DRAFT SCOPE OF WORK TO PREPARE A DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE SAINT VINCENT'S HOSPITAL MANHATTAN NEW ACUTE CARE HOSPITAL AND EMERGENCY DEPARTMENT AND RESIDENTIAL DEVELOPMENT

INTRODUCTION

Saint Vincents Catholic Medical Center of New York d/b/a Saint Vincent Catholic Medical Centers (SVCMC) is seeking a number of discretionary actions in connection with the construction of its proposed new acute care hospital and emergency department and the development of its East Site for residential use. All of the development will occur on land currently occupied and used by SVCMC in the Greenwich Village neighborhood in Manhattan. The project site, which includes Block 617, Lots 1[1] and 55 (the Triangle and New Hospital Sites, respectively) and Block 607, Lot 1 (the East Site) is located along Seventh Avenue between West 13th Street and West 11th Street/Greenwich Avenue (see Figures 1 and 2).

The proposed project includes the development of a new 19-story acute care hospital and emergency department on the west side of Seventh Avenue. With the completion of the new replacement hospital on the western portion of the site, new residential uses, including the construction of new buildings and the conversion of existing buildings, would be developed on the eastern portion of the site. The residential portion of the proposed project would contain a total of 797,880 gross square feet (gsf), including 591,986 gsf of residential floor area, 11,200 gsf of retail space, 21,094 gsf of medical office space, and 173,600 gsf of parking, mechanical, and below-grade residential amenity space. The developer of the residential buildings currently intends to build up to 450 units. However, as a reasonable worst-case scenario for analysis purpose, the Environmental Impact Statement (EIS) will consider 658 units, based on an average unit size of 850 zoning square feet (zsf).

PROJECT DESCRIPTION

SITE CONDITIONS AND HISTORY

SVCMC currently owns and occupies the entire project site. The project site comprises three tax lots located along Seventh Avenue in Greenwich Village (see Figure 2, "Existing Site Plan"). The East Site (Block 607, Lot 1), located on the east side of Seventh Avenue between West 11th and West 12th Streets, consists of the current hospital buildings and support functions, such as administrative offices (see Table 1). The New Hospital Site (Block 617, Lot 55), located on the west side of Seventh Avenue between West 12th and West 13th Streets, consists of the O'Toole Building, which houses ambulatory care facilities and physicians' offices. The Triangle Site (Block 617, Lot 1), formed by Seventh Avenue, West 12th Street and Greenwich Avenue,

[1] Block 617, Lot 1 will be subdivided into two tax lots. SVCMC will retain ownership of both.

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Project Site Boundary

Study Area Boundary (400-Foot Perimeter)

Figure 1
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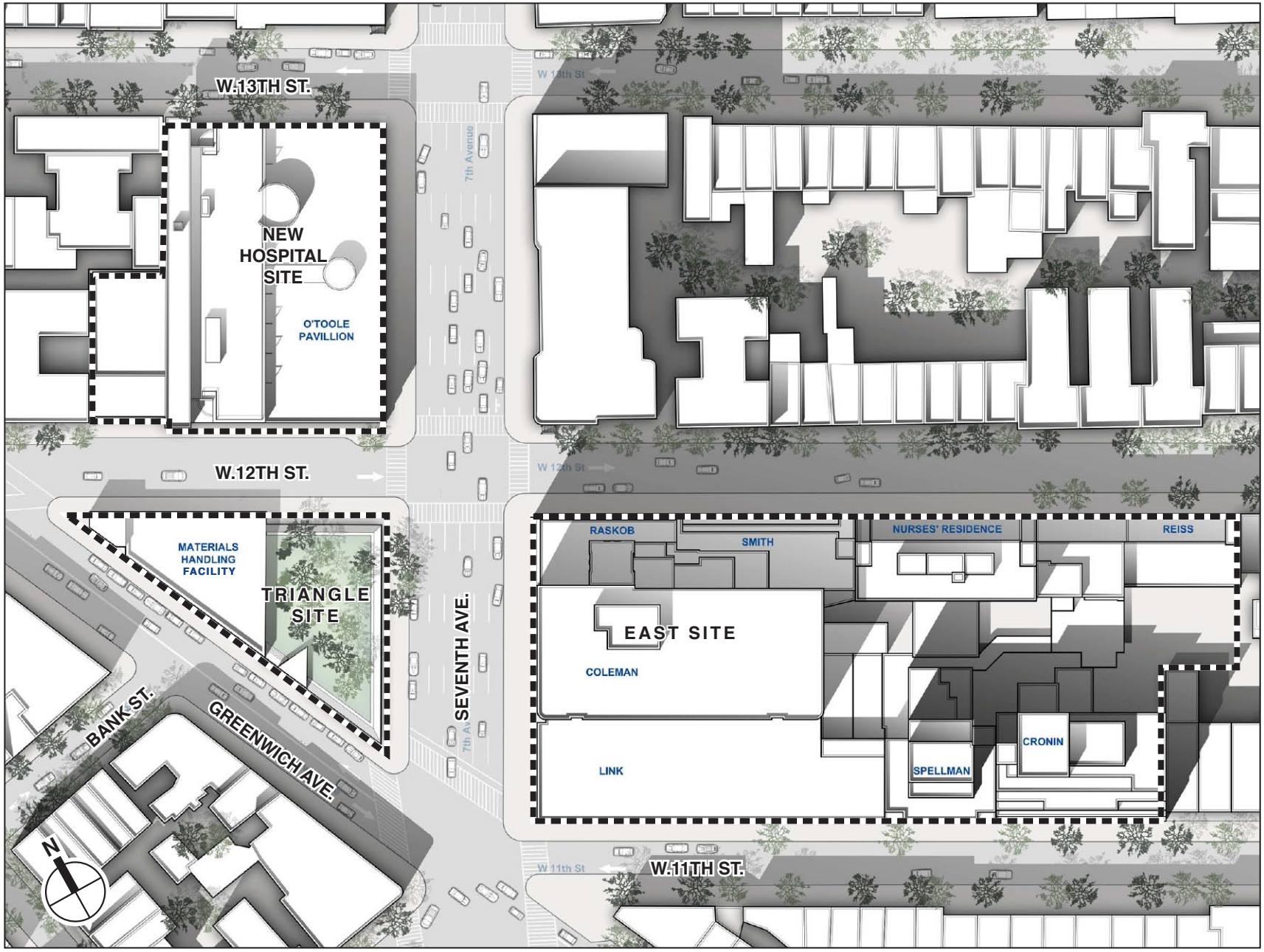

Figure 2
Existing Site Plan

consists of the Materials Handling Facility, which includes loading bays and two medical gas tanks and is connected to the East Site via a tunnel running beneath Seventh Avenue, and open space which is currently fenced and inaccessible to the public.

Table 1
Existing Buildings on the Project Site

Location/Building	Block/Lot	Lot Area (sf)	Address	Height	Current Use	Gross Floor Area (sf) Above Grade
East Site (Block 607, Lot 1)						
Coleman/Link Pavilions	Block 607, Lot 1	92,925	1 Seventh Avenue	190/59 ft.	Hospital and related	356,013
Cronin Building			133 West 11th Street	151 ft.	Hospital and related	88,170
Spellman Pavilion			143 West 11th Street	134 ft.	Hospital and related	63,582
Reiss Pavilion			148 West 12th Street	109 ft.	Hospital and related	67,120
Nurses' Residence			158 West 12th Street	140 ft.	Hospital and related	73,903
Smith/Raskob Buildings			170 West 12th Street	146/168 ft.	Hospital and related	114,326
The Triangle Site (Block 617, Lot 1)						
Materials Handling Facility	Block 617, Lot 1	16,677	76 Greenwich Avenue	20 ft.	Warehouse	8,500
New Hospital Site (Block 617, Lot 55)						
O'Toole Building	Block 617, Lot 55	36,138	20 Seventh Avenue	55 ft.	Ambulatory Care/ Physician Offices	188,876

Source: SVCMC

The East Site includes seven individual buildings dedicated to hospital and administrative support uses:

- Coleman Pavilion, completed in 1982, is the tallest building on the campus. It stands in the middle of the Seventh Avenue frontage.
- Link Pavilion adjoins the Coleman Pavilion to the south and occupies the corner of Seventh Avenue and West 11th Street. Completed in 1987 as a hospital wing to the Coleman Pavilion, it is the newest building on the campus.
- Cronin Building, located at the eastern end of the campus on West 11th Street, was built in 1961 for research and laboratory facilities.
- Spellman Pavilion, located on West 11th Street between the Link Pavilion and the Cronin Building, was also constructed in 1941 but for administrative offices.
- Smith/Raskob Buildings, north of the Coleman Pavilion at the corner of Seventh Avenue and West 12th Street, were constructed in 1949 and 1952, respectively, as inpatient pavilions serving the buildings that preceded the Coleman/Link Pavilions.
- Reiss Pavilion, built in 1954 as a residential behavioral health facility, is located at the eastern end of the campus on West 12th Street.

- The Nurses' Residence, completed in 1925 to serve as a dormitory for the since closed School of Nursing, is located on West 12th Street between the Smith/Raskob Buildings and Reiss Pavilion.

The hospital currently has a capacity of 484 staffed beds.

The Triangle Site is zoned C2-7, the New Hospital Site is zoned C2-6 along Seventh Avenue and C1-6 in the midblock, and the East Site is zoned C2-6 along Seventh Avenue and R6 in the midblock (see Figure 3). The project site is also part of a large-scale community facility development (LSCFD) designated in 1979 that provided for the transfer of zoning floor area from Block 617, Lots 1 and 55 (the Triangle and New Hospital Sites respectively) to Block 607, Lot 1 (the East Site), and for authorizations to modify lot coverage and height and setback for the construction of the Link and Coleman Pavilions (N780516 ZAM) (see Figure 4). The LSCFD also provided for the construction of the Materials Handling Facility and creation and regulation of the landscaped space on the Triangle Site. The project site is located within the boundaries of the Greenwich Village Historic District, although none of the buildings on the project site is individually designated as a New York City Landmark (NYCLs).

Saint Vincent's Hospital Manhattan, the facility located on the project site, serves as the anchor of the SVCMC system and is the New York City academic medical center for New York Medical College. The system also includes Saint Vincent's Hospital Westchester, a behavioral health facility; continuing care services that include Bishop Mugavero Center for Geriatric Care and Holy Family Home in Brooklyn; Saint Elizabeth Ann's Health Care & Rehabilitation Center and Pax Christi Hospice on Staten Island; and SVCMC Home Health Agency, which delivers comprehensive home care services throughout the five boroughs of New York City as well as in Nassau and Suffolk Counties. SVCMC also delivers high level primary and specialty outpatient care through a number of ambulatory treatment centers from Clinton to Chinatown and the Lower East Side. Saint Vincent's Hospital was founded in 1849 by the Sisters of Charity to carry out their charitable purposes.

PROPOSED ACTIONS

A number of discretionary approvals are necessary to develop the proposed project. These include zoning map and text amendments, special permits, and authorizations subject to approval by the New York City Planning Commission (CPC); a Certificate of Need approval from the New York State Department of Health (NYSDOH); and potential funding approvals from the Dormitory Authority of the State of New York (DASNY).

MAP AMENDMENTS

- Rezoning of the New Hospital Site from C2-6 and C1-6 to C2-7 (see Figure 5). This would increase the allowable Floor Area Ratio (FAR) for community facilities from 6.5 to 10. However, the proposed new hospital and reconstructed Materials Handling Facility are expected to use only 9.26 FAR as limited by the New York City Landmarks Preservation Commission (LPC)-approved design.
- Rezoning of the Seventh Avenue portion of the East Site from C2-6 to C6-2 (see Figure 5). This map amendment would increase the allowable FAR for residential use from up to 3.44 to up to 6.02 and would maintain the current FAR 6.5 for community facility or mixed use residential/community facility uses. It would also increase the allowable FAR for commercial use from 2.0 to 6.0. It would also allow the use of the special permit provisions

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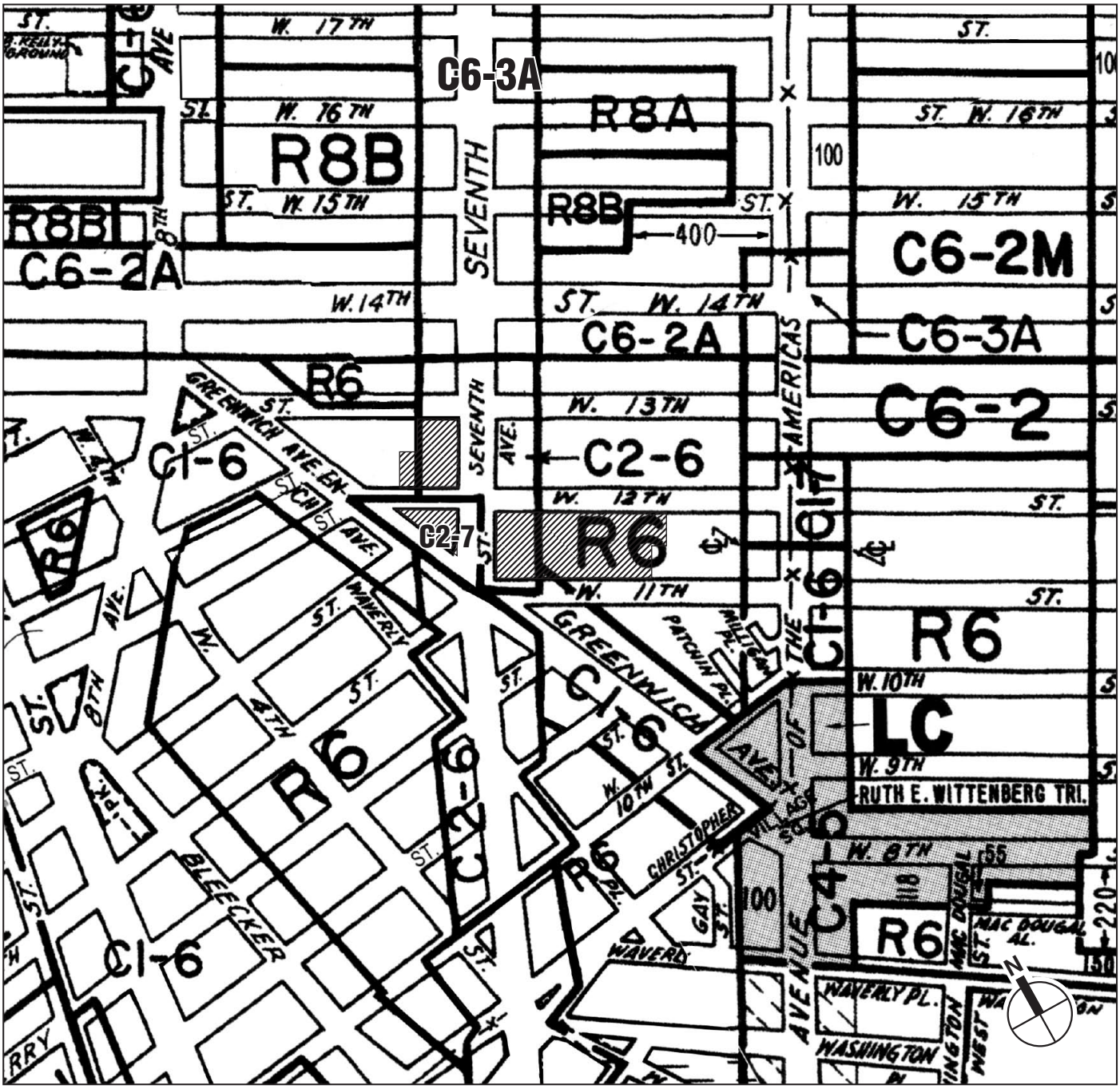

Figure 3
Existing Zoning

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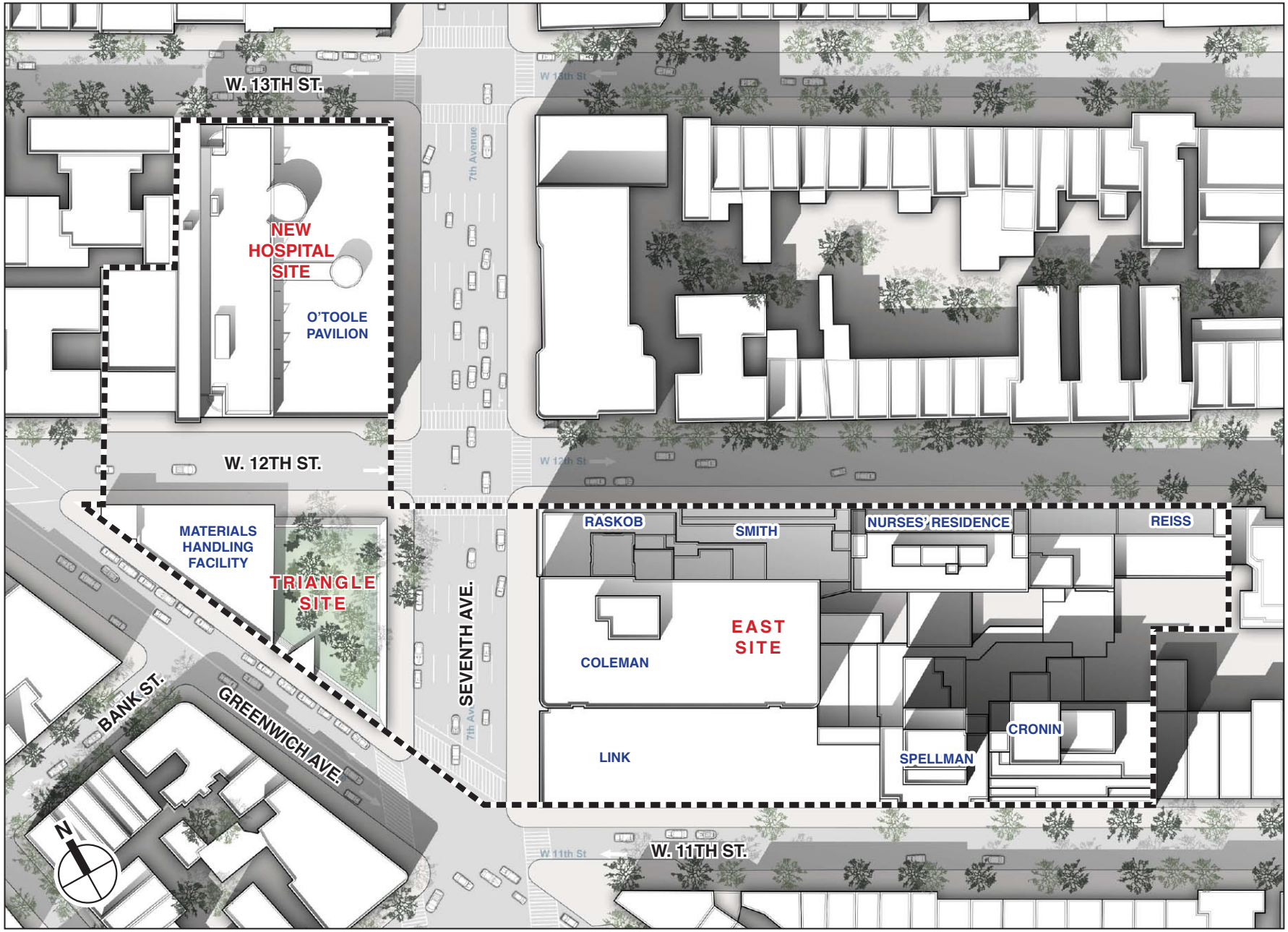

Boundary of Existing LSCFD

Figure 4

ST. VINCENT'S HOSPITAL MANHATTAN

Existing Large Scale Community Facility Development (LSCFD)

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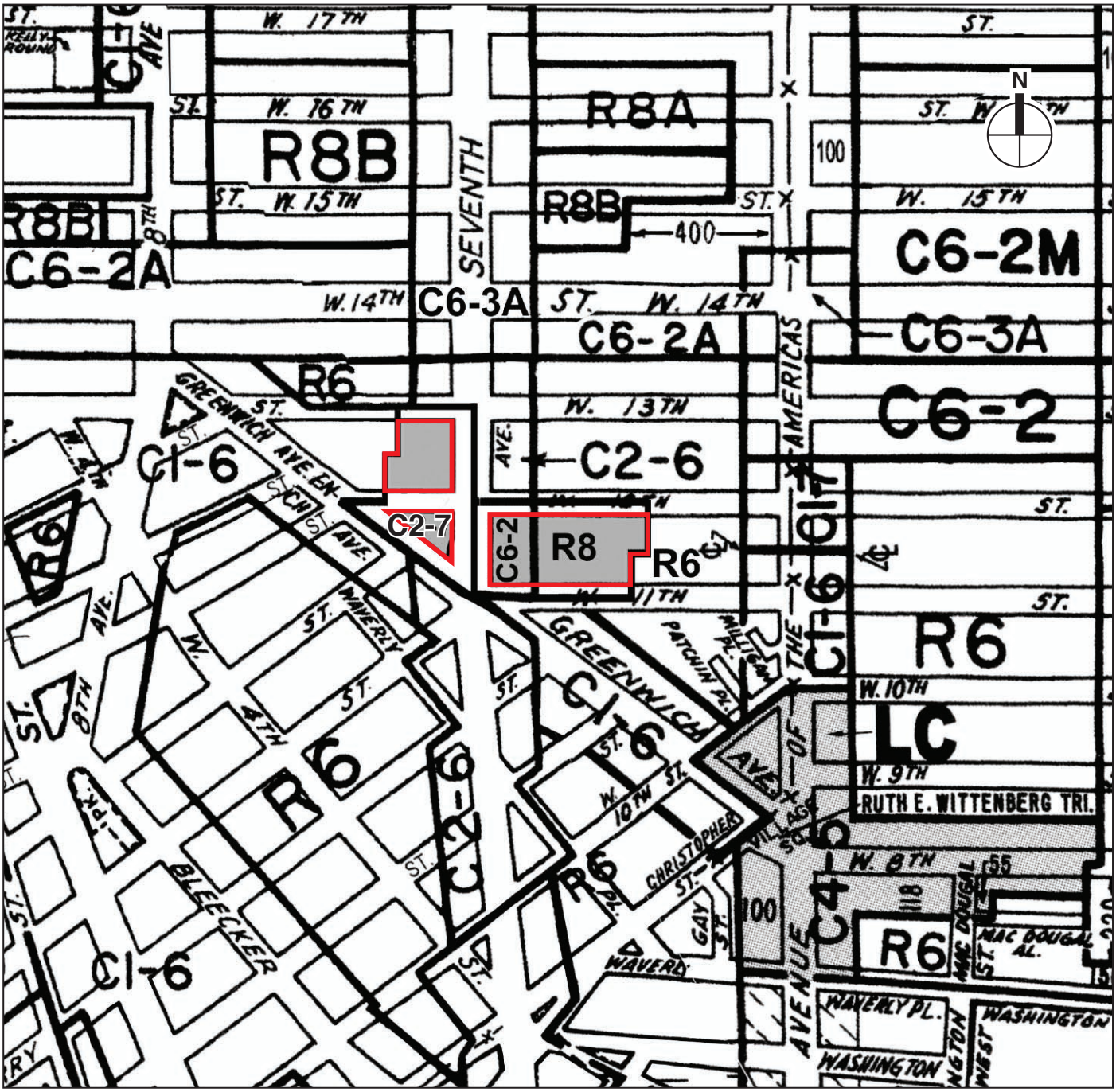

Project Site

Zoning District Boundary

Special Purpose District

Figure 5
Proposed Zoning

available to general large-scale developments (GLSDs) described below (see "Discretionary Permits and Authorizations").

- Rezoning of the midblock portion of the East Site from R6 to R8. This would increase the allowable FAR for residential use from up to 2.43 to 6.02 and the amount of FAR for community facility or mixed use residential/community facility from 4.8 to 6.5. This is needed in part to allow the adaptive reuse of two midblock buildings, each in excess of 10 FAR. These buildings were non-complying in 1961, and the FAR shortfall on the single zoning lot of the East Site remained uncorrected with the adoption in 1979 of the existing LSCFD.

TEXT AMENDMENTS

- Zoning text amendment to LSCFD text to add a new ZR 79-44 setting forth a special permit through which an existing LSCFD in Community District (CD) 2 in Manhattan can be reduced to less than 3 acres. This would allow the lot area of the existing LSCFD to be reduced to the New Hospital Site and a portion of the Triangle Site. Currently, there is a requirement that LSCFDs be no less than 3 acres, and there are no provisions for modifications to existing LSCFDs. The special permit would permit temporary non-compliances that have been created as a result of the reduction of area of the LSCFD within the area removed from the LSCFD. This is required to permit the new hospital to be placed in service before demolition of the old hospital on the East Site. And finally the new special permit would allow the new reduced LSCFD to modify the yard requirements and to utilize the existing bulk modification provisions in ZR 79-43 waiving height and setback on the periphery of the LSCFD, courts, and distance between windows and walls or lot lines not otherwise allowed in Section 79-21 and not permitted as a matter of right in C2-7 districts.
- Zoning text amendment to ZR 74-743(a)(4) to permit maximum FAR without regard to height factor or open space ratio requirements and to make open space allowances currently applicable only in GLSDs located in Manhattan CD 7 applicable to GLSDs in Manhattan CD 2. This would reduce the open space obligation on the residential portion of the project to 50 percent. While required from the outset of this project, this requirement has gained in importance due to the subsequent requirement imposed by LPC that two non-complying buildings on the midblock of the East Site be preserved.

REDUCTION OF A LARGE-SCALE COMMUNITY FACILITY DEVELOPMENT

- Modification and reduction of the existing LSCFD covering the entire project site. This would allow for the reduction in the LSCFD to eliminate the area of the existing East Site and a portion of the Triangle Site while still permitting the use of a portion of the development rights on the remaining portion of Triangle Site to be transferred to the New Hospital Site (see Figure 6).

DESIGNATION OF A GENERAL LARGE-SCALE DEVELOPMENT

- Creation of a GLSD consisting of the East Site and a portion of the Triangle Site (see Figure 6). This would allow a portion the Triangle Site to be counted in the open space calculations for the residential development on the East Site as described above.

DISCRETIONARY PERMITS AND AUTHORIZATIONS

- LSCFD special permit pursuant to (new) ZR 79-44 to permit (1) the reduction in the permitted size of a previously created LSCFD to less than 3 acres, (2) modification of yard

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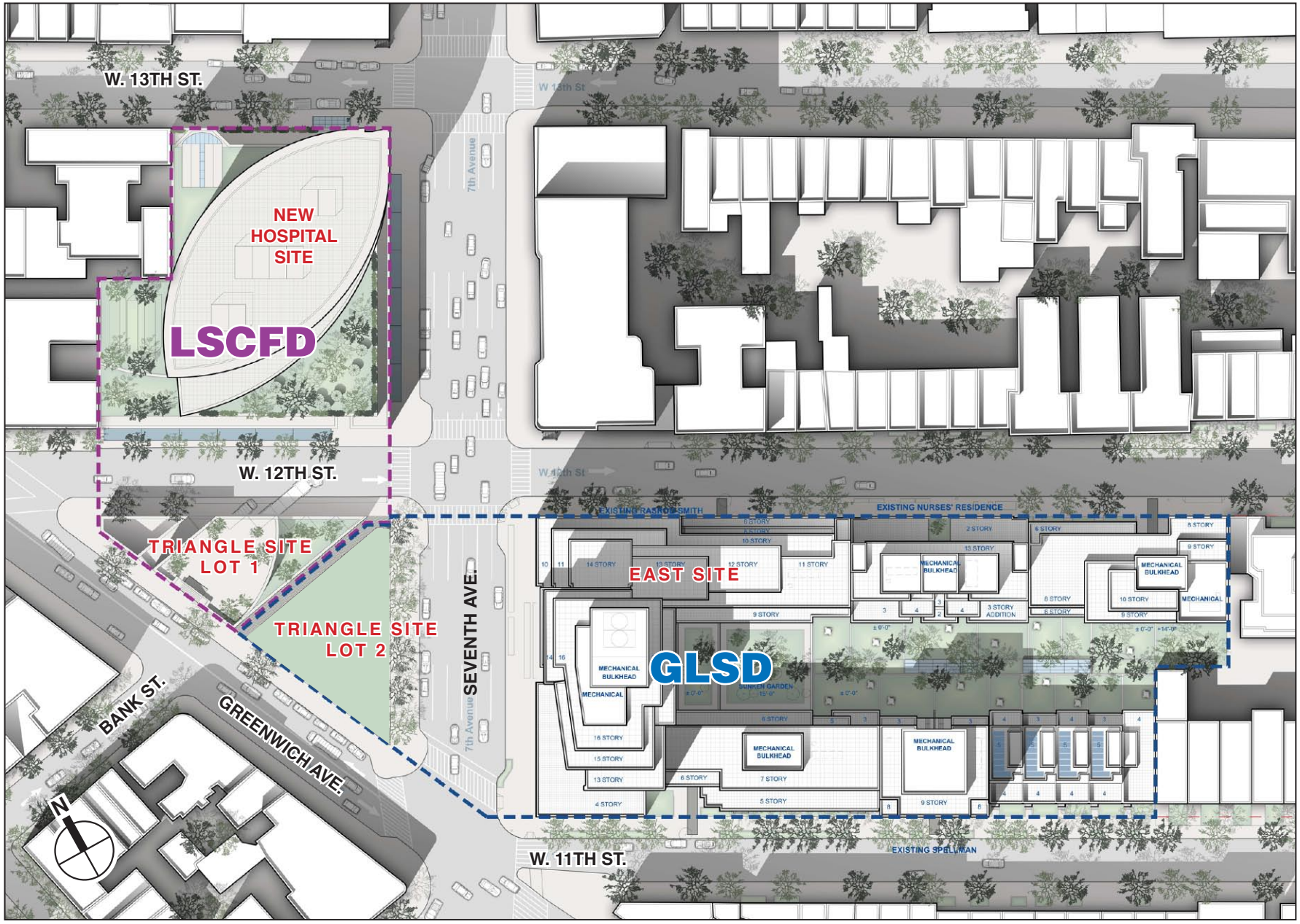

Proposed LSCFD Boundary

Proposed GLSD Boundary

Figure 6

Proposed Large Scale Community Facility Development (LSCFD) and General Large Scale Development (GLSD)

requirements and (3) temporary non-compliances that have been created as a result of the reduction of area of the LSCFD within the area removed from the LSCFD.

- LSCFD special permit pursuant to ZR 79-43 to modify the C2-7 regulations relating to height and setback on West 13th Street and Seventh Avenue, courts and distance between windows and walls and lot lines.
- LSCFD authorizations pursuant to ZR 79-21 to modify by authorization distribution of permitted floor area within the LSCFD without regard for zoning lot lines, height, and setback regulations along West 12th Street and rear yard regulations which would otherwise apply along portions of the LSCFD's lot lines abutting other zoning lots.
- LSCFD authorization pursuant to ZR 79-31 authorizing permitted or required accessory off-street bicycle parking spaces to be located anywhere within the development without regard for zoning lot lines.
- LSCFD authorization pursuant to ZR 79-32 authorizing permitted required accessory loading berths to be located anywhere within the development without regard for zoning lot lines.
- GLSD special permits pursuant to ZR 74-743 (as amended) as follows:
  - ZR 74-743(a)(1): distribution of total allowable floor area, lot coverage and total required open space without regard for zoning lot lines or district boundaries to allow for location of open space on the Triangle Site;
  - ZR 74-743(a)(2): location of buildings without regard for the applicable yard, court, distance between buildings, or height and setback regulations applicable in the C6-2 and R8 zoning districts to allow for modification of height and setback regulations for existing and proposed buildings on the zoning lot; and
  - ZR 74-743(a)(4) (as amended) to modify the open space regulations applicable in the C6-2 and R8 zoning districts to allow the maximum FAR within the GLSD to be developed and to allow the required open space to be reduced by up to 50 percent.
- GLSD special permit pursuant ZR 74-744(b) to permit residential and non-residential uses to be arranged within the C6-2 portion of the GLSD without regard for locational regulations set forth in ZR 32-42. Doctors' offices proposed for the East Site within the C6-2 district may occupy a portion of the third floor of the development, with residential uses located on the remainder of the floor.
- Special permit pursuant to ZR 13-561 to provide an accessory parking garage with approximately 250 spaces in the residential development. This would allow additional on-site accessory parking spaces for residents and tenants.
- A request to the CPC pursuant to ZR 11-42(c) to grant in its approvals of the proposed special permits and authorizations extensions of the periods after which each would automatically lapse pursuant to ZR 11-42(a) from four years from the effective date of such permit or authorization to a period not to exceed ten years.

ADDITIONAL NON-CPC PERMITS AND APPROVALS

A revocable consent will be sought from the New York City Department of Transportation (NYCDOT) for the proposed underground service tunnel beneath West 12th Street that would connect the new acute care hospital and emergency department on the New Hospital Site to the loading bays, oxygen tanks, and Materials Handling Facility on the Triangle Site. The proposed

project also requires a Certificate of Need approval from NYSDOH. In addition, SVCMC may seek funding from DASNY, which is an interested agency for the proposed project's environmental review. DASNY's action would consist of its authorization of the issuance of Dormitory Authority obligations on behalf of SVCMC, the proceeds of which would be used to finance the proposed project. Finally, the proposed project requires and has obtained three Certificates of Appropriateness and a Notice to Proceed on the basis of Hardship from LPC.

The bus stop currently located at the corner of Seventh Avenue and West 12th Street would be relocated one block to the south on the Triangle Site. This requires approval by MTA-New York City Transit and that agency coordinates with NYCDOT.

ADDITIONAL CPC NON-DISCRETIONARY ACTION

The proposed project would require a waiver pursuant to ZR 36-65 that the Commissioner of Buildings has certified that there is no way to arrange the hospital loading berths of the Materials Handling Facility on the Triangle Site with access to the street to conform to the provisions of ZR 36-682.

PROPOSED DEVELOPMENT PROGRAM

The proposed project consists of two components: a new hospital building on the west side of Seventh Avenue between West 12th and West 13th Streets and a residential development on the eastern portion of the site that would include both adaptive reuse of existing buildings and new construction (see Figures 7 and 8).

NEW ACUTE CARE HOSPITAL AND EMERGENCY DEPARTMENT BUILDINGS

SVCMC proposes to construct a new 19-story acute care hospital and emergency department on the New Hospital Site (see Figure 9). The O'Toole Building, which currently occupies this site, would be demolished. Loading docks for the hospital and the below-ground Materials Handling Facility on the Triangle Site to the south of the new acute care hospital and emergency department would continue to be used. The loading docks on the ground level of this building would be rebuilt with the loading bays at an angle to West 12th Street for easier truck access. In addition, a second level of mechanical space would be constructed to house the chiller plant serving the new acute care hospital and emergency department. The Triangle Site also would include 8,573 square feet (sf) of privately owned, publicly accessible open space. An underground service tunnel would be constructed to connect the new acute care hospital and emergency department to the Materials Handling Facility on the Triangle Site. Overall, the hospital portion of the proposed project would include 639,799 gsf of floor area in the new acute care hospital and emergency department and 30,650 gsf in the Materials Handling Facility (see Table 2). The new acute care hospital would have a capacity of 366 beds.

The primary entrances to the new hospital would be located on Seventh Avenue with the main lobby entrance to the north of the midblock and the main Emergency Room access to the south near West 12th Street (see Figure 10). There would also be a secondary entrance to the Emergency Room on West 12th Street, an ambulette entrance and non-emergency drop-off pickup on West 13th Street, and a secondary entrance to the hospital on Seventh Avenue. A layby lane would be created on the west side of Seventh Avenue to accommodate vehicular drop-offs (at the north end of the block) and ambulances (at the south end of the block). Bulb-outs at West 12th and West 13th Streets would facilitate pedestrian crossings on Seventh Avenue.

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Project Site

Approximate location of proposed underground service tunnel

Proposed publicly accessible open space

NOTE: For Illustrative Purposes

Figure 7

Proposed Site Plan



Buildings Proposed for Historic Preservation and Adaptive Reuse

New Construction

Figure 8

Proposed Residential Development

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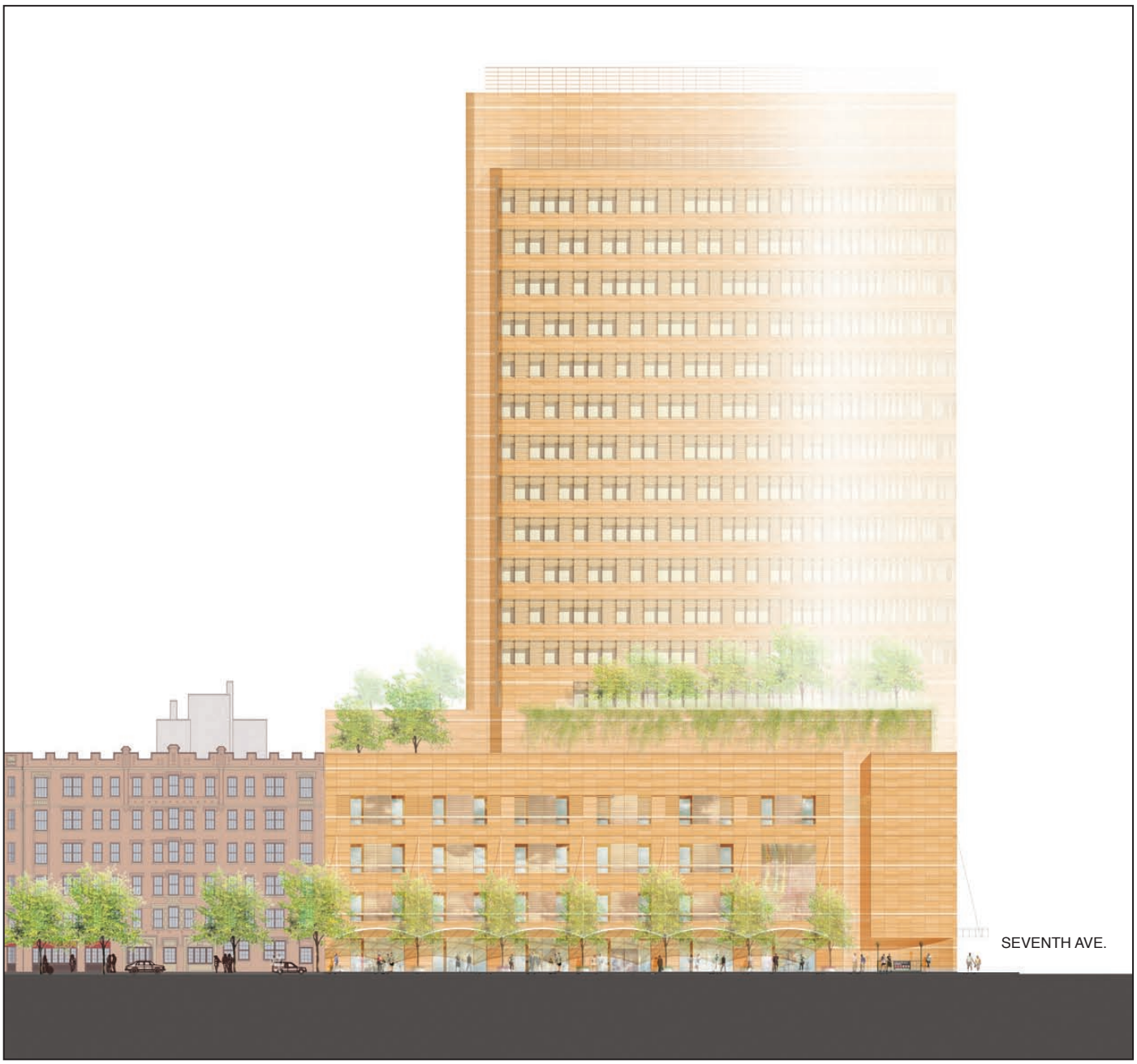

NOTE: For Illustrative Purposes

Figure 9

ST. VINCENTS HOSPITAL MANHATTAN

Proposed Hospital Building - South Elevation

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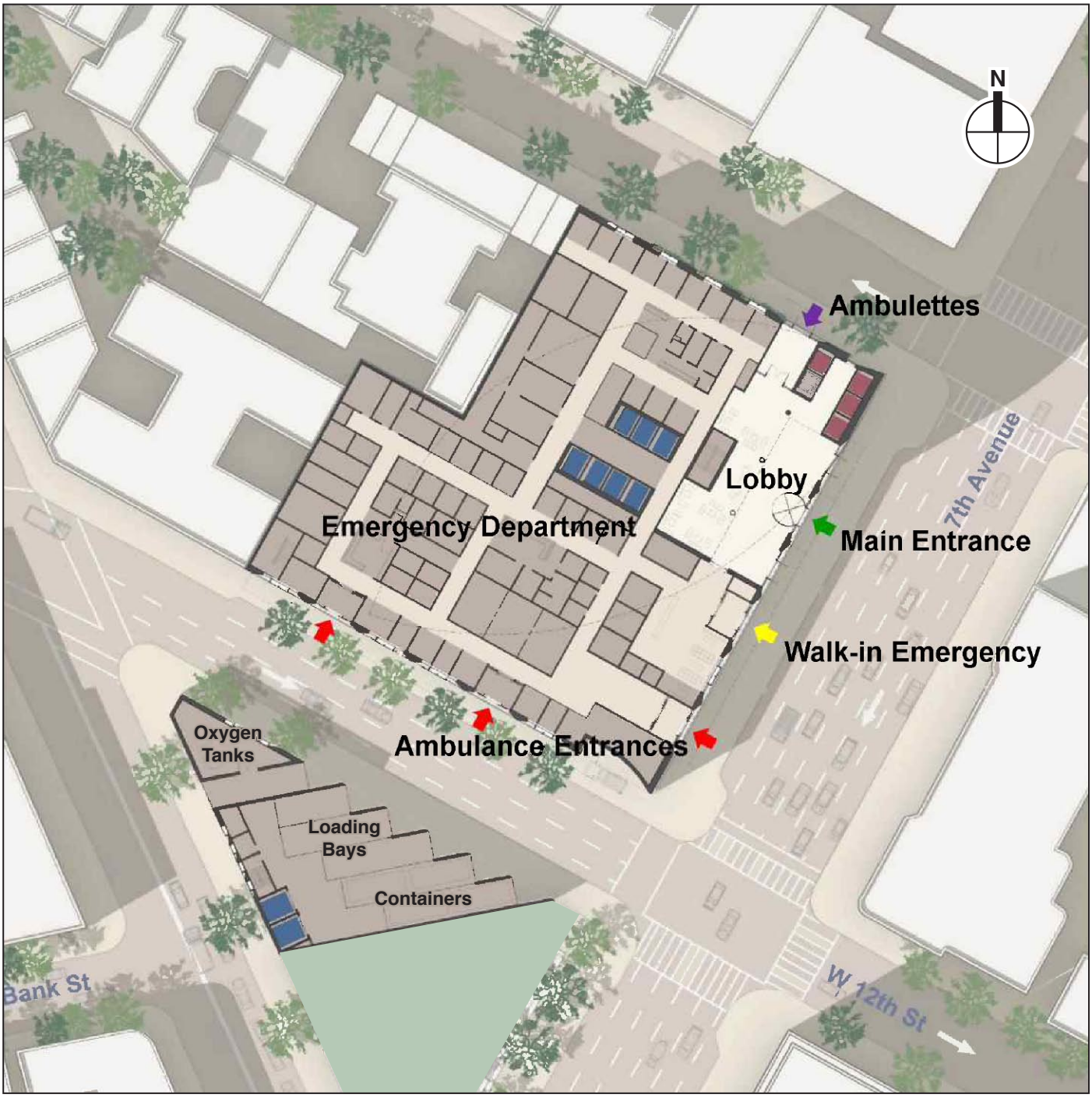

NOTE: For Illustrative Purposes

Figure 10

Proposed Hospital Ground Floor Plan

The outpatient and private practice services currently housed in the O'Toole Building would be relocated off-site. SVCMC is currently seeking space in existing office buildings in the immediate vicinity of the project site, though relocation plans have not been finalized at this time and may not be finalized prior to CPC consideration of this project.

Table 2
Proposed Development Program

	Gross Floor Area (sf)	Zoning Floor Area (sf)
Acute Care Hospital and Emergency Department		
Hospital above grade	459,984	403,984
Hospital below grade	179,815	--
Subtotal, New Hospital	*639,799*	*403,984*
Materials Handling Facility above grade	12,618	4,572
Materials Handling Facility below grade	18,032	--
Subtotal, Materials Handling Facility	*30,650*	*4,572*
Total Hospital-Related	*670,449*	*408,556*
Residential Development		
Residential (above grade)	591,986	559,409
Medical Offices	21,094	20,426
Retail	11,200	10,825
Parking, mechanical, and below-grade residential amenity	173,600	--
Total Residential Development	*797,880*	*590,660*
TOTAL PROJECT	**1,468,329**	**999,216**

RESIDENTIAL DEVELOPMENT

With the completion of the new acute care hospital on the western portion of the site, the eastern portion of the site would be developed for residential use with retail and medical office uses on the lower floors (see Figures 11 through 14). The Raskob and Smith Buildings, Spellman Pavilion, and Nurses' Residence would be adapted for residential use. Extensions in the rear yards of the Nurses' Residence and Spellman Pavilion would be removed and an extension to the rear yard setback line would be added to the Spellman Pavilion.

The Coleman, Link, and Reiss Pavilions and Cronin Building would be demolished and new buildings would be constructed at these locations. A new 16-story residential building would be constructed on the site of the Link and Coleman Pavilions, and a new 10-story apartment building would replace the Reiss Pavilion. A row of five 5-story townhouses would be constructed on the site of the Cronin Building. Along Seventh Avenue, the buildings would include ground floor retail space as well as medical offices on the second and third floors and at the cellar level. An accessory parking garage with approximately 250 spaces would be constructed below grade.

The residential portion of the proposed project would contain a total of 797,880 gsf (624,280 gsf above grade), including 591,986 gsf of residential floor area, 11,200 gsf of retail space, 21,094 gsf of medical office space, and 173,600 gsf of parking, mechanical, and below-grade residential amenity space. The residential space would include 559,409 zsf of floor area. Although the developer of the residential buildings currently intends to build up to 450 units, the EIS will analyze 658 units as a reasonable worst-case scenario based on an average unit size of 850 zsf.

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NOTE: For Illustrative Purposes

Figure 11

ST. VINCENT'S HOSPITAL MANHATTAN

Proposed Residential Development - North Elevation

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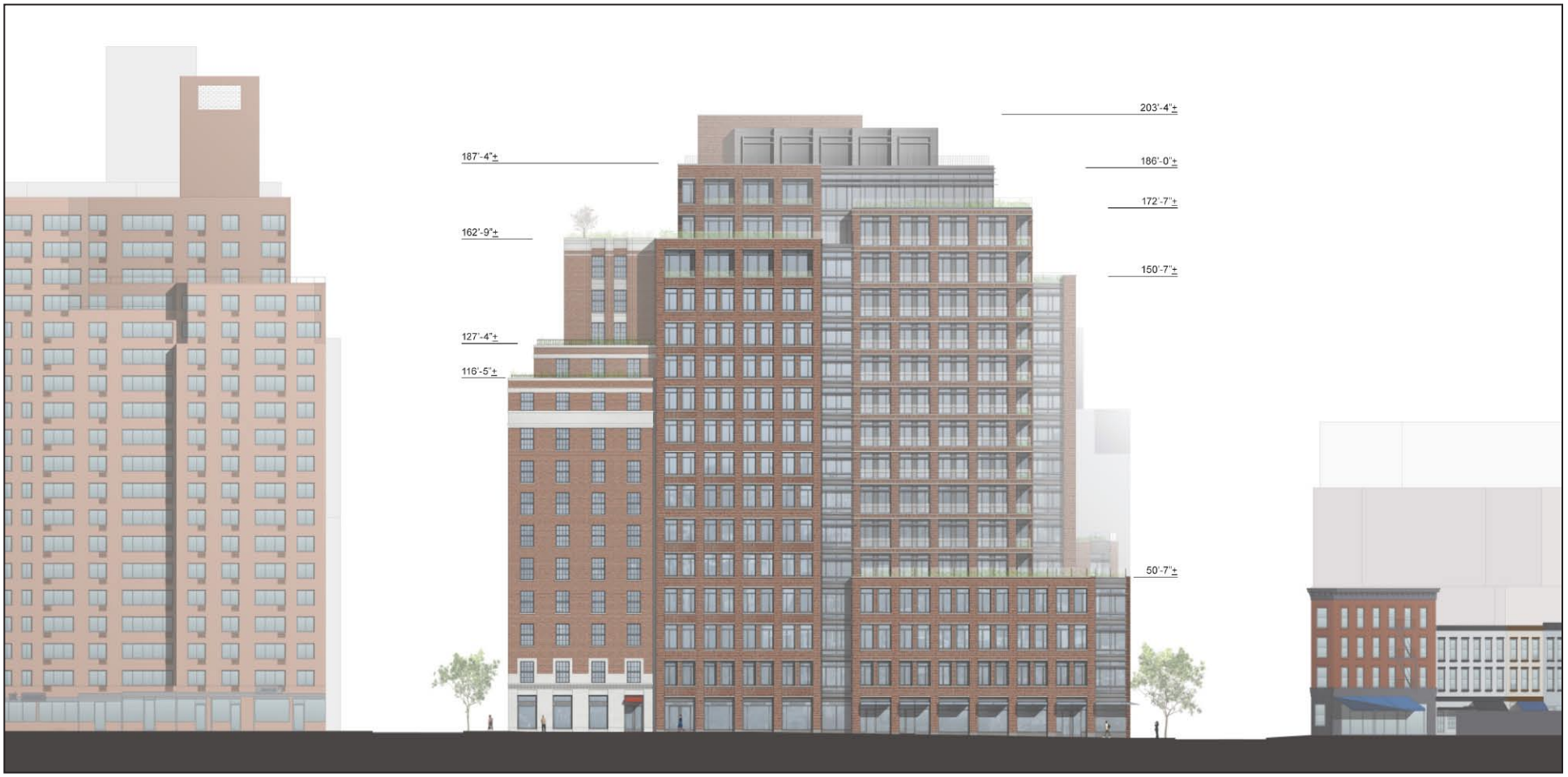

NOTE: For Illustrative Purposes

Figure 12

ST. VINCENT'S HOSPITAL MANHATTAN

Proposed Residential Development - West Elevation

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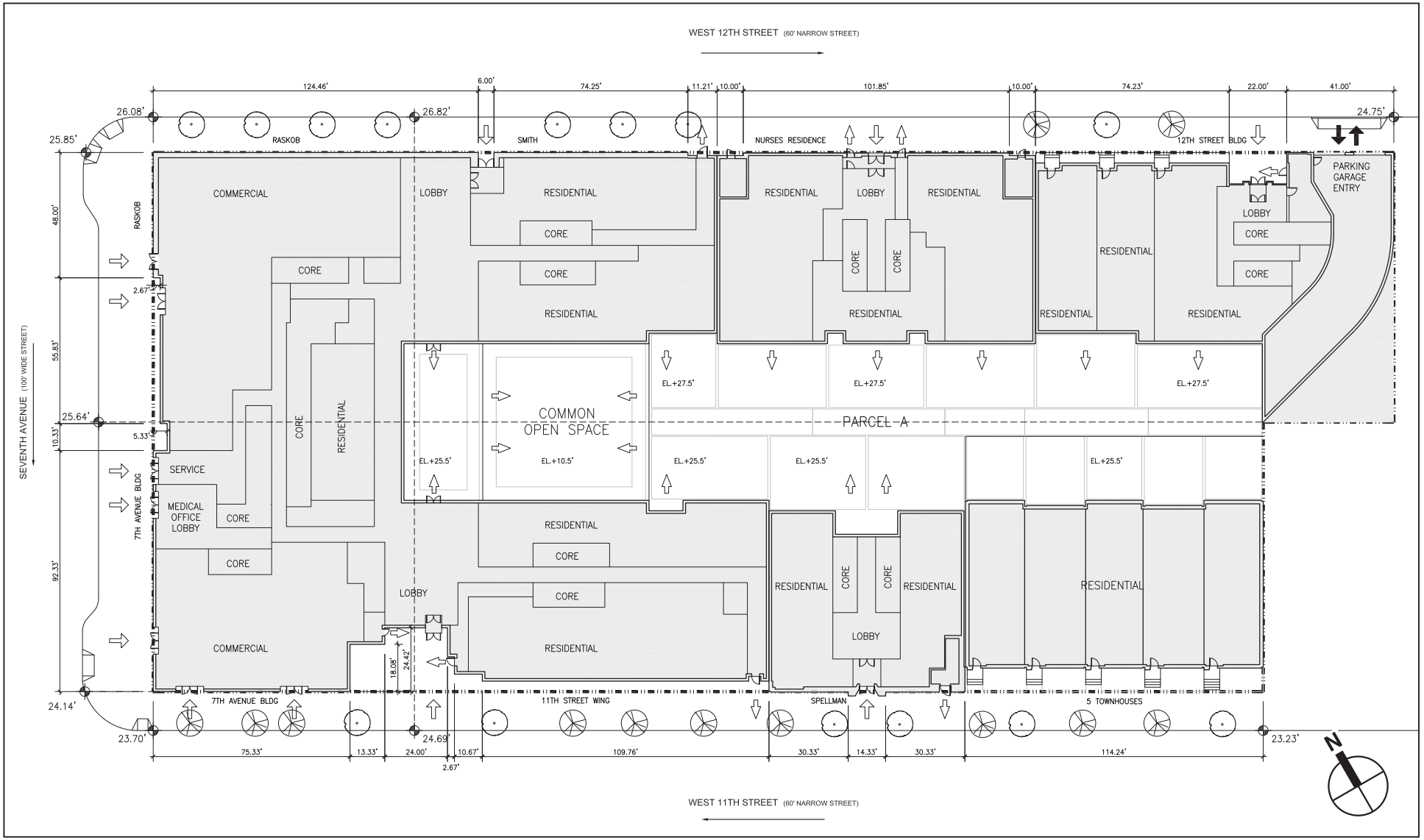
NOTE: For Illustrative Purposes

Figure 13

ST. VINCENT'S HOSPITAL MANHATTAN

Proposed Residential Development - South Elevation



NOTE: For Illustrative Purposes

Figure 14

ST. VINCENTS HOSPITAL MANHATTAN

Proposed Ground Floor Plan for Residential Development

PURPOSE AND NEED OF THE PROPOSED PROJECT

SVCMC regularly undertakes assessments of the healthcare needs of the community and its role in the larger community to determine its long-term infrastructure needs as an acute care hospital and emergency department with inpatient, emergency, ambulatory care, and home-based services. The most recent analysis provided a road map for the development of a new clinical infrastructure for an acute care hospital and emergency department. The objective of the planning process was to design a community based health care delivery system predicated on neighborhood data to best address the clinical demands projected for the future.

This analysis was based on the hospital's Primary Service Area (PSA) demographics, historical community demand as recorded in the New York Statewide Planning and Research Cooperative System (SPARCS) database, disease management/ambulatory care sensitive conditions/ prevention quality indicators, and future projected utilization. External factors in the analysis include the impact of changing demographics, use rates, and medical advances. Internal factors include advanced technologies, improved efficiencies and clinical enhancements resulting in better throughput and a decrease in inpatient length of stay.

In addition, SVCMC examined the staffing and facility requirements necessary to fulfill the inpatient, emergency and ambulatory care needs of the community. The preliminary results of this analysis are summarized as follows:

- Approximately 360 to 396 inpatient beds and behavioral health emergency observation beds are necessary to meet community need and must be located within the proposed acute care hospital;
- Managed emergency department growth, including the establishment of urgent care facilities within SVCMC's PSA is necessary to encourage more appropriate use of the emergency room;
- Surgical, interventional procedure, and diagnostic imaging space appropriately sized and equipped is necessary to accommodate advancements in medical and surgical technologies; and
- Decentralized ambulatory care centers are necessary to provide services more easily accessible to patients.

Based on the service composition noted above, a functional space program was developed. In optimally configured space—one parameter of which was that all acute care beds and hospital services be contained in a single building—the program was determined, pending review by the NYSDOH, to require approximately 600,000 to 650,000 gsf of space for an acute care hospital and emergency department.

Healthcare delivery for the new acute care hospital will rely heavily on major technological advances in medicine, particularly those advances made in the last decade. The prevalence of minimally invasive, image guided procedures has resulted in better outcomes for patients who depend less on medication during what is today a much shorter recovery process. These new medical technologies demand a physical environment that provides the space and layout for the new technology, equipment, and critical infrastructure services such as increased frequency of air exchange, precision control of air temperature and quality, increased consumption of normal power, and unrestricted access to emergency power.

These new medical technologies demand space that can support flexibility in use over time through wide spacing of structural support columns, reinforcement of floors to support the

weight of equipment intensive occupancy, uniform horizontal floor elevations, and increased spacing between floors to provide space above the finished ceiling for the complex web of ventilation, lighting, power, information technology, and life safety systems required in today's healthcare environment. The standard minimum floor-to-floor heights for the construction of acute care hospitals range from 13 to 14 feet for bed floors and from 15 to 16 feet for surgical, diagnostic and procedural floors. Only nine percent of the existing SVCMC floors are built to that standard.

In fact, SVCMC today is an assemblage of buildings built for various purposes over an 80-year period of time (see Table 1). These buildings, forming the hospital east of Seventh Avenue were designed as freestanding structures each with their own service cores and demising walls. In many cases, it is not possible to pass from one building to another. While Smith, Raskob, Coleman, and Link connect on most floors (in some cases via ramps to compensate for variation in floor elevation), the Nurses' Residence building stands alone, nearly 120 feet tall, without connection above the 2nd floor to its neighbors Smith and Reiss, thus isolating the Reiss Pavilion from the rest of the buildings on the East Site. Spellman, too, lacks connection above the 4th floor to its neighbor Link, thereby isolating the upper floors of the Spellman Pavilion and Cronin Building from the rest of the buildings on the East Site. As hospitals plan to meet the pace of advances in medical care, such haphazard horizontal adjacencies limit programmatic growth, expansion, and relocation. Moreover, passage between these buildings, already hampered by the structural walls of the joined buildings and the varying floor levels, requires 23 elevators in 7 separate elevator banks and 19 individual staircases. The ratio of truly usable space in the existing hospital complex, net of hallways, stairs and elevators, is only 50 percent of the SVCMC's footprint.

Accordingly, SVCMC believes that it has no alternative but to build a new acute care hospital and emergency department on the New Hospital Site. Construction activities would begin with demolition of the O'Toole Building. Following completion of the new hospital building on the New Hospital Site and the transfer of medical functions to that building, the existing East Site buildings would be vacated and that site would be redeveloped with residential buildings with retail and medical office uses on the ground and basement floors in cooperation with a real estate development partner. The transfer of the East Site to a private developer for residential development would provide one of the necessary revenue sources for SVCMC to construct the new hospital. The redevelopment of the East Site with residential use would allow for the productive reuse of what is otherwise an obsolete group of four historically contributing buildings within the Greenwich Village Historic District. The redevelopment and reuse of the East Site would result in an overall reduction in the amount of development on this portion of the project site by more than 15 percent, from the existing approximately 763,114 gsf above grade to approximately 624,280 gsf.

ANALYSIS FRAMEWORK

In the future without the proposed project, the current uses on the project site are assumed for the purpose of this analysis to continue, with the exception of the current inpatient behavioral health program. Apart from the proposed project, SVCMC intends to move 73 existing beds associated with its behavioral health program to the former Cabrini Medical Center building on East 19th Street between Second and Third Avenues.

Development of the proposed project is expected to be complete in 2019, with the hospital and the residential buildings occupied. Thus 2019 will be the analysis year for the proposed project.

ENVIRONMENTAL REVIEW PROCESS

CPC as lead agency in the environmental review has determined that the proposed actions and project have the potential to result in significant environmental impacts and, therefore, pursuant to City Environmental Quality Review (CEQR) procedures, has issued a positive declaration requiring that an EIS be prepared in conformance with all applicable laws and regulations, including the State Environmental Quality Review Act (SEQRA), the City's Executive Order No. 91, and CEQR regulations (August 24, 1977), as well as the relevant guidelines of the *CEQR Technical Manual*. This draft scope of work has been prepared in accordance with those laws and regulations and the City's *CEQR Technical Manual*.

In accordance with SEQR and CEQR, this Draft Scope of Work has been distributed for public review. A public hearing has been scheduled for December 8, 2009 at Spector Hall, Department of City Planning (NYCDCP), 22 Reade Street, New York, NY, 10007, and the period for submitting written comments will remain open for ten days, or until December 22, 2009. After considering comments received during the public comment period, a Final Scope of Work will be prepared to direct the content and preparation of a Draft EIS (DEIS). As the next step in the process, once the lead agency has determined that the DEIS is complete, it will be subject to additional public review, in accordance with the CEQR and Uniform Land Use Review Procedure (ULURP) processes with a public hearing and a period for public comment. A Final EIS (FEIS) will then be prepared to respond to those comments. The lead agency will make CEQR findings based on the FEIS, before making a decision on project approval.

As described in greater detail below, the EIS will contain:

- A description of the proposed actions and project and its environmental setting;
- An analysis of the potential for adverse environmental impacts to result from the project;
- A description of mitigation measures proposed to eliminate or minimize any adverse environmental impacts disclosed in the EIS;
- An identification of any adverse environmental effects that cannot be avoided if the proposed project is implemented;
- A discussion of alternatives to the proposed actions and project; and
- A discussion of any irreversible and irretrievable commitments of resources to develop the project.

ENVIRONMENTAL IMPACT STATEMENT (EIS) SCOPE OF WORK

TASK 1: PROJECT DESCRIPTION

The first chapter of the EIS introduces the reader to the project and sets the context in which to assess impacts. The chapter will contain a project identification; the background and/or history of the hospital's development on the project site; a statement of purpose and need for the proposed project; a detailed description of the proposed actions necessary to achieve the project; a description of the development program and project siting and design; and a discussion of approvals required, procedures to be followed, and the role of the EIS in the process. The chapter is the key to understanding the proposed project and its impacts, and gives the public and decision-makers a base from which to evaluate the project against both the future with the proposed project and the future without the proposed project options.

TASK 2: LAND USE, ZONING, AND PUBLIC POLICY

The proposed project would be in keeping with existing community facility and residential uses in the area. However, it would require a number of discretionary actions as described above and would result in changes to land use on the project site. This chapter will:

A. Provide a brief development history of the project site and surrounding area (see Figure 15). Describe conditions on the project site, including existing conditions and the underlying zoning.

B. Describe predominant land use patterns, including a description of recent development trends.

C. Describe the existing zoning and any recent zoning actions in the study area.

D. Describe other public policies that apply to the project site and the study area, including specific development projects and plans for public improvements.

E. Prepare a list of future projects in the study area and describe how these projects might affect land use patterns and development trends in the study area in the future without the proposed project. Also, identify any pending zoning actions or other public policy actions that could affect land use patterns and trends in the study area as they relate to the proposed project.

F. Assess impacts of the proposed project on land use and land use trends, zoning, and public policy. Discuss potential changes associated with the addition of the proposed project.

TASK 3: SOCIOECONOMIC CONDITIONS

According to guidelines of the *CEQR Technical Manual*, since the proposed project will include more than 200 residential units, a preliminary socioeconomic assessment is appropriate. The purpose of the assessment is to disclose changes resulting from the proposed project and determine if these changes are significant. Socioeconomic impacts can occur when a proposed project directly or indirectly changes economic activities in an area.

In general the five principal issues of concern are (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.

The *CEQR Technical Manual* suggests that the analysis for each area of concern begin with a preliminary assessment. For those areas in which the preliminary assessment cannot definitively rule out the potential for significant adverse impacts, a detailed analysis is required.

The proposed project would not displace any residences. The indirect residential displacement analysis will be undertaken using 2000 US Census data, as well as current real estate market data and New York City Department of Finance Real Property Assessment Data (RPAD), to describe demographic and residential conditions in the study area (see Figure 16). In accordance with *CEQR Technical Manual* guidelines, the analysis will use this data to consider whether the proposed project would have the potential to result in significant residential displacement impacts by adding substantial new population with different socioeconomic characteristics compared to the existing population, or by introducing a substantial amount of more costly type of housing compared to existing housing and housing expected to be built in the study area by the time the action is implemented.

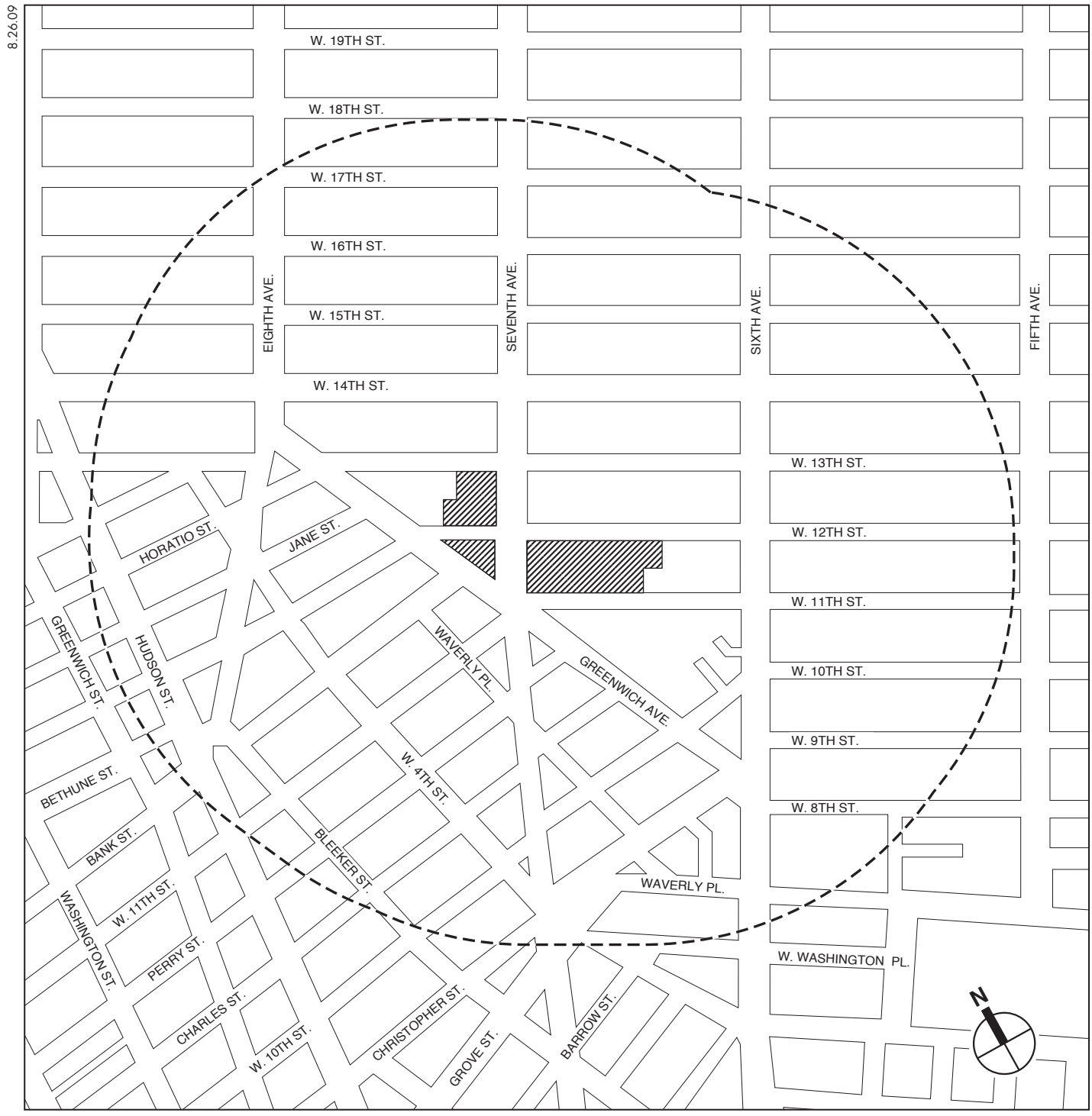


Figure 15
Land Use Study Area

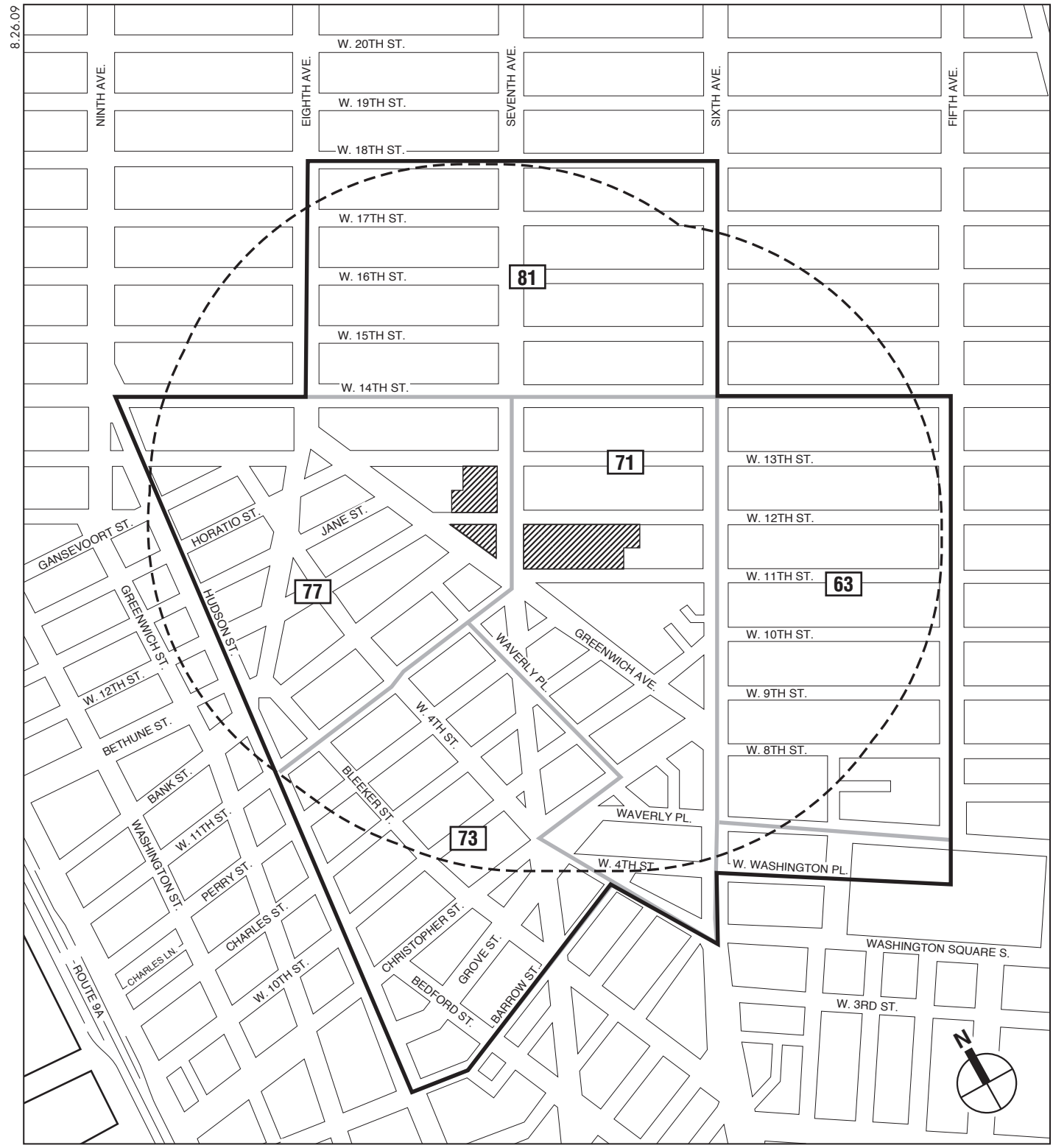


Figure 16

Socioeconomic Study Area

TASK 4: COMMUNITY FACILITIES AND SERVICES

The demand for community facilities and services is directly related to the type and size of the new population generated by the proposed action. New residential developments have the potential to affect facilities, such as public schools, libraries, and hospitals. According to the *CEQR Technical Manual*, a detailed community facilities analysis is conducted when a project would have a direct or indirect effect on a community facility.

DIRECT EFFECTS

A direct effect would occur if a project would physically alter a community facility, whether by displacement of the facility or other physical change. The proposed project would directly affect only the community facility on the project site, namely Saint Vincent's Hospital Manhattan. The proposed project would constitute a major improvement to this facility with the construction of a new acute care hospital and emergency department, and this improvement will be described in this chapter. The proposed project would require the relocation of ambulatory care facilities and physicians' offices associated with SVCMC that are currently located on the project site in the O'Toole Building. The EIS will consider any potential for impacts on the operation of these services resulting from their relocation. The analysis will also consider the proposed reduction in the bed count in the new hospital and operational changes.

Analysis of police and fire facilities is conducted only when a direct impact is expected. As the proposed project would not directly affect any police or fire facilities, no assessment of these facilities is necessary.

INDIRECT EFFECTS

Regarding indirect effects on community facilities, the proposed project requires only an analysis of potential impacts on public schools. An analysis of public schools is required if the project would introduce more than 50 elementary/middle school or 150 high school students. Based on the student generation ratios provided in the *CEQR Technical Manual*, the proposed 658 market-rate residential units would introduce approximately 80 elementary, 27 middle, and 40 high school students to public schools in Community School District (CSD) 2. Because this exceeds the threshold of 50 elementary/middle school students, an analysis of potential impacts on elementary and middle schools within a ½-mile radius of the project site and within CSD 2 as a whole will be conducted (see Figure 17). Because the proposed project would not exceed the threshold of 150 high school students, no assessment of potential impacts on public high schools is necessary. The assessment of potential impacts on public elementary and middle schools will be conducted as follows:

A. Identify and locate public schools serving the project site (residential redevelopment area). Describe conditions within the ½-mile study area and CSD 2 as a whole in terms of enrollment, capacity, and utilization during the current school year, noting any specific shortages of school capacity. This analysis will use data from the Department of Education (DOE).

B. Identify conditions that will exist in the future without the proposed project, taking into account any projected changes in future enrollment and plans to alter school capacity through either the construction of new school space or through administrative actions on the part of DOE. The planned New York Foundling Hospital School, an elementary



Figure 17
Schools Study Area

school that will be constructed by 2012 near the project site at West 17th Street and Sixth Avenue, will be considered and discussed in this analysis.

C. Analyze future conditions with the proposed project, adding students likely to be generated by the proposed project to the projections for the future without the actions. Assessment of impacts will be based on the methodology presented in the *CEQR Technical Manual*.

An analysis of libraries is undertaken if the project would result in more than a 5 percent increase in the ratio of residential units to libraries in the borough. In Manhattan, the CEQR threshold for this increase is 901 residential units. As the proposed project would include only 658 residential units, no assessment of potential impacts on public libraries is warranted.

An analysis of publicly funded health care facilities is undertaken with projects of more than 600 low- to moderate-income housing units, and an analysis of day care centers is necessary when a project would introduce more than 50 eligible children (357 low-income or 417 low-moderate-income residential units in Manhattan, as identified in Table 3C-4 of the *CEQR Technical Manual*). As the proposed project includes only market-rate units, no analysis of health care or day care facilities is warranted.

TASK 5: OPEN SPACE

The number of residents introduced to the area by the proposed project would exceed the CEQR threshold (200 residents) requiring an analysis to assess potential impacts on the residential open space user population in a ½-mile study area (see Figure 18). As the proposed project would result in a net reduction of workers coming to the project site, an assessment of potential impacts on the non-residential (worker) population within a ¼-mile of the project site is not called for.

The open space analysis will:

A. Compile an inventory of all passive and active open spaces, both publicly and privately owned, for the study area. This will be accomplished through coordination with the New York City Department of Parks and Recreation (DPR) and private owners of publicly accessible open spaces, and verified through field visits. The inventory will include an evaluation of the condition and use of existing open spaces, as well as acreage. Qualitative discussions of any major public open spaces just outside the study area will be included, if appropriate.

B. In conformance with *CEQR Technical Manual* methodologies, assess the adequacy of existing publicly accessible open space facilities.

C. Assess expected changes in future levels of open space supply and demand by the project's analysis year, based on other planned development projects within the study areas and any public open space expected to be developed. Develop open space ratios for future conditions and compare them with existing ratios to determine changes in future levels of adequacy.

D. Based on the residential and worker populations to be added by the proposed project, as well as any public open space to be provided, assess the project's effects on open space supply and demand. The assessment of project impacts will be based on a comparison of open space ratios with the project and open space ratios in the future without the proposed project.



Figure 18

Open Space Study Area

TASK 6: SHADOWS

The *CEQR Technical Manual* requires a shadow analysis for proposed projects that have the potential to cast new shadows on a publicly accessible open space or historic resource with sun-sensitive features. The proposed new hospital building on the New Hospital Site is expected to reach a height of approximately 286 feet and could potentially cast new shadows on nearby open spaces or on historic resources with significant sunlight-dependent features. A screening analysis will be performed to determine if and when new shadows from the proposed project, including the new acute care hospital and emergency department as well as the new residential buildings, would reach any open spaces or sun-sensitive features of historic resources. This chapter of the EIS will:

A. Identify sun-sensitive landscapes and historic resources within the path of shadows that would be cast by the proposed project's maximum building envelopes.

B. In coordination with the analyses for open space and historic resources, map and describe any sun-sensitive areas.

C. For open spaces, map active and passive recreation areas and features of the open spaces such as benches or play equipment.

If shadows would reach any such resources, a detailed shadow analysis will be performed.

TASK 7: HISTORIC RESOURCES

The *CEQR Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. Historic resources include designated NYCLs and Historic Districts; properties calendared for consideration as NYCLs by LPC or determined eligible for NYCL designation; properties listed on the State and National Register of Historic Places (S/NR) or formally determined eligible for S/NR listing, or properties contained within a S/NR listed or eligible district; properties recommended by the NY 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).

The project site is located within the Greenwich Village Historic District, both a New York City Historic District and a district listed on the S/NR. Since the project must be approved by LPC, the chapter will reference and quote text from the LPC approval with respect to architectural resources. Because SVCMC will be required to secure a Certificate of Need from the NYSDOH for the new acute care hospital and emergency department and SVCMC may also seek DASNY financing, the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) will be consulted with respect to impacts on historic resources associated with those actions.

ARCHAEOLOGICAL RESOURCES

In a letter dated August 25, 2008, LPC determined that the project site is not sensitive for potential archaeological resources. OPRHP's Concurrence with LPC's determination will be sought. If OPRHP determines that the project site may be sensitive for archaeological resources, the following work will be undertaken:

- A Stage 1A Archaeological Assessment will be prepared for OPRHP review. The Stage 1A Archaeological Assessment will identify the potential for the project site to contain precontact-period and/or historic-period archaeological resources.

- Qualitatively discuss any impacts on potential archaeological resources that are expected in the future without the proposed project.
- Describe the proposed project and the potential impact it could have on archaeological resources through subsurface disturbance.
- If applicable, develop mitigation measures to avoid or minimize any adverse impacts on archaeological resources in consultation with OPRHP.

ARCHITECTURAL RESOURCES

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

- Describe architectural resources on the project site.
- Within a 400-foot study area, map and briefly describe known architectural resources, which in this area is primarily the Greenwich Village Historic District. The study area for architectural resources is shown in Figure 19.
- Conduct a field survey of the small portions of the study area outside the Greenwich Village Historic District to identify any potential architectural resources that could be affected by the proposed project. Potential architectural resources comprise properties that appear to meet the eligibility criteria for NYLC designation and/or S/NR listing. Map and briefly describe any potential architectural resources.
- Qualitatively discuss any impacts on architectural resources that are expected in the future without the proposed project as a result of other expected development projects.
- Describe the proposed project and any additional potential development and the impact it would have on the buildings on the project site. Assess the project's potential for indirect impacts on any known or potential architectural resources, including visual and contextual impacts.

If applicable, develop mitigation measures to avoid any adverse impacts on architectural resources in consultation with LPC and OPRHP.

TASK 8: URBAN DESIGN AND VISUAL RESOURCES

The proposed new hospital and new development on the East Site would replace the existing buildings with new buildings of a different bulk, height, and design, altering the urban design character of the site and possibly the surrounding area. The analysis will be undertaken as follows:

A. Based on field visits, describe the project site and the urban design and visual resources of the surrounding area, using photographs and text as appropriate. A description of existing natural features, block forms, streetscape elements, street patterns and street hierarchy, as well as building bulk, use, type, and arrangement of the study area will be included as per the *CEQR Technical Manual*. A description of visual resources in the area will also be provided. The study area for urban design and visual resources is shown in Figure 19.

B. Based on planned and proposed development projects, describe the changes expected in the urban design and visual character of the study area that are expected in the future without the project.

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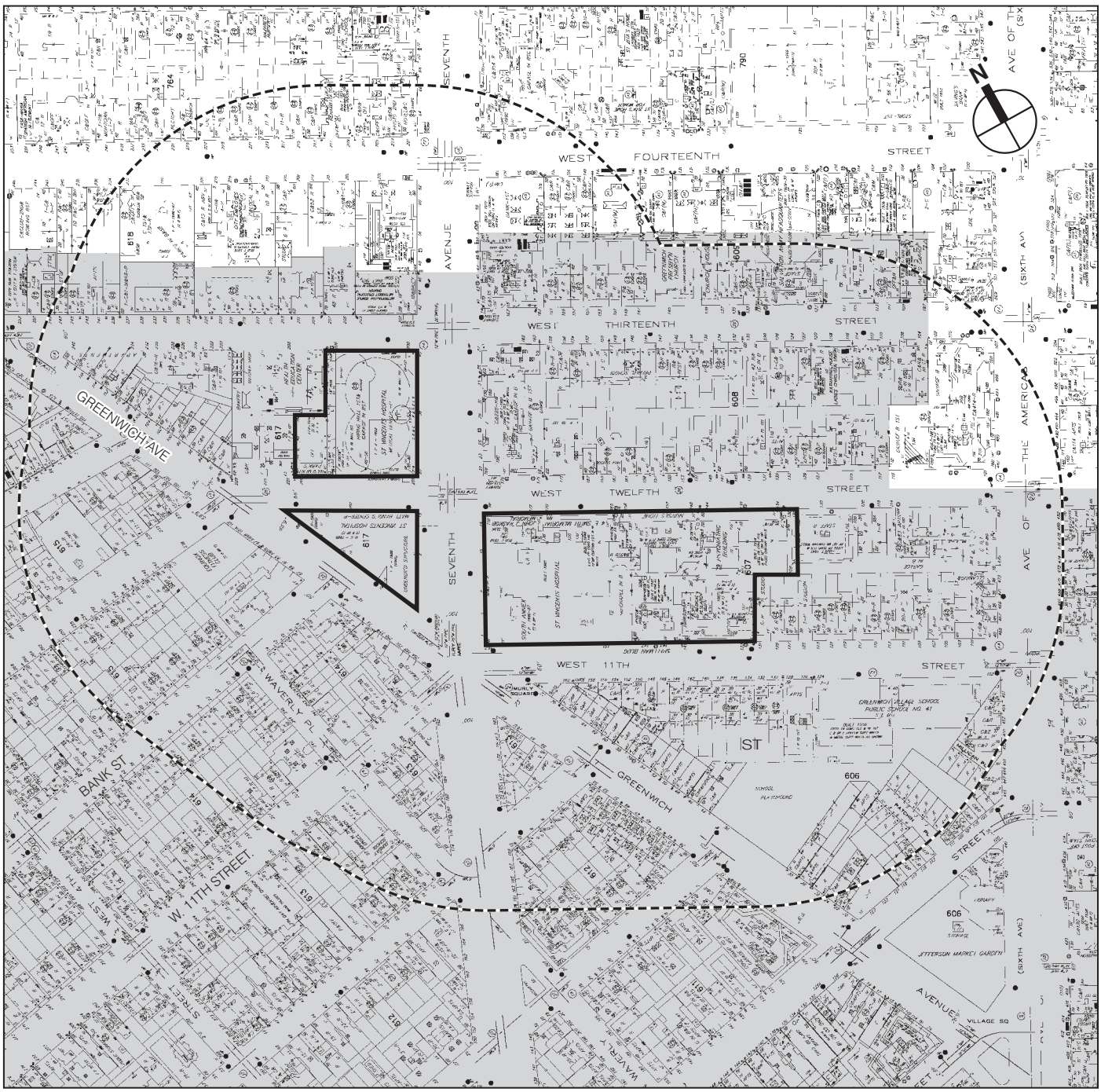

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SCALE

Project Site Boundary

Study Area Boundary (400-Foot Perimeter)

Greenwich Village Historic District

Figure 19

Historic Resources and Urban Design Study Areas

C. Assess the changes in urban design characteristics and visual resources that are expected to result from the project on the project sites and in the study area and evaluate the significance of the change.

TASK 9: NEIGHBORHOOD CHARACTER

The character of a neighborhood is established by numerous factors, including land use patterns, the characteristics of its population and economic activities, the scale of its development, the design of its buildings, the presence of notable landmarks, and a variety of other physical features that include noise levels, traffic, and pedestrian patterns. The proposed project represents a change that could affect the character of the surrounding area. Therefore, the EIS analysis will consist of the following.

A. Based on the other EIS chapters, summarize the predominant factors that contribute to defining the character of the neighborhood.

B. Based on planned development projects, public policy initiatives, and planned public improvements, changes that can be expected in the character of the neighborhood in the future without the project will be described.

C. Assess and summarize the project's impact on neighborhood character.

TASK 10: NATURAL RESOURCES

A natural resources assessment is conducted when a natural resource is present on or near the project site and when an action involves the disturbance of that resource. The *CEQR Technical Manual* defines natural resources as water resources, including surface water bodies and groundwater; wetland resources, including freshwater and tidal wetlands; upland resources, including beaches, dunes, and bluffs, thickets, grasslands, meadows and old fields, woodlands and forests, and gardens and other ornamental landscaping; and built resources, including piers and other waterfront structures. The project site is located in a fully developed area in Manhattan and has limited potential to provide unique habitat for noteworthy wildlife. A screening analysis will be presented in the EIS identifying whether the proposed project would result in significant impacts on natural resources.

TASK 11: HAZARDOUS MATERIALS

This task involves summary of a Phase I Environmental Site Assessment (ESA) prepared for the project site and other available sources. This analysis examines the potential for the presence of hazardous materials on the project site. This work will be performed as follows:

- The land use history of the project site will be determined by review of historic maps, atlases, and other historical records.
- Records maintained by the United States Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (NYSDEC) will be obtained and reviewed to assess the potential for contamination due to the presence of identified problem sites and activities on or adjacent to the property, including registered underground storage tanks, hazardous waste disposal sites, hazardous waste generators or treatment facilities, and hazardous substance releases. The database search areas will be at least as extensive as those recommended in ASTM Standard E1527-05.

- Available information on subsurface conditions (geology and hydrogeology) will be obtained and reviewed.
- The project site will be inspected for any evidence of contamination, including the presence of drums or tanks, stained soils, stressed vegetation, and illegally dumped or stored material. Current occupants of the property will be interviewed to obtain information regarding site conditions.

If necessary, Phase II testing and remediation measures will also be discussed.

In addition, the Hazardous Materials chapter of the EIS will assess potential impacts from the future use of hazardous materials, including hazardous chemicals, biohazards, and radioactive materials, within the proposed buildings. Based on information supplied by SVCMC, the chapter will describe the general types and quantities of hazardous materials expected to be used, and the way in which they would be stored, used, and disposed of.

TASK 12: WATERFRONT REVITALIZATION PROGRAM

The project site is not located within the boundaries of the City's Coastal Zone. Therefore, the Waterfront Revitalization Program and Coastal Zone assessment are not required. This chapter will include a map showing that the project site is outside the coastal zone and a statement to that effect.

TASK 13: INFRASTRUCTURE

The proposed project would place additional demands on the infrastructure systems serving the area. These systems include water supply and sanitary sewage handling and treatment. The infrastructure analysis will include the following tasks:

WATER SUPPLY

A. The existing water supply system will be described, and any planned changes to the system will be discussed. Average and peak water demand for the existing water use on the development parcels will be estimated. The effects of the incremental demand on the system will be assessed to determine if there is sufficient capacity to maintain adequate supply and pressure.

WASTEWATER

B. The existing sewer system serving the development parcels will be described based on information obtained from the New York Department of Environmental Protection (DEP). The existing flows to the North River Water Pollution Control Plant (WPCP) will be obtained for the latest 12-month period. The average monthly flow rate will be presented.
C. Sanitary sewage generation for the proposed development program will be estimated. The effects of the incremental demand on the system as compared to the No Action development will be assessed to determine if there will be any impact on operations of the WPCP.

TASK 14: SOLID WASTE AND SANITATION SERVICES

This chapter of the EIS will assess the additional demands the proposed project would place on solid waste disposal services.

A. Existing and future New York City solid waste disposal practices will be described, including the collection system and status of landfilling, recycling, and other disposal methods.
B. The incremental impacts of the development's solid waste generation on the City's collection needs and disposal capacity will be assessed.

TASK 15: ENERGY

This chapter of the EIS will assess the additional demands the proposed project would place on the energy supply. Energy usage for the proposed project will be estimated and the proposed project's "green measures" to reduce energy consumption will be described. The effect of the project's new demand on the energy supply systems will be assessed. As a conservative assumption, the quantitative assessment of the project's demand on energy systems will not take credit for the green building technologies that the proposed buildings are expected to incorporate.

TASK 16: TRAFFIC AND PARKING

Effects of the proposed project, including the residential development, will be considered for a 2019 analysis year, by which time both the new acute care hospital and the residential development on the East Site would be completed and occupied.

The need for quantified traffic and parking analyses is dependent on the peak hour trips generated by the proposed project in accordance with the 50 peak hour vehicle trip threshold specified in the *CEQR Technical Manual*. Memoranda summarizing the trip generation and travel demand surveys undertaken for the proposed project are presented in Appendix A. The projection of trips expected to be generated by the proposed project is based on the information provided by SVCMC, a review of the existing hospital operations and the travel demand surveys which have been conducted at both the East Site and the O'Toole Building. The data obtained from the travel demand surveys has been used to develop future trip-making characteristics for the staff, visitors and patients, including those who would be relocated from the East Site to the proposed building on the New Hospital Site. In addition, standard references, census data, and rates developed for similar uses from previous studies have been used to develop the trip generation estimates for the new residential development. The trip generation analysis also includes the number of deliveries that are anticipated to service the new facilities.

Based on the preliminary findings presented in Appendix A, detailed quantified traffic and parking analyses will not be required. However, if final trip generation projections exceed the CEQR threshold, then quantified traffic and parking analyses would be undertaken.

TASK 17: TRANSIT AND PEDESTRIANS

The need for quantified transit and pedestrian analyses is dependent on the peak hour trips generated by the proposed project in accordance with the 200 peak hour trip threshold specified in the *CEQR Technical Manual*. The transit and pedestrians analyses for the EIS will be based on the trip generation estimates and the travel surveys developed for the traffic and parking task. As described above under "Traffic and Parking," it is anticipated based on the preliminary trip generation and travel demand surveys that that the proposed project would not generate sufficient trips to warrant detailed analysis of potential pedestrian and transit impacts. However, if based on the result of travel demand surveys and final trip projections, quantified transit and/or

pedestrian analyses are deemed necessary based on the CEQR threshold, those will be undertaken.

TASK 18: AIR QUALITY

As described above under "Traffic and Parking," based on the preliminary trip generation findings presented in Appendix A, it is not anticipated that the proposed project would generate a substantial amount of new vehicle traffic. Thus it is not anticipated that project-generated traffic would be likely to result in significant air quality impacts. However, in the event that the number of project-generated trips exceeds the *CEQR Technical Manual* screening threshold of 100 vehicles, an analysis of air quality impacts from mobile source emissions will be conducted using the EPA CAL3QHC screening model to assess impacts of carbon monoxide (CO).

An air quality analysis of potential impacts from parking garages associated with the project will be conducted since emissions from vehicles using the parking facilities could potentially affect ambient levels of CO at sensitive receptors in the project area. An analysis of the emissions from the parking facilities and the dispersion of CO emissions in the environment will be performed using the methodology set forth in the *CEQR Technical Manual*. The CO concentrations will be determined for the time periods when overall garage usage would be the greatest, considering the hours when the greatest number of vehicles would exit the facility. Background and on-street CO concentrations will also be added to the modeling results to obtain the total ambient levels for comparison to ambient air quality standards.

A stationary source screening analysis will be performed to determine the potential for significant pollutant concentrations from fossil-fueled HVAC heating systems for each project building. The procedure involves determining the distance (from the exhaust point) within which potential significant impacts may occur, on elevated receptors (such as open windows, air intake vents, etc.) that are of an equal or greater height when compared to the height of the proposed project's HVAC exhaust. The distance within which a significant impact may occur is dependent on a number of factors, including the height of the discharge, type(s) of fuel burned and development size. Project-on-project impacts will also be determined, where applicable. The screening analysis uses procedures outlined in the *CEQR Technical Manual*. Based upon this information a determination will be made of whether further detailed analysis is necessary.

TASK 19: NOISE

According to *CEQR Technical Manual* guidelines, a detailed noise analysis is recommended if a proposed action would (among other things) cause a stationary source to be operating within 1,500 feet of a receptor—such as a park—with a direct line of sight to that receptor, or would generate vehicular traffic above a certain level. The proposed project would create a new stationary source (i.e., HVAC system for the new hospital) within 1,500 feet of noise-sensitive uses including residences, and the proposed project would increase the volume of vehicular traffic in the area.

As described above under "Traffic and Parking," based on the preliminary trip generation findings presented in Appendix A, it is not anticipated that the proposed project would generate a substantial amount of new vehicle traffic. Thus it is not anticipated that project-generated traffic would be likely to result in significant noise impacts. Consequently, the noise analysis will examine the level of attenuation needed in the proposed buildings to satisfy CEQR requirements for interior noise levels. The EIS building attenuation noise study will be an assessment of noise levels in the

surrounding area associated primarily with traffic and nearby uses and their potential effect on the proposed project. The study will include the following tasks:

A. Select appropriate noise descriptors. Appropriate noise descriptors that characterize the noise environment and the impact of the proposed project will be selected based on current CEQR criteria. Consequently, the 1-hour equivalent ($L_{eq(1)}$) and the L_{10} noise levels will be examined, where appropriate.

B. Based on the traffic studies, perform a screening analysis to determine whether there are any locations where there is the potential for the proposed project to result in significant noise impacts (i.e., doubling of traffic volume) due to project-generated traffic.

C. Select receptor locations for building attenuation analysis purposes. The six receptor sites for analysis are shown in Figure 20.

D. Determine existing noise levels. At each of the receptor sites, existing noise levels will be measured during three time periods—weekday AM, midday, and PM peak periods. Measurements will be made using a Type 1 Sound Level Meter, and L_{eq}, L_1, L_{10}, L_{50}, and L_{90} values will be recorded. At each site, 20-minute spot measurements will be made.

E. Determine the level of attenuation necessary to satisfy CEQR criteria. As necessary, recommendations regarding general noise attenuation measures needed for the proposed project to achieve compliance with standards and guideline levels will be made. Due to the relatively high ambient noise levels adjacent to the project site, any development in the area would be expected to require double-glazed windows together with provision of some kind of alternate ventilation (i.e., air conditioning) to achieve acceptable interior noise levels.

If the results of the traffic study indicate that a doubling of traffic would occur, a mobile source noise analysis would be performed.

TASK 20: CONSTRUCTION

The *CEQR Technical Manual* calls for an assessment of construction-related impacts, with a focus on historic and archaeological resources, transportation, air quality, noise, hazardous materials, and natural resources. The likely construction schedule for development at the sites and an estimate of activities will be described. Construction impacts will be evaluated according to the *CEQR Technical Manual* guidelines. The construction assessment will generally focus on areas where construction activities may result in specific environmental impacts. Measures to mitigate potential impacts will also be included. Technical areas that will be the focus of the analysis include:

A. *Cultural Resources*. Any potential construction-period impacts on historic resources will be considered.

B. *Transportation Systems*. This assessment will consider losses in lanes, sidewalks, and other transportation services during the various phases of construction, and identify the increase in vehicle trips from construction workers and equipment. In consultation with the project's construction manager, we will review the construction plan and prepare a discussion for inclusion in the EIS.

C. *Air Quality*. The construction air quality impact section will contain a discussion of both mobile air source emissions from construction equipment and worker and delivery vehicles, and fugitive dust emissions. It will include an analysis of direct emissions from

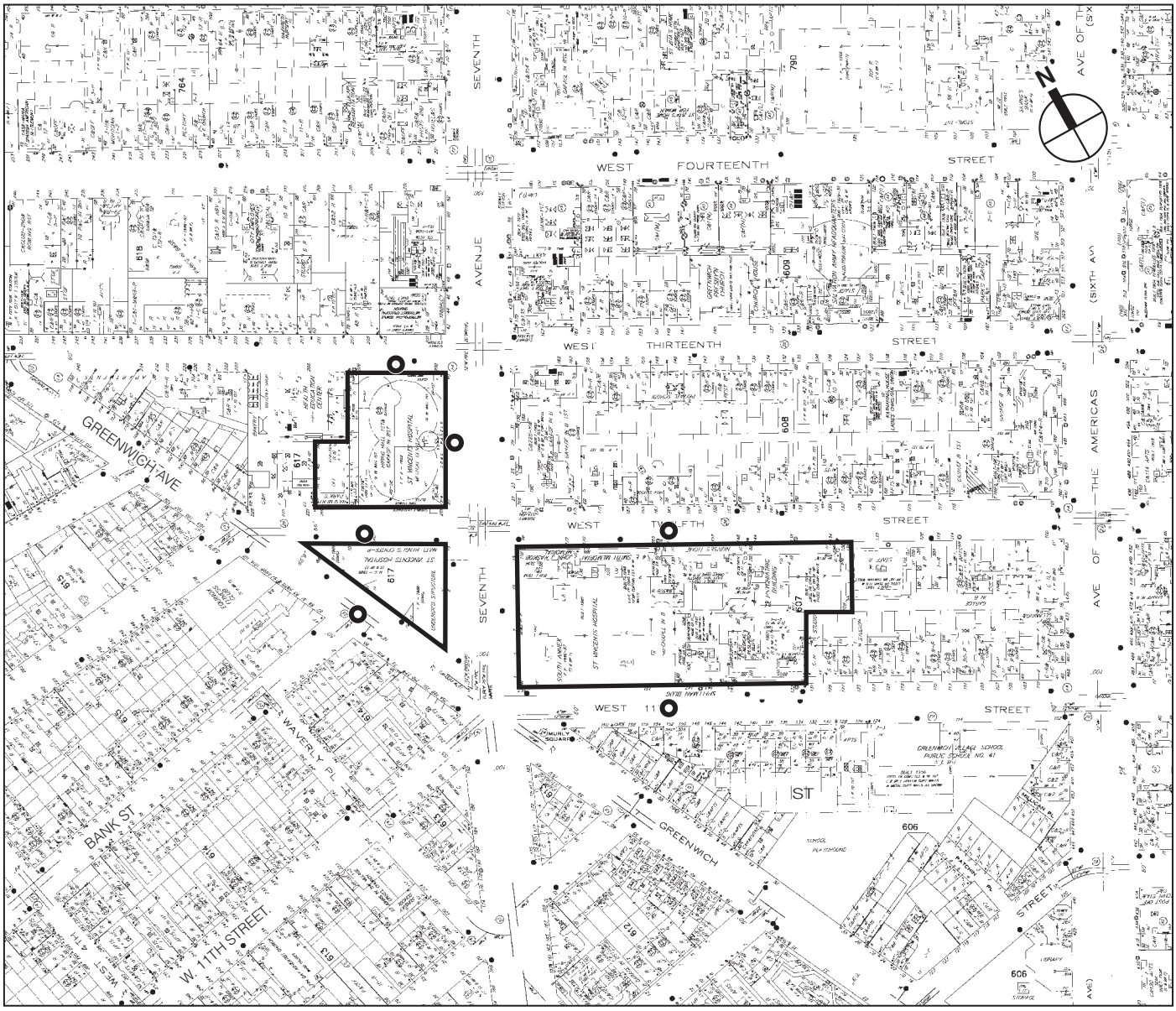

Figure 20

Noise Receptor Locations

demolition and construction site activity, including fugitive dust and on-site diesel equipment; analysis of potential effects from increases in mobile source emissions of trucks and worker vehicles at nearby sensitive receptors and congested locations, and from potential long-term traffic diversions; and a discussion of measures and emission reduction strategies to reduce impacts.

D. *Noise*. Estimate construction noise levels from various pieces of construction equipment and discuss potential effects on adjacent land uses. Measures to minimize construction noise impacts will be presented, as necessary.

E. *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.

F. *Other Technical Areas*. As appropriate, discuss the other areas of environmental assessment for potential construction-related impacts.

TASK 21: PUBLIC HEALTH

Following the guidelines presented in the *CEQR Technical Manual*, this task will examine the project's potential to significantly affect public health concerns related to air quality, noise, hazardous materials, and construction. Drawing on other EIS sections, this task will assess and summarize the potential for significant adverse impacts on public health from project activities.

TASK 22: MITIGATION

If significant project impacts are identified in the analyses discussed above, measures will be identified and assessed to mitigate those impacts. This task summarizes the findings and prepares the mitigation chapter for the EIS. The formulation and assessment of any recommended mitigation measures would be conducted in close coordination with other city agencies as necessary. Where impacts cannot be mitigated, they will be described as unavoidable adverse impacts.

TASK 23: ALTERNATIVES

The purpose of an alternatives analysis is to examine reasonable and practicable options that avoid or reduce project-related significant adverse impacts while achieving the goals and objectives of the proposed project. The specific alternatives to be analyzed are typically finalized with the lead agency as project impacts become clarified. However, they will likely include a Reduced Impact Alternative in addition to the No Action Alternative.

The analysis will be primarily qualitative, except where specific project impacts have been identified (e.g., traffic intersections with significant impacts). However, the qualitative analysis will be of sufficient detail to allow comparisons of associated environmental impacts and attainment of project goals and objectives. In addition, a description of alternative designs previously considered but rejected will be included.

TASK 24. SUMMARY CHAPTERS

The executive summary will summarize relevant material from the body of the EIS to describe the proposed project, the necessary approvals, study areas, environmental impacts predicted to occur, measures to mitigate those impacts, unmitigated and unavoidable impacts (if any), and

alternatives to the proposed project. In addition, summary chapters for the EIS may include the following (as appropriate):

- Irreversible and irretrievable commitment of resources;
- Relationship between short-term uses of the environment and the maintenance and enhancement of long-term productivity; and
- Unavoidable significant adverse impacts that cannot be mitigated.

These analyses draw from the work done in the technical areas, as relevant. They are intended to inform the decision maker of the environmental "costs" and benefits of the proposed project. ✷

Appendix A

AKRF

Environmental and Planning Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Memorandum

To: Environmental Assessment and Review Division, DCP

From: AKRF, Inc.

Date: November 6, 2009

Re: Saint Vincent's Hospital Manhattan EIS — Trip Generation Analysis

A. INTRODUCTION

This memorandum details trip generation assumptions and travel demand estimates for the Saint Vincent's Hospital Manhattan new acute care hospital and emergency department and Residential Development. The proposed development will occur on land currently occupied and used by Saint Vincents Catholic Medical Centers of New York d/b/a Saint Vincent Catholic Medical Centers (SVCMC) in the Greenwich Village neighborhood of Manhattan. The project site includes the East Site located east of Seventh Avenue between West 11th and 12th Streets, and the Triangle Site and the New Hospital Site west of Seventh Avenue between Greenwich Avenue and West 13th Street.

B. PROPOSED DEVELOPMENT

The proposed project would begin with the demolition of the existing O'Toole Building and development of the new 19-story acute care hospital and emergency department/trauma center on the New Hospital Site (currently occupied by the O'Toole Building), providing a state-of-the-art emergency department and diagnostic and treatment facilities and 366 single-bed inpatient rooms. Upon completion and occupancy of the new acute care hospital and emergency department, the East Site would be redeveloped with primarily residential use in new buildings and in renovated and adapted existing buildings. In addition to 591,986 gross square feet (gsf) of residential gross floor area, there would be 11,200 gsf of retail space, 21,094 gsf of medical office space, and 173,600 gsf of accessory parking, mechanical, and below-grade residential amenity space. While the developer of the residential buildings currently intends to build no more than 450 units, the reasonable worst-case development scenario for Environmental Impact Statement (EIS) analysis is assumed to be 658 residential units, based on an average unit size of 850 zoning square feet (zsf). It is anticipated that construction of the entire project would be completed by 2019.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT (NO BUILD)

In the future without the proposed project, the current uses on the project site are assumed to continue with the exception of the current inpatient behavioral health program. Apart from the proposed project,

SVCMC intends to move 73 existing beds associated with its behavioral health program to the former Cabrini Medical Center building on East 19th Street between Second and Third Avenues.

D. THE FUTURE WITH THE PROPOSED PROJECT (BUILD)

The proposed project would allow Saint Vincent's Hospital Manhattan to relocate to a new acute care hospital and emergency department on the west side of Seventh Avenue between West 12th and 13th Streets. The new hospital would have a state-of-the-art emergency department and operating rooms as well as 366 single-bed inpatient rooms. The existing O'Toole Building would be demolished for construction of the new hospital. Existing employees, patients, and visitors to the O'Toole Building would be relocated offsite as a result of the proposed project. Staff, inpatients, outpatients, and visitors on the East Site would move across Seventh Avenue but in reduced numbers. The proposed project would also allow the redevelopment of the existing hospital site (East Site) for residential use with retail and community facility uses on the lower levels along Seventh Avenue. Publicly accessible open space would be created on the Triangle Site one block south of the new hospital. Table 1 presents a comparison of the No Build and Build conditions.

Table 1
No Build vs. Build Program Comparison

Components	Future Without Proposed Project	Future With Proposed Project	Incremental Change
Hospital Related			
Main Hospital Workers	2,835	2,165	-670
O'Toole Building Workers	287	0	-287
Inpatients	317	312*	-5
Inpatient Visitors	628	618	-10
Outpatients	1,434	508	-926
Outpatient Visitors	2,695	1,016	-1,679
Residential (du)	0	658	658
Local retail (gsf)	0	11,200	11,200
Community Facility - Medical Office (gsf)	0	21,094	21,094

Notes:
* The new hospital would have a total of 366 inpatient beds (360 acute care and 6 psychiatric). The projected 306 acute inpatient and emergency care patients is based on an expected 85 percent occupancy rate in the proposed 360 acute care beds. The projected 6 inpatient psychiatric patients are based on full occupancy of the 6 proposed inpatient psychiatric evaluation and observation beds and part of the Comprehensive Psychiatric Emergency Program. This results in a total of 312 inpatients per day under the Build condition.

Sources:
SVCMC, 2009.

E. TRAVEL DEMAND FACTORS

The proposed project consists of two components: a new hospital building to be built on the west side of Seventh Avenue between West 12th and 13th Streets (currently occupied by the O'Toole Building) and a residential development on the East Site (currently occupied by the hospital) that would include both adaptive reuse of existing buildings and new construction. In order to identify the current travel characteristics to the various hospital facilities and to develop more realistic travel demand estimates for the proposed project, travel demand surveys were conducted at the existing hospital facilities in April 2009.

Information regarding the trip making characteristics of the employees, patients and visitors—at both the O'Toole Building and the current hospital on the East Site—was gathered in the form of travel surveys. The travel surveys were designed for all SVCMC employees, patients (both inpatient and outpatient), and visitors to the existing hospital on the East Site, the emergency department, and to the O'Toole Building. In addition to the travel surveys, door counts consisting of continuous counts of foot traffic entering/exiting (excluding people congregating and smoking) the existing hospital on the East Site and the O'Toole Building were conducted for two consecutive weekdays in April 2009.

The travel demand survey results were summarized in a form of a Technical Memorandum which is appended to this memorandum for reference. Based on the travel demand survey results, trip generation factors—including temporal distribution, modal splits, vehicle occupancies, etc.—were developed for

hospital employees, patients and visitors (see Table 2). In addition, trip generation factors for the residential and retail development components of the proposed project were developed based on standard sources—including the *City Environmental Quality Review (CEQR) Technical Manual*, U.S. Census Data, and *Urban Space for Pedestrians (by Pushkareve and Zupan)*—as summarized in Table 2.

Table 2
Travel Demand Assumptions

Use	Existing Hospital Complex (Employees)			O'Toole Building (Employees)			Patients			Visitors		
Daily Person Trip Rate	Weekday 2.0 (/employee)			Weekday 2.0 (/employee)			Weekday 2.0 (/patient)			Weekday 2.0 (/visitor)		
Temporal Distribution	AM[1] 52.0%	MD[1] 27.0%	PM[1] 55.0%	AM[1] 52.0%	MD[1] 27.0%	PM[1] 55.0%	AM[2] 8.5%	MD[2] 12.0%	PM[2] 11.1%	AM[2] 11.0%	MD[2] 14.5%	PM[2] 12.2%
In / Out[1,2]	95%/5%	35%/65%	15%/85%	95%/5%	35%/65 %	15%/85 %	50%/50 %	54%/46 %	50%/50 %	56%/44 %	56%/44 %	44%/56 %
Modal Split	AM[2]	MD[1]	PM[2]	AM[2]	MD[1]	PM[2]	AM[2]	MD[2]	PM[2]	AM[2]	MD[2]	PM[2]
Auto	19.0%	0.0%	19.0%	4.0%	0.0%	4.0%	14.0%	14.0%	14.0%	16.0%	16.0%	16.0%
Taxi	3.0%	0.0%	3.0%	1.0%	0.0%	1.0%	19.0%	19.0%	19.0%	11.0%	11.0%	11.0%
Subway	64.0%	0.0%	64.0%	65.0%	0.0%	65.0%	18.0%	18.0%	18.0%	32.0%	32.0%	32.0%
Bus	5.0%	0.0%	5.0%	11.0%	0.0%	11.0%	4.0%	4.0%	4.0%	11.0%	11.0%	11.0%
Walk/Other	9.0%	100.0%	9.0%	19.0%	100.0%	19.0%	11.0%	11.0%	11.0%	30.0%	30.0%	30.0%
Ambulance	N/A	N/A	N/A	N/A	N/A	N/A	22.0%	22.0%	22.0%	N/A	N/A	N/A
Ambulette	N/A	N/A	N/A	N/A	N/A	N/A	12.0%	12.0%	12.0%	N/A	N/A	N/A
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Occupancy	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
Auto[1,2]	1.45	1.45	1.45	1.45	1.45	1.45	2.27	2.27	2.27	1.89	1.89	1.89
Taxi[1,2]	1.35	1.35	1.35	1.35	1.35	1.35	2.08	2.08	2.08	1.57	1.57	1.57
Ambulance	N/A	N/A	N/A	N/A	N/A	N/A	1.00	1.00	1.00	1.00	1.00	1.00
Ambulette	N/A	N/A	N/A	N/A	N/A	N/A	1.00	1.00	1.00	1.00	1.00	1.00
Daily Delivery Trip Rate[1]	Weekday 0.2 (/1,000 square feet)			Weekday 0.2 (/1,000 square feet)			Weekday 0.0 (/1,000 square feet)			Weekday 0.0 (/1,000 square feet)		
Delivery Temporal[1]	AM 10.0%	MD 9.0%	PM 5.0%	AM 10.0%	MD 9.0%	PM 5.0%	AM 0.0%	MD 0.0%	PM 0.0%	AM 0.0%	MD 0.0%	PM 0.0%
Use	Residential			Local Retail			Medical Office (Staff)			Medical Office (Visitors)		
Daily Person Trip Rate	Weekday[3] 8.075 (/dwelling unit)			Weekday[3,10] 153.75 (/1,000 square feet)			Weekday[9] 10.0 (/1,000 square feet)			Weekday[9] 33.6 (/1,000 square feet)		
Temporal Distribution	AM[4] 9.1%	MD[4] 4.7%	PM[4] 10.7%	AM[8] 3.1%	MD[8] 19.0%	PM[8] 9.6%	AM[2] 11.0%	MD[2] 14.5%	PM[2] 12.2%	AM[2] 11.0%	MD[2] 14.5%	PM[2] 12.2%
In / Out[2,4,8,9]	15%/85%	50%/50%	70%/30%	50%/50 %	50%/50 %	50%/50 %	95%/5%	50%/50 %	15%/85 %	56%/44 %	56%/44 %	44%/56 %
Modal Split	AM[5]	MD[5]	PM[5]	AM[8]	MD[8]	PM[8]	AM[2]	MD[9]	PM[2]	AM[2]	MD[2]	PM[2]
Auto	6.0%	6.0%	6.0%	2.0%	2.0%	2.0%	4.0%	2.0%	4.0%	16.0%	16.0%	16.0%
Taxi	6.0%	6.0%	6.0%	3.0%	3.0%	3.0%	1.0%	3.0%	1.0%	11.0%	11.0%	11.0%
Subway	57.0%	57.0%	57.0%	6.0%	6.0%	6.0%	65.0%	6.0%	65.0%	32.0%	32.0%	32.0%
Bus	3.0%	3.0%	3.0%	6.0%	6.0%	6.0%	11.0%	6.0%	11.0%	11.0%	11.0%	11.0%
Walk/Other	28.0%	28.0%	28.0%	83.0%	83.0%	83.0%	19.0%	83.0%	19.0%	30.0%	30.0%	30.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Occupancy	AM	MD	PM	AM	MD	PM	AM	MD	PM	AM	MD	PM
Auto[2,5,8]	1.18	1.18	1.18	1.60	1.60	1.60	1.38	1.38	1.38	1.89	1.89	1.89
Taxi[2,8,9]	1.40	1.40	1.40	1.20	1.20	1.20	1.40	1.40	1.40	1.57	1.57	1.57
Daily Delivery Trip Rate	Weekday[6] 0.06 (/dwelling unit)			Weekday[8] 0.35 (/1,000 square feet)			Weekday[9] 0.20 (/1,000 square feet)			Weekday 0.0 (/1,000 square feet)		
Delivery Temporal	AM[7] 12.0%	MD[7] 9.0%	PM[7] 2.0%	AM[8] 7.7%	MD[8] 11.0%	PM[8] 1.0%	AM[9] 9.6%	MD[9] 11.0%	PM[9] 1.0%	AM 0.0%	MD 0.0%	PM 0.0%

Notes:
N/A = Not Applicable
Sources:
1. *Memorial Sloan Kettering Cancer Center FEIS: CEQR # 01DCP050M (2001)*
2. Saint Vincent's Catholic Medical Center (SVCMC) Travel Demand Surveys - April 2009.
3. *CEQR Technical Manual (2001)*
4. *No. 7 Subway Extension and Hudson Yards Rezoning and Development Program FGEIS (2004)*
5. 2000 U.S. Census, Journey to Work
6. *Wilbur Smith Associates, Motor Trucks in the Metropolis, 1969*
7. *Curbside Pickup and Delivery Operations and Arterial Traffic Impacts, FHWA, February 1981*
8. *West Chelsea Rezoning FEIS (2005)*
9. *First Avenue Properties Rezoning FSEIS (2006)*
10. 25% trip linkage assumed

These trip generation estimates focused on the peak hours when the maximum levels of activity would occur, thereby examining the reasonable worst case scenario with respect to transportation conditions. These included the weekday morning, midday, and evening peak hours—the periods when future activity

in terms of project generated and background traffic would be at its highest along the major roadways and local streets in the study area.

As discussed earlier, the proposed project would primarily relocate the activities related to the hospital to the proposed new building on the New Hospital Site and would redevelop the East Site (current hospital location) with residential uses along with a small amount of retail and community facility space. Therefore, the EIS transportation analyses would assess the difference in travel demand between the Build and the No Build conditions.

F. TRAVEL DEMAND ANALYSIS RESULTS

As shown in Table 3, absent the proposed project, under the No Build condition a total of 3,096, 2,455, and 3,385 person trips would be generated during the weekday AM, midday, and PM peak hours, respectively. In terms of vehicular traffic, approximately 668, 459, and 739 vehicle trips would be generated during the same respective time periods.

Table 3
Trip Generation Summary: No Build

Peak Hour Person Trip	AM			Midday			PM		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto	417	90	507	118	95	213	139	413	552
Taxi	126	66	192	102	84	186	84	138	222
Subway	1,418	197	1,615	213	170	383	360	1,372	1,732
Bus	166	47	213	68	54	122	65	167	232
Walk/Other	344	123	467	562	846	1,408	163	352	515
Ambulance	33	33	66	50	43	93	43	43	86
Ambulette	18	18	36	27	23	50	23	23	46
Total	**2,522**	**574**	**3,096**	**1,140**	**1,315**	**2,455**	**877**	**2,508**	**3,385**
Peak Hour Vehicle Trip	**AM**			**Midday**			**PM**		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	273	49	322	60	48	108	80	265	345
Taxi	95	95	190	76	76	152	110	110	220
Delivery	19	19	38	17	17	34	10	10	20
Ambulance	33	33	66	50	43	93	43	43	86
Ambulette	26	26	52	36	36	72	34	34	68
Total	**446**	**222**	**668**	**239**	**220**	**459**	**277**	**462**	**739**

As shown in Table 4, the proposed project would generate a total of 2,486, 2,081, and 2,853 person trips during the weekday AM, midday, and PM peak hours, respectively. In terms of vehicular traffic, approximately 498, 297, and 530 vehicle trips would be generated during the same respective time periods.

Table 4
Trip Generation Summary: Build

Peak Hour Person Trip	AM			Midday			PM		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto	299	79	378	76	63	139	114	301	415
Taxi	84	62	146	68	58	126	73	96	169
Subway	969	355	1,324	204	179	383	456	995	1,451
Bus	100	41	141	55	46	101	54	106	160
Walk/Other	243	208	451	538	727	1,265	274	322	596
Ambulance	15	15	30	23	20	43	20	20	40
Ambulette	8	8	16	13	11	24	11	11	22
Total	**1,718**	**768**	**2,486**	**977**	**1,104**	**2,081**	**1,002**	**1,851**	**2,853**
Peak Hour Vehicle Trip	**AM**			**Midday**			**PM**		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto	200	52	252	41	35	76	72	198	270
Taxi	79	79	158	56	56	112	86	86	172
Delivery	18	18	36	16	16	32	8	8	16
Ambulance	15	15	30	23	20	43	20	20	40
Ambulette	11	11	22	17	17	34	16	16	32
Total	**323**	**175**	**498**	**153**	**144**	**297**	**202**	**328**	**530**

As per the criteria established in the *CEQR Technical Manual*, a quantified transportation analysis is warranted if the proposed action results in more than 50 vehicle-trips and/or 200 pedestrian/transit trips during a given peak hour. As shown in Table 5, the net difference in trips generated under the No Build and Build conditions would result in total increments of -610, -374, and -532 person trips and -170, -162, and -209 vehicle trips during the weekday AM, midday, and PM peak hours, respectively.

Table 5
Trip Generation Summary: Increment

Peak Hour Person Trip	AM			Midday			PM		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto	-118	-11	-129	-42	-32	-74	-25	-112	-137
Taxi	-42	-4	-46	-34	-26	-60	-11	-42	-53
Subway	-449	158	-291	-9	9	0	96	-377	-281
Bus	-66	-6	-72	-13	-8	-21	-11	-61	-72
Walk/Other	-101	85	-16	-24	-119	-143	111	-30	81
Ambulance	-18	-18	-36	-27	-23	-50	-23	-23	-46
Ambulette	-10	-10	-20	-14	-12	-26	-12	-12	-24
Total	-804	194	-610	-163	-211	-374	125	-657	-532
Peak Hour Vehicle Trip	**AM**			**Midday**			**PM**		
	In	Out	Total	In	Out	Total	In	Out	Total
Auto	-73	3	-70	-19	-13	-32	-8	-67	-75
Taxi	-16	-16	-32	-20	-20	-40	-24	-24	-48
Delivery	-1	-1	-2	-1	-1	-2	-2	-2	-4
Ambulance	-18	-18	-36	-27	-23	-50	-23	-23	-46
Ambulette	-15	-15	-30	-19	-19	-38	-18	-18	-36
Total	-123	-47	-170	-86	-76	-162	-75	-134	-209

Since the net incremental trips between the No Build and Build conditions would not result in more than 50 vehicle-trips and/or 200 pedestrian/transit trips during a given peak hour, detailed quantitative traffic and pedestrian/transit studies are not required.

AKRF

Environmental and Planning Consultants

440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Draft Memorandum

To: Robert Dobruskin, Celeste Evans and Mehdi Amjadi (NYCDCP)

From: Adnan Pasha, P.E. and James Seto

Date: November 6, 2009

Re: Saint Vincent's Hospital Manhattan EIS — Travel Demand Surveys

A. INTRODUCTION

This memorandum discusses the framework and results for the trip generation surveys conducted for the Saint Vincents Catholic Medical Centers of New York d/b/a Saint Vincent Catholic Medical Centers (SVCMC) project as part of the transportation analysis being prepared for the Environmental Impact Statement (EIS). The proposed project consists of two components: a new hospital building on the west side of Seventh Avenue between West 12th and West 13th Streets (currently occupied by the O'Toole Building) and a residential development on the eastern portion of the site (the existing hospital complex) that would include both adaptive reuse of existing buildings and new construction. Information regarding the travel demand characteristics for the employees, patients and visitors—at both the O'Toole Building and the existing hospital complex—was gathered in the form of travel surveys and door counts. This information was used to identify current travel characteristics to the various hospital facilities, and to develop travel demand analyses for the proposed project. The results of this survey are intended to be the basis for developing travel demand estimates for the proposed project.

B. SURVEY DESIGN

The travel demand surveys were conducted via a personal interview survey form designed to gather the trip making information for all SVCMC employees, patients (both inpatient and outpatient), and visitors to the existing hospital complex, and the O'Toole Building.

In addition, continuous door counts of foot traffic entering/exiting (excluding people congregating and smoking) the existing hospital complex and the O'Toole Building at all entrance locations were gathered. To obtain a reliable sample size, the in-and-out door counts were conducted for two representative weekdays on Tuesday, April 7, 2009 and Wednesday, April 8, 2009, and the information was recorded hour-by-hour in 15-minute intervals.

Various elements of the travel demand survey are discussed as follows:

IN/OUT DOOR COUNTS

The continuous door counts were conducted from 8 AM to 8 PM for two consecutive weekdays. Vehicular curbside activities at the O'Toole Building and the Emergency Department were also observed during these times. The in/out counts provide the total number of patrons entering and exiting the hospital facilities over the course of the day. This information was used in determining the daily peak hours of activity, as well as the temporal distribution of trips.

PERSONAL INTERVIEWS

The various elements of the personal interview survey forms are discussed as follows:

Modal Split

The modal split portion of the survey provides information regarding the various means of transportation available to employees, patients and visitors traveling to and from SVCMC, including private autos, taxis, ambulances, buses, subway, etc. Respondents were asked which mode of transportation they took to reach SVCMC, and which they expected to use when they left.

Vehicle Occupancy

The vehicle occupancies for autos and taxis will be used to convert the total number of person trips by these modes into vehicle trips. Respondents who arrived to SVCMC by auto or taxi/livery car were asked how many people, including themselves, were in the vehicle with them (excluding the driver).

Parking Locations

Information regarding parking locations will be used in assigning auto trips to the study area parking facilities. Respondents who arrived to SVCMC by auto were asked if they were dropped off, and, if not, where they parked (on street, off-site garage or lot, on-site garage).

Trip Origin

The trip origin data provides information on the geographical distribution of the employees, patients and visitors, and will be used in distributing the trips to and from the study area. Respondents were asked to provide the area (by borough, county, zip code) from where their trip to SVCMC started.

C. TRAVEL DEMAND SURVEY RESULTS

Detailed summaries of survey statistics are provided in Attachment A to this memorandum. Below is an interpretation and tabulation of the key survey results.

BACKGROUND INFORMATION

A total of 228 employees, 187 patients and 61 visitors participated in the SVCMC-administered survey. In addition to the survey questions outlined in the previous section, employees were asked to identify their shift duration, while patients were categorized as either inpatients or outpatients. The specific breakdown of the survey target audience is summarized in Table 1.

Table 1
SVCMC Survey Target Populations

Population	Existing Hospital Complex (with Emergency Department)	O'Toole Building	Total
Employees	123	105	228
Patients	187	N/A	187
Visitors	N/A	61	61
Total	310	166	476
Percent (%)	65%	35%	100%

Notes and Sources:
April/May 2009 SVCMC-administered survey
N/A implies information is not applicable or not available.

The 15-minute in/out count data were summarized to develop hourly counts for arrivals and departures at each of the hospital facilities. The hourly counts were used to estimate the temporal and directional distribution rates for a typical weekday. The information collected by interviewing hospital employees, patients and visitors was summarized to determine their travel modes. In addition, the interview information was used to develop vehicle occupancies for autos and taxis, identifying the parking locations for autos, and for obtaining the information on trip origins for employees, patients, and visitors.

It is important to note that several of the survey responses included multiple modes of transportation to and/or from SVCMC. In such cases, logical assumptions were made, using the respondent's trip origin information and the proximity of SVCMC to each transportation mode, to determine the primary mode of travel.

EXISTING HOSPITAL COMPLEX

Over the two-day survey period, approximately 18,634 trips were counted entering and leaving the existing hospital complex main entrance and 2,496 trips were counted entering and leaving the Emergency Department. These trips were used to determine the temporal and directional distributions, as detailed below.

TEMPORAL AND DIRECTIONAL DISTRIBUTION

Based on the average of both days' door counts, the largest share of the daily (12 hour) trips entered or exited the main entrance during the midday peak hour, with 12 percent of the average daily trips, followed by the PM peak hour with 11.1 percent and by the AM peak hour with 8.5 percent of the average daily trips. For the Emergency Department, the largest share of the daily trips occurs during the PM peak hour with 10.6 percent, followed by the midday peak hour with 10.3 percent and by the AM peak hour with 6.5 percent. The directional distributions (the number of inbound/outbound trips versus the total number of trips during the peak hour) for the both the main entrance and the Emergency Department are similar across their respective three peak hours, as shown in Table 2.

Table 2
Existing Hospital Complex Door Counts
Temporal and Directional Distribution

Main Entrance Trips	18,634					
Emergency Dept. Trips	2,496					
Temporal and Directional Distribution						
	Main Entrance			**Emergency Department**		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**
Temporal	8.5%	12.0%	11.1%	6.5%	10.3%	10.6%
In	50.4%	53.6%	49.8%	52.8%	52.1%	51.4%
Out	49.6%	46.4%	50.2%	47.2%	47.9%	48.6%

MODAL SPLIT AND VEHICLE OCCUPANCY

A total of 123 employees and 187 patients participated in the travel demand survey conducted by the hospital staff at the existing hospital complex. The various modes of transportation used by the employees were divided into five categories: auto, taxi/livery, city bus, subway, and walk/bicycle/other modes. Furthermore, for patients, the categories of ambulance and ambulette were also recorded in addition to five modes of transportation identified for the employees. Since travel characteristics between employees and patients are expected to vary considerably, the survey results were summarized separately for various trip purposes. Table 3 summarizes the modes of transportation and vehicle occupancies for the existing hospital complex and the Emergency Department.

In general, subway was the main mode of transportation for the existing hospital complex employees, with 64 percent of employees commuting via subway. Ambulance and taxi/livery car made up the most used travel mode choices for patients traveling to and from the existing hospital complex main entrance, with 22 percent

arriving by ambulance and 19 percent arriving by taxi/livery car. At the Emergency Department, approximately 10 percent of patients arrived by ambulance and approximately 18 percent arrived by taxi/livery car.

For those traveling to the project site via auto or taxi, additional information was recorded regarding vehicle occupancy and parking locations. For employees, the private auto occupancy was 1.45; patients had auto occupancies of 2.27 and 2.25 for those traveling to the existing hospital complex and Emergency Department, respectively. The patient taxi/livery car occupancies were 2.08 and 1.43 for the existing hospital complex main entrance and Emergency Department, respectively.

Table 3
Existing Hospital Complex Survey Results
Modal Split and Vehicle Occupancy

Modal Split			
Travel Mode	**Employees**	**Patients (Hospital)**	**Patients (Emergency Department)**
Auto	19%	14%	11%
Taxi/Livery Car	3%	19%	18%
City Bus	5%	4%	2%
Subway	64%	18%	32%
Walk/Bike/Other	9%	11%	21%
Ambulance	N/A	22%	10%
Ambulette	N/A	12%	6%
Total	100%	100%	100%
Vehicle Occupancy			
Auto	1.45	2.27	2.25
Taxi/Livery Car	N/A[1]	2.08	1.43

Notes:
1. Vehicle occupancy cannot be ascertained for employee taxi/livery car trips due to limited number of responses to taxi occupancy question.

ORIGIN OF TRAVEL

Information on travel origins were also obtained from the SVCMC-administered survey. Generally, respondent locations included the five boroughs of New York City (Bronx, Brooklyn, Manhattan, Queens and Staten Island), Long Island and New Jersey. In addition, a small number of respondents came from Connecticut, Westchester County, and other counties in upstate New York. These respondents are included in the "other" category.

As shown in Table 4, approximately 20 percent of employees traveled from places in Manhattan to get to the existing hospital complex, with another 20 percent traveling from Brooklyn. Of the patient respondents, 49 percent of patients entering the existing hospital complex traveled from Manhattan, with 57 percent of Emergency Department patients traveling from Manhattan. In addition, 27 percent of patients coming to the main entrance of the existing hospital complex and 17 percent of Emergency Department patients traveled from Brooklyn.

Table 4
Existing Hospital Complex Survey
Origin of Travel

Trip Origin Location	Employees		Patients (Existing Hospital Complex)		Patients (Emergency Department)	
	Number of Responses	Percent	Number of Responses	Percent	Number of Responses	Percent
Manhattan	24	20%	48	49%	43	57%
Brooklyn	24	20%	26	27%	13	17%
Queens	22	18%	7	7%	8	11%
Bronx	16	13%	8	8%	5	7%
Staten Island	3	2%	1	1%	1	1%
New Jersey	15	12%	4	4%	1	1%
Long Island	7	6%	3	3%	2	3%
Other	11	9%	1	1%	2	3%
Total	122	100%	98	100%	75	100%

PARKING

Parking locations varied among employees and patients. Approximately 50 percent of employees and 27 percent of patients going to the existing hospital complex main entrance by car were accommodated at off-site garages or lots. Approximately 18 percent of employees and patients traveling by car parked on street, respectively. Only 18 percent of employees traveling by car parked at the on-site garage or parking lot, with no patients parking on-site. In addition, approximately 14 and 55 percent of employees and existing hospital complex patients were dropped off, respectively.

Table 5
Existing Hospital Complex Survey
Parking Characteristics

Parking Location	Employees		Patients (Hospital)	
	Number of Responses	Percent	Number of Responses	Percent
On Street	4	18%	2	18%
Off-Site Garage/Lot	11	50%	3	27%
On-Site Garage/Lot	4	18%	0	0%
Drop-off	3	14%	6	55%
Total	22	100%	11	100%

O'TOOLE BUILDING

Over the two-day survey period, approximately 6,798 trips were counted entering and leaving the O'Toole Building Seventh Avenue entrance and 6,170 trips were counted entering and leaving the O'Toole Building south entrance. These trips were used to determine the O'Toole Building temporal distribution, as detailed below.

TEMPORAL AND DIRECTIONAL DISTRIBUTION

Based on the average of both days' door counts, the largest share of the daily (12 hour) trips entered or exited the O'Toole Building Seventh Avenue entrance during the midday peak hour, with 14.5 percent of the average daily trips, followed by the PM peak hour with 12.2 percent and the AM peak hour with 11.0 percent of the average daily trips. For the O'Toole Building south entrance, the largest share of the daily trips also occurs during the midday peak hour with 11.9 percent, followed by the AM peak hour with 10.1 percent and by the PM peak hour with 9.8 percent. The temporal and directional distributions for both the Seventh Avenue and south entrances of the O'Toole Building are presented in Table 6.

Table 6
O'Toole Building Door Counts
Temporal and Directional Distribution

O'Toole Seventh Avenue Entrance Trips	6,798					
O'Toole South Entrance Trips	6,170					
Temporal and Directional Distribution						
	O'Toole Seventh Avenue Entrance			**O'Toole South Entrance**		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**
Temporal	11.0%	14.5%	12.2%	10.1%	11.9%	9.8%
In	56.0%	55.5%	44.2%	70.0%	51.2%	39.2%
Out	44.0%	44.5%	55.8%	30.0%	48.8%	60.8%

MODAL SPLIT AND VEHICLE OCCUPANCY

A total of 105 employees and 61 visitors participated in the travel demand survey conducted by the hospital staff at the O'Toole Building. In general, subway was the main mode of transportation for O'Toole Building employees and visitors, with 77 percent of employees entering O'Toole Building via the south entrance, 61 percent of employees entering the Building via the Seventh Avenue entrance, and 32 percent of visitors commuting via subway. For the employees entering the O'Toole Building via the Seventh Avenue entrance, the auto occupancy was 1.00. The visitor auto and taxi/livery car vehicle occupancies were 1.89 and 1.57, respectively.

Table 7
O'Toole Building Survey
Modal Split and Vehicle Occupancy

Modal Split			
Travel Mode	**Employees (O'Toole Seventh Avenue Entrance)**	**Employees (South Entrance)**	**Visitors**
Auto	5%	0%	16%
Taxi/Livery Car	2%	0%	11%
City Bus	10%	17%	11%
Subway	61%	77%	32%
Walk/Bike/Other	22%	6%	30%
Ambulance	N/A	N/A	N/A
Ambulette	N/A	N/A	N/A
Total	100%	100%	100%
Vehicle Occupancy[1]			
Auto	1.00	N/A	1.89
Taxi/Livery Car	N/A	N/A	1.57

Notes:
1. Due to limited number of responses to the taxi/livery vehicle occupancy question, the taxi/livery car vehicle occupancy could not be ascertained for employees using the O'Toole Building Seventh Avenue and south entrances. In addition, due to limited number of responses to the auto vehicle occupancy question, the auto vehicle occupancy could not be ascertained for employees using the O'Toole Building south entrance.
N/A implies information is not applicable or not available.

ORIGIN OF TRAVEL

Information on travel origins was also obtained from the SVCMC-administered survey. Generally, respondent locations included the five boroughs of New York City (Bronx, Brooklyn, Manhattan, Queens and Staten Island), Long Island and New Jersey. A small number of respondents also came from Connecticut, Westchester County, and other counties in upstate New York. These respondents are included in the "other" category.

As shown in Table 8, approximately 31 percent of employees traveled from places in Manhattan to get to the O'Toole Building, with another 23 percent traveling from Brooklyn. Of the visitors, 49 percent traveled to the O'Toole Building from Manhattan, and 25 percent traveled from Brooklyn.

Table 8
O'Toole Building Survey
Origin of Travel

Trip Origin Location	Employees		Visitors	
	Number of Responses	Percent	Number of Responses	Percent
Manhattan	30	31%	29	49%
Brooklyn	22	23%	15	25%
Queens	18	19%	5	8%
Bronx	5	5%	0	0%
Staten Island	3	3%	1	2%
New Jersey	6	6%	4	7%
Long Island	4	4%	2	3%
Other	9	9%	4	6%
Total	97	100%	60	100%

PARKING

Due to limited number of responses, the parking characteristics cannot be ascertained for the O'Toole Building.

RESULTS SUMMARY

Overall, according to data from the surveys conducted by the hospital staff, approximately 65 percent of survey respondents indicated the existing hospital complex main entrance as their primary destination. In general, subway was the main mode of transportation for employees and visitors at the existing hospital complex and O'Toole Building. Ambulance and taxi/livery car made up the most used travel mode choices for patients traveling to and from the existing hospital complex. In terms of trip origin, most of the employee, patient, and visitor trips originated in Manhattan followed by Brooklyn. As for the parking characteristics, most of the existing hospital complex employees parked at off-site parking garages.

Attachment A

Table A-1
Existing Hospital Complex – Travel Demand Survey Results

St. Vincent's Survey - Existing Hospital Complex

Employee Arrival Mode

	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	23	4	6	79	3	8	123
%	19%	3%	5%	64%	2%	7%	100%

Employee Departure Mode

	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	23	4	7	78	3	7	122
%	19%	3%	6%	64%	2%	6%	100%

Employee Arrival and Departure

	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	46	8	13	157	6	15	245
%	19%	3%	5%	64%	2%	7%	100%

Employee Auto Occupancy Rate	
No. of Cars	22
No. of Passengers	32
Rate	1.45

Employee Taxi/Black Car Occupancy Rate	
No. of Cars	1
No. of Passengers	5
Rate	5.00

Auto Parking Options		
Options	No.	%
On Street	4	18%
Off Site Garage/Lot	11	50%
On-Site Garage	4	18%
Drop-Off	3	14%
Total	22	100%

Patient Arrival Mode - Main Hospital

	Auto	Taxi/Black Car	Ambulance	City Bus	Subway	Ambulette	Walk/Other	Total
No.	11	17	32	4	18	5	12	99
%	11%	17%	33%	4%	18%	5%	12%	100%

Patient Departure Mode - Main Hospital

	Auto	Taxi/Black Car	Ambulance	City Bus	Subway	Ambulette	Walk/Other	Total
No.	16	21	11	4	17	18	9	96
%	17%	22%	11%	4%	18%	19%	9%	100%

Patient Arrival and Departure - Main Hospital

	Auto	Taxi/Black Car	Ambulance	City Bus	Subway	Ambulette	Walk/Other	Total
No.	27	38	43	8	35	23	21	195
%	14%	19%	22%	4%	18%	12%	11%	100%

Patients Auto Occupancy Rate - Main Hospital	
No. of Cars	11
No. of Passengers	25
Rate	2.27

Patients Taxi/Black Car Occupancy Rate - Main Hospital	
No. of Taxis	13
No. of Passengers	27
Rate	2.08

Auto Parking Options - Main Hospital		
Options	No.	%
On Street	2	18%
Off Site Garage/Lot	3	27%
On-Site Garage	0	0%
Drop-Off	6	55%
Total	11	100%

Patient Arrival Mode - Emergency Room

	Auto	Taxi/Black Car	Ambulance	City Bus	Subway	Ambulette	Walk/Other	Total
No.	8	15	15	2	24	8	16	88
%	9%	17%	17%	2%	28%	9%	18%	100%

Patient Departure Mode - Emergency Room

	Auto	Taxi/Black Car	Ambulance	City Bus	Subway	Ambulette	Walk/Other	Total
No.	12	16	2	2	33	3	20	88
%	14%	18%	2%	2%	38%	3%	23%	100%

Patient Arrival and Departure - Emergency Room

	Auto	Taxi/Black Car	Ambulance	City Bus	Subway	Ambulette	Walk/Other	Total
No.	20	31	17	4	57	11	36	176
%	11%	18%	10%	2%	32%	6%	21%	100%

Patients Auto Occupancy Rate - Emergency Room	
No. of Cars	8
No. of Passengers	18
Rate	2.25

Patients Taxi/Black Car Occupancy Rate - Emergency Room	
No. of Taxi	7
No. of Passengers	10
Rate	1.43

Auto Parking Options - Emergency Room		
Options	No.	%
On Street	3	50%
Off Site Garage/Lot	1	17%
On-Site Garage	0	0%
Drop-Off	2	33%
Total	6	100%

Employee Trip Origin		
Area	No.	%
Manhattan	24	20%
Brooklyn	24	20%
Queens	22	18%
Bronx	16	13%
Staten Island	3	2%
NJ	15	12%
Long Island	7	6%
Other	11	9%
Total	122	100%

Patient Trip Origin - Main Hospital		
Area	No.	%
Manhattan	48	49%
Brooklyn	26	27%
Queens	7	7%
Bronx	8	8%
Staten Island	1	1%
NJ	4	4%
Long Island	3	3%
Other	1	1%
Total	98	100%

Patient Trip Origin - Emergency Room		
Area	No.	%
Manhattan	43	57%
Brooklyn	13	17%
Queens	8	11%
Bronx	5	7%
Staten Island	1	1%
NJ	1	1%
Long Island	2	3%
Other	2	3%
Total	75	100%

Table A-2
O'Toole Building – Travel Demand Survey Results

St. Vincent's Survey - O'Toole Building

Employee Arrival Mode - South Entrance							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	0	0	4	19	0	1	24
%	0%	0%	17%	79%	0%	4%	100%

Employee Departure Mode - South Entrance							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	0	0	4	18	0	2	24
%	0%	0%	17%	75%	0%	8%	100%

Employee Arrival and Departure - South Entrance							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	0	0	8	37	0	3	48
%	0%	0%	17%	77%	0%	6%	100%

Employee Auto Occupancy Rate - South Entrance	
No. of Cars	0
No. of Passengers	0
Rate	N/A

Employee Taxi/Black Car Occupancy Rate - South Entrance	
No. of Taxis	0
No. of Passengers	0
Rate	N/A

Auto Parking Options - South Entrance		
Options	No.	%
On Street	0	N/A
Off Site Garage/Lot	0	N/A
On-Site Garage	0	N/A
Drop-Off	0	N/A
Total	0	N/A

Employee Arrival Mode - Seventh Avenue Entrance							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	4	2	9	49	3	14	81
%	5%	2%	11%	61%	4%	17%	100%

Employee Departure Mode - Seventh Avenue Entrance							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	4	1	7	50	5	14	81
%	5%	1%	9%	62%	6%	17%	100%

Employee Arrival and Departure - Seventh Avenue Entrance							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
No.	8	3	16	99	8	28	162
%	5%	2%	10%	61%	5%	17%	100%

Employee Auto Occupancy Rate - Seventh Avenue Entrance	
No. of Cars	4
No. of Passengers	4
Rate	1.00

Employee Taxi/Black Car Occupancy Rate - Seventh Avenue Entrance	
No. of Taxis	1
No. of Passengers	1
Rate	1.00

Auto Parking Options - Seventh Avenue Entrance		
Options	No.	%
On Street	3	75%
Off Site Garage/Lot	1	25%
On-Site Garage	0	0%
Drop-Off	0	0%
Total	4	100%

Employee Trip Origin		
Area	No.	%
Manhattan	30	31%
Brooklyn	22	23%
Queens	18	19%
Bronx	5	5%
Staten Island	3	3%
NJ	6	6%
Long Island	4	4%
Other	9	9%
Grand Total	97	100%

Table A-3
O'Toole Building Visitors – Travel Demand Survey Results

St. Vincent's Visitor Survey - O'Toole Building

Arrival Mode							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
O'Toole Building	9	7	6	22	15	2	61
O'Toole Building (%)	15%	11%	10%	36%	25%	3%	100%

Departure Mode							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
O'Toole Building	10	7	7	17	18	2	61
O'Toole Building (%)	16%	11%	11%	28%	31%	3%	100%

Arrival and Departure							
	Auto	Taxi/Black Car	City Bus	Subway	Walk/Bike	Other	Total
O'Toole Building	19	14	13	39	33	4	122
O'Toole Building (%)	16%	11%	11%	32%	27%	3%	100%

Auto Occupancy Rate	
No. of Cars	9
No. of Passengers	17
Rate	1.89

Taxi Occupancy Rate	
No. of taxi	7
No. of Passengers	11
Rate	1.57

Trip Origin - O'Toole		
Area	No.	%
Manhattan	29	49%
Brooklyn	15	25%
Queens	5	8%
Staten Island	1	2%
Long Island	2	3%
New Jersey	4	7%
Connecticut	2	3%
Other	2	3%
Total	60	100%

Table A-4

Existing Hospital Complex Door Counts – Main Entrance

Time Period			Two Day Average Counts *		Directional Distribution		Temporal
Begin	-	End	In	Out	In	Out	Distribution
8:00 AM	-	9:00 AM	365	343	51.5%	48.5%	7.4%
8:15 AM	-	9:15 AM	411	404	50.4%	49.6%	8.5%
8:30 AM	-	9:30 AM	398	380	51.2%	48.8%	8.1%
8:45 AM	-	9:45 AM	365	349	51.1%	48.9%	7.4%
9:00 AM	-	10:00 AM	347	329	51.3%	48.7%	7.1%
9:15 AM	-	10:15 AM	330	324	50.5%	49.5%	6.8%
9:30 AM	-	10:30 AM	332	324	50.6%	49.4%	6.8%
9:45 AM	-	10:45 AM	331	333	49.8%	50.2%	6.9%
10:00 AM	-	11:00 AM	324	329	49.6%	50.4%	6.8%
10:15 AM	-	11:15 AM	315	337	48.3%	51.7%	6.8%
10:30 AM	-	11:30 AM	318	326	49.4%	50.6%	6.7%
10:45 AM	-	11:45 AM	330	338	49.4%	50.6%	7.0%
11:00 AM	-	12:00 PM	365	354	50.7%	49.3%	7.5%
11:15 AM	-	12:15 PM	478	379	55.8%	44.2%	9.0%
11:30 AM	-	12:30 PM	560	446	55.7%	44.3%	10.5%
11:45 AM	-	12:45 PM	611	475	56.3%	43.7%	11.3%
12:00 PM	-	1:00 PM	616	533	53.6%	46.4%	12.0%
12:15 PM	-	1:15 PM	557	577	49.1%	50.9%	11.8%
12:30 PM	-	1:30 PM	510	554	48.0%	52.0%	11.1%
12:45 PM	-	1:45 PM	498	564	46.9%	53.1%	11.1%
1:00 PM	-	2:00 PM	500	521	49.0%	51.0%	10.7%
1:15 PM	-	2:15 PM	473	490	49.1%	50.9%	10.1%
1:30 PM	-	2:30 PM	460	485	48.7%	51.3%	9.9%
1:45 PM	-	2:45 PM	461	491	48.4%	51.6%	9.9%
2:00 PM	-	3:00 PM	442	474	48.2%	51.8%	9.6%
2:15 PM	-	3:15 PM	438	468	48.3%	51.7%	9.5%
2:30 PM	-	3:30 PM	466	496	48.5%	51.5%	10.0%
2:45 PM	-	3:45 PM	460	484	48.8%	51.2%	9.9%
3:00 PM	-	4:00 PM	479	519	48.0%	52.0%	10.4%
3:15 PM	-	4:15 PM	528	533	49.8%	50.2%	11.1%
3:30 PM	-	4:30 PM	515	517	49.9%	50.1%	10.8%
3:45 PM	-	4:45 PM	504	491	50.6%	49.4%	10.4%
4:00 PM	-	5:00 PM	491	440	52.7%	47.3%	9.7%
4:15 PM	-	5:15 PM	460	358	56.2%	43.8%	8.5%
4:30 PM	-	5:30 PM	434	348	55.5%	44.5%	8.2%
4:45 PM	-	5:45 PM	413	315	56.7%	43.3%	7.6%
5:00 PM	-	6:00 PM	372	302	55.2%	44.8%	7.0%
5:15 PM	-	6:15 PM	326	326	50.0%	50.0%	6.8%
5:30 PM	-	6:30 PM	297	303	49.5%	50.5%	6.3%
5:45 PM	-	6:45 PM	285	307	48.1%	51.9%	6.2%
6:00 PM	-	7:00 PM	285	304	48.3%	51.7%	6.1%
6:15 PM	-	7:15 PM	293	288	50.5%	49.5%	6.1%
6:30 PM	-	7:30 PM	284	272	51.0%	49.0%	5.8%
6:45 PM	-	7:45 PM	276	278	49.8%	50.2%	5.8%
7:00 PM	-	8:00 PM	275	269	50.6%	49.4%	5.7%

Note:

* Average of two consecutive days of door counts conducted at SVCMC - April 2009.

Table A-5

Existing Hospital Complex Door Counts – Emergency Department Entrance

Time Period			Two Day Average Counts *		Directional Distribution		Temporal
Begin	-	End	In	Out	In	Out	Distribution
8:00 AM	-	9:00 AM	39	38	50.6%	49.4%	5.6%
8:15 AM	-	9:15 AM	45	43	51.1%	48.9%	6.4%
8:30 AM	-	9:30 AM	47	42	52.8%	47.2%	6.5%
8:45 AM	-	9:45 AM	43	42	50.6%	49.4%	6.2%
9:00 AM	-	10:00 AM	46	37	55.4%	44.6%	6.0%
9:15 AM	-	10:15 AM	41	32	56.2%	43.8%	5.3%
9:30 AM	-	10:30 AM	44	29	60.3%	39.7%	5.3%
9:45 AM	-	10:45 AM	51	33	60.7%	39.3%	6.1%
10:00 AM	-	11:00 AM	51	40	56.0%	44.0%	6.6%
10:15 AM	-	11:15 AM	60	41	59.4%	40.6%	7.4%
10:30 AM	-	11:30 AM	61	45	57.5%	42.5%	7.7%
10:45 AM	-	11:45 AM	68	47	59.1%	40.9%	8.4%
11:00 AM	-	12:00 PM	66	53	55.5%	44.5%	8.7%
11:15 AM	-	12:15 PM	65	62	51.2%	48.8%	9.3%
11:30 AM	-	12:30 PM	69	61	53.1%	46.9%	9.5%
11:45 AM	-	12:45 PM	66	67	49.6%	50.4%	9.7%
12:00 PM	-	1:00 PM	70	61	53.4%	46.6%	9.5%
12:15 PM	-	1:15 PM	74	68	52.1%	47.9%	10.3%
12:30 PM	-	1:30 PM	70	70	50.0%	50.0%	10.2%
12:45 PM	-	1:45 PM	63	66	48.8%	51.2%	9.4%
1:00 PM	-	2:00 PM	59	62	48.8%	51.2%	8.8%
1:15 PM	-	2:15 PM	56	56	50.0%	50.0%	8.2%
1:30 PM	-	2:30 PM	50	61	45.0%	55.0%	8.1%
1:45 PM	-	2:45 PM	56	66	45.9%	54.1%	8.9%
2:00 PM	-	3:00 PM	56	71	44.1%	55.9%	9.3%
2:15 PM	-	3:15 PM	46	66	41.1%	58.9%	8.2%
2:30 PM	-	3:30 PM	58	60	49.2%	50.8%	8.6%
2:45 PM	-	3:45 PM	59	57	50.9%	49.1%	8.5%
3:00 PM	-	4:00 PM	67	65	50.8%	49.2%	9.6%
3:15 PM	-	4:15 PM	75	71	51.4%	48.6%	10.6%
3:30 PM	-	4:30 PM	66	72	47.8%	52.2%	10.1%
3:45 PM	-	4:45 PM	59	70	45.7%	54.3%	9.4%
4:00 PM	-	5:00 PM	53	64	45.3%	54.7%	8.5%
4:15 PM	-	5:15 PM	48	52	48.0%	52.0%	7.3%
4:30 PM	-	5:30 PM	34	38	47.2%	52.8%	5.2%
4:45 PM	-	5:45 PM	31	34	47.7%	52.3%	4.7%
5:00 PM	-	6:00 PM	31	34	47.7%	52.3%	4.7%
5:15 PM	-	6:15 PM	37	42	46.8%	53.2%	5.8%
5:30 PM	-	6:30 PM	49	51	49.0%	51.0%	7.3%
5:45 PM	-	6:45 PM	55	54	50.5%	49.5%	7.9%
6:00 PM	-	7:00 PM	62	54	53.4%	46.6%	8.5%
6:15 PM	-	7:15 PM	64	61	51.2%	48.8%	9.1%
6:30 PM	-	7:30 PM	65	60	52.0%	48.0%	9.1%
6:45 PM	-	7:45 PM	65	55	54.2%	45.8%	8.7%
7:00 PM	-	8:00 PM	56	48	53.8%	46.2%	7.6%
7:15 PM	-	8:15 PM	47	44	51.6%	48.4%	6.6%
7:30 PM	-	8:30 PM	44	43	50.6%	49.4%	6.3%
7:45 PM	-	8:45 PM	40	51	44.0%	56.0%	6.6%
8:00 PM	-	9:00 PM	39	50	43.8%	56.2%	6.5%

Note:

* Average of two consecutive days of door counts conducted at SVCMC - April 2009.

Table A-6

O'Toole Building Door Counts – Seventh Avenue Entrance

Time Period			Two Day Average Counts *		Directional Distribution		Temporal Distribution
Begin	-	End	In	Out	In	Out	
8:00 AM	-	9:00 AM	143	46	75.7%	24.3%	5.6%
8:15 AM	-	9:15 AM	215	72	75.0%	25.0%	8.5%
8:30 AM	-	9:30 AM	249	79	76.0%	24.0%	9.7%
8:45 AM	-	9:45 AM	254	91	73.6%	26.4%	10.2%
9:00 AM	-	10:00 AM	237	105	69.3%	30.7%	10.1%
9:15 AM	-	10:15 AM	225	124	64.6%	35.4%	10.3%
9:30 AM	-	10:30 AM	213	150	58.6%	41.4%	10.8%
9:45 AM	-	10:45 AM	209	164	56.0%	44.0%	11.0%
10:00 AM	-	11:00 AM	186	183	50.5%	49.5%	10.9%
10:15 AM	-	11:15 AM	164	172	48.8%	51.2%	10.0%
10:30 AM	-	11:30 AM	150	172	46.7%	53.3%	9.5%
10:45 AM	-	11:45 AM	147	174	45.8%	54.2%	9.5%
11:00 AM	-	12:00 PM	150	184	44.8%	55.2%	9.9%
11:15 AM	-	12:15 PM	153	227	40.2%	59.8%	11.3%
11:30 AM	-	12:30 PM	167	258	39.3%	60.7%	12.6%
11:45 AM	-	12:45 PM	181	266	40.5%	59.5%	13.3%
12:00 PM	-	1:00 PM	212	254	45.4%	54.6%	13.8%
12:15 PM	-	1:15 PM	241	232	51.0%	49.0%	14.0%
12:30 PM	-	1:30 PM	259	213	54.9%	45.1%	14.0%
12:45 PM	-	1:45 PM	271	217	55.5%	44.5%	14.5%
1:00 PM	-	2:00 PM	239	204	54.0%	46.0%	13.1%
1:15 PM	-	2:15 PM	211	194	52.1%	47.9%	12.0%
1:30 PM	-	2:30 PM	196	193	50.4%	49.6%	11.6%
1:45 PM	-	2:45 PM	173	197	46.8%	53.2%	11.0%
2:00 PM	-	3:00 PM	180	215	45.6%	54.4%	11.7%
2:15 PM	-	3:15 PM	182	230	44.2%	55.8%	12.2%
2:30 PM	-	3:30 PM	152	204	42.7%	57.3%	10.5%
2:45 PM	-	3:45 PM	139	194	41.7%	58.3%	9.9%
3:00 PM	-	4:00 PM	132	180	42.4%	57.6%	9.3%
3:15 PM	-	4:15 PM	113	178	38.9%	61.1%	8.6%
3:30 PM	-	4:30 PM	114	202	36.0%	64.0%	9.4%
3:45 PM	-	4:45 PM	100	200	33.3%	66.7%	8.9%
4:00 PM	-	5:00 PM	81	195	29.3%	70.7%	8.2%
4:15 PM	-	5:15 PM	67	194	25.6%	74.4%	7.7%
4:30 PM	-	5:30 PM	52	177	22.5%	77.5%	6.8%
4:45 PM	-	5:45 PM	42	155	21.3%	78.7%	5.9%
5:00 PM	-	6:00 PM	33	143	18.8%	81.3%	5.2%
5:15 PM	-	6:15 PM	25	98	20.3%	79.7%	3.7%
5:30 PM	-	6:30 PM	23	74	23.3%	76.7%	2.9%
5:45 PM	-	6:45 PM	21	62	25.0%	75.0%	2.4%
6:00 PM	-	7:00 PM	17	41	28.7%	71.3%	1.7%
6:15 PM	-	7:15 PM	10	35	22.2%	77.8%	1.3%
6:30 PM	-	7:30 PM	10	25	28.6%	71.4%	1.0%
6:45 PM	-	7:45 PM	0	0	0.0%	0.0%	0.0%
7:00 PM	-	8:00 PM	0	0	0.0%	0.0%	0.0%

Note:

* Average of two consecutive days of door counts conducted at SVCMC - April 2009.

Table A-7
O'Toole Building Door Counts – South Entrance

Time Period			Two Day Average Counts *		Directional Distribution		Temporal
Begin	-	End	In	Out	In	Out	Distribution
8:00 AM	-	9:00 AM	127	38	76.9%	23.1%	5.0%
8:15 AM	-	9:15 AM	171	49	77.9%	22.1%	6.6%
8:30 AM	-	9:30 AM	194	65	74.9%	25.1%	7.9%
8:45 AM	-	9:45 AM	215	65	76.7%	23.3%	8.5%
9:00 AM	-	10:00 AM	236	88	73.0%	27.0%	9.8%
9:15 AM	-	10:15 AM	233	100	70.0%	30.0%	10.1%
9:30 AM	-	10:30 AM	224	100	69.1%	30.9%	9.8%
9:45 AM	-	10:45 AM	219	119	64.8%	35.2%	10.2%
10:00 AM	-	11:00 AM	214	135	61.3%	38.7%	10.6%
10:15 AM	-	11:15 AM	210	162	56.5%	43.5%	11.3%
10:30 AM	-	11:30 AM	196	181	51.9%	48.1%	11.4%
10:45 AM	-	11:45 AM	186	185	50.1%	49.9%	11.3%
11:00 AM	-	12:00 PM	164	188	46.5%	53.5%	10.7%
11:15 AM	-	12:15 PM	155	204	43.2%	56.8%	10.9%
11:30 AM	-	12:30 PM	176	207	46.0%	54.0%	11.6%
11:45 AM	-	12:45 PM	172	203	45.9%	54.1%	11.4%
12:00 PM	-	1:00 PM	200	191	51.2%	48.8%	11.9%
12:15 PM	-	1:15 PM	204	167	55.0%	45.0%	11.3%
12:30 PM	-	1:30 PM	212	157	57.4%	42.6%	11.2%
12:45 PM	-	1:45 PM	228	160	58.8%	41.2%	11.8%
1:00 PM	-	2:00 PM	207	161	56.3%	43.8%	11.2%
1:15 PM	-	2:15 PM	218	168	56.5%	43.5%	11.7%
1:30 PM	-	2:30 PM	199	178	52.9%	47.1%	11.4%
1:45 PM	-	2:45 PM	187	195	49.0%	51.0%	11.6%
2:00 PM	-	3:00 PM	182	195	48.2%	51.8%	11.4%
2:15 PM	-	3:15 PM	161	207	43.8%	56.2%	11.2%
2:30 PM	-	3:30 PM	150	203	42.4%	57.6%	10.7%
2:45 PM	-	3:45 PM	139	182	43.3%	56.7%	9.7%
3:00 PM	-	4:00 PM	129	185	41.0%	59.0%	9.5%
3:15 PM	-	4:15 PM	127	197	39.2%	60.8%	9.8%
3:30 PM	-	4:30 PM	122	188	39.4%	60.6%	9.4%
3:45 PM	-	4:45 PM	114	188	37.8%	62.2%	9.2%
4:00 PM	-	5:00 PM	95	181	34.4%	65.6%	8.3%
4:15 PM	-	5:15 PM	73	141	34.0%	66.0%	6.5%
4:30 PM	-	5:30 PM	64	132	32.7%	67.3%	6.0%
4:45 PM	-	5:45 PM	58	125	31.8%	68.2%	5.5%
5:00 PM	-	6:00 PM	61	111	35.5%	64.5%	5.2%
5:15 PM	-	6:15 PM	61	92	39.9%	60.1%	4.6%
5:30 PM	-	6:30 PM	63	82	43.3%	56.7%	4.4%
5:45 PM	-	6:45 PM	52	69	42.7%	57.3%	3.7%
6:00 PM	-	7:00 PM	53	56	48.6%	51.4%	3.3%
6:15 PM	-	7:15 PM	51	70	42.3%	57.7%	3.7%
6:30 PM	-	7:30 PM	39	72	35.1%	64.9%	3.4%
6:45 PM	-	7:45 PM	37	78	32.3%	67.7%	3.5%
7:00 PM	-	8:00 PM	23	78	22.4%	77.6%	3.1%

Note:
* Average of two consecutive days of door counts conducted at SVCMC - April 2009.