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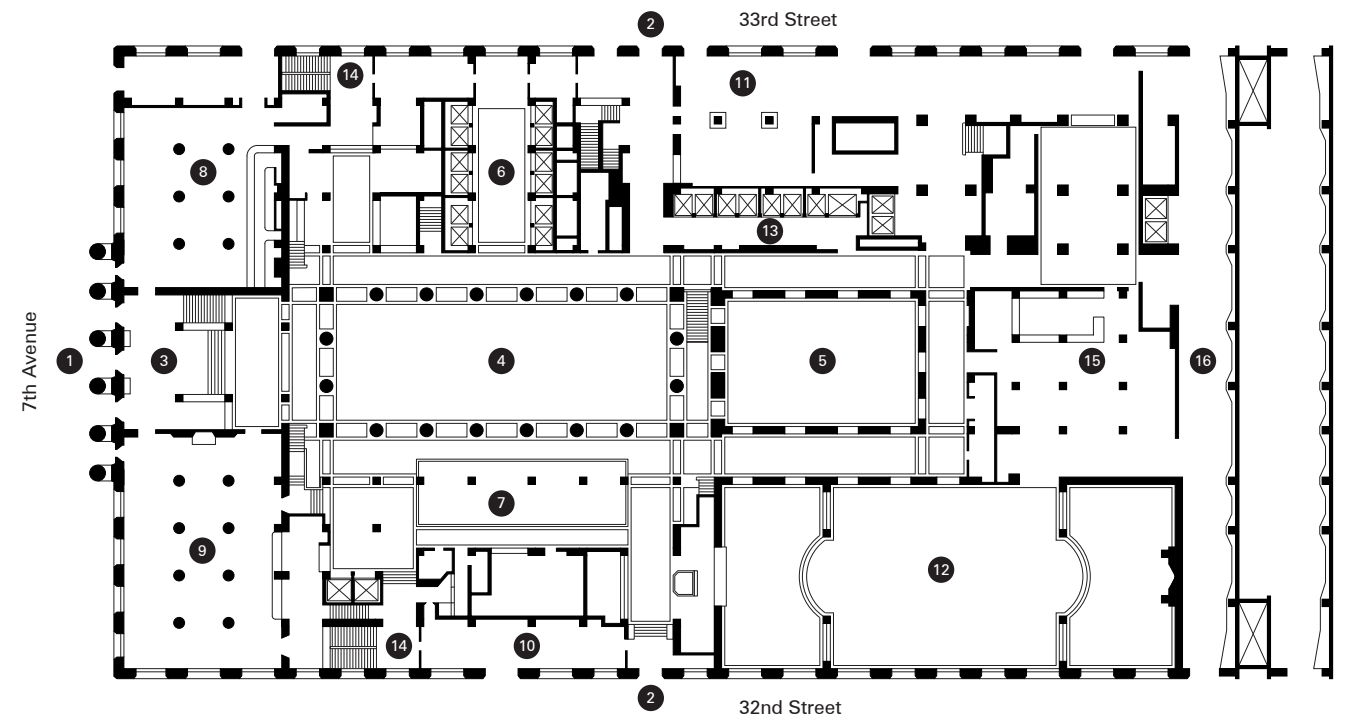
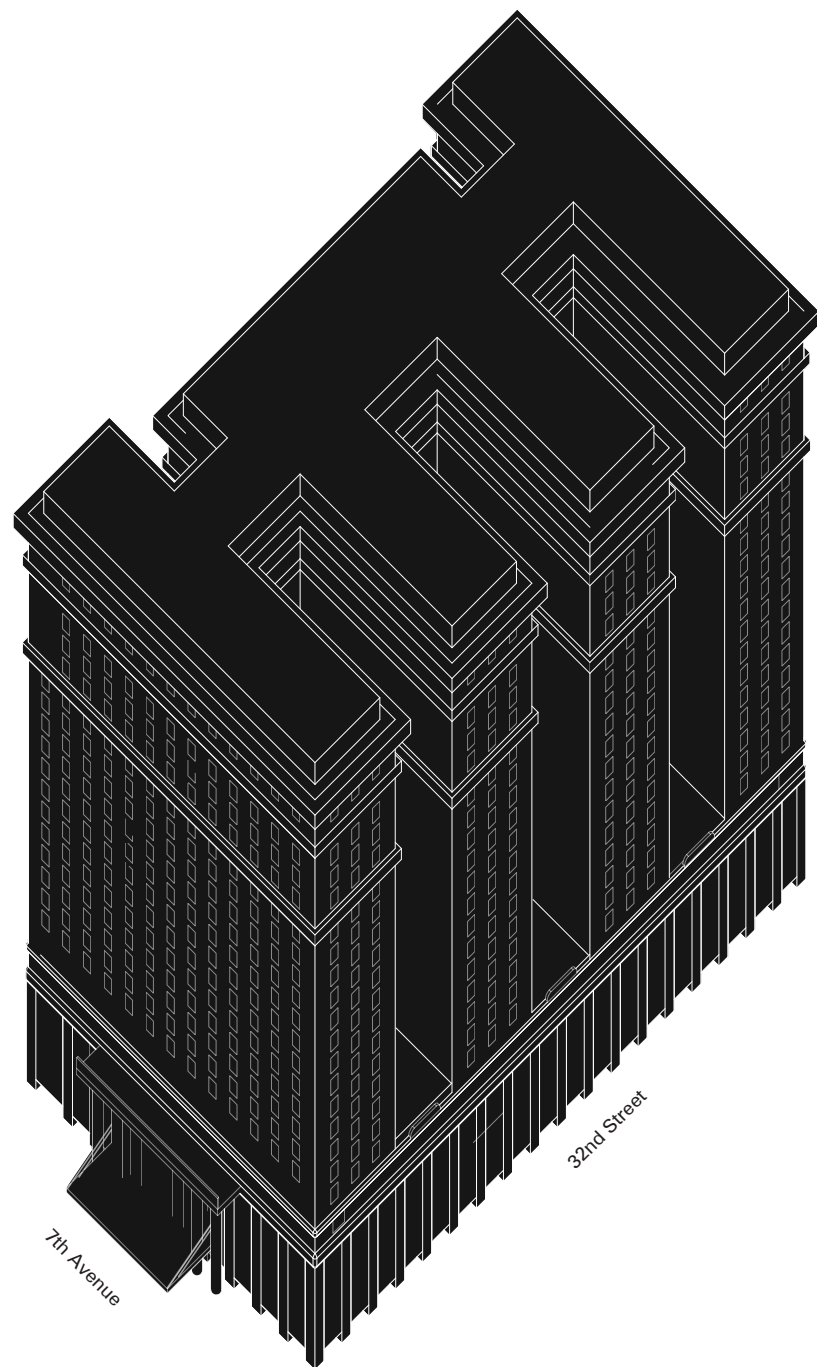
The Hotel is a collective project that studies the hotel, both as a building type and as a place of hospitality, through a collection of fourteen individual contributions inside one skyscraper. The project imagines hospitality as a realm of exchange that condenses the diversity of the city through an assortment of guests, staff, and the broader public.

The hotel is a function of temporality and hospitality. The study questions the requirements for an architecture of hospitality to welcome, host, and entertain. As an architecture of temporality—an architecture that is dynamic and ever-changing, embodying a sense of transience and constant activity—the hotel allows for experimentation, while anticipating adaptation to meet the changing demands of its temporary residents. The hotel, as type, is understood beyond its curated front. It is, instead, a place of anonymity and exchange, of served and serving, a place characterized by short stays in a lasting structure.

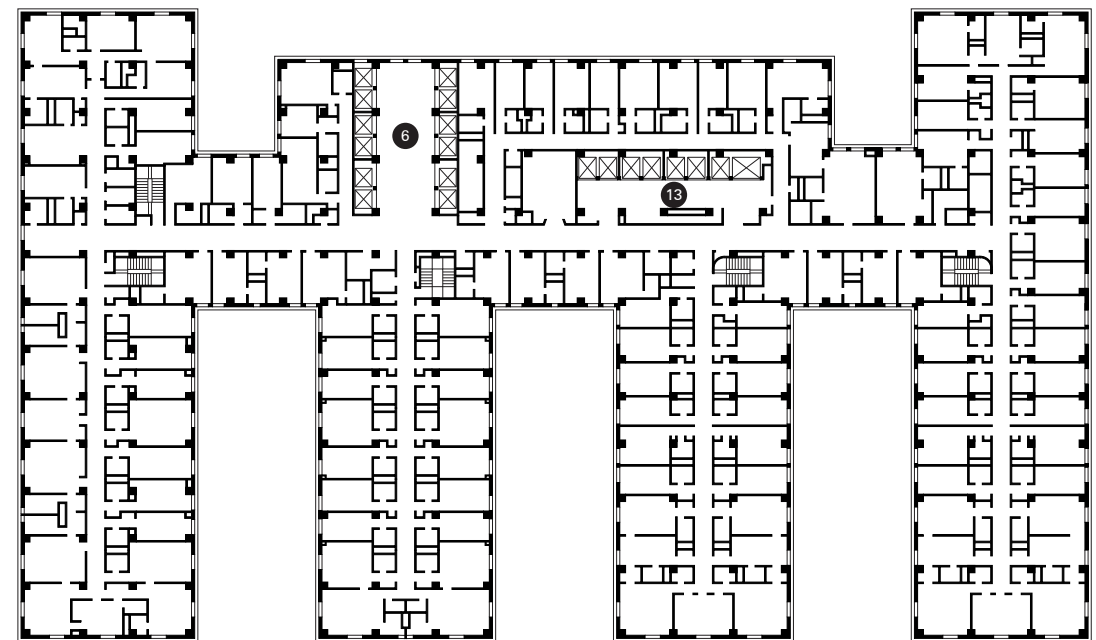
The skyscraper, as a formal and monumental object, appears to contrast the hotel’s temporality. In its autonomy, the skyscraper is a landmark in the skyline. Located in Midtown Manhattan—on the former site of Hotel Pennsylvania and adjacent to Penn Station—this project is a reflection on the metropolis of New York City.

The Hotel consists of the design of the skyscraper as landmark—The Metropolitan—and the hotel as tenant—One Hotel.

1. *The Hotel* embraces the frenetic energy of New York City while opposing its outward expansion.
2. The Metropolitan will outlast One Hotel.
3. One Hotel accommodates fourteen types of guests, and its staff.
4. One Hotel shares accommodation, amenities, systems, and services with a 24/7 cycle.
5. *The Hotel* sets a standard for an architecture of hospitality.



Ground Floor



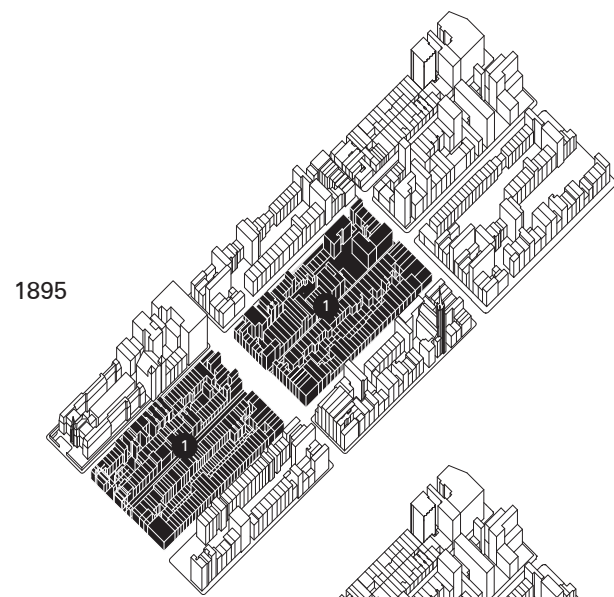
Typical Accommodation Floor

Hotel Pennsylvania

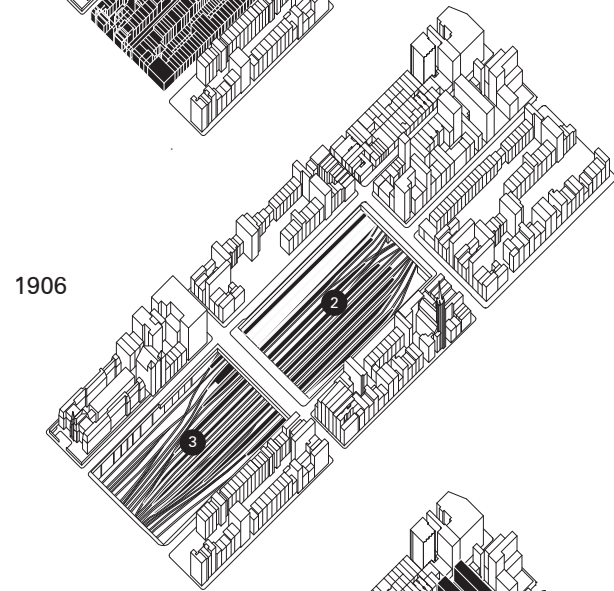
Hotel Pennsylvania was designed by the renowned firm of McKim, Mead & White. Consisting of 2,200 guest rooms over twenty-two floors, it was the largest hotel in the world at the time. Facing Seventh Avenue—and Pennsylvania Station—a portico greeted guests and led into the building through a sequence of spaces culminating in the hotel's lobby.



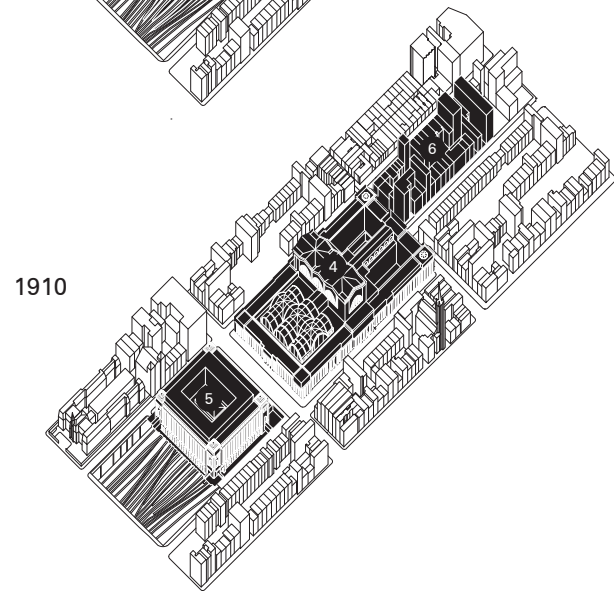
- | | | |
|------------------------|-----------------------|----------------------|
| 1. Main entrance | 7. Office | 14. Subway entrance |
| 2. Secondary entrances | 8. Soda room | 15. Pantry |
| 3. Entrance vestibule | 9. Mens' café | 16. Service driveway |
| 4. Lobby | 10. Shop | |
| 5. Palm room | 11. Drug store | |
| 6. Guest elevators | 12. Dining room | |
| | 13. Service elevators | |



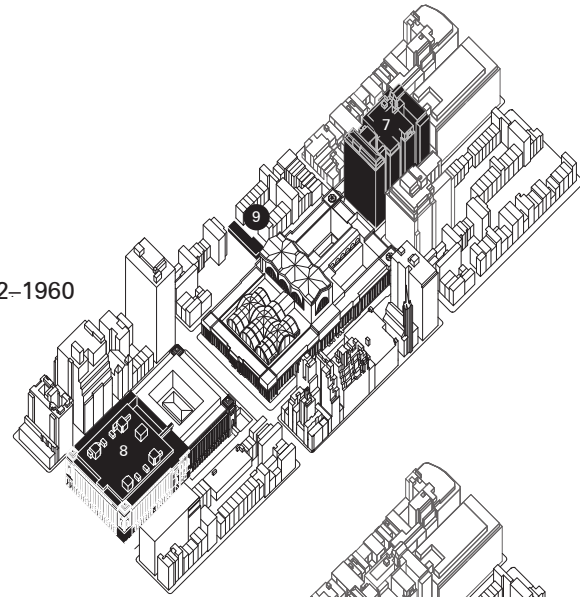
1895



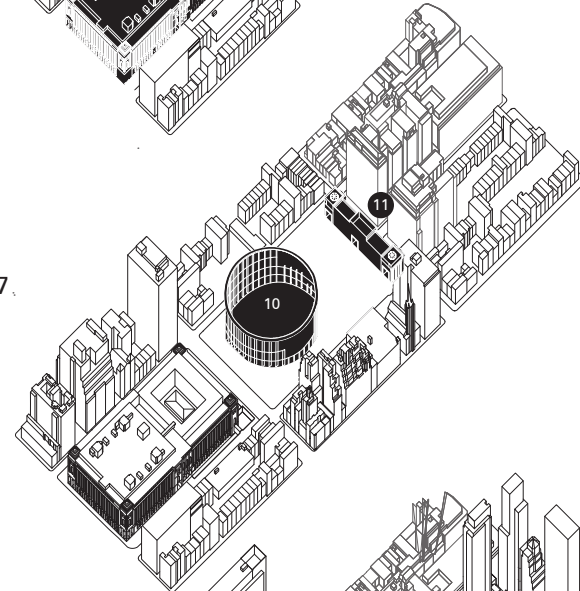
1906



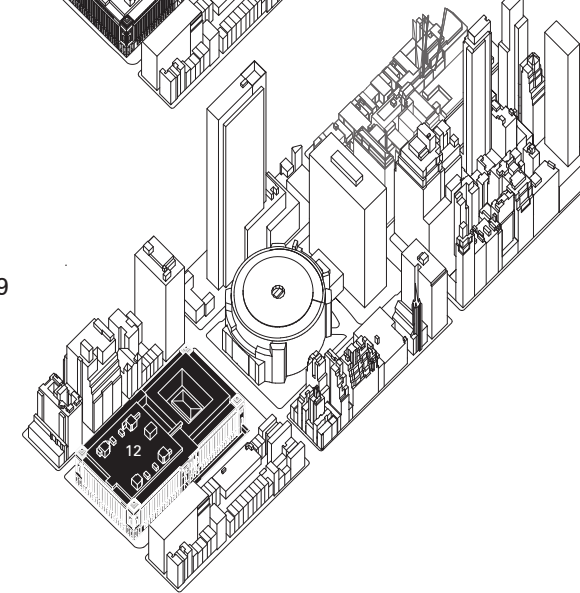
1910



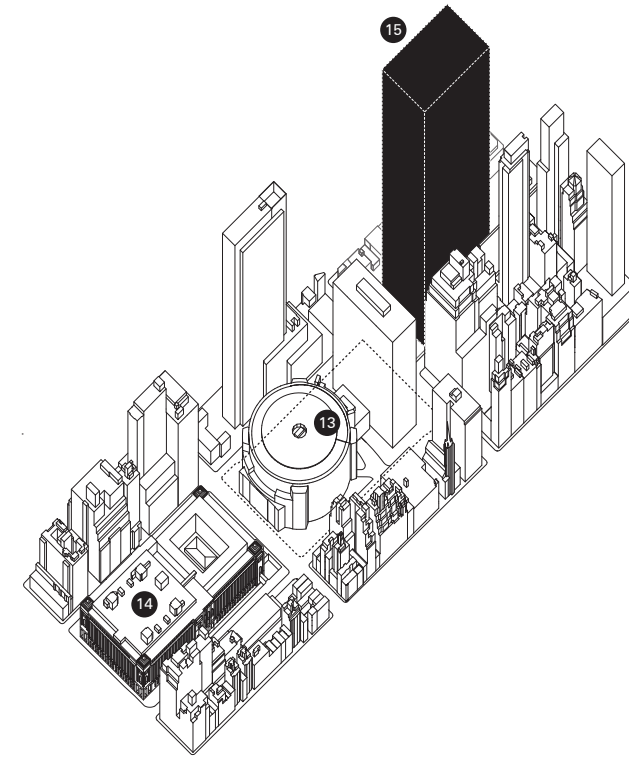
1912–1960



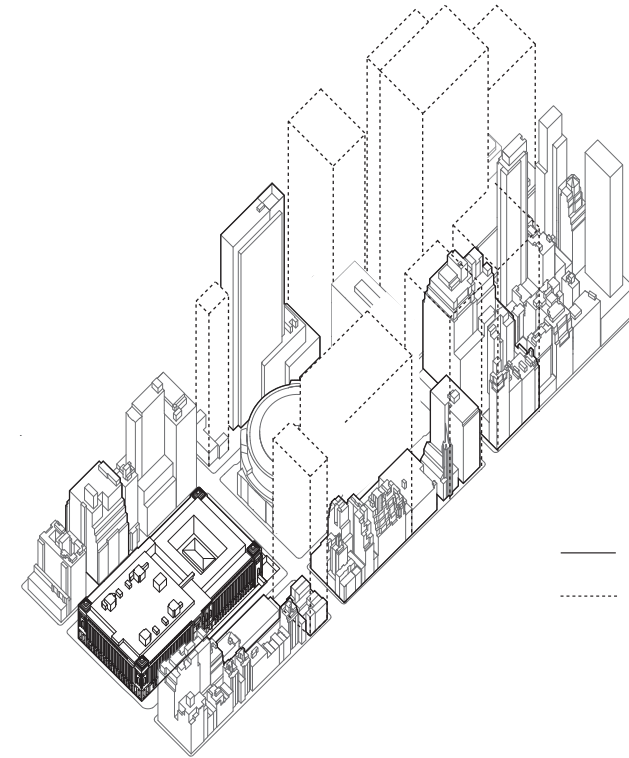
1967



1999



2020



2030

— Vornado-owned properties
 Proposal by Vornado Realty trust in conjunction with previous Governor Andrew Cuomo to develop 10 new buildings in the project called the "Empire station complex". The draft plan is a comprehensive, high-density, transit-oriented redevelopment proposition that would generate the revenue needed to finally overhaul and expand Penn Station as well as other transit facilities in the area.

Pennsylvania Station

1. Pennsylvania Station stood on the former Tenderloin neighborhood, a lively district from 20th to 53rd Streets, Fifth to Seventh Avenues, evolving from the adjacent theater and hotel hub.
2. In 1901, the Pennsylvania Railroad unveiled a \$150 million plan to electrify and expand, connecting Pennsylvania and Long Island Railroads to Manhattan.
3. Pennsylvania Railroad tunnels span Manhattan

4. Opened in 1910, the original Pennsylvania Station, with North River Tunnels, was a Beaux Arts masterpiece by McKim, Mead & White, spanning West 31st to West 33rd Streets.
5. During Penn Station's planning, the Pennsylvania Railroad proposed a nearby post office on 8th avenue for the United States Post Office Department.

6. Six years after the opening of the station, PRR proposed a \$9 million, 1,000-room hotel on Seventh Avenue by McKim, Mead & White: Hotel Pennsylvania.
7. On January 25, 1919, the Hotel Pennsylvania was officially dedicated. With 2,200 rooms and baths, it claimed the title of the world's largest hotel.
8. The expansion of the Post Office Department was handled by McKim, Mead & White and

- occurred between 1932 and 1934.
9. In 1935, a new bus terminal opened, adding to the area's importance as the city's main transportation hub.
10. Madison Square Garden Corporation replaced Pennsylvania Station with a sports complex, citing benefits like tax revenues and construction boost.
11. The old structure was leveled but continued to operate underground as the Garden's skeleton rose

- above.
12. The expansion of Pennsylvania station into the Farley building begins, adding three underground levels along with the redesign of the first floor.
13. Today, Pennsylvania station functions below Madison square garden sports arena and Penn Plaza.
14. Moynihan Train Hall is an expansion of Pennsylvania Station, in the former post office

- building, the James A. Farley Building.
15. Hotel Pennsylvania was demolished and in the now vacant plot, 15 Penn Plaza, also known as PENN15 and Vornado Tower, has been planned to be constructed by Vornado Realty Trust.



New York City Boroughs

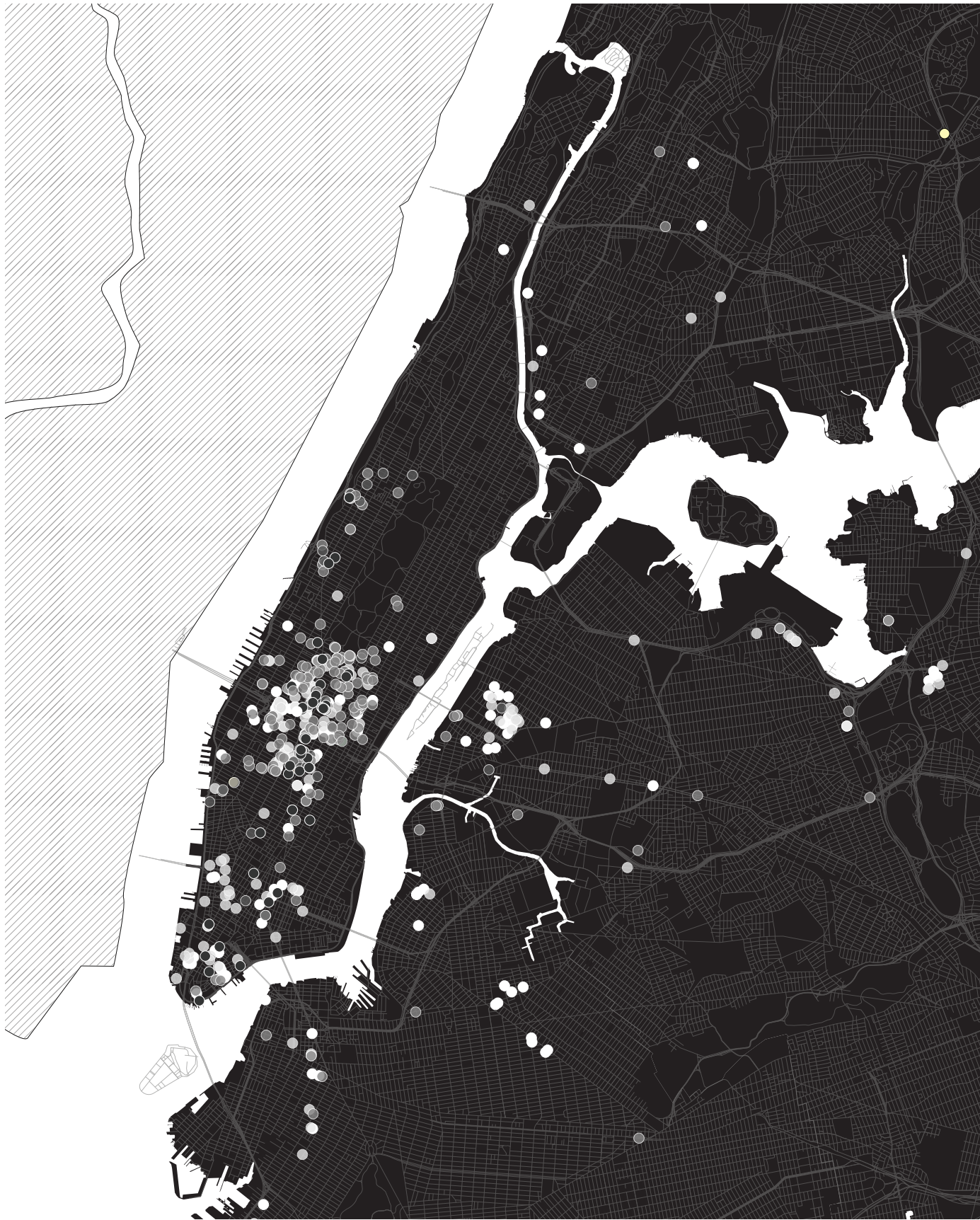
- 1. Manhattan
- 2. Bronx
- 3. Queens
- 4. Brooklyn
- 5. Staten Island



Development of Transportation

As the city expanded, the development of efficient modes of transport has allowed more people to cross greater distances more frequently across the densely knit island of Manhattan.

- 1. First regular ferry service starts in 1642
 - 2. Broadway extends North in 1790s
 - 3. First streetcar line opens in 1832
 - 4. Railroad line to the East opens in 1850s
 - 5. Railroad line to the North opens in 1850s
 - 6. Railroad line to the West opens in 1850s
 - 7. First elevated railroad opens in 1871
- 8. Brooklyn Bridge opens in 1883
 - 9. Construction of Penn Station begins in 1903
 - 10. First subway line opens in 1905
 - 11. Hudson tunnels and Penn Station open in 1910
 - 12. Newark Liberty Airport opens in 1928
 - 13. Lincoln Tunnel opens in 1938
- 14. La Guardia Airfield opens in 1939
 - 15. Idlewild International Airport -later renamed John F. Kennedy Airport- opens in 1948
 - 16. Port Authority Bus Terminal opens in 1950
 - 17. Grand Central Depot opens in 1971



Development of Accommodation and Lodging

Historically, hotels were concentrated in Midtown Manhattan where most of the city's attractions were located.

- Hotels by year of opening
- 1805
 - 1850
 - 1900
 - 1950
 - 2022



Development of Public Housing

Around 90% of public housing developments in New York City are situated within low-income neighborhoods, with about 21% found in areas undergoing gentrification.

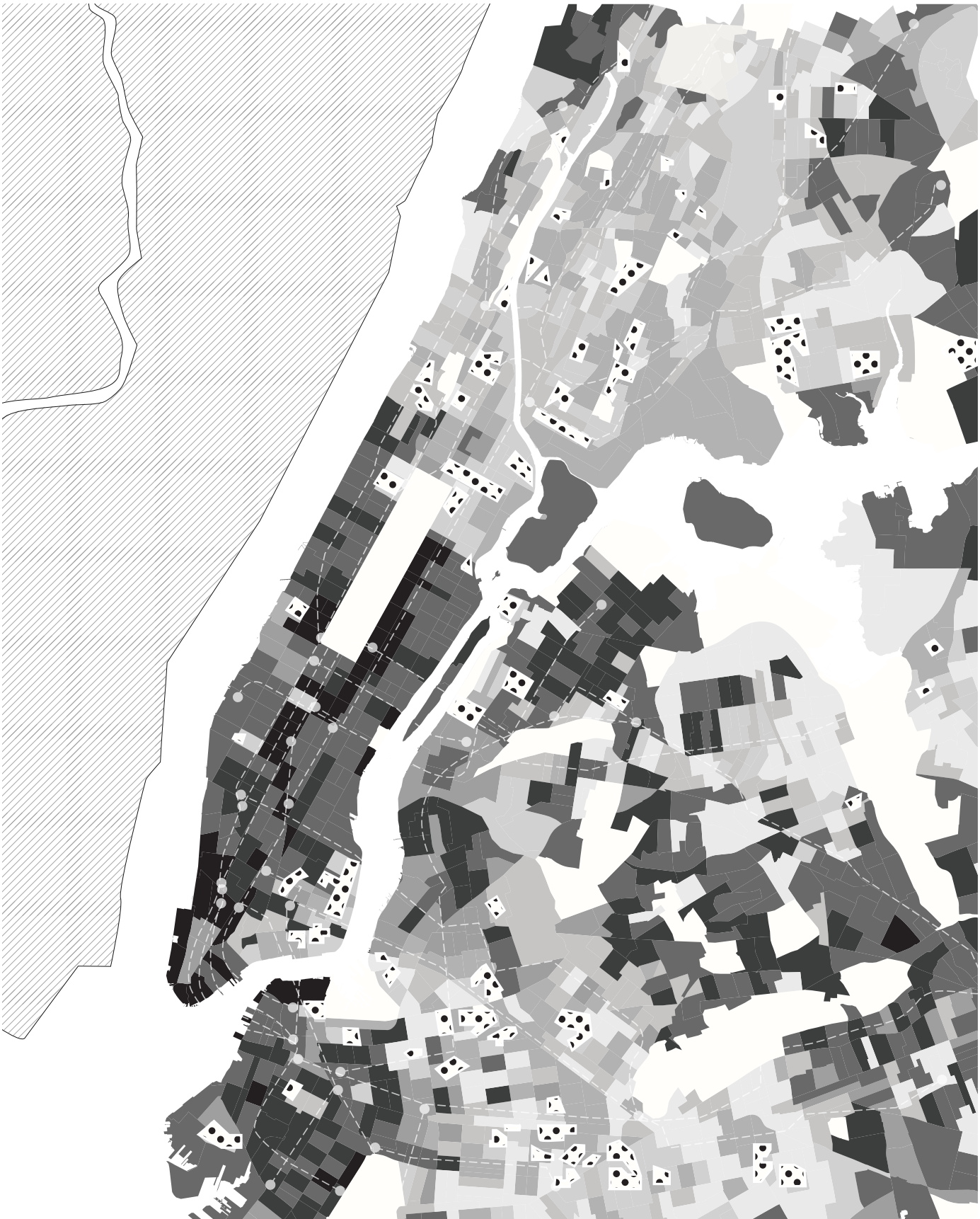
- Decade
- 1990
 - 2000
 - 2010
- 1000 units to <20 units



Development of Office Density

The majority of office buildings are in Midtown and Downtown Manhattan, with some smaller clusters in Brooklyn and Queens. Today, there are almost 9 million square meters of vacant office spaces in the city.

○ Office buildings



Development and Changes in Income Levels

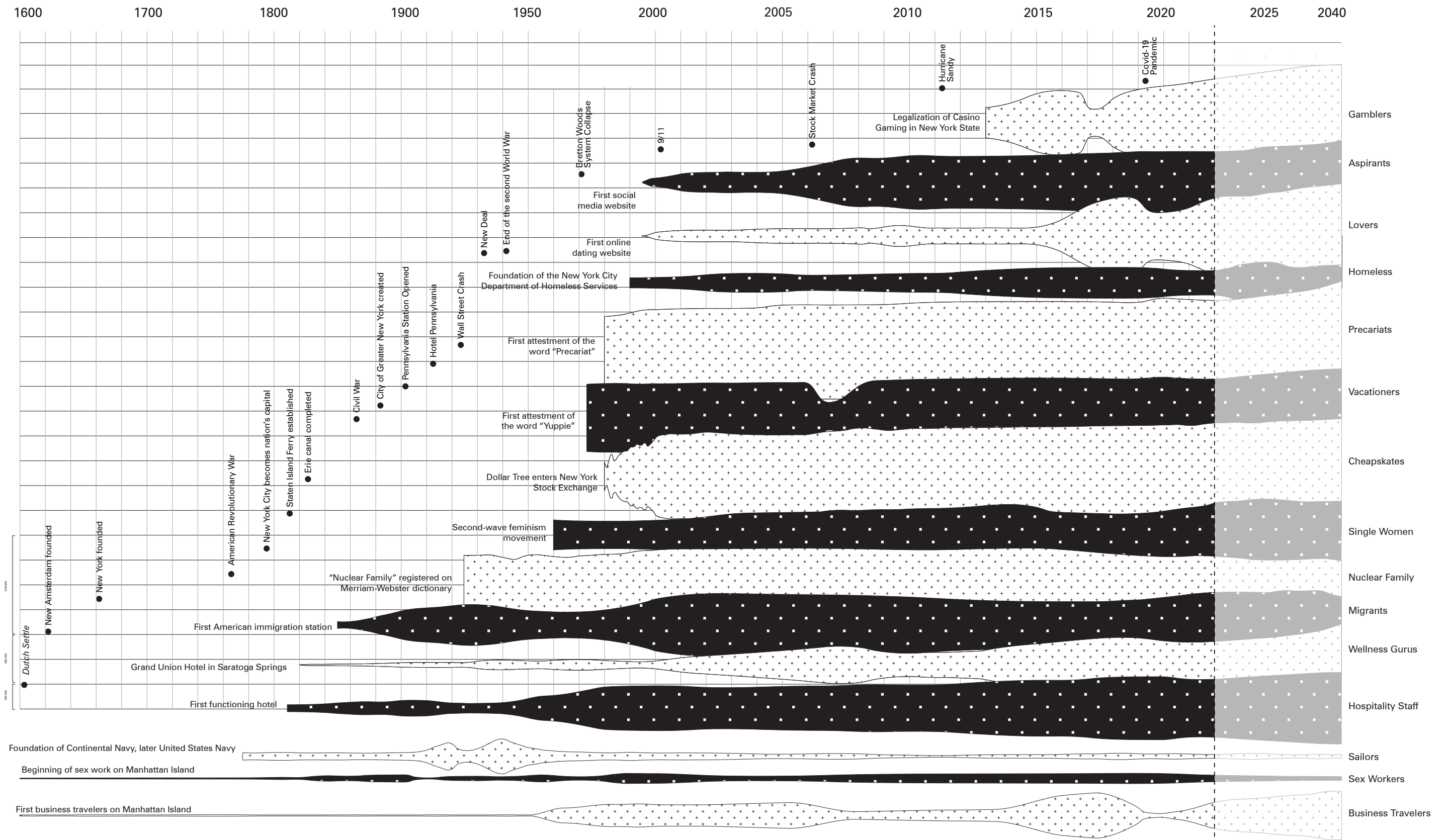
Manhattan is one of the most expensive places to live, with an average of \$15,000—or EUR 14,000—per square meter. In the 515 census tracts of New York City today, 23% are situated in neighborhoods undergoing gentrification, while an additional 30% are in areas considered at risk of gentrification.

Degree of gentrification based on area median income



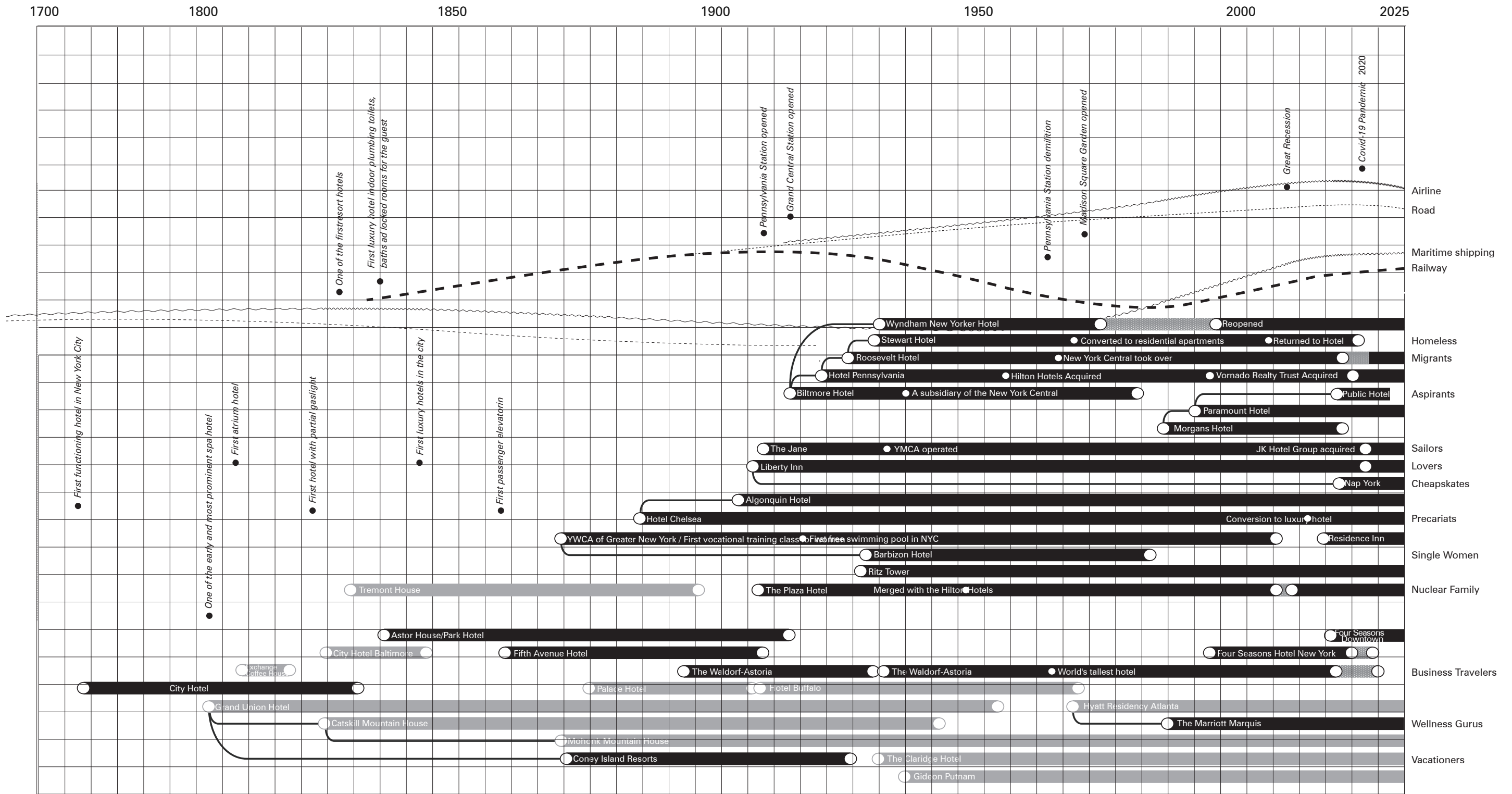
■ Current public housing stock

---- Metro lines



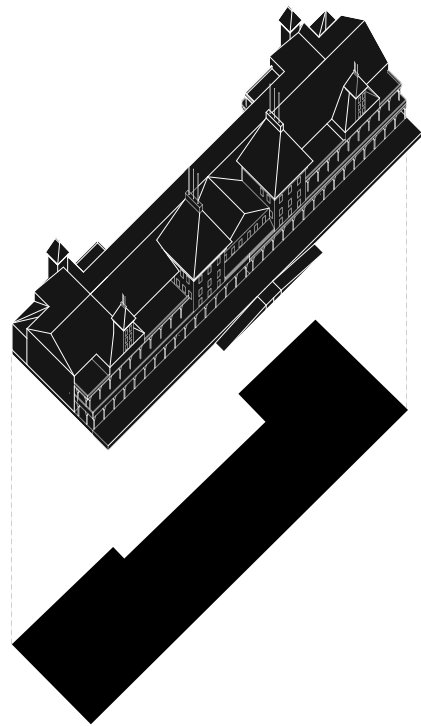
Changing Demographics of New York City

New York City has been the epicenter for immigration into the United States, especially from Europe, since the arrival of the Dutch in the seventeenth century. In recent times, various demographic groups have been introduced into the city's history, contributing to its diverse and dynamic tapestry. On top of this, as an economic and cultural center, New York hosts travelers for business and pleasure, welcoming many, along with their money.



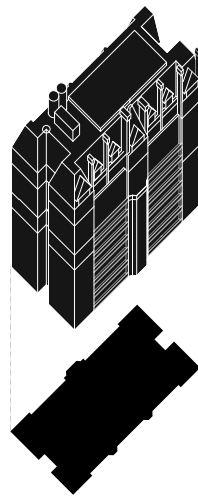
Hotel Development in New York City

The beginning of the hotel as a building type dates to the late eighteenth century in the United States as a result of trade and commerce, and the development of new modes of transportation. In the first half of the twentieth century, hotels became the epitome of modernity—centers of mobility, temporality, and anonymity. With the increasing ease of traveling, hotel types expanded to meet the needs of new customers.



Brighton Beach Hotel
1870–1924
Rooms: 400
Floors: 4
Case study for
Vacationers/Resort
segment

Brighton Beach Hotel opened in Coney Island in 1870, before it closed in 1924. The seaside resort was constructed near Manhattan, where it offered a place of residence and seclusion of 400 keys, while providing its guests with a high-end amenity program.



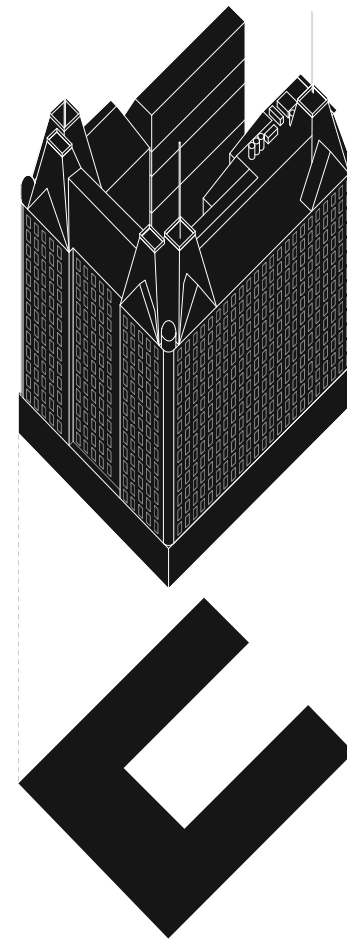
Hotel Chelsea
1884–
Rooms: 250
Floors: 12
Case study for
Precariats/Residential
segment

The Hotel Chelsea opened in 1884. As one of the city's first private apartment cooperatives, it housed 250 keys before its renovation and reopening in 2022.



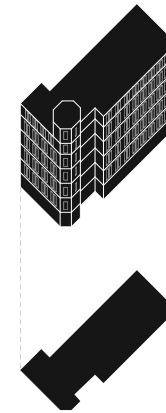
Liberty Inn
1906–2022
Rooms: 17
Floors: 3
Case study for Lovers/
Day segment

Built in 1906 by poultry wholesalers as the Strand Hotel, it was an old remnant of the Meatpacking District with a saloon on the ground floor that catered to sailors. It got its name in 1969, when it functioned as an after-hours sex club, shut down short after due to the AIDS scare. It continued to operate as an hourly hotel until 2022 when it was sold to Hyundai.



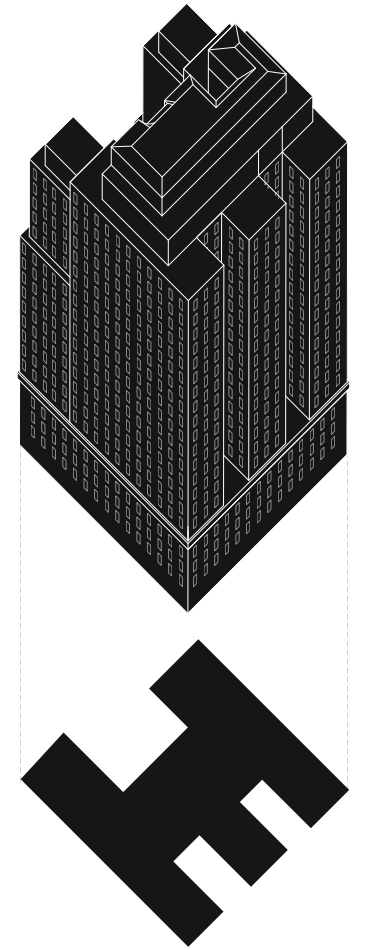
The Plaza
1907–
Rooms: 463
Floors: 18
Case study for Nuclear
Family/Family segment

The luxurious hotel opened its doors in 1907 in Midtown Manhattan, next to Central Park. It continues to operate, offering a total of 463 keys, some of which are used as residences. Among the various room types, it offers a spacious family room. The hotel has often appeared in many movies, in which the main protagonist, a child, lived at The Plaza.



The Jane
1908–
Rooms: 200
Floors: 6
Case study for Sailors/
Sailors' Boarding House
segment

The Jane, a historic Sailors' Boarding House containing 200 rooms and cabins, opened in West Village in 1908 as the American Seaman's Friend Society Sailors' Home and Institute. It continues to offer accommodations to this day, now transformed into a boutique hotel with a maritime theme and vintage feel.

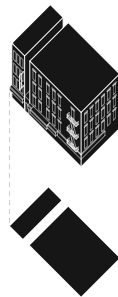


Roosevelt Hotel
1924–
Rooms: 1025
Floors: 19
Case study for
Migrants/Migrant
segment

The Roosevelt Hotel opened in Midtown Manhattan in 1924, with 1025 rooms. After its closure in 2020 due to the economic downturn of the covid pandemic, it reopened in 2023 as a shelter for asylum seekers.

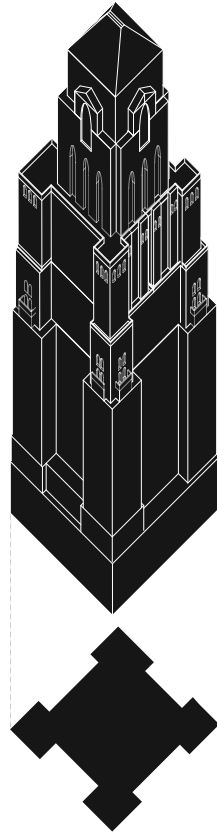
Fourteen Case Studies

Hotels evolved to meet varying guest needs, resulting in a diversification of hotel types. Fourteen case studies from different time periods, all in New York City and each a different hotel type, are analyzed in their diverse spatial and functional characteristics, as well as in their relation to a specific guest.



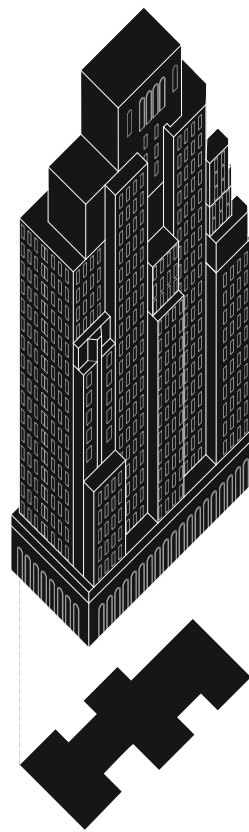
Elk Hotel
1925–2012
Rooms: 50
Floors: 3
Case study for Sex
Workers/Love segment

The Elk Hotel is a relic of Times Square's grungy past. It closed its doors in 2012, after almost a century of offering cheap short- and long-term accommodation to its guests.



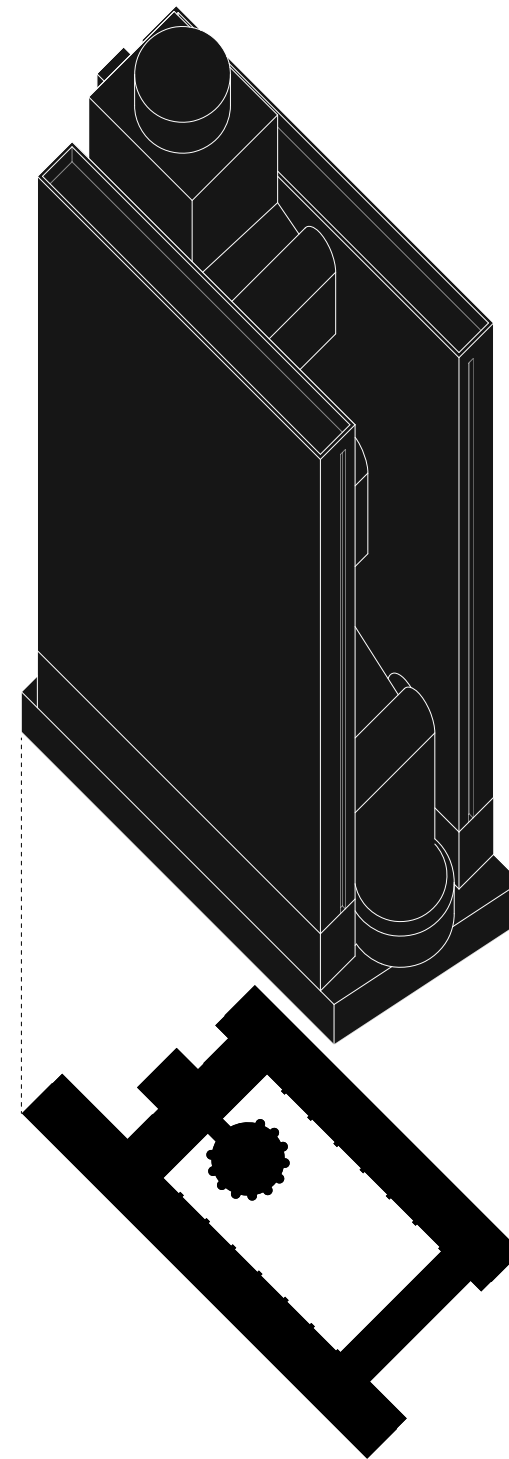
The Barbizon
1927–1981
Rooms: 372
Floors: 23
Case study for Single
Women/Single
Women's segment

The Barbizon opened in Lenox Hill in 1927, housing 372 keys for women only. Before its renovation in 1981, it was a women-only residential hotel, with a broad range of amenities to support women in all their needs.



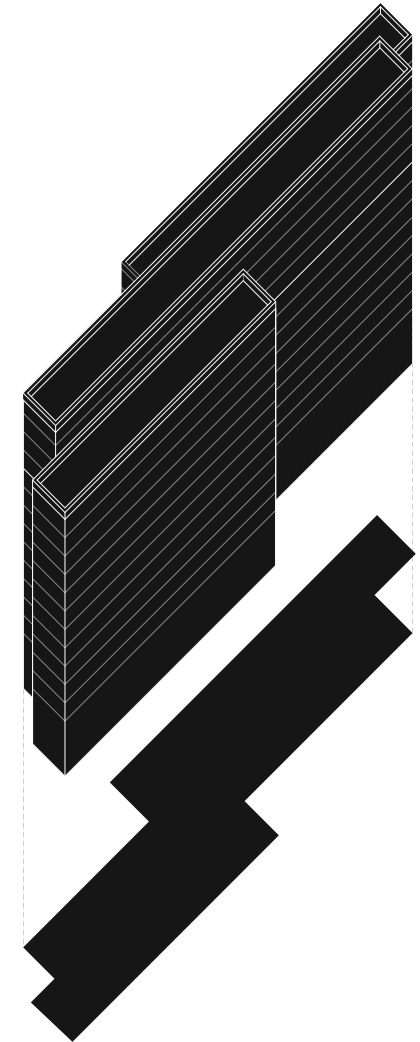
Stewart Hotel
1929–
Rooms: 610
Floors: 28
Case study for
Homeless/Homeless
segment

The Stewart Hotel opened in Midtown in 1929. After several ownership changes, the hotel was converted in 2022 as a shelter for the homeless and/or asylum seekers with a total of 610 keys. Its primary focus is to provide care and compassion.



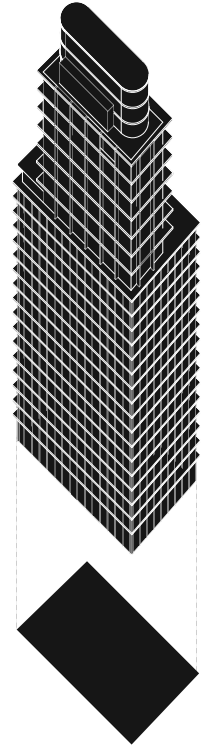
Marriott Marquis
1985–
Rooms: 2023
Floors: 49
Case study for Business
Travelers/Chain
segment

The Marriott Marquis, opened its doors on Broadway in 1985. With almost 2000 rooms, and over 100,000 m2 of convention spaces, it is one of the biggest hotels in New York City.



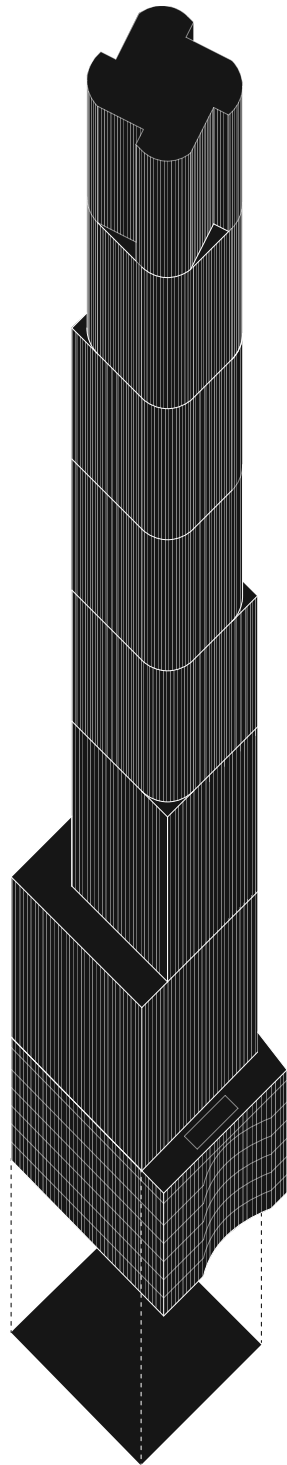
Resorts World New
York City
2012–
Rooms: 400
Floors: 12
Case study for
Gamblers/Casino
segment

Situated in Queens, the Resort World New York City Casino, coupled with an on-site Hyatt Regency hotel, operates as a racino. The distinction between a casino license and the current gaming infrastructure in the city lies in the authorization to offer table games such as poker or blackjack.



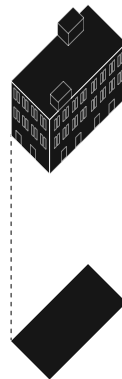
Public Hotel
2017–
Rooms: 367
Floors: 28
Case study for
Aspirants/Boutique
segment

The Public opened in Bowery in 2017 as part of Ian Schrager's latest boutique hotel chain. Consisting of 367 keys, its aim is to make luxury accessible to all through comfortable accommodations and an extensive ray of private and public amenities.



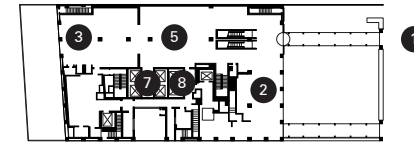
Equinox Hotel
2019–
Rooms: 212
Floors: 14
Case study for Wellness
Gurus/Wellness Spa
segment

The Equinox Hotel opened in Hudson Yards in 2019: a spa hotel launched by the Equinox fitness chain, comprising 212 keys and amenities focussed on fitness, relaxation, culture, and community. Office spaces and luxury housing are located at the bottom and top of the tower, respectively.

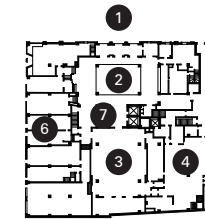


Nap York Central Park
2021–
Rooms: 30
Floors: 3
Case study for
Cheapskates/Capsule
segment

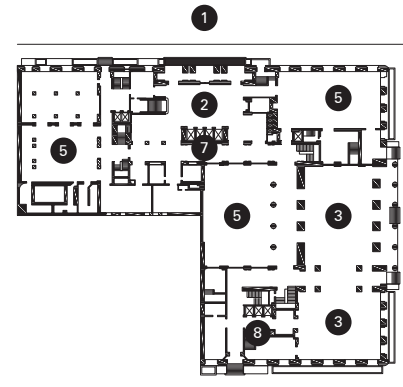
Nap York is a sleep station that offers sleeping pods by the hour. It provides a tranquil environment for individuals seeking a brief rest from the hustle of the city.



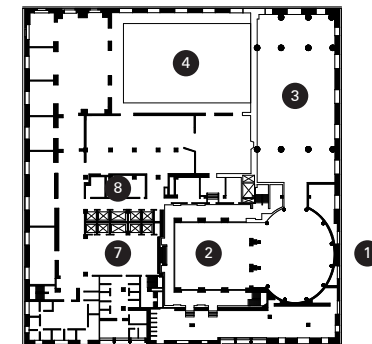
Public Hotel
Rooms: 367



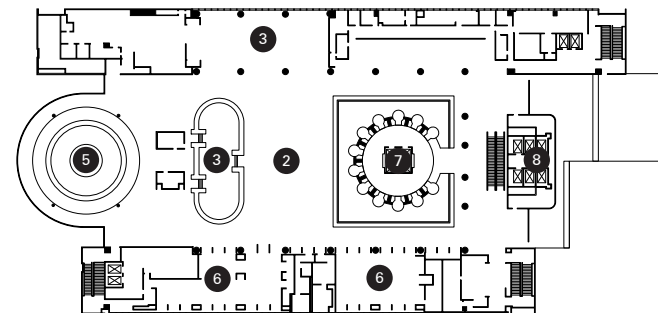
The Barbizon
Rooms: 372



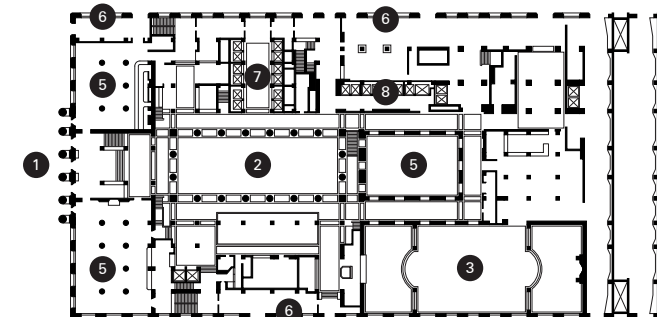
The Plaza
Rooms: 463



Roosevelt Hotel
Rooms: 1125



Marriott Marquis
Rooms per floor: 2023



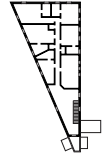
Hotel Pennsylvania
Rooms per floor: 2200

Entrance Floor

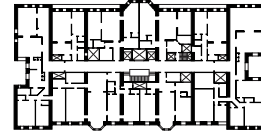
As temporary accommodations, all hotels function according to the same fundamental principles: Guests are welcomed, guided to the entrance, and greeted at reception or check-in kiosk, receiving keys for access. After guests check in, they navigate to their accommodations and use a variety of amenities during their stay.



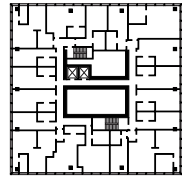
- | | |
|---------------------------|----------------------|
| 1. Street entrance | 7. Guest elevators |
| 2. Lobby | 8. Service elevators |
| 3. Restaurant/Dining hall | |
| 4. Kitchen | |
| 5. Café/Bar/Lounge | |
| 6. Retail | |



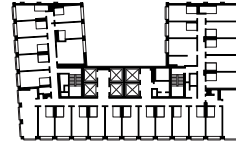
Liberty Inn
Rooms per floor: 6



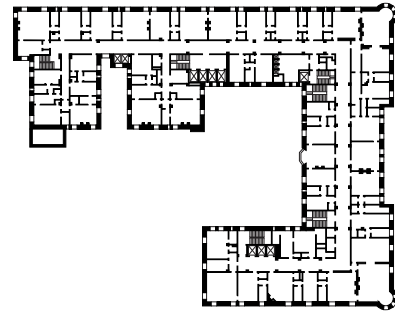
Hotel Chelsea
Rooms per floor: 11



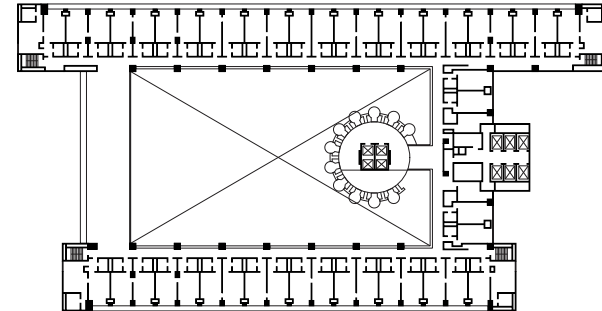
Equinox Hotel
Rooms per floor: 18



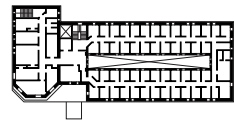
Public Hotel
Rooms per floor: 29



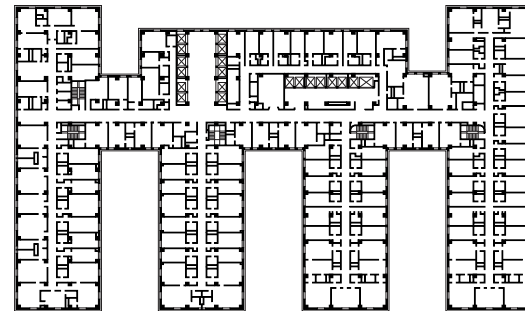
The Plaza
Rooms per floor: 40



Marriott Marquis
Rooms per floor: 50



The Jane
Rooms per floor: 59



Hotel Pennsylvania
Rooms per floor: 121

Typical Accommodation Floor



The Jane 1.8 x 2.4 m 4 m ²	Elk Hotel 1.2 x 4 m 4.8 m ²	The Barbizon 2.8 x 3.6 m 10 m ²	Public Hotel 3 x 6.5 m 18 m ²	Liberty Inn 3.4 x 6.5 m 22 m ²	Stewart Hotel 3.2 x 7.5 m 24 m ²	Nap York 2.7 x 11.5 m 27 m ²	Roosevelt Hotel 4.2 x 9.6 m 30 m ²
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Marriott Marquis 4.2 x 9.2 m 40 m ²	Equinox Hotel 4.2 x 10 m 42 m ²	The Plaza 7.2 x 6.4 m 43 m ²	Aria Rooms & Suites Las Vegas* 5.2 x 9.6 m 48 m ²	Four Seasons Orlando* 4.5 x 12.5 m 55 m ²	Chelsea Hotel 8.4 x 7.8 m 74 m ²
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Fourteen Hotel Rooms

The characteristics of the hotel type and its targuet guest are reflected in the room's size, spatial configuration, furnishings and room amenities.

87.3%



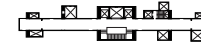
Hotel Chelsea
Floor plate: 1146 m2
Accommodation: 1001 m2

76.9%



Equinox Hotel
Floor plate: 1136 m2
Accommodation: 874 m2

12.7%



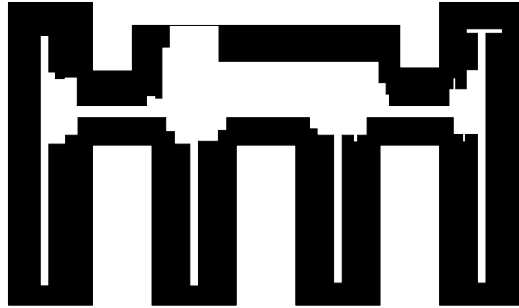
Hotel Chelsea
Floor plate: 1146 m2
Circulation, Services and Systems: 145 m2

23.1%



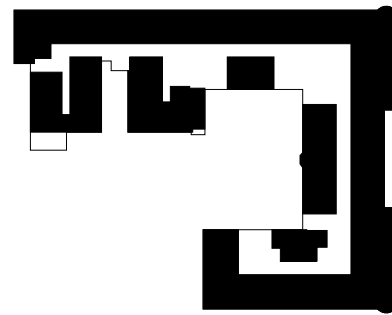
Equinox Hotel
Floor plate: 1136 m2
Circulation, Services and Systems: 262 m2

74.8%



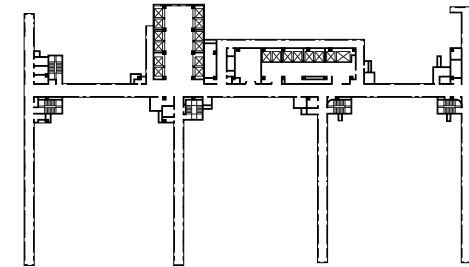
Hotel Pennsylvania
Floor plate: 4472 m2
Accommodation: 3349 m2 (74.8%)

72.9%



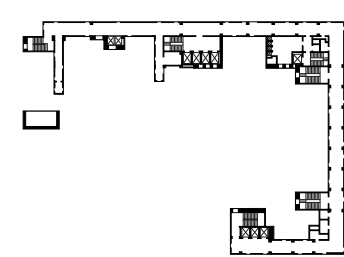
The Plaza
Floor plate: 2453 m2
Accommodation: 1789 m2

25.2%



Hotel Pennsylvania
Floor plate: 4472 m2
Circulation, Services and Systems: 1123 m2

27.1%



The Plaza
Floor plate: 2453 m2
Circulation, Services and Systems: 664 m2

72.1%



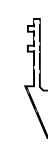
Liberty Inn
Floor plate: 215 m2
Accommodation: 155 m2

71.2%



Public Hotel
Floor plate: 988 m2
Accommodation: 704 m2

27.9%



Liberty Inn
Floor plate: 215 m2
Circulation, Services and Systems: 60 m2

28.8%



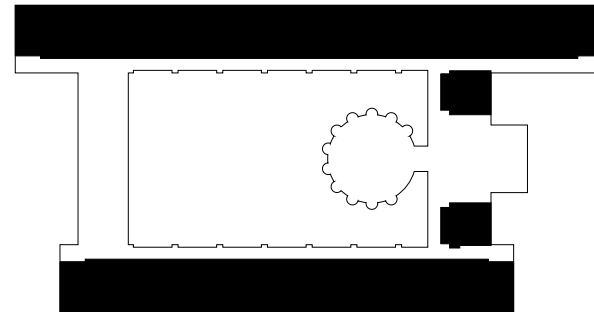
Public Hotel
Floor plate: 988 m2
Circulation, Services and Systems: 284 m2

67.4%



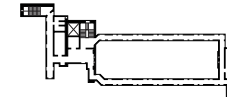
The Jane
Floor plate: 605 m2
Accommodation: 408 m2

60.4%



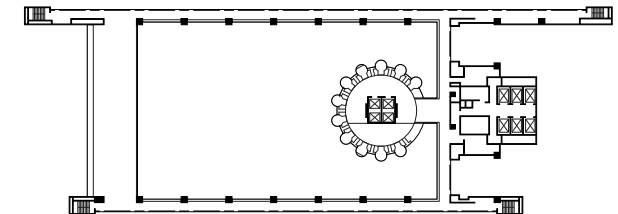
Marriott Marquis
Floor plate: 3802 m2
Accommodation: 2297 m2

32.6%



The Jane
Floor plate: 605 m2
Circulation, Services and Systems: 197 m2

39.6%



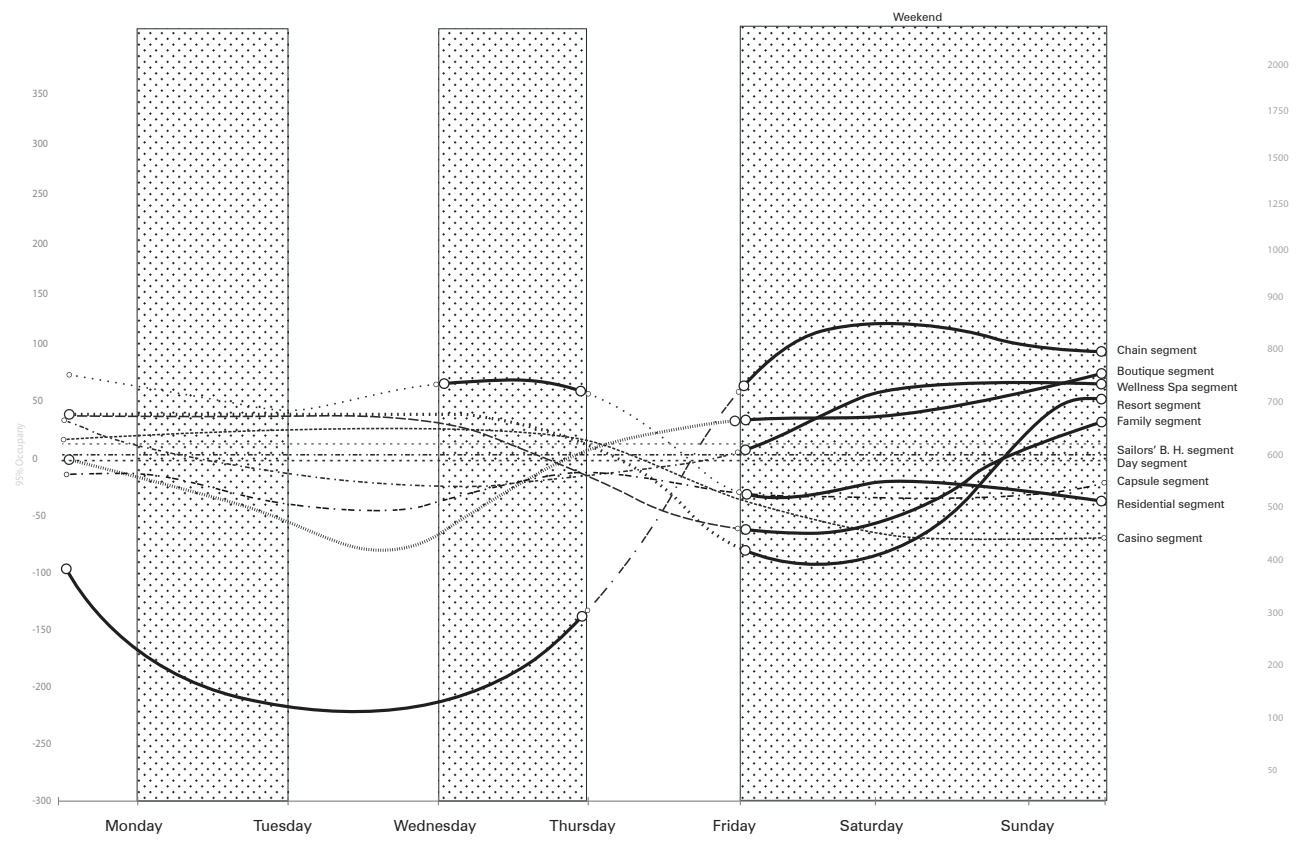
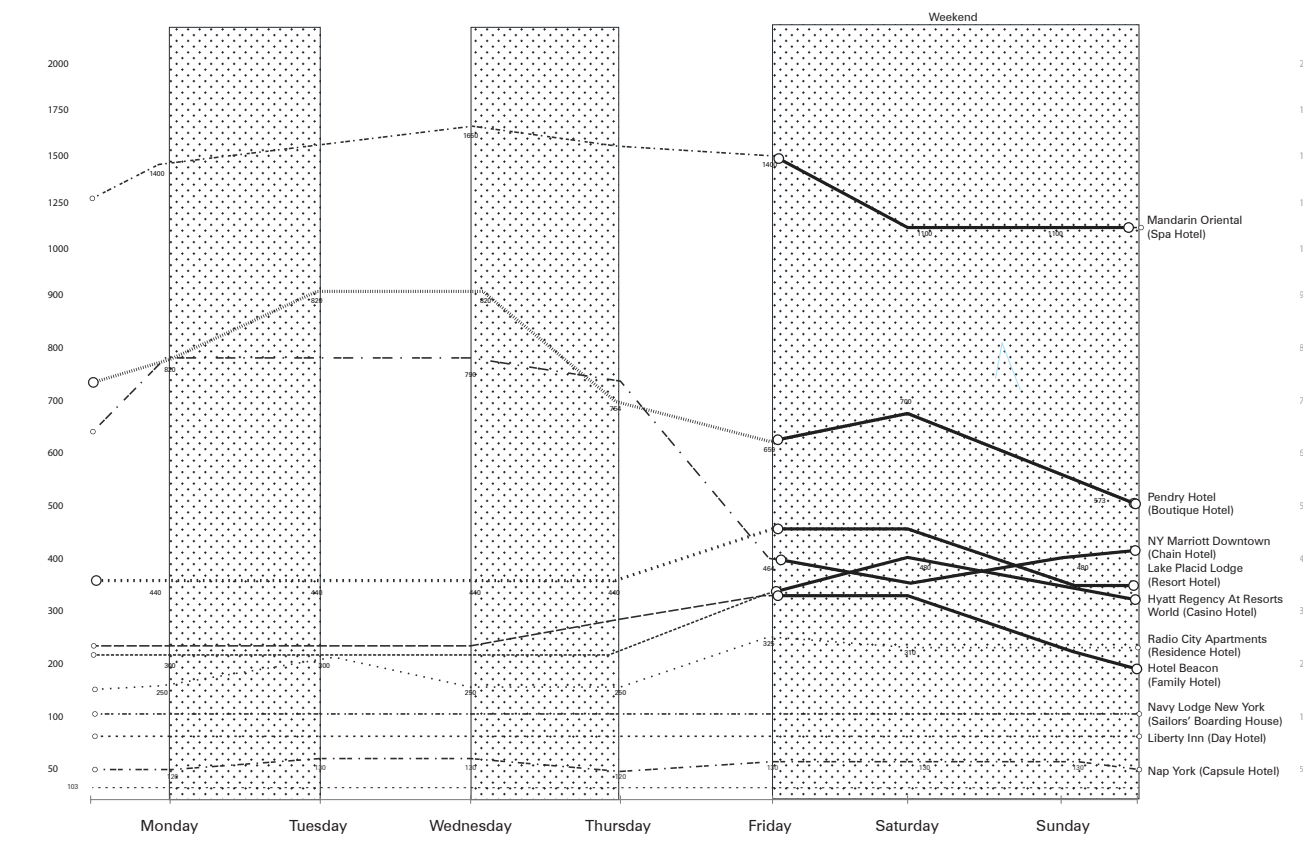
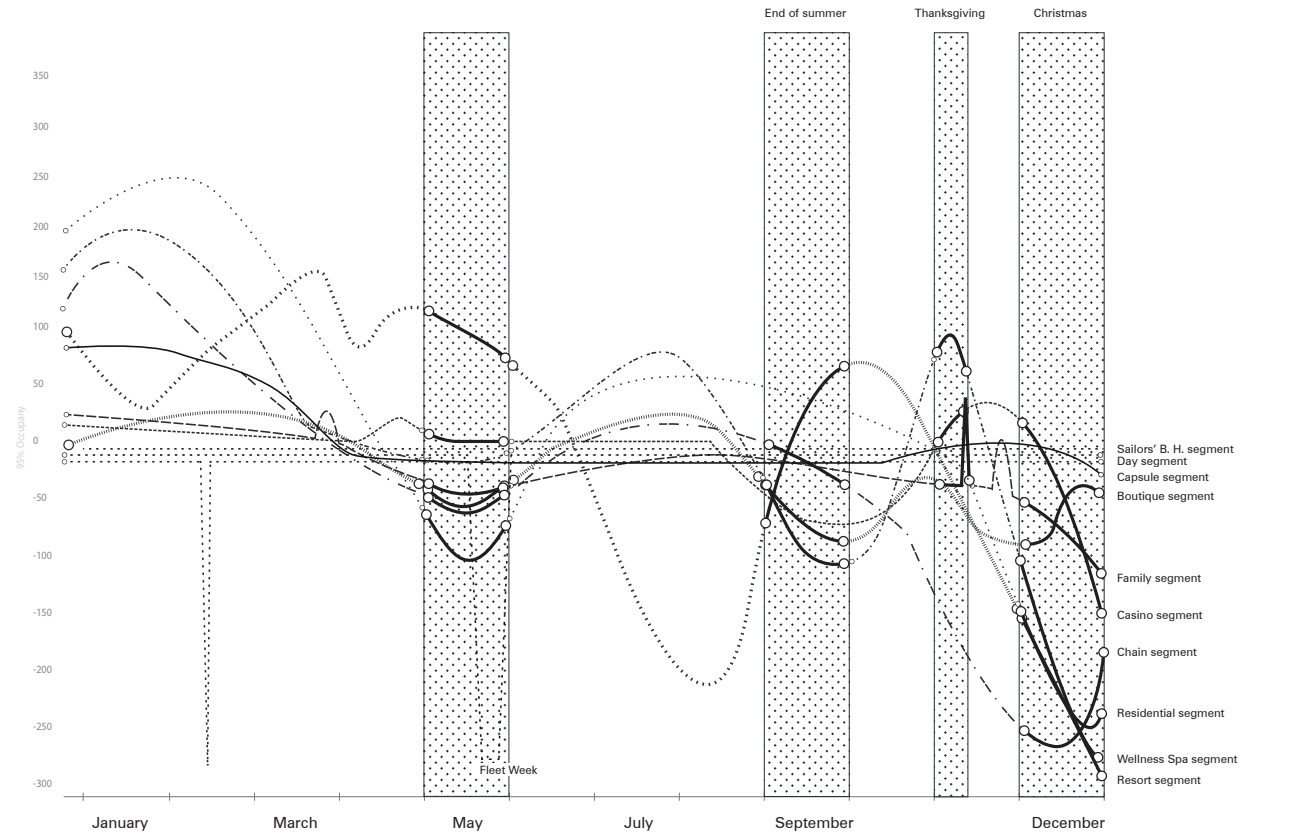
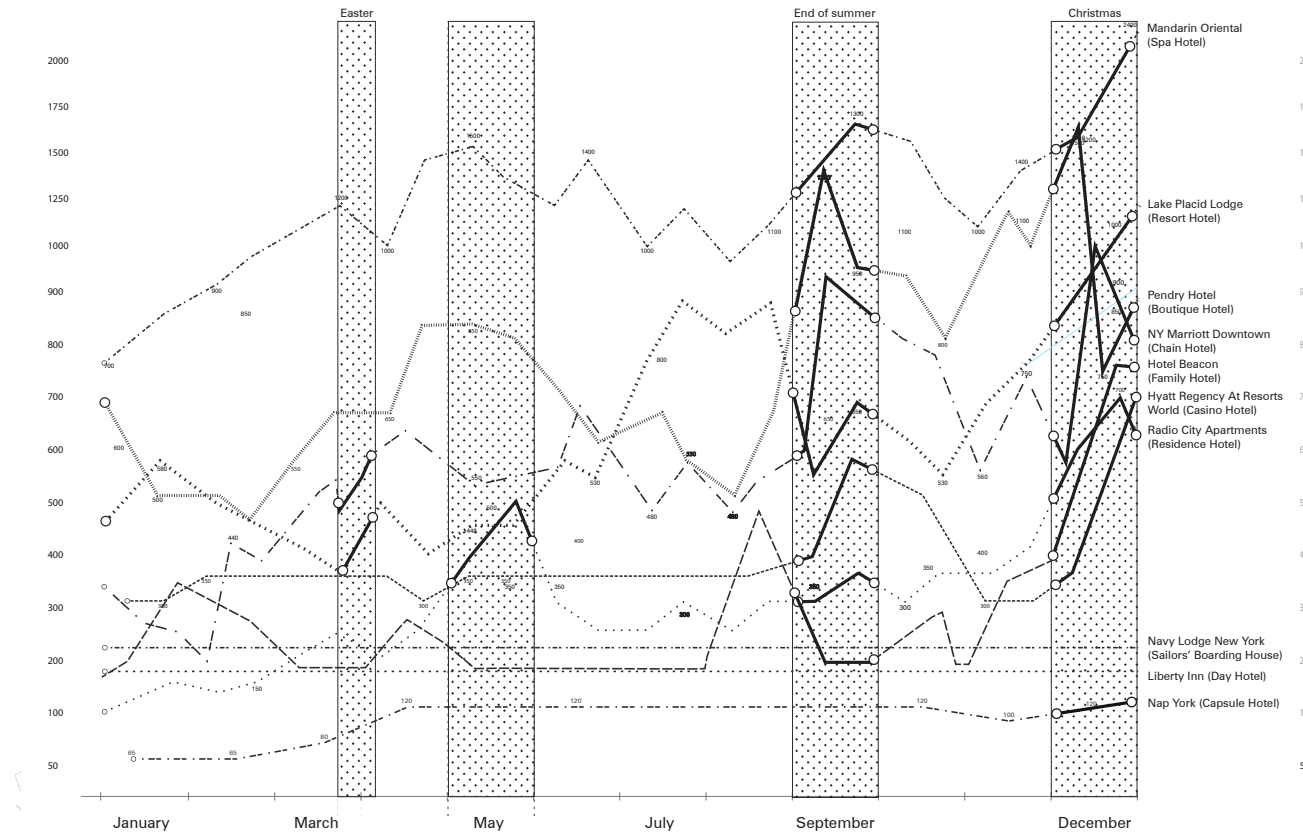
Marriott Marquis
Floor plate: 3802 m2
Circulation, Services and Systems: 1505 m2

Accommodations Ratio



Circulation, Services and Systems Ratio





Yearly/Weekly Hotel Prices per Type

These diagrams map the yearly and weekly hotel price fluctuations based on different hotel-type precedents.

Projected Yearly/Weekly Room Availability per Type

A visualization of the projected occupancy and room availability of each hotel type throughout the year based on the size as a way to map potential seasonal occupancy compensations.

Skyscraper Museum

The Skyscraper Museum tour in NYC traced a timeline of significant skyscraper landmarks, spanning from the Landmarks Preservation Commission’s inception in 1965 to the completion of the AT&T Building in 2018. Insight from the tour guides delved into city commission dynamics, exploring the impact of appointed mayors and diverse commissioner backgrounds. The evolution of landmark designations initially focused on Midtown and later downtown. Museum maps showcased designated skyscrapers, highlighting Manhattan schist’s (bedrock) role and financial factors influencing locations.

A section spotlighted the Empire State Building’s early 2000s restoration, addressing disrepair

and past modifications. Led by preservation architect Byran Linda Bell, the restoration, approved by the Landmarks Preservation Commission, involved replacing marble, restoring an Art Deco chandelier, and creating a new typeface. The guides pointed out the historical significance of the Bankers Trust Building, emphasizing the need for comprehensive designation reports to prevent loss to development. The AT&T Building, a 2018 landmark, exemplified adaptive preservation in a postmodern style.

Air rights and zoning emerged as crucial elements in NYC’s preservation landscape, sparking public debates. The collaboration between the Landmarks Preservation Commission and building owners, fueled by federal historic preservation tax credits and tourism, played a pivotal role

in landmark decisions, underlining the intricate balance between preservation and development.

Skidmore, Owings & Merrill

The meeting with the architecture firm began with a tour of the firm’s 20th floor New York City office. The office values collaboration spaces, open areas, natural light, and acoustic solutions. The tour covered dedicated collaboration spaces, a double-height forum, material research, technology’s role, flexible workspace usage, and overall comfort in the office environment.

Following the tour, a discussion on skyscrapers and hospitality took place, featuring two main projects. One project focused on a prominent super tall tower in Midtown, deemed a mega-project,

while the other highlighted low-carbon skyscrapers. The impact of the pandemic on workplace design and collaboration was emphasized, showcasing an office redesign project for health and wellness.

The conversation delved into a research project centered on environmentally friendly, high-performance buildings. This included a manufacturing facility and research center dedicated to exploring low-carbon materials. Later, the focus turned to an in-depth exploration of the Urban Sequoia project, aiming to design buildings that mimic trees and actively absorb carbon. The design featured an integrated construction approach, a concrete shell, a timber floor, and a cavity for air distribution to surpass net-zero carbon emissions.

The presentation underscored the importance of flexibility in building design, incorporating technologies like solar glass, photovoltaics, and direct air capture for sustainability. The envisioned building network contributes to a forest-like system of structures for environmental benefits. The meeting concluded with a video presentation showcasing the Urban Sequoia project, addressing reduced embodied carbon, clean energy production, and an extended building lifespan.

Guy Nordenson Associates

The consultation with Guy Nordenson Associates aimed to gather expertise in designing the structure of a skyscraper featuring diverse hotel programs. The primary focus was on overcoming challenges related to core structure and fostering innovative design to shape a

distinctive communal space.

The engineers emphasized the resilience of reinforced masonry structures, spotlighting variations like cage-frame and skeleton frame constructions. The discourse also touched upon strategic material choices, including the use of timber with a height limit of 85 feet. Exploring the dichotomy between heavy and light structures, the conversation underscored the role of glass facades in light structures for optimal views. The engineers discussed the benefits of redundancy and reducing weight, proposing potential integration of masonry for infill or load-bearing functions, challenging conventional perceptions of skyscrapers as exclusively glass towers. Further discussions revolved around the relationship between structure and core, examining ad-hoc structures like the Seagram building and moment frames, alongside innovative concepts like outrigger trusses meeting the core. Superstructures were positioned as primary elements, complemented by adaptable and lighter secondary structures aligned with a Metabolism approach. Additional considerations included site-specific factors such as bedrock presence, potential subway rails below, and the utilization of trusses for spanning tracks. The meeting concluded with insights into the significance of skylobbies, the flexibility of secondary structures, and considerations for spread footings contingent on-site conditions.

Remnants of Penn Station Tour

Justin Rivers, the enthusiastic tour guide, led a captivating

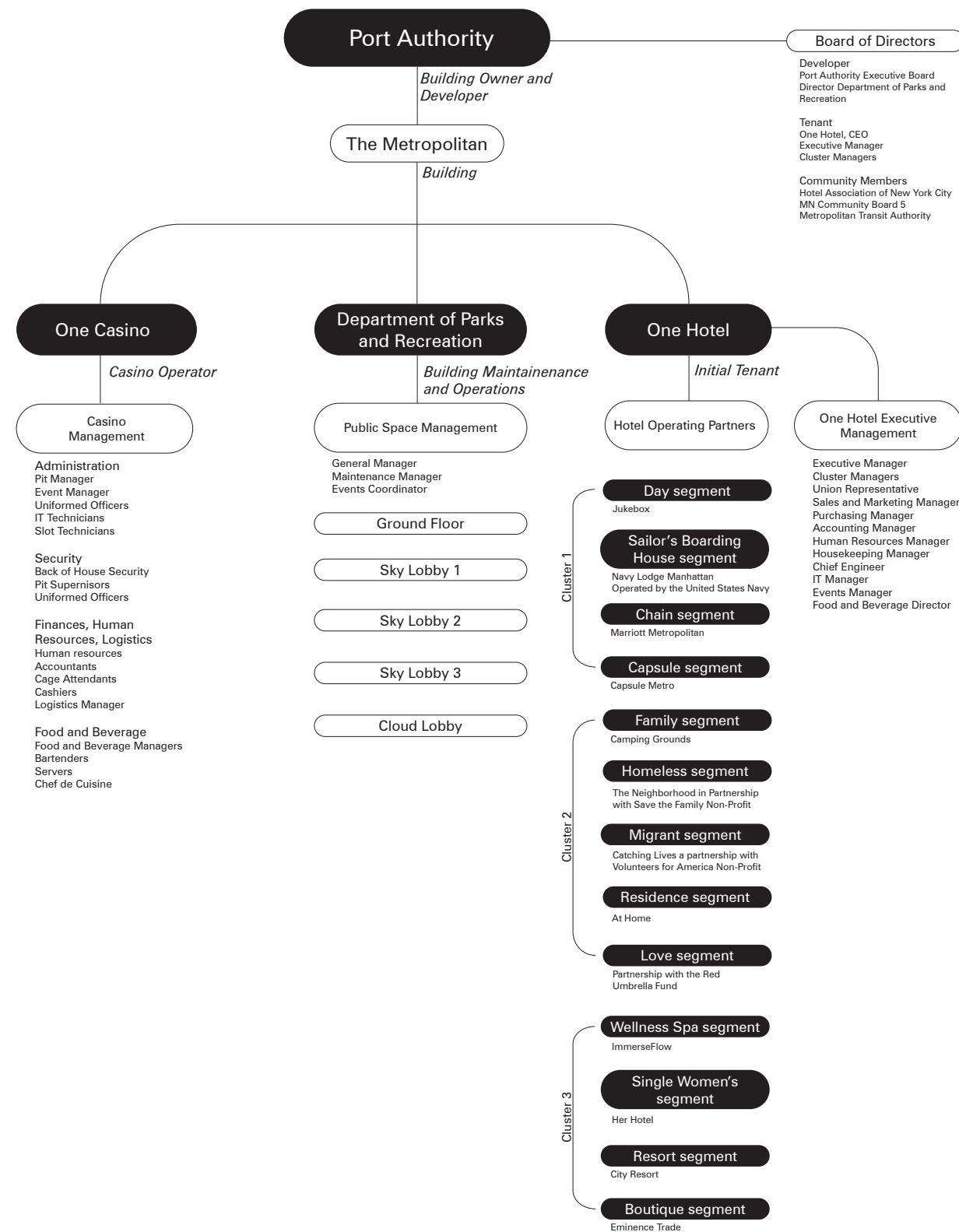
exploration of Penn Station, weaving personal anecdotes and historical insights. His roots in New York and a 25-year obsession with Penn Station, dating back to his Fordham University days, added a personal touch.

The two-hour tour delved into Penn Station’s rich history, from its grand opening in 1910 to the controversial demolition and the subsequent construction of Moynihan Train Hall. Using images, Jason showcased the station’s original grandeur, drawing parallels with Roman baths and European architecture. Exploring the station’s layout, Rivers touched on challenges faced by non-vehicle travelers, navigating areas like Seventh Avenue. He detailed the original driveways, courtyards, and waiting rooms, which have long been replaced by retail and high-traffic concourses. The back area discussion covered baggage carousels, entryways, and historical lighting fixtures. Art installations, redevelopment plans, and controversial proposals were also addressed, emphasizing the significance of often-overlooked details.

Jason’s narration extended beyond Penn Station to Hotel Pennsylvania, touching on its failed restoration plans and proposed redevelopment. He discussed the challenges of preserving historical landmarks, the potential relocation of Madison Square Garden, and the historical context of Gimbels Mall. Concluding with the latest Penn Station renderings, including art installations and the challenges faced during its original demolition, the tour provided an in-depth insight onto the complex history of renovation and development around Penn Station since the 1960s.

Expert Conversations

Ten-day schedule of fieldwork in New York City, along with summaries of conversations we had with experts from different fields.



A casino where gamblers are dealt a good time.

A boarding house that refreshes enlisted sailors.

A day hotel where lovers cross paths and share fleeting intimacies.

Capsules that treat cheapskates with a good deal.

A chain hotel that entices business travelers to extend their journey.

A family hotel that all members of the nuclear family can enjoy.

A homeless hotel that invests in children's better future.

A migrant hotel that shelters those on long-term relocation.

A residential hotel that is (almost) home to precariats on the move.

A love hotel where sex workers and customers can be intimate in a safe environment.

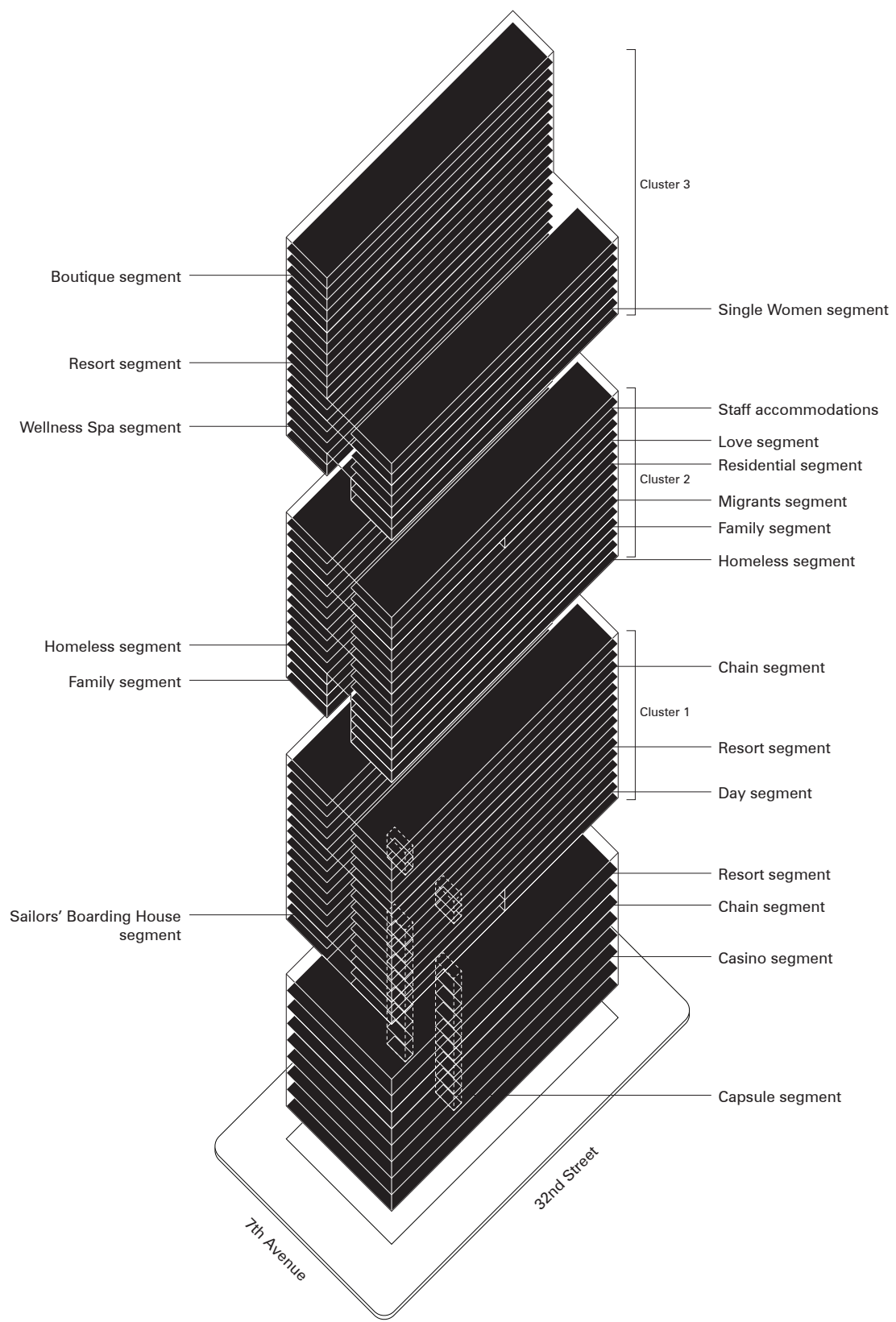
A wellness spa that blends sensory treatment with water-enhanced tranquility.

A resort that indulges vacationers in a manicured paradise.

A single women's hotel that supports women to live freely and confidently.

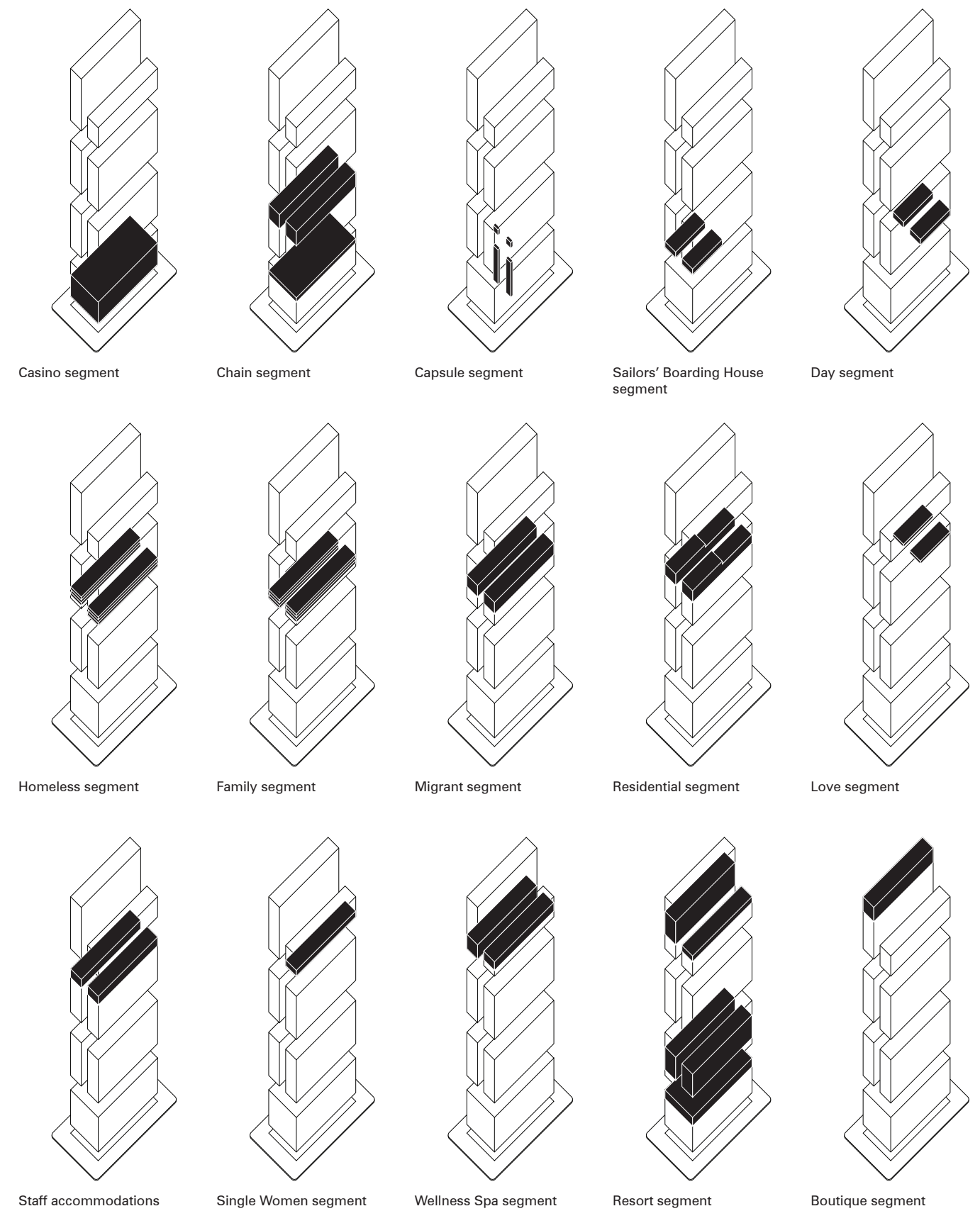
A boutique hotel that elevates aspirants' real life and online presence.

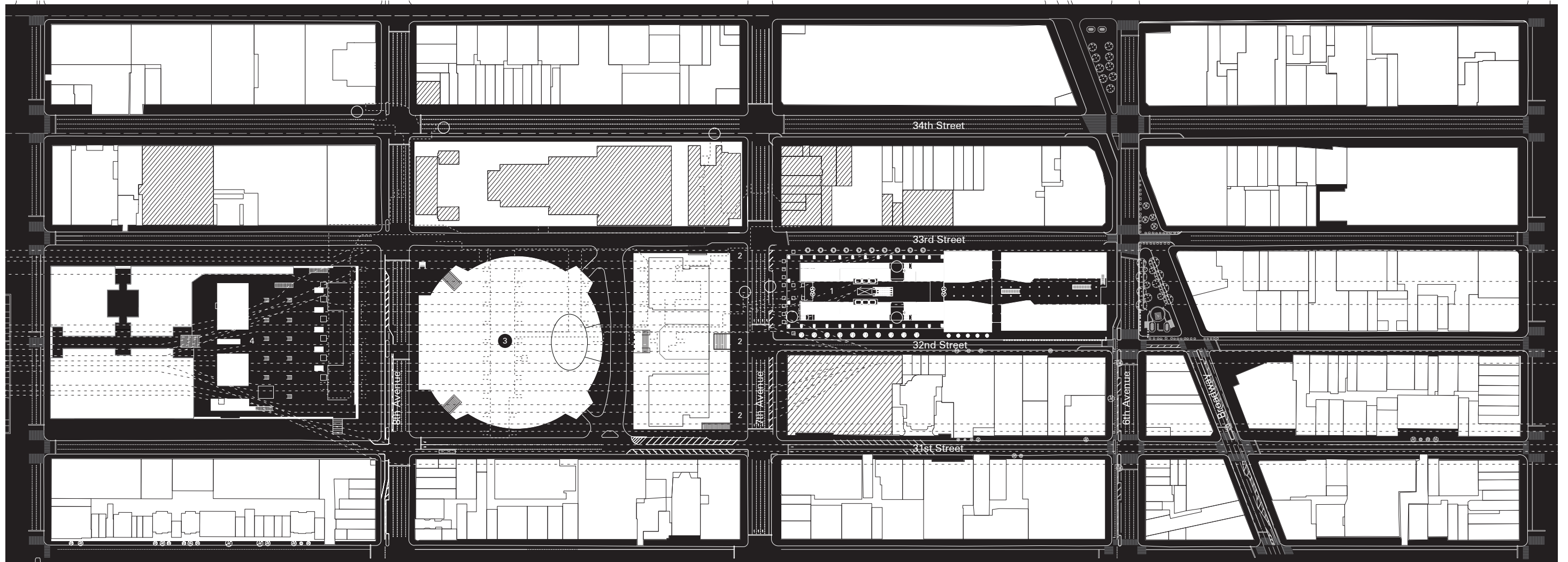
Hotel Ownership and Operation Diagram



Hotel Segments

The fourteen segments are arranged in clusters in the building. The first cluster has hotel accommodations and amenities intimately connected to the life of the city. The hotel types of the second cluster are associated with longer-stay accommodations and amenities. The accommodations in the third cluster are more private in nature. They are still connected to the city, but this connection occurs through views, rather than through the public invitation at the base of the building.





Site Plan

The Site of The Metropolitan is largely influenced by the Pennsylvania Station which runs below Madison Square Garden. The entrances to the station are at several points around the site thus leading to a complex underground network. The Moynihan Train Hall, redeveloped in 2020, is an above ground part of Pennsylvania Station and contributes to the commuter traffic. Besides the density of the site the details of ownership and real estate are important factors to note. The Vornado owned and development sites around The Metropolitan have a great influence on the design decisions that are taken for it. This would eventually modify the current nature of the site.

0
10
20
50
100 m

1. The Metropolitan

2. Access to Penn Station

3. Madison Square Garden

4. Moynihan Train Hall

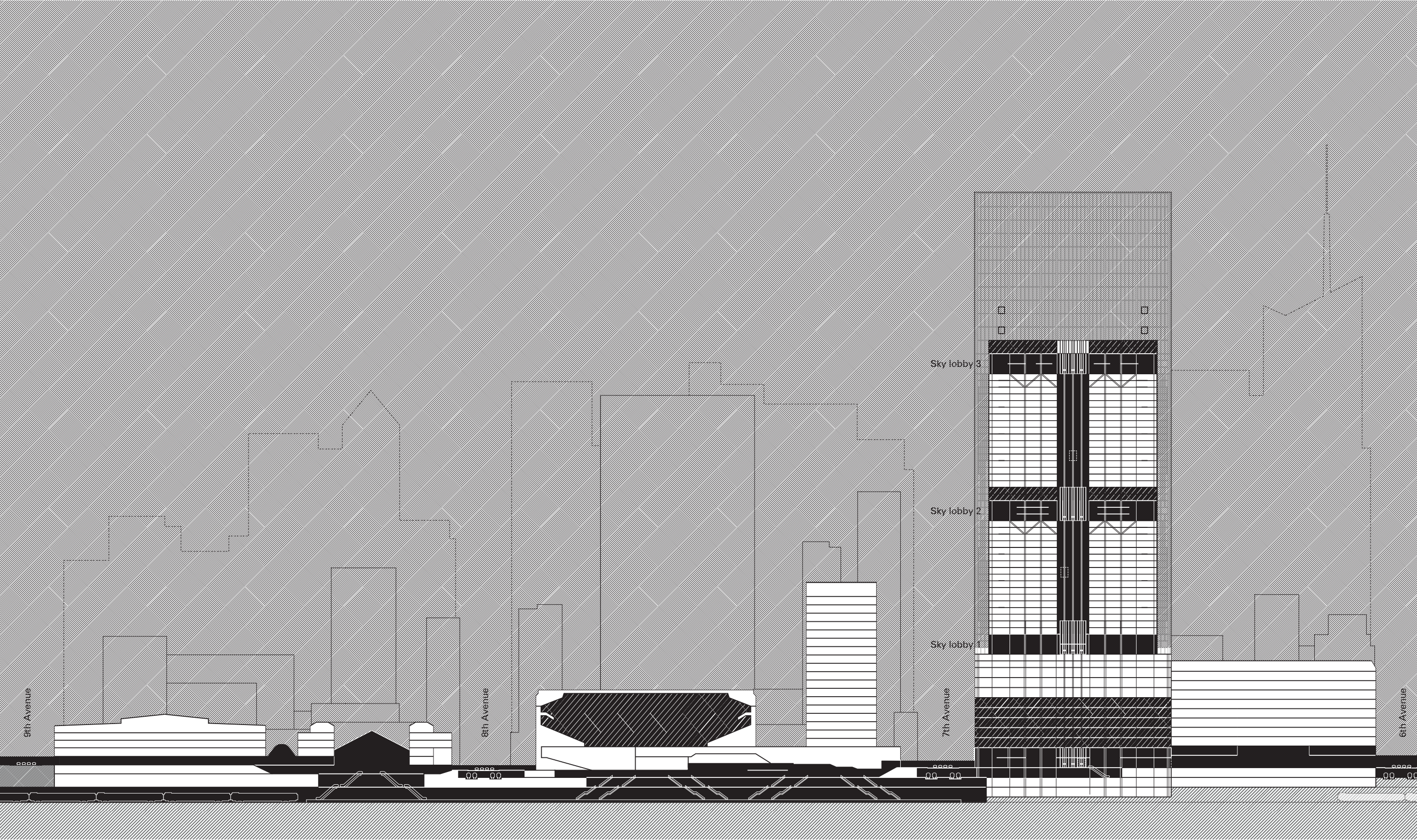
Public space

Subway exits

Vornado property

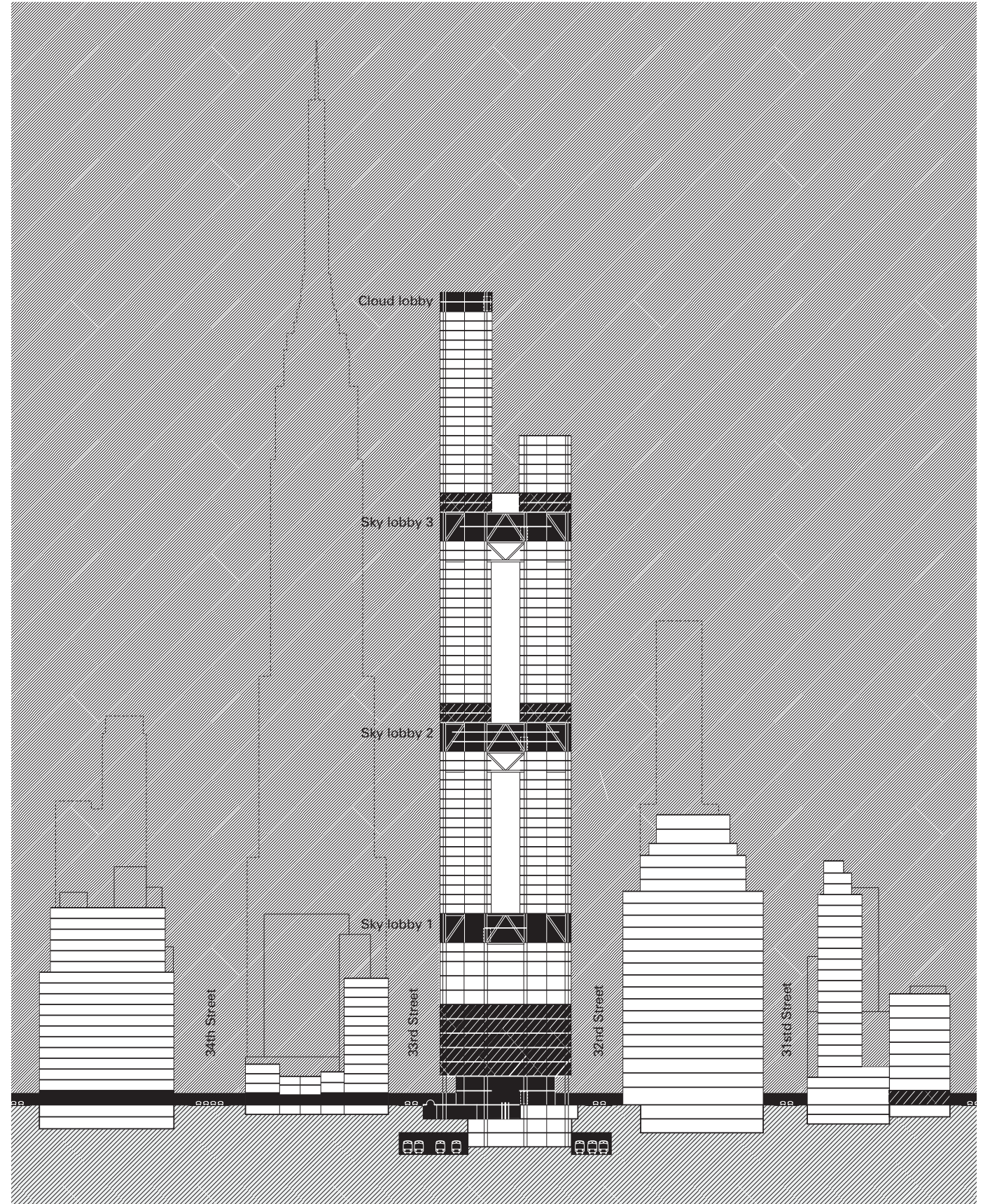
Penn Station tracks

Lower level commute



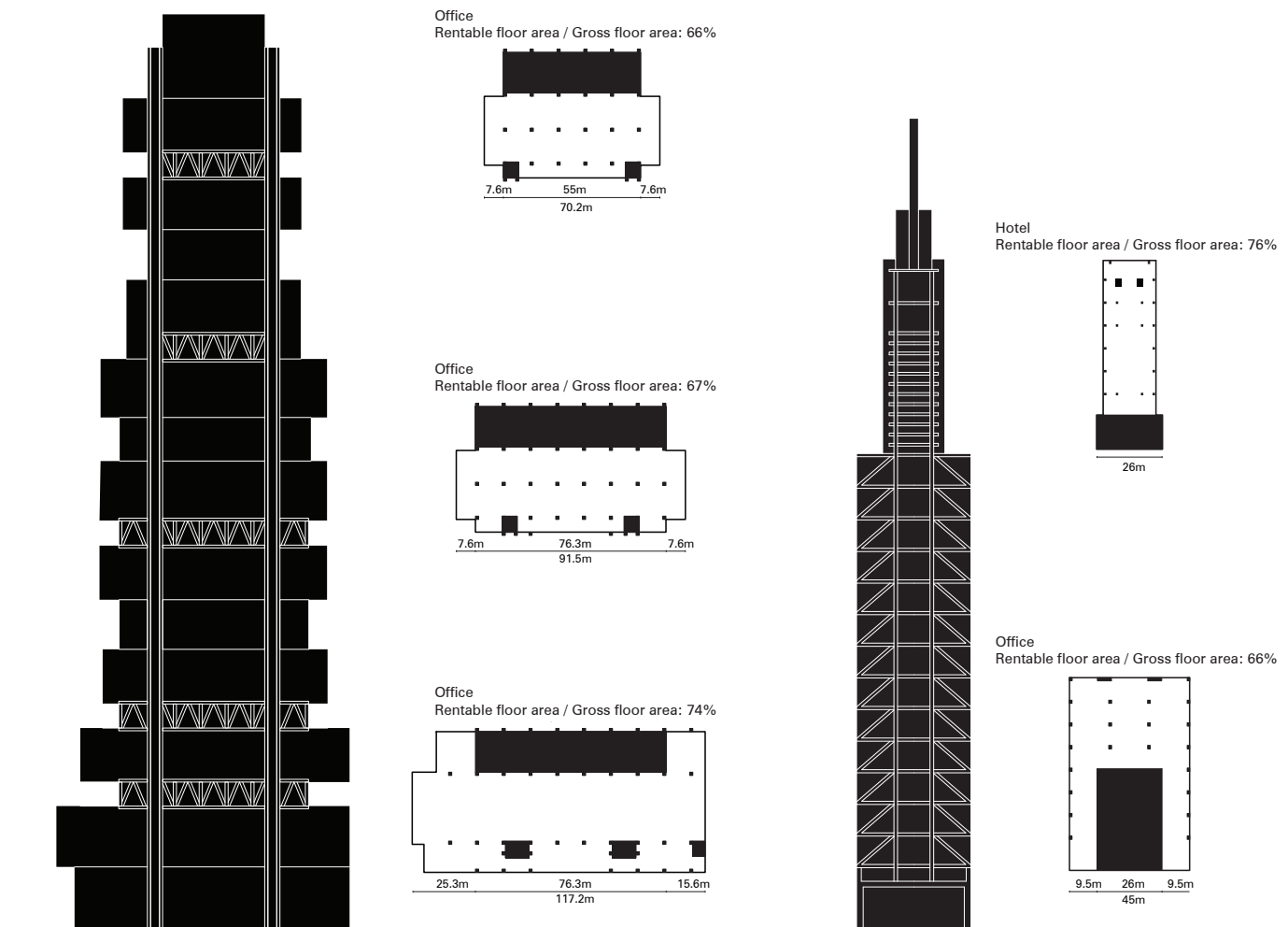
Context Section East-West

0 10 20 50 100 m



Context Section North-South

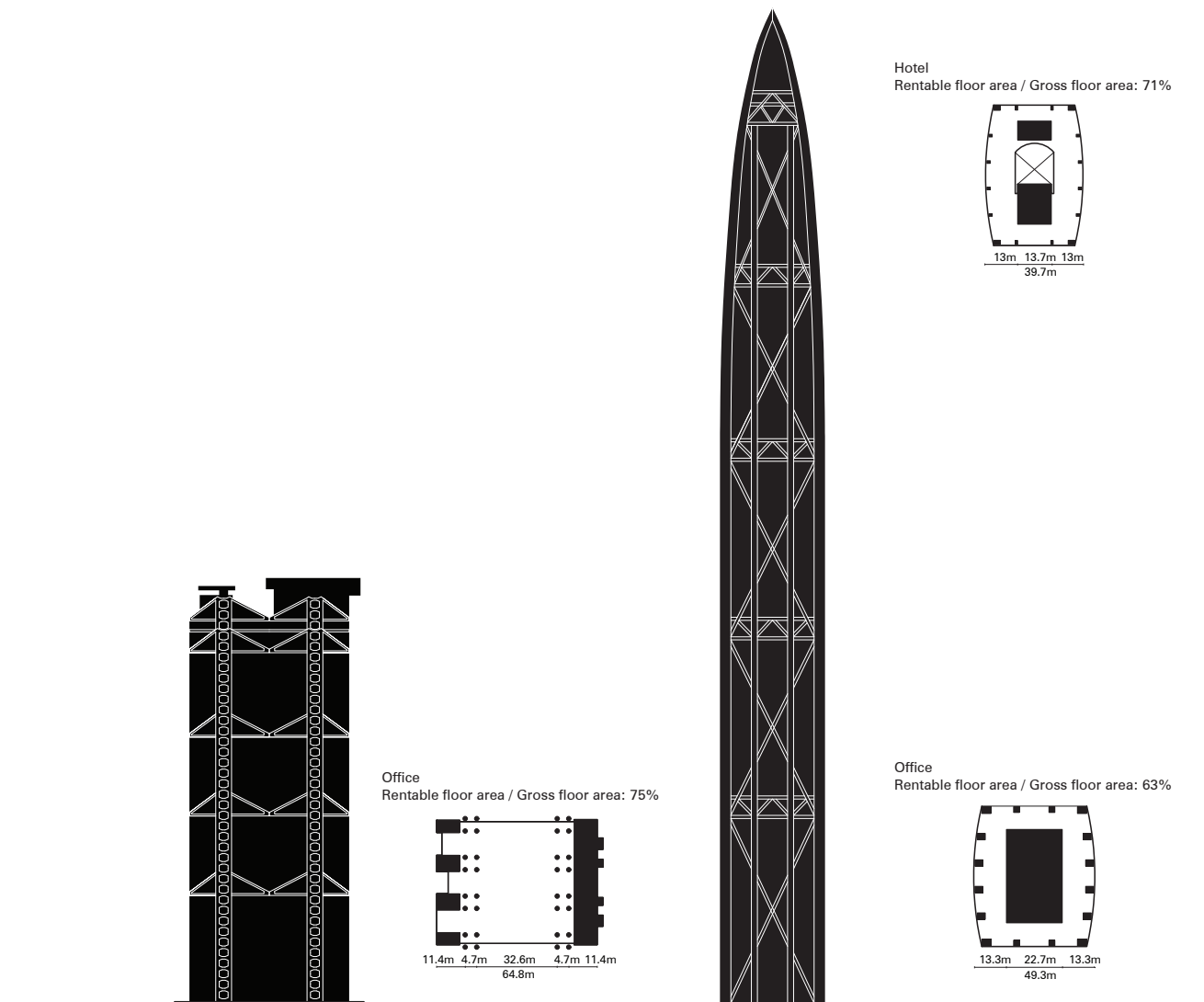
0 10 20 50 100 m



The peripheral core in PENN15 is designed to provide large office space to attract high-end tenants.

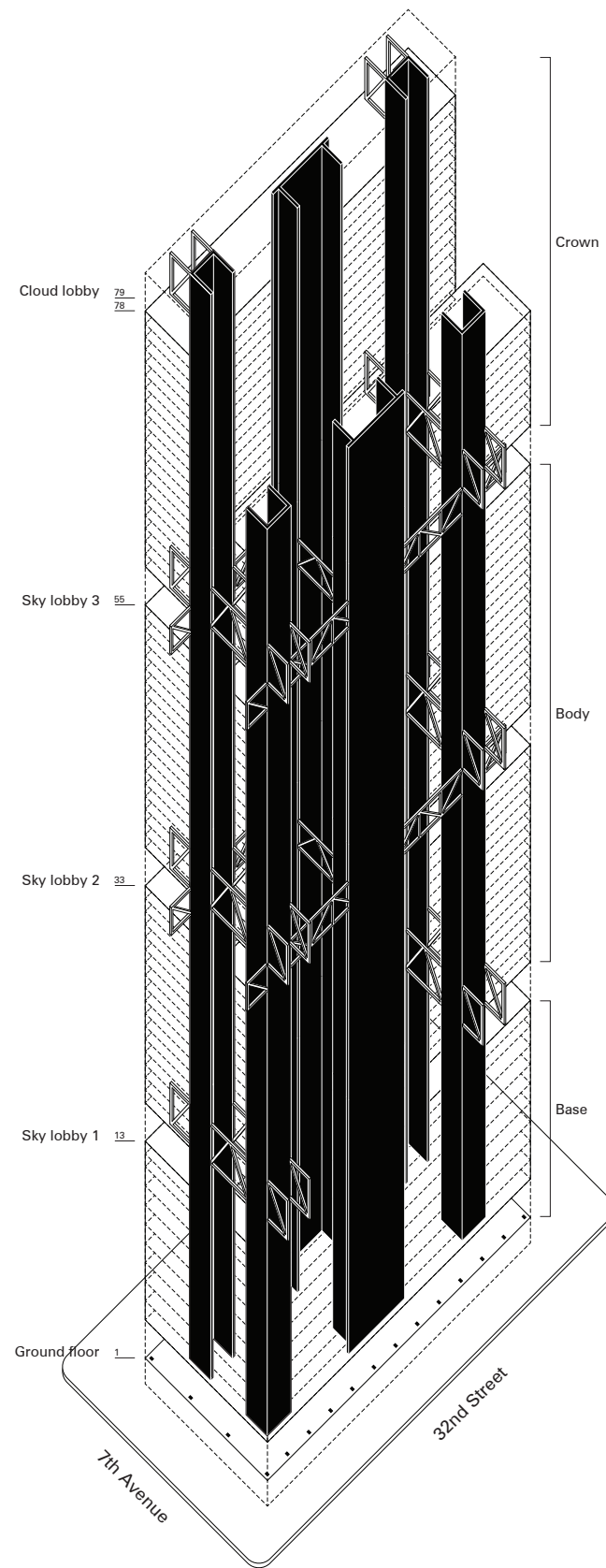
Off-set cores of different sizes at different heights in the Comcast Technology Centre give the office and hotel their own spatial flexibility.

Skyscraper Core and Structure Case Studies



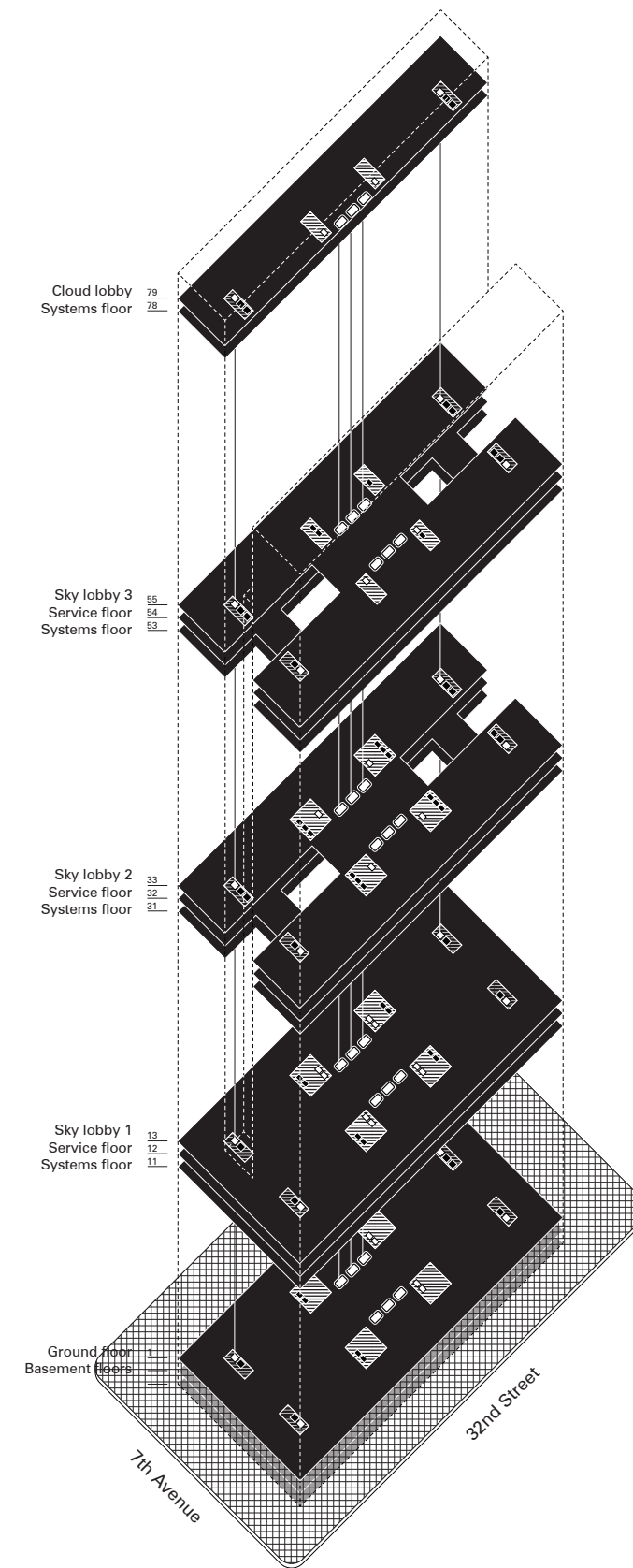
The decentralized cores of HSBC reduce the area ratio of the cores through a structural system enhanced by the association of multiple cores.

Kingkey 100 embodies the high potential of an outrigger structural system, and the core shrinks with increasing height and splits from the central core into two atrium cores.



Structure Axonometric

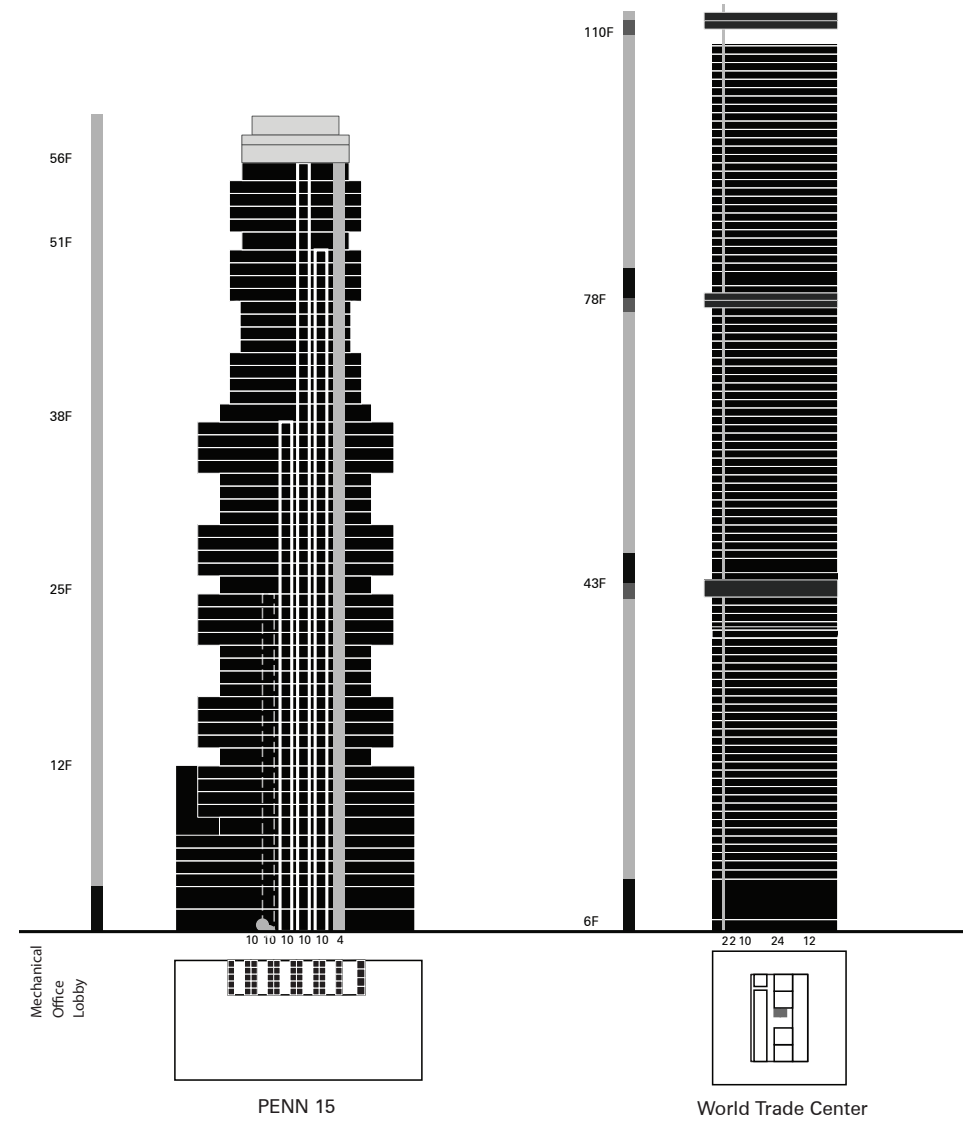
Symmetrical cores and trusses increase the structural efficiency, thus reducing core sizes. The cores are divided into three six smaller cores along the length of the building, leaving adaptable open spaces, and allowing for differing arrangements between hotel types across the floors. The lateral load is absorbed by an outrigger truss system that stiffens the building. Where the outrigger trusses are located, big open spaces with long spans become possible, which is desirable for public amenities.



Vertical Circulation Axonometric

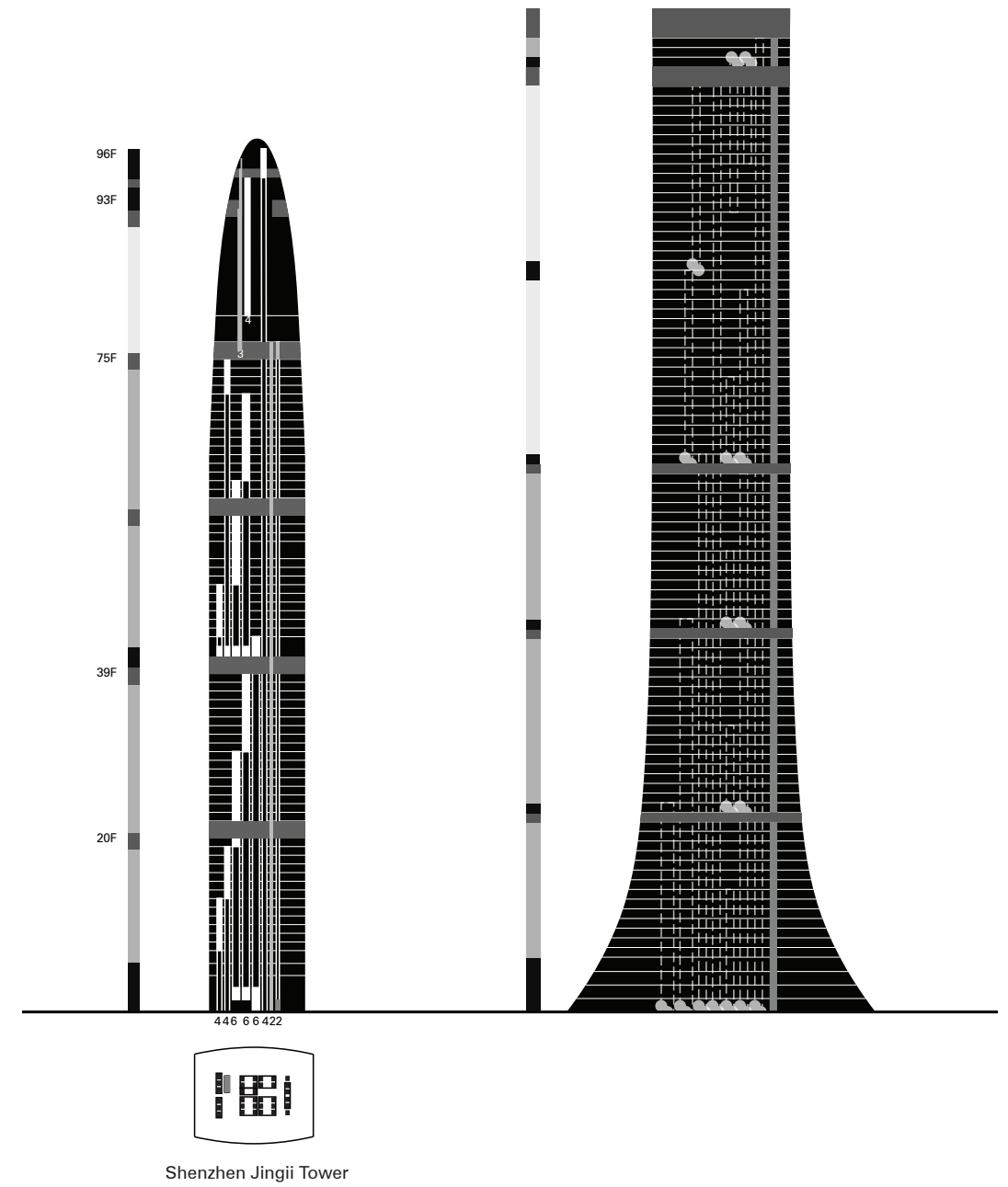
The vertical circulation is composed of three elevator systems: Metro Express, express, and local. The Metro Express connects with the subway, and stops on the ground floor, sky lobbies and observation deck. The express and local elevators are separated according to guest (central cores) and service use (corner cores). The express elevators stop at public and service floors, while the local elevators shuttle inside designated clusters.

- Metro Express elevator
- Express elevator
- Local elevator
- Guest elevator core
- Service elevator core



Office building high-rise like PENN 15 uses a straight-forward elevator scheme where the elevators connect the ground floor to a set of higher floors.

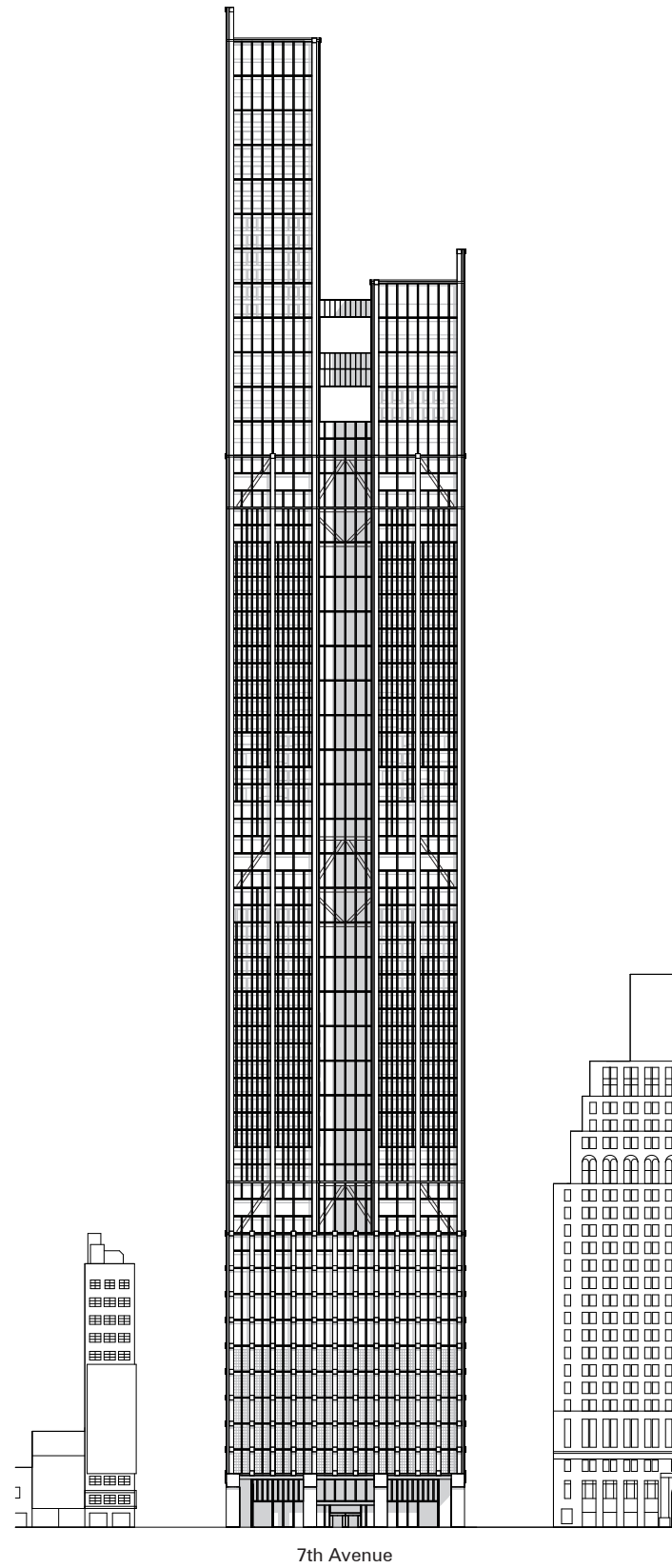
Sky lobby is a typical elevator scheme employed to reduce shaft space, and improve the efficiency of the elevator system. It acts as an intermediate interchange floor where people can change from an express elevator to a local elevator that stops at a subset of higher floors.



In the case of a mixed-use skyscraper with office and hotel, Kingkey 100 has a more complex elevator system with different ground access, one sky lobby for its office space, one check-in lobby for hotel, and an observational deck.

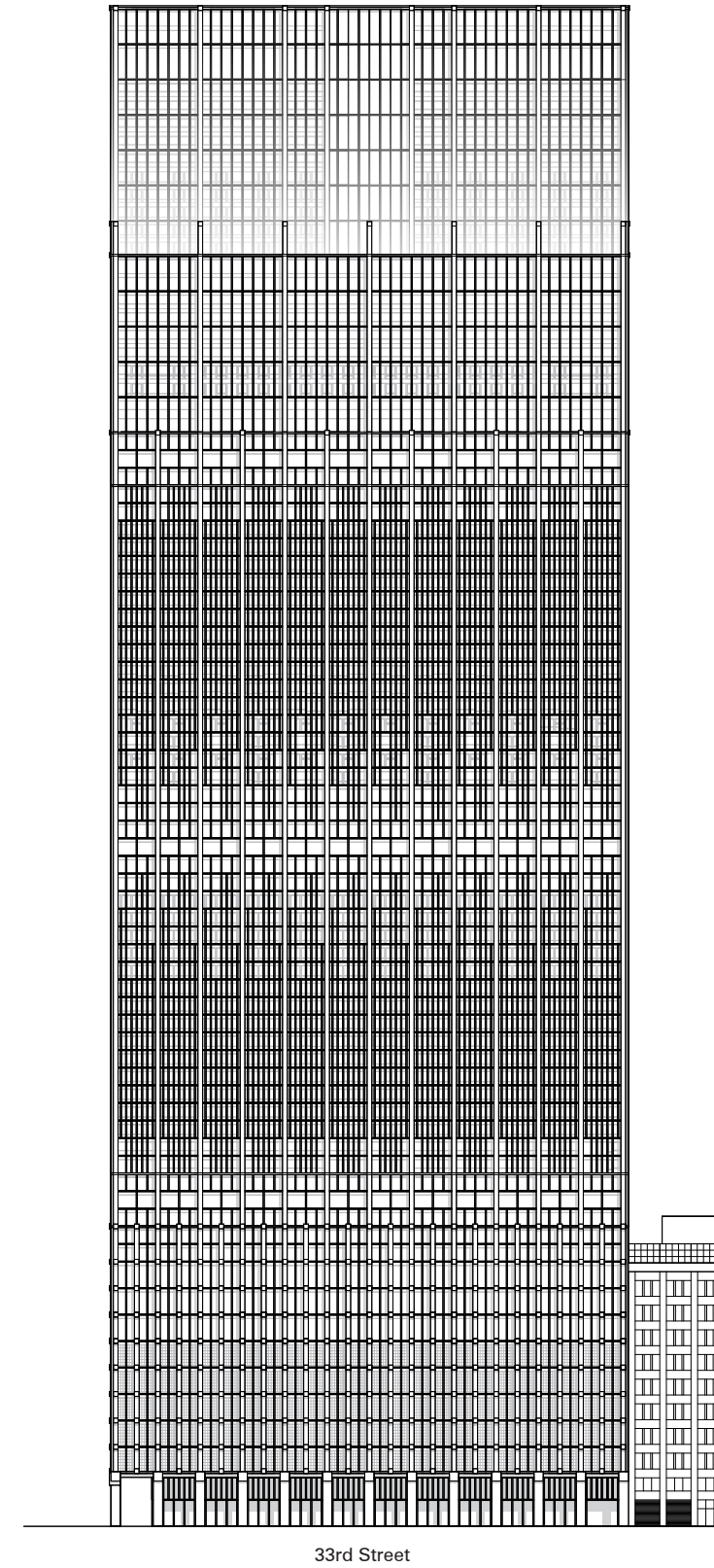
When envisioning a mixed-use highrise with office, residence, and hotel, the sharing of amenities floor is achieved through additional express elevators.

Skyscraper Elevator Case Studies



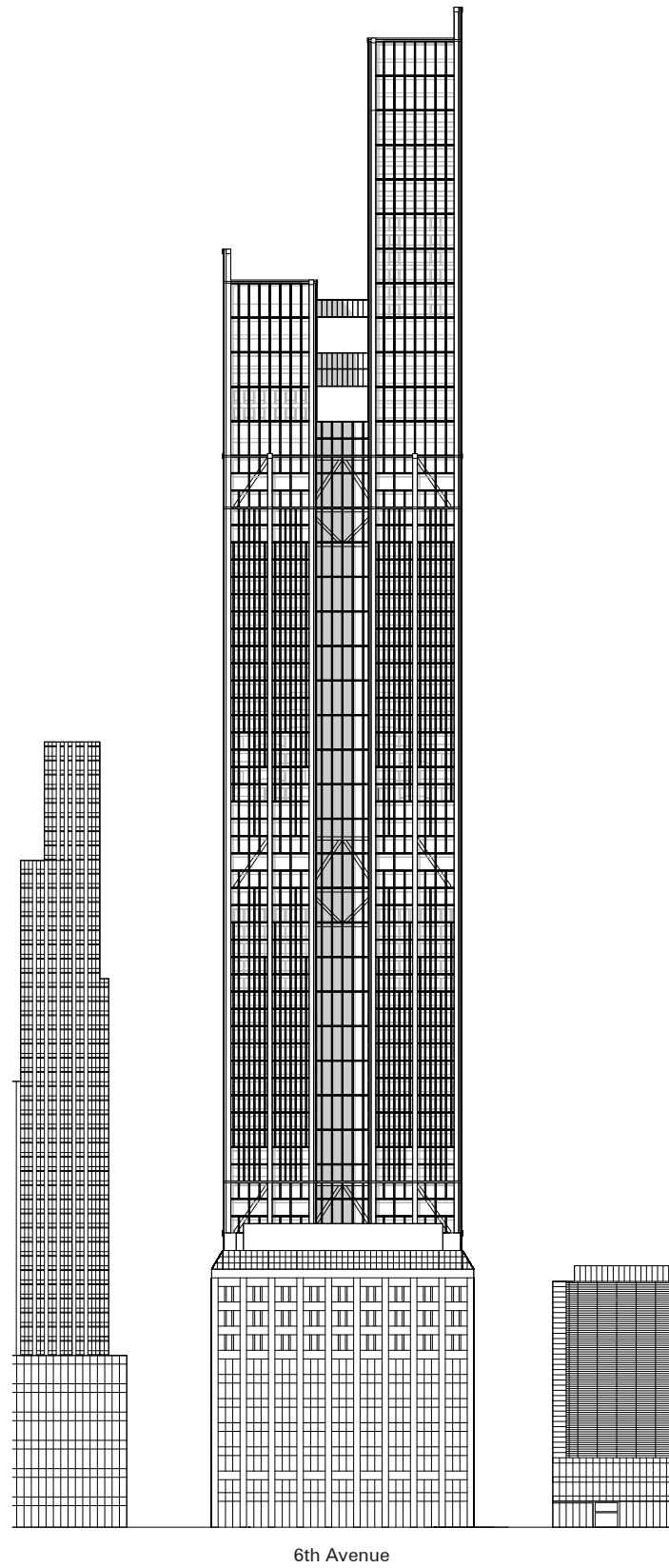
Tower Elevation - West

0 10 20 50 m



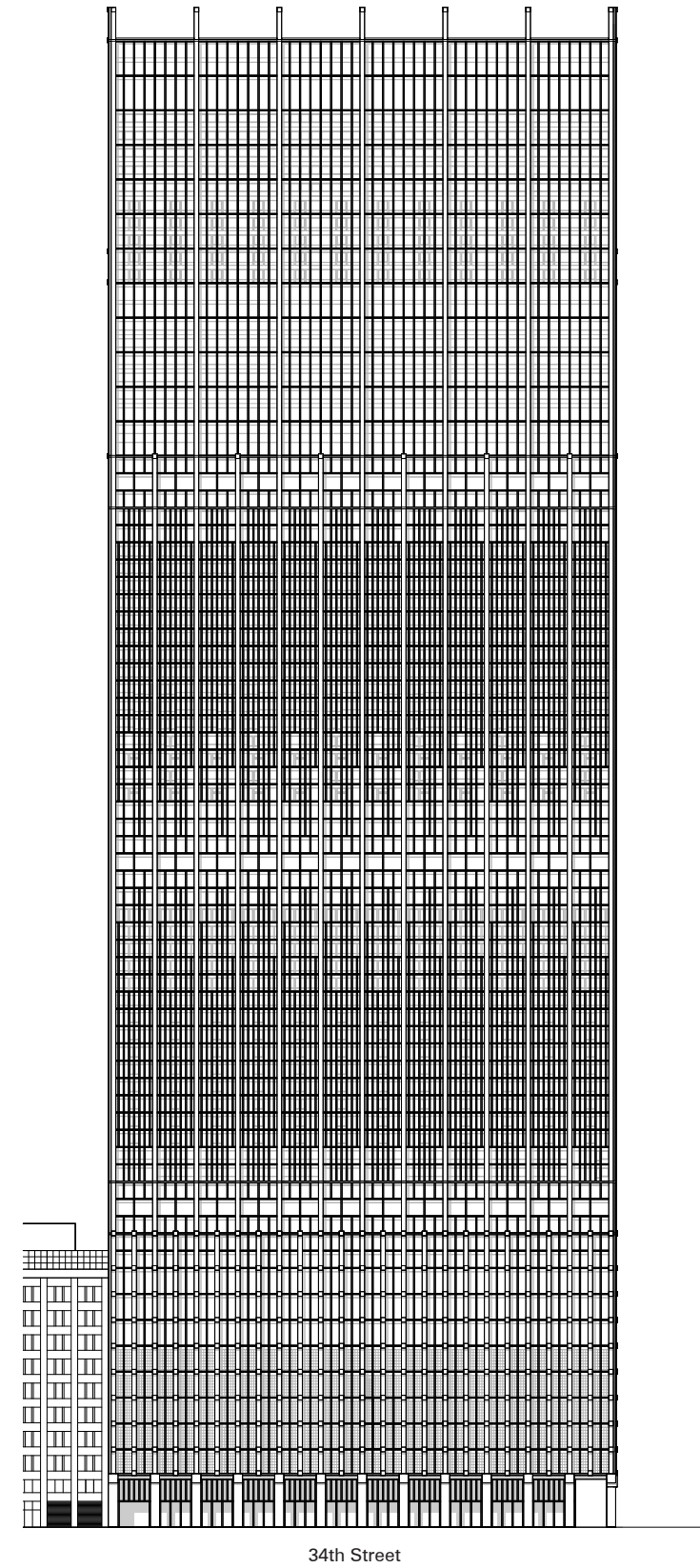
Tower Elevation - South

0 10 20 50 m



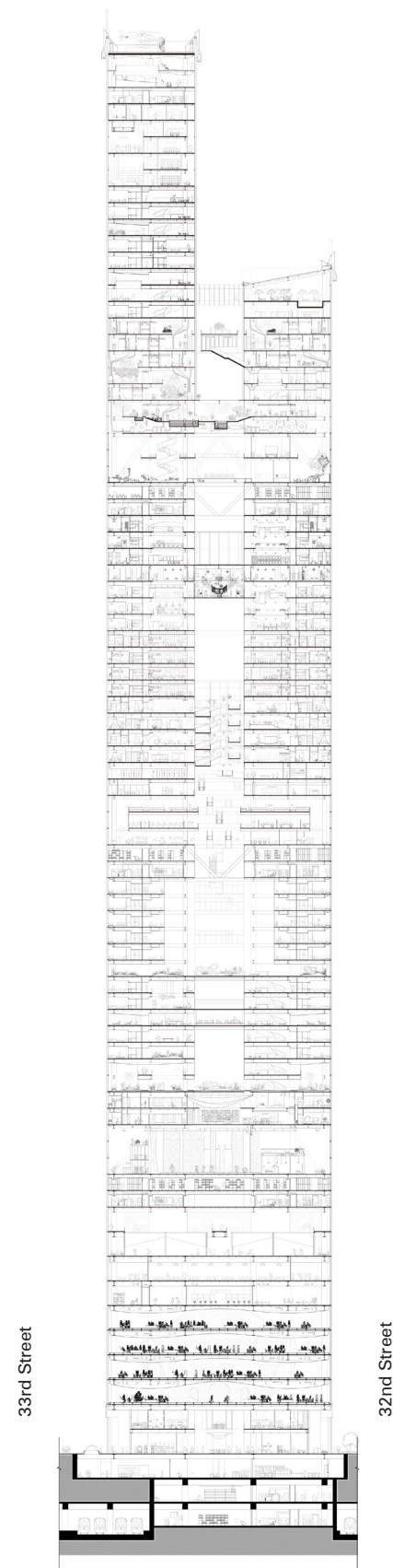
Tower Elevation - East

0 10 20 50 m



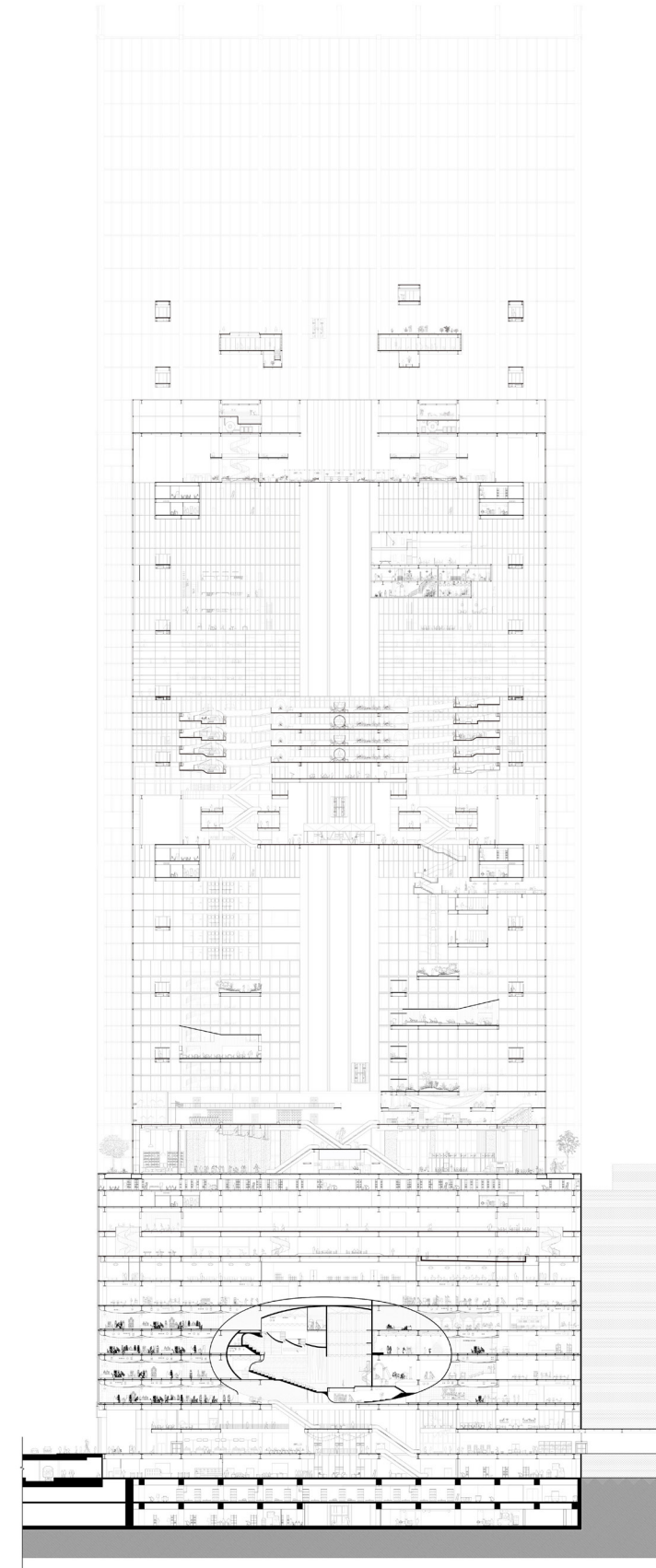
Tower Elevation - North

0 10 20 50 m



Tower Section North-South

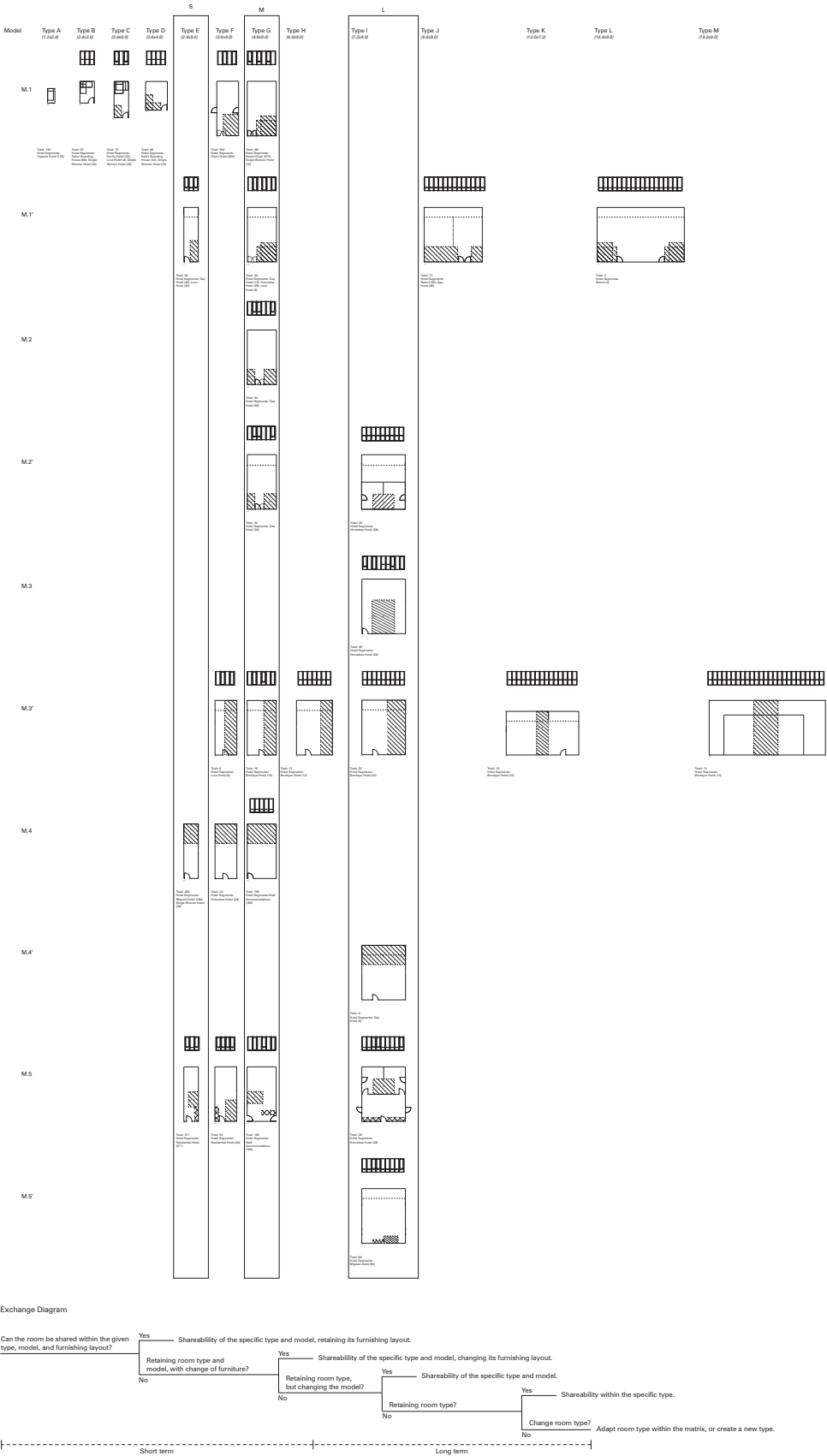
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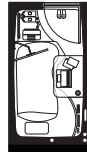


Tower Section West-East

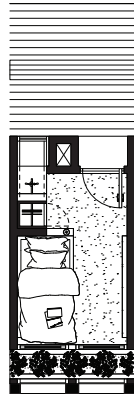
0 10 20 50 m

- 0 Casino segment
- 72 Day segment
- 100 Sailors' Boarding House segment
- 160 Capsule segment
- 300 Chain segment
- 112 Family segment
- 84 Homeless segment
- 264 Migrant segment
- 365 Residential segment
- 40 Love segment
- 130 Wellness Spa segment
- 112 Single Women's segment
- 508 Resort segment
- 70 Boutique segment
- 180 Staff Accommodation
- 2497 One Hotel Total Keys

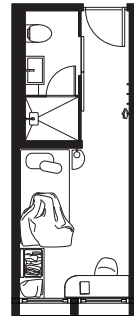




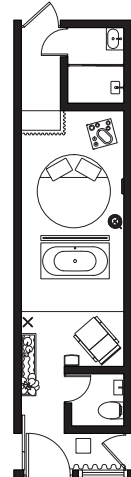
Capsule segment



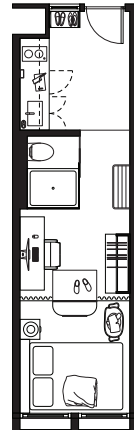
Sailors' Boarding House segment



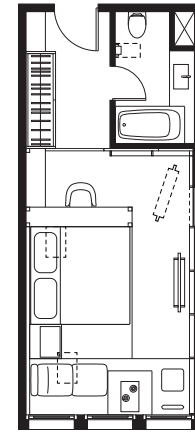
Single Women's segment



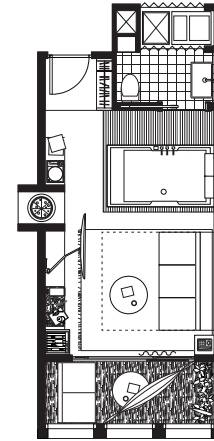
Love segment



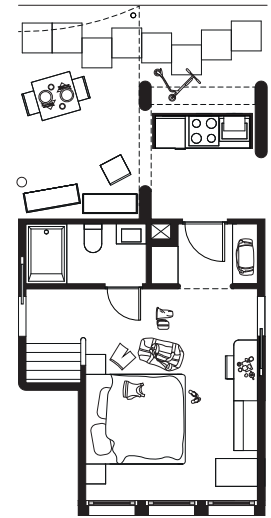
Residential segment



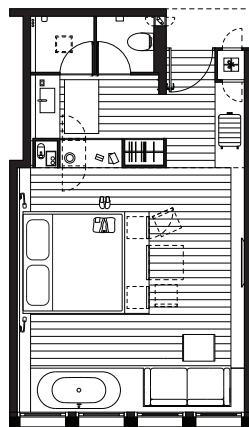
Chain segment



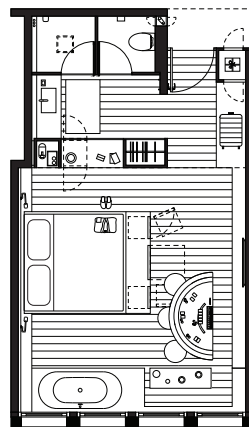
Day segment



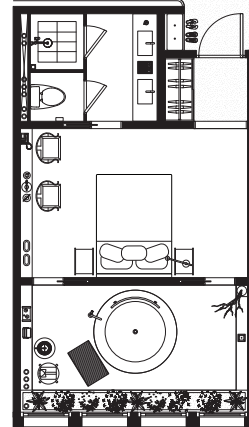
Family segment



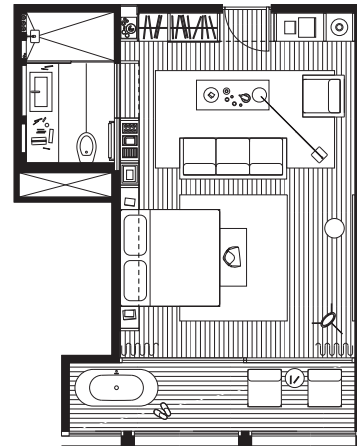
Resort segment



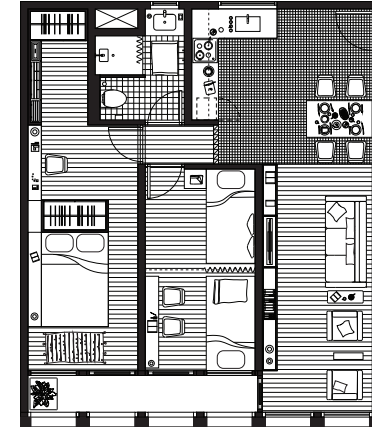
Casino segment



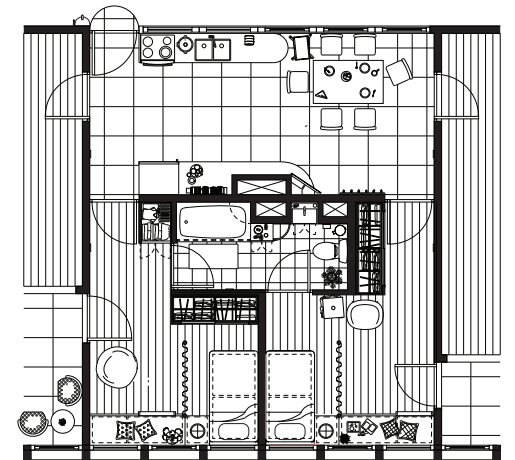
Wellness Spa segment



Boutique segment

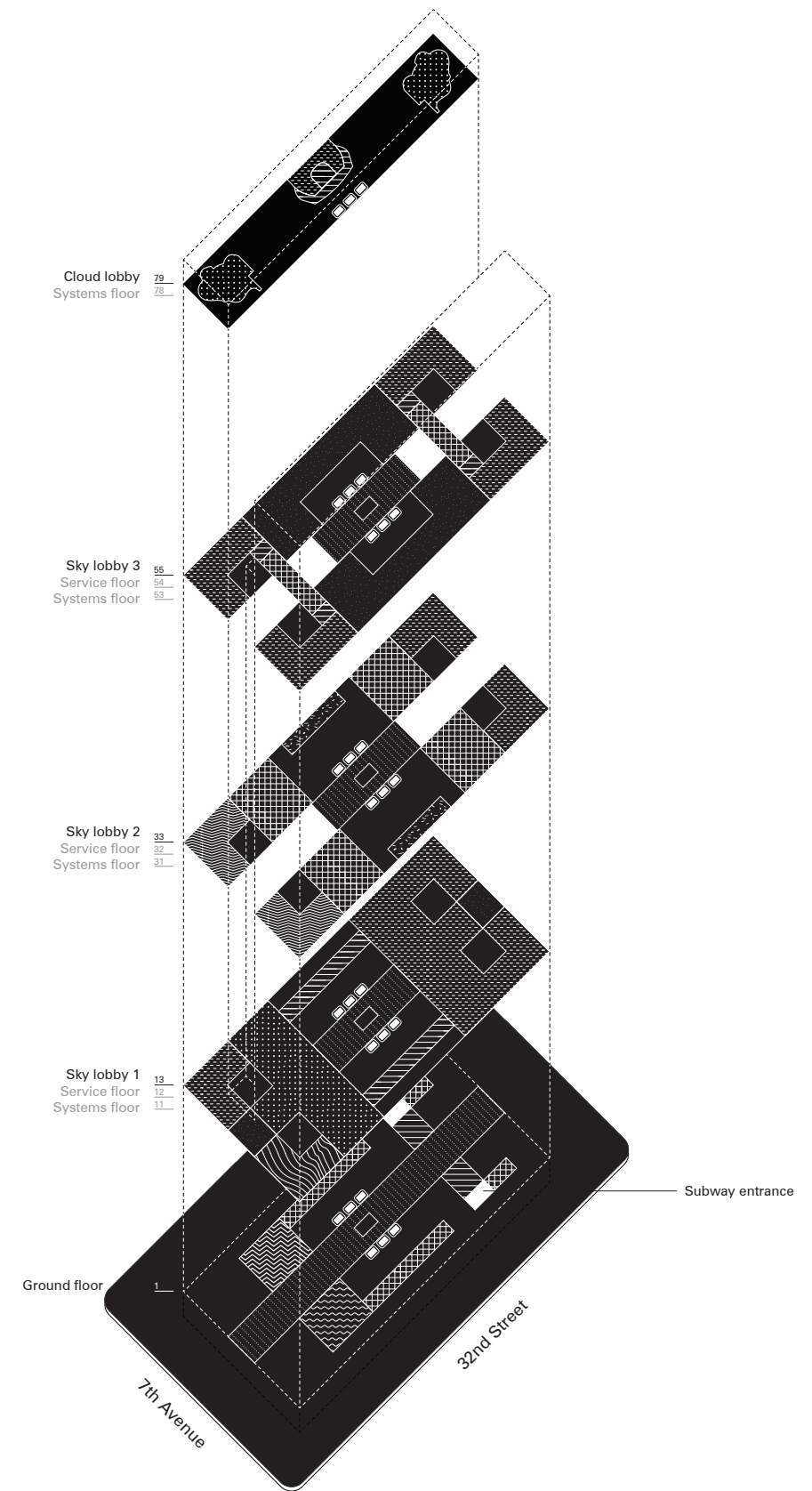


Migrant segment



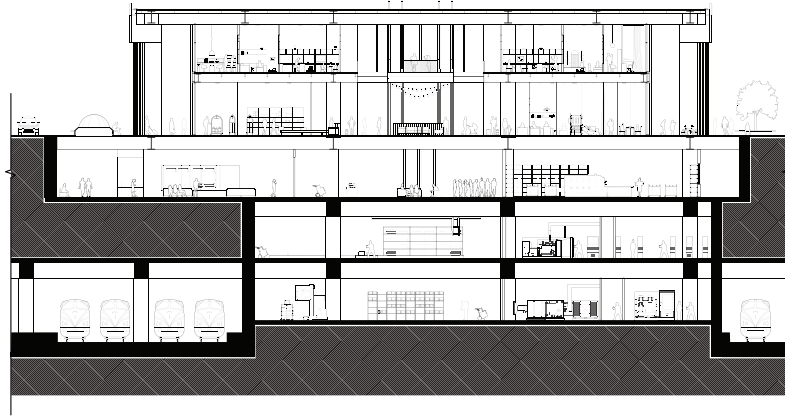
Homeless segment

Typical Room

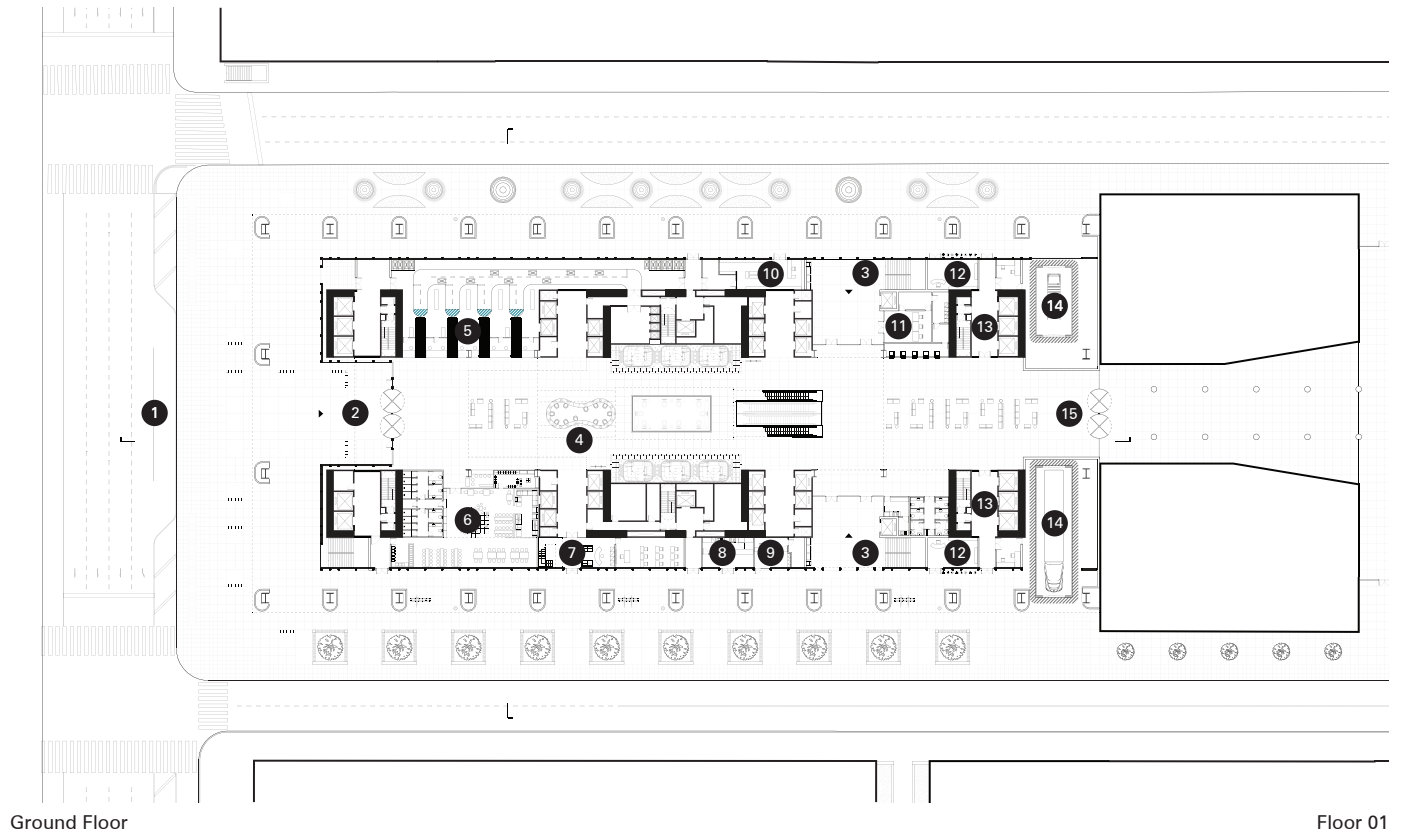


Amenities - Public Program

- | | | |
|--------------------------|------------------|------------------------|
| Lobby and reception area | Art gallery | Metro Express elevator |
| Luggage reception | Garden | Express elevator |
| Migrant facility | Fitness center | Local elevator |
| Retail | Market | Guest elevator core |
| Food and beverage | Support services | |
| Event space | | |

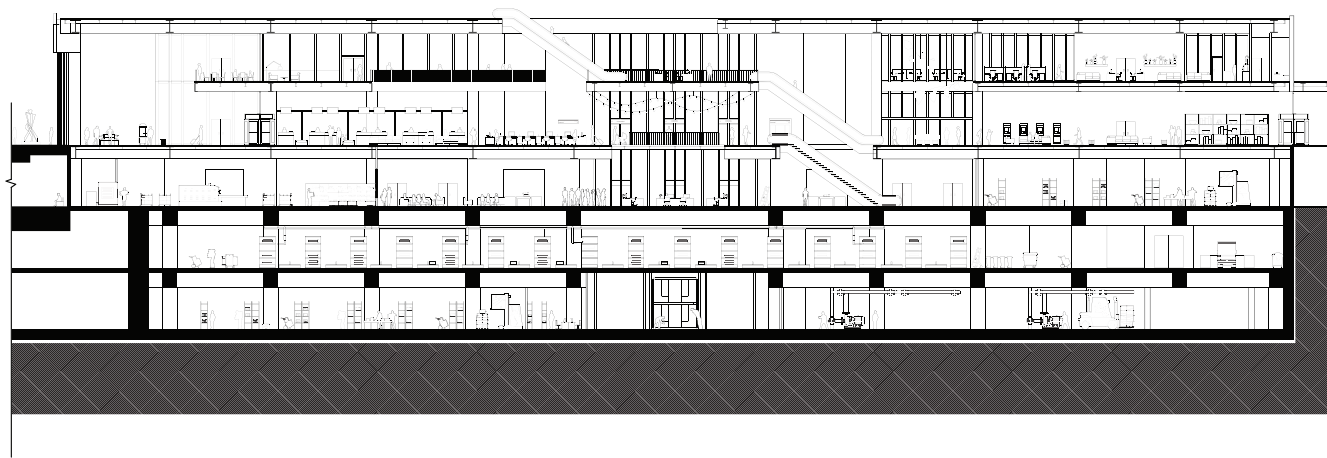


Cross Section of Basement and Ground Floor

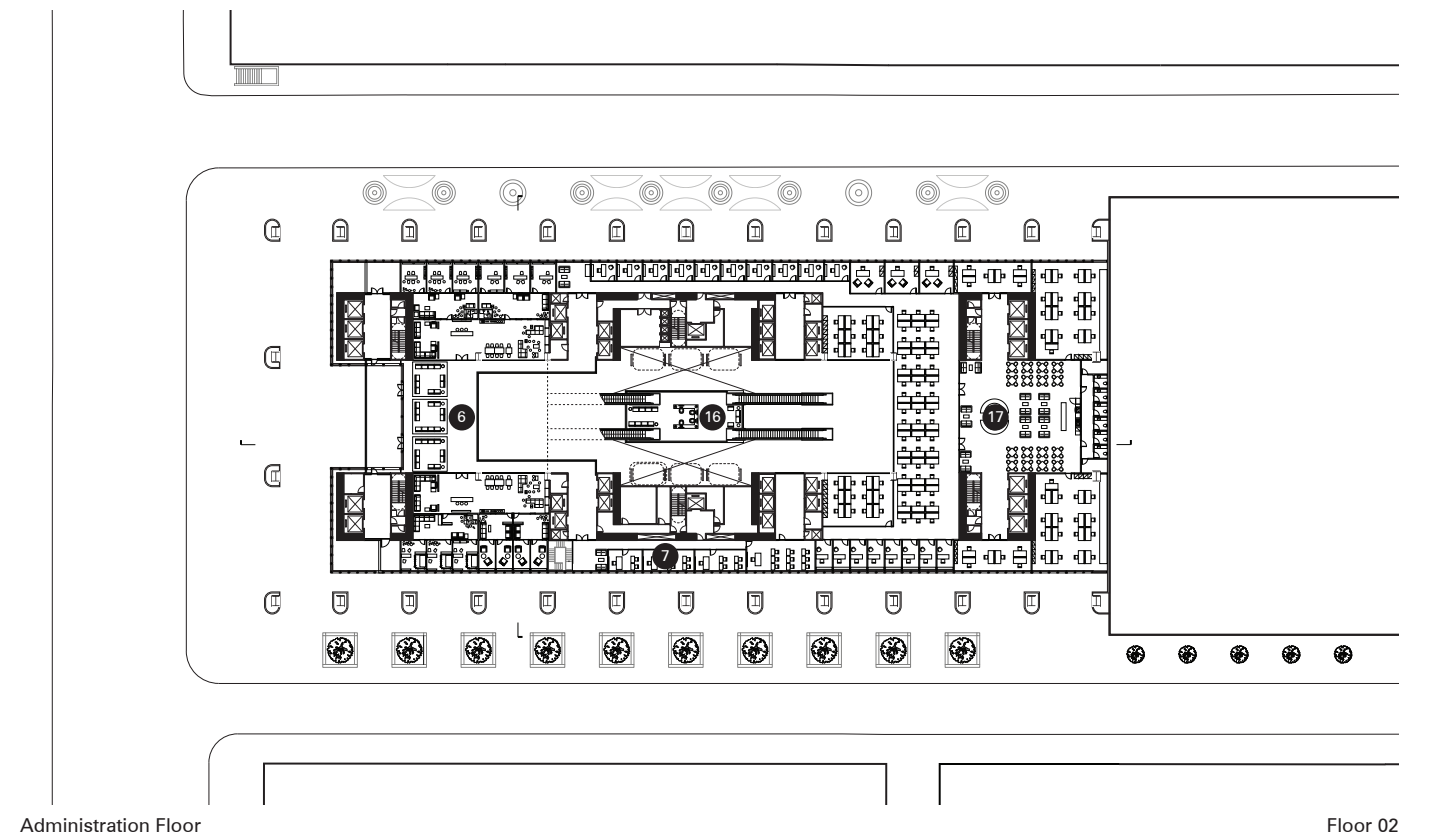


Ground Floor

Floor 01



Longitudinal Section of Basement and Ground Floor



Administration Floor

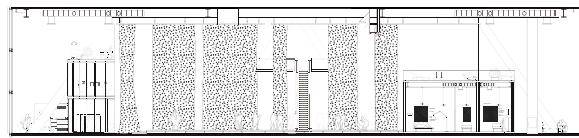
Floor 02

Ground Floor

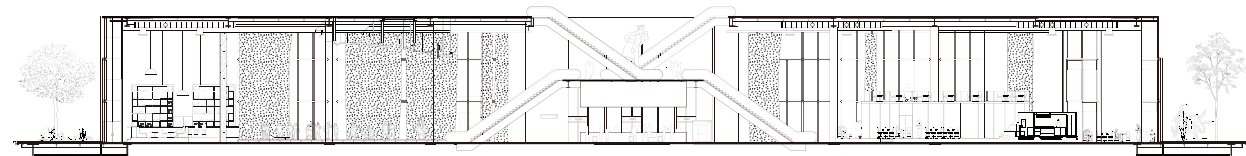
0 10 20 m

- | | | | |
|---------------------|----------------------|-----------------------|----------------|
| 1. Motor lobby | welcoming center | 12. Flower shop | check-point |
| 2. Entry plaza | 7. Language center | 13. Staff entrance | 17. One Hotel |
| 3. Subway entrance | 8. Coffee shop | 14. Truck elevator to | administration |
| 4. Reception | 9. Post office | loading dock below | offices |
| 5. Luggage drop-off | 10. 24/7 convenience | 15. Link to | |
| facility | store | Manhattan Mall | |
| 6. Migrant | 11. Bank | 16. Casino security | |

0 10 20 m



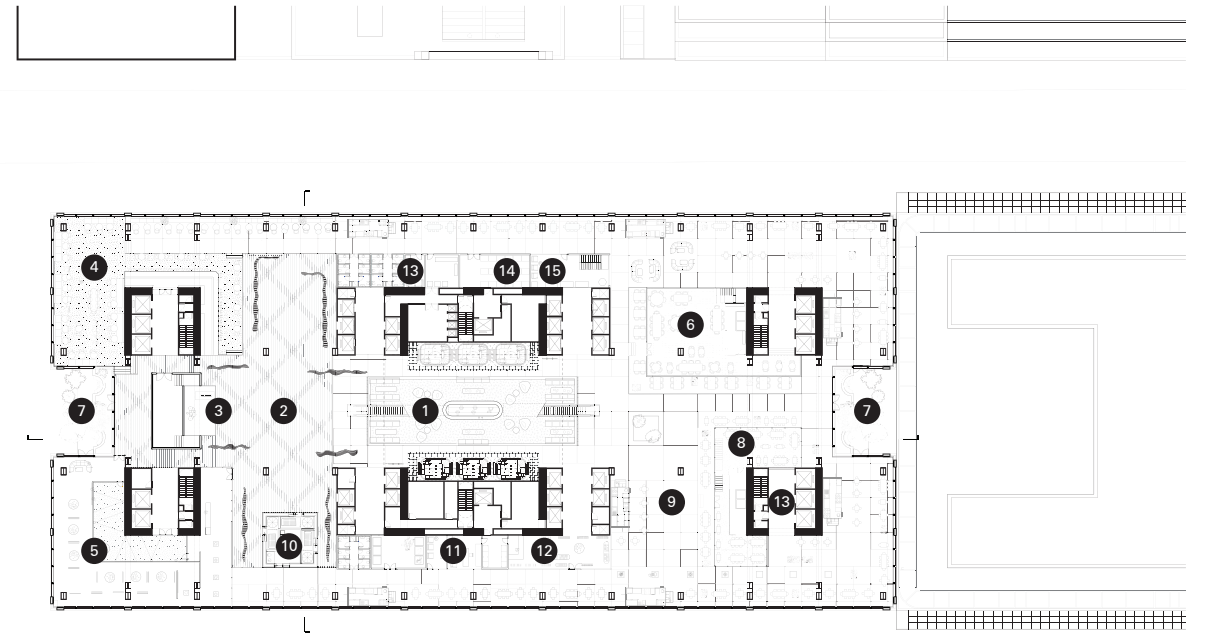
Cross Section of Sky Lobby 1



Longitudinal Section of Sky Lobby 1

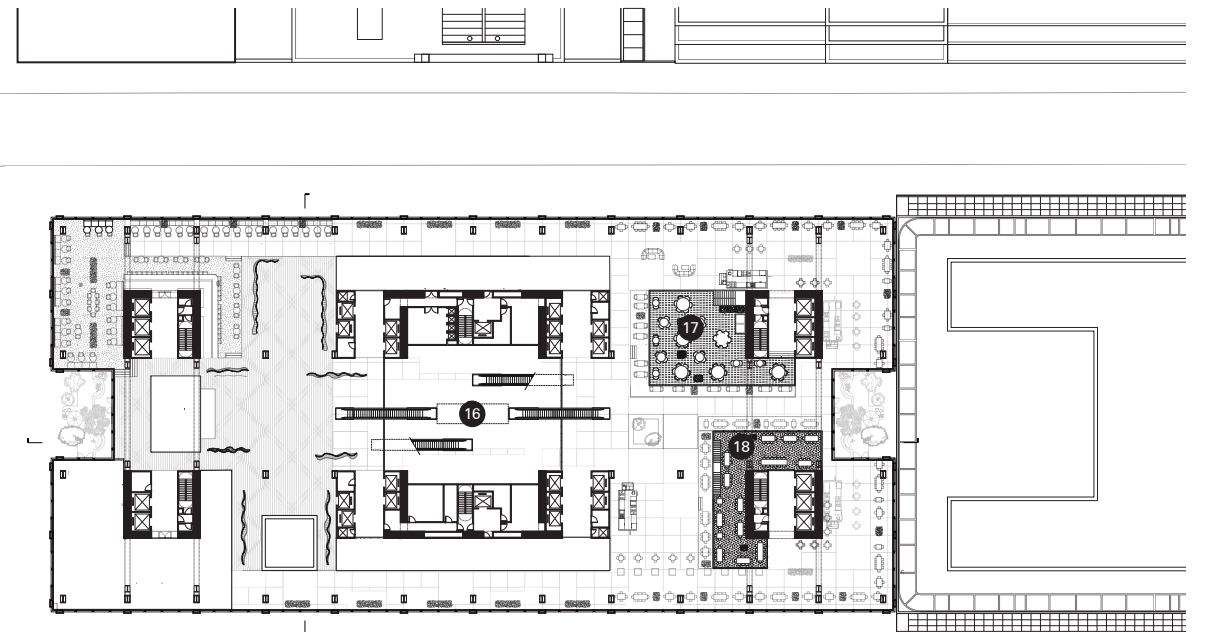
Sky Lobby 1

0 10 20 m



Sky Lobby 1

Floor 13



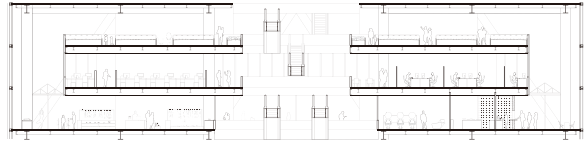
Sky Lobby 1 Mezzanine

Floor 14

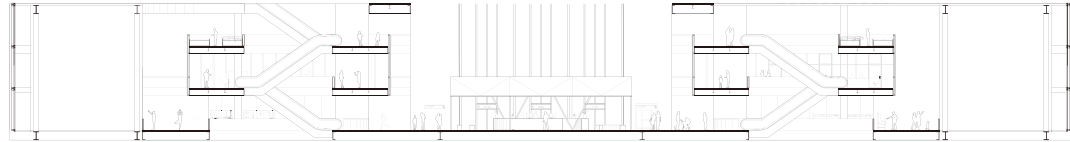
- | | | | | |
|-------------------------------------|---|-----------------------------|--|-------------------|
| 1. Reception | restaurant | confession rooms | office | 17. Diner seating |
| 2. Event hall | 7. Terrace garden | 11. Navy recruitment center | 15. Mezzanine to Sailors' Boarding House and Day segment | |
| 3. Stage | 8. Diner | 12. Navy exchange store | 16. Specialty restaurant seating | |
| 4. Bar | 9. Street food with food trucks and seating | 13. Lactation rooms | | |
| 5. Art gallery and exhibition space | 10. Non-religious | 14. Administration | | |
| 6. Specialty | | | | |

0 10 20 m

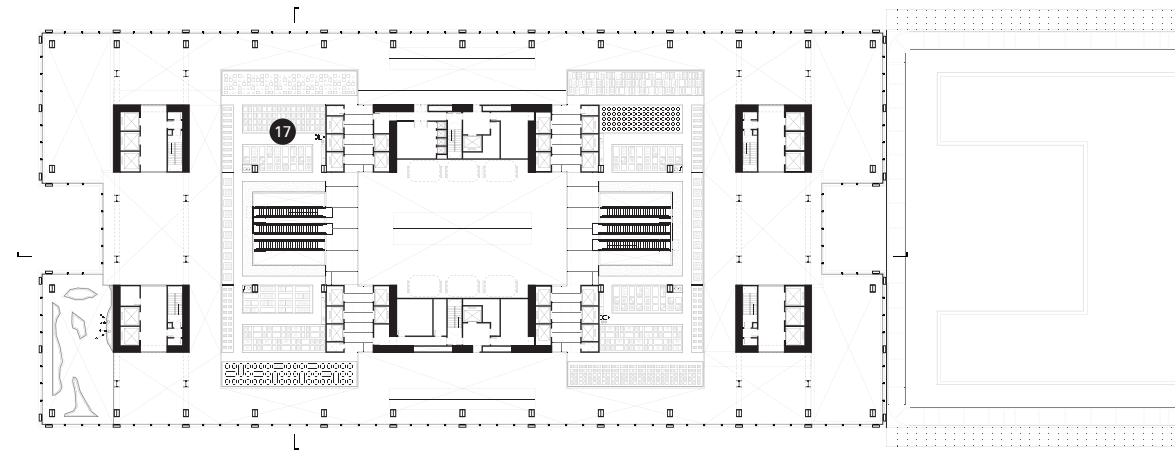
Cross Section of Sky Lobby 2



Longitudinal Section of Sky Lobby 2



0 10 20 m

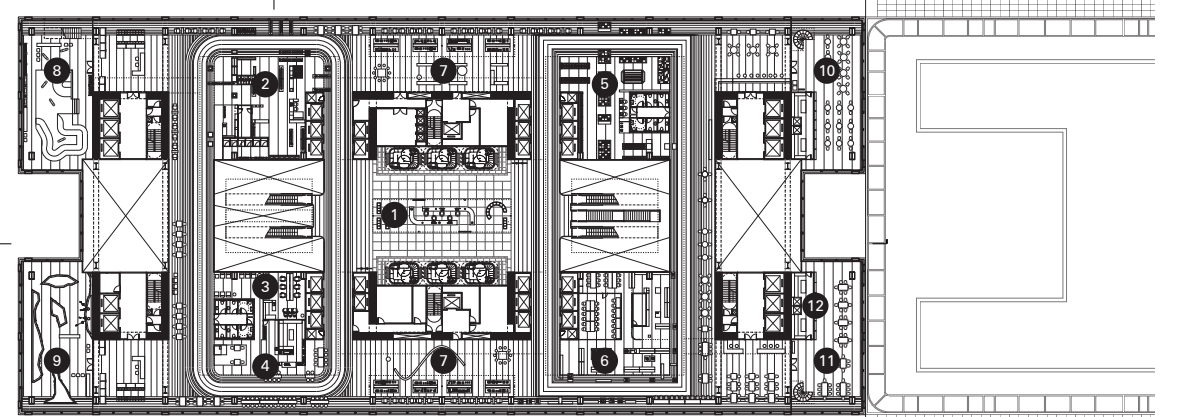


Sky Lobby 2 Mezzanine

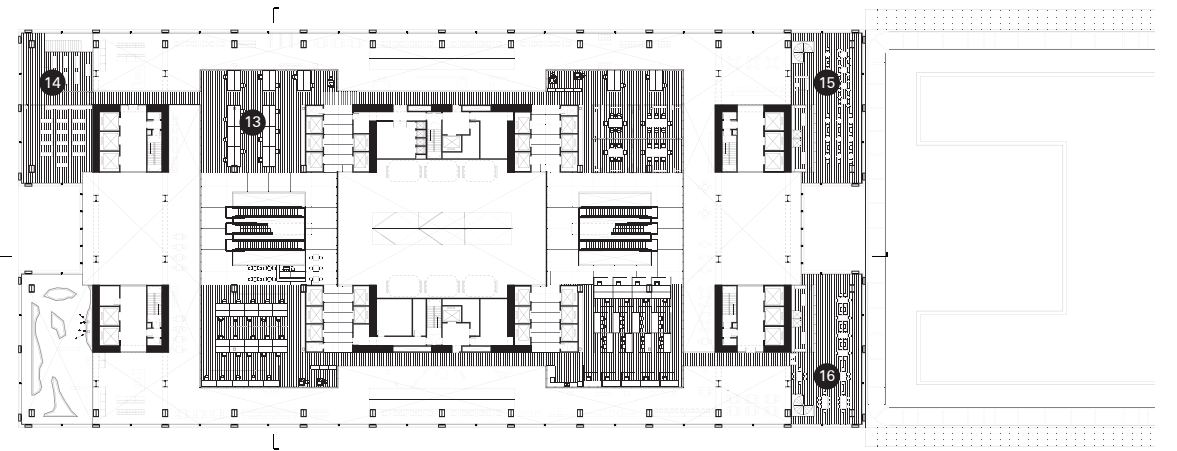
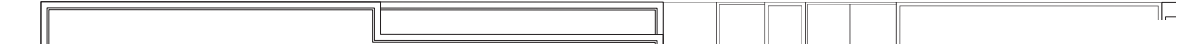
Floor 35

Sky Lobby 2

Sky Lobby 2



Floor 33

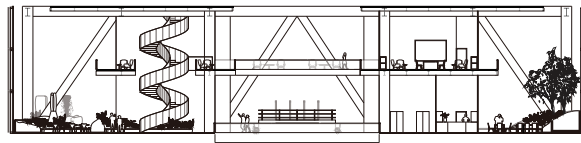


Sky Lobby 2 Mezzanine

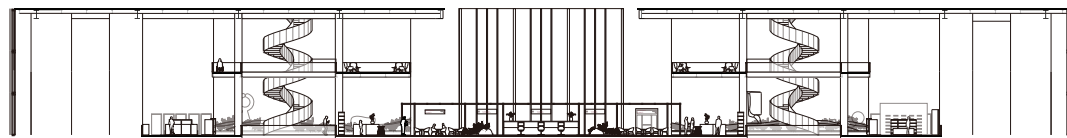
Floor 34

- | | | | |
|----------------------|------------------|--------------------|--------------------|
| 1. Reception | 7. Street market | restaurant | 16. All-day |
| 2. Thrift shop and | 8. Skatepark | 12. Dumbwaiter | restaurant seating |
| tailor's shop | 9. Rock climbing | 13. Co-working | 17. Indoor |
| 3. Barber shop | gym | spaces | production garden |
| 4. Bakery | 10. Specialty | 14. Yoga studio | |
| 5. Convenience store | restaurant | 15. Specialty | |
| 6. Library | 11. All-day | restaurant seating | |

0 10 20 m



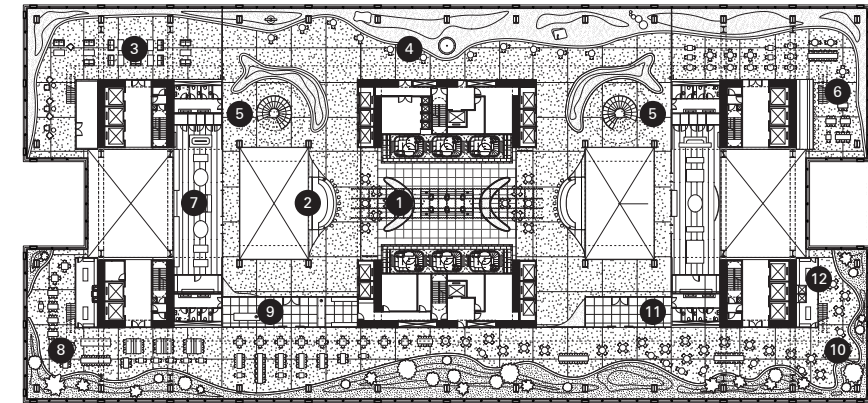
Cross Section of Sky Lobby 3



Longitudinal Section of Sky Lobby 3

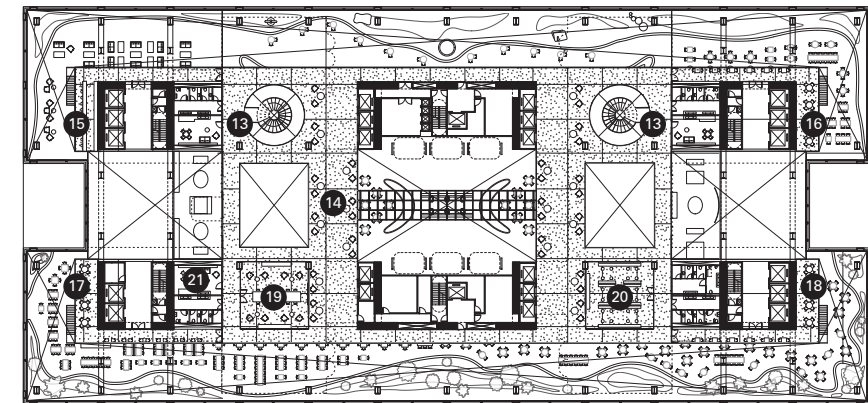
Sky Lobby 3

0 10 20 m



Sky Lobby 3

Floor 55

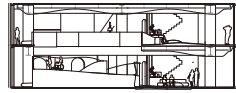


Sky Lobby 3 Mezzanine

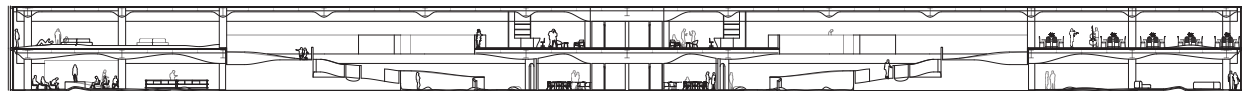
Floor 56

- | | | | | | |
|-----------------------------|---------------------------------|------------------------------------|---|----------------------------------|--------------------|
| 1. Reception | mezzanine and spa above | 10. Specialty restaurant | skylobby below and spa above | 16. Café seating | 19. Beauty salon |
| 2. Lobby bar | 6. Café | 11. Specialty restaurant reception | 14. Loung overlooking gardens and city beyond | 17. All-day restaurant seating | 20. Lactation room |
| 3. Event space | 7. Retail | 12. Dumbwaiter | 15. Event space balcony with bar | 18. Specialty restaurant seating | |
| 4. Garden with seating area | 8. All-day restaurant | 13. Staircase connecting to | | 18. Rentable workspace | |
| 5. Staircase connecting to | 9. All-day restaurant reception | | | | |

0 10 20 m

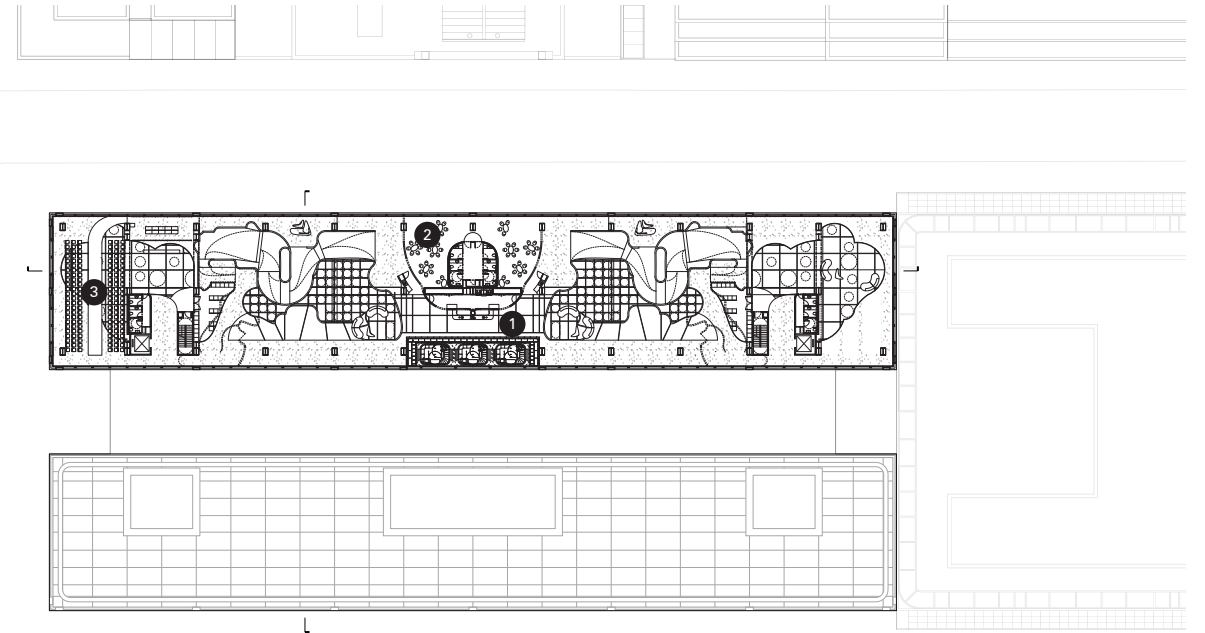


Cross Section of Cloud Lobby



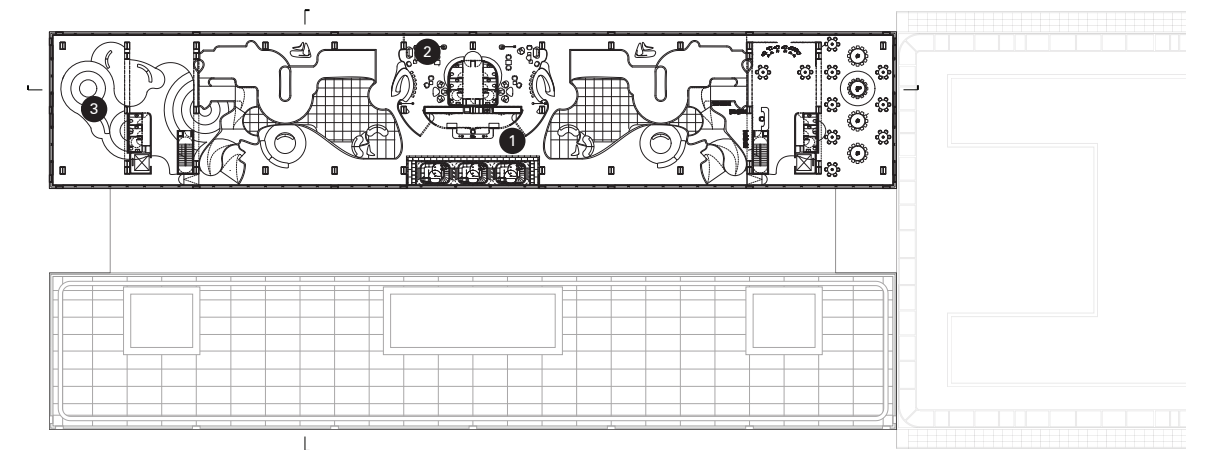
Longitudinal Section of Cloud Lobby

Cloud Lobby



Cloud Lobby

Floor 79

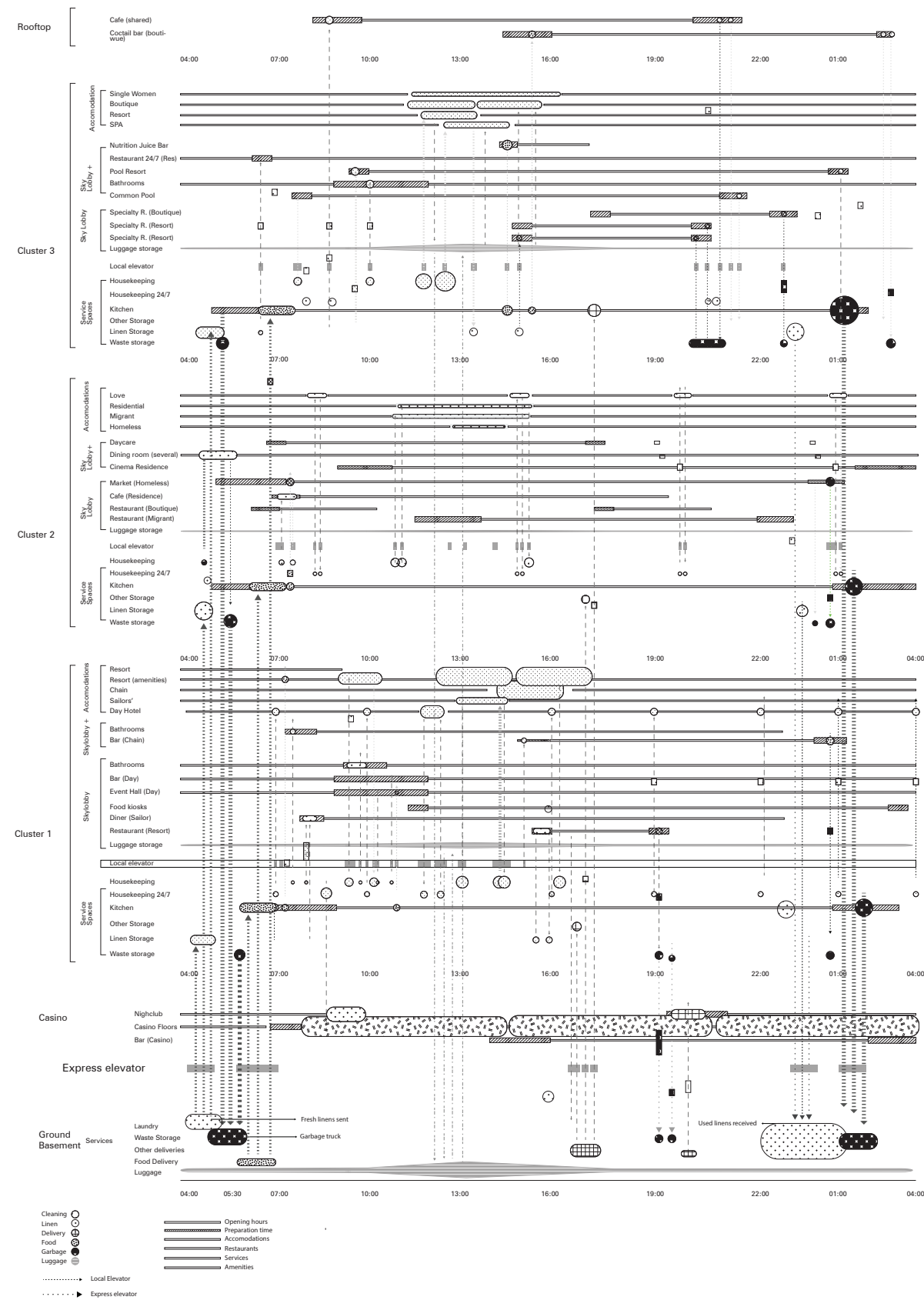


Cloud Lobby Mezzanine

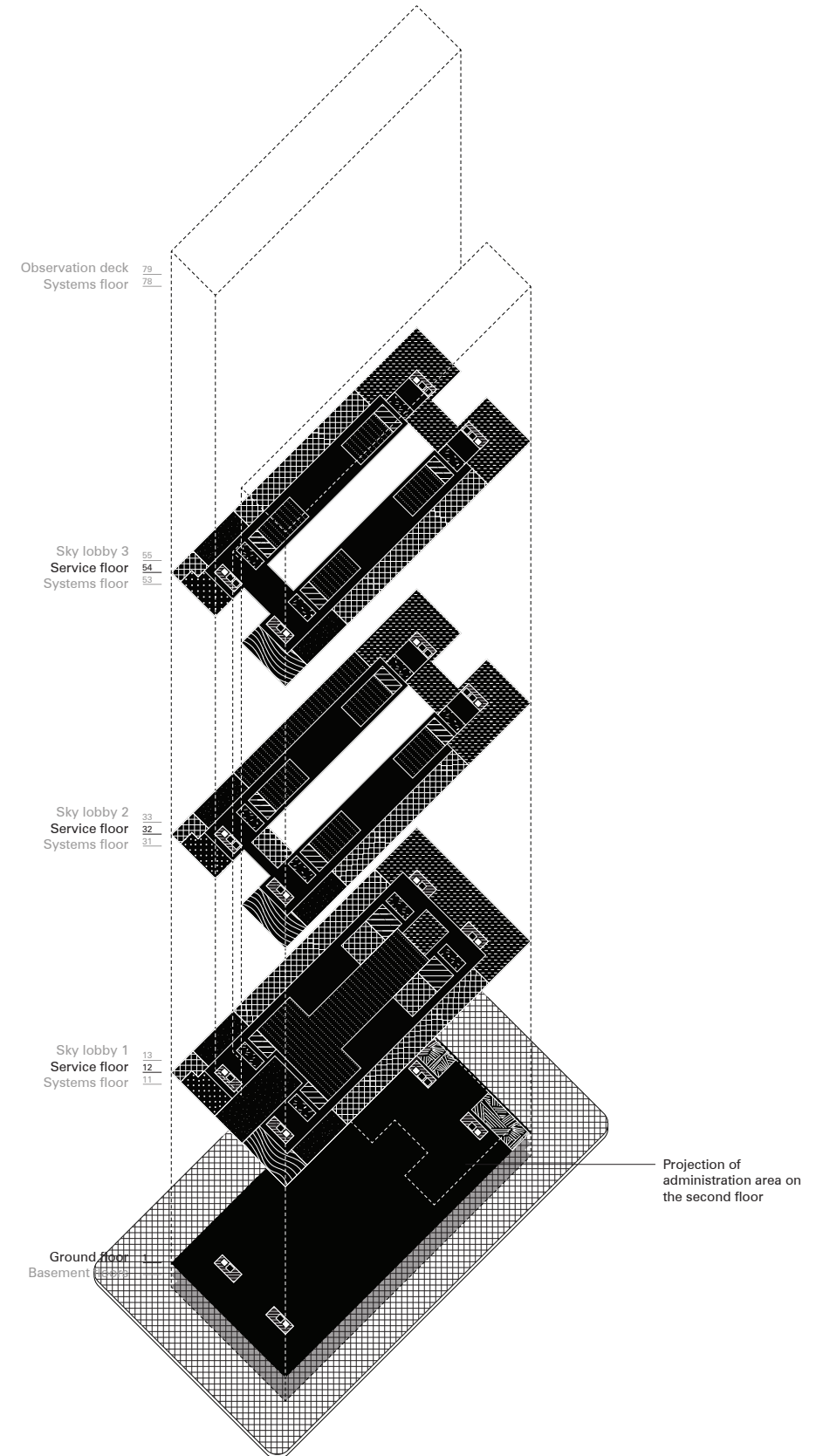
Floor 80



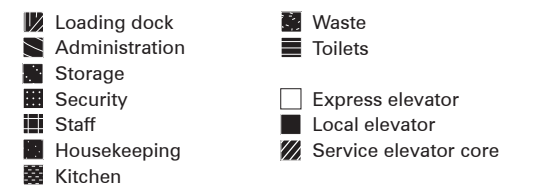
- 1. Reception
- 2. Café
- 3. Event space

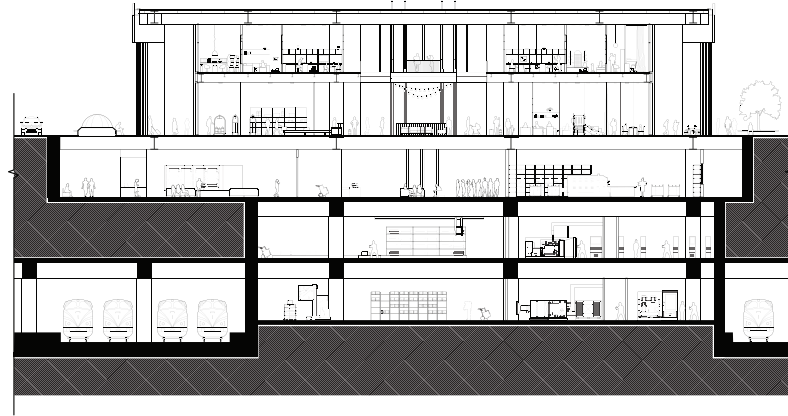


Daily Operations Diagram



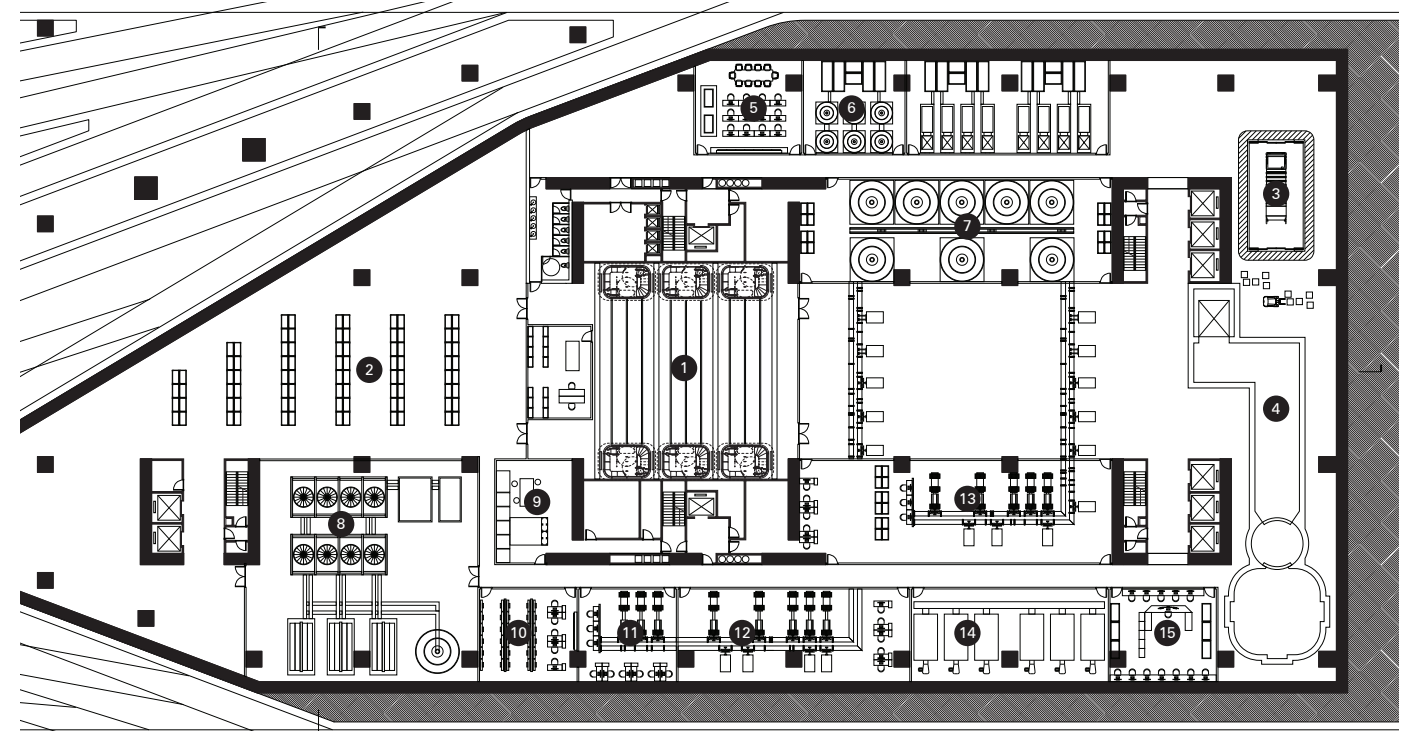
Services





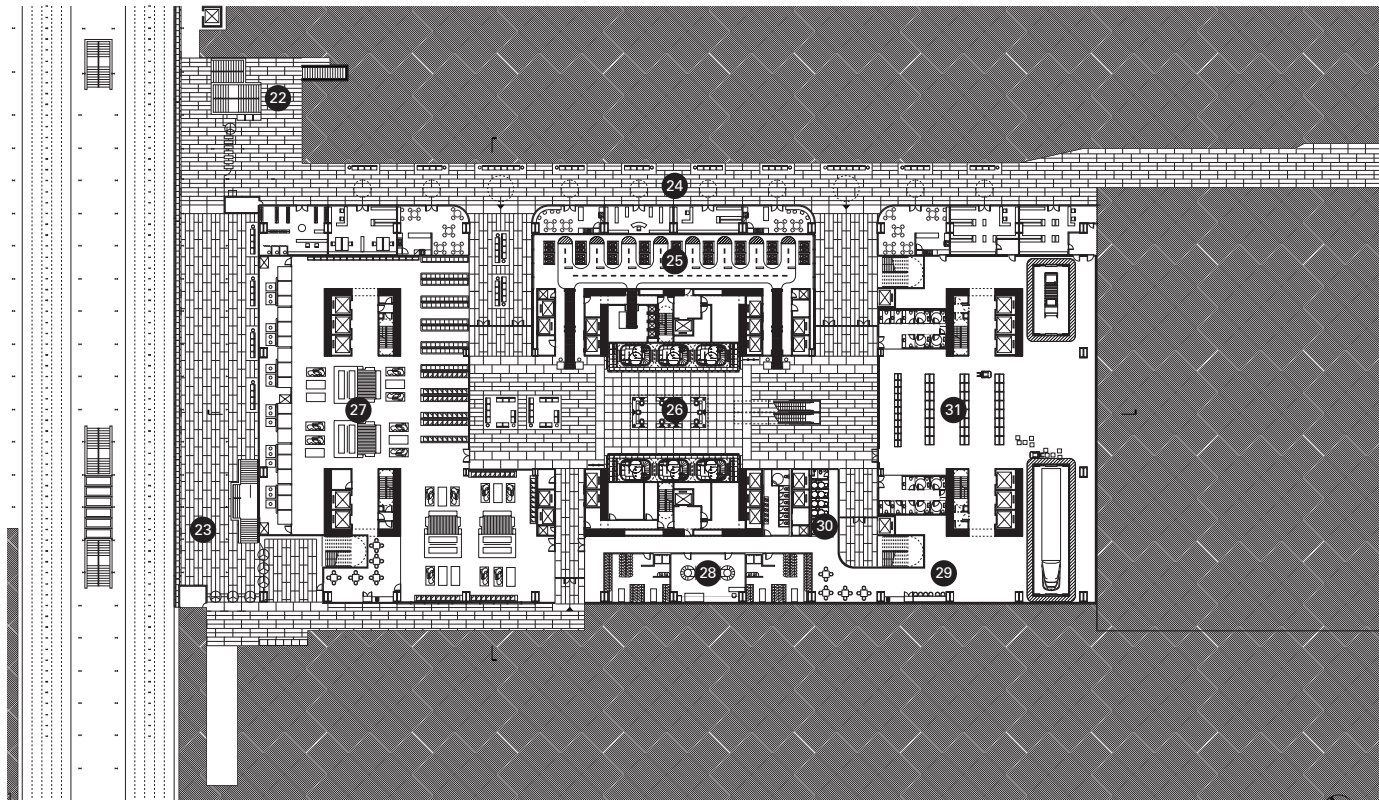
Cross Section of Basement and Ground Floor

0 10 20 m



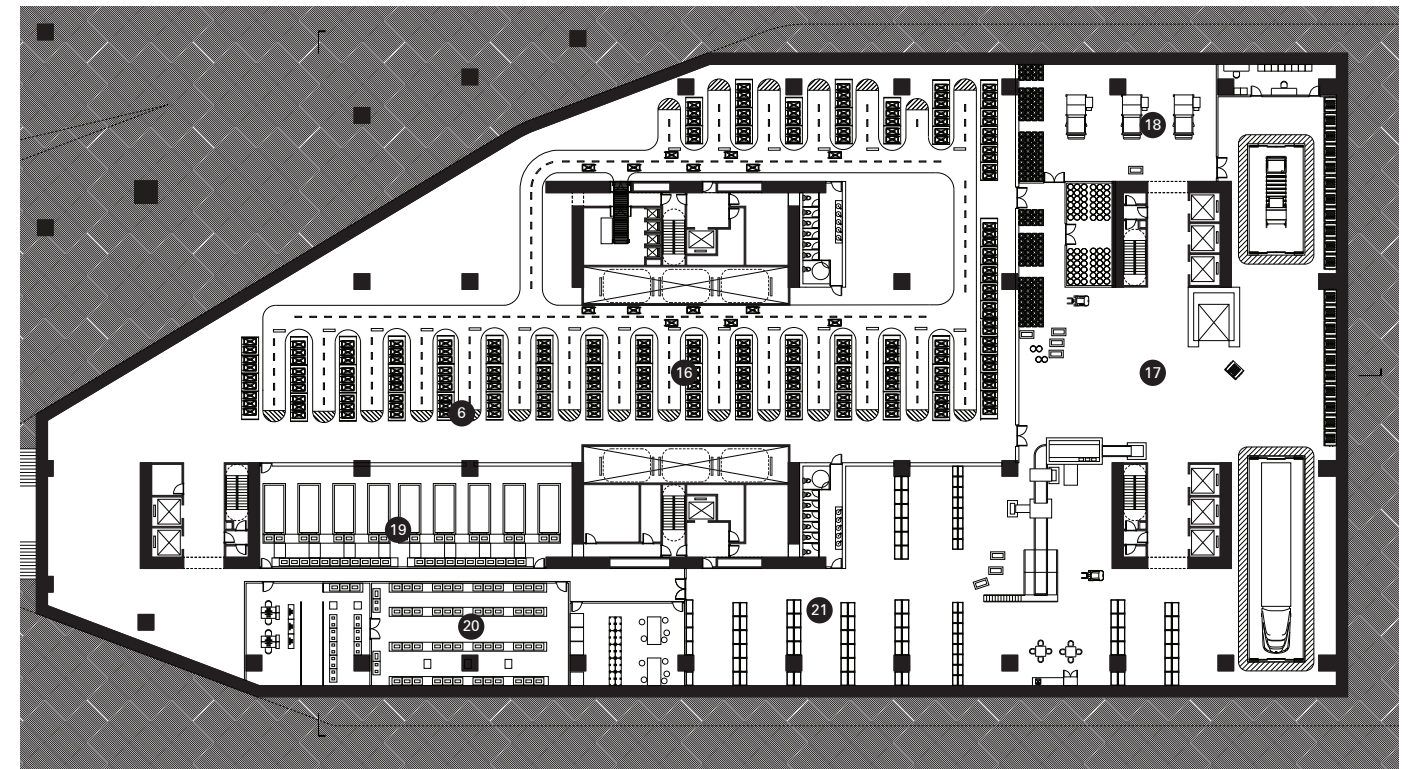
Basement

Floor -3



Basement

Floor -1



Basement

Floor -2

Basement Floors

- 1. Elevator maintenance and repair
- 2. General storage
- 3. Truck elevator
- 4. Casino vault
- 5. CCTV room
- 6. Water treatment room
- 7. Water tank room
- 8. HVAC room
- 9. Maintenance room
- 10. Smoke control room

- 11. Sprinkler System room
- 12. Fire pump room
- 13. Irrigation pump room
- 14. Gas distribution
- 15. Access control

- 16. Luggage storage facility
- 17. Waste loading and sorting area connected to truck elevators
- 18. Track compactor

- 19. Backup generator room
- 20. Uninterrupted power supply room
- 21. Storage
- 22. Underground passage to Penn

- Station 23. 34th Street Penn Station subway platform
- 24. Gimbel's passage and retail
- 25. Luggage drop-off

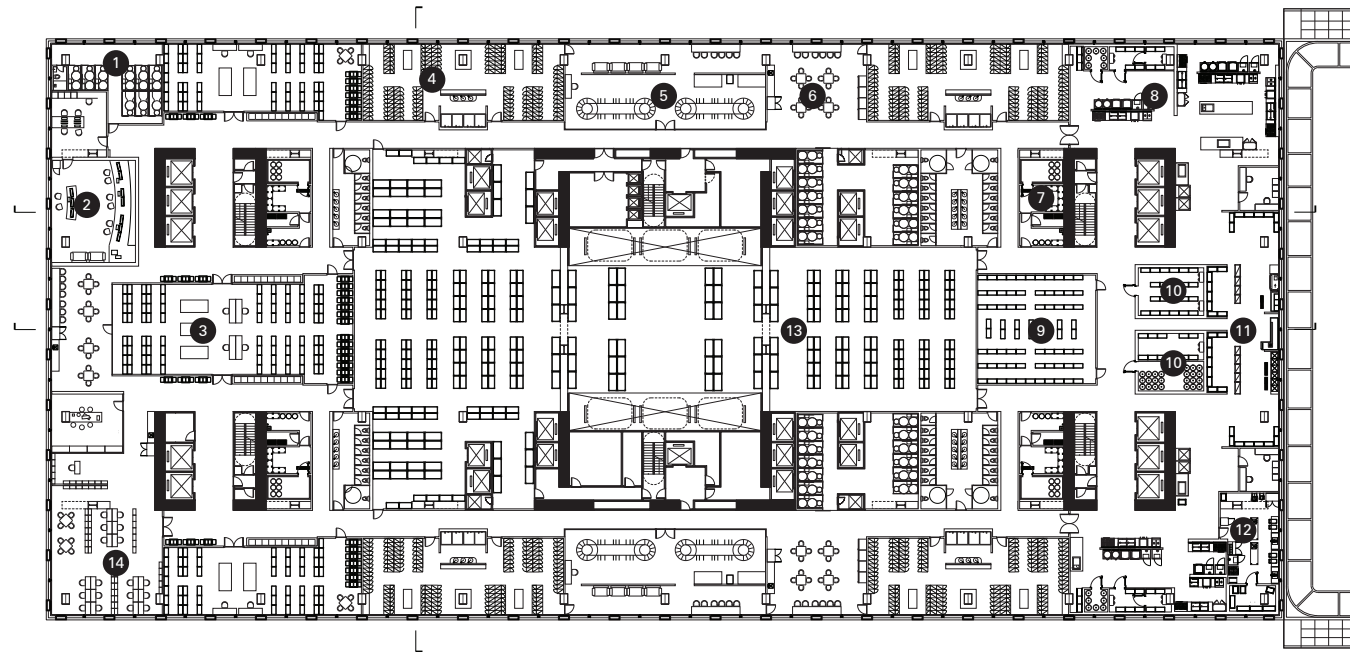
- 26. Reception facility
- 27. Central laundry
- 28. Employee uniform and changing areas
- 29. Employee

- lunchroom
- 30. On-duty sleeping pods
- 31. Loading dock connected to truck elevators on the floor above

0 10 20 m



Service and Systems Floor Sections (Floors 11–12)

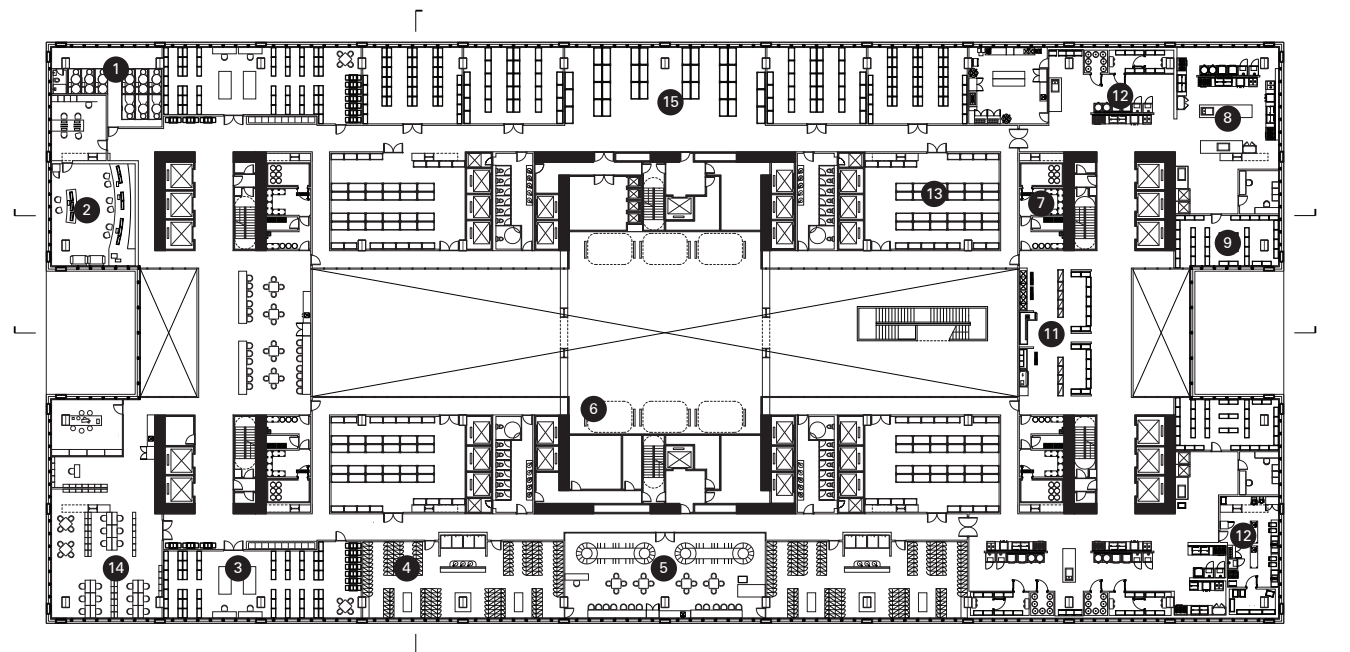


Service Floor

Floor 12



Service and Systems Floor Sections (Floors 31–32)



Service Floor

Floor 32

Service Floors

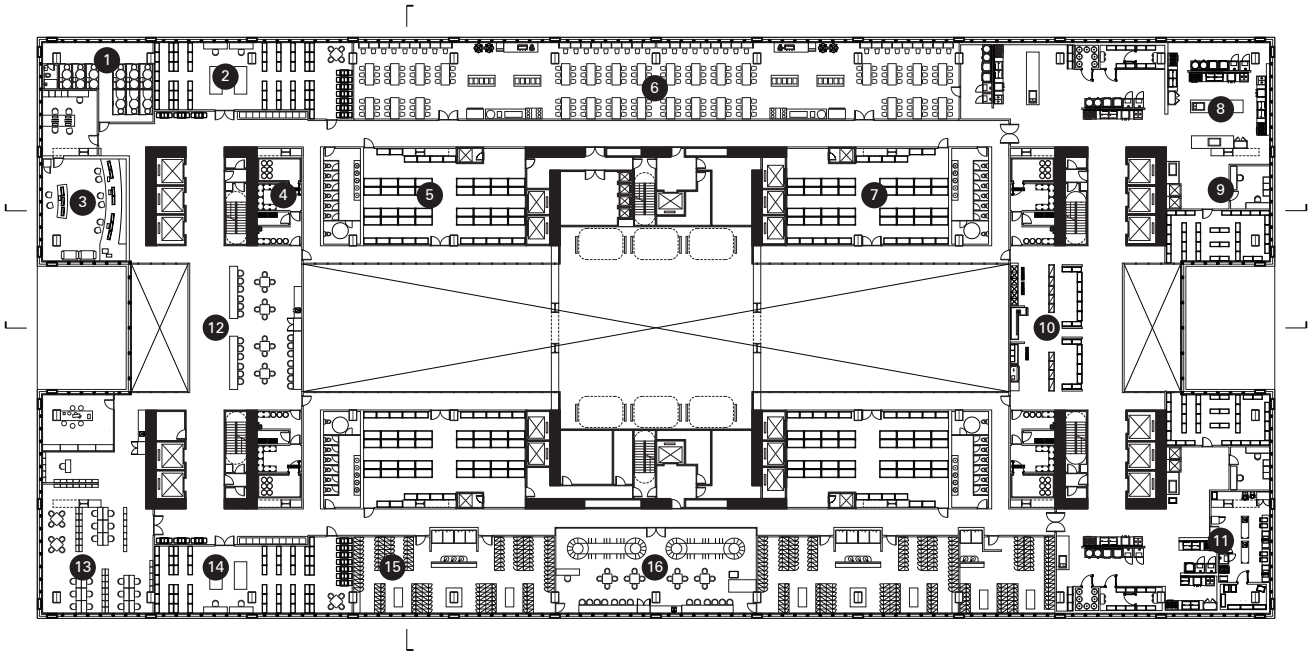
- | | | | |
|-------------------------|--------------------------|-------------------------|--------------------|
| 1. On-duty sleeping pod | changing room | 9. Dry storage | management offices |
| 2. CCTV control room | 5. Uniform room | 10. Cold storage | 15. Guest storage |
| 3. Housekeeping offices | 6. Employee lunch room | 11. Dishwashing station | |
| 4. Employee | 7. Waste collection room | 12. Pastry kitchen | |
| | 8. Kitchen | 13. General storage | |
| | | 14. Cluster | |





Service and Systems Floor Sections (Floors 53–54)

Service Floors

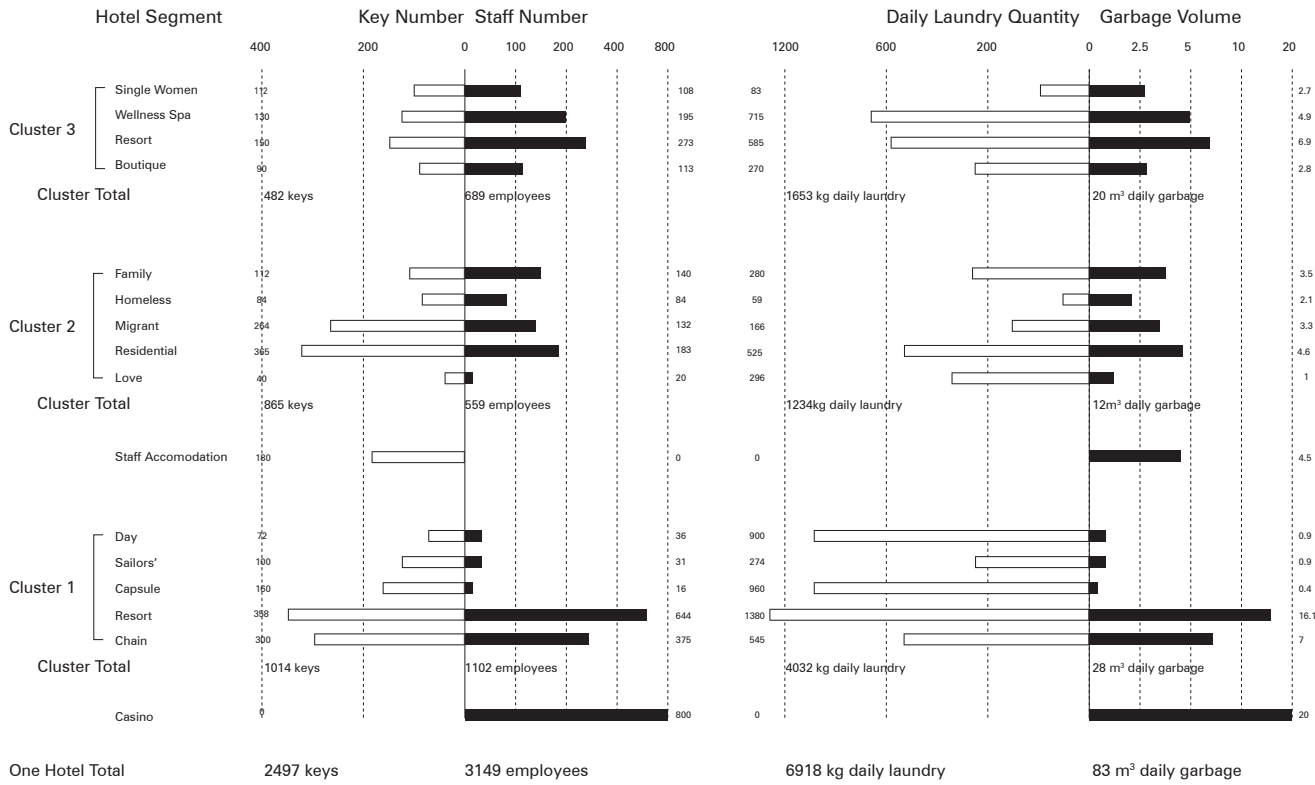


Service Floor

Floor 54

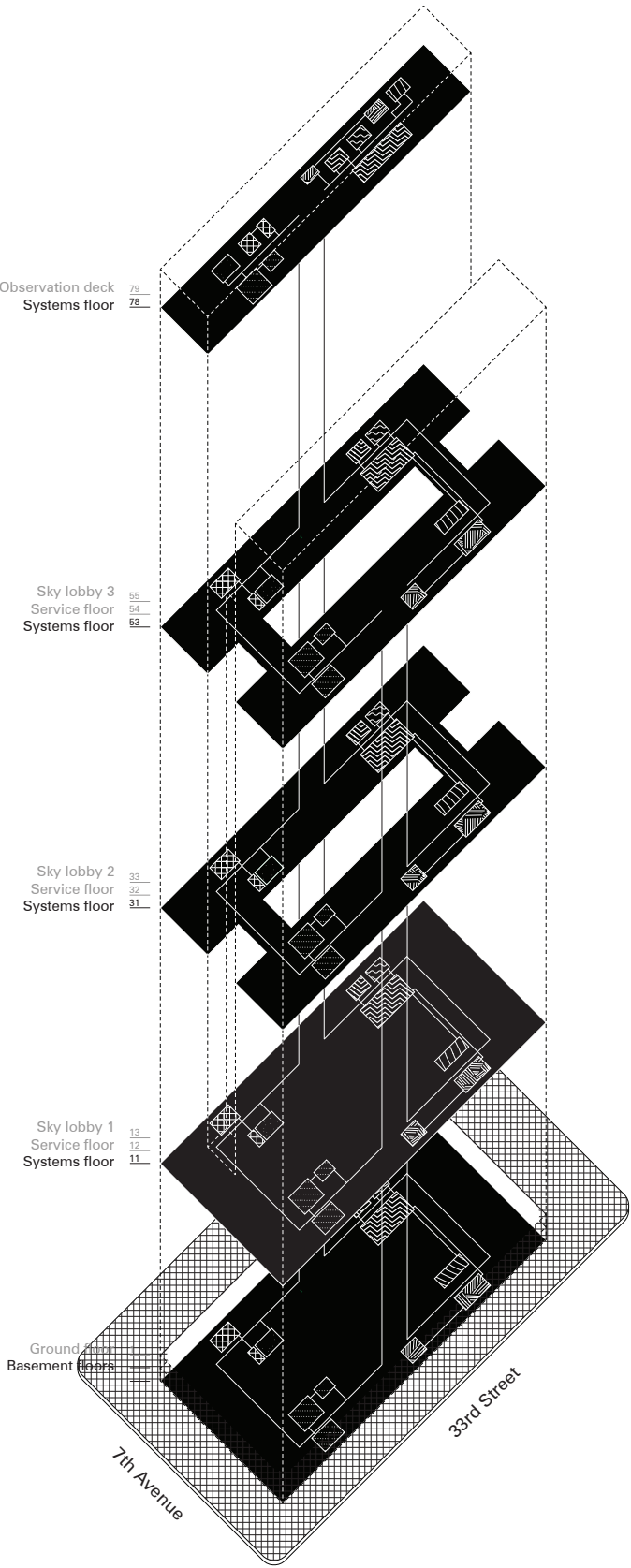
- | | | | |
|-------------------------|-------------------------|-------------------------------|----------------------------|
| 1. On-duty sleeping pod | 5. Luggage storage | station | office |
| 2. Housekeeping offices | 6. Employee dining hall | 11. Pastry kitchen | 15. Employee changing room |
| 3. CCTV control room | 7. General storage | 12. Employee lunchroom | 16. Uniform room |
| 4. Waste | 8. Kitchen | 13. Cluster management office | |
| | 9. Dry storage | 14. Housekeeping | |
| | 10. Dishwashing | | |





Hotel Calculations

Diagram comparing hotel segments through number of keys, calculations of number of elevators, number of staff, amount of laundry and waste.



Systems

- Gas supply system
- HVAC system
- Energy and electric supply system
- Irrigation pumping system
- Fire pumping system
- Cold water
- Hot water

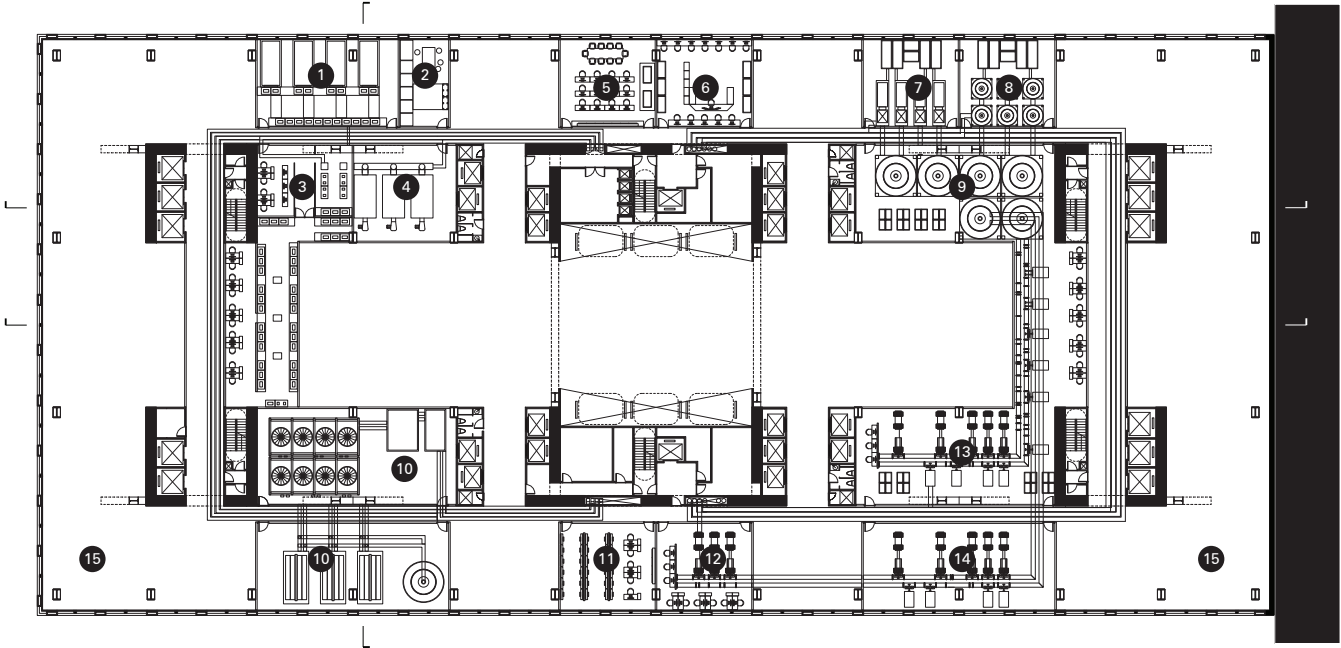


Service and Systems Floor Sections (Floors 11–12)



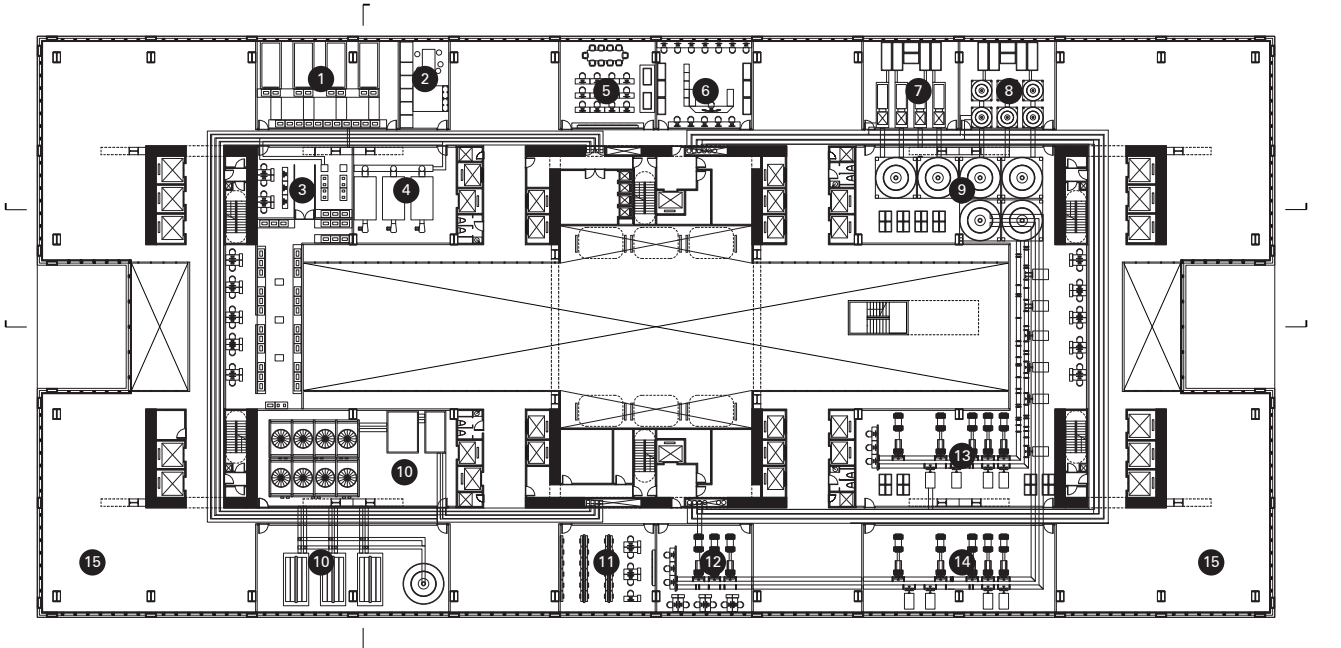
Service and Systems Floor Sections (Floors 31–32)

Systems Floors



Systems Floor

Floor 11



Systems Floor

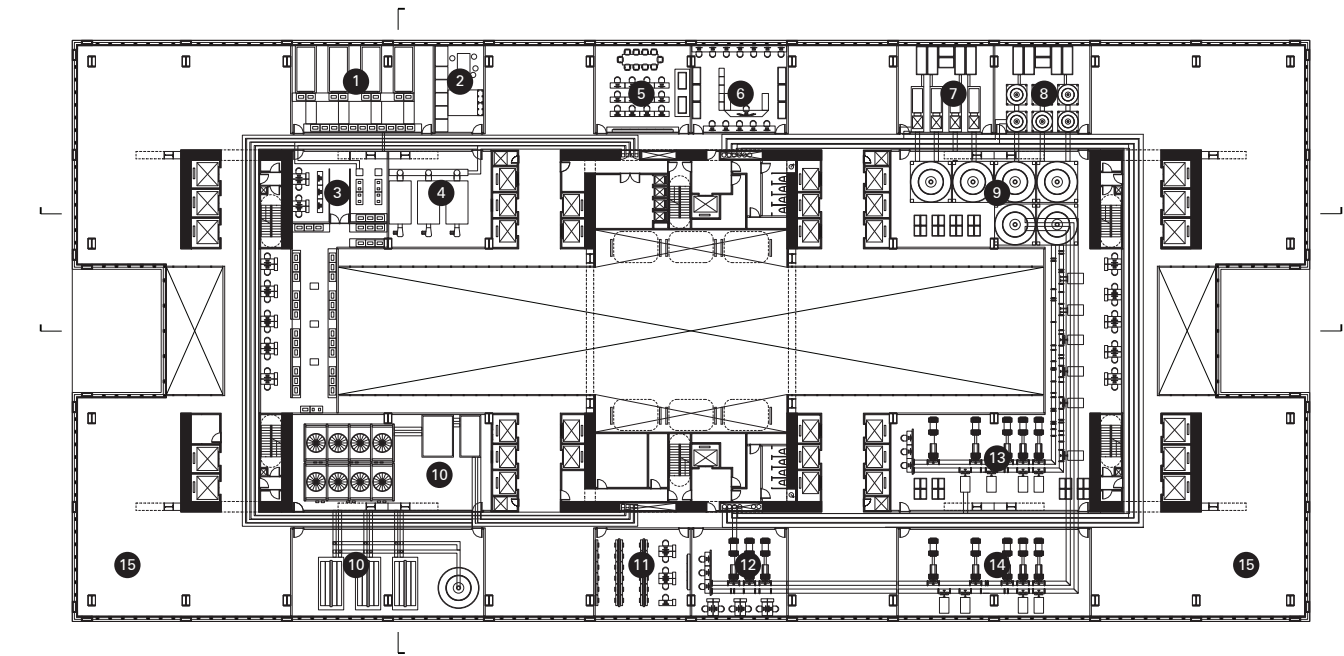
Floor 31

- | | | | |
|------------------------------------|-------------------------|----------------------------------|---------------------------|
| 1. Backup generator room | 5. CCTV room | 9. Intermediate water tank rooms | 12. Sprinkler system room |
| 2. Maintenance workshop | 6. Access control room | 10. Central HVAC plant room | 13. Irrigation pump room |
| 3. Uninterrupted power supply room | 7. Water treatment room | 11. Smoke control room | 14. Fire pump room |
| 4. Gas distribution | 8. Hot water plant | | 15. Refuge area |



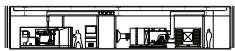


Service and Systems Floor Sections (Floors 53–54)

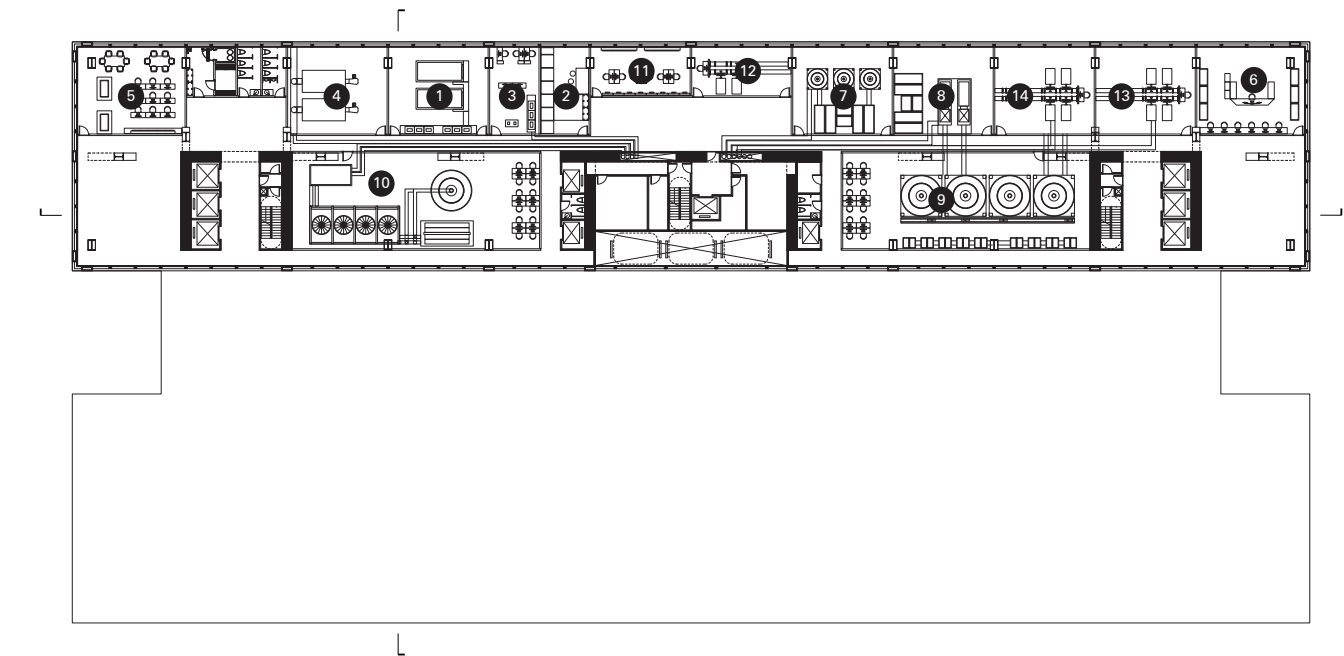


Systems Floor

Floor 53



Systems Floor Cross Section



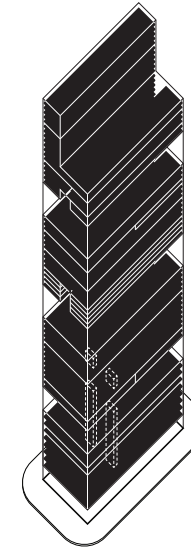
Systems Floor

Floor 78

Systems Floors

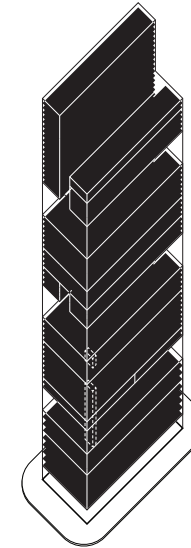
- | | | | |
|------------------------------------|-------------------------|----------------------------------|---------------------------|
| 1. Backup generator room | 5. CCTV room | 9. Intermediate water tank rooms | 12. Sprinkler system room |
| 2. Maintenance workshop | 6. Access control room | 10. Central HVAC plant room | 13. Irrigation pump room |
| 3. Uninterrupted power supply room | 7. Water treatment room | 11. Smoke control room | 14. Fire pump room |
| 4. Gas distribution | 8. Hot water plant | | 15. Refuge area |

2030



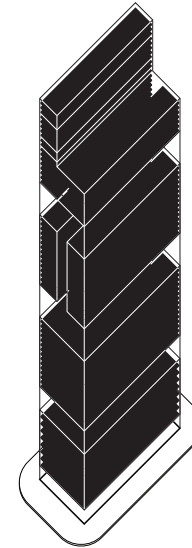
Fourteen hotel segments

2050

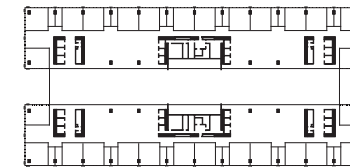


Nine hotel segments

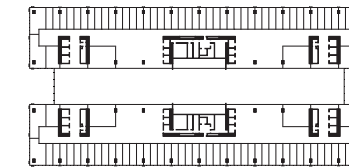
2080



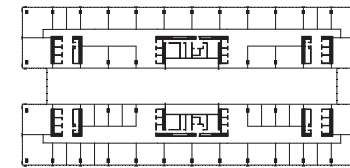
Residential



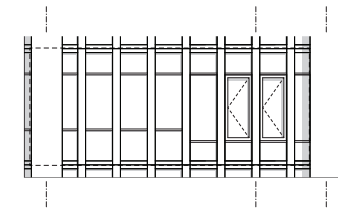
Hotel segment



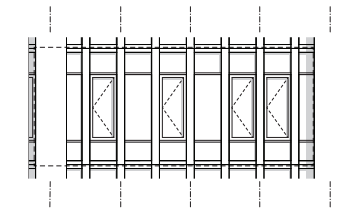
Student housing segment



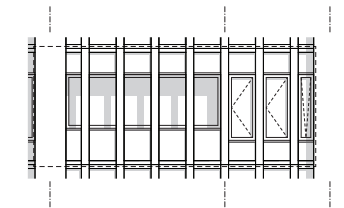
Apartments



Hotel segment



Student housing segment



Apartments

Afterlife

One Hotel may shift and change in response to changing demographics. A successful hotel segment may take over another. The hotel segments could move from thirteen, to eight, or twenty-three. As the program shifts, the facade's secondary elements will come and go. As will temporary walls and plumbing. Public spaces will host new tenants. Apartments could fill the floors once held by One Hotel. Regardless of the fluctuation inside, the Metropolitan will remain a landmark in the skyline of New York City.

In New York City today, single women outnumber single men. The majority of the City’s population is female. In the United States, single women are projected to outnumber married women by 2030. Women are postponing motherhood or electing to be childfree. Instead, they are focused on establishing themselves. With successful careers, money to spend, and newfound freedom, women are drawn to the entertainment centers of the big city—even if it is difficult to acclimate to these new surroundings.

The Single Women’s segment is reminiscent of the women’s-only hotels of the twentieth century. Hotels such as the Barbizon in New York City catered to women with the promise of safety, relief from the duties of home, amenities to further their careers, and a well-known name.

The Barbizon was in operation as a women’s-only hotel from 1927 until 1981. It attracted organizations such as the Ford Modeling Agency, Mademoiselle magazine, and the Katherine Gibbs Secretarial School, which rented blocks of rooms. This hotel was often the first stop for many young women from small-town America. The size and variety of rooms—the majority of which were small with shared bathrooms—sustained amenities such as a swimming pools, dance studios, and libraries. At the Barbizon, men were not allowed beyond the first floor, even though some were rumored to make it past the elevator operators. Due to the relatively affordable room prices, some women stayed for extended periods of time, while others left for blossoming careers. Societal expectations have changed drastically since the heyday of the women’s-only hotel. No longer destined to be just a secretary or a wife, women have diverse careers and freedom to travel. And yet, women’s hotels—and sometimes women-only floors—are starting to reappear, often as places of safety, security, and retreat. Their amenities no longer guide women into specific careers, nor treat their temporary stay as a step toward marriage. Hotels now cater to a variety of lifestyles. Similarly, women’s coworking spaces have risen in popularity. Providing a platform for women, they are designed for the diversity of women today. Spaces are

intimate in nature and offer variety.

The Single Women’s segment offers many of these same qualities: it is a place of retreat, connection between women, security, networking, and accommodations for a range of stays and budgets. Guests range from solo travelers looking for a short, safe, and reasonable stay, to women seeking accommodation for a few weeks as they establish themselves in the city.

Arriving from all directions, the segment’s guests are welcomed on the ground floor by staff at the baggage drop-off counter who will deliver this luggage in the guests’ rooms. Free of luggage, the guests can travel back out into the city or take the express elevators to the third sky lobby, where they check in and receive their room key. Subsequently, guests will be directed to the local elevator serving only the Single Women’s segment. Traveling up with key-card access, the doors to the local elevator open directly to the entry hall, a double-height space with welcome desk for the floor manager, a grand stair, and other guests gathering in the communal spaces. To keep guests comfortable in a women-only space and foster connection among guests, only the segment’s guests are allowed on its two private floors.

All of the segment’s accommodations, as well as guest-only amenities, are located on the south side of the sixtieth and sixty-first floors. The segment sits across from the Wellness Spa segment. As both emphasize privacy, they remain independent of each other.

Rooms range in size, from small rooms with shared bathrooms to suites with small living spaces. These rooms may host the solo traveler for a few nights or a newly hired working woman for a month. With five room types, the segment has a total of 106 keys. Designed for one person, a standard room in the Single Women’s segment is simple, with a small yet efficient bathroom, a small working space, and enough room for a suitcase or two.

The Single Women’s segment offers a new domesticity to its guests, free from domestic responsibilities to care for others. Domestic spaces such as the home have often been workplaces for women tasked with the neverending

duties of cooking, cleaning, organizing, and caring for others. For those that women have cared for, the home became a place of leisure, one that supported productive careers. Subdivided homes merely furthered hierarchical divisions between men and women. In the Single Women’s segment, domestic spaces are not places of duty and responsibility. Rather, communal spaces are places to network, decompress, and develop careers.

On the sixtieth floor, these communal spaces include: a living room for casual connection, a work studio space for creativity and collaboration, a communal kitchen with a breakfast bar each morning. Here guests also have access to self-service laundry and a live-in floor manager with connections across New York City. The communal spaces on the sixty-first floor are open to the spaces below. These include a lounge overlooking the living room, workspaces for independent work, a library for the exchange of ideas, a gym for private workouts, and a game room to play. In these open yet inward-looking communal spaces, women meet other women, network, collaborate, and share travel tips as they step into the city. Guests also have access to amenities elsewhere in the skyscraper, such as a beauty salon in the third sky lobby, socializing in the event hall, a treatment at the spa, or a reasonably priced meal in the dining room in the second sky lobby.

Beyond its private floors, the Single Women’s segment advocates for other women throughout the building—both guests and staff. It does this by providing guidelines for safety, security, caregiving facilities, and special programming. Public spaces in the building are populous and well-lit. The presence of friendly staff welcome and oversee the hotel’s guests. Direct paths of travel and large glass elevators ease fear or anxiety of traveling through the building.

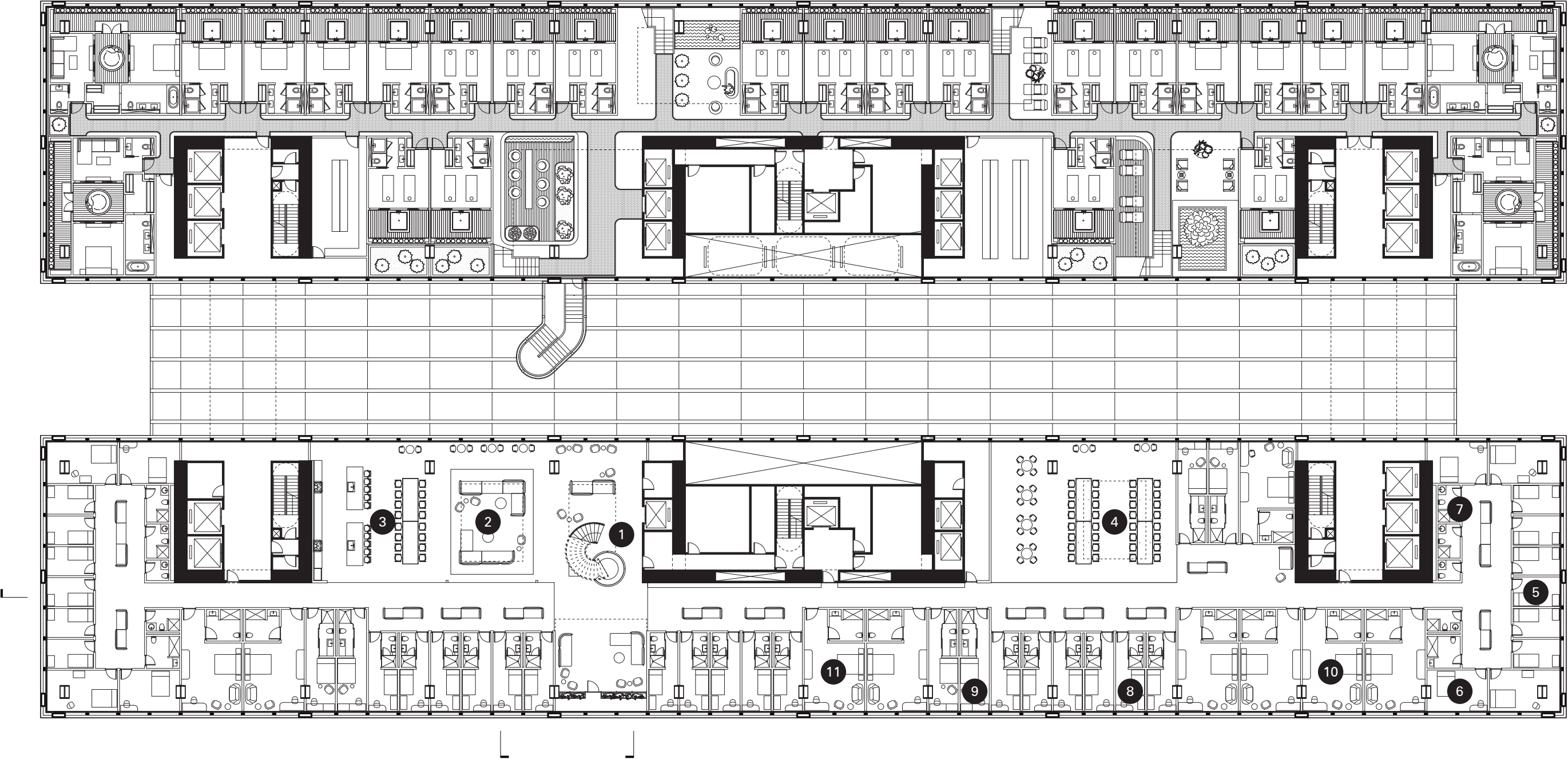
Women are often primary caretakers, whether they are working or not. Daycare facilities are available for staff and their children to ease the burden of finding childcare, transporting to and from childcare sites, and adjusting work schedules due to childcare availability. The sky lobbies also include lactation rooms.

Empowering hotel programming includes lectures, workshops, and classes from self-defense to home-improvement. Available to anyone in the building, these programs promote independence and build confidence. Located in the sky lobbies, an art gallery, café, and retail are women-led and support female entrepreneurship.

The public spaces designed for women extend the cultivation in the segment’s private floors. Here women have a place to travel, develop new careers, and find freedom from domestic duties.

As a haven from the chaos of the city, the Single Women’s segment is a place for social exchange and empowers women throughout One Hotel.

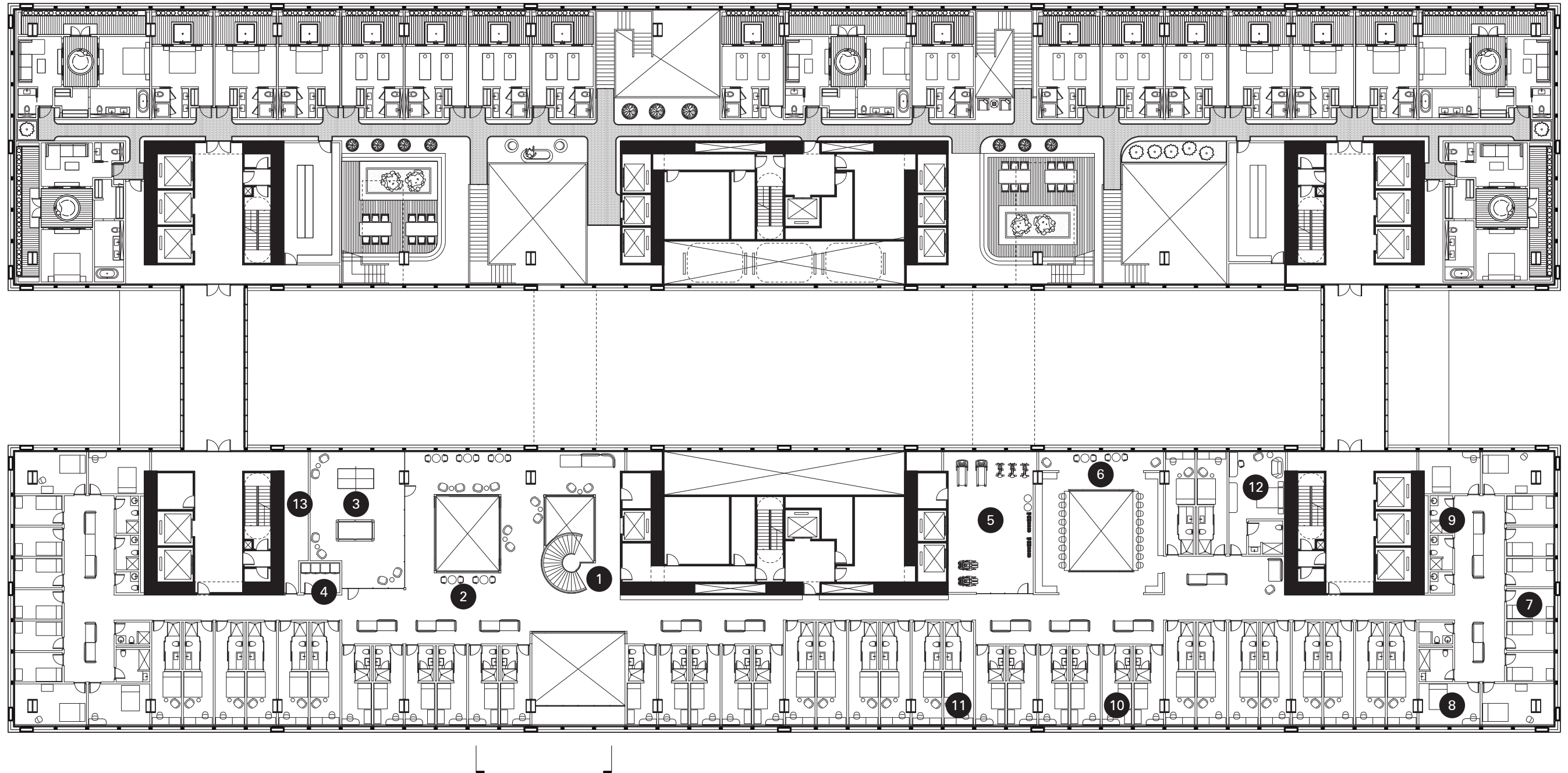
- 1. The Single Women’s segment supports women as they face safety concerns, difficulty navigating New York City, and an increasing cost of living.
- 2. Elevated high in the skyscraper, the segment’s private floors are connected to the vertical city of the skyscraper through program and public spaces designed for women.
- 3. The Single Women’s segment caters to solo travelers and career-focused women through a kind of new domesticity, accommodations for a variety of budgets, and protection within a secure boundary.
- 4. The Single Women’s segment advocates for women across One Hotel, through safety measures, caregiving spaces, and hotel programming that empowers.
- 5. The Single Women’s segment is a place for social exchange among women.



Floor 60



- | | | |
|---|--|---------------------------------------|
| 1. Welcome desk and spiral staircase
open to floor above | 4. Communal workspace
(Type D1) | 10. Suite (Type G1) |
| 2. Living room | 5. Single room with shared bath
(Type B1) | 11. Suite for floor manager (Type G1) |
| 3. Communal kitchen and dining room | 6. Single corner room with shared bath | |
| | 7. Shared bathroom | |
| | 8. Standard room (Type C1) | |
| | 9. Long-stay room (Type E1) | |



Floor 61

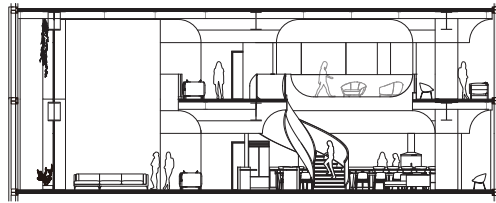


- 1. Spiral staircase connecting to communal spaces below
- 2. Common lounge
- 3. Game room

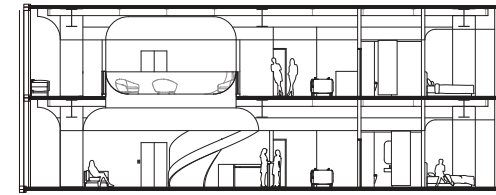
- 4. Self-service laundry
- 5. Gym
- 6. Common workspace and library
- 7. Single room with shared bath

- (Type B1)
- 8. Single corner room with shared bath (Type D1)
- 9. Shared bathroom

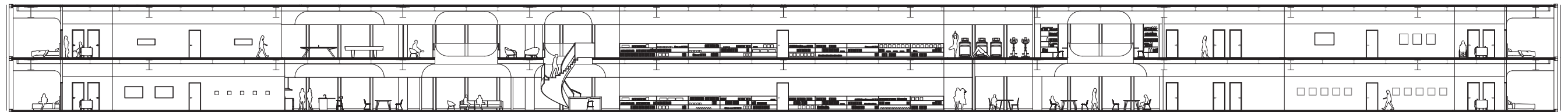
- 10. Standard room (Type C1)
- 11. Long-stay room (Type E1)
- 12. Suite (Type G1)
- 13. Storage



Cross Section

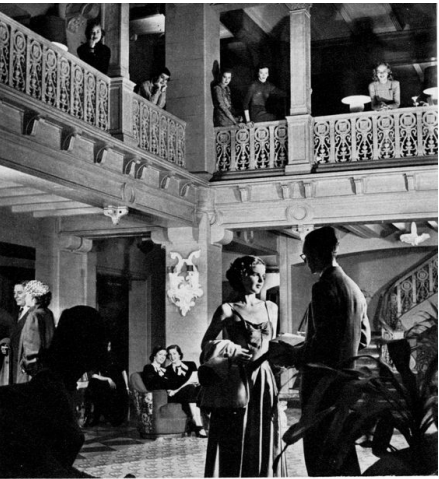


Cross Section



Longitudinal Section

0 1 2 5 10 m



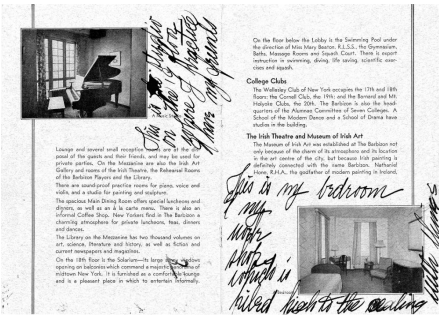
Barbizon Hotel lobby



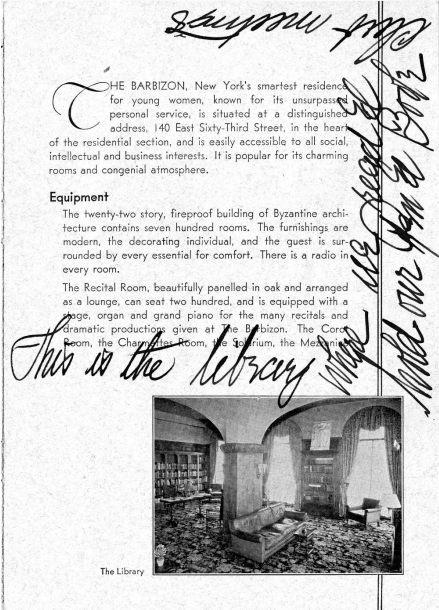
Letter home written by a guest at the Barbizon



Photograph by Vivian Maiers



Letter home written by a guest at the Barbizon



Letter home written by a guest at the Barbizon



Sleeping LabArch by Atelier d More



Supershe Island for women only



Goodbody hair salon designed by Homework



The Wing, women's coworking space



Sofe system by Patricia Urquiola

The Hotel is a collective project that studies the hotel, both as a building type and as a place of hospitality, through a collection of fourteen individual contributions inside one skyscraper. The project imagines hospitality as a realm of exchange that condenses the diversity of the city through an assortment of guests, staff, and the broader public.

This contribution is a single women's hotel that supports women to live freely and confidently.

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and Urban Design

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Delft University of Technology

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