CHAPTER 7: DESIGN AND VISUAL RESOURCES

Introduction

This chapter assesses the visual characteristics of the Project Site, the primary study area, and the design consequences of the Proposed Project on the surrounding streets and examines how the proposed buildings would relate to the built form of the Project Site. The analysis focuses on the bulk, scale and proportion and the arrangement of the buildings; the visual identity as defined by the built character and architecture of the SBUMC (or Medical Center) campus; the building type, use and design typology; the pattern and hierarchy of arteries in the street network; the pedestrian and vehicular circulation; and the overall visual character and view corridors. The primary and secondary study areas for this assessment are the same as those identified in Chapter 2, “Land Use, Zoning and Public Policy.” (See Figure 2-1.)

In addition, as the Proposed Project would entail the development of structures that are greater than 50 feet in height, an assessment of the potential shadow effects of the Proposed Project has been included in the evaluation of the Future Build Condition.

As detailed below, the Proposed Project would introduce several new buildings to the SBUMC campus, including a bed tower, medical and research translation building and medical office building, as well as a multilevel parking garage. The existing Hospital and HSC complex is an important work designed by a well-respected architect, Bertrand Goldberg. The Proposed Project has been evaluated for its potential effects upon the design of this major work and the aesthetic character of the study area.

The Project Site is defined by three building characteristics — the large inter-connected towers of the Hospital and the HSC that dominate the skyline, the multi-level parking garages surrounding the complex, and several single-purpose buildings located on the periphery. These include the central utility plant situated in a wooded area between the Hospital towers and Health Sciences Drive; the sprawling, two-story medical structure associated with the Cancer Center, and a structure at the north end of the Project Site that is associated with the Point of Woods buildings.

Activity on the campus focuses centrally around the Hospital towers and the HSC. These modern buildings with predominately concrete and glass facades make up the core of the Medical Center campus. The resulting visual and spatial experiences are due to several factors discussed in this section.

The area immediately surrounding the Project Site consists of single-family homes; community facilities such as schools, churches, fire stations, and utilities; the Chapin Apartments
east of the Health Sciences Drive; wooded land; and the SBU Main Campus, directly across Nicolls Road to the west.

The street with the strongest presence is Nicolls Road (Suffolk County Route 97), which provides a major north-south connection for the area and also divides the overall SBU campus, separating the Medical Center campus from the Main Campus. Other arteries of note are South Drive, which turns into Health Sciences Drive east of Nicolls Road, and North Country Road (New York State Route 25A). Health Sciences Drive primarily services the Medical Center campus, while North Country Road provides an important east-west link for the area.

Other built conditions that contribute to the character of the primary study area include: the organization, design and building placement of the Medical Center campus; roadways that follow the contours of the natural landscape; view corridors; the height of the Hospital towers; roadbeds of various widths; and natural features such as wooded areas, gently rolling topography and a pond (that serves as a storm water retention/groundwater recharge area).

**Existing Conditions**

**Design Characteristics**

**Project Site.** Photos of existing Medical Center facilities on the Project Site are shown in Figure 7-1. The Proposed Project would be located on the Medical Center portion of the greater Stony Brook University Campus, among existing buildings associated with SBUMC. These include the main Hospital complex with the two 19-story bed towers (14 stories above grade), the HSC complex with the 10-story HSC Basic Science Tower (8 above-grade stories) and the 19-story Clinical Science Tower (17 above-grade stories), the Ambulatory Surgery Center, and the Cancer Center building.

Designed by Chicago architect Bertrand Goldberg, construction of the medical complex began in 1976. Its design includes at least six “schools” in an organizational plan that emphasizes contact between disciplines and forms a cohesive network between the various colleges. The layout encourages a learning environment focused on the exchange of ideas, resources and personalities. In addition, a large underground support area, partially built into the side of a hill and complemented with outdoor gardens and terraces, was designed to function as a movement system for the facility by allowing for the transit of staff between the towers without the need to travel outside. This underground support area acts as a base for the Hospital and the HSC.

The impressive heights of the towers, which range from eight to approximately seventeen stories above grade, give them a dominating presence over the University and can be seen from miles away across Suffolk County. By far the tallest buildings and a formidable presence in the landscape are the Hospital towers. The unique design of the complex is visible from various viewpoints both on and off campus, including portions of the study area.
SBUMC: University Hospital/ Health Sciences Center Complex
The design of this megastructure recalls a small self-sufficient city planned for a daily population of 12,000 with specialized spaces and an internal street system with moving sidewalks. According to the architect:

“To build 2 million square feet is in itself a task, but to relate 2 million square feet to the individuals within, rather than produce rooms with numbers on them is really our task. We have to create what I call ‘villages of space’.”1

The floor plans of the Hospital towers emphasize the idea of community and neighborhood clusters by locating nursing and administrative services in a central core and housing patients in surrounding pods. It demonstrated the architect’s interest in improving the quality of education and health care through new spatial configurations designed to function as close-knit ‘villages’; promoting healing and social exchange. All of the buildings comprising the HSC and Hospital are connected above and below ground through a series of elevated walkways and subterranean areas in a dynamic composition that clusters activities and functions in a modular pod-like system. The design of the complex also took into account the possible need for these buildings to work as a self-contained unit in a time of emergency.

The Hospital was ranked third in a list of Most Beautiful Hospitals in America in 2011 in a poll conducted by Soliant Health, one of the largest healthcare staffing companies in the country. The ranking measures architectural style, photogenic properties, landscaping, and diversity of the Hospital structures, spatial quality and distinctiveness. The following summary description by the organization highlights some of the reasons given:

“... great pieces of architecture are inspiring, even stirring. Occasionally they are also challenging, perplexing, and just plain fun. Such might be the case for patients or visitors wandering under the upper-stories ... or upon traversing one of its several multi-level glass bridges between wings.”2

The Cancer Center, located south of the Hospital towers, is a two-story modern building with a glass façade framed by intermittently placed concrete pillars. A front lawn lies between the building and the approach road, while a large parking lot sits behind the structures, buffered from Nicolls Road by a strip of woods. A large parking garage and surface parking lot lies to the north, between the Cancer Center and the Hospital.

The central utility plant complex is located in a wooded area to the west of Health Sciences Drive, southeast of the Hospital towers and northeast of the Cancer Center. Natural and planted vegetation, as well as a small hill along the north side of the lot partially screens views of the plant from the ground level of the Hospital. Dense woodlands obscure views of the utility plant from both the south and east along Health Sciences Drive.

1 http://bertrandgoldberg.org/projects/health-sciences-center/
The Chapin Graduate Apartment Complex, comprised of attached-housing style apartment buildings, is situated across Health Sciences Drive immediately east of the SBUMC campus. The wooded areas that surround the Medical Center campus along Nicolls Road and Health Sciences Drive screen the lower structures of the Medical Center from these roadways, and also separate the Medical Center, South and Main campuses from each other and from the public streets. The wooded buffer areas also provide some visual cohesion.

**Primary Study Area.** This section discusses the principal design characteristics of the study area, which includes the Medical Center campus and portions of the SBU Main and South campuses. Figure 7-2 includes photos of building types and bulk present within the study area.

The Stony Brook University Main Campus is made up of large, modern buildings surrounded by open areas and connected by campus roads, cycling paths, and pedestrian walkways. The campus is encircled by Circle Road, which is accessed by three entrances — Marburger Drive, Entrance Drive (a.k.a. Shirley Kenny Drive), and North Entrance Drive. Nicolls Road to the east is the through-street closest to campus.

Surface parking lots can be found throughout the campus, with one large parking garage situated near Entrance Drive. The four-level parking garage is set back from Circle Road and offers no strong design characteristics.

The loop formed by Circle Road provides access to all parts of the Main Campus and connects with the Medical Center campus via a pedestrian underpass below Nicolls Road, near the Center for Molecular Medicine at the southeast corner of the Main Campus. Residential buildings on campus are grouped in quads located at the south end of the Main Campus and are also accessed from this road. Over 8,000 students live on the SBU Main Campus, while less than 7,000 commute to the campus.

Athletic facilities dominate the northeast section of the Main Campus, with multiple baseball, track and soccer fields; basketball and tennis courts; and a large stadium. A large wooded area, known as the Ashley Schiff Preserve, is located just south of Circle Road between Nicolls Road and Marburger Drive. The Preserve separates the SBU South Campus from the Main Campus to the north, its features contributing to the wooded ambience of the Main and South campuses. The South Campus, consisting of eleven buildings, is not connected to the Medical Center campus.
Building Bulk, Use, Type and Building Arrangement. The Health Sciences Center and University Hospital were completed in the 1970s. The complex comprises several buildings located atop a seven-story base built into the side of a hill.

The Medical Center towers, ranging from 8 to 17 stories above grade, are a dominant presence over the University and the immediate surrounding area. The two Hospital towers are 6-sided, 14-story black structures that serve as patient bed areas. The two towers are set on bases and connected by a central structure that serves a role in both educational and support services.

The two main HSC buildings, the Basic Science Tower and Clinical Science Tower, evoke organic growth designed as flexible and expandable structures with hanging gardens. The buildings are a series of horizontally- and vertically-interconnected, 5-story cubes surrounding a central support area that allows the shared use of facilities and easier flow of information. The larger of these two futuristic towers is 12 stories, and consists of eight cubes, with four cubes set on top of four. The smaller of the two is 5 stories and made up of four cubes. Both buildings feature modular pods with curved edges, rounded windows at the corners of each cube, circular centers that connect each cube to another and a series of poles that support the outside edges of the buildings above their bases. The outdoor space, planned for and programmed by the University, consists of pocket patios and terraces, and carefully controlled courtyards. (See Figures 7-1 and 7-2.)

The remaining buildings on the Medical Center campus are one- to two-story structures with no strong, overriding sense of design unity. These buildings sit on both the north and south sides of the towers, separated by large expanses of surface parking lots, multi-level parking garages, and minimally landscaped common areas.

Street Pattern. As shown in Figure 7-3, the street pattern on the Project Site, as well as the primary and secondary study areas is curvilinear, following the natural topography of the area. This trend applies to the main arterials that traverse the area as well as the local roads that service the neighborhoods surrounding SBU.

Arteries associated with the SBU campuses are generally circuitous, focusing on providing convenient vehicular access to the University rather than encouraging movement through the area. These loop roads provide the most convenient and efficient, if not direct, access to all points within the campus and make for safe driving experiences.

Streetscape Elements. Due to the focus on movement by car, the Medical Center campus lacks any real sense of a unifying streetscape theme or character. The arteries in the study area have been designed and built as a utilitarian movement system, the focus of which is on commuting by car, not for facilitating and encouraging pedestrian movement.
Streetscape elements present in the study area include infrastructure such as sidewalks, which connect parking lots to adjoining buildings; generic cobra-head street lighting fixtures, and grass-filled medians along the arteries and in the parking lots.

Street Hierarchy. There are several factors that determine the relative importance and the character of the streets in the study areas: proximity of buildings to the streets; shapes of block and lots; street pattern, land use, and density; relation of streets to the SBU campus; and street widths and number of traffic lanes. There are four main street types in the study areas — Main Arterial, Secondary Arterial, Local Road, and SBU Campus Roads. Examples of these four types of streets in the study areas are provided in Figure 7-4.

For the purposes of this design and visual resources assessment, Main Arterials are high-capacity, two- to-four-lane roads that collect traffic from Secondary Arterials and Local Roads. Secondary Arterials, like Main Arterials, are two- to-four-lane roads but with less capacity that provide movement between Main Arterials and Local Roads, and allow access to residential properties. Local Roads are low-capacity thoroughfares primarily used for accessing individual properties in residential neighborhoods.

The primary and secondary study areas contain one Main Arterial, Nicolls Road, which is oriented north-south and separates the SBU main and South campuses from the SBUMC campus. Nicolls Road is four lanes wide with a grassy median along the length of the study areas. Buildings on Nicolls Road generally are set back significant distances from the thoroughfare, and are less inclined to be situated facing the artery than the Secondary Arterials, Local Roads, or Campus Roads described below. Another major artery, North Country Road (NYS 25A), lies just outside the northern boundary of the secondary study area.

There are five Secondary Arterials in the study areas: Stony Brook Road and Pond Path, which are north-south; Oxhead Road and South Drive, which is east-west; and Health Sciences Drive, which partially encircles the Project Site on its southern, eastern and northern boundaries. Although Health Sciences Drive contains the same number of lanes as Nicolls Road, it is considered a Secondary Arterial because it experiences substantially less traffic and serves more as an access road for the University and Hospital. These Secondary Arterials are characterized by a width of two to four lanes. Buildings along these collector streets typically are set back from the roadway, although not as far removed as the structures mentioned along the Main Arterial. Unlike Main Arterials, Secondary Arterials provide access to individual properties.

Local Roads make up the remaining streets in the study area, with the majority of these streets running through the neighborhoods in the four corners of the secondary study area. These streets are characterized by mature tree canopies, curvilinear street layouts, on-street parking, residential driveways, cul-de-sacs, and an association with residential land use. Building faces tend to be oriented to the streets.
Street Types

A. Main Arterial

B. Main Arterial

C. Secondary Arterial

D. Local Road

E. Campus Road

F. Campus Road

Prepared by Zone Architecture

Dormitory Authority
State of New York

Stony Brook University Medical Center
Medical Facilities and Parking Project
Street Type Examples

The Louis Berger Group, Inc.

Figure 7-4
Campus Roads are directly associated with University use and facilitate movement around, not through, the campus. Structures along Campus Roads and narrow feeder streets tend to sit closer to the street, with building faces oriented toward the street.

Pedestrian Circulation and Access. Pedestrian movement in the area is limited to the SBU Main Campus with branches connecting the Medical Center campus and graduate student apartment complex on Health Sciences Drive. The SBU Main Campus is connected through a series of pedestrian walkways and plazas that facilitate the movement of students and faculty. In addition, the Main Campus has a network of separated bike lanes along its periphery, allowing for the movement of cyclists around the campus without the need to compete for space on roadbeds.

The Medical Center campus is connected to the Main Campus through a pedestrian tunnel that runs underneath Nicolls Road, providing movement between campuses without the need to cross the four-lane road. Once on the Medical Center campus, pedestrian movement is largely limited to travel between the main facilities and the surrounding surface parking lots and garages. There are few sidewalks and pedestrian safety zones along the roads, nor are there any pedestrian-scaled amenities, such as benches for seating, landscaping and lighting in this vehicular arcadia. The Hospital and HSC complex are a self-contained facility, allowing for pedestrian travel between floors and buildings through underground corridors and elevated walkways in order to maximize efficiency and avoiding the use of outdoor space for movement.

Natural Features. The principal natural features found in the surrounding neighborhood are moderate elevation changes and well-forested areas. Other features include landscaped areas, mature tree growth, a nature preserve, and ponds.

The southern portion of the primary study area consists of forested area set upon a hill that serves to screen the Medical Center campus from the southern portion of Health Sciences Drive. Portions of the northern section of the primary study area are also well forested, and provide a buffer between the Medical Center campus and the intersection of Nicolls Road and the northern terminus of Health Sciences Drive. The area contains a small pond and the elevation changes are less dramatic than those found in the southern section of the primary study area.

Visual cohesion is provided in part by the wooded areas that surround the Medical Center and which run along Nicolls Road and Health Sciences Drive. These wooded areas screen the lower structures of the Medical Center from the roads and separate the Medical, South and main campuses from each other and the public streets. The Ashley Schiff Preserve, located along the western boundary of the primary study area, provides a heavily forested setting that serves as a buffer between the SBU main and South campuses.

Both the SBU Main Campus and Medical Center campus are minimally landscaped with planted and mature trees, shrubbery, grass-filled lawns, and planted medians along the roadways.
Although these features are relatively modest, they contribute to the overall aesthetic of the University campus.

**Visual Resources and Visual Character**

This analysis examines the important local scenic views and visual resources within a 0.5-mile radius of the Project Site to establish a baseline against which the potential visual effects of the Proposed Project can be compared. Establishing the existing visual conditions will enable a qualitative analysis of the potential for the proposed new facilities to affect views and the local setting. Refer to Figure 7-5 for a visibility analysis map, and to Figure 7-6 for visibility analysis photographs.

The dark metal and glass curtain and concrete walls of the Hospital towers and the concrete pod structures of the HSC stand alone toward the middle of the Medical Center campus and are significant presences in both the primary and secondary study areas. Occasionally, other buildings within the study area are visible from points in the two study areas; however, the scale, massing and architectural style of the Hospital and HSC complex, a significant work of architecture by a prominent architect, attract the viewer’s eyes and call attention to its importance in the Medical Center campus.

The most notable views of the buildings are limited to views within the Project Site itself and the SBU Main Campus across Nicolls Road, with unobstructed sight lines occurring along the Arterial Highways, Nicolls Road and Health Sciences Drive. Depending on the direction the viewer is traveling, the structures may appear unexpectedly and dramatically in the landscape silhouetted against the sky as there are no other tall significant buildings nearby to compete with this large complex.

Notwithstanding its scale and massing, other views of the complex occur infrequently at scattered locations throughout the surrounding neighborhoods. Such other views of the complex are largely determined by the varying degree of seasonal foliage cover and are screened by the elevation changes of the rolling landscape, the wooded areas near the structures, and the ample vegetation of the surrounding neighborhoods. When not obstructed by these elements, the Hospital and HSC structures can be seen as stand-alone landmarks from various portions of both the primary and secondary study areas.

**Future No-Build Condition**

The Future No-Build Condition considers planned projects that will be completed by the 2018 Build Year, and includes the following: the three infrastructure projects on the SBUMC campus projects, the Campus Hotel project, the ABSL-3 Laboratory project and the HSC and LIHTI Parking Lot Expansions and Improvements Project.
Visibility Analysis

A

B

C

D

E

F

Prepared by Zone Architecture

Dormitory Authority
State of New York
Stony Brook University Medical Center
Medical Facilities and Parking Project
Visibility Analysis Photographs

The Louis Berger Group, Inc.  Figure 7-6
**Project Site.** Although originally designed as a unified complex with singular characteristics, the Project Site is also characterized by utilitarian structures, additions and new buildings developed incrementally over several years. These structures are found scattered throughout the Project Site and differ significantly in scale and design from the Hospital and HSC towers. While functional and efficient, they lack presence and do not contribute to the identity and visual cohesiveness of the Medical Center campus or Project Site.

In the Future No-Build Condition, SBUMC would retain its current mostly iconic presence distinguished by the futuristic HSC and Hospital towers. The highly visible and prominent design of the facility and its various components — the “research pods,” the towers, the network of interconnected support spaces, and the internal street system — would not be changed. The self-sufficient complex would retain its current identity and continue to define the Project Site, the garages and parking lots would continue as to act as an unwelcoming but necessary visual element between the buildings, and the surrounding landscape would continue to screen some views of the sprawling complex. The ABSL-3 laboratory structure will only be minimally visible as it will be built mostly underground with an above-ground height limited to approximately 16 feet.

**Study Areas.** In the Future No-Build Condition, the existing aesthetic and design characteristics of the study areas — including street layout, building height and bulk, neighborhood patterns, visual characteristics and visual resources — would be unaffected. The new generic Hilton Garden Inn (the Campus Hotel project) would be located on the SBU Main Campus, west of the Medical Center campus and Nicolls Road. The hotel building has been designed and sited to minimize the visual presence and visual impact on the surrounding community, and will be partially screened by the 150-foot, wooded/vegetated buffer that the University maintains along Nicolls Road, and by retaining much of the existing woodland (approximately 67 percent) on that development site. The HSC and Hospital towers would continue to be a dominant presence in the landscape and the visual markers most often associated with the identity of the Medical Center campus.

**Future Build Condition**

This section addresses the Proposed Project’s effect on the visual characteristics and design elements of the Project Site and study areas. It assesses the changes to the Project Site and the impacts to the Hospital complex in relation to the surrounding campus, community and streets, with respect to form, visual identity, overall visual character and views. The Proposed Project’s fit with the existing context is addressed, and its potential to result in direct or indirect impacts on the design characteristics, visual resources and quality of the streetscape is evaluated. The assessment discusses changes to the Project Site and the impacts to the Medical Center campus.

In the Future Build Condition, the Proposed Project would be constructed and operational. The Proposed Project would add a new 8-story, approximately 250,000-gsf MART; a new 8-story, approximately 200,000-gsf, 158-bed BT (with connections to both the existing
Hospital and the MART); an approximately 75,000-gsf MOB containing two stories above grade as well as one to two levels of subsurface parking; a new 1,908-space, approximately 647,700-gsf, 5-level parking garage; new campus roadways; and additional surface parking lots.

By adhering to many of the recommendations provided in the Long-Range Facilities Master Plan, SBUMC would meet many of its needs. The Master Plan recommended a basic campus framework to ease way finding, interconnect vehicular paths and identify an organized growth pattern for future buildings. Specifically, it identified the following priorities, many which would be addressed by the Proposed Project:

- Parking to address parking deficiencies and allow for the Hospital’s future growth,
- Bed Modernization to increase the all-private-room complement with efficient unit sizes and adequate support space,
- Targeted Growth in Key Clinical Programs to support the regional demand for services among the aging population of Suffolk County,
- Children’s Hospital to consolidate pediatric services and create a distinct image for the “hospital-within-a-hospital” model of care,
- Imaging to expand the department and provide adequate treatment rooms and support spaces,
- Support departments to ensure that adequate support spaces exist throughout the Hospital and,
- Infrastructure to provide necessary upgrades, maintenance or replacement of existing infrastructure, and alleviate operational deficiencies.3

Project Site. According to the criteria developed by the NYSDEC to assess potential visual impacts, an “aesthetic impact” is said to occur when there is a detrimental effect on the perceived beauty of a place or structure. Moreover, a visual impact may occur when distance and perspective are insufficient to reduce the visibility of the Proposed Project to insignificant levels.4

The Proposed Project is still in the preliminary planning phase; thus, the proposed buildings have yet to be designed. When originally constructed, the architectural design of the HSC and Hospital complex was a groundbreaking work done by a prominent architect; and in 2011 the Hospital was ranked among the Most Beautiful Hospitals in America. Based on the NYSDEC impact criteria discussed above, and given the architectural significance of the HSC and Hospital complex, careful consideration should be given to the design of the proposed buildings to avoid the potential for visual or aesthetic impacts.

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3 Stony Brook University Medical Center Facilities Master Plan, prepared by Ellerbe Becket and STV, July 2009
To preserve the existing facility’s striking planning and unique image, the design of the Proposed Project should be distinctive and contribute to the spatial and architectural quality of the existing HSC and Hospital complex. The iconic visual character of the Medical Center campus, although currently under appreciated, gives the facility its photogenic properties and identity. Therefore, new building designs that relate harmoniously to the existing structures should be encouraged by the University to strengthen the visual presence of SBUMC.

**Study Areas.** The Proposed Project would have no substantial effect on the primary or secondary study areas. There are no notable views, nor are there any historic resources listed on the State or National Register of Historic Places within the study area, nor sensitive receptors such as State Parks that would be affected by the construction of the proposed structures.

The proposed buildings would be an integral part of the Medical Center campus, clustering in close proximity and significantly lower than the existing Hospital and HSC towers, which range between 8 and 17 stories in height. This concentration of bulk has the benefit of reducing any potential impacts and would not particularly increase or significantly add to the perceived mass of the complex. Views of the Proposed Project from Nicolls Road would thus be in the context with views of the existing Medical Center buildings, thereby reducing the prominence of any individual new building. As previously indicated, views from nearby residential neighborhoods and parks occur at a great distance and are limited due to the screening provided by trees and sloping topography. Therefore, there would not be adverse visual impacts within the study area, since the Proposed Project would not introduce a development form different from that found on the Project Site.

Views of the Proposed Project from Nicolls Road and the study area would vary depending on elevation, buildings and vegetation, but would not be significantly altered. Although Nicolls Road is not a designated scenic or visual resource, it is an important and well-traveled arterial. A 150-foot-wide landscaped buffer zone would be maintained between Nicolls Road and the Proposed Project, which would continue to screen the lower buildings of the Medical Center campus from viewsheds available along this arterial. In addition, the proposed buildings would be shorter than the existing buildings and designed to respect topography and integrate existing elevations, further reducing their visual impact.

A viewshed map was prepared (see Figure 7-7) that depicts areas from which the Proposed Project would likely be visible, based on existing topography and using worst-case-scenario heights that were developed for the proposed structures. The map was created in GIS using the viewshed tool, United States Geologic Survey (“USGS”) digital elevation model data, and the approximate location and height of the proposed structures. The results are conservative because they do not consider canopy height (the height of the top of the vegetation above the ground surface). The viewshed map is included to provide the reader with a sense of general

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5 With the viewshed tool, points that lie above the local horizon are considered visible. In the viewshed map prepared for the Proposed Project (see Figure 7-7), green areas are areas from which the Proposed Project may be visible, while red areas represent areas from which the Proposed Project would not be visible.
Figure 7-7

Stony Brook University Medical Center
Medical Facilities and Parking Project

Legend

Development Parcel
Project Site
Proposed Structure Footprints
One-Mile Radius of Development Parcel

Viewsed Analysis Results:
Not Visible
Visible
Digital Elevation Model (meters)
High: 86.2
Low: -2.9

Public Open Space Resources within One Mile of Development Parcel
State and/or National Register-listed Properties within one mile of Development Parcel
1 inch = 2,000 feet

Sources: Census TIGER® 2000 data, ESRI; NYSOPRHP, S/NR GIS data, 2005; DEM data, USGS.
areas from which the Proposed Project would likely be visible, not accounting for existing canopy or, more importantly, existing, larger intervening buildings such as the HSC and Hospital towers.

**Shadows**

A shadow assessment is typically completed for projects that result in new shadows long enough to reach a sunlight-sensitive resource. This assessment is generally warranted only if the project would either result in new structures (or additions to existing structures) of 50 feet or more or be located adjacent to, or across the street from, a sunlight-sensitive resource. The Proposed Project would include construction of several structures greater than 50 feet tall, therefore a screening has been completed to identify potential sunlight-sensitive resources within the shadow assessment study area.

For the purposes of this shadows screening analysis, sunlight-sensitive resources include public open spaces and recreational facilities; significant natural features such as water bodies, wetlands, significant natural habitat areas, etc.; and portions of historic architectural resources where the features that render the resource significant are sunlight-sensitive (e.g., stained glass windows). A significant shadow impact may occur when the incremental shadow added by a proposed action falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct exposure to sunlight, thus substantially altering the public’s use of the resource or threatening the viability of vegetation or other resources. As a general rule-of-thumb, sunlight-sensitive activities (e.g., sitting or sunning, gardening, use of wading pools and sprinklers) and vegetation (e.g., trees and plants) in this region require a minimum of four to six hours of sunlight per day, particularly during the growing season (e.g., between April and October).

The size of the shadow assessment study area is determined by the longest shadow that each structure could potentially cast throughout the year, which is generally equal to 4.3 times the overall height of each structure (including any rooftop mechanical space). As the design of the Proposed Project is preliminary/conceptual at this time, reasonable worst-case assumptions have been made with respect to the proposed building footprints and heights, as shown in below Table 7-1. Topography (i.e., mean ground elevation) was factored into the estimated heights of each proposed structure. A radius equal to the maximum shadow extent for each proposed structure was applied to the structure footprint; the four individual radius areas were combined to create the overall study area for the shadow assessment. The proposed structure footprints and the overall shadow assessment study area is presented in Figure 7-8.
Legend
- Development Parcel
- Project Site
- Proposed Structure Footprints
- Kettle Hole Park (Town of Brookhaven)
- Shadow Assessment Study Area

1 inch = 1,050 feet


Triangular area to the south that cannot be shaded by the Proposed Project (starting from the southernmost portion of the Proposed Project, covering the area between approx. -108° degrees and approx. +108 degrees from true north)
Table 7-1: Shadow Assessment Study Area

<table>
<thead>
<tr>
<th>Proposed Structure</th>
<th>Approximate Height (feet)*</th>
<th>Approximate Footprint Area (square feet)</th>
<th>Distance applied to Structure Footprint (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MART</td>
<td>267</td>
<td>31,250 sf</td>
<td>1,148.1</td>
</tr>
<tr>
<td>BT</td>
<td>267</td>
<td>25,000 sf</td>
<td>1,148.1</td>
</tr>
<tr>
<td>MOB</td>
<td>252</td>
<td>18,750 sf</td>
<td>1,083.6</td>
</tr>
<tr>
<td>Parking Garage</td>
<td>229</td>
<td>142,100 sf</td>
<td>1,290</td>
</tr>
</tbody>
</table>

* Approximate height includes ground elevation.

As shown in Figure 7-8, essentially there are three areas outside of the Project Site that could potentially be affected by shadows from the Proposed Project. The largest of these areas lies west of Nicolls Road and includes the southeast portion of the SBU main campus, the eastern part of the SBU South Campus, and a small area south of South Drive. There are no significant, sunlight-sensitive natural resources within this part of the shadow assessment study area. No historic architectural resources, either with or without sunlight-sensitive features, have been identified in this portion of the study area. The site of the future Hilton Garden Inn, currently under construction, occupies the northernmost part of this area. Although part of the 26-acre Ashley Schiff Preserve is within the shadow study area, this area is not considered a public open space or shadow resources as it does not have legal status or protections (as noted in Chapter 5, “Open Space and Recreational Facilities”). The remainder of this area is either wooded or part of the SBU built campus environment, but does not contain public open space or recreational facilities.

The second area, rather limited in size, is situated northeast of the Development Parcel in the vicinity of Jackson Drive. This area slopes downhill east of Health Sciences Drive and is comprised of wooded buffer area between the Project Site and residential area to the east. No public open space resources or historic architectural resources have been identified in this area.

The third area lies south of the Project Site and Health Sciences Drive, on the east side of Nicolls Road/CR 97. This part of the shadow study area includes a relatively small portion of the 36-acre Kettle Pond Park that is operated by the Town of Brookhaven. It should be noted, however, that the portion of the shadow study area that reaches this resource also generally coincides with the triangular-shaped area south of the Proposed Project that could never be shaded by the Proposed Project (see Figure 7-8). Thus, shadows from the Proposed Project likely would not reach this resource, and would not affect the usability or viability of Kettle Pond Park. No other public open spaces or recreational facilities, significant natural resources or historic architectural resources have been identified in this locale.

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* Given the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given location. In the vicinity of the Project Site this triangular area generally lies between -108 and +108 degrees from true north.
The wooded areas situated within the shadow study area, primarily located along both sides of Nicolls Road on portions of the SBU Main, South and East Campuses, could be affected by incremental shadows from the proposed new facilities. However, the presence of the existing and relatively much larger Hospital and HSC buildings would limit the incremental shadow coverage associated with the proposed structures. Sunlight-sensitive features identified within these wooded areas include trees and vegetation. The amount of sunlight reaching the trees and vegetation would not be reduced to less than the amount of time necessary for tree or plant survival, thus these sun-dependent features would not be substantially impacted. The incremental shadows that the Proposed Project may cast onto the surrounding wooded areas would not result in an adverse shadow effect.

Thus, as discussed above and based on reasonable worst-case development assumptions for the Proposed Project, the maximum shadow reach associated with the proposed structures would not have the potential to result in significant adverse shadow impacts.

Conclusion

In terms of the scale of the proposed new buildings and their location adjacent to and in close proximity of the existing Hospital and HSC complex and towers, the construction of the Proposed Project would have a minimal effect on the Project Site, primary study area and secondary study area. Accordingly, mitigation would not be necessary. The building type, size and mass of the proposed structures would not substantially differ from those found in the study area, thus there would be no significant or adverse effects as a result of the Proposed Project.

Since the proposed buildings have been programmed but not designed, the Proposed Project would have the potential to enhance the visual character of the Medical Center campus and create a cohesive presence for the facility. For the same reason, the Proposed Project also has the potential to erode the iconic quality of the Project Site. Currently unavailable details such as the footprint, height above grade, massing, materials and architectural design of the proposed facilities, would have to be addressed to ensure that the overall design of the Proposed Project would complement the visual setting of the Project Site.

Based on the above, and provided the new building designs take into consideration the aesthetic character of the Medical Center campus, it is concluded that visibility of the Proposed Project would not have a significant adverse visual impact on the visual setting of the study area or the Project Site. Moreover, the Proposed Project could improve the photogenic properties and architectural quality of the Project Site; and, as such, could result a beneficial change in the visual character of the area and the context of the Project Site. Achieving this level of design excellence would give the campus a renewed visual identity.

Because the building type, size and mass of the proposed structures would not be substantially different from those currently found on the Project Site, there would be no significant or adverse effects from the Proposed Project with respect to design and visual character. The Proposed Project would not affect any important visual resources nor would it alter the scale of the surrounding buildings. The potential for significant adverse shadow
impacts has also been ruled out. The Proposed Project would not substantially alter the characteristics of the visual setting nor alter the context of the surrounding area or any natural resources, views or landmarks.