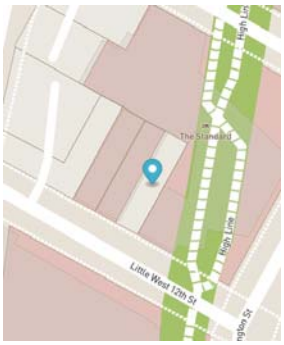
Project Value and Profit Summary

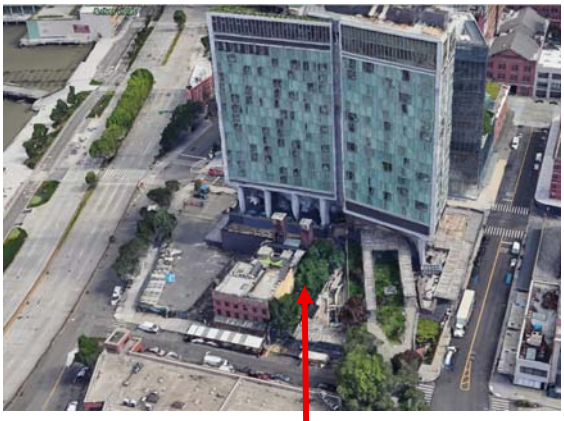
	Project Cost	Project Value	Project Profit or Loss	Annual Return as % of Cost
"As-of-Right" Restaurant & Commercial Office Use – 7-story - FAR 5.0	$12,984,371	$11,480,155	($1,504,210)	-(5.1%)
Proposed Restaurant & Residential Condo Use - 9-Story - FAR 4.41	**$16,600,629**	**$19,071,691**	**$2,471,063**	**6.3%**

SITE DESCRIPTION

The subject site is represented by **Lot 21** on **Block 645** in the West Village-Meatpacking area of Manhattan. Located at **51 Little West 12th Street**, the subject property has a lot size of approximately 2,581 square feet (a lot width of 25 feet) and is unimproved since 2010 when DOB ordered an emergency declaration to demolish the underbuilt 3-story commercial building, a result various construction impacts associated with the Standard Hotel. The potential development of the subject site recognizes the importance of monitoring and taking special precautions to avoid any negative impacts on adjacent buildings. The adjacent buildings are represented by a 3-story commercial building (53 Little West 12th Street) built in 1910 to the west, and a single-story commercial building associated with the Standard Hotel to the east (848 Washington St), and the Standard Hotel itself abutting the subject property to the north. The Highline is a dominate feature in this neighborhood, situated just east of the subject site, and the Whitney Museum, developed in 2015, is also a significant presence in the neighborhood. A map and photo of the subject site are presented below.

Subject Property
51 Little West 12th Street – Manhattan
Block 645 | Lot 21





Subject Site & View East

Subject Site & View West

Subject Site

Future Planned Development: Gansevoort Square

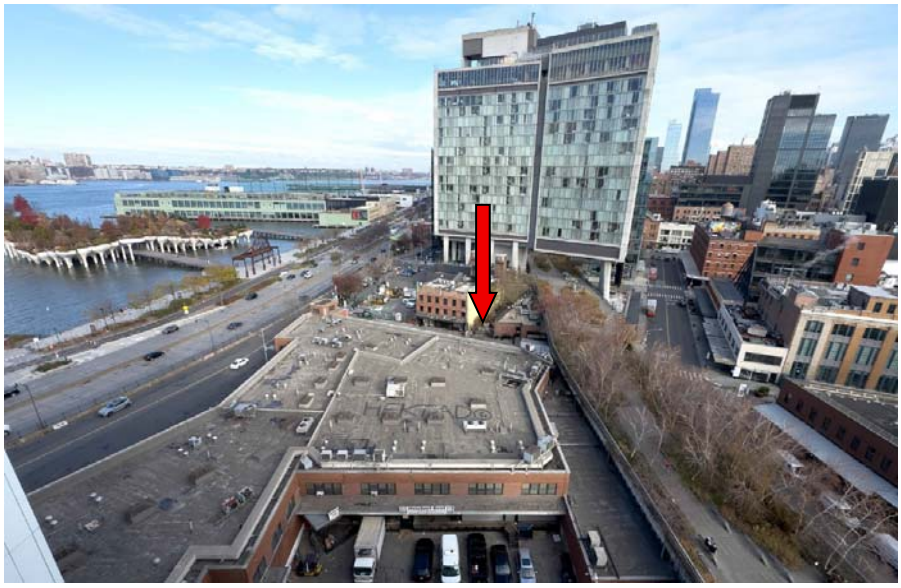
Under review by the NYC Economic Development Corporation are proposals to develop Block 644 to its fullest potential, which includes a parcel of about 10,000 square feet located at the southest corner of Little West 12th Street and 10th Avenue, opposite the subject site. The redevelopment of the corner parcel is to be a part of a larger, coordinated redevelopment of the majority of Block 644. It is contemplated that the entire block, bounded by Little West 12th Street, Washington Street, Gansevoort Street and 10th Avenue will be rezoned as part of a single, comprehensive Uniform Land Use Review Procedure ("ULURP") process.

The proposed Gansevoort Square project seeks to:

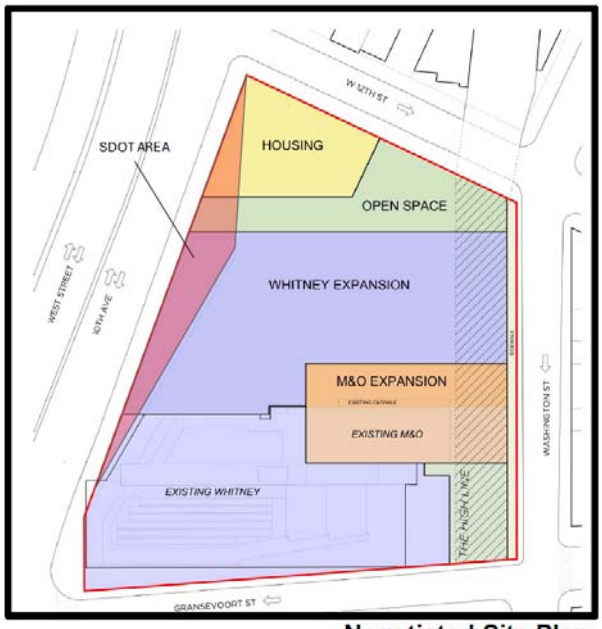
- Expand the Whitney Museum
- Expand the maintenance and operations space for future High Line needs with a focus on year-round programming
- Provide public realm improvements and new open space (11,200 square feet)
- Provide mixed-income housing (600 units)

While no official renderings have been released, it is expected that the new residential tower will be at a greater height (potentially double) than the Standard Hotel which at about 260 feet, is the current tallest building in the neighborhood.

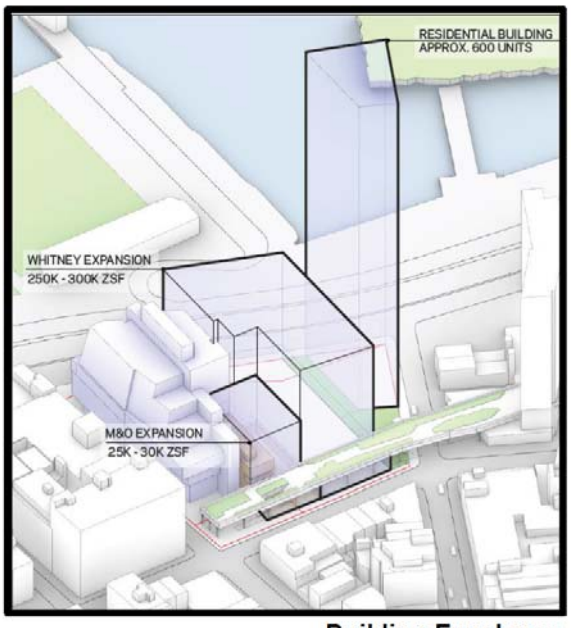
The development of corner of Little West 12th Street and 10th Avenue with a residential tower along with the redesign and expanison on the remaining Block 644 will no doubt impact the subject site's development, especially in terms of the view corridors towards the Hudson River, Lower Manhattan, and beyond to the Statue of Liberty.



Subject Site & Block 644 in Foreground



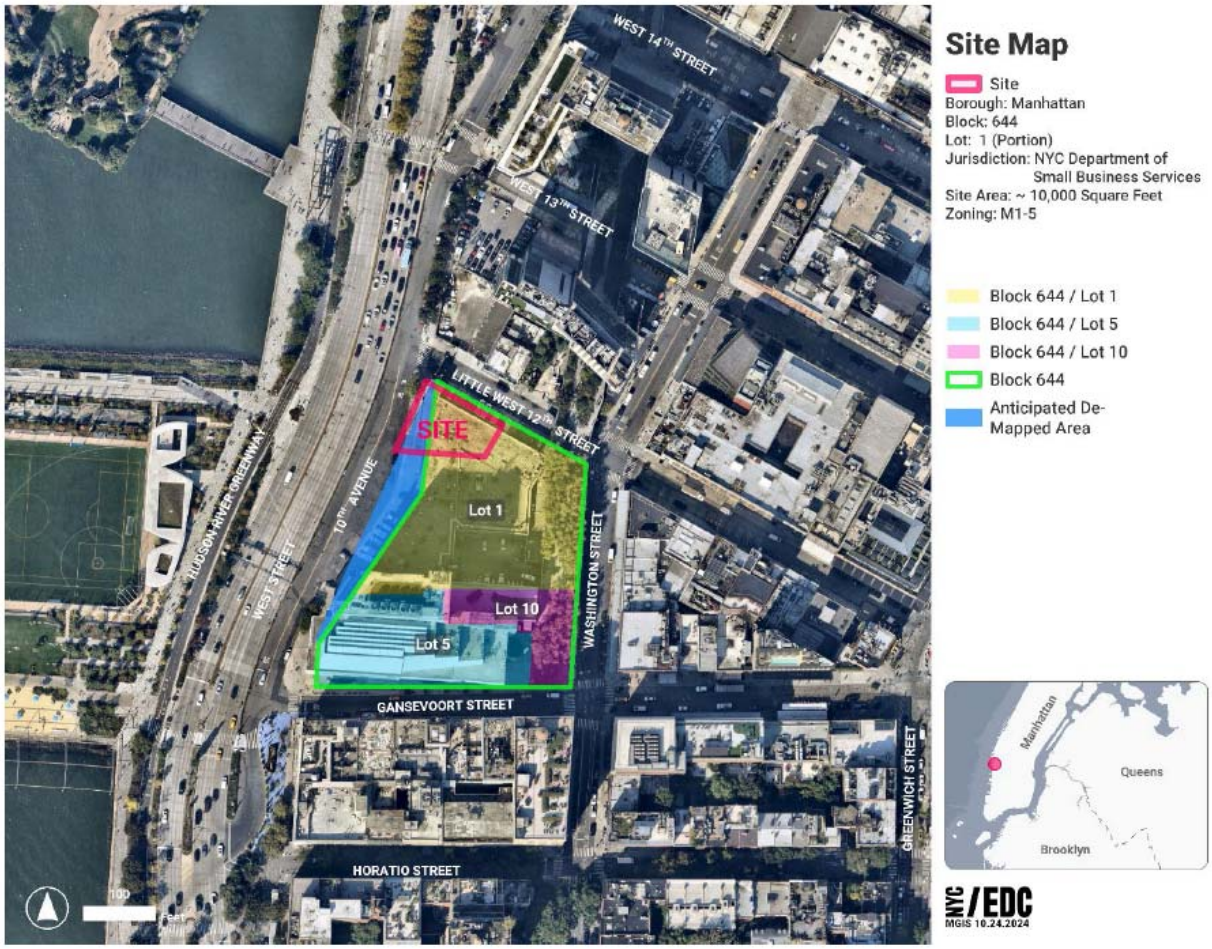
Negotiated Site Plan



Building Envelopes

FUTURE SITE PLAN

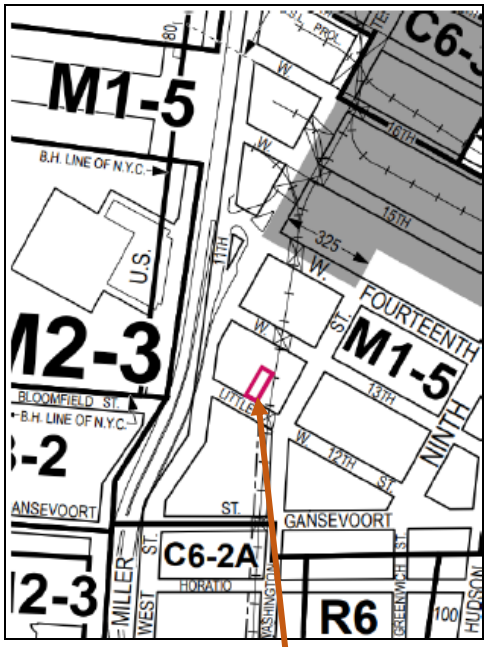
Source: NYC EDC – Gansevoort Square Mixed-Income Housing RFP



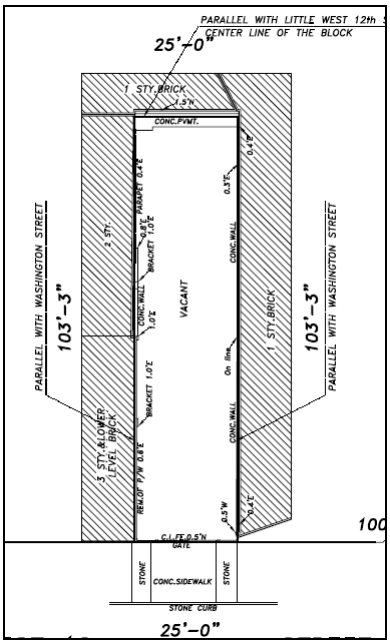
Source: NYC EDC – Gansevoort Square Mixed-Income Housing RFP

ZONING & DEVELOPMENT OPTIONS

The entire parcel is zoned M1-5, which provides a 5.0 FAR for commercial use and certain community facility uses.



Subject Site: 51 Little West 12th Street

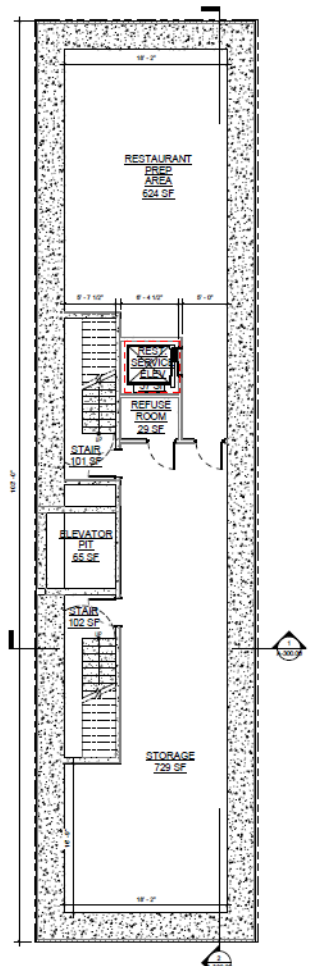


Subject Site Survey

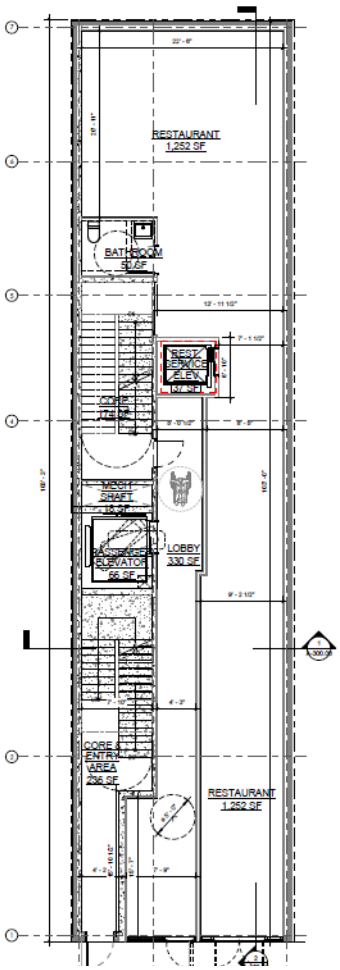
The development scenarios analyzed in the report are as follows:

1. **"As-of-Right" Restaurant & Commercial Office Use– FAR 5.0 -** The current return of a new, 7-story commercial office development totaling 14,905 square feet of above grade building area, and 12,904 square feet of zoning floor area. All upper floors (floors 4 through 7) are assigned office use, while the ground floor, rear portion of the second floor, and third floor are assigned restaurant use with a supporting service area at a portion of the cellar level accessed by a second elevator. Mechanical systems are located above the ground floor due to the flood zone designation. The loss factor is significant. For example, a typical upper floor of 2,034 gross square feet is reduced to 1,380 square feet of useable office space, once the core (i.e., elevator and stairwells) is taken into account.

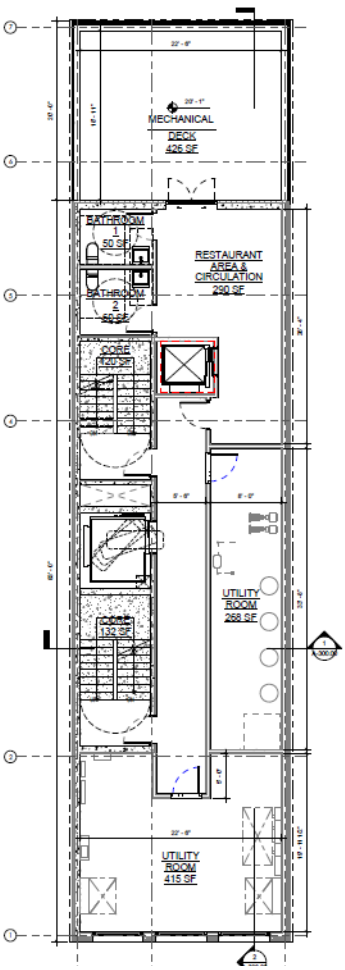
“As-of-Right” Office and Restaurant Development Scenario – Floor Plans



Cellar Level

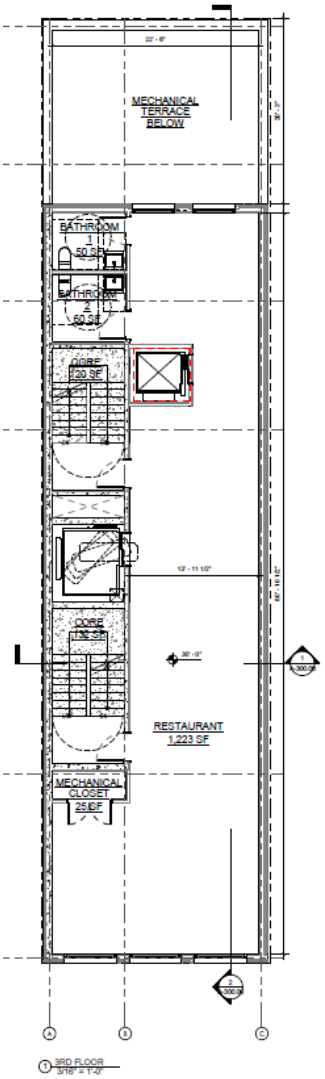


Ground Flr – Restaurant Use

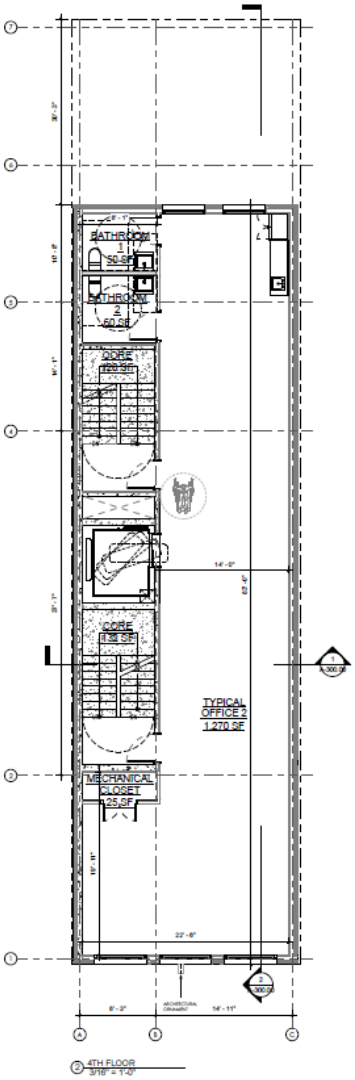


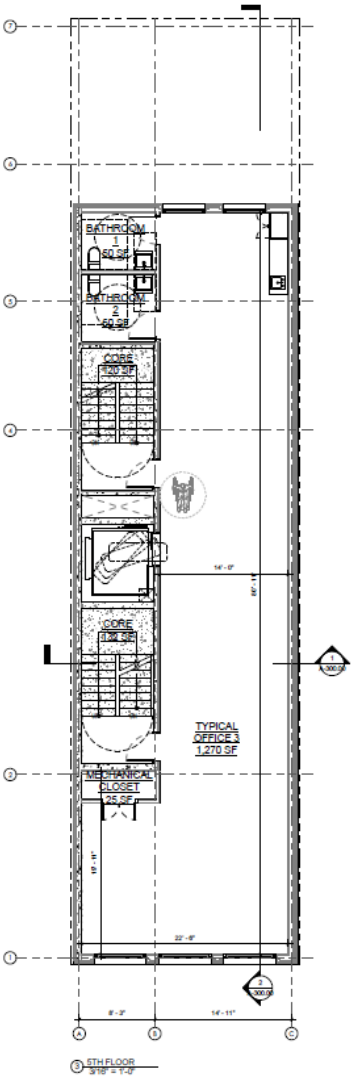
Second Flr (Mech., Circulation & Rest.)

"As-of-Right" Office and Restaurant Development Scenario – Floor Plans (continued)



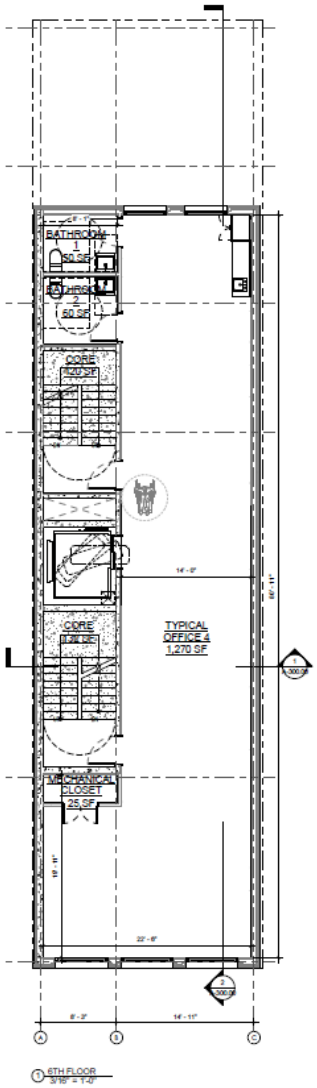
Restaurant – 3rd Flr



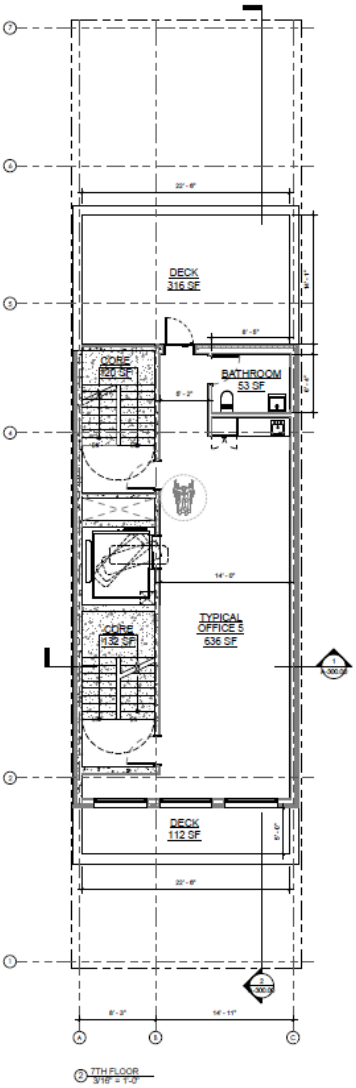


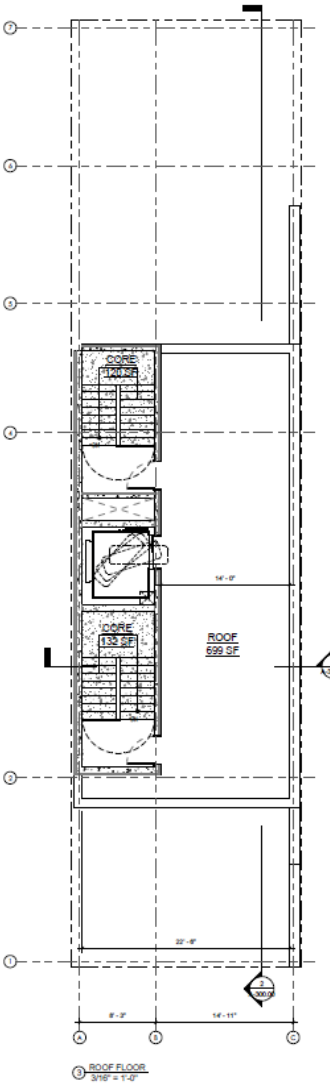
Typical Office Units - Floors 4 & 5

"As-of-Right" Office and Restaurant Development Scenario – Floor Plans (continued)



Typical Office Units - Floors 6 & 7



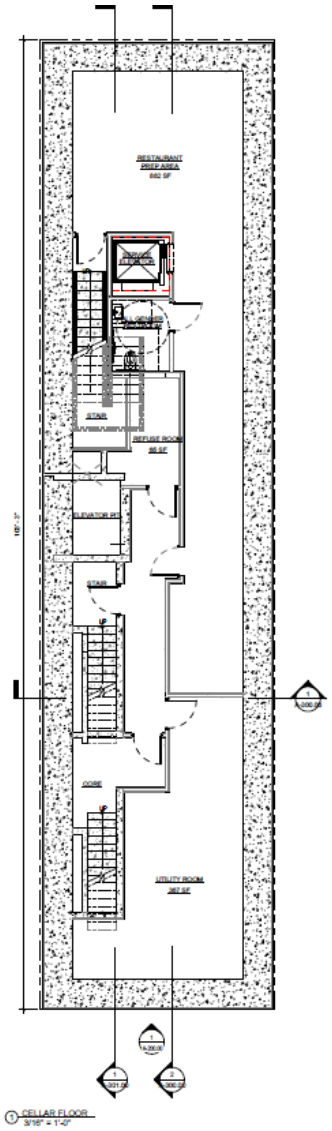


Roof Plan

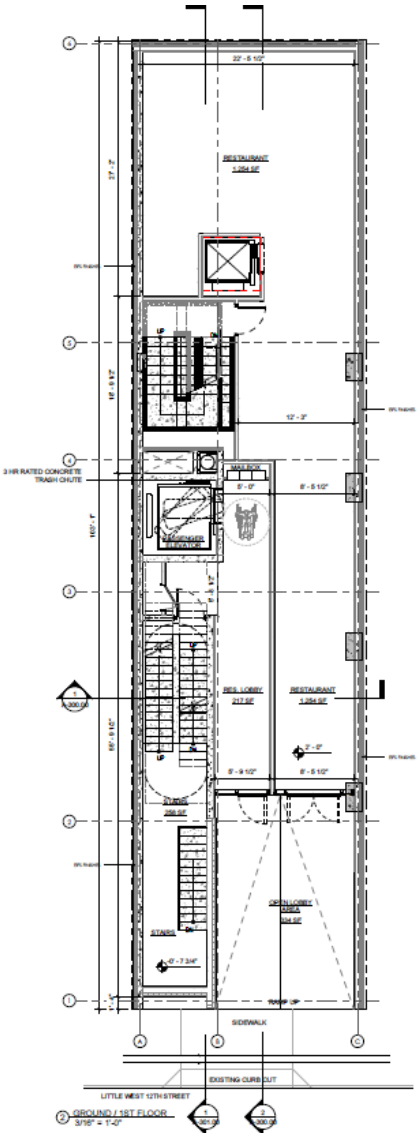
2. **Proposed Residential and Restaurant Use – FAR 4.41 -** The current return of a new, 9-story restaurant and residential condominium building totaling 17,539 gross square feet of above grade building area, and 11,379 square feet of zoning floor area. Restaurant space has three components: a small support service area at a portion of the cellar level (approx. 882 square feet), ground floor of approximately 1,254 square feet, and a third floor restaurant area (1,213 sqft) with a front terrace (474 sf) aligned with the height of the nearby High Line. The second floor provides for mechanical systems and resident bike storage. The upper floors (floors 4 through 9) contain 6 residential condominium apartments.

Each unit approximates 770 square feet and configured as a small two-bedroom/1.5 bath unit. No full-service building-wide amenities are provided; however, individual units benefit from outdoor space, primarily small balconies at the front of the building, and bike storage for the 6 units.

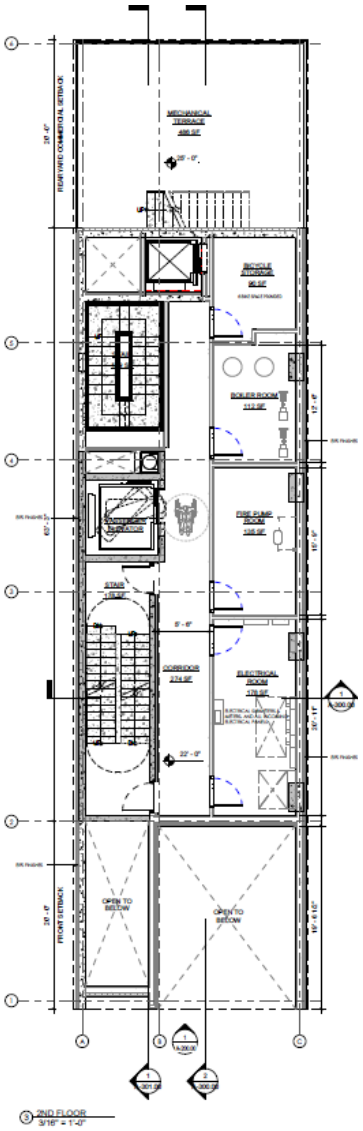
Proposed Residential and Restaurant Development Scenario – Floor Plans



Cellar Level

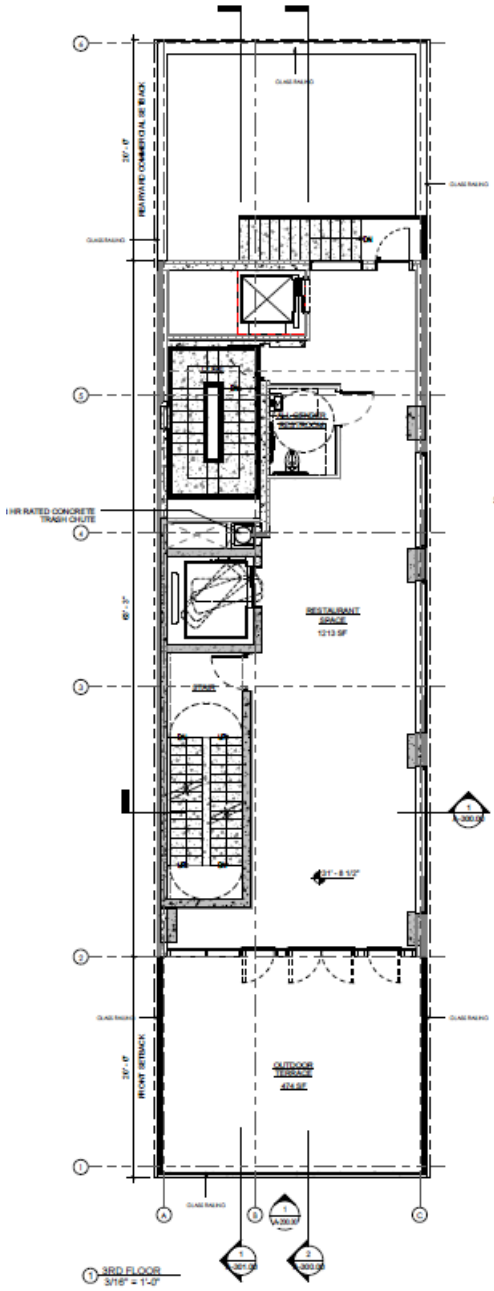


Ground Flr – Restaurant Use

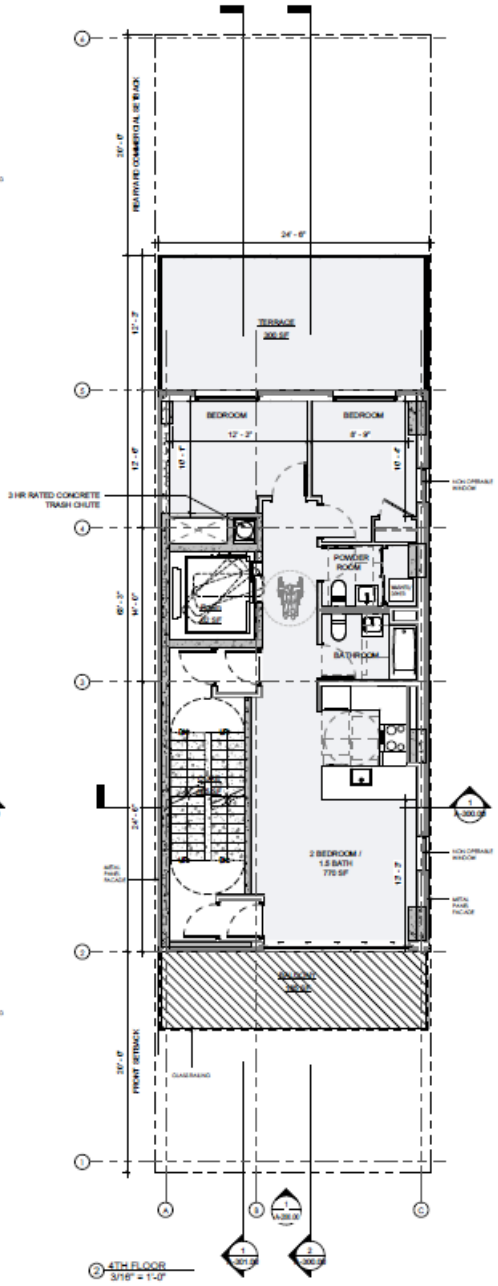


Second Flr - Mech. & Bike Storage Flr

Proposed Residential and Restaurant Development Scenario – Floor Plans (continued)

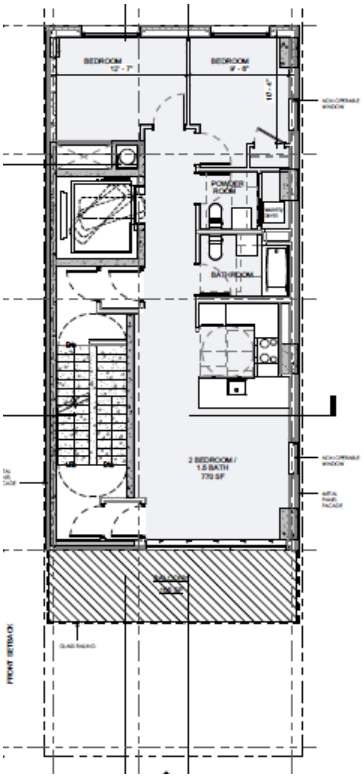


3rd Floor – Restaurant Use

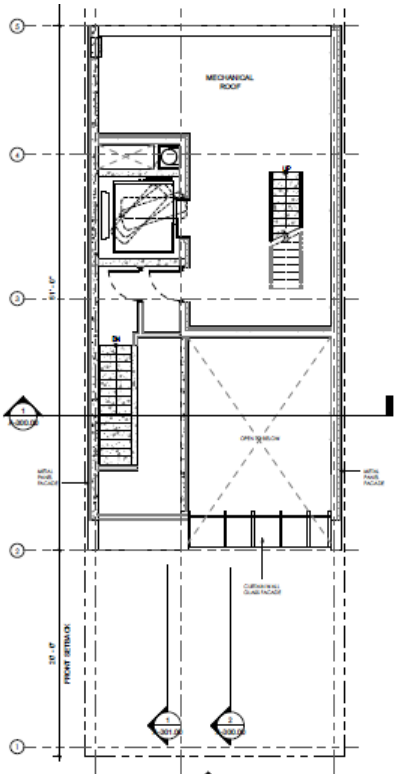


Residential Condo Unit (770 SF): 4th Floor

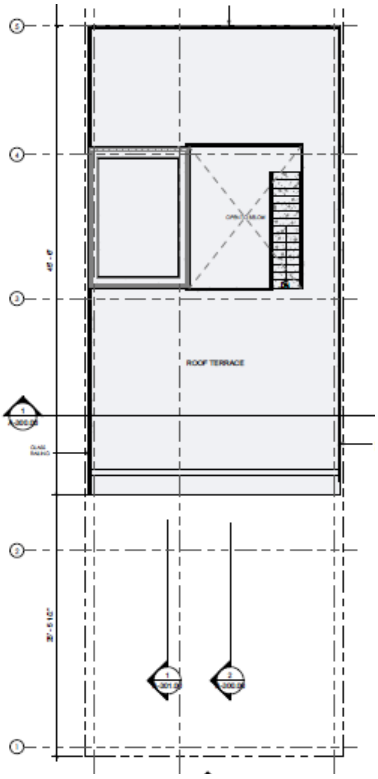
Proposed Residential and Restaurant Development Scenario – Floor Plans (continued)



Typical Residential Condo Unit (770 SF) – Floors 5-9



Roof

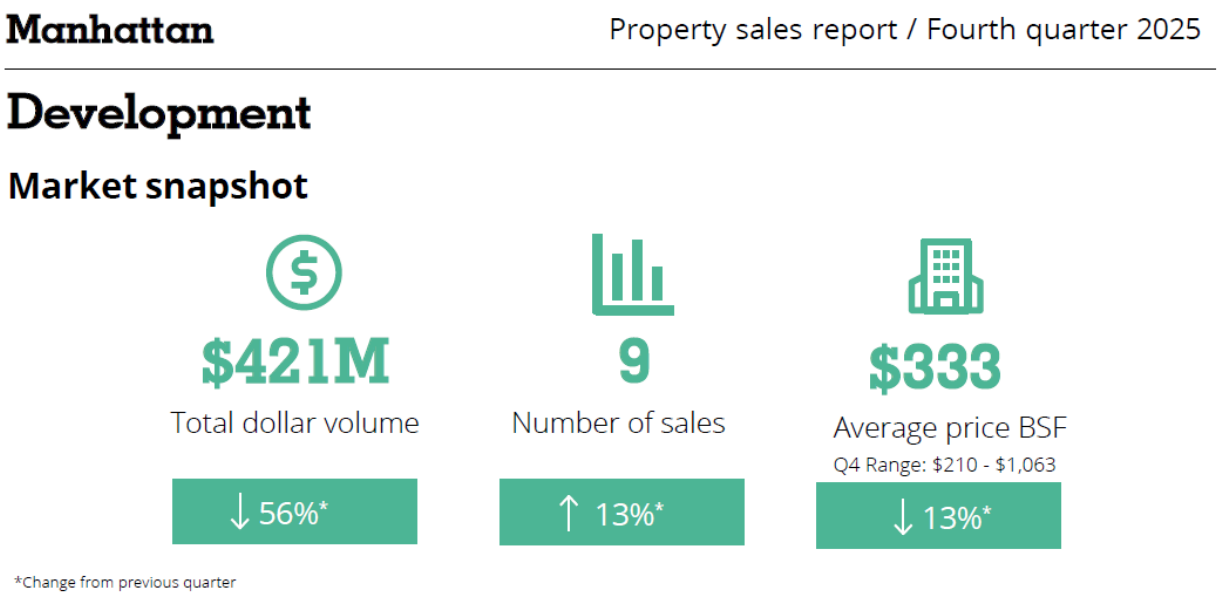


Bulkhead

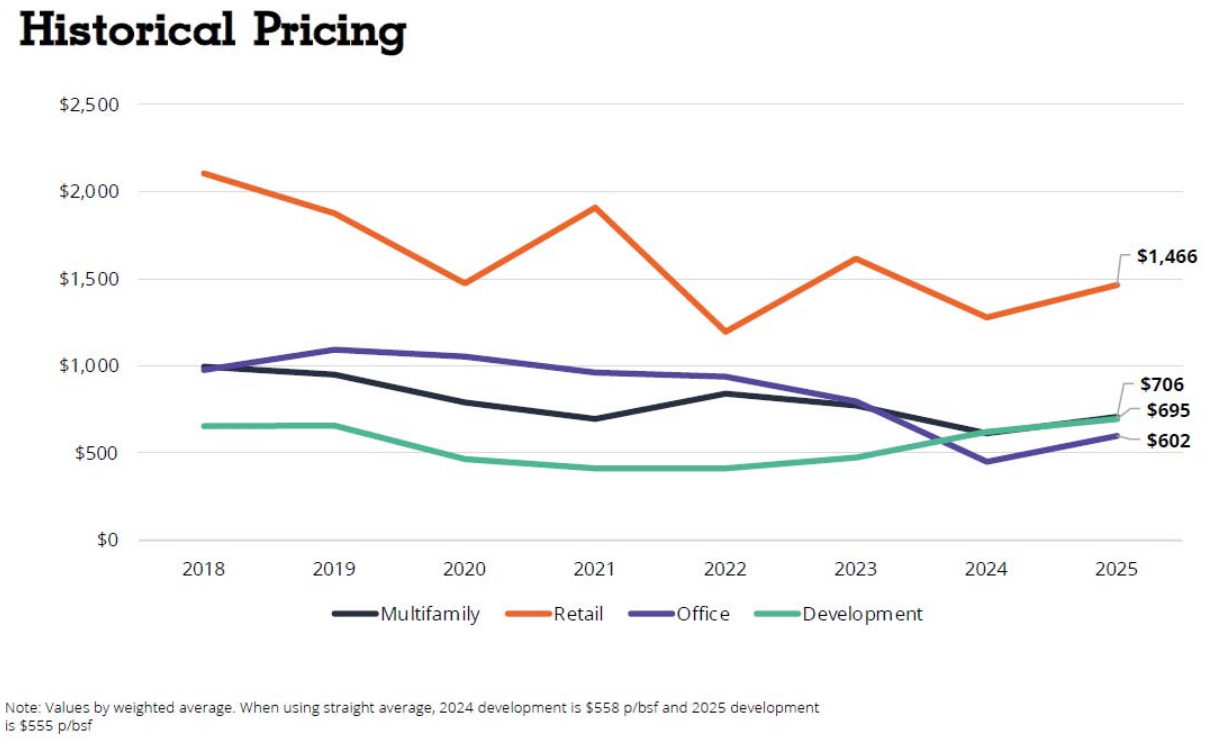
SITE VALUATION - "AS IS"

The site value is based on the research of recent sales of vacant land, under-utilized or development sites in the vicinity of the West Village-Meatpacking area. The value of the subject site as a vacant parcel will reflect the development potential dictated by current zoning, therefore all the sales comparables are presented on an Allowable Buildable Area ("ABA") square foot basis. Adjustments have been made to determine comparability to the subject site in terms of date of sale, location, site size and configuration and zoning designation's permitted uses. Additionally, site value is also reflected in the potential sales prices of the finished product (i.e., condominium apartments) which is firmly based upon location, the area's sales comparables, and the impact of the planned Gansevoort Square development.

According to the Avison Young's "Manhattan Property Sales Report – 4th Quarter 2025", development sales transactions have increased from prior years. For Manhattan, the report identified 9 development type sales with an average of $333 per ABA square foot, a decline from the prior quarter average of $384 per ABA square foot. As shown below, historically, development type sales have been in the $500-under $700 ABA square foot range.



Source: Avison Young: Manhattan Property Saels Report – 4th Qtr 2025



Source: Avison Young: Manhattan Property Saels Report – 4th Qtr 2025

The property sales research to determine site value for the subject site represents over 200 transactions within a large surrounding area of the subject site. Of the total, there were 13 properties defined as vacant, none of which are zoned for solely commercial use. Only 4 properties (all improved with buildings) are located within either a M1-5 or M1-6 zoning district. The remaining properties reflect mixed zoning designations that allow for residential use “as-of-right”. Therefore, the sales comparables below require a downward adjustment to reflect the zoning districts that permit residential use. Lot size and configuration and location were key factors that informed the selection from a small universe of property sales and were adjusted accordingly.

As per the Board’s direction, the upward adjustment in the prior report relating to possible water views has been removed, and an added value was assigned to the subject site’s proximity to the High Line.

Exhibit 2

Property Sale Comparables - Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
Location	**30 Thompson St**	**33 West 14th St**	**10 West 17th St**	**112 Liberty St**	**525 Sixth Ave at W. 14 St**
Block/Lot	476-56	816-21	818-56	52-16	609-35,37,38,39,40,41
Zoning	M1-5/R10, SNX	C6-2M	C6-4A	C5-5 LM	C6-3A, C6-2A
Prior Existing-Bldg Size (SF) | DOB Demo Date		4,943 | 11/1/2024			
Lot Size (SF)	2,726	2,582	4,140	6,100	12,900
Lot Dimension	29 x 94 (Infill)	25 x 103 (Infill)	45 x 92 (Infill)	48 x 113 (Thru-Lot)	125 x 126 (Crnr)
Sale Date	1/14/2022	10/12/2023	12/16/2022	3/28/2024	12/15/2021
ABA SF *	27,260	15,544	41,400	61,000	97,008
Sales Price	$13,000,000	$9,000,000	$15,500,000	$21,687,750	$46,000,000
Price/ABA SF*	$476.89	$579.01	$374.40	$355.54	$474.19
Adjustment Factors					
Time	1.15	1.10	1.15	1.05	1.20
Location (Neighborhood & Proximity to High Line)	1.10	1.10	1.10	1.10	1.10
Size	1.00	1.00	1.03	1.05	1.10
Config./Utility/Bldg On Site	1.00	1.00	0.95	0.95	0.90
Zoning	0.75	0.75	0.75	0.75	0.75
Composite Adj.	**0.95**	**0.91**	**0.93**	**0.86**	**0.98**
Adj. Price/ABA SF*	**$452.45**	**$525.46**	**$347.57**	**$307.21**	**$464.75**
Avg Adj. Price/ABA SF*	**$419.49 / ABA SF***				

* Allowable Building Area

Development Site Sales Comparables – Adjustment Factors

Time: According to recent market reports, development sales and demand have increased. Upward adjustments of various degrees have been made to all property sales comparables due to the date of the respective sales transaction.

Location: The subject site is well situated as the Meatpacking District continues to strengthen with recent and planned developments, including the Whitney Museum and the High Line. An upward adjustment was applied to all sales comparables due to attractive location and proximity to the High Line, a special feature in the area.

Size: All property comparables, except for Comps # 1 and # 2, are subject to an upward adjustment due to their larger lot size compared to the subject site, as larger lots tend to reflect lower prices per square foot compared to smaller sites.

Configuration & Utility | Building on Site: A downward adjustment was made to all property sales comparables, except for Comp #1 and #2 with similar dimensions as the subject site. The remaining comparables reflect sites with dimensions that provide greater design flexibility and potential.

Zoning: As noted above, there were no comparable sales that were zoned for commercial use only. All comparables provide for residential use and therefore, require a downward adjustment, as pointed out by Commissioner Otley-Brown.

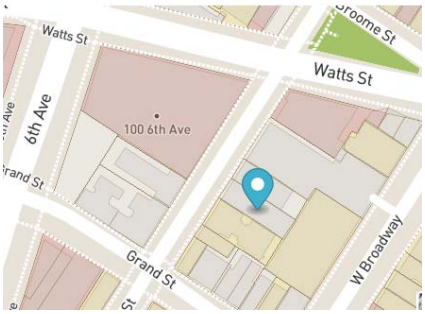
Based on the above, the site value assigned to the subject site is calculated as follows:

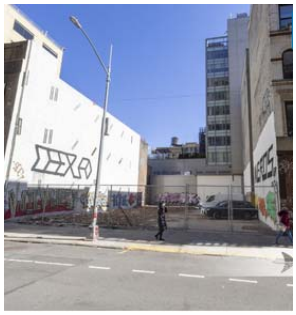
Allowable building area under current zoning =

Lot Area: 2,581 SF at 5.0 FAR = 12,905 ABA SF

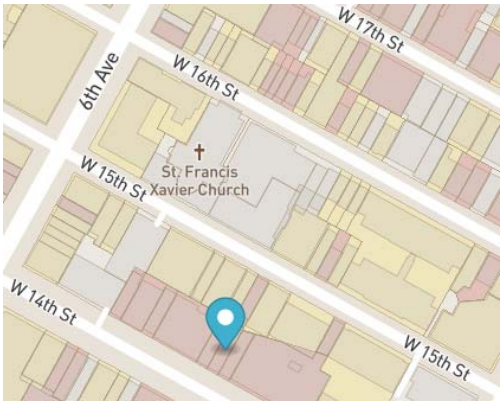
Site Value = 12,905 ABA SF @ $419.49 / ABA SF = $5,413,496

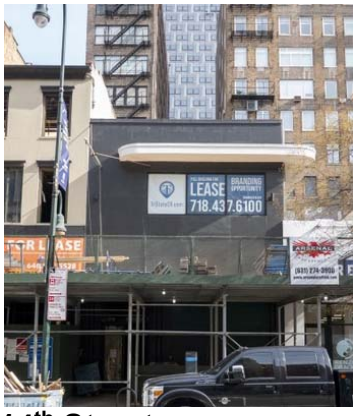
Photos and maps of the property sales comparables are shown below.





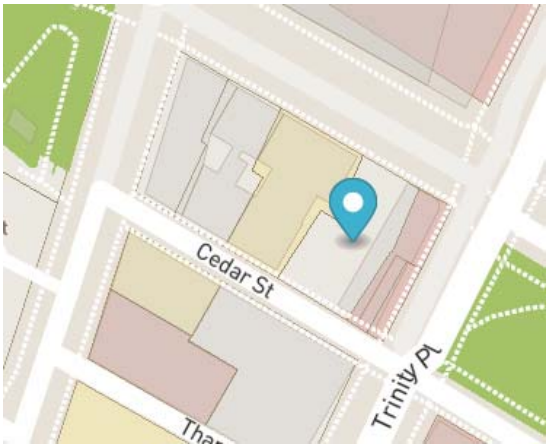
Property Sale Comp # 1 - 30 Thompson Street



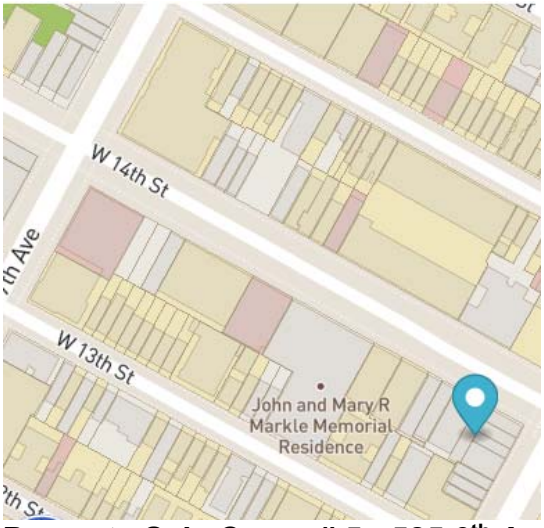


Property Sale Comp # 2 - 33 West 14th Street

Property Sale Comp # 3 - 10 West 17th Street

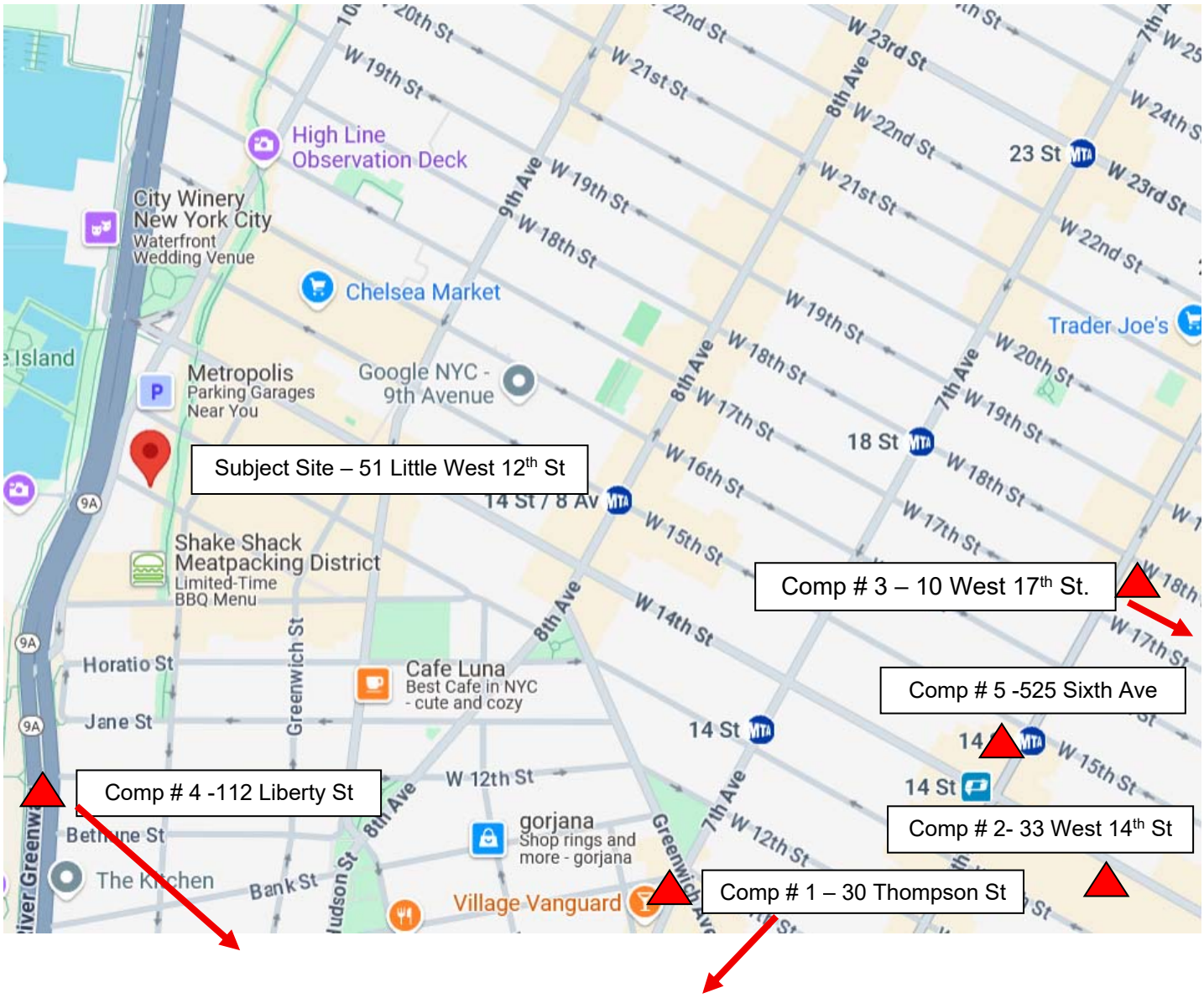


Property Sale Comp # 4 - 112 Liberty Street



Property Sale Comp # 5 - 525 6th Avenue

Property Sales Comparables and Subject Site



COMPARABLE LEASE AND SALES COMPARABLES

Restaurant Lease Comparables

The “as-of-right” commercial office development scenario and proposed residential development scenario envision a multi-level restaurant space consisting of the ground floor with support services at the cellar level accessed by a second service elevator, a rear portion of the second floor (“as-of-right” scenario only) and a full third floor. The proposed plan is enhanced by an outdoor terrace at the front of the building, views of the High Line are best seen from the restaurant terrace. The nearest access point from the High Line is at Gansevoort and Washington Street, one block south of the subject site.

A restaurant use at the subject site is better suited to the challenges of the space configuration and size compared to a traditional inline retail use. Unlike traditional retail that benefits from a concentration or continuum of retail stores, a restaurant can establish its own identity and is less influenced by the location. Under both development scenarios, this commercial space has a specialty profile and is not an easy match to the limited commercial retail condominium sales in the area. Therefore, the revenue associated with this restaurant space is derived from rental income compared to a sales transaction, and as such, the pro forma reflects a capitalized value of the net income of this commercial space. The capitalization rate applied reflects the high risk associated with restaurant use and particularly the multi-level space at the subject site.

The design of restaurant space at the subject site is unique and in many ways challenging to maximizing the number of seats, therefore, direct lease comparables are not available. The cellar level with its prep space and direct elevator access, separate from the passenger elevator, is a necessary component to support the restaurant space, as the small narrow lot results in very limited useable space, particularly on the ground floor where the circulation core and lobby area serve either office or residential units above. For restaurant staff and patrons, the small service elevator provides movement between the floors in addition to the stair that is located within the restaurant space. **Exhibit 3** presents a best effort to provide a basis from which to assign a rental rate to the multi-level restaurant space under both the “as-of-right” and proposed development scenarios.

In general, there is an expectation that a premium would be paid for a restaurant space with in a desirable Manhattan location like the Meatpacking District. As shown below, the rents can range between $120 to $250 (and as high as $400) per square foot annually, depending on location, pedestrian foot traffic, the profile of the space itself, amenities, and views. Although not every street has the same profile and value for ground floor commercial use, the Board believes that Little West 12th Street is equal to other streets in the Meatpacking area and beyond. Therefore, the location factor

associated with all lease comparables is deemed equal and directly comparable to the subject site.

It is assumed that the multi-level restaurant space will be assigned a rental rate that reflects a blend of value of the small food prep space at the cellar level, ground floor space, rear second floor space under the “as-of-right” scenario, and the third floor. It is expected that the rental rates will be influenced by the limited storefront display area, small prep area, operational challenges of multiple levels, a small service elevator shared by restaurant staff and patrons, as well as the configuration of the common core and its impact on the utility of the remaining space.

Exhibit 3

Restaurant Lease Comparables - Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
Location	823 Washington St	248 West 14th St (Built-Out)	245 West 14th St (Build out)	70 Seventh Ave (Built Out)	301 West 13th St (Built-Out)
Block-Lot	644-23	618-9	764-7503	764-39	629-42
Lease Date	Immediate	Immediate	Leased	Immediate	Immediate
Size (SF)	1,125	2,000	3,964	1,200	500
Price/SF	$185.00	$180.00	$135.00	$185.00	$240.00
Time	0.95	0.95	1.05	0.95	0.95
Location	1.00	1.00	1.00	1.00	1.00
Size & Layout	0.85	0.90	0.95	0.85	0.75
Condition (Built Out)	1.00	0.90	0.90	0.90	0.90
Visibility	0.80	0.80	0.80	0.80	0.80
Outdoor Dining / Event Space	1.25	1.25	1.25	1.25	1.25
Composite Adj.	0.80	0.77	0.89	0.72	0.64
Adj. Price/SF	**$148.79**	**$137.96**	**$120.71**	**$133.91**	**$153.28**
Avg. Adj. Price/SF		**$ 138.93 /SF**			

Commercial Restaurant Lease Comparables – Adjustment Factors

Time: Adjustments downward were made to all lease comparables to reflect the negotiability of asking prices. Comp #3 was leased about a year ago and requires an upward adjustment.

Location: Lease Comp # 1 is the closest to the subject site and no adjustment has been assigned. The remaining lease comparables reflect a more consistent, active location with a higher density of residents and workers and therefore a small downward adjustment was applied.

Size & Layout: A downward adjustment was made to lease comparables with spaces smaller than the subject site, as rental rates tend to garner a higher rates per square foot for smaller spaces. Moreover, the multi-level restaurant use at the subject site is a challenging situation for any prospective restaurant operator.

Condition (Built-Out): Downward adjustments were made to all comparables, except Comp # 1, to reflect the restaurant built-out construction condition.

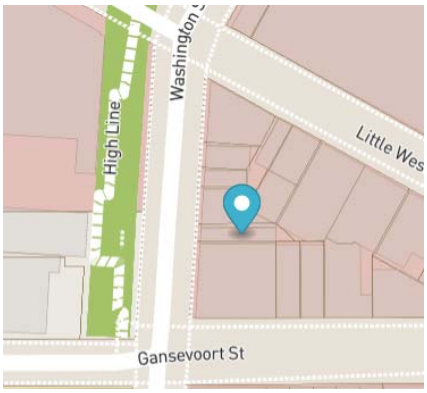
Visibility: The subject site offers very little storefront display frontage, while the lease comparables provide a traditional storefront merchandising-signage area for the prospective tenant.

Outdoor Dining/Event Space: Given the multi-level restaurant space with outdoor terraces under both scenarios, the potential for entertainment event type activity is an added value and an upward adjustment was applied to all lese comparables.

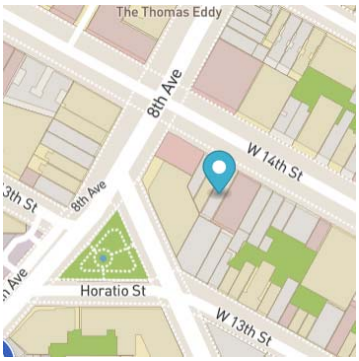
Blended Rental Rates

Based on the above, the “as-of-right” restaurant space totals 3,623 square feet consisting of a small partial cellar food prep area, ground floor space, second floor restrooms and circulation space, and a third floor (no front terrace). Given the small cellar prep area and the second floor (non-serving area), the rental rate is at the lowest at $50 per square foot. The ground floor is at the highest at $200 per square foot and the third floor is assigned $125 per square foot. The blended rate is equivalent to $131 per square foot, equivalent to a monthly rent of almost $39,500.

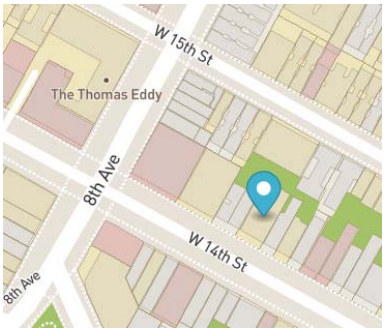
The proposed plan that totals 3,823 square feet applies the same blended rental rate methodology and evaluation of space utilization and results in $139 per square foot, equivalent to a monthly rent of $40,000. More specifically, $200/sf is assigned to the ground floor space, a discounted rate of $50 per square foot is applied to the small prep area at the rear of the cellar, and $125 per square foot is applied to the third floor restaurant area and front terrace. The proposed plan has no interior second floor restaurant use.



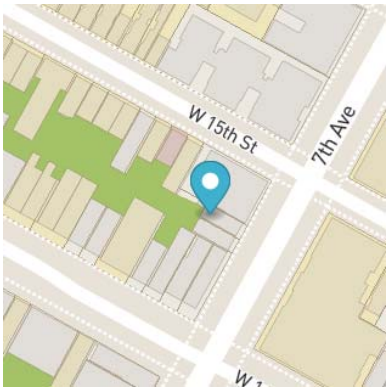
Comp # 1 - 823 Washington Street



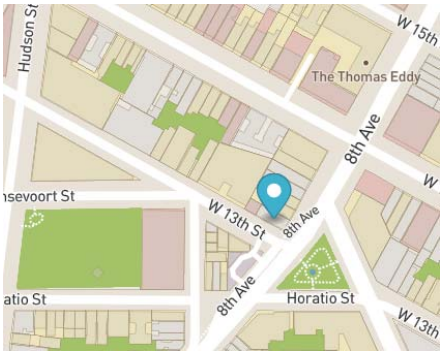
Comp # 2 - 248 W 14th Street



Comp # 3 - 245 W 14th Street

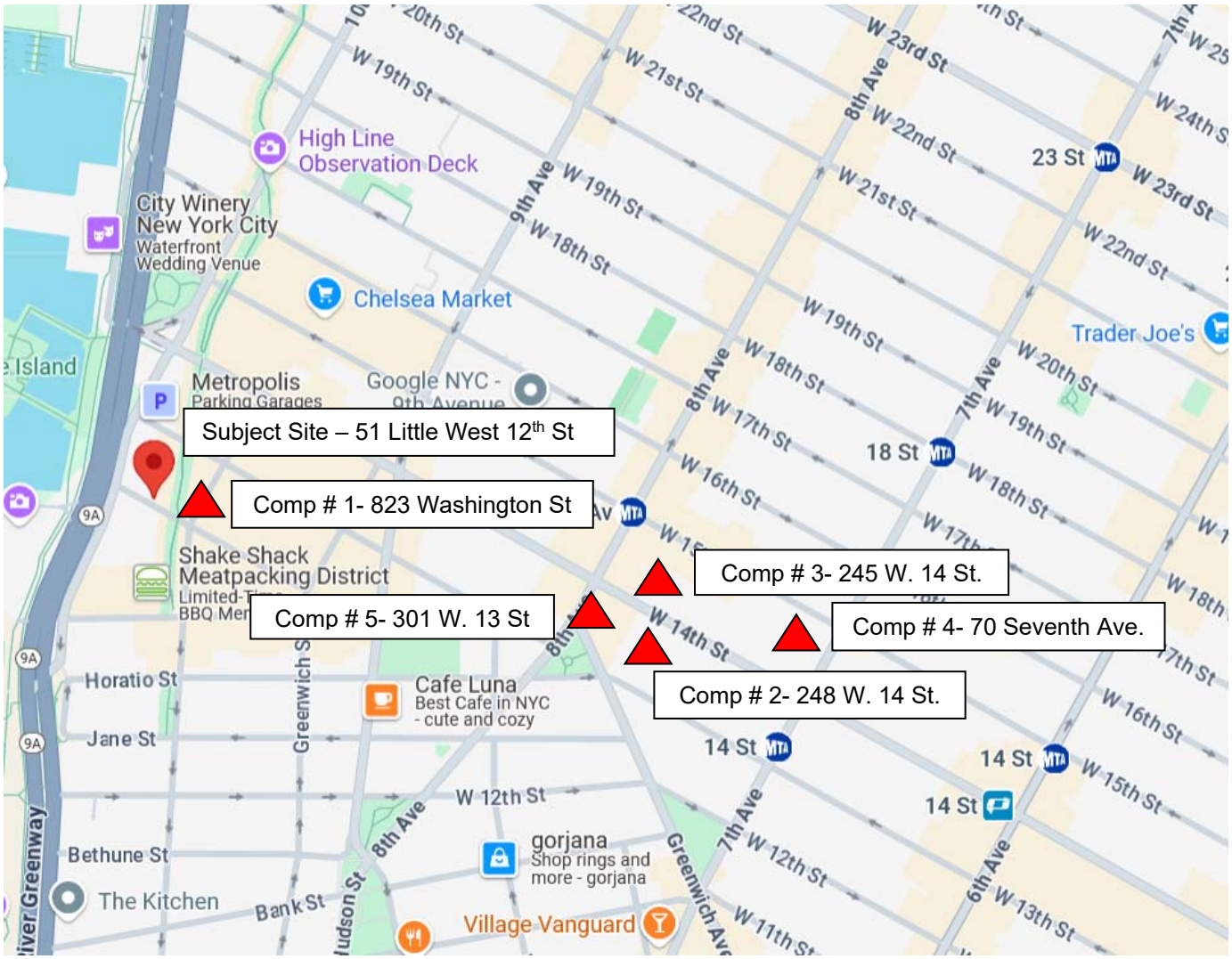


Comp # 4 - 70 Seventh Avenue



Comp # 5- 301 West 13th Street

Subject Site and Restaurant Lease Comparables



Office Lease Comparables

The "as-of-right" commercial development scenario consists of a 7-story building with a multi-level restaurant use and mechanical space on the lower three floors and commercial office space on the upper floors (floors 4 through 7). The common core requirements reduce the utility of the office space overall, as the floorplate of 2,034 gross square feet is reduced to 1,380 square feet on floors 4-6. The 7th floor setback reduces the net office space to 689 square feet; however, does benefit from a front and rear terrace. Although the useable space from a tenant perspective is very important as alternatives are considered, the overall rental income (from the landlord's perspective), is based on gross square feet of non-restaurant space, not net square feet of the office space itself.

Exhibit 4

Office Lease Comparables - Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4	NO. 5
Location	314 West 14th St (Partial Built-Out)	426 West 14th St - 2nd flr	112-114 West 14 St - 5th Flr	31 Washington Sq. West - (Medical-Built Out) - 3rd flr	419 West 13th St- 2nd flr
Block -Lot	629-28	646-29	609-31	552-61	646-56
Lease Date	Immediate	Immediate	Immediate	Immediate	Immediate
Size (SF)	1,100	3,212	1,159	1,200	3,023
Price/SF	$60.00	$59.00	$56.45	$65.00	$70.00
Adjustment Factors					
Time	0.95	0.95	0.95	0.95	0.95
Location	0.95	1.00	0.95	0.95	1.00
Size	1.00	1.05	1.00	1.00	1.05
Condition (Built-Out)	0.95	1.05	1.05	0.95	1.05
Composite Adj.	0.86	1.05	0.95	0.86	1.05
Adj. Price/SF	**$51.44**	**$61.80**	**$53.49**	**$55.73**	**$73.32**
Avg. Adj. Price/SF		**$ 59.16/SF, Say $60.00/SF**			

Commercial Office Lease Comparables – Adjustment Factors

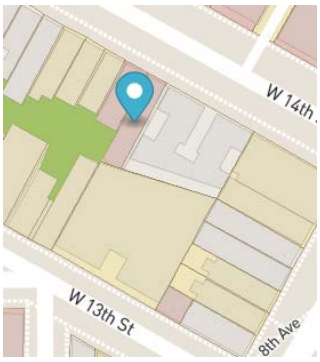
Time: A downward adjustment was made to all comparables to reflect the negotiability of asking prices.

Location: Downward adjustments were made as all the lease comparables, except Comps # 1 and #5, as they are better located in terms of proximity to public transportation.

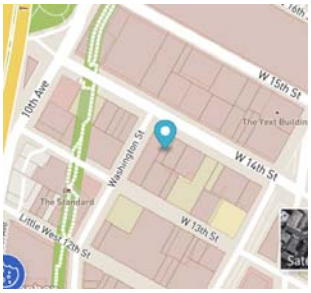
Size: An upward adjustment was made to Comps # 2 and # 5, as the unit size for the "as-of-right" office use at the subject site is smaller, and small spaces tend to garner a higher price per square foot.

Condition: Upward adjustments were made to all comparables, except Comps # 1 and # 4, to reflect the new construction at the subject site. The downward adjustment for Comps #1 and # 4 reflects the built-out condition of the space.

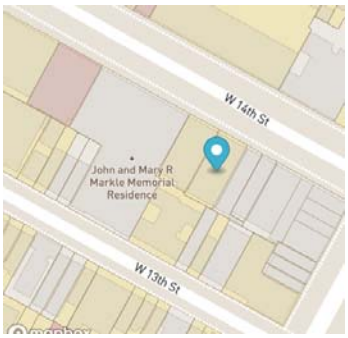
Based on the above, the commercial office space is assigned $60.00 per gross square foot in the "as-of-right" development scenario.



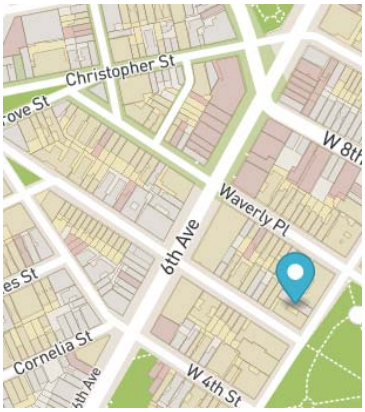
Comp # 1 – 314 W 14th Street



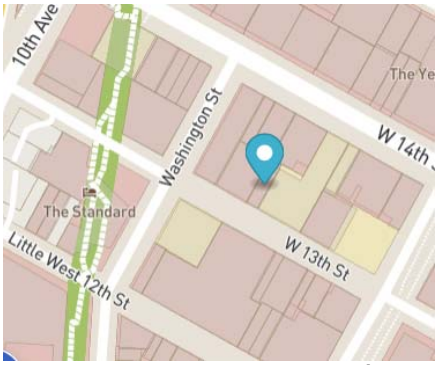

Comp # 2 - 426 W 14th Street

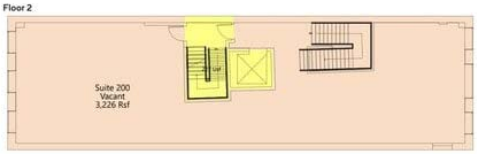



Comp # 3 – 112-114 West 14 Street



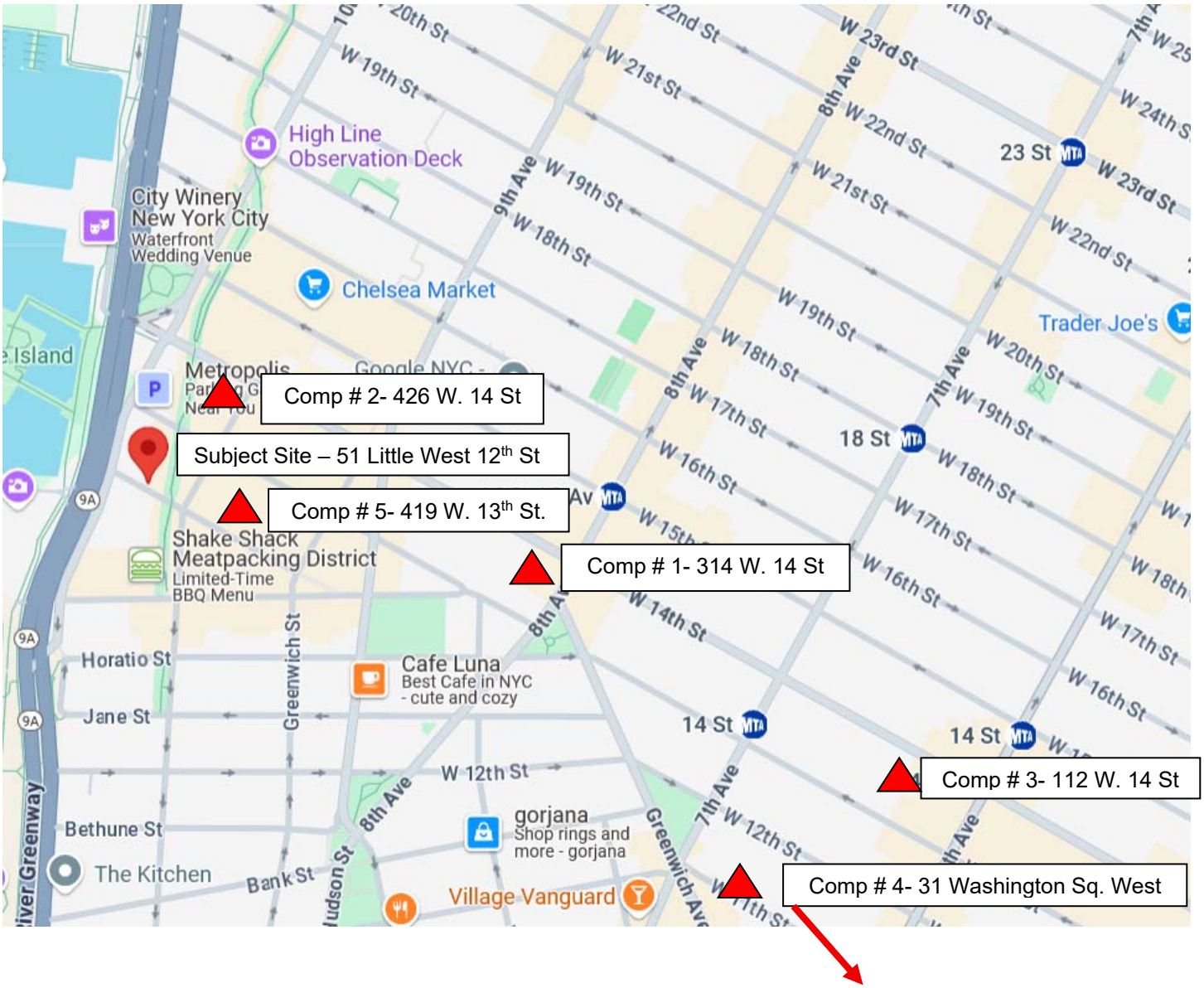

Comp # 4 - 31 Washington Square West



Comp # 5 - 419 West 13th Street

Subject Site and Commercial Office Lease Comparables



COMPARABLE RESIDENTIAL SALES

The proposed development scenario analyzed in this report is represented by a 9-story building with a multi-level restaurant space on the ground and third floors and residential condominiums on floors 4 through 9. Mechanical equipment and resident bicycle storage is assigned to the second floor due to flood zone requirements. The building totals 17,539 gross square of above grade area, or 11,379 zoning square feet, equivalent to a FAR of 4.41.

The 6 residential condominium units consist of small, two-bedroom/1.5 bath units on floors 4 through 9. Each unit contains 770 square feet representing a total net residential area of 4,620 square feet. Individual units benefit from small balconies at the front (Little West 12th Street) of the building offering a downtown city view. The High Line to the east can be viewed by residents.

The proposed development scenario has a single passenger elevator servicing residents only, while the restaurant staff and patrons use a small service elevator or stair located within the restaurant space to reach the third floor. The unique multi-level layout of the restaurant space and its outdoor terrace lend itself to entertaining and special events which may impact the residential units at the lower floors, particularly during the seasonal months.

The area's two-bedroom condominium units in new developments are generally much larger overall, have larger bedrooms with connecting bathrooms and often incorporate full-service amenities as well. The subject site will be at a competitive disadvantage due to its small two-bedroom/1.5 bath units, the lack of building-wide amenities, and less than standard 10 foot ceiling heights. It is expected that the subject site's condominium units will have high quality finishes throughout to offset some of the disadvantages compared to other available units offered in the market. These quality finishes are assumed to be represented by Luxury High Rise occupancy category shown in the Marshall & Swift Valuation Service cost manual.

Moreover, on the opposite block, the existing vacant meat-packing buildings await the redevelopment of Block 644 (Gansevoort Square) as described in the NYCEDC presentation. Aside from the very tall tower planned, it is unknown as to how the streetscape opposite the subject site will be designed and occupied. Uncertainty about the future can be problematic for prospective tenants and buyers.

Residential Condominium Sales Market

The Manhattan condominium sales reports prepared by Miller Samuels for Douglas Elliman and Corcoran for the 3rd Quarter 2025 provide context for determining comparability to the two-bedroom/1.5 bath units under the proposed plan for the subject site. The focus is on new developments, particularly in the Downtown target area, and for two-bedroom/1.5 bath units with private outdoor space with a unit size approximating 770 square feet, if available. Both reports provide similar statistics, although The Corcoran Report offers insight into the Downtown market, while the Elliman report only evaluates Manhattan sales overall. Selected pages of both reports are provided in the Appendix with summary charts presented below.

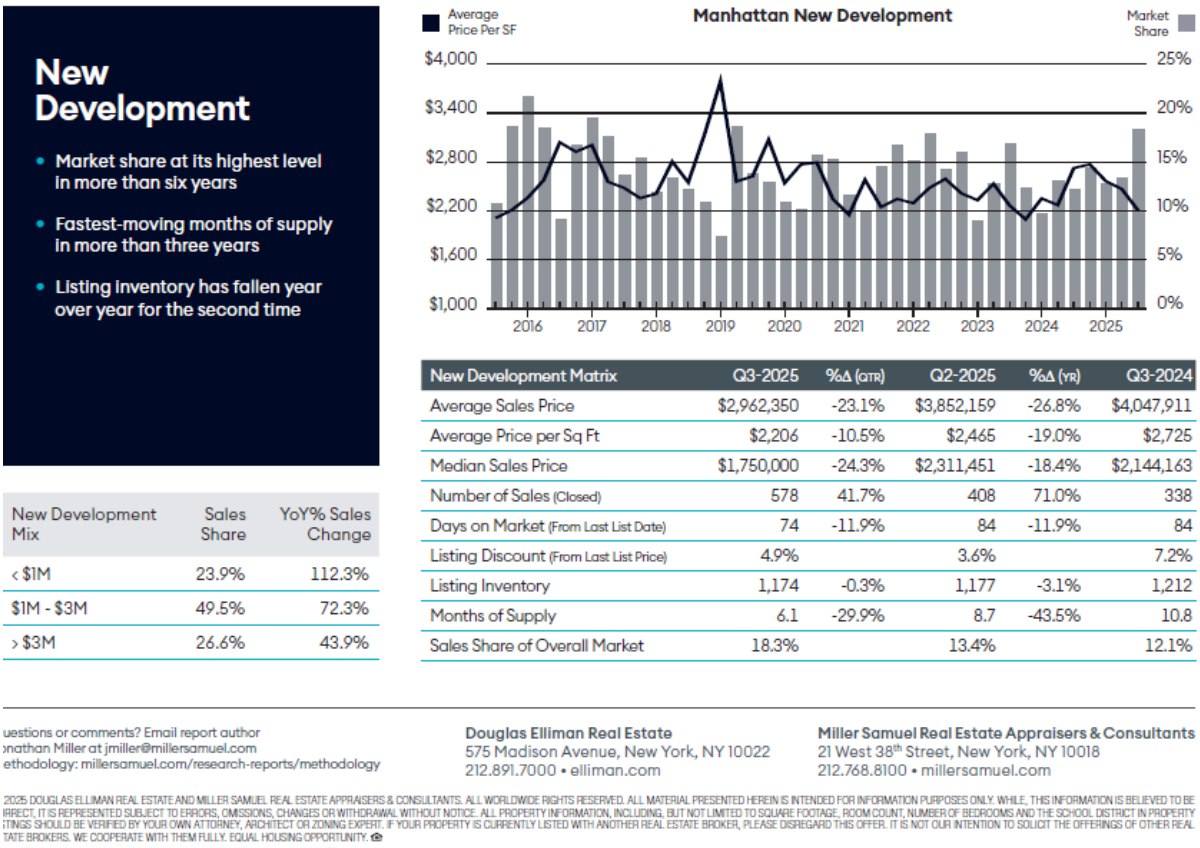
According to The Corcoran Report, overall Manhattan condominium sales within new developments had a median sales price of $1,964 per square foot in 3rd quarter 2025, or about $2.6 million for a two-bedroom unit, a minimal increase from the 3rd quarter 2024. The Elliman report indicates condominium sales in new developments had a median sales price of $1.7 million and an average of $2,206 per square foot for all unit types. Two-bedroom units among all condominiums had a median price of $2.15 million

Manhattan – New Development Sales Overall

New Development Prices

PRICES	3Q25	3Q24	%CHG (YR)	2Q25	%CHG (QTR)
MEDIAN PRICE	$2.094M	$2.295M	-9%	$2.275M	-8%
AVERAGE PRICE	$3.263M	$3.715M	-12%	$3.890M	-16%
MEDIAN PPSF	$1,964	$1,928	2%	$1,904	3%
AVERAGE PPSF	$2,339	$2,513	-7%	$2,478	-6%
MEDIAN PRICE BY BEDROOM					
STUDIO	$1.013M	$825K	23%	$822K	23%
1 BEDROOM	$1.350M	$1.327M	2%	$1.322M	2%
2 BEDROOM	$2.610M	$2.500M	4%	$2.282M	14%
3+ BEDROOM	$5.376M	$4.995M	8%	$5.700M	-6%

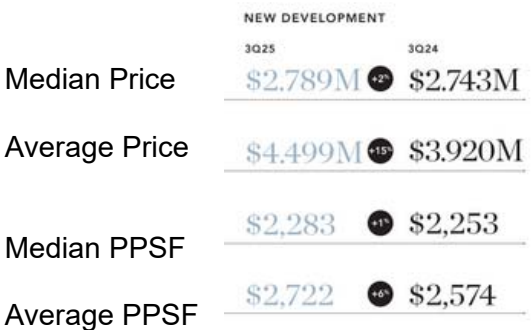
Source: The Corcoran Report – Manhattan – 3rd Qtr 2025



Source: Elliman Report – Manhattan Sales – 3rd Quarter 2025

<u>Manhattan – New Development – Downtown Area</u>

Within the Downtown target area defined in The Corcoran Report, the median sales price for all unit types was $2.8 million, or $2,283 per square foot, practically no change from the 3rd Quarter 2024. The median price for two-bedroom units was $3.0 million. It is important to note that reported sales prices from these industry sources reflect many sales contained in new developments providing large units and full service, building-wide amenities and often water views. The residential condominium pricing under the proposed plan is expected to be more aligned with the smaller units, regardless of unit type in buildings with limited or no amenities.



NEW DEVELOPMENT

3Q25

STUDIO	$995K	+18%
1 BEDROOM	$1.380M	-14%
2 BEDROOM	$3.025M	-3%
3+ BEDROOM	$8.165M	+33%

3Q24

STUDIO	$843K
1 BEDROOM	$1.609M
2 BEDROOM	$3.120M
3+ BEDROOM	$6.150M

Source: The Corcoran Report – Manhattan – 3rd Qtr 2025

Residential Sales Comparables

In the prior report, unit size was a primary factor in the research on recent residential condominium sales, as condo sales are based on price per square foot compared to residential rentals that are based on number of bedrooms and baths. In the prior report, research demonstrated that of the 114 residential condo sales identified within the vicinity of the subject site, approximately 70 or 61% were units with over 1,000 square feet, not comparable to the proposed plan units that average 770 square feet presented as two-bedroom/1.5 bath units.

As per the Board's direction, this report identifies two-bedroom units with private outdoor space in close vicinity to the subject site. Large units still dominate the condo market; however, special attention has been given to identify the most comparable units. **Exhibit 5** presents the residential sales comparables that meet the two-bedroom with private outdoor space criteria, adjusted to determine comparability to the proposed plan two-bedroom/1.5 bath units.

Exhibit 5

Residential (Two-Bedroom with Private Outdoor Space) Sales Comparables – Adjustment Grid

	NO. 1	NO. 2	NO. 3	NO. 4
Location	519 W. 23rd St	140 Charles St	366 W. 11th St	99 Jane St
Unit #	Unit # 8	Unit # 7A	Unit # 5BC	Unit # 6J
Block-Lot	695-7505	631-7502	637-7502	602-7502
Sales Date	5/30/2025	9/18/2025	3/21/2025	3/4/2026
Unit Size (SF)	1,696	1,115	1,184	1,208
Unit Type	2 Bedrm/2 Bath	2 Bedrm/2 Bath	2 Bedrm/2 Bath	2 Bedrm/2 Bath
Sales Price	$2,550,000	$2,625,000	$2,900,000	$3,150,000
Price/SF	$1,504	$2,354	$2,449	$2,608
Adjustment Factors				
Time	1.00	1.00	1.00	1.00
Location - High Line Proximity	1.00	1.10	1.10	1.10
Size (SF & Full Second Bath)	1.35	1.20	1.25	1.25
Interior Space Layout	0.95	1.00	0.95	0.95
Building Wide Amenities	1.00	0.75	0.90	0.75
Condition	1.05	1.05	1.05	1.05
Unit Outdoor Space	1.00	1.00	1.00	1.00
Composite Adj.	**1.35**	**1.04**	**1.23**	**1.03**
Adj. Price/SF	**$2,025**	**$2,447**	**$3,023**	**$2,682**
Avg. Adj. Price/SF:	**$ 2,544/SF**			

Time: The sales comparables reflect recent sales and don't require an adjustment.

Location & Proximity to High Line: Although all the sales comparables are located far west in proximity to the waterfront, only Comp # 1 is comparable to the subject site as it is directly benefits from the High Line. Upward adjustments were made to the remaining sales comparbles.

Size & Layout: The sales comparables are expressed in price per square foot and larger units tend to have a lower price per square foot compared to smaller units. All sales comparables are larger than the subject site units and therefore require an upward adjustment; however, there is an offset represented by the added bath.

Interior Space Layout: A downward adjustment was applied to all sales comparables except for Comp # 2 due to the layout of the space which reflects larger closets and master bedroom setups with connecting master bathrooms.

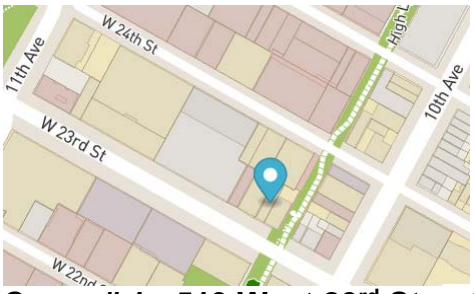
Building-Wide Amenities: Except for Comp # 1 which is similar to the subject site's lack of building-wide amenities, a downward adjustment was made to sales comparables that offered a range of building-wide amenities, such as a gym, full time doorman/concierge, generous roof deck, extra storage, on-site parking etc.

Condition: An upward adjustment is assigned to all comparables as the subject site will be new construction.

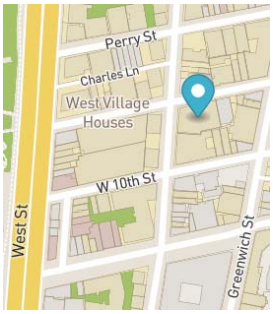
Unit Outdoor Space: No adjustments have been made, as all sales comparbles contain private outdoor space similar to the subject site.

Based on the above, the average adjusted sales price per square foot for the 770 square foot units on floors 4-9 of the proposed plan is $2,544 per square foot. It is expected that the upper floors will garner a higher price, while the lower floors will require a discount.

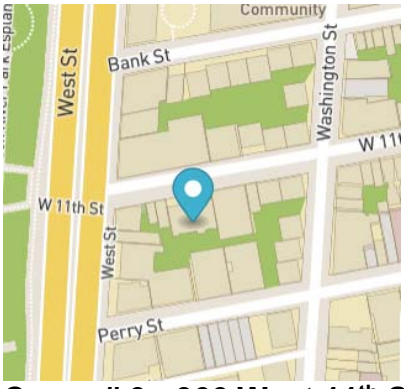
Photos, unit floor plans (where available) and a map are shown below for each of the residential sales comparable presented in **Exhibit 5**.



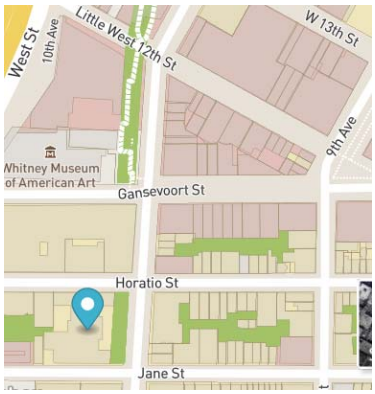

Comp # 1 - 519 West 23rd Street – Unit # 8

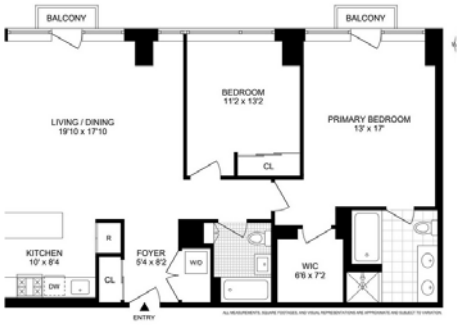



Comp # 2 - 140 Charles Street – Unit # 7A



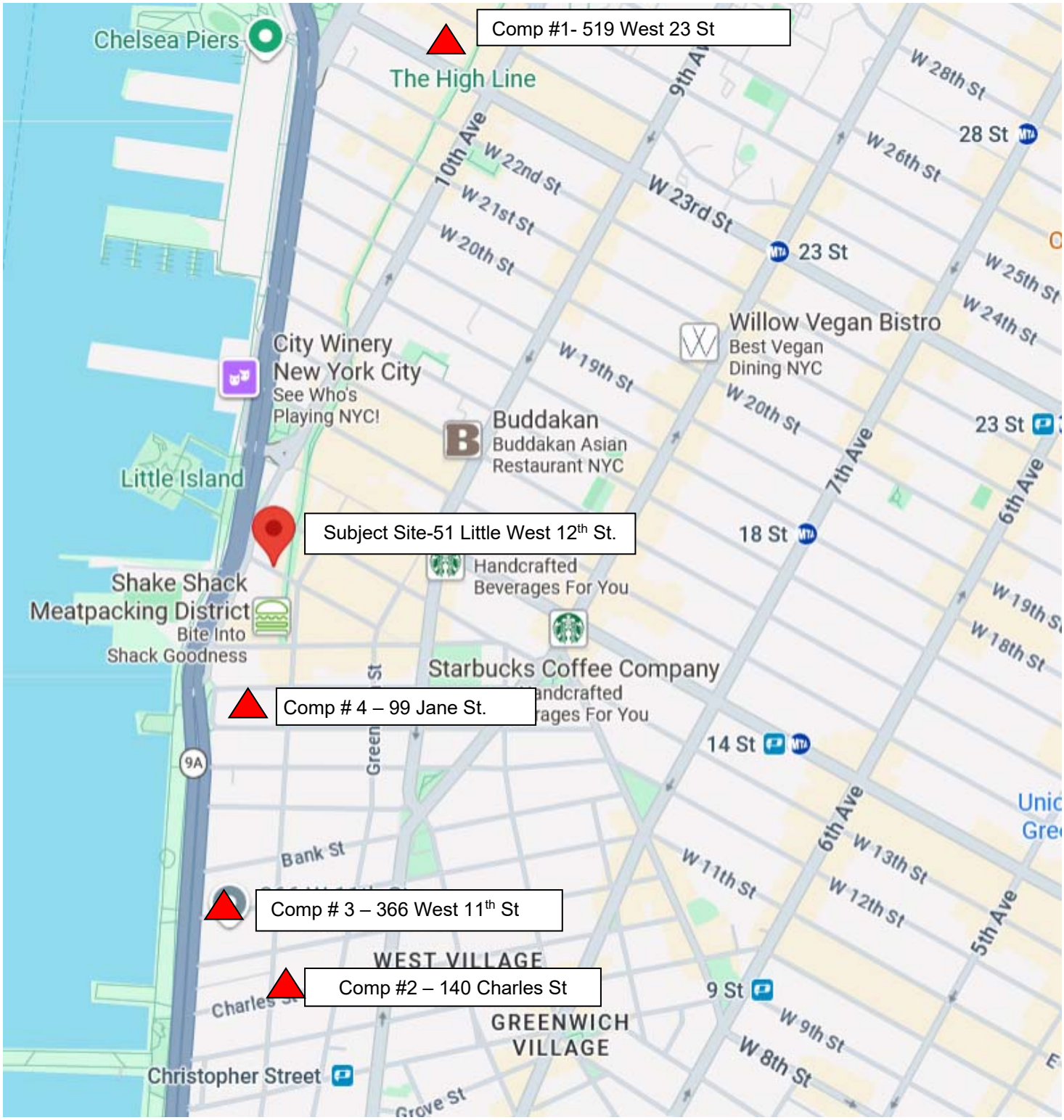

Comp # 3 - 366 West 11th Street - Unit 5 B/C



Comp # 4 - 99 Jane Street - Unit 6J

Subject Site and Residential (Two-Bedroom with Private Outdoor Space) Sales Comparables



Comparable Rate Summary

Exhibit 6 below summarizes the adjusted comparable rates for the subject site's "as-of-right" and proposed development scenarios.

Exhibit 6

Comparable Rates and Pro-Forma Rate Summary

Use	Comparable Rate	Pro Forma Rate
Site Value	**$5,413,496**	**$5,413,496**
Restaurant (Blended) Rental		
"As-of-Right"	$ 138.93/SF	$ 131.00/SF
Proposed	$ 138.93/SF	$ 139.00/SF
Office Rental	$ 59.16/SF	$ 60.00/SF
Residential Condo Sales		
Two-Bedroom w/ Private Outdoor Space	Avg. Adj. $2,544/SF	Avg. Adj. $2,544/SF

COST ANALYSIS

Construction costs for each of the scenarios analyzed is based on the **Marshall & Swift Valuation Service** for the above grade building area.[1] The Marshall & Swift costs are adjusted to local conditions and updated according to the March 2026 cost modifiers shown in the Marshall & Swift cost manual. They are assumed to represent typical costs in the New York market for the type of structure contemplated in each scenario. Where special items exist, such as sprinklers, elevators, HVAC systems, or office finishes, they have been added to the base cost derived from the **Calculator Cost Section[2]** of the manual. The Marshall & Swift manual also provides a **Segregated Cost Section[3]** which gives special consideration to the all the major building components. In the development of the subject site, the cost of the special foundation components are derived from the Segregated Cost Section, as they are priced in addition to other foundation costs. The **Appendix** provides the Marshall & Swift individual pages from both the Calculator and Segregated sections.

Foundation Design and Cost

The GZA Geo-Technical report identified key site considerations and the structural design prepared by DeSimone Engineers demonstrate an integrated support of excavation and foundation design that serves multiple functions for both the "as-of-right" and proposed development scenarios. The deep foundation required consists of mini-caissons (often called micropiles) and tangent piles (or tangent walls). The mini-caissons/micropiles are small-diameter, high-capacity piles used primarily for vertical load support in tight spaces, whereas tangent piles are a series of adjacent, non-overlapping concrete piles used to form retaining walls for excavation support.

According to Marshall & Swift (Segregated Section 51, page 4), "Pilings and special foundations must be priced in addition to other foundation costs", and therefore are incorporated into the base cost of each scenario based on the DeSimone deep foundation design. Due to the lack of specificity in the Marshall & Swift Cost Manual, pricing of the following special add-on items have been excluded, thereby undervaluing the total construction cost. These items include: the installation of liner wall inboard of the tangent wall, added waterproofing, required ground water control and adjacent structures monitoring.

[1] Marshall & Swift: Section1, Page 3
[2] Marshall & Swift: Section 1, Page 1 & 3; Section 10, Page 1
[3] Marshall & Swift: Section 40, Page 1

The calculation of the special foundation items, based on the Segregated Cost Section - 51, Page 4 (March 2025) is as follows:

"As-of-Right" Restaurant & Office Scenario

Special Foundation Item	Unit Basis	Unit Cost	Total Cost
Tangent Wall Micropiles - 83 ea x 35 ft	$58.50	2,905	$169,943
Micropile Installation - (16 load-bearing piles x 55 ft)	$49.50	880	$ 43,560
Subtotal			**$213,503**
Architect Fee Multiplier (7.10%) & Current Cost Multiplier (4%)			$ 24,305
TOTAL COST			**$237,808**
COST PER ABOVE GRADE SF	**14,905 SF**		**$15.95/SF**

Proposed Restaurant & Residential Scenario

Special Foundation Item	Unit Basis	Unit Cost	Total Cost
Tangent Wall Micropiles - 83 ea x 35 ft	$58.50	2,905	$169,943
Micropile Installation - (44 load-bearing piles x 55 ft)	$49.50	2,420	$119,790
Subtotal			**$289,733**
Architect Fee Multiplier (7.10%) & Current Cost Multiplier (4%)			$ 32,983
TOTAL COST			**$322,716**
COST PER ABOVE GRADE SF	**17,539 SF**		**$18.40/SF**

7-Story Restaurant and Commercial Office Building

According to Marshall & Swift Valuation Service, the base cost for an Average Class B commercial building is $269.32 per square foot of above grade area, and includes the passenger elevator, an added service elevator and stops at the ground through third floors, the shell space for the multi-level restaurant use, outdoor terraces, sprinklers and the added cost of tangent wall/micropile system. The configuration of the lot has a major effect of the size and shape of the building. In addition to the base cost, façade ratio adjustment, building and floor height adjustments are applied. The local multiplier for Manhattan and the adjustment to reflect current March 2026 costs was applied as well. The base construction costs for this type of structure rise to $400.69 per square foot of above grade building area, or a total cost of $5,972,338

9-Story Residential and Restaurant Building

According to Marshall & Swift Valuation Service, the base cost for an Average Class B Luxury residential elevator building is $311.44 per square foot of above grade area, and includes the passenger elevator, an added service elevator and stops at the ground through third floors, the shell space for the multi-level restaurant use, outdoor terraces and private unit balconies, sprinklers and the added cost of tangent wall/micropile system. The configuration of the lot has a major effect of the size and shape of the building. In addition to the base cost, façade ratio adjustment, building and floor height adjustments are applied. The local multiplier for Manhattan and the adjustment to reflect current March 2026 costs was applied as well. The base construction costs for this type of structure rise to $535.53 per square foot of above grade building area, or a total cost of $9,392,603.

Construction Cost Summary

Development Scenario	Est. Total Base Construction Cost	$/SF (incl Cellar)
“As-of-Right” Scenario	$5,972,338	$342.67/SF
Proposed Plan	$9,392,603	$468.13/SF

PRO FORMA ANALYSIS

Exhibit 7 presents a summary of the assumptions used in each scenario. **Exhibit 8** summarizes costs, income, and expenses for each development scenario, as well as an investment analysis for each scenario. **Exhibit 9** presents a breakdown of the development costs for each scenario, including site valuation, base construction costs, FF & E costs, financing and soft costs.

Economic and Financial Assumptions

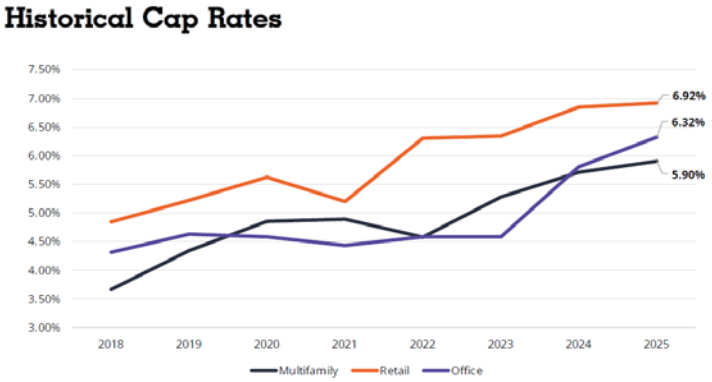
The building size, zoning floor area and rentable area are as per the architectural schemes prepared by Walter Marin Architect. The hard construction costs are as per the estimates provided by the Marshall & Swift Valuation cost manual (both the Calculator & Segregated Cost Sections) informed by the preliminary structural design was prepared by DeSimone Engineers.

The **construction loan rate for market rate scenarios** is based on the average paid in a survey of 312 appraisers, lenders and developers taken by *RealtyRates.com* in the fourth quarter of 2025. The **construction loan amount** is equal to 75% of the total development costs, as this is the average loan to cost ratio according to the *RealtyRates.com* survey.

Lease and Sales rates were based on an analysis of comparable sales and industry sources (see **Exhibit 6**). **Current and New Real Estate Taxes** are the actual 2025 taxes on the property for the "as-of-right" commercial development scenario, and it is assumed that proposed condominium owners are responsible for their property taxes.

Soft costs are based on industry standards for each type of development envisioned in each scenario. Where they are typically calculated on a percentage basis, this is shown in **Exhibit 9**.

Capitalization Rates for the leased space in each scenario are based on the average provided by Realty Rates.com and IRR Viewpoint and further defined by the Avison Young's "Manhattan Property Sales – 4th Qtr 2025" shown below.



Source: Avison Young: Manhattan Property Sales Report – 4th Qtr 2025

Exhibit 7

Basic Development Assumptions

	As of Right Restaurant & Office Rental - 7 Story	Proposed Restaurant & Residential Condo-9 story
Site Area	2,581	2,581
Gross Building Area - Above Grade (SF)	14,905	17,539
Gross Building Area - Including Cellar (SF)	17,429	20,064
Number of Stories	7	9
Zoning Floor Area (SF)	12,904	11,379
FAR over Entire Site	5.00	4.41
Rentable/Saleable Area		
Commercial Office Gross SF (incl all Common Area)	10,827	
Restaurant SF: Cellar,Grnd Flr, 3rd Flr		3,823
Restaurant SF: Cellar,Grnd Flr, Part 2nd Flr & 3rd Flr	3,623	
Residential -Two Bedrm/1.5 Bath: # Units		6
Net Residential (SF)		4,620
Construction Loan Rate	5.0%	5.0%
Lease up/Sellout Time - Months	9	10
Construction Loan Amt.	$8,918,688	$11,204,928
Site Value	$5,413,496	$5,413,496
Sales & Lease Rates - Sq. Ft.		
Commercial Office-$/SF	$60	
Restaurant (Blended Rate)- $/SF	$131	$139.00
Residential (Two Bedrm/1.5 Bath) Unit - Approx 770 SF : Avg. $/SF		$2,544
Commercial Vacancy Rate	5%	5%
FF&E (Restaurant & Ofc. Only | Resid Condo incl. MS Cost)	$35.00	$35.00
Base Constr. Costs/SF: Entire Bldg. (incl. Cellar SF)	$342.67	$468.13
Total Base Constr. Costs (Entire Bldg,Incl Cellar SF)	$5,972,338	$9,392,603
M&O Expenses	$7.30	
Management	5.0%	
Current Real Estate Taxes	$39,732	$39,732
New Real Estate Taxes	$39,732	$39,732
Capitalization Rate - Commercial Space Only	7.5%	7%

Exhibit 8

Pro Forma Analysis Summary

	As of Right Restaurant & Office Rental - 7 Story	Proposed Restaurant & Residential Condo-9 story
Building Area (Sq. Ft.)		
FAR	5.00	4.41
Total Zoning Floor Area	12,904	11,379
Saleable Residential Area	0	4,620
Rentable Restaurant Area	3,623	3,823
Rentable Commercial Office Area	10,827	0
Capital Investment Summary		
Site Value	$5,413,496	$5,413,496
Total Base Constr. Costs (Entire Bldg ,incl Cellar SF)	$5,972,338	$9,392,603
FF&E (Restaurant & Ofc. Only | Resid Condo incl. MS Cost)	$505,750	$133,805
Est. Soft Costs	$1,092,787	$1,660,725
Est. Total Dev. Costs	**$12,984,371**	**$16,600,629**
Rental Income and Expenses		
Restaurant Rental Income	$473,725	$531,397
Commercial Office Rental Income	$649,620	$0
Gross Rental Income	**$1,123,345**	**$531,397**
Less Vacancy	($60,661)	($26,570)
Effective Rental Income	**$1,062,684**	**$504,827**
Less M&O Expenses	($108,807)	
Management	($53,134)	
Less Real Estate Taxes	($39,732)	
Net Operating Income	**$861,012**	**$504,827**
Return on Investment		
Project Development Cost	$12,984,371	$16,600,629
Less Capitalized Value of Net Operating Income	($11,480,155)	($7,316,336)
Less Residential Sales		($11,755,356)
Est. Project Value/Profit	**($1,504,216)**	**$2,471,063**
Annualized Return As % of Cost	**-5.1%**	**6.3%**

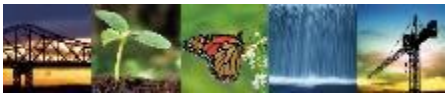
Exhibit 9

Development Cost Summary

		As of Right Restaurant & Office Rental - 7 Story	Proposed Restaurant & Residential Condo-9 story
	Basis		
Site Value		$5,413,496	$5,413,496
Total Base Constr. Costs (Entire Bldg ,incl Cellar SF)		$5,972,338	$9,392,603
FF&E (Restaurant & Ofc. Only | Resid Condo incl. MS Cost)		$505,750	$133,805
Est. Soft Costs		$1,092,787	$1,660,725
Est. Total Dev. Costs		**$12,984,371**	**$16,600,629**
Est. Const. Loan Amount		$8,918,688	$11,204,928
Est. Const. Period (Mo.)		18	19
Est. Soft Costs:			
Archit. & Engin. Fees; Nominal Bldg Permit Fees & Survey		Incl. in MS Cost	Incl. in MS Cost
Construction Management	3.5%	$226,733	$333,424
Controlled Inspections, Borings & On-Going Surveys/Expediting		$35,000	$35,000
Dev. Legal Fees		$25,000	$45,000
Site Safety/Security & Other Consultants		$30,000	$30,000
Permits & Approvals		$25,000	$30,000
Accounting		$5,000	$7,500
Real Property Tax		$89,397	$94,364
Insurance	3%	$179,170	$179,170
Appraisal Fees		$6,500	$6,500
Con. Loan Int., Loan Rate@		Incl. in MS Cost	Incl. in MS Cost
Con. Lender Fees	1.25%	$111,484	$140,062
Con. Lender Legal		$15,000	$15,000
Bank Inspect. Engin.		$7,500	$7,500
Residential Brokerage-Sales	6%	$0	$705,321
Commercial Brokerage	30%	$337,004	$31,884
Total Est. Soft Costs		**$1,092,787**	**$1,660,725**

APPENDIX

GZA
Geo Technical Report
January 2025



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January 30, 2025
GZA Project No.: 41.0163381.00

Mr. Novac Noury
51 Little West 12th Street
New York, New York 10014

Re: Geotechnical Engineering Report
51 Little West 12th Street
New York, New York 10014

Dear Mr. Noury,

GZA GeoEnvironmental of New York (GZA) is pleased to submit this geotechnical engineering report for the proposed development at 51 Little West 12th Street in New York, New York (Site).

SCOPE OF SERVICES

Our services were performed in accordance with our proposal number 41.P000374.25R1, and are subject to the terms of our agreement and the limitations presented in **Appendix A**.

Our scope of services consisted of performing a subsurface exploration program, geotechnical engineering analyses of the subsurface conditions encountered at the site, and preparation of this engineering report summarizing our observations and geotechnical recommendations.

Elevations in this report are in feet and are referenced to the North American Vertical Datum of 1988 (NAVD 88), unless otherwise noted. This geotechnical report meets the general requirements in Section 1803 of 2022 New York City Building Code (NYCBC) for the proposed work referenced herein.

PROJECT BACKGROUND

Our understanding of the project is based on our email correspondences, subsurface exploration program described herein, and the following documents:

- Draft BSA Plans for the Site, prepared by Marin Architects, dated October 10, 2024;
- "As-of-Right" Architectural Drawings, prepared by Marin Architects, dated October 10, 2024; and
- Property Survey prepared by Kaba Land Surveying P.C., surveyed on May 24, 2024.

The Site is located at 51 Little West 12th Street in New York, New York, identified on tax maps as Block 645, Lot 21, New York City Department of Buildings (NYCDOB) BIN# 1091846, and is a vacant lot with a footprint area of approximately 2,581 square feet (sf). The property is bounded by a nineteen-story building to the north (North portion of 848 Washington Street) and a one-story building to the east (East portion of 848 Washington Street), a three-story building with a cellar to the west (53 Little West 12th Street), and Little West 12th Street sidewalk to the south.

At the time of this report preparation, a topographic site survey was not available. We have assumed that the existing ground surface elevation at the site is approximately El. +8, based on available topographic maps. A Site Location Map is included as **Figure 1**.

Proposed Construction

Based on the Draft BSA Plans, the proposed development may consist of the construction of a 10-story residential building with a full lot cellar level. This design scheme will be referred to as Option 1. The "As-of-Right" drawings depict the proposed development as a six-story commercial building with a full lot cellar level, retail space on a portion of the ground floor, and mechanical spaces and offices on the upper floors. This design scheme will be referred to as Option 2.

The proposed cellar in both options will have a finished floor elevation of approximately El. -1.0 (about 9 feet below the existing curb elevation), and a footprint area of approximately 2,520 sf. Both options also feature an elevator that extends to the cellar level which typically have pits that extend 5 feet below the cellar slab. We have assumed the foundation system could be up to 3 feet thick resulting an excavation depth of approximately 12 feet below existing curb with localized excavation of up to 17 feet at the elevator pit.

HISTORICAL SUBSURFACE INFORMATION

To check for former marshes or streams in the Site vicinity, we referred to the Sanitary & Topographic Map of the City and Island of New York prepared by Egbert L. Viele. A portion of that map is included here, showing that the project site lies within an area of reclaimed land from the Hudson River. With historic development, the Hudson River marsh and shoreline were extended west by backfilling and raising grades to develop the street grid.

SUBSURFACE EXPLORATION PROGRAM

We conducted a subsurface exploration to evaluate the subsurface materials underlying the project site in accordance with requirements of Section 1803 of the 2022 NYCBC, which consisted of two test borings, five test pits, and geotechnical laboratory testing of selected soil samples. **Figure 2** shows the approximate boring and test pit locations. The boring logs, log key, well log, and rock core log are included in **Appendix B**. Test pit sketches and photographic logs are included in **Appendix C**. Geotechnical laboratory test results are included in **Appendix D**.

You/Client retained PG Environmental Services, Inc. (PGES) of Hauppauge, New York to advance the test borings and test pits at the site between December 26 and 31, 2024. PGES performed the work under the observation of our field representative as described below.

Test Borings

PGES advanced two test borings (identified as B-01[OW] and B-02) using a Geoprobe with mud-rotary drilling techniques and steel casing. The borings were advanced from the existing grade to depths ranging from approximately 99.3 to 100.1 feet. Soil samples were visually classified in the field by our field representative in accordance with the Modified Burmister Soil Classification System. Standard Penetration Tests (SPT) were performed at two-foot intervals during drilling within the top 22 feet and generally at five-foot intervals thereafter in general accordance with ASTM D-1586. A 140-pound automatic hammer was used to drive the split spoon sampler through a distance of 24 inches for each SPT sample. The number of blows required to drive the split spoon sampler from 6 to 18 inches is the SPT N-value, a commonly used indicator of soil density and consistency. The SPT N-values and hammer blows at various depths are recorded on the boring log as well as the Modified Burmister description and the NYCBC Class of Materials for each stratum.

Rock coring was performed in boring B-01(OW) using an NX-size double tube core barrel with a diamond bit. Recovered rock cores were described using a modified International Society for Rock Mechanics (ISRM) system. The rock description, core sample recovery, and the Rock Quality Designation (RQD) for each core run are recorded on the boring logs. Rock recovery is the length of the core recovered divided by the length of the core expressed as a percentage. RQD is defined as the sum of the length of recovered intact rock greater than four inches in length between natural breaks, expressed as a percentage of the total core run. RQD is an indication of the relative frequency of jointing or natural fracturing of the bedrock.

A 1.5-inch PVC temporary groundwater observation well was installed in test boring B-01(OW) to a depth of about 30 feet below ground surface (bgs). The screen interval was at a depth between 20 and 30 feet bgs corresponding to between approximately El. -12 and El. -22. Boring B-02 was backfilled with soil cuttings upon completion of drilling.

Test Pits

GZA observed test pits TP-01 through TP-05 which were excavated by PGES along the perimeter of the property line to expose existing adjacent foundations. GZA's field representative documented the test pits and prepared sketches of the exposed conditions. Dimensions were obtained using a tape measure. Upon completion of documentation, the test pits were backfilled with excavated material.

Soil Laboratory Testing Program

Selected soil samples were sent to Thielsch Engineering of Cranston, Rhode Island for laboratory testing to check our soil descriptions and provide data used in the development of our recommendations. Soil testing included Sieve Analysis (ASTM D-6913), Hydrometer Testing (ASTM D-7928), and Water Content Testing (ASTM D-2216). Laboratory test results are included in **Appendix D**.

SUBSURFACE CONDITIONS

Generalized Subsurface Stratigraphy

Based on the results of GZA's exploration program, the subsurface conditions at the site generally consist of the following, in order of increasing depth from existing grade.

Fill (NYCBC Class 7) – Fill was encountered at the ground surface in all borings and test pits. The Fill extends to depths ranging between approximately 18 and 20 feet bgs and consists of various shades of brown fine to coarse sand or gravel containing up to 50 percent sand, 35 percent silt or silt and clay, and up to 10 percent construction debris such as concrete and brick fragments. Former building foundations, including legacy timber piles or foundation debris is likely located within this Fill layer. Within boring B-02, gravel became wedged within the tip of the split spoon for the sample taken between 14 feet and 16 feet bgs. SPT N-values for tests performed in the Fill ranged from 7 blows per foot (bpf) to split spoon refusal, indicating a variable soil density.

Upper Sand (NYCBC Class 6) – An Upper Sand stratum consisting of primarily red-brown fine to coarse sand with up to 35 percent silt or silt and clay, and varying amounts of gravel and seashells was encountered in both test borings. The Upper Sand stratum extends

to a depth of about 26 feet in test boring B-01(OW) and 33.5 feet in B-02. SPT N-values for tests performed in the Upper Sand stratum ranged from 7 bpf and 28 bpf, averaging 14 bpf. This stratum was generally looser than the Lower Sand stratum encountered deeper in the borings, as described below.

Clayey Silt (NYCBC 5a/5b) – A Clayey Silt stratum (discontinuous) was encountered below the Upper Sand in boring B-01(OW) and was approximately 5 feet thick, extending from approximately El. -18 to El. -23. This stratum generally consisted of gray Clayey Silt containing up to 35 percent sand, and up to 10 percent seashells. The measured SPT N-value of 12 bpf indicates a stiff soil condition. Based on our experience in the vicinity of the Site, this stratum can be discontinuous and can vary in thickness and may be encountered within various sections of the site.

Lower Sand (NYCBC 3a/3b) – A Lower Sand stratum was encountered below the Clayey Silt in boring B-01(OW) and below the Upper Sand in B-02. This stratum was approximately 59 feet to 61.5 feet thick. The Lower Sand generally consisted of red-brown fine to coarse sand up to 50 percent silt or clayey silt, 10 percent gravel, and varying amounts of mica. Lab results indicated that sample S-16 within B-01(OW) (sampled between 50 to 52 feet bgs) consisted of clayey silt with up to 50 percent fine to medium sand. Measured SPT N-values generally varied from 11 bpf to 42 bpf, with an average of 23 bpf, indicating a medium dense condition throughout the soil material.

Decomposed Rock (Class 1d) – A Decomposed Rock stratum was encountered below the Lower Sand stratum in both borings. The Decomposed Rock stratum was encountered at a depth of about 90 feet bgs within B-01(OW), and 95 feet bgs within B-02. Split spoon samples taken within this stratum encountered refusal, indicating a very dense condition.

Bedrock (NYCBC Class 1b/1d) – Bedrock was encountered below the Decomposed Rock in B-01(OW) at a depth of about 94.7 feet, corresponding to a top of rock elevation of approximately El. -86.7 at this boring location. The Bedrock consisted of moderately hard and moderate to moderately severe weathered Manhattan Schist and was observed to have very close to close horizontal to sub-horizontal fractures. Recovery and RQD in the rock cores recovered at B-01(OW) were 0 percent and 83 percent.

Test Pit Observations

A brief description of our observations of test pits TP-01 to TP-05 is summarized below.

Test Pit TP-01: Test Pit TP-01 was excavated along the western property line (adjacent to the three-story portion of 53 Little West 12th Street) to a depth of approximately 10 feet bgs. The foundation wall of 53 Little West 12th Street is parged with an approximately 1/2 -inch-thick layer of concrete and transitioned to a mortared stone rubble. The foundation wall extended to approximately 9.2 feet bgs and is supported on a 6-inch-thick poured concrete footing which protruded 8-inches east of the wall face. A steel bar was used to probe up to 2 feet west of the wall face and did not encounter resistance. The excavated soil within the test pit consisted of brown, fine to coarse sand with some silt, little gravel, and miscellaneous concrete and brick fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-02: Test Pit TP-02 was excavated along the eastern property line (adjacent to 848 Washington Street) to a depth of approximately 10.1 feet bgs. The western concrete wall of 848 Washington Street protrudes approximately 8 inches west of the wall face about 13 inches bgs for a distance of 25 inches. An approximately 6-inch-thick poured concrete slab was observed below the protrusion, followed by an 8-inch-thick layer of gray sand. A 2-foot-thick section of brick was below the gray sand (likely a remnant perimeter wall). The brick was supported by 14 inches of stone which protrudes an additional 10- to 20- inches west. Following the stone layer, a 47-inch-thick stone rubble wall was observed to be supported by a 6-inch-thick concrete footing. This footing protrudes about 8-inches west of the wall face. A 3-foot probe below the footing did not encounter resistance. The excavated soil within the test pit consisted of brown, fine to coarse sand with some silt, little silt, and miscellaneous brick and concrete fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-03: Test Pit TP-03 was excavated along the western property line (adjacent to the two-story portion of 53 Little West 12th Street, and about 40 feet north of TP-01) to a depth of approximately 6 feet bgs. The eastern foundation wall of 53 Little West 12th Street is parged with an approximately 1/2 -inch-thick layer of concrete and protrudes approximately 6 inches east at the ground

surface. The wall extends about 2 feet below the ground surface and is supported by a 4-inch-thick poured concrete slab that protrudes another 10 inches east. The slab was underlain by about 8 inches of Fill material and followed by another 4-inch-thick poured concrete slab. A steel bar was used to probe up to 2 feet west of the wall face at a depth of about 5 feet bgs and did not encounter resistance. The excavated soil within the test pit consisted of various shades of brown or black, fine to coarse sand with varying amount of silt and gravel, and miscellaneous cinders and brick fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-04: Test Pit TP-04 was excavated along the eastern property line (adjacent to 848 Washington Street) to a depth of about 11.3 feet bgs. The western concrete wall of 848 Washington Street is supported by a brick wall at a depth of approximately 18 inches bgs. The brick wall protrudes approximately 8- to 10- inches west of the wall face over a distance of 28 inches. This brick wall extends to a depth of about 11 feet bgs. and is supported by a 4-inch-thick concrete footing that protrudes an additional 13-inches west of the brick wall face. The excavated soil within the test pit consisted of various shades of brown, fine to coarse sand with varying amount of silt and gravel, and miscellaneous cinders, brick, and porcelain fragments (Fill). Groundwater was not encountered within the test pit excavation.

Test Pit TP-05: TP-05 was excavated at the northern portion of the site immediately south of a 4-inch-thick concrete slab. The test pit extended to a depth of approximately 4.5 feet bgs. The north side of the test pit exposed an approximately 26-inch-thick brick wall bearing on cementitious soil. To the west of the brick wall, a concrete mass was observed at a depth of about 26-inches below the top of slab, below the cementitious soil. The vertical and western extents of the brick wall and concrete mass were not observed in the excavation due to time constraints. The excavated soil within the test pit consisted of orange, fine to coarse sand with some gravel, little silt, and some miscellaneous brick and root fragments (Fill). Groundwater was not encountered within the test pit excavation.

Groundwater

A groundwater observation well was installed in Boring B-01(OW) to a depth of approximately 30 feet below existing grade. The average measured depth to groundwater within the observation well during the time of our exploration was about 11.4 feet below existing grade, corresponding to about El. -3.4. Groundwater observations were made within the observation well over three days. Groundwater well construction details and water depth readings are provided on the well log in **Appendix B**. Groundwater was not observed within the test pit excavation given the excavations were only open for a short period of time. Local pumping from adjacent buildings may be impacting the groundwater elevations, as we would expect that the groundwater would typically be at EL. 0 in this area.

Groundwater depths are expected to vary seasonally throughout the year depending on many factors, including precipitation and surface water infiltration, local pumping, utility leakage, and other factors different from those existing at the time the observations were made. Groundwater levels at the time of construction may differ from those presented herein.

Flood Elevation

Based on the Preliminary Flood Insurance Rate Map (FIRM) number 3604970182G, dated December 5, 2013 (after Post-Tropical Cyclone Sandy), the site appears to be within Area AE with a Base Flood Elevation of El. +11. Therefore, pursuant to NYCBC the design flood elevation must be considered in design.

GEOTECHNICAL ENGINEERING RECOMMENDATIONS

Our recommendations are based on our review of the documents noted above, and the subsurface conditions encountered during the exploration. Recommendations may require revisions if the scope of the proposed construction differs from that described herein, or if additional relevant information becomes available.

Key Geotechnical Issues

We have identified the following key geotechnical issues that should be considered by the Client, designers, and Contractor:

- The Fill stratum present below the existing ground surface is unsuitable for support of the proposed structure on shallow foundations and will require deep foundations.
- The Fill stratum contains construction debris, including, legacy timber piles, foundation debris, brick, porcelain, concrete, and cinders, and may lead to difficulty during deep foundation and/or excavation support installation.
- Groundwater was encountered at shallow depths and a dewatering program will likely be needed for foundation, cellar, and elevator pit construction. The dewatering will likely cause some level of settlement and manifest in cracking of masonry of the adjacent buildings founded on shallow foundations.
- The site lies within Flood Zone AE shown on the preliminary FIRM maps and must consider a design water elevation of El. +11.
- Depending on the final geometry and construction configuration, underpinning of the eastern foundation wall of 53 Little West 12th Street and western foundation wall of 848 Washington Street may be necessary for proposed below-grade construction. Underpinning of adjacent buildings will require coordination (legal access agreements) with adjacent property owners and may also require jet grouting due to the excavation below the groundwater table. Additionally, underpinning, support of excavation installation, and the required excavation that will cause some impacts (settlement, cracking) to the abutting buildings.

Geotechnical Design Parameters

Based on the results of our exploration, the following soil design parameters provided in **Table 1** below can be used in design of foundations and construction works such as excavation shoring, if required.

Table 1 – Recommended Soil Design Parameters

Stratum	Total Unit Weight (pcf)	Effective Unit Weight [1] (pcf)	Angle of Internal Friction (deg)	Cohesion (psf)	Coefficient of Friction (soil/concrete)	Earth Pressure Coefficients [4]		
						K_a	K_p	K_o
Compacted Granular Fill	125	62.6	32	-	0.45	0.31	3.3	0.47
Fill (7)	120	57.6	30	-	0.3	0.33	3.0	0.5
Upper Sand (6)	120	57.6	32	-	0.45	0.31	3.3	0.47
Lower Sand (3a/3b)	125	62.6	30	-	0.34	0.33	3.0	0.5
Clayey Silt (5b)	110	47.6	-	1,500	-	-	-	-
Decomposed Rock (1d)	135	72.6	38	-	0.6	0.24	4.2	0.38

Table 1 Notes:

[1] Effective unit weights should be used below the groundwater table in permanent design.

[2] Active and passive earth pressures may be computed using Rankine or Coulomb earth pressure theory.

[3] Surcharge and seismic loading should be included in accordance with the NYCBC.

[4] Refer to the Lateral Earth Pressure section below for additional information.

Foundation Recommendations

Based on the subsurface conditions observed in the test pits and test borings, we recommend that the proposed structure for both design options be supported on a deep foundation system consisting of micropiles bearing in the Lower Sand (NYCBC 3b or better) stratum. Micropiles will support both axial compression and buoyancy forces and can be utilized to transfer the proposed building loads to the Sand.

It is our understanding that both design options include construction of a cellar level with a finished floor elevation of approximately El. -1 (9 feet below existing sidewalk elevation). Deeper excavations of up to 17 feet below the sidewalk, and approximately 5.6 feet below measured groundwater will be required for the elevator pit and pile caps. Underpinning of adjacent building foundations to the bottom of excavation may be complicated by groundwater. To facilitate excavations within dry conditions, jet grout underpinning could be utilized. However, due to the cost, adjacent property legal agreements, extensive dewatering that would be required for excavation, and the impacts to adjacent building foundation from settlement, we recommend against using underpinning.

Our recommended, but still with risk of settlement of the surrounding buildings based on the Contractor's related means and methods, is to utilize tangent micropiles bearing in the Lower Sand stratum. The tangent micropiles can act both as a support of excavation (SOE) system and as foundation elements for the new cellar foundation walls. Installed from the existing site grade, the tangent micropiles would resist a portion of both lateral earth and groundwater pressure, as well as permanent vertical and uplift loads. A liner wall system (designed by others) would be needed inboard of the tangent micropiles to resist permanent groundwater and seismic loads and to allow for the installation of insulation, drainage, and waterproofing between the liner wall and inside of the tangent micropiles. The use of a tangent micropile system will require that these walls be installed inboard of the property line by up to 3 feet, reducing the new cellar footprint. This tangent micropile system can also be used with a soil grouting program to reduce possible settlement of adjacent structures and the groundwater volume that would need to be dewatered and discharged to the sewer system during construction.

Tangent Micropiles

Tangent micropiles are constructed by rotating a steel casing into the ground until it reaches the design tip elevation in a suitable bearing stratum. Soil is removed within the casing with a low-pressure internal water flush and/or using an auger within the casing, followed by injecting a cement grout through a tremie tube to the bottom of the excavation. Tangent micropiles would be installed from the existing ground surface, spaced adjacent to each other without overlapping, forming a relatively continuous wall with minor gaps between each pile.

Tangent micropiles along the perimeter of the property will function as the temporary support of excavation (SOE) and will carry some of the permanent lateral loads. The allowable axial capacities of the tangent micropiles can be determined during the design phase in coordination with structural engineer once foundation loads and proposed cellar geometry is determined. Axial compression and uplift capacity can be achieved at select tangent piles by drilling an additional grouted bond zone below the steel cased section of the pile with a center bar to allow for load transfer, similar to micropiles discussed later in this report. Sacrificial tangent micropiles will need to be installed and tested to check the various loading conditions per NYCDOB requirements. This tangent micropile system would be designed as part of the Support of Excavation process.

Micropiles

Micropiles (similar to tangent micropiles) are drilled grouted piles that transfer structural loads into a suitable bearing stratum. A bond zone is constructed in the bearing stratum where the grout is in contact with the surrounding soil. Above the bond zone, the grout is contained in a permanent steel casing. A full length, high-strength steel bar is placed in the center of each micropile. The grout-soil bond is enhanced through pressurization of the fluid grout immediately upon placement or through post-grouting, where additional grout is pumped into the micropile after the initial grout is set to compact the surrounding soil.

We recommend 10.75-inch diameter micropiles with a casing thickness of 0.545 inches designed for allowable axial loads of 100 kips (50 tons) and 200 kips (100 tons) for supporting the proposed structure. The micropiles should be permanently cased to a depth of 20 feet below the final excavation elevation. The micropiles should be constructed with Grade 75, threaded steel bar over its full length and minimum 4,000 psi cement grout. Centralizers spaced every 10 feet and placed within the top 5 feet of the pile should be attached to the steel bar. Each micropile shall be pressure-grouted through the casing during casing removal. The minimum bond zone is summarized in **Table 2**.

The allowable uplift capacity of the micropiles will vary depending on the length of the pile and structural capacity. The estimated allowable uplift capacities are summarized in **Table 2**.

Table 2: Micropile Summary Table

Micropile Dimensions (in.)	Allowable Compression Capacity (tons)	Allowable Uplift Capacity (tons)	Minimum Pile Length (ft)	Minimum Cased Section Length (ft)	Uncased Section/ Bond Length (ft.)	Center Bar Size	Grout Strength (psi)
10.75 x 0.545	50	30	50	20	30	#11	4000
	100	65	65	20	45	#18	

The estimated allowable axial compression capacity is based on an ultimate axial capacity with a factor of safety of 2.0, assuming that micropiles will have a center-to-center spacing of at least three pile diameters. If micropiles are spaced more closely, additional evaluation of axial capacity is required. Allowable axial compression capacity is to be checked by load tests.

The allowable axial uplift capacity values consider a factor of safety of 3.0, which will not require uplift load testing. A lower factor of safety may be used to estimate the allowable uplift capacity; however, the design uplift capacity would need to be checked through uplift load testing.

The uplift capacity of a pile group is dependent on the number of piles in the group, the length of piles, the configuration of the piles, cap thickness/dimensions, and soil conditions.

Micropile Lateral Capacity

We used the LPile (v.2022) computer program to evaluate the lateral loading conditions for the 10.75-inch diameter micropiles. In our analyses, we considered both "fixed-head" and "free head" conditions and included a ¼-inch reduction in the micropile casing wall thickness to account for corrosion. Our analysis considers that the pile is subject to the static axial load of 100 kips (50 tons) or 200 kips (100 tons), and that the piles will have center-to-center spacing of at least eight pile diameters. We assigned strength properties based on the soil properties presented in **Table 1** of this report.

The maximum allowable lateral load of a pile per the NYCBC is 1 ton (2 kips), unless verified in the field by a lateral load test. Per the requirements of the NYCBC, the maximum pile deflection under "fixed-head" conditions is about 3/8 inch. In a "free-head" condition, the maximum allowable lateral load is one-half of the nominal load that deflects the pile 1 inch. The results of the lateral analyses are presented below.

Table 3: Lateral Loading Summary for 10.75-inch Diameter Micropile

Allowable Capacity (tons)	Loading Condition	Deflection (in.)	Maximum Shear Load (kips)	Maximum Moment (ft-kips) (fixed head)
50	Fixed-Head	0.375	14.2	56.2
	Free-Head	1.0	5.1	-
100	Fixed-Head	0.375	13.5	52.9
	Free-Head	1.0	4.6	-

We recommend checking the lateral pile capacity in the field by performing load test(s) (if lateral loads exceed 2 kips) in accordance with ASTM D3966 and the NYCBC. Additional recommendations for pile load testing are provided in the Construction Considerations section of this report.

Micropile and Tangent Pile Settlement

Immediate elastic settlement of the micropiles/tangent piles should be anticipated as loads are added and will depend on the magnitude of loads. The settlement can be estimated during the design phase in coordination with the structural engineer but is

expected to be approximately 1/2-inch. The structural engineer should consider the effect of the differential settlement between micropile/tangent pile supported foundations and other foundation elements including site utility connections.

Pile Foundation Alternatives

Alternative drilled foundations, such as auger cast piles or drilled displacement piles may be feasible provided the required capacities can be achieved but must consider the limitations of the installation method, impacts to adjustment structures and the subsurface conditions. A submittal package for any alternative pile foundation, including calculations, shop drawings, and installation procedures would need to be submitted by the Contractor to you, GZA, and the structural engineer for any proposed alternate pile foundation for review and acceptance. Driven piles within 50 feet of the adjacent buildings would produce vibrations that may lead to densification of the underlying sands and settlement of adjacent structures and should not be considered.

Floor Slabs

Floor slabs should be designed and constructed as a monolithic structural floor slab in accordance with the NYCBC. We recommend the cellar slab span between pile caps and be capable of resisting applied uplift from water pressure using the building weight. We recommend a 4-inch-thick mud mat consisting of lean concrete to provide a flat surface for membrane waterproofing below the floor slab. The structural slab may be constructed above the mud mat to resist hydrostatic pressures. We recommend a gravel layer placed above the structural slab to suspend utilities and facilitate dry utility construction. Above the gravel layer and utilities, we recommend a surface wearing slab with the top of the slab equal to the proposed finished floor elevation. The top of the structural slab should be pitched to drain to local sumps to address any leaks in the slab that may become evident over time. Discharges must comply with local, state, and federal regulations.

GZA should be informed if non-typical loading is to be placed on the cellar slab. Non-typical loading includes, but is not limited to, heavy point loads and vibratory loads.

Foundation Depth

In accordance with NYCBC, all new interior shallow foundations must bear a minimum of 12 inches below the surrounding surface. For frost protection, new exterior foundations must be a minimum of 4 feet below the surrounding exterior ground surface. Grade beams may be a minimum of 18 inches below the surrounding exterior ground surface.

Lateral Earth Pressures (Below-Grade Walls)

Permanent below grade walls should be designed to resist long term at-rest earth pressures using the soil parameters in **Table 1**. A uniform horizontal pressure equal to one-half to one-quarter of the anticipated vertical surcharge load should be used for design of permanent and temporary walls where surcharges are anticipated due to vehicular traffic, construction equipment, adjacent footings, etc. The foundation walls must also be designed to resist hydrostatic forces and seismic loading (where applicable). GZA's recommended lateral earth pressures resulting from soil, hydrostatic forces, surcharges, and seismic loadings are presented in **Figure 3 and in Table 4**.

Groundwater Design

Groundwater depth readings were collected from the groundwater observation well in B-01(OW). Stabilized groundwater measurements in the well were at a depth of approximately 11.4 feet, corresponding to an elevation of about El. -3.4. As noted above this groundwater elevation is likely influenced by local pumping and may be closed to El. 0.0 at the time of construction.

Design of the proposed structure should use a design water elevation of El. +11 feet, considering the site location in FEMA flood zone AE.

Waterproofing

We recommend all below-grade foundation walls, including any underpinning or tangent micropile system, and cellar floor slabs be fully waterproofed to reduce the potential for water infiltration caused by groundwater, potential utility breaks (i.e., water main, sewer main, etc.), and extreme storm events. All waterproofing should be designed in accordance with Section 1805 of the NYCBC.

The Contractor installing the waterproofing shall be approved by the waterproofing manufacturer to ensure the waterproofing system has been installed properly. The waterproofing manufacturer should perform laboratory testing to confirm the compatibility of the waterproofing material with the foundation soils and submit a certificate of compliance to the Owner. Waterproofing will need to be carefully planned and installed in sections and in conjunction with all foundation operations to allow for full integrity of the installed waterproofing.

Even with good construction and practices, submerged waterproofed cellars may eventually develop leaks in some cases due to slab cracking or gaps in the membrane. The below grade walls and foundation slab (as noted above) should be designed to address this leakage.

Seismic Design Parameters

Based on the results of our exploration, available information, and in accordance with the NYCBC, the calculated average measured SPT N-values of the top 100 feet of soils fall into the range of Seismic Site Class D which is used for calculation of seismic loading and the corresponding response spectrum as described in Section 1613 of the NYCBC. The recommended seismic design parameters are summarized in **Table 4** below.

Table 4 - Recommended Seismic Design Parameters

Parameter	Value
Mapped Spectral Acceleration Parameter at 0.2-Second Period (S_S)	0.296 g
Mapped Spectral Acceleration Parameter at 1-Second Period (S_1)	0.061 g
Site Coefficient as a function of site class and mapped spectral response acceleration at short periods (F_a)	1.57
Site Coefficient as a function of site class and mapped spectral response acceleration at 1-second period (F_v)	2.40
Maximum Spectral Response Acceleration for short periods (S_{MS})	0.465 g
Maximum Spectral Response Acceleration for 1-second period (S_{M1})	0.146 g
Design Spectral Response Acceleration Parameter at Short Periods (S_{DS})	0.310 g
Design Spectral Response Acceleration Parameter at 1-Second Period (S_{D1})	0.098 g
Adjusted Peak Ground Acceleration (PGA_M)	0.26 g

We plotted SPT N-values normalized to an energy efficiency of 60 percent versus depth to assess whether evaluation of liquefaction was required, pursuant to Section 1816 of the NYCBC. The range of corrected N-values plotted on the screening diagram revealed that an evaluation was required, and therefore, a simplified site-specific analysis was performed.

We performed the analysis using the Boulanger & Idriss 2014 method, considering the corrected SPT N-values, overburden stress, fines content, peak ground acceleration equal to 0.26g, and an estimated earthquake magnitude of 5.75. The results of the simplified liquefaction analysis indicate that only five SPT samples exhibit liquefaction potential, with many of these samples being between soil samples that do not have potential to liquefy. On the basis of the simplified liquefaction analysis, liquefaction is not likely and does not need to be considered for design.

CONSTRUCTION CONSIDERATIONS

Demolition

Based on the results of the subsurface exploration program and the proposed construction, we anticipate that existing utilities, remanent foundations or Fill will be removed from the site prior to beginning construction. Any utilities designated to remain, such as gas, water, electric and sewer connections should be protected during demolition, excavation, and construction activities.

Temporary Support of Excavation (SOE) and Underpinning

Excavations of up to approximately 17 feet below the sidewalk, and 5.6 feet below measured groundwater will be required for the elevator pit and pile caps. Open-cut excavation is not permissible due to geometry constraints from the adjacent streets, abutting properties, and utilities. Therefore, excavation support around the perimeter of the excavation will be necessary.

A more robust and technically prudent method to construct the cellar level would utilize a tangent micropile system to provide lateral support along the perimeter of the project site. Tangent micropile walls will result in some lost cellar space (up to 3-feet on each side). Pre-treatment of the soil under the adjacent foundations and within the footprint of the excavation by means of permeation grouting or similar method prior to the installation of the tangent micropiles and later between the individual tangent micropiles may be required. Groundwater control will be required, and the Contractor should be prepared to implement a dewatering system to maintain groundwater level 1- to 2- feet below the general excavation depth. Internal bracing will be required for excavation support.

Settlement of the adjacent building walls should also be expected during any SOE installation, and/or during excavation due to the proximity of the supported excavation face, which will deflect outwards as excavation proceeds. The Contractor's means and methods will have a significant influence on the magnitude of the settlement. We anticipate settlement of about 1- to 2-inches may occur on abutting building which are supported on shallow foundations with lesser amounts on building that are pile supported, and this effect on the adjacent buildings should be considered by the project team and addressed in any legal agreements.

The settlement estimates as result of SOE installation, ground disturbance, and/or during excavation should be combined with those anticipated during dewatering and discussed at length with the Client, design team and adjacent property owners. The design team should consider settlement associated with dewatering which should be calculated by the dewatering engineer based on the proposed dewatering schedule and SOE system implemented. We would also recommend that any access agreement with these adjacent property owners include documentation of these settlement estimates and address a way forward for repairs if these settlement manifest into building damages or operation issues.

Further clarification on the impacts of the chosen design options on the adjacent buildings should be discussed in the Adjacent Lots/Buildings for Suitable Method of Support Evaluation Report that is required by NYCBC.

Temporary Groundwater Control

Groundwater will need to be lowered 1- to 2- feet below excavation subgrade in advance of excavations below the groundwater table, as demonstrated by measurements of groundwater depth within installed groundwater monitoring well. We recommend that the maximum draw drawdown along the lot lines (SOE) should not exceed 2 feet below the bottom of excavation depth.

Based on the subsurface conditions at the site and required drawdown, a wellpoint system appears to be suitable for construction dewatering for the proposed excavations. Well point systems typically consist of a series of individual dewatering wells installed at regular intervals and connected to a common header pipe. Groundwater is pumped from the screened portion of the wellpoint by applying a vacuum to the system. A single stage wellpoint system is expected for the excavations. A deep well system is also a viable alternative for dewatering and will similarly require design by a qualified and experienced Professional Engineer licensed in the State of New York.

Depending on means and methods, dewatering could cause settlement of existing structures within the zone of influence. The Contractor should also be prepared to remove accumulated rainwater and runoff from local excavations during construction through the use of submersible pumps.

Site and Subgrade Preparation

The cellar slab is expected to be constructed as a monolithic structural slab deriving its support from adjacent pile caps and not the underlying soil. We recommend the final subgrade be free of standing water and proof-rolled to a stable and firm consistency with a minimum of four passes of a vibratory walk behind plate compactor to check integrity. Areas of unstable ground observed during proof-rolling should be over-excavated and backfilled with new compacted Granular Sand/Sand-Gravel Fill placed in accordance with the recommendations provided in **Table 6** of this report.

Approved subgrades should be protected from disturbance during excavation and reparation prior to placing foundation concrete. Conventional excavation equipment may be used to perform the initial excavation to within 6-inches of design subgrade elevations. Final excavation to design subgrade levels should be performed with an excavator equipped with a smooth (toothless) bucket or with "Grade-All" – type equipment.

Fill Material and Compaction

Backfill used to replace unsuitable materials shall consist of Granular Fill compacted to at least 95 percent of the maximum dry density measured by the Modified Proctor test (ASTM D1557). The gradation requirements for the Granular Fill material are presented in **Table 5**. The recommended maximum loose lift thickness and minimum number of passes for compaction equipment are given in **Table 6**.

Excavation

The Owner and the Contractor should make themselves aware of and become familiar with applicable local, state, and federal safety regulations, including the current Occupational Safety and Health Administration (OSHA) Excavation and Trench Safety Standards. Construction site safety generally is the sole responsibility of the Contractor, who shall also be solely responsible for the means, methods, and sequencing of construction operations. We are providing this information solely as a service to our Client. Under no circumstances should the information provided herein be interpreted to mean that GZA is assuming responsibility for construction site safety or the Contractor's activities, such responsibility is not being implied and shall not be inferred.

The Contractor should be aware that slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal safety regulations, such as OSHA Health and Safety Standards for Excavations, 29 CFR Part 1926, or successor regulations. Such regulations are strictly enforced and, if they are not followed, the Owner, Contractor, and/or earthwork and utility subcontractors could be liable for substantial penalties.

Evaluation of Adjacent Lots/Buildings for Suitable Method of Support

Pursuant to Section 1817.3 of the NYCBC, an evaluation report assessing the conditions of the adjacent buildings and the subsurface conditions of the construction site and adjacent properties (buildings and yards/open areas) is required. The report shall also identify acceptable method(s) of support, including underpinning or alternate methods of support, for the building areas.

Monitoring of Adjacent Structures

Section 3309.4.3 of the NYCBC requires documentation of the condition of structures prior to beginning excavation or construction on an adjacent site and requires monitoring of adjacent structures during excavation and construction if the excavation depths exceed either five feet or if the excavation exceeds the depth of the adjacent building footings. A Professional Engineer registered in the State of New York must develop a monitoring plan to comply with the requirements of NYCBC Section 3309.16.

The pre-construction condition documentation of adjacent buildings is required prior to the start of excavation at the site. This includes photographing and measuring conditions and defects to provide a quantifiable baseline record prior to construction. Crack gages, vibration monitors and/or survey points should be installed at applicable locations, and baseline values should be obtained or one to two weeks before commencing construction. During construction, crack monitoring readings, vibration level measurements, and optical monitoring/deflections, groundwater depth should be measured throughout excavation and construction until at least the first floor of the superstructure has been completed. This must be performed on behalf of the Client and must be maintained separately from the work performed by the General Contractor.

Pile Installation

The means and methods for installation of the micropiles and tangent micropiles will be the sole responsibility of the Contractor. The installation will need to be carefully planned and executed so as not to cause damage to the adjacent building foundations, subsurface utilities, etc. Piles must be installed in a way that will not cause excessive vibrations or settlement of the existing buildings or structures adjacent to the site.

The Contractor should use methods that contain and circulate the drilling fluid entirely within the steel casing. Downhole hammers and compressed air should not be used.

Pile Load Testing

We recommend a load test program prior to the installation of the production piles to check anticipated tangent and micropile capacities. Two compressive load tests are required to evaluate the axial compressive capacity for each typical micropile and tangent micropile at the project site per the requirements of the NYCBC. Each test pile should be tested to the recommended ultimate axial capacity of two times the design load to evaluate the micropile response to simulated structural loads and to establish bond zone lengths for production piles. The axial static load test should be performed in accordance with ASTM D1143 and the applicable requirements of the NYCBC.

The NYCBC requires lateral load testing for any piles with lateral loads greater than 1 ton. If the lateral load for the micropile is greater than 1 ton, a minimum of two piles must be load tested per the requirements of the NYCBC. The load tests should be performed in accordance with ASTM D3966, Procedure B, with loading increments applied until a measured deflection of 1-inch is observed to evaluate micropile response to simulated structural loads. The lateral load tests should be conducted in accordance with the applicable requirements of the NYCBC. A test pile cannot be used as a production pile.

The allowable uplift capacity for the micropiles considers a factor of safety of 3.0. Therefore, uplift load tests are not required.

The installation Contractor must provide a detailed design for the axial load testing, including the load test location, construction details for the load test frame and hold-down piles, loading and monitoring procedures, and recommended evaluation procedures. An independent, calibrated load cell must be used to measure the load on the pile head; reliance solely on a calibrated jack to measure the load is not acceptable. The detailed design must be signed and sealed by a Professional Engineer registered in New York. GZA should review the design before construction.

Special Inspection Requirements

We recommend that GZA, who is knowledgeable in soils, foundations, and the requirements of the NYCBC be retained to observe subgrade preparation, SOE/Underpinning installation, pile installation and foundation construction. We anticipate that the following NYCBC Special Inspections will be required for work discussed in this report:

- Excavation – Sheeting, Shoring, and Bracing (NYCBC 1705.25.3)
- Underpinning (NYCBC 1705.25.4, NYCBC 1817) (if required)
- Subgrade Inspection (NYCBC 1705.6)

- Deep Foundation Elements (NYCBC 1705.7)

The required "Subsurface Investigations (Borings/Test Pits)" Special Inspection was completed as a part of the subsurface exploration program. Special Inspections must be performed by a Special Inspection Agency retained by the Owner.

Special inspection of pile installation and load testing must be provided by a qualified Professional Engineer in accordance with Section 1705.7 of the NYCBC. During installation of the production piles, the Special Inspector must record the minimum following data:

- Pile Identification
- Equipment used to install the piles
- Pile, bar, and grout material properties
- Installation Start and Finish Time for each pile
- Pile Installation Depth
- Cutoff Elevation and Tip Elevation (to be provided by surveyor)
- Bond length
- Grout Back-Pressure
- Theoretical and Actual Grout Volumes

CLOSING

We appreciate the opportunity to provide our services to you on this project. Should you have any questions, please contact us.

Very truly yours,
GZA GEOENVIRONMENTAL OF NEW YORK

Dharmil S. Patel, P.E.
Senior Project Manager

Douglas S. Roy P.E.
Vice President

Cassandra A. Wetzel, P.E.
Consultant Reviewer

Attachments: Table 5 – Recommended Use and Gradation Criteria for Fill Materials
Table 6 – Suggested Compaction Methods
Figure 1 – Site Location Plan
Figure 2 – Subsurface Exploration Location Plan
Figure 3 – Lateral Earth Pressure Diagram
Appendix A – Geotechnical Limitations
Appendix B – Log Key, Boring Logs, & Rock Core Photo Log
Appendix C – Test Pit Logs and Photo Log
Appendix D – Laboratory Testing Results

APPENDIX

DESIMONE ENGINEERS
EXECUTIVE SUMMARY & PRELIMINARY
STRUCTURAL DESIGNS

“As-of-Right” 7-Story Commercial Building &
Proposed 9-Story Restaurant and Residential Building

DESIMONE

April 7, 2026

Acting Chair Shampa Chandra
New York City Board of Standards and Appeals
22 Reade Street, Main Floor
New York, New York 10007

Re: Preliminary Structural Design
BSA Variance Application
51 Little West 12th Street
Block 645, Lot 21 -
Manhattan

Dear Acting Chair Chandra and Commissioners:

Re: Summary of Structural Challenges for "As-of-Right" and "Proposed" Conceptual Schemes

The following updates the prior submission dated July 8, 2025 which identifies the impact of the subject site's small size and narrowness as well as the sub-surface conditions on structural design for the development scenarios. Although the plans for the development scenarios have been modified (As-of-Right-7 Story Restaurant & Office Use and Proposed 9 story Restaurant & Residential Use), the foundation design and references to the superstructure remain the same for both revised development scenarios.

Subject Site Profile and Conditions

The preliminary structural design provided herein was prepared for the two development scenarios being considered for the subject site, The subject site, located at 51 Little West 12th Street, Manhattan, is currently a small, 2,581 square foot infill vacant lot is bordered by a nineteen-story hotel building the north, a one-story commercial building to the east, and a three-story brick building built in 1910 to the west. The subject property is situated within an AE flood zone with base flood elevation of +11 NAVD 88. The small, narrow lot size, the design flood water elevation, the quality and bearing capacity of the soil, and the adjacency issues associated with the shallow, unstable foundation of 53 Little West 12th Street abutting the subject site to the west all contribute to the challenges of development on the subject site and inform the approach to the structural design of the building and its foundation.

The Geotechnical report (Jan 2025) prepared by GZA provides the profile of the subsurface conditions of the subject site and makes recommendations as to the support of excavation, groundwater control, soil improvement, deep foundation piling, monitoring adjacent buildings, and other pertinent considerations.

The two development scenarios consist of: (1) As-of-Right, 7-Story, Commercial Office and Restaurant building with a cellar level, (2) Proposed 9-Story Residential and Restaurant building with a cellar level. The constraints and design challenges for each option are outlined below.

As-of-Right Development Scenario:

Foundation Components:

1. Due to design flood water levels, and the delicate condition of the adjacent building to the west, a tangent pile wall installation is required around the perimeter site to create a cut-off wall and avoid issues with undermining of adjacent building structures, particularly 53 Little West 12th Street to the west.

2. This will require a 3 foot zone around the cellar perimeter:
    a. 1'-0" for tangent installation
    b. 1'-0" for tangent wall
    c. 1'-0" for permanent foundation wall.

3. Due to the narrow nature of the site, primary building supports will be located at building perimeter.
    a. Columns and concrete walls at perimeter as well as perimeter transfer beams and a thickened ground floor slab serve to transfer loads back to the primary foundation walls, down to supporting foundation elements.

4. Elevators:
    a. The building's passenger elevator is restricted to the perimeter of the building.
        i. Due to the location, and the adjacent building concerns, the passenger elevator cannot service cellar level. As such, this elevator pit will stop at ground floor. The second elevator is required to access the cellar level which under both development scenarios contain the prep support area to the restaurant use above.

5. Mini-Caissons:
    a. Due to the difficult ground conditions, mini caissons, also known as micropiles provide the deep foundation support, as conventional footings are not possible at the subject site. These will be drilled elements to further avoid impacting adjacent building properties.

Superstructure:

The building will consist of flat plate concrete construction supported on concrete columns and with elevator and stair cores wrapped in concrete. Slabs will typically be 8" construction.

Proposed Development Scenario:

Foundation Components:

The Proposed Plan faces similar concerns to the As-of-Right building. However, due to increased number of proposed floors (proposed 9-story vs. as-of-right 7-Story) and slenderness transfer structure will be thicker and an increased number of micro-caissons will be required to transfer the load down to suitable stratum.

Superstructure:

The building will consist of flat plate concrete construction supported on concrete columns and with elevator and stair cores wrapped in concrete. Slabs will typically be 8" construction.

Under the Proposed Plan, the overall column and lateral system will be more robust given the increased building height and increased number of floors. It is important to note that given the building's narrow footprint, the proposed 9 floor option will result in increased costs and construction time and may result in modifications of the structural design.

Summary of Challenges:

The profile of the subject site as detailed in the Geo Technical Report and illustrated in the preliminary structure design for both development scenarios demonstrate the challenges that must be addressed in order for any development is to take place on the subject site. Although the Board recognizes the small lot size and narrow configuration as unique conditions that generate a premium cost, the subject site is impacted by the subsurface conditions represented by the potential flooding in an AE flood zone and requirements to design for the associated FEMA flood elevations, the poor soil quality, and the special preparations to avoid undermining the adjacent structure to the west.

More specifically, given the depth of the foundations, the excavation would extend below the adjacent building at 53 Little West 12th Street. Conventional pit pier underpinning for stabilization is not recommended as this could result in excessive settlement of adjacent building foundations due to the poor soils and measured groundwater elevation.

Typically, an infill site would perform underpinning of an adjacent building to provide support due to any settlement during excavation, allowing for the foundation to extend to the property lot line. This is not the case at the subject site. As such, each scenario must install a second elevator to service the cellar level, as these conditions doesn't allow for the passenger elevator to make a stop at the cellar level.

The tangent pile wall system is part of a complex foundation that serves not only as a support of excavation but also the structural support that transfers loads at the ground level to then construct the building's superstructure. Although accommodating a cellar level requires more attention, the site conditions and the construction means and methods to address these issues remain the same.

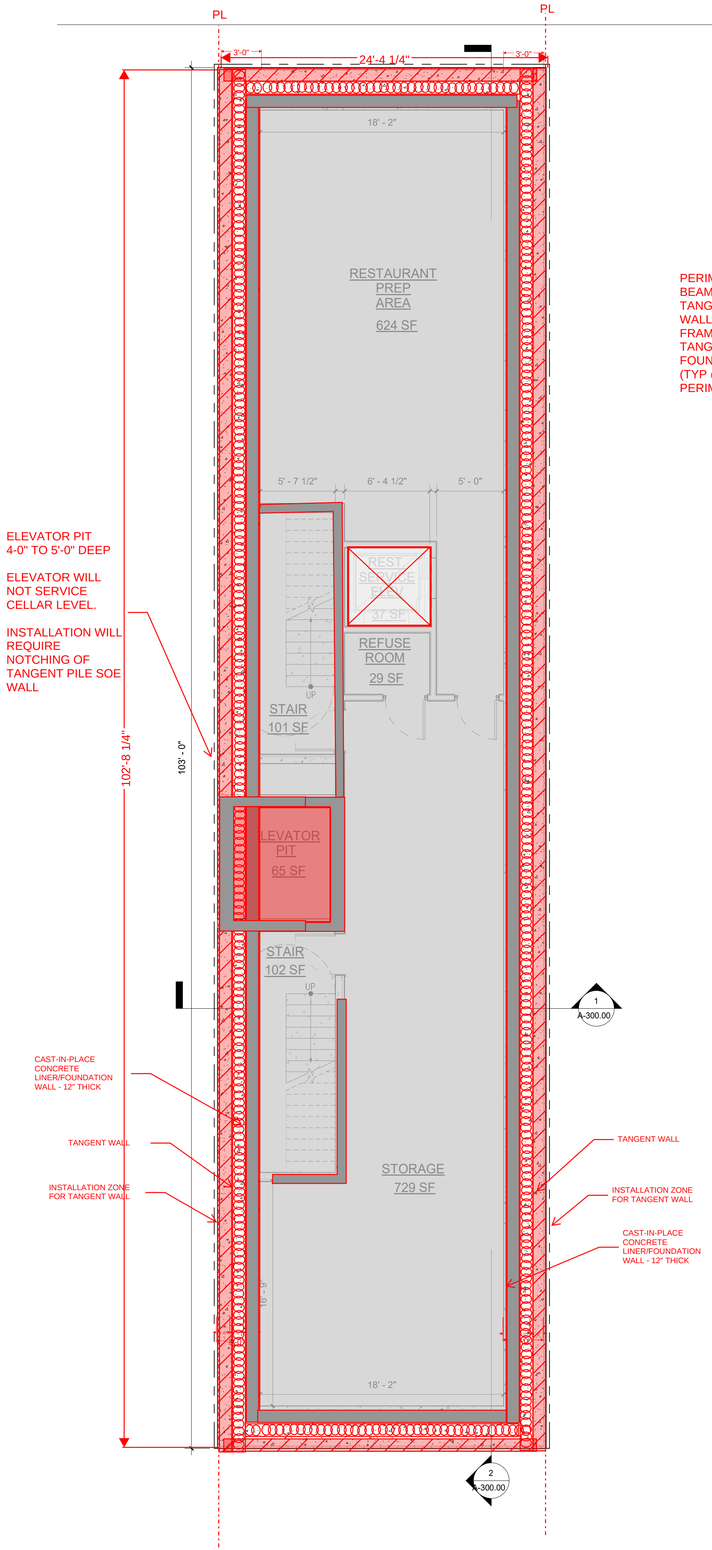
Respectfully submitted,

Rodolfo Medina, PE

Rodolfo Medina, PE
Associate Principal |
Structural
DeSimone Consulting

Engineering Enclosure

Preliminary Structural Design
“As-of-Right” Development Scenario



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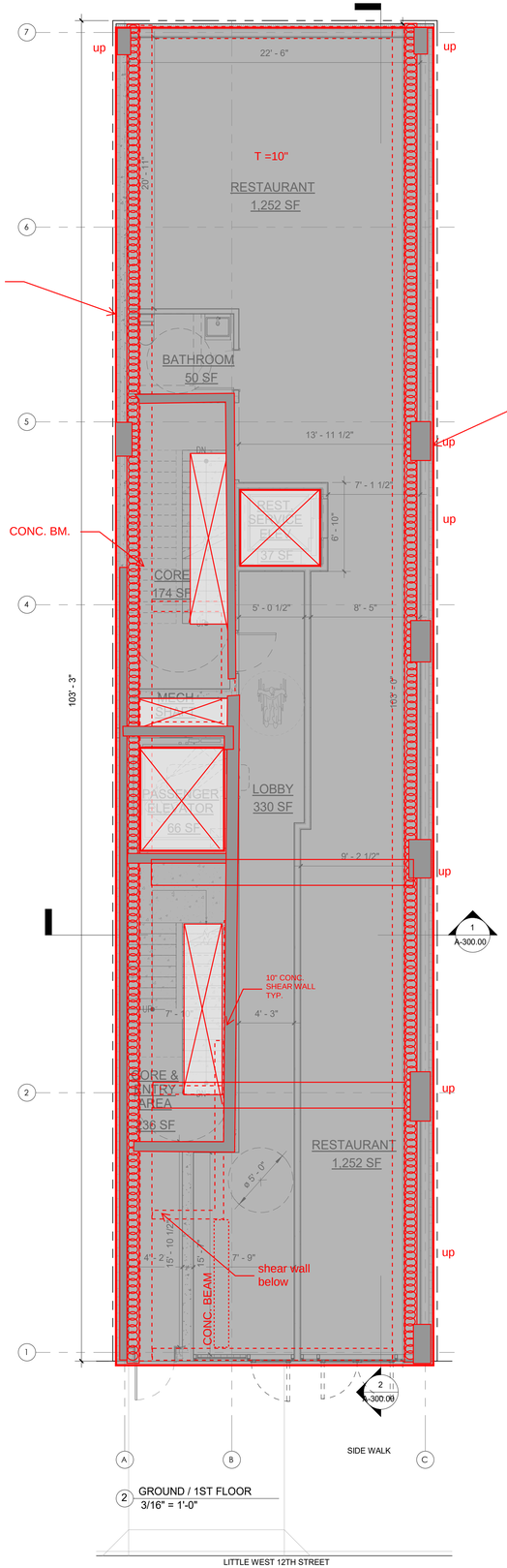
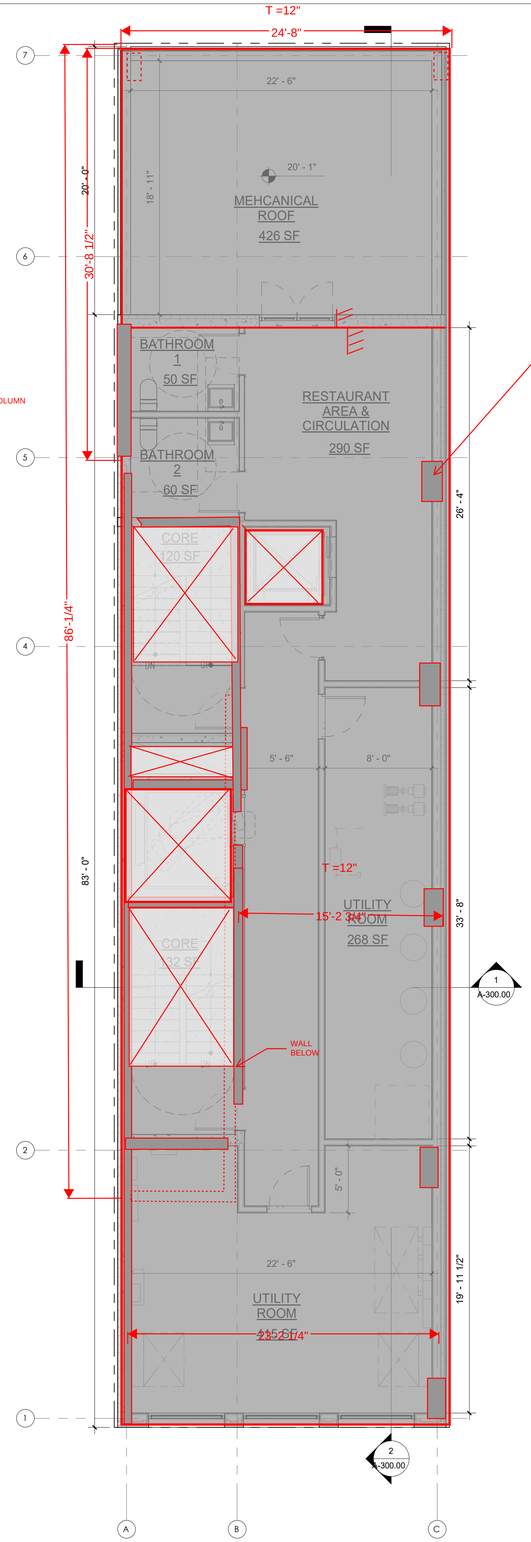
3/16" = 1'-0"



2 GROUND / 1ST FLOOR
3/16" = 1'-0"



3 2ND FLOOR
3/16" = 1'-0"

QUANTITY ESTIMATE:

COLUMNS:
F'c = 8 KSI
REINF = 1PSF

SLABS - TYP. 12" FLOORS
F'c = 7.2 KSI
6 KSI
REINF = 4 PSF

TRANSFER SLAB GROUND
F'c = 10KSI
REINF. = 6PSF

SHEAR WALLS
F'c = 8KSI
REINF. = 4PSF

CAP BEAMS TANGENT WALLS
F'c = 8KSI
REINF = 30 PLF

FOUNDATION SLAB:
F'c = 8KSI
REINF = 8PSF

38- 100 TON MINI-CAISSONS
(REFER TO GEOTECH REPORT)

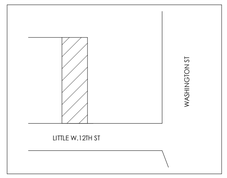
MARIN ARCHITECTS
57 W 38TH ST NEW YORK NY 10018
212.463.9450 INFO@ MARINARCHITECTS.COM
CONSULTING ENGINEERS

DESIMONE
4-7-2026

""AS-OF-RIGHT"
RESTAURANT AND OFFICE DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

AS-OF-RIGHT RESTAURANT & OFFICE SCENARIO

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

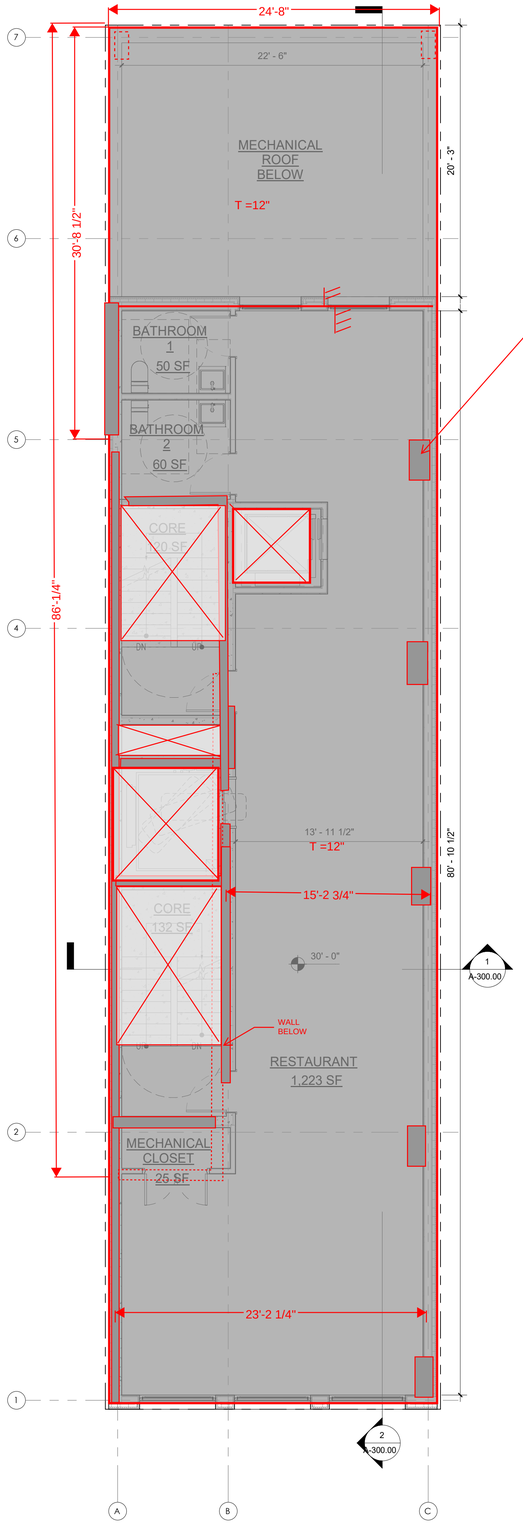
CELLAR, 1ST, SECOND FL

SEAL

REGISTERED ARCHITECT WALTER MARIN 027344 STATE OF NEW YORK

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-100.00

DOB BSCAN STICKER



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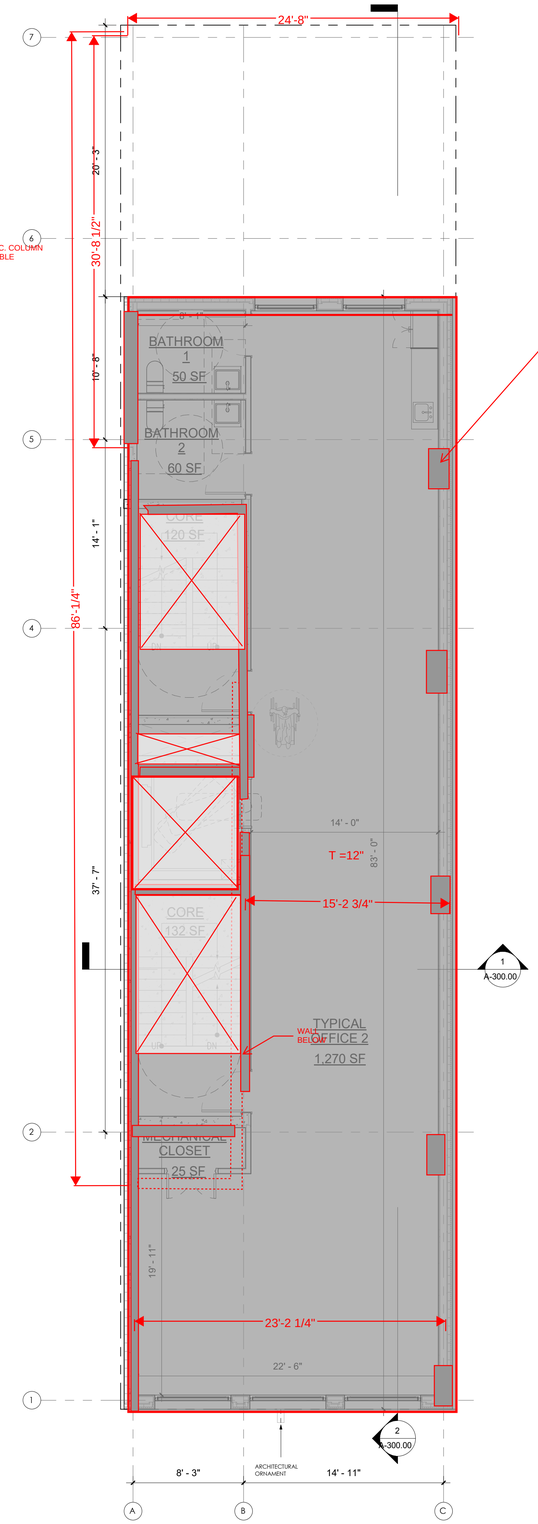
3/16" = 1'-0"



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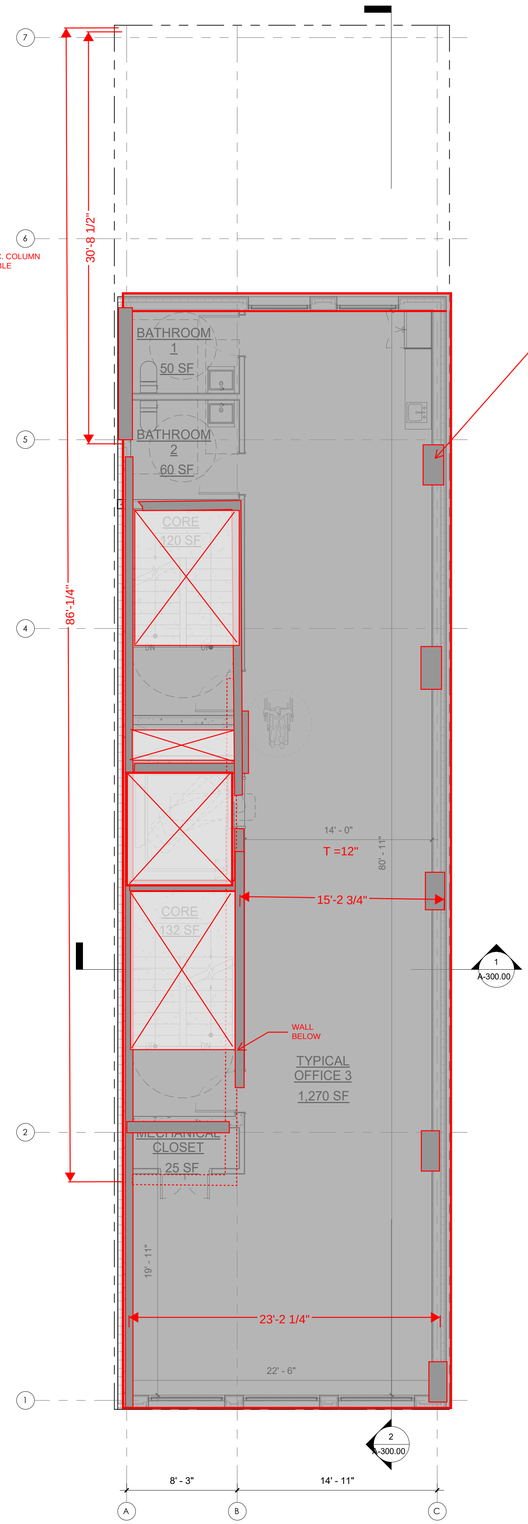

3 5TH FLOOR
3/16" = 1'-0"

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ARCHITECTS

57 W 38TH ST NEW YORK NY 10018
212 463 8480 INFO@ MARINARCHITECTS.COM

CONSULTING ENGINEERS

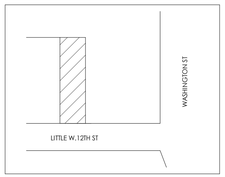
DESIMONE

4-7-2026

""AS-OF-RIGHT"
RESTAURANT AND OFFICE
DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

AS-OF-RIGHT RESTAURANT &
OFFICE SCENARIO

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

3RD, 4TH, 5TH FLOOR

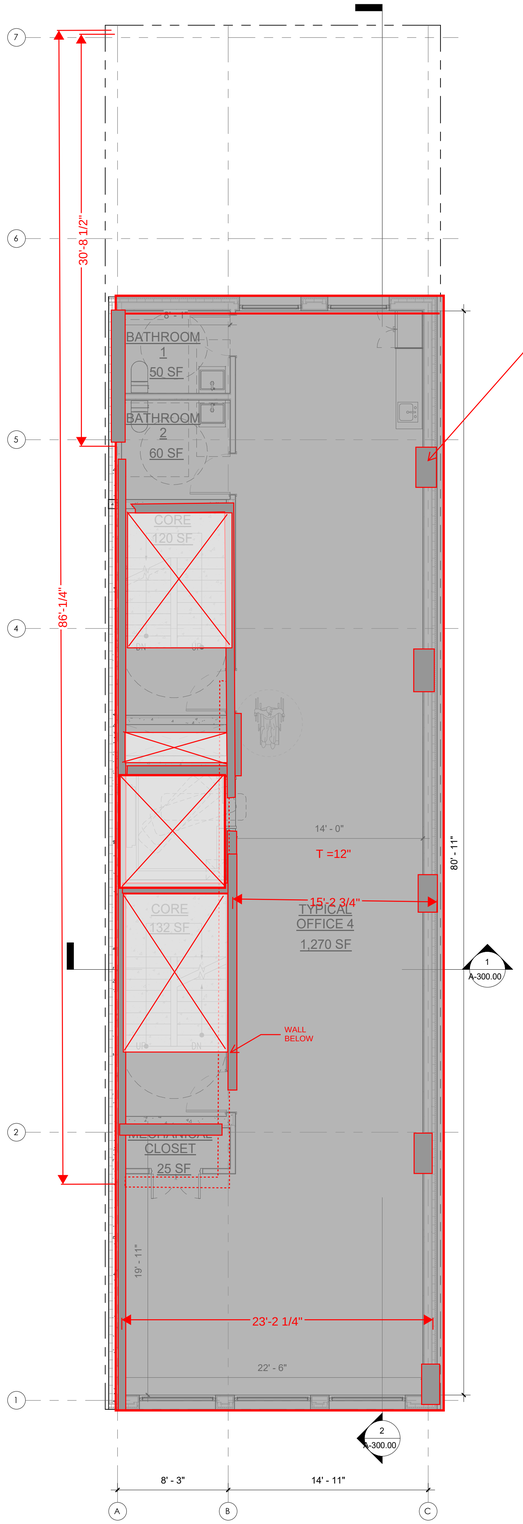
SEAL

DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-101.00

DOB BSCAN STICKER



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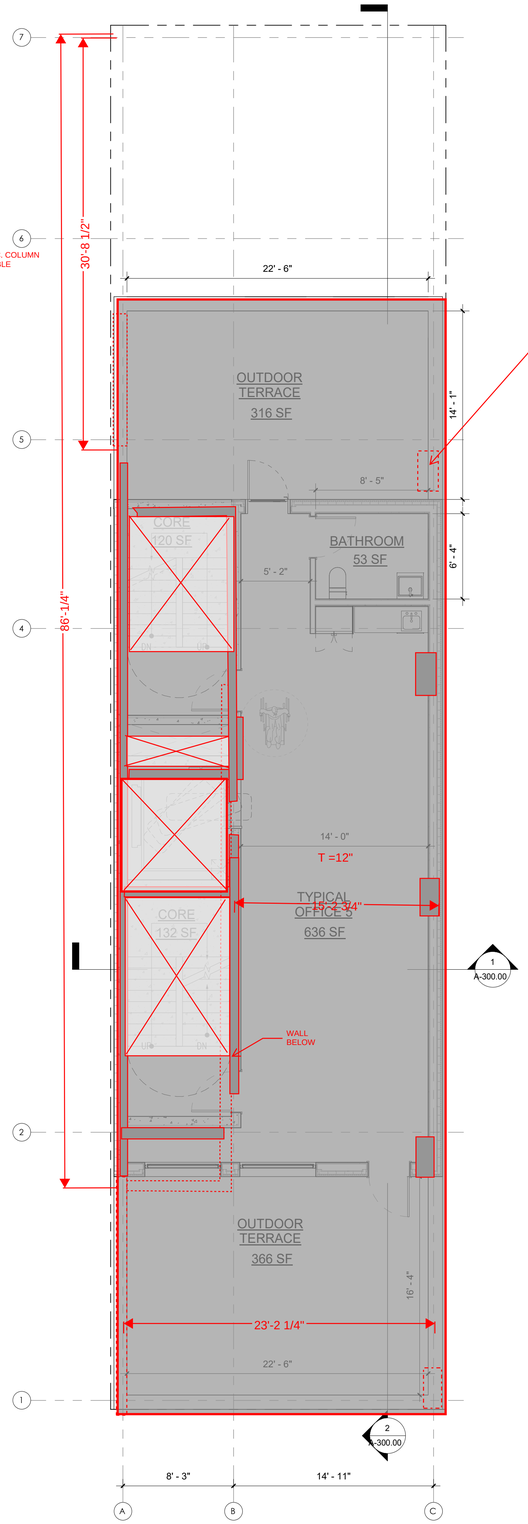

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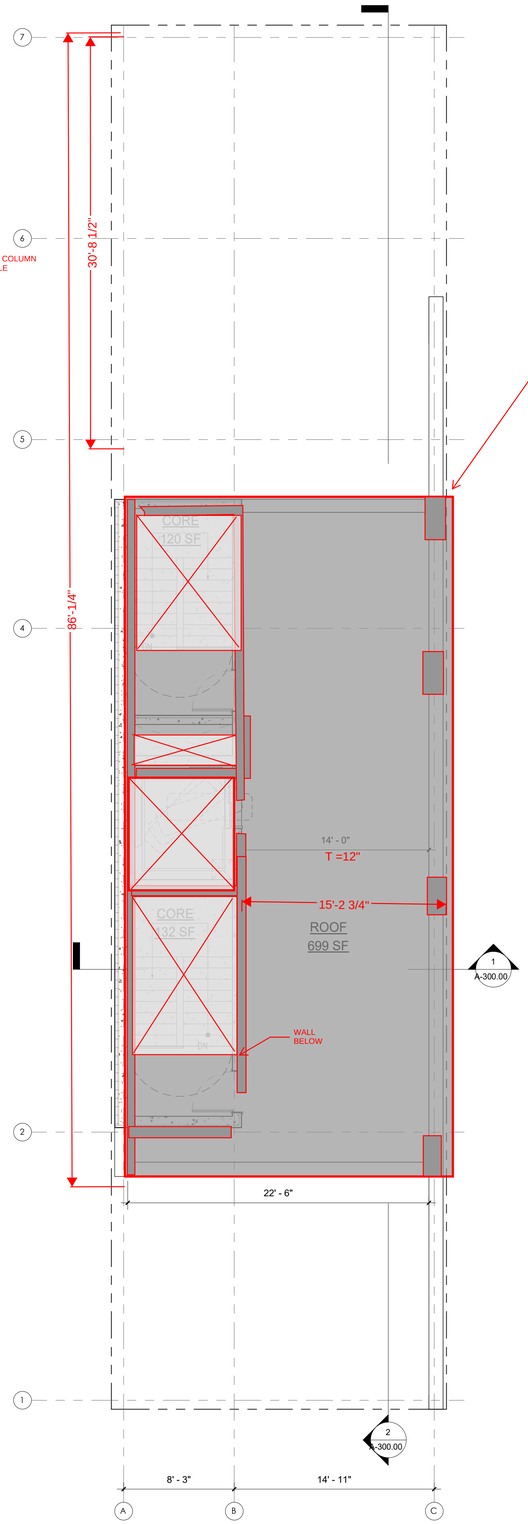

3 ROOF FLOOR
3/16" = 1'-0"

MARIN ARCHITECTS
57 W 38TH ST NEW YORK NY 10018
212 463 8480 INFO@ MARINARCHITECTS.COM
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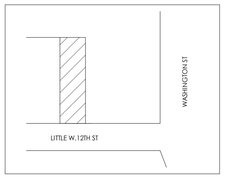
""AS-OF-RIGHT"
RESTAURANT AND OFFICE
DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

KEY PLAN



CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST

AS-OF-RIGHT RESTAURANT &
OFFICE SCENARIO

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

6TH, 7TH, ROOF PLAN

SEAL

REGISTERED ARCHITECT WALTER MARIN 027794 STATE OF NEW YORK

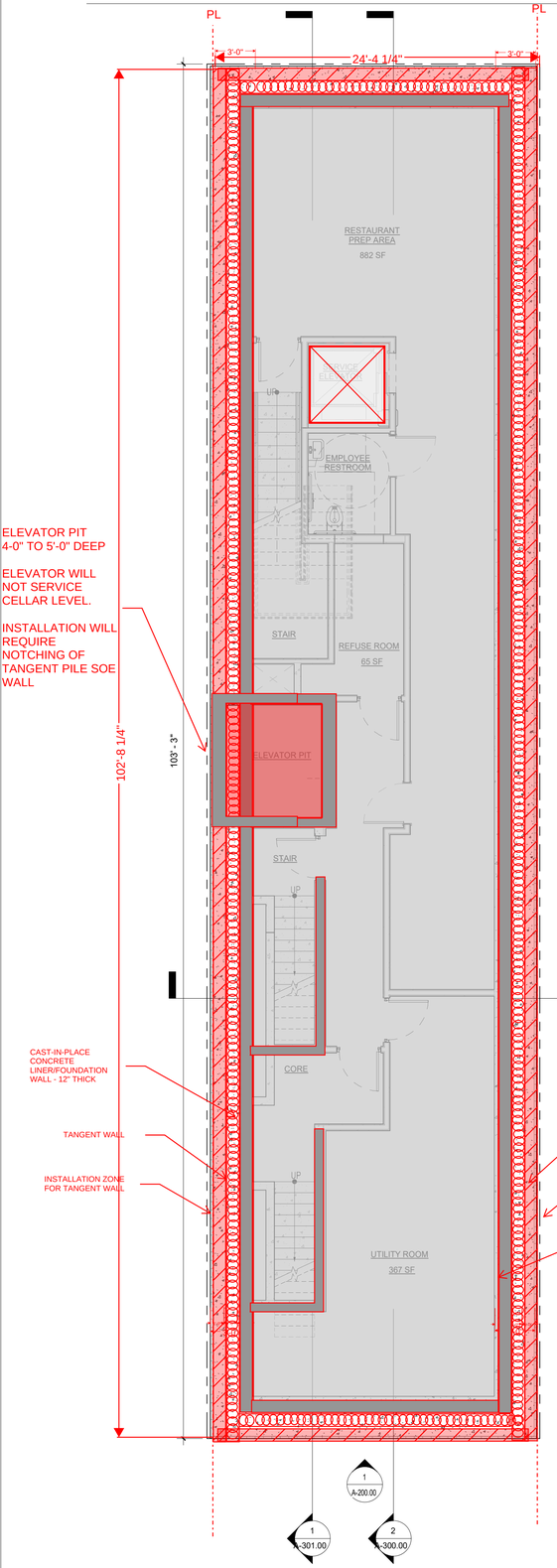
DATE:	10/10/24
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-102.00

DOB BSCAN STICKER

Preliminary Structural Design
Proposed Development Scenario



ELEVATOR PIT
4-0" TO 5'-0" DEEP

ELEVATOR WILL NOT SERVICE CELLAR LEVEL.

INSTALLATION WILL REQUIRE NOTCHING OF TANGENT PILE SOE WALL

CAST-IN-PLACE CONCRETE LINER/FOUNDATION WALL - 12" THICK

TANGENT WALL

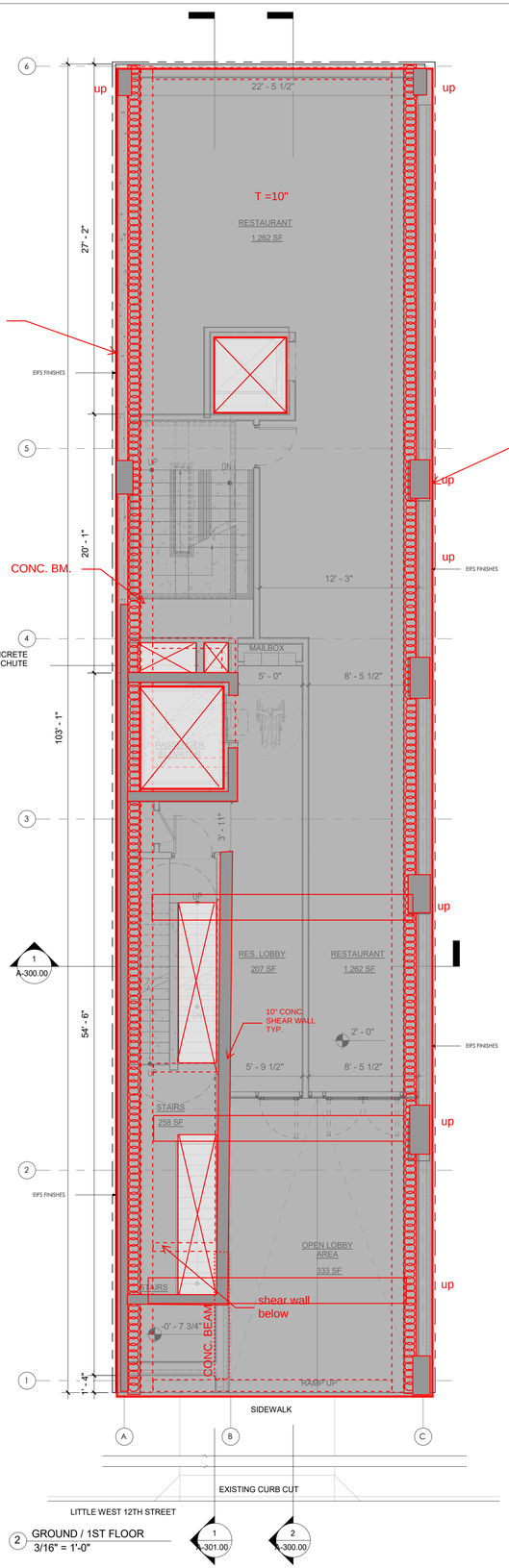
INSTALLATION ZONE FOR TANGENT WALL

TANGENT WALL

INSTALLATION ZONE FOR TANGENT WALL

CAST-IN-PLACE CONCRETE LINER/FOUNDATION WALL - 12" THICK

1 CELLAR FLOOR
3/16" = 1'-0"

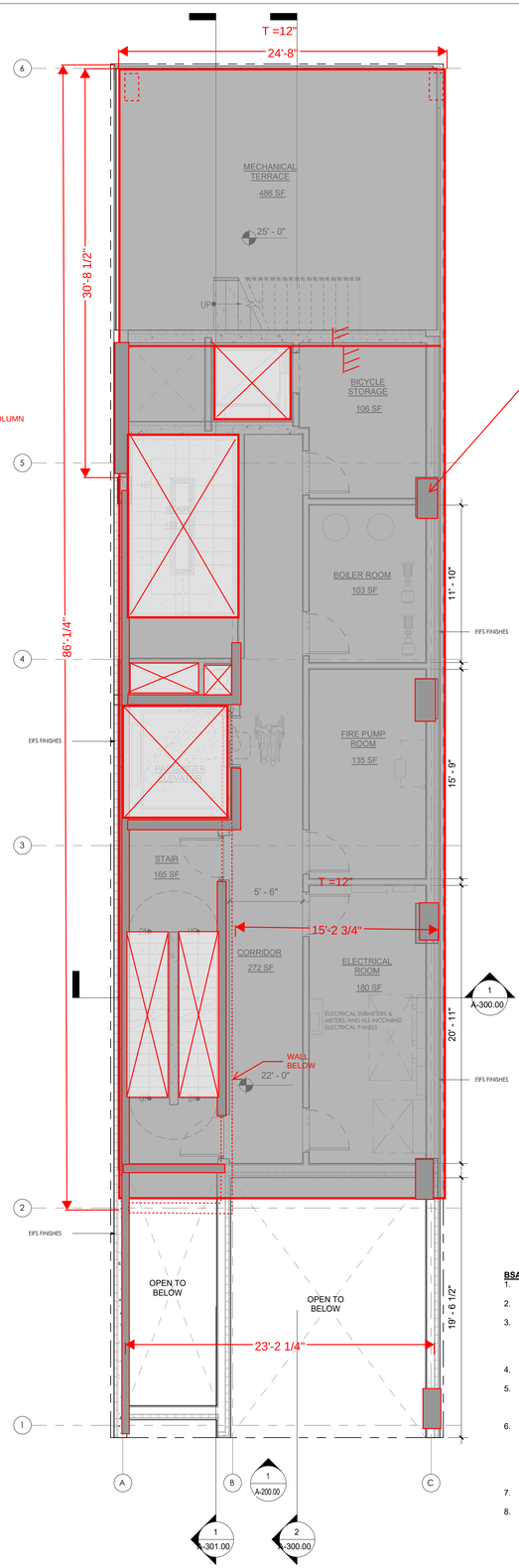


PERIMETER CAP BEAM OVER TANGENT PILE WALL FRAMING INTO TANGENT PILE AND FOUNDATION WALL (TYP. @ PERIMETER)

CONC. BM.

20" W X 24" L CONC. COLUMN (TYP DUE TO DOUBLE HEIGHT)

2 GROUND / 1ST FLOOR
3/16" = 1'-0"



20" W X 24" L CONC. COLUMN (TYP DUE TO DOUBLE HEIGHT)

3 2ND FLOOR
3/16" = 1'-0"

QUANTITY ESTIMATE:

COLUMNS:
F'c = 10KSI (LOWER HALF)
8 KSI (UPPER HALF)
REINF = 1PSF

SLABS - TYP. 8" FLOORS
F'c = 7.2 KSI
6 KSI
REINF = 4 PSF

TRANSFER SLAB GROUND
F'c = 10KSI
REINF. = 6PSF

SHEAR WALLS
F'c = 10KSI (LOWER HALF)
8KSI (UPPER HALF)
REINF. = 4PSF

CAP BEAMS TANGENT WALLS
F'c = 8KSI
REINF = 30 PLF

FOUNDATION SLAB:
F'c = 8KSI
REINF = 8PSF

44- 100 TON MINI-CAISSONS (REFER TO GEOTECH REPORT)

Note required on plans:
"Flood Regulations, Article S, Chapter b, of the Zoning Resolution and Appendix G of the New York City Building Code, as applicable, shall be complied with as reviewed and approved by the Department of Buildings.

BSA and General Notes:

1. All work and site conditions shall substantially conform to drawings filed at Board of Standards and Appeals (BSA).
2. All partitions and exits shall be approved by the Department of Buildings (DOB).
3. DOB shall ensure compliance with all other applicable provisions of the Zoning Resolution, the Administrative Code and any other relevant laws under its jurisdiction irrespective of the plans/configurations not related to the relief granted
4. No noise appliffication at grade and no noise amplification devices will be added in outdoor areas.
5. All signage shall comply with underlying zoning district regulations subject to DOB review and approval. BSA is not waiving signage requirements and no signage waivers are being requested.
6. The BSA's approval of the instant plans does not constitute any waiver of any flood regulations that may apply to the Premises. The applicant must comply with all applicable flood regulations, including Article 6, Chapter 4, of the Zoning Resolution and Appendix G of the Building Code, as reviewed and approved by the Department of Buildings"
7. The proposed project shall used electricity to power HVAC systems.
8. Construction Protection Plan will be submitted to Landmarks Preservation Commission (LPC) for review prior to the start of construction.

MARIN ARCHITECTS
57 W 38TH ST NEW YORK NY 10018
212 463 8480 INFO@MARINARCHITECTS.COM
CONSULTING ENGINEERS

DESIMONE
4-7-2026

"PROPOSED"
RESTAURANT AND RESIDENTIALS DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

KEY PLAN

CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST
PROPOSED RESTAURANT & RESIDENTIAL SCENARIO

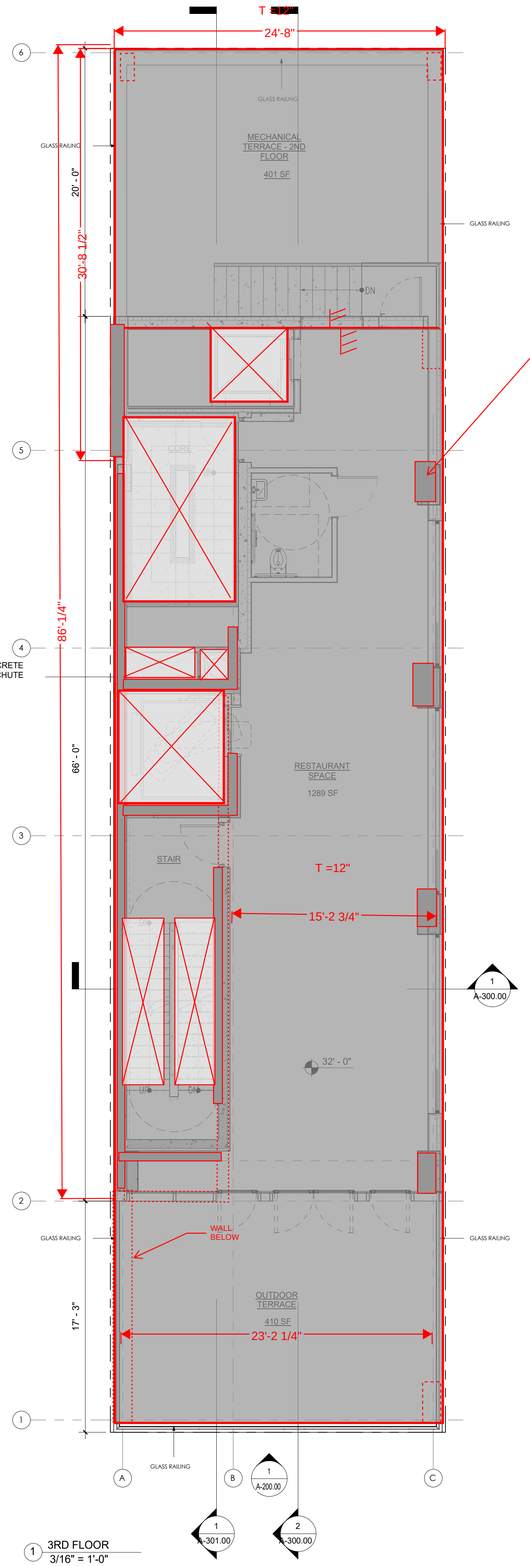
PROJECT ADDRESS:
51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

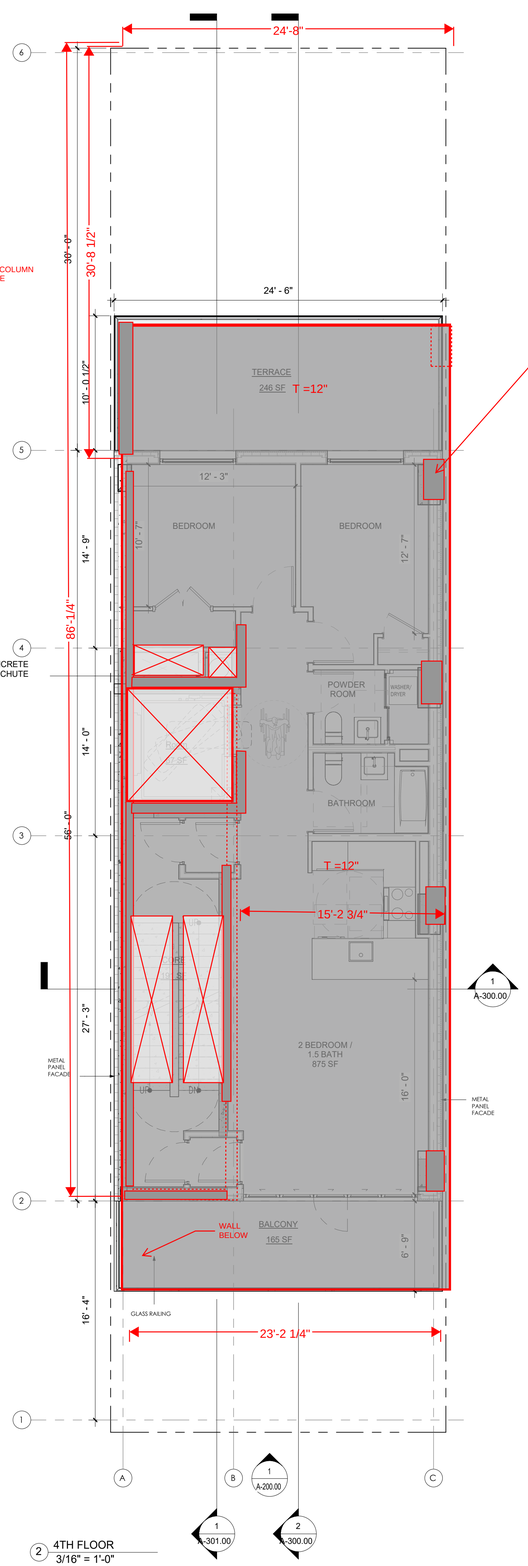
DWG TITLE:
CELLAR, 1ST, 2ND FLOOR

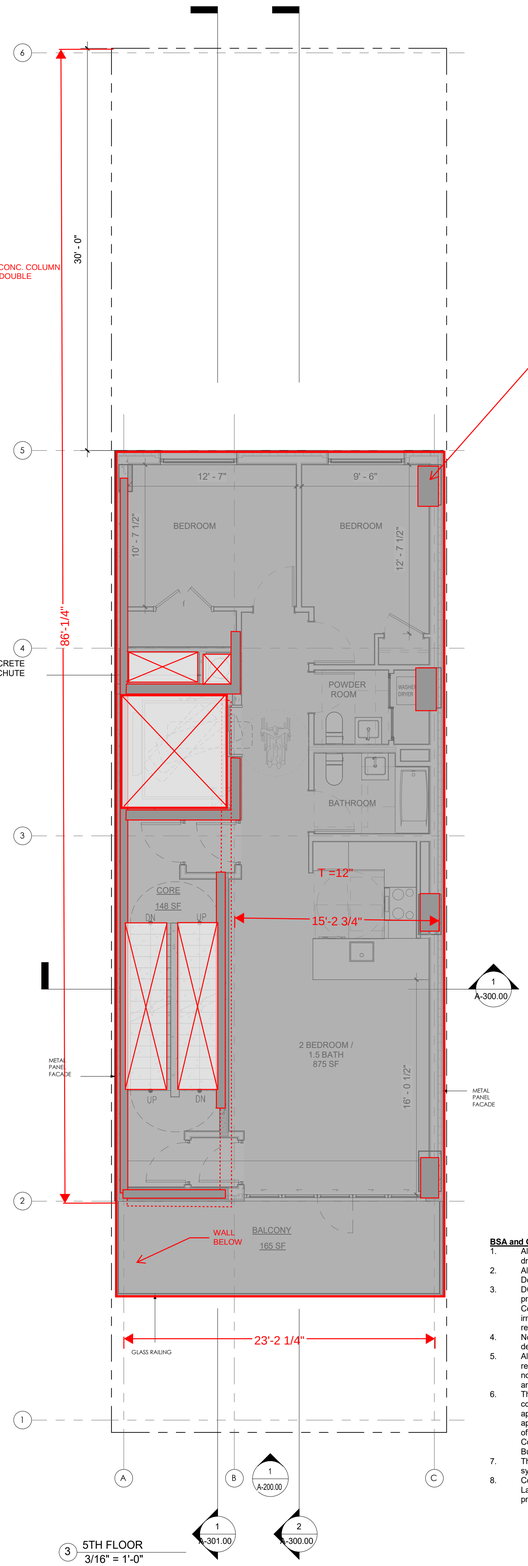
SEAL

DATE:	10/15/25
PROJECT No:	JOB # 24068
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-100.00

DOB BSCAN STICKER







BSA and General Notes:

1. All work and site conditions shall substantially conform to drawings filed at Board of Standards and Appeals (BSA).
2. All partitions and exits shall be approved by the Department of Buildings (DOB).
3. DOB shall ensure compliance with all other applicable provisions of the Zoning Resolution, the Administrative Code and any other relevant laws under its jurisdiction irrespective of the plans/configurations not related to the relief granted
4. No noise appliffication at grade and no noise amplification devices will be added in outdoor areas.
5. All signage shall comply with underlying zoning district regulations subject to DOB review and approval. BSA is not waiving signage requirements and no signage waivers are being requested.
6. The BSA's approval of the instant plans does not constitute any waiver of any flood regulations that may apply to the Premises. The applicant must comply with all applicable flood regulations, including Article 6, Chapter 4, of the Zoning Resolution and Appendix G of the Building Code, as reviewed and approved by the Department of Buildings"
7. The proposed project shall used electricity to power HVAC systems.
8. Construction Protection Plan will be submitted to Landmarks Preservation Commission (LPC) for review prior to the start of construction.

MARIN ARCHITECTS
57 W 38TH ST NEW YORK NY 10018
212 463 8480 INFO@ MARINARCHITECTS.COM
CONSULTING ENGINEERS

DESIMONE
4-7-2026

"PROPOSED"
RESTAURANT AND RESIDENTIALS DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

KEY PLAN

CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST
PROPOSED RESTAURANT & RESIDENTIAL SCENARIO

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

3RD, 4TH, 5TH FLOOR

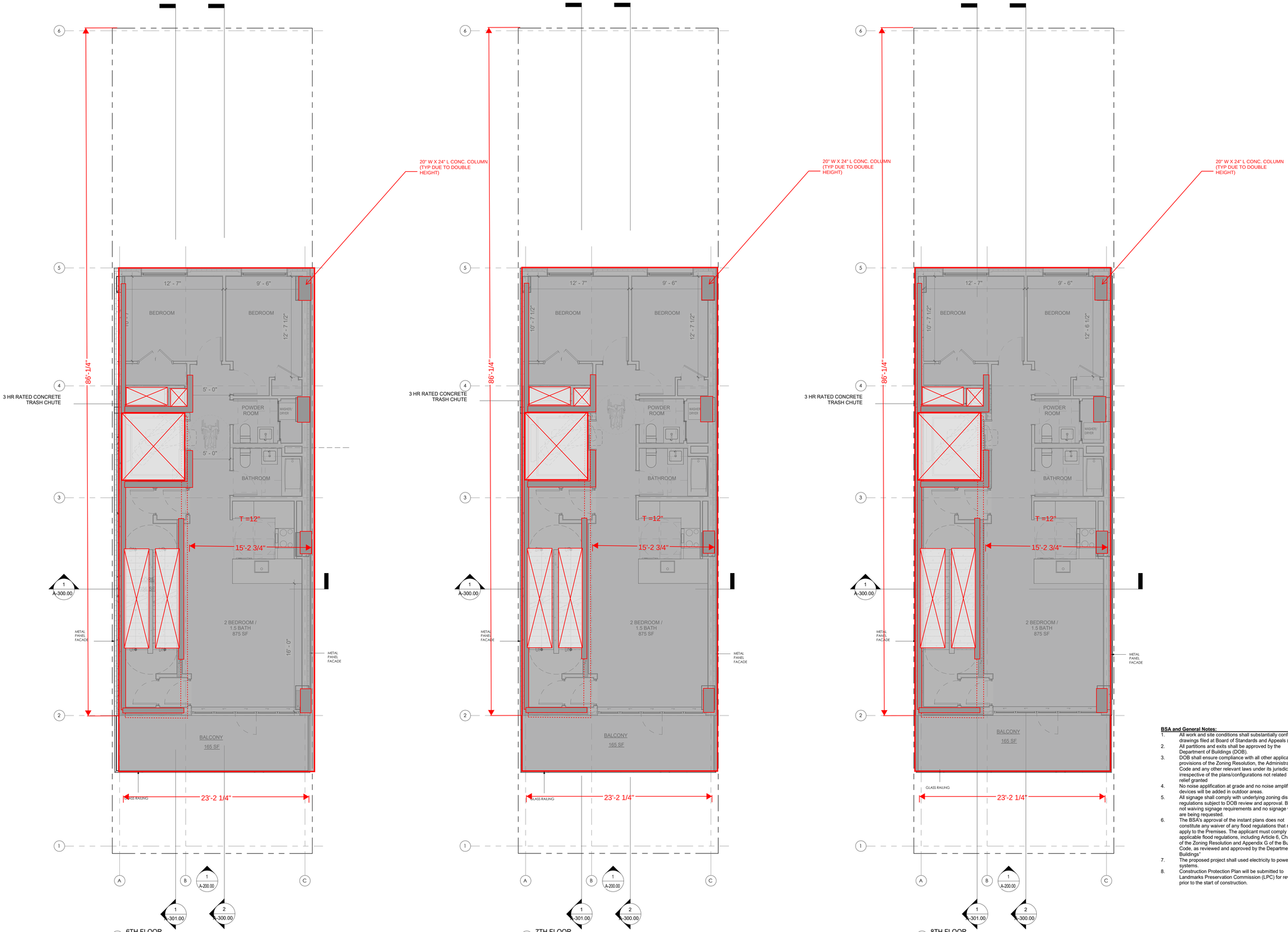
SEAL

DATE:	10/15/25
PROJECT No:	JOB # 24068
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-101.00

DOB BSCAN STICKER



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4-7-2026

"PROPOSED"
RESTAURANT AND RESIDENTIALS
DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

KEY PLAN

CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST
PROPOSED RESTAURANT &
RESIDENTIAL SCENARIO

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

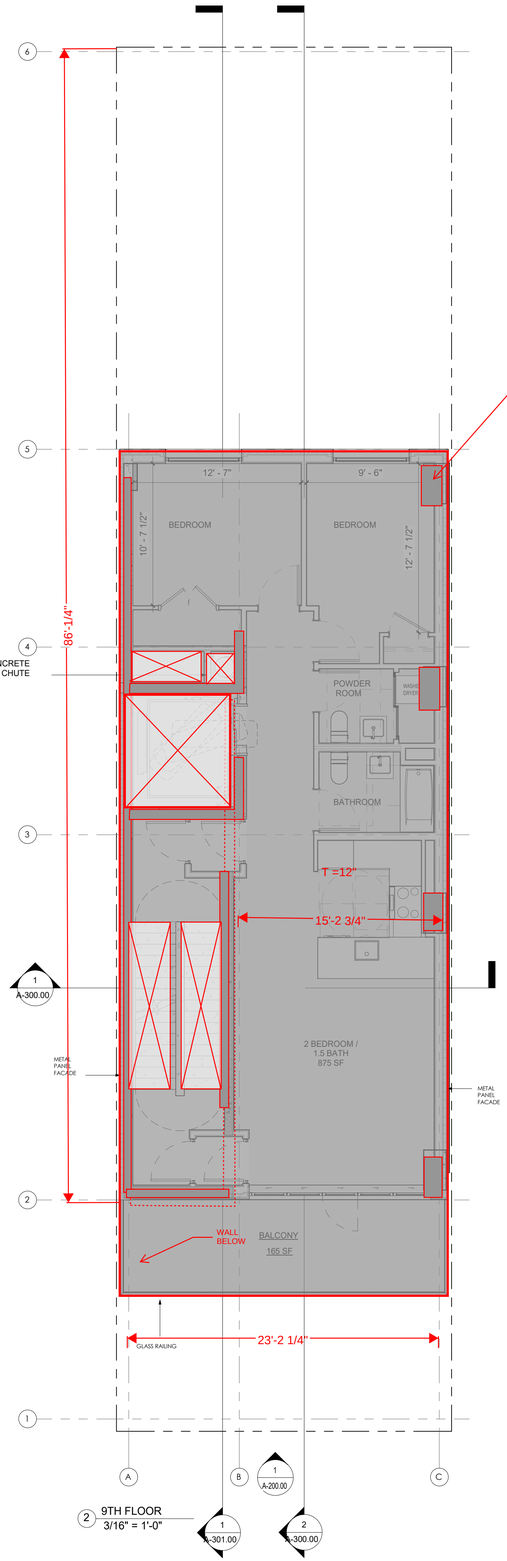
DWG TITLE:

6TH, 7TH, 8TH FLOOR PLAN

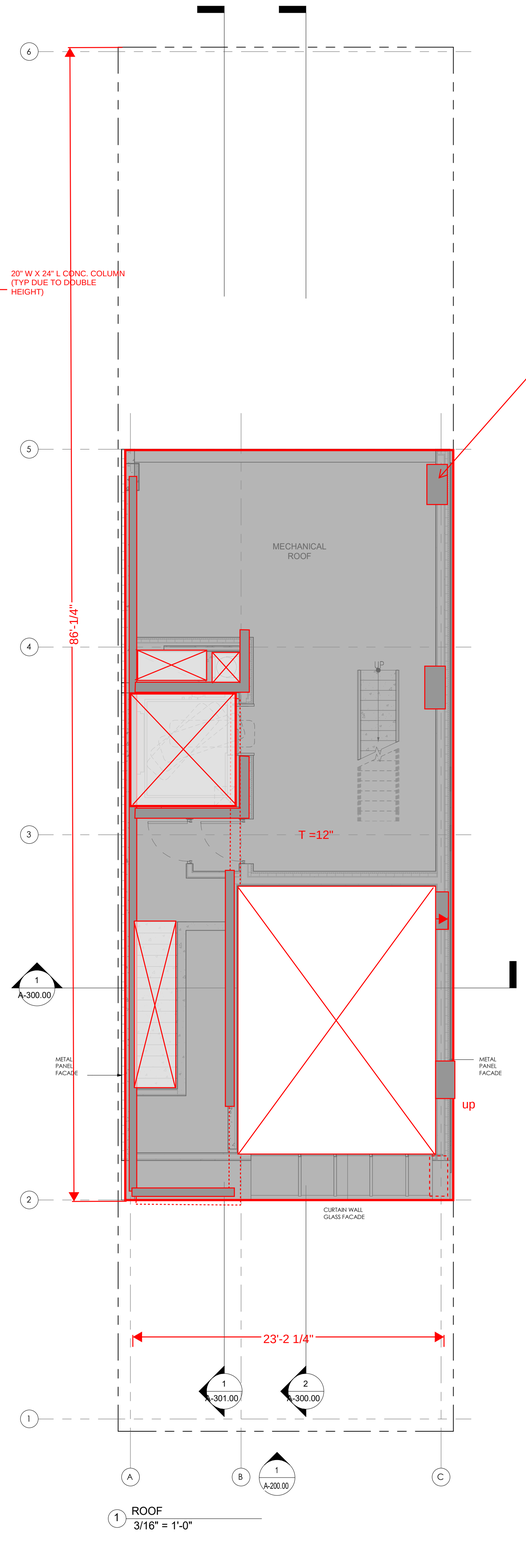
SEAL

DATE:	10/15/25
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker
DWG No:	A-102.00

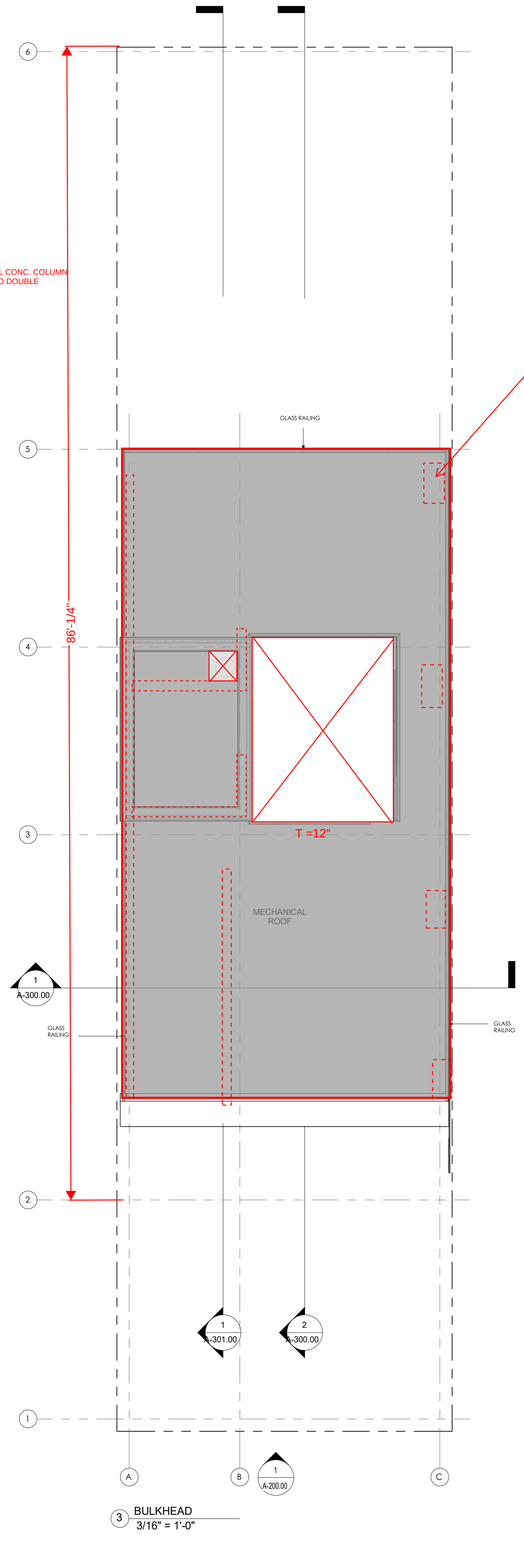
DOB BSCAN STICKER



2 9TH FLOOR
3/16" = 1'-0"



1 ROOF
3/16" = 1'-0"



3 BULKHEAD
3/16" = 1'-0"

BSA and General Notes:

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DESIMONE
4-7-2026

"PROPOSED"
RESTAURANT AND RESIDENTIALS
DEVELOPMENT SCENARIO

CONCEPT STRUCTURAL

KEY PLAN

CLIENT:

NOVAC NOURY

PROJECT NAME:

51 LITTLE W.12TH ST
PROPOSED RESTAURANT & RESIDENTIAL SCENARIO

PROJECT ADDRESS:

51 LITTLE WEST 12TH STREET
NEW YORK, NY 10014
BLOCK 645, LOT 21

DWG TITLE:

9TH, 10TH FLOOR PLAN

SEAL

REGISTERED ARCHITECT WALTER MARIN STATE OF NEW YORK

DATE:	10/15/25
PROJECT No:	JOB # 24868
DRAWING BY:	Author
CHK BY:	Checker

DWG No:

A-103.00

DOB BSCAN STICKER

APPENDIX

CONSTRUCTION COST ESTIMATES

Marshall & Swift Valuation Cost Manual

"As-of-Right" Office & Restaurant Scenario

DEVELOPMENT COST ESTIMATES

As-of-Right Commercial Development Scenario

Based on Marshall & Swift Valuation Service

		Avg. Class B Commercial Office Bldg 7-Story	MS Manual Pages
Base Cost Per SF *		**$230.00**	Section 15, page 17 - Nov 2025
Cellar Adj.		$14.65	Section 15, page 19 - Nov 2025
Add Micropiles & Tangent Wall System		$15.95	Section 51, page 4 - Mar 2025
First, Part 2nd,& 3rd Flr Restaurant Adj. (Shell)		($11.53)	Section 13, page 14 - May 2024
Add 2nd Elevator Adj		$10.94	Section 15, page 17 - Nov 2025
Add Elevator Stops to Cellar,2nd & 3rd flrs Adj		$2.66	Section 15, page 36 - Nov 2025
Sprinklers-Wet System		$6.23	Section 15, page 37 - Nov 2025
Outdoor Terrace (2nd Flr Rear & 7th Flr Front & Rear) Adj.		$0.43	Section 57, page 4 - Sept 2025
Total Base Cost Per SF *		**$269.32**	* Costs are for above grade area.
Façade Area Adjustment		110.5%	Section 15, page 38 - Nov 2023
Bldg. Height Adjustment		102.0%	Section 15, page 17 - Nov 2023
Floor Height Adjustment		100.0%	Section 15, page 38 - Nov 2023
Geographic Multiplier		132.0%	Section 99, page 9 - Mar 2026
Inflation Factor		100.0%	Section 99, page 3 - Jan 2026
Total Cost per SF *		**$400.69**	* Costs are for above grade area.
Total Above Grade SF		**14,905**	
MS Total Cost		**$5,972,338**	
Total Bldg SF incl Cellar		17,429	
	$/SF	**$342.67**	

OFFICES, MEDICAL AND PUBLIC BUILDINGS

GENERAL INFORMATION

Calculator Costs are averages of final costs including architects' fees and contractors' overhead and profit, sales taxes, permit fees, and insurance during construction. Interest on interim construction financing is also included, but not financing costs, real estate taxes, or brokers' commissions (see Section 1 for complete list). They do not represent any building illustrated, except as the building is included in the averages. Refinements to the average costs for type of heating, sprinklers, basement elevator stops, area/perimeter ratio, and story height are given at the end of the section, and adjustments for elevators and number of stories are on the cost pages. Current and Local Cost Multipliers are given in Section 99.

DESCRIPTIONS

The abbreviated descriptions given in the tables show some of the items most generally found in buildings of the class, quality and occupancy listed. They are merely indicative of many buildings in this cost classification, and are not meant to be building specifications.

CONSTRUCTION

Buildings are divided into five construction classes: A, B, C, D, and S, as described in Section 1. In each class there will be variations and subclasses, but for purposes of pricing, the major elements of the building should be considered in entering the tables. Thus, if a building which is otherwise a Class B has a steel truss roof, the costs for the Class B building will still be representative. Interpolations may be made if the appraiser feels the building overlaps two classes, or the segregated costs in Section 45 may be used for adjustments. Pole or post frame prefabricated metal skin structures are a subcategory of Class D. All metal buildings (skin and frame) with mixed secondary wood purlins and girts can be interpolated between Classes S and D pole frame structure costs or adjusted from Section 64.

OCCUPANCY

Office buildings are buildings designed for general commercial occupancy, including administrative government and corporate uses, and are normally subdivided into relatively small units. If part of an office building has some other occupancy, such as a bank or store on the first floor, that portion should be priced using its appropriate base cost. For light shed office structures, see Section 17. For office apartments, see Section 12.

Atrium and vestibule entries or lobbies are glassed structures which usually abut or are underneath elevated buildings. For prefabricated greenhouse structures, see Section 17 or 18.

Mechanical penthouses shelter the building's elevator and other mechanical equipment. For finished penthouses, i.e., those containing roof apartments, restaurants, etc., use the proper occupancy cost.

Parking-level floors are intermediate and ground-level parking facilities found underneath elevated buildings and include all framing, ramps and stairs necessary.

Basements include finish compatible with the type of basement, including stairs and ramps as necessary and must be refined for size, shape and height. Add elevator stops from the refinement table at the end of the section.

Mezzanines do not include exterior wall or heating which are included in the building cost refinement for wall height. Elevator stops can be added from the refinement page.

Banks, branch and central offices, include savings and loan and credit union occupancies where the design is of a bank type. Where such uses are made of ordinary store or office buildings, the store or office costs should be used, adding for any extra features. While a branch bank tends to be a single-purpose, low-rise neighborhood facility, the central or main bank facility may be more office building in character, where high-rise administrative office floors should be priced as such. **Minibanks** are small walk- or drive-up facilities, typically between 500 and 2,000 square feet in size. Costs include vaults, but do not include banking fixtures or equipment, vault doors, or safe deposit boxes. Drive-up windows, night depositories, and surveillance systems commensurate with the quality, are included.

Medical office buildings are designed for medical and/or dental services with examination and outpatient treatment, and includes private and public clinics. **Dental clinics** are small, standalone facilities and will generally have a greater amount of plumbing and partitions.

Urgent Care Clinics or infirmaries are designed for emergency, urgent care, first aid and medical treatment, usually having no facilities for surgery or a minimum of such facilities.

General hospital costs include fixed equipment (Group I) but not Groups II and III equipment, whether installed or classed as personal property. See definitions of equipment groups on cost pages of this section.

Outpatient centers are freestanding, specialty treatment centers for ambulatory outpatient or same-day surgery facilities and include all clinical surgery, diagnostic, lab, administrative and public areas commensurate with the quality level. Operating rooms on average represent 2.5% of the total floor area. Cost includes fixed equipment only. This category will also include specialized imaging and radiation treatment, and diagnostic centers for cancer, diabetes, and eye and kidney diseases, etc. Extremely small vault-type imaging equipment buildings only, are not included, where reported costs have been 50% to 100% greater.

Nursing Homes (Convalescent hospitals) lack facilities for surgical care and treatment, and include so-called skilled nursing homes, rest homes, sanitariums and like buildings of hospital-type construction, giving full nursing care. Treatment and therapy rooms commensurate with the quality, are included. Retirement living facilities are found in Section 11 or 12. Group care homes are found in Section 11.

Veterinary hospitals are designed for the medical and surgical care and treatment of small animals. Costs do not include cages and runs or open shelters, which should be priced separately.

Kennels have limited examination and treatment facilities and are predominantly for the boarding of small animals. The better qualities include the large public animal control facilities and the high-cost "pet hotels." Costs include the cages and enclosed runs.

Governmental buildings include major city halls or town centers, courthouses, etc., but do not include typical office or service buildings, which should be priced under the proper category in this or other sections of the manual. **Community service buildings** are mixed-use structures, typically found in rural communities, and are generally smaller and utilitarian in scope. The lower qualities are generally composed of public safety facilities, volunteer fire, limited office and council meeting rooms and/or small libraries, etc. The better qualities will have a large proportion of well-finished, full-service facilities and will merge into the government occupancy.

Fire stations, staffed, are emergency service buildings designed with engine storage, dormitory, and light kitchen facilities. **Volunteer stations** are primarily for vehicular/apparatus storage only, with minimum office and meeting room facilities commensurate with the quality. The good quality may also include restroom and kitchenette facilities. If part of a station has some other occupancy, such as a library or social hall, that portion should be priced using its appropriate base cost, with each portion modified by its area/perimeter multiplier, considering the common wall as belonging to half of each of the portions, or see community service buildings above.

Jails, correctional facilities or detention centers include the jail hardware; i.e., cell blocks and locking equipment, for which average costs are given. The full range of facilities, for minimum to maximum security, is included, commensurate with the quality of the entire prison plant. **Police stations** are basically law enforcement facilities with limited numbers of jail holding cells. Sallyport facilities commensurate with the quality are included. Costs do not include any service equipment for kitchen, laundry or recreation.

Public libraries or media/resource centers include the basic construction of the building, including most items found in the general contract, but not furnishings and fixtures such as counters, kitchenette, seating or book stacks which are not considered built-in and permanently attached under the general building contract. For school and university libraries, see Section 18.

TRADE FIXTURES AND EQUIPMENT

Some fixtures and equipment costs for buildings in this section are listed in Section 65.

OFFICE BUILDINGS (344)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A	Excellent	Best metal or stone, brick or block backup, solar glass	Plaster, best veneers, vinyl wall coverings, vinyl, terrazzo, carpet	*Luminous ceilings, many outlets, many private restrooms	Hot and chilled water (zoned)	4617.71	35.74	429.00
	Good	Good metal and solar glass, face brick, precast concrete panels	Drywall or plaster, some wall cover, acoustic tile, vinyl tile, carpet	*Good fluorescent, high intensity lighting, good restrooms	Hot and chilled water (zoned)	3648.96	28.24	339.00
	Average	Brick, concrete or metal and glass panels, little trim	Average partitions, acoustic tile, vinyl composition, some extras	*Average intensity fluorescent lighting, average restrooms	Warm and cool air (zoned)	2755.56	21.32	256.00
	Low cost	Minimum-cost walls and fenestration, little trim	Drywall, acoustic ceilings, asphalt tile, few partitions	*Minimum office lighting and plumbing	Warm and cool air (zoned)	2185.07	16.91	203.00
B	Excellent	Best metal or stone, brick or block backup, tinted glass	Plaster, best veneers, vinyl wall coverings, vinyl tile, terrazzo	*Luminous ceilings, many outlets, many private restrooms	Hot and chilled water (zoned)	4208.68	32.57	391.00
	Good	Good metal and solar glass, face brick, precast concrete panels	Drywall/plaster, some wall cover, acoustic tile, vinyl tile, carpet	*Good fluorescent, high intensity lighting, good restrooms	Hot and chilled water (zoned)	3315.28	25.66	308.00
	Average	Brick, concrete or metal and glass panels, little trim	Average partitions, acoustic tile, vinyl composition, some extras	*Average intensity fluorescent lighting, average restrooms	Warm and cool air (zoned)	2475.70	19.16	230.00
	Low cost	Minimum-cost walls and fenestration, little trim	Drywall, acoustic ceilings, asphalt tile, few partitions	*Minimum office lighting and plumbing	Warm and cool air (zoned)	1959.03	15.16	182.00
C	Excellent	Steel frame, masonry and glass, stone ornamentation, top quality	Plaster, paneling, carpet and terrazzo, suspended ceilings	*Best fluorescent ceiling panels, tiled restrooms, good fixtures	Warm and cool air (zoned)	3595.14	27.82	334.00
	Good	Steel frame or bearing walls, brick/ conc. panels, some ornamentation	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2507.99	19.41	233.00
	Average	Steel or concrete frame, or bearing walls, some trim	Paint, drywall partitions, acoustic tile, vinyl composition	*Fluorescent lighting, adequate outlets and plumbing	Forced air	1776.04	13.74	165.00
	Low cost	Masonry bearing walls, light rafters, very plain	Paint, few low-cost partitions, acoustic tile, asphalt tile	Minimum office lighting and plumbing	Wall furnace	1194.79	9.25	111.00
D	Excellent	Studs or steel columns, bar or web joists, brick or stone veneer, EIFS	Best plaster, paneling, carpet and vinyl tile	*Fluorescent panels, many outlets, good tiled restrooms	Warm and cool air (zoned)	3401.39	26.32	316.00
	Good	Best stucco on good frame, brick or stone trim, good front	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2368.06	18.33	220.00
	Average	Stucco or wood siding on wood or steel studs, some trim	Drywall, acoustic tile, low-cost carpet or vinyl composition	*Adequate lighting and plumbing	Forced air	1679.17	12.99	156.00
	Low cost	Light stucco or siding on wood or steel studs, very plain	Drywall, few partitions, acoustic tile, asphalt tile	Minimum lighting and plumbing	Wall furnace	1119.45	8.66	104.00
DPOLE	Good	Good metal panels, fenestration, some brick or stone trim	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2228.13	17.24	207.00
	Average	Pole frame, insulated metal panels, some ornamentation	Drywall, acoustic tile, low-cost carpet or vinyl composition	Adequate lighting and plumbing	Forced air	1517.71	11.75	141.00
	Low cost	Pole frame, finished interior, some insulation	Drywall, few partitions, acoustic tile, asphalt tile	Minimum lighting and plumbing	Wall furnace	1027.95	7.96	95.50
S	Good	Good sandwich panels and fenestration, some brick or stone	Plaster or drywall, good partitions, acoustic tile, carpet and vinyl	*Good fluorescent lighting, good restrooms and fixtures	Package A.C.	2292.71	17.74	213.00
	Average	Insulated wall or sandwich panels, adequate fenestration	Drywall, acoustic tile, low-cost carpet or vinyl composition	Adequate lighting and plumbing	Forced air	1571.53	12.16	146.00
	Low cost	Steel or aluminum on light frame, finished interior, some insulation	Drywall, few partitions, acoustic tile, asphalt tile	Minimum lighting and plumbing	Wall furnace	1065.63	8.25	99.00

MULTISTORY BUILDINGS – Add .5% (1/2%) for each story, over three, above ground, to all base costs, including basements but excluding mezzanines, up to 30 stories; over 30 add .4% (4/10%) for each additional story.

SPRINKLERS – Systems are not included. Costs should be added from Page 37.

BALCONIES – Exterior balconies see Page 37, or they may be computed from the Segregated Costs.

CANOPIES – For large entrance marquees or carport canopies, see Page 37.

***ELEVATORS** – Base costs of buildings marked with an asterisk (*) include elevator costs. If the subject building has no elevators, deduct the following from the base costs for buildings on this page. See Notes on Page 19.

		Sq. M.	Sq. Ft.		Sq.M.	Sq.Ft
Classes A & B	Excellent	200.75	18.65	Average	93.65	8.70
	Good	136.70	12.70	Low cost	63.94	5.94
Classes C/D/S	Excellent	101.29	9.41	Average	36.70	3.41
	Good	60.92	5.66			

CALCULATOR METHOD

BASEMENTS – OFFICE BUILDINGS

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A-B	Office	Plaster interior	Average office finish, acoustic tile, vinyl composition	Adequate office lighting and plumbing	Warm and cool air (zoned)	1991.32	15.41	185.00
	Parking	Unfinished interior	Concrete with hardener, lines and stops, small service area	Exposed lighting, drains	Ventilation	1011.81	7.83	94.00
	Unfinished storage	Painted interior	Unfinished storage and utility, few partitions	Minimum lighting, drains	Space heaters	931.08	7.21	86.50
CDS†	Office	Plaster or drywall interior	Average office finish, acoustic tile, vinyl composition	Typical office lighting and plumbing	Forced air	1259.38	9.75	117.00
	Parking	Unfinished interior	Finished ceiling, concrete floor with hardener	Exposed lighting, adequate drains	Ventilation	656.60	5.08	61.00
	Unfinished storage	Painted interior	Unfinished storage and utility, few partitions	Minimum lighting, drains	None	548.96	4.25	51.00

†For fire-resistant Type I basements, with concrete slab separation under Class C, D or S units, add 8.95 per square foot (96.34 per square meter). Where utilized as courtyard deck on topside, add 19.65 per square foot (211.51 per square meter).

MEZZANINES

A-B	Office	Not included	Enclosed, average office finish, plaster soffit	Average office lighting and plumbing	In building cost	1367.02	-----	127.00
	Open	Not included	Carpet and vinyl composition, plaster soffit	Average lighting and plumbing	In building cost	775.00	-----	72.00
	Good storage/ mechanical	Not included	Metal grating on steel structure	Adequate lighting, no plumbing	In building cost	931.08	-----	86.50
	Average storage	Not included	Painted soffit, light storage, unfinished floor	Minimum, exposed lighting	In building cost	519.36	-----	48.25
	Low storage/ mechanical	Not included	Interstitial space, walk-on platform ceiling assembly, unfinished interior	Minimum lighting, drains	In building cost	226.04	-----	21.00
CDS	Office	Not included	Enclosed, average office finish, acoustic tile soffit	Average office lighting and plumbing	In building cost	979.51	-----	91.00
	Open	Not included	Open, finished floors and soffit	Average lighting, no plumbing	In building cost	543.58	-----	50.50
	Average storage	Not included	Drywall soffit, wood floor, light storage	Minimum lighting, no plumbing	In building cost	363.28	-----	33.75

MECHANICAL PENTHOUSES (585)

A-B	Excellent (Full floor)	Louvers, best curtain wall panels, matching spandrel	Intermediate full mechanical floor, utility space, some storage	Adequate lighting, utility outlets and drains	None	1517.71	11.75	141.00
	Good	Good curtain panels, masonry, louvers, concrete roof	Mechanical and storage, some finish and partitions	Adequate lighting, utility outlets and drains	None	1367.02	10.58	127.00
	Average	Curtain panels or masonry, steel roof deck	Unfinished equipment and storage, few partitions	Exposed lighting, adequate drains	None	968.75	7.50	90.00
	Low cost	Low-cost panels, masonry, very plain	Unfinished interior, roof access only	Minimum lighting, floor drains	None	688.89	5.33	64.00
CDS	Average	Frame or bearing walls, good panels, louvers or masonry, trim	Unfinished equipment and storage, few partitions	Exposed lighting, adequate drains	None	731.95	5.66	68.00
	Low cost	Light frame or stud single wall, low-cost metal, stucco or siding	Unfinished interior	Minimum lighting, floor drains	None	511.29	3.96	47.50

MULTISTORY BUILDINGS – Add .5% (1/2%) for each story, over three, above ground, to all base costs, excluding mezzanines, up to 30 stories; over 30 add .4% (4/10%) for each additional story.

MEZZANINES – Do not use story height or area/perimeter multipliers with mezzanine costs.

SPRINKLERS – Systems are not included. Costs should be added from Page 37.

CANOPIES – Large entrance marquees or carport canopies see Page 37, or they may be computed from the Segregated Costs, Section 45, or from Unit-in-Place Costs.

ELEVATORS – Basement, mezzanine and equipment penthouse stops are not included. Costs should be added from Page 36.

NOTES: Care must be exercised when using square foot elevator costs. Small commercial buildings may have only one elevator and/or handicap lift regardless of size, where a normal range or area served is not feasible for low- to mid-rise applications. Costs should be added as a lump sum from Page 36.

For finished penthouses, i.e., those containing roof apartments, restaurants, etc., use the proper costs factors for that occupancy.

CALCULATOR METHOD

OFFICES, MEDICAL AND PUBLIC BUILDINGS

REFINEMENTS

On this page and the next are means of making adjustments to the base costs given in this section. The component parts which are not defined, such as the roof or foundation, are considered to be commensurate with the general quality of the building. If further refinements are required or the construction is unusual, price either entirely or partially by the Segregated Cost System, Section 45. Special items which should be added to the total cost may be added from the Unit-in-Place cost sections.

HEATING AND COOLING

These costs are averages of the total installed costs of the entire heating or cooling installation including its prorated share of contractors' overhead and profit and architects' fees. If the heating found in the building being appraised is different from that indicated for the base being used, take the difference between the costs of the two and add to or subtract from the base square foot or square meter cost. If a cubic foot cost is used, use one-twelfth the difference shown to adjust the base cubic foot cost. All of the heating costs included in the base costs are those listed under "Moderate Climate." For specific systems costs not found below, see Section 45 or 53.

HEATING ONLY

TYPE	SQUARE METER COSTS			SQUARE FOOT COSTS		
	Mild Climate	Moderate Climate	Extreme Climate	Mild Climate	Moderate Climate	Extreme Climate
Electric, baseboard or cable	66.74	114.10	194.29	6.20	10.60	18.05
radiant panels	60.28	89.88	134.01	5.60	8.35	12.45
Electric wall heaters (inc. FWA)	31.97	43.06	58.13	2.97	4.00	5.40
Forced-air furnace	73.63	127.01	218.51	6.84	11.80	20.30
Hot water, baseboard/convector	118.40	199.67	336.37	11.00	18.55	31.25
radiant floor or ceiling	113.56	197.52	344.44	10.55	18.35	32.00
Space heaters, w/fan	20.88	38.75	71.47	1.94	3.60	6.64
radiant	27.66	47.90	82.24	2.57	4.45	7.64
Steam (including boiler)	109.79	186.75	317.54	10.20	17.35	29.50
(without boiler)	90.09	162.00	290.63	8.37	15.05	27.00
Wall or floor furnace	32.94	45.75	63.51	3.06	4.25	5.90

ELEVATORS

Lump sum cost per elevator plus the cost per stop or landing including the ground level. Use the cost per stop for basement and mezzanine stops. See Section 58 for more detailed costs, for observation elevators and for moving-walk costs.

TYPE	Low	Average	Good	Excellent
Passenger, Base Coat, 2 - 3 story	71250.00	84500.00	99500.00	117000.00
4- to 7 story	123000.00	141000.00	163000.00	186000.00
8 story and over	189000.00	240000.00	301000.00	382000.00
add, cost per stop	9850.00	11400.00	13200.00	15100.00
Freight, base cost, 2- to 3 story	52500.00	69500.00	92250.00	122000.00
4-story and over	103000.00	130000.00	166000.00	210000.00
add, cost per stop, manual doors	13300.00	14500.00	15900.00	17400.00
power doors	23200.00	25200.00	27600.00	30000.00
Escalators, each stairway	276000.00	294000.00	312000.00	333000.00
Vertical wheelchair lifts, each	19100.00	24600.00	32000.00	41200.00

HEATING AND COOLING – (Except General Hospitals)

TYPE	SQUARE METER COSTS			SQUARE FOOT COSTS		
	Mild Climate	Moderate Climate	Extreme Climate	Mild Climate	Moderate Climate	Extreme Climate
Package A.C. (short ductwork)	103.98	179.22	309.46	9.66	16.65	28.75
Warm and cool air (zoned)	180.30	301.39	503.21	16.75	28.00	46.75
Hot and chilled water (zoned)	301.39	462.85	710.42	28.00	43.00	66.00
Heat-pump system	135.63	238.42	419.79	12.60	22.15	39.00
add for ground-loop heat source	32.94	61.89	116.79	3.06	5.75	10.85
Individual thru-wall heat pumps	52.74	87.73	146.39	4.90	8.15	13.60

Small individual heat pumps cost 2725.00 to 3650.00 per ton of rated capacity.

COOLING ONLY

Cooling costs in offices and other public-use buildings are dependent on the summer heat load, types of walls and roof, traffic, density of occupancy, etc. In general, the following figures will serve as a guide for picking the proper cost of separate cooling.

Central refrigeration with ducts and zone control	101.07	155.54	238.96	9.39	14.45	22.20
Package refrig. (short ductwork)	71.47	109.79	167.92	6.64	10.20	15.60
Central evaporative (with ducts)	52.74	69.97	92.35	4.90	6.50	8.58
Package refrigeration	3100.00 to 3975.00 per ton of rated capacity					
Evaporative coolers	444.00 to 780.00 per thousand CFM of rated capacity					

VENTILATION ONLY

Ventilation (blowers and ducts)	20.88	34.44	56.83	1.94	3.20	5.28

OFFICES, MEDICAL AND PUBLIC BUILDINGS

REFINEMENTS

EXTERIOR BALCONIES

Balcony costs include the supporting structure, decking and rails. Apply costs to the balcony area.

	LOW	AVG.	GOOD	EXCL.
Concrete	33.25	43.00	56.00	72.00
Steel	31.25	42.75	57.50	78.50
Wood	26.50	35.25	47.00	63.00
Add for ornate finishes, balustrades	29.00	35.50	44.00	54.00
Add for roofs or awnings	15.95	21.15	28.00	37.25

CANOPIES

This is the cantilevered portion of a building that extends over an entrance. The distance that the canopy is cantilevered should be considered when selecting a rank.

	LOW	AVG.	GOOD	EXCL.
Wood Frame	41.00	51.50	63.00	78.50
Light false-mansard	22.55	28.25	34.50	43.25
Steel Frame	50.00	63.00	80.00	101.00
Light false-mansard	27.50	34.50	44.00	55.50

MISCELLANEOUS EQUIPMENT

Apply to total square feet of building area, if required. These costs vary greatly, and the following typical cost ranges should be used with caution. Built-in equipment which is normally included under the general contract is included in the base structure cost.

	LOW	AVG.	GOOD	EXCL.
Bank equipment, counters, vault doors, etc	45.25	62.00	85.50	118.00
Jail equipment, cell blocks, locking devices, etc	26.00	43.00	68.50	106.00
polic stations	4.14	6.86	10.90	17.05
Hospital equipment, Groups II and III	40.50	70.00	114.00	179.00
Hospital pneumatic conveyor system	5.28	6.20	7.26	8.48
Library equipment, bookstacks, etc	21.05	37.50	62.00	98.50

SPRINKLERS

Sprinkler costs include all costs for the system and supply lines, but not tanks, towers or high-pressure pumps. The square foot costs listed are based on the total area of sprinkler system installation on a single main connection including its prorated share of contractors' overhead and profit and architects' fees. For a more specific cost, see Section 45 or 53. Sprinklers should not be modified for size or shape. To convert square foot costs to square meter costs, multiply by 10.764.

	WET SYSTEMS				DRY SYSTEMS			
Coverage	Low	Avg.	Good	Excl.	Low	Avg.	Good	Excl.
1500 square foot	6.56	7.79	9.26	11.00	8.50	10.10	12.00	14.25
2,000	6.25	7.41	8.78	10.40	8.07	9.57	11.35	13.45
3,000	5.85	6.92	8.18	9.67	7.52	8.90	10.50	12.45
5,000	5.43	6.39	7.53	8.86	6.92	8.15	9.60	11.30
10,000	4.89	5.73	6.70	7.85	6.20	7.26	8.49	9.94
15,000	4.54	5.32	6.23	7.29	5.75	6.72	7.86	9.19
20,000	4.36	5.09	5.93	6.92	5.50	6.42	7.48	8.73
30,000	4.11	4.77	5.54	6.43	5.14	5.97	6.93	8.05
50,000	3.79	4.38	5.07	5.86	4.70	5.45	6.31	7.32
75,000	3.56	4.11	4.74	5.47	4.41	5.09	5.87	6.78
100,000	3.43	3.94	4.53	5.20	4.21	4.85	5.58	6.43
125,000	3.28	3.77	4.33	4.97	4.04	4.65	5.35	6.15
150,000	3.21	3.68	4.23	4.85	3.94	4.52	5.19	5.96
200,000	3.06	3.50	4.01	4.59	3.76	4.30	4.92	5.62
250,000	2.95	3.38	3.86	4.42	3.61	4.13	4.73	5.42
300,000	2.88	3.29	3.76	4.29	3.51	4.01	4.57	5.22
400,000	2.77	3.15	3.59	4.08	3.36	3.82	4.35	4.95
500,000	2.65	3.02	3.43	3.91	3.21	3.65	4.15	4.72

CALCULATOR METHOD

OFFICES, MEDICAL AND PUBLIC BUILDINGS
FLOOR AREA – PERIMETER MULTIPLIERS

AVERAGE FLOOR AREA		M.	AVERAGE PERIMETER																M.	AVERAGE FLOOR AREA	
Sq. M.	Sq. Ft.	FT.	38	46	53	61	76	91	122	152	183	213	244	305	366	427	488	549	610	FT.	Sq. Ft.	Sq. M.
			125	150	175	200	250	300	400	500	600	700	800	1000	1200	1400	1600	1800	2000			
93	1,000		1.168	1.235	1.299	1.364	1.494	1.624	1.884	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		1,000	93
139	1,500		1.061	1.105	1.146	1.191	1.277	1.364	1.537	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		1,500	139
186	2,000		1.007	1.040	1.072	1.105	1.168	1.235	1.364	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		2,000	186
232	2,500		-----	1.000	1.027	1.052	1.105	1.155	1.259	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		2,500	232
279	3,000		-----	.975	.997	1.018	1.061	1.105	1.191	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		3,000	279
372	4,000		-----	-----	.958	.975	1.007	1.040	1.105	1.168	-----	-----	-----	-----	-----	-----	-----	-----	-----		4,000	372
465	5,000		-----	-----	.936	.949	.975	1.000	1.052	1.105	1.155	-----	-----	-----	-----	-----	-----	-----	-----		5,000	465
557	6,000		-----	-----	-----	.932	.952	.975	1.018	1.061	1.105	1.146	-----	-----	-----	-----	-----	-----	-----		6,000	557
743	8,000		-----	-----	-----	-----	.926	.942	.975	1.007	1.040	1.072	1.105	-----	-----	-----	-----	-----	-----		8,000	743
929	10,000		-----	-----	-----	-----	.910	.923	.949	.975	1.000	1.027	1.052	1.105	1.155	-----	-----	-----	-----		10,000	929
1,115	12,000		-----	-----	-----	-----	-----	.910	.932	.952	.975	.997	1.018	1.061	1.105	1.146	-----	-----	-----		12,000	1,115
1,301	14,000		-----	-----	-----	-----	-----	.900	.920	.938	.956	.975	.993	1.030	1.067	1.105	1.140	-----	-----		14,000	1,301
1,486	16,000		-----	-----	-----	-----	-----	-----	.910	.926	.942	.958	.975	1.007	1.040	1.075	1.105	-----	-----		16,000	1,486
1,672	18,000		-----	-----	-----	-----	-----	-----	.903	.918	.932	.946	.960	.990	1.018	1.046	1.076	1.105	-----		18,000	1,672
1,858	20,000		-----	-----	-----	-----	-----	-----	-----	.910	.923	.936	.949	.975	1.000	1.027	1.052	1.078	1.105		20,000	1,858
2,323	25,000		-----	-----	-----	-----	-----	-----	-----	.897	.908	.918	.928	.948	.969	.990	1.011	1.032	1.052		25,000	2,323
2,787	30,000		-----	-----	-----	-----	-----	-----	-----	-----	.897	.906	.915	.932	.949	.965	.983	1.000	1.018		30,000	2,787
3,252	35,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	.897	.904	.919	.934	.949	.963	.978	.993		35,000	3,252
3,716	40,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	.890	.897	.910	.923	.936	.949	.962	.975		40,000	3,716
4,645	50,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.887	.897	.908	.918	.928	.938	.948		50,000	4,645
6,968	75,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.873	.879	.885	.892	.900	.908	.915		75,000	6,968
9,290	100,000		-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	.866	.871	.876	.881	.887	.892	.897		100,000	9,290

NOTE: For small buildings, enter the table by doubling the average floor area and doubling the perimeter. For larger buildings, take half the area and half the perimeter.

STORY HEIGHT MULTIPLIERS

Multiply base cost by following multipliers for any variation in average story height from the base of 12 feet (3.66 meters). For extremely high-pitched roofs (see Section 10), use the height of the eaves plus one-half the height from the eaves to the ridge as the effective height. In some buildings or for a complete facility average, it is better to compute the total cubage and divide by the total square footage of floor area to get an effective height to use.

AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER	AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER	AVERAGE WALL HEIGHT		SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER
(M.)	(FT.)			(M.)	(FT.)			(M.)	(FT.)		
2.44	8	.900	1.350	3.96	13	1.023	.944	6.10	20	1.184	.710
2.74	9	.928	1.237	4.27	14	1.046	.897	7.31	24	1.276	.638
3.05	10	.953	1.144	4.57	15	1.069	.855	8.53	28	1.367	.586
3.35	11	.977	1.066	4.88	16	1.092	.819	9.75	32	1.459	.547
3.66	12	1.000 (base)	1.000	5.49	18	1.138	.758	10.97	36	1.552	.517

CALCULATOR METHOD

RESTAURANTS (350)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	*HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A-B	Excellent	Stone, face brick, best metal walls, usually part of a building	Best plaster and paneling, highly ornamental, carpeted, deluxe quality	Special lighting fixtures and effects, deluxe restrooms	Complete H.V.A.C.	4434.73	34.32	412.00
	Good	Concrete, metal/glass or masonry panels, usually part of a building	Plaster with enamel & vinyl, carpet & vinyl flooring, decorated interior	Good lighting and outlets, good plumbing and restrooms	Complete H.V.A.C.	3315.28	25.66	308.00
	Average	Brick or concrete, usually part of a building	Plaster or drywall, acoustic tile, carpet, ceramic, rubber, or vinyl comp. tile	Adequate lighting outlets, adequate plumbing	Complete H.V.A.C.	2497.22	19.33	232.00
C	Excellent	Individual design, highly ornamental exterior	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	4079.52	31.57	379.00
	Very good	Individual design, brick, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good lighting/restrooms with good-quality fixtures and tile	Complete H.V.A.C.	3164.59	24.49	294.00
	Good	Brick, concrete or metal and glass panels, ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2464.93	19.08	229.00
	Average	Brick, block, tilt-up, plain building, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1915.97	14.83	178.00
	Low cost	Cheap brick or block, very plain, low-cost front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1388.54	10.75	129.00
D	Excellent	Individual design, highly ornamental exterior, stone veneer	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	3918.06	30.32	364.00
	Very good	Individual design, brick veneer, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good fixtures, good restrooms w/good-quality fixtures and tile	Complete H.V.A.C.	2992.36	23.16	278.00
	Good	Stucco or siding, metal and glass, some ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2303.47	17.83	214.00
	Average	Stucco or siding, plain building and front, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1776.04	13.74	165.00
	Low cost	Cheap stucco or siding, very plain	Low-cost short order cafe, min. finish	Minimum lighting and plumbing	Forced air/vent.	1259.38	9.75	117.00
D POLE	Low cost	Pole frame, good metal panels, lined and insulated, plain front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1173.27	9.08	109.00
S	Good	Insulated sandwich panels, metal and glass, some ornamentation	Comparable to typical chain coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2325.00	17.99	216.00
	Average	Insulated panels, metal and glass, little ornamentation	Typical neighborhood coffee shop, vinyl comp., some ceramic or pavers	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1743.75	13.49	162.00
	Low cost	Finished interior, some front	Low-cost finish, asphalt tile	Minimum lighting and plumbing	Forced air/vent.	1205.56	9.33	112.00

BASEMENTS AND MEZZANINES

A-B	Basement, finished	Plaster interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Low-cost complete H.V.A.C.	1668.40	12.91	155.00
	Mezzanine, open	Not included	Open, finished floors, plaster soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	645.83	-----	60.00
CDS	Basement, finished	†Plaster or drywall interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Forced air and ventilation	1108.68	8.58	103.00
	Bsmt. storage	†Painted interior, outside entry	Paint only, some partitions	Adequate lighting, drains	None	535.50	4.14	49.75
	Mezzanine, open	Not included	Open, finished floors and soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	449.39	-----	41.75

†For fire-resistant Type I basements, with concrete slab separation under Class C, D or S units, add $ 8.66 per square foot ($93.22 per square meter). *Adjust for heat from table on following page.
NOTES: For other basement types, see Page 30.

MULTISTORY BUILDINGS

Add 0.5% (1/2%) for each story over three, above ground, to all base costs, including basements but excluding mezzanines, up to 30 stories. Over 30 stories, add 0.4% (4/10%) for each additional story.

BALCONIES

To determine the cost for exterior balconies use one of the following: Page 40 in this section; compute from the Segregated Costs in Section 43; or from Unit-In-Place Costs in Section 66.

MEZZANINES

Do not use story height or area/perimeter multipliers with mezzanine costs.

SPRINKLERS

Sprinkler systems are not included. Costs should be added from Page 40.

ELEVATORS

Elevators are not included. Costs should be added from Page 39. Add for dumbwaiters from Section 58.

GENERAL INFORMATION

FLOOR LOADS

The following are typical live floor loads of some of the buildings used in determining cost averages. A majority of the buildings will have more than one design floor load to accommodate various uses. Thus, a hotel will be designed for heavy floor loads in halls and public areas and lighter floor loads in room areas; banks will need heavier floors in computer and equipment rooms than in office areas.

The listed loads are typical of design specifications of a number of buildings built or under construction during recent years.

OCCUPANCY	POUNDS PER SQUARE FOOT	
Apartments and dormitories	40	
Attics (no storage)	10	(20 lbs. for limited storage)
Auditoriums and churches	100	(50 lbs. for fixed seating)
Balconies (exterior), stairs and fire escapes	40	
Banks	100	
Computer floors	150	
Corridors and stairways	100	
Dwellings	40	(30 lbs. for sleeping rooms)
Equipment rooms	125	
Garage repair	100	
Garages and automobile parking	50	
Governmental buildings	80	
Gymnasiums	100	(150 lbs. for drill floors)
Hospitals	50	(40 lbs. for patient rooms)
Hotels and clubs	40	(100 lbs. in public areas)
Industrials, light	100	
medium	150	(200 to 350 lbs. for cleanrooms)
heavy	200	

OCCUPANCY (Continued)	POUNDS PER SQUARE FOOT	
Libraries	60	(150 lbs. in stacked areas)
Lofts	100	
Meeting rooms	100	
Offices, low cost	50	(plus 20 lbs. for partitions)
average	50	(plus 20 lbs. for partitions)
good	60	(plus 20 lbs. for partitions)
excellent	80	(plus 20 lbs. for partitions)
Restaurants	100	
Roofs, unoccupied	20	(plus snow and drift)
School, classrooms	50	
Stores, retail	75	(125 lbs. in appliance floors)
wholesale	125	
Theaters	100	(150 lbs. for stage floors)
Warehouses, light	125	
medium	175	
heavy	250	(and up)

CONSTRUCTION TIME

The following table of average periods of construction lists points on smoothed empirical curves, which have been developed from figures for actual construction jobs. The data was adjusted for time lost due to labor shutdowns with extreme and/or staged construction cases being discarded. No adjustments were made for holidays, inspection delays, weather or other minor shutdowns. Figures are the number of contract (calendar) days from ground breaking to completion of project.

DESIGNED OCCUPANCY	TOTAL COST OF PROJECT (in thousands of dollars)												
	100	200	500	1,000	2,000	3,000	5,000	10,000	20,000	30,000	50,000	75,000	100,000
Apartments and retirement homes, low rise	100	145	200	240	285	310	340	385	-----	-----	-----	-----	-----
Apartments and retirement homes, high rise	-----	-----	-----	250	325	370	425	500	575	620	675	-----	-----
Auditoriums and clubhouses	105	135	185	235	300	345	410	520	665	765	910	1050	-----
Banks	95	120	165	210	270	310	375	475	-----	-----	-----	-----	-----
Churches	120	160	235	315	420	495	610	815	1090	-----	-----	-----	-----
Department stores and shopping malls	-----	-----	-----	280	330	365	415	490	575	635	720	-----	-----
Dormitories	120	150	205	260	330	375	445	565	710	-----	-----	-----	-----
Garages and parking structures	105	135	195	250	325	380	460	600	-----	-----	-----	-----	-----
Governmental buildings	120	155	220	280	365	425	515	665	860	995	1200	1400	1550
Hotels and motels	115	145	195	245	305	350	415	520	655	750	885	1010	1110
Hospitals	-----	-----	270	325	395	445	510	620	755	845	975	1090	1180
Industrial buildings	100	125	165	205	250	285	335	410	510	575	675	-----	-----
Libraries	105	190	300	385	470	515	580	665	750	-----	-----	-----	-----
Medical office buildings	120	180	260	320	375	410	455	515	575	-----	-----	-----	-----
Nursing homes	160	195	250	305	370	415	480	585	710	795	-----	-----	-----
Office buildings	110	135	185	225	280	315	370	460	570	645	760	860	940
Residences, single family and town houses	95	125	180	240	315	-----	-----	-----	-----	-----	-----	-----	-----
Restaurants	120	155	220	285	365	425	515	-----	-----	-----	-----	-----	-----
Retail stores, markets and discount stores	105	160	235	290	340	375	415	470	-----	-----	-----	-----	-----
Schools and colleges	145	180	240	295	365	415	485	600	740	840	985	-----	-----
Veterinary hospitals	130	175	255	340	455	535	665	-----	-----	-----	-----	-----	-----
Warehouses	90	110	150	185	235	265	315	390	-----	-----	-----	-----	-----

The published base costs, for the most part, represent completely finished buildings in the physical or hard construction sense, but not necessarily completely finished projects, which could include consideration for a variety of developmental and/or site improvement costs. Failure to recognize this distinction could result in a final value estimate that is incomplete, depending on the type of appraisal assignment. Listed under "What the Costs Do Not Contain" are a number of financial and operational soft cost factors that may require consideration.

WHAT THE COSTS CONTAIN

(1) In the Calculator Section, the actual costs used are final costs to the owner and will include average architects' and engineers' fees. These, in turn, include plans, plan check and nominal building permits, and surveying to establish building lines and grades.

(2) In the Segregated Cost and most Unit-in-Place Cost Sections, except as noted, the architects' fees are omitted. For these sections, a schedule of typical fees is printed in Section 99. However, each listed item will have its pro rata share of the other miscellaneous costs included in the construction of the whole building or other improvement.

(3) Normal interest on only the actual building funds during period of construction and processing fee or service charge is included. Typically, this will average half of the going rate over the time period plus the service fee. For average construction times, see Section 85.

(4) All material and labor costs include all appropriate local, state and federal sales or GST taxes, etc.

(5) Normal site preparation including finish, grading and excavation for foundation and backfill for the structure only.

(6) Utilities from structure to lot line figured for typical setback except where noted in some Unit-in-Place Cost sections (e.g., mobile homes).

(7) Contractors' overhead and profit including job supervision, workmen's compensation, fire and liability insurance, unemployment insurance, equipment, temporary facilities, security, etc., are included.

WHAT THEY DO NOT CONTAIN

(1) Costs of buying or assembling land such as escrow fees, legal fees, property taxes, right of way costs, demolition, storm drains, or rough grading, are considered costs of doing business or land improvement costs.

(2) Pilings or hillside foundations are priced separately in the manual and are considered an improvement to the land. This also refers to soil compaction and vibration, terracing, etc.

(3) Costs of land planning or preliminary concept and layout for large developments inclusive of entrepreneurial incentives or developer's overhead and profit are not included, nor is interest or taxes on the land, feasibility studies, certificate of need, environmental impact reports, hazardous material testing, appraisal or consulting fees, etc.

(4) Discounts or bonuses paid for financing are considered a cost of doing business, as are funds for operating startup, negative cashflow during development, project bond issues, permanent financing, developmental overhead or fixture and equipment purchases, etc.

(5) Yard improvements including septic systems, signs, landscaping, paving, walls, yard lighting, pools or other recreation facilities, etc., which can be priced separately from Unit-in-Place Sections.

(6) Off-site costs including roads, utilities, park fees, jurisdictional hookup, tap-in, impact or entitlement fees and assessments, etc.

(7) Furnishings and fixtures, usually not found in the general contract, that are peculiar to a definite tenant, such as seating or kitchen equipment, etc.

(8) Marketing costs to create first occupancy including model or advertising expenses, leasing or brokers' commissions, temporary operation of property owners' associations, fill-up or membership sales costs and fees.

(9) General contingency reserve where a percentage of the total cost is set aside for some unknown future event, such as labor strikes, anticipated labor and material increases, etc.

TYPES OF BUILDINGS

Buildings are classified in the *Marshall Valuation Service* by occupancy and grouped into sections by occupancies having certain similar cost characteristics. A building's present use might not be the same as that for which it was constructed and in some cases must be priced from the original use for which designed. In general, if the designed use and the actual use differ, the design determines the cost to be used in estimating the basic replacement cost, while the depreciation or obsolescence is affected by the present use. Types of buildings are divided into similar groups for the Calculator and Segregated Cost Methods. See Occupancy Section Reference in Section 2.

In addition, many less common buildings are included in the cost pages, as well as some ancillary structures such as basements and mezzanines, etc., which are listed under the various occupancies with which they are usually associated.

DESCRIPTIVE AIDS

In the *Marshall Valuation Service*, you will find descriptions and pictures of buildings provided as a scale of comparison. You, as a user, must provide the discrimination necessary to fit these costs to the specific building which you are valuing.

The Replacement Cost of a building is determined in this system by benchmarking – that is, comparing the building under appraisement with buildings whose costs are known. The *Marshall Valuation Service* provides an organized collection of these known costs, collated and averaged to make them most useful to you.

The material is classified under descriptive headings which, if clearly understood, will lead you directly to the desired costs. Explanation of these headings is contained in this section and the three following introductory sections.

Since base costs are based on a certain size and shape relationship, story height, heating, and number of stories, adjustments and refinements must be made for the subject property. It is recommended that a standard procedure, as outlined by the standard forms, be followed to lessen any chance of error.

To understand the manual, Sections 1 and 3 should be read in detail. Section 10 with its examples of the Calculator Cost Method should be studied as well as Section 40 with its detailed example of the Segregated Cost Method. A discussion and example of applying indexes and the validity of prior costs can be found in Section 98.

QUESTIONS

We invite any inquiries that will give you a more thorough understanding of the use of the manual – though, of course, we cannot work out valuations for you.

Detailed costs on many minor items are not published in the book and we tend to discourage questions regarding them since they often encourage subscribers toward an undue emphasis on minor details which is not contemplated in any of the estimation methods presented in this manual.

The *Marshall Valuation Service*, plus good judgment, will allow you to concentrate on the important cost items and to avoid unimportant detail. The costs contained in the manual have a high validity, but as with any collection of cost data, they are presented as a guide to cost analysis and cannot be used blindly.

Direct all questions regarding the Service directly to:

CoreLogic
40 Pacifica, Suite 900
Irvine, CA 92618
Phone: (800) 544-2678
Email: is.support@corelogic.com
corelogic.com/marshallswift

As an aid in processing correspondence, please use your Record Number. Your number will appear as the first entry on the label in all mailings of the *Marshall Valuation Service*.

OUTLINE OF CALCULATOR METHOD

SQUARE FOOT METHOD INTRODUCTION

The Calculator Method gives average square meter and square and cubic foot costs for typical buildings. These costs are divided into eight sections (11 through 18), each dealing with a major occupancy group. Refinements are given on the last page or pages of each section, so that the base cost can be modified to fit buildings different from the standard descriptions. If further refinements are needed, the Segregated Cost Sections or Unit-in-Place Cost Sections may be used to adjust the cost factor.

Costs are classified by class and quality of construction. Buildings typical of a certain quality have many characteristics in common. For example, a Good Quality building will usually have good quality roofing so modifications for roof differences on a quality classified building are seldom necessary. The following are the most important square meter and square and cubic foot cost modifications. Many other modifications are possible but since they are seldom cost-important, and usually require considerable additional time to count and measure, they have been omitted from the Calculator Method which is designed to be a fairly rapid cost system.

The base cost refinements found at the end of each Calculator Section or on the cost pages, which are applied when the building being appraised varies from the general description, are as follows:

HEATING AND COOLING

Each heating and cooling base cost is an average cost for the entire building described, as installed in a moderate climate. To adjust to the climate and the type of heat used, take the difference between the average cost of the type found in the subject building as listed for the proper cost range or climate, and the cost of the type listed in the "Heat" column of the cost pages as found under "Moderate Climate", and add or subtract from the base cost. A general climate map is shown on the back pages of Section 85. If only a portion of the building is heated or cooled, then a prorated amount is to be used.

The cost ranges – low, "Mild"; average, "Moderate"; and high cost "Extreme" – for the heating and cooling systems found in each section are based on the capacity, complexity and typical occupancy load for each of the major occupancy groups listed. The lowest priced installations would normally be in a mild climate (down to 30°F), while the highest priced systems would be found in the best buildings in an extreme cold (down to -30°F) or hot, humid climate with respect to air conditioning. A further discussion can be found in Section 40, and the definitions in the Glossary, Section 90. In selecting a proper cost for basement heating, it is important to remember that a minimal number of outlets would be incidental to the overall cost of the system. When supplemental perimeter heat is found, the primary system might be priced as "Average" with the perimeter at "Low", or the primary system may be priced only at a "High Cost" range to account for the supplemental costs involved.

ELEVATORS

The standard building description indicates, by an asterisk in the mechanical column, that an allowance was made for elevators. If no elevator is found in a building of a type marked with an asterisk, subtract the elevator factor found on the cost pages from the base square meter or square foot cost. The square foot figures must be divided by the base height given for the section before being applied to a cubic foot cost.

If elevators are found in a building not marked with an asterisk, add the cost as a lump sum from the refinement pages or from the detailed costs found in Section 58. Care must be exercised when using square foot costs where building sizes may fall outside a normal range of area served.

Basement and mezzanine costs do not allow for elevators. Where elevator stops are found, add the cost per stop as a lump sum from the refinement pages, or see Section 58.

SPRINKLERS

Basic building costs do not allow for sprinkler systems. Where sprinkler systems are found, price them from the refinement pages or the corresponding Segregated Cost Section. A further discussion can be found in Section 40 and the Glossary, Section 90.

MULTISTORY BUILDINGS

Base costs are given for buildings of three stories or less. For buildings having more floors (not counting basements), a recommended percentage adjustment is shown on the cost pages. This increased cost is the net of increased frame weight, construction difficulty, high-rise wages, etc., resulting in less savings from shorter heating and plumbing runs, a single roof, etc. The added cost is applied to all floors including basements, regardless of occupancy. In using the standard form, it is applied as a multiplier equal to one plus the percentage increase, which is included in the refinement notes on the bottom of each calculator cost page.

HEIGHT

All base costs are given for a base story height which is chosen to require the least modification for all buildings in the occupancy group. The base height and a story height multiplier table for square foot, square meter and cubic foot costs are given on the refinements pages. For further discussion of height measurement, see Page 8 and Section 3.

SIZE AND SHAPE

The major effect that variation in size and shape of a building has on the square foot or meter cost is due to the variation in the proportion of exterior wall area to floor area. To adjust for this variation in cost, an average "Floor Area/Perimeter" table is provided giving a multiplier for various floor area and wall perimeter ratios. Most buildings being appraised will not have the exact area and perimeter shown on the table, so some interpolation is necessary. Usually the multiplier can be approximated accurately enough without a detailed interpolation. An example of a two-way interpolation is shown on Page 9.

In multistory buildings, use the average floor area and the average perimeter to enter the Floor Area/Perimeter table, and the average story height for the story height multiplier.

SEGREGATED COST METHOD

ASSEMBLY/SYSTEMS INTRODUCTION

The Segregated Cost Method is designed to enable the appraiser to give separate consideration to all of the major construction assemblies or systems (groups of components) of a building with a minimum of time-consuming counting and measuring, and to systematically arrive at a reliable replacement cost in a reasonably short time.

Use of this method does require a greater degree of understanding of both building construction techniques and the overall cost relationships between occupancies, classes and quality levels, as well as the basic differences resulting from quantity, material grade or workmanship affecting each component's rating range.

The costs of many parts of a building, such as floor, ceiling and lighting, change directly as the floor area of the building increases. Other building costs vary with relation to parameters other than floor area; however, most costs can be related to floor area, wall area, roof area or sometimes an individual count of unit installations. To facilitate the application of these individualized costs, they are grouped so that all costs related to floor area can be added together and applied to the total floor area. All wall area costs can be added together and applied to the wall area, and all roof costs applied to the ground floor or roofed area.

A breakdown of the components whose costs correspond to the major areas follows:

	FLOOR AREA	
Site Preparation	Floor Cover	Sprinklers
Foundation	Ceiling	Heating, Cooling and Ventilating
Frame	Interior Construction	Electrical
Floor Structure	Plumbing	
	OUTSIDE WALL	
Wall	Wall Ornamentation	Storefronts
	ROOF	
Roof Structure	Roof Trusses	Roof Cover

A general discussion of these major components can be found in Section 40, Pages 5 through 7, with many individual component definitions listed in the Glossary, Section 90.

A separate section is included for buildings in each of eight major cost-related groups, (see Section 2, Page 2) classified by type of occupancy so that the user will find the section pertaining to his subject property largely self-contained. The only additional data required are Architects' Fees, Section 99, Page 2; Current Cost Multipliers, Section 99, Page 3; and Local Multipliers, Section 99, Pages 5 through 10.

By separating the costs into major occupancy groups, many of the factors which cause variations in costs are automatically considered, thus eliminating the necessity for detailed consideration of each component. For each component of the building, a range of costs representing a typical spread between low and high costs for that component within the occupancy group is given. The costs in this range are subdivided into four groups whose midpoints are generally defined as follows:

COST RANGE RATING

1	2	3	4
Low	Average	Good	Excellent

The component costs of most buildings, both old and new, will fall within Columns 2 and 3. Columns 1 and 4, while representing the low and high ranges in normally encountered construction costs, do not represent the highest or lowest costs that may be found. (For a more detailed discussion of the rating numbers, see Section 40, Pages 7 and 8).

While it is true that a number of factors influence the cost of each component, buildings are fairly consistent in their quality. Therefore, after the overall quality or cost level of the building is established in relation to the group and class (i.e., an average Class A hospital would not receive the same rating as an average Class C office building, or a 400,000-square-foot warehouse the same rating as a 4,000-square-foot facility, etc.) and the general rating is selected, that column is often appropriate for many of the Segregated Cost components. Exceptions may be those components, such as insulation, wall sheathing, heating and cooling and foundations, which can be directly affected by climate. See Section 85 for environmental mapping.

For typical buildings, the procedure is quite simple:

1. Select the section best describing the occupancy of the building as it was designed.

2. Generally classify the building as to cost level by overall quality and complexity or size for that occupancy as: low cost, average, above average or high cost.

3. Systematically describe each of the major components in order, considering whether that component is consistent with the general cost level of the building as a whole and with the occupancy in that section and its commonality, and enter the appropriate cost.

4. Total the unit costs belonging to each of the major area groups: total floor area, exterior wall area, wall ornamentation and roof area, and multiply each total by its area.

5. The sum of these amounts, modified by the multipliers for the number of stories, architects' fees, current cost and locality, plus any lump-sum additions for miscellaneous items, will be the total replacement or reproduction cost.

PILING

EXPLANATION

Pilings and special foundations must be priced as an addition to other foundation costs. The costs given below are averages of total costs in place, to the user, exclusive of architect's fees. Setting up and dismantling a job depends mainly on the size of equipment needed and the difficulty of access to the job. For a small residential job or boat dock where light piling is used and a mobile rig can run up to the work, setup and dismantling may amount to only a few hundred dollars. For a major dam or seawall project far from a shipping point and requiring piecemeal movement of heavy equipment, the cost might run twice the average as shown. When placement is in wet conditions, riverfront, marshland, over water, etc., the costs should be increased 25% to 50%.

Where light residential piles are used as common practice, installed costs have been as low as 5.51 per linear foot for one hundred 8" tapered wood piles, and as high as 17.95 per linear foot for composition wood pole and concrete lined pipe over water, and up to 38.75 per linear foot for fifteen 12" precast concrete piles, plus 12200.00 for setup costs in wetlands.

For pile tests, add 190.00 to 520.00 per ton of load per test pile.

EXAMPLE

A piling job requires 100 treated wood pilings, each 50' long by 14" diameter.

Cost of setup and dismantling	$ 26300.00
100 piles 50' long = 5,000 linear feet @ 49.75	+ 248000.00
Total job cost	273000.00

SHEET PILING

TYPE	COST RANGE	
Sheeting, bulkheads, left in place, per square foot		
concrete, poured in place	30.50 –	40.75
metal, aluminum panels	31.75 –	36.25
steel, 27# average	44.25 –	62.00
vinyl	17.95 –	20.85
wood, untreated	18.35 –	20.45
treated	20.85 –	23.80

Seawalls, cost per linear foot where typically installed, 10' - 14' depth for small residential jobs.

For large commercial projects, costs may be 50% lower.

treated wood, 8" - 12", including tiebacks	465.00 –	630.00
concrete, precast, 5" - 6" including ties or piling	795.00 –	1310.00
masonry block, decorative, 1' solid, including 1' of bedding	890.00 –	1250.00
rubble stone, 3', including 1' of bedding	1080.00 –	1400.00

PILING COSTS

TYPE OF PILING		COST PER LINEAR FOOT PILE	DRIVING	TOTAL	SETUP COST
Untreated Wood	10"	10.50	13.85	24.45	18400.00
	12"	15.85	14.95	30.75	22900.00
	14"	22.85	16.10	38.75	26300.00
	16"	31.00	17.30	48.75	30300.00
Treated Wood	10"	18.55	13.85	32.50	18400.00
	12"	25.50	14.95	40.75	22900.00
	14"	33.75	16.10	49.75	26300.00
	16"	43.00	17.30	60.00	30300.00
Steel, "H"	8" x 8"	40.75	15.40	56.00	20500.00
	10" x 10"	56.50	17.80	74.00	23700.00
	12" x 12"	73.00	20.30	93.50	27900.00
	14" x 14"	91.50	22.20	113.00	31200.00
Concrete, precast	10"	30.50	18.80	49.50	25500.00
	12"	39.75	22.20	61.50	30000.00
	14"	49.50	25.25	74.50	33800.00
	16"	59.50	28.50	88.50	38300.00
	18"	70.00	31.25	103.00	43000.00
	24"	107.00	40.00	146.00	56000.00
Steel pipe, concrete filled	8"	45.00	16.15	61.00	17500.00
	10"	56.00	18.40	74.50	21000.00
	12"	66.50	20.30	87.00	26300.00
	16"	88.50	23.60	112.00	35500.00
	18"	107.00	26.75	134.00	43000.00
	20"	122.00	31.75	155.00	48900.00
	24"	146.00	35.25	181.00	56000.00
	30"	174.00	42.75	213.00	65000.00
Concrete, in drilled holes	12"	----	----	49.50	----
	16"	----	----	58.50	----
	24"	----	----	88.50	----
	36"	----	----	158.00	----
	48"	----	----	282.00	----

ARCHITECTS' FEES

TABLE I

Furnishings and Interiors
Special Lighting
High-value – Luxury Residences
Mausoleums and Memorials

TABLE II

Airport Terminals, Control Towers
Cathedrals
Specialized College Buildings
Convention Centers
Governmental Buildings
Hospitals and Outpatient Centers
Laboratories and Computer Centers
Libraries
Medical Schools
Museums, Galleries and Aquariums
Penal and Mental Institutions
Storefronts

TABLE III

Banks and Financial Institutions
Churches, Amphitheaters and Pavilions
Commons, Bookstores, Luxury Apartments
Communications and Broadcasting
Convalescent and Veterinary Hospitals
Country Clubs and Marinas
Detention and Firing Range Buildings
Fieldhouses and Natatoriums
Fire (Staffed) and Police Stations
Fraternal, Community and Senior Center Buildings
Hotels, City Clubs and Resort Lodges
Institutional Greenhouses
Medical/Dental Office Buildings
Major Post Office Buildings
Public Health and Service Centers
Restroom and Shower Buildings
Secondary and Vocational Schools
Specialty Shops and Boutiques
Stadiums, Sports Facilities, Colleges
Theaters, Auditoriums and Casinos

TABLE IV

Apartments and Dormitories
Bars and Lounges
Branch Post Offices
Bus Stations and Visitor Centers
Clubhouses and Gymnasiums
Cold Storage Buildings
Convents, Rectories and Rooming Houses
Day Care Centers, Retirement Care Complexes
Department/Anchor Stores and Pharmacies
Elementary Schools and Relocatable Buildings
Engineering and Research Industrial Buildings
Equestrian Centers
Fellowship Halls, Fraternity and Sorority Houses
Guard Houses and Golf Starter Booths
Group Care Homes & Retirement Complexes
Health Clubs and Fitness Centers
Homes for the Elderly and Assisted Living
Hotels – Limited-service
Laundries and Cleaners
Maintenance Hangars and Storage Bldgs.
Mortuaries
Motels, Inns and Cottages
Office and Administration Buildings
Public Recreation Facilities
Racquetball and Tennis Clubs
Regional Shopping Centers
Residences, Individual Design, Historical
Restaurants and Clubs

TABLE V

Arcade Buildings
Armories
Automotive Centers
Barber and Beauty Shops
Bowling Centers
Bulk and Bag Fertilizer Buildings
Car Washes, Full-service Tunnels
Community and Discount Shopping Centers
Creameries, Dairies or Milking Barns
Discount and Warehouse Stores
Dispensaries and Kennels
Distribution Warehouses
Docks and Wharfs
Fast Food, Truck Stops and Snack Bars
Golf Cart Barns
Grain Elevators
Loft and Industrial Flex Buildings
Manufacturing Industrial Buildings
Markets and Convenience Stores
Multiples, Row Houses, Individual Design
Neighborhood and Mixed Shopping Centers
Retail Stores and Florist Shops
Senior Citizen Residences
Showrooms and Complete Auto Dealerships
Skating Rinks and Recreational Enclosures
Stables and Horse Arenas
Storage Hangars
Wineries

TABLE VI

Car Washes, Self-serve, Drive-thru
Garages, Mini-lube and Service
General-purpose, Poultry and Hog Barns
Greenhouse Structures
Prefabricated Booths and Shelters
Recycling, Waste Transfer Structures
Service Stations and Parking Structures
Shipping Docks and Transfer Points
Storage and Volunteer Fire Garages
Storage Warehouses & Roadside Markets

EXPLANATION

The tables of architects' fees are based on composite curves for new construction derived from actual fees charged, recommendations of several architectural committees in various states, and architectural time studies. In cases where superior quality and detail are required, the fee may be higher than the average, while very low quality and standardized buildings may call for a fee which is lower. Special consultants or commissioning services for feasibility and energy and performance studies, post-occupancy evaluations, etc., can add .5 to 1.2 percent to the fees. Renovation or rehab work may require considerably more time, and fees can run 20% to 60% above those listed due to the many variables and complexities involved.

The fee schedules contain approximately 30% (20% to 40%) for contract administration and supervision. In many cases, this function may be performed by the contractor, an employee of the owner or an outside consultant. In any case, this is a proper charge against the building, and the total fee should be added to building costs computed from the Unit-in-Place or the Segregated Costs.

PROJECT COST	TABLE					
Up To	I	II	III	IV	V	VI
$ 50,000	10.7	9.7	8.7	7.9	7.1	6.4
100,000	10.3	9.4	8.4	7.6	6.9	6.2
200,000	10.0	9.1	8.2	7.4	6.7	6.0
500,000	9.5	8.7	7.8	7.1	6.4	5.8
1,000,000	9.2	8.4	7.6	6.9	6.2	5.6
2,000,000	8.9	8.1	7.3	6.6	6.0	5.5
3,000,000	8.7	7.9	7.2	6.5	5.9	5.4
5,000,000	8.4	7.7	7.0	6.4	5.8	5.3
10,000,000	8.1	7.5	6.8	6.2	5.6	5.1
20,000,000	7.9	7.2	6.6	6.0	5.4	5.0
50,000,000	7.5	6.9	6.3	5.7	5.2	4.8
and up	7.3	6.8	6.2	5.6	5.1	4.7

The following are the approximate percentages included in the manual costs for single and multifamily residences, and miscellaneous light commercial and farm structures not listed in the above table. The single-family residence, Low-to-Average quality percentage represents stock plans only, with some variations commensurate to the quality. Good percentage represents custom drafting service and plans; while Very Good to Excellent percentages included in the tables above would represent full architects' fees, plans, specifications and supervision.

	LOW COST	FAIR	AVERAGE	GOOD
Single-family Residences and Structures	.5%	.8%	1.3%	3.6%
Multiple-residential Structures	1.5%	1.9%	2.4%	3.9%
Light Commercial Utility/Shop Structures	1.7%	2.1%	2.5%	3.5%
Miscellaneous Farm Structures	1.6%	1.9%	2.3%	3.3%

NOTE: To convert a percentage to a multiplier, simply move the decimal over two places and add the whole number "one" to the factors. Example, 10.7% expressed as a multiplier is 1.107 (1+.107).

EXCLUSION OF ARCHITECTS' FEES

The exclusion of architects' fees from the replacement cost for insurance purposes is a matter of underwriting and not of valuation. Plans and specifications can sometimes be reused in case of total loss, but this is not common practice. When used, plans are greatly modified or a second fee may be imposed. See Section 96.

CURRENT COST MULTIPLIERS

These multipliers bring costs from preceding pages up to date. Also apply Local Multipliers, Section 99, Pages 5 through 10.

CALCULATOR COST SECTIONS

(Effective Date of Cost Pages)		11 (11/24)	12 (8/24)	13 (5/24)	14 (2/26)	15 (11/25)	16 (8/25)	17 (5/25)	18 (2/25)
EASTERN	A	1.07	1.07	1.07	0.99	1.02	1.04	1.06	1.09
	B	1.08	1.08	1.05	1.02	1.00	1.02	1.05	1.08
	C	1.06	1.05	1.07	1.01	1.03	1.04	1.06	1.04
	D	1.04	1.05	1.05	0.99	1.00	1.03	1.03	1.03
	S	1.10	1.09	1.08	1.01	1.04	1.02	1.02	1.08
CENTRAL	A	1.03	1.02	1.01	0.97	0.97	1.00	1.00	1.01
	B	1.02	1.03	1.02	0.97	1.00	0.99	0.99	1.00
	C	1.02	1.03	1.04	0.97	0.98	0.98	1.00	1.01
	D	1.01	1.03	1.03	0.98	1.02	1.02	0.99	1.01
	S	0.98	1.02	0.99	0.97	0.98	0.97	1.01	1.00
WESTERN	A	1.02	1.07	1.09	1.05	1.04	1.03	1.03	1.00
	B	1.03	1.05	1.10	1.02	1.04	1.06	1.06	1.03
	C	1.04	1.08	1.06	1.04	1.03	1.05	1.04	1.07
	D	1.07	1.06	1.07	1.04	1.02	1.02	1.08	1.06
	S	1.04	1.04	1.09	1.03	1.02	1.08	1.06	1.02

SEGREGATED COST SECTIONS

(Effective Date of Cost Pages)		41 (12/24)	42 (9/24)	43 (6/24)	44 (3/26)	45 (12/25)	46 (9/25)	47 (6/25)	48 (3/25)
EASTERN	A	1.07	1.07	1.07	0.99	1.02	1.04	1.06	1.09
	B	1.08	1.08	1.05	1.02	1.00	1.02	1.05	1.08
	C	1.06	1.05	1.07	1.01	1.03	1.04	1.06	1.04
	D	1.04	1.05	1.05	0.99	1.00	1.03	1.03	1.03
	S	1.10	1.09	1.08	1.01	1.04	1.02	1.02	1.08
CENTRAL	A	1.03	1.02	1.01	0.97	0.97	1.00	1.00	1.01
	B	1.02	1.03	1.02	0.97	1.00	0.99	0.99	1.00
	C	1.02	1.03	1.04	0.97	0.98	0.98	1.00	1.01
	D	1.01	1.03	1.03	0.98	1.02	1.02	0.99	1.01
	S	0.98	1.02	0.99	0.97	0.98	0.97	1.01	1.00
WESTERN	A	1.02	1.07	1.09	1.05	1.04	1.03	1.03	1.00
	B	1.03	1.05	1.10	1.02	1.04	1.06	1.06	1.03
	C	1.04	1.08	1.06	1.04	1.03	1.05	1.04	1.07
	D	1.07	1.06	1.07	1.04	1.02	1.02	1.08	1.06
	S	1.04	1.04	1.09	1.03	1.02	1.08	1.06	1.02

UNIT-IN-PLACE COST SECTIONS (51 – 70)

Sec.	Page	Date		Eastern	Central	Western
51 -	2-3	(3/25)	Concrete Foundations	1.04	1.02	1.06
51 -	4	(3/25)	Pilings	1.04	0.99	1.06
51 -	7-8	(3/25)	Steel and Concrete Frame	1.04	1.00	1.07
51 -	3,7	(3/25)	Wood Foundations, Frame	1.01	1.01	1.07
52 -	1-4, 6	(3/25)	Interior Construction	1.02	1.02	1.06
52 -	5	(3/25)	Bank Vaults and Equipment	1.05	1.00	1.05
53 -	1-8	(6/25)	Heating, Cooling & Ventilating	1.02	1.01	1.06
53 -	9-12	(6/25)	Plumbing, Fire Protection, etc.	1.03	0.99	1.07
54 -	1-6	(6/25)	Electrical, Security	1.01	1.06	1.02
55 -	3-7	(8/25)	Wall Costs	1.01	0.99	1.07
56 -	1-2	(8/25)	Stained Glass	1.02	1.00	1.05
56 -	3-6	(8/25)	Storefronts	1.02	1.00	1.05
56 -	7	(8/25)	Stonework	1.00	1.01	1.07
56 -	8	(8/25)	Columns, Stone & Concrete	1.00	1.01	1.07
56 -	8	(8/25)	Columns, Wood & Aluminum	1.01	1.00	1.06
57 -	1-6	(9/25)	Roofs	1.00	1.01	1.05
58 -	1	(9/25)	Cold Storage	1.00	0.99	1.07
58 -	2-8	(9/25)	Elevators, Conveying Systems	1.02	1.00	1.04
61 -	1-8	(12/24)	Tanks	1.02	1.02	1.07
62 -	1	(6/24)	Industrial Pumps & Boilers	1.06	0.97	1.12
62 -	2-3, 6	(6/24)	Piping	1.06	0.97	1.12
62 -	4	(6/24)	Electrical Motors	1.06	0.97	1.12
62 -	5	(6/24)	Steel Stacks, Chutes	1.06	0.97	1.12
62 -	5	(6/24)	Masonry & Concrete Chimneys	1.04	1.00	1.11
62 -	6	(6/24)	Compactors, Incinerators	1.06	0.97	1.12
63 -	1-4	(9/24)	Trailer and Mfg. Housing Parks	1.01	1.02	1.10
63 -	5-10	(9/24)	Manufactured Housing	1.02	1.03	1.08
64 -	1-6	(3/26)	Service Stations, Car Washes	1.02	0.98	1.01
64 -	7-9	(3/26)	Prefabricated Metal Structures	1.00	0.96	1.05
64 -	7-8	(3/26)	Prefab. Wood & Air Structures	0.99	0.98	1.03
65 -	1-12	(3/26)	Equipment Costs	0.99	1.00	1.01
66 -	1	(12/25)	Subdivision Costs	1.00	0.98	1.05
66 -	2-9	(12/25)	Yard Improvements	0.99	0.97	1.06
66 -	10-11	(12/25)	Demolition & Remediation	0.98	0.99	1.05
67 -	1-2	(12/25)	Golf Courses	0.98	1.01	1.03
67 -	3-7	(12/25)	Recreational Facilities	0.98	0.99	1.05
70 -	1-32	(1/26)	Green Section	0.98	0.99	1.06

This page supersedes the February 2026 Green Supplement.

The data included on this page becomes obsolete after update delivery, scheduled for April 2026.

LOCAL MULTIPLIERS

Apply to costs brought up-to-date from preceding pages. Do not apply to Section 98 or any other indexes.

UNITED STATES

CLASS	A	B	C	D	S
NEW JERSEY	1.18	1.20	1.18	1.19	1.19
Asbury Park	1.08	1.10	1.09	1.10	1.12
Atlantic City	1.21	1.23	1.24	1.27	1.25
Bayonne	1.19	1.22	1.20	1.21	1.19
Camden	1.14	1.15	1.13	1.14	1.14
Clifton	1.19	1.21	1.19	1.20	1.20
East Orange	1.20	1.22	1.21	1.22	1.21
Edison	1.20	1.22	1.21	1.22	1.20
Elizabeth	1.23	1.24	1.22	1.23	1.23
Fairlawn	1.19	1.22	1.19	1.21	1.21
Hackensack	1.19	1.22	1.20	1.20	1.21
Irvington	1.23	1.25	1.24	1.25	1.24
Jersey City	1.20	1.23	1.20	1.22	1.21
Lakewood	1.06	1.09	1.09	1.10	1.10
Morristown	1.20	1.23	1.22	1.23	1.23
New Brunswick	1.20	1.22	1.21	1.22	1.20
Newark	1.24	1.26	1.25	1.27	1.25
Passaic	1.19	1.21	1.19	1.20	1.20
Paterson	1.19	1.22	1.19	1.21	1.21
Plainfield	1.10	1.11	1.11	1.11	1.11
Somerville	1.18	1.20	1.20	1.19	1.21
Teaneck	1.19	1.22	1.20	1.20	1.20
Trenton	1.18	1.19	1.18	1.20	1.19
Vineland	1.11	1.12	1.13	1.14	1.15
West Orange	1.19	1.21	1.20	1.21	1.19
NEW MEXICO	0.92	0.94	0.94	0.94	0.94
Alamogordo	0.87	0.90	0.90	0.86	0.90
Albuquerque	0.93	0.93	0.93	0.92	0.93
Carlsbad	0.89	0.92	0.92	0.92	0.91
Clovis	0.94	0.96	0.95	0.95	0.93
Farmington	0.94	0.97	0.97	0.96	0.96
Gallup	0.90	0.90	0.90	0.90	0.93
Hobbs	0.89	0.92	0.92	0.92	0.90
Las Cruces	0.91	0.94	0.94	0.92	0.97
Los Alamos	0.93	0.94	0.96	0.98	0.96
Portales	0.86	0.88	0.85	0.86	0.86
Roswell	0.93	0.94	0.95	0.95	0.95
Santa Fe	0.92	0.94	0.96	0.96	0.95
Taos	1.04	1.04	1.06	1.07	1.06
NEW YORK	1.03	1.05	1.05	1.07	1.05
Albany	1.05	1.08	1.10	1.11	1.09
Amsterdam	1.03	1.06	1.08	1.10	1.07
Auburn	1.00	1.02	1.00	1.02	1.01
Binghamton	1.00	1.01	0.99	1.00	1.00
Buffalo	1.08	1.08	1.10	1.10	1.09
Elmira	0.97	0.99	0.99	1.00	0.98
Ithaca	0.97	0.98	1.00	1.00	0.98
Jamestown	0.99	1.00	1.03	1.01	1.01
Kingston	1.09	1.13	1.12	1.15	1.14
Niagara Falls	1.08	1.07	1.07	1.08	1.07
Plattsburgh	0.96	0.97	0.99	1.01	1.00
Poughkeepsie	1.08	1.12	1.12	1.15	1.12
Rochester	1.06	1.12	1.09	1.08	1.09
Rome	1.02	1.05	1.03	1.06	1.03
Schenectady	1.04	1.06	1.07	1.10	1.09
Syracuse	1.10	1.10	1.09	1.08	1.11
Troy	1.07	1.11	1.11	1.12	1.11
Utica	1.02	1.05	1.04	1.06	1.03
Watertown	1.00	1.01	0.99	1.01	1.00
NEW YORK CITY AREA	1.28	1.30	1.30	1.33	1.34
Bronx	1.30	1.31	1.32	1.35	1.36
Brooklyn	1.28	1.30	1.32	1.34	1.34
Manhattan	1.29	1.32	1.32	1.35	1.35
Nassau County	1.29	1.31	1.32	1.34	1.35
Orange County	1.17	1.19	1.19	1.19	1.21
Putnam County	1.19	1.19	1.20	1.22	1.23
Queens	1.27	1.30	1.31	1.33	1.34
Rockland County	1.19	1.20	1.22	1.23	1.23
Staten Island	1.22	1.24	1.22	1.26	1.27
Suffolk County	1.31	1.33	1.34	1.36	1.36
Westchester County	1.20	1.21	1.21	1.24	1.24
Yonkers	1.31	1.33	1.33	1.36	1.36
NORTH CAROLINA	0.94	0.95	0.93	0.94	0.94
Asheville	0.95	0.97	0.96	0.95	0.96
Charlotte	0.97	0.98	0.97	0.97	0.98
Durham	1.01	1.00	0.97	0.99	1.01
Fayetteville	0.95	0.96	0.93	0.93	0.94
Gastonia	0.99	0.98	1.00	0.98	0.99
Goldsboro	0.94	0.93	0.90	0.92	0.93
Greensboro	0.93	0.94	0.94	0.95	0.95
Greenville	0.89	0.91	0.88	0.89	0.89
Hickory	0.90	0.91	0.91	0.92	0.90
Jacksonville	0.91	0.91	0.88	0.88	0.89
Raleigh	1.01	1.00	0.97	0.99	1.01
Rocky Mount	0.93	0.95	0.91	0.93	0.93
Wilmington	0.94	0.92	0.92	0.93	0.93
Winston-Salem	0.90	0.92	0.91	0.89	0.89
NORTH DAKOTA	0.98	1.01	1.00	0.98	1.02
Bismarck	0.97	1.01	0.99	0.98	1.01
Fargo	0.97	0.98	0.98	0.96	1.00
Grand Forks	0.96	1.02	1.00	0.98	1.02
Jamestown	0.97	1.02	1.00	0.98	1.02
Mandan	0.97	1.01	0.99	0.98	1.01
Minot	1.00	1.02	1.00	0.97	1.04
Williston	1.00	1.03	1.01	0.98	1.05
OHIO	0.99	0.99	0.98	0.98	0.99
Akron	0.97	0.98	0.99	1.00	0.99
Canton	0.96	0.97	0.97	0.97	0.97
Cincinnati	1.00	0.99	0.99	0.97	1.01
Cleveland	0.99	1.02	1.02	1.01	1.02
Columbus	1.02	1.01	1.00	0.99	1.00
Dayton	0.98	0.97	0.98	0.97	0.97
East Liverpool	1.05	1.06	1.08	1.04	1.06
Hamilton	0.95	0.93	0.96	0.94	0.95
OHIO (Continued)					
Lima	0.94	0.95	0.94	0.93	0.94
Lorain County	0.98	1.00	1.01	1.00	1.01
Mansfield	0.97	0.98	0.95	0.95	0.97
Marion	0.97	0.98	0.95	0.95	0.97
Middletown	0.95	0.93	0.94	0.94	0.95
Newark	0.98	0.99	0.97	0.97	0.98
Portsmouth	0.89	0.87	0.87	0.86	0.89
Springfield	0.98	0.96	0.96	0.96	0.97
Toledo	1.03	1.04	1.04	1.04	1.07
Youngstown	1.05	1.07	1.03	1.02	1.06
OKLAHOMA	0.91	0.93	0.92	0.91	0.92
Ardmore	0.93	0.93	0.94	0.91	0.93
Bartlesville	0.87	0.89	0.89	0.88	0.88
Enid	0.89	0.92	0.91	0.91	0.91
Lawton	0.86	0.88	0.87	0.85	0.85
Norman	0.97	0.98	0.97	0.96	0.96
Oklahoma City	0.97	0.98	0.97	0.96	0.96
Tulsa	0.90	0.93	0.92	0.93	0.92
OREGON	1.06	1.10	1.09	1.08	1.11
Albany	1.06	1.10	1.08	1.06	1.10
Altamont	1.03	1.06	1.04	1.04	1.08
Astoria	1.05	1.09	1.07	1.05	1.08
Bend	1.06	1.12	1.12	1.12	1.11
Coos Bay	1.04	1.08	1.07	1.07	1.10
Corvallis	1.06	1.10	1.08	1.06	1.09
Eugene	1.12	1.17	1.15	1.14	1.18
Grants Pass	1.04	1.07	1.06	1.04	1.10
Klamath Falls	1.04	1.07	1.05	1.04	1.09
Medford	1.05	1.09	1.09	1.07	1.11
North Bend	1.04	1.08	1.07	1.08	1.10
Pendleton	1.09	1.10	1.10	1.11	1.11
Portland	1.11	1.13	1.13	1.11	1.12
Roseburg	1.04	1.08	1.04	1.04	1.11
Salem	1.08	1.13	1.10	1.09	1.11
Springfield	1.03	1.06	1.06	1.06	1.10
The Dalles	1.08	1.13	1.10	1.08	1.11
PENNSYLVANIA	1.07	1.10	1.08	1.08	1.08
Allentown	1.10	1.15	1.10	1.13	1.08
Altoona	1.09	1.12	1.08	1.09	1.09
Bethlehem	1.07	1.12	1.07	1.10	1.07
Easton	1.05	1.11	1.06	1.08	1.04
Erie	1.07	1.08	1.08	1.06	1.06
Harrisburg	1.02	1.07	1.04	1.02	1.05
Johnstown	1.07	1.08	1.07	1.06	1.05
Lancaster	1.05	1.06	1.03	1.04	1.04
Norristown	1.19	1.20	1.20	1.22	1.20
Philadelphia	1.17	1.19	1.19	1.22	1.20
Pittsburgh	1.12	1.14	1.11	1.12	1.14
Reading	1.07	1.11	1.07	1.08	1.05
Scranton	1.04	1.03	1.03	1.04	1.05
State College	1.02	1.04	1.03	1.02	1.03
Wilkes-Barre	1.02	1.04	1.05	1.02	1.05
Williamsport	1.03	1.05	1.03	1.03	1.07
York	1.04	1.06	1.04	1.03	1.06

The data included on this page becomes obsolete after update delivery, scheduled for April 2026.

APPENDIX
DEVELOPMENT COST ESTIMATES

Marshall & Swift Valuation Cost Manual

Proposed Scenario

DEVELOPMENT COST ESTIMATES

Proposed Restaurant and Residential Development Scenario

Based on Marshall & Swift Valuation Service

		Average Class B High Rise Residential & Retail Luxury 9-Story	MS Cost Manual Pages
Base Cost Per SF		**$288.00**	Section 11, page 18 - Nov 2024
	Cellar Adj.	$10.44	Section 11, page 19 - Nov 2024
	Add Micropiles & Tangent Wall System	$18.40	Section 51, page 4 - Mar 2025
	First Flr & Third Flr Restaurant Adj. (Shell)	($16.32)	Section 13, page 26 - May 2024
	Second Flr Mechanical & Bike Storage Adj.	($6.14)	Section 11, page 16 - Nov 2024
	Add 2nd Elevator Adj.	$5.35	Section 11, page 35 - Nov 2024
	Add Elevator Stops to Cellar,2nd & 3rd flrs Adj	$2.19	Section 11, page 35 - Nov 2024
	Sprinklers Adj.	$5.59	Section 11, page 35 - Nov 2024
	Paved Front Yard Parking Area Adj.	$0.13	Section 66, page 2 - Dec 2025
	Balconies Adj.	$3.27	Section 11, page 35 - Nov 2024
	Outdoor Terrace (2nd, 3rd, 4 Flrs Terraces) Adj.	$0.53	Section 57, page 4 - Sept 2025
Total Base Cost Per SF *		**$311.44**	* Costs are for above grade area.
Façade Area Adjustment		111.0%	Section 11, page 36 - Nov 2024
Bldg. Height Adjustment		103.0%	Section 11, page 18 - Nov 2024
Floor Height Adjustment		105.5%	Section 11, page 36 - Nov 2024
Geographic Multiplier		132.0%	Section 99, page 9 - Mar 2026
Inflation Factor		108.0%	Section 99, page 3 - Jan 2026
Total Cost per SF *		**$535.53**	* Costs are for above grade area.
Total Gross Above Grade Bldg Area (SF)		**17,539**	
MS Total Cost		**$9,392,603**	
Total Bldg SF incl Cellar		**20,064**	
	$/SF	**$468.13**	

APARTMENTS, HOTELS AND CLUBS

GENERAL INFORMATION

Calculator Costs are averages of final costs including architects' fees and contractors' overhead and profit, sales taxes, permit fees and insurance during construction. Interest on interim construction financing is also included, but not financing costs, real estate taxes or brokers' commissions (see Section 1 for complete list). They do not represent any building illustrated, except as the building is included in the averages. Refinements to the average costs for type of heating, built-in appliances, fireplaces, sprinklers, basement, elevator stops, area/perimeter ratio and story height are given at the end of the section, and adjustments for elevators and number of stories are on the cost pages. Exterior balconies are not included in the basic building costs and must be added separately. Current and Local Cost Multipliers are given in Section 99.

DESCRIPTIONS

The abbreviated descriptions given in the tables show some of the items generally found in buildings of the class, quality and occupancy listed. They are merely indicative of many buildings in this cost classification, and are not meant to be building specifications.

CONSTRUCTION

Buildings are divided into five construction classes: A, B, C, D and S, as described in Section 1. In each class there will be variations and sub-classes, but for purposes of pricing, the major elements of the building should be considered in entering the tables. Thus, if a building which is otherwise a Class B has a steel truss roof, the costs for the Class B building will still be representative. Interpolations may be made if the appraiser feels the building overlaps two classes, or the Segregated Costs in Section 41 may be used for adjustments.

OCCUPANCY

Dormitories include college and boarding school residence halls, interns' and nurses' quarters and armed services bachelor officers' and NCO quarters. They generally have a lounge and frequently have dining facilities and built-in features not found in apartments. For migrant labor dormitories or bunkhouses, see Section 17.

High-rise Apartment costs are averages for multiple dwelling units of three or more floors, with kitchen facilities. For buildings of one or two stories and newer three-story buildings of lightweight residential-type construction, use Multiple Residence Costs, Section 12. **Luxury Apartments** are listed separately and include the high-end, owner-occupied condominiums and resort time-share facilities. Although apartments built as condominiums sometimes are required by building and zoning codes to have certain items not required for rental units, basically, "condominium" is a type of ownership and not a type of construction, and the apartment costs are valid. There can be extra developers' or soft costs related to a type of ownership, which are not considered in this manual. See Section 1.

Basement costs include finish compatible with the type of basement, including stairs and ramps as necessary, and must be refined for size, shape and height. Add elevator stops from the refinement page.

Hotels are multiple sleeping units and lobby, of three or more floors, without individual kitchen facilities. The costs are separated by the type and amount of common-use or support facilities available. **Full-service** hotels will have meeting, ballroom, banquet and dining and lounge facilities commensurate with the class and quality. **Limited-service** hotels will have little or no space designed for large groups or formal dining. Where the first floor is divided entirely into retail stores and shops, that floor should be priced from Section 13. For one- to three-story buildings of light residential-type construction, Class C, D or S, use the motel costs in Section 12. Swimming pools should be added from Section 66. For separate convention facilities, see Section 16.

Mezzanine costs do not include exterior wall or heating, which are included in the building cost refinement for wall height. Elevator stops can be added from the refinement page.

City Clubs are private hotels with dining, gymnasium and library facilities. Swimming pools should be added from Section 66.

Homes for the Elderly include assistance living congregate housing for the elderly, of three or more floors, typically consisting of one- or two-room suites, normally with limited individual and common kitchen and dining areas, lounges, nursing and therapy rooms. For apartments, multiple residences (senior and assisted living), single-family residences, duplexes, separate clubhouses, etc., in so-called senior citizen developments, use the section for the proper type of occupancy. Skilled nursing facilities or convalescent hospitals are found in Section 15.

Group Care Homes are small congregate care or special needs buildings that are more family or residential style in character than convalescent hospitals, and include intermediate-care facilities for the physically challenged or mentally handicapped, substance abusers, battering victims, emergency homeless and other like groups. Therapy rooms or lounges and administrative rooms commensurate with the quality are included.

Mortuaries or funeral homes include chapels, stained glass and laboratories commensurate with the general quality. Generally, the better funeral homes may include some living area. Vehicular garages should be priced from Section 12 or 14 as appropriate.

Fraternity Houses or sorority facilities have kitchen, dining and lounge rooms, and are more family style in character than dormitories.

Rectories or convents are buildings of residential type with some additional plumbing and kitchen facilities for the additional unrelated numbers of occupants. The better qualities may include small office, meeting and/or chapel rooms.

Rooming or Boarding Houses can be more commercial style in character than rectories, and provide minimum living quarters for transient occupancy.

High-rise Row Houses are all common wall dwellings over three stories. For three-story or less units, see Section 12.

Clubhouses are general-purpose recreation or activity buildings, usually with light kitchen facilities, a large general-use room and multiple restrooms. They will often have stages, and the better quality clubs will merge into the fraternal or auditorium occupancies found in Section 16. Large gymnasium-type facilities can be priced from Section 18 or community recreation centers or fellowship halls, Section 16.

Senior Centers are municipal-type clubhouses for senior citizens, which generally have multiple meeting and recreation rooms and full kitchen facilities.

Country Clubs are specialized clubhouses designed mainly for entertainment and have few, if any, sleeping rooms. Generally, the better clubs will have ballroom, bar, banquet and pro shop facilities, as well as locker and shower rooms. For snack bars, see Section 13. Golf cart storage, see Section 17.

Recreational Enclosures are structures designed to specifically shelter swimming facilities from the elements. Pool costs are not included, and must be added from Section 66. The lowest pre-engineered structures are light-residential patio-style enclosures only, while the better qualities are typical of hotel/motel-type facilities with ancillary restroom, exercise or lounge finishes commensurate with the quality level. Natatoriums should be priced from Section 18.

Health Clubs or spas are designed as small physical fitness facilities typically 2,000 to 6,000 square feet, with limited exercise and conditioning areas. Generally, the better resort luxury day spa facilities can be much larger and will have a snack bar, massage and steam room and sauna facilities, as well as locker and shower rooms concentrating on day spa personal services. Whirlpool baths, swimming pools and sport courts are not included. Large gymnasium-type fitness centers with sports courts, rinks, running tracks, etc. should be priced from either Section 16 or Section 18, gymnasiums.

Separate restroom and bathhouse facilities should be priced from Section 12 or 18.

LUXURY APARTMENTS (HIGH-RISE) (984)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	HEAT	COST Sq. M.	COST Cu. Ft.	COST Sq. Ft.
A	Good	Best metal or stone, brick or block backup, solar glass, best lobby	Finest interior detail, hardwoods, ceramic, custom carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	4348.62	40.40	404.00
	Average	Good metal and solar glass, face brick, precast concrete panels, EIFS	Good interior detail, carpet, ceramic tile, some vinyl and fine hardwood	*Electrical/plumbing, fine fixtures, one full bath per bedroom	Hot and chilled water (zoned)	3487.50	32.40	324.00
B	Good	Best metal or stone, brick or block backup, solar glass, best lobby	Finest interior detail, hardwoods, ceramic, custom carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3842.71	35.70	357.00
	Average	Good metal and solar glass, face brick, precast concrete panels, EIFS	Good interior detail, carpet, ceramic tile, some vinyl and fine hardwood	*Electrical/plumbing, fine fixtures, one full bath per bedroom	Hot and chilled water (zoned)	3100.00	28.80	288.00
C	Excellent	Best stones, metal, solar glass, highly ornamented lobby	Best interior detail, hardwoods, ceramic, carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3821.18	35.50	355.00
	Good	Good masonry and glass, good ornamentation and lobby	Good interior detail, sheet vinyl, ceramic tile/carpet, paneling, fine hardwood	*Electrical/plumbing, extra fixtures, one full bath per bedroom	Warm and cool air (zoned)	2992.36	27.80	278.00
	Average	Stone, brick, metal and glass, individual design, good lobby	Good plaster, paneling/paper, vinyl, carpeting or hardwood, some extras	*Electrical/plumbing, fine fixtures, one full bath per bedroom	Warm and cool air (zoned)	2443.41	22.70	227.00
D MASONRY VENEER	Excellent	Best brick or stone veneer, highly ornamental lobby	Best interior detail, hardwoods, ceramic, carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3735.07	34.70	347.00
	Good	Good veneers and trim, good ornamentation and lobby	Good interior detail, sheet vinyl, ceramic tile/carpet, paneling, fine hardwood	*Electrical/plumbing, extra fixtures, more than one bath per bedroom	Warm and cool air (zoned)	2927.78	27.20	272.00
	Average	Face brick or stone veneer, individual design, good lobby	Good plaster, paneling/paper, vinyl, carpeting or hardwood, some extras	*Electrical/plumbing, good fixtures, one bath per bedroom	Warm and cool air (zoned)	2378.82	22.10	221.00
D	Excellent	Best EIFS, stone trim, highly ornamental lobby	Best interior detail, hardwoods, ceramic, carpet, built-ins	*Electrical/plumbing, fine fixtures, more than one bath per bedroom	Hot and chilled water (zoned)	3670.49	34.10	341.00
	Good	Good EIFS or sidings, good ornamentation and lobby	Good interior detail, sheet vinyl, ceramic tile/carpet, paneling, fine hardwood	*Electrical/plumbing, extra fixtures, more than one bath per bedroom	Warm and cool air (zoned)	2863.20	26.60	266.00
	Average	Good stucco or siding, brick and stone trim, good lobby	Good plaster, paneling/paper, vinyl, carpeting or hardwood, some extras	*Electrical/plumbing, good fixtures, one bath per bedroom	Warm and cool air (zoned)	2325.00	21.60	216.00

NOTES: Fireplaces, balconies and canopies, are not included, see Pages 34 - 35.

BUILT-IN APPLIANCES – May be computed from Section 12, the Segregated Costs, Section 42, or from the Unit-in-Place Costs.

For load-bearing sports court or swimming roof, add $8.43 per square foot of roof ($90.74 per square meter). For pools or courts, see Sections 66 and 67.

For differentiation in our pricing system, high-rise apartments are three stories and above, while low-rise garden apartments of light residential-type construction are referred to as multiple residences up to three stories and are priced from Section 12.

For individual timeshare lock-off efficiency suites, add $1710.00 to $3100.00 per unit.

For utility and parking basements, see Page 19.

For parking structures, see Section 14; underbuilding levels, Section 15.

For mechanical penthouses, see Section 15.

MULTISTORY BUILDINGS – Add .5% (1/2%) for each story, over three, aboveground, to all base costs, including basements but excluding mezzanines, up to 30 stories; over 30 add .4% (4/10%) for each additional story.

SPRINKLERS – Systems are not included. Costs should be added from Page 35.

***ELEVATORS** – Building costs marked with an asterisk (*) include elevators. If elevators are not included in your subject property, deduct the following from the base costs on this page which are so marked. For buildings not marked, or for basement stops, add costs from Page 35.

LUXURY APARTMENTS

CLASSES A and B	Sq. M.	Sq. Ft.
Good	139.93	13.00
Average	122.71	11.40

CLASSES C	Sq. M.	Sq. Ft.
Excellent	93.65	8.70
Good	82.77	7.69
Average	73.41	6.82

CLASSES D	Sq. M.	Sq. Ft.
Excellent	82.77	7.69
Good	73.41	6.82
Average	64.58	6.00

DORMITORIES

CLASSES A and B	Sq. M.	Sq. Ft.
Excellent	117.86	10.95
Very Good	102.36	9.51
Good	87.94	8.17
Average	67.38	6.26
Low Cost	51.24	4.76

CLASSES C and D	Sq. M.	Sq. Ft.
Excellent	72.55	6.74
Very Good	63.61	5.91
Good	55.76	5.18

NOTE: Care must be exercised when using square foot elevator costs. Small dormitory buildings may have only one elevator and/or handicap lift regardless of size, where a normal range or area served is not feasible for low-rise applications.

ELEVATORS

Lump-sum cost per elevator plus the cost per stop or landing including the ground level. Use the cost per stop for basement and mezzanine stops. See Section 58 for more detailed costs, for observation elevators and for dumbwaiter costs.

TYPE	LOW	AVG.	GOOD	EXCL.
Base cost, passenger, two- to three story	67500.00	79500.00	93750.00	110000.00
four- to seven - story	117000.00	135000.00	154000.00	177000.00
eight-story and over	180000.00	228000.00	287000.00	363000.00
add, cost per stop	9700.00	11100.00	12800.00	14700.00
Freight, base cost, two to three stories	51000.00	67500.00	89000.00	118000.00
four stories and over	100000.00	126000.00	160000.00	202000.00
add, cost per stop, manual doors	12900.00	14100.00	15300.00	16700.00
power doors	22400.00	24400.00	26600.00	29000.00
Escalators, each stairway	260000.00	276000.00	294000.00	312000.00
Vertical wheelchair lifts, each	17200.00	22300.00	29000.00	37600.00

EXTERIOR BALCONIES

Balcony costs include the supporting structure, decking and rails. Apply costs to the balcony area.

	LOW	AVG.	GOOD	EXCL.
Concrete	34.50	44.00	56.50	72.00
Steel	32.25	43.25	58.00	76.50
Wood	30.50	40.00	53.00	69.50
Add for finishes, balustrades	30.00	36.75	45.00	55.00
Add for roofs or awnings	15.55	20.70	27.50	36.50

CANOPIES

This is the cantilevered portion of a building that extends over an entrance. The distance that the canopy is cantilevered should be considered when selecting a rank.

	LOW	AVG.	GOOD	EXCL.
Wood frame	38.50	47.75	59.00	72.50
Light false-mansard	19.30	23.90	29.50	36.25
Steel frame	45.25	56.50	71.00	89.00
Light false-mansard	22.65	28.25	35.50	44.50

SPRINKLERS

Sprinkler costs include all costs for the system and supply lines, but not tanks, towers, or high-pressure pumps. The square foot costs listed are based on the total area of sprinkler system installation on a single main connection including its prorated share of contractors' overhead and profit and architects' fees. For a more specific cost, see Section 41 or 53. For double sprinkler systems with heads both above and below a ceiling, use sprinklered area and 1.6 times the listed cost. Small intricate installations (i.e., Group Care Homes) may run twice the averages as shown. Sprinklers should not be modified for size or shape. For square meter cost, mulitiply square foot cost by 10.764.

COVERAGE Square Feet	WET SYSTEMS LOW	AVG.	GOOD	EXCL.	DRY SYSTEMS LOW	AVG.	GOOD	EXCL
1,500	5.81	6.91	8.22	9.77	7.55	8.98	10.70	12.70
3,000	5.22	6.18	7.33	8.68	6.73	7.98	9.45	11.20
5,000	4.83	5.70	6.72	7.92	6.18	7.29	8.60	10.15
10,000	4.35	5.10	5.98	7.02	5.52	6.47	7.59	8.90
15,000	4.09	4.78	5.59	6.54	5.17	6.05	7.08	8.28
20,000	3.93	4.58	5.33	6.20	4.94	5.75	6.70	7.81
30,000	3.64	4.24	4.94	5.76	4.59	5.35	6.23	7.26
40,000	3.53	4.09	4.75	5.51	4.40	5.11	5.93	6.88
50,000	3.41	3.95	4.58	5.31	4.27	4.94	5.71	6.60
75,000	3.19	3.69	4.26	4.93	3.96	4.58	5.29	6.12
100,000	3.04	3.51	4.05	4.67	3.78	4.36	5.03	5.80
125,000	2.96	3.40	3.91	4.49	3.64	4.19	4.82	5.54
150,000	2.87	3.30	3.79	4.35	3.53	4.06	4.66	5.36
200,000	2.74	3.14	3.60	4.12	3.35	3.85	4.43	5.09
300,000	2.59	2.97	3.40	3.90	3.19	3.64	4.15	4.73
400,000	2.46	2.81	3.21	3.67	3.01	3.44	3.93	4.49
500,000	2.38	2.71	3.10	3.53	2.90	3.31	3.77	4.30

CALCULATOR METHOD

APARTMENTS, HOTELS AND CLUBS
REFINEMENTS
FLOOR AREA/PERIMETER MULTIPLIERS

AVERAGE FLOOR AREA		M.	AVERAGE PERIMETER															M.	AVERAGE FLOOR AREA	
Sq. M.	Sq. Ft.	FT.	49 160	55 180	61 200	76 250	91 300	107 350	122 400	152 500	183 600	213 700	244 800	305 1000	366 1200	427 1400	488 1600	610 2000	FT.	Sq. Ft.	Sq. M.
139	1,500		1.099	1.133	1.165	1.247	1.329	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		1,500	139
186	2,000		1.034	1.059	1.083	1.143	1.206	1.267	1.329	-----	-----	-----	-----	-----	-----	-----	-----	-----		2,000	186
232	2,500		.992	1.012	1.034	1.083	1.133	1.181	1.231	1.329	-----	-----	-----	-----	-----	-----	-----	-----		2,500	232
279	3,000		.967	.984	1.000	1.042	1.083	1.123	1.165	1.247	1.329	-----	-----	-----	-----	-----	-----	-----		3,000	279
372	4,000		.935	.947	.959	.989	1.021	1.052	1.083	1.143	1.206	1.268	1.329	-----	-----	-----	-----	-----		4,000	372
465	5,000		-----	.926	.935	.959	.984	1.009	1.034	1.083	1.133	1.181	1.231	1.329	-----	-----	-----	-----		5,000	465
557	6,000		-----	-----	.917	.938	.959	.980	1.000	1.042	1.083	1.123	1.165	1.247	1.329	-----	-----	-----		6,000	557
650	7,000		-----	-----	-----	.924	.942	.959	.977	1.011	1.047	1.083	1.118	1.188	1.257	1.329	-----	-----		7,000	650
743	8,000		-----	-----	-----	.913	.929	.944	.959	.989	1.021	1.052	1.083	1.143	1.206	1.268	1.329	-----		8,000	743
836	9,000		-----	-----	-----	-----	.917	.932	.945	.973	1.000	1.028	1.056	1.110	1.165	1.220	1.274	-----		9,000	836
929	10,000		-----	-----	-----	-----	.910	.922	.935	.959	.984	1.009	1.034	1.083	1.133	1.181	1.231	1.329		10,000	929
1,115	12,000		-----	-----	-----	-----	-----	.907	.917	.938	.959	.980	1.000	1.042	1.083	1.123	1.165	1.247		12,000	1,115
1,301	14,000		-----	-----	-----	-----	-----	-----	.906	.924	.942	.959	.977	1.011	1.047	1.083	1.118	1.188		14,000	1,301
1,486	16,000		-----	-----	-----	-----	-----	-----	.898	.913	.929	.944	.959	.989	1.021	1.052	1.083	1.144		16,000	1,486
1,672	18,000		-----	-----	-----	-----	-----	-----	.890	.904	.917	.932	.945	.973	1.000	1.028	1.056	1.110		18,000	1,672
1,858	20,000		-----	-----	-----	-----	-----	-----	.885	.898	.910	.922	.935	.959	.984	1.009	1.034	1.083		20,000	1,858
2,230	24,000		-----	-----	-----	-----	-----	-----	-----	.886	.896	.907	.917	.938	.959	.980	1.000	1.042		24,000	2,230
2,601	28,000		-----	-----	-----	-----	-----	-----	-----	.880	.888	.898	.906	.924	.942	.959	.977	1.011		28,000	2,601
2,973	32,000		-----	-----	-----	-----	-----	-----	-----	.874	.882	.889	.898	.913	.928	.944	.959	.989		32,000	2,973
3,344	36,000		-----	-----	-----	-----	-----	-----	-----	.870	.877	.883	.890	.904	.917	.932	.945	.973		36,000	3,344
3,716	40,000		-----	-----	-----	-----	-----	-----	-----	.866	.873	.879	.885	.898	.910	.922	.935	.959		40,000	3,716

STORY HEIGHT MULTIPLIERS

Multiply the base cost by the following multipliers for any variation in average story height from the base of 10 feet (3.05 meters).

AVERAGE WALL HEIGHT (M.)	AVERAGE WALL HEIGHT (FT.)	SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER	AVERAGE WALL HEIGHT (M.)	AVERAGE WALL HEIGHT (FT.)	SQUARE FOOT OR SQUARE METER MULTIPLIER	CUBIC FOOT MULTIPLIER
2.13	7	.922	1.317	4.57	15	1.144	.763
2.44	8	.947	1.184	4.88	16	1.175	.734
2.74	9	.973	1.081	5.18	17	1.207	.711
3.05	10	1.000 (base)	1.000	5.49	18	1.240	.689
3.35	11	1.027	.934	5.79	19	1.274	.671
3.66	12	1.055	.879	6.10	20	1.309	.655
3.96	13	1.084	.834	6.71	22	1.381	.628
4.27	14	1.114	.796	7.31	24	1.458	.608

CALCULATOR METHOD

RESTAURANTS (350)

CLASS	TYPE	EXTERIOR WALLS	INTERIOR FINISH	LIGHTING, PLUMBING AND MECHANICAL	*HEAT	Sq. M.	COST Cu. Ft.	Sq. Ft.
A-B	Excellent	Stone, face brick, best metal walls, usually part of a building	Best plaster and paneling, highly ornamental, carpeted, deluxe quality	Special lighting fixtures and effects, deluxe restrooms	Complete H.V.A.C.	4434.73	34.32	412.00
	Good	Concrete, metal/glass or masonry panels, usually part of a building	Plaster with enamel & vinyl, carpet & vinyl flooring, decorated interior	Good lighting and outlets, good plumbing and restrooms	Complete H.V.A.C.	3315.28	25.66	308.00
	Average	Brick or concrete, usually part of a building	Plaster or drywall, acoustic tile, carpet, ceramic, rubber, or vinyl comp. tile	Adequate lighting outlets, adequate plumbing	Complete H.V.A.C.	2497.22	19.33	232.00
C	Excellent	Individual design, highly ornamental exterior	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	4079.52	31.57	379.00
	Very good	Individual design, brick, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good lighting/restrooms with good-quality fixtures and tile	Complete H.V.A.C.	3164.59	24.49	294.00
	Good	Brick, concrete or metal and glass panels, ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2464.93	19.08	229.00
	Average	Brick, block, tilt-up, plain building, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1915.97	14.83	178.00
	Low cost	Cheap brick or block, very plain, low-cost front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1388.54	10.75	129.00
D	Excellent	Individual design, highly ornamental exterior, stone veneer	High-quality detail, best acoustics, carpeted, deluxe quality	Special lighting effects, tiled restrooms, good fixtures	Complete H.V.A.C.	3918.06	30.32	364.00
	Very good	Individual design, brick veneer, good metal and glass, ornamentation	Typically best chain restaurants, carpeted lounge and dining room	Good fixtures, good restrooms w/good-quality fixtures and tile	Complete H.V.A.C.	2992.36	23.16	278.00
	Good	Stucco or siding, metal and glass, some ornamentation	Typical chain restaurant or coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2303.47	17.83	214.00
	Average	Stucco or siding, plain building and front, stock plans	Typical neighborhood restaurant, vinyl composition, small kitchen	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1776.04	13.74	165.00
	Low cost	Cheap stucco or siding, very plain	Low-cost short order cafe, min. finish	Minimum lighting and plumbing	Forced air/vent.	1259.38	9.75	117.00
DPOLE	Low cost	Pole frame, good metal panels, lined and insulated, plain front	Low-cost short order cafe, minimum finish, asphalt tile	Minimum lighting and outlets, minimum plumbing	Forced air and ventilation	1173.27	9.08	109.00
S	Good	Insulated sandwich panels, metal and glass, some ornamentation	Comparable to typical chain coffee shop, vinyl and ceramic floors	Good lighting and service outlets, tiled restrooms	Complete H.V.A.C.	2325.00	17.99	216.00
	Average	Insulated panels, metal and glass, little ornamentation	Typical neighborhood coffee shop, vinyl comp., some ceramic or pavers	Adequate lighting and outlets, small restrooms	Complete H.V.A.C.	1743.75	13.49	162.00
	Low cost	Finished interior, some front	Low-cost finish, asphalt tile	Minimum lighting and plumbing	Forced air/vent.	1205.56	9.33	112.00

BASEMENTS AND MEZZANINES

A-B	Basement, finished	Plaster interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Low-cost complete H.V.A.C.	1668.40	12.91	155.00
	Mezzanine, open	Not included	Open, finished floors, plaster soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	645.83	-----	60.00
CDS	Basement, finished	†Plaster or drywall interior	Finished ceiling and floors, banquet, service functions	Adequate lighting/plumbing, restrooms, utility rooms	Forced air and ventilation	1108.68	8.58	103.00
	Bsmt. storage	†Painted interior, outside entry	Paint only, some partitions	Adequate lighting, drains	None	535.50	4.14	49.75
	Mezzanine, open	Not included	Open, finished floors and soffit, minimum work stations	Adequate lighting, minimum plumbing	Included in building cost	449.39	-----	41.75

†For fire-resistant Type I basements, with concrete slab separation under Class C, D or S units, add $ 8.66 per square foot ($93.22 per square meter). *Adjust for heat from table on following page.
NOTES: For other basement types, see Page 30.

MULTISTORY BUILDINGS

Add 0.5% (1/2%) for each story over three, above ground, to all base costs, including basements but excluding mezzanines, up to 30 stories. Over 30 stories, add 0.4% (4/10%) for each additional story.

BALCONIES

To determine the cost for exterior balconies use one of the following: Page 40 in this section; compute from the Segregated Costs in Section 43; or from Unit-In-Place Costs in Section 66.

MEZZANINES

Do not use story height or area/perimeter multipliers with mezzanine costs.

SPRINKLERS

Sprinkler systems are not included. Costs should be added from Page 40.

ELEVATORS

Elevators are not included. Costs should be added from Page 39. Add for dumbwaiters from Section 58.

ROOFS

ROOF DECKS AND SHEATHING

(Per square foot of decking or sheathing)

TYPE	COST RANGE
Concrete: hollow precast plank	11.65 – 18.40
Lift slab	13.85 – 21.70
Lightweight channels, 2" - 3"	9.47 – 14.35
Plank, 2" - 3" T&G	10.75 – 14.35
Reinforced slab, 4" - 6"	14.20 – 22.50
Topping, 1 3/4" - 2 1/2" foamed concrete	2.07 – 4.34
lightweight concrete, reinforced, 2" - 3"	4.59 – 6.18
Prestressed tees or double tees	12.60 – 20.90
Fiberboard, prefinished one side, 2" T&G	4.59 – 6.52
3" T&G	6.11 – 7.62
Gypsum: 2" plank with metal edge	6.52 – 10.20
2"-3" poured over gypsum board	5.11 – 7.11
2"-3" poured over fiberglass	6.11 – 7.69
Steel:18 gauge, corrugated or crimped	4.24 – 8.21
26 gauge	2.82 – 5.66
Cellular	10.85 – 19.50
Tectum, 2", prefinished one side	6.43 – 8.75
Wood sheathing: 5/16" plywood	1.56 – 1.93
3/8" plywood	1.71 – 2.18
1/2" plywood	1.90 – 2.49
5/8" plywood	2.24 – 3.05
3/4" plywood	2.63 – 3.35
1 1/8" plywood, T&G	4.00 – 5.43
1" spaced board	1.78 – 3.15
1" solid board	2.78 – 4.25
1" T&G	2.87 – 4.63
2" T&G	4.77 – 8.06
3" T&G	7.97 – 11.85
2" plank	4.62 – 9.31
3" plank	7.74 – 13.15
for oriented strand - waferboard, deduct	0.12 – 0.26
for fire-treated wood, add	0.66 – 1.21
Wood Stresskin sandwich panels	9.31 – 20.45

ROOF COVER

Cost per square foot of roof area, including typical flashing, valleys and underlayment as required by the roofing type. Extremely steep or cut-up roofs may be 20% above the high end of the range. For vertical or mansard applications, add 20%. Curved panels, add 1.49 to 4.18.

Aluminum, sheet, corrugated, crimped or tile panels preformed, light (.0175" - .024" thick)	3.34 – 6.09
heavy (.032" - .050" thick) including prefab lock and seam	5.68 – 8.83
formed seam, flat or standing	5.86 – 14.60
batten seam	6.84 – 16.60
shingles	4.44 – 9.56
Built-up, 2-ply	1.75 – 2.80
3-ply	2.06 – 3.44
4-ply	2.41 – 3.99
5-ply	2.87 – 4.97
add for gravel or small rock	0.40 – 0.63
add for large rock	0.47 – 0.79
Cement fiber, shingles	4.49 – 9.72
corrugated or sheet (Transite)	3.87 – 15.60
Composition, roll	1.10 – 2.46
Composition shingle, light, to 235#	1.96 – 3.38

ROOF COVER

(Continued)

TYPE	COST RANGE
heavy, over 235# or laminated	2.50 – 5.91
Copper, flat or standing seam	14.00 – 26.00
batten seam	15.30 – 28.00
shingles	14.25 – 19.95
Elastomeric, single ply	3.59 – 10.50
reinforced sheet or spray fluid coat	6.50 – 12.60
Fiberglass, corrugated or sheet	2.35 – 4.44
structural or FRP panels over 8 oz.	4.44 – 11.30
Modified bitumen, single ply	3.68 – 10.85
reinforced sheet	6.09 – 12.35
Slate (red slate, add 100%)	8.75 – 18.70
Steel, corrugated, crimped or tile panels, galvanized preformed, light (30 - 26 gauge)	2.35 – 5.93
heavy (24 - 18 gauge) including prefab lock and seam	5.02 – 8.68
formed seam, flat or standing	5.34 – 13.30
batten seam	6.50 – 15.35
shingles	4.25 – 9.31
add for porcelain enamel finish	4.00 – 6.84
add for sandwich panels	4.59 – 15.75
add for interior metal liner	2.35 – 4.25
add for stainless steel	4.18 – 8.61
Terne, flat or standing seam	13.05 – 24.05
batten seam	14.10 – 26.00
Tile, clay	7.11 – 21.05
concrete	6.00 – 11.10
plastic or rubber	5.18 – 9.31
Wood, shakes	4.34 – 8.06
shingles	4.00 – 7.36
fiber shingles	2.52 – 5.27
add for fire-resistant finish	0.66 – 1.34
Roof walkways	6.50 – 8.75
Bird spikes, per linear foot	4.44 – 15.60

INSULATION

(Per square foot of insulated area)

Aluminum foil, single ply	R- 5 - R- 9	0.49 – 0.59
add, per additional ply		0.19 – 0.31
Expanded mica, 3 1/2"	R- 7 - R- 9	1.75 – 2.46
Fiberboard, 1/2" wood	R- 1 - R- 2	1.34 – 1.56
1"	R - 2 - R- 3	1.57 – 2.15
2"	R- 5 - R- 6	2.49 – 3.21
Fiberglass or rock wool: For blown-in, use appropriate batt R-value plus 20%.		
1" board	R- 3 - R- 4	1.91 – 2.91
2" board	R- 7 - R- 8	2.85 – 4.10
batts or roll, 2 1/2"	R- 7 - R- 9	0.88 – 1.24
3 1/2"	R-11 - R-13	1.02 – 1.34
6"	R-19 - R-22	1.41 – 1.90
9"	R-28 - R-30	1.93 – 2.60
12"	R-36 - R-38	2.53 – 3.40
add for vinyl–faced or wire support		0.28 – 0.54
add for colored band support		0.41 – 0.82
Foamglass, 1" board	R - 2 - R- 3	4.53 – 5.40
2" board	R- 4 - R- 6	5.66 – 7.14
3" board	R- 7 - R- 8	7.41 – 8.75
Polyurethane, 1" board	R- 7 - R- 8	2.35 – 2.93
2" board	R-14 - R-17	3.07 – 4.34
3" board	R-22 - R-25	4.38 – 5.27
Polystyrene, 1" board	R- 5 - R- 6	1.77 – 2.49
2" board	R-10 - R-12	2.66 – 3.49

YARD IMPROVEMENTS

PAVING – DECKING

Typical costs per square foot, except as otherwise specified. For paved areas of 750 square feet, deduct 10%; 2,000 square feet, deduct 20%. Over 3,000 square feet, use Subdivision costs. Small separate pours of 100 square feet or less may run 25% higher. Hand mixed and spread could cost 75% more.

For complete plaza cost, see Open Malls, Section 13.

	COST RANGE		
2" asphalt on 2" base	2.87	–	4.24
add per additional inch	0.67	–	0.85
2" aggregate base	0.93	–	1.60
add per additional inch	0.22	–	0.32
4" concrete, unreinforced	6.42	–	9.58
add or deduct per inch of variation	0.58	–	0.85
add for mesh reinforcing	0.58	–	1.52
bar reinforcing	0.67	–	3.38
exposed aggregate	1.09	–	4.24
brick ribbons	1.44	–	4.74
detectable warning surface (ADA), stamped	3.38	–	7.42
decorative pattern finish, stamped	7.61	–	15.00
surface formed	6.17	–	11.40
thin–set synthetic overlay	9.33	–	20.80
color or grits	0.93	–	2.03
epoxy with stone or shell	6.68	–	9.48
salt finish (cool deck)	0.58	–	1.01
deck channel drain and grate, per lin. ft.	20.80	–	81.00
catch basins, small, up to 24", each	376.00	–	750.00
4" sand base	1.44	–	2.03
4" gravel base	1.60	–	2.22
add or deduct per inch of variation	0.31	–	0.39
add for 1" stone dust base	0.32	–	0.53
Open grid blocks for grass on sand base	9.33	–	12.75
Asphalt block pavers on concrete base*	12.30	–	20.25
Brick on concrete base, grouted, flat*	16.20	–	26.25
on edge	22.90	–	39.00
Concrete pavers on concrete base*	13.90	–	22.90
Flagstone on concrete base, grouted*	18.15	–	32.75
Tile, quarry on concrete base*	16.20	–	23.50
*For sand bed in place of concrete, deduct	4.05	–	7.42
Snow melting, including controls, electric	17.70	–	21.35
hydronic, large areas (excluding heat source)	9.33	–	25.00
Wood, on grade (posts, beams and joists not included)			
2" x 4" flat	8.55	–	13.90
2" x 4" on edge	13.00	–	20.80
Steps on ground, per lin. ft. of tread, brick on concrete	64.50	–	132.00
concrete	49.25	–	82.50
Approach apron, concrete	7.42	–	12.30
Concrete curb, 4" 6", per lin. foot	17.05	–	26.50
Concrete sidewalk	6.84	–	10.35
Handicap ramps, sidewalks (retrofit, add 400%)	9.96	–	15.60
buildings, concrete (remodel, add 200%)	29.25	–	59.50
add for railing, per lin. ft.	55.50	–	78.00
wood	38.25	–	55.50
add for railing, per lin. ft.	21.95	–	46.75

for portable ramps, see Section 58.

For synthetic surfaces, pathways, see Section 67. Special stone paving, see Section 56.

RAISED PATIO DECKS

Typical cost ranges per square foot of deck area, including supports. For custom installations with complex shapes, built-in planters and seats can run 50% to 100% more.

TYPE	≤ 25 Sq. Ft.	50 Sq. Ft.	100 Sq. Ft.	≥ 300 Sq. Ft.
Decks:				
softwood, fir, pine, etc.	39.50 – 47.50	28.75 – 34.75	21.05 – 26.00	12.80 – 16.40
cedar, redwood or metal	53.00 – 63.50	40.50 – 49.50	30.75 – 38.25	20.25 – 25.25
Railings:				
softwood, fir, pine, etc.	12.45 – 15.60	8.42 – 10.55	5.79 – 6.73	2.96 – 3.82
cedar, redwood or metal	17.50 – 21.70	12.45 – 14.95	8.42 – 10.35	4.85 – 5.79
Steps:				
softwood, fir, pine, etc.	11.65 – 14.25	5.85 – 7.35	3.15 – 3.69	0.96 – 1.31
cedar, redwood or metal	17.15 – 21.30	8.63 – 10.65	4.35 – 5.32	1.50 – 1.81

For each foot of height above 3 feet, increase costs by 5%.
For treated softwoods increase cost by 25%.
For wood polymer composite, add 30% to softwood costs.
For vinyl and tropical hardwoods, add 15% to cedar/redwood costs.

PATIO ROOF

(Typical costs per square foot of covered area, including supports)

TYPE	COST RANGE		
Awning, fabric	16.65	–	37.50
Aluminum or steel, baked enamel	11.25	–	20.80
Fiberglass or screen only	8.06	–	15.00
Wood, including built–up, composition	13.30	–	32.00
Open lattice, metal, vinyl or wood	9.10	–	27.75
Architectural columns, open lattice or trellis	37.50	–	128.00
Picnic shelters	24.85	–	63.00
Add for insulated metal panels	5.40	–	7.42
Add for lighting fixtures, each	123.00	–	338.00

For Carports, see Section 63 or Section 12.
For small Prefabricated Storage Structures, see Section 63 or Section 17.

PATIO ENCLOSURES

Typical cost ranges per linear foot of wall, 84" high, including one exterior door. Use high end of range for insulated panels or knee walls. Add for roof above.

Glassine windows or decorative wood with screen	116.00	–	203.00
Acrylic windows	195.00	–	241.00
Screened only, fiberglass	39.00	–	64.00
steel or aluminum	63.00	–	82.50
bronze	81.00	–	122.00
Add for extra door, each	150.00	–	300.00

GAZEBOS: Typical cost each for 8' to 20' wood units including minimal foundation but excluding floors.

Standard	4950.00	–	26100.00
Deluxe	23200.00	–	62750.00

For Solar rooms and greenhouses, see Section 64. Pool enclosures, see Section 67.

TEMPLES: Typical cost each, 8' to 12' high (to bottom of dome) cast stone units with top ring up to 12' in diameter.

Cost does not include floors or other ornamentation	25700.00	–	69250.00
Add for fiberglass dome	7500.00	–	13300.00
Add for masonry paver floor with no steps	5200.00	–	10400.00
Add for floor with steps	5850.00	–	13300.00

PAVILIONS: Typical cost each for cast stone units 38600.00 – 93250.00

For individual stone columns, see Section 56. For finials, urns, statuaries, see Page 7.

SEGREGATED COST METHOD

ASSEMBLY/SYSTEMS INTRODUCTION

The Segregated Cost Method is designed to enable the appraiser to give separate consideration to all of the major construction assemblies or systems (groups of components) of a building with a minimum of time-consuming counting and measuring, and to systematically arrive at a reliable replacement cost in a reasonably short time.

Use of this method does require a greater degree of understanding of both building construction techniques and the overall cost relationships between occupancies, classes and quality levels, as well as the basic differences resulting from quantity, material grade or workmanship affecting each component's rating range.

The costs of many parts of a building, such as floor, ceiling and lighting, change directly as the floor area of the building increases. Other building costs vary with relation to parameters other than floor area; however, most costs can be related to floor area, wall area, roof area or sometimes an individual count of unit installations. To facilitate the application of these individualized costs, they are grouped so that all costs related to floor area can be added together and applied to the total floor area. All wall area costs can be added together and applied to the wall area, and all roof costs applied to the ground floor or roofed area.

A breakdown of the components whose costs correspond to the major areas follows:

	FLOOR AREA	
Site Preparation	Floor Cover	Sprinklers
Foundation	Ceiling	Heating, Cooling and Ventilating
Frame	Interior Construction	Electrical
Floor Structure	Plumbing	
	OUTSIDE WALL	
Wall	Wall Ornamentation	Storefronts
	ROOF	
Roof Structure	Roof Trusses	Roof Cover

A general discussion of these major components can be found in Section 40, Pages 5 through 7, with many individual component definitions listed in the Glossary, Section 90.

A separate section is included for buildings in each of eight major cost-related groups, (see Section 2, Page 2) classified by type of occupancy so that the user will find the section pertaining to his subject property largely self-contained. The only additional data required are Architects' Fees, Section 99, Page 2; Current Cost Multipliers, Section 99, Page 3; and Local Multipliers, Section 99, Pages 5 through 10.

By separating the costs into major occupancy groups, many of the factors which cause variations in costs are automatically considered, thus eliminating the necessity for detailed consideration of each component. For each component of the building, a range of costs representing a typical spread between low and high costs for that component within the occupancy group is given. The costs in this range are subdivided into four groups whose midpoints are generally defined as follows:

COST RANGE RATING

1	2	3	4
Low	Average	Good	Excellent

The component costs of most buildings, both old and new, will fall within Columns 2 and 3. Columns 1 and 4, while representing the low and high ranges in normally encountered construction costs, do not represent the highest or lowest costs that may be found. (For a more detailed discussion of the rating numbers, see Section 40, Pages 7 and 8).

While it is true that a number of factors influence the cost of each component, buildings are fairly consistent in their quality. Therefore, after the overall quality or cost level of the building is established in relation to the group and class (i.e., an average Class A hospital would not receive the same rating as an average Class C office building, or a 400,000-square-foot warehouse the same rating as a 4,000-square-foot facility, etc.) and the general rating is selected, that column is often appropriate for many of the Segregated Cost components. Exceptions may be those components, such as insulation, wall sheathing, heating and cooling and foundations, which can be directly affected by climate. See Section 85 for environmental mapping.

For typical buildings, the procedure is quite simple:

1. Select the section best describing the occupancy of the building as it was designed.

2. Generally classify the building as to cost level by overall quality and complexity or size for that occupancy as: low cost, average, above average or high cost.

3. Systematically describe each of the major components in order, considering whether that component is consistent with the general cost level of the building as a whole and with the occupancy in that section and its commonality, and enter the appropriate cost.

4. Total the unit costs belonging to each of the major area groups: total floor area, exterior wall area, wall ornamentation and roof area, and multiply each total by its area.

5. The sum of these amounts, modified by the multipliers for the number of stories, architects' fees, current cost and locality, plus any lump-sum additions for miscellaneous items, will be the total replacement or reproduction cost.

PILING

EXPLANATION

Pilings and special foundations must be priced as an addition to other foundation costs. The costs given below are averages of total costs in place, to the user, exclusive of architect's fees. Setting up and dismantling a job depends mainly on the size of equipment needed and the difficulty of access to the job. For a small residential job or boat dock where light piling is used and a mobile rig can run up to the work, setup and dismantling may amount to only a few hundred dollars. For a major dam or seawall project far from a shipping point and requiring piecemeal movement of heavy equipment, the cost might run twice the average as shown. When placement is in wet conditions, riverfront, marshland, over water, etc., the costs should be increased 25% to 50%.

Where light residential piles are used as common practice, installed costs have been as low as 5.51 per linear foot for one hundred 8" tapered wood piles, and as high as 17.95 per linear foot for composition wood pole and concrete lined pipe over water, and up to 38.75 per linear foot for fifteen 12" precast concrete piles, plus 12200.00 for setup costs in wetlands.

For pile tests, add 190.00 to 520.00 per ton of load per test pile.

EXAMPLE

A piling job requires 100 treated wood pilings, each 50' long by 14" diameter.

Cost of setup and dismantling	$ 26300.00
100 piles 50' long = 5,000 linear feet @ 49.75	+ 248000.00
Total job cost	273000.00

SHEET PILING

TYPE	COST RANGE	
Sheeting, bulkheads, left in place, per square foot		
concrete, poured in place	30.50 –	40.75
metal, aluminum panels	31.75 –	36.25
steel, 27# average	44.25 –	62.00
vinyl	17.95 –	20.85
wood, untreated	18.35 –	20.45
treated	20.85 –	23.80

Seawalls, cost per linear foot where typically installed, 10' - 14' depth for small residential jobs.

For large commercial projects, costs may be 50% lower.

treated wood, 8" - 12", including tiebacks	465.00 –	630.00
concrete, precast, 5" - 6" including ties or piling	795.00 –	1310.00
masonry block, decorative, 1' solid, including 1' of bedding	890.00 –	1250.00
rubble stone, 3', including 1' of bedding	1080.00 –	1400.00

PILING COSTS

TYPE OF PILING		COST PER LINEAR FOOT PILE	DRIVING	TOTAL	SETUP COST
Untreated Wood	10"	10.50	13.85	24.45	18400.00
	12"	15.85	14.95	30.75	22900.00
	14"	22.85	16.10	38.75	26300.00
	16"	31.00	17.30	48.75	30300.00
Treated Wood	10"	18.55	13.85	32.50	18400.00
	12"	25.50	14.95	40.75	22900.00
	14"	33.75	16.10	49.75	26300.00
	16"	43.00	17.30	60.00	30300.00
Steel, "H"	8" x 8"	40.75	15.40	56.00	20500.00
	10" x 10"	56.50	17.80	74.00	23700.00
	12" x 12"	73.00	20.30	93.50	27900.00
	14" x 14"	91.50	22.20	113.00	31200.00
Concrete, precast	10"	30.50	18.80	49.50	25500.00
	12"	39.75	22.20	61.50	30000.00
	14"	49.50	25.25	74.50	33800.00
	16"	59.50	28.50	88.50	38300.00
	18"	70.00	31.25	103.00	43000.00
	24"	107.00	40.00	146.00	56000.00
Steel pipe, concrete filled	8"	45.00	16.15	61.00	17500.00
	10"	56.00	18.40	74.50	21000.00
	12"	66.50	20.30	87.00	26300.00
	16"	88.50	23.60	112.00	35500.00
	18"	107.00	26.75	134.00	43000.00
	20"	122.00	31.75	155.00	48900.00
	24"	146.00	35.25	181.00	56000.00
	30"	174.00	42.75	213.00	65000.00
Concrete, in drilled holes	12"	----	----	49.50	----
	16"	----	----	58.50	----
	24"	----	----	88.50	----
	36"	----	----	158.00	----
	48"	----	----	282.00	----

ARCHITECTS' FEES

TABLE I

Furnishings and Interiors
Special Lighting
High-value – Luxury Residences
Mausoleums and Memorials

TABLE II

Airport Terminals, Control Towers
Cathedrals
Specialized College Buildings
Convention Centers
Governmental Buildings
Hospitals and Outpatient Centers
Laboratories and Computer Centers
Libraries
Medical Schools
Museums, Galleries and Aquariums
Penal and Mental Institutions
Storefronts

TABLE III

Banks and Financial Institutions
Churches, Amphitheaters and Pavilions
Commons, Bookstores, Luxury Apartments
Communications and Broadcasting
Convalescent and Veterinary Hospitals
Country Clubs and Marinas
Detention and Firing Range Buildings
Fieldhouses and Natatoriums
Fire (Staffed) and Police Stations
Fraternal, Community and Senior Center Buildings
Hotels, City Clubs and Resort Lodges
Institutional Greenhouses
Medical/Dental Office Buildings
Major Post Office Buildings
Public Health and Service Centers
Restroom and Shower Buildings
Secondary and Vocational Schools
Specialty Shops and Boutiques
Stadiums, Sports Facilities, Colleges
Theaters, Auditoriums and Casinos

TABLE IV

Apartments and Dormitories
Bars and Lounges
Branch Post Offices
Bus Stations and Visitor Centers
Clubhouses and Gymnasiums
Cold Storage Buildings
Convents, Rectories and Rooming Houses
Day Care Centers, Retirement Care Complexes
Department/Anchor Stores and Pharmacies
Elementary Schools and Relocatable Buildings
Engineering and Research Industrial Buildings
Equestrian Centers
Fellowship Halls, Fraternity and Sorority Houses
Guard Houses and Golf Starter Booths
Group Care Homes & Retirement Complexes
Health Clubs and Fitness Centers
Homes for the Elderly and Assisted Living
Hotels – Limited-service
Laundries and Cleaners
Maintenance Hangars and Storage Bldgs.
Mortuaries
Motels, Inns and Cottages
Office and Administration Buildings
Public Recreation Facilities
Racquetball and Tennis Clubs
Regional Shopping Centers
Residences, Individual Design, Historical
Restaurants and Clubs

TABLE V

Arcade Buildings
Armories
Automotive Centers
Barber and Beauty Shops
Bowling Centers
Bulk and Bag Fertilizer Buildings
Car Washes, Full-service Tunnels
Community and Discount Shopping Centers
Creameries, Dairies or Milking Barns
Discount and Warehouse Stores
Dispensaries and Kennels
Distribution Warehouses
Docks and Wharfs
Fast Food, Truck Stops and Snack Bars
Golf Cart Barns
Grain Elevators
Loft and Industrial Flex Buildings
Manufacturing Industrial Buildings
Markets and Convenience Stores
Multiples, Row Houses, Individual Design
Neighborhood and Mixed Shopping Centers
Retail Stores and Florist Shops
Senior Citizen Residences
Showrooms and Complete Auto Dealerships
Skating Rinks and Recreational Enclosures
Stables and Horse Arenas
Storage Hangars
Wineries

TABLE VI

Car Washes, Self-serve, Drive-thru
Garages, Mini-lube and Service
General-purpose, Poultry and Hog Barns
Greenhouse Structures
Prefabricated Booths and Shelters
Recycling, Waste Transfer Structures
Service Stations and Parking Structures
Shipping Docks and Transfer Points
Storage and Volunteer Fire Garages
Storage Warehouses & Roadside Markets

EXPLANATION

The tables of architects' fees are based on composite curves for new construction derived from actual fees charged, recommendations of several architectural committees in various states, and architectural time studies. In cases where superior quality and detail are required, the fee may be higher than the average, while very low quality and standardized buildings may call for a fee which is lower. Special consultants or commissioning services for feasibility and energy and performance studies, post-occupancy evaluations, etc., can add .5 to 1.2 percent to the fees. Renovation or rehab work may require considerably more time, and fees can run 20% to 60% above those listed due to the many variables and complexities involved.

The fee schedules contain approximately 30% (20% to 40%) for contract administration and supervision. In many cases, this function may be performed by the contractor, an employee of the owner or an outside consultant. In any case, this is a proper charge against the building, and the total fee should be added to building costs computed from the Unit-in-Place or the Segregated Costs.

PROJECT COST	TABLE					
Up To	I	II	III	IV	V	VI
$ 50,000	10.7	9.7	8.7	7.9	7.1	6.4
100,000	10.3	9.4	8.4	7.6	6.9	6.2
200,000	10.0	9.1	8.2	7.4	6.7	6.0
500,000	9.5	8.7	7.8	7.1	6.4	5.8
1,000,000	9.2	8.4	7.6	6.9	6.2	5.6
2,000,000	8.9	8.1	7.3	6.6	6.0	5.5
3,000,000	8.7	7.9	7.2	6.5	5.9	5.4
5,000,000	8.4	7.7	7.0	6.4	5.8	5.3
10,000,000	8.1	7.5	6.8	6.2	5.6	5.1
20,000,000	7.9	7.2	6.6	6.0	5.4	5.0
50,000,000	7.5	6.9	6.3	5.7	5.2	4.8
and up	7.3	6.8	6.2	5.6	5.1	4.7

The following are the approximate percentages included in the manual costs for single and multifamily residences, and miscellaneous light commercial and farm structures not listed in the above table. The single-family residence, Low-to-Average quality percentage represents stock plans only, with some variations commensurate to the quality. Good percentage represents custom drafting service and plans; while Very Good to Excellent percentages included in the tables above would represent full architects' fees, plans, specifications and supervision.

	LOW COST	FAIR	AVERAGE	GOOD
Single-family Residences and Structures	.5%	.8%	1.3%	3.6%
Multiple-residential Structures	1.5%	1.9%	2.4%	3.9%
Light Commercial Utility/Shop Structures	1.7%	2.1%	2.5%	3.5%
Miscellaneous Farm Structures	1.6%	1.9%	2.3%	3.3%

NOTE: To convert a percentage to a multiplier, simply move the decimal over two places and add the whole number "one" to the factors. Example, 10.7% expressed as a multiplier is 1.107 (1+.107).

EXCLUSION OF ARCHITECTS' FEES

The exclusion of architects' fees from the replacement cost for insurance purposes is a matter of underwriting and not of valuation. Plans and specifications can sometimes be reused in case of total loss, but this is not common practice. When used, plans are greatly modified or a second fee may be imposed. See Section 96.

CURRENT COST MULTIPLIERS

These multipliers bring costs from preceding pages up to date. Also apply Local Multipliers, Section 99, Pages 5 through 10.

CALCULATOR COST SECTIONS

(Effective Date of Cost Pages)		11 (11/24)	12 (8/24)	13 (5/24)	14 (2/26)	15 (11/25)	16 (8/25)	17 (5/25)	18 (2/25)
EASTERN	A	1.07	1.07	1.07	0.99	1.02	1.04	1.06	1.09
	B	1.08	1.08	1.05	1.02	1.00	1.02	1.05	1.08
	C	1.06	1.05	1.07	1.01	1.03	1.04	1.06	1.04
	D	1.04	1.05	1.05	0.99	1.00	1.03	1.03	1.03
	S	1.10	1.09	1.08	1.01	1.04	1.02	1.02	1.08
CENTRAL	A	1.03	1.02	1.01	0.97	0.97	1.00	1.00	1.01
	B	1.02	1.03	1.02	0.97	1.00	0.99	0.99	1.00
	C	1.02	1.03	1.04	0.97	0.98	0.98	1.00	1.01
	D	1.01	1.03	1.03	0.98	1.02	1.02	0.99	1.01
	S	0.98	1.02	0.99	0.97	0.98	0.97	1.01	1.00
WESTERN	A	1.02	1.07	1.09	1.05	1.04	1.03	1.03	1.00
	B	1.03	1.05	1.10	1.02	1.04	1.06	1.06	1.03
	C	1.04	1.08	1.06	1.04	1.03	1.05	1.04	1.07
	D	1.07	1.06	1.07	1.04	1.02	1.02	1.08	1.06
	S	1.04	1.04	1.09	1.03	1.02	1.08	1.06	1.02

SEGREGATED COST SECTIONS

(Effective Date of Cost Pages)		41 (12/24)	42 (9/24)	43 (6/24)	44 (3/26)	45 (12/25)	46 (9/25)	47 (6/25)	48 (3/25)
EASTERN	A	1.07	1.07	1.07	0.99	1.02	1.04	1.06	1.09
	B	1.08	1.08	1.05	1.02	1.00	1.02	1.05	1.08
	C	1.06	1.05	1.07	1.01	1.03	1.04	1.06	1.04
	D	1.04	1.05	1.05	0.99	1.00	1.03	1.03	1.03
	S	1.10	1.09	1.08	1.01	1.04	1.02	1.02	1.08
CENTRAL	A	1.03	1.02	1.01	0.97	0.97	1.00	1.00	1.01
	B	1.02	1.03	1.02	0.97	1.00	0.99	0.99	1.00
	C	1.02	1.03	1.04	0.97	0.98	0.98	1.00	1.01
	D	1.01	1.03	1.03	0.98	1.02	1.02	0.99	1.01
	S	0.98	1.02	0.99	0.97	0.98	0.97	1.01	1.00
WESTERN	A	1.02	1.07	1.09	1.05	1.04	1.03	1.03	1.00
	B	1.03	1.05	1.10	1.02	1.04	1.06	1.06	1.03
	C	1.04	1.08	1.06	1.04	1.03	1.05	1.04	1.07
	D	1.07	1.06	1.07	1.04	1.02	1.02	1.08	1.06
	S	1.04	1.04	1.09	1.03	1.02	1.08	1.06	1.02

UNIT-IN-PLACE COST SECTIONS (51 – 70)

Sec.	Page	Date		Eastern	Central	Western
51 -	2-3	(3/25)	Concrete Foundations	1.04	1.02	1.06
51 -	4	(3/25)	Pilings	1.04	0.99	1.06
51 -	7-8	(3/25)	Steel and Concrete Frame	1.04	1.00	1.07
51 -	3,7	(3/25)	Wood Foundations, Frame	1.01	1.01	1.07
52 -	1-4, 6	(3/25)	Interior Construction	1.02	1.02	1.06
52 -	5	(3/25)	Bank Vaults and Equipment	1.05	1.00	1.05
53 -	1-8	(6/25)	Heating, Cooling & Ventilating	1.02	1.01	1.06
53 -	9-12	(6/25)	Plumbing, Fire Protection, etc.	1.03	0.99	1.07
54 -	1-6	(6/25)	Electrical, Security	1.01	1.06	1.02
55 -	3-7	(8/25)	Wall Costs	1.01	0.99	1.07
56 -	1-2	(8/25)	Stained Glass	1.02	1.00	1.05
56 -	3-6	(8/25)	Storefronts	1.02	1.00	1.05
56 -	7	(8/25)	Stonework	1.00	1.01	1.07
56 -	8	(8/25)	Columns, Stone & Concrete	1.00	1.01	1.07
56 -	8	(8/25)	Columns, Wood & Aluminum	1.01	1.00	1.06
57 -	1-6	(9/25)	Roofs	1.00	1.01	1.05
58 -	1	(9/25)	Cold Storage	1.00	0.99	1.07
58 -	2-8	(9/25)	Elevators, Conveying Systems	1.02	1.00	1.04
61 -	1-8	(12/24)	Tanks	1.02	1.02	1.07
62 -	1	(6/24)	Industrial Pumps & Boilers	1.06	0.97	1.12
62 -	2-3, 6	(6/24)	Piping	1.06	0.97	1.12
62 -	4	(6/24)	Electrical Motors	1.06	0.97	1.12
62 -	5	(6/24)	Steel Stacks, Chutes	1.06	0.97	1.12
62 -	5	(6/24)	Masonry & Concrete Chimneys	1.04	1.00	1.11
62 -	6	(6/24)	Compactors, Incinerators	1.06	0.97	1.12
63 -	1-4	(9/24)	Trailer and Mfg. Housing Parks	1.01	1.02	1.10
63 -	5-10	(9/24)	Manufactured Housing	1.02	1.03	1.08
64 -	1-6	(3/26)	Service Stations, Car Washes	1.02	0.98	1.01
64 -	7-9	(3/26)	Prefabricated Metal Structures	1.00	0.96	1.05
64 -	7-8	(3/26)	Prefab. Wood & Air Structures	0.99	0.98	1.03
65 -	1-12	(3/26)	Equipment Costs	0.99	1.00	1.01
66 -	1	(12/25)	Subdivision Costs	1.00	0.98	1.05
66 -	2-9	(12/25)	Yard Improvements	0.99	0.97	1.06
66 -	10-11	(12/25)	Demolition & Remediation	0.98	0.99	1.05
67 -	1-2	(12/25)	Golf Courses	0.98	1.01	1.03
67 -	3-7	(12/25)	Recreational Facilities	0.98	0.99	1.05
70 -	1-32	(1/26)	Green Section	0.98	0.99	1.06

This page supersedes the February 2026 Green Supplement.

The data included on this page becomes obsolete after update delivery, scheduled for April 2026.

LOCAL MULTIPLIERS

Apply to costs brought up-to-date from preceding pages. Do not apply to Section 98 or any other indexes.

UNITED STATES

CLASS	A	B	C	D	S
NEW JERSEY	1.18	1.20	1.18	1.19	1.19
Asbury Park	1.08	1.10	1.09	1.10	1.12
Atlantic City	1.21	1.23	1.24	1.27	1.25
Bayonne	1.19	1.22	1.20	1.21	1.19
Camden	1.14	1.15	1.13	1.14	1.14
Clifton	1.19	1.21	1.19	1.20	1.20
East Orange	1.20	1.22	1.21	1.22	1.21
Edison	1.20	1.22	1.21	1.22	1.20
Elizabeth	1.23	1.24	1.22	1.23	1.23
Fairlawn	1.19	1.22	1.19	1.21	1.21
Hackensack	1.19	1.22	1.20	1.20	1.21
Irvington	1.23	1.25	1.24	1.25	1.24
Jersey City	1.20	1.23	1.20	1.22	1.21
Lakewood	1.06	1.09	1.09	1.10	1.10
Morristown	1.20	1.23	1.22	1.23	1.23
New Brunswick	1.20	1.22	1.21	1.22	1.20
Newark	1.24	1.26	1.25	1.27	1.25
Passaic	1.19	1.21	1.19	1.20	1.20
Paterson	1.19	1.22	1.19	1.21	1.21
Plainfield	1.10	1.11	1.11	1.11	1.11
Somerville	1.18	1.20	1.20	1.19	1.21
Teaneck	1.19	1.22	1.20	1.20	1.20
Trenton	1.18	1.19	1.18	1.20	1.19
Vineland	1.11	1.12	1.13	1.14	1.15
West Orange	1.19	1.21	1.20	1.21	1.19
NEW MEXICO	0.92	0.94	0.94	0.94	0.94
Alamogordo	0.87	0.90	0.90	0.86	0.90
Albuquerque	0.93	0.93	0.93	0.92	0.93
Carlsbad	0.89	0.92	0.92	0.92	0.91
Clovis	0.94	0.96	0.95	0.95	0.93
Farmington	0.94	0.97	0.97	0.96	0.96
Gallup	0.90	0.90	0.90	0.90	0.93
Hobbs	0.89	0.92	0.92	0.92	0.90
Las Cruces	0.91	0.94	0.94	0.92	0.97
Los Alamos	0.93	0.94	0.96	0.98	0.96
Portales	0.86	0.88	0.85	0.86	0.86
Roswell	0.93	0.94	0.95	0.95	0.95
Santa Fe	0.92	0.94	0.96	0.96	0.95
Taos	1.04	1.04	1.06	1.07	1.06
NEW YORK	1.03	1.05	1.05	1.07	1.05
Albany	1.05	1.08	1.10	1.11	1.09
Amsterdam	1.03	1.06	1.08	1.10	1.07
Auburn	1.00	1.02	1.00	1.02	1.01
Binghamton	1.00	1.01	0.99	1.00	1.00
Buffalo	1.08	1.08	1.10	1.10	1.09
Elmira	0.97	0.99	0.99	1.00	0.98
Ithaca	0.97	0.98	1.00	1.00	0.98
Jamestown	0.99	1.00	1.03	1.01	1.01
Kingston	1.09	1.13	1.12	1.15	1.14
Niagara Falls	1.08	1.07	1.07	1.08	1.07
Plattsburgh	0.96	0.97	0.99	1.01	1.00
Poughkeepsie	1.08	1.12	1.12	1.15	1.12
Rochester	1.06	1.12	1.09	1.08	1.09
Rome	1.02	1.05	1.03	1.06	1.03
Schenectady	1.04	1.06	1.07	1.10	1.09
Syracuse	1.10	1.10	1.09	1.08	1.11
Troy	1.07	1.11	1.11	1.12	1.11
Utica	1.02	1.05	1.04	1.06	1.03
Watertown	1.00	1.01	0.99	1.01	1.00
NEW YORK CITY AREA	1.28	1.30	1.30	1.33	1.34
Bronx	1.30	1.31	1.32	1.35	1.36
Brooklyn	1.28	1.30	1.32	1.34	1.34
Manhattan	1.29	1.32	1.32	1.35	1.35
Nassau County	1.29	1.31	1.32	1.34	1.35
Orange County	1.17	1.19	1.19	1.19	1.21
Putnam County	1.19	1.19	1.20	1.22	1.23
Queens	1.27	1.30	1.31	1.33	1.34
Rockland County	1.19	1.20	1.22	1.23	1.23
Staten Island	1.22	1.24	1.22	1.26	1.27
Suffolk County	1.31	1.33	1.34	1.36	1.36
Westchester County	1.20	1.21	1.21	1.24	1.24
Yonkers	1.31	1.33	1.33	1.36	1.36
NORTH CAROLINA	0.94	0.95	0.93	0.94	0.94
Asheville	0.95	0.97	0.96	0.95	0.96
Charlotte	0.97	0.98	0.97	0.97	0.98
Durham	1.01	1.00	0.97	0.99	1.01
Fayetteville	0.95	0.96	0.93	0.93	0.94
Gastonia	0.99	0.98	1.00	0.98	0.99
Goldsboro	0.94	0.93	0.90	0.92	0.93
Greensboro	0.93	0.94	0.94	0.95	0.95
Greenville	0.89	0.91	0.88	0.89	0.89
Hickory	0.90	0.91	0.91	0.92	0.90
Jacksonville	0.91	0.91	0.88	0.88	0.89
Raleigh	1.01	1.00	0.97	0.99	1.01
Rocky Mount	0.93	0.95	0.91	0.93	0.93
Wilmington	0.94	0.92	0.92	0.93	0.93
Winston-Salem	0.90	0.92	0.91	0.89	0.89
NORTH DAKOTA	0.98	1.01	1.00	0.98	1.02
Bismarck	0.97	1.01	0.99	0.98	1.01
Fargo	0.97	0.98	0.98	0.96	1.00
Grand Forks	0.96	1.02	1.00	0.98	1.02
Jamestown	0.97	1.02	1.00	0.98	1.02
Mandan	0.97	1.01	0.99	0.98	1.01
Minot	1.00	1.02	1.00	0.97	1.04
Williston	1.00	1.03	1.01	0.98	1.05
OHIO	0.99	0.99	0.98	0.98	0.99
Akron	0.97	0.98	0.99	1.00	0.99
Canton	0.96	0.97	0.97	0.97	0.97
Cincinnati	1.00	0.99	0.99	0.97	1.01
Cleveland	0.99	1.02	1.02	1.01	1.02
Columbus	1.02	1.01	1.00	0.99	1.00
Dayton	0.98	0.97	0.98	0.97	0.97
East Liverpool	1.05	1.06	1.08	1.04	1.06
Hamilton	0.95	0.93	0.96	0.94	0.95
OHIO (Continued)					
Lima	0.94	0.95	0.94	0.93	0.94
Lorain County	0.98	1.00	1.01	1.00	1.01
Mansfield	0.97	0.98	0.95	0.95	0.97
Marion	0.97	0.98	0.95	0.95	0.97
Middletown	0.95	0.93	0.94	0.94	0.95
Newark	0.98	0.99	0.97	0.97	0.98
Portsmouth	0.89	0.87	0.87	0.86	0.89
Springfield	0.98	0.96	0.96	0.96	0.97
Toledo	1.03	1.04	1.04	1.04	1.07
Youngstown	1.05	1.07	1.03	1.02	1.06
OKLAHOMA	0.91	0.93	0.92	0.91	0.92
Ardmore	0.93	0.93	0.94	0.91	0.93
Bartlesville	0.87	0.89	0.89	0.88	0.88
Enid	0.89	0.92	0.91	0.91	0.91
Lawton	0.86	0.88	0.87	0.85	0.85
Norman	0.97	0.98	0.97	0.96	0.96
Oklahoma City	0.97	0.98	0.97	0.96	0.96
Tulsa	0.90	0.93	0.92	0.93	0.92
OREGON	1.06	1.10	1.09	1.08	1.11
Albany	1.06	1.10	1.08	1.06	1.10
Altamont	1.03	1.06	1.04	1.04	1.08
Astoria	1.05	1.09	1.07	1.05	1.08
Bend	1.06	1.12	1.12	1.12	1.11
Coos Bay	1.04	1.08	1.07	1.07	1.10
Corvallis	1.06	1.10	1.08	1.06	1.09
Eugene	1.12	1.17	1.15	1.14	1.18
Grants Pass	1.04	1.07	1.06	1.04	1.10
Klamath Falls	1.04	1.07	1.05	1.04	1.09
Medford	1.05	1.09	1.09	1.07	1.11
North Bend	1.04	1.08	1.07	1.08	1.10
Pendleton	1.09	1.10	1.10	1.11	1.11
Portland	1.11	1.13	1.13	1.11	1.12
Roseburg	1.04	1.08	1.04	1.04	1.11
Salem	1.08	1.13	1.10	1.09	1.11
Springfield	1.03	1.06	1.06	1.06	1.10
The Dalles	1.08	1.13	1.10	1.08	1.11
PENNSYLVANIA	1.07	1.10	1.08	1.08	1.08
Allentown	1.10	1.15	1.10	1.13	1.08
Altoona	1.09	1.12	1.08	1.09	1.09
Bethlehem	1.07	1.12	1.07	1.10	1.07
Easton	1.05	1.11	1.06	1.08	1.04
Erie	1.07	1.08	1.08	1.06	1.06
Harrisburg	1.02	1.07	1.04	1.02	1.05
Johnstown	1.07	1.08	1.07	1.06	1.05
Lancaster	1.05	1.06	1.03	1.04	1.04
Norristown	1.19	1.20	1.20	1.22	1.20
Philadelphia	1.17	1.19	1.19	1.22	1.20
Pittsburgh	1.12	1.14	1.11	1.12	1.14
Reading	1.07	1.11	1.07	1.08	1.05
Scranton	1.04	1.03	1.03	1.04	1.05
State College	1.02	1.04	1.03	1.02	1.03
Wilkes-Barre	1.02	1.04	1.05	1.02	1.05
Williamsport	1.03	1.05	1.03	1.03	1.07
York	1.04	1.06	1.04	1.03	1.06

The data included on this page becomes obsolete after update delivery, scheduled for April 2026.

APPENDIX

DOUGLAS ELLIMAN REPORT – 3rd QTR 2025 – MANHATTAN

[SELECTED PAGES]

SELECTED PAGES

Elliman Report

Q3-2025 Manhattan, NY Sales

Co-Op & Condo Dashboard

YEAR-OVER-YEAR

+ 5.8%
Prices
Median Sales Price

- 0.5 mos
Pace
Months of Supply

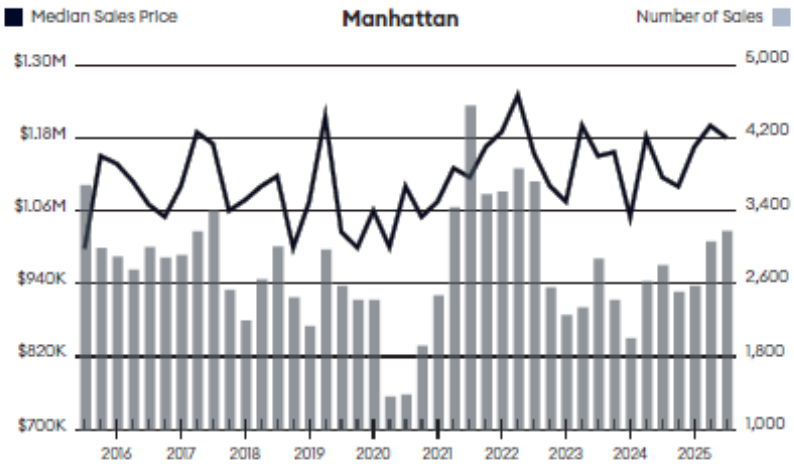
+ 13.4%
Sales
Closed Sales

+ 7.0%
Inventory
Total Inventory

- 3 days
Marketing Time
Days on Market

+ 0.4%
Negotiability
Listing Discount

- Sales jumped annually to their highest level in more than two years, overpowering inventory
- Median and average sales prices rose annually together for the third time
- Two-thirds of total sales were cash, as were more than ninety percent of sales above $3 million



Manhattan Matrix	Q3-2025	%Δ (QTR)	Q2-2025	%Δ (YR)	Q3-2024
Average Sales Price	$1,989,107	-5.2%	$2,098,658	0.8%	$1,973,404
Average Price Per Sq Ft	$1,552	-5.9%	$1,650	-2.8%	$1,597
Median Sales Price	$1,180,000	-1.7%	$1,200,000	5.8%	$1,115,000
New Development	$1,750,000	-24.3%	$2,311,451	-18.4%	$2,144,163
Re-Sale	$1,026,500	-2.6%	$1,053,500	2.7%	$999,250
Number of Sales (Closed)	3,158	3.8%	3,042	13.4%	2,784
Days on Market (From Last List Date)	77	-11.5%	87	-3.8%	80
Listing Discount (From Last List Price)	6.2%		5.8%		5.8%
Listing Inventory	7,733	-6.8%	8,296	7.0%	7,224
Months of Supply	7.3	-11.0%	8.2	-6.4%	7.8
Year-to-Date	**Q3-2025**	**%Δ (QTR)**	**Q2-2025**	**%Δ (YR)**	**Q3-2024**
Average Sales Price (YTD)	$2,099,358	N/A	N/A	7.7%	$1,948,954
Average Price per Sq Ft (YTD)	$1,631	N/A	N/A	1.5%	$1,607
Median Sales Price (YTD)	$1,190,000	N/A	N/A	6.3%	$1,120,000
Number of Sales (YTD)	8,760	N/A	N/A	18.7%	7,381

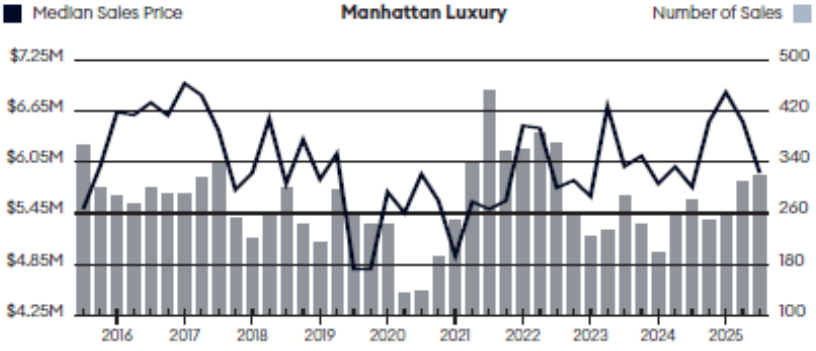
The Manhattan housing market continued to experience sales growth outpacing inventory, accompanied by modest price increases. Throughout 2025, the median sales price has risen each quarter. In this report, the median sales price was $1,180,000, reflecting a 5.8% increase from the same period last year. The main reason for higher prices, despite increasing inventory, is the strong demand. The impact of the more than 50-basis-point rise in mortgage rates since early August has not yet been fully felt in demand. If mortgage rates stabilize or decrease by year's end, a rise in sales next quarter seems likely. There were 3,158 sales, up 13.4% year over year, marking the

DouglasElliman

Prepared by Miller Samuel Real Estate Appraisers & Consultants

Luxury

- Luxury median sales price rose year over year for the fourth time
- Luxury listing inventory for both resales and new development continued to drop
- Luxury new development average sold square feet is smaller than resales since the pandemic

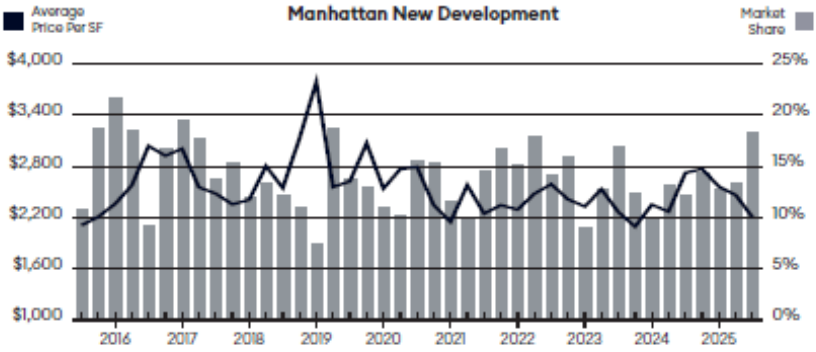


Luxury Mix	Sales Share	Median Sales Price
Co-ops	55.3%	$4,200,000
Condos	44.7%	$10,182,995
New Dev.	31.8%	$6,250,000
Re-Sales	68.2%	$6,300,000

Luxury Matrix (Top 10% of Sales)	Q3-2025	%Δ (QTR)	Q2-2025	%Δ (YR)	Q3-2024
Average Sales Price	$7,891,731	-7.9%	$8,573,103	-5.5%	$8,354,427
Average Price per Sq Ft	$2,535	-10.1%	$2,819	-7.9%	$2,751
Median Sales Price	$5,922,500	-9.2%	$6,525,000	2.8%	$5,759,902
Number of Sales (Closed)	318	2.6%	310	13.6%	280
Days on Market (From Last List Date)	109	-18.0%	133	1.9%	107
Listing Discount (From Last List Price)	8.3%		8.2%		8.1%
Listing Inventory	1,317	4.9%	1,255	-16.1%	1,569
Months of Supply	12.4	2.5%	12.1	-26.2%	16.8
Entry Price Threshold	$4,000,000	-11.1%	$4,500,000	2.6%	$3,900,000

New Development

- Market share at its highest level in more than six years
- Fastest-moving months of supply in more than three years
- Listing inventory has fallen year over year for the second time



New Development Mix	Sales Share	YoY% Sales Change
< $1M	23.9%	112.3%
$1M - $3M	49.5%	72.3%
> $3M	26.6%	43.9%

New Development Matrix	Q3-2025	%Δ (QTR)	Q2-2025	%Δ (YR)	Q3-2024
Average Sales Price	$2,962,350	-23.1%	$3,852,159	-26.8%	$4,047,911
Average Price per Sq Ft	$2,206	-10.5%	$2,465	-19.0%	$2,725
Median Sales Price	$1,750,000	-24.3%	$2,311,451	-18.4%	$2,144,163
Number of Sales (Closed)	578	41.7%	408	71.0%	338
Days on Market (From Last List Date)	74	-11.9%	84	-11.9%	84
Listing Discount (From Last List Price)	4.9%		3.6%		7.2%
Listing Inventory	1,174	-0.3%	1,177	-3.1%	1,212
Months of Supply	6.1	-29.9%	8.7	-43.5%	10.8
Sales Share of Overall Market	18.3%		13.4%		12.1%

Questions or comments? Email report author
Jonathan Miller at jmiller@millersamuel.com
Methodology: millersamuel.com/research-reports/methodology

Douglas Elliman Real Estate
575 Madison Avenue, New York, NY 10022
212.891.7000 • elliman.com

Miller Samuel Real Estate Appraisers & Consultants
21 West 38th Street, New York, NY 10018
212.768.8100 • millersamuel.com

APPENDIX

THE CORCORAN REPORT - 3rd QTR 2025 – MANHATTAN [SELECTED PAGES]

SELECTED PAGES

The Corcoran Report

3Q | 2025 | MANHATTAN

corcoran

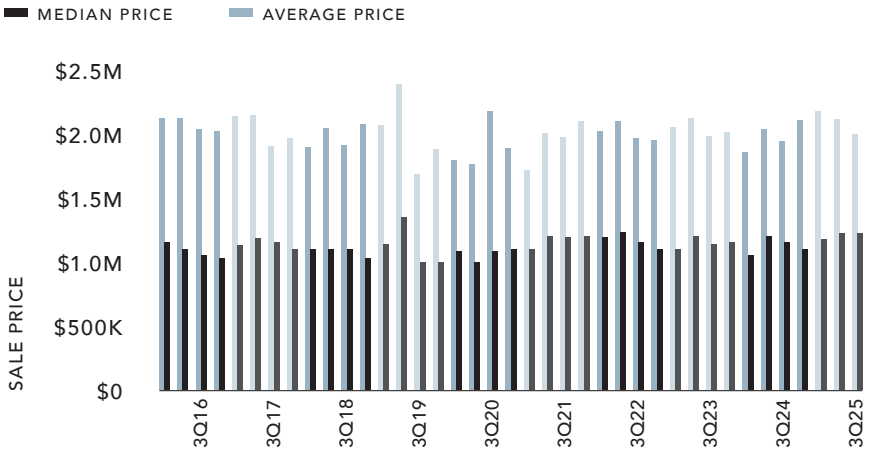
Prices

- Manhattan overall price statistics saw across-the-board annual increases for the third straight quarter.
- Median price rose 7% year-over-year to $1.225M while average price rose 3% annually to $1.998M.
- Median and average price were pushed higher as sales shifted towards larger, more expensive homes than last year, with sales under $2M essentially level but those over $2M up 17% annually.
- Amid robust luxury activity and a greater proportion of condo sales than 2024, average price per square foot moved up 5% to $1,433 and and median price per square foot rose 11% to $1,792. Note that last year both metrics were at three-year lows for the third quarter and both still remain below their peak levels.
- Resale co-op median price rose 7% annually to a record high of $895K while average price reached its second-highest figure ever at $1.441M. A 32% increase in sales over $3M propelled the price growth.
- Resale co-op average price per square foot rose 2% due to two East Side closings over $4,000 per square foot. Excluding those two sales, average price per square foot would have been level.
- Resale condo price figures rose across the board versus 2024. Median price rose 6% to a record high of $1.525M, while average price also rose 6% year-over-year to $2.433M. As with resale co-ops, strong high-end sales generated the gains, with sales over $3M up 31% annually.

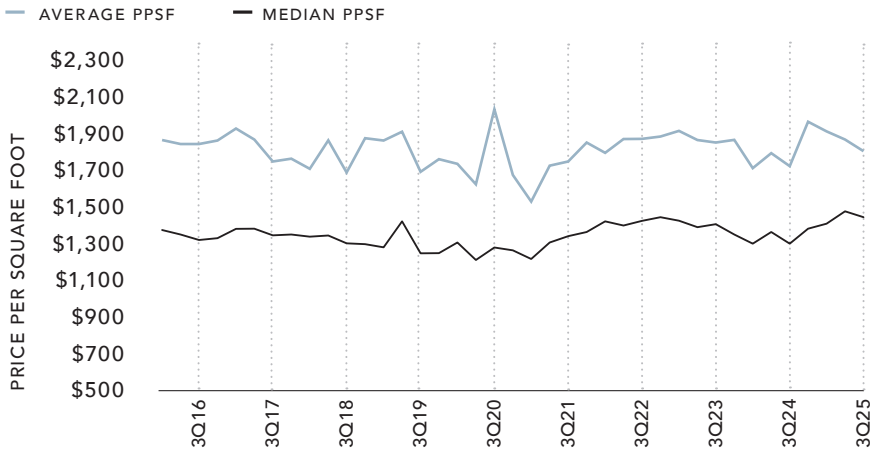
	3Q25	3Q24	%CHG (YR)	2Q25	%CHG (QTR)
MEDIAN PRICE	$1.225M	$1.150M	7%	$1.220M	0%
AVERAGE PRICE	$1.998M	$1.941M	3%	$2.117M	-6%
MEDIAN PPSF	$1,433	$1,294	11%	$1,412	1%
AVERAGE PPSF	$1,792	$1,713	5%	$1,857	-4%

- Resale condo price per square foot rose 4% annually to $1,861 due to a 66% increase in closings over $4,000 per square foot, nearly all of which were at properties completed in the last ten years.
- New development price statistics mostly decreased year-over-year in Third Quarter 2025. Median price at $2.094M fell 9% annually while average price per square foot dropped 12% to $2,339.
- This quarter, sponsor closing activity shifted away from prime locations to large properties in less-expensive locations, including a 77% annual increase in Financial District & Battery Park City sales.

Median and Average Price

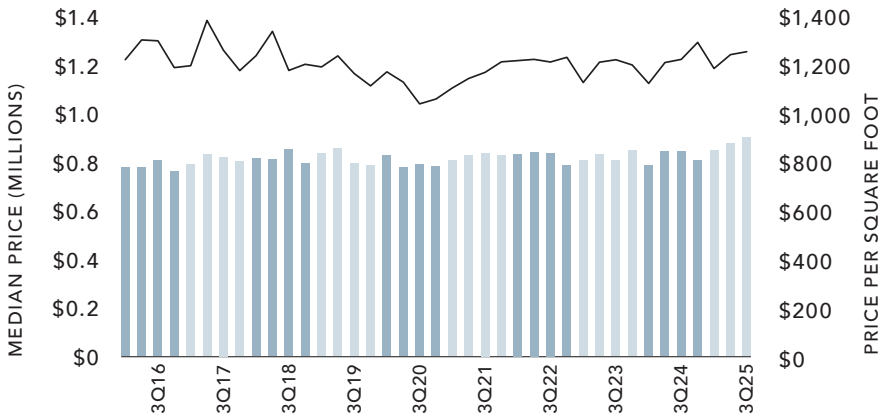


Price Per Square Foot



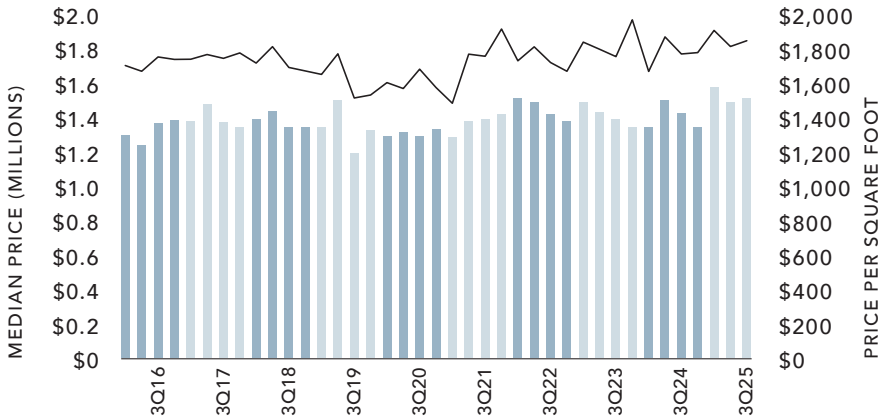
Resale Co-op Prices

PRICES	3Q25	3Q24	%CHG (YR)	2Q25	%CHG (QTR)
MEDIAN PRICE	$895K	$836K	7%	$870K	3%
AVERAGE PRICE	$1.441M	$1.334M	8%	$1.394M	3%
MEDIAN PPSF	$984	$1,019	-3%	$985	0%
AVERAGE PPSF	$1,239	$1,213	2%	$1,232	1%
MEDIAN PRICE BY BEDROOM					
STUDIO	$453K	$425K	7%	$440K	3%
1 BEDROOM	$699K	$680K	3%	$700K	0%
2 BEDROOM	$1.300M	$1.246M	4%	$1.275M	2%
3+ BEDROOM	$2.500M	$2.550M	-2%	$2.600M	-4%



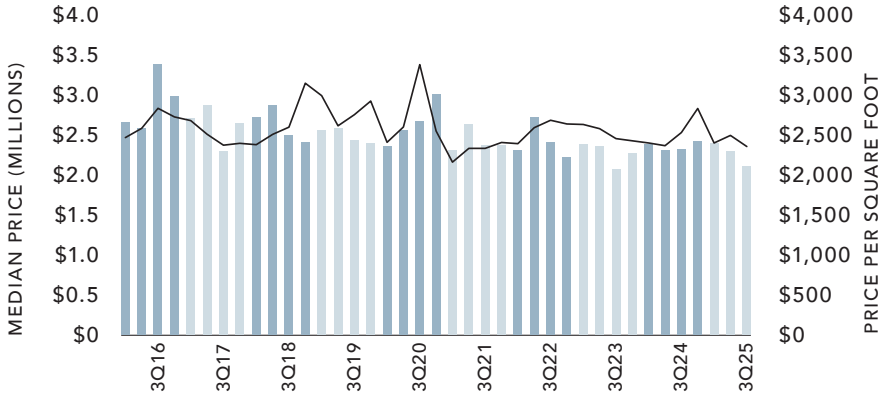
Resale Condo Prices

PRICES	3Q25	3Q24	%CHG (YR)	2Q25	%CHG (QTR)
MEDIAN PRICE	$1.525M	$1.437M	6%	$1.500M	2%
AVERAGE PRICE	$2.433M	$2.294M	6%	$2.459M	-1%
MEDIAN PPSF	$1,453	$1,419	2%	$1,442	1%
AVERAGE PPSF	$1,861	$1,784	4%	$1,827	2%
MEDIAN PRICE BY BEDROOM					
STUDIO	$638K	$618K	3%	$650K	-2%
1 BEDROOM	$983K	$990K	-1%	$988K	-1%
2 BEDROOM	$1.915M	$1.775M	8%	$1.900M	1%
3+ BEDROOM	$4.250M	$3.900M	9%	$4.350M	-2%



New Development Prices

PRICES	3Q25	3Q24	%CHG (YR)	2Q25	%CHG (QTR)
MEDIAN PRICE	$2.094M	$2.295M	-9%	$2.275M	-8%
AVERAGE PRICE	$3.263M	$3.715M	-12%	$3.890M	-16%
MEDIAN PPSF	$1,964	$1,928	2%	$1,904	3%
AVERAGE PPSF	$2,339	$2,513	-7%	$2,478	-6%
MEDIAN PRICE BY BEDROOM					
STUDIO	$1.013M	$825K	23%	$822K	23%
1 BEDROOM	$1.350M	$1.327M	2%	$1.322M	2%
2 BEDROOM	$2.610M	$2.500M	4%	$2.282M	14%
3+ BEDROOM	$5.376M	$4.995M	8%	$5.700M	-6%



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Downtown

- Downtown closings rose 1% annually to 951 sales, the fourth consecutive quarter with an increase.
- Resale condo and co-op sales saw strong gains, but new development sales fell about 40% annually due to significantly fewer new developments completing construction compared to this time last year.
- Downtown days on market fell 5% annually to 94, the lowest average of any Manhattan submarket.
- Active listings fell annually for the first time in six quarters, down 2% to 1,779 units.
- Downtown was the only submarket where median price declined versus 2024, falling 7% to $1.425M. The sharp drop in the number and market share of new development sales was the main contributor.
- Average price per square foot rose 1% annually to $2,030, helped by a 70 Vestry closing for $7,233 per square foot.

Sales

951

+1% YEAR OVER YEAR

Market Share of Sales

29%

-1% YEAR OVER YEAR

Inventory

1,779

-2% YEAR OVER YEAR

Days on Market

94

-5% YEAR OVER YEAR

Median Price

$1.42M

-7% YEAR OVER YEAR

Average PPSF

$2,030

+1% YEAR OVER YEAR

Downtown Prices by Property Type

% CHANGE (YEAR-OVER-YEAR)

	RESALE CO-OP			RESALE CONDO			NEW DEVELOPMENT		
	3Q25		3Q24	3Q25		3Q24	3Q25		3Q24
MEDIAN PRICE	$910K	+1%	$900K	$2.300M	+16%	$1.990M	$2.789M	+2%	$2.743M
AVERAGE PRICE	$1.443M	+9%	$1.321M	$3.074M	-3%	$3.164M	$4.499M	+15%	$3.920M
MEDIAN PPSF	$1,117	-7%	$1,200	$1,825	+1%	$1,810	$2,283	+1%	$2,253
AVERAGE PPSF	$1,298	-2%	$1,319	$2,095	0%	$2,099	$2,722	+6%	$2,574

Downtown Median Price by Bedroom

% CHANGE (YEAR-OVER-YEAR)

RESALE CO-OP

3Q25			3Q24	
STUDIO	$520K	-4%	$540K	
1 BEDROOM	$853K	+2%	$835K	
2 BEDROOM	$1.525M	+2%	$1.495M	
3+ BEDROOM	$3.150M	+1%	$3.125M	

RESALE CONDO

3Q25			3Q24	
STUDIO	$650K	-24%	$855K	
1 BEDROOM	$1.375M	0%	$1.378M	
2 BEDROOM	$2.550M	+11%	$2.305M	
3+ BEDROOM	$5.200M	+3%	$5.025M	

NEW DEVELOPMENT

3Q25			3Q24	
STUDIO	$995K	+18%	$843K	
1 BEDROOM	$1.380M	-14%	$1.609M	
2 BEDROOM	$3.025M	-3%	$3.120M	
3+ BEDROOM	$8.165M	+33%	$6.150M	

APPENDIX

IRR VIEWPOINT 2026 &

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2026

INVESTOR RATES TABLE

INTEGRA REALTY RESOURCES CAPITALIZATION RATES DISCOUNT RATES AND REVERSION RATES

Region	Market	Class A Going In Capitalization Rates (%)									Class B Going In Capitalization Rates (%)			
		CBD Office	Suburban Office	Industrial	Flex Industrial	Urban Multifamily	Suburban Multifamily	Regional Mall Retail	Community Retail Center	Neighborhood Retail	CBD Office	Suburban Office	Urban Multifamily	Suburban Multifamily
East Region	Baltimore, MD	9.25	9.50	7.25	7.75	6.00	6.50	7.25	7.75	7.75	9.50	10.00	6.75	8.25
	Boston, MA	7.50	7.75	7.00	7.50	6.50	7.25	7.00	7.00	7.00	8.00	8.50	7.00	8.00
	Hartford, CT	8.75	9.00	7.75	7.50	6.25	6.00	9.00	7.75	8.00	9.00	9.25	6.75	6.50
	New Jersey, Coastal		8.00	6.00	6.50	5.65	5.65	7.75	7.25	7.00		8.50	5.90	5.90
	New Jersey, No	7.50	7.75	5.50	6.50	5.00	5.75	7.75	6.75	6.25	8.50	9.00	5.75	6.25
	New York, NY	7.00		6.25	7.00	6.00		6.50	7.00	7.00	7.25		6.75	
	Philadelphia, PA	8.25	8.50	5.50	6.00	5.25	5.00	7.75	7.00	6.75	8.50	9.00	6.25	6.00
	Pittsburgh, PA	10.00	8.50	7.00	7.00	6.50	6.25	10.00	8.50	8.50	10.50	9.00	7.00	7.00
	Providence, RI	8.75	9.00	7.50	7.75	6.50	6.25	9.00	7.75	8.00	9.00	9.25	7.00	6.75
	Syracuse, NY	8.50	8.50	8.50	8.50	6.00	5.75		8.50	8.00	9.50	9.50	6.50	6.25
	Washington, DC	8.00	8.50	6.00	6.50	5.75	6.25	7.00	6.50	6.50	8.50	8.75	6.25	6.75
	Wilmington, DE	9.25	9.50	7.25	7.75	6.75	6.75	6.75	7.25	7.25	10.50	11.50	7.25	7.50
South Region	Atlanta, GA	8.00	8.50	6.00	7.00	5.50	6.00	6.75	7.00	7.25	8.25	9.00	6.00	6.50
	Austin, TX	7.50	7.50	7.50	7.50	5.50	6.00	6.00	6.00	6.00	8.25	8.25	6.00	6.50
	Birmingham, AL	7.75	7.75	6.25	7.00	5.75	5.75	8.75	7.75	7.00	8.25	8.25	6.75	6.75
	Broward-Palm Beach, FL	7.25	7.50	6.25	6.50	5.75	5.75	6.50	6.75	6.75	7.75	8.25	6.50	6.75
	Charleston, SC	7.25	7.75	7.25	7.50	5.00	5.00	8.50	7.50	7.50	7.75	8.75	5.25	5.25
	Charlotte, NC	7.25	8.00	5.00	5.25	4.75	5.00	9.00	7.00	6.50	9.50	10.50	6.50	6.50
	Columbia, SC	7.50	8.00	6.00	6.75	5.75	6.00	8.25	7.50	7.75	8.50	8.75	6.25	6.75
	Dallas, TX	7.75	8.50	5.50	7.00	5.00	5.50	9.50	6.50	6.50	8.25	9.50	5.50	6.00
	Fort Worth, TX	7.75	7.75	6.25	6.25	5.25	5.50	8.75	6.50	6.50	8.00	8.00	5.50	6.00
	Greensboro, NC	9.00	9.00	5.50	6.50	5.75	5.75	10.00	6.75	6.50	11.00	11.00	7.50	7.50
	Greenville, SC	7.50	7.75	5.75	6.75	5.75	6.00	8.50	7.75	7.25	8.00	8.50	6.25	6.75
	Houston, TX	7.70	7.60	6.40	7.60	5.80	5.80	8.50	7.70	7.30	8.40	8.60	6.70	6.70
	Jacksonville, FL	9.00	8.50	7.00	7.25	5.50	5.50	7.00	7.00	7.50	9.75	9.50	6.00	6.00
	Memphis, TN	9.50	8.50	6.25	7.25	5.75	5.75		7.25	7.50	11.00	9.75	7.00	7.00
	Miami, FL	6.50	6.75	5.75	6.25	5.50	6.00	6.25	6.25	6.50	6.75	7.50	5.75	6.25
	Naples, FL		6.75	6.25	6.25		5.50	6.25	6.25	6.50		6.75		6.00
	Nashville, TN	7.00	9.00	5.50	5.00	6.50	6.25	9.50	6.75	6.75	7.00	9.00	6.50	6.25
	Oklahoma City, OK	8.00	8.50	7.50	7.75	6.50	6.75		7.50	7.75	8.50	9.00	7.00	7.50
	Orlando, FL	8.75	8.75	6.00	6.50	5.50	5.25		7.00	6.25	9.25	9.25	6.00	6.00
	Raleigh, NC	8.00	9.00	6.00	6.00	5.50	5.75	7.75	7.25	7.50	9.00	10.00	6.00	6.25
	Richmond, VA	7.25	7.75	5.75	7.00	5.25	5.25	8.00	7.25	7.25	8.25	8.25	6.25	6.25
	San Antonio, TX	9.00	9.00	7.25	7.50	5.50	5.50	8.50	7.25	7.00	10.00	10.00	6.00	6.00
	Sarasota, FL		7.00	7.25	7.25		5.50	6.50	6.25	6.75		7.00		5.50
	Tampa, FL	7.75	7.75	7.25	7.50	5.00	5.25	6.50	7.00	6.75	7.50	7.50	5.50	5.75
Central Region	Chicago, IL	7.75	9.55	5.25	8.75	5.25	5.50	7.75	7.25	8.00	9.00	10.75	5.75	6.00
	Cincinnati, OH	9.75	9.75	7.50	8.75	6.25	6.25	9.50	8.25	8.00	10.50	10.50	7.00	7.00
	Cleveland, OH	8.50	8.50	7.25	7.75	6.00	6.00	9.00	8.50	8.25	10.00	9.50	7.00	7.00
	Columbus, OH	8.50	8.50	7.25	8.00	5.50	6.00	8.50	8.25	8.00	9.00	9.00	6.00	6.50
	Dayton, OH	10.00	8.50	7.75	8.25	7.00	7.00	12.00	8.50	8.50	10.25	8.75	8.00	8.00
	Detroit, MI	9.00	8.75	7.50	7.00	6.00	5.75	8.75	8.25	8.25	9.00	9.00	6.50	6.25
	Grand Rapids, MI	8.75	8.25	7.25	7.75	5.50	5.50	8.75	8.25	8.25	9.00	8.75	6.00	6.00
	Indianapolis, IN	8.25	8.00	7.00	7.50	5.75	6.00	7.75	7.25	7.00	8.75	8.50	6.00	6.25
	Kansas City, MO	8.50	8.50	7.75	8.50	6.25	6.25	8.25	8.25	8.50	9.25	9.25	7.50	7.50
	Louisville, KY	10.50	8.25	7.00	7.50	6.50	5.25		8.00	8.00	11.50	9.25	8.30	8.20
	Minneapolis, MN	9.00	7.75	5.50	6.50	5.50	5.25	7.00	6.75	7.25	11.00	8.50	6.25	5.75
	St. Louis, MO	10.00	8.25	7.75	8.00	6.50	6.25	8.25	8.25	8.50	11.00	9.25	7.75	7.75
West Region	Boise, ID	6.50	6.50	6.25	6.25	4.75	5.25	6.50	6.75	6.75	6.75	6.75	5.25	5.75
	Denver, CO	11.00	11.00	7.00	7.00	5.75	5.75	7.00	7.00	6.50	11.00	11.00	6.00	6.00
	Las Vegas, NV	7.75	8.00	6.00	6.25	5.25	5.00	7.75	6.75	7.00	8.00	8.25	5.75	5.25
	Los Angeles, CA	8.00	8.25	5.25	5.50	4.50	5.25	6.50	6.00	6.25	8.50	8.25	4.75	5.50
	Oakland, CA	7.25	7.25	5.25	6.50	5.00	5.50	7.50	6.50	6.75	7.75	7.75	5.50	6.00
	Orange County, CA		7.50	5.00	5.00		4.25	7.00	5.75	5.50		7.25		4.50
	Phoenix, AZ	7.50	7.50	5.50	6.50	5.00	5.00	6.50	6.75	6.50	8.00	8.00	5.50	5.50
	Portland, OR	8.50	8.50	6.00	7.00	5.50	6.00		7.00	6.75	8.75	8.75	6.25	6.50
	Sacramento, CA	8.00	8.25	6.50	6.75	5.75	6.00	7.50	6.75	7.00	8.75	9.00	6.00	6.50
	Salt Lake City, UT	7.00	7.75	5.75	5.75	5.00	5.00	8.00	6.75	6.75	7.50	8.00	5.50	5.50
	San Diego, CA	7.50	7.50	5.50	5.50	4.75	4.75	7.50	6.50	6.50	8.00	8.00	5.00	5.00
	San Francisco, CA	7.50	7.50	5.50	5.75	5.00	5.00	7.50	6.00	6.25	7.75	8.00	5.25	5.25
	San Jose, CA	6.25	6.25	5.75	6.25	4.50	4.25	6.50	5.75	6.00	6.75	7.00	5.25	5.25
	Seattle, WA	8.00	8.00	6.00	7.00	5.00	5.25	6.75	7.00	7.00	8.50	8.50	5.25	5.50
	Averages	8.19	8.19	6.43	6.95	5.63	5.69	7.84	7.16	7.14	8.83	8.83	6.26	6.36

Region	Market	Class A Discount Rates (%)									Class B Discount Rates (%)			
		CBD Office	Suburban Office	Industrial	Flex Industrial	Urban Multifamily	Suburban Multifamily	Regional Mall Retail	Community Retail Center	Neighborhood Retail	CBD Office	Suburban Office	Urban Multifamily	Suburban Multifamily
East Region	Baltimore, MD	10.75	11.00	8.75	9.25	7.25	7.75	8.50	9.25	9.25	11.00	11.50	8.25	8.75
	Boston, MA	9.00	9.25	8.00	8.50	7.75	8.75	8.25	8.25	8.25	9.50	10.00	8.25	9.25
	Hartford, CT	9.50	9.75	8.75	8.50	7.25	7.00	10.00	8.50	8.25	9.75	10.00	7.75	7.50
	New Jersey, Coastal		9.00	7.25	7.50	7.15	7.15	8.75	8.25	8.50		9.75	7.35	7.35
	New Jersey, No	8.50	9.00	7.00	7.75	6.00	6.75	8.75	7.75	7.25	9.00	9.50	6.75	7.25
	New York, NY	8.50		7.50	8.25	7.25		7.75	8.00	8.00	8.75		8.00	
	Philadelphia, PA	9.25	10.00	7.00	7.50	7.00	6.75	9.00	8.25	8.75	9.50	10.50	7.75	7.50
	Pittsburgh, PA	11.00	9.50	8.00	8.00	7.50	7.25	11.00	11.00	11.00	11.50	10.00	8.00	8.00
	Providence, RI	9.50	9.75	8.50	8.75	7.50	7.25	10.00	8.50	8.25	9.75	10.00	8.00	7.75
	Syracuse, NY	10.00	10.00	10.00	9.75	7.00	6.75		9.00	10.00	11.00	11.00	7.50	7.25
	Washington, DC	9.50	10.00	7.25	7.75	7.25	7.25	8.25	8.00	8.00	9.75	10.50	7.50	7.50
	Wilmington, DE	11.00	12.50	8.50	9.00	8.00	8.00	8.00	8.50	8.50	12.00	13.00	8.50	8.75
South Region	Atlanta, GA	10.50	11.50	7.00	8.50	8.00	8.50	9.00	10.00	10.25	10.50	11.50	8.50	9.00
	Austin, TX	9.00	9.00	9.00	9.00	7.00	7.00	8.50	8.50	8.00	9.75	9.75	7.50	7.50
	Birmingham, AL	8.75	8.75	7.50	8.25	7.25	7.25	10.00	9.00	8.25	9.25	9.25	8.25	8.25
	Broward-Palm Beach, FL	8.50	8.75	7.50	7.75	7.00	7.00	7.75	8.00	8.00	9.00	9.50	7.75	8.00
	Charleston, SC	8.25	8.75	8.25	8.50	6.75	6.75	10.00	9.00	9.00	8.75	9.75	7.00	7.00
	Charlotte, NC	9.00	9.75	6.50	8.25	6.50	6.75	10.75	8.75	8.25	11.25	11.75	8.00	8.00
	Columbia, SC	9.50	9.75	7.25	8.00	7.50	8.00	10.00	9.50	10.00	10.00	10.50	8.25	8.75
	Dallas, TX	8.75	9.50	7.00	8.25	6.50	7.00	10.50	7.50	7.50	9.25	10.50	6.50	7.00
	Fort Worth, TX	8.75	8.75	7.00	7.00	6.50	6.75	9.75	7.50	7.50	9.00	9.00	6.75	7.25
	Greensboro, NC	10.75	10.75	7.25	7.25	7.50	7.50	11.75	8.00	8.75	11.75	11.75	9.50	9.50
	Greenville, SC	9.25	9.50	7.50	8.50	7.50	8.00	10.25	10.00	9.50	10.00	10.25	8.25	8.75
	Houston, TX	9.30	9.30	7.80	8.30	7.10	7.10	9.70	8.90	8.70	10.10	10.10	8.20	8.20
	Jacksonville, FL	10.00	9.50	8.00	8.25	7.50	7.50	8.00	8.00	8.50	11.25	11.00	8.00	8.00
	Memphis, TN	10.50	10.25	7.75	8.75	6.25	6.25		8.75	8.75	11.50	11.25	7.50	7.50
	Miami, FL	8.00	8.25	7.00	7.25	7.00	7.50	7.25	7.75	7.75	8.25	8.75	7.25	7.75
	Naples, FL		7.75	7.25	7.25		6.50	7.25	7.25	7.50		7.75		7.00
	Nashville, TN	7.25	9.25	5.75	5.25	6.75	6.50	10.50	7.75	7.75	7.25	9.25	6.75	6.50
	Oklahoma City, OK	9.50	10.00	8.75	9.00	8.00	8.25		9.00	9.25	10.00	10.50	8.50	9.00
	Orlando, FL	10.00	10.00	7.00	7.50	7.25	7.00		8.00	7.25	10.25	10.25	7.75	7.75
	Raleigh, NC	10.00	11.00	7.50	7.50	7.25	7.75	8.75	8.50	8.50	11.00	12.00	8.25	8.75
	Richmond, VA	8.25	8.75	7.00	8.25	6.75	6.75	9.50	8.75	8.75	9.25	9.25	7.75	7.75
	San Antonio, TX	10.00	10.00	8.75	9.00	6.75	6.75	9.25	8.00	7.75	11.00	11.00	7.00	7.00
	Sarasota, FL		8.00	8.25	8.25		6.50	7.50	7.25	7.75		8.00		6.50
	Tampa, FL	8.75	8.75	8.25	8.50	8.00	8.25	8.50	8.00	7.75	8.50	8.50	8.50	8.75
Central Region	Chicago, IL	10.00	10.00	6.25	9.00	6.25	6.75	9.00	8.75	8.75	10.00	10.00	6.75	7.25
	Cincinnati, OH	11.00	11.00	9.50	10.50	8.00	8.00	11.50	10.25	10.00	12.50	12.50	8.75	8.75
	Cleveland, OH	9.50	9.50	8.25	8.75	8.00	8.00	10.00	9.50	9.25	10.50	10.00	9.50	9.50
	Columbus, OH	9.25	9.25	8.25	9.00	7.00	7.50	10.00	9.75	9.50	10.00	10.00	7.50	8.00
	Dayton, OH	12.00	10.50	8.75	9.75	9.00	9.00	14.00	10.50	10.50	12.25	10.75	10.00	10.00
	Detroit, MI	9.25	9.25	8.25	8.00	8.00	7.75	9.50	9.25	9.25	9.50	9.50	8.50	8.25
	Grand Rapids, MI	9.50	9.00	8.25	8.75	7.50	7.50	9.50	9.25	9.25	9.75	9.50	8.00	8.00
	Indianapolis, IN	9.50	9.25	8.25	8.50	6.75	7.00	8.75	8.25	8.00	10.25	10.00	7.00	7.25
	Kansas City, MO	10.25	10.25	9.25	10.00	7.75	7.75	9.25	9.25	9.50	11.25	11.25	8.50	8.50
	Louisville, KY	10.50	9.35	9.00	9.50	8.30	8.15		9.00	9.00	11.50	9.35	9.35	8.80
	Minneapolis, MN	10.00	8.75	7.50	8.00	7.25	7.00	8.00	7.50	8.00	12.00	10.00	7.75	7.25
	St. Louis, MO	11.00	9.25	8.75	9.00	7.75	7.75	9.25	9.25	9.50	12.00	10.25	8.75	8.75
West Region	Boise, ID	8.00	8.25	8.00	8.00	6.75	7.25	8.50	8.75	8.75	8.25	8.50	7.25	7.50
	Denver, CO	10.00	11.00	9.00	9.00	9.00	9.00	8.50	8.50	7.75	10.50	11.00	9.00	9.00
	Las Vegas, NV	9.50	9.75	7.75	8.00	8.00	7.75	9.00	7.75	8.00	9.75	10.00	8.25	8.00
	Los Angeles, CA	9.50	9.50	7.00	7.25	6.00	6.75	8.00	7.50	7.75	10.00	9.50	6.25	7.50
	Oakland, CA	8.50	8.50	6.75	8.00	6.50	7.00	9.25	8.25	8.50	9.00	9.00	7.00	7.50
	Orange County, CA		9.25	6.75	6.50		5.75	8.50	7.25	7.00		8.50		6.00
	Phoenix, AZ	8.50	8.50	6.50	7.50	6.50	6.60	8.00	8.25	8.00	9.00	9.00	7.00	7.00
	Portland, OR	9.75	9.75	7.50	8.50	6.50	7.00		8.50	8.25	10.00	10.00	7.25	7.50
	Sacramento, CA	10.00	10.25	8.00	8.25	7.25	7.50	9.25	8.50	8.75	10.75	11.00	7.50	8.00
	Salt Lake City, UT	8.50	9.00	7.75	7.75	6.50	6.50	9.50	8.50	8.50	8.75	9.25	7.00	7.00
	San Diego, CA	9.50	9.50	7.50	7.50	6.75	6.75	9.50	8.50	8.50	10.00	10.00	7.00	7.00
	San Francisco, CA	9.00	9.00	7.00	7.25	6.50	6.50	9.25	7.75	8.00	9.25	9.50	6.75	6.75
	San Jose, CA	7.50	7.50	7.25	7.75	6.00	5.75	8.25	7.50	7.75	8.00	8.25	6.75	6.75
	Seattle, WA	9.50	9.50	7.50	8.25	7.00	7.25	7.75	8.00	8.00	9.75	9.75	7.25	7.50
	Averages	9.46	9.51	7.77	8.24	7.19	7.27	9.19	8.53	8.53	10.05	10.05	7.79	7.86

Region	Market	Class A Reversion Rates (%)									Class B Reversion Rates (%)			
		CBD Office	Suburban Office	Industrial	Flex Industrial	Urban Multifamily	Suburban Multifamily	Regional Mall Retail	Community Retail Center	Neighborhood Retail	CBD Office	Suburban Office	Urban Multifamily	Suburban Multifamily
East Region	Baltimore, MD	8.25	8.75	7.00	7.25	6.50	6.75	7.00	7.25	7.25	8.75	9.25	6.75	7.25
	Boston, MA	6.75	7.00	7.00	7.25	6.75	7.00	6.75	7.00	7.00	7.50	8.00	7.00	8.00
	Hartford, CT	9.25	9.50	8.00	7.75	6.50	6.25	10.50	8.25	8.50	9.50	9.75	7.00	6.75
	New Jersey, Coastal		8.50	6.50	7.00	6.50	6.50	8.25	7.75	8.00		9.00	6.75	6.75
	New Jersey, No	8.00	8.50	6.50	7.50	6.25	7.00	8.00	7.00	6.75	8.50	9.00	7.00	7.50
	New York, NY	6.75		6.25	6.75	6.00		6.25	6.75	6.75	7.25		6.75	
	Philadelphia, PA	9.00	9.25	6.25	6.75	5.75	5.50	8.25	8.25	7.50	9.50	10.00	7.00	6.75
	Pittsburgh, PA	10.50	9.00	7.50	7.50	7.00	6.75	10.50	9.50	9.50	11.00	9.50	7.50	7.50
	Providence, RI	9.25	9.50	7.75	8.00	6.75	6.50	10.50	8.25	8.50	9.50	9.75	7.25	7.00
	Syracuse, NY	10.50	10.50	10.00	9.75	6.50	6.25		9.00	8.50	11.50	11.50	7.00	6.75
	Washington, DC	8.00	8.50	6.00	6.50	6.25	6.75	7.50	7.25	7.25	8.50	9.00	6.75	7.25
	Wilmington, DE	8.50	9.50	6.75	7.00	6.50	6.75	6.75	7.25	7.25	9.50	10.00	7.00	7.50
South Region	Atlanta, GA	9.00	9.50	6.50	8.50	6.50	7.00	7.50	7.75	8.00	9.25	10.00	7.00	7.50
	Austin, TX	8.00	8.00	8.50	8.50	6.00	6.50	6.50	7.00	6.50	8.75	8.75	6.50	7.00
	Birmingham, AL	8.25	8.25	6.75	7.50	6.00	6.00	9.00	8.00	7.25	8.75	8.75	7.00	7.00
	Broward-Palm Beach, FL	7.00	7.25	6.50	6.75	5.75	6.00	6.50	6.75	6.75	7.75	8.25	6.25	6.50
	Charleston, SC	7.75	8.25	7.75	8.00	5.50	5.50	9.00	8.00	8.00	8.25	9.25	5.75	5.75
	Charlotte, NC	8.00	8.75	5.75	6.25	5.50	5.75	9.75	7.50	7.25	10.25	11.25	7.25	7.25
	Columbia, SC	8.25	9.00	6.50	7.75	6.50	6.75	9.00	8.50	8.50	9.50	9.75	7.25	7.75
	Dallas, TX	8.25	9.00	5.75	7.25	6.50	7.00	10.00	7.00	7.00	8.75	10.00	7.00	7.50
	Fort Worth, TX	8.25	8.25	6.50	6.50	6.50	6.75	9.00	6.75	6.75	8.50	8.50	6.75	7.25
	Greensboro, NC	9.75	9.75	6.50	7.50	6.75	6.75	11.75	8.00	8.25	11.75	11.75	9.50	9.50
	Greenville, SC	8.50	8.75	6.50	7.75	6.50	6.75	9.25	8.50	8.25	9.25	9.75	7.25	7.75
	Houston, TX	8.20	8.30	6.90	7.60	6.40	6.40	9.10	8.30	7.80	9.00	9.10	7.30	7.30
	Jacksonville, FL	9.50	9.00	7.25	7.50	6.00	6.00	7.50	7.50	8.00	10.25	10.00	6.50	6.50
	Memphis, TN	11.00	10.75	6.75	7.75	6.25	6.25		7.75	8.00	12.00	11.75	7.50	7.50
	Miami, FL	6.50	6.75	6.00	6.25	5.50	6.00	6.25	6.50	6.50	7.25	7.75	5.75	6.50
	Naples, FL		7.25	6.75	6.75		7.00	6.75	6.75	7.00		7.25		7.50
	Nashville, TN	7.50	9.50	6.00	5.50	7.00	6.75	10.00	7.25	7.25	7.50	9.50	7.00	6.75
	Oklahoma City, OK	8.00	8.50	7.50	8.00	6.50	7.00		7.50	7.75	8.50	9.00	7.00	7.50
	Orlando, FL	9.25	9.25	6.50	7.00	6.00	5.75		7.50	6.75	9.75	9.75	6.50	6.50
	Raleigh, NC	8.50	9.50	6.50	6.50	5.75	6.00	8.25	7.75	7.75	9.50	10.50	6.25	6.50
	Richmond, VA	7.75	8.25	6.25	7.50	5.75	5.75	8.50	7.75	7.75	8.75	8.75	6.75	6.75
	San Antonio, TX	9.50	9.50	7.75	8.00	5.75	5.75	8.75	7.50	7.25	10.50	10.50	6.00	6.00
	Sarasota, FL		7.50	7.75	7.75		6.00	7.00	6.75	7.25		7.50		6.00
	Tampa, FL	8.25	8.25	7.75	8.00	5.50	5.75	7.00	7.50	7.25	8.00	8.00	6.00	6.25
Central Region	Chicago, IL	8.00	9.75	5.75	9.00	6.00	6.25	8.25	7.50	8.25	9.00	10.75	6.25	6.75
	Cincinnati, OH	10.00	9.75	8.00	8.50	6.75	6.75	10.00	8.75	8.50	10.25	10.25	7.25	7.25
	Cleveland, OH	9.25	9.00	8.25	8.75	7.00	7.00	10.75	9.75	9.50	10.25	10.00	8.00	8.00
	Columbus, OH	8.75	8.75	7.75	8.50	6.00	6.50	9.00	8.75	8.50	9.50	9.50	6.50	7.00
	Dayton, OH	12.25	9.50	8.25	8.75	7.50	7.50	12.50	9.00	9.00	12.50	9.75	8.50	8.50
	Detroit, MI	9.50	9.25	8.00	7.50	6.50	6.25	11.00	9.50	9.25	9.50	9.50	7.00	6.75
	Grand Rapids, MI	9.00	8.50	7.50	8.00	6.00	6.00	9.50	8.75	8.75	9.25	9.00	6.50	6.50
	Indianapolis, IN	8.75	8.50	7.50	8.00	6.00	6.25	8.25	7.75	7.50	9.25	9.00	6.25	6.50
	Kansas City, MO	9.00	9.00	8.25	9.00	6.75	6.75	8.50	8.50	8.75	9.75	9.75	7.75	7.75
	Louisville, KY	9.50	8.50	7.50	8.50	7.15	5.90		8.50	8.50	10.50	9.50	9.50	8.65
	Minneapolis, MN	9.50	8.25	6.00	7.00	6.00	5.75	7.50	7.25	7.75	11.50	9.00	6.75	6.25
	St. Louis, MO	10.25	8.75	8.00	8.25	6.75	6.50	8.50	8.50	8.75	11.50	9.50	7.75	8.00
West Region	Boise, ID	7.00	7.25	6.75	6.75	5.00	5.75	7.00	7.25	7.25	7.25	7.50	5.75	6.25
	Denver, CO	10.50	11.00	7.25	8.00	6.00	6.00	7.75	7.75	7.00	11.00	11.00	6.00	6.25
	Las Vegas, NV	8.00	8.25	6.25	6.50	5.75	5.50	8.30	7.35	7.60	8.25	8.50	6.25	5.75
	Los Angeles, CA	7.75	8.00	5.75	6.00	5.00	5.75	7.00	6.50	6.75	8.25	8.00	5.25	6.50
	Oakland, CA	7.50	7.50	5.75	7.00	5.50	6.00	8.00	7.00	7.25	8.00	8.00	6.00	6.25
	Orange County, CA		7.75	5.50	5.50		4.75	7.50	6.25	6.00		7.50		5.50
	Phoenix, AZ	8.00	8.00	6.00	7.00	5.50	5.50	7.00	7.25	7.00	8.50	8.50	6.00	6.00
	Portland, OR	8.00	8.50	6.50	7.50	6.00	6.50		7.50	7.50	8.50	8.00	6.75	7.00
	Sacramento, CA	8.25	8.50	7.00	7.25	6.25	6.50	8.00	7.25	7.50	9.00	9.25	6.50	7.00
	Salt Lake City, UT	7.50	8.25	6.25	6.25	5.50	5.50	8.50	7.25	7.50	8.00	8.50	6.00	6.00
	San Diego, CA	8.00	8.00	6.00	6.00	5.25	5.25	8.00	7.00	7.00	8.50	8.50	5.50	5.50
	San Francisco, CA	7.50	7.50	6.00	6.25	5.50	5.50	8.00	6.50	6.75	7.75	8.00	5.75	5.75
	San Jose, CA	6.50	6.50	6.25	6.75	5.00	4.75	7.00	6.25	6.50	7.00	7.25	5.75	5.75
	Seattle, WA	7.25	7.25	6.50	7.50	5.50	5.75	7.50	7.50	7.50	7.75	7.75	5.75	6.00
	Averages	8.54	8.61	6.89	7.41	6.13	6.22	8.39	7.66	7.64	9.19	9.21	6.76	6.90

NOTES:

1. CAPITALIZATION, DISCOUNT, AND REVERSION RATES DATA IS BASED ON IRR'S 3Q '25 VIEWPOINT SURVEY.

SOURCE: INTEGRA REALTY RESOURCES, INC.

* OAR = Overall Capitalization Rate

RealtyRates.com INVESTOR SURVEY - 4th Quarter 2025* OFFICE - ALL TYPES							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.06%	**DCR Technique**		1.10	0.060430	0.80	**5.32**
Debt Coverage Ratio	1.10	**Band of Investment Technique**					
Interest Rate	5.32%	Mortgage		80%	0.060430	0.048344	
Amortization	40	Equity		20%	0.072270	0.014454	
Mortgage Constant	0.060430	OAR					**6.28**
Loan-to-Value Ratio	80%	**Surveyed Rates**					**5.90**
Equity Dividend Rate	7.23%						
Maximum							
Spread Over 10-Year Treasury	6.71%	**DCR Technique**		2.15	0.136166	0.50	**14.64**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	10.97%	Mortgage		50%	0.136166	0.068083	
Amortization	15	Equity		50%	0.154474	0.077237	
Mortgage Constant	0.136166	OAR					**14.53**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**13.66**
Equity Dividend Rate	15.45%						
Average							
Spread Over 10-Year Treasury	3.39%	**DCR Technique**		1.63	0.085100	0.68	**9.34**
Debt Coverage Ratio	1.63	**Band of Investment Technique**					
Interest Rate	7.65%	Mortgage		68%	0.085100	0.057443	
Amortization	30	Equity		33%	0.117482	0.038182	
Mortgage Constant	0.085100	OAR					**9.56**
Loan-to-Value Ratio	67.5%	**Surveyed Rates**					**9.68**
Equity Dividend Rate	11.75%						

*3rd Quarter 2025 Data

RealtyRates.com INVESTOR SURVEY - 4th Quarter 2025* OFFICE - CENTRAL BUSINESS DISTRICT							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.26%	**DCR Technique**		1.35	0.068285	0.65	**5.99**
Debt Coverage Ratio	1.35	**Band of Investment Technique**					
Interest Rate	5.52%	Mortgage		65%	0.068285	0.044385	
Amortization	30	Equity		35%	0.074270	0.025995	
Mortgage Constant	0.068285	OAR					**7.04**
Loan-to-Value Ratio	65%	**Surveyed Rates**					**6.62**
Equity Dividend Rate	7.43%						
Maximum							
Spread Over 10-Year Treasury	6.71%	**DCR Technique**		2.15	0.136166	0.50	**14.64**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	10.97%	Mortgage		50%	0.136166	0.068083	
Amortization	15	Equity		50%	0.154474	0.077237	
Mortgage Constant	0.136166	OAR					**14.53**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**13.66**
Equity Dividend Rate	15.45%						
Average							
Spread Over 10-Year Treasury	3.99%	**DCR Technique**		1.75	0.097855	0.58	**9.85**
Debt Coverage Ratio	1.75	**Band of Investment Technique**					
Interest Rate	8.25%	Mortgage		58%	0.097855	0.056267	
Amortization	23	Equity		43%	0.110362	0.046904	
Mortgage Constant	0.097855	OAR					**10.32**
Loan-to-Value Ratio	58%	**Surveyed Rates**					**9.86**
Equity Dividend Rate	11.04%						

*3rd Quarter 2025 Data

* OAR = Overall Capitalization Rate

RealtyRates.com INVESTOR SURVEY - 4th Quarter 2025* RESTAURANTS - ALL TYPES							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.54%	**DCR Technique**		1.10	0.070426	0.80	**6.20**
Debt Coverage Ratio	1.10	**Band of Investment Technique**					
Interest Rate	5.80%	Mortgage		80%	0.070426	0.056341	
Amortization	30	Equity		20%	0.102934	0.020587	
Mortgage Constant	0.070426	OAR					**7.69**
Loan-to-Value Ratio	80%	**Surveyed Rates**					**6.23**
Equity Dividend Rate	10.29%						
Maximum							
Spread Over 10-Year Treasury	11.80%	**DCR Technique**		2.15	0.176746	0.50	**19.02**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	16.06%	Mortgage		50%	0.176746	0.088373	
Amortization	15	Equity		50%	0.198891	0.099446	
Mortgage Constant	0.176746	OAR					**18.78**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**17.65**
Equity Dividend Rate	19.89%						
Average							
Spread Over 10-Year Treasury	5.44%	**DCR Technique**		1.55	0.109955	0.66	**11.25**
Debt Coverage Ratio	1.55	**Band of Investment Technique**					
Interest Rate	9.70%	Mortgage		66%	0.109955	0.072441	
Amortization	22	Equity		34%	0.155710	0.053125	
Mortgage Constant	0.109955	OAR					**12.56**
Loan-to-Value Ratio	65.9%	**Surveyed Rates**					**12.72**
Equity Dividend Rate	15.6%						

*3rd Quarter 2025 Data

RealtyRates.com INVESTOR SURVEY - 4th Quarter 2025* RESTAURANTS - FULL SERVICE							
Item	**Input**						**OAR**
Minimum							
Spread Over 10-Year Treasury	1.74%	**DCR Technique**		1.35	0.085986	0.65	**7.55**
Debt Coverage Ratio	1.35	**Band of Investment Technique**					
Interest Rate	6.00%	Mortgage		65%	0.085986	0.055891	
Amortization	20	Equity		35%	0.104934	0.036727	
Mortgage Constant	0.085986	OAR					**9.26**
Loan-to-Value Ratio	65%	**Surveyed Rates**					**8.89**
Equity Dividend Rate	10.49%						
Maximum							
Spread Over 10-Year Treasury	11.80%	**DCR Technique**		2.15	0.176746	0.50	**19.02**
Debt Coverage Ratio	2.15	**Band of Investment Technique**					
Interest Rate	16.06%	Mortgage		50%	0.176746	0.088373	
Amortization	15	Equity		50%	0.198891	0.099446	
Mortgage Constant	0.176746	OAR					**18.78**
Loan-to-Value Ratio	50%	**Surveyed Rates**					**17.65**
Equity Dividend Rate	19.89%						
Average							
Spread Over 10-Year Treasury	6.77%	**DCR Technique**		1.75	0.129225	0.58	**13.01**
Debt Coverage Ratio	1.75	**Band of Investment Technique**					
Interest Rate	11.03%	Mortgage		58%	0.129225	0.074304	
Amortization	18	Equity		43%	0.147214	0.062566	
Mortgage Constant	0.129225	OAR					**13.69**
Loan-to-Value Ratio	58%	**Surveyed Rates**					**14.29**
Equity Dividend Rate	14.72%						

*3rd Quarter 2025 Data

APPENDIX
QUALIFICATIONS

Barbara J. Cohen
Real Estate & Planning Consultant

PO Box 1285 • New York, New York 10156
917.562.4290 • bjcohen@att.net

PROFILE

With almost 30 years of professional experience in real estate development, Business Improvement Districts (BID), community planning and small business assistance, Barbara J. Cohen Real Estate & Planning Consultant has provided professional services to a range of both private and public sector clients. The hands-on approach and long–standing reputation ensures the highest quality of technical expertise and professional judgment.

EXPERIENCE

FINANCIAL FEASIBILITY STUDIES
NYC BOARD OF STANDARDS & APPEALS

As Senior Associate at Robert B. Pauls LLC, economic analysis reports were prepared for numerous variance applications to the BSA and testimony was provided to support the application request.

Transition and continuity from Robert Pauls to Barbara J. Cohen is complete and past and current projects have been brought to fruition and new ones are underway.

BUSINESS IMPROVEMENT DISTRICT (BID)
PLANNING & DEVELOPMENT

On behalf of neighborhood organizations and stakeholders seeking BID formation, expansion, or start-up of governance and operations, Barbara J. Cohen has a proven track record demonstrated by the formation of the Pitkin Avenue BID (1993), Glen Cove BID (1996), Belmont Avenue BID (2008), SoHo Broadway BID (2013); Hudson Yards | Hell's Kitchen Alliance (2013); Greater JFK BID (2016)

ADVISORY BID SERVICES: • Pitkin Avenue BID (Executive Director) • Lower East Side BID (Proposed Expansion) • HUB-Third Avenue BID (Amended District Plan) • Alliance For Downtown New York (Developed/Implemented Storefront Improvement Program) • Village Alliance BID (Property Database, Market Demographics, Shopper Survey) • Garment District Alliance (Economic Profile; Storefront Improvement Program); Alliance for Coney Island (BID Formation)

COMMUNITY PLANNING

Provide urban planning expertise to a variety of organizations to implement their strategies and goals.

CLIENTS INCLUDE: Sutton Area Community-Manhattan • Bay Ridge Development Corporation – Brooklyn • Church-Schenectady Merchants Assn., Brooklyn • Phipps Houses, New York City • Journal of American Planning Assn. • Center for Building Conservation, New York City • NYC Landmarks Preservation Commission • F. L. Olmsted National Historic Site, Brookline, MA.

SMALL BUSINESS ASSISTANCE

Con Edison – Brooklyn: Developed, implemented, and tabulated a survey of small business owners in over 30 retail districts throughout Brooklyn in an effort to improve and expand customer outreach activities.

Coalition for Electrical Safety – NYC: On behalf of a consortium of electrical trade groups and industry-related safety organizations, prepared a white paper, "NYC's Proposed Self Certification of Electrical Contractors: A Threat to Public Safety" to comment on a public policy proposal.

Small Business Clients: Guidance to individual firms in overall business organization and finance, specializing in the full range of bookkeeping tasks utilizing Quickbooks accounting software. Clients include: AJW Ltd.; Balancing the Executive Life; MetroHort Group; APM Model Management; Stooz Records Inc.; Terry Design & Construction; Beat Street Productions.

EDUCATION

CUNY HUNTER COLLEGE • Master's Degree in Urban Planning (Public Service Fellow)
SUNY BUFFALO • B. A. in Architectural History with an emphasis in Historic Preservation