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**TRANSMITTAL**

**To:** Circulation  
**From:** Assistant Commissioner David Kelly  
New York City Police Department Counterterrorism Bureau  
**Subject:** Final Scope of Analyses for an Environmental Impact Statement  
For the World Trade Center Campus Security Plan  
CEQR No. 12NYP001M  
**Date:** April 1, 2013

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Enclosed please find a copy of the Final Scope of Analyses for an Environmental Impact Statement for the proposed World Trade Center Campus Security Plan in Manhattan Community District 1.

Pursuant to Section 5-07(b) of the Rules of Procedure for City Environmental Quality Review (CEQR), a Public Scoping Meeting for the project was held on Wednesday March 14, 2012. The purpose of the scoping hearing was to provide the public with the opportunity to comment on the Scope of Analyses proposed to be included in the Draft Environmental Impact Statement (DEIS) for the above referenced project. Comments were accepted at the Public Scoping, and written comments on the scope were accepted up to 10 days after the hearing. The Final Scope incorporates those comments and is revised in response to the comments, as applicable.

Any member of the public may obtain a copy of the Scoping Document for the project online at the following web address:

[http://www.nyc.gov/html/nypd/html/crime\\_prevention/counterterrorism.shtml](http://www.nyc.gov/html/nypd/html/crime_prevention/counterterrorism.shtml)

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# **WORLD TRADE CENTER CAMPUS SECURITY PLAN**

## **FINAL SCOPE OF WORK FOR THE ENVIRONMENTAL IMPACT STATEMENT**

**CEQR No. 12NYP001M**

**Lead Agency:  
NYC Police Department**

**Prepared by:  
Philip Habib & Associates  
AKRF, Inc.  
the LIRO Group**

**April 1, 2013**



# WORLD TRADE CENTER CAMPUS SECURITY PLAN

**FINAL**

## SCOPE OF WORK FOR AN ENVIRONMENTAL IMPACT STATEMENT

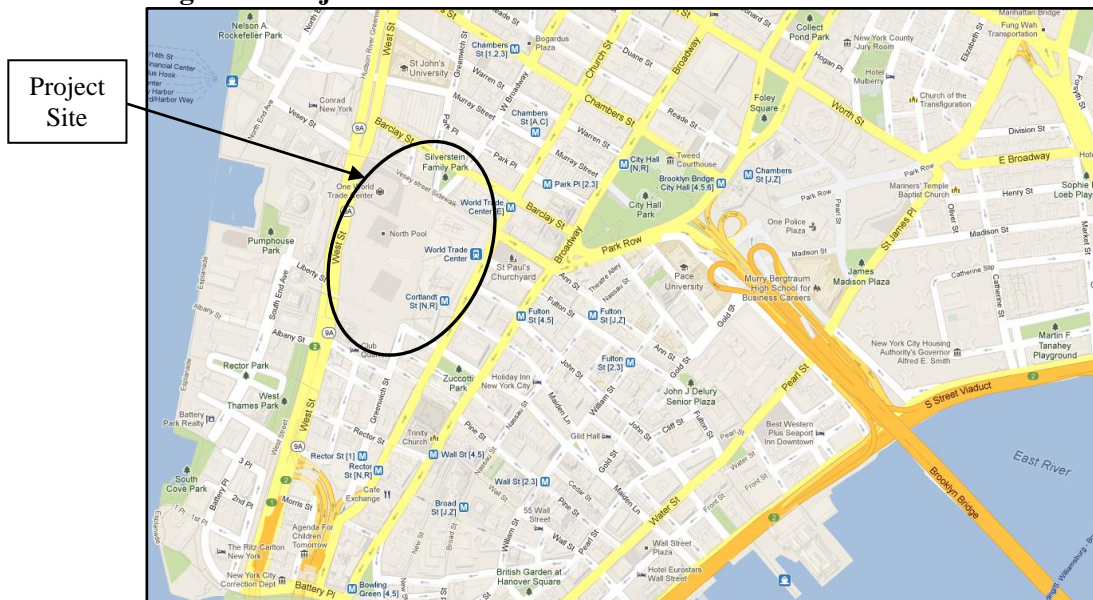
CEQR NO. 12NYP001M

**April 1, 2013**

### A. INTRODUCTION

This final scope of work outlines the technical areas to be analyzed in the preparation of an Environmental Impact Statement (EIS) for the World Trade Center (WTC) Campus Security Plan project. The New York City Police Department (NYPD) proposes to implement a Campus Security Plan for the 16-acre WTC Campus in Manhattan Community District 1 (the “Proposed Project”) in collaboration with other New York City agencies, the Port Authority of New York and New Jersey (PANYNJ) and other WTC stakeholders. Implementation of the Proposed Project is the “Proposed Action.” **Figure 1** shows the site location in Lower Manhattan.

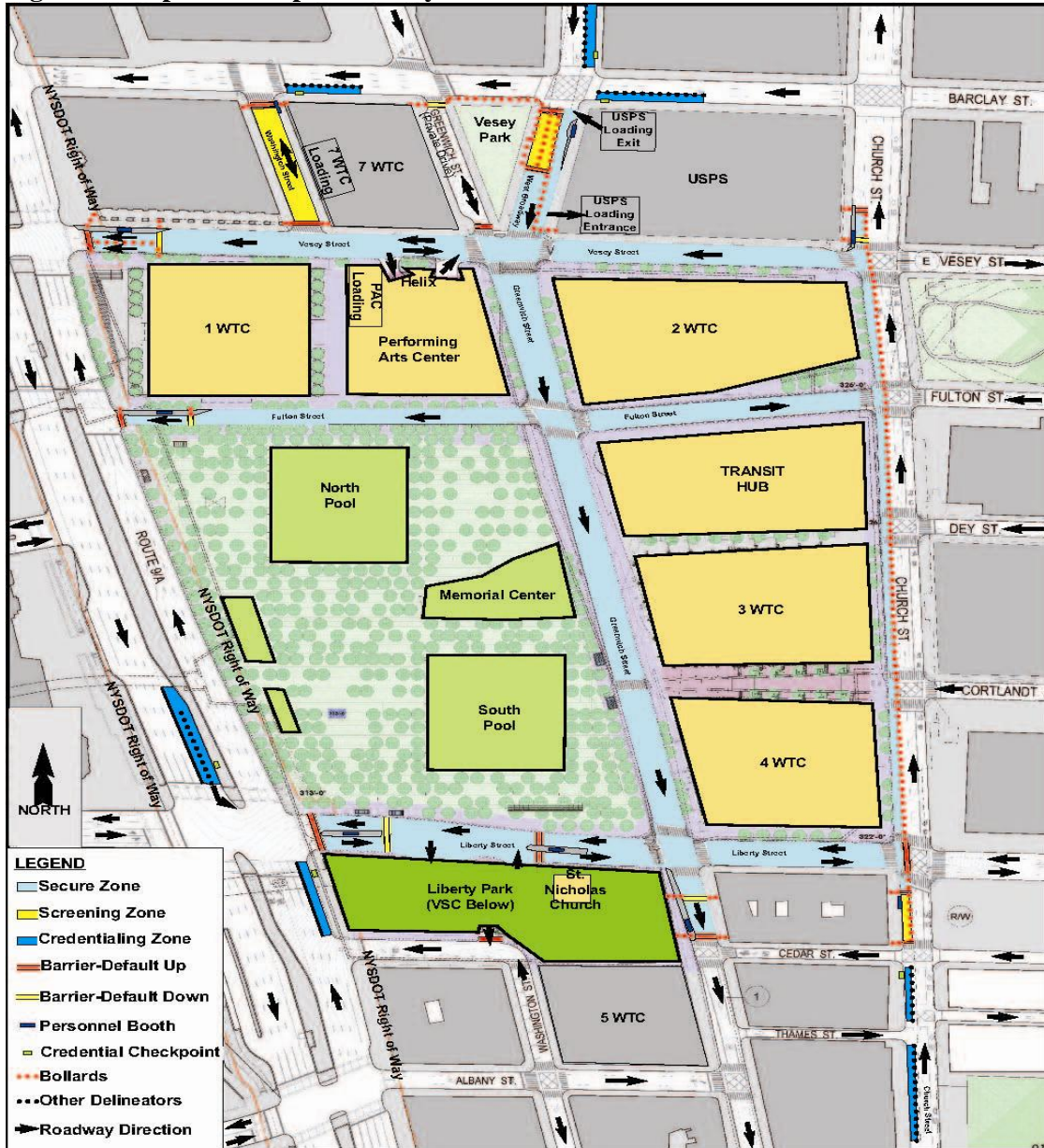
**Figure 1: Project Site Location**



As shown in **Figure 2**, the Campus Security Plan will create a comprehensive vehicle security perimeter for the WTC Campus (the “Campus Security Plan”) to protect against vehicle-borne explosive devices while ensuring an open environment that is hospitable to remembrance, culture, and commerce. The Campus Security Plan bars unscreened vehicles from entering the WTC Campus and certain areas at the perimeter of the Site and creates increased stand-off distances to reduce the risk of catastrophic damage to persons and property. A vehicle seeking to enter restricted areas would be subject to credentialing to determine whether entry is authorized and screening to ensure the vehicle does not contain dangerous

material. The creation of a Trusted Access Program<sup>1</sup> (TAP), in which WTC office tenants with parking privileges on site, residents and owners of businesses located in non-WTC buildings within the secure zone (Liberty Street between Greenwich Street and Trinity Place), for-hire vehicle operators, and delivery vehicle operators could enroll, is expected to facilitate entry for those vehicles with destinations within the WTC Campus.

Figure 2: Proposed Campus Security Plan



Note: Image is schematic and conceptual.  
Source: NYPD

The Vehicular Security Center (VSC) planned in conjunction with the WTC development controls access to the underground traffic network that serves the entire WTC Campus, including the loading docks for each building and parking areas. The parking garage will not allow general public parking; rather, the parking garage will be restricted to use by tenants. All vehicles entering the VSC, including tenants that

<sup>1</sup> PANYNJ is currently developing the TAP program.

park on site, tour buses and delivery vehicles will be processed and screened at the VSC. PANYNJ will operate and be responsible for screening vehicles entering the VSC. As it is anticipated that demand for on-site delivery, tour bus and private occupancy vehicle (POV) parking will be considerable, PANYNJ is developing a management strategy, including scheduling of tour buses and truck deliveries, to ensure orderly and efficient operations.

The NYPD and PANYNJ have coordinated to develop conceptual plans for the design and location of the proposed security infrastructure, which is discussed in more detail in Section C, below. The Project Area includes all streets, sidewalks and buildings that would be directly affected by the installation of the Site's security infrastructure. This area is generally bounded by Barclay, West, Albany and Church Streets. Four vehicular entry points are planned under the proposed Campus Security Plan at: Washington Street and Barclay Street; West Broadway and Barclay Street; Trinity Place/Church Street and Liberty Street; and Liberty Street and West Street/Route 9A. Exits from the secure zone are proposed at the following five locations: Church Street at Vesey Street; Vesey Street at West Street/Route 9A; Fulton Street at West Street/Route 9A; Liberty Street at West Street/Route 9A; and Greenwich Street at Cedar Street. The secure perimeter would consist of various types of vehicle interdiction devices, which would include static barriers (such as bollards) and operable barriers to allow vehicle access, all under NYPD control.

The Proposed Action also includes the reconfiguration of Church Street from Cedar Street north to Vesey Street to create a northbound lane for screened vehicles within the security zone as well as an exit area north of Vesey Street. This secure lane would be created by constructing a four-foot-wide raised median on Church Street. An approximately 11-foot-wide inner secure lane would provide additional stand-off distance between the planned WTC buildings and the general traffic flow on Church Street. Three lanes of northbound Church Street traffic, having an approximate total width of 33 feet, would remain outside the secure zone.

## **B. REQUIRED APPROVALS AND REVIEW PROCEDURES**

As described above, the WTC Campus Security Plan was developed in response to the continued security concerns at the WTC site. The Proposed Action bars unscreened vehicles from entering the WTC Campus and certain areas at the perimeter of the Site and creates increased stand-off distances between unscreened vehicles and WTC buildings. A vehicle seeking to enter restricted areas would be subject to credentialing to determine whether entry is authorized and screening to ensure that the vehicle does not contain dangerous material. As indicated above, the proposed security measures are intended to safeguard the WTC Campus while allowing access for screened vehicles.

### **Funding**

The WTC Campus Security Plan is a direct undertaking by the NYPD and would be paid for, at least in part, with New York City funds. Therefore, the Proposed Action is subject to environmental review pursuant to the New York State Environmental Quality Review Act (SEQRA) and the City Environmental Quality Review (CEQR) process. The Proposed Action is subject to review under CEQR because it has the potential to result in adverse environmental impacts and the NYPD will be the lead agency.

The EIS will include review and analysis of all relevant impact categories identified in the *CEQR Technical Manual*. The EIS will contain a description and analysis of the Proposed Action and its environmental setting; the environmental impacts of the Proposed Action, including its short- and long-term effects, and typical associated environmental effects; identification of any significant adverse environmental effects that can be avoided through incorporation of corrective measures; a discussion of alternatives to the Proposed Action; the identification of any irreversible and irretrievable commitments



of resources that would be involved in the Proposed Action should it be implemented; and a description of any necessary mitigation measures proposed to minimize significant adverse environmental impacts.

### **Agency Coordination**

The Proposed Action may require or involve, among others, the following agency notifications, actions, permits and/or approvals or expertise:

#### ***Federal***

- Department of Homeland Security/Federal Emergency Management Agency– possible funding for all or a portion of the proposed Campus Security Plan
- Advisory Council on Historic Preservation (ACHP)
- Federal Highway Administration (FHWA)
- Federal Transit Administration (FTA)

#### ***Bi-State***

- Port Authority of New York and New Jersey – possible plan funding and implementation

#### ***State***

- New York State Department of State (NYSDOS)
- New York State Historic Preservation Office (SHPO)
- New York State Department of Transportation (SDOT)
- New York State Metropolitan Transportation Authority (MTA)

#### ***New York City***

- New York City Mayor’s Office of Environmental Coordination
- New York City Department of Transportation (NYCDOT) – review of proposed geometric changes, street direction changes, and security elements, as well as construction permits
- New York City Planning Commission acting as the New York City Coastal Commission – Coastal Zone Consistency review
- New York City Department of Environmental Protection

### **City Environmental Quality Review (CEQR) and Scoping**

The Proposed Action requires environmental review under CEQR procedures. An Environmental Assessment Statement (EAS) was completed on February 8, 2012. The NYPD, acting as lead agency, has determined that the Proposed Action requires the preparation of an EIS.

The CEQR scoping process is intended to focus the EIS on those issues that are most pertinent to the Proposed Action. The process at the same time allows other agencies and the public a voice in framing the scope of the EIS. This scoping document sets forth the analyses and methodologies which will be utilized to prepare the EIS. A Draft Scope of Work for the EIS for the Proposed Action was issued on February 2, 2012, and a public scoping hearing on the Proposed Action was held on Wednesday, March 14, 2012 from 4:00 PM to 8:00 PM at the New York City Department of City Planning in Spector Hall. City Planning is located at 22 Reade Street, New York, NY 10007. Comments received during the draft

scope's public hearing, and written comments received up to 10 days [until Monday, March 26, 2012] after the hearing have been considered and will be incorporated as appropriate into the EIS. The final scope of work will be used as a framework for preparing the Draft EIS (DEIS) for the Proposed Action.

Once the lead agency is satisfied that the DEIS is complete, the document will be made available for public review and comment. A public hearing will be held on the DEIS to afford all interested parties the opportunity to submit oral and written comments. The record will remain open for a minimum of 10 days after the public hearing to allow additional written comments on the DEIS. At the close of the public review period, a Final EIS (FEIS) will be prepared that will incorporate and respond to all substantive comments made on the DEIS, along with any revisions to the technical analysis necessary to respond to those comments. The FEIS will then be used by the decision makers to evaluate CEQR findings, which address project impacts and proposed mitigation measures, before deciding whether and how to proceed with the discretionary actions.

## C. DESCRIPTION OF PROPOSED ACTION

### Background and Existing Conditions

The Lower Manhattan Development Corporation (LMDC) issued a Master Plan for the redevelopment of the WTC site (LMDC Master Plan) in September 2003 which included the National September 11<sup>th</sup> Memorial, the PATH HUB, the Performing Arts Center (PAC), and commercial office towers. As the Lead Agency and responsible entity for the U.S. Department of Housing and Urban Development (HUD) and in cooperation with the PANYNJ, the LMDC prepared a Generic Environmental Impact Statement (GEIS) under the National Environmental Policy Act (NEPA), SEQRA, and CEQR to examine a range of potential impacts stemming from the LMDC Master Plan. A Record of Decision and Findings Statement was adopted by LMDC in June, 2004.

As shown in Table 1, the development program contemplated under the Master Plan provided for the construction of a Memorial and Museum Pavilion, up to 10 million square feet of office space, up to 1 million square feet of retail space, a hotel with up to 800 rooms and up to 150,000 square feet of conference space, a 2,200-seat performance space, up to 240,000 square feet of cultural facilities, up to 290,000 square feet dedicated to the Memorial Center, up to 30,000 square feet of restaurant/café uses, and a 1,200- to 1,400-car underground parking garage. Also present on the project site was the permanent WTC terminal for PATH trains to New Jersey. Additionally, a VSC accessed from Liberty Street was included as part of the program for screening of all vehicles that sought access into the below grade parking garage loading areas.

The current program for the WTC Campus includes the National September 11th Memorial and Museum, approximately 8.5 million square feet of office space, approximately 441,000 square feet of retail space, no hotel rooms or conference space, a 1,000-seat performance space, an approximately 290,000 square-foot Memorial Center, approximately 14,000 square feet of restaurant/café uses, and an underground parking garage consisting of up to approximately 500 parking spaces for autos and 67 bus parking spaces. The WTC terminal for PATH trains to New Jersey is present in both versions of the plan. Additionally, the VSC would remain as part of the program for screening of all vehicles that seek access into the below grade parking garage loading areas.



**Table 1**

**Comparison of Current WTC Development Program with 2004 FGEIS**

| Project Component                                    | 2004 FGEIS Program (2015 Build Year) | Current Estimated Program | Net Change            |
|--|--------------------------------------|---------------------------|-----------------------|
| Office   | 10 million sf                        | 8.5 million sf            | -1.5 million sf       |
| Retail   | 1 million sf                         | 441,000 sf                | -559,000 sf           |
| Hotel/Conference Space                               | 800 rooms/150,000 sf                 | 0 rooms/0 sf              | -800 rooms/150,000 sf |
| Memorial Center                                      | 290,000 sf                           | 290,000 sf                | 0                     |
| Performing Arts Center                               | 2,200 seats                          | 1,000 seats               | -1,200 seats          |
| Cultural Facilities                                  | 240,000 sf                           | 0 sf                      | -240,000 sf           |
| <u>Restaurant/Café Uses</u>                          | <u>30,000 sf</u>                     | <u>14,000 sf</u>          | <u>-16,000 sf</u>     |
| Parking Spaces                                       | 1,200- to 1,400-spaces               | +/- 500                   | -700 to -900 spaces   |
| <b>Notes:</b><br>Memorial included in both programs. |                                      |                           |                       |

#### *LMDC Master Plan and Envisioned Vehicular Circulation*

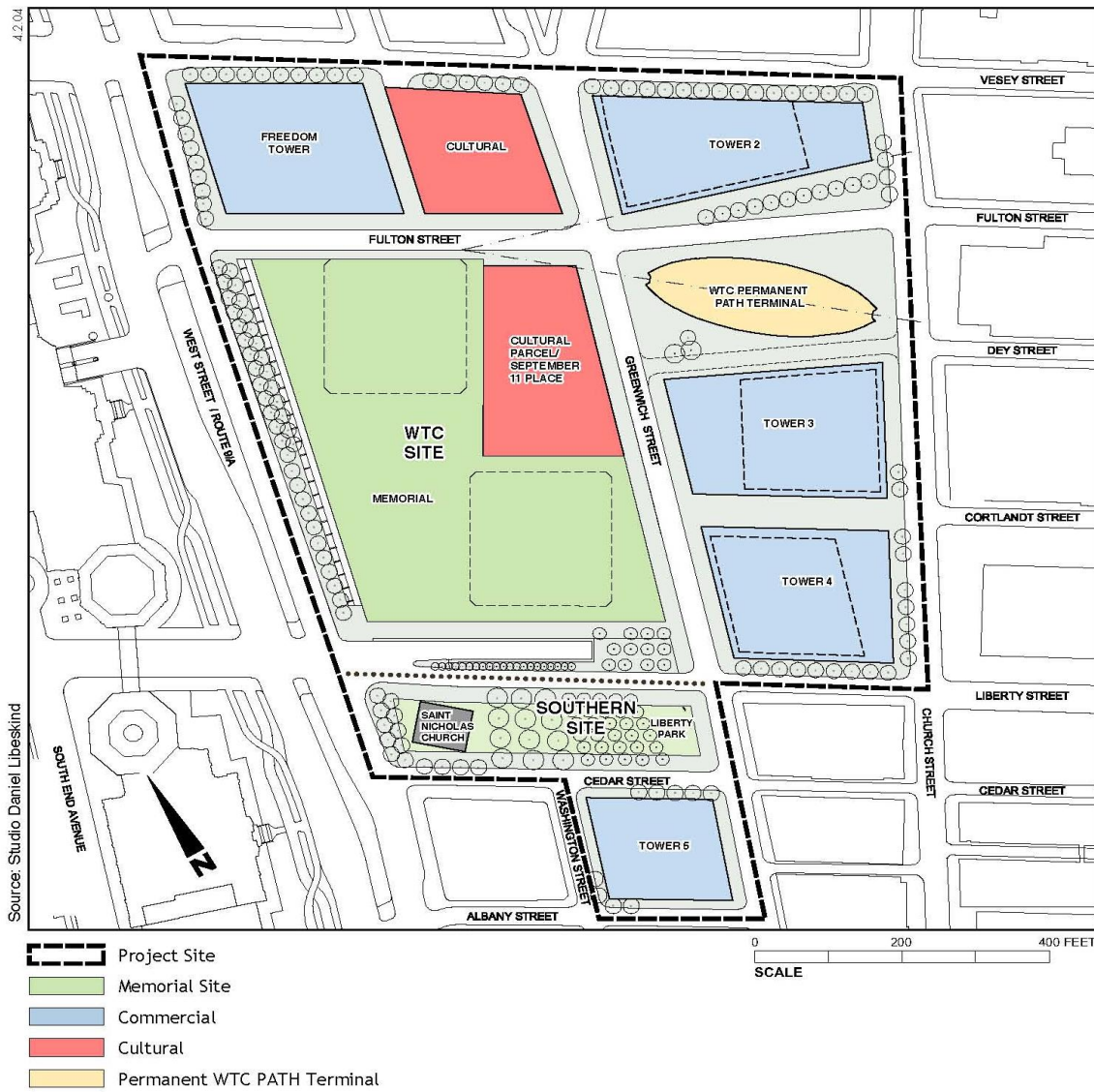
The proposed street configuration under the 2004 LMDC Master Plan included extending Fulton Street east-west through the site and Greenwich Street north-south through the site. Within the site, Fulton Street would operate one-way westbound and Greenwich Street would operate one-way southbound, and it was stated in the 2004 FGEIS that both streets might be restricted or closed to traffic from time to time. The area to the south of the WTC site would be reconfigured to open Cedar Street between Greenwich and Washington Streets and close Washington Street between Liberty and Cedar Streets (see Figure 3). Cedar Street would operate one-way westbound, with all traffic northbound on Washington Street turning left onto Cedar Street to West Street/Route 9A.

As shown in **Figure 3**, the extensions of Fulton and Greenwich Streets would divide the project site into four quadrants. It was planned that the Memorial, Museum Pavilion and cultural buildings would occupy the southwest quadrant, while the tallest of five proposed towers (1 WTC) and cultural space would occupy the northwest quadrant. Three additional towers and the PATH Terminal would occupy the two eastern quadrants while the fifth tower would be located at the south end of the site between Albany, Washington, Cedar and Greenwich Streets.

Under the 2004 LMDC Master Plan, it was assumed that tour buses would stop to discharge and pick up passengers along the west side of Greenwich Street, and that these buses would be parked in a below-grade parking area, which would be accessed at the VSC via a ramp on Liberty Street east of West Street/Route 9A. Trucks en route to below-grade service levels on the WTC site were also assumed to enter at the VSC via this ramp, while autos belonging to building tenants would be allowed to enter and exit the 1,200-to-1,400-space below-grade parking areas via a ramp on the south side of Vesey Street at Washington Street. All vehicle types could exit the on-site service and parking areas via the Liberty Street or Vesey Street ramps, or via an exit ramp onto the northbound West Street/Route 9A median.

Subsequent planning actions on the site have resulted in updates to the building program and site plan. The most relevant and notable change for the purposes of the Proposed Action is the evolution of the plans for the VSC and on-site circulation. The amended plan relocated the entrance ramp to the VSC from the north side of Liberty Street to the south side of Liberty Street. Operation of Liberty Street was also modified from the originally proposed one-way eastbound flow to two-way operation between West Street/Route 9A and Church Street.

Figure 3: WTC Site Plan



Source: LMDC.

Available online:

<http://www.renewnyc.com/content/pdfs/eis/04-12-2004/vol1/01%20Project%20Description.pdf>

### Current World Trade Center Site Development Program

As described above, the development program for the WTC site has evolved since the 2004 FGEIS was released. Numerous factors, including the financing of the entire building program as described in the 2004 FGEIS, the current conditions of the financial market, and the process of finding tenants for the proposed office and retail space, have resulted in modifications to the building program that was originally considered. As shown in **Table 1**, the incremental difference between the 2004 FGEIS program and the building program that is currently being considered is a reduction of over 2 million square feet. As indicated in the table above, the hotel that was originally considered for the site has been eliminated from the building program. Additionally, the capacity of the PAC has been reduced from 2,200 seats under the plan analyzed in the 2004 FGEIS to approximately 1,000 seats. Other than the PAC and the memorial, no additional square footage is currently being planned for cultural uses.

Operational controls such as bus reservations and the scheduling of deliveries are expected to be implemented by PANYNJ in conjunction with the VSC under the No-Action condition. Bus loading could take place adjacent to the National September 11th Memorial and Museum along the east side of West Street/Route 9A, along the north side of Liberty Street, or along the west side of Greenwich Street.

Construction continues throughout the WTC site and in the immediate vicinity of the Site. Construction of 7 World Trade Center (7 WTC) has been completed and the building is now fully leased. The National September 11<sup>th</sup> Memorial Plaza opened to the public in September 2011. The National September 11<sup>th</sup> Museum is expected to open in early 2013. Towers 1 and 4 are expected to be completed in 2013, with occupancy anticipated in 2014. At this time, no completion date has been established for Towers 2 and 3. Tower 2 is expected to be constructed to grade in 2012, with no current plans to continue the above-grade construction. Tower 3 is expected to be completed to the podium level in 2015 and would then be occupied by retail tenants. The PAC is expected to be completed and operational in 2019, and the PATH HUB is expected to be opened for use in 2015. For the purposes of this EIS, it is assumed that all on-site building programs (along with required infrastructure, including streets) will be completed and fully occupied by 2019.

At this time the only building program proposed for 5 WTC is the 57-story, approximately 1.6-million-square-foot office tower that was contemplated in the 2004 *World Trade Center Memorial and Redevelopment Plan FGEIS* with anticipated completion by 2015. Due to the current economic climate, however, it is unlikely that the PANYNJ will pursue development of the 5 WTC site in the near term. With the ongoing construction of 1 WTC and 4 WTC and the recent completion of 7 WTC, demand for new Class A office space is being met in Lower Manhattan at present. This EIS conservatively assumes that 2 WTC and 3 WTC would be fully constructed and occupied by 2019. However, the full build-out of 2 WTC and 3 WTC is predicated on the ability to viably market the office space. Therefore, it is unlikely that the demand exists in the current market for construction of the additional 1.6-million square feet of office space that would be made available if 5 WTC were developed as once contemplated.

Any other proposals for development of 5 WTC would be purely speculative at this juncture as no developer has been selected and no alternative plans have been developed for the site at this time. As such, it is projected that 5 WTC would not be developed by 2019. With so many details surrounding the 5 WTC site unresolved, extending the analysis year beyond 2019 would not be useful because there is no information available that would provide reasonable guidance on when construction of the site could be completed. Additionally, the 5 WTC site is located outside of the security zone as proposed. For the reasons outlined, therefore, 5 WTC is not included in the analysis.

Vehicular circulation studied under the 2004 FGEIS assumed free flow traffic throughout the entire WTC site. However, it should be noted that the 2004 *World Trade Center Memorial and Redevelopment Plan FGEIS* acknowledged a need for security measures such as vehicular screening to secure buildings at the WTC site. The potential need to periodically close street segments within the WTC site was also recognized in the 2004 FGEIS, which includes an assessment of the potential traffic effects of closing both Fulton Street and Greenwich Street through the site. The No-Action site plan and vehicle circulation system assumed for the analyses in this EIS reflect the most current version of the PANYNJ's master plan for the WTC (Version 10) and security measures associated with the 2005 redesign of 1WTC. Under these measures, both Vesey Street and Fulton Street would function as "managed streets" west of Greenwich Street, reflecting security engineering for 1 WTC that require that unscreened vehicles be prohibited from accessing the portions of these streets adjacent to the building. Implementation of managed street segments adjacent to 1 WTC is therefore reflected in the No-Action condition as restrictions on unscreened vehicles would still be needed to secure 1 WTC in the absence of the proposed Campus Security Plan.

As the specific means to manage these street segments were not identified by the PANYNJ, it was assumed that in the No-Action condition they would be managed through the installation of sally ports and retractable barriers, a common method for controlling access in similar situations (and one that would be employed more extensively at the WTC site under the Proposed Action). Each sally port would consist of a guard booth and equipment house controlling a set of two retractable barriers with sufficient space between them to accommodate one or more motor vehicles. In operation, the first barrier would be lowered to permit authorized vehicles to enter, and then raised to prevent entry by other vehicles. After completing a screening process, the second barrier would be lowered to allow vehicles within the sally port to exit. As shown in **Figure 4**, two sally ports would be located on Fulton Street, one at West Street/Route 9A and the second west of Greenwich Street. As it is anticipated that the west barrier on Fulton Street at West Street/Route 9A would be installed immediately adjacent to the West Street/Route 9A travel lanes, the crosswalk on Fulton Street would likely be located within the sally port.

Two sally ports would also be located on Vesey Street, one to the east of West Street/Route 9A (set back from the crosswalk) and a second west of Greenwich Street. An additional retractable barrier would be installed on the Washington Street approach to Vesey Street that would remain raised as a default condition, and lowered only as needed to permit entry by authorized vehicles. Additionally, it is anticipated that the segment of Greenwich Street between Barclay and Vesey Streets, which is a privately-controlled street pursuant to a December 5, 2007 reciprocal easement agreement between the City of New York, 7 WTC ownership, PANYNJ, and LMDC, would primarily serve as an access point to the adjacent 7 WTC as at present.

Traffic flow under future No-Action conditions would be as shown in **Figure 4** and as described below:

1. Washington Street from Barclay Street to Vesey Street would operate with two-way traffic flow to accommodate 7 WTC loading operations. Access control in the form of an operable barrier is proposed at the intersection with Vesey Street to prevent unscreened vehicular traffic from driving near 1 WTC. Use of this street is expected to remain primarily for loading activities related to 7 WTC and will also provide access into the site for screened vehicles headed to 1 WTC and the PAC.
2. Greenwich Street from Barclay Street to Vesey Street would operate with two-way traffic flow. As indicated above, this section of Greenwich Street is a privately-controlled street pursuant to a December 5, 2007 reciprocal easement agreement between the City of New York, 7 WTC ownership, PANYNJ, and LMDC. It would primarily serve as an access point to the adjacent 7 WTC as at present, primarily serving livery vehicles.
3. Greenwich Street from Vesey Street to Albany Street would operate with one-way southbound traffic flow. Tour bus loading and unloading may occur adjacent to the Memorial on the west side of Greenwich Street. No security controls are currently being considered for this section of Greenwich Street under No-Action conditions.
4. West Broadway south of Barclay Street would continue to operate with one-way southbound traffic flow. No security controls are currently being considered for this section of West Broadway under No-Action conditions.
5. Vesey Street from Church Street to Greenwich Street would accommodate one-way eastbound traffic flow and would operate with no security controls. Between Greenwich and Washington Streets, Vesey Street would operate as a two-way corridor. From Washington Street to West Street/Route 9A, Vesey Street would operate as a one-way westbound corridor for screened vehicles.<sup>2</sup> The PANYNJ

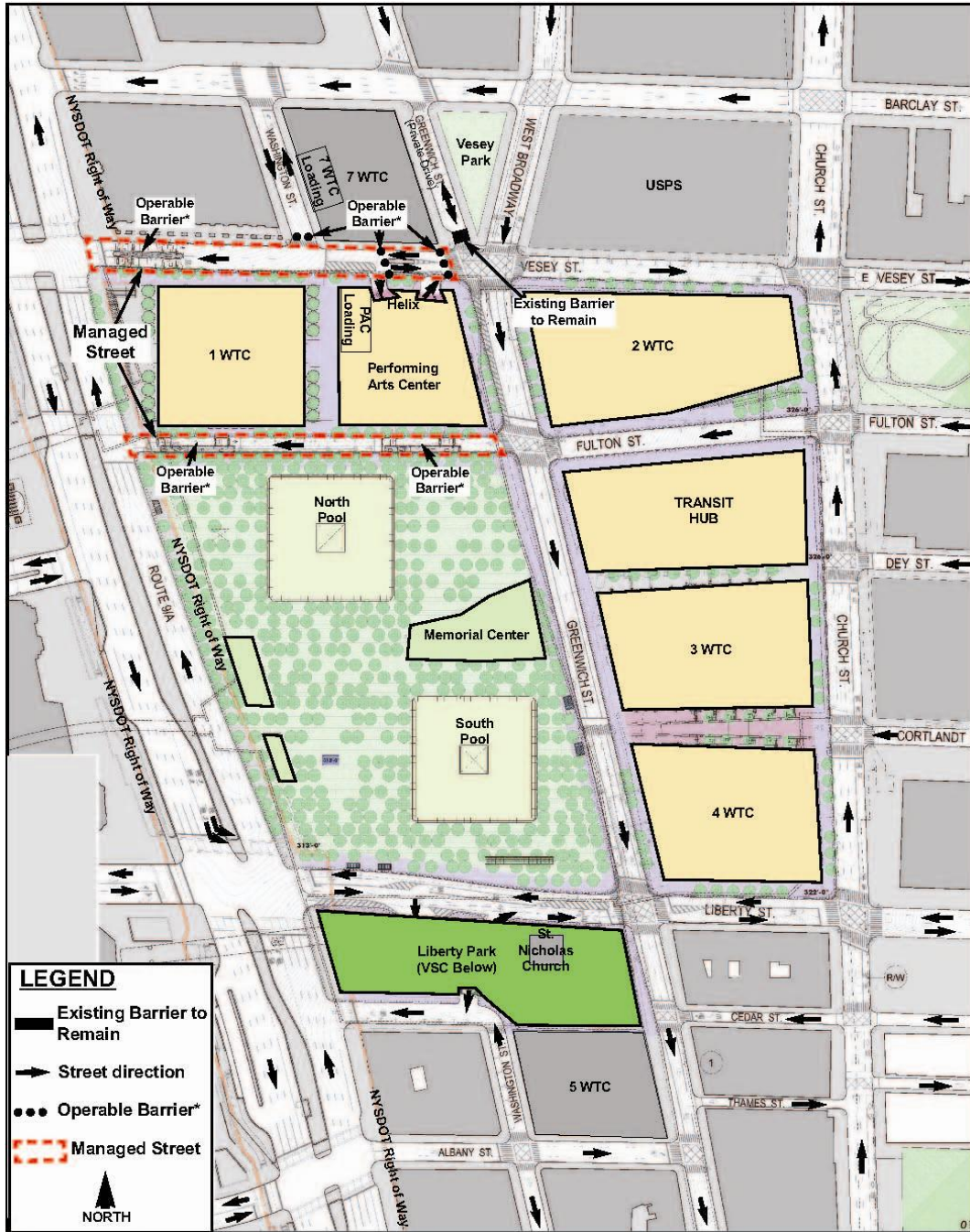
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<sup>2</sup> The No-Action site plan and vehicle circulation system assumed for the analyses in this EIS reflect the PANYNJ's master plan Version 10 for the WTC site and incorporate limited security measures identified by the PANYNJ and the NYPD in 2005 as the design of 1 WTC was finalized. Under these measures, both Vesey Street and Fulton Street would function as "managed streets" west of Greenwich Street reflecting security engineering for 1 WTC that identified a need to prohibit unscreened vehicles from accessing the portions of these streets adjacent to the building. Implementation of managed street segments adjacent to 1 WTC is



Master Plan proposes to introduce a secure zone with controlled vehicle access along Vesey Street (Greenwich to West Streets) and Washington Street (at Vesey Street).

Figure 4: No-Action Site Plan



Note: Image is schematic and conceptual.  
 \*Likely location of operable barriers needed to secure 1 WTC.  
 Source: NYPD

6. Fulton Street within the WTC Site would operate as a one-way westbound street. From Church Street to Greenwich Street, the traffic flow would operate without any security controls. West of Greenwich

therefore reflected in the No-Action condition as restrictions on unscreened vehicles would still be needed to secure 1 WTC in the absence of the proposed Campus Security Plan.

Street, the PANYNJ Master Plan proposes to introduce a secure zone with controlled vehicle access.

7. Liberty Street from Church Street to West Street/Route 9A would accommodate two-way traffic flow. Primary vehicular access to and from the VSC would be available on the south side of Liberty Street between West Street/Route 9A and Greenwich Street.

### **Purpose and Need for the Proposed Action**

On February 26, 1993 an explosive device was detonated in the underground public parking garage beneath the WTC. The attack resulted in several deaths and more than 1,000 injuries, along with hundreds of millions of dollars of damage. The PANYNJ subsequently implemented an extensive upgrade plan, with a focus on life safety and security. Less than a decade later, on September 11, 2001, the WTC was again attacked, resulting in the loss of nearly 2,800 lives and the destruction of the entire WTC complex.

Now that the WTC site is being rebuilt, new consideration is being given to increase on-site security. The proposed Campus Security Plan would protect against vehicle-borne explosive devices while ensuring an open environment that is hospitable to remembrance, culture, and commerce. The Campus Security Plan bars unscreened vehicles from entering the Site and certain areas at the perimeter of the site and increases stand-off distances to protect against the risk of catastrophic damage to persons and property. A vehicle seeking to enter restricted areas would be subject to credentialing to determine whether entry is authorized and screening to ensure that the vehicle does not contain dangerous material. As indicated above, the proposed security measures are intended to safeguard the WTC Campus while allowing access for screened vehicles. The creation of a TAP, in which tenants, car services, delivery vehicles, and possibly taxis could enroll, is envisioned to expedite vehicle entry.

The Proposed Action was developed after careful consideration of the LMDC Master Plan and the subsequent design of the commercial towers planned for the WTC site.

### **The Proposed Action**

The Proposed Action would control vehicular access to and traffic movement within the WTC Campus. This would be accomplished through the creation of a secure perimeter around the WTC Campus that is intended to prevent unscreened vehicles from driving within close proximity to the National September 11th Memorial plaza and the museum building, commercial towers, and transportation facilities located within the WTC Campus. Therefore, selected portions of streets in and around the WTC Campus are proposed to be restricted access streets that would be closed to general vehicular traffic. No restrictions or controls would be implemented on pedestrians as a result of the Proposed Action. Implementation of the Proposed Action would involve installation and utilization of security infrastructure in the immediate vicinity of the WTC Campus. Vehicles destined for the WTC site seeking entry onto these streets would be subject to credentialing to determine whether entry to the WTC Campus should be permitted, and then screening to confirm that these vehicles pose no threat. The Proposed Action would not alter the building program that is currently planned for the site. Instead, the Proposed Action would manage vehicular traffic to and through the site.

**Figure 2** shows a conceptual plan developed by the NYPD for the design and location of the security infrastructure that would be installed under the Proposed Action. The Project Area includes all streets and sidewalks that would be directly affected by the installation of this security infrastructure. As shown in **Figure 2**, the Project Area is generally bounded by Barclay Street and Park Place on the north, Albany Street on the south, Trinity Place/Church Street on the east and West Street/Route 9A on the west. The perimeter of the WTC Campus would be secured through the installation of various types of vehicle interdiction devices under the control of the NYPD. These could include static and operable barriers and traffic lane delineators. Screening of all vehicles entering the WTC Campus would utilize both

mechanical and manual processes, and would be facilitated through the use of sally ports which, as described previously, would consist of a screening booth controlling a set of two operable barriers with sufficient space between them to accommodate a motor vehicle undergoing screening. An additional booth would be installed at each credentialing location. It is anticipated that the sizes and locations of the booths and any ancillary structures will be refined as the project design advances.

The Proposed Action would modify the vehicular access and traffic flow patterns considered in the 2004 WTC Memorial and Redevelopment Plan FGEIS. As shown in **Figure 2**, a secure zone is proposed to provide limited vehicular access on the following streets:

- Greenwich Street from Vesey Street to Cedar Street;
- West Broadway from Barclay Street to Vesey Street;
- Washington Street from Barclay Street to Vesey Street;
- Vesey Street from Church Street to West Street/Route 9A;
- Fulton Street from Church Street to West Street/Route 9A; and
- Liberty Street from Trinity Place/Church Street to West Street/Route 9A.

Additionally, the Trinity Place/Church Street corridor<sup>3</sup> would be divided by a raised median with static barriers from Cedar Street to just north of Vesey Street. It is anticipated that to the east of the median the street would remain open to general traffic with three northbound moving lanes, while one additional moving lane to the west of the median would be located within the security perimeter and would be accessible only to screened vehicles.

As indicated above, PANYNJ Master Plan Version 10.0 intends to create a secure zone around 1 WTC by securing and restricting access to Vesey Street and Fulton Street between Greenwich Street and West Street/Route 9A. As such, these street segments would be managed streets irrespective of the Proposed Action. Additionally, it is expected that Greenwich Street from Barclay Street to Vesey Street would be limited for use only by 7 WTC tenants in the No-Action condition (as outlined in a December 5, 2007 reciprocal easement agreement among the City of New York, 7 WTC ownership, PANYNJ and LMDC); therefore, this section of Greenwich Street would be a controlled access street irrespective of the Proposed Action.

All vehicles seeking access to the WTC Campus would be subject to screening and vehicle operators would be required to provide credentials prior to being granted access to the interior of the WTC site. Credentialing zones are proposed at the following locations (refer to **Figure 2**):

- On West Broadway between Barclay Street and Park Place;
- On Barclay Street in the southern-most lane at the westbound approach to West Broadway;
- On Barclay Street in the southern-most lane at the westbound approach to Washington Street;
- On Trinity Place/Church Street in the western-most lane at the northbound approach to Thames Street and Cedar Street;
- On West Street/Route 9A in the eastern-most lane at the northbound approach to Liberty Street; and
- On West Street/Route 9A in the two southbound left turn lanes at the southbound approach to Liberty Street.

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<sup>3</sup> Trinity Place becomes Church Street north of Liberty Street.



The proposed security sequence for entries consists of three zones: approach zones, credentialing and authorization zones, and screening zones. Approach areas would vary in size, detail and security elements installed depending on the anticipated vehicle volumes and the roadway geometry leading to the security station. It is expected that new signage would be installed to alert vehicles that they are approaching a secure zone and, where possible, to re-direct traffic that does not need to be credentialed.

TAP would allow for expedited vehicle entry into the secure zone. While specific operational details of the TAP program cannot be released for security purposes, a brief overview of the program is provided here. Enrollment in the TAP program would be open to:

- WTC tenants and operations personnel with parking privileges on site;
- For-hire vehicle operators;
- Delivery vehicle operators; and
- Residents and owners of businesses located in non-WTC buildings within the secure zone (on Liberty Street between Trinity Place and Greenwich Street).

Both drivers and vehicles would be enrolled in the TAP. TAP credentials would be checked as vehicles approach entry points to the WTC Campus, and authorized vehicles would then be admitted to a sally port for expedited security screening. Drivers and vehicles with business at the WTC site, but not enrolled in the TAP, would be permitted into the WTC Campus, however, these drivers and vehicles would be subject to more rigorous credentialing and screening. This arrangement would help to facilitate access for those who seek entry. Vehicles without the proper credentials would be denied entry per NYPD policy.

It is expected that when the security zone is first implemented, some vehicle operators without proper credentials may unknowingly attempt to enter the WTC Campus. However, after the program has been active for a short time there would likely be fewer attempts to enter the campus without proper credentials.

Screening would include the visual and physical inspection of vehicles. The physical design of screening areas would vary slightly, depending on the anticipated primary users of each specific screening zone. For example, screening areas that are expected to have high bus or delivery vehicle volumes would be sized to fit these vehicle types, with larger sally ports. Screening booths at each sally port would house barrier controls, data systems and other equipment. They will be designed to meet these operational requirements while having the smallest possible footprint to minimize potential pedestrian conflicts.

Screening procedures for individuals and vehicles enrolled in the TAP program would differ from screening procedures for non-TAP individuals and vehicles. Screening time for non-TAP vehicles would be longer than TAP screening as it is more extensive and requires additional manual and mechanical screening processes.

Exit-only security stations would manage all traffic exiting the WTC Campus. The dimensions of sally ports at exits would vary in size based on their location and the size of the primary vehicle type expected to use them.

The following describes the security infrastructure and traffic changes that would be implemented under the Proposed Action.

#### *TRINITY PLACE/CHURCH STREET*

The western-most lane at the Trinity Place approach to Liberty Street would be an entry-only sally port that would serve as the primary point of entry for tour buses en route to the National September 11th

Memorial and Museum. Only buses with reservations to park on-site would be granted access. All others would be turned away in the credentialing zone. This policy would be strictly enforced.

The proposed credentialing and screening locations would be used as flexibly as possible to allow operational decisions to be made in the field so that inbound vehicle traffic could be distributed efficiently to all entry points. For example, during the morning peak period and after the PM peak period, POVs and for-hire vehicles would use this entrance to access the WTC Campus as tour bus activity during these time periods is expected to be very low.

Vehicles would approach the Trinity Place/Church Street entrance from the south. Credentialing zones associated with this entrance would be delineated in a single lane along the west curb south of Cedar and Thames Streets at the approach to Liberty Street. A personnel booth is proposed to be located on the western sidewalk of Trinity Place/Church Street, just north of Thames Street near the front of the credentialing lane. Street signs would be placed on the road leading up to the credentialing zone to inform drivers of the upcoming secure zone as they approach the credentialing zone. Placement of the personnel booth along the sidewalk would narrow the pedestrian zone to approximately 12 feet.

Entry to the secure lane would be available from a screening zone located on Trinity Place at Cedar Street. The screening zone would consist of a single northbound lane that would be approximately 15 feet wide and approximately 55 feet long. Operable barriers would be located at the northern and southern ends of the sally port.

A personnel booth is proposed on the western sidewalk of Trinity Place adjacent to the sally port. Placement of the booth on the western side of Trinity Place would reduce the pedestrian space to just under 12 feet. Static barriers are proposed between the curb and the building wall on the western sidewalk adjacent to the personnel booth. Static barriers would be spaced four feet apart to allow adequate space for pedestrian flow, but also to serve as effective vehicle interdiction devices.

As shown in **Figure 2**, the Trinity Place/Church Street corridor would be divided by a raised median with fixed barriers (possibly bollards), from Cedar Street to just north of Vesey Street. A four-foot wide north-south median would separate the two sections of Trinity Place/Church Street. It is anticipated that to the east of the median the street would remain open to general traffic with three northbound moving lanes, while the one moving lane of approximately 11 feet to the west of the median would be located within the security perimeter and would be accessible only to screened vehicles as a circulating roadway. Additionally, this median will include an operable barrier across Liberty Street. This barrier would be used to provide emergency egress by fire trucks stationed at the Ten House within the campus.

A second sally port would be located on Church Street at the northern end of the WTC Campus, just north of Vesey Street. This sally port would serve as an egress point for all vehicle types exiting onto northbound Church Street from the secure lanes located within the WTC Campus. The exit would be comprised of a single 16-foot-wide lane with a 55-foot-long sally port. The western sidewalk at this location would be extended by a width of approximately eight feet six-inches and would extend approximately 125 feet to the north to accommodate a personnel booth to be staffed by NYPD. The sidewalk extension would allow for the entire width of the existing sidewalk to be maintained at approximately 16 feet wide. Static barriers are proposed between the curb and the U.S. Post Office building's streetwall on the western sidewalk adjacent to the personnel booth. Static barriers would be spaced four feet apart to allow adequate space for pedestrian flow, but also to serve as effective vehicle interdiction devices.

While pedestrian crosswalks in the vicinity of these security elements would be unimpeded by operable security elements, static barriers would be spaced at four-foot intervals to allow pedestrian flow through at all crossings. All operable security devices would be set back from crosswalks to maintain the

pedestrian zone. Within the Liberty Street intersection, operable barriers would replace the static barriers to allow emergency vehicle access when necessary.

#### WEST BROADWAY

Southbound West Broadway would function as an entrance to the WTC Campus for for-hire vehicles and POVs arriving from the north for southbound access into the site. While all vehicles with business in the WTC Campus would be granted access, vehicles registered in the TAP would have expedited entry, while non-TAP vehicles would have to undergo more rigorous credentialing and screening. All other vehicles would be turned away if proper credentials are not provided in the credentialing zone. This policy would be strictly enforced.

Vehicles would approach the West Broadway entrance from the north and the east. The credentialing/authorization zones associated with this entrance would be delineated in two locations: a single lane along the east curb on West Broadway north of Barclay Street and a single lane on the southern curb of Barclay Street at the approach to West Broadway. One personnel booth associated with credentialing/authorization would be located on the eastern sidewalk of West Broadway, just north of Barclay Street; the second personnel booth associated with credentialing/authorization would be located on the southern sidewalk of Barclay Street, just east of West Broadway. Street signs would be placed on the road leading up to the credentialing zones to inform drivers of the upcoming secure zone as they approach the credentialing zones. Placement of the credentialing/authorization booths at these two sidewalk locations would require a pedestrian analysis. Due to the street geometry at these locations, sidewalk extensions would not be possible.

Entry to the secure zone would be available from a screening zone located on West Broadway at the approach to Barclay Street. The screening zone would consist of two side-by-side southbound lanes that would each be approximately 11 feet wide. Therefore, this entry point would facilitate access of multiple vehicles simultaneously entering the WTC Campus. The screening zone would consist of two 55-foot-long sally ports, separated by static barriers. Operable barriers would be located at the northern and southern ends of the sally ports to provide ingress and egress.

Static barriers would be used to delineate a single travel lane along the east curb adjacent to the sally port but outside of the secure perimeter in order to maintain access to the adjacent loading and service area for the U.S. Post Office building (the width of this lane varies from approximately 11 feet closer to Barclay Street to approximately 15 feet wide). Postal vehicles would enter the building at the south end of the block and utilize an internal roadway to exit the facility onto West Broadway near Barclay Street.

The personnel booth associated with the West Broadway entrance would be located on the eastern sidewalk of West Broadway adjacent to and south of the U.S. Post Office exit. As a 10-foot-wide by approximately 65-foot-long sidewalk extension is planned at this location to accommodate the inspection booth, the sidewalk width would be maintained at over 16 feet. Bollards are proposed around Vesey Park and at the southern limit of the U.S. Post Office access to ensure that no vehicles are able to bypass the screening zone. Static barriers proposed to cross the sidewalk from the edge of the curb to the building wall at the northeast corner of Vesey Street and West Broadway would be spaced four feet apart to allow adequate space for pedestrian flow, but to also effectively serve as vehicle interdiction devices.

Crosswalks on West Broadway, Barclay Street, and Vesey Street in the vicinity of these proposed credentialing and screening zones would be unimpeded by security elements. All operable security devices would be set back from crosswalks to maintain an unobstructed pedestrian zone.

#### GREENWICH STREET

It is anticipated that Greenwich Street from Barclay Street to Vesey Street would be limited for use only by 7 WTC tenants under future conditions (as outlined in a December 5, 2007 reciprocal easement

agreement among the City of New York, 7 WTC ownership, PANYNJ and LMDC); therefore, this section of Greenwich Street would be a controlled-access street irrespective of the Proposed Action and would be closed to through traffic. The installation of operable vehicle barriers would permit the use of this block for vehicle entry to the WTC campus in emergency situations when other entrances may be unusable. Operable barriers at the north end of the block (default down) and the south end of the block (default up) would allow vehicular access to the adjacent 7 WTC building, but not into the secure zone. As noted above, West Broadway would provide the primary access to the segment of southbound Greenwich Street traversing the WTC site.

At the south end of the WTC Campus, a sally port would be located on Greenwich Street approaching Cedar Street to provide egress for fire trucks stationed at the adjacent “Ten House” fire station on the south side of Liberty Street between Greenwich Street and Trinity Place/Church Street as well as for POVs and for-hire vehicles seeking access to the Greenwich South neighborhood and other local destinations.

Vehicles exiting the WTC Campus would approach the one-lane sally port from the north. The lane would be approximately 22 feet wide and the overall length of the sally port would be approximately 35 feet. The personnel booth would be located on a western sidewalk extension that would run the length of the block from Liberty Street to Cedar Street (approximately 15 feet wide by 160 feet long). This extension would allow an approximately 23-foot-wide clear zone for pedestrian circulation.

Static barriers would be installed on the sidewalks adjacent to the operable barriers proposed within the street; on the eastern sidewalk they would extend to the building streetwall and on the western sidewalk they would extend the width of the sidewalk extension and intersect with the bollard line that is planned in conjunction with the No-Action streetscape plan.

#### WASHINGTON STREET

The screening zone at Washington Street between Barclay and Vesey Streets would serve as an entrance and exit point for oversized trucks en route to and from the PAC at-grade loading dock on Vesey Street and as a secondary entrance for southbound POVs and for-hire vehicles seeking to enter the WTC Campus. Delivery and service vehicles would also continue to use Washington Street to access the 7 WTC loading dock. Access to the PAC at-grade loading dock will only be required infrequently as most PAC deliveries will use below grade loading docks via the VSC.

The credentialing zone proposed in conjunction with the Washington Street screening zone would be delineated in a single lane along the south curb of Barclay Street, east of Washington Street. A personnel booth would be located on the southern sidewalk of Barclay Street, just east of Washington Street, near the front of the credentialing lane. As placement of the booth along the sidewalk would narrow the pedestrian zone to slightly more than seven feet, a pedestrian analysis will be prepared for this location. Street signs would be placed on the road leading up to the credentialing zone to inform drivers of the upcoming secure zone as they approach the credentialing zone.

The Washington Street screening zone would consist of a southbound lane the full length of the roadway that would be approximately 163 feet long in order to accommodate the oversized vehicles that would deliver to the PAC. Operable barriers would be located at the northern and southern ends of the sally port.

A personnel booth would be located along the eastern side of Washington Street at the entrance to the sally port. The placement of the personnel booth on the eastern sidewalk would narrow the pedestrian zone to a width of approximately seven feet in the area immediately adjacent to these proposed personnel booth. Based on field observations, this block is not heavily used by pedestrians.

Additional sidewalk elements would include static barriers, placed adjacent to the access and denial

barriers (operable barriers at either end of the sally port) at four-foot intervals between the curb and the building wall on both the eastern and western sidewalks. Stop and signaling poles (includes lighting and stop and go signals for vehicles in the sally port) would be located at the northern end of the sally port, on both sidewalks as well. At the southern barrier, a light and equipment pole would be placed on both sides of the sally port.

While the With-Action Scenario would introduce new elements to the streetscape, it is important to note that the current site plan and vehicle circulation system for the WTC site incorporates limited security measures identified by the PANYNJ and the NYPD. Under these measures, which were identified as the design of Tower 1 was finalized, both Vesey Street and Fulton Street would function as “managed streets” west of Greenwich Street. This would be achieved through the installation of retractable barriers and sally ports on Vesey, Fulton and Washington Streets to restrict vehicular access. As such, there would only be a minor incremental change in the appearance of the intersection of Washington and Vesey Streets.

### VESEY STREET

The portion of Vesey Street that would be located within the WTC Campus extends from Church Street on the east to West Street/Route 9A to the west. As shown in **Figure 2**, the block of Vesey Street from Church Street to West Broadway would be converted from eastbound to westbound operation under the Proposed Action. Vesey Street would operate two-way between Greenwich and Washington Streets and one-way westbound between Washington Street and West Street/Route 9A. Vesey Street would remain one-way eastbound east of Church Street and vehicles would not be able to travel from the managed corridor on the west side of Church Street onto eastbound Vesey Street due to the proposed configuration of Church Street which would include a raised median that would separate an inner secure lane from the rest of northbound Church Street.

Vesey Street at West Street/Route 9A would consist of a two-lane exit to West Street/Route 9A (northbound and southbound) for all vehicles exiting the WTC Campus. A 35-foot-long sally port is proposed at this location. The sally port would be 24 feet wide, accommodating two-lanes of westbound exiting vehicles. The vehicles would first pass over the denial barrier, in a default-down position, and a default-up egress barrier would be located at the western end of the sally port. The sally port would be operated from a personnel booth located on an extended portion of the northern sidewalk in the area adjacent to the sally port. The proposed sidewalk extension would allow the adjacent sidewalk to be maintained for unobstructed pedestrian flow.

Static barriers would be installed across the sidewalk at both ends of the sally port. These static barriers would be placed at four-foot intervals, from the southern edge of the sidewalk extension north across the sidewalk where they would end adjacent to the existing building.

The proposed sidewalk extension would be approximately eight feet wide and it would run the entire length of the proposed sally port. Placement of the personnel booth and equipment house on the sidewalk extension would allow for the minimum impact on pedestrian use of the sidewalk in this area. The sidewalk extension would maintain the existing sidewalk width for pedestrian circulation on the northern sidewalk. Further, the security elements would be set back from West Street/Route 9A to ensure free-flow of pedestrians in the crosswalk.

While the With-Action Scenario would introduce new elements to the streetscape, it is important to note that the current site plan and vehicle circulation system for the WTC site incorporates limited security measures identified by the PANYNJ and the NYPD. Under these measures, which were identified as the design of Tower 1 was finalized, Vesey Street would function as a “managed street” west of Greenwich Street. This would be achieved through the installation of retractable barriers and sally ports on Vesey and Washington Streets to restrict vehicular access. As such, there would only be a minor incremental change

in the appearance of Vesey Street as a result of the Proposed Action.

### FULTON STREET

The portion of Fulton Street that would be located within the WTC Campus extends from Church Street on the east to West Street/Route 9A to the west. Under the Proposed Action, the block of Fulton Street between Greenwich and Church Streets would be converted from one-way westbound to one-way eastbound operation to facilitate drop-off and pick-up activity at the adjacent 2 WTC and the Transit Hub. The segment of Fulton Street west of Greenwich Street would remain one-way westbound as would Fulton Street east of Church Street (outside of the proposed secure zone). There would be no vehicular access on Fulton Street across the raised median and static barriers that would be installed along Church Street, although pedestrian access would be maintained.

A 35-foot-long, 15-foot-wide sally port is proposed on Fulton Street at the westbound approach to West Street/Route 9A. It would consist of a single exit lane for vehicles exiting the WTC Campus. A sidewalk extension would be installed along the north side of the roadway for the length of the sally port to accommodate the security booth at this location. The sidewalk extension would allow for an approximately 25-foot-clear pedestrian zone on the adjacent sidewalk. Static barriers would be placed at four-foot intervals between the curb and the northern end of the sidewalk extension where they would intersect with the static barriers planned at the perimeter of each block on the WTC Campus as part of the No-Action condition. The north-south pedestrian crossing on the east side of West Street/Route 9A would be located within the sally port so that the required stand-off distance from the western-most barrier to 1 WTC can be provided.

While the With-Action Scenario would introduce new elements to the streetscape, it is important to note that the No-Action site plan and vehicle circulation system for the WTC site similarly incorporates certain security measures identified by the PANYNJ and the NYPD. Under these measures, which were identified as the design of Tower 1 was finalized, Fulton Street would function as a “managed street” west of Greenwich Street. This would be achieved in the No-Action condition through the installation of operable barriers and sally ports on Fulton Street at West Street/Route 9A on the west and a point west of Greenwich Street on the east to restrict vehicular access. As such, there would only be a minor incremental change in the appearance of the Fulton Street when comparing the No-Action and With-Action conditions.

### LIBERTY STREET

The portion of Liberty Street that would be located within the WTC Campus extends from Church Street on the east to West Street/Route 9A to the west. As shown in **Figure 2**, under the Proposed Action two-way operation would continue on Liberty Street, and it would function as the primary point of access and egress for the VSC.

Two sets of sally ports would be installed on Liberty Street to the west of the VSC entrance in the With-Action scenario to accommodate entering and exiting vehicles. The secure access that would be constructed to the west of the VSC would consist of two approximately 11-foot-wide exit lanes and two approximately 11-foot-wide entry lanes. The entry from West Street/Route 9A would primarily serve POVs and various delivery and service vehicles entering the WTC Campus’s parking areas by way of the VSC. The overall length of the entry and exit sally ports is planned to be 55 feet long. The personnel booth would be located in Liberty Street between the inbound and outbound lanes.

Credentialing zones for the entry sally port would be located on West Street/Route 9A, north of Liberty Street for the two southbound left-only designated turning lanes and also south of Liberty Street in the eastern-most lane for vehicles that make the northbound right turn into the site. Vehicle screening would occur inside of the VSC. The personnel booth associated with the southbound credentialing zone would be located along West Street/Route 9A’s central median, and the personnel booth associated with the

northbound credentialing zone would be located on the eastern sidewalk, allowing a clear pedestrian zone of nearly 18 feet wide.

Liberty Street east of the VSC would accommodate two-way traffic flow, with two lanes of westbound traffic and one lane of eastbound traffic. An operable barrier would be installed across the eastbound and westbound lanes. This barrier would be in the default up position to prevent unauthorized vehicles from bypassing the VSC screening. A personnel booth would be located in the Liberty Street median between the eastbound and westbound lanes to control access at this location.

Vehicles already within the secure perimeter (tour buses, for example) would be able to enter the VSC from the east on Liberty Street. As indicated above, access to the VSC from the east would be through an operable barrier located immediately to the east of the VSC entrance/exit. Most vehicles departing the VSC would exit onto westbound Liberty Street to reach West Street/Route 9A. (A secondary exit would be provided on Cedar Street west of Washington Street to be used primarily in the event that a vehicle was allowed to enter Liberty Street in error from the credentialing zone on West Street/Route 9A.)

Another operable barrier would be located on Liberty Street in-line with the Church Street median. This barrier would be used to provide emergency egress from the Site for fire trucks stationed at the Ten House within the campus.

Under future conditions with the Proposed Action, it is anticipated that tour bus access would be similar to future conditions without the Proposed Action. It is anticipated that tour buses with passengers en route to the National September 11th Memorial and Museum and Tower 1 viewing platform would unload passengers along the north curb of Liberty Street west of Greenwich Street or along the west curb of Greenwich Street adjacent to the Memorial Center before proceeding to the VSC. Based on data from the WTC Vehicular Security Center and Tour Bus Parking Facility EA, it is anticipated that over 80 percent of these buses would approach the WTC site from southbound West Street/Route 9A, with the remainder approaching from Broadway or the Brooklyn-Battery Tunnel. Buses departing the VSC onto eastbound Liberty Street were assumed to loop north on Church Street and west on Fulton Street (under No-Action conditions) or west on Vesey Street (under With-Action conditions) to reach potential loading locations along the west curb of Greenwich Street, the north curb of Liberty Street and possibly the east curb of northbound West Street/Route 9A north of Liberty Street.

#### CEDAR STREET

Under both the No-Action and With-Action conditions, Cedar Street would be eliminated between Greenwich and Washington Streets, with the segment to the west operating one-way westbound as an outlet to West Street/Route 9A for northbound Washington Street. As noted above, a secondary exit from the VSC would be provided on Cedar Street west of Washington Street to be used primarily in the event that a vehicle was allowed to enter Liberty Street in error from the credentialing zone on West Street/Route 9A. The segment of Cedar Street between Greenwich Street and Trinity Place would operate one-way westbound under the Proposed Action.

#### BARCLAY STREET

As noted above, under the Proposed Action two credentialing zones would be established along the south curb of Barclay Street. One would be located immediately to the east of the screening zone on West Broadway, and the second would be located immediately to the east of the screening zone on Washington Street.

#### **Bus and Delivery/Service Vehicle Scheduling**

Delivery vehicles en route to the WTC site would need to be scheduled and would undergo a credentialing check as they approach the VSC. It is anticipated that in the No-Action condition, some



delivery vehicles would arrive unscheduled, and would be diverted to an off-site reconciliation area where they would wait until WTC staff could confirm their status before being allowed to return to the VSC. For traffic assignment purposes, it was assumed that when the WTC site initially becomes operational 15 percent of delivery vehicles arriving at the VSC in the No-Action condition would be unscheduled. These vehicles would be diverted out of the VSC via the secondary exit on Cedar Street, and it is assumed that they would use West Street/Route 9A to travel to an off-site reconciliation area located to the north of the WTC site. As people who make deliveries to the WTC site become more accustomed to the WTC delivery policies, it is anticipated that attempts to make unscheduled deliveries would become negligible over time. A more extensive system of security measures would be implemented under the Proposed Action. As vendors and delivery companies become accustomed to the more stringent security procedures, it is anticipated that there would be relatively few unscheduled deliveries in the With-Action condition. Any vehicles making an unscheduled delivery would not be permitted access to the WTC Campus or the VSC.

Credentialed vehicles, including tour buses, black cars, and delivery vehicles, would be permitted access into the Site. All private vehicles with reserved parking spaces and prior authorization to park on-site would access the VSC from the east or west via Liberty Street. In the With-Action condition, all tour buses en route to the National September 11th Memorial and Museum and 1 WTC observation deck would enter the WTC Campus via the security station on Trinity Place at Cedar Street, and it is expected that most if not all would unload along the north curb of Liberty Street west of Greenwich Street before proceeding to the VSC. Buses departing the VSC are assumed to pick up passengers at one of two locations: the west curb of Greenwich Street adjacent to the Memorial Plaza or the east curb of northbound West Street/Route 9A north of Liberty Street, similar to the No-Action condition.

As indicated above, it is anticipated that all deliveries will need to be scheduled as a result of policies implemented under No-Action conditions. Incoming delivery vehicles would be directed to the dedicated loading area for the appropriate building – through the VSC and below-grade road network, following screening.

Construction of the Proposed Action may require the relocation of utilities in some areas. The appropriate agencies or utility companies would be contacted prior to construction. Areas of potential utility conflicts would be identified. Utilities in these areas would either be relocated or alternate designs would be proposed to avoid conflicts.

## **D. ANALYSIS FRAMEWORK**

### **The Future Without the Proposed Action (No-Action Condition)**

In the 2019 scenario without the Proposed Action (No-Action), it is anticipated that the WTC Campus would be fully redeveloped. As described above, the 5 WTC site, which is not located within the proposed WTC Campus security perimeter, is not expected to be developed during this timeframe. At present, the only building program available for 5 WTC is the approximately 1.6-million-square-foot office tower that was contemplated in the 2004 World Trade Center Memorial and Redevelopment Plan FGEIS with an anticipated completion in 2015. Due to the current economic climate, however, it is unlikely that the PANYNJ will pursue development of the 5 WTC site in the near term. With the ongoing construction of 1 WTC and 4 WTC and the recent completion of 7 WTC, there is expected to be a substantial amount of new Class A office space available in Lower Manhattan in coming years. To be conservative, the analyses in this EIS assume that 2 WTC and 3 WTC would also be fully constructed and occupied by 2019, even though full build-out of 2 WTC and 3 WTC is predicated on the ability to viably market their office space. Given the current market for office space and amount of new development

planned, it is considered unlikely that there would be sufficient demand to justify the development of an additional 1.6-million square feet of office space on the 5 WTC site by 2019.

Any other scenarios for development of 5 WTC would be purely speculative at this juncture as no developer has been selected and no alternative plans have been advanced for the site at this time. As such, it is expected that 5 WTC would not be developed by 2019. With numerous details surrounding the 5 WTC site remaining unresolved, extending the analysis year beyond 2019 to incorporate 5 WTC would not be practicable as there is currently no information available that would provide reasonable guidance on when construction of the site could be completed. Additionally, the 5 WTC site is located outside of the security zone as proposed. As such, 5 WTC is not included in the analysis.

As shown in **Figure 4**, the current No-Action site plan for the WTC site includes the development of a Vehicular Security Center on the south side of Liberty Street east of West Street/Route 9A. All autos and tour buses en route to below-grade parking at the WTC site would undergo screening at this facility, as would delivery vehicles en route to below-grade loading areas for WTC Towers 1 through 4. Operational controls such as bus reservations and the scheduling of deliveries at the VSC are expected to be implemented under the No-Action condition.

The entrance to the VSC would be located on the south side of Liberty Street. In the No-Action condition, all vehicles departing the VSC would exit onto eastbound Liberty Street. While there would continue to be an entrance/exit ramp to/from the underground road network on Vesey Street (referred to as the “Helix”), current plans call for it to be used primarily for emergency access. There are expected to be a total of approximately 500 parking spaces for autos and approximately 67 spaces for tour buses located in below-grade facilities on the WTC site.

As shown in **Figure 4**, with redevelopment of the WTC site, both Greenwich Street and Fulton Street would be extended through the WTC site and Vesey and Liberty Streets would be reopened to traffic. In the No-Action condition, Greenwich Street is expected to operate one-way southbound with three moving lanes from Vesey Street to Fulton Street, and with two moving lanes and two curbside lanes south of Fulton Street. West Broadway between Barclay and Vesey Streets would remain open to southbound through-traffic, providing access to Greenwich Street through the WTC site. However, it is anticipated that the segment of Greenwich Street between Barclay and Vesey Streets, which is a privately-controlled street pursuant to a December 5, 2007 reciprocal easement agreement between the City of New York, 7 WTC ownership, PANYNJ, and LMDC, would primarily serve as access to the adjacent 7 WTC as at present. The parallel segment of Washington Street would operate two-way. It is expected that the intersections of Greenwich Street with Vesey, Fulton and Liberty Streets would be signalized, as would a midblock pedestrian crossing of Greenwich Street at Cortlandt Street.

Fulton Street would operate one-way westbound through the WTC site from Church Street to West Street/Route 9A in the No-Action condition. Vesey Street would operate one-way eastbound to the east of Greenwich Street, two-way between Greenwich and Washington Streets, and one-way westbound to the west of Washington Street.

At the south end of the WTC site, Liberty Street would be reopened to traffic between Church Street and West Street/Route 9A, and would operate two-way with one to two moving lanes in each direction. The exit from the VSC onto this block of Liberty Street would be stop-controlled, and left-turns from the VSC onto westbound Liberty Street would be prohibited in the No-Action condition. It is expected that the segment of Washington Street between Albany and Cedar Streets would be reopened to northbound traffic, and that the segment of Cedar Street from Washington Street to West Street/Route 9A would be reopened to westbound traffic. It is also expected that the segment of Cedar Street between Church and Greenwich Streets would be returned to one-way westbound operation.

With the completion of towers 2, 3 and 4 and the Transit Hub at the WTC site, lane closures associated with construction activity would no longer be needed along Church Street, and it is anticipated that the street would be restored to four lanes from Liberty Street to Vesey Street. The eastern-most lane would again function as an exclusive bus lane from 7 AM to 10 AM and from 4 PM to 7 PM on weekdays.

It is also expected that the reconstruction of West Street/Route 9A in the vicinity of the WTC site would be completed in the No-Action condition. This would include the installation of a traffic signal at a new intersection with Fulton Street. All traffic westbound on Fulton Street would turn onto northbound West Street/Route 9A as there would be no access across the median to the southbound lanes. Two crosswalks would be installed at this location, one on West Street/Route 9A on the north side of the intersection, and the second on the Fulton Street approach. To the south at Liberty Street, both northbound and southbound double left-turn lanes would be provided. The existing northbound left-turn at Albany Street would be eliminated. Lastly, it is anticipated that a new traffic signal would be installed at the intersection of Barclay Street with northbound West Street/Route 9A to accommodate new traffic generated by development at the WTC site.

It should be noted that the 2004 World Trade Center Memorial and Redevelopment Plan FGEIS acknowledged a need for security measures such as vehicular screening to secure buildings at the WTC site. The potential need to periodically close street segments within the WTC site was also recognized in the 2004 FGEIS, which includes an assessment of the potential traffic effects of closing both Fulton Street and Greenwich Street through the site. The No-Action site plan and vehicle circulation system (shown in **Figure 4**) assumed for the analyses in this EIS reflect the most current version of the PANYNJ's master plan for the WTC (Version 10) and incorporate security measures associated with the 2005 redesign of 1WTC. Under these measures, both Vesey Street and Fulton Street would function as "managed streets" west of Greenwich Street, reflecting security engineering for 1 WTC that required that unscreened vehicles be prohibited from accessing the portions of these streets adjacent to the building. Implementation of managed street segments adjacent to 1 WTC is therefore reflected in the No-Action condition as restrictions on unscreened vehicles would still be needed to secure 1 WTC in the absence of the proposed Campus Security Plan.

As the specific means to manage these street segments were not identified by the PANYNJ, it has been assumed that in the No-Action condition they would be managed through the installation of sally ports and retractable barriers, a common method for controlling access in similar situations (and one that would be employed more extensively at the WTC site under the Proposed Action). Each sally port would consist of a guard booth and equipment house controlling a set of two retractable barriers with sufficient space between them to accommodate one or more motor vehicles. In operation, the first barrier would be lowered to permit authorized vehicles to enter, and then raised to prevent entry by other vehicles. After completing a screening process, the second barrier would be lowered to allow vehicles within the sally port to exit. As shown in **Figure 4**, two sally ports would be located on Fulton Street, one at West Street/Route 9A and the second west of Greenwich Street. As it is anticipated that the west barrier on Fulton Street at West Street/Route 9A would be installed immediately adjacent to the West Street/Route 9A travel lanes, the crosswalk on Fulton Street would likely be located within the sally port.

Two sally ports would also be located on Vesey Street, one to the east of West Street/Route 9A (set back from the crosswalk) and a second west of Greenwich Street. An additional retractable barrier would be installed on the Washington Street approach to Vesey Street that would remain raised as a default condition, and lowered only as needed to permit entry by authorized vehicles.

Under the No-Action plan as described, there would be unrestricted vehicular access along Greenwich Street between Vesey Street and Liberty Street through the WTC site. Autos and trucks destined for the below-grade parking or loading docks at the WTC would have unrestricted access to the VSC via Liberty Street, while trucks en route to the loading docks at the PAC would likely have to pass through the

barriers on Washington Street and/or Vesey Street. Tour buses are expected to drop off passengers destined for the National September 11th Memorial and Museum on the west side of Greenwich Street or on Liberty Street west of Greenwich Street before proceeding to the VSC via Liberty Street. It is possible that tour buses may also drop off curbside on West Street/Route 9A. Buses that park in the VSC would exit the VSC onto eastbound Liberty Street, northbound Church Street and westbound Fulton Street to return to Greenwich Street to retrieve their passengers. Taxi and black (livery) car pick-up/drop-off activity would likely occur along both curbs of Greenwich Street as well as along both sides of Church Street, although there are many bus stops along the east side of Church Street in this area. While black cars would also be expected to traverse the sally ports along Fulton and Vesey Streets to access 1 WTC, taxis would be unlikely to do so, and would be expected to pick-up/drop-off along nearby unrestricted streets such as Greenwich Street and West Street/Route 9A (if permitted by the prevailing curbside regulations).

As noted above, there are now expected to be up to approximately 500 underground parking spaces for office-tenant autos and approximately 67 for tour buses at the WTC site compared to 1,200 to 1,400 parking spaces under the original program analyzed in the LMDC FGEIS. It is therefore anticipated that under the current development program, some of the parking demand generated by WTC office tenants as well as all of the parking demand generated by other uses at the WTC site would be distributed among off-street public parking facilities on the periphery. Many of these vehicles would therefore not actually enter the WTC site nor traverse intersections within its boundaries. All 500 parking spaces are expected to be reserved for tenants under an agreement with PANYNJ. No public parking would be permitted.

In addition to reflecting the Version 10.0 of the PANYNJ's master plan for the site and the limited security measures identified by the PANYNJ and the NYPD in 2005, the No-Action condition assumed for this EIS also reflects other changes made to the WTC redevelopment plan subsequent to the publication of the 2004 World Trade Center Memorial and Redevelopment Plan FGEIS. These include changes to the building program now envisioned for the WTC site, including a reduction in the overall size of the program and changes in the uses proposed for the site.

Lastly, in addition to the planned WTC build-out, Lower Manhattan is expected to experience growth in commercial office, retail, residential, hotel and community facility uses by 2019. The EIS will document the developments that are planned within the area and include these in the analysis of the No-Action condition.

### **The Future With the Proposed Action (With-Action Condition)**

The Proposed Action would result in the implementation of the WTC Campus Security Plan which includes a secure perimeter with limited vehicle access, vehicle credentialing and screening areas, and some proposed changes to street direction. Operational controls such as bus reservations and the scheduling of deliveries are expected to be implemented under both the No-Action and With-Action conditions. The details of the Proposed Action are provided in more detail above.

The security elements, street configurations, and access restrictions being considered as part of the Proposed Action would be overlaid on the full build condition of the WTC development. The incremental differences between the two conditions that would result from the Proposed Action will be documented and evaluated for their potential to result in significant adverse environmental impacts pursuant to the impact criteria described in the CEQR Technical Manual.

## **E. PROPOSED SCOPE OF WORK FOR THE EIS**

As the Proposed Action would affect various areas of environmental concern and was found to have the potential for significant adverse impacts, pursuant to the EAS and Positive Declaration, an EIS will be prepared for the Proposed Action. The EIS will analyze the Proposed Action for all technical areas of concern.

The EIS will be prepared in conformance with all applicable laws and regulations, including SEQRA (Article 8 of the New York State Environmental Conservation Law) and its implementing regulations found at 6 NYCRR Part 617, New York City Executive Order No. 91 of 1977, as amended, and the Rules of Procedure for CEQR, found at Title 62, Chapter 5 of the Rules of the City of New York. The EIS will follow the guidance of the 2012 CEQR Technical Manual, and will contain:

- A description of the Proposed Action and its environmental setting;
- A statement of the environmental impacts of the Proposed Action, including its short- and long-term effects and typical associated environmental effects;
- An identification of any adverse environmental effects that cannot be avoided if the Proposed Action is implemented;
- A discussion of reasonable alternatives to the Proposed Action;
- An identification of irreversible and irretrievable commitments of resources that would be involved in the Proposed Action should it be implemented; and
- A description of mitigation proposed to eliminate or minimize any significant adverse environmental impacts.

The EIS will analyze the Proposed Action for all technical areas of concern. Based on the preliminary screening assessments outlined in the 2012 CEQR Technical Manual and detailed in the EAS document, the following environmental areas would not require detailed analysis in the EIS: open space, shadows, natural resources, water and sewer infrastructure, solid waste and sanitation services, and energy. It should be noted however that as a greenhouse gas (GHG) emissions analysis will be provided in the EIS, pursuant to CEQR Technical Manual guidelines the Proposed Action's energy consumption will be calculated and provided in the EIS.

The specific technical areas to be included in the EIS, as well as their respective tasks, are described below.

### **TASK 1. PROJECT DESCRIPTION**

The first chapter of the EIS introduces the reader to the Proposed Action and sets the context in which to assess impacts. The chapter contains a description of the Proposed Action: its location; the background and/or history of the project; a statement of the purpose and need; key planning considerations that have shaped the current proposal; a detailed description of the Proposed Action; and discussion of the approvals required, procedures to be followed, and the role of the EIS in the process. This chapter is the key to understanding the Proposed Action and its impact, and gives the public and decision-makers a base from which to evaluate the Proposed Action.

In addition, the project description chapter will present the planning background and rationale for the actions being proposed and summarize the reasonable worst-case development scenario for analysis in the EIS. The section on approval procedures will explain the review process, its timing, and the public

hearings that are planned. The role of the EIS as a full-disclosure document to aid in decision-making will be identified.

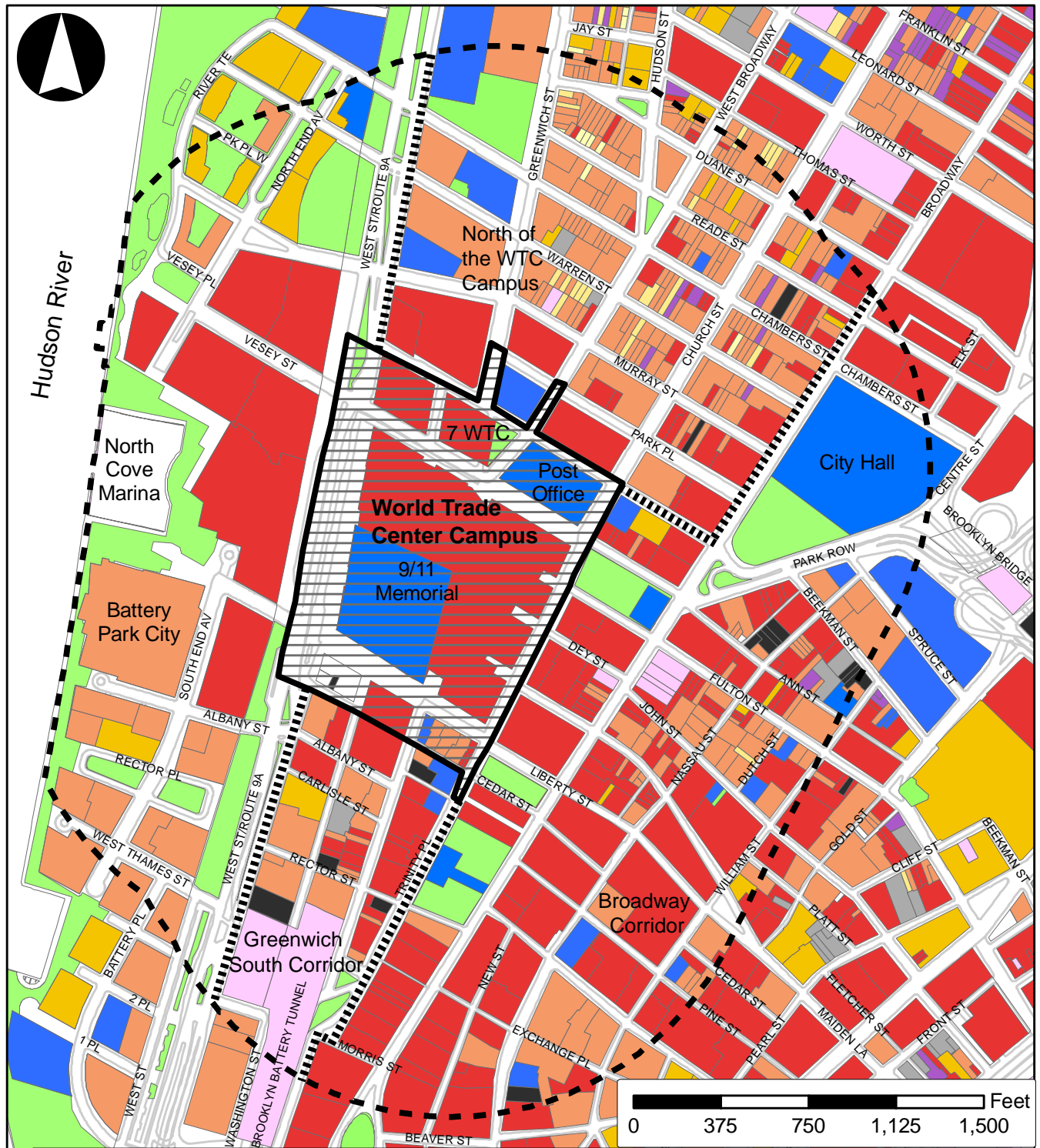
## **TASK 2. LAND USE, ZONING, AND PUBLIC POLICY**

This chapter will analyze the potential impacts of the Proposed Action on land use, zoning, and public policy, pursuant to the methodologies presented in the 2012 CEQR Technical Manual. The primary land use study area will consist of the WTC site and the immediate area, where the potential effects of the Proposed Action would be directly experienced (reflecting the Campus Security Plan). The secondary land use study area would include the neighboring areas within a quarter-mile boundary from the WTC site, as shown in **Figure 2-1**, which could experience indirect impacts. Subtasks will include the following:

- Provide a brief development history of the WTC site and surrounding study area.
- Provide a description of land use, zoning, and public policy in the study area discussed above. Recent trends in the study area will be noted. Other public policies that apply to the study area will also be described, including: the Special Lower Manhattan District; the Special Tribeca Mixed-Use District; the Special Battery Park City (BPC) District; the Downtown-Lower Manhattan Business Improvement District; the Lower Manhattan Development Corporation; City Vision for a 21st Century Lower Manhattan; the Commercial Revitalization Program; and the Local Waterfront Revitalization Program (LWRP); the 421-g Tax Incentive Program; Hudson River Park Trust; Battery Park City Authority; Fulton Nassau Crossroads Program; several historic districts that are designated by the New York City Landmarks Preservation Commission (LPC) and/or listed on the State and National Registers of Historic Places (S/NR); and Vision 2020 – New York City Comprehensive Waterfront Plan. The City’s sustainability/PlaNYC policies will also be discussed.
- Based on field surveys and prior studies, this chapter will identify, describe, and graphically portray predominant land use patterns for the study area. Describe recent land use trends in the study area and identify major factors influencing land use trends.
- Describe and map existing zoning and recent zoning actions in the study area.
- Prepare a list of future development projects in the study areas that are expected to be constructed by the 2019 analysis year and may influence future land use trends. Also, identify pending zoning actions or other public policy actions that could affect land use patterns and trends in the study area. Based on these planned projects and initiatives, assess future land use and zoning conditions without the Proposed Action (No-Action condition).
- Discuss the Proposed Action’s potential effects related to issues of compatibility with surrounding land use, the consistency with zoning and other public policies, and the effect of the Proposed Action on ongoing development trends and conditions in the study areas.
- The project is located in the New York City Coastal Zone, and therefore, it will be assessed for its consistency with the city’s LWRP. The analysis will assess, for those relevant policies identified on the project’s Consistency Assessment Form (provided as Appendix A to the EAS), the consistency of the Proposed Action and resultant projected development with the relevant WRP policies.
- If necessary, mitigation measures to avoid or reduce potential significant adverse land use, zoning, and/or public policy impacts will be identified.

## **TASK 3. SOCIOECONOMIC CONDITIONS**

The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements.



**Legend**

- |                                 |  |                       |
|---------------------------------|--|-----------------------|
| Project Site                    | Mixed Commercial/Residential Buildings | Open Space            |
| Study Area                      | Commercial/Office Buildings            | Parking Facilities    |
| One & Two Family Buildings      | Industrial/Manufacturing               | Vacant Land           |
| Multi-Family Walkup Buildings   | Transportation/Utility                 | All Others or No Data |
| Multi-Family Elevator Buildings | Public Facilities & Institutions       | Subarea Boundaries    |



Although socioeconomic changes may not result in impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. This chapter will assess the Proposed Action's potential effects on the socioeconomic character of the study area, which is expected to conform to the quarter-mile land use study area described in Task 2.

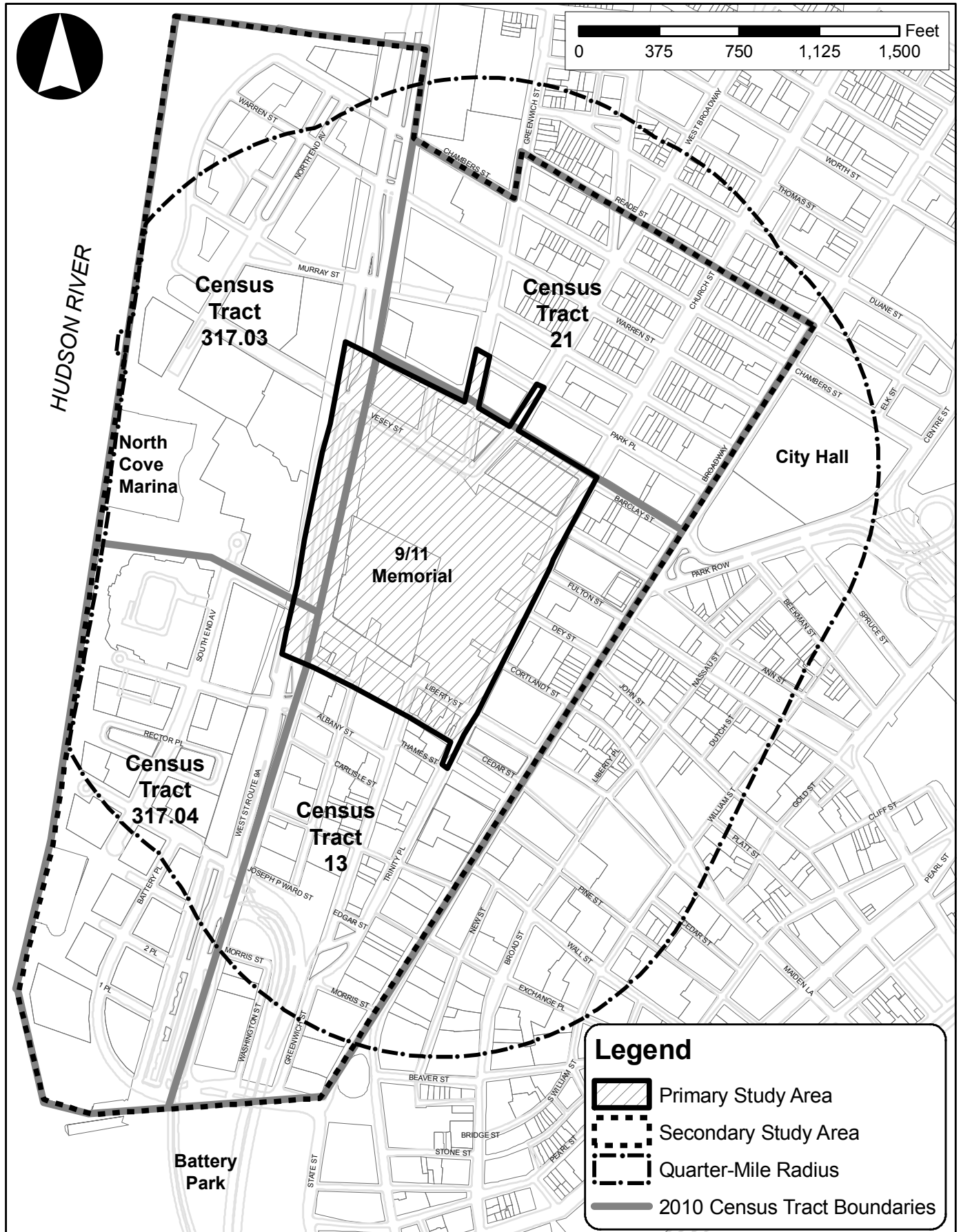
Pursuant to Section 310 of Chapter 5 of the 2012 CEQR Technical Manual, the socioeconomic study area boundaries are expected to be similar to those of the land use study area, and will be dependent on the size and characteristics of the Proposed Action. Therefore, the study area for this analysis would include the areas within a quarter-mile boundary of the proposed security measures.

A socioeconomic assessment seeks to assess the potential to change socioeconomic character relative to the study area population. Pursuant to the 2012 CEQR Technical Manual, the five principal issues of concern with respect to socioeconomic conditions are whether a proposed action would result in significant adverse impacts due to: (1) direct residential displacement; (2) direct business and institutional displacement; (3) indirect residential displacement; (4) indirect business and institutional displacement; and (5) adverse effects on specific industries. In conformance with the 2012 CEQR Technical Manual guidelines, the assessment of the five principal issues of concern will begin with a preliminary assessment to determine whether a detailed analysis is necessary. Detailed analyses will be conducted for those areas in which the preliminary assessment cannot definitively rule out the potential for significant adverse impacts. The detailed assessments will be framed in the context of existing conditions and evaluations of the Future No-Action and With-Action conditions in 2019, including any population and employment changes anticipated to take place by the time the project is complete.

As the Proposed Action would implement a campus security plan, it would not introduce any new housing units, new buildings (other than the proposed NYPD personnel booths), or land uses, nor would it directly displace any existing uses, properties, or populations. It also would not result in substantial new development that is markedly different from existing uses, development and activities within the neighborhood. However, as the street closures implemented as part of the project may affect accessibility to some existing and planned residential, commercial, and/or institutional developments, they may possibly affect property values in the study area, and therefore, the Proposed Action warrants an assessment of socioeconomic conditions with respect to indirect business, residential and institutional displacement. In addition, the EIS will provide sufficient information to determine whether the Proposed Action could have any adverse effects on a specific industry, compared with the future without the Proposed Action.

According to the 2012 CEQR Technical Manual, indirect displacement (also known as secondary displacement) is the involuntary displacement of residents, businesses, or employees that results from a change in socioeconomic conditions created by the proposed project. While the Proposed Action is not identified in the CEQR Technical Manual as a typical action that could result in indirect displacement, the EIS will provide an analysis of the areas where proposed security measures may decrease accessibility or potentially create other hardships for adjacent businesses, residential uses and institutions.

This chapter will examine the effects of the project on socioeconomic conditions in the study area. The analysis will provide an assessment of potential socioeconomic changes associated with the action. It will focus on: 1) existing businesses that may be indirectly affected by the implementation of the security plan; 2) existing residential uses that may be indirectly affected by the implementation of the security plan; and 3) potential effects on conditions in the real estate market in the area. If the preliminary assessment determines that the Proposed Action could introduce trends that make it difficult for businesses that are essential to the local economy or low-income populations to remain in the area, a detailed analysis of indirect displacement will be conducted. The detailed analysis would follow the CEQR Technical Manual guidelines to determine whether the Proposed Action would increase property



values and thus increase rents for potentially vulnerable residential populations or a potentially vulnerable category of business and whether relocation opportunities exist for those residential or businesses. In addition, the socioeconomic analysis of the Proposed Action's affect on specific industries will determine whether the Proposed Action would: 1) significantly affect business conditions in any industry or category of businesses within or outside the study area; and 2) substantially reduce employment or impair viability in a specific industry or category of businesses.

The Campus Security Plan involves installation of security infrastructure which would eliminate non-screened, public vehicular traffic from the roadways adjacent to and within the WTC site. Many of these roadways are closed under existing conditions due to construction work at the WTC site. Potential effects of the street closure on existing businesses and residential uses along these roadways will be evaluated. The analysis will also consider the effects that the presence of security screening infrastructure such as operable barriers and pre-screening areas may have upon businesses and residential uses in the surrounding area, including along Church Street adjacent to and south of the WTC site, as well as along Barclay Street, West Broadway and Washington Street north of the WTC site and Greenwich Street from Liberty Street to Cedar Street and Cedar Street from Greenwich Street to Trinity Place.

Vehicles traveling to businesses and residential uses near and within the secure zone (for example, delivery trucks, limousines, private autos, or access-a-ride vans) would be subject to screening. The effects of this screening process on existing residential uses and businesses, including the planned WTC businesses will be considered.

Subtasks for the socioeconomic assessment would include:

- Describe economic activity in the project area under Existing Conditions (using the most recently available data and studies), including the number and types of businesses and institutions and employment by key sectors, including within the secure zone, adjacent to the proposed screening infrastructure and queuing areas, and within a quarter-mile of the secure zone.
- Describe the physical characteristics of the residential, commercial, and institutional buildings in the project area and in the surrounding study area, including the general size of the structures, configurations, condition, and accessibility. Determine the approximate vacancy rate and rent levels for buildings in the study area.
- Estimate net new residential, employment and other economic activity in the study area under the No-Action scenario.
- Evaluate the effects of the proposed vehicle restrictions on accessibility, if any, in terms of residential or business displacement, employment changes, and adverse effects on the real estate market. Account for those residents, businesses, institutions, or industries within the study area that could be displaced or affected by the security plan and estimate whether such changes could affect the overall City economy. **Figure 3-1** shows the primary and secondary study areas for the analysis of Socioeconomic Conditions.

#### **TASK 4. COMMUNITY FACILITIES**

The Proposed Action would not result in the direct displacement of any existing community facilities or services. The Port Authority Police Department and NYPD will have personnel located within the WTC site. The NYPD will be responsible for staffing the proposed secured access points at the perimeter of the site. It is anticipated that the Proposed Action would affect access to and from Engine Company 10, Ladder 10 (“Ten House”) and ambulance access to the WTC site. As such, a discussion of FDNY and ambulance response to emergency calls will also be provided and the Proposed Action will be assessed

for its potential to result in service impacts. Therefore, the Proposed Action will be analyzed for its potential to result in significant adverse direct impacts on existing community facilities or services.

The EIS will identify and locate the relevant local police precinct and fire stations serving the project area, and describe service conditions, highlighting particular constraints. Additionally, the EIS will assess the potential for the Proposed Action to result in impacts on police, fire and ambulatory services in and around the WTC site. This would be a function of changes in traffic circulation and access related to the Proposed Action, and any effect the Proposed Action may have on the ability to deliver these services. Assessment of impacts will require coordination with the Police and Fire Departments.

The typical CEQR analysis considers the type and size of the new population generated by development resulting from an action that would place new demands on for community facilities and services. Demand for community facilities is directly related to the type and size of the new population generated by development resulting from a new development. As the Proposed Action is a security plan with no associated residential population, and no incremental change in NYPD officers per shift areas as compared to No-Action conditions, no additional community facility services would be required as a result of the Proposed Action. The analysis of community facilities will consider the potential for significant adverse impacts resulting from the proposed security measures, including operable barriers that are located near the “Ten House,” located at 124 Liberty Street and ambulance access to and from the WTC site. According to *CEQR Technical Manual* guidelines and as presented in the EAS document, this proposed development would not trigger a detailed analysis of schools, libraries, publicly funded day care centers, health care facilities or police service. However, fire services and ambulance services will be evaluated.

### **Fire Protection / Ambulance Services / Access to Emergency Services**

According to the *CEQR Technical Manual*, detailed community facilities analyses are often conducted for individual facilities that may be affected by a project. If the proposed project would displace or alter a community facility (i.e. direct effect), it is expected that the affected agency may conduct its own assessment to determine the impact of the proposed project on its facility and its constituents. The CEQR analysis will be coordinated with the affected agency’s assessment. Based on how the Proposed Action would change the affected facility, the EIS will determine the extent to which service would be disrupted or precluded. If disruption of service would place additional demand on other nearby facilities, it may be appropriate to examine the indirect effects on those facilities caused by the initial direct impact. Details will be provided in the EIS that address plans to accommodate emergency response vehicle access into and out of the WTC site. Additionally, the EIS will provide an assessment of private vehicle access to local hospitals with consideration of the proposed street configuration.

## **TASK 5. HISTORIC AND CULTURAL RESOURCES**

Historic and cultural resources include both archaeological and architectural resources. The *CEQR Technical Manual* identifies historic and cultural resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. Historic and cultural resources include designated New York City Landmarks (NYCLs) and Historic Districts; properties calendared for consideration as NYCLs by the New York City Landmarks Preservation Commission (LPC) or determined eligible for NYCL designation (NYCL-eligible); properties listed on the State and National Register of Historic Places (S/NR) or formally determined eligible for S/NR listing (S/NR-eligible), or properties contained within a S/NR listed or eligible district; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHLs); and potential historic resources (i.e., properties not identified by one of the programs listed above, but that appear to meet their eligibility requirements).

According to the *CEQR Technical Manual*, a historic and cultural resources assessment is required if a project has the potential to affect archaeological and/or architectural resources. The project site includes security checkpoints located within and adjacent to the approximately 16-acre WTC site, a National Register-eligible architectural resource. The archaeological resources areas of potential effect (APEs) for the proposed project will be the areas of planned construction and disturbance—each security checkpoint location and the associated vehicle interdiction devices around the security perimeter. To account for both the potential for impacts to architectural resources due to construction activities at each of the security checkpoint locations and the project’s potential visual and/or contextual impacts on nearby architectural resources, the architectural resources areas APEs are defined as the areas within 90 feet of each security checkpoint location. Within the architectural resources APEs are several architectural resources, including, but not limited to, the Barclay-Vesey (Verizon) Building at 140 West Street (S/NR, NYCL), St. Paul’s Chapel and Graveyard at Broadway and Fulton Street (NHL, S/NR, NYCL), and 90 West Street (S/NR, NYCL).

The analysis of historic resources will be undertaken in consultation with the SHPO and the LPC and will be prepared in accordance with Section 106 of the National Historic Preservation Act of 1966 and coordinated through the NEPA process.

### **Archaeological Resources**

Since the Proposed Action would entail in-ground disturbance, it is necessary to analyze the potential impacts of the Proposed Action on archaeological resources. LPC and SHPO will be contacted regarding each security checkpoint location’s potential for archaeological sensitivity. If LPC and/or SHPO determines that a security checkpoint location or locations may be sensitive for archaeological resources, the following work will be undertaken:

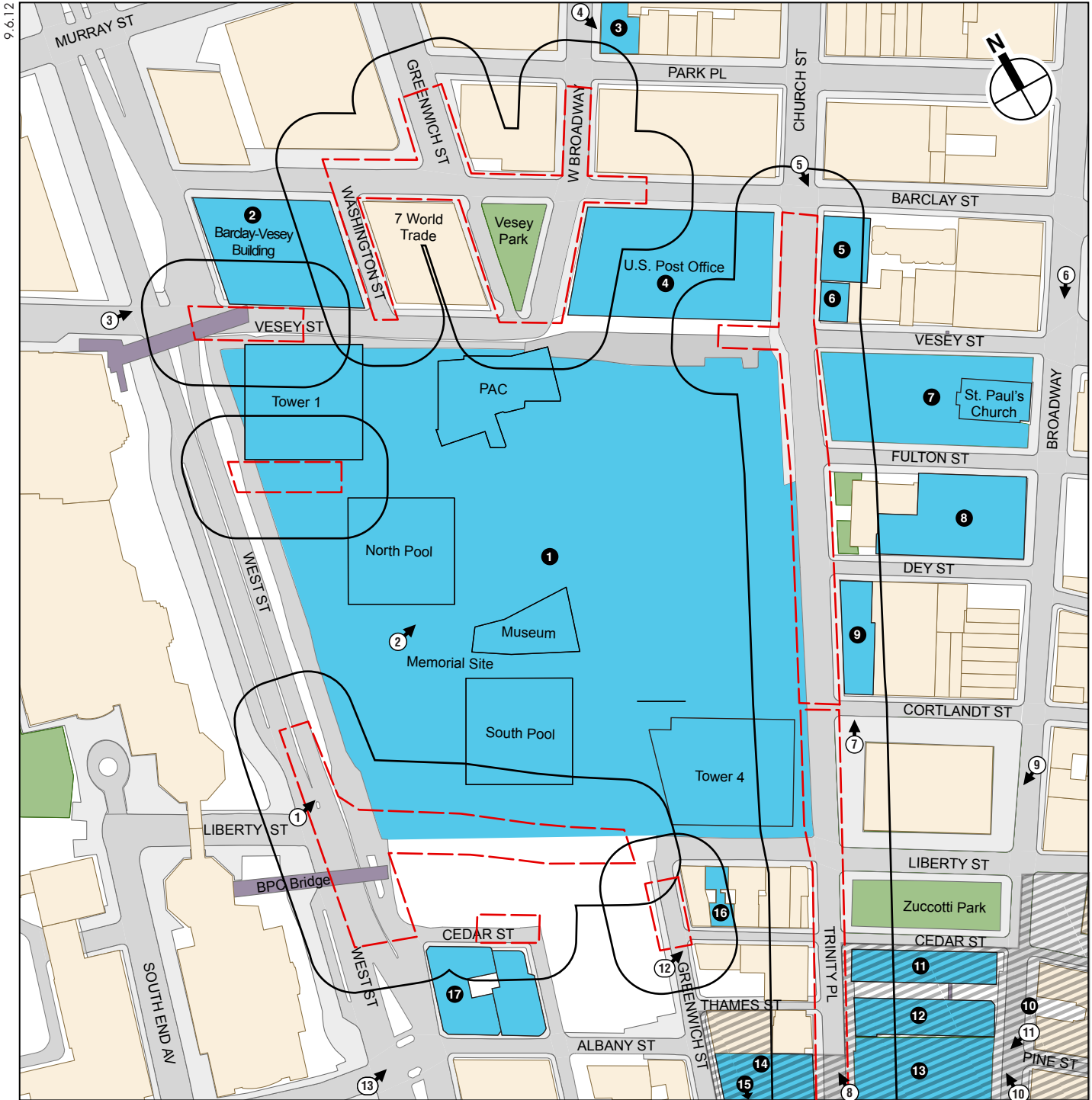
- Prepare a Phase 1A Archaeological Assessment for LPC and SHPO review. The Phase 1A Archaeological Assessment will identify the potential for areas identified by LPC and/or SHPO as requiring further study to contain pre-contact-period and/or historic-period archaeological resources. Qualitatively discuss any impacts on potential archaeological resources that are expected in the future without the Proposed Action.
- Describe the Proposed Action and the potential impact it could have on archaeological resources through subsurface disturbance.

If applicable, develop measures to avoid, minimize, or mitigate any adverse impacts on archaeological resources in consultation with LPC and SHPO.

### **Architectural Resources**

The following tasks will be undertaken as part of the architectural resources analysis:

- Describe and map architectural resources on the project site and within the 90-foot APEs around each security checkpoint location.
- Within each 90-foot APE, map and briefly describe known architectural resources. Each 90-foot APE for architectural resources is shown on **Figure 5-1**. Longer contextual views available beyond the 90-foot APEs will also be considered, as appropriate.
- Conduct a field survey of each 90-foot APE to identify any potential architectural resources that could be affected by the Proposed Action. Potential architectural resources comprise properties that appear to meet the eligibility criteria for NYCL designation and/or S/NR listing. Map and briefly describe any potential architectural resources.



- Archaeological Resources Study Area
- 90-Foot Architectural Resources Study Area
- 1 Architectural Resource
- ① → Photograph Reference Number and View Direction
- Wall Street Historic District (S/NR)

0 200 400 FEET  
SCALE

- Qualitatively discuss any impacts on architectural resources that are expected in the future without the Proposed Action as a result of other expected development projects.
- Describe the Proposed Action and any additional potential development and the impact it would have on the architectural resources in the APE around each security checkpoint location. Assess the project's potential for indirect impacts on any known or potential architectural resources, including visual and contextual impacts.

If applicable, develop measures to avoid, minimize, or mitigate any adverse impacts on architectural resources in consultation with LPC.

## **TASK 6. URBAN DESIGN/VISUAL RESOURCES**

A preliminary analysis of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, including the following: 1) projects that permit the modification of yard, height, and setback requirements; and 2) projects that result in an increase in built floor area beyond what would be allowed 'as-of-right' or in the future without the Proposed Action. CEQR stipulates a detailed analysis for projects that would potentially obstruct view corridors, compete with icons in the skyline, or would result in substantial alterations to the streetscape of the neighborhood by noticeably changing the scale of buildings.

As the Proposed Action would introduce new security elements (including static barriers, security booths, and related security devices) within the public right-of-way, a preliminary assessment of urban design and visual resources will be provided in the EIS.

As defined in Chapter 10, Section 310 of the *CEQR Technical Manual*, the urban design study area will be the same as that used for the land use analysis (delineated by a quarter-mile radius from the site). For visual resources, the view corridors within the study area from which such resources are publicly viewable should be identified. The assessment will be based on *CEQR Technical Manual* methodologies for a preliminary assessment, and include the following:

- Based on field visits, describe the project site and the urban design and visual resources of the areas where security elements are proposed and the adjacent study area, using text, photographs and other graphic material as necessary to identify critical features, use, bulk, form, and scale.
- In coordination with the land use task, describe the changes expected in the urban design and visual character of the study area due to planned development projects in the future without the Proposed Action (No-Action condition), including the WTC site.
- Describe the potential changes that could occur in the urban design character of the study area as a result of the Proposed Action (With-Action condition). Photographs and/or other graphic material will be utilized, where applicable, to assess the potential effects on urban design and visual resources, including views of/to resources of visual or historic significance (landmark structures, historic districts, parks, etc.).
- The analysis would describe the potential changes that could occur to urban design and visual resources in the future with the Proposed Action, in comparison to the No-Action condition, focusing on the changes that could negatively affect a pedestrian's experience of the area. If necessary, mitigation measures to avoid or reduce potential significant adverse impacts will be identified.



## **TASK 7. HAZARDOUS MATERIALS**

The EIS will address the potential presence of hazardous materials on the project site. It will summarize conditions on the sites based on an Environmental Site Assessment (ESA) and reports on subsurface investigations. Data will be obtained and reviewed to assess whether subsurface disturbance required for the installation of security equipment would result in pathways of exposure to hazardous materials. Such materials may be identified based on current or historical activities on or near the Project Site that may have resulted in contamination by substances or wastes. Of particular concern may be utility conduits that could involve asbestos or hazardous metals.

The EIS analysis will consist of the following tasks:

- A site reconnaissance to note activities of potential concern or obvious areas of concern related to soil and/or groundwater contamination on site and at adjacent properties.
- Review of readily available historical information regarding past site usage to assess the potential for contamination. Historical information, which will be reviewed if available during the project schedule, may include historic Sanborn Fire Insurance Maps, historic aerial photographs, historic City Directories and historic topographic maps.
- State and local agency review will be limited to a database search and review to determine potential environmental sites that may impact areas of subsurface disturbance

A Phase I Report will be completed in accordance with ASTM 1527-05. The Phase I report will include information regarding:

- Narrative description of completed activities;
- Description of the areas where subsurface disturbance is proposed and adjacent areas;
- General history and use of the project site(s);
- Hazardous substances and wastes identified within and near the project site(s);
- Current and former areas of recognized environmental concerns within and near the project site(s), including documentation of the recovery and remediation efforts for the WTC site;
- Proposed response actions for those areas of recognized environmental concerns identified;
- A brief discussion, when necessary, of any prior site investigations and remedial measures along the alignment;
- Scaled site maps, photographs, tabulated data summaries and other supporting information as appropriate.

The results and recommendations of the Phase 1 Environmental Site Assessment will be documented in the EIS.

Based on the construction activities that would be undertaken, a Phase 2 Environmental Site Investigation is not anticipated as part of the EIS. However, if required, a Phase 2 analysis will be prepared and summarized in the EIS.

## **TASK 8. TRANSPORTATION**

The Proposed Action is the implementation of a Campus Security Plan for the World Trade Center and would not introduce any new land uses. Therefore, it is not expected to directly generate new travel

demand to and from the project site. However, the implementation of new security measures, such as restrictions on vehicular access to streets in and around the site would alter traffic patterns, as well as pedestrian space at selected locations. Therefore, the transportation studies will be a major focus of the EIS, with emphasis on three principal issues: (1) the effects on traffic flow due to redirected or diverted vehicle trips and the relocation of curbside pick-up/drop-off activity resulting from new restrictions on access to streets within or adjacent to the WTC site; (2) the effects on pedestrian flow along selected sidewalks and crosswalks due to the installation of personnel and equipment booths, static barriers and other security-related measures; and (3) the potential effects on bus services utilizing streets affected by the new security measures (primarily Church Street).

It is also possible that the restrictions on vehicular access resulting from the proposed Campus Security Plan may potentially induce changes in modal split (i.e., from the auto and taxi modes to transit) for persons en route to and from the World Trade Center and its environs. The result may be a reduction in vehicle trips and a commensurate increase in person trips by transit. (It should be noted, however, that any increase in transit trips would likely be relatively small in the context of the overall demand on the PATH system and the numerous subway, bus and ferry routes serving the World Trade Center Site). For this EIS, the transportation analyses will take a conservative approach with respect to identifying potential significant adverse traffic impacts, and not assume any reduction in vehicular travel demand as a result of the Proposed Action.

As discussed above, a 2019 analysis year will be assumed for the No-Action and With-Action analyses in this EIS. The traffic network assumed to be in place in the absence of the Proposed Action will reflect the most current plans for the study area street system as well as the limited security measures currently planned for implementation at the WTC site by the PANYNJ and NYPD. (Under these measures, both Vesey Street and Fulton Street would function as “managed streets” west of Greenwich Street. This would be achieved through the installation of retractable barriers and sally ports on Vesey, Fulton and Washington Streets to restrict vehicular access.) In addition, the No-Action baseline condition for the transportation analyses will incorporate the anticipated travel demand from the full build-out of Towers 1 through 4, the National September 11th Memorial and Memorial Center, the Transit Hub and the Performing Arts Center at the World Trade Center site, as well as general background growth and demand from other anticipated developments in the vicinity. As it is anticipated that Tower 5 at the WTC site would be built subsequent to the completion of Towers 1 through 4, and as a development program and Build year for Tower 5 remain undefined, travel demand from this building located south of Cedar Street outside of the WTC Campus will not be included in the 2019 No-Action baseline condition.

It should also be noted that development on the World Trade Center site will include a below-grade Vehicular Security Center (VSC) on the south side of Liberty Street east of West Street/Route 9A. Autos and tour buses en route to below-grade parking at the WTC site would undergo screening at this facility, as would trucks en route to below-grade loading areas for Towers 1 through 4. The proposed Campus Security Plan would potentially affect how vehicles access and egress the VSC, and this will be reflected in the traffic assignments for the No-Action and With-Action conditions.

The following provides a scope of work for the EIS transportation studies, including analyses of traffic, transit, pedestrians and parking.

### **Traffic**

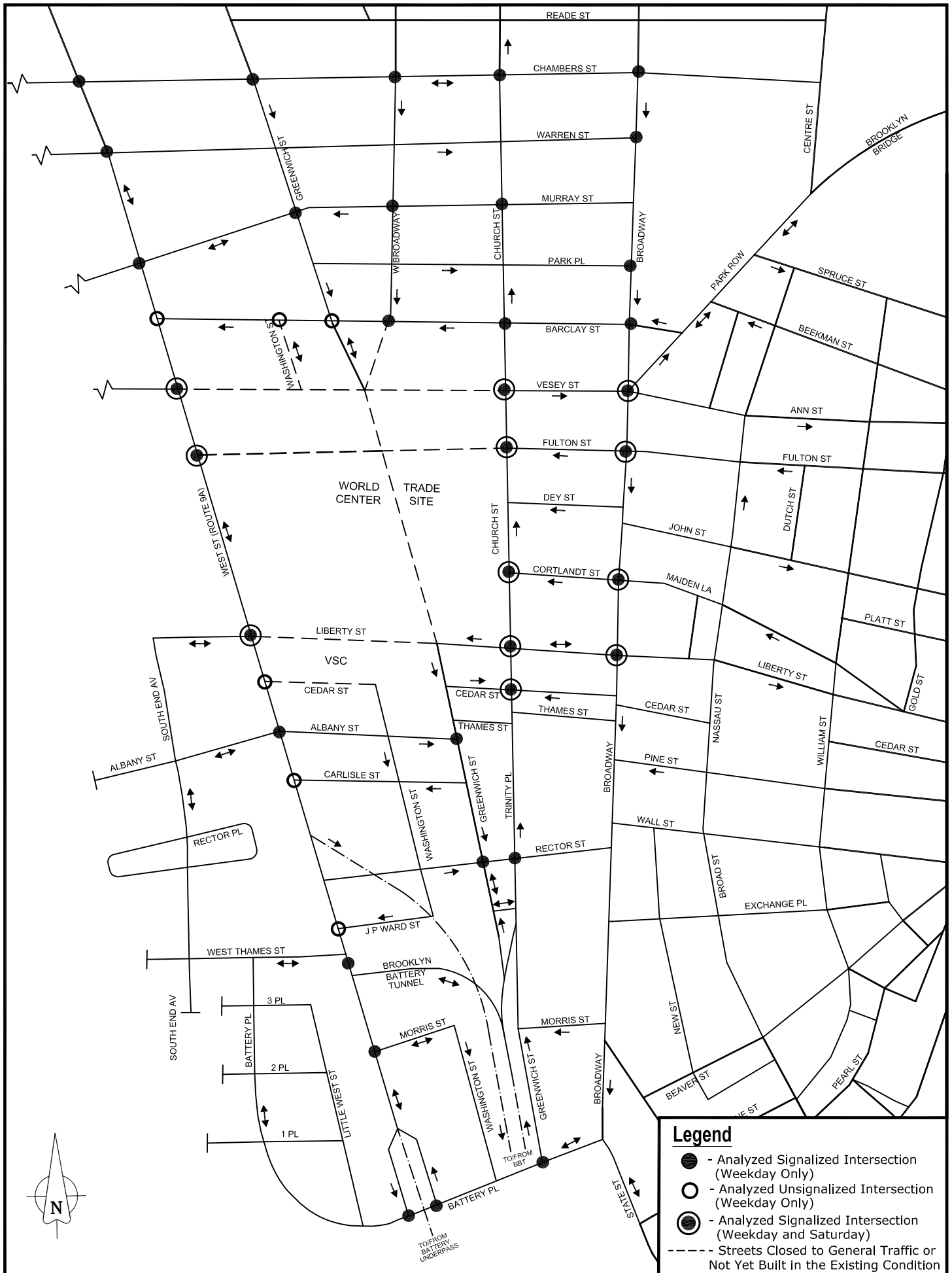
The EIS will provide a detailed traffic analysis focusing on those street network intersections where physical changes associated with the proposed Campus Security Plan would directly affect throughput capacity, as well as those intersections that are expected to experience the greatest net increase in diverted vehicle trips as a result of the Proposed Action. Locations where security measures might potentially result in vehicle queuing (i.e., at credentialing and screening zones) would also be a focus of the analysis.

With respect to Action-induced changes in traffic volumes, the specific intersections to be included in the traffic study area will be determined based upon 2012 CEQR Technical Manual criteria in consultation with NYCDOT. The traffic analysis will focus on three weekday peak periods when overall travel demand in the vicinity of the WTC site is expected to be greatest; specifically, the weekday AM and PM commuter peak hours as well as the weekday midday, a peak period for tour bus arrivals and lunchtime activity in the Financial District. Given the predominantly commercial nature of lower Manhattan in the vicinity of the WTC site as well as the development planned for the site, there is typically less traffic and overall travel demand in the area on weekends than on weekdays. However, it is recognized that there may also be somewhat less capacity on the street network as there tend to be fewer restrictions on parking and lower levels of enforcement on weekends than on weekdays. In addition, tourist activity is often greater on weekends, and tour buses and large groups of pedestrians associated with this activity can impede turning movements. Therefore, key intersections in the immediate vicinity of the WTC site will also be analyzed for a Saturday midday peak hour.

The EIS traffic analysis will make use of the Lower Manhattan Traffic Model (LMTM), a microsimulation model developed in the AIMSUN (version 6.1) platform that was built and calibrated to reflect conditions during the weekday AM and PM peak periods. The LMTM will be used for simulating traffic diversions as a result of modifications to the roadway network, including the opening of new street network linkages at the WTC site in the No-Action condition and the implementation of additional security restrictions under the Proposed Action. As the LMTM has not been built or calibrated for the weekday midday peak period, data from the 2012 count program will be used to create a weekday midday LMTM network for the WTC site study area. The study area and analyzed intersections will be the same for all three weekday periods. A more limited study area will be analyzed for the Saturday midday focusing on key intersections in the immediate vicinity of the WTC site that are the most likely to be affected by diverted trips and weekend demand from visitors to the National September 11th Memorial and Memorial Center.

The following outlines the anticipated scope of work for conducting the traffic impact analysis for the Proposed Action.

- In consultation with NYCDOT, select the specific peak hours for analysis and define a traffic study area consisting of intersections to be analyzed within the WTC site and along streets leading to and from the area. The traffic analysis in the EIS will focus on the weekday AM, midday and PM peak periods and the Saturday midday peak period, with the specific peak hour in each period to be determined based on automatic traffic recorder (ATR) count data and data from the Lower Manhattan Traffic Model and other sources. A total of 42 intersections (36 signalized and six unsignalized) will be analyzed for the weekday peak hours based on proposed physical changes to the street network and the numbers of redirected or diverted vehicle trips anticipated at each intersection as a result of the Proposed Action. These intersections are shown in **Figure 8-1** and include eight along Broadway, nine along Trinity Place/Church Street, six along Greenwich Street, 15 along West Street/Route 9A, three on West Broadway and one on Washington Street. A subset of these intersections (totaling 12 locations) was selected for analysis for the Saturday midday in consultation with NYCDOT.
- Conduct a count program for the traffic analysis locations that includes a mix of ATR machine counts and manual turning movement counts (TMCs), along with vehicle classification counts and travel time studies (speed runs using GPS loggers and floating car techniques) as support data for air quality and noise analyses. The manual turning movement and vehicle classification counts will be conducted concurrently with the ATR counts. A detailed plan for the traffic count program identifying ATR machine count locations as well as locations where 1-day or 3-day manual turning movement and vehicle classification counts will be performed will be submitted to NYCDOT for prior review. Where applicable, available information previously compiled for the LMTM and other recent studies in the vicinity of the WTC site will be utilized, as appropriate.



- Inventory physical data for each analyzed intersection, including street widths, number of traffic lanes and lane widths, pavement markings, turn prohibitions, bicycle routes and parking regulations. Signal phasing and timing data for each signalized intersection included in the analysis will be obtained from NYCDOT. Data for those intersections that are currently inaccessible due to construction or are on streets that have not yet been built will be obtained from NYCDOT, PANYNJ and/or other agencies. Operational measures such as street direction changes and special striping, lane channelization and signal timing that may currently be in effect due to construction at the WTC site and other locations (Chambers Street for example) will be identified.
- Determine existing traffic operating characteristics at each analyzed intersection including capacities, volume-to-capacity (v/c) ratios, average vehicle delays, and levels of service (LOS) per traffic movement, per intersection approach, and per overall intersection. The methodology of the 2012 Highway Capacity Manual (HCS+, Version 5.5) will be used for the analysis.
- Based on data from the 2004 *WTC Memorial and Redevelopment Plan FGEIS* and other recent studies, Census data, and standard references including the 2012 CEQR Technical Manual, estimate the travel demand generated by the current development program for the World Trade Center site as well as demand from other significant developments planned in the vicinity by the 2019 analysis year. This will include daily and hourly person trips, and a modal distribution to estimate trips by auto, taxi, walking and the various transit modes serving the WTC site (subway, PATH, bus and ferry). A truck trip generation forecast will also be prepared based on data from these sources and recent studies conducted as part of the planning process for redevelopment of the World Trade Center site.
- Compute future 2019 No-Action traffic volumes for the study area based on a background traffic growth rate of 0.25 percent per year for years one through five, and 0.125 percent per year for subsequent years as per 2012 CEQR Technical Manual criteria, along with demand from any other significant development projects expected to be completed in the future without the Proposed Action. Using data from the Lower Manhattan Traffic Model, reassign traffic to new roadway links that will be present on the WTC site in the 2019 No-Action condition (i.e., Greenwich, Fulton, Liberty and Vesey Streets). Security measures that would be implemented in the No-Action condition will be reflected in the network, as would mitigation measures accepted for all No-Action projects and other NYCDOT initiatives, as directed by NYCDOT. The elimination of temporary operational changes due to construction activity present in the Existing condition will also be reflected. Determine the No-Action v/c ratios, delays and levels of service for all analyzed intersections in the study area.
- Develop a 2019 With-Action street network reflecting implementation of the proposed Campus Security Plan. Action-related changes to the street network reflected in the analysis will include the installation of sally ports and barriers to restrict access to portions of West Broadway and Church, Fulton, Greenwich, Liberty, Vesey and Washington Streets; street direction changes; and the presence of curbside credentialing zones at various locations (as described in Section C, “Description of the Proposed Action”). Using data from the Lower Manhattan Traffic Model, weekday AM, midday and PM and Saturday midday peak hour traffic destined to and through the WTC site in 2019 will be reassigned to reflect the implementation of the proposed Campus Security Plan. Vehicles destined to and from the WTC site will be reassigned to the appropriate entry and exit portals based on type (i.e., autos, taxis/black cars, buses and trucks) and WTC origin/destination.
- The resulting v/c ratios, delays, and LOS at analyzed intersections will be determined for the With-Action condition, and significant adverse traffic impacts identified in accordance with 2012 CEQR Technical Manual criteria. Localized network changes and problematic locations may be further assessed with respect to queuing and signal timing optimization using SYNCHRO, VISSIM, or similar simulation.
- Detailed queuing analyses at the credentialing and screening zones will be performed to ensure vehicles waiting to enter the WTC site can be accommodated within these proposed zones. The potential for impacts on the local traffic network will be evaluated.

- If any significant adverse traffic impacts are identified, traffic improvements needed to mitigate these impacts will be developed and evaluated, where practicable. Development of these measures will be coordinated with NYCDOT and other agencies as necessary. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

## Transit

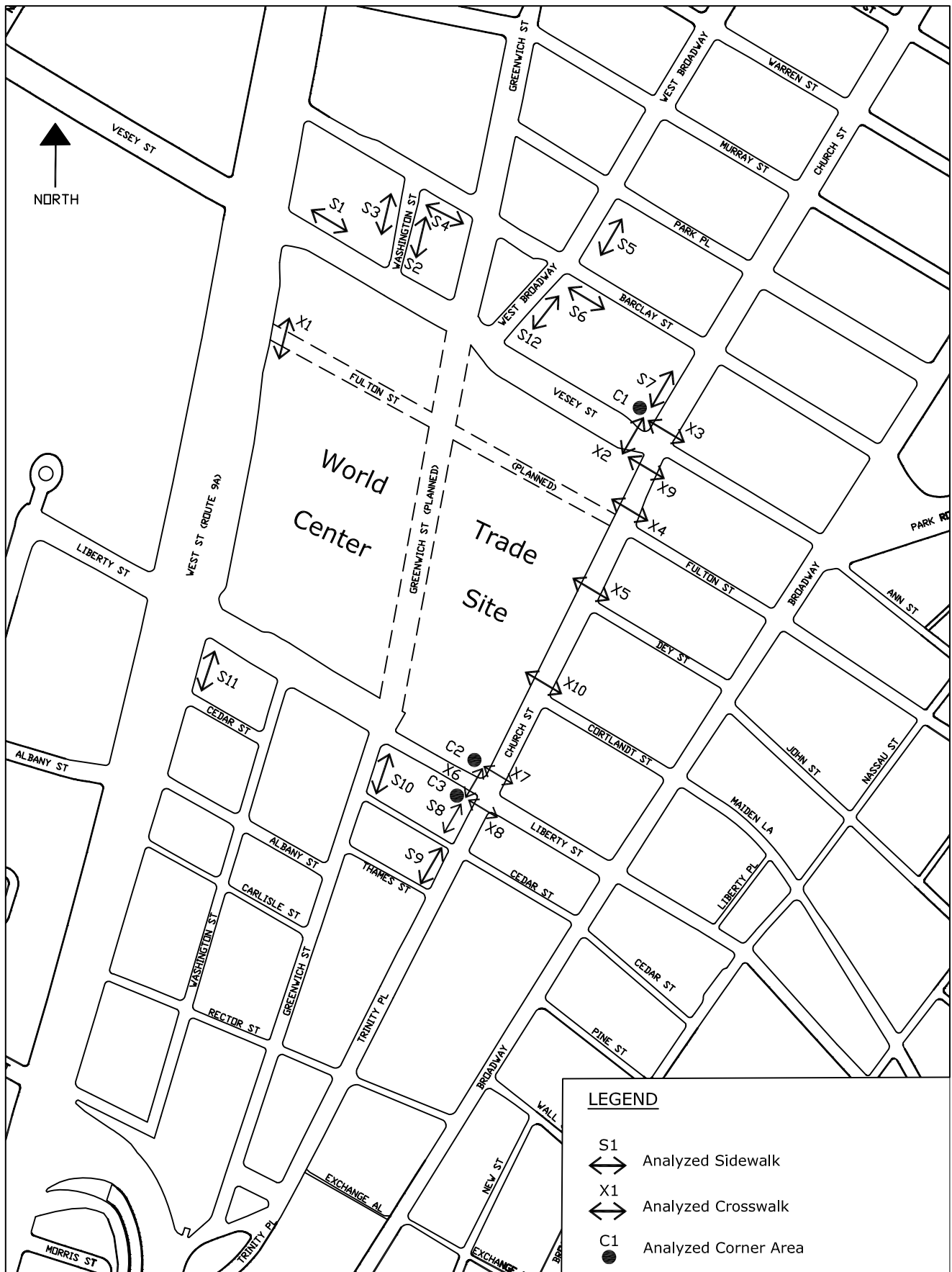
According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the 2012 CEQR Technical Manual, detailed transit analyses are generally not required if a Proposed Action is projected to result in fewer than 200 peak hour rail or bus transit trips. If a proposed action would result in 50 or more bus trips being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more trips at a single subway station or on a single subway line, a detailed bus or subway analysis would be warranted.

The proposed Campus Security Plan would not result in the development of new land uses that would generate additional demand on the transit systems serving the project site; although it is possible that the restrictions on vehicular access resulting from the Proposed Action may potentially induce changes in modal split (i.e., from the auto and taxi modes to transit) for persons en route to and from the World Trade Center and its environs. However, any potential increase in transit trips is expected to be relatively small in the context of the overall demand on the PATH system and the numerous subway, bus and ferry routes serving the site, and the numbers of such trips would be unlikely to exceed the CEQR Technical Manual analysis thresholds for either the rail or bus modes at any one rail transit station or bus route. As noted above, for this EIS the transportation analyses will take a conservative approach with respect to identifying potential significant adverse traffic impacts, and not assume any shift from vehicles to transit.

It should also be noted that much of the access between transit facilities and new and existing development in the vicinity of the WTC site would occur below-grade and would not be directly affected by physical changes to the surface street network associated with the proposed Campus Security Plan. However, some of these changes may potentially affect transit bus services operating along these streets. For example, one lane of Church Street, which is traversed by NYC Transit's M5 local bus service, approximately 21 MTA express bus routes and a number of other bus services operated by Academy, Suburban Transit and NJ Transit, would be incorporated into the secure area of the WTC site through the installation of a median. The effect of this and other proposed street network changes on bus service operations will therefore be assessed in the EIS.

## Pedestrians

According to 2012 CEQR Technical Manual criteria, projected pedestrian volume increases of less than 200 persons per hour at any pedestrian element (sidewalks, corner areas and crosswalks) would not typically be considered a significant impact, since that level of increase would not generally be noticeable and therefore would not require further analysis. Although the proposed Campus Security Plan would not directly generate new peak period pedestrian trips, it would alter pedestrian space at many locations as a result of the installation of personnel and equipment booths, static barriers and sidewalk extensions. The EIS will therefore include a quantitative pedestrian impact analysis. A total of 22 locations (12 sidewalks and 10 crosswalks) where pedestrian space would potentially be reduced due to installation of security equipment have been identified for analysis as shown in **Figure 8-2**. At each location where possible, pedestrian counts will be conducted and weekday AM, midday and PM peak hour levels of service determined for the existing conditions using approved HCM methodologies. Estimated future pedestrian volumes from the 2007 WTC PATH Terminal FEIS and other studies will be used to support analysis of future No-Action and With-Action conditions. Where significant adverse impacts to pedestrian flow are identified, measures to mitigate these impacts will be developed to the extent practicable.



## **Vehicular and Pedestrian Safety**

Traffic accidents involving injuries or fatalities to motor vehicle operators, pedestrians, and bicyclists will be researched and documented for key study area intersections, including those where substantial traffic diversions are likely to occur due to the Proposed Action. The potential for security measures and vehicle trip diversions associated with the proposed Campus Security Plan to have significant pedestrian and/or bicycle safety impacts will be.

## **Parking**

The off-street parking supply at the WTC site would total up to approximately 500 spaces for autos and 67 spaces for tour buses in a below-grade facility with access via the VSC. As there is relatively limited on-street parking in lower Manhattan, much of the WTC parking demand not accommodated on-site is expected to utilize off-street public parking facilities in the vicinity. As the proposed Campus Security Plan would not generate new parking demand nor directly affect the supply of off-street public parking, a quantitative analysis of off-street public parking conditions is not warranted for this EIS. The location, capacity and weekday AM and midday peak period utilization of off-street public parking facilities within one quarter-mile of the WTC site would, however, be documented to facilitate the assignment of auto trips to the study area street network for the No-Action and With-Action conditions. Among the parking facilities included would be the Battery Parking Garage to the south of the WTC site and facilities within Battery Park City to the west.

The Proposed Action would likely affect access to curbside space along streets where credentialing zones, sally ports and other project-related measures would be implemented. Existing curbside parking regulations will therefore be documented along streets within one quarter-mile of the WTC site to the extent practicable given construction activity and street closures in the area, and the Proposed Action's potential effects to curbside access and the supply of on-street parking will be assessed.

## **TASK 9. AIR QUALITY**

The Proposed Action would divert traffic (automobiles and trucks) from streets within and near the WTC site to other area roadways. Furthermore, screening procedures may result in idling at locations where vehicle checks would be undertaken. While this would be expected to benefit air quality for receptors within the WTC site, it may increase emissions in other areas of Lower Manhattan.

The number of project diverted vehicles will likely exceed the *CEQR Technical Manual* carbon monoxide (CO) analysis screening threshold of 170 vehicles in the peak hour at a number of locations within the study area. In addition, the projected number of diverted heavy-duty trucks or equivalent vehicles will likely exceed the applicable fine particulate matter (PM<sub>2.5</sub>) screening thresholds in the 2012 CEQR Technical Manual. Therefore, a microscale analysis of CO and PM mobile source emissions at affected intersections is necessary. In addition, an assessment of nitrogen dioxide (NO<sub>2</sub>) emissions from diverted vehicles will be performed based on available guidance. Detailed modeling analysis will focus on intersections along diversion routes and at other locations that could experience a significant increase in emissions due to delays and/or vehicle idling.

On a regional scale, the Proposed Action has some potential to increase vehicle miles traveled (VMT) as it would divert vehicle trips at various locations in Lower Manhattan. Relying on the projections of the Lower Manhattan travel demand model, the EIS will describe the potential impacts on regional air quality. It is not anticipated that a detailed regional assessment will be required, but any changes in emissions will be documented qualitatively based on the levels of diversions and the study area.

The following tasks will be performed as part of this task:



- Determine receptor locations for the CO and PM microscale analysis. Select critical locations in the study area based on data obtained from the traffic impact analysis.
- Gather existing air quality data. Collect and summarize existing ambient air quality data for the study area. Specifically, ambient air quality monitoring data published by the New York State Department of Environmental Conservation NYSDEC will be compiled for the analysis of existing and future conditions.
- Select dispersion model. Identify the appropriate dispersion model to be used in the microscale carbon monoxide analysis at each of the receptor sites previously identified. It is anticipated that the CAL3QHC dispersion model (Version 2) will be used for the CO microscale analysis and the CAL3QHCR model will be used for the PM analysis. For the CAL3QHCR analysis, five years of recent meteorological data from LaGuardia Airport and concurrent upper air data from Brookhaven, New York, will be used.
- Select emission calculation methodology and “worst-case” meteorological conditions. Compute vehicular cruise and idle emissions for the dispersion modeling using EPA’s MOBILE6.2 model. Conservative meteorological conditions to be assumed in the dispersion modeling are a 1 meter per second wind speed, Class D stability and a 0.79 persistence factor. In addition, the CEQR Technical Manual recommended winter temperature of 50 degrees Fahrenheit for the Borough of Manhattan will be used as input to the model.
- Calculate CO concentrations. Calculate maximum 1- and 8-hour CO concentrations for each mobile source microscale receptor site for existing conditions, the future conditions without the project and the future conditions with the project. Maximum 24-hour PM<sub>10</sub> and 24-hour and annual PM<sub>2.5</sub> concentrations will be determined for the future conditions without the project and the future conditions with the Proposed Action. CO and short-term PM concentrations will be determined for up to two peak periods. No field monitoring will be included as part of these analyses.
- An assessment of NO<sub>2</sub> emissions from project diverted vehicles will be performed based on available guidance.
- Conduct an analysis to determine whether federal conformity requirements under 40 CFR Part 93 are applicable to the Proposed Action.
- Compare existing and future levels with standards. Compare and determine compliance of future CO pollutant levels with and without the Preferred Alternative with the National Ambient Air Quality Standards (NAAQS). In addition, New York City’s CO *de minimis* criteria will be employed to determine the impacts of the Proposed Action. Predicted PM<sub>10</sub> concentrations with the Proposed Action will be compared to the NAAQS, and predicted project-generated increases of PM<sub>2.5</sub> will be compared with the CEQR criteria.

## **TASK 10. GREENHOUSE GAS ANALYSIS (GHG)**

The potential diversion of automobile and truck trips from potential street closures to through traffic in Lower Manhattan may result in a modest increase in vehicle miles of travel in the New York Region. A qualitative discussion of the impacts of the Proposed Action on energy consumption and greenhouse gas emissions will be presented, relying on recent guidance from the 2012 CEQR Technical Manual. The assessment will examine the consistency of the project with the PlaNYC greenhouse gas emission reduction goal.

## **TASK 11. NOISE**

The diversion of vehicle volumes to alternative streets has the potential to result in perceptible increases

in noise. Typically, a substantial increase is considered a doubling in passenger car equivalents (PCEs). The methodology outlined in the 2012 CEQR Technical Manual will be followed. Consistent with this methodology, the noise analysis will consist of the following:

- Identify sites for quantified noise analysis based on the potential changes in traffic predicted by the traffic model.
- 20-minute measurements at each receptor location during typical weekday AM, midday, PM, and nighttime peak periods. Hourly  $L_{eq}$ ,  $L_1$ ,  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$  values will be recorded.
- Use The Noise Model (TNM) to calculate existing ambient noise levels for the six receptor sites.
- Predict future no build and build ambient noise levels using the TNM at the six receptor sites.
- Evaluate changes in ambient noise consistent with CEQR criteria.
- Characterize changes in noise levels and determine whether the Proposed Action (and associated traffic diversions) would result in significant adverse impacts based on CEQR criteria.

## **TASK 12. PUBLIC HEALTH**

According to the *CEQR Technical Manual*, public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability and premature death; and reducing inequalities in health status. The goal of CEQR with respect to public health is to determine whether adverse impacts on public health may occur as a result of a proposed project, and if so, to identify measures to mitigate such effects.

According to the guidelines of the *CEQR Technical Manual*, a public health assessment may be warranted if an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, hazardous materials, or noise. If unmitigated significant adverse impacts are identified in any of these technical areas and the lead agency determines that a public health assessment is warranted, an analysis will be provided for the specific technical area or areas.

## **TASK 13. NEIGHBORHOOD CHARACTER**

The character of a neighborhood is established by numerous factors, including land use patterns, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other physical features that include traffic and pedestrian patterns, noise etc. The area surrounding the project site is composed of office, retail, residential, cultural, and institutional uses.

The Proposed Action has the potential to alter certain constituent elements of the affected area's neighborhood character, urban design, socioeconomic conditions, and traffic levels, and therefore an analysis will be provided in the EIS. As suggested by the *CEQR Technical Manual*, the study area for neighborhood character will be coterminous with the quarter-mile land use study area (refer to **Figure 2-1**). The chapter will summarize changes that can be expected in the character of the neighborhood in the future without the Proposed Action (No-Action condition) as well as describing the Proposed Action's impacts on neighborhood character.

Subtasks will include:

- Based on the other EIS chapters, describe the predominant factors that contribute to defining the character of the neighborhood, including land use, zoning, and public policy; socioeconomic conditions; historic and cultural resources; urban design and visual resources; transportation; and noise.

- Summarize changes in the character of the neighborhood that can be expected in the future No-Action condition based on planned development projects, public policy initiatives, and planned public improvements, as applicable.
- Summarize changes in the character of the neighborhood that can be expected in the future With-Action condition and compare to the future No-Action condition. A qualitative assessment will be presented, which will include a description of the potential effects of the Proposed Action on neighborhood character.

## **TASK 14. CONSTRUCTION IMPACTS**

Construction impacts, though temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through the area. Construction impacts are usually important when construction activity has the potential to affect transportation conditions, archaeological resources and the integrity of historic resources, community noise patterns, air quality conditions, and mitigation of hazardous materials. According to the *CEQR Technical Manual*, projects with overall construction periods lasting longer than two years and which are near to sensitive receptors should undergo a preliminary impact assessment. This chapter of the EIS will provide a preliminary impact assessment following the guidelines in the *CEQR Technical Manual*. The preliminary assessment will evaluate the duration and severity of the disruption or inconvenience to nearby sensitive receptors. If the preliminary assessments indicate the potential for a significant impact during construction, a detailed construction impact analysis will be undertaken and reported in the EIS in accordance with guidelines contained in the *CEQR Technical Manual*. Technical areas to be assessed include the following:

- **Transportation Systems.** This assessment will qualitatively consider temporary losses in lanes, sidewalks, and other transportation services on the adjacent streets during construction, and identify the increase in vehicle trips from construction workers and equipment. If warranted under CEQR guidelines, a travel demand forecast for the construction period will be prepared.
- **Air Quality.** The construction air quality impact section will contain a qualitative discussion of both mobile air source emissions from construction equipment and worker and delivery vehicles, and fugitive dust emissions. It will discuss measures to reduce impacts.
- **Noise Impacts.** The construction noise impact section will contain a qualitative discussion of noise from construction activity.
- **Hazardous Materials.** In coordination with the work performed for hazardous materials, above, summarize actions to be taken during project construction to limit exposure of construction workers to potential contaminants.
- **Socioeconomic Conditions.** The EIS will consider whether construction conditions as a result of the Proposed Action would affect access to existing businesses, the potential consequences concerning their continued viability, and the potential effects of their loss, if any, on the character of the area.
- **Historic and Cultural Resources:** In coordination with the work performed for historic resources above, identify the potential for construction-period impacts, and summarize actions to be taken during project construction to protect adjacent historic resources from potential construction impacts.
- **Neighborhood Character.** This assessment will consider potential impacts during the construction period to the character of the surrounding neighborhood.
- **Other Technical Areas.** As appropriate, discuss the other areas of environmental assessment, including Land Use, Zoning and Public Policy, Open Space, Socioeconomic Conditions, Community Facilities, and Infrastructure, for potential construction-related impacts.

## **TASK 15. ENVIRONMENTAL JUSTICE**

With respect to environmental justice, NEPA guidelines require that federal agencies consider and address adverse environmental effects of proposed federal projects on minority and low-income communities. Because of the possible involvement of several Federal departments or agencies in this action, environmental justice will be assessed in the EIS, in accordance with NEPA guidelines.

## **TASK 16. MITIGATION**

Where significant adverse project impacts have been identified in Tasks 2 through 15, measures to mitigate those impacts will be described and analyzed. These measures will be developed and coordinated with the responsible City/State agencies as necessary, including LPC, NYCDOT, NYCDEP, MTA, PANYNJ and NYSDOT. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

## **TASK 17. ALTERNATIVES**

The purpose of an alternatives section in an EIS is to examine feasible development options that would tend to reduce project-related impacts. The alternatives will be defined once the full extent of the Proposed Action's impacts has been identified. The alternatives will include the No-Action Alternative and may include one or more alternatives that reduce any identified significant adverse impacts. The alternatives analysis will be qualitative, except where significant adverse impacts of the Proposed Action have been identified. The level of analysis provided will depend on an assessment of project impacts determined by the analysis connected with the appropriate tasks.

## **TASK 18. SUMMARY EIS CHAPTERS**

In accordance with CEQR guidelines, the EIS will include the following three summary chapters, where appropriate to the Proposed Action:

- **Unavoidable Adverse Impacts** - which summarizes any significant adverse impacts that are unavoidable if the Proposed Action is implemented regardless of the mitigation employed (or if mitigation is not feasible).
- **Growth-Inducing Aspects of the Proposed Action** - which generally refer to "secondary" impacts of a Proposed Action that trigger further development.
- **Irreversible and Irrecoverable Commitments of Resources** - which summarizes the Proposed Action and its impacts in terms of the loss of environmental resources (loss of vegetation, use of fossil fuels and materials for construction, etc.), both in the immediate future and in the long term.

## **TASK 19. EXECUTIVE SUMMARY**

The executive summary will utilize relevant material from the body of the EIS to describe the Proposed Action, its environmental impacts, measures to mitigate those impacts, and alternatives to the Proposed Action. The executive summary will be written in enough detail to facilitate drafting of a notice of completion by the lead agency.