

Site 5 World Trade Center
Mixed-Use Design Guidelines
November 18, 2021

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1. Introduction

a. Project Description

The project is the development and operation of Tower 5 at the World Trade Center pursuant to the World Trade Center Memorial and Redevelopment Plan described in the World Trade Center Memorial and Cultural Program General Project Plan dated June 2, 2004, as amended through February 14, 2007 and by a proposed amendment dated November 17, 2021 (the “WTC MGPP”). The project is envisioned to become a world class mixed-use residential and commercial building on a site (“Site 5” or the “Development Site” as defined below) at the southern edge of the World Trade Center.

b. Purpose of the Mixed-Use Design Guidelines

These guidelines (the “Design Guidelines”) establish a framework for the development of a mixed-use residential, community facility and commercial building for Site 5. As set forth in the WTC MGPP, for purposes of mixed-use development on the Southern Site, the Design Guidelines supersede those portions of the World Trade Center Commercial Design Guidelines (the “WTC CDGs”) which relate to Site 5, except that the Design Guidelines do not supersede Section 7 (Retail Guidelines) and Section 9 (Signage and Graphics Guidelines) of the WTC CDGs, which are part of the Design Guidelines for Site 5 and will apply to any mixed-use building on Site 5 (in addition to the provisions of the Design Guidelines herein), but will be administered by The Port Authority of New York and New Jersey.

Further, the Design Guidelines do not supersede the Commercial Sustainable Design Guidelines annexed as Appendix D to the 2004 Record of Decision (“ROD”), as amended by the ROD addendum dated February 16, 2007 (as amended, the “Sustainable Design Guidelines”).

The New York State Urban Development Corporation, doing business as Empire State Development (“ESD”), will administer the Design Guidelines. The Port Authority of New York and New Jersey will administer the sections of the WTC CDGs referenced above.

c. Applicable Law and Zoning Overrides

In accordance with the New York State Urban Development Corporation Act, the WTC MGPP overrides certain provisions of the New York City Zoning Resolution (the “Zoning Resolution”) with respect to the Development Site, as set forth below.

Development on Site 5 will be subject to and conform with the applicable provisions of the Zoning Resolution, the New York City Building Code, the New

York City Energy Conservation Code and any other applicable laws, except as provisions of the Zoning Resolution are overridden by the WTC MGPP as follows:

- (i) Override the Zoning Resolution use regulations to allow for physical culture establishments without a special permit from the New York City Board of Standards and Appeals;
- (ii) Override the definition of “zoning lot” to allow for creation of a zoning lot comprising the “Project Site” as defined in the Design Guidelines;
- (iii) Override the maximum floor area ratio (“FAR”) of 15.0 permitted in the underlying zoning district and Special Lower Manhattan District to allow a maximum FAR of 15.0 for the mixed-use building on the Development Site without regard to any additional floor area attributable to improvements on other portions of the Project Site;
- (iv) Override the maximum residential FAR of 10.0 permitted in the underlying zoning district and Special Lower Manhattan District to allow an overall residential base FAR on the Project Site of 12.0 FAR (a) without utilization of recreational bonus space or floor area increase regulations; and (b) without regard to open space or lot coverage requirements, where applicable;
- (v) Override height and setback controls, including modification of street wall regulations, setback regulations, lot coverage regulations, and maximum horizontal dimensions for tall buildings in the Special Lower Manhattan District;
- (vi) Override (a) the Special Lower Manhattan District curb cut regulations to allow curb cuts on Greenwich Street without authorization from the City Planning Commission or Commissioner of Buildings; and (b) the underlying zoning regulations related to location of curb cuts for loading berths;
- (vii) Override the Mandatory District Plan Elements of the Special Lower Manhattan District regulations related to: (a) pedestrian circulation space on the Project Site; (b) amount of lobby space permitted on Greenwich Street; (c) location of retail space on the Project Site; and (d) other provisions of the special urban design regulations not consistent with the Design Guidelines; and
- (viii) Override any other provision of the Zoning Resolution not listed above to construct the mixed-use building in compliance with the mixed-use design guidelines.

In those instances where the WTC MGPP overrides the Zoning Resolution, the Design Guidelines shall control in lieu of the Zoning Resolution and ESD's review of development plans for the Development Site with respect to compliance with the WTC MGPP and the Design Guidelines will replace zoning compliance review by the New York City Department of Buildings (the "DOB"). In those instances where the Zoning Resolution is not overridden, compliance with the Zoning Resolution and any other applicable laws will continue to be reviewed by the DOB.

d. Goals and Objectives of the Design Guidelines

The Design Guidelines define the design direction of the new development at Site 5 in order to facilitate an appropriate mix of uses, activation of the streetscape, and a building form that will enhance the entirety of the World Trade Center Memorial and Redevelopment Plan, and will provide a state of the art mixed-use project that is responsive to market demands and fulfills urban design objectives.

Proposed uses, tower massing, and ground floor programming are described herein to create a dynamic mix of programs and world class design.

e. General Provisions

The Design Guidelines contain text as well as site plans and diagrams (the "Design Control Diagrams"). The Design Control Diagrams are hereby incorporated and made part of these Design Guidelines and are equally binding as if fully described in the text.

All measurements of height shall be measured from the "*Design Flood Elevation*" as defined by the New York City Building Code. Pursuant to New York City Local Law 43 of 2021, the anticipated Design Flood Elevation is two feet above the base flood elevation, which would correlate to 311.48 feet NYNJPA datum.

Certain terms and concepts used in these Design Guidelines are also contained in the Zoning Resolution. Unless otherwise stated, such terms shall have the meanings as set forth in the Zoning Resolution.

The word "shall" is always mandatory and not discretionary. The word "may" is permissive.

f. Sustainability

The new development shall be designed and constructed to meet LEED Gold standards for building performance, or an equivalent standard that may exist at the time detailed design work begins for a development. In addition, the new development shall meet the 2019 NYC Local Law 97 carbon annual intensity limits for buildings and shall comply with the Sustainable Design Guidelines that are applicable to a mixed-use building.

g. Definitions

All Electric Building. An All Electric Building is a building utilizing all electrical heating and cooling.

Development Site. The Development Site, identified in Figure 1, is the location of the proposed building at Block 54, p/o Lot 1.¹ The lot area of the Development Site is 33,008 square feet.

Fitness and Social Center. Fitness and Social Center shall mean a commercial or non-commercial establishment, which is equipped and arranged to provide instruction, services, or activities which improve or affect a person's well-being by physical exercise, massage or therapeutic or relaxation services.

Gross Square Feet or gsf. Gross Square Feet shall mean the area of floor space measured within the outer surface of building walls except for areas open to the sky above. The permitted gsf for the mixed-use building is different than the square footage for the mixed-use building to be set forth in the new Section 1 of the November 2021 amendment to that is part of the proposed WTC MGPP due to differences in measurement, not differences in the building. The applicable square footage limitation on the building provided in the WTC MGPP, which is not modified by the Design Guidelines, is based on the zoning floor area.

Landscape Buffer. A Landscape Buffer is a planting bed defined by a raised curb.

Laws. References to laws means laws, rules, orders, ordinances, regulations, statutes, requirements, permits, consents, certificates, approvals, codes and executive orders.

Loading Area. A Loading Area is an area used for the movement of commercial goods, tenant moving, refuse collection and removal, located off Washington Street.

Pedestrian Zone. The Pedestrian Zone shall be provided to increase the capacity of the sidewalks as well as to provide for access to entrances and uses at the ground floor and shall include those areas of increased sidewalk width within the Development Site that provide increased pedestrian circulation space.

Podium Façade. The Podium Façade is any portion of the building façade located below the maximum base height and directly below a Tower Setback. Portions of the building façade that are not located directly below Tower Setbacks are not considered Podium Façade and are not subject to Podium Façade requirements.

¹ Tax lot numbers to be updated upon reapportionment.

Project Site. The Project Site is the zoning lot for the project, identified in Figure 1, and includes the property located at Block 54, p/o Lots 1, 30, and 40, Block 56, p/o Lots 15, 20, and 21, and p/o Washington Street and p/o Liberty Street previously acquired from the City of New York.² The lot area of the Project Site is 92,759 square feet.

Required Setback Area. A Required Setback Area an area above the maximum base height where application of the maximum tower coverage results in a setback from the base.

Through-Site Connection. The Through-Site Connection is a space connecting Washington Street and Greenwich Street at the north of the Development Site that contains a pedestrian path with a minimum width of five feet and a vehicular access lane.

Tower Façade. The Tower Façade is any portion of the building façade located above the Tower Setbacks, and also includes any portion of the building façade that is below the maximum base height and not located directly below a Tower Setback.

Tower Setback(s). A setback or setbacks provided at or below the maximum base height in compliance with the maximum tower coverage requirement of Section 3(b)(ii).

² Tax lot numbers to be updated upon reapportionment.

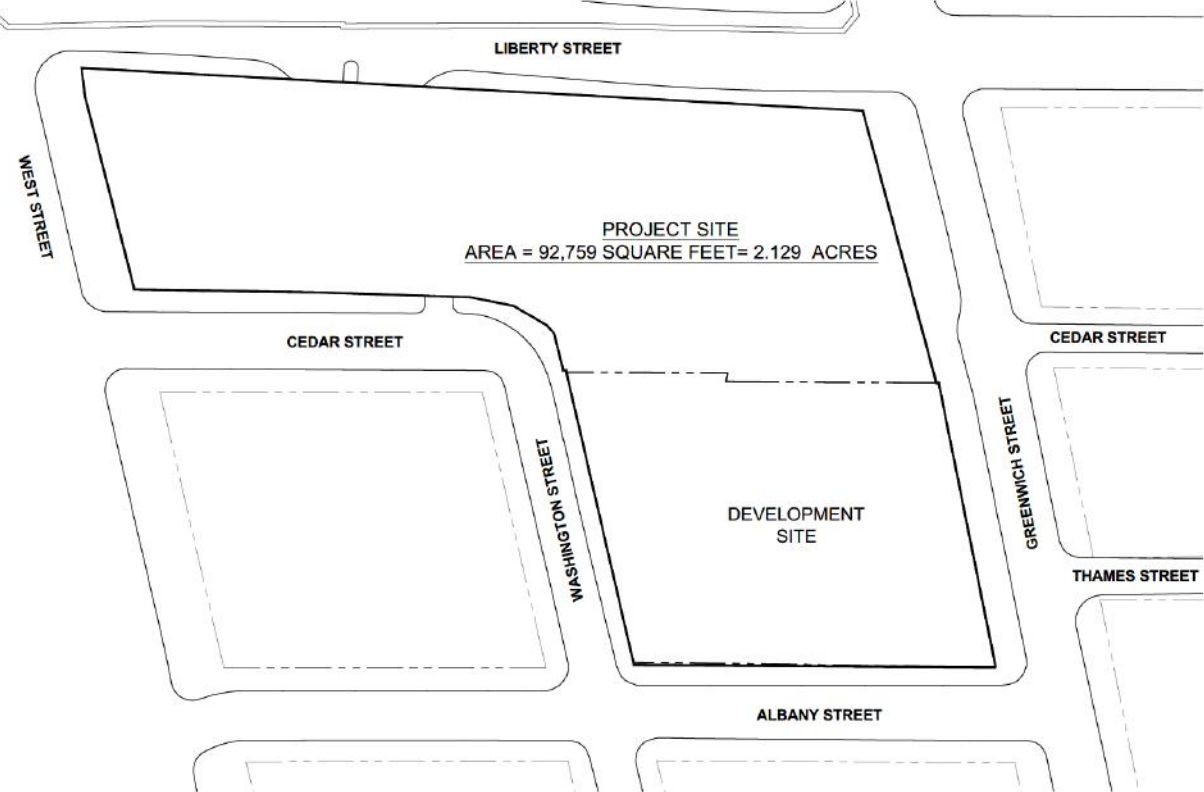


Figure 1 - Project Site

2. Project Program

a. Uses

Permitted uses at the Development Site shall include:

- Residential
- Office
- Fitness and Social Center
- Community facility without sleeping accommodations
- Retail
- Accessory Uses

b. Density

**Table 1
Potential Programs Analyzed**

| | Maximum Residential (1,270 Units) | Reduced Residential (1,193 Units) |
|--|--|--|
| Residential | 1,386,898 gsf* | 1,126,563 gsf* |
| Commercial | 180,000 gsf | 374,361 gsf |
| Fitness and Social Center | 36,000 gsf | 80,645 gsf |
| Community Facility | 13,000 gsf | 21,329 gsf |
| Retail | 12,000 gsf | 25,000 gsf |
| Total | 1,627,898 gsf* | 1,627,898 gsf* |
| Note: * An additional 50,000 gsf of residential mechanical space is permitted for an all-electric building under either program. | | |

3. Building Bulk, Massing, and Exterior Design

a. Ground Plane

Pedestrian Zones shall be provided at ground level adjacent to the public sidewalks along Greenwich and Albany Streets where shown on Figure 2. The surface of the Pedestrian Zones shall be consistent and seamless with the adjacent sidewalk material.

The building may project above a Pedestrian Zone to the Development Site property line at an average height of at least 20 feet.

Vehicular circulation shall be provided by a Through-Site Connection along the north of the Development Site connecting Washington Street to Greenwich Street in the location shown on Figure 2.

The Through-Site Connection is required to be open to the public and to have an average height of at least 20 feet. The vehicular drive may be differentiated from pedestrian areas by means of distinct paving or curbs, bollards, or a combination.

A Landscape Buffer shall be provided in the location shown in Figure 2.1.

Curb cuts are permitted within the “*Loading Curb Cut*” and “*Drive Lane Curb Cut*” zones shown in Figure 2. The maximum width for each Drive Lane Curb Cut is 12 feet. The maximum width for each Loading Curb Cut is 30 feet per curb cut.

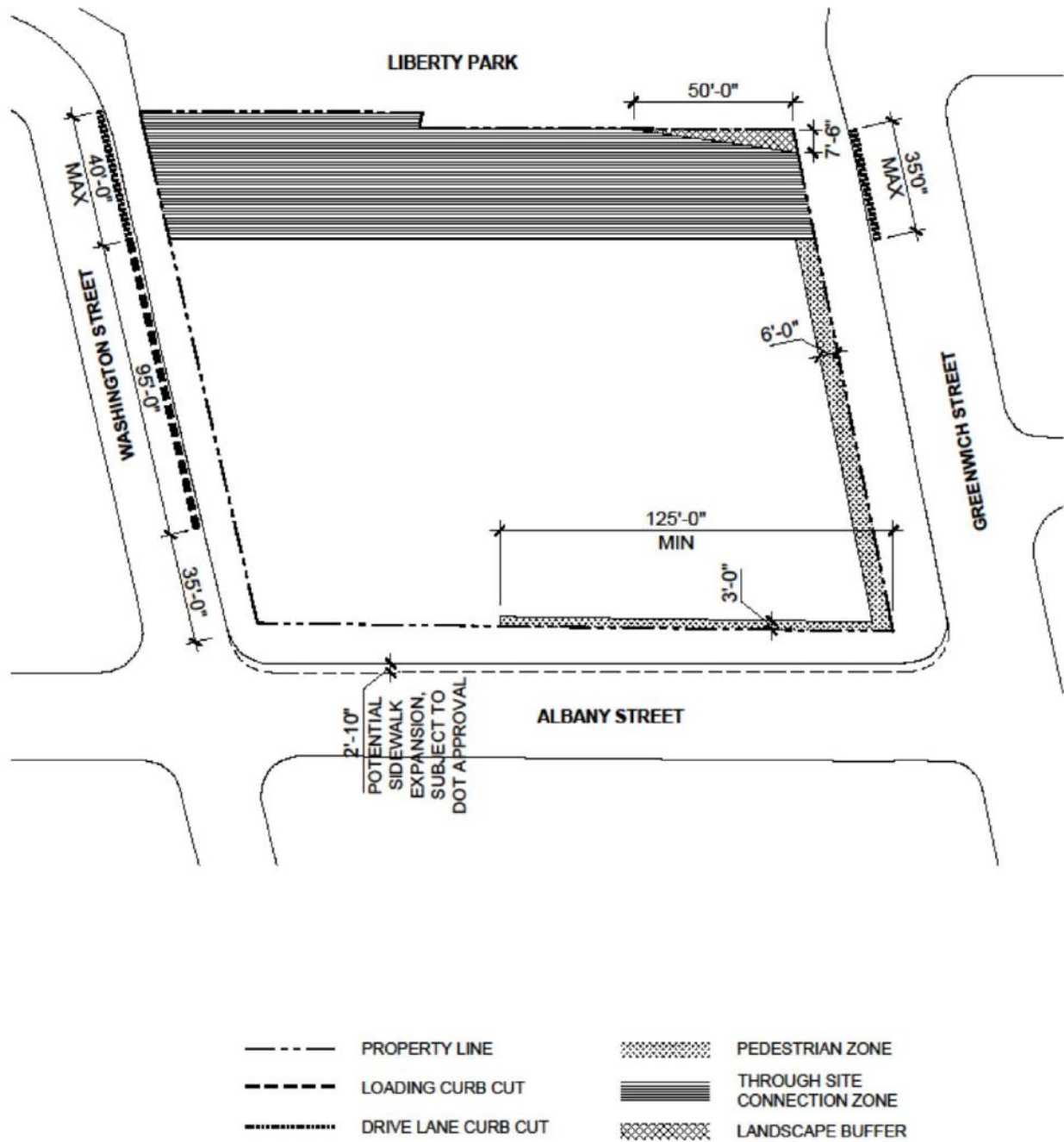


Figure 2- Ground Plane Diagram

b. Building Envelope

i. Maximum Base Height

A maximum base height of 190 feet is permitted.

ii. Maximum Tower Coverage (Tower Setback)

Beginning at or below maximum base height, the tower shall set back so that the gsf of each floor above the maximum base height shall not exceed 75 percent of the area of the Development Site. See Figure 3.

iii. Permitted Obstructions Above Maximum Base Height

The following obstructions may be permitted in the Required Setback Area:

- awnings
- balconies and railings
- decks
- solar energy systems
- vegetated roofs
- window washing equipment
- wind energy systems
- wind mitigation elements such as, but not limited to, a six foot high glass partition at the parapet
- outdoor kitchens and barbeques
- exercise equipment
- privacy partitions and trellises
- pergolas

iv. Maximum Building Height

A maximum building height of 900 feet is permitted, except that the maximum building height of an All Electric Building shall be 940 feet. Rooftop water tanks, cooling towers, and mechanical equipment shall be screened on all sides. Elevator or stair bulkheads, flagpoles, roof water tanks, cooling towers or other mechanical equipment shall not be permitted above the maximum building height. The maximum building height may only be exceeded by spires, masts, aerials, and buildings maintenance systems. Exposed masts and aerials shall not exceed 10 percent of the roof area nor shall their height exceed the heights of the masts or aerials on 4 World Trade Center.

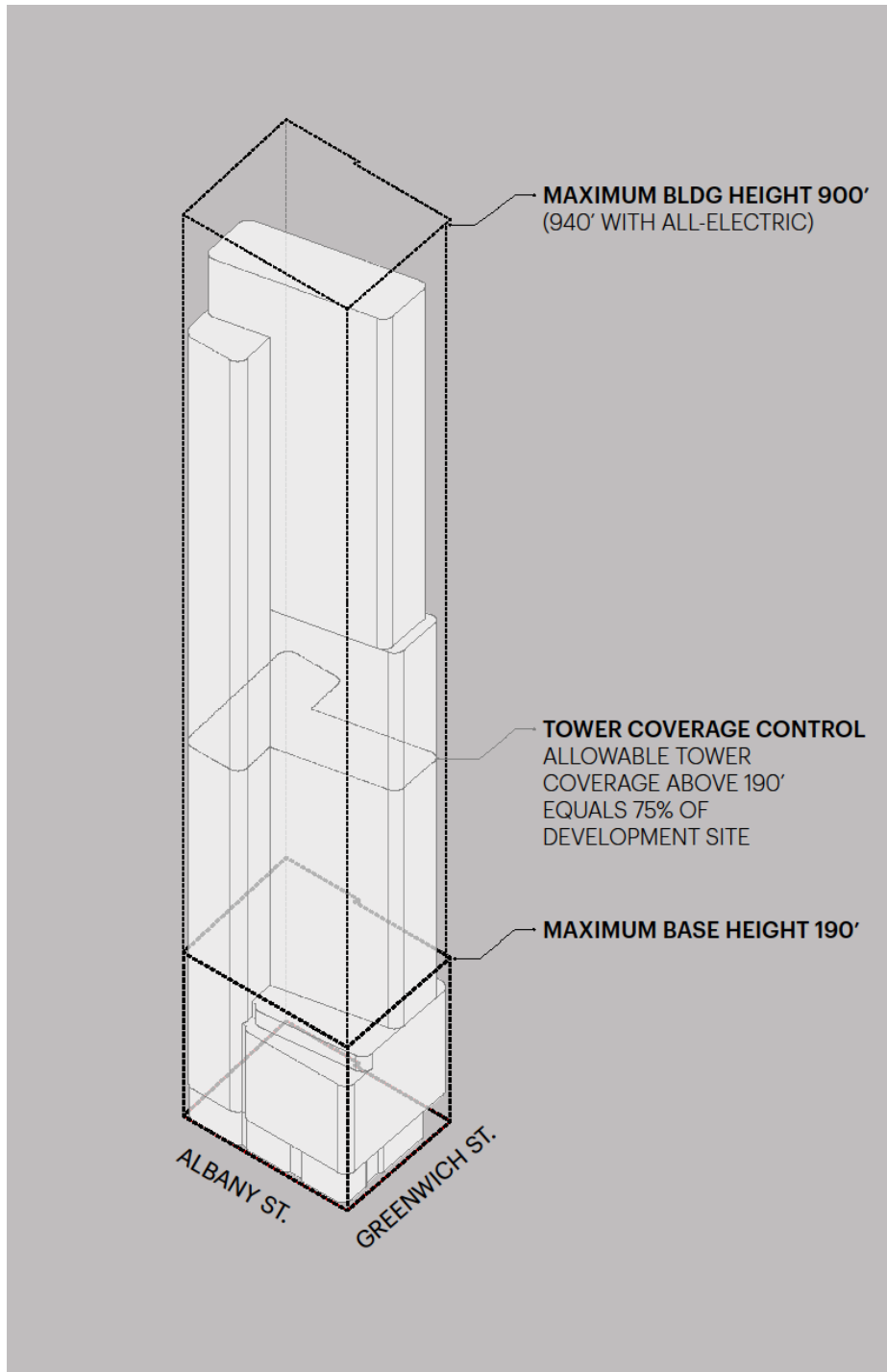


Figure 3 - Base Height and Tower Coverage

c. Exterior Building Design

i. Podium Façade

The Podium Façade shall have a three part composition comprised of a base, a middle and a top:

- Base - The lower (street) portion of the Podium Façade shall range in height from one to two stories above the ground with a minimum height of 20 feet. The façade of the base shall primarily be glass storefront. At the ground floor, the storefront shall meet the transparency requirements described in Section 4.
- Middle - The middle portion of the Podium Façade shall be located between the base portion and top portion and shall be characterized by a primary grid of masonry, or similar materials (e.g., brick, stone, precast concrete, GFRC, UHPC, terracotta, fiber cement, FRC, ceramic or porcelain). The area within the grid shall be comprised of vision glazing, spandrel glazing and masonry, or similar materials. Louvers, as required by building mechanical services, may be used in lieu of glazing. The combined vision glazing, spandrel glazing and louver area shall not exceed 75 percent of the total surface area of the middle portion of the Podium Façade.
- Top - The top portion of the Podium Façade shall include the top 1 or 2 full stories below the Tower Setbacks and shall be characterized by a primary grid of masonry, or similar materials (e.g., brick, stone, precast concrete, GFRC, UHPC, terracotta, fiber cement, FRC, ceramic or porcelain), similar to the middle portion of the Podium Façade. The area within the grid shall be comprised of vision glazing, spandrel glazing and masonry, or similar materials. Louvers, as required by building mechanical services, may be used in lieu of glazing. The combined vision glazing, spandrel glazing and louver area shall not exceed 75 percent of the total surface area of the top portion of the Podium Façade. The area within the primary grid shall be differentiated from the area with the primary grid of the middle of the Podium Façade by such techniques as changes of material or color, plane shifts, articulations or recesses.

The Podium Façade shall have rounded (radiused) corners. The requirements of this Section shall not apply to any portion of the Tower Façade, including portions of the Tower Façade located below the maximum base height.

ii. Tower

The Tower Façade shall have a glassy character and may include architectural elements that break down the scale of the building. The Tower Façade shall have rounded (radiused) corners. The Tower Façade requirements of this Section shall

apply to all portions of the Tower Façade, including portions of the Tower Façade located below the maximum base height.

iii. Connection to Liberty Park

A pedestrian connection shall be provided from the upper level of Liberty Park located to the north of the Development Site to the second floor shared lobby.

The portion of the pedestrian connection that is located on Liberty Park will be approved and permitted by the Port Authority.

The portion of the connection on the Development Site shall be located to provide a connection through the “*Bridge Connection Zone*” identified on Figure 4, and shall have a clear path with a minimum width of 10 feet and a minimum clear height of 10 feet from the surface of the pathway. The design character of the on-site connection shall be compatible with Liberty Park.

The pedestrian connection will connect to a shared lobby immediately adjacent to the entry doors and connect to the community facility with an elevator, and, if the community facility is located immediately above or below the shared lobby, it will connect with a communicating stair that is not less than five feet wide.

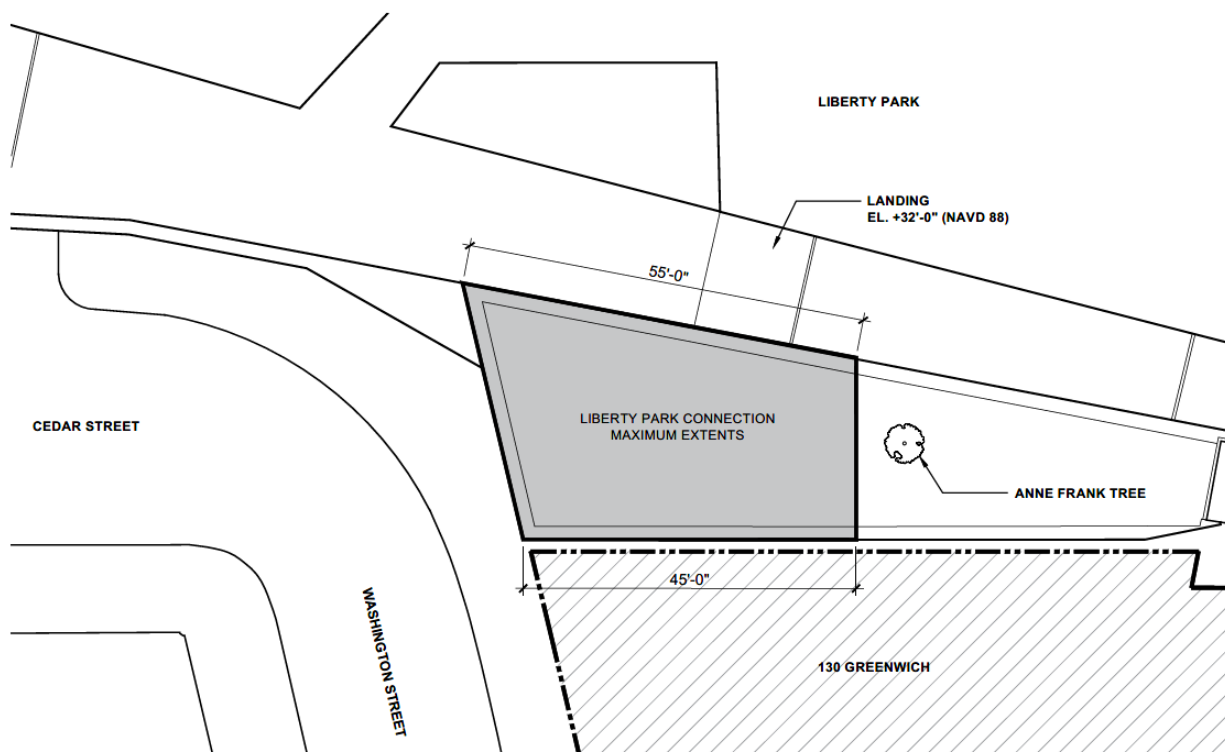


Figure 4 - Connection to Liberty Park

4. Ground Floor Frontage

a. Lobby Entry Zone

The lobby frontage shall not exceed 75 feet in length and shall be located on Greenwich Street within the “*Lobby Entry Zone*” shown on Figure 5.

b. Retail Frontage

Retail frontage is required in the location indicated on Figure 5. In the “*Retail Frontage*” area, transparent materials shall occupy at least 50 percent of the surface area of the ground floor level street wall between a height of two feet and 12 feet, or the height of the ground floor ceiling, whichever is higher, as measured from the adjoining sidewalk. Transparent materials provided to satisfy such 50 percent requirement shall not begin higher than two feet, six inches above the level of the adjoining sidewalk or the Design Flood Elevation, whichever is higher.

Emergency exits and service entrances should be located to minimize disruption of retail frontages.

c. Non-Residential Frontage

Non-residential frontage shall be located as shown on Figure 5. Only community facility or retail frontage is permitted at this location.

In the “*Non-Residential Frontage*” area, transparent materials shall occupy at least 50 percent of the surface area of the ground floor level street wall between a height of two feet and 12 feet, or the height of the ground floor ceiling, whichever is higher, as measured from the adjoining sidewalk.

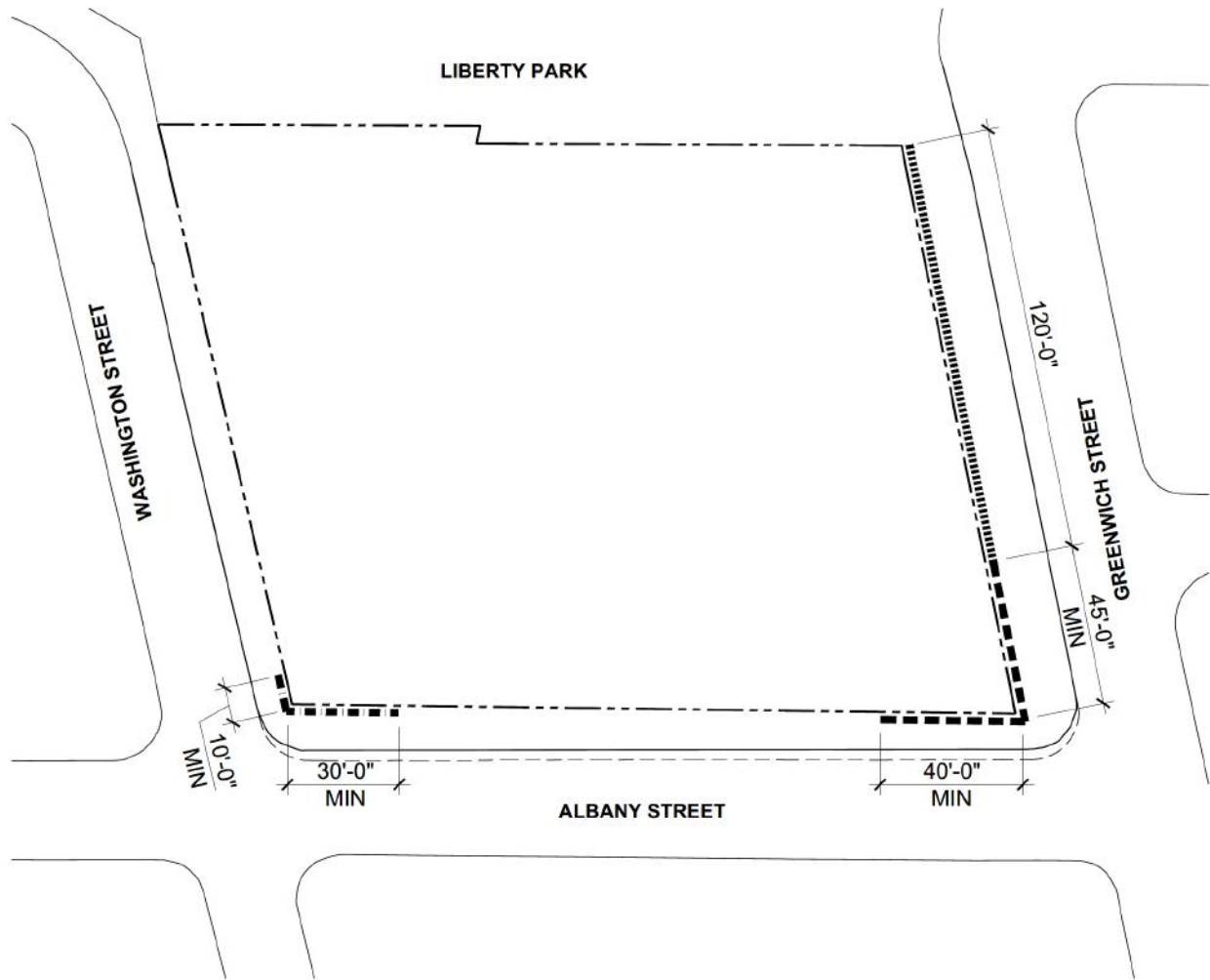


FIGURE 5

- LOBBY ENTRY ZONE
- RETAIL FRONTAGE
- . - . - . NON-RESIDENTIAL FRONTAGE

Figure 5 - Ground Floor Uses

5. Parking and Loading

a. Accessory Parking

Accessory parking is not permitted.

b. Off-Street Loading

Curb cuts providing access to off-street Loading Areas shall be located within the Loading Curb Cut zone shown on Figure 2. A minimum of two loading berths, each a minimum of 12 feet wide, 33 feet long, and 14 feet high, shall be provided.

Two areas will be provided within the building for off-street refuse storage and pickup.

A dedicated entry will be provided for off-street bicycle, pedestrian, or messenger deliveries.

6. Signage

a. Permitted Signs

All signs must be accessory to uses located within the building. Advertising signs are not permitted. Signage may not be located at a height more than 40 feet above curb level. Other than signage on canopies, awnings or marquees, no sign shall extend more than 12 inches beyond the street line.

b. Surface Area and Illumination

On each frontage, the area of all signs combined, inclusive of building identification signage, shall not exceed five times the length of the street frontage upon which such signs are located, but in no event more than 500 square feet on each frontage. Non-illuminated or illuminated non-flashing signs will be permitted.

c. North Facing Signage

Signage facing Liberty Park shall be limited to building identification or wayfinding signage and shall not be internally illuminated.

Where the northern Podium Façade is at least 20 feet from the northern boundary of the Development Site, the following commercial accessory signage shall be permitted to face the park on the northern Podium Façade:

- one 20 square foot internally illuminated, non-flashing cabinet sign, hung behind the façade, or

- two 10 square foot internally illuminated, non-flashing cabinet signs, hung behind the façade.

The top of such commercial accessory signs shall be no higher than 12 feet above the sidewalk.

Exhibit B-1

**Retail and Signage Provisions of Commercial
Design Guidelines**



Retail spaces are critical to the World Trade Center’s success as a lively, urban environment. At the same time, their character and locations must be balanced with sensitivity to the Memorial as well as the identity of other institutions and commercial considerations. This section establishes guidelines for retail spaces on the site, with particular attention paid to the relationship among retail, public concourses and streetscapes.

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- Introduction** 7.1
- Types and Character of Retail** 7.2
- Storefront Guidelines** 7.3
 - Above Grade Storefronts 7.3.1
- Storefront Entries and Identity Zone** 7.4
- Exterior Accessory Structures** 7.5
- Food Service Establishments** 7.6

7.1 Introduction

Retail spaces at the World Trade Center site are critical to creating a lively urban experience. Street level retail will create an identity for the site at-grade and will provide for an engaging pedestrian experience, similar to Fifth or Madison Avenues. At-grade street entrances to shops are encouraged.

The retail spaces will also activate the system of underground concourses that connect through the site and will offer convenience to transit customers. The success and public image of the World Trade Center will depend on the quality and vitality of its retail spaces and its ability to enliven the streetscape.

Retail spaces must be carefully integrated into the overall World Trade Center development. They must assert their own character, while respecting the stature of adjacent uses. They must add energy to the site, and complement the contemplative and respectful nature of the Memorial. They must be allowed to develop their own image, and still fit within the larger identity of the site as a whole. Retail hours of operation should be maximized to enhance the quality of life for Lower Manhattan residents, workers and visitors.

Shopping in New York is defined by the energy and diversity of its retail. At-grade retail within the development is to embrace and reflect this spirit. However, care must be taken to maintain a high degree of consistency and quality in the expression of the retail in order to reflect the world-class nature of this development.

Storefronts, signs and brands need to be presented in a manner that respects tenant standards and has a coherent identity as part of the overall World Trade Center. Retail and office areas also serve as part of the transportation network as well as the base for office structures. The synergy that results from this mix of uses, and the prominence of public transit on the site, create the ultimate value to the retailer.

Servicing shall not be permitted from the curb, except in cases of a tenant that is isolated from service.

While the guidelines presented here do not set out permitted or prohibited uses, it is important to communicate the desired character of retail space on the site, so the nature of these establishments has a consistency and quality that strengthens the overall concept. The presence of retail will serve as the connective tissue between the various addresses of the development. It is important that the expression and character of the retail be of high quality.

First, development on this site must be of world-class quality. The international attention focused on this site, the number of visitors who will come to the site from around the world, and the prominence of the site in New York, all require that a high standard of excellence be achieved. Each tenant should move beyond the customary standards of their particular operation and strive for a design that reaches a greater level of refinement.

Second, it is important to consider the role of retail use on the World Trade Center site as it relates to the rest of Lower Manhattan. Other than the South Street Seaport at the opposite end of Fulton Street, no large concentration of retailers exists in Lower Manhattan. Retail at the World Trade Center will establish a high level of service, choice and convenience. Retail on this site should complement retail throughout Lower Manhattan and local retailers should be encouraged.

Third, the office lobby entrances, grouped along the Greenwich Street corridor, form a transitional element between the Memorial experience to the west of Greenwich and the retail commercial environment to the east along the Church Street corridor. To respect the Memorial, retail frontage and retail signage should be directed to the Church Street Corridor and cross street areas. Retail Signage should not be directed toward the Memorial.

As retail on the World Trade Center site is distributed among at-, below-, and above-grade locations, the emphasis in designing such spaces should be on maintaining a strong connection to the street. Ensuring access to light and views should be a key priority in the configuration of above-grade retail. Multi-level retail spaces are encouraged, providing a connection from the street to both above and below-grade retail spaces.

Finally, the diversity of people who will frequent the retail areas will suggest the range of commercial uses for the site. Nearby residents, commuters, workers, and tourists will all be retail customers. Each of the groups has different needs and interests and the mix of retail should take this diversity into account. Each of them is likely to travel along somewhat different paths. Each group's needs can be accommodated in appropriate locations on the site and will be determined by the Port Authority and their lessee in accordance with an appropriate merchandising plan approved by the Port Authority.

7.3 Storefront Guidelines

The storefront articulates the transition between public areas and the commercial realm of the retailer. At the World Trade Center the storefront has a dual purpose: to allow the retailer to establish its image and also to create a consistency of design that connects each store to the larger context. This larger context suggests a common vocabulary of architectural expression for the storefront wall, specific to the base building that surrounds it.

See section 9, Signage Guidelines, for retail signage requirements.

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One of the most significant and visible parts of the World Trade Center site will be the street-level frontage of the various commercial buildings. The frontage will create a significant part of the experience for the pedestrians using any of the streets within or surrounding the WTC site.

In order to create an active, lively and vibrant public realm, ground floor plans, on Church Street, Fulton Street, Vesey Street, Liberty Street, Dey and Cortlandt, will be designed to “maximize” retail street frontage. The design must be consistent with first class building aesthetics and will include entrances for Class A Office tenants where circulation and security must be considered.

The final determination of the retail street frontage should include the following goals:

- Provide for the maximum amount of vitality and life along the street
- Provide sufficient amount of first class street-level retail to support that street life

Storefronts for above-grade areas should be integrated with the design of the individual buildings in which they are located. Therefore, there can be some variation from building to building, as long as several design principles are observed:

Storefront glazing should be clear glass, with at least two-thirds of the frontage transparent. Designers of structures should carefully consider the location of emergency exits and messenger entries so that openings do not conflict with retail frontage.

Mullion spacing materials, and proportions will be the result of decisions about the architecture of the structure above. There should be consistency between proportions, materials and details. Thus, the use of a uniform module is encouraged, but not required. All-glass or butt-glazed systems are preferred for storefronts. Introduction of opaque areas, such as stone or metal panels, is allowed, in patterns that relate to the building architecture.

Retail storefronts should be designed to be compatible with the unique architectural design features of the individual buildings within the World Trade Center site.

The following chart indicates the minimum retail frontages for Church and Fulton Streets. These percentages are based on the frontages of Towers 2, 3 and 4 only. The intent of these percentages is to maximize retail.

Minimum Retail Frontages along:

| | |
|---|-----|
| Church St (Between Vesey & Liberty St) | 70% |
| Fulton St (Between Greenwich & Church St) | 14% |

7.4 Storefront Entries and Identity Zone

Entrances into the storefronts can be accommodated in several ways. First, standard openings, accommodating a pair of glass doors (and optional sidelight), should be used by tenants with frontages 30 ft. or less. Doors that swing into concourses or sidewalks shall be recessed. Tenants whose frontage is wider than 30 ft. may use horizontally sliding sections of glass and metal door panels. The appearance of the entry when the retail space is closed must be given as much consideration as when the space is open. Security grills, if required, must be inside the glazing line and should be fully behind the storefront display zone. Fully opaque grills are prohibited. Door hardware shall be of high quality and shall be consistent with commercial building standards.

The first few feet behind the storefront is the critical zone for establishing the identity of the retailer. In this space, displays that establish a refined merchandising image are encouraged. The interior architecture of this zone can be tailored to meet the identity of the store. The use of color, varied materials, and creatively displayed merchandise are generally left to the discretion of the tenant. This area can be left open to allow views deep into the store, or can serve as a screen limiting views. Merchandise-intense outlets such as drug stores, bookstores, newsstands, card shops, gift shops, food markets and the like should screen store interiors through well-designed displays facing the storefront. All materials used in the identity zone should be of the highest quality.

7.5 Exterior Accessory Structures

In permitted areas, retail uses may extend beyond the limits of the storefront wall. This can occur in kiosks and temporary structures. Kiosks are semi-permanent retail structures where inventory and equipment can be secured over night. Temporary structures may include easily demountable tents or exhibit structures. They should be designed with a consistent look.

Kiosks and temporary structures may be permitted in areas where they can serve to enliven the location and that do not conflict with circulation routes or other programmed uses on the site. Temporary structures may be erected in Liberty Park, the WTC Hub Plaza, the Wedge of Light Plaza or other open spaces subject to approval. Special events in the Wedge of Light Plaza north of Fulton are limited to 12 days per year and if it is more than this would need the consent of the Tower 2 office net lessee and WTC Retail owner. All special events should be in keeping with the retail and office building entry environment.

Temporary structures are permitted on Cortlandt and Dey only during “Special Events”, which shall be limited to no more than twelve (12) times per year. Such “Special Events” shall consist of arts, cultural or similar events held on weekends only and open to the general public, but may also include weekday or weekend commemorations or other events of public significance with respect to the World Trade Center site. A “Special Event” may continue for no more than a twenty-four (24) hour period, which will include pre- set-up and post-cleanup activity. The Port Authority or Net Lessee will inform City Planning at least two (2) weeks prior to such an event and shall provide City Planning with a list and description of all such events held during each calendar year by January 31st of the succeeding calendar year.

Food Service Establishments **7.6**

Restaurants, cafes, food courts and other food service establishments represent unique challenges and benefits. These uses can activate and enliven spaces, but also can impact their surroundings if noise, odor and trash is not carefully managed. Therefore their locations and design need to be considered carefully. The location and design of outdoor dining areas should be temporary in nature with no permanent outdoor features and should not interfere with pedestrian flows and public access to walkways and public open spaces. Outdoor shades should be uniform in shape and color with consistent graphics.

Street level food service establishments must conform to the requirements of other retail spaces. Outdoor dining areas are encouraged.

Food service establishments are especially encouraged on second and third-floor levels. Seating areas should be located at the perimeter, adding visible life to the street. Service areas should be held back from the building perimeter.

All food service exhaust shall be coordinated with the commercial building mechanical system requirements.

Confidential Draft

FEBRUARY 07

Signage Guidelines



| | |
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9.1 Introduction

Environmental graphics and signage for the World Trade Center site require a visionary approach. From the use of names and nomenclature to the selection of typefaces and colors, each and every design decision must be carefully considered and thoughtfully reached in the context of the site as a whole.

The Signage Guidelines offer a framework for this decision making. They are intended to result in a harmonious and inspiring experience from the point of view of the user, whether it be the business commuter of today or the international tourist of tomorrow. Primarily as a user benefit, the signage is intended to provide information that simplifies, clarifies and enhances the user's visit to the World Trade Center site.

Through sound analysis, good planning and appropriate levels of consistency, the signage design at the World Trade Center site can create unified sense of place and leverage economies of scale in production and fabrication. A uniform signage program will give the World Trade Center site a unique identity and, in doing so, will knit together the many different program elements found on the site.

The end result should be a smart, attractive program that contributes to the WTC user and visitor experience and sets the standard for signage in the twenty-first century.

To achieve design integrity, these signage guidelines suggest the development of a "kit-of-parts" that contains a range of flexible, functional and complementary communication tools, and reasonable standards for their size, materials, placement, and other specifications.

The scale and complexity of the site's public spaces call for signage systems that include both dynamic and static components; accommodate both public information and promotional messages; and provide guest service and branding functions on an appropriate level. As such, signage will be an important link between the architectural environment and human behavior, helping people orient themselves, get where they want to go, and learn what they need to know, when they need to know it.

Fixed identification signs, directional signs, and safety and security messages will need to be visible, distinctive and durable, yet work in tandem with temporary information such as service and schedule notices. These graphics

must also be distinguishable from PATH, MTA and commercial tenants' branding and serve their function within a potentially cluttered visual environment. The use of symbols, electronic displays and other media may be considered to complement the fixed, text-based communications, and to help overcome language and other physical and perceptual barriers.

OVERALL SIGNAGE GOALS

There are several key goals that should inform the development of the WTC signage.

- Create spaces and places linked by a common signage thread that assimilate into a series of memorable experiences.
- Clearly identify the WTC as a single location/place and establish a common set of standards for the benefit of all stakeholders and tenants.
- Create a modern, elegant and sophisticated atmosphere that clearly conveys the individual identities of the stakeholders and tenants by employing simple, strong and legible design elements.
- Display and contribute to the perception of the WTC as a vibrant yet respectful place to visit.
- Present clear, concise information where and when users need it by using consistent messaging, logical naming, meaningful symbols, icons and logos.
- Design signs that are architecturally enhancing and compatible with their environment.
- Use cutting-edge, state of the art technology.
- Design a system that links adjacent destinations.
- Do not create distracting images, such as flashing signs or moving images.

9.2 Goals and Recommendations

9.2.1 Overview

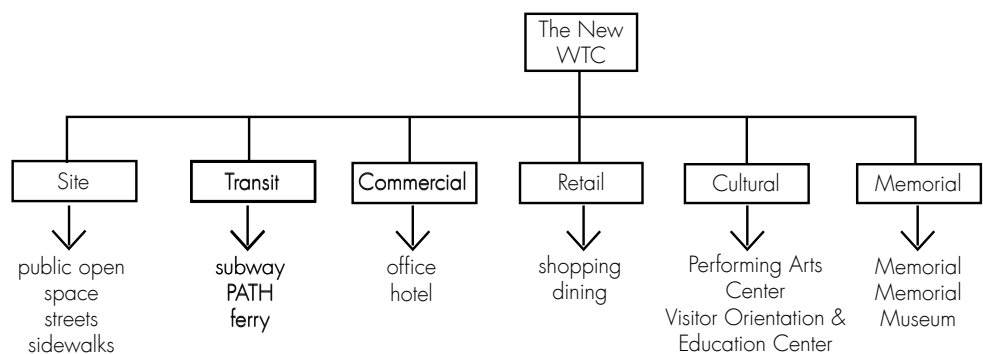
USERS

The new WTC site will be characterized by its many different amenities and populated by a wide variety of users. The people coming through this site will be there for any number of reasons, and possibly engage in more than one activity, for example:

- Memorial Visitor – shop – eat – visit memorial
- Transit Rider – transit – shop – eat
- Office Worker – transit – eat – shop – work
- Resident – recreation – transit – shop
- Cultural Visitor – culture – eat – shop
- Hotel Guest – eat – visit memorial – shop – transit – work
- Tourist – shop – eat

WAYFINDING EXPERIENCE

Signs play a major part in securing a user-friendly and cohesive experience for each of these user groups. The new WTC site will be physically integrated into the fabric of Lower Manhattan, therefore, identification signs need to help mark the transition between WTC and non-WTC buildings and public areas. As users enter the site, signs need to inform them about the different functions of the site and direct them from one to the other. Signs should consistently present and make a distinction between the different functions of the complex (transit, commercial, retail, memorial and cultural) and establish “paths” for the different users.



Following are further recommendations and guidelines per sign type. With the help of these recommendations, a meaningful and useful wayfinding and information signage system will be developed at the new World Trade Center.

COMPONENTS

Wayfinding and information systems provide the threads that carry people from all backgrounds, languages, and with varying destinations through a particular space. The system's success is based on its ability to communicate with the broadest audience and offer them a seamless wayfinding experience.

These are the functional elements that make up such a system:

Placemaking

Identification

Orientation

Direction

Information

Interpretation

Retail

Listed below are terms that will be used throughout this chapter:

SIGN: Any writing (including letter, word, or numeral), pictorial representation (including illustrations or decoration), emblem (including device, symbol or trademark), flag (including banner or pennant) or any other figure of similar character that is permanently affixed and used to advertise or identify a business via name or logo, the face of which shall not project more than 8" from the mounted surface.

SECONDARY SIGNAGE: Signage located at pedestrian level at or below eye site. They may occur in the lower 1/2 of the store façade. They should be 2-dimensional, applied directly to the glass or flush with the glass. It shall not be illuminated. These signs shall be the store name and/or logo only.

ILLUMINATED SIGN: A sign lighted by or exposed to artificial lighting either by lights on or in the sign or directed toward the sign.

HALO EFFECT: Backlit sign that incorporates internal illumination to create a glow effect against the back wall surface.

FLASHING SIGN: Any directly or indirectly illuminated, whether stationary, revolving or rotating, that exhibits changing artificial light or color effects by any means whatsoever.

DYNAMIC SIGN or ELECTRONIC SIGN: A general term used for signs that can be changed manually or electronically by an electronic device. Some of these require manual programming.

LED (Light Emitting Diode): Series of light panels that incorporate a 4-color system to create an image. They are programmed via computer systems with manual input. This results in a pixilated image.

LCD (Liquid Crystal Display) TELEVISION MONITOR: Receives

signals via computer or cable. Image is clear and continuous.
PLASMA DISPLAYS: Similar to LCD technology, can be projected on a flat screen.
FIBER OPTICS: A strand of light transmitting fibers used to illuminate from the back, side or front of signs.

9.2.2 Placemaking

The act of placemaking requires clearly defining the WTC's role within Lower Manhattan. Environmental graphics play a crucial role in building the character and sense of place. The foundation of this character is established by the architecture, and complemented by landscape/streetscape design, interior design, and lighting.

The WTC site will serve as a major access point to transportation systems and destinations in Lower Manhattan. Its function as a major transportation, cultural and commercial destination for the City of New York is equivalent to that of Penn Station or Grand Central Station, therefore branding this site must take into consideration all the various user functions and constituencies.

Placemaking Goals

- Design a family of wayfinding and environmental signs to unify the WTC Site under one identity and style, define its boundaries, and tie together the separate buildings and spaces.
- Create an identity that embraces the Memorial, commercial, cultural and transportation functions of the site.
- Create sub-identities that are compatible with the overall framework for WTC site signage but allow leaseholders to develop a clear identity.
- Create a strong graphic identity (logo) for the WTC that can be used in a variety of media (print, signs, video, etc.)
- Equip the graphic identity system with simple and bold colors palette, 3D forms, typefaces, lighting and materials that reinforce the character of the architecture.
- Use environmental graphics to welcome visitors to the Site and allow them to experience a sense of security and confidence in their navigation of the space.

Identification signs are visual markers that indicate the name and function of a place or space. They appear at the beginning and end of routes, including entrances and exits to destinations within larger destinations and clearly mark the transition from one kind of space or function to another. The development of a distinctive design vernacular for identification signs can contribute to a cohesive identity to a place. Legibility, visibility and consistency of identification signs and their components need to be maintained throughout the system.

Identification Goals

- Design a family of wayfinding and environmental signs and directories to unify the site under one identity and style, define its boundaries, and tie together the separate buildings and spaces.
- Establish consistent locations for identification signs throughout the site and ensure that the architecture has allowances for these elements.
- Develop a comprehensive and changeable map graphic that can be easily updated.
- Create a cohesive and consistent naming system for the parts of the site: buildings, building entrances, transit facilities, retail sectors, and public areas (open spaces, Memorial), that helps unify the place and respects the needs of tenants of particular buildings.
- Select a main identification material or colors for WTC signage that provides the right balance of contrast and harmony in the architectural setting.
- Select materials and forms that reiterate the significance of the site.
- Create identity elements strong and bold enough to stand out among the crowded and fast-paced environment, yet express the respectful and solemn character of the site.
- Use standard English, and international symbols wherever possible to address the cultural diversity of WTC visitors.

Applications of identification signs are usually in the form of illuminated or non-illuminated dimensional letters, logos or sign plaques that are mounted to wall surfaces. At the WTC site, these should be located at:

- Building entrances and lobbies
- Entrances to the PATH and MTA systems
- Retail entrances
- Public facility entrances

9.2.4

Direction

Directional signs are the main thread of any wayfinding system as they provide immediate information for users to navigate public places. This type of sign routes pedestrian traffic between main entrances, key decision points, destinations and exit points by using type, symbols and arrows. Directional signs should harmonize with the architecture yet be distinguishable enough to be recognized by the user. The information should be simple and visually categorized for easy navigation throughout the facilities. Connections to the office buildings should be clearly linked and visible to visitors and tenants alike.

A comprehensive wayfinding directional system needs to be created to guide users around the WTC site and to nearby destinations. Exterior directional signs need to direct users to destinations within and adjacent to the site (i.e., WFC, Battery Park, A/C/E subway station, Wall Street, etc.). These signs could be freestanding structures, outside the PATH Terminal, located on sidewalks, plazas and parks when necessary, where they clearly direct visitors to the various destinations, but should be integrated into the architecture/building so as not to distract pedestrian pathways or views.

The use of symbols and terminology on directionals must be consistent in tone and graphic style, with simple English messages being the primary language. This will ensure a universal understanding of sign messages among the cultural and linguistic diversity of WTC visitors.

Investigations should be made into designing and integrating the wayfinding, retail, office, transportation and cultural signage into an electronic broadcast signal downloadable to pdas, phones and other electronic devices using new technologies (WiFi/R.F. and GPS).

Direction- continued

Direction Goals

- Use clear and easy-to-remember messages, symbols and forms for directional signs.
- Use standard English, and recognizable symbols wherever possible to address the linguistic and cultural diversity of WTC visitors.
- Locate directional signs at key decision points in visible locations, minimizing the blocking of views.
- Select a typeface, colors, layouts, materials and forms that lend themselves to simple and clear signs.
- Categorize directional sign messages by function: Cultural, Memorial, Transit, Commercial Office and Retail.
- Direct visitors from the periphery of the site to adjacent Lower Manhattan destinations (Statue of Liberty, World Financial Center, Battery Park City, Financial District, South Street Seaport, etc) using the Alliance for Downtown New York (ADNY) standards.

9.2.5 Orientation

Orientation signs help situate users within their surroundings by showing an abstracted overview of their environment. Spatial orientation is typically achieved through a comprehensive site map at intensive decision-making points where overall orientation is needed and feasible. Orientation signs should be supported by the system of directional and identification signs that assists visitors in making decisions about vertical and horizontal circulation into other levels. If located in outdoor areas, orientation maps should offer an understanding of the entire site within its vicinity. If located inside, they should offer an understanding of both horizontal and vertical circulation marking important access and exit points.

Orientation signs should show the exact location of the user, “You Are Here,” within his/her surroundings. Each level should display plans (axometric or flat) of all other levels along with directory listings. These listings can be in alphabetical order or any other method of categorization that facilitates and expedites wayfinding. Due to the changing nature of this information, changeable technology and electronic maps should be considered.

Orientation signs are typically freestanding units to allow visibility to a large number of users simultaneously. If space does not allow, they can be wall-mounted. These signs need to be located in appropriate locations where they do not obstruct the circulation of the visitors, especially in areas of high pedestrian traffic or views to important destinations.

These units should be made out of strong and durable materials that can withstand the everyday use of visitors. Although natural and artificial light will be present in some parts of the below-grade concourses, interior or indirect illumination of these signs is recommended to attract visitors.

Orientation - continued

Orientation Goals

- Make the user/visitor experience clear.
- Create a comprehensive directory system with maps and keys that has both fixed and changeable elements.
- Have both indoor and outdoor versions of the directories at appropriate scales for the setting and context.
- Create an orientation map for the whole site showing all levels and access points (consider both flat graphic and axonometric views) and keys to important tenants and services.
- Display all maps in the same orientation (North-South).
- Research the best available technologies for fixed and changeable displays.
- Orient visitors from the periphery of the site to adjacent Lower Manhattan destinations (Statue of Liberty, World Financial Center, Battery Park City, Financial District, South Street Seaport, etc.) using ADNY standards.

9.2.6

Information

Information signs display constantly changing information such as time, temperature, stocks and headline news. In a transportation environment, these signs convey the most important information to the commuter: ticket fare, route maps, and schedules. Because information is never static, dynamic electronic display cases (such as LED or LCD) are often employed.

It is important to determine essential information from non-essential information within each space. A time display is important in a waiting area. Sometimes information displays can become important site-specific or civic landmarks. The clock in the center of Grand Central Station is such a civic landmark.

Adequate provisions for information intensive facilities must be in place prior to construction as the accuracy and quality of these displays will effect the use and perception of the Site as a whole. State-of-the-art technology will provide users with important to-the-second information.

The size, color and quality of the image should be clear, with sufficient resolution for the desired viewing distance. For crucial transit-related information such as emergencies, delays and changes in schedule, the unit should be able to display special message signals and provide clear instructions to the public. Given the evolution of technology, it is worth exploring interactivity between users and information displays through web applications and wireless technologies.

INFORMATION GOALS

- Identify areas where digital, electronic or mechanically animated signs are appropriate and develop a comprehensive technology signage program (transit, schedule, on-site events, local/national/global news, other relevant data: stocks, weather, etc.).
- Do not create distracting images, such as flashing signs or moving images. Flashing words or overlapping moving photo images and text are not permitted.
- Encourage the remote interactivity between visitors and personal information technology (web, kiosks, PDA's etc...).
- Explore technologies and display systems that will enable the accessing of information in a variety of languages.
- For exterior areas, the design of any information stanchions or boards should be considered and coordinated with the information, location and sign cases designed by ADNY.
- Informational signage shall not be used for private or promotional goals.

9.2.7

Interpretation

Interpretive signs form the educational and cultural component of a sign system. They offer, among other things, relevant historical, cultural, architectural or scientific information for the viewer to gain a deeper understanding of his or her surroundings. They can also serve as inspirational objects that allow people to interact and feel part of the space.

Interpretive signs can take the form of installations (interior or exterior), public art (sculptural) or more traditional exhibit signs with text and image. Locations for interpretive signs should be identified and assessed in relationship to wayfinding components. Therefore scale, location, materials and safety should be carefully considered.

There will be opportunities to place interpretive signs at different locations in the new WTC complex. At ground level, various architectural features such as Wedge of Light Plaza, Sept. 11th Place and the Memorial itself will offer interpretive opportunities to the general public.

Interpretation Goals

- Educate the general public about the past, present and future of the WTC Site.
- Create an environment of solemnity for September 11th victims and their families.
- Ensure that the Memorial is the most prominent interpretive element on the site and that other gestures don't compete with it.
- Collaborate with artists to create interpretive public art.
- Explore media and technology for interpretive and public art pieces throughout the WTC site.

Advertising Goals

- No commercial outdoor, exterior advertising such as sign boards visible from any public street or open space is permitted.
- Special event signage/advertising can be permitted (e.g. three sheets, cultural event signage, etc.).

9.2.9

Retail

Retail space will be a significant component of the WTC Site. The new development will feature significant retail areas both at and above street level (exterior) and at below grade concourses. Both areas will require specific signage guidelines to support the intended character of the various interior and exterior spaces, and shall be compatible with the unique architectural design features of the individual buildings. The design criteria shall be subject to the approval of the office building architect and the Net Lessees.

Retail Goals

- Encourage the use of simple and clear graphic treatments for retail signage.
- Find the right balance of harmony and diversity within the various retail signage areas.
- Respect the constraints and opportunities of different kinds of environments on site in creating signage standards: interior site streets vs. exterior site streets, ground floor lobbies vs. underground concourses.
- Acknowledge the need for retailers to express their brand identities and make their identity visible from more than one point of view.
- Create detailed guidelines for location, scale, material and construction of retail signage that will fit comfortably within the architectural settings and acknowledge retail presences.

Three types of signs will be needed:

- Identification signs for individual stores.
- Interior orientation directories to describe the locations of the stores and retail areas.
- Directional signs guiding people to major areas of the retail complex.

A basic style for the overall retail complex within the WTC site will need to be created with guidelines for signage, pageantry and event information. If this retail center will be managed and named as a single retail destination, a compelling graphic identity will be required to market it as such.

Preliminary interior retail guidelines have been established in chapter seven of this report. More specific exterior retail guidelines will be found in section 9.4 of this chapter. Once the architectural design is finalized, it will be possible to develop more specific (architecturally related) retail guidelines.

9.3

Sign Types and Locations

9.3.1

Sign Type Diagram

LOCATIONS PER CATEGORY

| Site | Transit | Commercial | Retail | Memorial | Cultural |
|------------------|---------------|------------|--------------|-------------|--|
| Wedge of Light | PATH terminal | Towers | Above-grade | Memorial | Perf. Arts Center |
| HUB Plaza | MTA stations | Hotel | Street level | Mem. Museum | Visitor Orientation & Education Center |
| Liberty Park | | Lobbies | Below-grade | | St. Nicholas Church |
| Sept. 11 Place | | Ob. Deck | | | |
| Washington Place | | | | | |
| Sidewalks | | | | | |
| Streets | | | | | |
| Parking | | | | | |
| Delivery/Service | | | | | |

SIGN TYPES PER CATEGORY

| Site | Transit | Commercial | Retail | Memorial | Cultural |
|------------------------|--------------------|------------------|------------------|------------------|------------------------|
| Exterior: | Exterior: | Exterior: | Exterior: | Exterior: | Exterior: |
| Site ID's | Bldg Entrance ID's | Tower ID's | Retail Area ID | Memorial ID | Building ID's |
| Area ID's | Street Access ID's | Hotel ID's | Store ID's | Orientation | Entrance ID's |
| Site Maps | (PATH/MTA) | Lobby ID'S | Ped. Dir. | Ped. Dir. | Directionals |
| Site Info | Ped. Directional | Orientation | Regulatory | Orientation | Pedestrian Directional |
| Interpretive | | | | ADA | Regulatory |
| Vehicular Directional | | | | | |
| Pedestrian Directional | | | | | |
| Interpretive | | | | | |
| Pageantry | | | | | |
| Site Regulatory | | | | | |
| Site Informational | | | | | |
| Parking Entrance ID's | | | | | |
| Parking Regulatory | | | | | |
| Parking Directional | | | | | |
| Public Art | | | | | |
| Interior: | Interior: | Interior: | Interior: | | |
| Delivery ID's | Platform ID's | Lobby ID's | Store ID's | | |
| Site Regulatory | Orientation | Elevator ID's | Orientation | | |
| Parking Regulatory | Regulatory | Directories | Directional | | |
| Parking Directional | Information | Fire Code | Regulatory | | |
| ADA | Advertising | Advertising | | | |
| Site Maps | Concourse ID's | Information | | | |
| Site Info | Zone ID's | Stair ID's | | | |
| | Elevator ID's | | | | |

SIGN TYPES PER FUNCTION**Placemaking Sign Types****Exterior**

Site Monument
 Building Monument
 Transit Marker
 Public Art Installation

Interior

Wayfinding/Information Marker
 Public Art Installations

Directional Sign Types**Exterior**

Directional

- Freestanding
- Building Mounted

Interior

Directional

- Overhead
- Freestanding
- Wall Mounted

Orientation Sign Types**Exterior/Interior**

Directory

- map
- listings

Identification Sign Types**Exterior**

WTC Identification
 Building Identification
 Building Entrance Identification
 Underground Parking Identification
 Service Entrance Identification
 Parks and Open Space Identification
 Transit Access Marker

Interior

Lobby/Commercial Tenant Identification
 Elevator Bank Identification
 Exit Identification

Information Sign Types**Exterior / Interior**

- time
- weather
- traffic
- community events
- memorial events
- stocks
- news

Advertising Sign Types**Interior Only**

Freestanding displays
 Wall-mounted displays

Interpretation Sign Types**Exterior / Interior**

Interpretive text/graphic panels
 Installations
 Murals
 Public Art

Retail Sign Types**Exterior /Interior**

Retail Store Identification
 Area or Zone Identification
 Directional
 Directory

This section will provide more specific guidelines for the following components of the signage system.

- Site Signage Guidelines
- Illumination Guidelines
- Exterior Site Signage Guidelines
- Ground Level Exterior Retail Guidelines
- Above Ground Level Exterior Retail Guidelines
- Anchor Tenants Exterior Retail Guidelines
- Commercial Signage Guidelines

Interior retail signage guidelines will be provided by the PANYNJ. Memorial and cultural signage guidelines will be established once the programs and/or design for these areas are more fixed.

9.4.2 Site Signage Guidelines

1. Comprehensive WTC signage design standards shall be developed for the site and will address directional and wayfinding signage. A strategy for consistency among signs will be developed.
2. The WTC signage design standards shall define a design vocabulary for directional, wayfinding and public open space signage identifying the primary materials, signage location zones, typefaces and standards for consistent fabrication and installation.
3. Signage materials will be compatible with the architectural palette of the building.
4. The graphic design for signage should be simple and clear. Names, and their supporting logotypes are to be the primary identifiers for stakeholders and their tenants.
5. Sign materials should be fade and vandalism resistant to ensure durability, and should be appropriate to the dignity and significance of the WTC setting.
6. All identification signs within the WTC site shall follow these design guideline standards with the following exceptions below. However, the agencies below, while exceptions to the rule, will be encouraged to follow the design standards to reinforce design vocabulary for all sign types:
 - i. Transit signage will conform to the appropriate agency standards, i.e. PATH or MTA.
 - ii. Memorial and cultural signs may have separate and unique identities.
 - iii. Street name signs within the WTC site shall follow the ADNY standards for street name signs.
 - iv. All traffic signage shall conform to DOT traffic signage standards.
7. All exterior signage shall be accessory to uses on site, however consideration should be given to certain signage for off-site destinations in Lower Manhattan including the ADNY signage standards.
8. No commercial outdoor, exterior advertising such as sign boards visible from any public street or open space is permitted. Public event/special event signage/advertising is permitted (e.g. three sheets, cultural events, etc). International and/or site specific symbols should be used wherever possible to encourage communications with international visitors.
9. Freestanding signs shall be limited to transportation, cultural (within the cultural parcels), memorial, public event, special event and wayfinding uses and be of an appropriate height to ensure visibility but yet not overwhelm the WTC setting. The placement of such signs shall not impede pedestrian flow. and should be limited to cultural and open space parcels excluding the north side of the wedge of light.

10. The number of regulatory signs should be minimized by integrating the messages into other sign type components and so as not to encourage the proliferation of signage on site.
11. Orientation (i.e. site maps and directories) and event information signs shall be placed in appropriate locations, key places on buildings and/or specially designed cases. Movable freestanding units of this sign type are prohibited.
12. There will be no signage above the highest level of publicly accessible retail.
13. Transit signage on the buildings will be located in the Architecturally Designated Sign Zone defined below.

Exterior Site Signage Illumination Guidelines 9.4.3

It is the intent of the design guidelines to develop standards for signage lighting that create a distinctive appearance across the WTC site, reinforcing the project as a whole but still allowing for creative diversity to be expressed. These guidelines cover exterior site, retail and commercial signage.

1. A sign's primary lighting shall be consistent.
2. Internal illumination of letters with translucent through returns is permitted.
3. Exposed neon is not permitted.
4. Signage with translucent, lighted faces or backgrounds visible from any WTC public open spaces are not permitted; however, translucent, lighted returns, halo lighting and indirect illumination by a remote source are permitted. Additional standards for the various uses that address lighting will be created in the future.
5. Flat screen digital or other dynamic signs are not permitted.
6. No flashing signs are permitted. No internal illuminated boxes or box letters with translucent front faces are permitted.
7. Projected images on sidewalks or other public spaces are not permitted.

9.4.4 Ground Level Exterior Retail Guidelines

These guidelines apply to ground level retail identification signs.

1. One Primary Store Identification Sign is permitted per storefront entry. This Primary Sign will be located in the Architecturally Designated Sign Zone (as defined below). In cases of more than one level above-grade occupied by a single tenant, additional primary signs shall be permitted, following the guidelines for those façade locations (see “above ground level exterior retail guidelines” below).
2. The Architecturally Designated Sign Zone shall be as defined by the office building architect and the retail developer in collaboration with the Port Authority and New York Department of City Planning to be compatible with the unique architectural design features of the individual commercial office buildings within the World Trade Center district.
3. Each store may have one Primary Sign per level, per side of the building on which it fronts but will not face the Memorial directly.
4. No sign shall be larger than 65 SF. The maximum size of a sign for a major anchor (with a program over 40,000 SF) will be subject to review by the Design Guidelines Committee.
5. Two Secondary Signs are permitted per storefront entry no larger than 4 SF each.
6. No attached canopies or awnings shall be used for signage purposes.
7. No permanent freestanding store identification signs or other freestanding sign types are permitted in front of the retail façade.
8. Paper and temporary signs may not be affixed to the storefronts.
9. Any signage, additional to the Primary and Secondary signage, installed more than 3’ behind the glass shall not be counted as part of the signage allotment.
10. Retail signage should not be permitted to face the Memorial directly or into the commercial office building lobbies that are located on Greenwich Street and therefore visible from the Memorial.

Above Ground Level Exterior Retail Guidelines

9.4.5

These guidelines apply to above ground level retail identification signs.

1. One Primary Store Identification Sign is permitted per level, per exterior facing storefront. This Primary Sign will be located in the Architecturally Designated Sign Zone (as defined below).
2. No sign shall be larger than 65 SF. The maximum size of a sign for a major anchor (with a program over 40,000 SF) will be subject to review by the Design Guidelines Committee.
3. The Architecturally Designated Sign Zone shall be as defined by the office building architect and the retail developer in collaboration with the Port Authority and New York Department of City Planning to be compatible with the unique architectural design features of the individual commercial office buildings within the World Trade Center district.
4. Interior Primary Signage above ground level is defined as any signage installed inside the façade, within 3' of the glass, in the Architecturally Designated Sign Zone.
5. Secondary external signage is not permitted above grade level.
6. Paper and temporary signs may not be affixed to the storefronts.
7. Any signage, additional to the Primary and Secondary signage, installed more than 3' behind the glass shall not be counted as part of the signage allotment.

Commercial Office Signage Guidelines

9.4.6

The following guidelines give parameters for the identification of the major towers, the entry points and the key commercial tenants of the WTC complex.

1. Each of the five towers of the WTC should be identified by name and/or address with a building mounted sign. Tower lobby entrance signs should provide building major tenant ID in the Architecturally Designated Sign Zone.
2. Each office tower shall be permitted one primary sign per lobby entry.
3. Two Secondary signs per entry no larger than 4 square feet each are permitted for major office tenants occupying more than 20% of the total rentable square footage of the building and must be located in the Architecturally Designated Sign Zone.
4. Exterior entrance ID signs shall be static signs, with no dynamic digital or LED/LCD or other video components.
5. The maximum size of a sign is 100 SF.

9.5 Design Considerations

9.5.1 Overview

Designing a signage system for a mixed-use development such as the new WTC site requires an awareness and understanding of multiple and interdependent design elements, all of which play an important role in meeting the needs of the system and its users. The following section outlines these elements.

These are the primary design considerations:

Placement and Architectural Context

Visual Character

Languages

Symbols

Naming

Lighting

Existing Identities

Technology and Media

Sustainability

A signage system that is well integrated with the architectural environment provides visitors with a seamless and effortless wayfinding experience. To achieve this, the sign system should have its own identity yet be visually integrated within the architectural environment; be simple and strong enough to complement the variety of architectural styles that will coexist at this site; be bold enough to stand out in an information intensive environment, saturated with images and media, with varying material surfaces; and have a clear and consistent relationship with the architectural forms within the space.

Each building will be designed in phases and by different architects with varying functions and components within each structure. Therefore, signage will play a key role in visually unifying the site. Though signs naturally weave their way through architectural forms, they need to hold a place for themselves and have a distinguished presence.

Public Art and Sculpture

Public art and sculpture can be important wayfinding tools and markers, helping the user to orient oneself as well as create a memorable sense of place. Important provisions and considerations should be given for the placement of and for works that can assist in the wayfinding experience.

Visual Character: Color

Color is a powerful tool for wayfinding and orientation graphics at transportation facilities. It has three primary functions: to create identity, to code information, and to create a sense of place.

It is necessary to select 2-3 colors of appropriate contrast and value as a basic starting palette before applying color to the different sign components. This palette should then be finalized once the designer is familiar with the exact selection of architectural materials, lighting elements and other formal components of the space. The WTC site has ample space to display signs, overhead or freestanding, with large and legible messages and bold colors. The degree to which this is implemented, depends on more in-depth color studies.

The current architectural guidelines recommend the use of metal and glass in many parts of the commercial development. The sign designer should consider fabrication materials for overheads, kiosks, display cases, etc. that complement and enhance the color scheme and structural quality of these architectural materials.

Visual Character: Color

Color for Identity

A consistent color palette creates a WTC complex identity and gives a unified character to the entire site, including its exterior paths and open areas, commercial towers, interior underground concourses, and transit areas.

Color Coding

Color coding is used to categorize information and give it a hierarchy. If used with clarity and consistency, color can be an identification tool that helps group destinations, or areas and orient users to them. At the WTC site color should be used to help distinguish the functions of the different destinations: memorial, transit, cultural, office, retail and public open space.

Color for Placemaking

Color can also be used to give a sense of place in an environment. This use of color encourages visitors to enjoy their journey from point to point, and also functions as a landmarking device. At the WTC site this use of color can happen on architectural features, public art (monuments, sculptures and installations), interpretive signage and exhibits.

Typography is a basic design tool to help define the character of a graphic system and to create a sense of place and identity for any given space. It is also a critical component in determining the legibility of an information system. A distinctive typeface shall be developed.

An appropriate typeface should be created or selected based on the following criteria:

- Legibility and clarity
- Style
- Variety of weight and styles available
- How well the typefaces complement and coexist with existing identities and environments

Type size and stroke weight play key roles in the delivery of wayfinding information. To succeed at it, the designer should first identify optimum viewing distances for each sign type. Then, by combining various type sizes and weights, the designer should establish a hierarchy of information based on the needs of the users and the space.

All signs should follow the minimum Americans with Disabilities Act (ADA) requirements for cap heights and raised lettering. For example, a 3" minimum cap-height is required on overhead signs while 5/8" minimum cap-height is required on public wall-mounted signs.

9.5.5 Visual Character: Scale

Wayfinding elements should relate to their environment, being bold or modest when appropriate, without becoming a physical obstruction or distraction. Scale controls the legibility and visibility of sign messages while also determining the impact of signs as objects.

At the new WTC site, there will be opportunities for both large and small scale signs within the system. Choosing the right scale will depend on spatial, operational and aesthetic factors. For exterior identification, freestanding signs are possible in plazas or near building entrances with actual building entrance identification signs directly on the entrance portal. In open areas, freestanding signs should be located within a clearance radius of 3' to 5' to allow for up close reading of small text. The placement of such signs shall not impede pedestrian flow

The strength and durability of signs should be evident to the users, inspiring trust in them as objects and as reliable sources of information. The materials and applications chosen should be innovative, to reflect the significance and visionary spirit of the site, but within the limitation of cost, maintenance and sustainability. Signs should be made of durable materials that are well fabricated, assembled and installed.

In addition, the selection of materials should support the design choices of the system in the following categories:

- Color palette and color stability
- Visual impact
- Character
- Visibility and clarity
- Sustainability

New signage materials and applications (such as titanium, resins, LED, LCD and fiber optics) are constantly being developed for construction. The choice of materials for signage should reflect the contemporary and progressive spirit of the WTC development.

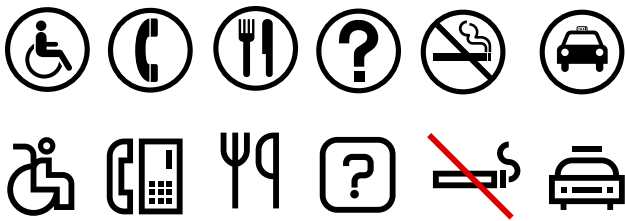
9.5.7**Languages**

As the international language of business and science and the standard language used at transit facilities in New York City and around the USA, English should be the primary language used on signs at the WTC site. In terms of scale and legibility, it would be counterproductive to include multi-lingual messages on all wayfinding signage when the use of symbols can relay the information effectively. Other languages could be featured on interpretive and information signs, but should be decided on a customized basis.

Americans With Disabilities Act (ADA)

ADA requires Braille and raised lettering on wall mounted interior signs which is achieved through various fabrication technologies. In addition, other communication methods such as sound, color codes and visual displays address the special needs of visitors with different disabilities.

Symbols are the universal language that convey information quickly and efficiently. At an international destination like the WTC site, symbols can be the best method for international visual communication. A symbol family should be made to complement typographic styles, weights, colors and forms and to ensure consistency and clarity. Guidelines should be created for the application of symbols on each of the sign family's types.



9.5.9 Naming

Well considered naming can make the difference between a user-friendly and welcoming place, or a confusing maze with indistinguishable destinations. The opportunity exists to get the naming and nomenclature right, from the beginning, and for all of the pieces to fit together into the larger whole.

Naming Components

Some names have been well considered: September 11th Place, Wedge of Light Plaza, Liberty Park. Other place names designating levels, entrances, retail and commercial towers should be considered within the place as a whole and contribute to its cultural and historic significance as well as its context within the city, and may change.

These names will ultimately appear on signage and ideally should support a developed wayfinding logic of locating destinations within the site, both horizontally and vertically in space. Careful thought should be given to the naming process rather than simply adopting a working name from the design and planning documents.

Both artificial and natural light will play a powerful role in wayfinding and landmarking at the WTC site. By specifically illuminating architectural elements or consequently not illuminating them, lighting can literally tell the public where to look. In addition to giving us the ability to see, lighting can also play a theatrical role and create a mood. Although it may seem subtle, lighting is a dynamic medium for finding, understanding and creating meaningful spaces.

Lighting as Wayfinding

Lighting can become an instinctual landmarking and wayfinding tool because of the human tendency to gravitate towards light. When traveling vertically from underground, visitors can follow daylight to street level exits. Ample light can create a sense of security and therefore, pull people away from traveling through darker, non-public areas.

Consistent sign visibility is important throughout the WTC site. The amount of ambient natural or artificial light in a particular location will determine if signs need exclusive illumination. This can be achieved through internal illumination where the light source is housed within the sign, or a nearby focal light source incorporated into the architecture. Fluorescent, incandescent, fiber optic, LED, and shielded neon are all potential options for lighting signage. Their application depends on many other design and material decisions. In addition to its visual impact, maintenance, longevity, durability, cost and energy consumption must be considered when exploring various lighting options

9.5.11

Existing Identities

Logos and brands are abundant in and around the WTC site. It is their primary function to identify existing services and vendors, allowing quick recognition as transportation, business, retail and cultural amenities.

The examples below illustrate and compare the wide variety of existing services and organizations and their respective logotypes at the WTC site, and around Lower Manhattan. Because they contain multiple colors and complex shapes, these logos should be used minimally on overhead directional signage where legibility is of utmost importance. They can be used on orientation directories and identification signs where appropriate. Specific logo and branding guidelines should be established with the signage design.

Port Authority



MTA



Battery Park City



New York Waterways



Other Area Logos



Signage should take advantage of the ever evolving technology and information delivery systems. Today, with new technologies, signs can be informative and constantly updated for delivering a variety of messages and information as needed by users. The particular media (or content) for these kinds of signs includes advertising, news and transit information.

Dynamic signs can be changed manually or electronically by a timed device, or a triggered reaction to an event- such as the arrival of a train. With new display technologies (such as LCD and plasma) becoming more integral to sign systems, bulky CRT tubes or projected images are no longer relied upon. Thinner, more colorful and flexible materials are being developed to change the shape and information contained in signage. It is not unusual for new technologies to have less than a 10 year life span before they become outdated or even obsolete. Therefore, constant update and exploration of new technologies is a must.

There are various standardized systems that deliver up to the minute travel, transportation and weather information from various sources.

Types of Technologies in Signage

- Wireless devices, WiFi (wireless fidelity) networks, GPS, PDA and other infrared devices
- Integrated information systems, that synchronize and share data amongst networks such as transportation, weather and travel information
- New technologies for changeable graphics, LCD, plasma displays
- New and rediscovered or repurposed materials: metals, resins, LED, fiber optics, flexible displays

9.5.13

A Sustainable Signage Program (Maintenance, Changeability, Etc.)

The sign system at the WTC site will need to be flexible for future expansion since the implementation of the sign system may happen over the course of several years. Durable materials and fabrication of the sign system will ensure easy long-term maintenance and reduce the possibility of damage and vandalism in exposed locations. When designing the sign system, the following issues should be considered:

- A modular or kit-of-parts design which is efficient in production and flexible for future expansion and updating
- Locations in places that minimize maintenance and replacement
- Vandal and tamper resistant
- Affordable materials and repairs