

THE BROOKLYN BRIDGE HOTEL:
A DESIGN PROPOSAL FOR THE BROOKLYN WATERFRONT

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by
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A.B. Stanford University
1976

Submitted in partial fulfillment
of the requirements for the degree of
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Submitted to the Department of Architecture on May 9, 1980, in partial fulfillment of the requirements for the degree of Master of Architecture.

This thesis makes a proposal for the development of a site at the foot of the Brooklyn Bridge pier in Brooklyn, New York based upon the following objectives:

1. Exploitation of the environmental, recreational, and economic assets of the East Riverfront.
2. Revitalization of the district in which the site is located.
3. Enhancement of the unique historic character of the district.

The study proceeds from a site analysis to the generation of a mixed-use program for the site. From these, a physical design proposal is made.

Acknowledgments

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My parents, for their continuing and unending support, encouragement, and patience throughout this endeavor and throughout my education.

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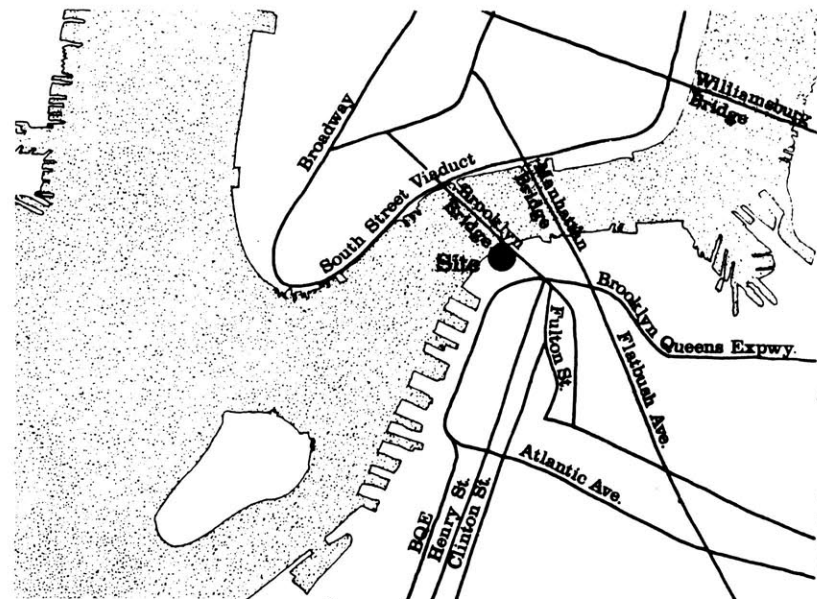
Introduction

The Fulton Ferry district is at a critical point in its historical evolution. Situated on the East Riverfront between the Manhattan Bridge and Brooklyn Heights, the area was once a thriving center of shipping and industry, as well as the location of the Brooklyn terminal of the Fulton Ferry, which connected that city with Manhattan. With the building of the Brooklyn Bridge in 1883, however, traffic began to by-pass the area, and the district began a decline that has continued to the present day. Recent development indicates that this trend is reversing: many of the lofts and warehouses in the district are being converted to residential use; new restaurants and a barge music hall have opened; and a private concern is seeking to reinstitute the ferry as a commuter service.

In the past year, the City has assembled the waterfront property in the district, for the first time making available to the public the land that was once the exclusive domain of the shipping industry. How this land is developed is crucial. If properly planned, the municipal property could serve as a catalyst to further renewal of the dis-

trict, enhance the unique historic character of the area, and provide inviting access to one of the City's greatest assets--its waterfront.

This thesis provides a physical image and set of recommendations for the development of a portion of the municipal holdings--the land at the terminus of Fulton Street. The study proceeds from a thorough site analysis to the generation of a mixed-use program for the site, based on current City and State proposals. Programmed uses



Regional Context

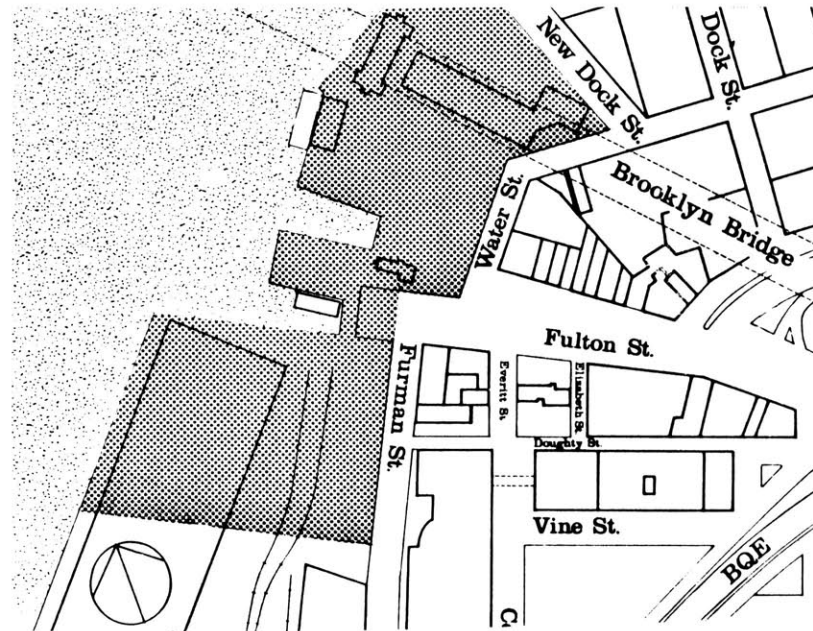


View of site and Lower Manhattan

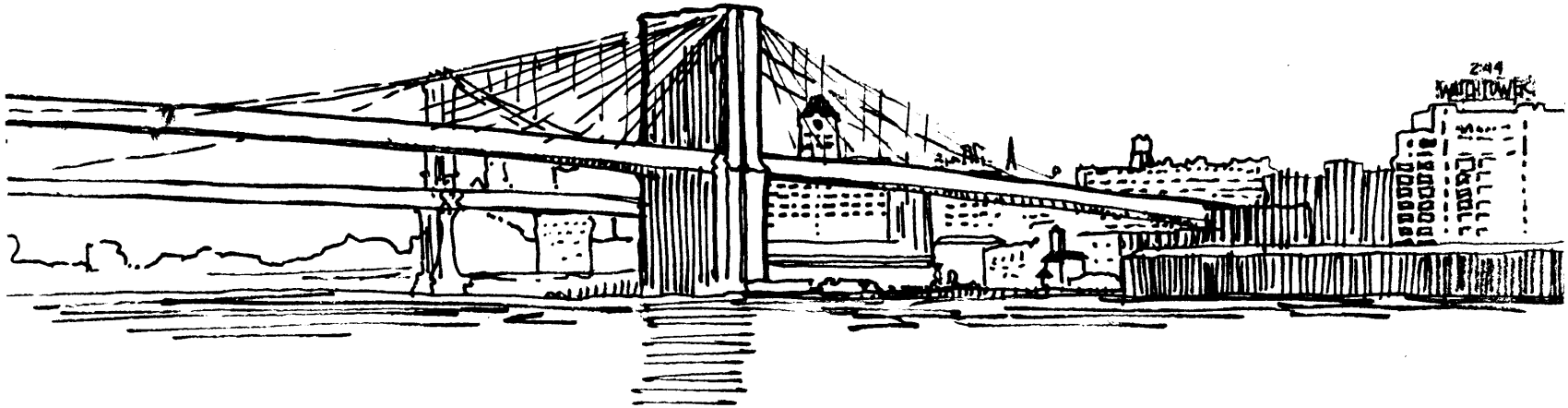
include: a plaza for Fulton Street, a waterfront park, a 350-room hotel, a small museum devoted to the Brooklyn Bridge and Fulton Ferry, professional offices, and a terminal for the revived ferry. The physical design focuses on the relationship of the public areas of the hotel, museum, and terminal to Fulton Street and the Waterfront Park.



The Fulton Ferry District



Study Area/Site



The following goals have guided the design study for the site:

1. Exploitation of the environmental, recreational, and economic potential of the East Riverfront.
2. Increasing the opportunities for viewing the Manhattan skyline.
3. Creation of major new open spaces at the water edge and on Fulton Street that are integrated with each other and with existing open spaces.
4. Re-establishment of the site as the activity center for the Fulton Ferry district.
5. Development of the site as a catalyst for renewal of the district.
6. Attraction of a broad range of users to the waterfront.
7. Provision of a distinct and memorable image for the site, while being sensitive to the surrounding built context.
8. Incorporation of a sense of the history of the site and district in the new development.
9. Restoration and preservation of the historic character of Fulton Street.
10. Improvement of pedestrian access to the site.

History

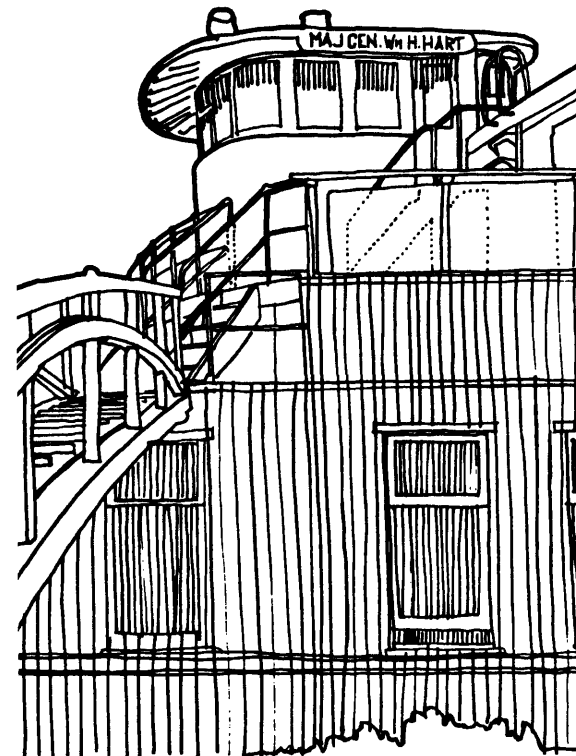
The history of the Fulton Ferry district is one of commerce and transportation. The Dutch settled the area when a ferry service between "Breukelen" and Manhattan was initiated in 1646. The early ferries were rowboats, flat scows with sprit sails, and two-masted sailboats, all dependent on the winds and tide.

Gradually, a small but bustling community grew around the ferry landing, which was the terminus of the Old Ferry Road. Officially laid out in 1704, this road was Brooklyn's principal artery, and ran from the ferry landing to Jamaica and eastern Long Island. It was along this road that farmers brought their produce to market and livestock to slaughter.

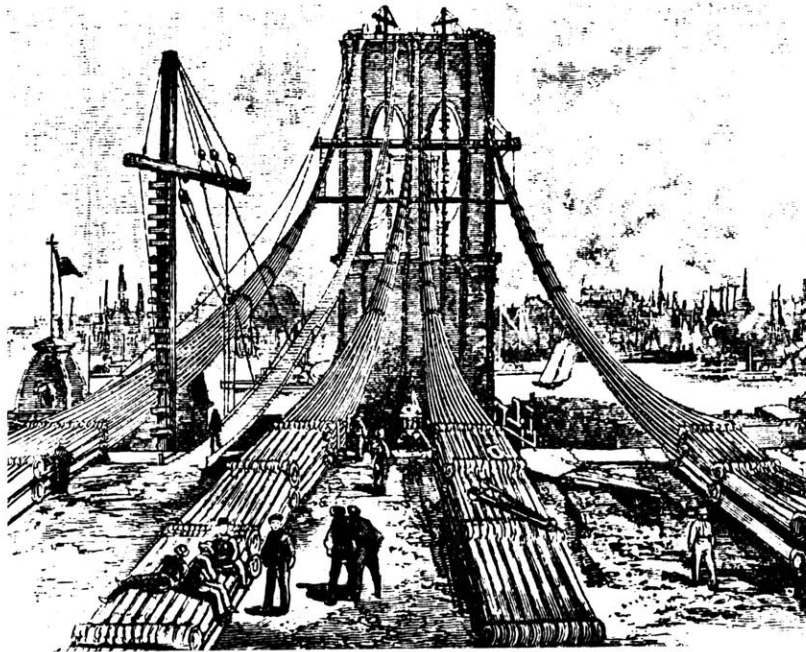
The Fulton Ferry district continued its growth in the 19th century. In 1814, a steam-propelled ferry was introduced on the Fulton Ferry Line to New York. The new ferries carried several hundred passengers, as well as horses and wagons. The ferries were capable of 40 eight-minute crossings per day. In honor of Robert Fulton, developer of the steam engines

which powered the boats, Old Ferry Street was renamed Fulton Street.

By the mid-1820's a number of commercial institutions--banks, fire insurance companies, and law firms--had settled along Front Street. Small maritime industries and warehouses located along Water Street. Shops with residences above lined Fulton Street by the late 1830's.



The problem of transit to the ferry from the newly developed inland sections of Brooklyn and from Long Island had become acute by the mid-19th century. The Brooklyn City Railroad Company replaced the old stagecoaches with twelve horse-car lines which converged at the Fulton Ferry. By 1867, these lines carried 22 million passengers a year, and by the time the construc-



Stages of construction (*Harper's New Monthly Magazine*, May 1883;
Bettmann Archive)

tion of the Brooklyn Bridge began in 1870, the ferries and horse-car lines carried about 50 million passengers annually.

On May 24, 1883, the Brooklyn Bridge formally opened amid festivities on both sides of the East River. A road and walkway joined the cities of New York and Brooklyn for the first time, and by September the bridge included a transit line as well.

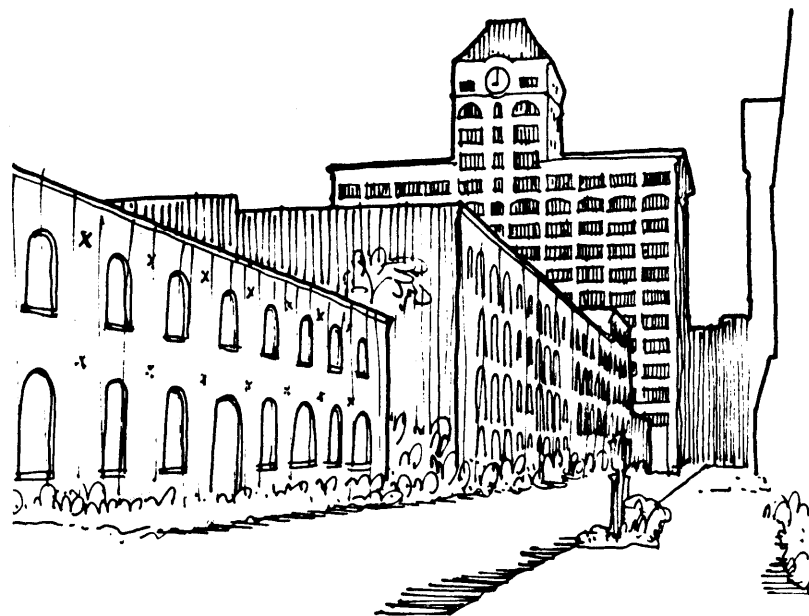
With the opening of the Brooklyn Bridge, however, traffic began to by-pass the Fulton Ferry district. Though the ferry continued for 40 years after the opening of the bridge, the district fell in importance as a viable commercial area. The decline is reversing with the recent renovation and re-use of existing structures in the district.

Architectural History

The buildings of the Fulton Ferry district have changed little since the 19th century, and are excellent examples of the industrial waterfront architecture of that time. The Empire Stores, a series of seven brick warehouses, form an almost continuous wall along Water Street between Main and Dock Streets. Completed in 1870, the stores were originally used for storage of raw materials such as coffee beans, animal hides, grains, raw sugar and molasses. The simple facades are punctuated by regularly-placed arched windows fitted with cast-iron shutters. Despite a height of only four to five stories, the buildings achieve an austere monumentality.

The Empire Stores were among the many warehouses constructed along the Brooklyn waterfront during the post-Civil War economic boom. By 1870, the waterfront was so completely lined with privately-owned warehouses and docks that Brooklyn earned the nickname the "walled city".

In contrast to the horizontality and planarity of the Empire Stores is the strongly expressed reinforced concrete framework of the 15- to 17-



The Empire Stores and Gair Building

story loft buildings northeast of Main Street. Robert Gair, an early entrepreneur in the corrugated box industry, built these structures.

The north side of Fulton Street is lined with a row of four-story brick buildings constructed in the 1830's. The buildings originally had lodgings above the first floor shops, but by the late 1850's, the use of these buildings had become strictly commercial. Designed in the Greek Revi-

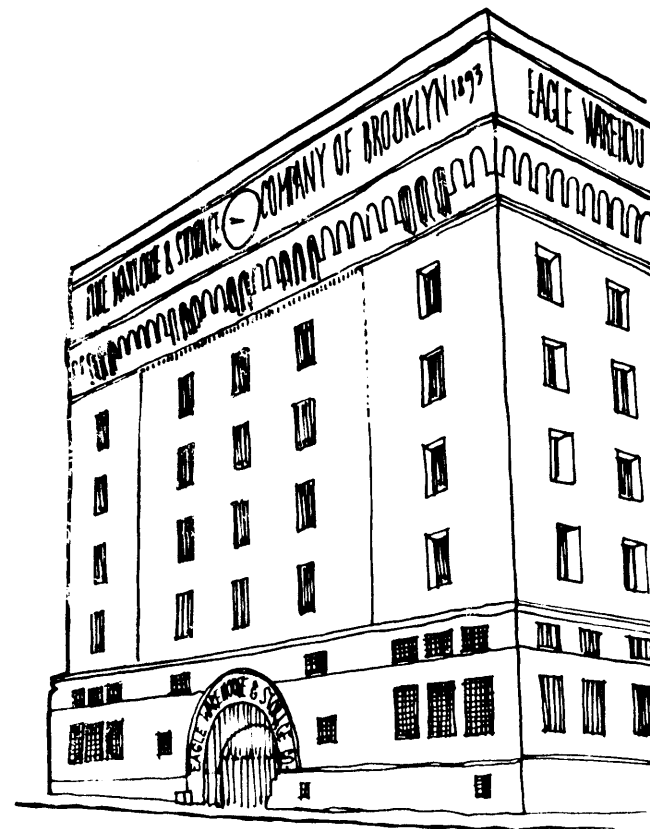


Rowhouses along Fulton Street

val style, the buildings have simple and restrained architectural detailing. Wooden canopies once extended eighteen feet over the sidewalk. Unlike the Empire Stores, the individual units that make up the continuous street wall are easily perceived. The buildings step to follow the slope of Fulton Street.

The Eagle Warehouse and Storage Company, located on the south side of Fulton Street between Elizabeth and Hicks Streets, was built in 1893-94.

The warehouse was used primarily for the storage of household furnishings and silverware. Designed by Frank Freeman in the rugged Romanesque Revival style, the building is dominated by a monumental entrance arch. The predominance



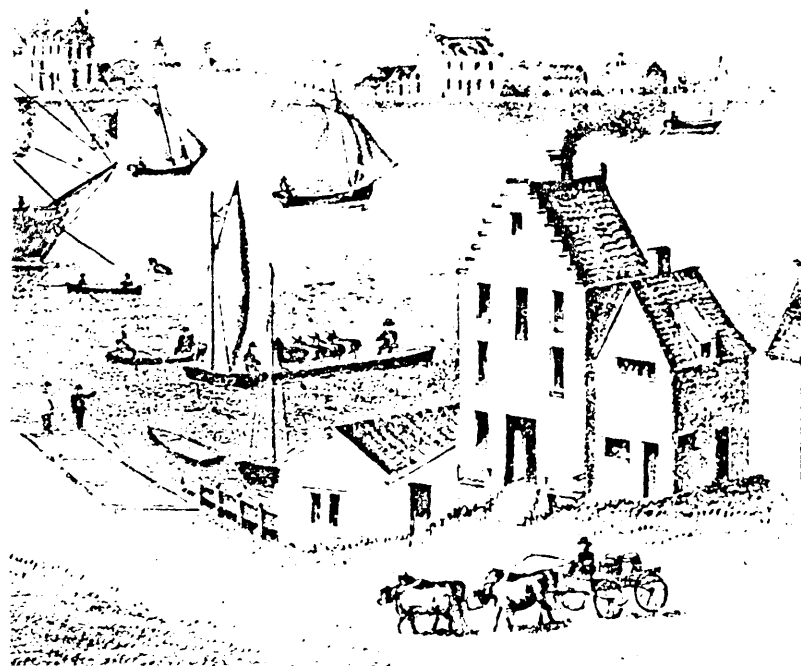
The Eagle Warehouse

of the wall surface with its small, vertical openings, the window grilles on the lower windows, and the machiolation-like arches supporting the heavy cornice make the warehouses resemble a fortress.

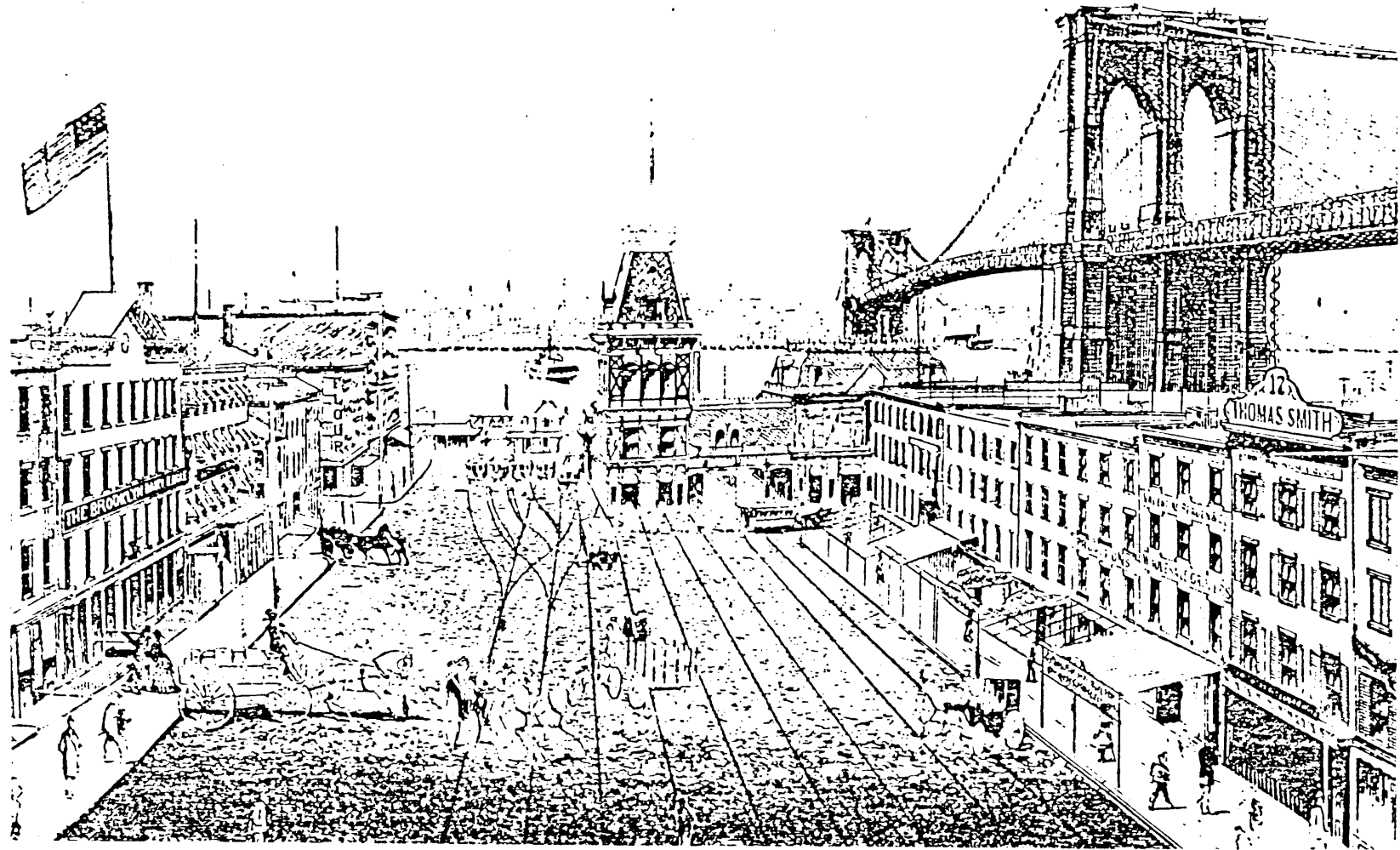
The site under investigation is the traditional location of the Fulton Ferry terminal. A wood-frame ferry house and tavern was built at the foot of Fulton Street in 1655, and later replaced with a stone building in 1700. A larger ferry house and tavern was built in 1865. This building combined stick-style Eastlavian elements with a French Second Empire roof over a tower wing, which extended to the center of Fulton Street. The building was demolished in 1926, two years after the ferry service had been discontinued. The existing Marine Fireboat Station, a two-story frame building with a hipped roof and tower, was built on the site in 1926.

The Brooklyn Bridge, designed by John Roebling and constructed by his son Washington, dominates the district. The gossamer web of supporting and bracing cables stretches between massive granite piers. The two towers, with their

Gothic arches, rise to a height of 276 feet above mean water level.



The Ferry House, 1716



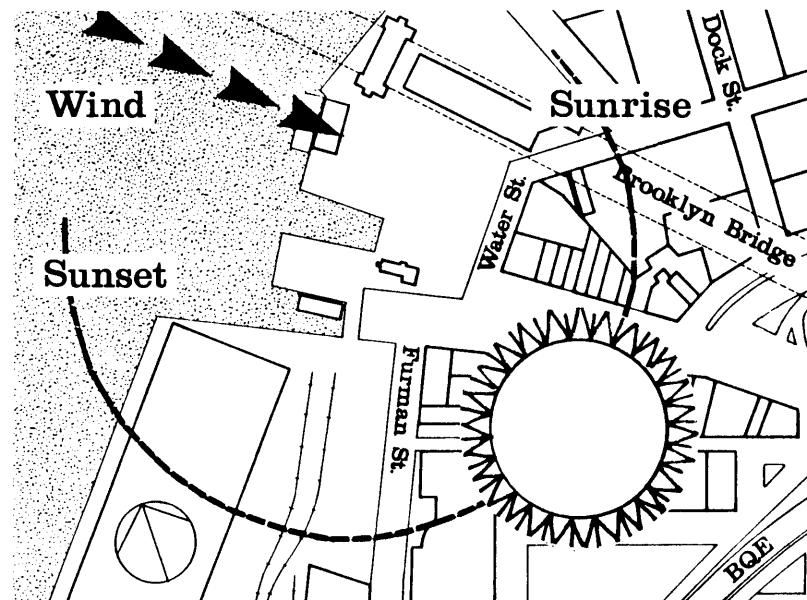
The Ferry Terminal circa 1865

Natural Conditions

The shoreline in the vicinity of the site is all landfill and has been altered repeatedly over the years. At the time of the Revolution, according to the Ratzer Map of 1766-67, Front Street was the last street above the waterline. The site of the Empire Stores was filled after a line of bulkheads was established in 1885. Early engravings illustrate the varying shape of the site shoreline, and a map as late as 1962 shows a configuration different from that of today.

Fulton Street slopes down to the site, affording improved views of the Manhattan skyline. The site is relatively flat, and about 10 feet above mean water level. The water level varies about four feet throughout the year.

The site is located in a region of temperate climate. Temperatures average 52°F, with average highs of 73°F in July and 30°F in January. Precipitation is well-distributed throughout the year, averaging 43 inches per year. Most snowfall occurs in February. Periods of excessive humidity coincide with the hottest months, June, July, and August. Prevailing winds are from the



Natural Conditions

northwest throughout the year, although summer winds are more variable, with frequent breezes from the south. High velocity winds are almost invariably from the northwest.

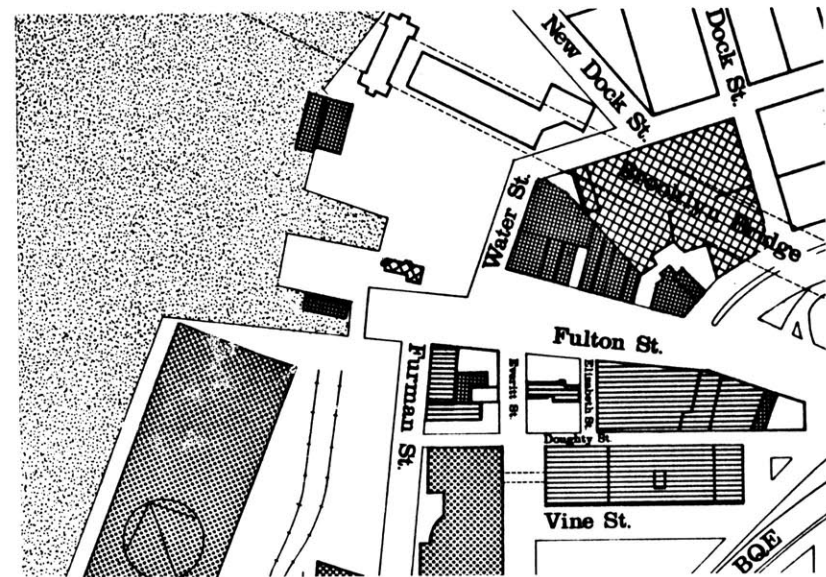
Land Use

The Fulton Ferry district, which originally developed as an industrial waterfront area, is undergoing change. North of Fulton Street, much of the land remains in industrial use. The Empire Stores, recently purchased by the State Commission of Parks and Recreation for the City of New York, lie vacant. Uses proposed for the 340,000 square feet contained in the buildings include retail or industrial space, housing, a state maritime museum, a hotel, or a sports club.






During the past few years, artists and architects have renovated many of the existing residential buildings on Fulton and Front Streets. With the skyrocketing cost of housing in Manhattan, however, larger scale development is taking place in the district. The Eagle Warehouse and the Watchtower building east of Columbia Heights are being converted to apartments. As housing pressures in Manhattan increase, gentrification in the Fulton Ferry area is likely to accelerate, just as it did in adjacent Brooklyn Heights.

Concentrated on the north side of Fulton Street, commercial uses in the district are limited

for the most part to bars, restaurants and convenience stores that serve the dock workers, truck men, and local residents. A large restaurant and a barge music hall that draw a regional clientele have opened recently at the foot of Fulton Street.



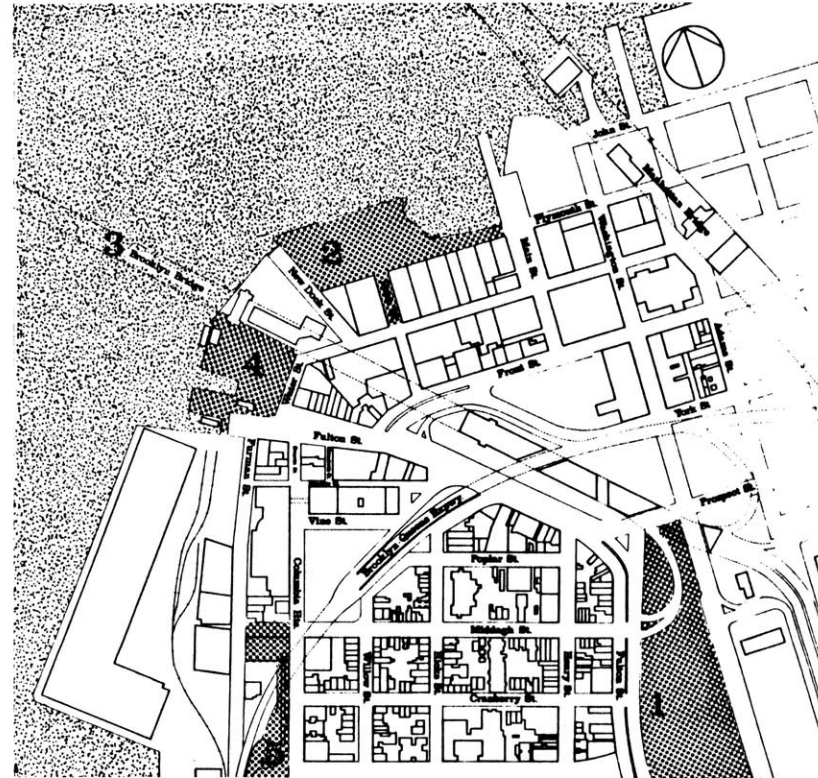
Land Use

-  Industrial
-  Residential
-  Commercial
-  Institutional
-  Vacant

Institutional uses are scattered throughout the district, and include the Department of Ports and Terminals shipping facility, the Fulton Ferry Museum in the Marine Fireboat Station, and several city-owned maintenance and storage buildings.

There is little vacant land in the area, though some buildings are unoccupied. Three small empty lots are located on Fulton Street.

The site is currently occupied by part of the Department of Ports and Terminals freight pier to the south, the Marine Fireboat Station, the barge restaurant and music hall, a parking lot, and a small park.



Open Space

The city and state have recently completed the assembling of the waterfront property on and adjacent to the site. A two-acre boardwalk park east of the site has been opened by the State Commission of Parks and Recreation for the City of New York.

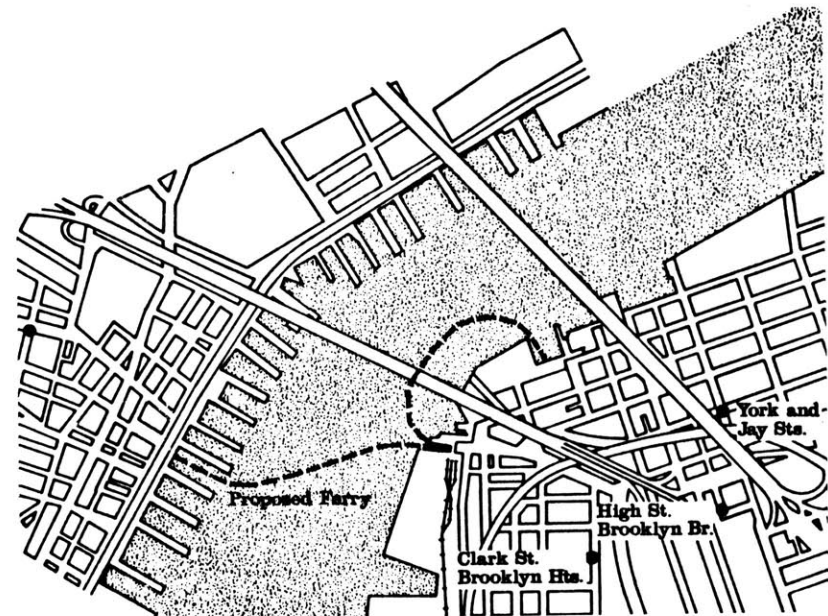
Open Space

1. Cadman Plaza
2. Boardwalk Park
3. Brooklyn Bridge Promenade
4. River Cafe and Marine Fireboat Station Park
5. Edward Robinson Squibb Park and Brooklyn Promenade

Other open space within the area includes the raised pedestrian walks on the Brooklyn Bridge; the Brooklyn Promenade, located above the Brooklyn-Queens Expressway; Cadman Plaza, a passive recreation park; and Edward Robinson Squibb Park, a playground at the terminus of the Brooklyn Promenade. A small park was recently built by the Department of Ports and Terminals on the site.

Circulation

The site is served by three subway lines and several bus lines. The nearest subway station is the High Street-Brooklyn Bridge stop, at a distance of 3/8 mile. The State Commission of Parks and Recreation for the City of New York has recommended the consideration of a small subway station on the Manhattan Bridge to improve the accessibility of the waterfront. Two buslines stop on Fulton Street, adjacent to the site.



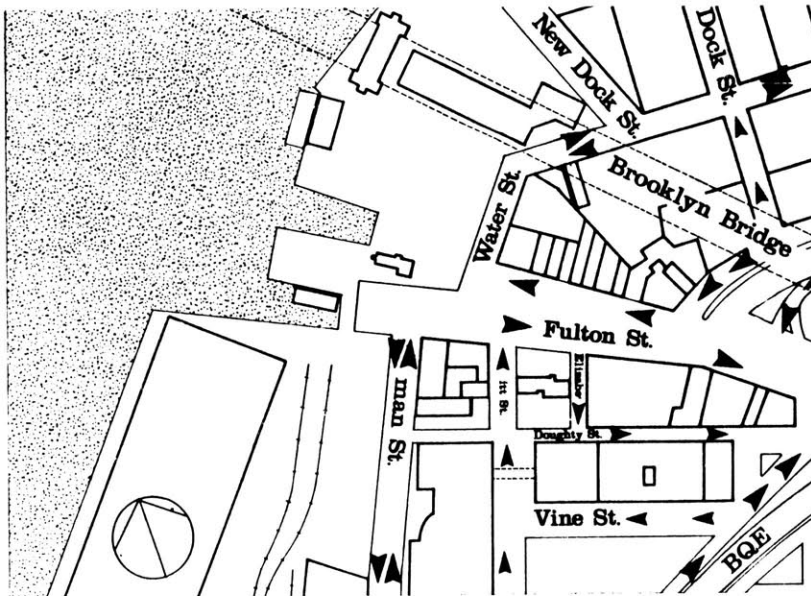
Mass Transit

A private concern is seeking to reinstitute a commuter ferry service between the historic ferry landing on the site, the South Street Seaport, and possibly Wall Street.

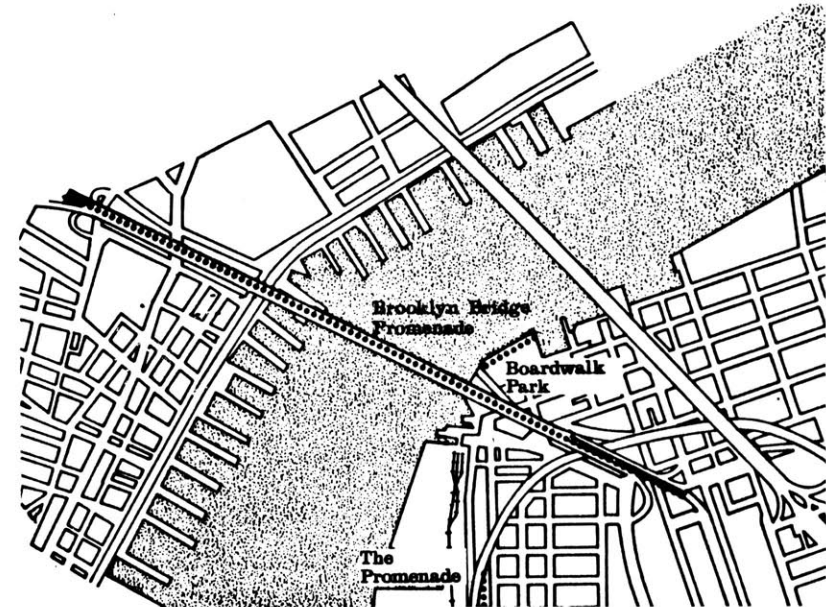
Traffic in the vicinity of the site is concentrated on Fulton Street near McKenney Street, where the Manhattan Bridge, Brooklyn Bridge, and Brooklyn-Queens Expressway ramps converge. Most of the traffic that continues down Fulton Street turns onto Furman Street to reach Atlantic

Avenue and downtown Brooklyn. Trucking traffic is heavier to the east of Fulton Street, where the industrial lofts are located, and on Furman Street, near the Department of Ports and Terminals pier.

Three pedestrian ways terminate in the vicinity of the site: the Brooklyn Promenade, the Brooklyn Bridge walk, and the new Boardwalk Park. The Brooklyn Promenade and Bridge walkway are well-used by strollers, joggers, and cyclists while the Boardwalk Park is kept locked



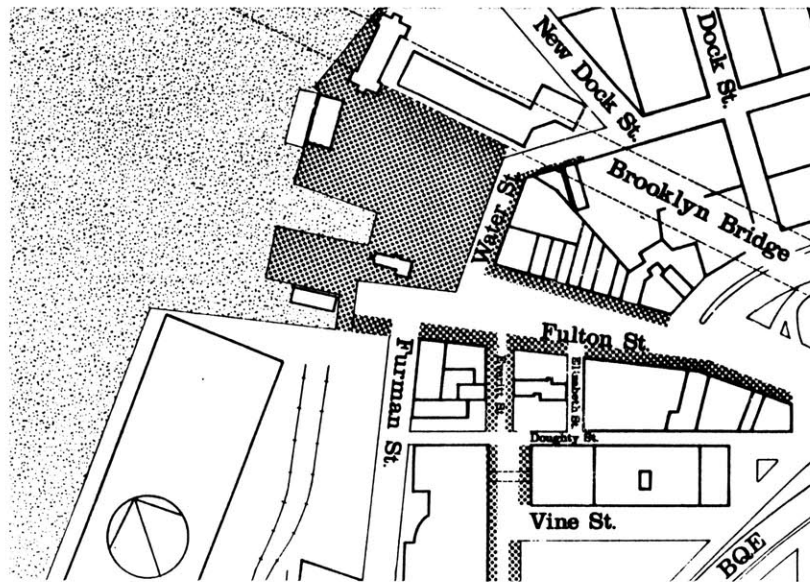
Traffic Flow



Regional Pedestrian Circulation

much of the time. The connection of these three promenades with each other and with the waterfront could be improved.

Most pedestrian traffic reaches the site from Fulton Street or Columbia Heights and Everit Street. The heavy traffic on Fulton Street near the Brooklyn-Queens Expressway makes pedestrian access difficult. Traffic lanes are not defined on the broad portion of Fulton Street near the site, and cars roam freely, endangering pedestrians. There is no signalization.



Pedestrian Concentration

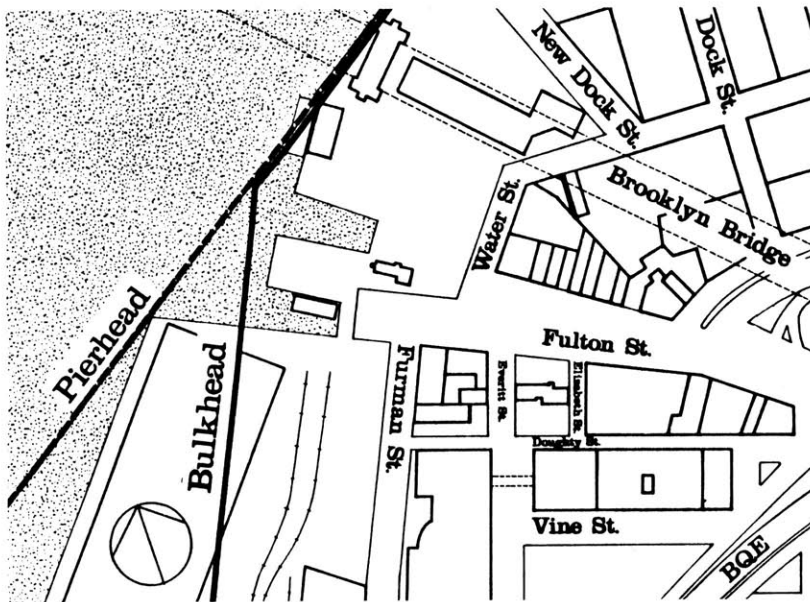


On Brooklyn Bridge (Photograph by Wayne Andrews)

Legal Considerations

Current zoning for the site, and for that part of Fulton Ferry district to the east of Fulton Street, is Medium Manufacturing - Medium Performance with an allowable F.A.R. of 2.0 and required parking. Land to the south of Fulton Street is zoned for medium density residential uses. Pierhead and bulkhead lines have been established for the site by the U.S. Army Corps of

Engineers. The eastern portion of the site is owned by the City, while that to the south is owned by the Department of Ports and Terminals. The Marine Fireboat Station located on the site is an individual historic landmark.



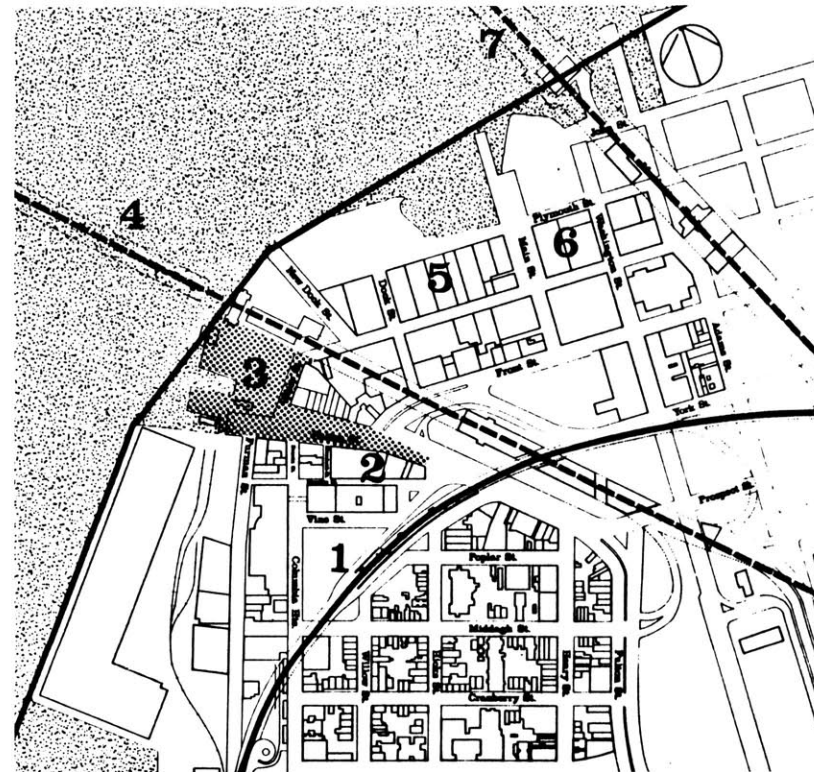
Pierhead and Bulkhead Lines

Urban Form: Imageability

The site is located in a district that is clearly identifiable from within and from afar. The Fulton Ferry district has distinct edges--the East River, the Brooklyn-Queens Expressway, and the rising topography of Brooklyn Heights. The fourth side is less clearly delineated; the Manhattan Bridge forms a permeable boundary. Fulton Street, with the site at its terminus, is located at one edge of the district and acts as a seam between the grids of Brooklyn Heights and Clinton Hill. Land uses change to either side of Fulton Street; industry is located to the east, and residences to the south.

The paths which transverse the district help to make it easily identifiable. The Brooklyn and Manhattan Bridges and the Brooklyn-Queens Expressway pass overhead, while Fulton Street and Furman Street are major routes at grade.

Fulton Street is an historic node for the district. It was at this point that goods were moved from land transportation to ship, passengers boarded the Fulton Ferry, and a market thrived. Though these activities have long since ceased,



District-Edge-Path-Node-Landmarks

- Edges
- - - Permeable edges
- ▨ Node

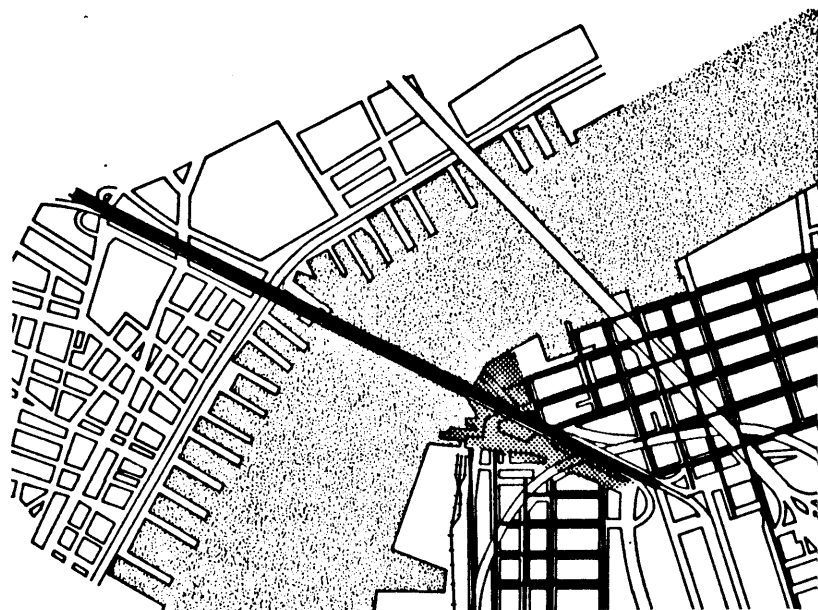
1. Brooklyn-Queens Expressway
2. Eagle Warehouse
3. Marine Fireboat Station
4. Brooklyn Bridge
5. Empire Stores
6. Gair Building
7. Manhattan Bridge

the street continues to draw people because of the splendid view of Manhattan and the river that it offers.

The district has several regional and local landmarks: the East River, the Brooklyn and Manhattan Bridge towers, the towers on the Gair and Watchtower buildings, the Empire Stores, the Eagle Warehouse and the Marine Fireboat Station.

A number of other factors contribute to the unique character of the area: the high density,

the industrial nature of the buildings, the hum of the traffic on the bridges, and the dusty smell of spices near the Empire Stores.



The Fulton Street "Seam"

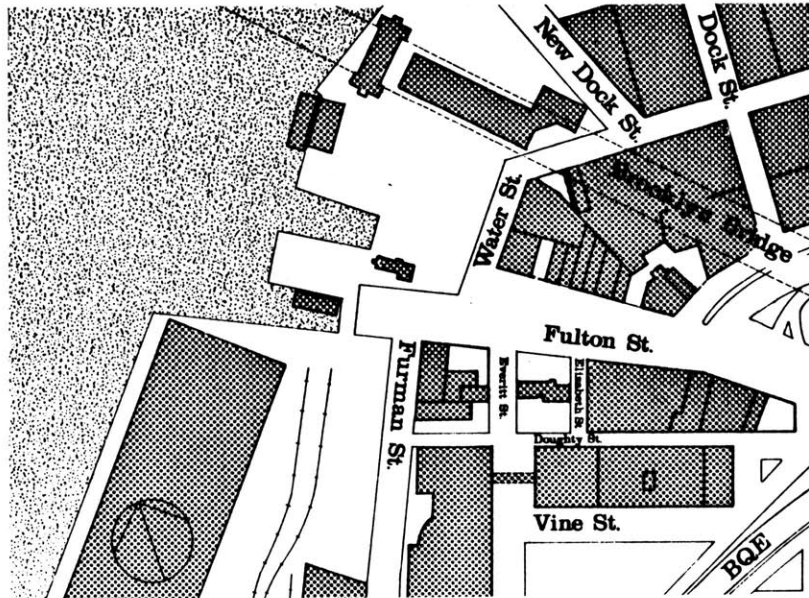


Marine Fireboat Station

Urban Form: Density

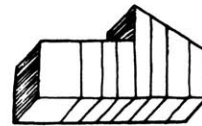
The Fulton Ferry district is densely built; none of the buildings are set back from the narrow streets, and there are few vacant parcels. Only near the site, where Fulton Street opens onto the river, is the sense of near-claustrophobia relieved.

Heights range from two-story warehouses to 17-story industrial lofts; most buildings have four to five stories. The tallest buildings are concentrated on Main Street near the Manhattan Bridge;

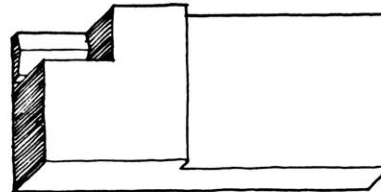


Solid-Void

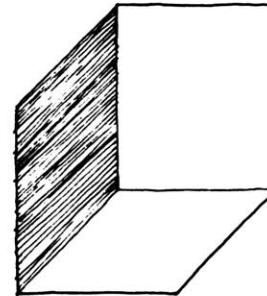
the lower Empire Stores form a continuous wall along the waterfront; and four-story rowhouses line Fulton Street near the site. Sizes range from industrial buildings that occupy entire city blocks to 20- by 60-foot rowhouses.



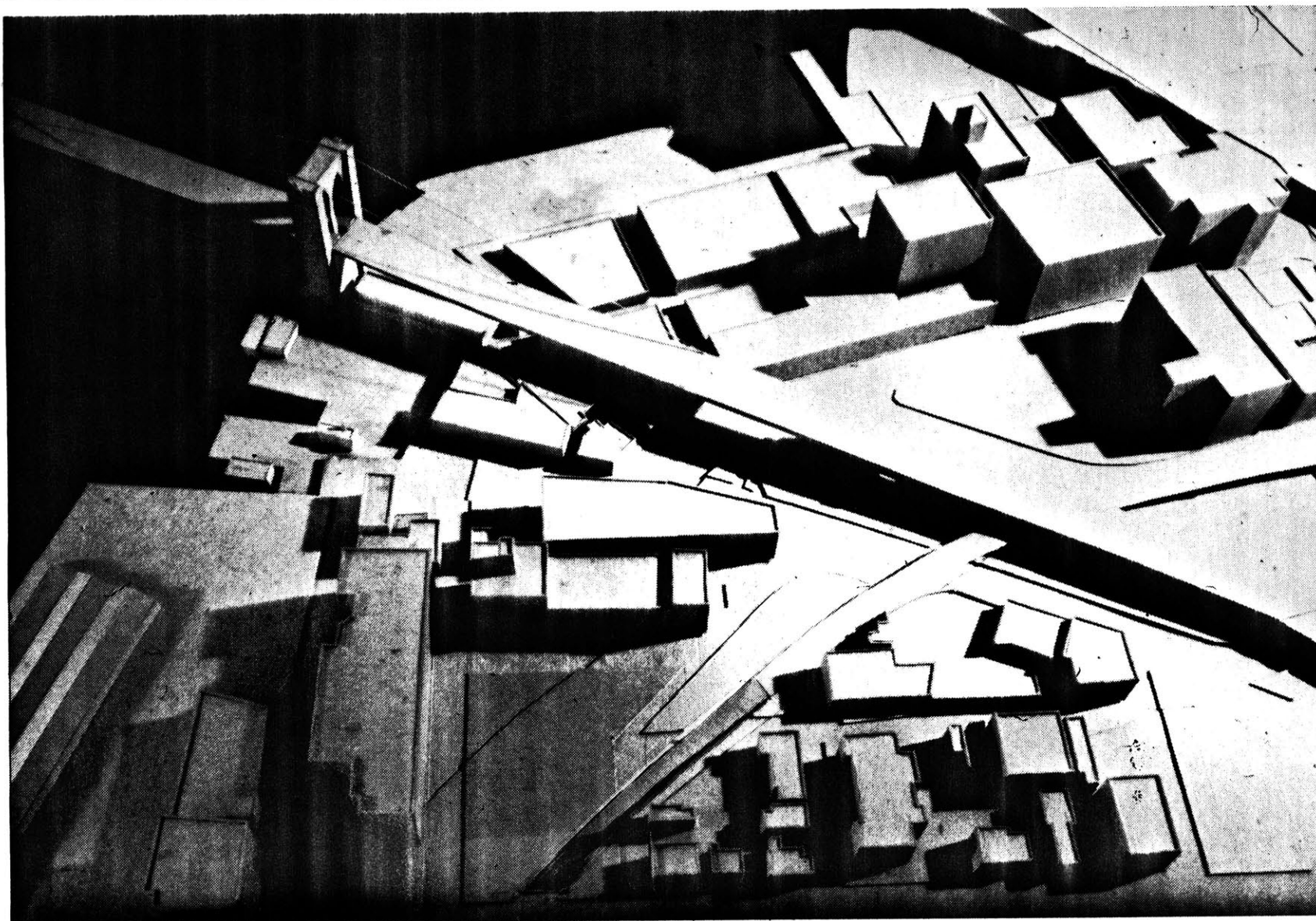
Rowhouses



Warehouses



Industrial Lofts



The Fulton Ferry district

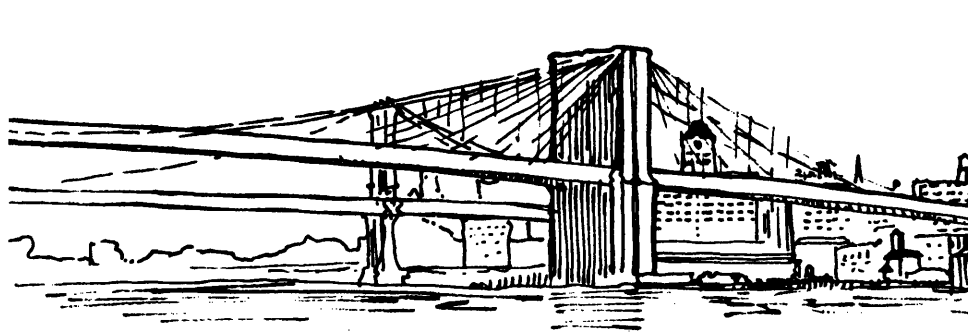
Urban Form: Vocabulary

The Fulton Ferry district has a rich vocabulary of form that reinforces its distinctive image and that might be used to inform the design of a new building on the site. The formal characteristics of the district include:

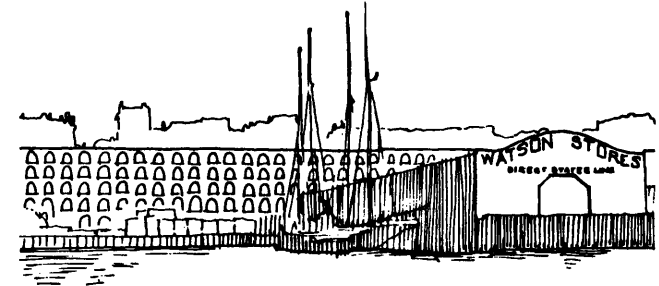


Verticality

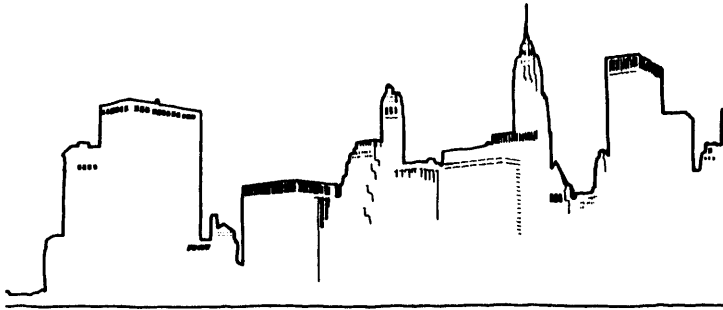
Towers and Lofts



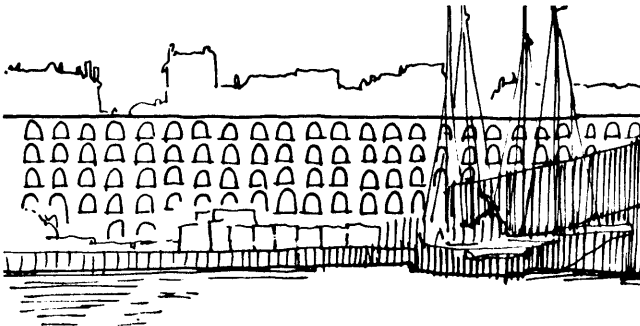
Horizontality



Manhattan Skyline Makes a
Lively Silhouette

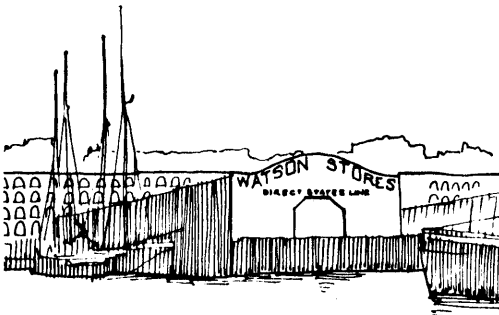


Silhouette



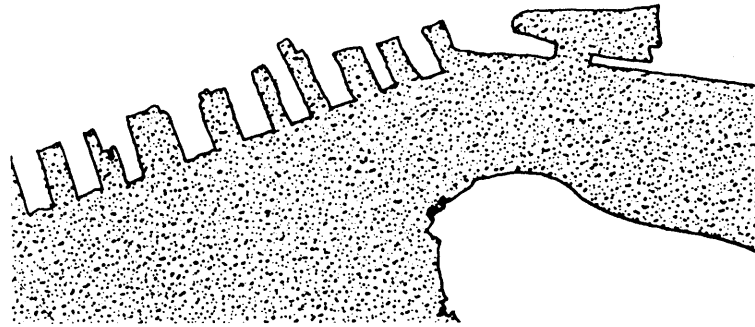
Buildings Parallel to River

Piers Extend into River

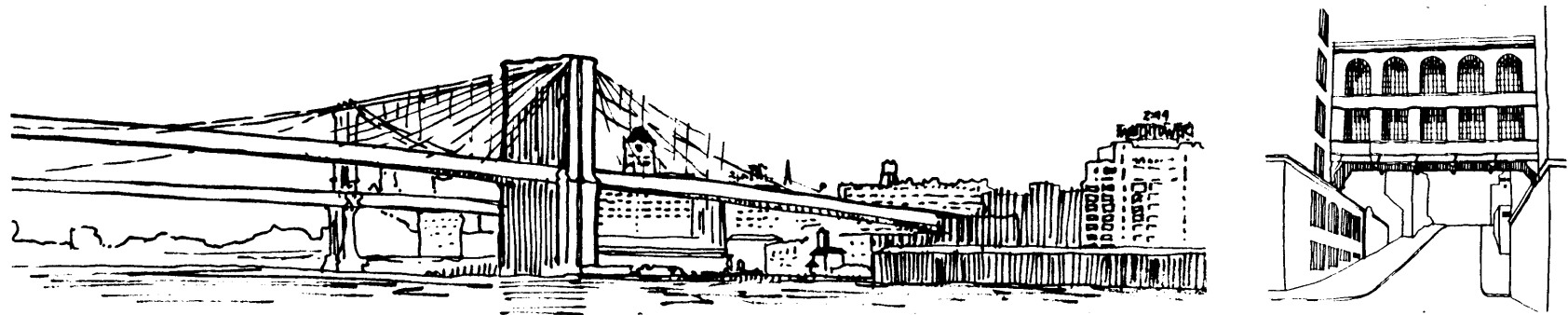


Buildings Perpendicular to River

Piers Jut Out into River



Crenelated River Edge



Bridges

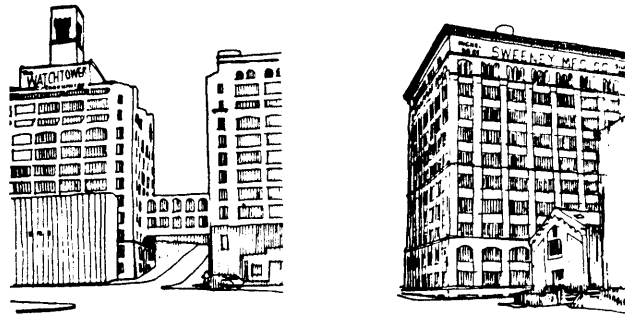


Towers



Bearing Wall

Continuous Vertical Surface
with Small Openings



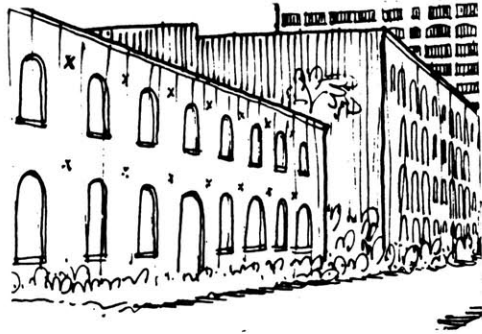
Frame

Industrial Loft Buildings -
Exposed Structural Skeleton with
Infill Panels



Classical Facade Organization

Grand First Floor, Repetitive
Middle Floors, Distinctive Top
Floor



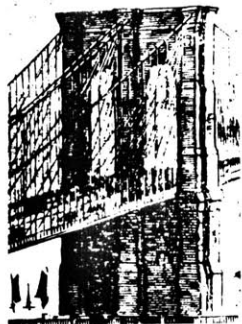
Arches



What Remains of Fulton Street's
Historic Canopies

Canopies

The Brooklyn Bridge

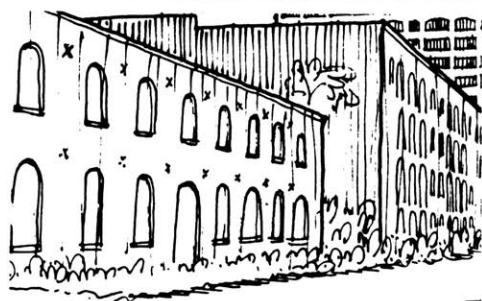


Materials: Granite

Brooklyn City Railroad Company
Building



Cast Iron



Brick

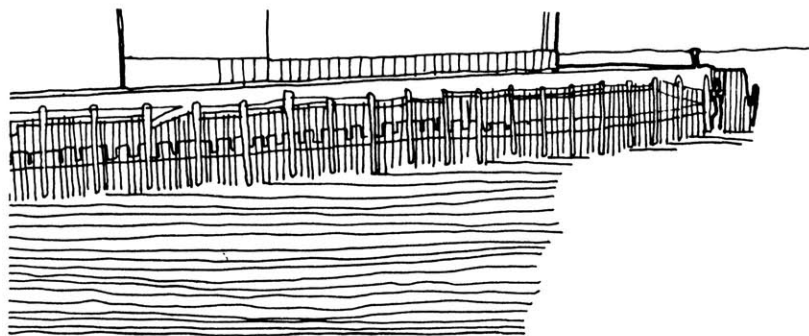


Concrete



Steel

Wooden Piles Support Piers



Wood

The program has been developed from current proposals by city and state agencies for the district, as well as from the objectives stated earlier. Uses have been selected which would work symbiotically to re-establish the site and Fulton Street as a major waterfront activity center. Though an attempt was made to be realistic about the types of uses that might occupy the site, it was not possible to confirm their economic and political viability. The value of the program lies not in the specific uses proposed, however, but in the generic physical solution for the site that can be derived from them.

The program was used as a vehicle for the design exploration, lending an air of reality to the study and making clear the need to address a variety of issues, such as orientation, access, and "image". On the other hand, the design exploration helped to refine the program. Massing studies showed whether the built volume called for in the program was too great or too little to achieve the desired formal objectives.

The various components of the program are described below, with more detailed listings in the appendix.

Fulton Street

The revitalization of Fulton Street will provide an more inviting approach to the waterfront. Vacant parcels along the once continuous street-wall will be rebuilt as shops with housing or office above. A mall will further enhance the pedestrian environment.

Waterfront Park

Development of a park at the water edge will comply with the city's policy of maintaining the waterfront accessible to the public. Coordination of the park with the existing Boardwalk Park, Brooklyn Bridge Promenade, and new waterfront-related public and private uses will make it a regional attraction.

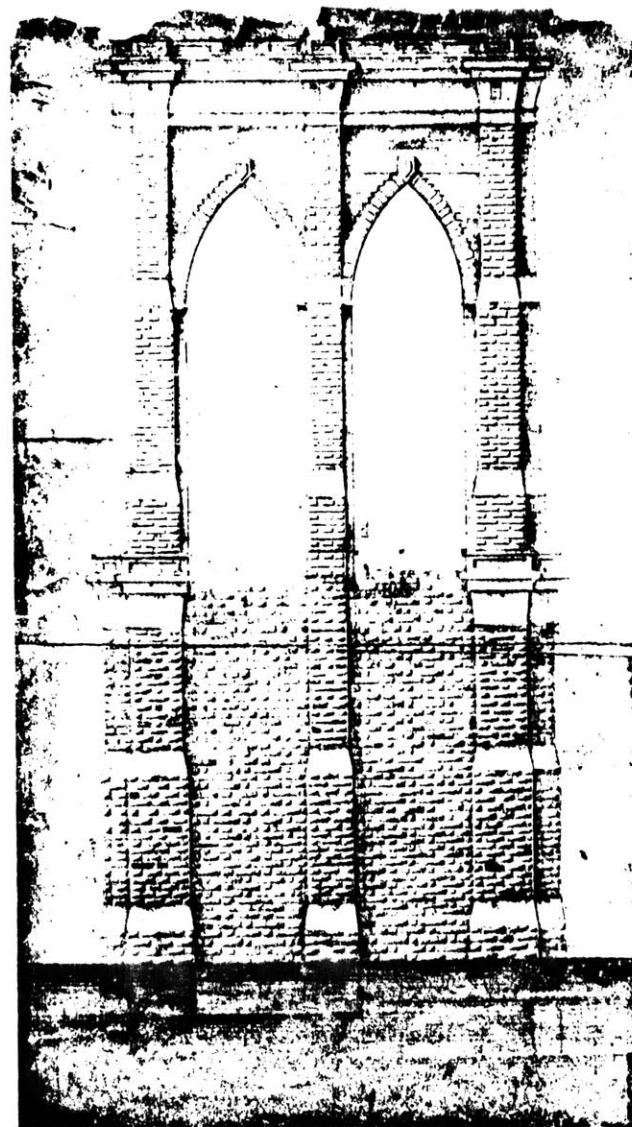
Brooklyn Bridge Hotel (350 rooms)

The City of New York has requested a proposal for a 300-500 room hotel with banquet facilities to be located either on the selected site or on one of two other city properties in the district. Brooklyn presently lacks a large, luxury hotel. A hotel on the selected site will offer a waterfront location in an historic district with a splendid view of Manhattan. A hotel, with its restaurant, shops, and meeting facilities, will contribute to a lively waterfront environment both day and night.

Museum (25,000 square feet)

The Department of Parks and Recreation has proposed that the New York State Maritime Museum be located in the district. However, a maritime museum already exists across the East River in the South Street Seaport area. The position of this museum undoubtedly will be strengthened with the development of the planned Rouse Company South Street Seaport marketplace.

A smaller facility, which would complement,



The Brooklyn Bridge - Original Drawing

rather than compete with, the museum on the Manhattan shore, is more appropriate for the Fulton Ferry district. The museum, like the hotel, will draw local and regional visitors to the waterfront. The museum will be devoted to the history of the Brooklyn Bridge, the Fulton Ferry, and Brooklyn waterfront industry of the 19th century.

Professional Offices (15,000 square feet)

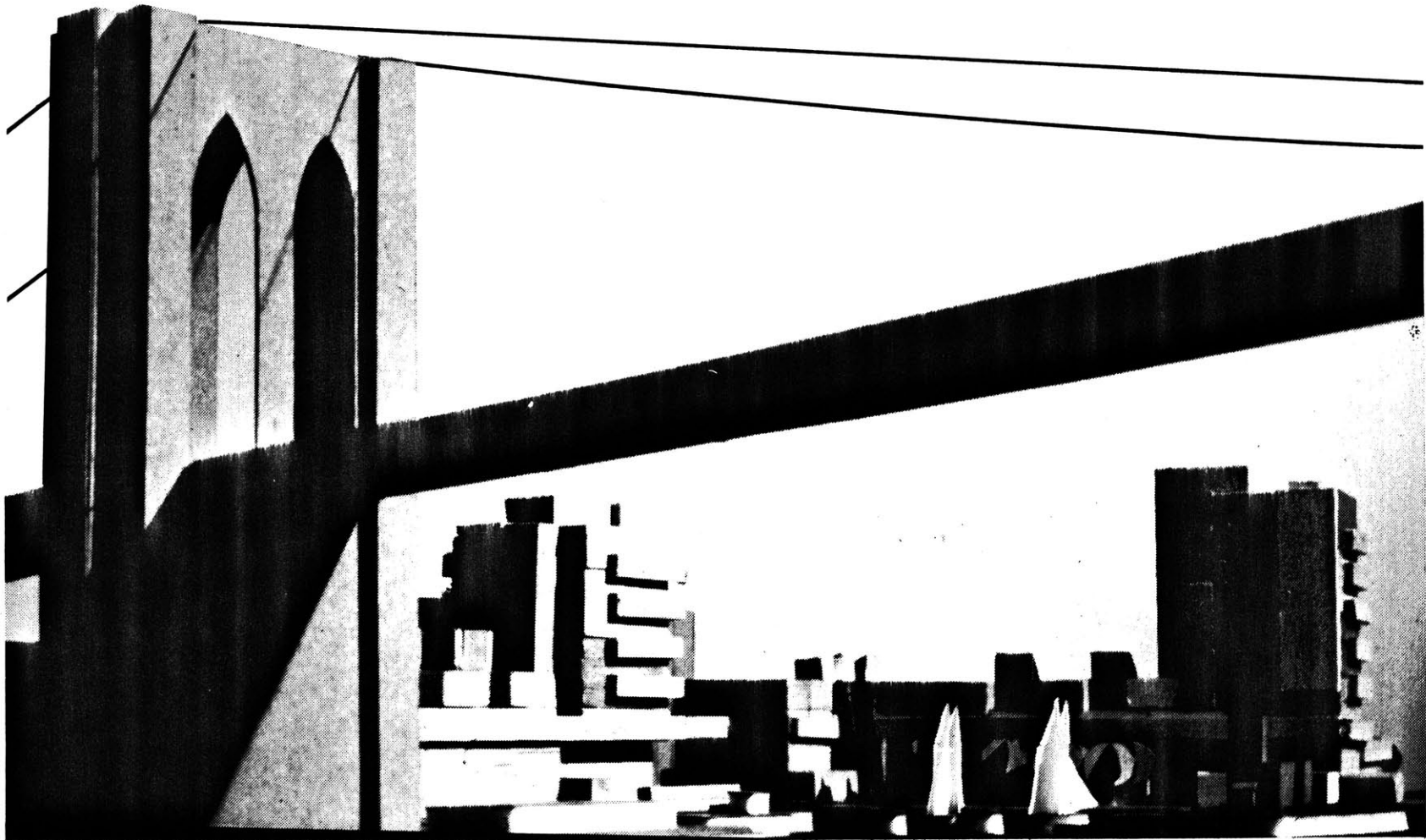
Subdividable office space can be used either to accommodate hotel or museum administrative requirements, or for lease. Offices will support the restaurants and conference facilities in the hotel.

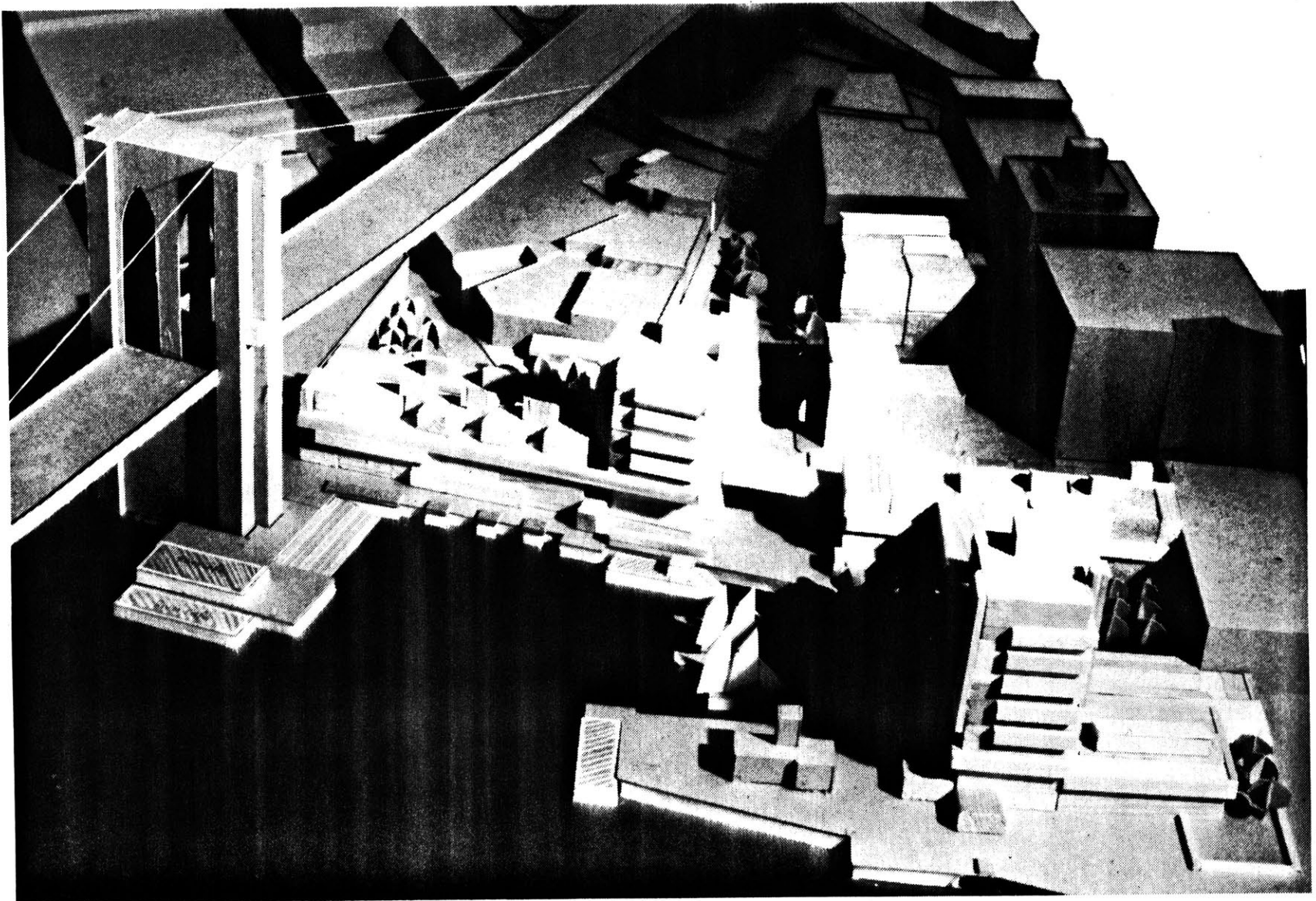
Fulton Ferry Terminal (2,000 square feet)

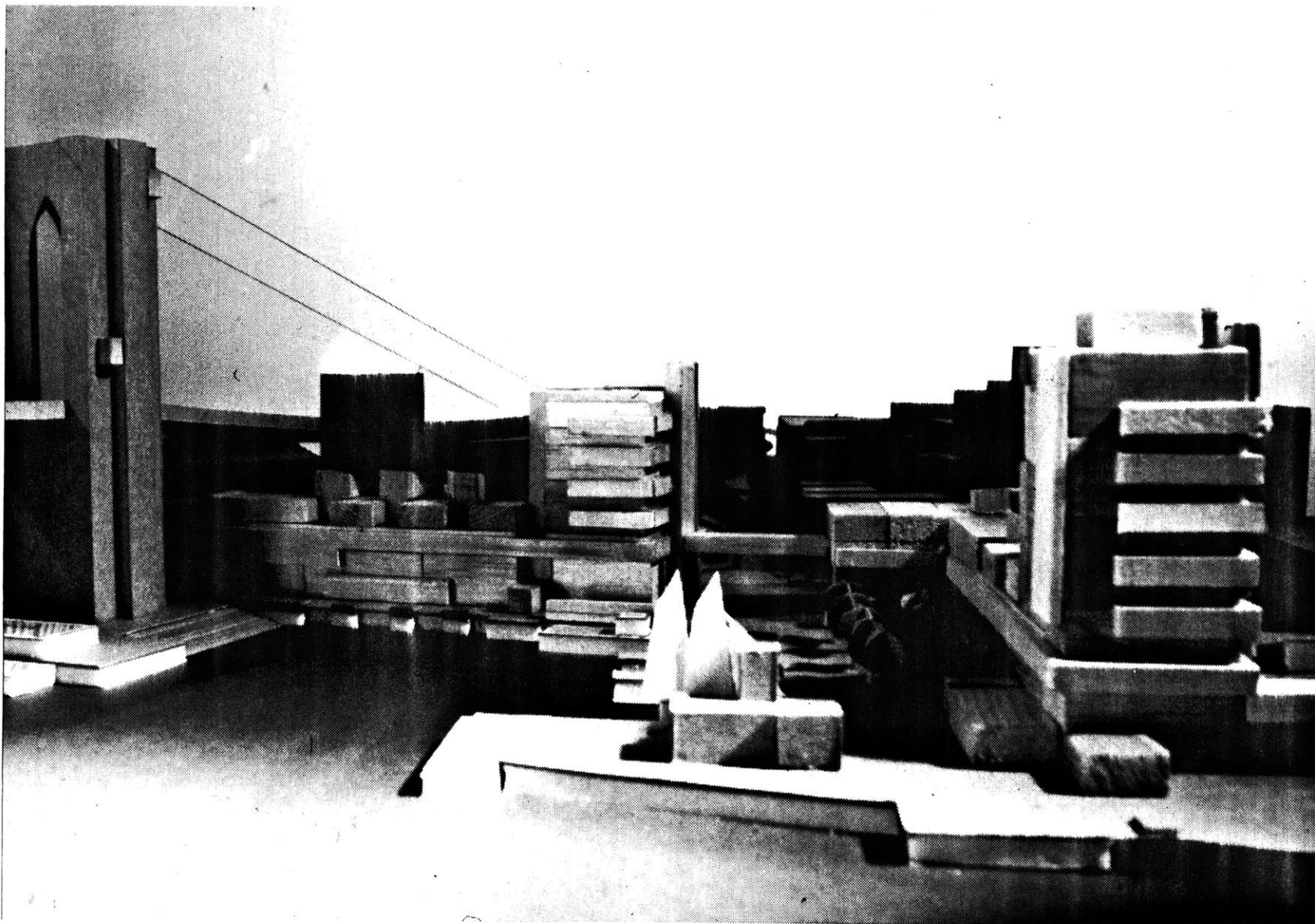
A private entrepreneur is attempting to revive the Fulton Ferry service between the South Street Seaport area, Wall Street, and the Fulton Ferry district. Placing the Brooklyn terminal on the selected site, its historic location, will improve the connection between Manhattan and Brooklyn for commuters, hotel guests, and visitors to the two waterfront museums.

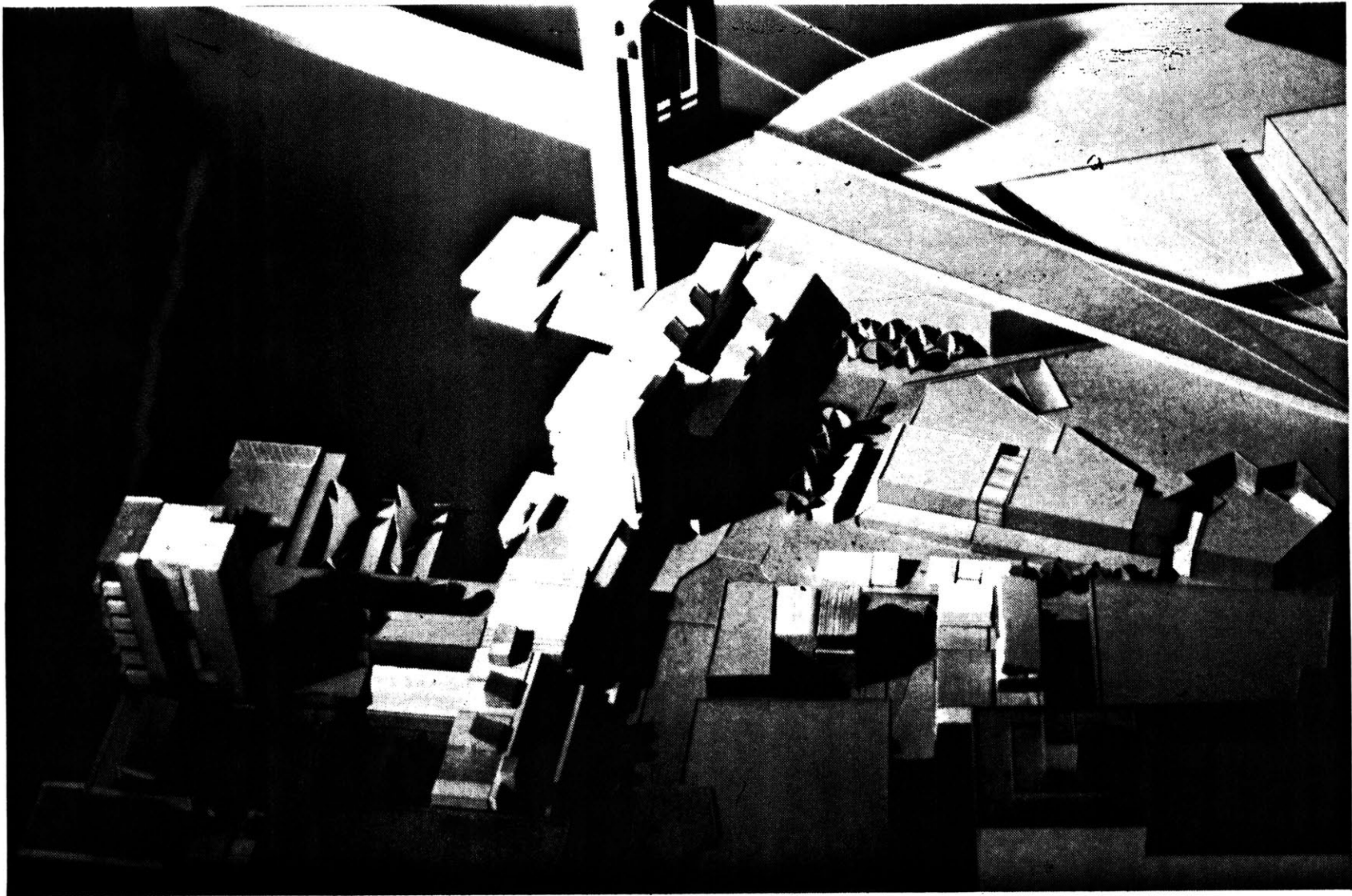
Parking

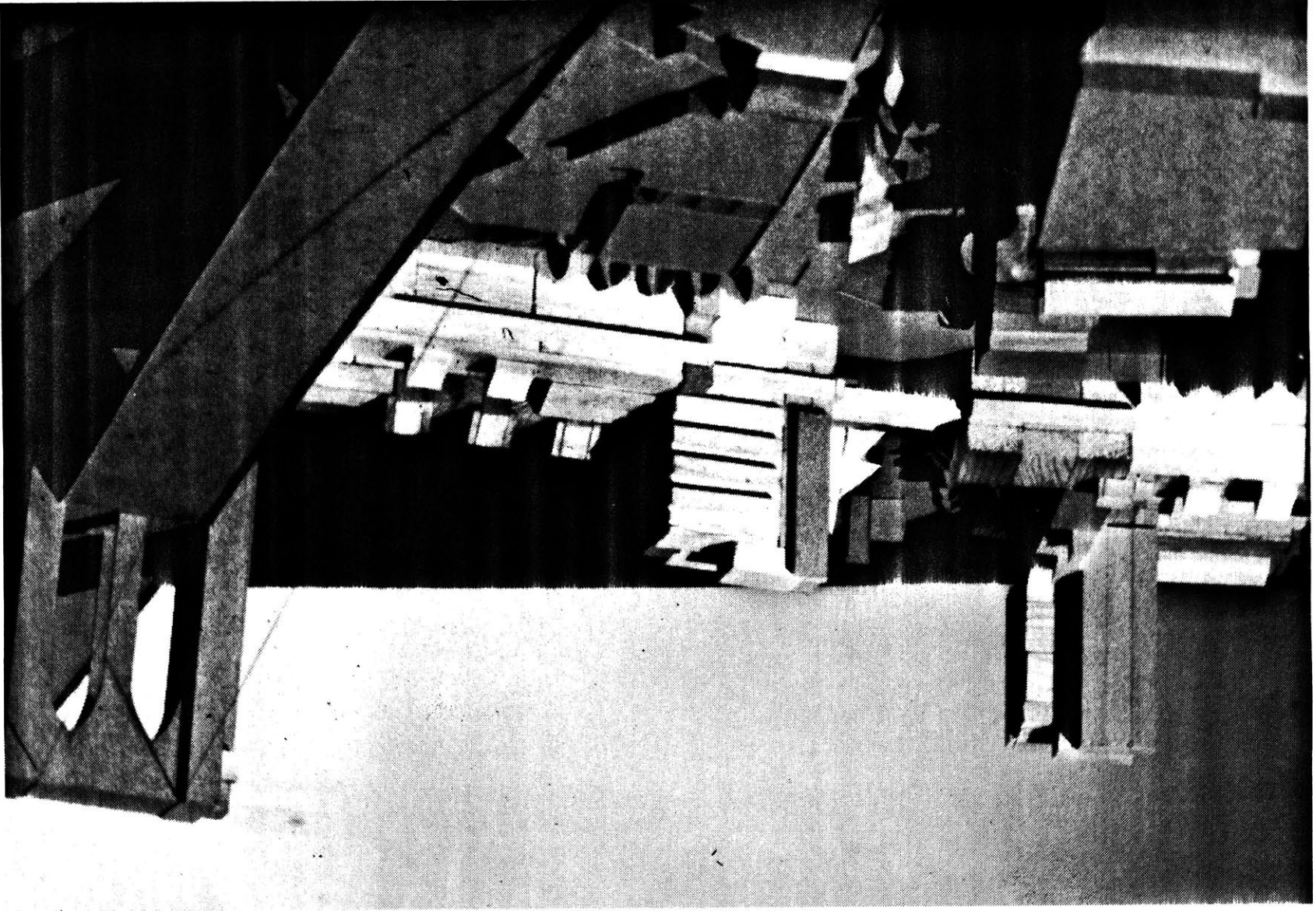
Parking will be provided for visitors to the park and museum, hotel guests, ferry passengers, and employees.



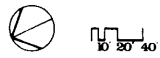




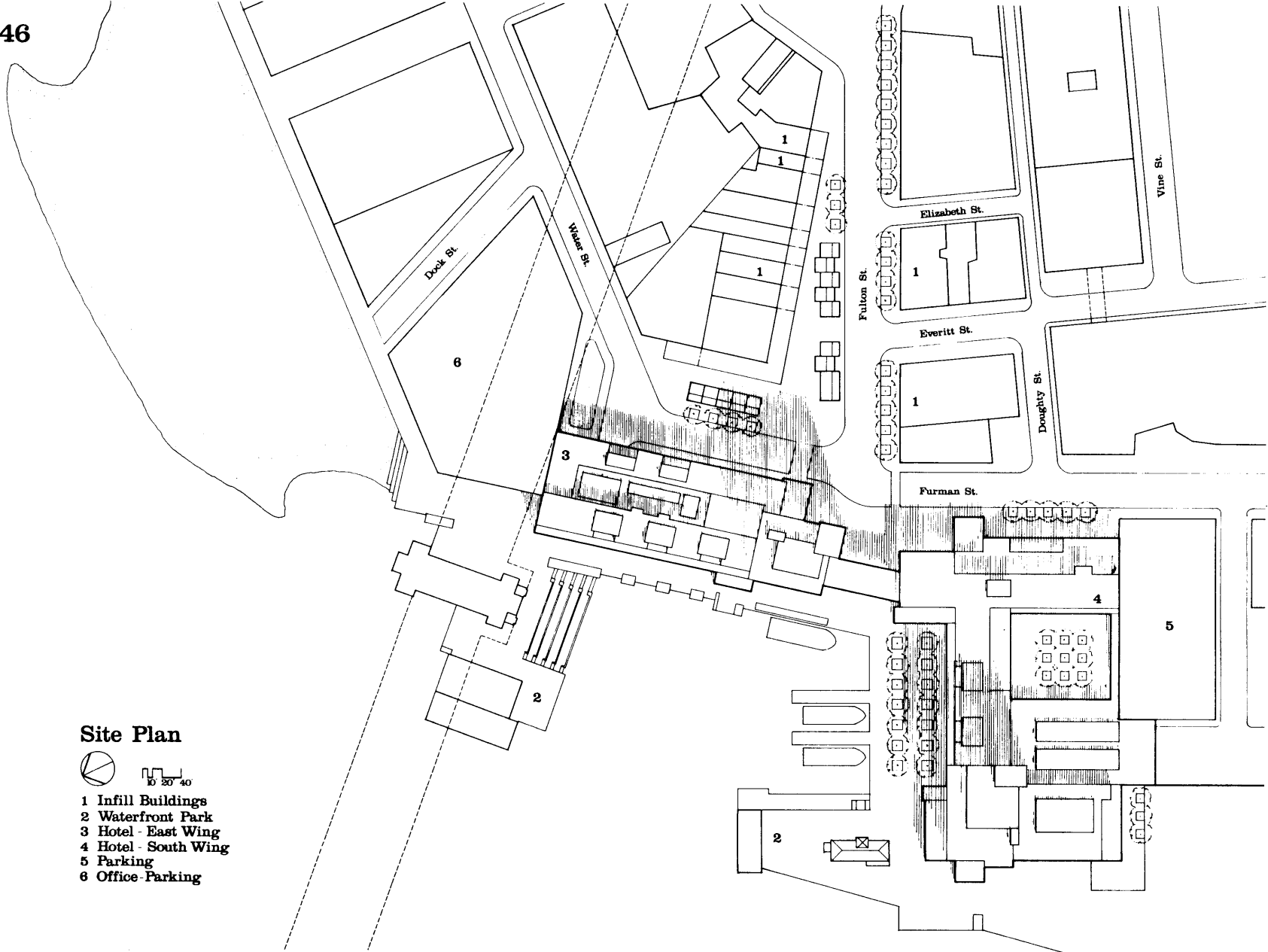




Site Plan



- 1 Infill Buildings
- 2 Waterfront Park
- 3 Hotel - East Wing
- 4 Hotel - South Wing
- 5 Parking
- 6 Office - Parking

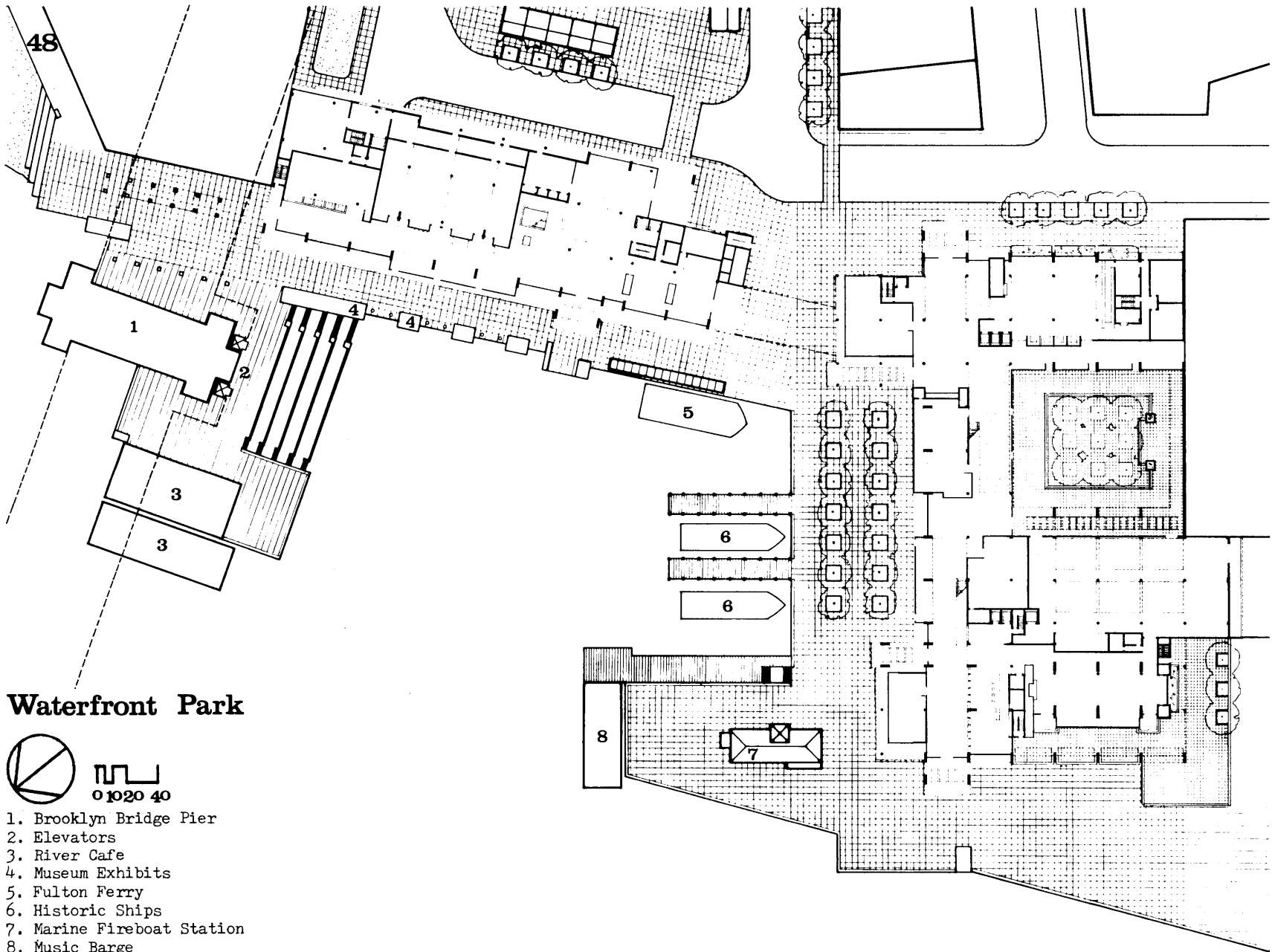




Fulton Street



- 1 Infill Buildings
- 2 Canopies
- 3 Vendors

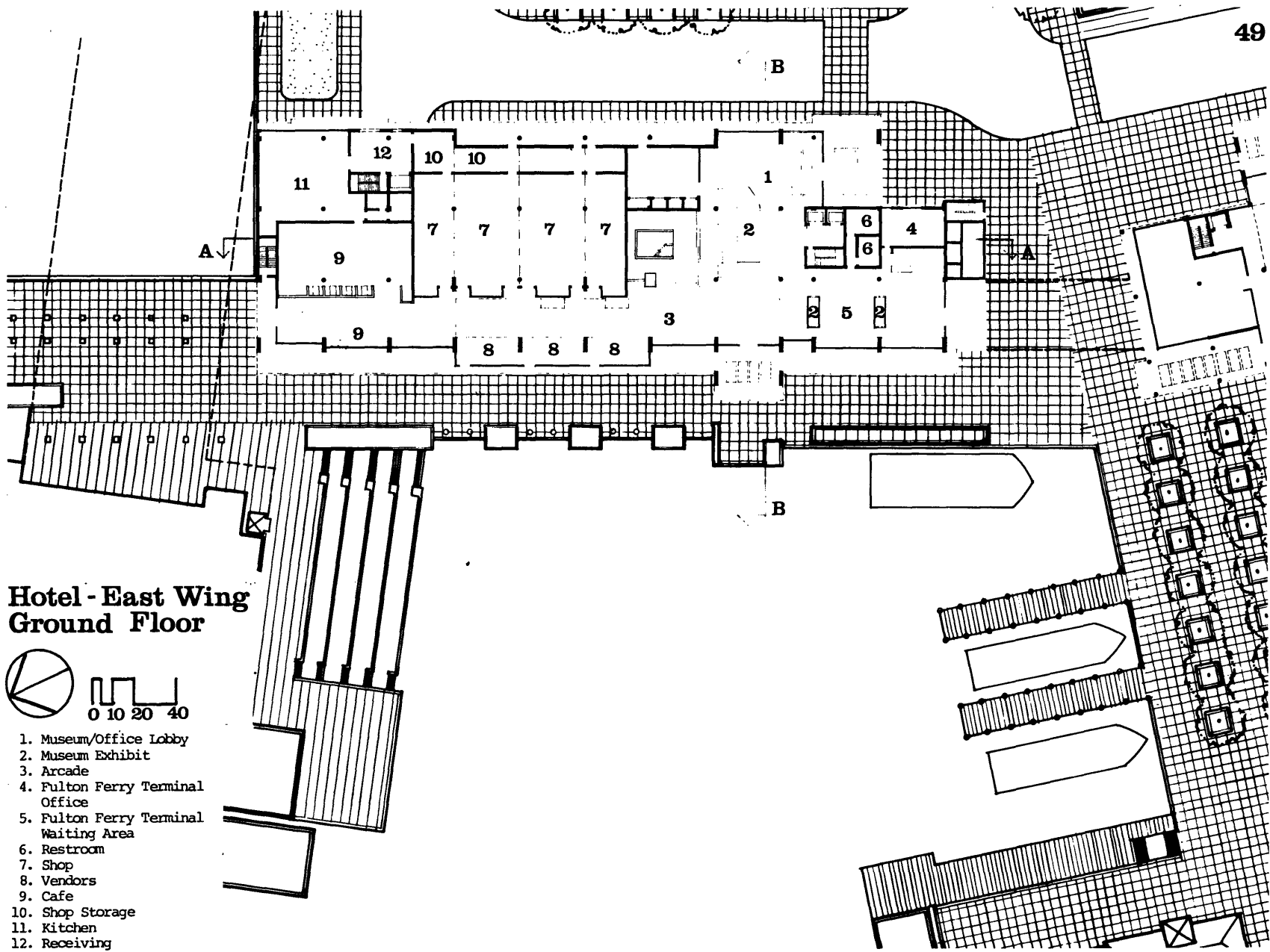


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Waterfront Park



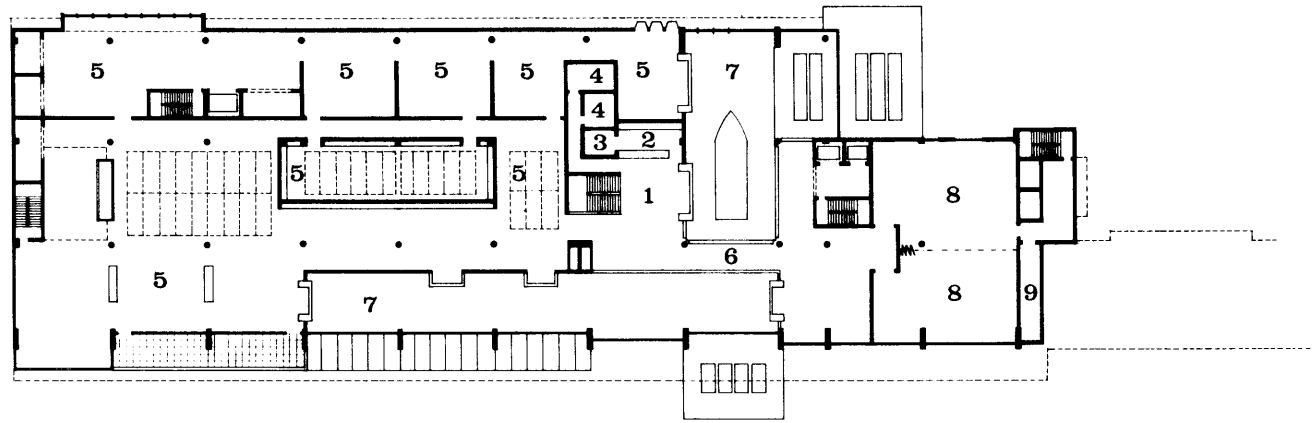
- 1. Brooklyn Bridge Pier
- 2. Elevators
- 3. River Cafe
- 4. Museum Exhibits
- 5. Fulton Ferry
- 6. Historic Ships
- 7. Marine Fireboat Station
- 8. Music Barge



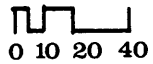
**Hotel - East Wing
Ground Floor**



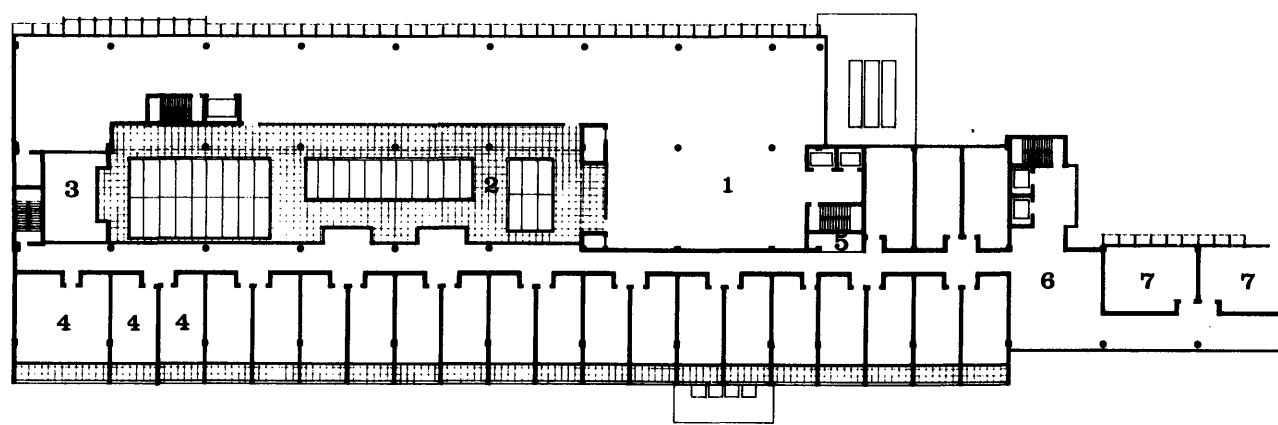
- 1. Museum/Office Lobby
- 2. Museum Exhibit
- 3. Arcade
- 4. Fulton Ferry Terminal Office
- 5. Fulton Ferry Terminal Waiting Area
- 6. Restroom
- 7. Shop
- 8. Vendors
- 9. Cafe
- 10. Shop Storage
- 11. Kitchen
- 12. Receiving



**Hotel-East Wing
Floor 2**



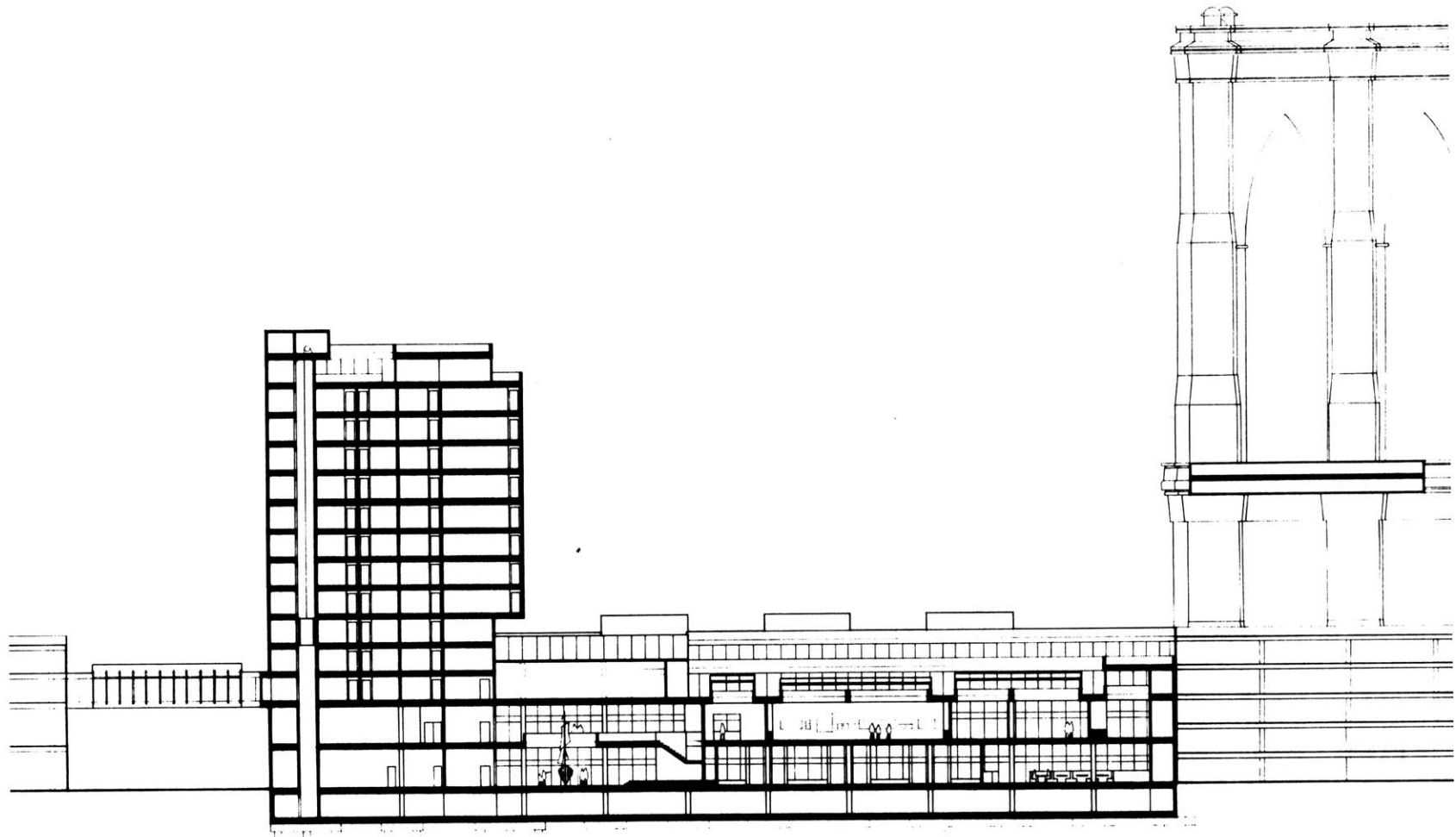
- 1. Upper Lobby
- 2. Information
- 3. Coat Room
- 4. Restroom
- 5. Gallery
- 6. Bridge
- 7. Open to below
- 8. Conference
- 9. Storage



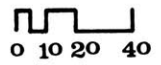
**Hotel-East Wing
Floor 3**

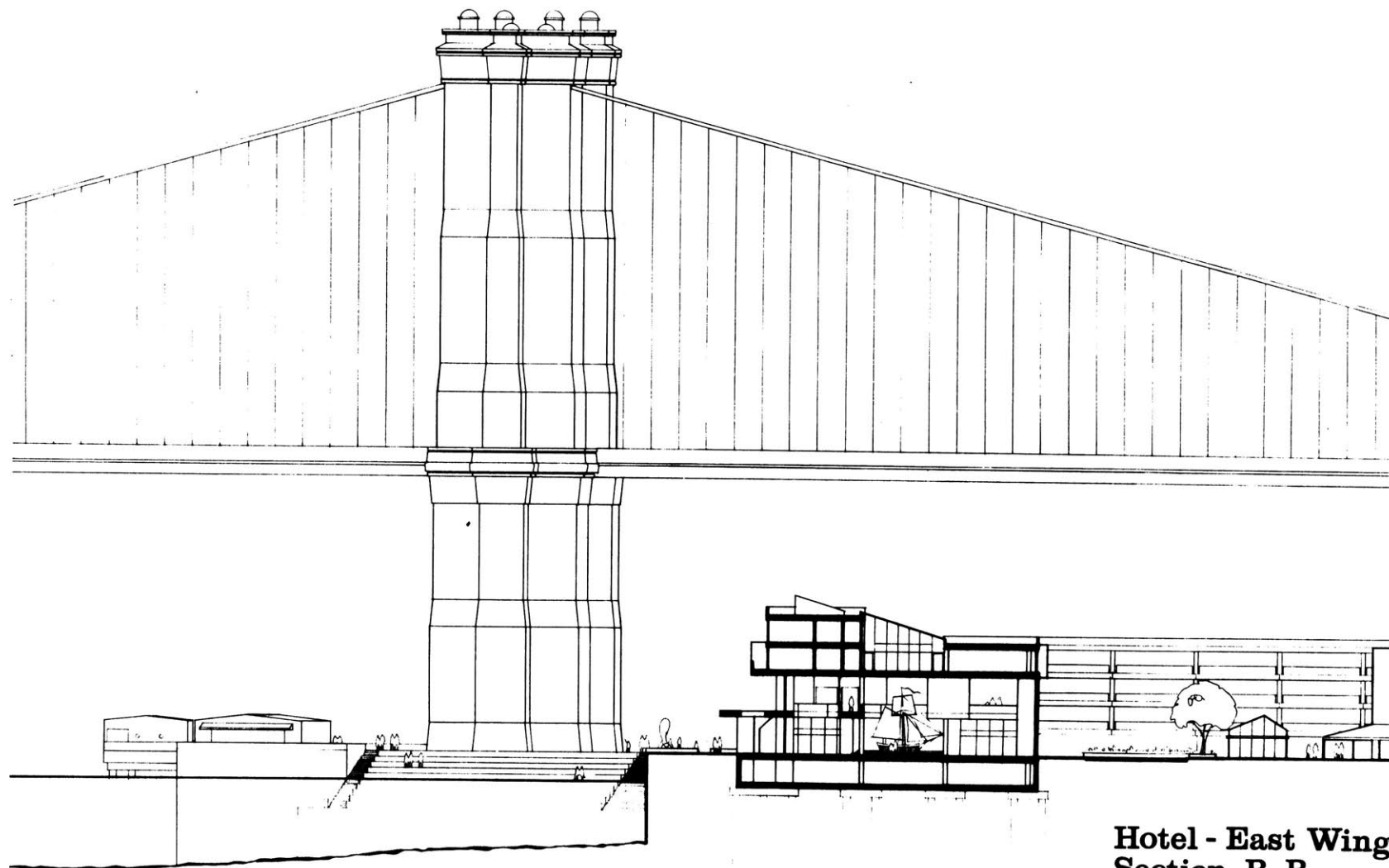


- 1. Office
- 2. Roof Terrace
- 3. Open to below
- 4. Hotel Room
- 5. Maid's Room
- 6. Transfer Lobby
- 7. Conference



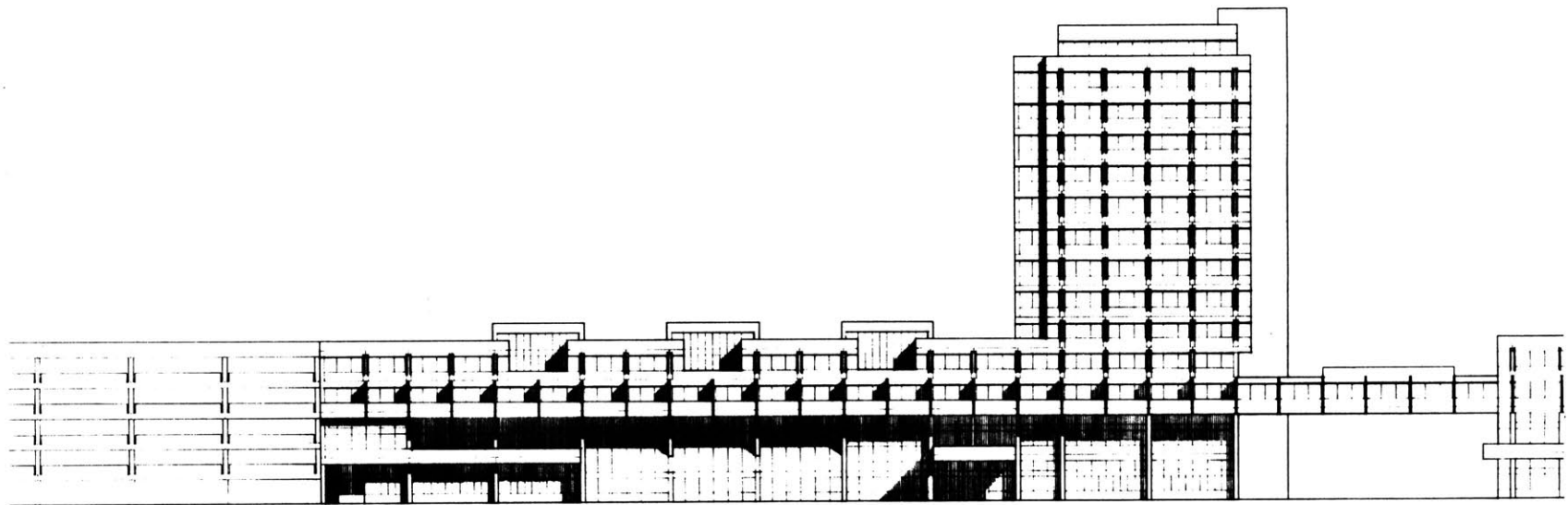
**Hotel-East Wing
Section A-A**





Hotel - East Wing
Section B-B





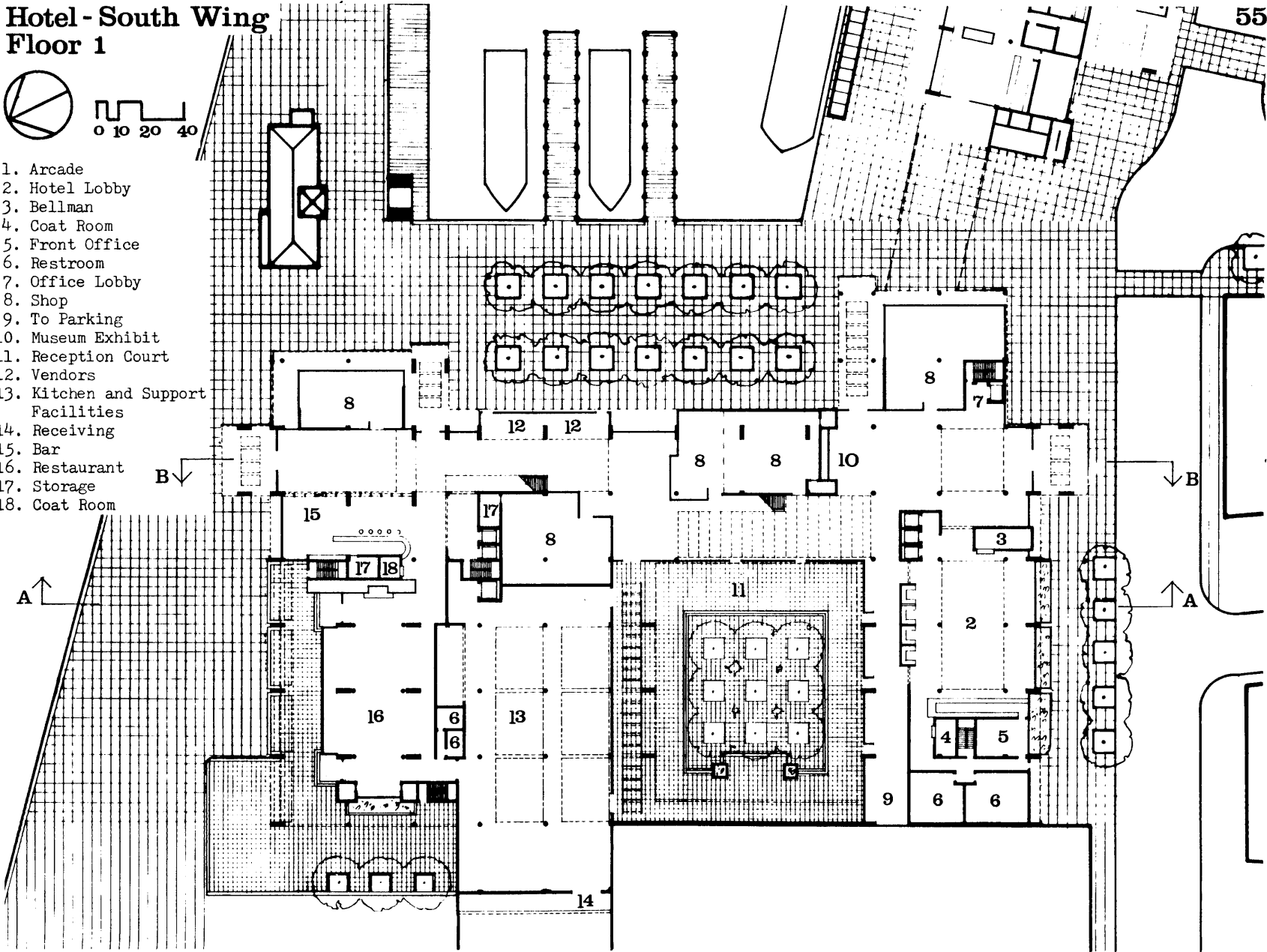
**Hotel - East Wing
East River Elevation**

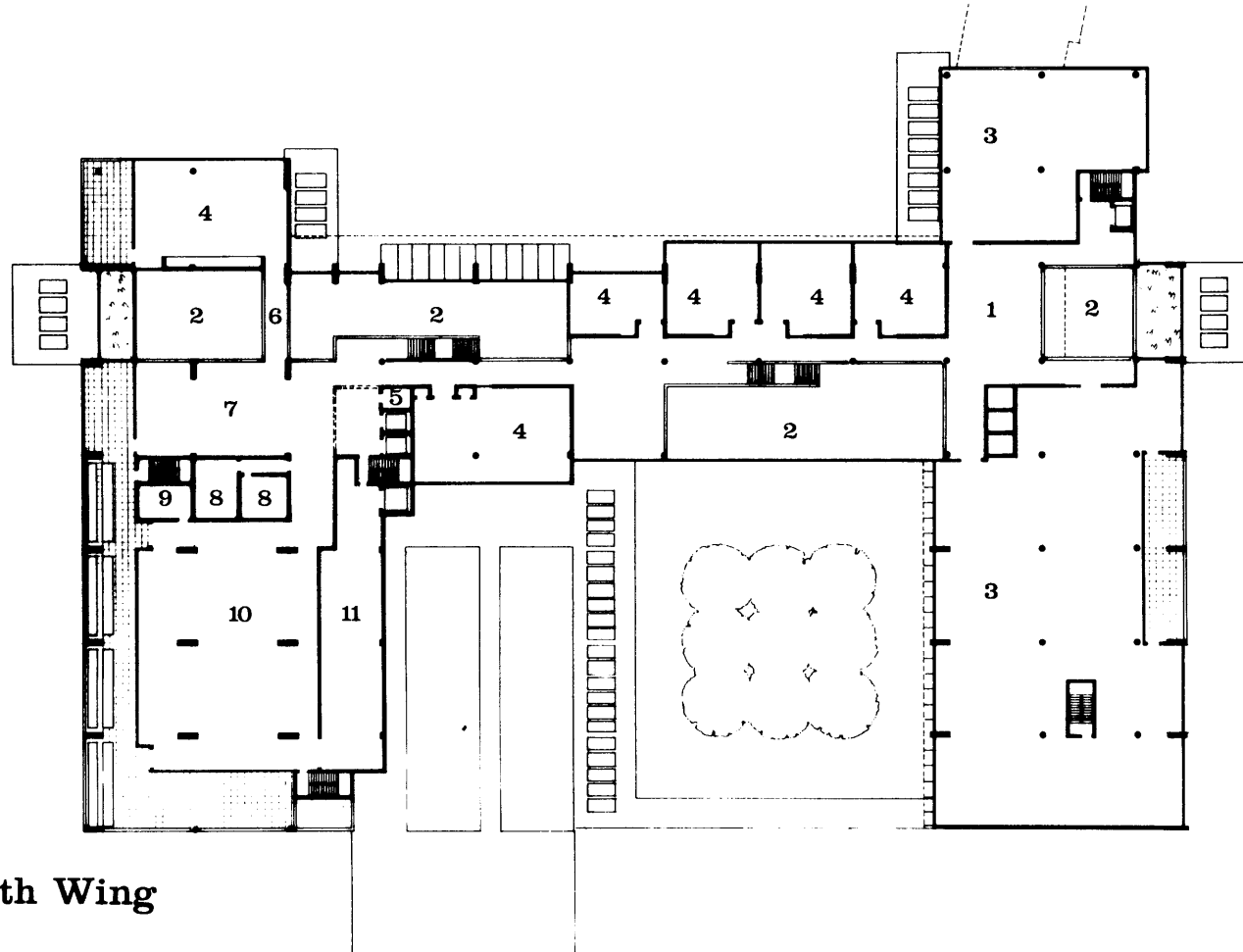
Hotel - South Wing Floor 1

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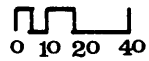


- 1. Arcade
- 2. Hotel Lobby
- 3. Bellman
- 4. Coat Room
- 5. Front Office
- 6. Restroom
- 7. Office Lobby
- 8. Shop
- 9. To Parking
- 10. Museum Exhibit
- 11. Reception Court
- 12. Vendors
- 13. Kitchen and Support Facilities
- 14. Receiving
- 15. Bar
- 16. Restaurant
- 17. Storage
- 18. Coat Room

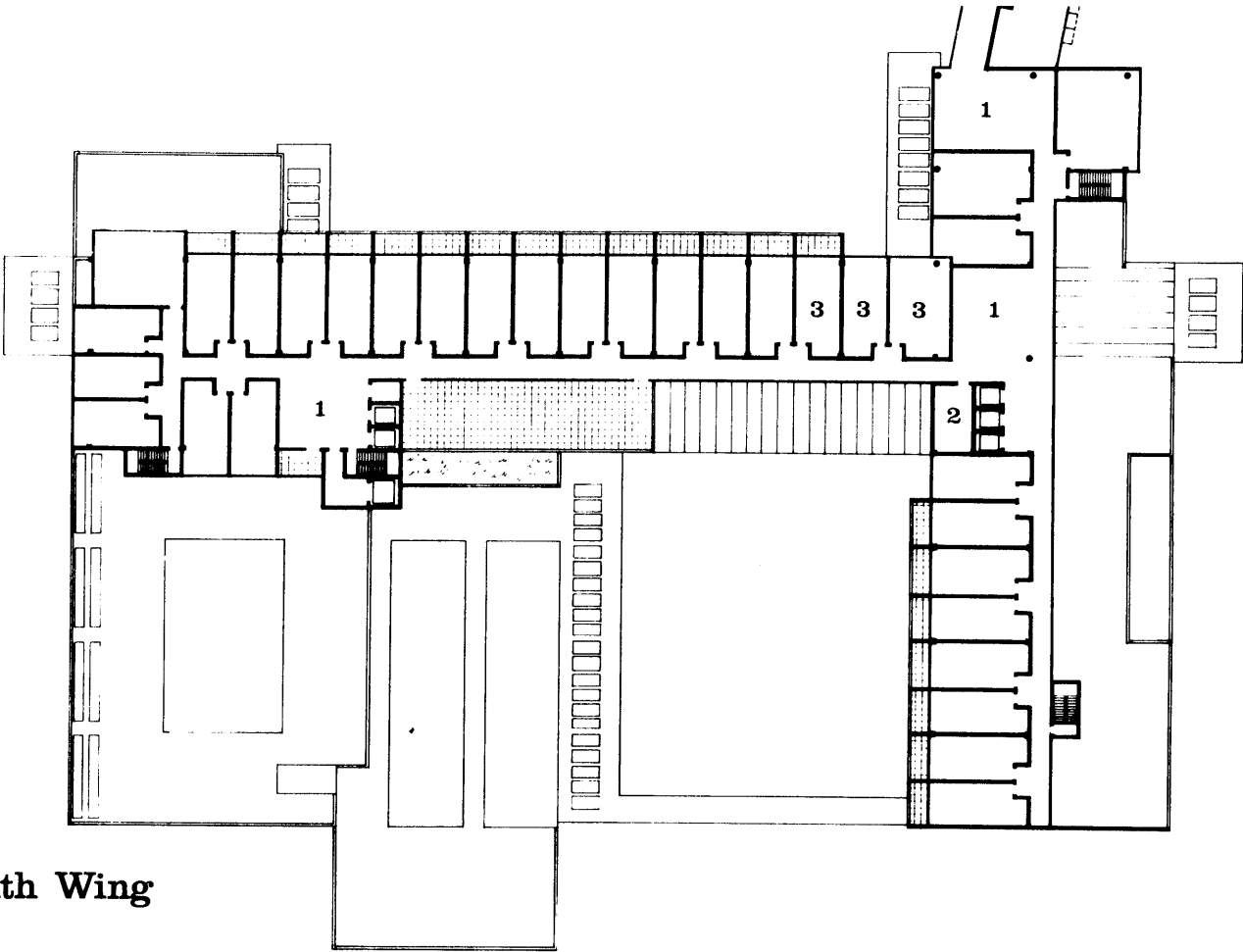




**Hotel - South Wing
Floor 2**



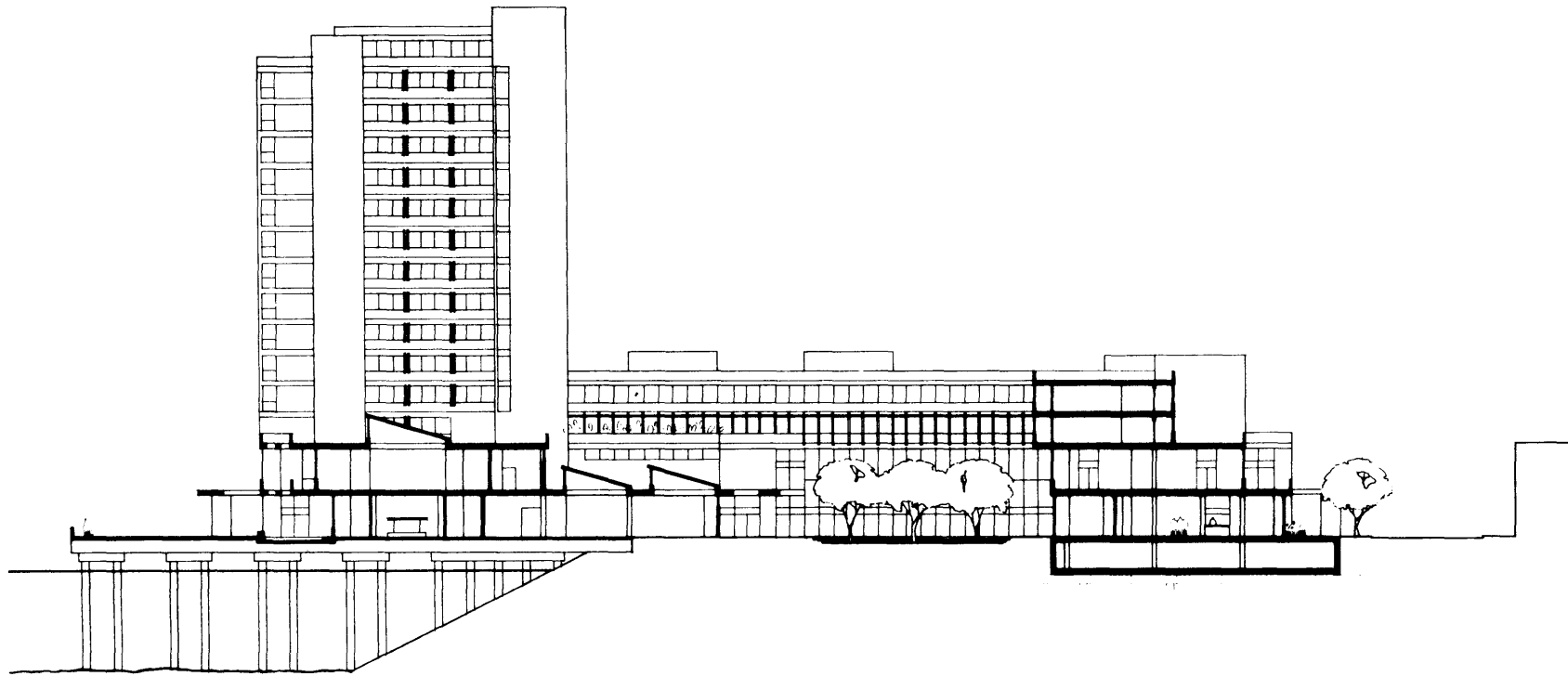
- | | |
|------------------|-----------------------------|
| 1. Office Lobby | 7. Banquet/Ballroom Lobby |
| 2. Open to below | 8. Restroom |
| 3. Office | 9. Coat Room |
| 4. Conference | 10. Banquet/Ballroom |
| 5. Storage | 11. Banquet/Ballroom Pantry |
| 6. Bridge | |



**Hotel - South Wing
Floor 3**

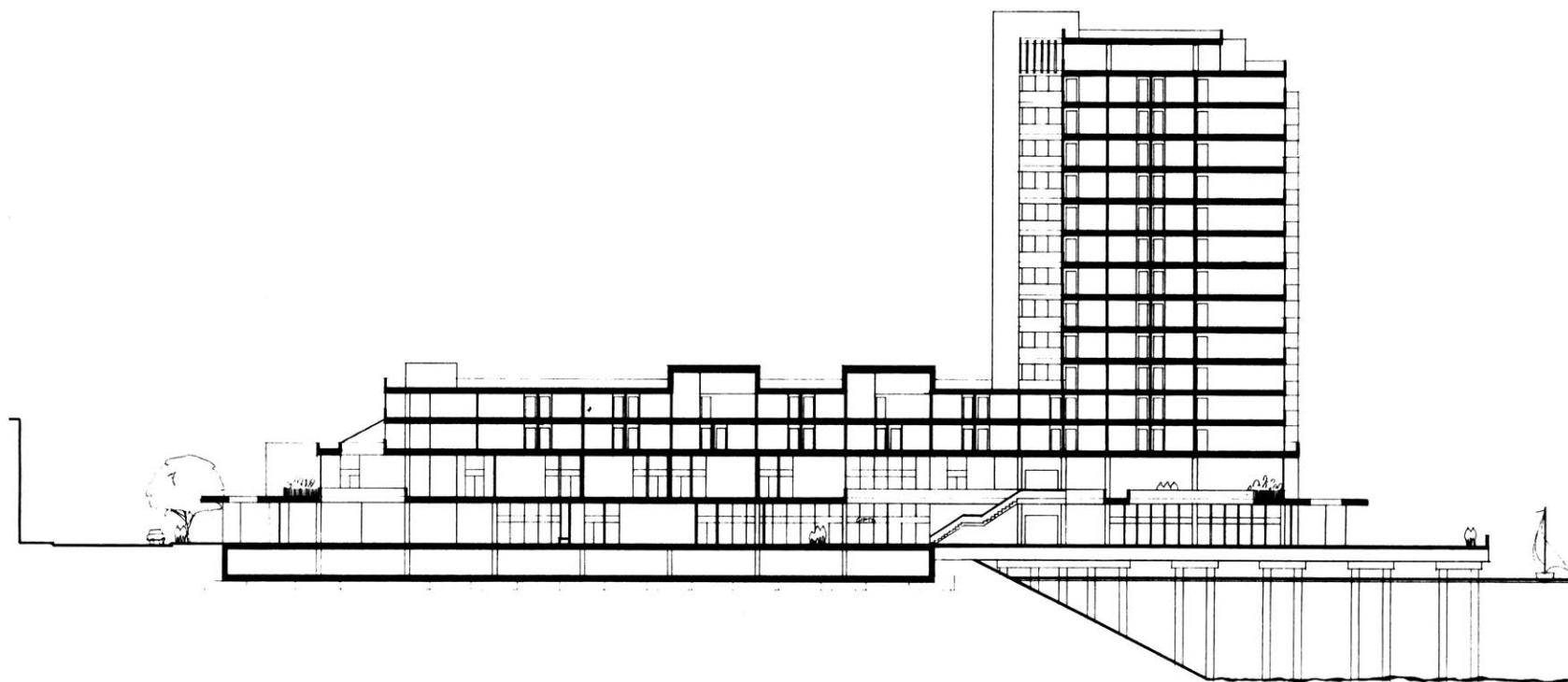


- 1. Transfer Lobby
- 2. Maid's Room
- 3. Hotel Room

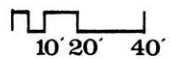


Hotel - South Wing
Section A-A

0 10 20 40



**Hotel-South Wing
Section B-B**



The design proposal seeks to provide an appropriate physical image for the site. The study includes schematic proposals for Fulton Street, the Waterfront Park, and the hotel, which includes the museum, offices, and ferry terminal.

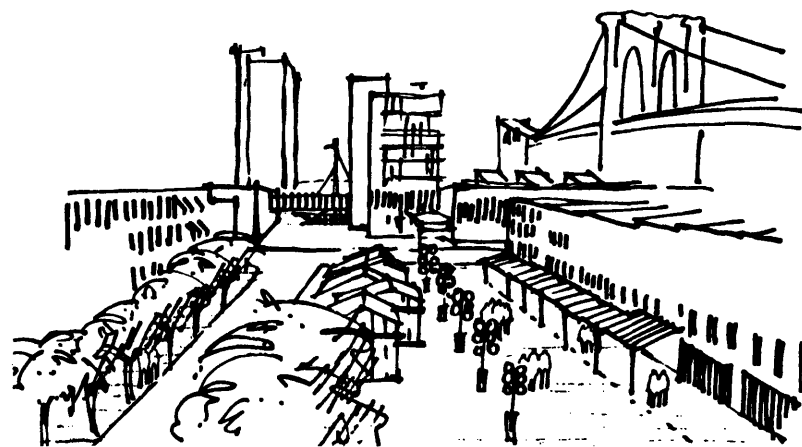
The following assumptions underlie the proposal:

1. Development of the project is economically and politically feasible.
2. Private investment will continue to revitalize the Fulton Ferry district.
3. The city will upgrade roads, sidewalks, and services in support of private investment in the area.
4. Land use in the area will change from industrial to commercial and residential. (The Empire Stores will be developed as housing with shops below.)
5. The proposed Fulton Ferry will be instituted.

Fulton Street

The design proposal re-establishes Fulton Street as the gateway to the waterfront and Brooklyn. The broad street is given closure at its terminus by the hotel, which still allows a view through to the river and Manhattan. The end of the street is defined by a tower on the new building in much the same way as the ferry terminal of the late 1800's marked the entry to the waterfront.

In order to improve the ease and safety of pedestrian movement to the waterfront, traffic on Fulton Street is confined to three lanes, and the pedestrian right-of-way to either side is widened. Fulton Street remains two-way with one lane for



parking and drop-off. Signalization and crosswalks defined by a change in paving further increase safety.

The sidewalk on the south side of the street, widened to 20 feet and lined with trees, connects directly to the Waterfront Park. A funnel-shaped plaza on the north side serves existing and proposed shops and restaurants. Vending stalls at the street edge make a two-sided shopping mall. Trees and the restored historic canopies provide shade for the southern exposure.

New buildings with ground floor shops and office or housing above fill the vacant parcels along Fulton Street. To maintain the historic configuration of the street wall, the buildings are four to six stories high, are built to the existing property frontage lines, and have their major entrances off Fulton Street.

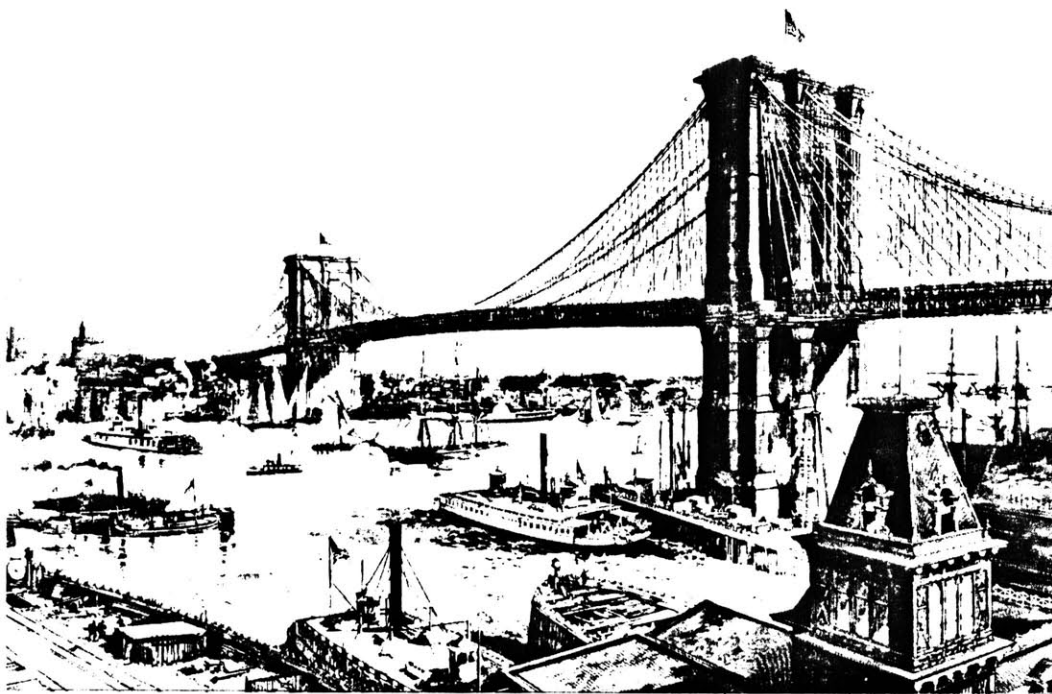
Doughty Street has been widened to two lanes near the site to make a convenient traffic turn-around from Fulton and Furman Streets. A bus stop is located at the foot of Fulton Street adjacent to the ferry terminal.

The Waterfront Park

The focus for the design proposal is a major open space, the Waterfront Park. The park is a broad promenade encircling a "bay" created by removing portions of existing piers. The bay and surrounding park approximate the configuration of the waterfront in that location at the time of the construction of the Brooklyn Bridge, thus bringing a sense of historic continuity to the development. The shape of the bay is also derived from Fulton Street; the north part of the



Drawing by Imre Halasz



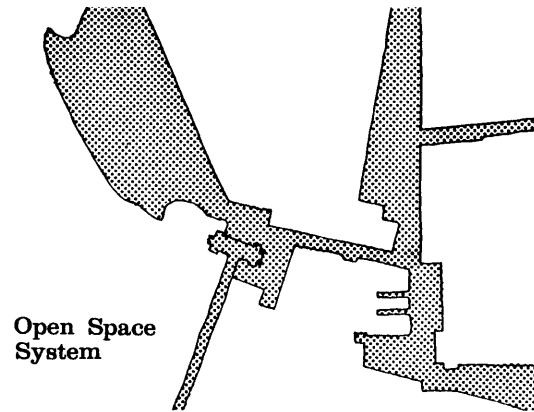
Brooklyn Bridge, 1883 (*Frank Leslie's Illustrated Newspaper*, May 26, 1883)

river. By enclosing a small piece of water, the Waterfront Park domesticates the East River, and increases its accessibility to the pedestrian.

The Waterfront Park links new and existing open space to create a regional park system. At the foot of Fulton Street, the two wings of the hotel are connected by only a light bridge to allow views and access to the waterfront. A row of

bay takes on the geometry of one side of Fulton Street, while the southern part follows that of the other.

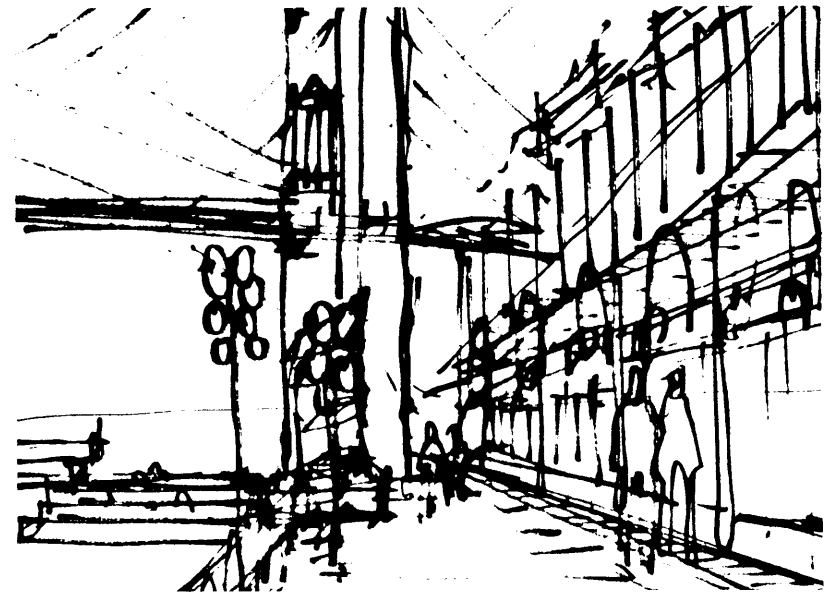
The Waterfront Park is defined by the wings of the waterfront hotel and the Brooklyn Bridge. The two towers of the building and that of the bridge mark the corners of the bay, making it identifiable from Brooklyn and from across the



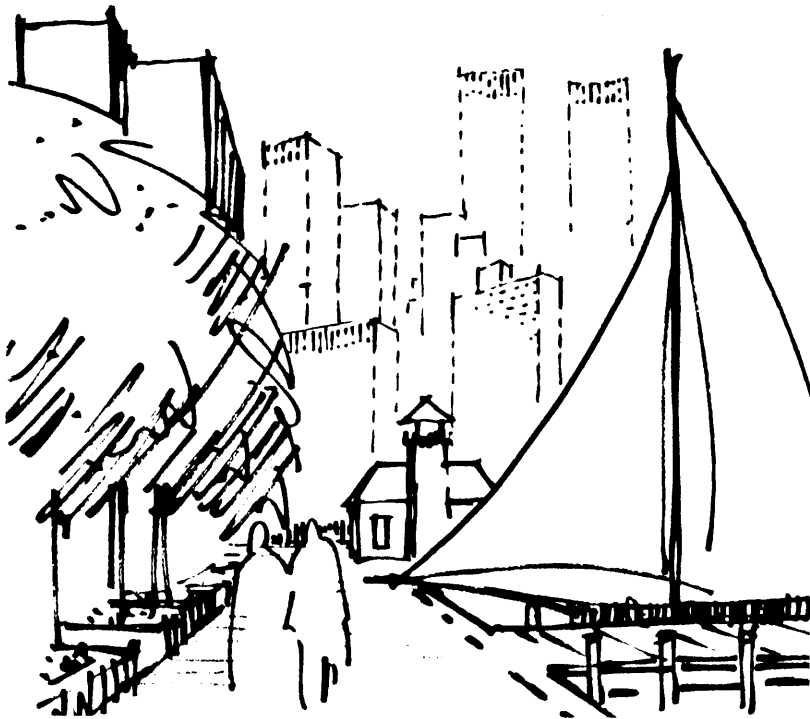
trees leads from the Waterfront Park and up the Fulton Street Plaza to the Brooklyn Promenade, and Cadman Plaza. Two glassy elevators climb the Brooklyn Bridge tower to the promenade above the traffic deck and to an observatory at the top. The east wing of the new building is pulled back from the pier to allow continuation of the Waterfront Park under the bridge to the Boardwalk Park.

The Waterfront Park offers a variety of activities. Joggers, cyclists, and strollers can take advantage of the park's connection to the Brooklyn Promenade and Brooklyn Bridge walkway. The Fulton Ferry will deliver passengers to a waiting shelter and interior terminal at the foot

of Fulton Street. Museum visitors will enjoy the displays of maritime artifacts on the raised platforms lining the park, the historic ships docked in the bay, and the Marine Fireboat Station--an historic landmark in itself--which will contain museum exhibits. A grand stair that steps down to the water level and seating under a grove of trees are available for those who want to relax and take in the view. The restaurant and music barges will continue to serve their clientele in approximately their original locations.



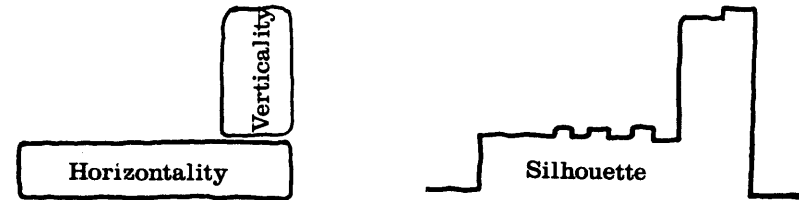
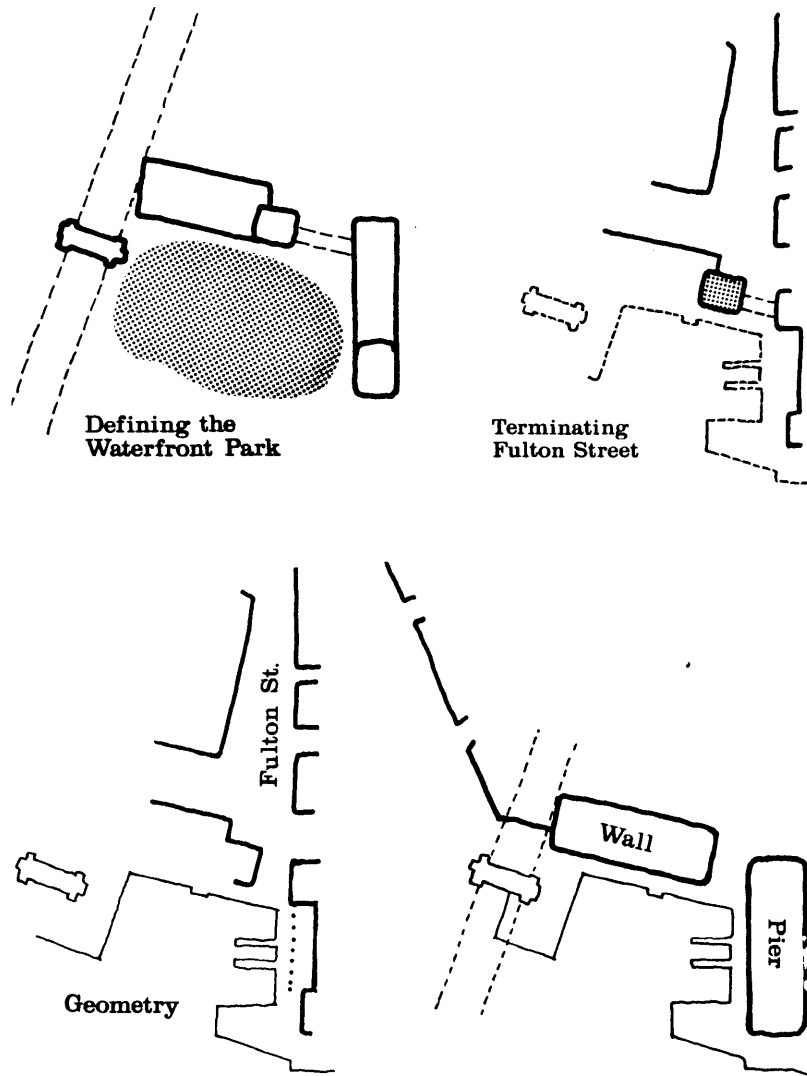
The park is constructed over fill and on piers. The eastern and northern parts of the park rest on fill and are paved with granite, the same material of which the Brooklyn Bridge piers are made. The southern part of the park is on a concrete deck supported by pilings so that the flow of the East River to the ocean will not be impeded. The docks for the historic ships are wood decks on wood pilings.



The Hotel: Massing

The hotel is divided into two long wings which form the back and one side of the new bay. The Brooklyn Bridge pier defines the third side. At the foot of Fulton Street, the wings are connected only by a light bridge to allow views of and access to the waterfront. Like the Waterfront Park, each wing follows the geometry of the adjacent side of Fulton Street. The east wing, lying parallel to the river, continues Brooklyn's historic "wall," of which only the Empire Stores remain. The south wing, which is perpendicular to the river, is like one of the old pier buildings. The horizontality of the river, and the height of the buildings on Fulton Street are reflected in the long, low part of the wings.

The verticality of the Brooklyn Bridge and the industrial lofts is expressed in the towers of the hotel. The towers not only make the site easily identifiable from a distance, but take advantage of the view across the river. With the Brooklyn Bridge tower, those of the hotel building help to define the bay. The tower of the east wing terminates Fulton Street and marks the entry

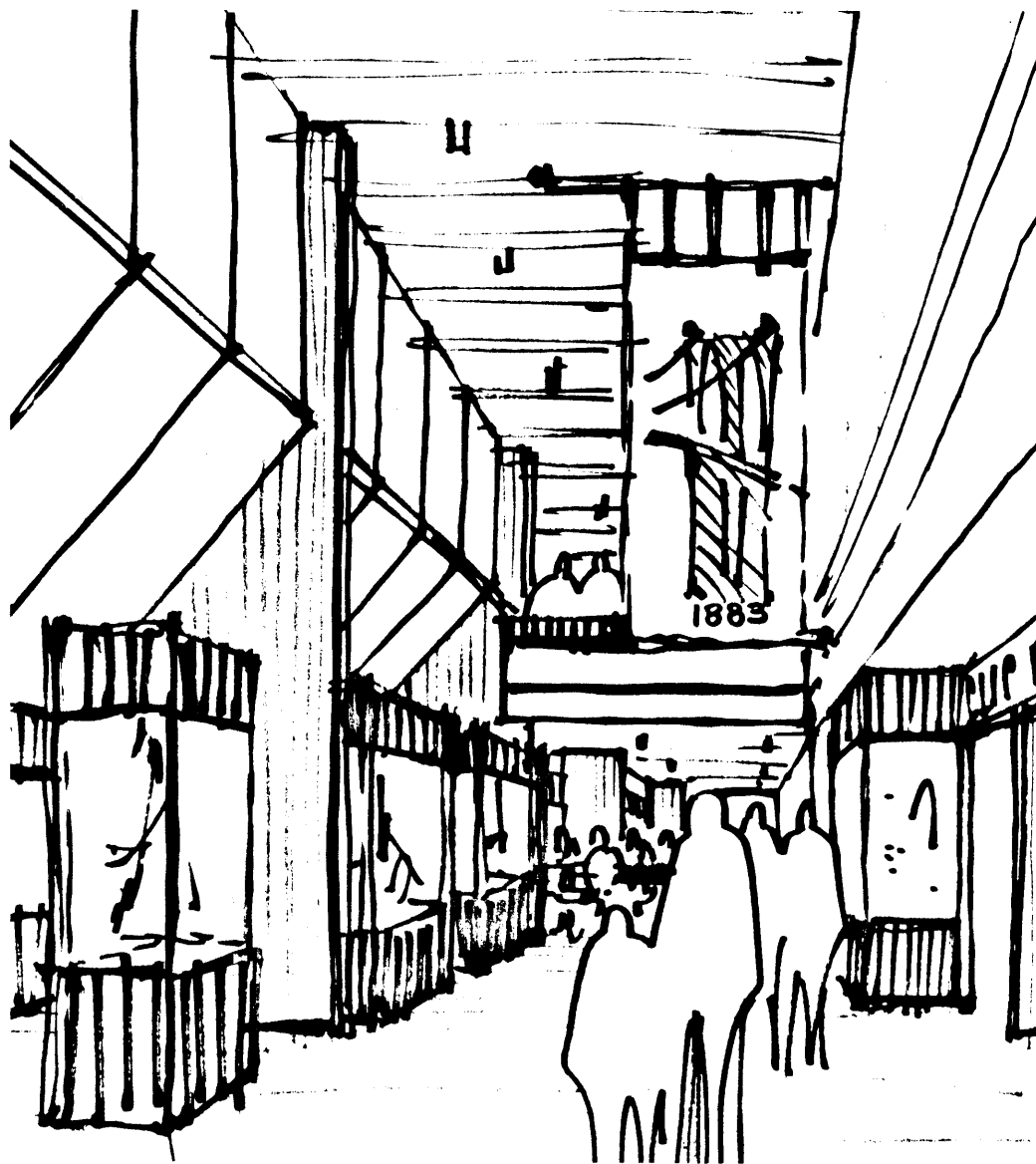


to the Waterfront Park. The towers and monitors on the low portions of the hotel building offer a lively silhouette to viewers on the Manhattan bank.

The building is massed so as not to overpower, nor be overpowered by the Brooklyn Bridge: the hotel towers are located a good distance from that of the bridge, are lower than the traffic deck, and are narrower than the pier. The lower portion of the east wing maintains a constant height as it extends under the traffic deck.

Organizational Framework

The hotel building is organized along a two-story interior arcade that parallels the waterfront promenade. Major hotel and museum functions are strung along the arcade; entries to all public buildings open off the interior promenade. A two-story museum exhibit (perhaps a ship) greets the visitor to the east wing. Small museum displays in



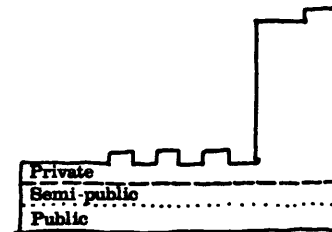
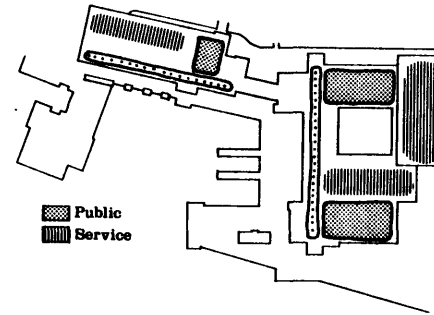
The Waterfront Arcade

glass cases are placed along the arcade; banners showing 19th century waterfront life hang from the high ceilings. Coffee shop and bar tables and seating for the ferry terminal extend into the passageway. Hotel shops and vendors line the arcade.

The arcade is enclosed as much of it does not receive direct sun and is exposed to the northwest wind. The enclosure is mostly glass, however, in order to take advantage of the views of Manhattan, the bay, and the bridge. Concrete piers march along the outer edge of the arcade. The ceiling varies along the interior promenade: near the main entries it is low; in some places it is skylit; in others it is sloped. Bridges cross the arcade at the second level, recalling the bridges of the district.

Distribution of Uses

The building is zoned from public to private both horizontally and vertically. The public functions of the building line the waterfront and the terminus of Fulton Street, while service functions and parking are located along Water Street and south of Doughty Street.



The most public uses--hotel lobby, certain museum exhibits, ferry terminal, restaurant, bar, and shops--are concentrated on the ground floor off the interior arcade and in association with the waterfront promenade. Public uses with restricted access--the banquet hall, meeting rooms, and museum--are located on the second floor. The third floor houses the more private professional offices and guest rooms, and serves as a transfer level for access to the two towers. More guest rooms

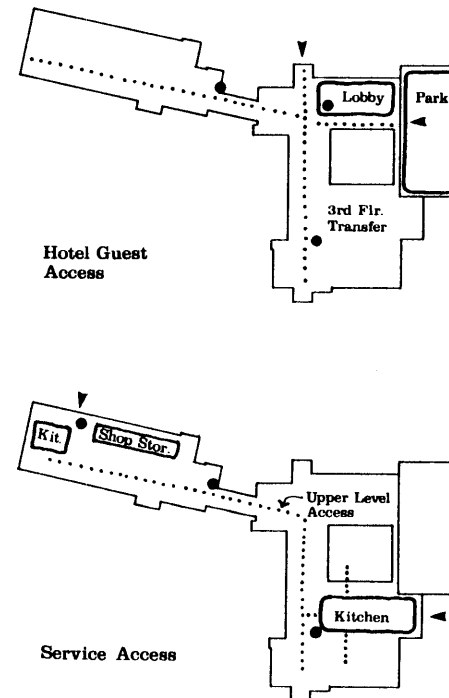
and some suites occupy the fourth floor. The two towers hold guest rooms and are topped by penthouses. The east wing has a rooftop bar, and the south, a luxury suite. (Services and mechanical are contained in a basement under the east wing and that part of the south wing on landfill.)

Uses are oriented to the view. The arcade, restaurant, and banquet hall offer panoramic vistas, while the museum gives only glimpses of the view. Single loaded corridors are used so that more guest rooms can face the view.

Outdoor space is provided for the building in addition to the Waterfront Park. A large courtyard in the south wing can be used as an outdoor cafe or for receptions; the restaurant, ballroom, museum, and offices have terraces; a courtyard in the east wing has skylights that serve the museum below; balconies are provided for some of the guest rooms; a tennis court is located on top of the parking garage; and gardens top the towers.

Circulation

Hotel guests park in the garage or arrive by taxi at the main entry to the south wing, check in at the lobby, and take an elevator to their floors, or to a transfer floor if their rooms are in a tower. Service access to the hotel is from an alley off Furman Street. Service elevators are provided for hotel employees.



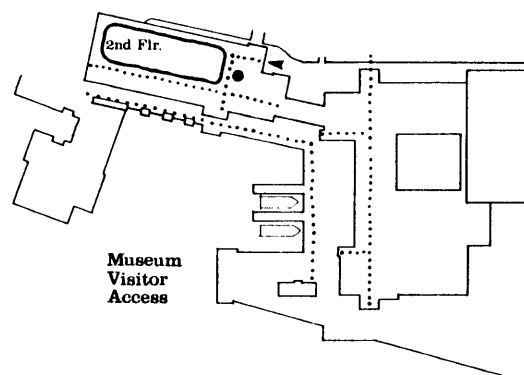
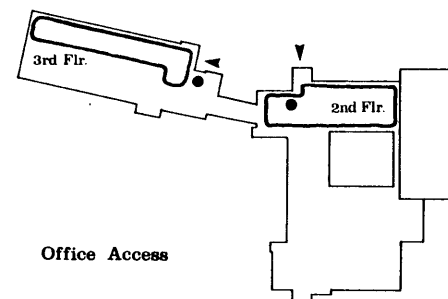
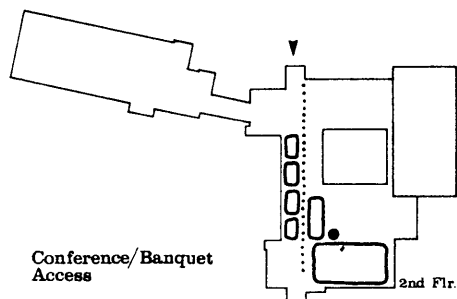
Persons attending conferences or banquets use the stairs along the arcade in the south wing or the elevator near the banquet hall.

Museum visitors enter the east wing from Fulton Street and ascend the lobby stair or elevator, or view the informal exhibits in the arcade and along the Waterfront Park. Service access to

the museum, as well as the shops, is provided off Water Street.

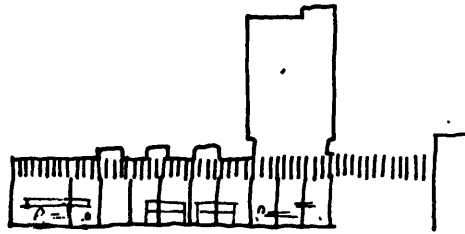
Office workers use the office elevators in the south and east wings. Offices in the east wing share the museum service elevator.

Casual visitors to the Waterfront Park may enter the arcade at any of several points.



Elevations

The organization of the elevation reflects that of the building. The two public floors facing the view are largely transparent and are punctuated by a series of concrete piers. The third floor, the transfer level, is defined by a continuous line of balconies or brises-soleil. Above and below this datum, the elevation has relative freedom. Monitors and the two towers rise above, while terraces, glass sheds, signs, and lighting animate the lower floors.



Elevation Organization

Building System

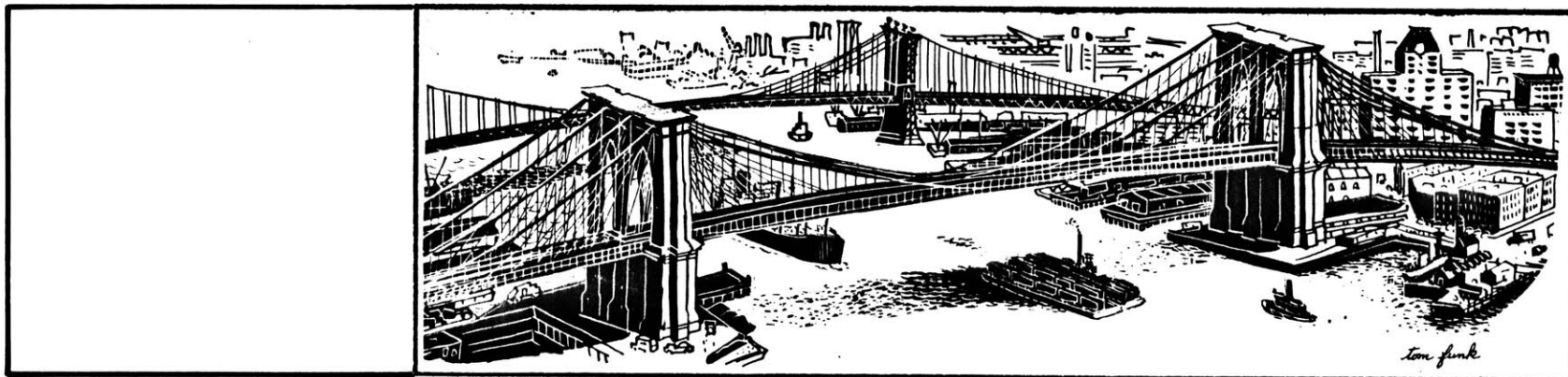
The hotel structure is a concrete frame with infill panels in the same spirit as the industrial lofts in the area. The 28' x 28' or 28' by 14' bay sizes are determined by the sizes of the guest rooms. Concrete pylons supporting the structure extend through the fill or river to solid bearing. Those in the water are capped by a concrete deck. Infill panels are operable and non-operable glass and aluminum. The walls dividing the guest room balconies are concrete. Pre-cast concrete elements are used where guest rooms join.

Conclusion

This thesis sets forward aspirations and conceptual proposals for the municipal property at the foot of the Brooklyn Bridge. The study has tried to identify some of the issues with which the City will have to grapple if it chooses to develop the site, and to provide physical solutions for them.

The thesis has recommended the construction of a hotel on the site; further study may reveal that this use is politically or economically unfeasible. However, it is important that any uses ultimately selected for the site complement the waterfront, improve its accessibility, and promote the revitalization of the district. Development of

the site cannot be conducted in isolation, but must be integrated with the reorganization of the Fulton Ferry District as a whole.



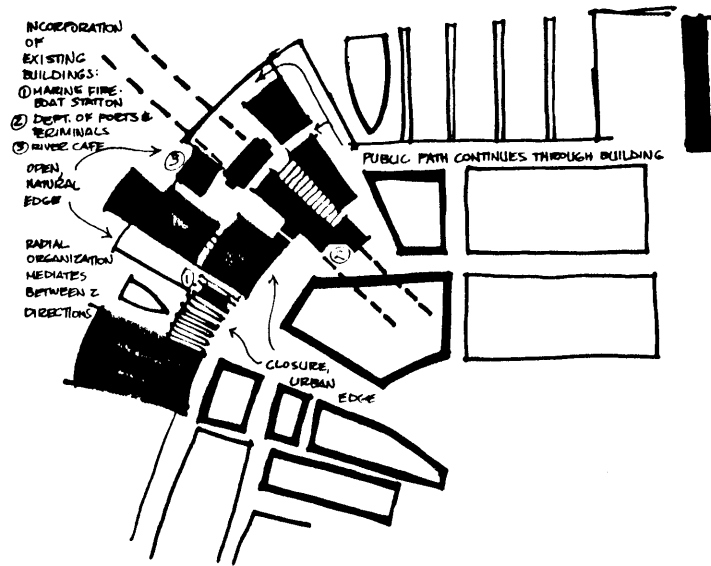
Appendix: Program

75

	Sq. Ft.
<u>Hotel</u>	
Lobby and lounge	5,650
Front office	350
Restrooms	1,220
Coatroom and bellman's checkroom	560
Shops, barber, valet	7,950
Main dining room	5,500
Coffee shop	2,500
Bar and cocktail lounge	2,500
Rooftop bar	1,200
Private dining/conference rooms	2,500
Restrooms	550
Banquet/ballroom	4,500
Banquet/ballroom foyer	1,125
Banquet/ballroom serving pantry	1,100
Restrooms	225
Main kitchen	3,800
Kitchen support facilities	4,700
Auxiliary kitchen	500
350 guests rooms (90% @ 400 square feet; 10% @ 550 square feet)	45,250
General service space	16,500
Storage areas, mechanical, and circulation are not included in this listing	

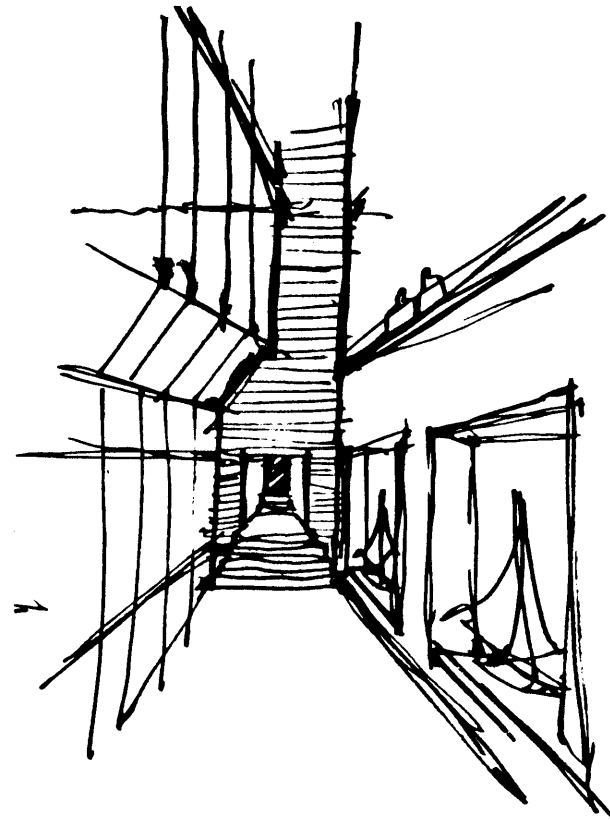
	Sq. Ft.
<u>Museum</u>	
Lobby	2,000
Security, coatroom, restrooms	450
Bookstore	900
Gallery space	12,000
Large rooms, suites of galleries, and alcoves to house the following exhibits:	
1. Brooklyn waterfront life Diorama of the waterfront Waterfront industries The <u>Brooklyn Eagle</u>	
2. The <u>Brooklyn Bridge</u> Drawings, engravings Paintings, photographs Model	
3. Fulton Ferry Gallery Engravings, photographs Models of early ferries	
Arcade	
Full-size replica of an early ferry Banners showing historic scenes Models in glass cases	
Waterfront promenade	
Large, weather- and vandal-resistant objects (anchors, steamship funnels) to be placed on raised platforms Historic ships, to be docked in bay	

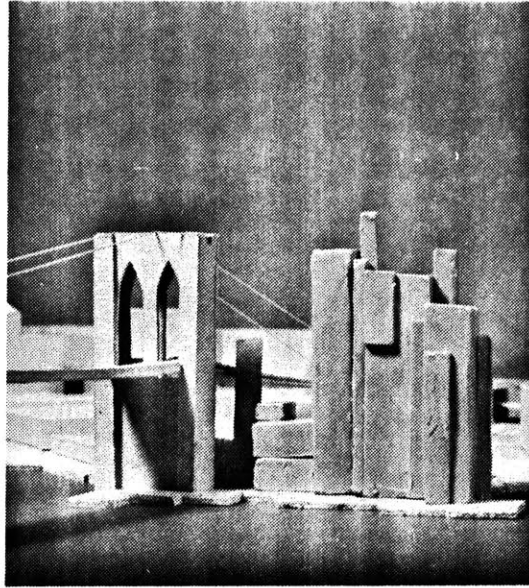
	Sq. Ft.
Meeting rooms	2,400
Support facilities	6,900
 <u>Fulton Ferry Terminal</u>	
Boat slip for 25' by 70' ferry	
Covered outdoor waiting area	
Indoor waiting area	1,200
Ticketing and office	500
Restrooms	225
 <u>Professional Offices</u>	 15,000
 <u>Parking</u>	



Left: An early organizational scheme.

Below: The two-story arcade at the river edge.



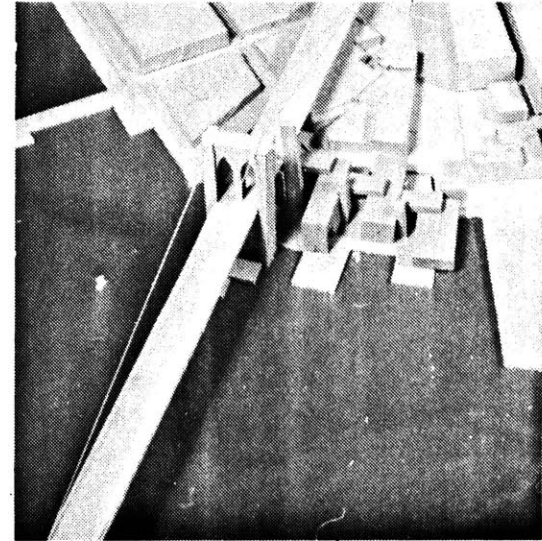
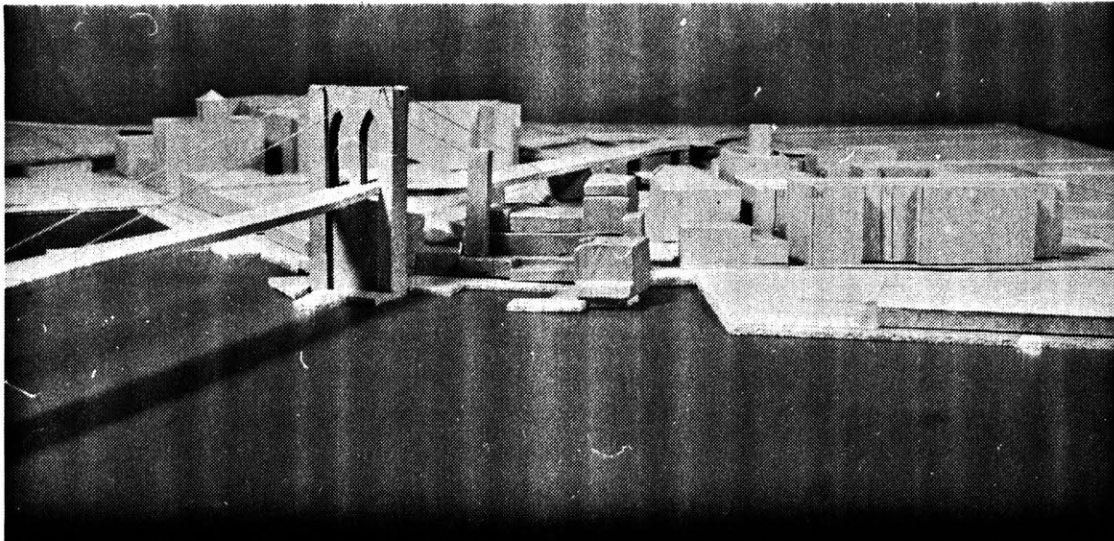


Massing Studies

Upper left: Competing with the Brooklyn Bridge.

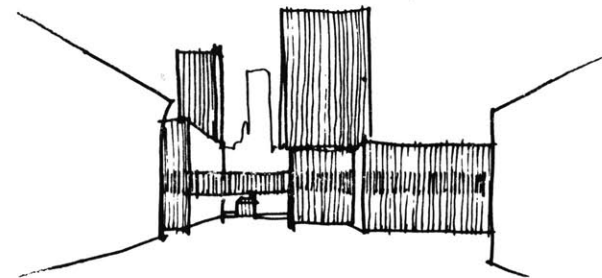
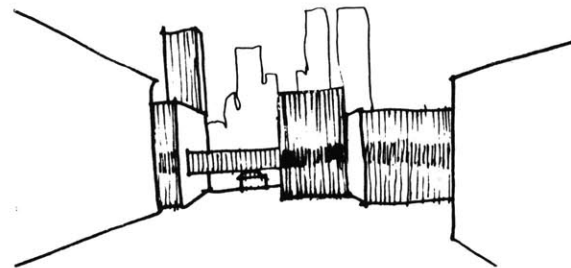
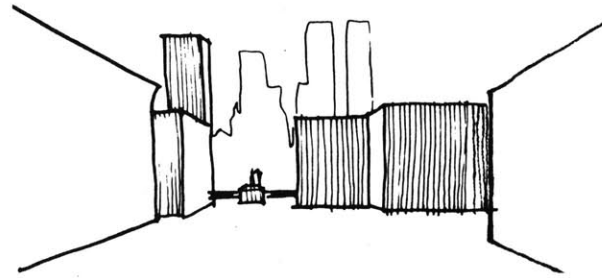
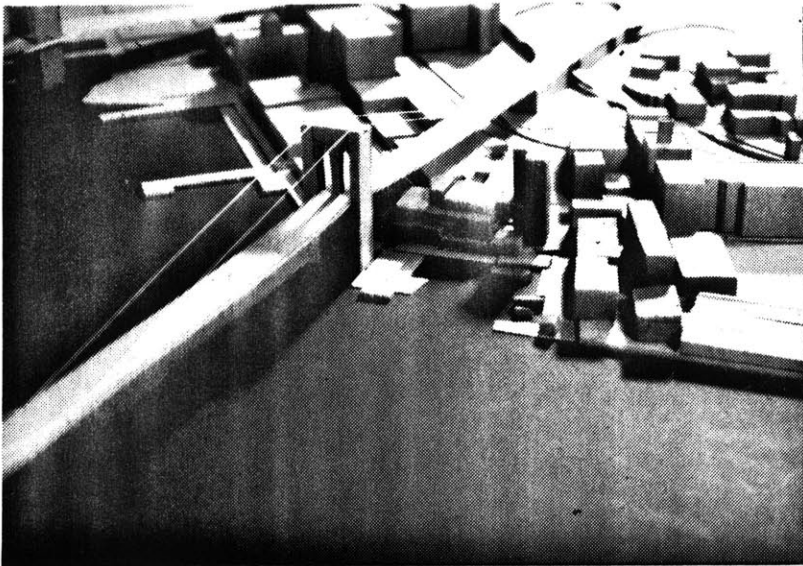
Lower left: Enclosing a small bay, and marking Fulton Street with a tower--the selected scheme.

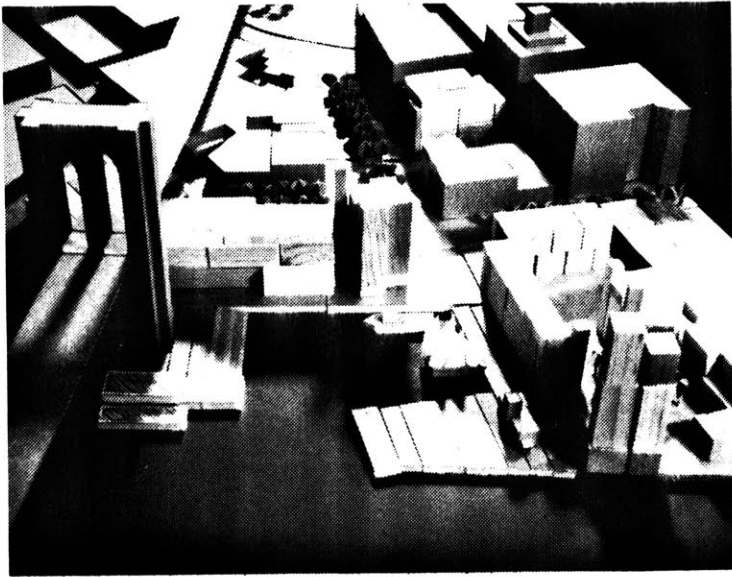
Lower right: Stepping down from the Brooklyn Bridge.



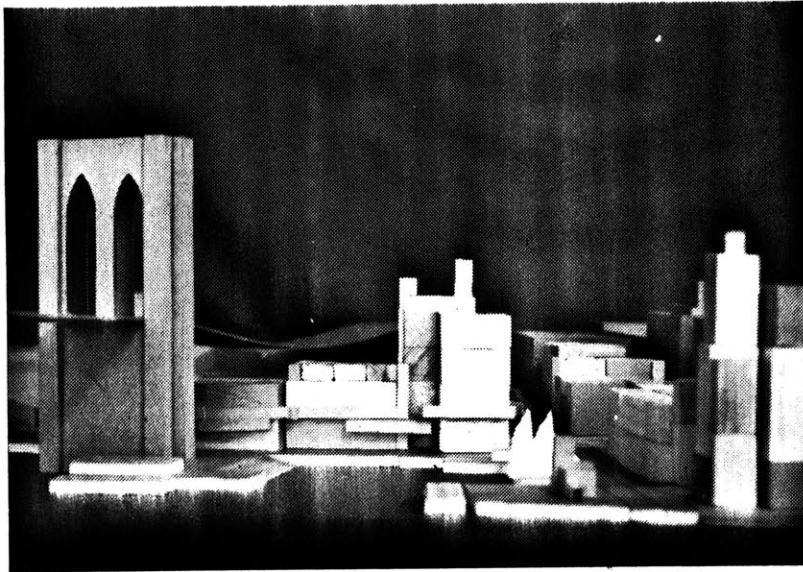
Lower left: Development of the selected scheme. Appropriating part of the Department of Ports and Terminals land (right) to enclose the bay.

Right: Studies for Fulton Street.





Further development of the massing. The hotel is located to the left near the Brooklyn Bridge. Offices overlooking courtyards occupy the Department of Ports and Terminals land to the right.

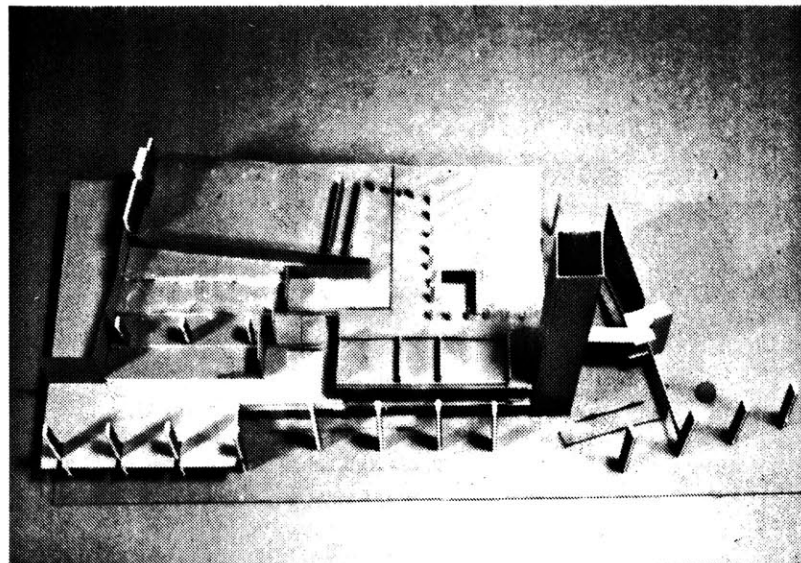
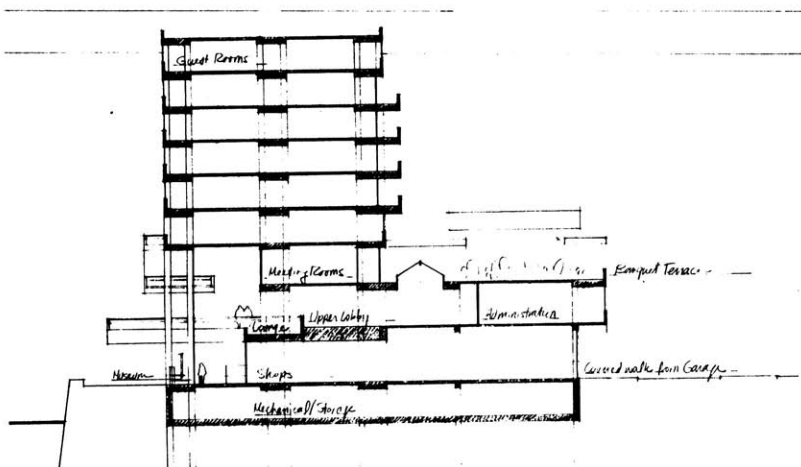
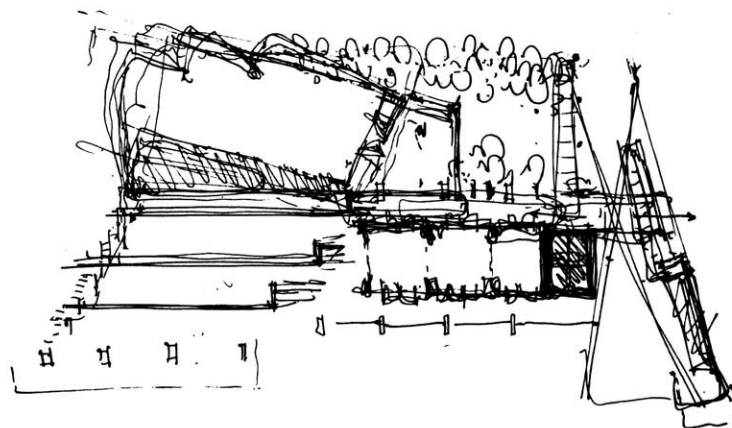


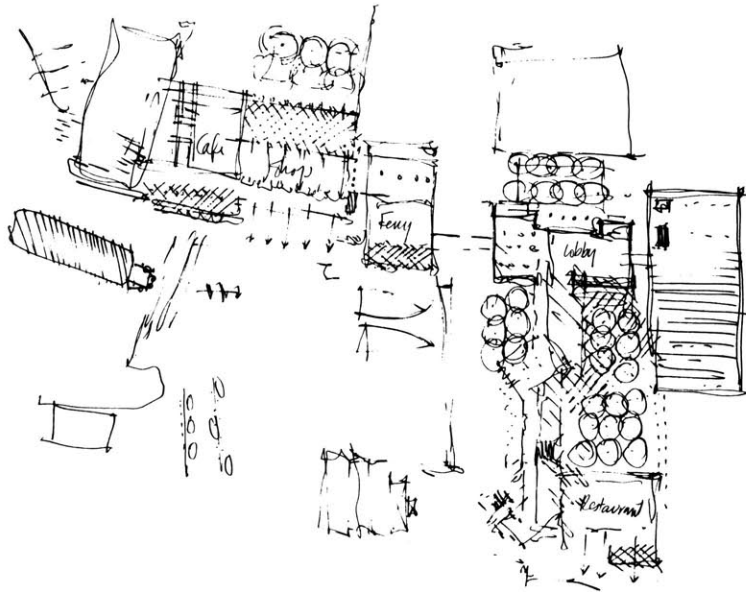
Studies for the hotel.

Lower left: Transverse section facing the Brooklyn Bridge.

Upper right: The restaurant, stepping up from the second floor to third floor banquet hall and meeting rooms.

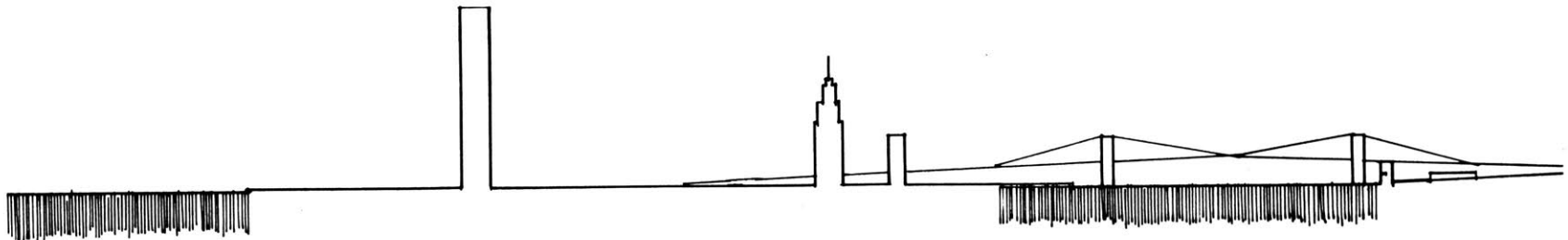
Lower right: All public uses overlook the arcade.



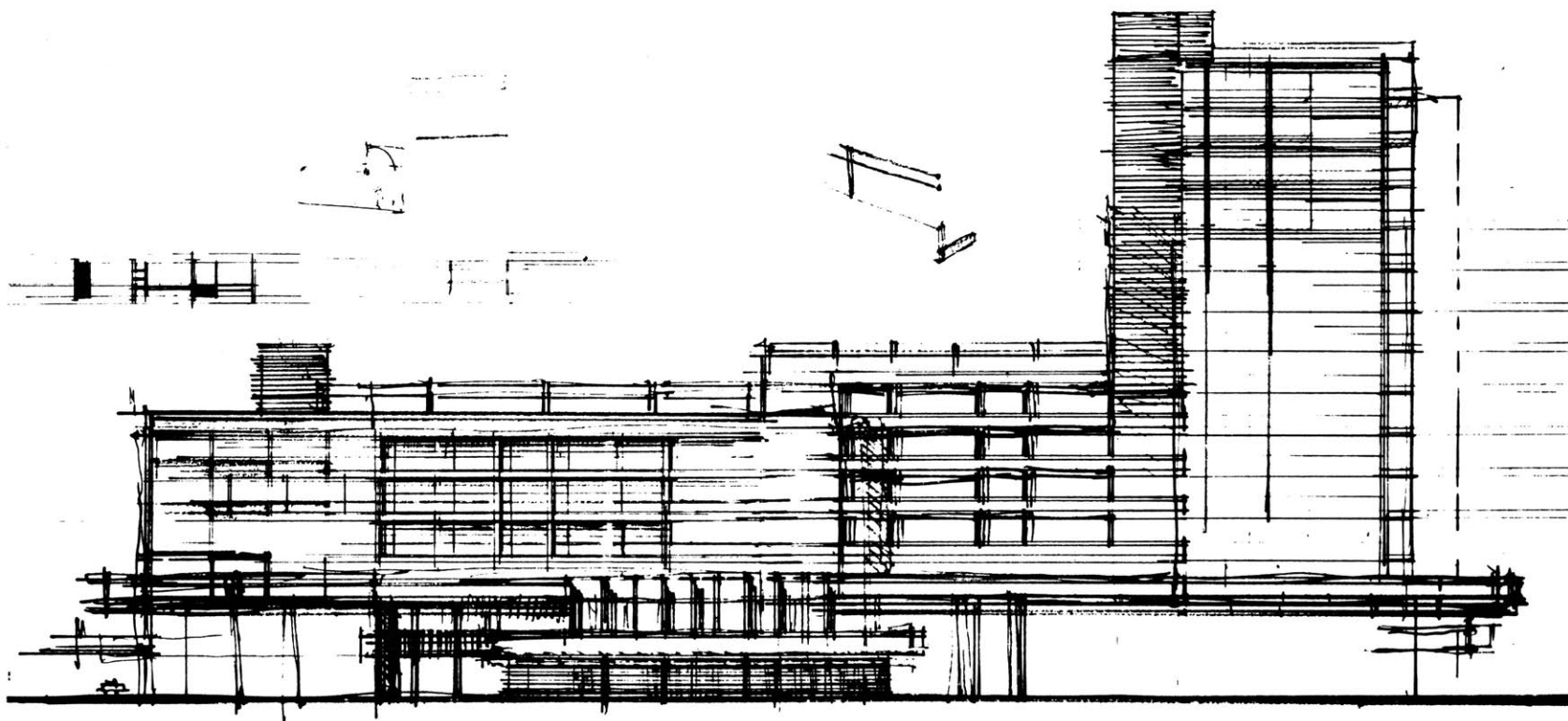


Left: Reorganization of hotel to occupy entire site. Public uses are located off a continuous interior arcade. A third story bridge connects the two wings.

Below: Section study to ensure that new bridge does not obstruct views of Manhattan.



Elevation study: The two-story public zone capped by a more-or-less continuous line of terraces that stresses horizontality.



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