

**WORLD TRADE CENTER MEMORIAL AND REDEVELOPMENT PLAN
PROGRAMMATIC AGREEMENT**

Agreement, dated April 22, 2004, among the Advisory Council on Historic Preservation ("ACHP"), the New York State Historic Preservation Officer ("SHPO") and the Lower Manhattan Development Corporation ("LMDC") as a recipient of community development block grant assistance from the U.S. Department of Housing and Urban Development ("HUD").

WHEREAS, LMDC is responsible for planning and conducting environmental and historic reviews for a proposed undertaking known as the World Trade Center Memorial and Redevelopment Plan (the "Plan") for the World Trade Center site (the "WTC Site") and adjacent areas in New York City as shown on Exhibit A hereto (the WTC Site and such adjacent areas are referred to, collectively, as the "Project Site"); and

WHEREAS, The Port Authority of New York and New Jersey (the "Port Authority") is the owner of the WTC Site and has certain artifacts from the WTC Site in its custody and control, which it has catalogued and committed to continuing to maintain, as set forth in its letter, dated April 21, 2004, attached hereto as Exhibit H; and

WHEREAS, the Plan has been developed by LMDC, after extensive public input, to include at its heart a Memorial to honor the victims of September 11, 2001 and February 26, 1993 and commercial, retail, open space and other uses to revitalize Lower Manhattan while providing opportunities through the Memorial design for remembrance of the tragic events of September 11 and preservation of historic resources at the WTC Site; and

WHEREAS, as lead agency under the National Environmental Policy Act (“NEPA”) and the New York State Environmental Quality Review Act (“SEQRA”), LMDC has undertaken a comprehensive environmental review of the Plan, as set forth in LMDC’s Final Generic Environmental Impact Statement (“FGEIS”) dated April, 2004, which includes an assessment of the potential impacts of the Plan on historic resources both on the Project Site and in an extended Area of Potential Effect (“APE”) surrounding the Project Site, as shown in Exhibit B hereto and described in Exhibit E hereto; and

WHEREAS, LMDC has, in addition, undertaken a comprehensive review of the potential effects of the Plan on historic resources under Section 106 of the National Historic Preservation Act (“NHPA”) and, as part of that review, has engaged in both (1) a joint review with the Federal Transit Administration (“FTA”) and the Federal Highway Administration (“FHWA”) of the potential eligibility of the WTC Site for listing on the National Register of Historic Places (“National Register”) and (2) an extensive consultation process with approximately 60 consulting parties (identified in Exhibit C hereto) with respect to such eligibility and the potential effects of the Plan on historic properties; and

WHEREAS, after consulting with the SHPO and the consulting parties and taking into account and considering their respective comments on draft determinations of eligibility, LMDC determined, jointly with FTA and FHWA, that the WTC Site is eligible for listing on the National Register for the reasons set forth in the Coordinated Determination of National Register Eligibility for the WTC Site (“DOE”), dated March 31, 2004, a copy of which is attached as Exhibit D hereto; and

WHEREAS, LMDC has, as part of both its NEPA and Section 106 reviews, consulted with the SHPO and undertaken a comprehensive review of the National Register status of historic properties in the APE; and

WHEREAS, the purpose of this Agreement is to address any unanticipated or adverse effects on historic resources or properties that may occur as a result of the Plan's implementation and, in particular, to provide a further opportunity for the SHPO and the consulting parties to comment on plans for the Memorial and the Project Site as they are developed in order to avoid or minimize any potential for adverse effects to any historic resources on the Project Site;

NOW, THEREFORE, LMDC, the ACHP and the SHPO agree that implementation of the undertaking as covered by this Agreement shall proceed in accordance with the following stipulations to avoid, minimize or mitigate any adverse effects and satisfy LMDC's Section 106 responsibilities.

LMDC, in coordination with the Port Authority, will ensure that the following measures are carried out:

1. Project Site Documentation

LMDC will, within 60 days of the execution of this Agreement, consult with the National Park Service and submit existing documentation of the current appearance of the Project Site to the SHPO, the Historic American Engineering Record (HAER), the Historic American Building Survey (HABS) and/or the New York State Archives, as appropriate, to ensure that there is a permanent record of existing historic resources on the Project Site.

2. Adherence to the Treatment Plans in the FGEIS

LMDC shall ensure that all plans and contracts adhere to the treatment/no adverse effect plans set forth in the relevant portions of Chapter 5, "Historic Resources," Chapter 21, "Construction," and Chapter 22, "Mitigation Measures," of LMDC's FGEIS for the Plan in order to avoid or minimize adverse effects to those historic resources within the Project Site and the historic properties adjacent to (i.e., across the street from) the Project Site. Excerpts of the relevant sections of Chapters 5, 21 and 22 of the FGEIS are attached as Exhibit E hereto.

3. Design of the Memorial

(a) As part of the development of the plans for the Memorial, LMDC will preserve and provide for reasonable and appropriate access by Memorial visitors to (1) portions of the western slurry wall on the WTC Site and (2) truncated box beam column bases outlining portions of the lower "footprints" of the former Twin Towers at the WTC Site (collectively, the "Memorial Access Commitments").

(b) At such time as the Memorial plans have reached a design stage sufficient to permit reasonable review of architectural plans for the Memorial, LMDC will notify the SHPO and the consulting parties and furnish copies of schematic drawings relating to the Memorial Access Commitments and/or illustrative plans (which may include renderings) for the Memorial to the SHPO and any consulting party for review and comment. The review of the plans shall focus solely on the Memorial Access Commitments. LMDC will consult with the SHPO concerning such plans and subsequently convene a meeting, on no less than 10 days' notice, of the consulting parties for the purpose of affording the consulting parties an opportunity to share their views regarding the adherence of the preliminary plans to the Memorial Access Commitments. LMDC shall consider all such

comments in preparing final plans for the Memorial. It is understood, however, that, in considering comments related to the Memorial Access Commitments, LMDC shall not be required to consider modifications to its proposed activities for any other portion of the Plan except as may be otherwise required by this agreement. In view of relevant security considerations, such plans shall not be subject to further review under this Agreement once the review contemplated by this Stipulation 3(b) has been completed.

4. Artifact Review Process

(a) LMDC has committed to, and will, (1) develop a Memorial Center as part of the Plan; (2) establish a Memorial Center Advisory Committee that will assist in the review of suggestions from the consulting parties and other members of the public with respect to the installation or display at the Memorial Center of artifacts removed from the WTC Site; and (3) consult with the Port Authority to assure that the Port Authority safeguards all such artifacts that are in its custody and control, pending the final disposition of such artifacts in accordance with the rights of the respective owners thereof, and thereafter transfers any remaining items to LMDC or its designee for safekeeping or other appropriate disposition. All artifacts to be included in the Memorial or elsewhere on the WTC Site shall be evaluated by LMDC for their significance as part of the National Register eligible WTC Site.

(b) LMDC shall obtain from the Port Authority a copy of a complete inventory listing of all WTC artifacts in the Port Authority's custody and control as of July 1, 2004. LMDC shall request and obtain periodic updates of this inventory to include any additional artifacts that come into the Port Authority's custody and control. LMDC will consult with the Port Authority to share the inventory with the SHPO and each consulting party and provide an opportunity to comment regarding artifacts that may be installed in

or displayed at the Memorial Center and their potential significance to the WTC Site. LMDC will share the comments with the Memorial Center Advisory Committee, which shall assist LMDC in considering such comments, along with other relevant considerations (e.g., security, space, curation standards), with respect to the construction and operation of the Memorial Center.

5. Consideration of Impacts to Additional Remnants of The WTC

In preparing plans for the portions of the Plan on the WTC Site that would reasonably be expected to affect any of the Additional Remnants listed on Exhibit F hereto, LMDC and, where appropriate, the Port Authority will seek to minimize or mitigate, through reasonable and practicable steps, any potentially adverse effects to such Additional Remnants to the degree consistent with the overall Plan, sound engineering practice and relevant construction considerations. Such measures may include, for example, the relocation and display of Additional Remnants. At such time as the preliminary design plans permit a reasonable assessment of potential effects to such Additional Remnants, LMDC will furnish relevant preliminary design or illustrative plans and a summary of any proposed mitigation measures to the SHPO and the consulting parties. The SHPO and consulting parties shall be afforded no less than 30 days to submit comments to LMDC and, where appropriate, the Port Authority on the adequacy of such plans in minimizing or mitigating any such potential effects. LMDC and, where appropriate, the Port Authority will consider all such comments in developing its final mitigation plans. In view of relevant security considerations, such plans shall not be subject to further review under this Agreement once the review contemplated by this Stipulation 5 has been completed.

6. Treatment of Archeological Resources

Upon completion of the plans for further archaeological investigation and monitoring of the portions of the Project Site which have a high probability of containing archeological resources per preliminary studies, a map of which is attached as Exhibit G, LMDC will provide copies or summaries of the proposed plans to the SHPO and each consulting party for review and comment. The SHPO and consulting parties shall be afforded no less than 30 days to submit comments or recommendations to LMDC or the Port Authority, as appropriate, with respect to the adequacy of such plans. LMDC and, where appropriate, the Port Authority shall consider all such comments before finalizing the plans that will address, as appropriate, required surveys, National Register evaluation, monitoring procedures, treatment and mitigation, including data recovery.

7. Treatment of Unanticipated Adverse Effects or Unknown Historic Resources or Properties

(a) If, during project implementation, LMDC, the Port Authority, or any of their contractors discovers or identifies additional historic resources within the Project Site that may be adversely affected, or should there be any unanticipated adverse effects to historic resources on the Project Site or historic properties immediately adjacent to the Project Site beyond those referred to in the FGEIS or this Agreement, LMDC or the Port Authority shall promptly notify the SHPO and the ACHP and shall, in consultation with the SHPO, develop a treatment or mitigation plan for such resource or property or adverse effect condition and submit it to the ACHP and consulting parties as well as SHPO for comment within 15 days. The failure of the ACHP to comment within that time period shall constitute its concurrence with the proposed plan. LMDC shall consider comments before finalizing its treatment or mitigation plans. Under emergency conditions, the 15 day period may be shortened, with the ACHP's concurrence.

(b) LMDC and the Port Authority may proceed with all project activities while the treatment or mitigation plan is being developed and reviewed, but shall not take or permit actions that would adversely affect such resource or property during such period.

8. Coordination of Future Federally Funded Activities

In the event that the LMDC applies for other federal assistance to implement this undertaking, the federal funding agency may satisfy its Section 106 responsibilities by agreeing in writing to the terms of this Agreement and notifying the SHPO and ACHP accordingly.

9. Monitoring and Reporting Activities

LMDC will continue to provide relevant and up-to-date information related to its planning efforts on its website: www.RenewNYC.com. During project implementation, LMDC shall ensure that all monitoring plans and contracts adhere to the standards set forth in Chapters 5, 21 and 22 of the FGEIS. LMDC shall submit semi-annual reports to the SHPO and ACHP to summarize measures it has taken to comply with the terms of this Agreement. Reports shall be submitted in January and June of each year during the term of this Agreement or until the project is completed or the requirements of this Agreement are satisfied. The SHPO and the ACHP may monitor project activities carried out pursuant to this Agreement. The LMDC will cooperate with the SHPO and the ACHP in carrying out these monitoring and review responsibilities.

10. Dispute Resolution

In the event that the SHPO concludes, either on the basis of its own review or on the basis of an objection submitted to it by a consulting party or another member of the public, that LMDC has failed or is failing to carry out its obligations under this Agreement, the SHPO shall so advise LMDC and request it to consider taking

appropriate measures to remedy such failure. If, after considering the SHPO's views, LMDC determines that no such measures are warranted or appropriate, LMDC shall so advise the ACHP, which shall have 15 days to consider the matter and submit its recommendations, if any, to LMDC for further consideration. The failure of the ACHP to comment within that time period shall constitute its concurrence with LMDC's views on the disputed matter.

11. Terminating the Agreement

Any signatory to this Agreement may terminate it by providing 30 days' notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination and to clarify the procedures for future review of any outstanding activities subject to this Agreement. In the event of termination, LMDC shall either execute a new programmatic agreement per 36 CFR § 800.14(b) or request and consider the comments of the ACHP per 36 CFR § 800.7.

12. Duration of This Agreement

This Agreement constitutes a Programmatic Agreement as set forth in 36 CFR § 800.14(b) and will continue in full force for ten years following its execution or until such earlier time as it is terminated or the matters that are the subject of this Agreement have been performed in accordance with the provisions hereof.

13. Amendments

Should any of the signatories to this Agreement propose that it be amended, LMDC shall consult with the signatories in accordance with 36 CFR § 800.14(b)(3). Amendments shall be in writing and effective when approved in writing by all the signatories to this Agreement.

14. Successors

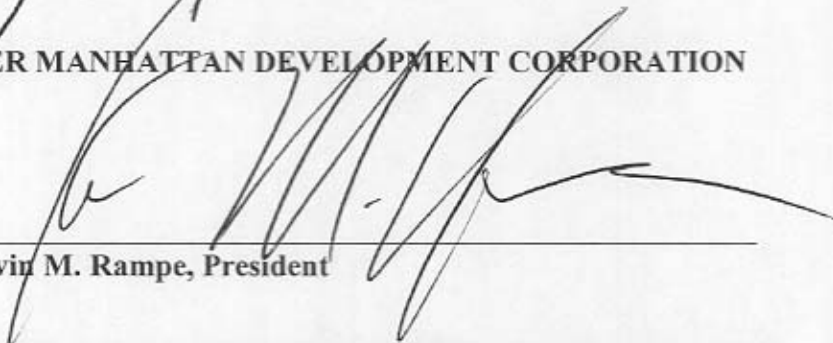
This Agreement shall be binding on and inure to the benefit of the parties' respective successors and assigns.

EXECUTION AND IMPLEMENTATION of this Agreement evidence that LMDC has afforded the ACHP a reasonable opportunity to comment on its Plan and that LMDC has taken into account the effects of the Plan on historic properties.

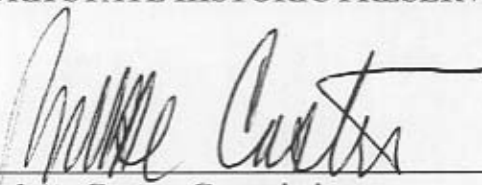
ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: 
John L. Nau, III, Chairman

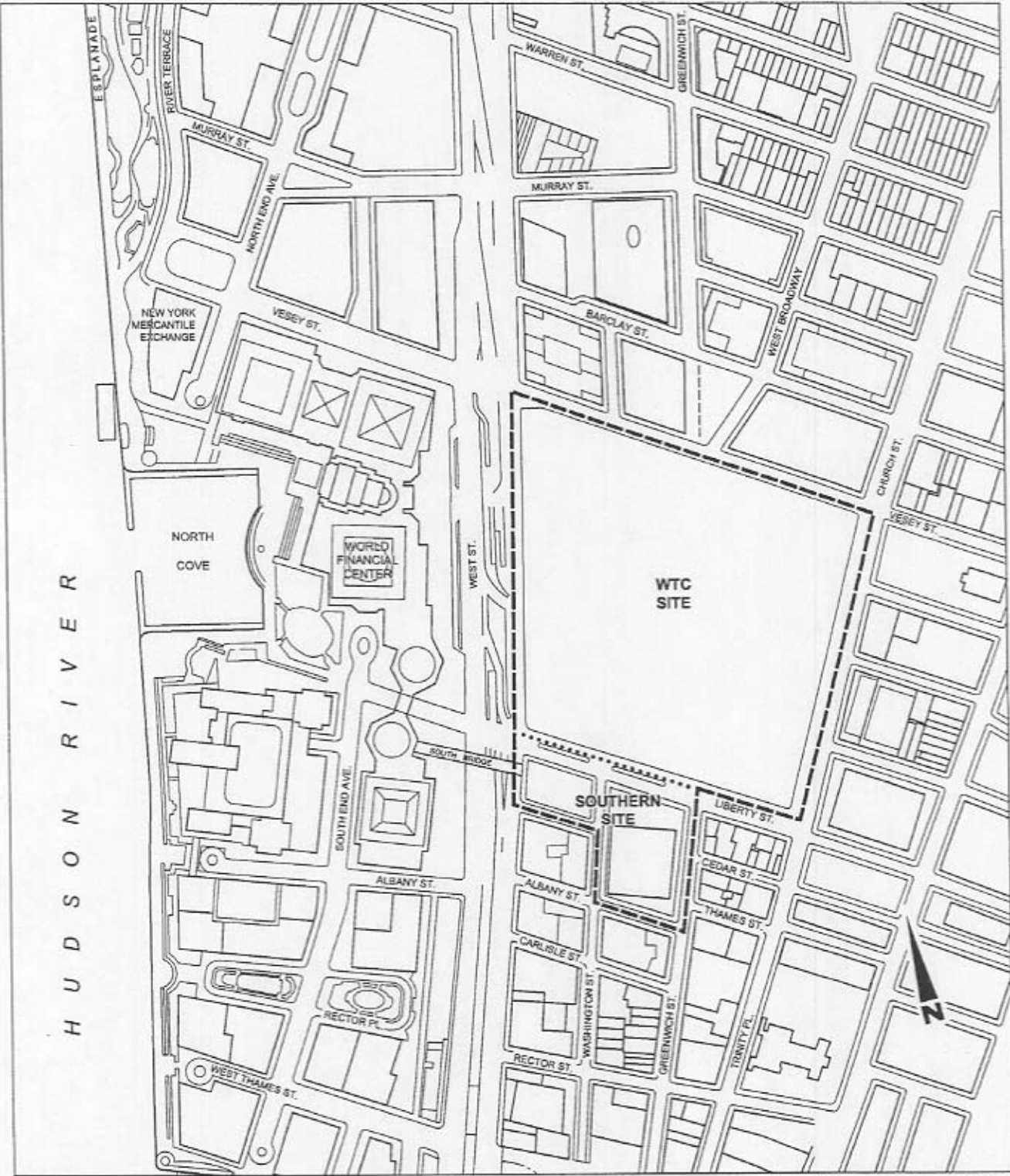
LOWER MANHATTAN DEVELOPMENT CORPORATION

By: 
Kevin M. Rampe, President

NEW YORK STATE HISTORIC PRESERVATION OFFICER

By: 
Bernadette Castro, Commissioner
New York State Office of Parks,
Recreation and Historic Preservation

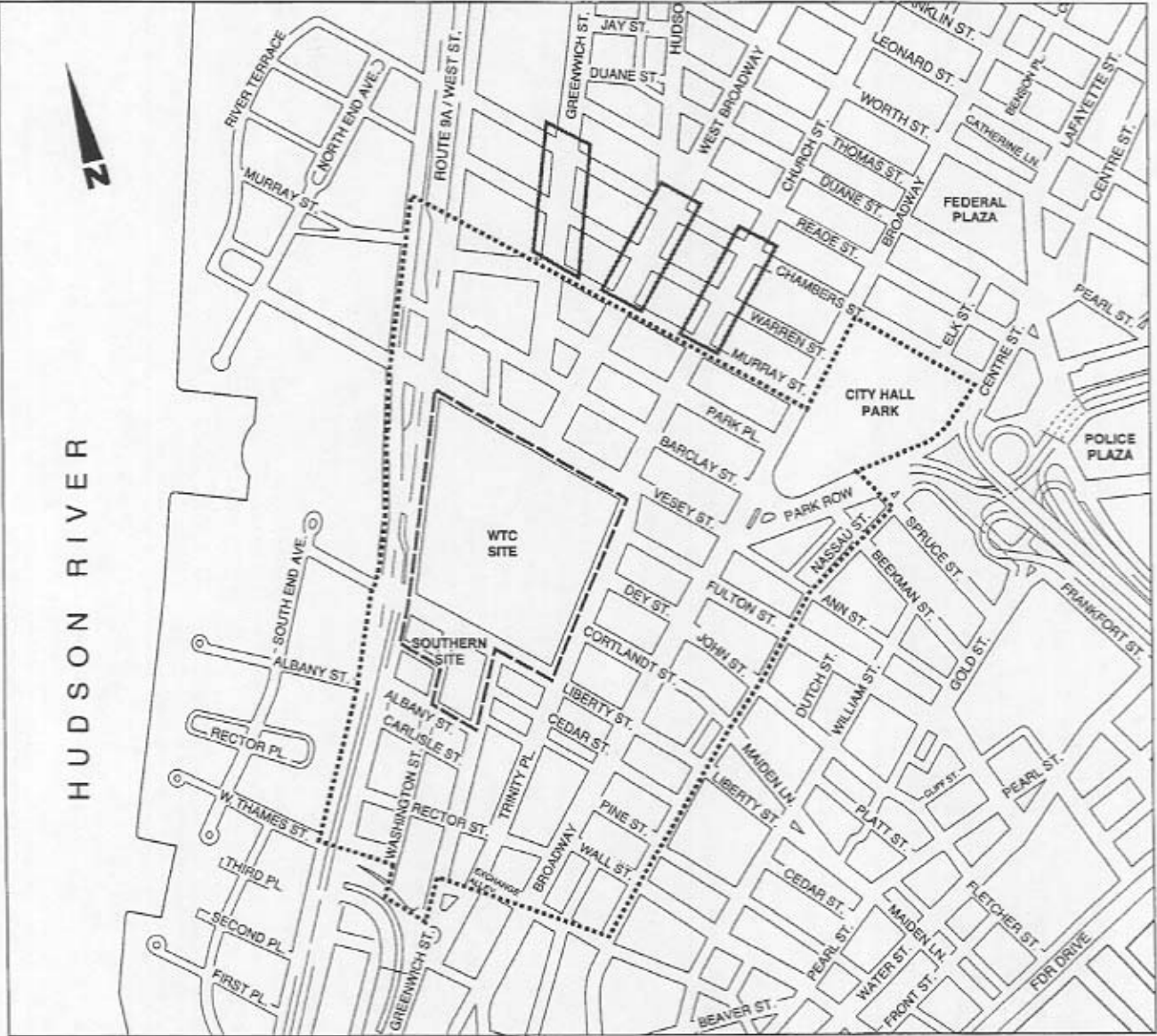
4.13.04



 Project Site

0 200 400 FEET
SCALE

4.13.04



- Project Site Boundary
- Primary Area of Potential Effect
- _____ Secondary Area of Potential Effect

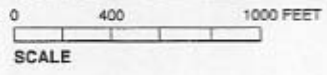


Exhibit C

List of Consulting Parties

Eric	Allison	American Planning Association -- NY Metro Chapter
Frederic	Bell	American Institute of Architects -- NY Chapter
Deborah	Bershad	New York City Art Commission
Laura	Blackman	Hudson River Park Trust
Douglas	Blais	Office of the Governor
Hon. Michael	Bloomberg	The City of New York
Amanda	Burden	New York City Department of City Planning
Jonathan	Cohen-Litant	Van Alen Institute
Megan	Cook	Verizon
Philip	Craft	Congresswoman Maloney's Office for United States Congress
Kate	Daly	Landmarks Preservation Commission
John	Dellaportas	Coalition to Save West Street
Bruce	Ehrmann	CB 1 Landmarks Committee
Marilyn	Fenollosa	National Trust for Historic Preservation
Mary	Fetchet	Voices of September 11th
Robin	Forst	Office of Councilmember Gerson
Monica	Gabrielle	Skyscraper Safety Campaign
Anthony	Gardner	Coalition of 9/11 Families
Raymond	Gastil	Van Alen Institute
Marilyn	Gaul	Coalition to Save West Street
Stephanie	Gelb	Battery Park City Authority
Michael	Gerrard	Silverstein Properties
Craig	Hall	WTC Residents' Coalition
Alex	Herrerra	New York Landmarks Conservancy
Scott	Heyl	Preservation League of New York State
Diane	Horning	WTC Families for a Proper Burial, Inc.
Kurt	Horning	WTC Families for a Proper Burial, Inc.
Lee	Ielpi	9/11 Widows and Victims Family Association
Monica	Iken	September's Mission
Richard	Kennedy	CB 1 WTC Redevelopment Committee
Joel	Klein	Coalition of 9/11 Families (Consultant)
Robert	Kornfeld	Historic Districts Council
Deborah	Lester	Speak Silver's Office in the New York State Assembly
Louise	LoPresti	
Ken	Lustbader	Lower Manhattan Emergency Preservation Fund (Consultant)
Edie	Lutnick	Cantor Fitzgerald Relief Fund
Jack	Lynch	9/11 Widows and Victims Family Association
Kevin	Madigan	St Peter's Church
Keith	Martin	New York State Department of Transportation
Elizabeth	Mattson	Senator Corzine's Office
Anna	Melman	Alliance for Downtown New York, Inc.

Elizabeth	Merritt	National Trust for Historic Preservation
Peter	Miller	WTC Survivor's Network
Tricia	Mire	Lower Manhattan Cultural Council
Sharon-Frances	Moore	Tribeca Organization
Patty	Noonan	Partnership for New York City
Jesi	Pezzuoli	R.dot (Rebuild Downtown Our Town)
Noah	Pfefferblit	Wall Street Rising
Sally	Regenhard	Skyscraper Safety Campaign
Tom	Roger	Families of September 11th
Linda	Rosenthal	Congressman Nadler's Office for United States Congress
Michael	Samuelian	New York City Department of City Planning
Frank	Sanchis	Municipal Art Society
George	Schira	Greek Orthodox in America (St. Nicholas)
Richard	Schmalz	New York State Department of Transportation
Helene Z.	Seeman	BPC United
Ninfa	Segarra	WTC Residents Coalition
Christopher	Shays	United States Congress
Daniel	Slippen	Pace University - Center for Downtown NY
David	Stanke	BPC United
Nikki	Stern	Families of September 11th
Tim	Stickelman	The Port Authority of New York and New Jersey
Petra	Todorovich	Regional Plan Association/Civic Alliance
Matt	Viggiano	Senator Connor's Office in the New York State Senate
Phyllis	Wahahrockah-Tasi	Delaware Nation
Winonah	Warren	Shinnecock Nation Cultural Center and Museum
Vicki	Weiner	Municipal Art Society
Kathy	Wylde	Partnership for New York City
Christopher	Zeppie	The Port Authority of New York and New Jersey

Exhibit D

March 30, 2004 Coordinated Determination of National Register Eligibility

(separately provided)

Excerpts of Relevant Sections of Chapters 5, 21, 22 of the FGEIS

EXCERPTS FROM CHAPTER 5 "HISTORIC RESOURCES" OF THE FGEIS

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5.1.2 CONCLUSIONS

This section summarizes the conclusions of the analysis that follows in this chapter. The Proposed Action was analyzed with respect to historic resources under two scenarios, the Pre-September 11 Scenario and the Current Conditions Scenario.

Potential effects to historic resources can include both direct physical effects and indirect contextual effects. Potential effects to archaeological resources would occur during excavation and below-grade construction activities. These effects would occur within the area where construction and excavation for the Proposed Action would occur. In order to identify historic properties and assess the potential effects of the proposed project, a study area or Area of Potential Effect (APE) was defined and an inventory of historic and architectural resources located in the APE was compiled in consultation with the New York State Historic Preservation Officer (SHPO).

The Proposed Action would memorialize the tragic events of September 11 while returning the commercial, open space and other uses that existed on the Project Site on that date and reintroducing streets that pre-existed the WTC. The Memorial has been designed to reflect the former presence of the Twin Towers, and to provide access to portions of the west slurry wall and box-beam column bases outlining portions of the perimeters of the former Twin Towers. The Memorial Center would be a museum that would exhibit or incorporate significant artifacts from the former WTC.

Under either the Pre-September 11 or Current Conditions Scenario, the Proposed Action is not expected to have significant adverse impacts on historic resources on the Project Site—namely the WTC Site itself—or elsewhere in the APE. The Proposed Action would, however, have the potential to adversely affect some of the remaining remnants at the WTC Site. In implementing the Proposed Action, LMDC and the Port Authority would undertake appropriate efforts to avoid, minimize or mitigate any such adverse effects or any unexpected adverse effects on other historic resources. These efforts would include both the Environmental Performance Commitments described in Chapter 21, "Construction," and the measures described in Chapter 22, "Mitigation," and the Programmatic Agreement under consideration referred to below. Overall, the Proposed Action would serve to enhance the historic significance of the WTC Site and its role in the city's and the nation's consciousness.

PRE-SEPTEMBER 11 SCENARIO

As described in greater detail below, it is not expected that the Proposed Action would have any significant adverse impact on historic resources.

2009

Archaeological Resources

All below-grade construction activities would have occurred by 2009, with the possible exception of the foundation of Tower 5. Therefore, this phase is analyzed for potential effects to archaeological resources. Construction of the former Twin Towers and associated excavations on the west side of the WTC Site to create the existing bathtub have limited the potential for significant archaeological resources to exist in this area. However, the north and south portions of the WTC Site east of the No. 1/9 IRT subway and portions of the Southern Site may be potentially sensitive for archaeological resources, such as shaft features and wharf and/or cribbing features. In order to identify any potential impacts to archaeological resources, Phase IB investigations are recommended in those areas.

Architectural Resources

In the Pre-September 11 Scenario, the SHPO had determined that the WTC was not eligible for listing on the National Register, and no other agency had identified any historic resources on the Project Site. Therefore, absent the events of September 11, redevelopment would have no impact on historic resources on the Project Site. Fulton Street and Greenwich Street would be extended through the WTC Site, restoring the street linkage between historic resources to the north and south of the WTC Site. This would be particularly beneficial to resources south of Liberty Street that were isolated by the superblock of the WTC and the lack of view corridors through the WTC Site. The WTC Site would be divided at grade level into four separate blocks, instead of one large superblock, thus restoring part of the street grid and allowing development to relate better to the neighboring historic resources.

Lower Manhattan, specifically the WTC Site, has historically been developed with technologically advanced buildings—such as the Hudson and Manhattan (H&M) Terminal and the Twin Towers—that were pioneering achievements for their time of construction. The Proposed Action would continue this tradition of building evolution and design and would introduce a new and more modern skyscraper, Freedom Tower, to the Project Site and surrounding neighborhood.

The Proposed Action would shift the bulk of the buildings away from the footprints of the Twin Towers located in the southwest quadrant of the site, altering views of adjacent historic resources to the north of the Project Site. Freedom Tower would rise immediately south of the Barclay-Vesey Building, blocking views of the structure from the southwest that were previously afforded by the lower-rise 6 WTC. Although the Proposed Action would in these respects shift the bulk of development as compared to pre-September 11 conditions, this change would not be an adverse effect as the Project Site and immediate study area have historically been developed with tall and modern structures in close proximity to historic buildings.

On the other hand, the open spaces that would be part of the Proposed Action would benefit certain historic resources. Liberty Park would greatly improve the setting of 90

West Street and the Beard Building (125 Cedar Street). It would also generally improve the neighborhood for all the other historic resources south of the Project Site. Farther north on the WTC Site, Wedge of Light Plaza would link to St. Paul's Chapel and historic resources east of the WTC Site.

Because the proposed construction would take place within 90 feet of historic structures, adherence to Construction Protection Plans would be required to avoid potential damage to architectural resources located near the Project Site. (See Chapter 21, "Construction.") The increased traffic levels expected as a result of the Proposed Action are expected to have some effect on the setting of historic resources, but not to a degree that they would constitute an adverse effect. This is primarily because most of the traffic impacts would occur on streets already burdened with high levels of traffic, thus historic resources located in these areas have already existed in an urban environment with well-traveled city streets.

2015

The full development of the Proposed Action would further alter the Project Site. However, since there would have been no historic resources on the site, there would have been no impacts to on-site historic resources.

In addition to the impacts on off-site resources described in 2009, completion of the four other office towers would increase bulk along Church Street on the WTC Site and on the south end of the Southern Site. The proposed office tower and hotel on the northeast quadrant would face directly into the Federal Office Building/U.S. Post Office and block views of it from the southeast that were formerly afforded by the much lower 5 WTC building. The proposed office building south of the permanent WTC PATH Terminal entrance would tower over the former East River Savings Bank. Finally the tower at the southeast corner of the WTC Site would be taller and have a greater bulk than 4 WTC, altering the context of the Beard Building and 114-118 Liberty Street. Again this change would not be an adverse effect as the study area has historically been developed with tall, modern structures among smaller-scaled historic buildings.

As described for conditions in 2009, it is not expected that the increased traffic levels would have an adverse effect on historic resources.

CURRENT CONDITIONS SCENARIO

As described in greater detail below, it is not expected that the Proposed Action would have any significant adverse impact on historic resources.

2009

Archaeological Resources

All below-grade construction activities would have occurred by 2009, except, possibly, the foundation of Tower 5. Therefore, this phase is analyzed for potential effects to archaeological resources. As described above under the Pre-September 11 Scenario, the north and south portions of the WTC Site east of the No. 1/9 IRT subway and portions of the Southern Site may be potentially sensitive for archaeological resources, such as shaft features and wharf and/or cribbing features. In order to identify any potential impacts to archaeological resources, Phase IB investigations are recommended in those areas.

Architectural Resources

Based on the events of September 11, the WTC Site has been found eligible for listing on the National Register. Although the eligibility of the site does not depend on existing remnants of the prior structures, the Proposed Action would have an adverse effect on some of these remnants. LMDC will consult with SHPO, the Port Authority, and Silverstein Properties in order to minimize or mitigate such effects. LMDC is also considering a Programmatic Agreement with the Advisory Council on Historic Preservation (ACHP) and SHPO that would include additional consultation with the consulting parties who participated in the Section 106 process.

By 2009, Fulton Street and Greenwich Street would be extended through the WTC Site, restoring the street linkage between historic resources to the north and south of the WTC Site. This would be particularly beneficial to resources south of Liberty Street that are now isolated by the large construction site that remains on the WTC Site.

Although the Proposed Action would change the study area through the addition of tall and modern towers, this is not expected to have an adverse effect. The Project Site and immediate study area have historically been developed with tall and modern structures in close proximity to low-rise and high-rise historic buildings. In addition, the Proposed Action would be in keeping with the character of the Project Site and surrounding area, which were located in a densely developed urban setting.

New office towers would be constructed on the Project Site that would re-introduce tall, modern structures to this portion of the Lower Manhattan skyline. The towers of the Proposed Action would block views across the now largely open WTC Site to historic resources on the other side. In particular, views of the Barclay-Vesey Building and the Federal Office Building/U.S. Post Office from Church and Liberty Streets, and from the Winter Garden to St. Paul's Chapel and the former East River Savings Bank would be blocked. Views from the corner of Vesey and Church Streets and along Church Street to the Beard Building and 90 West Street would be blocked. The Proposed Action would create a series of structures with retail frontage along the north and east sides of the WTC Site. Freedom Tower would rise immediately south of the Barclay-Vesey Building. On the other hand, the open spaces that would be part of the Proposed Action would benefit certain historic resources. Liberty Park would greatly improve the setting of 90 West Street and the Beard Building. It would also generally improve the neighborhood for all the other historic resources south of the Project Site. Farther north on the WTC Site, Wedge of Light Plaza would link to St. Paul's Chapel and historic resources east of the WTC Site.

Due to the proximity of historic resources, adherence to Construction Protection Plans would be required to avoid potential construction period damage to architectural resources.

The increased traffic levels expected as a result of the Proposed Action are expected to have some effect on the setting of historic resources, but not to a degree that they would constitute an adverse effect. This is primarily because most of the traffic impacts would occur on streets already burdened with high levels of traffic, thus historic resources located in these areas have already existed in an urban environment with well-traveled city streets.

2015

In addition to the impacts on off-site resources described in 2009, completion of the four other office towers would increase bulk along Church Street on the WTC Site and on the south end of the Southern Site. The proposed office tower and hotel on the northeast quadrant would face directly into the Federal Office Building/U.S. Post Office. The proposed office building south of the permanent WTC PATH Terminal entrance would tower over the former East River Savings Bank. Finally the tower at the southeast corner of the WTC Site would alter the context of the Beard Building and 114-118 Liberty Street. Overall, this change would not be an adverse effect, as the study area has historically been developed with tall, modern structures among smaller-scaled historic buildings.

As described for conditions in 2009, it is not expected that the increased traffic levels would have an adverse effect on historic resources.

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5.5.3 PROBABLE IMPACTS OF THE PROPOSED ACTION 2009— CURRENT CONDITIONS SCENARIO

ARCHAEOLOGICAL RESOURCES

The northeast and southeast corners of the WTC Site, as well as portions of the Southern Site, were found to be potentially sensitive for archaeological resources. Phase IB investigations would be conducted prior to project construction to document any potential resources. These investigations would be developed in consultation with SHPO and LPC.

ARCHITECTURAL RESOURCES

Project Site

By 2009 with the Proposed Action, Fulton and Greenwich Streets would run through the WTC Site and Freedom Tower would rise in the northwest quadrant. A proposed performing arts center would be located east of the Freedom Tower. The Memorial, the Memorial Center, September 11 Place, and other cultural institutions would occupy the southwest quadrant. Wedge of Light Plaza would occupy a portion of the northeast and southeast quadrants. The PATH Plaza would be located in the southeast quadrant. By 2009, the retail bases of three office buildings east of Greenwich Street would be complete. Liberty Park and a below-grade bus parking facility would be complete in the area south of Liberty Street.

The centerpiece of the Proposed Action is the creation of a Memorial to remember the victims of September 11, 2001 and February 26, 1993 and to record the events of September 11, which have changed our lives. The Memorial would be set in a context that provides a quiet and respectful setting for remembrance and contemplation. LMDC conducted the World Trade Center Site Memorial Competition pursuant to detailed Memorial Competition Guidelines, including diagrams of Libeskind's Memory Foundations design and the Memorial Mission Statement and Program. The Memorial Competition jury recently announced its selection of the design concept "Reflecting Absence" by Michael Arad and Peter Walker from 5,200 other entries (including seven

other finalists). This concept is being refined in order to accomplish the principles set forth in the Memorial Mission Statement and Program.

The Proposed Action would build up an approximately 4.87-acre area set aside for the Memorial from bedrock to 30 feet below grade in order to stabilize the slurry walls. The Memorial would be constructed in this area and at grade. It would make visible each of the 1-acre areas occupied by the Twin Towers, allow access to a portion of those footprints at bedrock and would keep exposed a portion of the west slurry wall, including a section to bedrock. In addition to the recognition of each victim, the unidentified human remains will be interred at a designated area within the Memorial. Visitors from around the world are expected to come to the WTC Site to learn about the events of September 11, 2001, and February 26, 1993, and to remember those who died and those whose lives were changed forever.

It is not anticipated that the Proposed Action would have any significant adverse impact on the WTC Site. The proposed Memorial and Memorial Center would recognize the history of September 11 and would be constructed around two large voids and other features that would represent the former location of the Twin Towers. The openness of the site plan for the Memorial would recall the openness of the WTC Site as it now exists after the recovery efforts and the openness of the Austin J. Tobin Plaza at the center of the WTC before September 11. The size and the location of the Memorial reflect LMDC's commitment from the very beginning of its planning efforts to leave open the space at grade level where the Twin Towers once stood.

The surviving column bases that outline the space where the Twin Towers stood would remain. The Proposed Action would also allow access to a portion of the west slurry wall. A special facility would be created to preserve the more than 12,000 human remains of victims of the WTC attacks that the Office of the Chief Medical Examiner has not been able to identify. The return of these human remains to rest at the WTC Site where these innocent individuals died would contribute to the feeling of the WTC Site's historic significance.

In implementing the Proposed Action, LMDC and the Port Authority would undertake appropriate efforts to avoid, minimize, or mitigate any such adverse effects or any unexpected adverse effects on other historic resources. These efforts would include both the Environmental Performance Commitments described in Chapter 21, "Construction," and the measures described in Chapter 22, "Mitigation," and a Programmatic Agreement under consideration with ACHP and SHPO. Before construction activities begin, LMDC will submit existing documentation of the current appearance of the WTC Site to SHPO, the New York State Archives, and other organizations as appropriate, to ensure that there is a permanent record of existing historic resources on the site. In developing its plans for the WTC Site, LMDC will also provide for appropriate access to portions of the west slurry wall on the WTC Site and the box-beam column bases outlining portions of the footprints of the former Twin Towers (collectively, the Memorial Access Commitments). LMDC has committed to develop a Memorial Center, establish a Memorial Center Advisory Committee that will review public suggestions and advise LMDC with respect to the installation or display at the Memorial Center of artifacts removed from the WTC Site, and consult with the Port Authority, which is safeguarding all such artifacts that are in its custody and control. The draft Programmatic Agreement (see Appendix K.7)

addresses these specific commitments relating to the Memorial Access Commitments, treatment of remnants on the WTC Site, consideration of artifacts removed from the site, and any potential adverse effects on historic resources. Overall, the Proposed Action would serve to enhance the historic significance of the WTC Site and its role in the city's and the nation's consciousness.

Primary Area of Potential Effect

Ground-Borne Vibrations

Several known and potential historic resources are located within 90 feet of the Project Site. Construction of the Proposed Action has the potential to cause damage to these buildings from ground-borne vibrations and dewatering. Specifically, historic buildings or sites located within 90 feet of the Project Site include the Barclay-Vesey Building at 140 West Street, the Federal Office Building/U.S. Post Office at 90 Church Street, 30 Vesey Street, St. Paul's Church Cemetery at Church Street between Vesey and Fulton Streets, the former East River Savings Bank at 26 Cortlandt Street, the Beard Building at 125 Cedar Street, 114-118 Liberty Street, the Western Electric Company Factory at 125 Greenwich Street, the American Stock Exchange at 86 Trinity Place, the Hazen Building at 120 Greenwich Street, 123 Washington Street, and 90 West Street. In addition there are potential historic resources at 106, 110, and 112 Liberty Street; 130 Cedar Street; and, 137-139 Greenwich Street. These resources survived the initial clearance of the WTC Site and the construction of the WTC, and also survived the destruction of the site on September 11. (Other historic resources are more distant from the Project Site and are not within the area that is expected to be affected by project construction.)

To avoid any potential adverse effects to historic resources, a Construction Protection Plan(s) would be developed in consultation with the SHPO and implemented before commencement of any excavation or construction. The Construction Protection Plan(s) would consist of an overall plan(s) of protection and avoidance of structural and architectural damage for all the potentially affected historic resources. Implementation of these plans would avoid or minimize the potential for adverse effects to historic resources during construction.

The Construction Protection Plans would be based on the requirements laid out in the "New York City Department of Buildings Technical Policy and Procedure Notice (PPN) #10/88," concerning procedures for avoidance of damage to historic structures from adjacent construction (see Chapter 21, "Construction" for more information). The PPN defines an adjacent historic structure as being contiguous to or within a lateral distance of 90 feet from a lot under development or alteration. In addition, EPCs have been made by LMDC to avoid or minimize any adverse effects on historic resources during construction (see Chapter 21).

Contextual and Visual Effects

The Proposed Action would extend Fulton and Greenwich Streets through the WTC Site, restoring the street linkage between historic resources to the north and south of the WTC Site. New office towers would be constructed on the Project Site that would re-introduce tall, modern structures to this portion of the Lower Manhattan skyline. By 2009, Freedom Tower would rise immediately south of the Barclay-Vesey Building, blocking views of

the structure from the southwest. However, views of this building would be available from other locations within the study area.

Additional open spaces would be part of the Proposed Action and would benefit certain historic resources. Liberty Park would greatly improve the setting of 90 West Street and the Beard Building. It would also generally improve the neighborhood for all the other historic resources south of the Project Site. Farther north on the WTC Site, Wedge of Light Plaza would link to St. Paul's Chapel and historic resources east of the WTC Site.

In terms of contextual or visual impacts, the study area is developed with a mix of historic and modern structures that range in height from one to 60 stories. The size and architectural styles of these buildings vary greatly, reflecting the architectural styles of the eras in which they were designed and constructed. The built fabric of Lower Manhattan is already composed of historic structures near more modern structures, where many streets contain a mixture of historic structures in immediate proximity to contemporary glass and metal structures. Thus, the Proposed Action would continue the existing trend of modern buildings juxtaposed against the historic fabric of Lower Manhattan.

As described earlier, the historic context of the study area was dramatically changed when the 16-acre site was cleared for the construction of the WTC. Thus, the proposed development would not alter the historic context of the surrounding area, as this context was significantly altered with the completion of the WTC and subsequent modern office buildings that were erected in the following decades. Overall, the Proposed Action is not expected to have any adverse contextual or visual effects on any known or potential historic resources in the area surrounding the WTC Site.

Secondary Area of Potential Effect

Traffic-Related Effects

The increased traffic levels expected as a result of the Proposed Action are expected to have some effect on the setting of historic resources, but not to a degree that they would be expected to have an adverse effect. The increased traffic is not expected to alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. This is primarily because most of the traffic impacts would occur on streets already burdened with high levels of traffic, thus historic resources located in these areas have already existed in an urban environment with well-traveled city streets.

5.5.4 FUTURE WITHOUT THE PROPOSED ACTION 2015—CURRENT CONDITIONS SCENARIO

ARCHAEOLOGICAL RESOURCES

On the Southern Site, construction of two office towers at 130 and 140 Liberty Street could impact any potential archaeological resources that exist.

ARCHITECTURAL RESOURCES

Project Site

In 2015 without the Proposed Action, it is assumed that the WTC Site will continue to remain largely vacant, with only the permanent WTC PATH Terminal on site and the No.

1/9 IRT subway lines crossing the site. On the Southern Site, it is assumed that two office towers would be developed at 130 and 140 Liberty Street. Construction of these towers could potentially affect adjacent historic resources, including 90 West Street.

Primary Area of Potential Effect

North of WTC Site

No specific potential projects have been identified for the North of WTC Site subarea in the 2009–2015 timeframe.

Broadway Corridor

Potential future development in the Broadway Corridor may include residential conversions at 115 Nassau Street and 3-9 Beekman Street (NYCL).

Greenwich South Corridor

New York City's Vision for a 21st Century Lower Manhattan calls for the creation of a park, Greenwich Square, over the Brooklyn Battery Tunnel ramps, and for the area to become a center of new residential uses that may renovate and occupy some of the historic structures. There are a number of historic resources in this area that might be altered in use or context.

Secondary Area of Potential Effect

No specific projects in the secondary APE were identified for this time frame. However, it is likely that residential renovation and reuse will continue to occur in historic buildings and districts in Tribeca. To the extent that these resources are not NYCLs or NYCHDs and if there is no federal or state action involved, they may be inappropriately altered or even demolished.

5.5.5 PROBABLE IMPACTS OF THE PROPOSED ACTION 2015— CURRENT CONDITIONS SCENARIO

ARCHAEOLOGICAL RESOURCES

As all construction activities that could potentially impact archaeological resources would be complete by 2009, there would be no potential for adverse effects to archaeological resources in 2015.

ARCHITECTURAL RESOURCES

Project Site

By 2015, it is assumed that the full program for the Project Site would be developed, with the completion of the three towers on the east side of the WTC Site and a fifth tower south of Liberty Street. A 65-story office building (Tower 2) and a 25-story hotel would be completed in the northeast quadrant. In the southeast quadrant, a 62-story office building (Tower 3) and a 58-story office building (Tower 4) would be completed. A 57-story office building (Tower 5) would be completed south of Liberty Street.

As described in "Probable Impacts of the Proposed Action 2009" and in section 5.2.1, it is not anticipated that the Proposed Action would have an adverse effect on the WTC Site.

Primary Area of Potential Effect

The towers of the Proposed Action would re-introduce tall, modern structures to this portion of the Lower Manhattan skyline. These towers would block views across the largely vacant WTC Site to historic resources on the other side. Views of the Barclay-Vesey Building and the Federal Office Building/U.S. Post Office from Church and Liberty Streets would be blocked. Views from the Winter Garden to St. Paul's Chapel and the Former East River Savings Bank would be blocked. Views from the corner of Vesey and Church Streets and along Church Street to the Beard Building and 90 West Street would be blocked. New structures would create a high-rise wall along the north and east sides of the WTC Site. The proposed office tower and hotel on the northeast quadrant would face directly into the Federal Office Building/U.S. Post Office. The proposed office building south of the permanent WTC PATH Terminal entrance would tower over the former East River Savings Bank. Finally the tower at the southeast corner of the WTC Site would alter the context of the Beard Building and 114-118 Liberty Street.

New open spaces that would be part of the Proposed Action would benefit historic resources by improving their setting.

Due to the proximity of historic resources, adherence to Construction Protection Plans would be required to avoid potential construction period damage to architectural resources.

As described above under "Probable Impacts of the Proposed Action 2009—Current Conditions Scenario," the study area is developed with a mix of historic and modern structures. The built fabric of Lower Manhattan is already composed of historic structures near more modern structures, where many streets contain a mixture of historic structures in immediate proximity to contemporary glass and metal structures. Thus, the Proposed Action would continue the existing trend of modern buildings juxtaposed against the historic fabric of Lower Manhattan.

Overall, the Proposed Action is not expected to have any adverse contextual or visual effects on any known or potential historic resources in the area surrounding the WTC Site.

Secondary Area of Potential Effect

As described above under "Probable Impacts of the Proposed Action 2009—Current Conditions Scenario," it is not expected that the increased traffic levels would have an adverse effect on historic resources.

5.6 PRE-SEPTEMBER 11 SCENARIO

5.6.1 BASELINE CONDITIONS

ARCHAEOLOGICAL RESOURCES

Prior to September 11, the same archaeological resources would have potentially existed on site as under the Current Conditions Scenario.

ARCHITECTURAL RESOURCES

Project Site

In the Pre-September 11 Scenario, the 16-acre WTC complex, built by the Port Authority between 1966 and 1981, comprised six buildings, including the 110-story Twin Towers (1 and 2 WTC). These 1,350-foot-tall aluminum-clad towers were the tallest buildings in the world when completed in 1972 and 1973. Other buildings located in the WTC included a 22-story hotel (3 WTC), two nine-story buildings (4 and 5 WTC), and an eight-story U.S. Customs House (6 WTC). These buildings were situated around the Austin J. Tobin Plaza, which was decorated with several sculptures by prominent artists, including Fritz Koenig (the Sphere), James Rosati (Ideogram), and Masayuki Nagare (unnamed granite). A concourse was located directly below the Plaza and consisted of a retail mall and transportation hub. A pedestrian bridge over Route 9A connected the northern part of the WTC with the commercial core of BPC.

All buildings in the WTC, except 3 WTC, were designed by Minoru Yamasaki & Associates and Emery Roth and Sons. The Marriott Hotel (originally the Vista International Hotel), located at 3 WTC, was designed by Skidmore, Owings & Merrill and was constructed in 1981.

Prior to September 11, the block at the corner of Liberty Street and Route 9A was an active parking lot and the site of the St. Nicholas Greek Orthodox Church, destroyed on September 11. This small Greek Orthodox church stood at 155 Cedar Street, south of the WTC. Established in 1916 by Greek immigrants, it was only 35 feet tall with a rooftop bell cote. The church was notable for its small scale and its icons, which were a gift from the last czar of Russia, Nicholas II. The block to the east was occupied by a 39-story office building at 130 Liberty Street. Located directly across Liberty Street from 2 WTC, it was a fully occupied office tower with ground-floor retail. It had a plaza with a fountain, above which was an additional plaza level that was originally intended to connect to the plaza level at the WTC.

As of September 11, none of the buildings in the WTC or on the Southern Site was listed on or determined to be eligible for listing on the S/NR or designated as a NYCL. Buildings that were part of the WTC were evaluated in 1989 as part of the Route 9A Project and were determined ineligible for S/NR listing. Buildings on the Southern Site had never been evaluated for eligibility.

Primary Area of Potential Effect

It is assumed that the identification of known and potential resources would be the same in the Pre-September 11 Scenario. Although several resources were listed on or determined eligible for listing on the NR or designated as NYCL or NYCHD after September 11, these resources would have been determined eligible or designated in any event because their characteristics that qualify them for listing were not altered. All the historic buildings that were damaged on September 11 would not have been damaged and would still be occupied as they were on September 11. The Barclay-Vesey Building would be fully occupied by New York Telephone. The Federal Office Building/U.S. Post Office would be occupied with office tenants and the Church Street Station of the post office would be open and serving its customers. The offices in the building at 90 West Street would be fully tenanted.

Secondary Area of Potential Effect

The identification of known and potential resources would be the same in the Pre-September 11 Scenario, as described above. Resources in this area were distant from the WTC and not directly damaged in the attacks.

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5.6.3 PROBABLE IMPACTS OF THE PROPOSED ACTION 2009— PRE-SEPTEMBER 11 SCENARIO

ARCHAEOLOGICAL RESOURCES

The northeast and southeast corners of the WTC Site, as well as portions of the Southern Site, were found to be potentially sensitive for archaeological resources. Phase IB investigations would be conducted prior to project construction to document any potential resources. These investigations would be developed in consultation with SHPO and LPC.

ARCHITECTURAL RESOURCES

Project Site

This scenario assumes that the buildings on the Project Site would be replaced by the Proposed Action. Buildings that were part of the WTC were evaluated in 1989 as part of the Route 9A Project and were determined ineligible for S/NR-listing. The building at 130 Liberty Street had never been evaluated for eligibility. Since these buildings were not officially recognized historic resources, their replacement would not be considered an adverse effect.

Primary Area of Potential Effect

The extension of Fulton and Greenwich Streets through the WTC Site would restore the street linkage between historic resources to the north and south of the WTC Site. This would be beneficial to resources south of Liberty Street that were isolated by the superblock of the WTC and the lack of view corridors through the WTC Site. The WTC Site would be divided at grade level into four separate blocks, instead of one large superblock, thus restoring part of the street grid and allowing development to relate better to historic resources in the surrounding area.

The Proposed Action would shift the bulk of the buildings away from the footprints of the Twin Towers located in the southwest quadrant of the site. Freedom Tower would rise immediately south of the Barclay-Vesey Building, blocking views of the structure from the southwest that were previously afforded by the lower-rise 6 WTC. However, the open spaces that would be part of the Proposed Action would benefit certain historic resources. Liberty Park would greatly improve the setting of 90 West Street and the Beard Building. It would also generally improve the neighborhood for all the other historic resources south of the Project Site. Farther north on the WTC Site, Wedge of Light Plaza would link to St. Paul's Chapel and historic resources east of the WTC Site.

Because the proposed construction would take place within 90 feet of historic structures, adherence to Construction Protection Plans would be required to avoid potential damage to architectural resources located near the Project Site.

Overall, the Proposed Action is not expected to have an adverse effect on historic resources in this scenario, since the historic context of the study area was significantly altered with the completion of the WTC as well as the construction of later modern skyscrapers.

Secondary Area of Potential Effect

The increased traffic levels expected as a result of the Proposed Action are expected to have some effect on the setting of historic resources, but not to a degree that they would be expected to have an adverse effect on those resources. The increased traffic is not expected to alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. This is primarily because most of the traffic impacts would occur on streets already burdened with high levels of traffic; historic resources located in these areas have long existed in an urban environment with well-traveled city streets.

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5.6.5 PROBABLE IMPACTS OF THE PROPOSED ACTION 2015— PRE-SEPTEMBER 11 SCENARIO

ARCHAEOLOGICAL RESOURCES

As all construction activities that could potentially impact archaeological resources would be complete by 2009, there would be no potential for adverse effects to archaeological resources in 2015.

ARCHITECTURAL RESOURCES

Project Site

As no historic resources would be located on the Project Site, there would be no potential for adverse effects to historic resources.

Primary Area of Potential Effect

By 2015, all the office towers as well as the hotel would be completed. The proposed office tower and hotel on the northeast quadrant would face directly into the Federal Office Building/U.S. Post Office and block views of it from the southeast that were formerly afforded by the much lower 5 WTC building. The proposed office building south of the permanent WTC PATH Terminal entrance would tower over the former East River Savings Bank. Finally the tower at the southeast corner of the WTC Site would be taller and have a greater bulk than 4 WTC, altering the context of the Beard Building and 114-118 Liberty Street. Although the Proposed Action would shift the bulk of development as compared to pre-September 11 conditions, this would not be an adverse effect as the Project Site and immediate study area has historically been developed with tall and modern structures in close proximity to low-rise historic buildings.

Because the proposed construction would take place within 90 feet of historic structures, adherence to Construction Protection Plans would be required to avoid potential damage to architectural resources located near the Project Site.

Overall, the Proposed Action is not expected to have an adverse effect on historic resources in this scenario, since the historic context of the study area was significantly altered with the completion of the WTC as well as the construction of later modern skyscrapers.

Secondary Area of Potential Effect

As described in greater detail in Chapter 13A, "Traffic and Parking," traffic volumes with the Proposed Action in 2015 would only be about 5 percent higher than volumes that would have been expected had the events of September 11 not occurred. Therefore, as described above under "Probable Impacts of the Proposed Action 2009—Pre-September 11 Scenario," it is not expected that the increased traffic levels would have an adverse effect on historic resources. *

EXCERPTS FROM CHAPTER 21 "CONSTRUCTION "OF THE FGEIS

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21.1.2 CONCLUSIONS

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CULTURAL RESOURCES

The pedestrian connection to the World Financial Center would be constructed through the Hudson River Bulkhead as part of the permanent WTC PATH Terminal project. Alteration of the bulkhead would require mitigation based on a Programmatic Agreement (previously established for Hudson River Park). Some limited areas of the eastern side of the WTC Site and of the Southern Site would require testing and monitoring, respectively to avoid adverse impacts to archaeological resources. Analysis as part of the environmental review for the permanent WTC PATH Terminal would insure the avoidance of any potential impacts to archaeological resources in the location of the potential below grade pedestrian connection under Church Street from the permanent WTC PATH Terminal to Liberty Plaza. Taken cumulatively, no significant adverse impacts to archaeological resources would be anticipated from the Proposed Action and the other major construction projects.

Construction of the Proposed Action has the potential to cause damage to nearby historic resources from ground-borne vibrations, dewatering (for the bathtub on the east side of the site and for the expansion of the existing bathtub to the south), and other activities. To avoid any adverse impacts to standing structures throughout the construction period, construction protection plans would be developed in consultation with the New York State Historic Preservation Officer. Taken cumulatively, it is not expected that there would be any adverse impacts to historic resources adjacent to the Project Site.

Construction activities on the WTC Site have the potential to adversely affect some of the remaining remnants from the former WTC Complex. To minimize or mitigate any such effects from the Proposed Action, LMDC has incorporated into the proposed Programmatic Agreement, referred to in Chapter 5, "Historic Resources," a series of commitments with respect to the future treatment of such remnants and procedures for consulting with the New York State Historic Preservation Officer (SHPO) and identified consulting parties concerning such treatment. It is expected that the sponsors of other Lower Manhattan Recovery Projects that might have the potential for similar effects on such remnants would enter into similar arrangements or take comparable actions to avoid or mitigate such impacts as well.

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21.6.7 CULTURAL RESOURCES

ARCHAEOLOGICAL RESOURCES

This section considers the full range of impacts to archaeological and historic resources. However, effects to archaeological resources may occur sooner in areas that would be excavated sooner, and there would be the potential for effects to historic resources later as construction progresses to the sites that would be developed later. Accordingly, there is no basis to believe that the Proposed Action would contribute to any potential cumulative archaeological impacts in the area.

The potential for historic period archaeological resources (shaft features, such as privies, cisterns, wells, and cesspools pre-dating the 1850s) has been identified in limited areas of the WTC Site (see Chapter 5, "Historic Resources"). Phase IB testing would be carried out on the potentially sensitive areas of the WTC Site prior to excavation and if necessary any mitigation and retrieval activities could be accomplished before or during excavation for construction.

Potential 18th and 19th century shaft features as well as wharf and/or cribbing features may also be on the Southern Site and within the beds of Liberty, Washington, Cedar and Albany Streets that would be disturbed during construction of the Proposed Action. Since avoidance of these potentially sensitive areas is not feasible, Phase IB investigation is recommended to document potential shaft features and potential wharf and cribbing features. The Phase IB investigations would consist of archaeological monitoring during excavation following a plan developed in consultation with the State Historic Preservation Office (SHPO) and Landmarks Preservation Commission (LPC).

The potential below grade pedestrian connection under Church Street from the permanent WTC PATH Terminal to Liberty Plaza is being considered in the environmental review for the permanent WTC PATH Terminal and, if necessary based on the findings of the research report, further investigation and mitigation would be carried out.

Taken cumulatively, no significant adverse impacts to archaeological resources would be anticipated from the Proposed Action and the other major construction projects.

HISTORIC RESOURCES

Construction of the Proposed Action has the potential to cause damage to nearby historic resources from ground-borne vibrations, dewatering (for the bathtub on the east side of the site and for the expansion of the existing bathtub to the south), and other activities. Buildings or sites located within 90 feet of the Project Site are considered to be in the area of potential effect for construction activities. Historic resources in this area include the Barclay-Vesey Building at 140 West Street, the Federal Office Building/U.S. Post Office at 90 Church Street, 30 Vesey Street, St. Paul's Chapel Cemetery at Church Street between Vesey and Fulton Streets, the East River Savings Bank at 26 Cortlandt Street, the Beard Building at 125 Cedar Street, 114-118 Liberty Street, the Western Electric Company Factory at 125 Greenwich Street, the American Stock Exchange at 86 Trinity Place, the Hazen Building at 120 Greenwich Street, 123 Washington Street, and 90 West Street. In addition there are potential historic resources at 106, 110, and 112 Liberty Street; 130 Cedar Street; and, 137-139 Greenwich Street (see Chapter 5, "Historic Resources").

In the analysis year of 2006 construction activity would be in progress across the WTC Site and the Southern Site. Activities on the perimeters of these sites would be the most likely to have impacts on historic resources in the surrounding area. On the northwest quadrant of the WTC Site below grade retail space would be in construction while the structural framing would be erected in the first half of the year. This construction would be taking place immediately south of the Barclay-Vesey Building across Vesey Street. On the two eastern quadrants construction of the foundations and below grade structure would be completed during the year and construction of the retail bases of Towers 2, 3, and 4 would be begun. This work would be across Vesey Street from the Federal Office Building/U.S. Post Office, across Church Street from the graveyard of St. Paul's Chapel and the East River Savings Bank, and across Liberty Street from 114-118 Liberty Street and the Beard Building. On the portion of the Southern Site along Liberty Street (excluding the area of the building at 130 Liberty Street) excavation inside the new slurry walls would be completed during the year and construction of the below-grade structure would be largely completed by the end of the year. This work, which would involve dewatering, would take place across Cedar Street from 90 West Street.

To avoid any adverse impacts to standing structures throughout the construction period, construction protection plans would be developed in consultation with SHPO, as described in Chapter 5, "Historic Resources." Typical protective measures in construction plans are described below:

1. To the extent permitted, a preconstruction inspection of the buildings will be undertaken by an engineering firm licensed to practice in the State of New York (the "Inspecting Engineer"), to determine existing foundation and structural condition information and ascertain any pre-existing damage, existing structural distress, and any potential structural weakness of the foundations or structures of these buildings. The Inspecting Engineer will have experience with historic structures.
2. A written report would be prepared by the Inspecting Engineer documenting any potential weakness or structural distress and an assessment of the stability of any applied ornament, together with a protocol addressing any recommended remediation and steps taken to secure problem areas prior to the commencement of any construction activities. The written report would be submitted to SHPO and will be supplemented with photo-documentation—in the form of 8 inch x 10 inch black-and-white photographs keyed to a map or plan—in order to provide a clear record of existing conditions and any problem areas.
3. Controls on construction vibration would be required as per the Landmarks Preservation Commission (LPC) standards, or the specifications of the Inspecting Engineer if the latter is lower. LPC requirements limit maximum peak particle velocity to 0.5 inches per second for historic structures and 2.0 inches per second for non-historic structures.
4. The Construction Contractor would thereafter ensure that the appropriate vibration limits and any other criteria deemed appropriate by the Inspecting Engineer are incorporated into the sub-contracts for the excavation work, which may include rock

removal operations. The Construction Contractor will be responsible for monitoring these controls with periodic inspection by the owner's representative.

5. Under supervision of the Inspecting Engineer, the Construction Contractor will provide continuous seismic monitoring at the Project Site and inside the buildings during excavation and any other construction operations that would cause vibrations. Seismographs will be installed on the interior and exteriors of the buildings, to the extent permitted by building owners. These units will be located such that they are away from the general public but that they are accessible to the technicians who must monitor them. The seismographs will measure vibration levels during excavation and construction. Prior to the commencement of excavation operations, the seismographs will be installed and tested to ensure that they are in working order and to enable taking baseline readings. Daily logs of the seismic monitoring will be maintained and submitted to SHPO upon request.

6. If any excessive vibration (that which meets or exceeds the peak particle velocity level) is detected, the Inspecting Engineer will stop the work causing this excessive vibration. Buildings will be inspected for any structural degradation that may have occurred. The Inspecting Engineer will submit a report to SHPO detailing the reason for exceeding the peak particle velocity level and the presence or lack of damage to buildings. If any damage was sustained, it will be secured, and the work that caused any damage will be altered to reduce the vibration levels to within acceptable limits. The resumption of work, if damage was sustained, must be authorized by SHPO.

7. In addition, during excavation the Inspecting Engineer will monitor any exposed vertical rock faces or fissures, joint orientation, and potential weaknesses to ensure that underground utilities serving the identified buildings are protected from damage.

8. Should any cracking occur in any of the buildings during excavation or construction, crack monitors will be installed over each crack and monitored on a weekly basis until the Inspecting Engineer deems the cracks to be stable.

9. All substantive requirements of the New York City Building Code applicable to construction activities, protection of adjacent structures (including party wall exposure) and utilities, and specific sections dealing with excavation and foundation operations will be met or exceeded. Construction of the Proposed Action will be performed in a safe manner with controlled inspections as required by the New York City Department of Buildings. Inspections will include but will not be limited to structural stability and foundation concrete. The Inspecting Engineer is required to be present during these and other operations to monitor the construction progress and conformance with contract documents.

Taken cumulatively, there would likely not be any adverse impacts to historic resources adjacent to the Project Site. Taken cumulatively, it is not expected that there would be any significant adverse impact on historic resources.

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EXCERPTS FROM CHAPTER 22 "MITIGATION MEASURES "OF THE FGEIS

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22.2. HISTORIC RESOURCES

22.2.1 ARCHEOLOGICAL RESOURCES

Three areas of the Project Site were found to be potentially sensitive for historic period archaeological resources, as described in Chapter 5, "Historic Resources." The northeast and southeast corners of the WTC Site as well as the portion of the Southern Site between Route 9A and Washington Streets may be sensitive for historic period archaeological resources, including shaft features (such as privies, cisterns, wells, and cesspools) predating the 1850s as well as wharf and/or cribbing features. To avoid or reduce to the extent practicable potential impacts on these resources, the Proposed Action would include a Phase IB investigation. On the Southern Site, the Phase IB investigations would consist of archaeological monitoring during construction. These commitments would also be included in the Programmatic Agreement described in section 22.2.2.

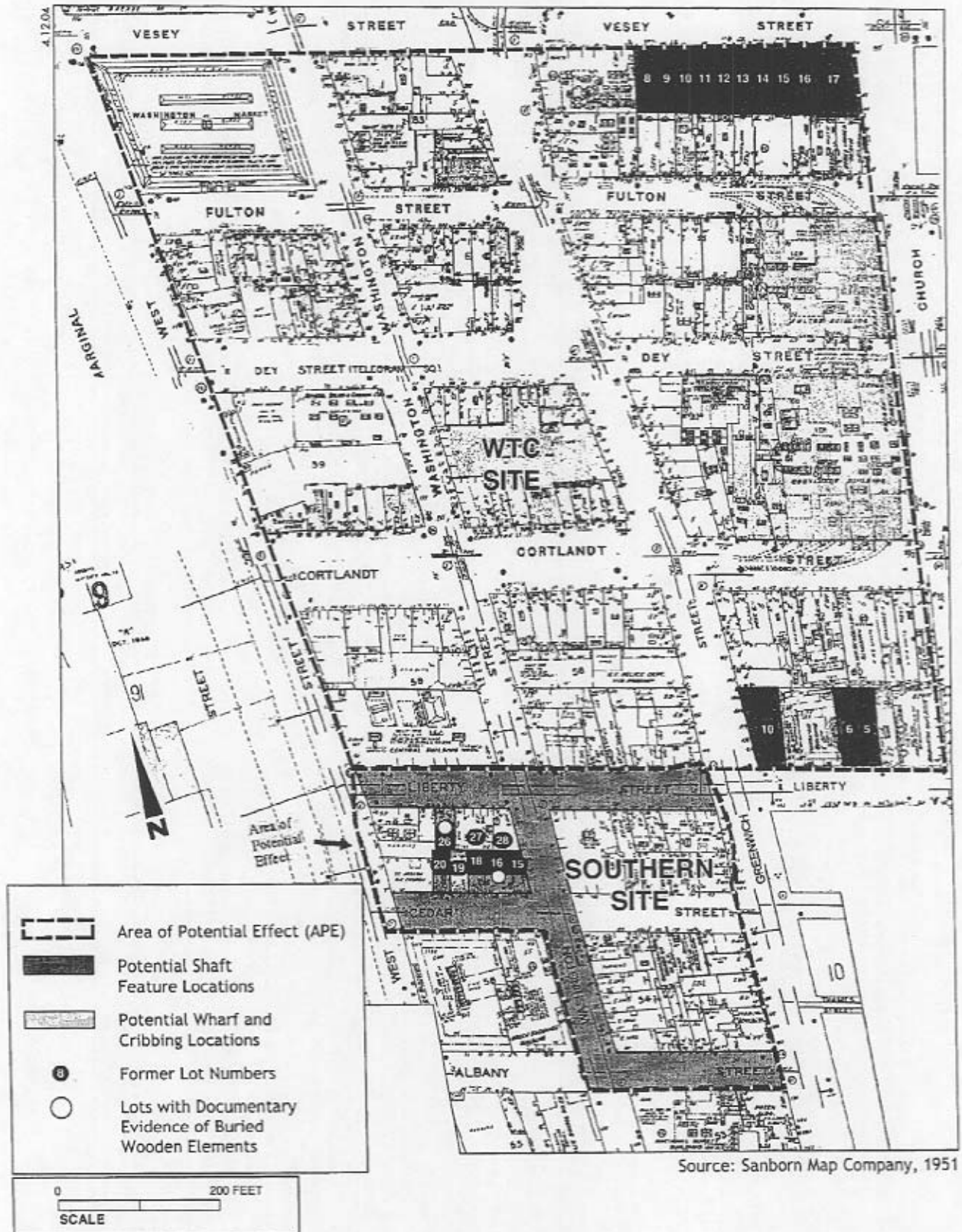
22.2.2 HISTORIC RESOURCES

As noted in Chapter 5, "Historic Resources," the Proposed Action could have an adverse effect on a number of the remaining remnants on the World Trade Center that contribute to the WTC Site's historic significance. In order to minimize or mitigate any such effects, LMDC has proposed to enter into a Programmatic Agreement with the New York State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation that would include specific commitments with respect to the treatment or removal of such remnants and procedures for consultation with SHPO and those consulting parties who participated in the Section 106 process referred to in Chapter 5. A draft of the proposed Programmatic Agreement is included in Appendix K-7.

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Additional Remnants on WTC Site

1. Slab and column remnants of below grade parking garage at northwest corner of WTC Site with smoke scars or other visible evidence of the September 11 attacks.
2. Portions of former stairway and escalator support at Greenwich and Vesey Streets.
3. Steel column and crossbeam mounted on a concrete pedestal.
4. Visible temporary tie-back caps.
5. Remnants of Hudson & Manhattan Tubes and Terminal.



VIA HAND DELIVERY

April 21, 2004

Lower Manhattan Development Corporation
One Liberty Plaza – 20th Floor
New York, New York 10038
Attn.: Kevin Rampe - President

Re: World Trade Center Memorial and Redevelopment Plan

Dear Mr. Rampe:

Thank you for providing the Port Authority, as owner of the World Trade Center Site and a consulting party, with a copy of that certain draft agreement (the "Programmatic Agreement"), entitled "*World Trade Center Memorial and Redevelopment Plan Programmatic Agreement*", to be entered into by the Advisory Council on Historic Preservation, the New York State Historic Preservation Officer and the Lower Manhattan Development Corporation ("LMDC").

This letter will serve to confirm that the Port Authority will consult with the LMDC to assure that all artifacts from the WTC Site that are in the Port Authority's custody and control and are located at Hangar 17, John F. Kennedy International Airport ("WTC Artifacts"), will be safeguarded as appropriate pending the final disposition of the WTC Artifacts in accordance with the rights of the respective owners thereof, and thereafter, subject to future agreements or arrangements, the Port Authority will transfer any remaining WTC Artifacts to LMDC, its designee or other appropriate entities for safekeeping or other appropriate disposition. Additionally, the Port Authority (1) has provided LMDC with an inventory listing of the current WTC Artifacts, (2) will provide LMDC with a copy of a complete inventory listing of all WTC Artifacts as of July 1, 2004, and (3) will periodically update this listing if and when additional artifacts from the WTC Site come into the Port Authority's custody and control and are located at Hangar 17, John F. Kennedy International Airport.

Very truly yours,



A. Paul Blanco
Chief, Regional & Economic Development