

Stony Brook University
Hotel Project
Environmental Assessment

Prepared for:

SUNY Stony Brook
Campus Planning, Design, and Construction

Prepared by:



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List of Preparers

Lead Agency:

SUNY Stony Brook Board of Trustees

EA Lead Consultant:

AKRF, Inc.
3900 Veterans Memorial Highway, Suite 300
Bohemia, NY 11716
Jessica Zanca, AICP

Project Engineer/Architect:

Holzmacher, McLendon & Murrell, P.C.
575 Broad Hollow Road
Melville, NY 11747-5076
Charles R. Beckert, R.L.A.

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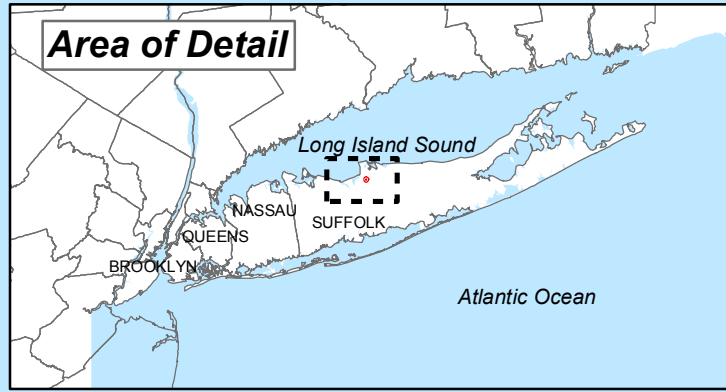
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A. INTRODUCTION

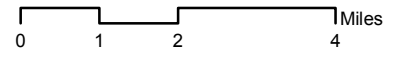
The Stony Brook Foundation Realty Inc. (SBFR) is proposing to sublease an 11-acre parcel (i.e., the project parcel) to Harbor Construction Management for the purposes of constructing a hotel on approximately 3.6 acres (i.e., the project site), in accordance with a ground lease from the State University of New York (SUNY) Board of Trustees. The SUNY Stony Brook main campus comprises more than 1,100 acres on the north shore of Long Island in the northwestern portion of the Town of Brookhaven (see **Figure 1-1**). The complex includes a west campus, east campus, and south campus. The proposed hotel, including the building, parking, landscaping, and utilities, would together encompass approximately 3.6 acres of the 11-acre parcel. As part of the proposed project, the residual 7.4 acres would remain wooded and undisturbed. This project site is located immediately south of the main entrance and east of the University Administration building parking garage (see **Figure 1-2**). Assuming all approvals are granted, construction of the new hotel would commence in 2010, and the hotel is expected to be operational in Spring 2012.

In late 1986, Chapter 830 (amended in 1989 as Chapter 200) of the New York State Laws, authorized the SUNY Board of Trustees to contract or lease with a non-profit corporation for the construction and operation of hotel and/or conference center facilities at SUNY Stony Brook. The Legislature determined that “students, faculty, administrators and other personnel participate annually in educational and other activities on the campus of the State University of New York at Stony Brook.” Therefore, it declared that “the development and operation of a hotel/conference center with related service, commercial and recreational facilities, fulfills a necessary and desirable public purpose and promotes education at the State University of New York at Stony Brook.” The legislation specifically identified the project parcel as the only parcel of land available for this type of facility. The hotel facility cannot be moved to a different location on the SUNY Stony Brook campus unless the authorizing legislation is first amended to identify the new site location. Since the enactment of the legislation, the Charles B. Wang Center was opened in 2002 and currently serves as one of the school’s main conference facilities. To meet the intent of the legislation, SBFR now proposes to sublease designated land to a commercial entity to construct and operate a hotel facility that will support the University’s public purpose and educational growth.

This Environmental Assessment (EA) has been prepared to provide an environmental review for this proposed project. To that end, this EA has been prepared pursuant to the New York State Environmental Quality Review Act (SEQRA). The Lead Agency overseeing preparation of this EA is SUNY Board of Trustees. **Appendix A** of this EA includes the Environmental Assessment Form pursuant to SEQRA.



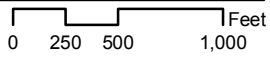
- Project Parcel
- 1/2-Mile Study Area
- Town Boundary
- Long Island Rail Road
- Limited Access Highway
- Highway
- Local Roads



2.12.10



- Project Parcel
- 1/2-Mile Study Area



Stony Brook University Hotel Project

**Project Parcel Location
Figure 1-2**

PROJECT DESCRIPTION

Under the proposed project, the 11-acre parcel would be under sublease to Harbor Management Construction for the purposes of constructing a hotel to serve the University's needs with respect to holding conferences, as well as providing accommodations for visiting faculty and parents, hospital patients, and other visitors. As the hotel would be a private entity on University property, the hotel operator would be subject to a payment in lieu of real property taxes (PILOT). The hotel site is located on SUNY Stony Brook's west campus, which is separated from the east campus by a four-lane county road; Nicolls Road (or County Road 97). Located along the eastern border of the west campus, the hotel would be situated on approximately 3.6 acres in the northwestern portion of an undeveloped 11-acre parcel, bounded by Entrance Drive (the main entrance to the campus) to the north, Nicolls Road to the east, and Circle Road to the west (see **Figure 1-3**).

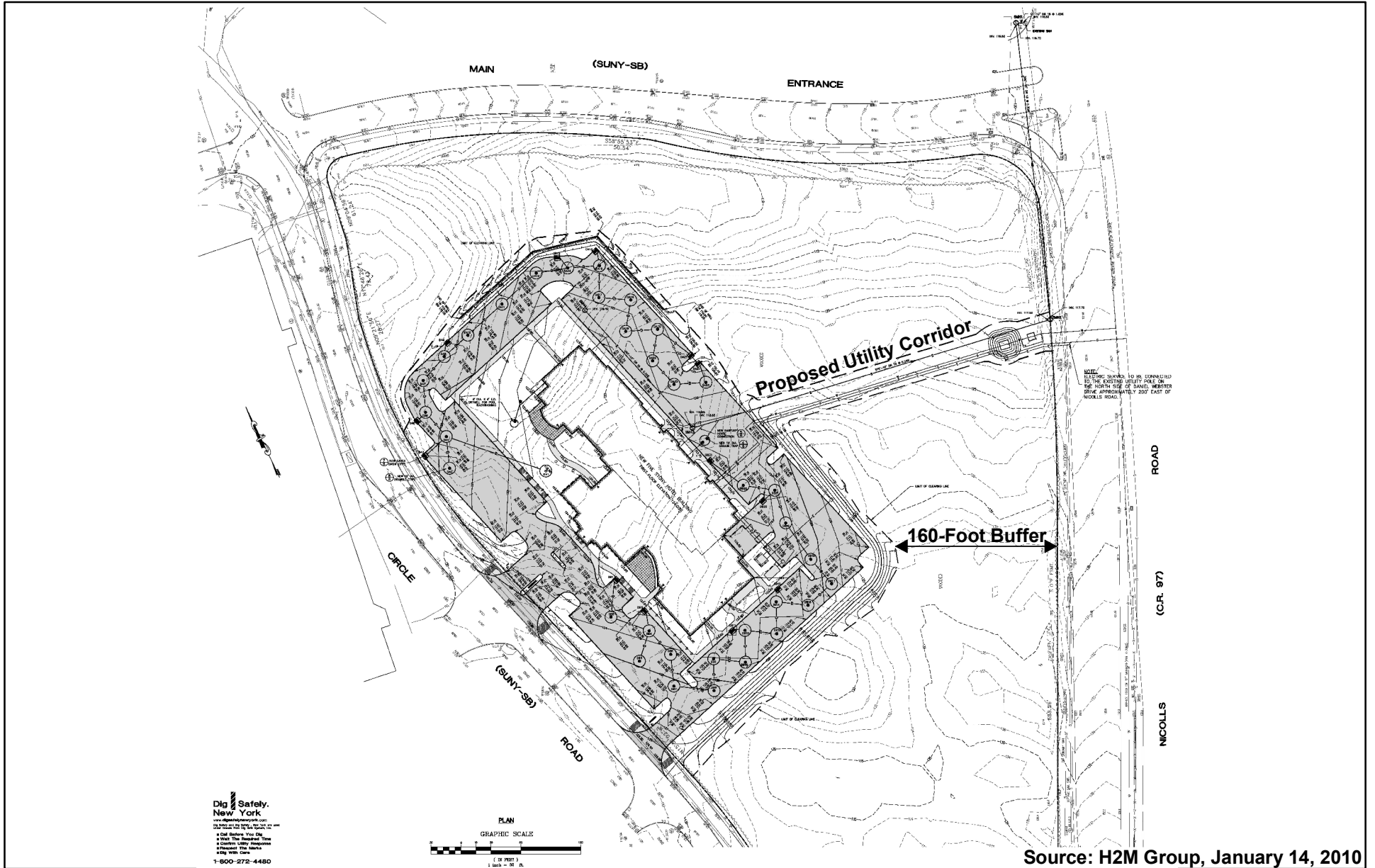
The proposed project entails construction of a 135-room, 5-story (approximately 60-foot-high) Hilton Garden Inn totaling approximately 90,023 gross square feet. The footprint would be 27,588 square feet plus a 523-square-foot Porte-cochere. Each of the second through fifth floors would be about 15,478 square feet. The components of the hotel would include a restaurant (80 seats), 30-seat bar/lounge area, indoor swimming pool/sauna area, 5,000 square feet of meeting space, and infrastructure space within a 5-story main building and 1-story entry pavilion. Each guest room would range from 314 to 438 square feet in size, with suites upwards to 765 square feet.

A total of 161 parking spaces would be provided with a main entry to the parking area located on Circle Drive opposite the existing University Administration building parking garage access and a secondary entry to the parking area located on Circle Drive further south.

The approximately 3.6-acre project site includes approximately 2.3 acres dedicated to the hotel building, parking, and other paved areas, 1.3 acres to be landscaped and the residual 7.4 acres to remain wooded and undisturbed. The landscaped area includes a utility corridor totaling approximately 0.2 acres. A vegetated buffer in excess of 160 feet would remain along the Nicolls Road frontage, providing a visual buffer along this thoroughfare and an 80-foot buffer, at a minimum, would be maintained between the hotel parking area and Entrance Drive. In addition, the site plan respects the existing topography so that portions of the building would appear to be below grade where the project site elevations are the highest (i.e., along the eastern and southeastern borders of the project site), thus also providing a natural visual buffer and minimizing views of the hotel from Nicolls Road. Moreover, the site design features landscaping in keeping with the campus aesthetic.

The building construction would be structural steel with poured concrete floors over steel deck. The hotel would be clad with a brick exterior façade and cast stone details with a look similar to that of the Humanities building, which is located immediately west of the University Administration building parking garage.

Based on discussions with the Hilton organization, the project applicant estimates that 37 full-time equivalent jobs (the number of full-time workers plus the total numbers of part-time workers that would total a full-time position) would be employed in hotel operations. It is estimated that approximately 100 construction-related positions would be provided during the construction of the proposed project.



PROJECT PURPOSE AND NEED

The Stony Brook campus is located at the center of Long Island, about 60 miles east of Manhattan and 60 miles west of Montauk Point. The campus was constructed in 1962 and the University Hospital was constructed in 1980, all on land donated by philanthropist Ward Melville. Over the past 48 years, the University campus has grown from 9 buildings on an approximately 480-acre site to 119 buildings over approximately 1,039 acres. SUNY Stony Brook is the preeminent research university on Long Island, and, excluding the State and County governments, is Long Island's second largest employer, with nearly 14,000 full and part-time employees, making SUNY Stony Brook the largest single-site employer in Suffolk County. During Fall 2009, the full time undergraduate enrollment at the Stony Brook campus was 14,737 students. Including graduate and part-time students, total enrollment was 24,215 students.¹

SUNY Stony Brook, as one of the premier research schools in the nation and the world, holds conferences and other educational events that attract attendees from all over the region, country, and from institutions around the world. The hotel is proposed to accommodate these attendees on the campus and promote a greater number of informal meetings and discussions in conjunction with lectures and conferences—primarily held at the Charles B. Wang Center. The Charles B. Wang Center, which opened in late 2002, provides SUNY Stony Brook with a 120,000-square-foot conference and events center where fiber optic technology and video conferencing allow the worldwide exchange of ideas in real time. The Charles B. Wang Center is also a venue for events of cultural, professional, and intellectual caliber that are initiated by and involve the various components of SUNY Stony Brook and Long Island communities and organizations, as well as other regional, national and international constituencies. An example of such a conference is the Stony Brook World Environmental Forum, designed to address the effects of global climate change on the world's protected areas, and the consequences of such change for biodiversity.

In 2006, SUNY Stony Brook acquired 246 acres of Gyrodyne's Flowerfield property for the purpose of building a Stony Brook University Research and Development Park. This property is located just west of the existing campus and Stony Brook Road. The University has since constructed two buildings on the property, including the 100,000-square-foot Center for Excellence in Wireless and Information Technology (CEWIT) and the Advanced Energy Research and Technology Center.² CEWIT is one of several centers for excellence created by former Governor George Pataki around New York State, and the only one on Long Island. These research facilities have increased the need for hotel accommodations for the research and business communities visiting the Research and Development site.

The University Hospital, a leading academic medical center, attracts more than 12,000 patients, students, faculty, staff, and visitors per day from across the region and State, most of whom need accessible, short-term lodging. Additional hotel occupants include potential students and their parents as well as prospective faculty members, who now must travel by vehicle between the

¹ Stony Brook University, Fast Facts, last accessed on January 27, 2010 at <http://www.stonybrook.edu/sb/fastfacts/>

² Winzelberg, David. "Gyrodyne gets day in court." *Long Island Business News* (online edition), March 10, 2009. Last accessed on October 16, 2009 at <http://libn.com/blog/2009/03/10/gyrodyne-gets-day-in-court/>

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campus and local hotels. Finally, the University's international student population is constantly growing, which has created an increasing demand for families with extended-stay visits.

Finally, the University's campus hosts more than 500 events and activities each year, including the Stony Brook Film Festival, Parents & Family Weekend, Homecoming Weekend/Wolf Stock, commencement and convocation ceremonies, conferences, symposiums and dignitary visits, and major athletic events such as the upcoming 2011 NCAA Women's Final Four Lacrosse Championships. These cultural and athletic events also generate a demand for on-site lodging.

It is the finding of SUNY (Board of Trustees) that the mission of the University would be advanced by providing a campus hotel that could accommodate these various needs. Such a hotel would be invaluable to SUNY Stony Brook and its missions of education, health care, community service, and scientific research, and would provide a number of important and significant public benefits.

NOTIFICATIONS, ACTIONS, PERMITS AND APPROVALS

Development and operation of the proposed project may require the following State and County regulatory agency notifications, actions, permits, and approvals. Notice requirements and obtaining the requisite permits and approvals are the responsibility of the hotel developer/owner.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

- General Permit for stormwater discharge associated with construction activities

STATE UNIVERSITY OF NEW YORK

- Site Use License Permit
- Building Permit

SUFFOLK COUNTY WATER AUTHORITY

- Authorization to connect to water supply system

SUFFOLK COUNTY DEPARTMENT OF PUBLIC WORKS

- Sewer Discharge Permit (modification of existing SUNY Stony Brook discharge permit)

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES

- Article 7 Hydrogeologic Zones and the SGPAs
- Article 13 General Food Regulations: Food Service Permit

B. LAND USE, ZONING, AND PUBLIC POLICY

EXISTING CONDITIONS

LAND USE

Project Site

The hotel, proposed for a site on the Stony Brook campus in the Town of Brookhaven, would occupy approximately 3.6 acres of an 11-acre parcel situated on the west campus of the SUNY Stony Brook complex and immediately south of the main entrance. The 11-acre project parcel is currently vacant and wooded (see **Figure 1-4**).

½-Mile Study Area

A ½-mile study area was delineated for the purposes of examining potential land use impacts resulting from the proposed project. **Figure 1-4** shows the existing land uses within this study area. As shown in **Figure 1-4**, the majority of the area within ½ mile of the project parcel is located within the Hamlet of Stony Brook, in the Town of Brookhaven. The only exception is the eastern edge of the study area, which extends into the Hamlet of Setauket, Town of Brookhaven.

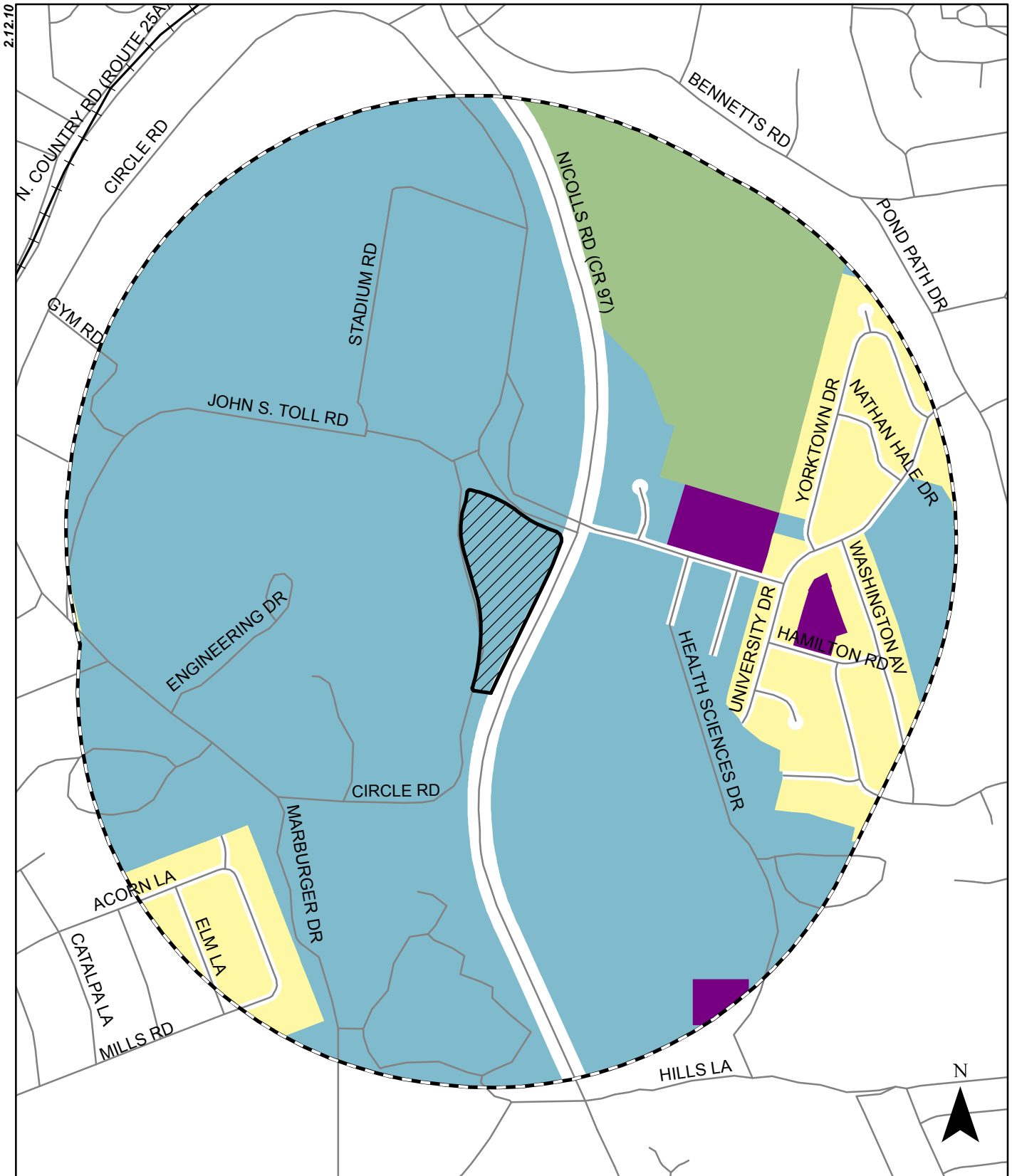
As shown in **Figure 1-4**, the majority of the ½-mile study area includes institutional uses associated with SUNY Stony Brook. Nicolls Road, a four-lane county road, separates the SUNY Stony Brook complex into the west and east campuses. The west campus includes the Academic Mall, Roth Quad, Mendelsohn Quad, Athletic Fields, Student Health Center, Tabler Quad, and the Roosevelt Quad. Further, the Ashley Schiff Preserve is located just west of Nicolls Road in the southern portion of the study area, immediately south of the project parcel, and is approximately 26 acres of woodland. The east campus includes the Health Sciences Center and University Hospital. In addition to the east and west campuses of SUNY Stony Brook, the ½-mile study area includes a portion of the south campus. Additional institutional uses within the ½-mile study area include the Setauket United Methodist Church on Yorktown Drive and the Nassakeag Elementary School on Pond Path Drive in the Setauket hamlet of the study area, as well as New York State Housing Finance Agency buildings east and west of Nicolls Road. The Town of Brookhaven also owns a vacant parcel on University Drive.







Residential, utility, and recreational uses comprise the balance of the study area. Residential uses consist of single-family residences, which are largely found in the Setauket portion of the study area. This section also includes utility uses, primarily a Town of Brookhaven recharge basin and a Suffolk County Water Authority (SCWA) well field. The large recreational use shown on **Figure 1-4** is the St. George's Golf and Country Club in the northeast section of the study area abutting Nicolls Road.

ZONING

Project Site

Figure 1-5 shows the zoning districts within the ½-mile study area. As shown on the figure, the project parcel is within an area zoned "B Residence 1 District" (or "B-1 Residence"). Permitted uses within the B-1 Residence district include one-family dwellings, churches or similar places of worship, public and parochial schools, convents and monasteries, and open farming. Colleges

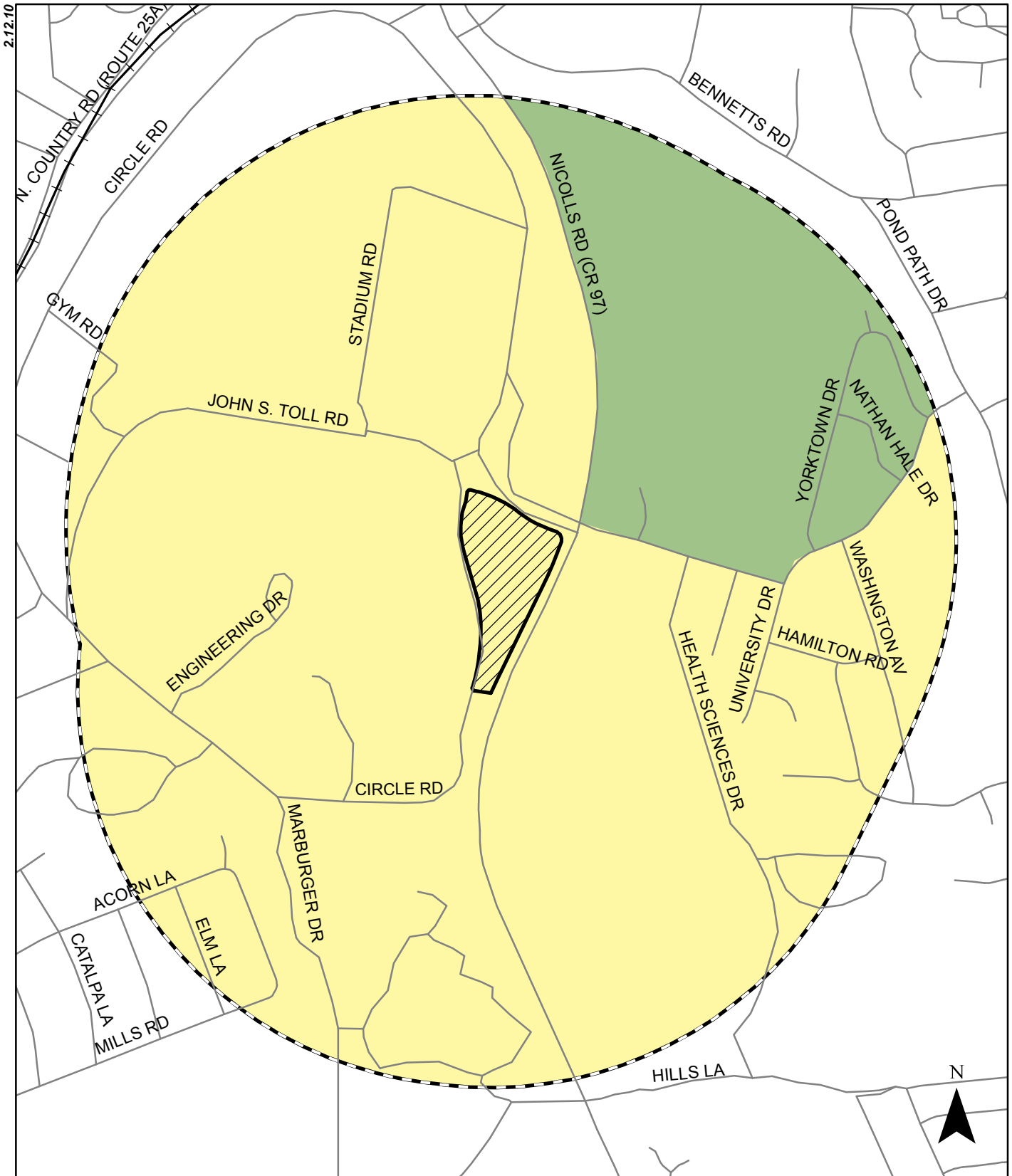





-  Project Parcel
-  1/2-Mile Study Area
-  LIRR Tracks
-  Government and Institutional
-  Residential
-  Recreation
-  Utility

0 250 500 1,000 Feet

Stony Brook University Hotel Project

Existing Land Use
Figure 1-4



-  Project Parcel
-  1/2-Mile Study Area
-  LIRR Tracks
-  A-1 Residence
-  B-1 Residence

0 250 500 1,000 Feet

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and universities are permitted in this district by issuance of a special use permit granted by the Planning Board. (As a state entity, SUNY Stony Brook, in accordance with the New York State Education Law, is not subject to local zoning.)

Accessory uses are permitted in the B-1 Residence district when located on the same lot as an allowable use. The minimum lot size required in this district is 22,500 square feet, with a maximum total building area of 20 percent and a maximum height of 18 feet.

½-Mile Study Area

The entire ½-mile study area is zoned residential, with the majority of the study area within the B-1 Residence district. The recreational use in the northeast portion of the study area is zoned A-1 Residence. A-1 districts allow the same uses as the B-1 Residence district; however, the lot size requirement for the A-1 district is 40,000 square feet (almost double that required by the B-1 district).

PUBLIC POLICY

New York State

In late 1986, the New York State Legislature enacted Chapter 830 of the Laws of New York (amended in 1989 by Chapter 200), which authorized the SUNY Board of Trustees to contract for or sublease hotel and/or conference center facilities. The Legislature determined that a public need for such facilities existed and that those facilities would promote the educational mission of the University. This determination was based on the annual participation of many students, faculty, administrators, visitors, and invitees in educational conference and other activities on the SUNY Stony Brook campus. Since the enactment of this legislation, SUNY Stony Brook developed the Charles B. Wang Center in 2002, which serves as one of the University's main conference facilities.

SUNY Stony Brook

The *State University of New York at Stony Brook Campus Master Plan Report* (June 1991) identified the construction of a 126,000 square-foot Hotel and Conference facility on the existing SUNY Stony Brook complex by 2015. Directives for the University evolved from reports in 1958 and 1963, which outlined the need for an institution aimed at advancing technical and scientific industry throughout the State. The major objectives of the University's building program are to provide the required support services for academic, research, and health care facilities as well as for students and staff.

The University has also embarked on a *Facilities Master Plan*, managed by the State University Construction Fund, which will provide an in-depth assessment of the University's building inventory and hospital facilities, along with recommendations for future capital construction initiatives. This will be a 2-year process that will attempt to consolidate the University's various planning efforts and set new directives and goals.

Town of Brookhaven

The Town of Brookhaven's Final 1996 Comprehensive Land Use Plan does not specifically address the project parcel, but does address the SUNY Stony Brook complex in general. According to the plan, the Town proposes public and semi public use of the SUNY Stony Brook campus, including the project parcel. The plan identifies a portion of the SUNY Stony Brook complex as environmentally-sensitive land due to the presence of moraines. Associated with

moraines are unique geological features such as the bluffs of the north shore, round kettle hole depressions, and steep slopes. The Town has striven to protect these important geological areas by applying the Town's grading ordinance, reducing overall site development impacts, and by clustering development away from steep slopes or by utilizing buffers to protect areas of most significant topography. To further protect these environmental sensitive areas, the Town recommends avoiding development in areas of steep slopes where a large amount of regrading and clearing of existing vegetation is required. It is noted that before the 1996 plan was published, a significant portion of the lands identified on the SUNY Stony Brook complex as environmentally sensitive lands were built with the University and hospital structures and associated facilities.

The Comprehensive Land Use Plan also addresses the SUNY Stony Brook complex as part of the South Setauket Woods Special Groundwater Protection Area (SGPA), which is one of nine on Long Island. SGPAs are recharge watershed areas important for the maintenance of large volumes of high quality groundwater. Since the inception of the 1992 *Long Island Comprehensive Special Groundwater Protection Area Plan*, prepared by the Long Island Regional Planning Board (LIRPB), the Town has demonstrated support of and compliance with the SGPA plan, although the Town recognizes that there are limits on the extent to which existing recommendations in the SGPA plan can be implemented. (See also Section G, "Water Resources," for more detail on SGPAs).

It is noted that the Town of Brookhaven is in the process of preparing a 2030 Comprehensive Plan to guide the future of the Town. This plan will identify strategies to preserve important resources and coordinate conservation activities; guide future land use decisions and regulations; enhance community character; program public projects and meet public needs; and promote quality of life for residents.

COMMUNITY PROPOSALS

Stony Brook Environmental Conservancy

The Stony Brook Environmental Conservancy (the Conservancy) is a community-based public-interest organization registered as a not-for-profit corporation in the State of New York, whose mission is to preserve, protect, enhance, and expand the unique environmental heritage in and around the Stony Brook community. The Conservancy supports the formation of the Stony Brook Greenbelt (the Greenbelt), a 5-mile, publicly accessible, contiguous domain of forests, memorial preserves, open lands, farmland, and shoreline. The group also wishes to provide for the permanent protection of the Greenbelt under New York State Law. Under this law, this preserved land would continue to be held by the various landowners, but would be made available for non-invasive, passive recreational and educational use by the community.

The proposed Greenbelt would stretch from the northeast corner of SUNY Stony Brook at the junction of Route 25A and Nicolls Road, continue south along Nicolls Road, through the project parcel and the Ashley Schiff Preserve, and then move west to encompass approximately 89 acres of woodland on the SUNY Stony Brook south campus, around the eastern and northern perimeter of the former Gyrodyne Flowerfield property (the current location of the Stony Brook University Research and Development Park) eventually terminating in Stony Brook Harbor.

PLANNED FUTURE PROJECTS

Table 1-1 summarizes the planned future projects anticipated to be completed on the SUNY Stony Brook campus by the proposed project’s 2012 Build Year. As shown in the table, all of the projects are located within the SUNY campus. No other development projects were identified in the study area.

**Table 1-1
No Build Projects**

Project Name	Project Summary	Anticipated Completion Year
Student Recreation Center	New recreational building of approximately 86,000 gsf	2012
Simons Center for Geometry & Physics	Faculty/research office building	2010
New Student Residence Facility – Roosevelt/Kelly Quads	600-bed dormitory	2010
Old Chemistry Renovation Addition	Renovation of old lab building into a classroom, with the addition of three lecture halls to the building envelope. Includes the renovation of 80,000 gsf, with an additional 20,000 gsf. The project will serve the existing student base and will represent no increase in the number of University employees.	2012
Kelly Dining Hall Addition	The addition of 10,000 gsf to an existing facility	2012
Note: gsf=gross square feet		
Source: SUNY Stony Brook, October 2009.		

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

LAND USE

Project Site

The proposed project is a 5-story, 135-room, (approximately 60-foot-high) hotel within the Stony Brook campus. Under this proposal, SBFR would sublease an 11-acre parcel to a major hotel developer to construct and operate the hotel. The approximately 3.6-acre project site would include approximately 2.3 acres dedicated to the hotel building, parking, and other paved areas, 1.3 acres to be landscaped and the residual 7.4 acres to remain wooded and undisturbed. A vegetated woodland buffer of more than 160 feet wide would be provided along Nicolls Road to shield the hotel from views along this road corridor. In addition, an approximately 80-foot buffer would be created between the hotel parking area and Entrance Drive.

The proposed project would introduce a new commercial use on what is currently vacant, wooded, institutional land within a large, 1,039-acre campus. Because the hotel would be integral to support, and be part of the University campus, existing land use conditions would not substantively change as a result of the proposed project. For example, the amount of wooded land that would be disturbed—approximately 3.6 acres—would be relatively small compared with the total acreage of the campus. Moreover, of the approximately 3.6-acre project site, approximately 1.3 acres would be landscaped or replanted (including a utility corridor totaling

approximately 0.2 acres). The remaining 7.4 acres of the 11-acre wooded project parcel would remain vacant woodland.

Since the project site is within the campus and part of a larger parcel that is bounded to the west by campus buildings, the main west campus, campus to the north as well as campus properties to the south, it is concluded that the proposed project is consistent with the prevailing land patterns for the immediate area and would not conflict with any adjoining areas. To the east is a major road corridor, Nicolls Road, and the project site would be buffered from this transportation corridor. Thus, the proposed project would not conflict with this use. Moreover, the nearest non-institutional uses are some distance from the project site and parcel (see **Figure 1-4**), and are therefore adequately separated from the project site.

1/2-Mile Study Area

The proposed project would introduce a commercial use in the study area, which is comprised almost entirely by institutional uses of the SUNY Stony Brook complex. Since the hotel would essentially serve the University, this new use would be compatible with the existing institutional uses. Nicolls Road, a major thoroughfare, would separate the hotel from other uses in the study area, including the University Hospital, Health Sciences Center, single-family residences, a golf and country club, a school, a church, and two utility uses, all of which have long existed in close proximity to the existing SUNY Stony Brook complex. Further, a natural visual buffer would be kept along Nicolls Road to shield any sensitive viewer groups from the hotel—specifically, motorists that travel along Nicolls Road. This viewer group would not be significantly impacted due to the short duration of time that it takes to travel past this area of the campus. Moreover, the proposed hotel would not pose a visual detriment to any viewsheds presently available to nearby homeowners because the project site is not directly seen from surrounding neighborhoods. Therefore, it is concluded that the proposed project is entirely consistent with the prevailing land pattern of the study area, would be compatible with current land uses, and would not result in any significant adverse land use impacts.

ZONING

Project Site

The proposed hotel would introduce a commercial use in an area zoned for residential uses. However, under Section 375(3) of the New York State Education Law, facilities constructed for state university purposes are not subject to local regulation, including zoning. SUNY facilities and facilities located on the SUNY Stony Brook complex that are used for state university purposes are not subject to, nor required to conform to, local zoning requirements.

The provisions of Section 375(3) notwithstanding, the proposed facility would conform to local zoning requirements in that the B-1 Residence district, which allows for colleges and universities and their supporting and accessory facilities, and the hotel, would be an integral part of the SUNY Stony Brook complex. Moreover, as stated above, the proposed project is consistent with the prevailing land pattern, and given the separation of the project site from other surrounding uses, it is concluded that the proposed project would not conflict with any nearby zoning districts.

1/2-Mile Study Area

The proposed facility would not conflict with zoning districts in the 1/2-mile study area. The proposed project would not prevent the orderly and reasonable use of permitted or legally

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established uses within these zoning districts. The established zoning and legal uses of the surrounding area could coexist with the proposed hotel, just as they have for decades with existing facilities at the SUNY Stony Brook complex. Consequently, the proposed facility would not result in a significant adverse impact or conflict with local zoning.

PUBLIC POLICY

New York State

The proposed project would allow SUNY Stony Brook to address the legislative statement of purpose articulated by Chapters 830 and 200 of the Laws of New York, 1986 and 1989. The proposed hotel would therefore fulfill a public need by supporting and serving the University's growth as a premiere educational and research institution. This is a positive impact and public benefit of the proposed project.

SUNY Stony Brook

By serving the University's growing community of conference attendees, prospective students and faculty, parents, hospital patients, and visitors, the proposed project would help the University to meet its objective of providing much-needed support services for its academic, research, and health care facilities as well as its student and staff constituencies.

Review of the proposed project design would be handled by SUNY Stony Brook Campus Planning, Design and Construction. Detailed site plans and construction specifications would be provided to Campus Planning, Design and Construction for its review and approval prior to construction of the project. The site plans and construction specifications would be reviewed for good engineering practices, applicable New York State Building Code standards, and compatibility with existing and planned future development on the SUNY Stony Brook campus. A preliminary review has concluded that the proposed project would meet the campus goals and would not conflict with existing or planned future development on the campus.

Town of Brookhaven

In recognition of the project site's location in both an identified environmentally sensitive area and a SGPA, the planned design of the 135-guest room hotel facility respects the local topography and does not disturb a significant portion of the existing natural vegetation on the project parcel. For example, only 3.6 acres of the 11-acre parcel would be developed and a vegetated buffer in excess of 160 feet provided along Nicolls Road would be maintained. Moreover, because the proposed project is in keeping with the Town of Brookhaven's proposed future land use pattern, the hotel project would be consistent with the Town of Brookhaven's land use planning policies.

COMMUNITY PROPOSALS

Stony Brook Environmental Conservancy

As discussed in the "Existing Conditions" section, above, the 11-acre project parcel is one of the parcels included in the Conservancy's proposed 5-mile Stony Brook Greenbelt. The Conservancy supports permanent protection of the proposed Greenbelt under New York State Law. Under the Conservancy's proposal, all preserved land would continue to be held by the various landowners, but would be made available for non-extractive, passive recreational and educational use by the community. The proposed hotel project would affect the 3.6-acre project

site of the 11-acre parcel as included within the proposed Greenbelt. However, because the hotel would be situated in the northwest portion of the 11-acre parcel, the remaining 7.4 acres would remain undisturbed woodland, contiguous with the existing woodlands to the north, east, and south.

The construction of the proposed hotel in the northwestern portion of the 11-acre project parcel behind the naturally wooded buffer in excess of 160 feet would not compromise the current function of this parcel, which acts as a visual buffer between the University and Nicolls Road. Moreover, the proposed hotel would not compromise the project parcel's limited ability to serve as a nature preserve. However, with or without the proposed hotel, it is unlikely that the project parcel and adjacent University-owned parcels would become part of the proposed Greenbelt due to the sensitive nature of their relationship to the University's infrastructure and utility systems.

C. NATURAL RESOURCES

METHODOLOGY

As part of the evaluation of potential natural resources impacts, a literature review was conducted and field reconnaissance was performed on December 30, 2009 to determine habitat characterization. This site reconnaissance was conducted to document general habitat structure and to identify woody plant species. The habitat characterization was then used to assess the presence of general plants and animals. In addition, published sources of information were consulted to document the potential for regulated wetlands, rare habitats, and threatened and endangered species to occur on-site. These sources include:

- U.S. Fish and Wildlife Service National Wetlands Inventory (NWI)
- New York State Department of Environmental Conservation (NYSDEC) Freshwater Wetlands Maps
- NYSDEC Natural Heritage Program (NYNHP)
- Published sources of plants/animals expected to occur in the region, including the New York State Breeding Bird Atlas and Herp Atlas Projects

The proposed project was then assessed for potential impacts to the identified natural resources.

EXISTING CONDITIONS

VEGETATION—HABITAT CHARACTERIZATION

Based on the field survey and literature review, the project parcel is concluded to consist of an early-mature native oak forest with a relatively open understory. Predominant trees/shrubs observable in winter are native plants, with few non-native or invasive species except at the extreme edges of the parcel. Black oak (*Quercus velutina*), scarlet oak (*Q. coccinea*), white oak (*Q. alba*), and red oak (*Q. rubra*) are the most common occurring overstory dominant tree species. Red maple (*Acer rubrum*) and flowering dogwood (*Cornus florida*) are also prevalent throughout the parcel in the subcanopy. Less common tree species include hickory (*Carya sp.*), and American holly (*Ilex opaca*). Maple-leaved viburnum (*Viburnum acerifolium*), lowbush blueberry (*Vaccinium angustifolium*), and mountain laurel (*Kalmia latifolia*) populate the understory, along with round leaved pyrola (*Pyrola rotundifolia*) and striped wintergreen (*Chimaphila maculata*) in the herbaceous stratum. The list of plants observed during the winter

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site inspection is provided in **Table 1-2** below. It is expected that field inspections during a growing season (spring/summer/fall) would yield a longer list of plants, especially in the herbaceous species.

**Table 1-2
Vegetation Identified On-site¹**

Common Name	Scientific Name	Stratum
red maple	<i>Acer rubrum</i>	tree/overstory
black birch	<i>Betula lenta</i>	tree/overstory
hickory	<i>Carya sp.</i>	tree/overstory
oriental bittersweet	<i>Celastrus orbiculatus</i>	vine
striped wintergreen	<i>Chimaphila maculata</i> ²	herbaceous
sweetfern	<i>Comptonia pregrina</i>	shrub/understory
flowering dogwood	<i>Cornus florida</i> ²	tree/overstory
autumn olive	<i>Elaeagnus umbellata</i>	shrub/understory
American beech	<i>Fagus grandifolia</i>	tree/overstory
Japanese holly	<i>Ilex crenata</i>	shrub/understory
American holly	<i>Ilex opaca</i> ²	shrub/understory
eastern red cedar	<i>Juniperus virginiana</i>	tree/overstory
mountain laurel	<i>Kalmia latifolia</i> ²	shrub/understory
club moss	<i>Lycopodium tristachyum</i> ²	herbaceous
patridgeberry	<i>Mitchella repens</i>	herbaceous
Indian pipe	<i>Monotropa uniflora</i>	herbaceous
white pine	<i>Pinus strobus</i>	herbaceous
haircap moss	<i>Polytrichum commune</i>	herbaceous
round leaved pyrola	<i>Pyrola rotundifolia</i>	herbaceous
white oak	<i>Quercus alba</i>	tree/overstory
scarlet oak	<i>Quercus coccinea</i>	tree/overstory
red oak	<i>Quercus rubra</i>	tree/overstory
black oak	<i>Quercus velutina</i>	tree/overstory
poison ivy	<i>Rhus radicans</i>	shrub/understory
blackberry	<i>Rubus allegheniensis</i>	shrub/understory
sassafras	<i>Sassafras albidum</i>	tree/shrub
glaucous greenbriar	<i>Smilax glauca</i>	vine
ornamental cypress	<i>Taxodium sp.</i>	shrub/understory
yew	<i>Taxus sp.</i>	herbaceous
lowbush blueberry	<i>Vaccinium angustifolium</i>	herbaceous
maple leaved viburnum	<i>Viburnum acerifolium</i>	shrub/understory
grape	<i>Vitis sp.</i>	vine

Notes:
¹ Winter site inspection, conducted by AKRF, Inc. on December 30, 2009.
² New York State-listed as “exploitably vulnerable” plant species (6 NYCRR Part 193)

The overall plant composition of the project parcel resembles both the “Coastal Oak-Hickory Forest” and “Coastal Oak-Beech Forest” plant communities as described in the *Ecological Communities of New York State*,¹ the primary difference being the relative lack of hickory and beech trees on the project parcel as compared to the NYNHP documented communities. Both

¹ Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, A.M. Olivero. *Ecological Communities of New York State*, 2nd Edition. New York Natural Heritage Program. 2002.

community types are known from this region of Long Island and are ranked G4/S3, indicating 21 to 100 occurrences Statewide.

Historic aerial photos of the project parcel and vicinity reveal that the parcel and surrounding lands were once composed of a large, contiguous block of undeveloped woodlands greater than 3,000 acres in size with few roads or buildings well into the 1950s. Sequential historic aerial photos up to the present day reveal that the approximately 11-acre project parcel has not been cleared/regraded since the abandonment of agriculture more than half a century ago and therefore retains its native, second growth forest structure. This accounts for the oak forest and predominance of native plant species identified during the field investigations.

Adjacent Habitats—Ashley Schiff Preserve

In order to supplement the winter site inspection with information on what plants may occur on-site during the growing/flowering season, AKRF consulted a 2000 woody plant inventory completed by David Laby, a volunteer with New York Metropolitan Flora Project of Brooklyn Botanic Garden, and made available by the Department of Geosciences at SUNY Stony Brook (see **Appendix B**). The list is of “the wild woody plants found in the woods on the south side of the main entrance to SUNY Stony Brook” (Laby 2000). The Ashley Schiff Preserve, located immediately south and adjacent to the project parcel, and other forested lands proximal to the project parcel, is presumed to be the location of this 2000 inventory and therefore may provide an indication of likely floral richness during the growing season on the project parcel itself. AKRF’s on-site inspection on December 30, 2009 included a walk through of the adjacent Ashley Schiff Preserve.

Site inspection reveals that the project parcel is floristically similar to the adjacent Ashley Schiff Preserve with a few notable exceptions. Black birch (*Betula lenta*) and American beech (*Fagus grandifolia*) are far more abundant in the Ashley Schiff Preserve. Many individual birch/beech trees within the Ashley Schiff Preserve appear to be suffering from beech bark disease, a fungal pathogen (*Nectria sp.*) which causes perennial cankers and disfigurement in beech and birch. This tree pathogen was not noted on the project parcel in large part due to the relative absence of beech and birch trees. Also noteworthy is the greater abundance of vines (*Smilax*, *Celastrus*) and somewhat greater frequency of smaller diameter trees and early successional/invasive species on southern portions of the Ashley Schiff Preserve as compared with the project parcel, which is relatively free of invasive species. A possible cause of this may be the proximity of the South Campus buildings to the Ashley Schiff Preserve and the greater recreational use of the Preserve. Tulip tree (*Liriodendron tulipifera*) was also present on the Ashley Schiff Preserve property but appears to be absent from the project parcel. Nevertheless, both habitats are very similar as would be expected by their close proximity and by the fact that they were once part of a larger contiguous forest.

The list of woody plants found on the south side of the main campus entrance (Laby, *Wild Woody Plants of the South Campus*, June 2000) includes a number of plants not observed on the project parcel. However, many of the species on this list can be expected to be present on the project parcel itself during the growing season judging by its habitat similarity with the Ashley Schiff Preserve and expected species associations. Of the plants found in this region by David Laby, the following additional species are likely to be present on the project parcel based on observed site conditions: wintergreen (*Gaultheria procumbens*), black huckleberry (*Gaylussacia baccata*), dangleberry (*Gaylussacia frondosa*), chokeberry (*Aronia prunifolia*), serviceberry (*Amelanchier canadensis*), black cherry (*Prunus serotina*), false solomon’s seal (*Smilacina racemosa*), wood anemone (*Anemone quinquefolia*), ground cedar (*Lycopodium complanatum*),

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pink ladyslipper (*Cypripedium acaule*), yellow star grass (*Hypoxis hirsuta*), whorled loosestrife (*Lysimachia quadrifolia*), Canada mayflower (*Maianthemum canadense*), and northern downy violet (*Viola fimbriatula*).

WILDLIFE

Two species of wildlife were noted during the December 30, 2009 winter site inspection: downy woodpecker (*Picoides pubescens*) and gray squirrel (*Sciurus carolinensis*). No targeted species surveys were completed on the project parcel, such as bird point counts, transect investigations, or amphibian sampling. As such, a list of species that could frequent the project parcel based on its current available habitat is provided below.

Based on available habitat, species that may utilize the parcel are listed below. In general, the project parcel has moderate wildlife habitat value due to its undeveloped, native forested condition. However, it is limited in its ability to support a diverse assemblage of fauna due to its relatively small size, lack of water resources (stream/wetlands), and lack of a heterogeneous assemblage of diverse habitat types (forest, field, shrubland, etc.), which would provide for greater wildlife species diversity and richness. The parcel lacks surface waters (streams/wetlands), which prevents it from being a useful amphibian breeding habitat and limits its use by animals that prefer a water source for foraging species such as mink, muskrat, and waterfowl. The project parcel does not contain an abundance of standing dead wood or trees with loose bark, limiting its usefulness for species that require this, such as woodpeckers, flying squirrels, and bats. Most importantly, the approximately 11-acre project parcel is largely isolated from adjacent wildlife habitat. This limits the diversity of species that the project parcel may support and prevents the project parcel from serving as an important source of biological productivity in the region (i.e., as a breeding site) which would be the case if it was connected more directly to larger, adjacent habitats. As an example, one species of reptile, the eastern box turtle, may occur in isolated woodlands in this part of Long Island. However, on small parcels such as the project parcel, without connections to adjacent habitat and separated by heavily traveled roads, this species cannot migrate to breed or disperse. The one exception to this conclusion is use of the parcel by forest-interior breeding birds. Although isolated by surrounding roads and therefore less valuable to forest birds, the parcel's proximity to other woodlands on the SUNY Stony Brook campus increases the likelihood that it may serve this purpose.

The potential use of the project parcel by wildlife is discussed by class below.

Reptiles and Amphibians

The Amphibian & Reptile Atlas Project (Herp Atlas) was a 10-year survey (1990-1998) designed to document the geographic distribution of New York State's herpetofauna. Of the 73 species of amphibians and reptiles known to occur in New York State, only 9 have been documented by the NYSDEC Herp Atlas Project for the "Port Jefferson" United State Geological Survey (USGS) Quad—the quadrangle map within which the project parcel is located.

The species of reptiles and amphibians known for the Port Jefferson Quad include spring peeper (*Acris crucifer*), bullfrog (*Rana catesbeiana*), snapping turtle (*Chelydra serpentina*), eastern box turtle (*Terrapene carolina carolina*), red-eared slider (*Trachemys scripta elegans*), painted turtle (*Chrysemys picta picta*), common garter snake (*Thamnophis sirtalis*), northern black racer (*Coluber constrictor constrictor*), and smooth green snake (*Liochlorophis vernalis*).

Of these species, only the common garter snake, northern black racer, and box turtle have the potential to utilize the project parcel as they are terrestrial species that frequent wooded uplands. The remaining are aquatic or field/meadow species that are unlikely to occur on the project parcel. Of the species known for the Port Jefferson Quad that may occur on-site, garter snake and northern black racer are common snakes. The eastern box turtle is becoming less common on Long Island due to habitat fragmentation and loss of habitat, although it is not currently listed as threatened or endangered in New York State. Appropriate habitat exists for the eastern box turtle on the project parcel. If box turtles are present on the project parcel, they are isolated individuals that could be effectively moved to larger adjacent habitats.

It has been reported that the project site is used by the SUNY Stony Brook Department of Ecology and Evolution as a field site for study of the eastern red-backed salamander (*Plethodon cinereus*). Although this species is not listed by the NYS Herp Atlas project for the USGS quadrangle encompassing the project site, it is likely that this species occurs on the project site. It is relatively common in the region and appropriate habitat occurs on-site. Eastern red-backed salamanders are a terrestrial salamander living/breeding entirely in upland woods. Unlike other salamanders, it is not dependant on aquatic habitats to reproduce. *Plethodon cinereus* is likely the most abundant salamander in New York State forests where it lives among leaf litter, logs, and stones on the forest floor and feeds on arthropods, earthworms and other invertebrates. Eastern red-backed salamanders will occupy forests of various types as long as a closed canopy is present. They are sensitive to reduced soil moisture and acidification. Two morphs of this species occur in New York – the striped morph, “redbacks”, and the unstriped morph, “leadbacks”. Populations in Long Island are particularly variable, with redbacks predominating in the western end of the Long Island and leadbacks on the eastern end. *Plethodon cinereus* is not listed as threatened or endangered in New York State.¹

Mammals

Mammal species that have the potential to utilize the project parcel based on their habitat requirements include masked shrew (*Sorex cinereus*), short tailed shrew (*Blarina brevicauda*), eastern mole (*Scalopus aquaticus*), little brown myotis (*Myotis lucifugus*), silver-haired bat (*Lasiurus noctivagans*), big brown bat (*Eptesicus fuscus fuscus*), red bat (*Lasiurus borealis borealis*), eastern cottontail (*Sylvilagus floridanus*), woodchuck (*Marmota monax*), eastern chipmunk (*Tamias striatus*), white footed mouse (*Peromyscus leucopus*), pine mouse (*Pitymys pinetorum*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), long-tailed weasel (*Mustela frenata*), striped skunk (*Mephitis mephitis*), white-tailed deer (*Odocoileus virginianus*), and opossum (*Didelphis marsupialis*).

None of the mammals expected to frequent the project parcel are listed as threatened or endangered at the State or federal level.

Birds

The Breeding Bird Atlas is a comprehensive, statewide survey designed to reveal the distribution of breeding birds in New York. The latest completed survey period with data available to the public was conducted from 2000-2005. In total, Breeding Bird Atlas census block #6553c incorporating the project parcel and surrounding lands lists 80 species of birds as confirmed or

¹ Gibbs, James P et. al, *The Amphibians and Reptiles of New York State: Identification, Natural History, and Conservation*. Oxford U. Press 2007.

probable/possible breeders in the vicinity of the project parcel. The complete list of birds identified by the Atlas for this census block can be found in **Appendix B**. Because the census block includes the coastal region north and west of the project parcel, shorebirds would not be expected to be found within the upland forested habitat on the project parcel. Others, such as Carolina wren (*Thryothorus ludovicianus*) or blue jay (*Cyanocitta cristata*), are common perching birds that are either year-round residents or are found in human-modified urban/suburban landscapes in abundance. By contrast, several of the species identified in the region surrounding the project parcel require intact forest habitat for breeding success. Because the project parcel consists of oak woodland, these forest-breeding species are discussed further.

The size (acreage) of a forest is a significant predictor of breeding habitat for certain forest interior breeding birds, including neotropical migrants. While not the only measure of the value of habitat for birds, a parcel's use by such species is of importance to gauge land development impacts. This is because reduction in forest size or actions that result in forest fragmentation (breaking up forested area into separate, smaller portions) can adversely affect the available breeding habitat for such bird species—species which are declining worldwide. Another important predictor of the suitability of habitat for forest-interior breeding birds is the amount of forested land in the vicinity of a site. The nearby forested areas generally contiguous to the project parcel include large forested blocks (>100 acres) to the south. This increases the likelihood that the 11-acre project parcel may be used as a breeding site for forest-interior and neotropical migrant birds. The project parcel is relatively small and by itself may already be too isolated to accommodate forest-interior breeding birds with the greatest conservation need. However, its separation from adjacent forested lands is not extreme—to the north, east, and south are additional wooded areas separated only by roadways ranging in width from 30 to 100 feet. Of the 80 bird species listed for census block #6553c, the following are forest-interior birds with documented conservation concerns that may breed on the project parcel:

- red-eyed vireo (*Vireo olivaceus*)
- wood thrush (*Hylocichla mustelina*)
- black-and-white warbler (*Mniotilta varia*)
- American redstart (*Setophaga ruticilla*)
- ovenbird (*Seiurus aurocapilla*)
- scarlet tanager (*Piranga olivacea*)
- rose-breasted grosbeak (*Pheucticus ludovicianus*)
- great crested flycatcher (*Myiarchus crinitus*)
- yellow billed cuckoo (*Coccyzus americanus*)

Of the bird species known for the BBA census block containing the project parcel, wood thrush, scarlet tanager, blue-winged warbler (*Vermivora pinus*), and Cooper's hawk (*Accipiter cooperii*) are all listed by NYSDEC as "species of greatest conservation need" (SGCN). The blue-winged warbler breeds in highly variable habitat, from forested areas to farmland. Cooper's hawk nest in dense woods, but frequents a variety of habitats to hunt. The project parcel may be utilized by both of these species.

THREATENED AND ENDANGERED SPECIES

New York State Listing

Five plants identified on-site are listed as “exploitably vulnerable” in New York State. These are club moss (*Lycopodium tristachyum*), mountain laurel (*Kalmia latifolia*), American holly (*Ilex opaca*), flowering dogwood (*Cornus florida*), and striped wintergreen (*Chimaphila maculata*). Two of the plants identified in the vicinity of the project parcel¹ are also listed as “exploitably vulnerable” in New York State, including pink ladyslipper (*Cypripedium acaule*) and ground cedar (*Lycopodium complanatum*). It is a violation to remove protected native plants without consent of the property owner.² The presence of protected native plants on a property subject to SEQRA must also be considered in the environmental impact review.

Of the wildlife species that may occur on-site, Coopers hawk (*Accipiter cooperii*) and eastern box turtle (*Terrapene carolina*) are listed as a “special concern” species (6 NYCRR Part 182) indicating that their conservation status is of concern and they are at risk of becoming “threatened” in New York, but are not yet listed as “threatened” or “endangered.” The coastal barrens buckmoth (*Hemileuca maia maia*), a New York State “special concern” species, was formerly known for the pine barren habitat around SUNY Stony Brook.³ Host plants for the buckmoth include scrub oaks (*Quercus ilicifolia*) and similar oak species found in pine barren habitats, including the Long Island Central Pine Barrens, located approximately 7 miles east of the project parcel.

On October 26, 2009, AKRF sent a letter of correspondence to the Information Services division of the NYNHP to request information regarding the presence of any rare, threatened, endangered, or special concern flora and fauna, areas of special concern, and New York State-identified ecological communities within and surrounding the project area. A photocopy of the letter has been included in **Appendix C**. According to the response from NYNHP dated November 17, 2009 (see **Appendix C**), the agency has no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of the project parcel.

Federal Listing

The U.S. Fish and Wildlife Service (USFWS) has listed the following threatened and endangered plant and animal species for Suffolk County: sandplain gerardia (*Agalinis acuta*), seabeach amaranth (*Amaranthus pumilus*), small whorled pogonia (*Isotria medeoloides*), kemp’s ridley turtle (*Lepidochelys kempi*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), piping plover (*Charadrius melodus*), roseate tern (*Sterna dougallii dougallii*), and shortnose sturgeon (*Acipenser brevirostrum*).⁴ None of these species is expected to frequent

¹ Laby, David, *Wild Woody Plants of the South Campus*, 2000. Last accessed on February 2, 2010 at <http://www.geo.sunysb.edu/a-schiff/wildWoodyPlants.html>

² New York State Department of Environmental Conservation, 6 NYCRR Part 193.3

³ NYSDEC NHP, Albany, NY. Personal Communication, 12.29.09.

⁴ USFWS, *Species Reports*. Last accessed on February 3, 2010 at http://ecos.fws.gov/tess_public/countySearch!speciesByCountyReport.action?fips=36103 and USFWS, *Suffolk County Federally Listed Endangered and Threatened Species and Candidate Species*, last accessed on February 3, 2010 at <http://www.fws.gov/northeast/nyfo/es/CountyLists/SuffolkDec2006.htm>

the project parcel. In the case of the plant species, seabeach amaranth is a coastal beach species and sandplain gerardia is a plant of fields growing in association with grasses. Such habitats are lacking on-site. Small whorled pagonia is known historically for the region, meaning there has not been confirmation of its continued presence in recent decades. It is presumed extirpated from this region of Long Island. Small whorled pagonia inhabits semi-open, mesic forests of eastern North America and is known to grow in association with ferns, club mosses, low-lying evergreen forbs such as partridgeberry (*Mitchella repens*), witch hazel (*Hamamelis virginiana*), and frequently a canopy of paper birch (*Betula papyrifera*). The five turtle species mentioned are all marine species and are therefore unable to use the project parcel. Shortnose sturgeon is a fish that frequents the Hudson River, and would not be present on the project parcel. The piping plover and roseate tern are shore birds and would not frequent the inland, forested habitat of the project parcel.

REGIONAL HABITAT CONTEXT

NYNHP Mapped Significant Habitat Areas

Approximately 1 mile east of the project parcel within the Town of Brookhaven, the NYNHP has mapped the “pitch pine heath oak woodland” rare natural community. This area is also mapped as the “South Setauket Woods Zone” of the Suffolk County Pine Barrens. It is a part of the overall pine barrens habitat of Long Island but is no longer connected to the Central Pine Barrens that was given protection under the Long Island Pine Barrens Protection Act of 1993. The core area mapped as the Central Pine Barrens is located roughly 7 miles to the east of the project parcel.

SEQRA Critical Environmental Areas (CEA)

As discussed in more detail in Section G, “Water Resources,” the project parcel overlies the *South Setauket Woods Special Groundwater Protection Area*. This area, including the SUNY Stony Brook campus and adjacent South Setauket Woods, is a Suffolk County-designated Critical Environmental Area (CEA).

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

The proposed project would disturb approximately 3.6 acres of woodland within a larger 11-acre parcel and clear it to develop a hotel with parking, accessory structures, and landscaping. The proposed hotel would be located at the northern portion of the project parcel, occupying the widest portion of the parcel.

It is not expected that the proposed project would eliminate any plant species currently present on-site. The undisturbed remainder of the parcel should be able to support the species assemblage that currently occupies the project site. Disturbance to the northern, central portion of the project site has the potential to introduce non-native or invasive species to the more interior portions of the project parcel—areas currently occupied by a native plant assemblage. This potential can be minimized with the use of native plant species in the proposed planting plan. Although several plants identified or expected to occur on-site are New York State-listed plants, mitigation for site impacts may be provided, such as relocation of plants determined of higher value. Although listed as “exploitably vulnerable” by New York State, none of the plant species identified on-site or expected to occur on-site during the growing season is listed as “threatened” or “endangered.”

Wildlife use of the project parcel is not expected to change significantly with the proposed project. All mammal, reptile, and amphibian species that have the potential to utilize the project parcel are expected to continue to utilize the parcel habitat in the future with the proposed project. However, the available habitat will be reduced by 3.6 acres and therefore the sustainable population of animals at the project site would be somewhat reduced.

It is also noted that the potential for the project parcel to support forest interior breeding habitat may be reduced. At approximately 11 acres, the project parcel meets the minimum forest size requirements of a number of forest-interior breeding birds that have experienced population declines due to forest habitat fragmentation, including ovenbird, red-eyed vireo, wood thrush, and others. Potential use of the project parcel by these species is also enhanced by the presence of other forested parcels in the general area. A reduction in the parcel size by 3.6 acres could reduce on-site nesting, which could adversely affect forest interior species. Although regional loss of forested habitat is a conservation issue that may affect the future stability of forest-interior bird populations, the loss of 3.6 acres of forest at the project site is concluded to not be a significant impact requiring mitigation under SEQRA.

A habitat impact avoidance measure incorporated into the proposed site plan is the placement of stormwater management facilities entirely within drywells located below the parking areas. This design serves to limit site disturbance and maximize forest area preservation by avoiding the creation of a detention basin or other facilities outside the parking lot footprint (see also Section G, "Water Resources").

The applicant can commit to moving listed plant species and individual eastern box turtles (*Terrapene carolina*), which may be present prior to and during construction with assistance from qualified ecologists and would work with the appropriate division of SUNY Stony Brook to identify appropriate locations on campus for replanting and/or relocation. Such measures would be implemented to avoid significant adverse impacts to on-site ecological resources.

D. VISUAL RESOURCES

INTRODUCTION

This section examines the proposed hotel and evaluates the potential for any impacts on local visual resources. Typically, this analysis identifies important local scenic or visual resources and locally significant open spaces, and historic resources within ½ mile of the project parcel. To determine visual effects, this section evaluates visual conditions with respect to the resources and describes how views in the area and the local visual setting may be affected by this proposed project. Discussion is also provided of views from other locations and viewsheds that are not considered State or locally significant resources.

From certain key vantage points, photosimulations were developed to demonstrate how the proposed hotel building would look in the local visual setting. Locations of viewpoints for photosimulations were selected to demonstrate potential visibility of the proposed hotel from representative viewpoints. The identification of visual resources and the analysis of visual

impacts are based upon application of NYSDEC Visual Impact Assessment Methodology, “Assessing and Mitigating Visual Impacts” (DEP-00-2)¹.

METHODOLOGY

As described above, the area surrounding the project parcel is a mix of Stony Brook University campus and residential and open space uses. There are several buildings of similar massing that already exist near the proposed hotel. As such, it was determined that a ½-mile study area for visual resources was appropriate for this visual resources analysis. To determine the visual effects of the proposed hotel on the ½-mile study area from sensitive receptors, and from typical viewsheds, photographs were taken to demonstrate existing views from the surrounding area. Some photographs are intended to demonstrate that certain locations will not have views of the proposed project due to screening from existing buildings, vegetation, and topography. In other instances, photosimulations were prepared to model visual conditions with the proposed hotel from various representative locations. Other photographs were taken to demonstrate the overall character of the study area and to provide better context for the proposed project. These photos include views of existing buildings in the study area and demonstrate the visual character and existing building massing in the vicinity of the project site for the purposes of evaluating any potential changes to visual character resulting from the proposed project.

Photograph and photosimulation locations were selected to depict representative views of the proposed hotel and typical views from sensitive receptors and the surrounding area. The representative views selected do not provide an exhaustive collection of potential views from every location where the proposed hotel would be visible. Rather, these views are intended to demonstrate future project conditions from typical viewsheds from nearby locations. It is also noted that photographs were taken in December 2009, when deciduous trees do not have leaves. As such, these photographs provide the most conservative views of the project site since trees with leaves would provide additional screening during non-winter months.

NYSDEC GUIDANCE

NYSDEC developed DEP-00-2 for NYSDEC review of actions, the methodology and impact assessment criteria established by the policy are comprehensive and can be used by other State and local agencies to assess potential impacts. According to DEP-00-2, a “visual impact” occurs when “the mitigating² effects of perspective do not reduce the visibility of an object to insignificant levels. Beauty plays no role in this concept.³ DEP-00-2 also provides guidance with respect to the definition of an “aesthetic impact”:

Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility, even startling visibility of a project proposal, should not be a

¹ New York State Department of Environmental Conservation, *Assessing and Mitigating Visual Impacts* (DEP-00-2), July 31, 2000. Last accessed on January 27, 2010 at http://www.dec.ny.gov/docs/permits_ej_operations_pdf/visual2000.pdf

² DEP-00-2 uses the term “mitigating” or “mitigation” to refer to design parameters that avoid or reduce potential visibility of a project. This should not be confused with the use of the term “mitigation” with respect to mitigation of significant adverse environmental impacts as required by the State Environmental Quality Review Act (SEQRA).

³ DEP-00-2, op. cit., p. 10.

threshold for decision making. Instead a project, by virtue of its visibility, must clearly interfere with or reduce the public's enjoyment and/or appreciation of the appearance of an inventoried resource.¹

The "mitigating effects of perspective" are important to understand in the assessment of visual impact. While an object such as a building may be visible over a long distance, "atmospheric perspective," which DEP-00-2 describes as the "reduction in intensity of colors and the contrast between light and dark as the distance of the objects from the observer increases" and which is a product of the natural particles within the atmosphere that scatter light, serves to minimize the significance of the object in the overall viewshed. A second factor that reduces the potential for impact is the overall character of the surrounding landscape, including existing vegetation, buildings, and topography. The effects of distance and contextual topography typically reduce the visibility of buildings to insignificant levels. In the case of the proposed project, any distant views of the proposed hotel would also include views of existing buildings, thereby reducing the prominence of any individual new building.

Thus, while the proposed hotel may be visible within a viewshed, mere visibility is not a threshold of significance. The significance of the visibility is dependent on several factors: presence of any designated historic or scenic resources within the viewshed of the project, distance, general characteristics of the surrounding landscape, and the extent to which the visibility of the project interferes with the public's enjoyment or appreciation of the resource. A significant adverse visual impact would only occur when the effects of design, distance, and intervening topography and vegetation do not minimize the visibility of an object and the visibility significantly detracts from the public's enjoyment of a resource.

DEP-00-2 states that an action can be determined to be one that avoids or minimizes adverse impacts to the maximum extent practicable by answering in the affirmative to each of the following questions²:

- 1) Was the full mitigation menu considered?³
- 2) Will those mitigation strategies be effective?
- 3) Were the costs of mitigation for impacts to other media considered and were those mitigation investments prioritized accordingly?
- 4) Are the estimated costs of all mitigation insignificant?
- 5) Were the mitigation strategies employed consistent with previous similar applications?
- 6) Was the mitigation cost effective?

¹ Ibid., p. 9.

² DEP-00-2, op. cit., p. 8.

³ DEP-00-2 defines the "mitigation menu" as three general groups: professional design and siting, maintenance, and offsets. "Professional design and siting" includes a full suite of standard design considerations such as screening, relocation, camouflage/disguise, alternative technologies, materials, and lighting. "Maintenance" refers to any actions that an applicant can take to improve the appearance of an existing facility. "Offsets" include measures to compensate for a visual impact through on- or off-site actions to improve the overall visual quality within an affected viewshed. Offsets "should be employed in sensitive locations where significant impacts from the proposal are unavoidable, or mitigation of other types would be uneconomic and mitigation to be used is only partially effective."

7) Were offsets and decommissioning (removal of older structures or equipment) considered?

EXISTING CONDITIONS

VIEWS

Photograph and Photosimulation locations are shown on **Figure 1-6** and labeled by a number or letter, respectively. The actual photographs and photosimulations are shown on subsequent figures. **Figures 1-7a to 1-7e (Photographs 1 to 10)** demonstrate the existing views from locations surrounding the study area. **Figures 1-8a and 1-8c (Photosimulations A-C)** provide existing views and photosimulations from Nicolls Road where visibility of the proposed hotel would be possible. These photosimulations provide representative typical views from locations along Nicolls Road where the proposed hotel would be closest to the observer. Visibility of the proposed hotel would likely decrease from more distant views.

The study area for visual resources is the area within ½ mile from the project parcel. Based on observations, the ½-mile study area was determined appropriate as this distance represents the maximum distance from which the hotel would likely be discernable from other buildings.

Typical views of the project site from Nicolls Road are provided in photographs 5 and 6. Existing relatively tall buildings (up to 19 stories, 17 stories above grade) are currently visible from Nicolls Road within the study area, including the University Hospital (19 stories with 14 stories above grade), Basic Sciences Tower (10 stories with 8 stories above grade), Clinical Sciences Tower (19 stories with 17 stories above grade), and Life Sciences Center (6 stories) (see **Photographs 5 to 10**). The Charles B. Wang Center and the Center for the Arts are also visible from Nicolls Road in the vicinity of Entrance Drive—the proposed hotel would be located near the southwestern corner of Nicolls Road and Entrance Drive.

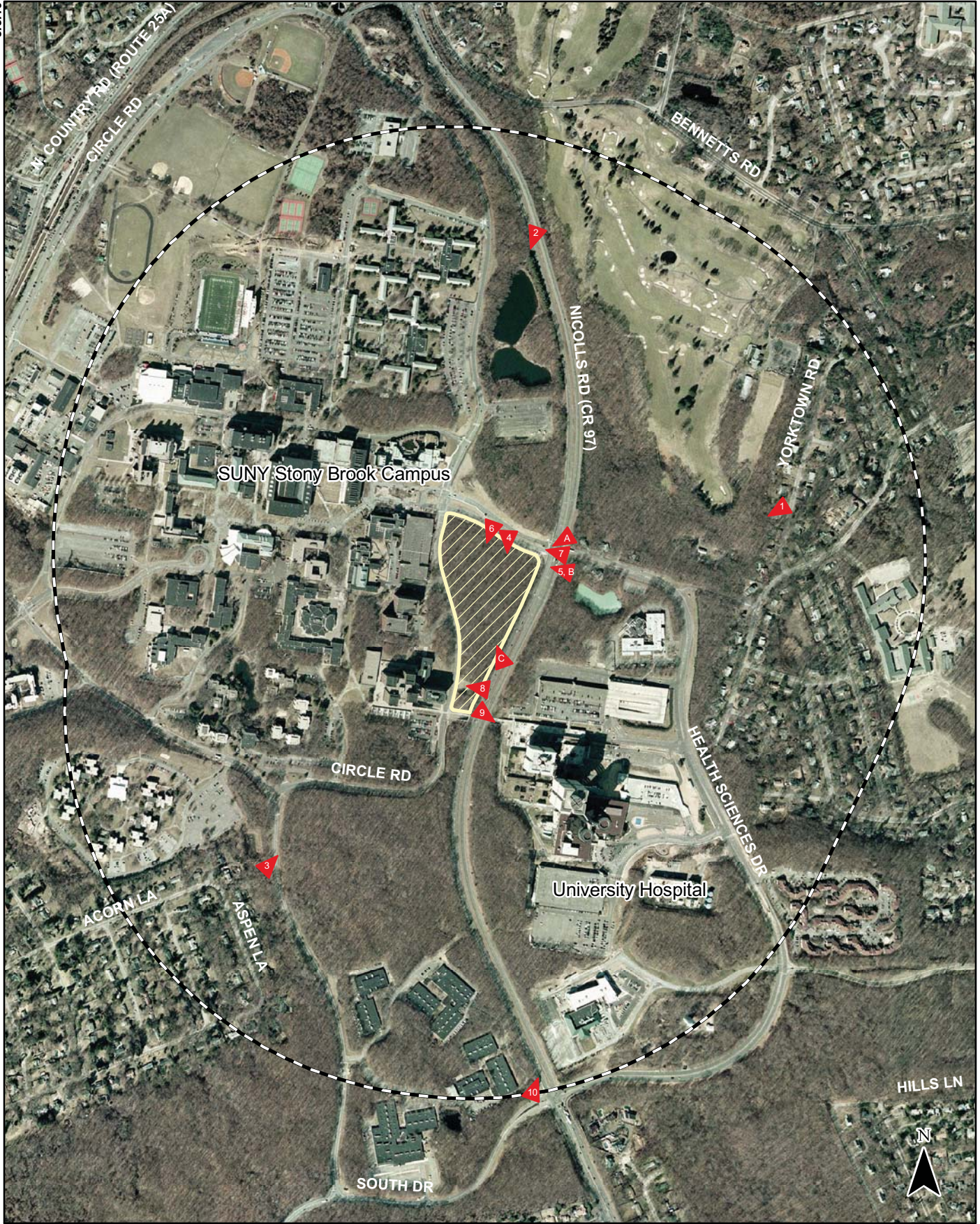
Photographs were also taken from nearby neighborhoods in the study area to document existing views and document the potential to view the project site from those locations. Looking southwest toward the project site from a residence on Yorktown Road, the project site is not visible due to the dense brush of trees and sloping topography toward the project site. Similarly, the view looking northeast toward the Ashley Schiff Park Preserve and the project site from the backyard of a residence on Aspen Lane does not include views of the project site due to the distance between the project site and this residential area (see **Photographs 1 and 2**). During non-winter months, views of the project site would be further screened by leaves.



INVENTORY OF RESOURCES

An inventory of sensitive aesthetic and visual resources was taken based on the guidance of DEP-00-2,¹ including locations or resources identified by local jurisdictions as having scenic or aesthetic quality within the ½-mile study area. Other notable visual resources outside of the ½-mile study area were also noted. In summary, there is one designated visual resource listed in the study area—the Long Island North Shore Heritage Area, as defined by Article 35, Parks, Recreation and Historic Preservation Law. Another resource, Nicolls Road, is not designated but within the study area is a noted scenic resource of importance to the local community.

¹ DEP-00-2, op. cit.

3.5.10



-  Project Parcel
-  1/2-Mile Study Area

0 250 500 1,000 Feet

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**Key to Photographs and Photosimulations
Figure 1-6**



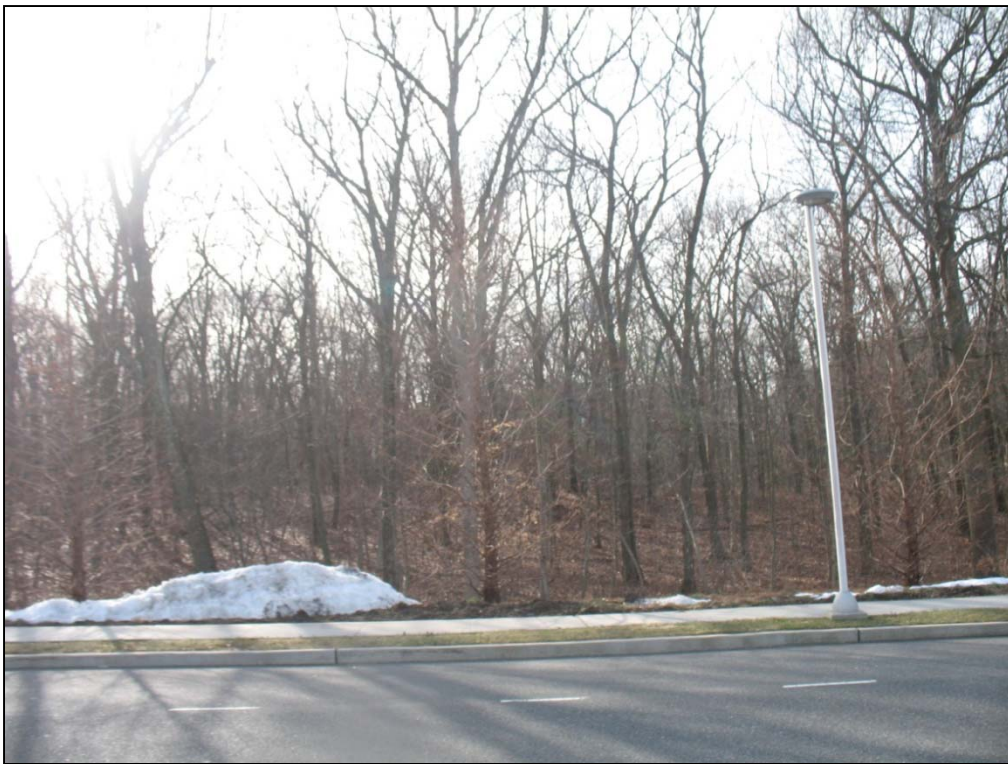
Photograph 1: View looking southwest toward Project Site from Yorktown Road. The Project Site is screened from this location by dense vegetation and a distance of approximately ¼ mile. The proposed hotel would not be visible from this residential area.



Photograph 2: View looking southwest toward Project Site from Nicolls Road just north of wetlands. The proposed hotel would not change the existing views of this water resource from Nicolls Road.



Photograph 3: View looking northeast toward Ashley Schiff Park Preserve and Project Site from Aspen Lane. Because the Life Sciences Building and Basic Sciences Tower are not visible, the proposed hotel is not expected to be visible from this location.



Photograph 4: View looking south toward Project Site from Entrance Drive.



Photograph 5: View looking west toward Project Site from southeast corner of Nicolls Road and Entrance Drive.



Photograph 6: View looking southwest toward Project Site and Life Sciences Center from Entrance Drive.



Photograph 7: View looking west toward Main Entrance/Entrance Drive from southeast corner of Nicolls Road and Daniel Webster Drive; the Charles B. Wang Center and the Center for the Arts are visible.



Photograph 8: View looking west toward 6-story Life Sciences Building from Nicolls Road adjacent to Project Parcel.



Photograph 9: View looking east toward 10-story Basic Sciences Tower from Nicolls Road adjacent to Project Site.



Photograph 10: View looking northeast toward the 19-story Hospital buildings and 19-story Clinical Sciences Tower from northwest corner of Nicolls Road and South Drive.



Existing



Proposed

Photosimulation A
View looking southwest toward project site from
southeast corner of Nicolls Road and Entrance Drive



Existing



Proposed



Existing



Proposed

State/National Register of Historic Places

There are no historic resources listed on the State and/or National Register of Historic Places (S/NR) (16 USC §470a et seq., Parks, Recreation and Historic Preservation Law §14.07) within the ½-mile study area.¹

New York State Parks

There are no State parks in the study area² (the State parkland at Stony Brook Harbor is too far to the north).

Heritage Areas

The study area is within the Long Island North Shore Heritage Area, as defined by Article 35, Parks, Recreation and Historic Preservation Law, which is generally the area of Long Island north of the Long Island Expressway (I-495).³ The Heritage Area System was formerly known as the Urban Cultural Park System.

New York State Forest Preserve

All lands within the State Forest Preserve (New York State Constitution Article XIV) are located within the boundaries of the Adirondack and Catskill Parks. Thus, there are no State Forest Preserve lands within the study area.⁴

National Wildlife Refuges

There are no National Wildlife Refuges (NWR), as defined by the National Wildlife Refuge System Administration Act 16 U.S.C. 668dd-668ee and amended by P.L. 105-57, located in the study area.⁵

State Game Refuges and State Wildlife Management Areas

State Game Refuges and State Wildlife Management Areas (WMA) are defined by Environmental Conservation Law (ECL) 11-2105. There are no State Game Refuges or WMAs within the ½-mile study area.⁶

National Natural Landmarks

No National Natural Landmarks (defined by 36 CFR Part 62) are located within the study area.¹

¹ New York State Office of Parks, Recreation, and Historic Preservation, SPINX. Last accessed on December 17, 2009 at <http://www.oprhp.state.ny.us/SPHINX/>

² New York State Office of Parks, Recreation, and Historic Preservation. *Welcome to the Long Island Region*. Last accessed on December 17, 2009 at <http://nysparks.state.ny.us/regions/long-island/default.aspx>

³ New York State Office of Parks, Recreation, and Historic Preservation. *Heritage Areas*. Last accessed on December 17, 2009 at <http://www.nysparks.state.ny.us/historic-preservation/heritage-areas.aspx>

⁴ New York State Department of Environmental Conservation. *New York's Forest Preserve*. Last accessed on December 17, 2009 at <http://www.dec.ny.gov/lands/4960.html>

⁵ U.S. Department of Interior, Fish and Wildlife Service. *NWRS – Refuge Locator Map*. Last accessed on December 17, 2009 at <http://www.fws.gov/refuges/refugeLocatorMaps/NewYork.html>

⁶ New York State Department of Environmental Conservation. *List of New York State Wildlife Management Areas*. Last accessed on December 17, 2009 at <http://www.dec.ny.gov/outdoor/8297.html>

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National Park System Recreation Areas, Seashores, Forests

No National Parks (as defined by 16 USC 1c) are located within the study area.²

Rivers Designated as National or State Wild, Scenic, or Recreational

There are no National Wild, Scenic, or Recreational (16 USC Chapter 28) rivers within the study area.³ Rivers designated by New York State as Wild, Scenic, or Recreational are listed in §§15-2713 through 15-2715 of Environmental Conservation Law. There are no State-designated Wild, Scenic, or Recreational rivers within the study area.⁴

Sites, Areas, Lakes, Reservoirs, or Highways Designated or Eligible for Designation as Scenic

Resources identified in Article 49 of the ECL include Scenic Byways (under the purview of New York State Department of Transportation [NYSDOT]), parkways (designated by the Office of Parks, Recreation, and Historic Preservation [OPRHP]), and other areas designated by NYSDEC. There are no Scenic Byways or parkways located within the study area.⁵

Scenic Areas of Statewide Significance

In July 1993, the New York State Department of State (NYSDOS) designated six Scenic Areas of Statewide Significance in the Hudson River Valley as part of its implementation of the State's Coastal Management Program. NYSDOS has not identified any other Scenic Areas of Statewide Significance⁶ in the study area.

State or Federally Designated Trails

There are no federally designated trails (as defined by 16 USC Chapter 27) located within the study area.⁷

State Nature and Historic Preservation Areas

There are no State Nature or Historic Preservation Areas (as designated by Section 4 of Article XIV of the New York State Constitution) located within the study area.⁸

¹ U.S. Department of Interior, National Park Service. *New York*. Last accessed on December 17, 2009 at http://www.nature.nps.gov/npl/Registry/USA_Map/States/NewYork/new_york.cfm

² U.S. Department of Interior, National Park Service. *New York*. Last accessed on December 17, 2009 at <http://www.nps.gov/state/NY/index.htm>

³ National Wild and Scenic Rivers. *Designated Wild and Scenic Rivers*. Last accessed on December 17, 2009 at http://www.rivers.gov/wildriverslist.html#ny_pa

⁴ U.S. Department of Interior, National Park Service. *Conservation and Outdoor Recreation*. Last accessed on December 17, 2009 at <http://www.ncrc.nps.gov/rtca/nri/states/ny.html>

⁵ New York State Department of Transportation. *New York State Scenic Byways*. Last accessed on December 17, 2009 at <https://www.nysdot.gov/display/programs/scenic-byways>

⁶ New York State Department of State, Division of Coastal Resources and Waterfront Revitalization, "Scenic Areas of Statewide Significance," July 1993.

⁷ U.S. Department of Interior, National Park Service, National Park System. Last accessed on December 17, 2009 at <http://www.nps.gov/carto/PDF/TRAILSmap1.pdf>

⁸ New York State Department of Environmental Conservation. *Long Island – Region 1*. Last accessed on December 17, 2009 at <http://www.dec.ny.gov/outdoor/7809.html>

Palisades Park

Palisades Park is not located within the study area.

Visually Significant Resource Areas

No Visually Significant Resource Areas (VSR), as designated under Long Island Power Authority (LIPA)'s electric tariffs, are located within the study area.¹

Locally Significant Resources

Historic Resources

There are no locally significant historic resources in the study area. The Stony Brook Historic District, a locally designated historic district, is located outside of the study area to the west (approximately 1.1 miles to the west).²

Public Parks

There were no public parks identified in the study area. St. George's Golf and Country Club is located in the northeaster portion of the study area and is a private club.

Other Locally Significant Resources

Nicolls Road has been noted as an important scenic resource to the local community. The potential for visual impacts along the Nicolls Road corridor has been raised by the local community. Therefore, this visual corridor is addressed as part of this analysis.^{3,4}

PUBLIC POLICIES AND PLANS

1996 Town of Brookhaven Comprehensive Plan

One of the objectives of the plan is to provide positive, traditional visual and cultural resources such as tree-lined streets and downtown business areas, which people in general find attractive and grant its residents a feeling of identity, belonging, satisfaction, community pride, and comfort. According to the plan, there is a need to preserve and enhance visual quality, especially along roads, as a key component of the sense of place and quality of life. Preserving and enhancing the aesthetic views along major Town roads is extremely important, particularly the preservation of existing street trees and planting of new street trees. The preservation of rural, scenic byways is also deemed important.

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

The proposed hotel has been designed and sited to maximize its visual presence and connection to the Stony Brook campus and to minimize the visual presence to the external campus, thereby minimizing the visual impact on the surrounding community. For example, much of the project parcel (about 67 percent) would remain wooded with the proposed project, including a woodland

¹ Long Island Power Authority. *Tariff for Electric Service*. Last accessed on December 17, 2009 at <http://www.lipower.org/pdfs/lipatariff.pdf>

² *Town of Brookhaven Long Island Final Comprehensive Land Use Plan*. 1996.

³ Epstein, Reid J. "Stony Brook initiates long-planned campus hotel." *Newsday.com*. October 19, 2009. last accessed on October 20, 2009

⁴ Winslow, Olivia. "Stony Brook hotel meets resistance." *Newsday*. November 4, 2009.

natural vegetated buffer of 160 feet or more along Nicolls Road. This buffer would screen the hotel from views along this thoroughfare. In addition, a minimum 80-foot buffer would be maintained between the hotel and Entrance Drive. The only exception is the proposed utility corridor, about 30 feet wide, which would provide access to the utilities serving the site from Nicolls Road. The proposed utility corridor would be cleared and replanted with grass and closest to Nicolls Road, shrubs that would provide vegetative screening would be planted on a raised berm. The sanitary sewer access along the utility corridor was deemed necessary from Nicolls Road due to the existing grades and the fact that sewage must flow downgrade. The connections for water, gas, and electric services would have to come from Nicolls Road as that is where the existing mains and transmission lines are located. Regulatory agencies would not allow replanting of the utility corridor with trees. However, to minimize visibility of the hotel from Nicolls Road and provide additional screening, a vegetative berm and new shrubs are proposed at the end of the proposed utility corridor near Nicolls Road. Overall, the amount of wooded land that would be disturbed with the proposed project—approximately 3.6 acres—would be relatively small compared with the total acreage of the 11-acre project parcel. Of the approximately 3.6-acre project site, approximately 1.3 acres would be landscaped or replanted (including the utility corridor totaling approximately 0.2 acres). The remaining 7.4 acres of the 11-acre wooded project parcel would remain woodland in its natural state.

In addition to the setback from Nicolls Road and the preserved areas, the proposed hotel would be constructed to respect the existing topography so that portions of the building would appear to be below grade where the project site elevations are the highest (i.e., along the eastern and southeastern borders of the project site). This design approach would further minimize the visual presence of the proposed hotel, particularly in views along Nicolls Road. Overall, the 11-acre project parcel will feature landscape design in keeping with the existing campus aesthetic. The hotel will have a brick exterior façade similar to that of the Humanities Building. **Figure 1-9** shows an architectural rendering of the front of the proposed hotel building (view from within campus).

Views of the proposed project would vary throughout the study area depending on elevation, vegetation, and other built structures. For example, site elevations are the highest along the eastern and southeastern borders of the project site at approximately 134 feet above mean sea level (MSL) compared with approximately 110 feet above MSL in the northwesterly portion of the site. Views of the proposed hotel would also vary as a function of the presence or absence of vegetation and buildings.

With the proposed project, views along the Nicolls Road corridor would not be significantly altered. As stated above, the proposed hotel would be set back from Nicolls Road and would be constructed to respect the existing topography, both of which are design strategies to minimize the visual presence of the hotel along the Nicolls Road corridor. With these measures, as well as the brick façade of the building and a general design approach that fits with the overall campus, it is expected that views along Nicolls Road would not change significantly from the current views as this county road passes through the existing SUNY Stony Brook complex. For example, there are a number of existing University buildings that are up to 19 stories tall (17 stories above grade) while the proposed hotel will only be 5 stories. **Photographs 5 to 10** provide photos from Nicolls Road in the vicinity of the project site demonstrating heights of existing buildings. While there would be locations along Nicolls Road where the proposed hotel would be visible, the screening with existing woodland vegetation and the context of surrounding buildings that are of equal and greater height would limit the changes the proposed project would have on the prevailing visual character and aesthetic of the study area. **Figures 1-**



Stony Brook University Hotel Project

Architectural Rendering
Figure 1-9

8a and 1-8c provide photosimulations from three representative views along Nicolls Road where visibility of the proposed hotel would be possible. As seen in these figures, visibility of the proposed hotel would be possible from certain locations where the vegetation is less dense. However, these views are only likely to occur during winter months. During spring, summer, and fall, when trees have leaves, views of the proposed hotel would be minimal or unlikely from Nicolls Road due to screening from the leaves. One exception is that views may also be possible from the end of proposed utility corridor. However, since there would be a landscaped berm to provide screening from this location, any visibility is expected to be brief and would only be possible with deliberate observation of the landscape due the bearing of the roadway compared to the bearing of prevalent views. The utility easement and any potential views of proposed hotel would not result in significant changes to the tree lined character of Nicolls Road.

Based on the existing view looking southwest toward the project site from Yorktown Road, it was determined that the proposed hotel would not likely be visible from this residential area. Similarly, since the view looking northeast toward the Ashley Schiff Park Preserve and the project site from the backyard of a residence on Aspen Lane does not include views of the Life Sciences Building or Basic Sciences Tower, it is unlikely that the proposed hotel would be visible from this location. These views are typical views of the project site from the study area's residential neighborhoods around Yorktown Road and Aspen Lane (see **Photographs 1 and 2**).

CONCLUSION

Based on the above analysis, it is concluded that visibility of the proposed hotel would not have a significant adverse visual impact on the current visual setting, nor would it impact any sensitive visual receptor in the study area. The proposed 160-foot buffer and consideration of the local topography and use of façades similar to the existing buildings on campus would be in keeping with the existing visual character of the area and would limit the visual presence of the proposed hotel and limit changes to the prevailing visual character and aesthetic of the study area. The new hotel, where visible, would not be substantially different from the existing buildings fronting Nicolls Road, nor would it be in sharp contrast with existing land uses. Thus, the proposed hotel would not be a significant intrusion into the existing visual setting or landscape or interfere with or reduce the public's enjoyment and/or appreciation of the appearance of the local visual setting. Thus, there would be no significant adverse visual impacts with the proposed project.

E. ARCHAEOLOGY

A Stage 1 Archaeological Survey was undertaken for the proposed hotel to determine if there is the potential for any archaeological impacts from the proposed project.¹ The purpose of this study was to determine if construction of the proposed hotel complex would impact archaeological remains of prehistoric and/or historic age. The Stage 1A involved archival research and an archaeological survey with subsurface testing. The survey was conducted by the Institute for Long Island Archaeology (ILIA) at the State University of New York at Stony Brook in July 2005. All field data and photographs generated by this survey are curated at ILIA. The full report is provided as **Appendix D**.

¹ Bernstein, David J. and Allison J. Manfra. *A Stage 1 Archaeological Survey for the Proposed Stony Brook University Hotel, Town of Brookhaven, Suffolk County, New York*, Institute for Long Island Archaeology, State University of New York at Stony Brook. 2005.

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The study was performed in accordance with the guidelines outlined in the Standards for Cultural Resource Investigations and the Curation of Archaeological Collections issued by the New York Archaeological Council (1995) and the Phase I Archaeological Report Format Requirements issued by OPRHP (2005).

METHODOLOGY

Existing conditions were determined through two phases: background research to estimate the potential for precontact and historical archaeological resources to exist at the project parcel and a Stage 1 survey, including documentary research and field investigations. The documentary and cartographic research included resources from New York State Museum (NYSM), OPRHP, Suffolk County Archaeological Association (SCAA), and ILIA.

A two phase survey design was used to search for archaeological remains at the proposed project parcel. The initial phase of the survey involved a surface reconnaissance and inspection intended to locate large and easily visible remains. The second phase entailed subsurface testing. Both phases are summarized below.

SURFACE SURVEY

A walkover of the project parcel was performed in July 2005, with special attention given to examining exposed soil or other surface manifestations of past cultural activity. Vegetation patterns and topographic features which might provide insight into early land use were also noted.

Ground surface visibility was fair to poor in most portions of the project area due to leaf litter and low vegetation. No cultural material other than recent debris (i.e., less than ten years old) was encountered during the surface survey.

SUBSURFACE TESTING INVESTIGATION

The second phase of the archaeological investigation involved performing shovel test pits that were designed to detect the presence or absence of cultural remains beneath the ground surface. A mapping datum was established at a sewer cover near the eastern edge of the parcel, and all of the test units were designated using metric grid coordinates relative to this point. The project parcel was tested at 49 foot intervals. Subsurface testing was performed throughout the entire project parcel.

A total of 151 shovel test pits were excavated. Shovel test pits had a diameter of approximately 16 inches. All of the shovel test pits were dug well into the subsoil, typically to 24 inches below the present ground surface. The soil from each test unit was then screened through ¼ inch wire mesh to aid in the identification and recovery of cultural materials.

EXISTING CONDITIONS

LITERATURE REVIEW

The files of the NYSM, OPRHP, SCAA, and ILIA contain information regarding five known prehistoric archaeological sites, two sites with both prehistoric and historic period components, and one historic period archaeological site within 1 mile of the project parcel (see **Table 1-3**). There are no S/NR-listed or previously determined eligible properties within or adjacent to the project parcel.

PREHISTORIC CONTEXT

The results of more than 20 years of archaeological studies suggest that many sites located away from the coast are potentially “short duration camps or procurement stations.”¹ These are sites where a limited range of Native American activities were performed (such as hunting, nut collecting, or lithic raw material procurement), but their archaeological assemblages frequently contain a low diversity of artifactual remains. The location of both interior and coastal prehistoric sites appears to be strongly influenced by the proximity of freshwater sources.²

Typical of the documented prehistoric sites are two low-density loci identified at the Long Island State Veteran’s Home site (A10302.01573 and A10302.01574), approximately 0.75 miles southeast of the project parcel. One locus yielded seven quartz flakes (chipping debris from the manufacture or sharpening of stone tools), while the other contained a quartz core (the cobble from which flakes are removed to form a tool), a possibly modified cobble, one flake, and one fire-cracked rock. The prehistoric cultural material was found along the edge of kettle hole depressions which may have held water in the past.³ Other nearby documented find spots are on the west campus of the University. “Quartz points, clam shell, some historic material” were found on the surface south of Kelly quad (NYSM 5560, A10302.0487). A single projectile point was reportedly found on the ground surface during construction of the University’s Tabler Quad, approximately 2,297 feet southwest of the project area. In addition, a pointed quartz biface was encountered on the surface near the Graduate Chemistry building, roughly 1,181 feet to the west (see **Table 1-3**).

HISTORIC CONTEXT

Trends in development and land use patterns in the Town of Brookhaven and in the area around the project parcel can be discerned through a study of late eighteenth through early twentieth century maps (see **Appendix D**). The 1797 Hulse Map of the Town of Brookhaven shows some development along major roads leading from the north shore to the interior of Brookhaven township. The project parcel is shown within the “West Division of Long Lots” on the north side of “Country Road” (modern New York State Route 25), but no structures are shown in the expanse between Stony Brook Road and Pond Path (now largely occupied by the University campus).

¹ Lightfoot, Kent. *Archaeological Investigations of Prehistoric Sites on Eastern Long Island*. Evoking a Sense of Place, edited by Joann P. Krieg, pp. 31-44. Heart of the Lakes Publishing, Interlaken, New York. 1988.

² Bernstein, David J., Lynne-Harvey Cantone, Michael J. Lenardi, Daria Merwin. “Prehistoric Use of Wetland Environments: A Case Study from the Interior of Long Island, New York.” *Northeast Anthropology* 51:113-130. 1996.

³ Grzybowski, Susan D., Frank Turano, Kent Lightfoot, and Joseph Muenning. *A Cultural Resource Assessment of the Long Island State Veterans Home Property, South Setauket, New York*, Department of Anthropology, State University of New York at Stony Brook. 1987.

Table 1-3

Known Archaeological Sites Within 1 Mile of the Project Area

Site identifier	Site name	Age/Cultural Affiliation	Comments
NYSM 5560, A10302.000487, SCAA 504	State University at Stony Brook	prehistoric and historic	Surface collection near Kelly quad of "white quartz points, clam shell, some historic material."
SCAA	Tabler Quad, SUNY Stony Brook	prehistoric	Stray surface find of a quartz Wading River projectile point.
	Grad Chemistry, SUNY Stony Brook	prehistoric	Stray surface find of a quartz bifacial tool.
NYSM 5580, A10302.000049	Lewis Pond	prehistoric	Projectile points found near pond on Lewis property in South Setauket.
NYSM 7178	Messiah Lutheran Church	prehistoric and historic	Four quartz flakes and five 19th century ceramics and nails recovered from plow zone. ¹
A10302.001573	Veteran's Home Locus 1	prehistoric	Lithic concentration of 7 quartz flakes. ²
A10302.001574	Veteran's Home Locus 2	prehistoric	Lithic concentration of 1 flake, 1 possibly modified cobble, 1 core, and 1 fire-cracked rock. ³
A10302.001575	Veteran's Home Locus 3	historic	Linear cobble feature, possibly remnants of a stone wall or boundary marker. ⁴
Sources: Suffolk County Archaeology (SCAA), the New York State Office of Parks, Recreation and Historic Preservation (OPRHP), NYSM site files, and ILIA.			

The 1837 USGS is among the earliest maps to provide an accurate record of topographic and man-made features on the Long Island landscape. Here, the project parcel is depicted as deciduous woods. A dirt trail to the east approximates the course of modern Nicolls Road, while the closest structures are farmhouses along Pond Path farther to the east.

The extent of undeveloped woodland around the project area was greatly reduced by the mid-nineteenth century, as suggested by the 1858 Chace Map of Suffolk County. Clearing was the result of more intensive field agriculture and cord-wood harvesting (with the open lots subsequently used for pasturage) as the population of Brookhaven increased. The project parcel is identified as cleared land north of the remaining woodland on the 1858 map.

By the time of the 1873 Beers Atlas of Long Island, the railroad had reached Stony Brook. Sail and steamboat packets had made regular trips between Setauket Harbor and New York City since the early nineteenth century, but it was the railroad that facilitated the development of summer resorts along the coast of Long Island. Although Stony Brook was not radically altered by tourism at the turn of this century, larger estates and smaller summer homes appeared on the landscape. Local farming continued through this period, though on a reduced scale. There are no structures within or adjacent to the project parcel on the 1873 map.

As indicated on contemporary maps (e.g., USGS 1904; Hyde 1917; Dolph and Stewart 1930), residential growth in Stony Brook continued into the twentieth century. While the 1904 USGS topographic map of Setauket, New York does not indicate land ownership, it does provide

¹ Bonasera, Michael and Linda E. Barber. *Stage I-B Archaeological Survey of the Messiah Lutheran Church Property, Setauket, New York*. Institute for Long Island Archaeology, State University of New York at Stony Brook. 1999.

² Grzybowski et al., op. cit.

³ Ibid.

⁴ Ibid.

information about natural features and general use of the land. By this time, more roads were constructed west of Pond Path. However, the project parcel remains devoid of structures.

The first buildings at SUNY Stony Brook were built on a 478-acre tract donated by local philanthropist Ward Melville in 1962.^{1,2} The campus subsequently grew to its current size of approximately 123 buildings on 1,039 acres. The project parcel has served as a wooded buffer between Nicolls Road and the campus.

Disturbances resulting from clearing, grading, and other earth-moving activities associated with road construction are present along the northern (along the Main Entrance to Stony Brook University), eastern (along Nicolls Road), and western (along Circle Road) edges of the parcel.

A survey of historic maps indicates that initial Euro-American settlement of the Town of Brookhaven was linear along main roads and surrounding the harbors and creeks on the north shore. The more interior portions of the Town (including the project parcel) remained undeveloped woods until the twentieth century. Based on the results of the site file search and the historic map overview, it is concluded that the project parcel has a low sensitivity for the presence of historic period Euro-American sites.

Two sites with both prehistoric and historic components and one possibly historic feature are listed in **Table 1-3**. The possibly historic feature (A10302.01575) is the closest of these sites, located on the grounds of the Long Island State Veteran's Home (about 0.75 miles away). The feature is a linear concentration of cobbles which may represent the remains of a stone wall or boundary marker, and is of uncertain age.³

RESULTS OF FIELD INVESTIGATION

The specific data recorded in the field for each shovel test pit, including information on soil stratigraphy and cultural material, are presented in the full report provided as **Appendix D**.

The general characteristics of the soils on the project parcel are discussed in the "Environmental Setting" section of the Stage 1 report. As discussed in that report, the topsoil layer consists of partially decomposed organic matter and dark gray brown sandy loam, and extends to an average of 3.3 inches below the ground surface. The upper subsoil is a medium brown sandy loam and extends to an average depth of 9.5 inches below the ground surface. It is underlain by the lower subsoil (10 to 19 inches)—an orange brown loamy sand (occasionally with pebbles, gravel, and cobbles). Disturbed soils were encountered in one shovel test pit (N60/W165) near the western edge of the project parcel.

No prehistoric or historic period artifacts or features were encountered during subsurface testing.

¹ Klein, Howard. *Three Village Guidebook: the Setaukets, Poquott, Old Field, and Stony Brook, Second edition*. Three Village Historical Society, East Setauket, New York. 1986.

² Rosenthal, Joel. *From the Ground Up: A History of the State University of New York at Stony Brook*. 116 Press, Port Jefferson, New York. 2004.

³ Grzybowski et al., op. cit.

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

PREHISTORIC CONTEXT

The project parcel is located within a generalized zone of prehistoric activity.¹ However, because of the lack of surface freshwater resources in the immediate vicinity, it is unlikely that substantial settlements were established on the project parcel by Native Americans. In addition, no materials were observed or recovered during the site testing. Thus, it is concluded that the project parcel is not sensitive for prehistoric archaeological resources.

HISTORIC CONTEXT

Based on the information pertaining to initial settlement and the historic map overview, the potential for the presence of historic period archaeological sites at the project parcel is concluded to be low. While the area probably witnessed limited use during the late seventeenth through the mid-twentieth centuries, no structures are recorded within or adjacent to the project area on any map. It is possible that the project parcel experienced limited use for pasturage or harvesting timber, possibly starting in the nineteenth century. Both land use practices would result in little, if any, deposition of cultural remains.

Archival research and archaeological investigation for the proposed project indicate that the project parcel experienced minimal discernable historic human activity. A total of 151 shovel test pits were excavated at the project parcel. No prehistoric or historic period artifacts or features were encountered. Thus, no further archaeological investigations are recommended and it is concluded that the project parcel and site is not archaeologically sensitive for historic period resources.

Therefore, it is concluded that the proposed project would have no adverse impacts on any potential archaeological resources.

F. SOILS AND TOPOGRAPHY

EXISTING CONDITIONS

SOILS

According to the *Soil Survey of Suffolk County*, New York (United States Department of Agriculture [USDA] Soil Conservation Service, April 1975), the project parcel contains two distinct soil types—Riverhead and Haven loam (see **Table 1-4**). Approximately 90 percent of the project parcel consists of Haven loam (HaA and HaB) soils with slopes ranging from 0 to 6 percent with 2 to 6 percent slopes dominating the parcel. The remaining soil unit present is graded Riverhead and Haven (RhB) soils with 0 to 8 percent slopes, located in the northern portion of the project parcel along the western boundary.

¹ Gonzalez, Ellice and Edward Rutsch. *Suffolk County Cultural Resource Inventory*. Published by the Suffolk County Archaeological Association, Stony Brook, New York. 1979.

**Table 1-4
Summary of Soil Properties**

Mapping Unit	Soil Name and Gradient	On-Site Area (Acres)	Erosion Hazard	Permeability (Depth ¹ -Rate ²)	Depth ³ to Seasonal High Water Table	Limitations of Soils		
						Streets and Parking Lots	Homesites ⁴	Sewage Disposal Fields
HaA	Haven loam, 0 to 2 % slopes	1.0	Slight	0-19—0.63-2.0 19-28—>2.0 28-55—>6.3	>4	Slight	Slight	Slight ⁶
HaB	Haven loam, 2 to 6 % slopes	9.0	Slight to moderate	0-19—0.63-2.0 19-28—>2.0 28-55—>6.3	>4	Moderate: slopes, slight for town and county roads	Slight	Slight ⁶
RhB ⁵	Riverhead and Haven soils, graded, 0 to 8 % slopes	1.0	Slight to moderate	0-32—2.0-6.3 32-65—>6.3	>4	Slight	Slight	Slight ⁶
Notes: ¹ Inches ² Inches per hour ³ Feet ⁴ Three stories or less ⁵ These soils are mainly in built-up areas, and they are not well suited to uses other than present use. ⁶ Possible pollution hazard to lakes, springs, or shallow wells in these rapidly permeable soils. Source: <i>Soil Survey of Suffolk County, New York</i> , USDA Soil Conservation Service, April 1975.								

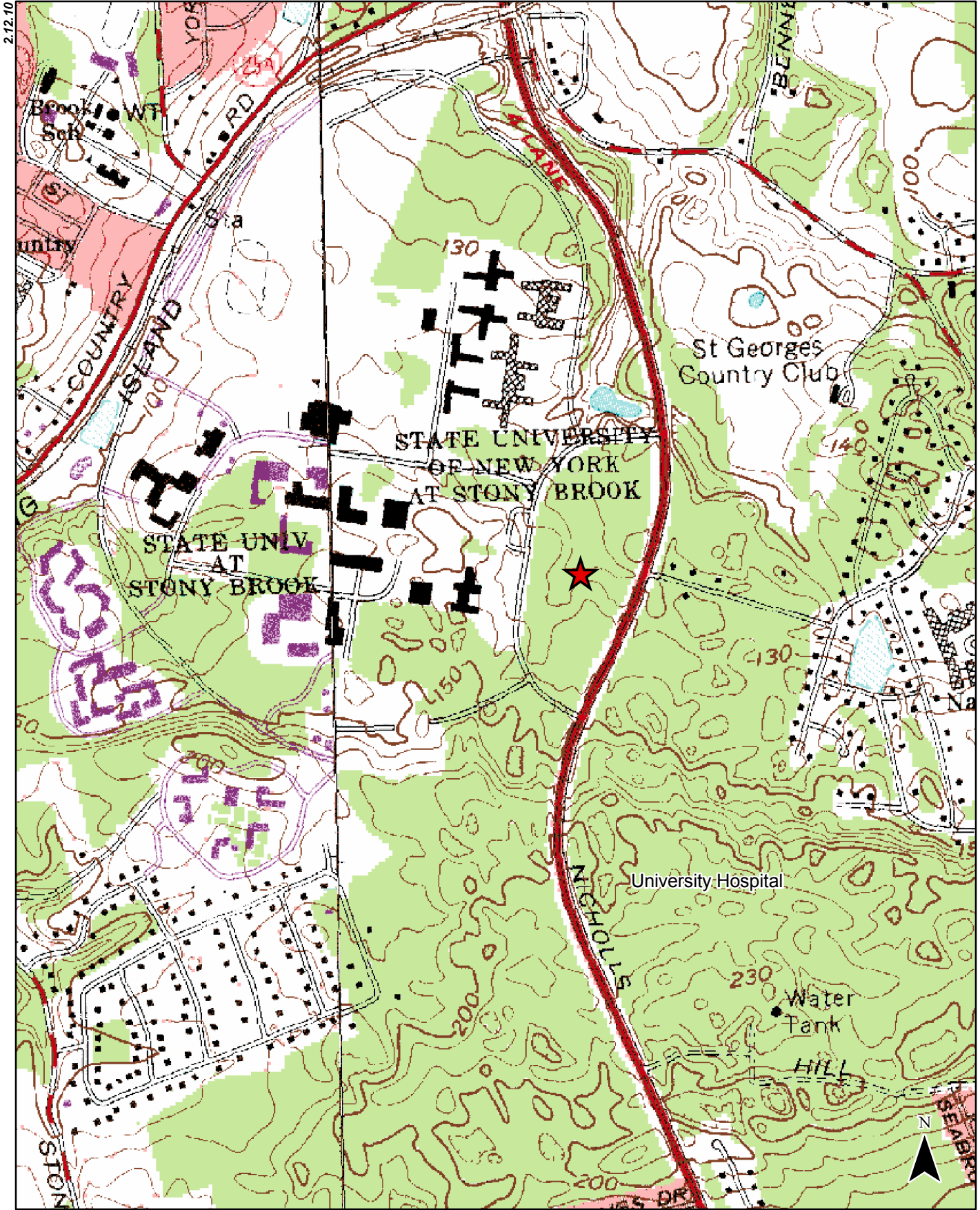
The general soil properties associated with each soil mapping unit described above, as presented in the *Soil Survey of Suffolk County*, are as follows:

- Haven Series—deep, well-drained, medium-textured soils that formed in a loamy or silty mantle over stratified coarse sand and gravel. Slopes range from 0 to 12 percent but generally range from 1 to 6 percent. Permeability is moderate in the surface layer and subsoil and rapid or very rapid in the substratum.
- Riverhead Series—deep, well-drained, moderately coarse textured soils that formed in a mantle of sandy loam or fine sandy loam over thick layers of coarse sand and gravel. In general nearly level to gently sloping, these soils range from nearly level to steep slopes. Permeability is moderately rapid in the surface layer and in the subsoil and very rapid in the substratum.

TOPOGRAPHY AND SLOPES

The project parcel, according to the 1967 Port Jefferson USGS Quadrangle Map (see **Figure 1-10**), varies in elevation from 110 feet above MSL along the northern border to approximately 150 feet above MSL along the southern border with steeper slopes in the eastern portion of the parcel and more flat terrain in the northern, southern, and western portions of the parcel.¹ In addition, a topographical survey (January 14, 2010) shows parcel elevations range from a low of 108 feet above sea level in the north central section to 155 feet above sea level in the southeasterly section of the parcel. The project site topography ranges from approximately 109

¹ U.S. Geological Survey (USGS), *Port Jefferson Quadrangle Map 7.5 Minute Series (Topographic)*. 1967.



★ General Project Parcel Location

Stony Brook University Hotel Project

**Topographic Map
Figure 1-10**

feet above sea level in the northern section to 134 in the southern section. Slopes on the project site range from approximately 0 to 10 percent. The project site generally slopes downward across the site from south to north. The project site is relatively flat in the most southern, northern, and central areas, with steeper slopes in the middle portions of the site.

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

As noted above, the *Soil Survey of Suffolk County* provides generalized soil suitability ratings for potential uses on sites. The following analysis summarizes the general limitations associated with site development based on soil suitability. The key rating measures applied to the soils analysis are:

- Slight—The soil is generally well-suited to the intended use, or the degree of soil limitation is minor and can easily be overcome. Good performance and low maintenance can be expected.
- Moderate—The soil is moderately suited for the intended use, or the degree of soil limitation can be overcome/modified by special planning, design, or maintenance. The performance of these soils for the listed use is less desirable than soils ranked as having a “slight” limitation for the same use. The problems associated with use of these soils may be intermittent or seasonal in nature. Some soils may require additional treatment such as artificial drainage, runoff control to reduce erosion, over-excavation, extended sanitary lines, or special manipulation or modification. Modifications may include soil admixture, special foundations, extra reinforcement for structures, and sump pumps.
- Severe—This rating indicates that the soils have one or more properties which are considered unfavorable for the intended use, such as steep slopes, flooding hazards, a high shrink-swell potential, seasonal high water table, or low bearing strength. This degree of limitation generally requires major soil reclamation, special design, or intensive maintenance. Some of these limitations may be overcome, but the degree of alteration may be cost-prohibitive.

Most of the 11-acre project parcel would be unaffected by development on the project site (the site of the proposed hotel). The majority of the soils in the approximately 3.6-acre project site have slight to moderate limitations with regard to development. The small portion of the parcel is RhB soils that have some limitations based on slope conditions as identified in the Suffolk County soil survey. As stated, the site plan incorporates the hotel design into site slopes and topography.

Based on the proposed site plan, soils, and their suitability for development, it is anticipated that the proposed project would not result in any significant adverse impacts with respect to soils, topography, or slopes.

G. WATER RESOURCES

EXISTING CONDITIONS

GROUNDWATER

Groundwater, contained in aquifers beneath Long Island, represents the primary source for local domestic, commercial, and industrial water supply needs. Aquifers are geologic formations that can store, transmit, and yield usable quantities of water. These hydrological formations can be

located in unconsolidated deposits, such as sand and gravel, or in bedrock that has interconnected fractures (cracks). Long Island's principal water supply aquifers are located in unconsolidated deposits.

The three aquifers on Long Island are, from shallowest to deepest, the Upper Glacial, the Magothy, and the Lloyd. Across the majority of Long Island, the Magothy and Lloyd Formations are separated by the Raritan Clay. The bottom of this aquifer system, at the base of the Lloyd Aquifer, rests on bedrock approximately 800 to 1,000 feet below ground surface at the project parcel.

The top of the groundwater surface at any given location represents the local water table. In general, the water table on Long Island slopes gently in conformance with surface topography. As a result, depth to groundwater is generally equivalent to sea level at the north and south shorelines of Long Island and, following the topography, rises in elevation towards the center of the Island. These elevation changes form a parabola in the groundwater levels. Thus, the depth of groundwater on Long Island ranges from a few feet along the shorelines and stream/lake margins to more than 200 feet below grade in the center of the Island, depending on the surface topography. The high point of the parabola is referred to as the groundwater divide, which creates a hydraulic gradient causing groundwater to flow to the north (into Long Island Sound), or to the south (into the Atlantic Ocean). The general direction of groundwater flow beneath the project parcel is to the north.

According to the Suffolk County Department of Health Services (SCDHS),¹ the water table within the project vicinity is at an elevation of about 55 feet above MSL. Therefore, the approximate depth to groundwater at the project parcel ranges from 53 to 75 feet above.

Approximately one-half of the 45 inches of average annual rainfall on Long Island percolates through the soil to recharge the aquifers.² The other half forms runoff that evaporates or evapotranspires. Aquifer recharge occurs primarily during the months of October through April.

The Upper Glacial Aquifer is used widely for water supply in areas of central and eastern Suffolk County. While the Magothy Aquifer supplies the majority of Suffolk County with potable water, the Lloyd Aquifer supplies water to the south shore barrier beach communities. In the vicinity of the project parcel, potable water is drawn from the Magothy Aquifer.

Groundwater Classifications and Protection Zones

Federal Designations

In 1978, the United States Environmental Protection Agency (EPA) identified the aquifer system underlying Long Island, including the project parcel, as a sole source aquifer. A sole source aquifer is defined by the EPA as an aquifer that is a sole or principle drinking water source that, if contaminated, would create a significant hazard to public health. The sole source aquifer is inclusive of the three primary aquifers beneath the project parcel and is identified by the EPA and the NYSDEC as the Nassau-Suffolk Aquifer System.

¹ Suffolk County Department of Health Services. Water Table Counts and Locations of Observation Wells in Suffolk County, NY, March 2002.

² Long Island Regional Planning Board, Long Island Comprehensive Special Groundwater Protection Area Plan, 1992 (LIRPB 1992).

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The Safe Drinking Water Act of 1974 (SDWA) authorized EPA to regulate public water systems to protect the public's health. The EPA set standards for chemicals that might be found in water that could potentially have adverse effects. EPA has 25 drinking water standards, 10 of which are for synthetic organics. These drinking water protection measures are also written into the State and County regulations.

State Designations

Article 55 of the New York State Conservation Law (known as the Sole Source Aquifer Protection Act) designates nine areas on Long Island as SGPAs. An overall management plan (*The Long Island Comprehensive Special Groundwater Protection Area Plan*) for the SGPAs was officially implemented in 1992. All development and related activities in the SGPAs must demonstrate conformity to the plan. The plan contains a number of guidelines and recommendations for development in the SGPAs which include: avoid the establishment of new sources of contamination, eliminate non-essential commercial uses throughout the SGPAs, and maximize open space and preservation of existing natural vegetation and habitats.

SGPAs are usually located in largely undeveloped or sparsely developed areas of Long Island that provide recharge to portions of the deep flow aquifer system. This water supply policy is to ensure the future quantity and quality of groundwater recharge by controlling development and pumpage in the SGPAs. All SGPAs are designated CEAs. CEAs are areas of exceptional or unique natural settings that have an inherent ecological, geological, or hydrological sensitivity. SUNY Stony Brook is located within the South Setauket Woods SGPA. The SUNY Stony Brook complex occupies approximately one fourth of this SGPA.

Groundwater beneath the project parcel is classified by NYSDEC as Class GA, fresh groundwater that is suitable for use with or without treatment.

In 1987, the Clean Water Act (CWA) was amended to specifically identify the types of stormwater discharges requiring permit authorization and to establish deadlines for their achievement. New York State administers the State Pollutant Discharge Elimination System (SPDES) program, which serves as the authorizing mechanism for activities in the State to comply with the National Pollution Discharge Elimination System (NPDES) program.

Whenever there are discharges to State waters, authorization is required through a SPDES permit from NYSDEC. A SPDES permit also satisfies the federal NPDES process, since the NYSDEC has an approved NPDES program that is administered in lieu of the EPA issuing discharge permits in New York State. SUNY Stony Brook presently maintains a SPDES permit to discharge sanitary wastewater from its on-site sewage treatment plant (STP).

County Designations

The *Long Island Comprehensive Waste Treatment Management Plan*¹ issued in 1978 by the LIRPB identified eight Hydrogeologic Zones in Nassau and Suffolk Counties with the objective of protecting groundwater quality. The identified hydrogeologic zones were codified by the SCDHS through adoption of Suffolk County Sanitary Code, Article 7. These eight zones were differentiated based on differences in underlying groundwater flow patterns and groundwater quality. Zones I through III occupy geographic areas that are primarily characterized by a deep

¹ Long Island Regional Planning Board, *Long Island Comprehensive Waste Treatment Management Plan* (208 Study). 1978.

flow system (or large vertical component of groundwater flow recharging the aquifer). The remaining five zones are characterized by a larger horizontal component of groundwater flow, which contributes to shallow recharge or transmits flows to surface waters.

The purpose of Article 7 of the Suffolk County Sanitary Code is to safeguard all the water resources of Suffolk County, especially in deep recharge areas and water supply sensitive areas, from stormwater runoff and discharges of sewage, industrial and other wastes, toxic or hazardous materials, by (a) preventing and controlling such sources in existence when the article was enacted, and (b) preventing further pollution from new sources, under a program that is consistent with maintaining and protecting the County's water resources. Article 7 regulates the storage of toxic or hazardous materials as well as the discharge of sewage, industrial wastes, toxic or hazardous materials, or other wastes to surface or groundwater. These discharges are prohibited in deep recharge or water supply sensitive areas. One of the most important aspects of this article is its restriction of sanitary flow per acre within various Hydrogeologic Zones. In Hydrogeologic Zones III, V, and VI, or where the public water supply is not provided, the maximum sanitary flow per-acre is 300 gallons per day (gpd). This is the equivalent of 1-acre residential zoning and is based on a nitrogen loading that is equivalent to 6 mg/l with a drinking water standard of 10 mg/l. Densities in excess of these standards require the use of a STP. In addition, NYSDEC regulations require the use of a STP if the flow from a single facility is in excess of 30,000 gpd.

Suffolk County Sanitary Code Article 7 also designates water supply sensitive areas. A water supply sensitive area includes areas in "close proximity" to existing or identified future public water supply wells or wellfields. The term "close proximity" means the land surface area located 1,500 feet upgradient or 500 feet downgradient of public supply wells screened in the Upper Glacial Aquifer (i.e., the surficial aquifer across Long Island). Review of the 208 Study and the Suffolk County Sanitary Code Article 7 - Groundwater Management Zone and Water Supply Sensitive Areas Map indicates that the project parcel is located in Zone I, but does not appear to lie within a designated water supply sensitive area. Zone I is a deep flow recharge area that contributes water to portions of the Magothy Aquifer where the major source of water is supplied to both Nassau and Suffolk Counties (LIRPB 1992).

Stormwater Management

The project parcel is entirely vegetated and therefore stormwater runoff is negligible. Because of the low topographic relief of the project parcel and surrounding area, surface run-on from off-site areas is also negligible.

SURFACE WATERS AND WETLANDS

There are no surface waters or wetlands located on-site or immediately adjacent to the project parcel. Wetlands are habitats that exhibit high biological diversity and serve as sources of biological productivity. Wetlands also serve stormwater management and water quality improvement functions. It is for these reasons, among others, that wetlands are regulated by federal, State and local authorities to prevent their loss or degradation.

No wetlands are mapped on the project parcel by the U.S. Fish and Wildlife Service or NYSDEC. The closest mapped wetlands to the project parcel are a PFO1A wetland (palustrine forested broad-leaved deciduous temporarily flooded) located approximately 300 feet to the southwest and a PUBZx wetland (palustrine unconsolidated bottom intermittently exposed/permanent, excavated) located approximately 250 feet to the east (see **Figure 1-11**).

3.5.10



Project Parcel	NWI Wetlands	PFO1C	PUBZ
1/2-Mile Study Area	PFLAx	PUBF	PUBZx
DEC Wetlands	PFO1A	PUBFx	

0 250 500 1,000 Feet

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**Wetlands
Figure 1-11**

The proposed hotel would be also not be sited within the regulatory jurisdiction (i.e. within 100 feet of any wetland).

Site inspections verified wetland mapping data. Field investigations found no positive wetland indicators of vegetation or hydrology during the December 2009 AKRF site inspection (see also the discussion above under “Natural Resources”). The project site and parcel is entirely upland habitat.

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

GROUNDWATER

Consistent with federal, State, and local regulations and in accordance with guidelines set forth to protect CEAs, the proposed project would be designed to limit the degradation of groundwater in the project vicinity and not cause a detriment to local or regional groundwater or surface water. As discussed below, all sanitary wastewater would be discharged to an existing STP for treatment prior to discharge. All stormwater runoff would be managed for a 7.5 inch storm event by a system of 12-foot drywells (identified in the 2008 New York State Stormwater Management Design Manual as a good practice to remove contaminants). Given these design elements, and that the majority of the project parcel would remain wooded, it is concluded that the proposed project would not adversely impact groundwater resources.

Stormwater Management

Stormwater from the proposed project would be managed for a 7.5-inch storm event by a system of 12-foot drywells. The system would utilize a network of drywells to retain surface water runoff from rooftops, parking areas, roadways, and other impervious surfaces for ground discharge.

Stormwater discharges from construction sites greater than one acre are regulated by a SPDES permit. This permit must be obtained by the hotel developer prior to operation of the project, and is designed to ensure that the stormwater quality does not adversely affect groundwater or surface water quality. Runoff from the proposed project would be limited, and, as the proposed hotel activities are not expected to generate significant pollutant loads, it is concluded that the proposed project would not adversely impact water resources from on-site runoff.

In addition, an Erosion Control Plan (January 14, 2010) has been developed to ensure that the impacts from construction activities are minimized to the greatest extent practicable. Some of these measures include:

- Installation of a new silt fence along the limit of clearing to trap sediment on-site to not disturb existing vegetation, roadways, or drainage systems in the surrounding area.
- Clearing and grading would be scheduled to minimize the extent of exposed areas and the length of time that areas are exposed. Graded and stripped areas would be kept stabilized through the use of temporary seeding as required.
- The length and steepness of cleared slopes would be minimized to reduce runoff velocities. Runoff would be diverted away from cleared slopes.
- All runoff would be retained on-site in accordance with local regulations and approvals. Drainage inlets installed on-site would be protected from sediment buildup, through the use of appropriate inlet protection.

- A new stabilized construction entrance would be installed and periodically maintained. The entrance would consist of stones spread over the geotextile fabric to prevent mud from being tracked onto local roadways and to minimize soil disruption.

SURFACE WATERS AND AQUATIC RESOURCES

Since there are no surface waters present on or immediately adjacent to the project parcel or in areas to be disturbed, the project would not result in any significant adverse impacts to surface water resources or aquatic resources of Suffolk County. The two designated wetlands located to the north and east of the project parcel are more than 300 feet from the project parcel boundary and therefore are not within the area of impact designated by NYSDEC.

H. HAZARDOUS MATERIALS

EXISTING CONDITIONS

A Phase I Environmental Site Assessment was prepared for the 11-acre project parcel (November 2009, see **Appendix E**). Based on the results of the site inspection, records review, and interviews, it was determined that there were no recognized environmental concerns with respect to the subject site. However, one potential construction issue was identified—aerial photographs from 1966 and 1969 identified the presence of a former campus access road located at the extreme southern portion of the project parcel. In addition, the site inspection identified the presence of sub-grade utilities (manholes/vaults) at the southern portion of the project parcel.¹

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

The proposed project would not disturb the areas containing the former campus road and utilities described above. However, the presence of sub-grade utilities, as the well as the potential presence of out-of-service storm drains (associated with the former road), would be reviewed prior to construction to avoid potential construction issues.

I. UTILITIES, SOLID WASTE, AND ENERGY

This section addresses facility water use, wastewater generation/disposal, solid waste generation, and energy usage associated with the operation of the project. It should be noted that the proposed hotel would be considered as a separate utility customer from the University.

The utilities to service the hotel would be accessed from Nicolls Road. These services would include electric, gas, domestic water, fire sprinkler, and sewer.

¹ VHB Engineering, Surveying and Landscape Architecture, P.C., Phase I Environmental Site Assessment – Undeveloped Property – State University of New York, Stony Brook, November 6, 2009.

EXISTING CONDITIONS

WATER SUPPLY

SCWA is the local provider of potable water. According to the 2009 Annual Drinking Water Quality Report,¹ SCWA operates more than 586 wells and has over 5,800 miles of water mains, serving approximately 1.1 million customers in Suffolk County. Water production for the system in 2008 was approximately 66 billion gallons. The University complex is served by SCWA through water mains maintained by the University. Water usage is metered. For fiscal year 2008/2009, the University, including the medical center, used an average of 1.6 million gpd (mgd) (585 million gallons per year). Because the project site is currently undeveloped, it has no current water demand.

WASTEWATER GENERATION

The SUNY Stony Brook complex, including the medical center, discharges its wastewater to Suffolk County Sewer District No. 21-STP No. 21. The STP is located at the northeasternmost border of SUNY Stony Brook's west campus. In addition to serving the entire SUNY Stony Brook complex, this STP also serves Suffolk County Sewer District No. 10 and 19 as well as Brookhaven Sewer District No. 1. These sewer districts are primarily composed of residential developments located immediately south of SUNY Stony Brook, southeast of the University and Nesconset Highway (Route 347), and northeast of the University and Route 25A, respectively. STP No. 21 is operated and maintained by the SCDPW, and has a design and permitted capacity of approximately 2.5 million gpd.² The average wastewater generated from the University during fiscal year 2008/2009 was approximately 1.3 mgd. The STP provides tertiary treatment that is discharged to Port Jefferson Harbor. Since the project site is currently undeveloped, it has no wastewater treatment demands.

SOLID WASTE

Solid waste generated by the University complex is presently collected by a private carting company and disposed of at a licensed solid waste facility. In New York State, licensed carters are required to dispose of solid waste in compliance with 6 NYCRR Part 360,³ the Solid Waste Management Facilities Rules and Regulations of NYSDEC. SUNY Stony Brook has also had a recycling program in place at the complex since 1987.

According to the University's Department of Recycling and Resource Management, the University generated approximately 7,500 tons of solid waste per month in 2007-2008. Of the total tonnage, SUNY Stony Brook recycles approximately 833 tons per month.⁴ Because the project site is undeveloped, no solid waste is presently generated at the proposed hotel site.

¹ Suffolk County Water Authority, 2009 Annual Drinking Water Quality Report.

² State University of New York at Stony Brook, Student Recreation Center State University of New York at Stony Brook, Statement of Findings, Negative Declaration, Notice of Determination of Nonsignificance, 2009.

³ New York State Department of Environmental Conservation, 6 NYCRR Part 360

⁴ Stony Brook University Central Services, *Recycling Figures for Stony Brook University*, last accessed on October 16, 2009 at <http://www.sunysb.edu/centralservices/recycling/figures.shtml>

ENERGY

Gas service to the University is entirely supplied by National Grid while SUNY Stony Brook's electrical needs are supplied through the University's substation, operated by Calpine Corporation, with some small LIPA accounts. For fiscal year 2008/2009, the University used 223,210,738 kwh of electricity of 2,934,422 therms of gas.

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

WATER SUPPLY

The proposed project's average water use was projected to be approximately 18,469 gpd (based on an industry standard assumption that water usage amounts to approximately 110 percent of the projected sewage flow) while peak daily demand could approach 150 gallons per minute (gpm). The estimated fire flow demand for the project would be 2,500 gpm (2 fire hydrants and sprinkler system in the hotel), with a pressure of about 75 pounds per square inch.

The proposed hotel would be supplied with water from SCWA. The projected water use represents less than 1 percent of the average water withdrawal from the SCWA system in this service area. According to correspondence with SCWA (see **Appendix C**), SCWA does not have an issue with accommodating the average water demand. However, SCWA noted in subsequent correspondence (see **Appendix C**) that additional facilities are required to adequately serve the proposed hotel as well as other projects in the vicinity. SCWA is working with the University to obtain property to build the additional facilities in time to serve the proposed hotel. With the additional facilities, it is not expected that the proposed project would pose a significant adverse impact on the water supply system.

WASTEWATER GENERATION

The proposed hotel would use the University's sanitary system to convey wastewater to the SCDPW STP 21. The project engineers have estimated that the proposed 135-unit hotel would generate about 16,790 gpd of sanitary wastewater that would be directed to this STP. This volume would be part of the University's maximum allowance of approximately 2.0 mgd. Based on the University's current demand and the addition of the proposed hotel, there would still be about 0.7 mgd available through the University's maximum allowance. The wastewater would represent about 0.7 percent of the STP's total capacity (2.5 mgd). This volume would not cause a significant adverse impact to STP No. 21 (i.e., demand would not exceed capacity), or the facility's ability to properly treat and dispose of the wastewater it handles.

SOLID WASTE

The proposed project, as estimated, would generate approximately 2,775 pounds per week. This addition to the University's waste stream is less than 0.05 percent of the solid waste collected at SUNY Stony Brook. Because the additional waste generation is insignificant, and the waste would be collected by a private carter, no significant adverse impacts to solid waste management or collection are expected from the development of the hotel project. Recycling measures would also be instituted in accordance with local law and University policy.

ENERGY

Natural gas and electrical demands for the proposed project are insignificant in light of available supplies and the capacity of the conveyance systems. Demands at this facility would not impact regional energy systems nor would they impact or preclude service to other users. LIPA and National Grid would directly serve the proposed hotel's energy needs.

J. PUBLIC HEALTH AND SAFETY

EXISTING CONDITIONS

Safety and security systems presently on campus include exterior and emergency lighting, surveillance, hazardous waste management, monitoring and detection of potentially hazardous conditions or behavior, safety devices, alarm systems, and emergency response/reporting systems. University Police provide campus security on a 24-hour basis assisted by Suffolk County Police, if needed. The central fire command center, located in the University Police headquarters, connects to each University building. The University employs fire marshals who assist local fire departments in responding to automatic fire alarms. The Setauket and Stony Brook Fire Departments have jurisdiction over the University campus, with the Setauket Fire Department serving the project site. Emergency medical responses are primarily provided by on volunteer ambulance companies.

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

In the future with the proposed project, police, fire, medical emergency, and public health services provided by the University would essentially remain the same as in the existing condition. A letter was sent to the Setauket Fire Department to inquire about any potential concerns related to providing fire services to the proposed hotel, with a response received dated November 20, 2009 (see **Appendix C**). In response to concerns articulated by the Setauket Fire Department in its letter of November 20, 2009, the University states as follows: The hotel developer and operator are obliged to make PILOT payments to the local taxing authorities. Those funds may be directed by the Town of Brookhaven taxing authority to address Setauket Fire Department concerns.

The hotel will be privately owned and is planned as a 5-story 135 room facility. Its structural design will comply with all New York State Building and National Fire Protection Association (NFPA) Life Safety Codes. The proposed building height is not expected to present an unserviceable condition for the fire department, as it does not present a new building height that does not already exist within the Setauket Fire Department's service area. The hotel developer and University have each invited the Setauket Fire Department to meet, review and comment on the design specifications, and will continue to do so. The University has also offered on campus recruitment access to the Setauket Fire Department for additional volunteers.

Further, the proposed hotel would provide two fire hydrants on the property to flow at about 1,000 gpm each. The building would also be fully sprinklered with a manual wet stand pipe system designed and installed as per NFPA. The Siamese connection would be at the front right side of the building. The fire alarm system would be fully addressable with voice capabilities and calls to the central station would go to the University Police Headquarters, connected by a single mode fiber. The proposed hotel would have a fire command center in the main lobby;

warden stations would not be present in the building. The elevator recall system would recall to the first floor and alternatively to the second floor.

Regarding the type of fire alarm system, as well as details with respect to hydrant placement and Siamese connections, these are site plan details that would be addressed during site plan review by the Lead Agency (SUNY Board of Trustees). New York State Building Code standards will be met. Based on the current preliminary site plan, it is expected that the proposed hotel would meet applicable codes and fire safety standards.

In sum, the proposed project is not expected to result in significant adverse impacts to public health and safety. Emergency services would be provided by in-place systems.

K. TRAFFIC

The proposed hotel would generate new vehicle trips traveling to and from the project site. This section examines the potential for impacts of the proposed hotel on the local traffic network in the study area.

METHODOLOGY

The operation of signalized intersections in the study area was analyzed applying the methodologies presented in the 2000 *Highway Capacity Manual (HCM)*. This procedure evaluates signalized intersections for average control delay per vehicle and level of service (LOS).

SIGNALIZED INTERSECTIONS

LOS for the signalized intersections is based on the average control delay per vehicle for the various lane group movements within the intersection. Control delay is equal to stopped delay times 1.3. This delay is the basis for a LOS determination for individual lane groups, each approach as a whole, and the overall intersection.

The control delay criteria for the range of service levels for signalized intersections are defined in **Table 1-5**:

**Table 1-5
LOS Criteria for Signalized Intersections**

Level-of-Service (LOS)	Control Delay Per Vehicle
A	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds
C	>20.0 and ≤ 35.0 seconds
D	>35.0 and ≤ 55.0 seconds
E	>55.0 and ≤ 80.0 seconds
F	>80.0 seconds
Source: Transportation Research Board. <i>Highway Capacity Manual</i> , 2000.	

Although the *HCM* methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the *HCM*. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with low average delay indicates an optimization of traffic flow—when an approach, or the whole intersection, processes traffic close to its theoretical maximum with a minimum amount of delay. However, very high v/c ratios—especially those greater than 1.0—are often correlated with a

deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time. LOS A and B indicate good operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition where motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels, and cycle breakdowns are frequent. The *HCM* methodology provides for a summary of the total intersection operating conditions. The analysis chooses the two critical movements (the worst case from each roadway) and calculates a summary critical v/c ratio, delay, and LOS.

EXISTING CONDITIONS

STUDY AREA

To assess the traffic impacts associated with the proposed action, an overall study area was defined that considers the location of the proposed project, primary access routes to and from the site, and key intersections likely to be affected by project-generated trips. As shown in **Figure 1-12**, the study area consists of a network containing three intersections, as follows:

- Nicolls Road (Suffolk County Route 97, CR 97) at North Campus Entrance and Sheep Pasture Road;
- Nicolls Road at Main Campus Entrance; and
- Nicolls Road at South Campus Entrance.

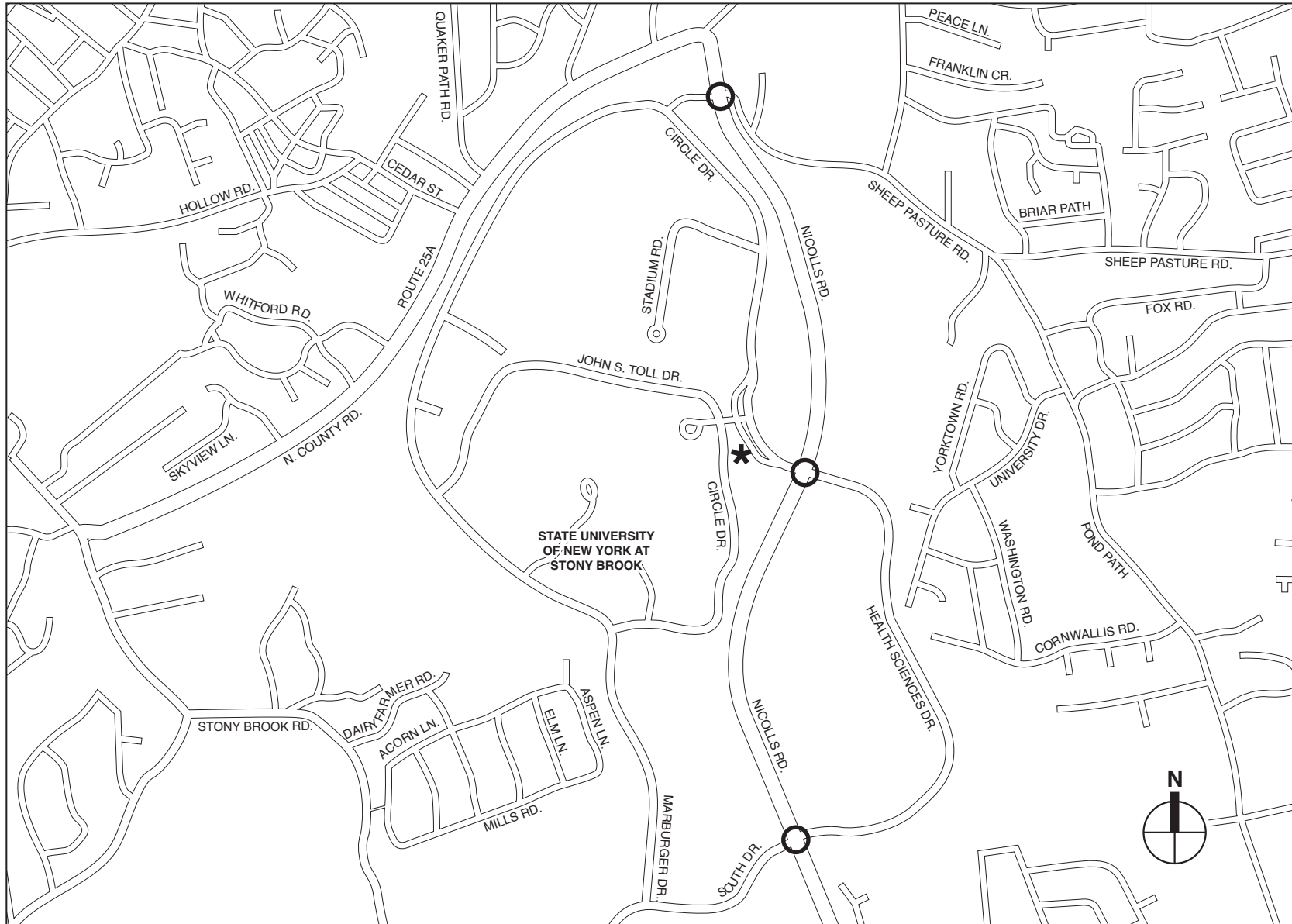
ROADWAY NETWORK

The traffic study area is located in the Town of Brookhaven in Suffolk County, New York at the SUNY Stony Brook complex. The project site is located along a major north-south corridor. Nicolls Road (CR97) is a two-way, north-south arterial with four to five lanes (including turning lanes) in each direction. It connects North Country Road (New York State Route 25A) to the north, with Middle Country Road (New York State Route 25), the Long Island Expressway (LIE, I-495), Sunrise Highway (New York State Route 27), and Montauk Highway (New York State Route 27A, CR 85) to the south. The three campus driveways are all two-way, east-west roadways with two or three lanes in each direction. Sheep Pasture Road is a local, two-way road providing east-west travel, east of Nicolls Road.

All three analysis locations are controlled by actuated traffic signals with variable cycle lengths depending upon traffic conditions.

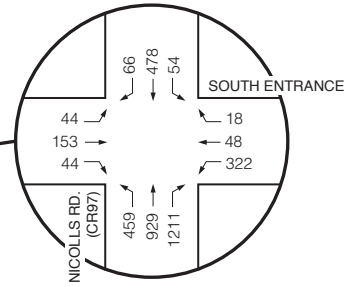
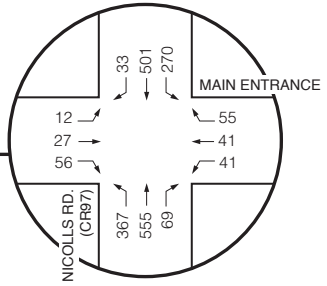
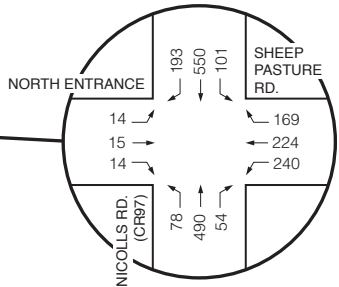
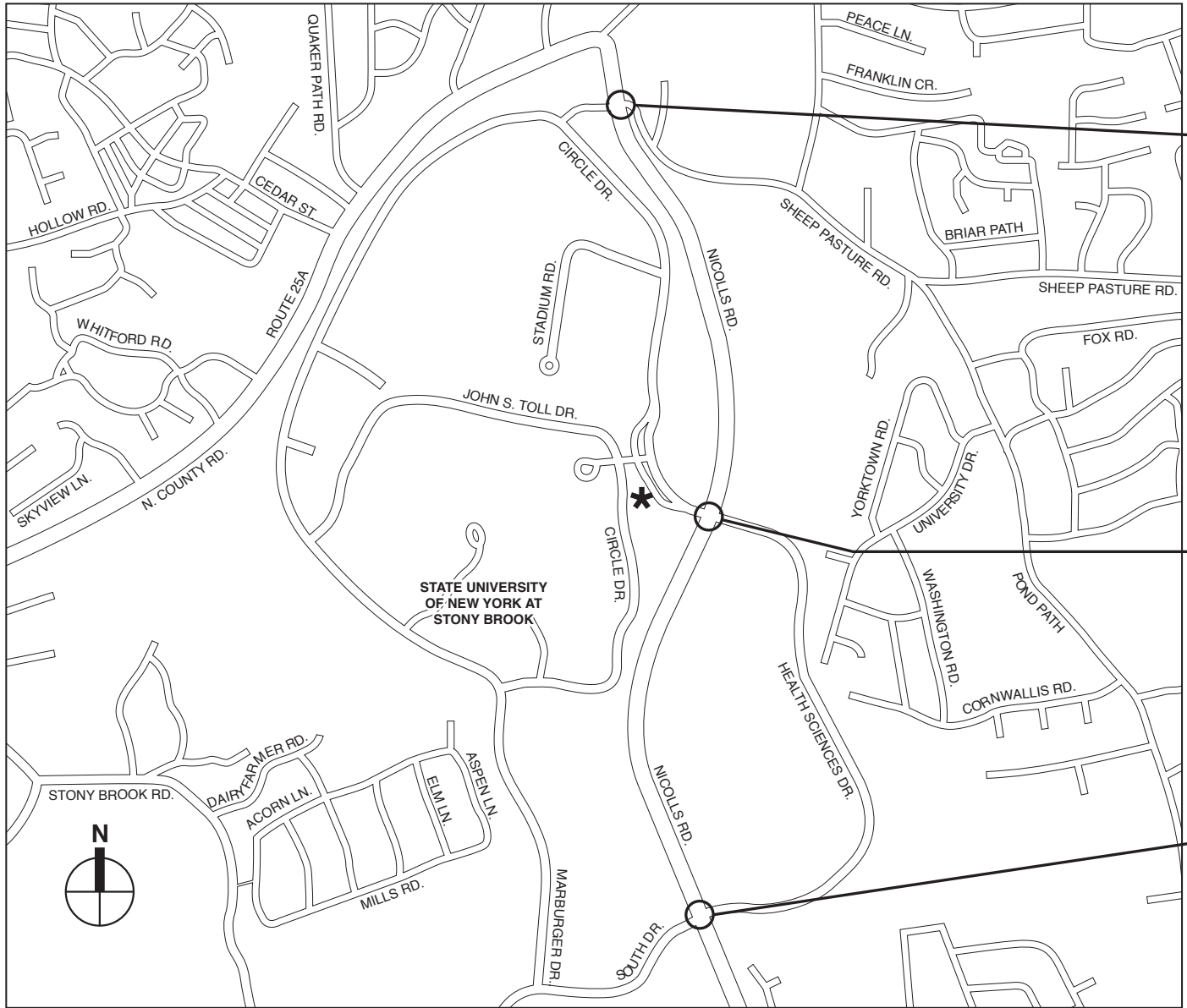
TRAFFIC CONDITIONS

Existing traffic volumes in the study area were established based on field counts conducted during the weekday AM and PM peak hours (i.e., 7-9 AM and 4-6 PM) in October 2009 at the three study area intersections. In addition to manual counts, an Automated Traffic Recorder (ATR) was placed on Nicolls Road for one week to identify temporal and daily traffic variations. Field inventories of roadway geometry, traffic control, bus stop presence, and parking regulations/activities were also conducted to provide the appropriate inputs to the operational analyses. **Figures 1-13 and 1-14** show the existing traffic volumes for the weekday AM and PM peak hours, which were determined to take place from 7:30 to 8:30 AM and 4:30 to 5:30 PM, respectively.



NOT TO SCALE

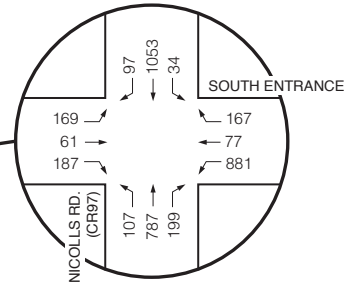
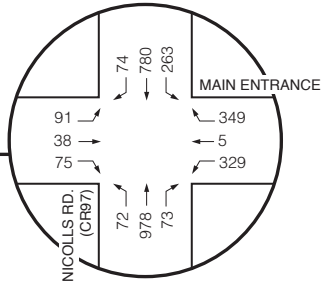
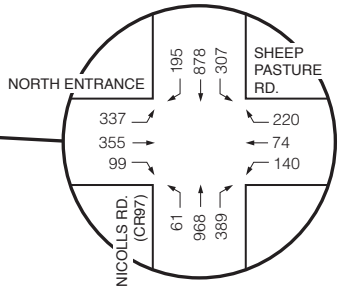
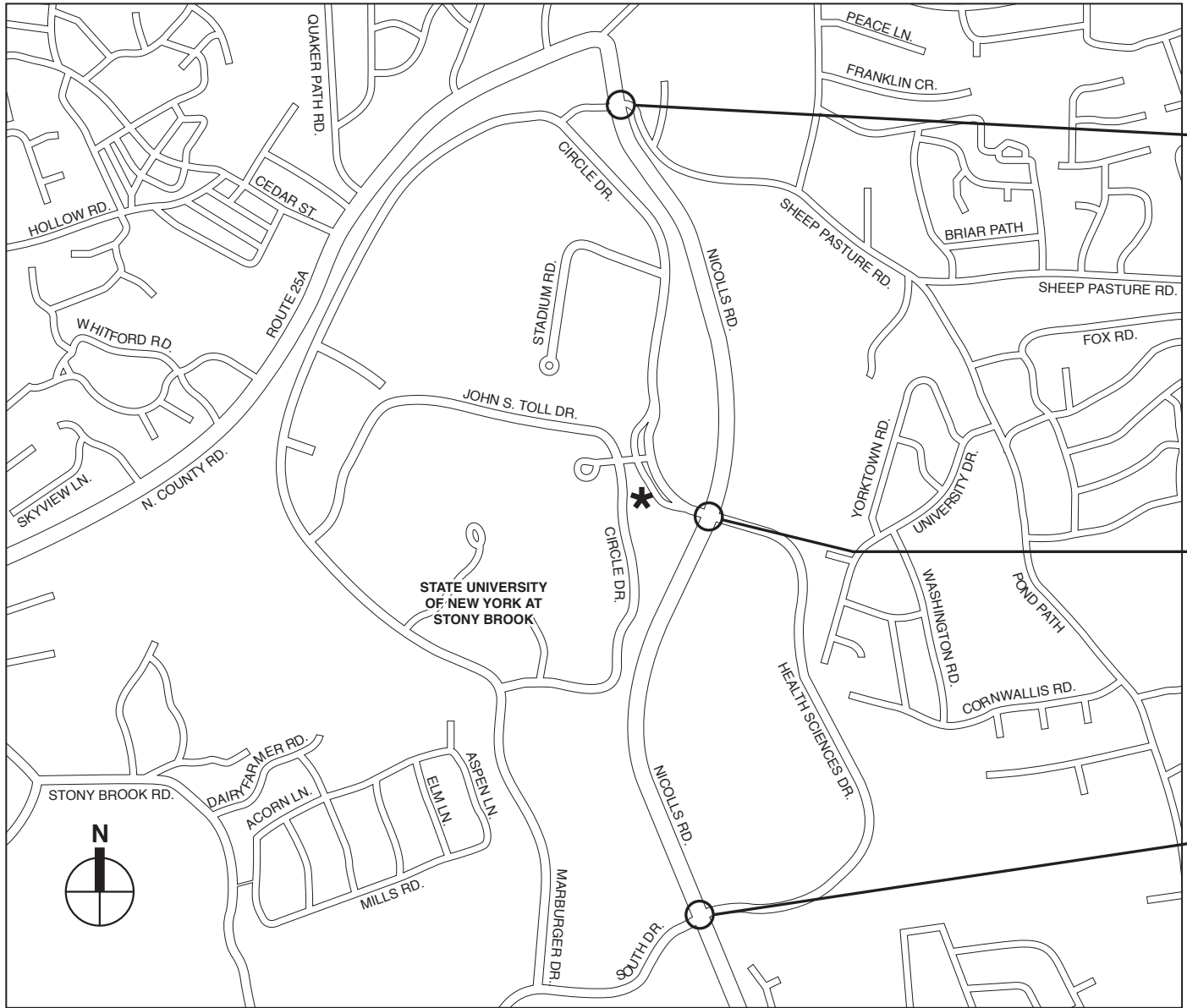
- Intersection Analyzed
- * Project Site



- Intersection Analyzed
- * Project Site

STONY BROOK
UNIVERSITY HOTEL PROJECT

2009 Existing Traffic Volumes
AM Peak Hour (7:30 - 8:30 AM)
Figure 1-13



- Intersection Analyzed
- * Project Site

2009 Existing Traffic Volumes
PM Peak Hour (4:30 - 5:30 PM)
Figure 1-14

One-way peak hour volumes on Nicolls Road range from 595 to 2,595 vehicles per hour (vph), while volumes on the east-west roadways range from 40 to 1,415 vph during the analysis periods.

LEVEL OF SERVICE

Table 1-6 presents the service conditions for the study area intersections. Locations which operate at LOS E or F (55.0 seconds of delay or higher) are described below.

**Table 1-6
2009 Existing Conditions LOS Analysis**

Intersection /Approach	AM Peak Hour				PM Peak Hour			
	Lane Group	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS
North Campus Entrance/Sheep Pasture Road & Nicolls Road/CR 97								
EB	L	0.12	23.8	C	L	0.64	28.0	C
	T	0.05	23.2	C	LT	0.82	35.9	D
WB	L	0.81	42.0	D	L	0.98	92.4	F
	T	0.56	28.5	C	T	0.13	20.3	C
NB	L	0.44	38.2	D	L	0.70	62.7	E
	T	0.42	20.3	C	T	1.07	83.5	F
SB	L	0.61	42.4	D	L	0.93	65.5	E
	T	0.53	21.6	C	T	0.63	21.7	C
Int.			27.2	C			51.9	D
Main Campus Entrance & Nicolls Road/CR 97								
EB	L	0.06	27.6	C	L	0.27	31.3	C
	T	0.09	27.9	C	T	0.34	41.8	D
WB	L	0.21	28.9	C	L	0.93	61.5	E
	T	0.15	28.3	C	T	0.02	33.9	C
NB	L	0.62	34.0	C	L	0.23	37.7	D
	T	0.49	21.6	C	T	0.84	32.9	C
SB	L	0.43	31.3	C	L	0.81	53.6	D
	T	0.42	20.9	C	T	0.65	26.2	C
Int.			25.9	C			37.1	D
South Campus Entrance/E Loop Road & Nicolls Road/CR 97								
EB	L	0.21	34.4	C	L	0.57	35.5	D
	T	0.68	43.1	D	T	0.65	54.7	D
WB	L	0.88	56.8	E	L	0.88	38.0	D
	T	0.24	35.4	D	T	0.25	32.2	C
NB	L	1.31	195.4	F	L	0.77	64.1	E
	T	0.99	52.6	D	T	0.68	26.7	C
SB	L	0.29	35.9	D	L	0.47	46.6	D
	T	0.50	24.4	C	T	0.94	42.4	D
Int.			73.0	E			37.7	D

Notes: L = Left turn; T = Through; LT = Shared left and through.

AM Peak Hour

- *South Campus Entrance and Nicolls Road:* The westbound left-turn movement operates at LOS E with an average delay of 56.8 spv and a v/c ratio of 0.88. The northbound left-turn movement operates at LOS F with an average delay of 195.4 spv and a v/c ratio of 1.31.

PM Peak Hour

- *North Campus Entrance and Nicolls Road:* The westbound left-turn movement operates at LOS F with an average delay of 92.4 spv and a v/c ratio of 0.98. The northbound left-turn movement operates at LOS E with an average delay of 62.7 spv and a v/c ratio of 0.70, while the through movement operates at LOS F with an average delay of 83.5 spv and a v/c ratio of 1.07. The southbound left-turn movement operates at LOS E with an average delay of 65.5 spv and a v/c ratio of 0.93.
- *Main Campus Entrance and Nicolls Road:* The westbound left-turn movement operates at LOS E with 61.5 spv and a v/c ratio of 0.93.

South Campus Entrance and Nicolls Road: The northbound left-turn movement operates at LOS E with an average delay of 64.1 spv and a v/c ratio of 0.77.

THE FUTURE WITHOUT THE PROPOSED PROJECT

Future 2012 conditions without the proposed project were forecasted by increasing baseline traffic levels to reflect expected growth in overall travel through and within the study area. In line with the data provided by NYSDOT LITP 2000 model, an annual background growth rate of 1.45 percent per year was used in this traffic study. This results in an overall growth rate of 4.35 percent. Trips generated by the potential development of the SUNY Stony Brook West Campus (some of which is currently under construction) anticipated to be completed by 2012 were also included in the No Build conditions. These projects include:

- Student Recreation Center
- Simons Center for Geometry & Physics
- Old Chemistry Renovation Addition

TRAFFIC CONDITIONS

The 2012 No Build traffic volumes are shown in **Figures 1-15 and 1-16** for the AM and PM peak hours. **Table 1-7** presents a comparison of the Existing and No Build conditions for the study area intersections. The majority of the approaches/lane groups would operate at the same LOS as in the existing conditions with the following exceptions:

AM Peak Hour

- *South Campus Entrance and Nicolls Road:* The northbound through movement would deteriorate from LOS D with a delay of 52.6 spv and a v/c ratio of 0.99 to LOS F with a delay of 82.3 spv and a v/c ratio of 1.08.

PM Peak Hour

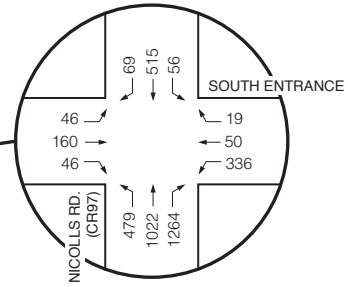
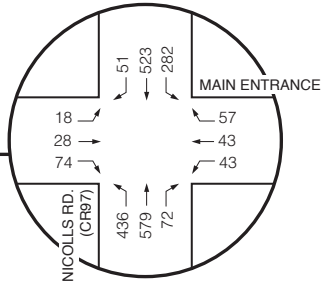
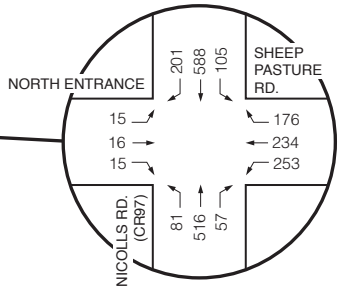
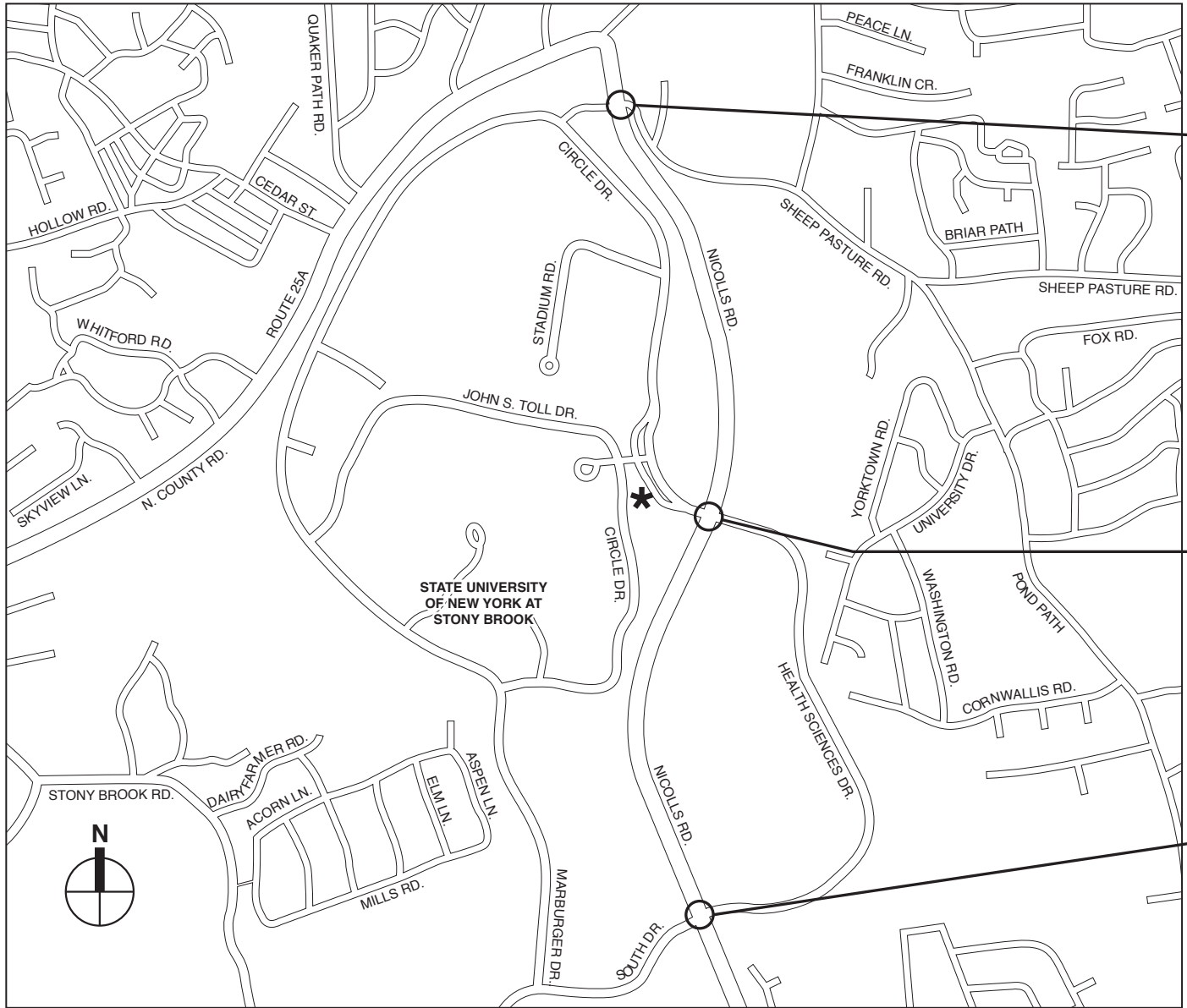
- *Main Campus Entrance and Nicolls Road:* The southbound left-turn movement would deteriorate from LOS D with a delay of 53.6 spv and a v/c ratio of 0.81 to LOS E with a delay of 57.8 spv and a v/c ratio of 0.85.
- *South Campus Entrance and Nicolls Road:* The eastbound through movement would deteriorate from LOS D with a delay of 54.7 spv and a v/c ratio of 0.65 to LOS E with a delay of 57.7 spv and a v/c ratio of 0.68. The southbound through movement would deteriorate from LOS D with a delay of 42.4 spv and a v/c ratio of 0.94 to LOS E with a delay of 57.2 spv and a v/c ratio of 1.01.

POTENTIAL IMPACTS OF THE PROPOSED PROJECT

TRIP GENERATION

Hotel Use

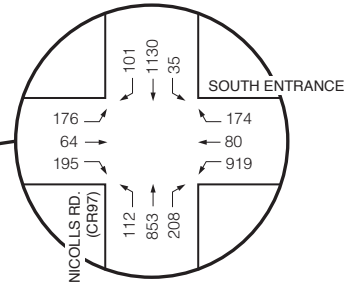
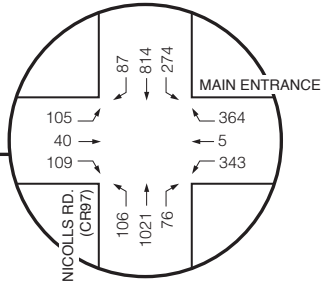
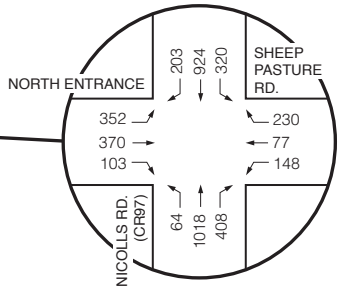
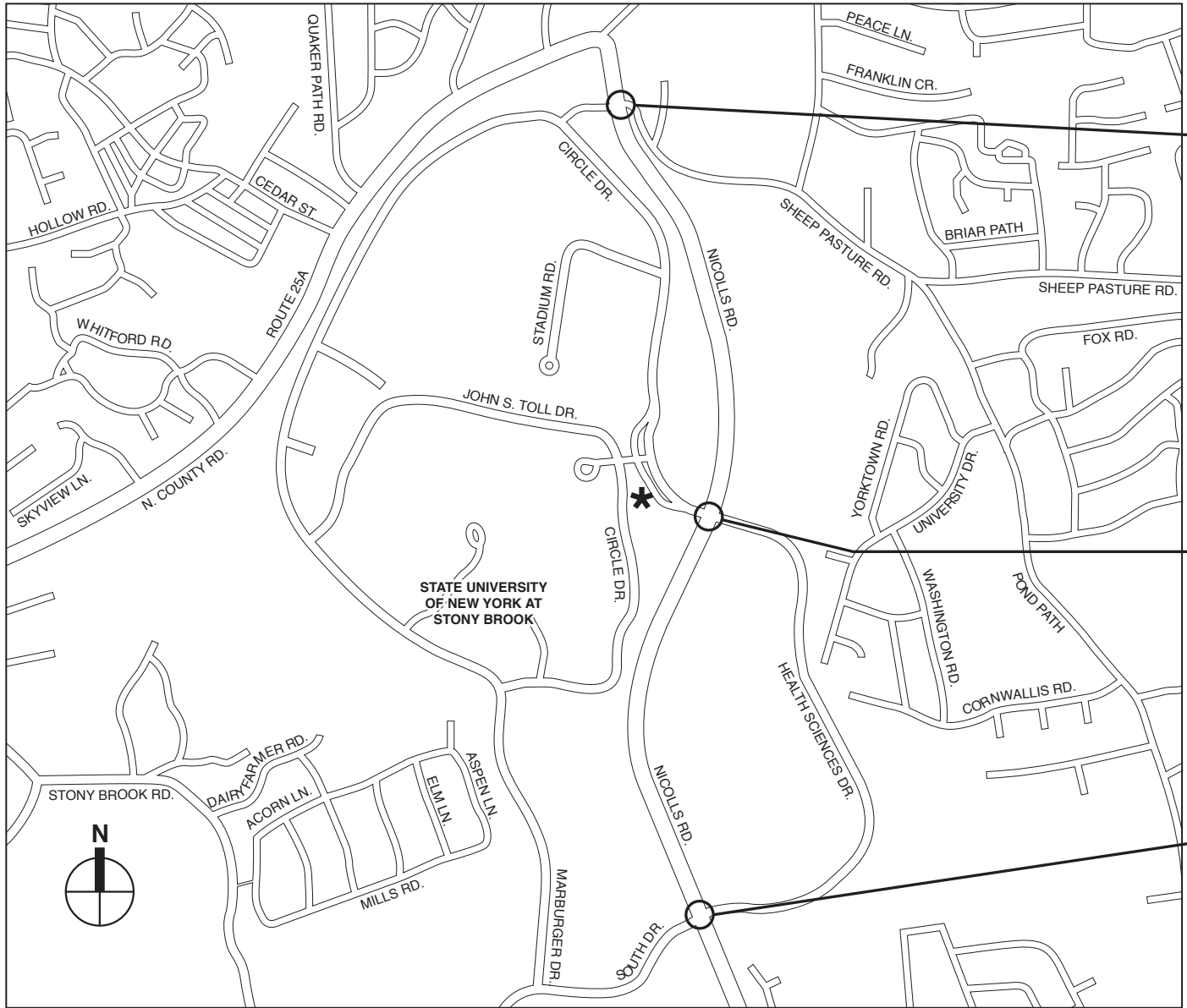
The proposed project would result in the development of a hotel with approximately 135 rooms. Based on the trip generation rates presented in the *ITE Trip Generation Manual, 8th Edition* for Land Use Code #310 - Hotel, the proposed hotel would generate 52 inbound and 38 outbound



- Intersection Analyzed
- * Project Site

STONY BROOK
UNIVERSITY HOTEL PROJECT

2012 No Build Traffic Volumes
AM Peak Hour (7:30 - 8:30 AM)
Figure 1-15



- Intersection Analyzed
- * Project Site

2012 No Build Traffic Volumes
PM Peak Hour (4:30 - 5:30 PM)
Figure 1-16

vehicle trips, and 47 inbound and 48 outbound vehicle trips during the weekday AM and PM peak periods, respectively (see Table 1-8).

Table 1-7
2009 Existing and 2012 No Build Conditions LOS Analysis

Intersection / Approach	AM Peak Hour							PM Peak Hour						
	Lane Group	2009 Existing			2012 No Build			Lane Group	2009 Existing			2012 No Build		
		V/C Ratio	Delay (spv)	LOS	V/C Ratio	Delay (spv)	LOS		V/C Ratio	Delay (spv)	LOS	V/C Ratio	Delay (spv)	LOS
North Campus Entrance/Sheep Pasture Road & Nicolls Road/CR 97														
EB	L	0.12	23.8	C	0.14	24.0	C	L	0.64	28.0	C	0.67	29.2	C
	T	0.05	23.2	C	0.06	23.2	C	LT	0.82	35.9	D	0.85	39.5	D
WB	L	0.81	42.0	D	0.86	47.6	D	L	0.98	92.4	F	1.14	148.4	F
	T	0.56	28.5	C	0.59	29.0	C	T	0.13	20.3	C	0.14	20.4	C
NB	L	0.44	38.2	D	0.46	38.3	D	L	0.70	62.7	E	0.74	69.0	E
	T	0.42	20.3	C	0.44	20.5	C	T	1.07	83.5	F	1.13	104.4	F
SB	L	0.61	42.4	D	0.63	43.5	D	L	0.93	65.5	E	0.97	74.9	E
	T	0.53	21.6	C	0.57	22.2	C	T	0.63	21.7	C	0.67	22.3	C
Int.			27.2	C		28.4	C		51.9	D		63.0	E	
Main Campus Entrance & Nicolls Road/CR 97														
EB	L	0.06	27.6	C	0.08	27.8	C	L	0.27	31.3	C	0.32	31.6	C
	T	0.09	27.9	C	0.10	27.9	C	T	0.34	41.8	D	0.36	42.0	D
WB	L	0.21	28.9	C	0.22	29.0	C	L	0.93	61.5	E	0.96	70.4	E
	T	0.15	28.3	C	0.15	28.4	C	T	0.02	33.9	C	0.02	33.9	C
NB	L	0.62	34.0	C	0.74	37.3	D	L	0.23	37.7	D	0.34	38.4	D
	T	0.49	21.6	C	0.51	21.9	C	T	0.84	32.9	C	0.88	35.7	D
SB	L	0.43	31.3	C	0.45	31.4	C	L	0.81	53.6	D	0.85	57.8	E
	T	0.42	20.9	C	0.44	21.1	C	T	0.65	26.2	C	0.68	26.9	C
Int.			25.9	C		27.0	C		37.1	D		39.9	D	
South Campus Entrance/E Loop Road & Nicolls Road/CR 97														
EB	L	0.21	34.4	C	0.22	34.4	C	L	0.57	35.5	D	0.59	36.2	D
	T	0.68	43.1	D	0.71	45.0	D	T	0.65	54.7	D	0.68	57.7	E
WB	L	0.88	56.8	E	0.92	63.1	E	L	0.88	38.0	D	0.91	42.1	D
	T	0.24	35.4	D	0.25	35.5	D	T	0.25	32.2	C	0.25	32.3	C
NB	L	1.31	195.4	F	1.37	218.9	F	L	0.77	64.1	E	0.80	69.2	E
	T	0.99	52.6	D	1.08	82.3	F	T	0.68	26.7	C	0.73	28.2	C
SB	L	0.29	35.9	D	0.30	36.0	D	L	0.47	46.6	D	0.49	46.8	D
	T	0.50	24.4	C	0.54	24.9	C	T	0.94	42.4	D	1.01	57.2	E
Int.			73.0	E		89.1	F		37.7	D		44.4	D	

Notes: L = Left turn; T = Through; LT = Shared left and through.

Table 1-8
Trip Generation: Hotel Use

Future Development Description	Proposed Size (Rooms)	Weekday Trip Generation Rate (/Units)		Build Generated Traffic Volumes			
		AM Peak	PM Peak	AM Peak		PM Peak	
				IN	OUT	IN	OUT
Hotel ITE Land Use: 310	135	0.67	0.70	52	38	47	48

Source: ITE Trip Generation Manual, 8th Edition, Institute of Transportation Engineers

PROJECT VEHICLE ASSIGNMENT

Traffic was assigned on the basis of existing travel patterns (the most likely approach paths to and from the project site). Based on the existing travel patterns, approximately 75 percent of the project generated traffic would enter the study area from the south, while the remaining 25 percent would come from the north.

Stony Brook University Hotel Project

TRAFFIC CONDITIONS

Figures 1-17 and 1-18 show the total project-generated traffic volumes on the streets surrounding the project site in the AM and PM peak hours, respectively. Figures 1-19 and 1-20 show the estimated 2012 Build condition volumes for the AM and PM peak hours, respectively. Table 1-9 presents a comparison of the No Build and Build conditions for the study area intersections.

Under the 2012 Build conditions, there would be no changes in LOS at any of the study area intersections. Both the overall intersection LOS and individual approach/turning movement LOS for each of the study area intersections would remain unchanged from 2012 No Build conditions to 2012 Build conditions. Therefore, the proposed project would not result in any significant traffic impacts under 2012 Build conditions. Based on the impact criteria outlined above, the proposed project would not be responsible for further notable deterioration of traffic conditions.

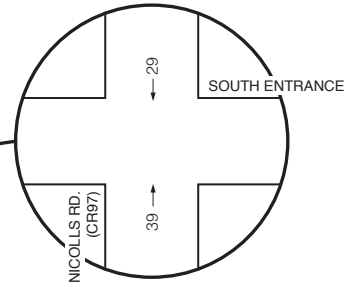
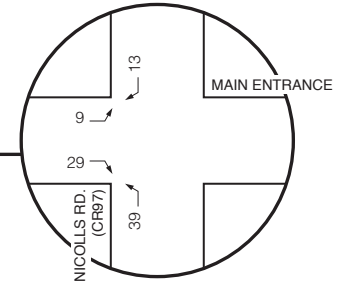
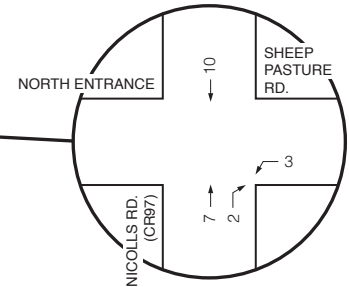
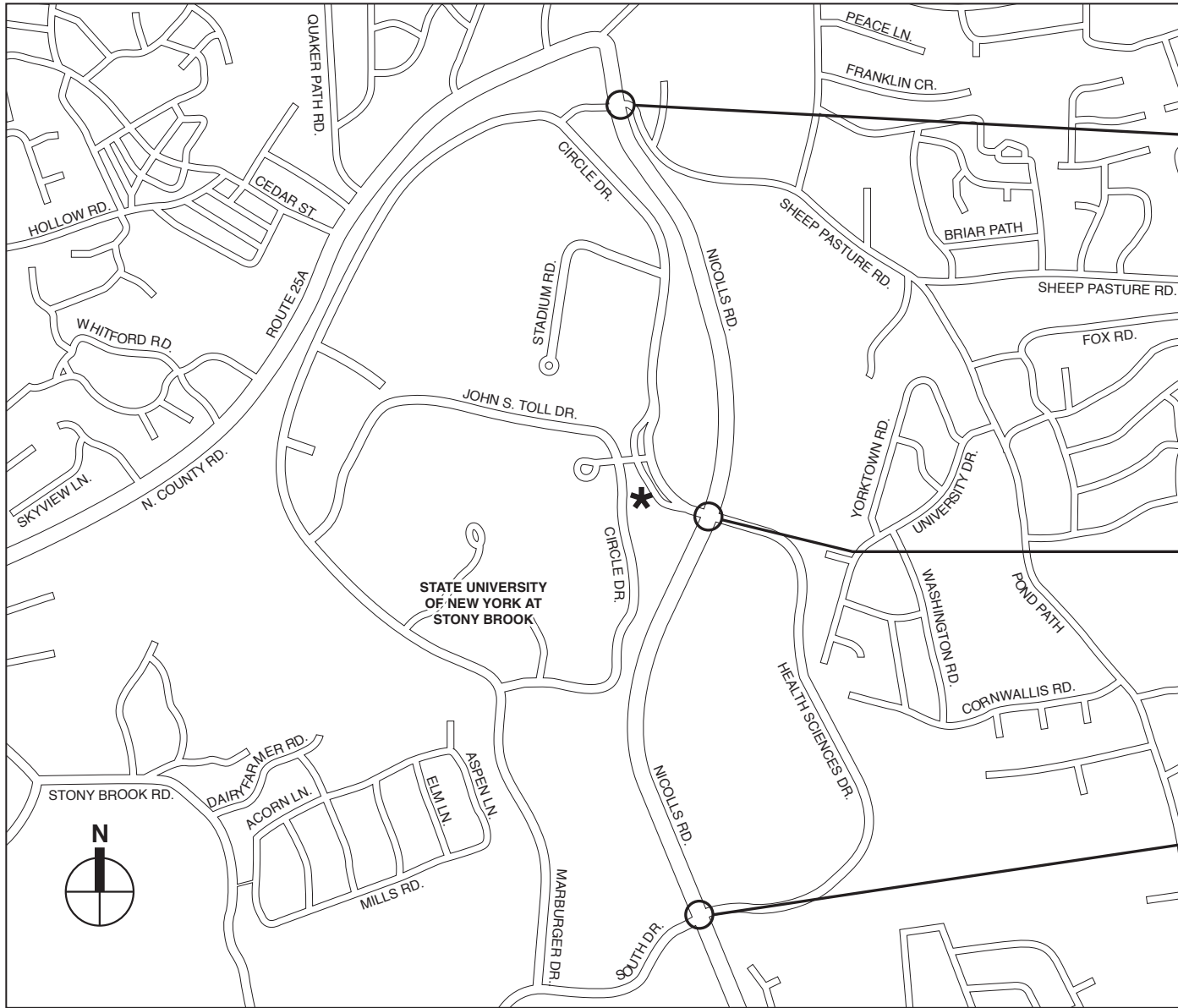
**Table 1-9
2012 No Build and Build Conditions LOS Analysis**

Intersection / Approach	Lane Group	AM Peak Hour						PM Peak Hour						
		2012 No Build			2012 Build			2012 No Build			2012 Build			
		V/C Ratio	Delay (spv)	LOS	V/C Ratio	Delay (spv)	LOS	Lane Group	V/C Ratio	Delay (spv)	LOS	V/C Ratio	Delay (spv)	LOS
North Campus Entrance/Sheep Pasture Road & Nicolls Road/CR 97														
EB	L	0.14	24.0	C	0.14	24.0	C	L	0.67	29.2	C	0.67	29.2	C
	T	0.06	23.2	C	0.06	23.2	C	LT	0.85	39.5	D	0.85	39.5	D
WB	L	0.86	47.6	D	0.87	49.0	D	L	1.14	148.4	F	1.17	155.6	F
	T	0.59	29.0	C	0.59	29.0	C	T	0.14	20.4	C	0.14	20.4	C
NB	L	0.46	38.3	D	0.46	38.3	D	L	0.74	69.0	E	0.74	69.0	E
	T	0.44	20.5	C	0.45	20.6	C	T	1.13	104.4	F	1.14	108.4	F
SB	L	0.63	43.5	D	0.63	43.5	D	L	0.97	74.9	E	0.97	74.9	E
	T	0.57	22.2	C	0.58	22.3	C	T	0.67	22.3	C	0.67	22.5	C
Int.			28.4	C		28.7	C			63.0	E		64.7	E
Main Campus Entrance & Nicolls Road/CR 97														
EB	L	0.08	27.8	C	0.12	28.1	C	L	0.32	31.6	C	0.35	32.0	C
	T	0.10	27.9	C	0.10	27.9	C	T	0.36	42.0	D	0.36	42.0	D
WB	L	0.22	29.0	C	0.22	29.0	C	L	0.96	70.4	E	0.96	70.4	E
	T	0.15	28.4	C	0.15	28.4	C	T	0.02	33.9	C	0.02	33.9	C
NB	L	0.74	37.3	D	0.80	40.6	D	L	0.34	38.4	D	0.45	39.1	D
	T	0.51	21.9	C	0.51	21.9	C	T	0.88	35.7	D	0.88	35.7	D
SB	L	0.45	31.4	C	0.45	31.4	C	L	0.85	57.8	E	0.85	57.8	E
	T	0.44	21.1	C	0.44	21.1	C	T	0.68	26.9	C	0.68	26.9	C
Int.			27.0	C		28.0	C			39.9	D		39.9	D
South Campus Entrance/E Loop Road & Nicolls Road/CR 97														
EB	L	0.22	34.4	C	0.22	34.4	C	L	0.59	36.2	D	0.59	36.2	D
	T	0.71	45.0	D	0.71	45.0	D	T	0.68	57.7	E	0.68	57.7	E
WB	L	0.92	63.1	E	0.92	63.1	E	L	0.91	42.1	D	0.91	42.1	D
	T	0.25	35.5	D	0.25	35.5	D	T	0.25	32.3	C	0.25	32.3	C
NB	L	1.37	218.9	F	1.37	218.9	F	L	0.80	69.2	E	0.80	69.2	E
	T	1.08	82.3	F	1.13	98.0	F	T	0.73	28.2	C	0.76	29.1	C
SB	L	0.30	36.0	D	0.30	36.0	D	L	0.49	46.8	D	0.49	46.8	D
	T	0.54	24.9	C	0.57	25.4	C	T	1.01	57.2	E	1.04	66.1	E
Int.			89.1	F		94.6	F			44.4	D		47.7	D

Notes: L = Left turn; T = Through; LT = Shared left and through.

L. AIR QUALITY

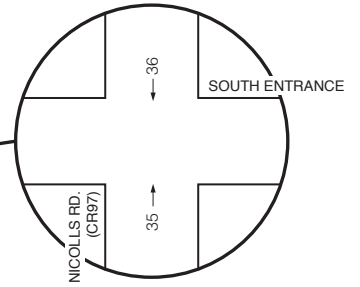
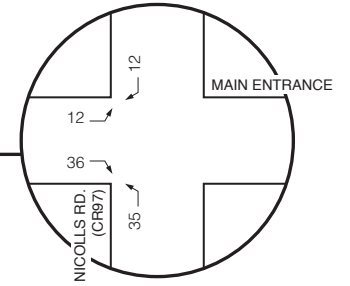
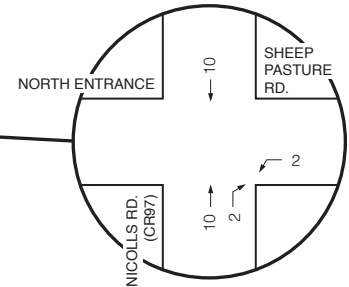
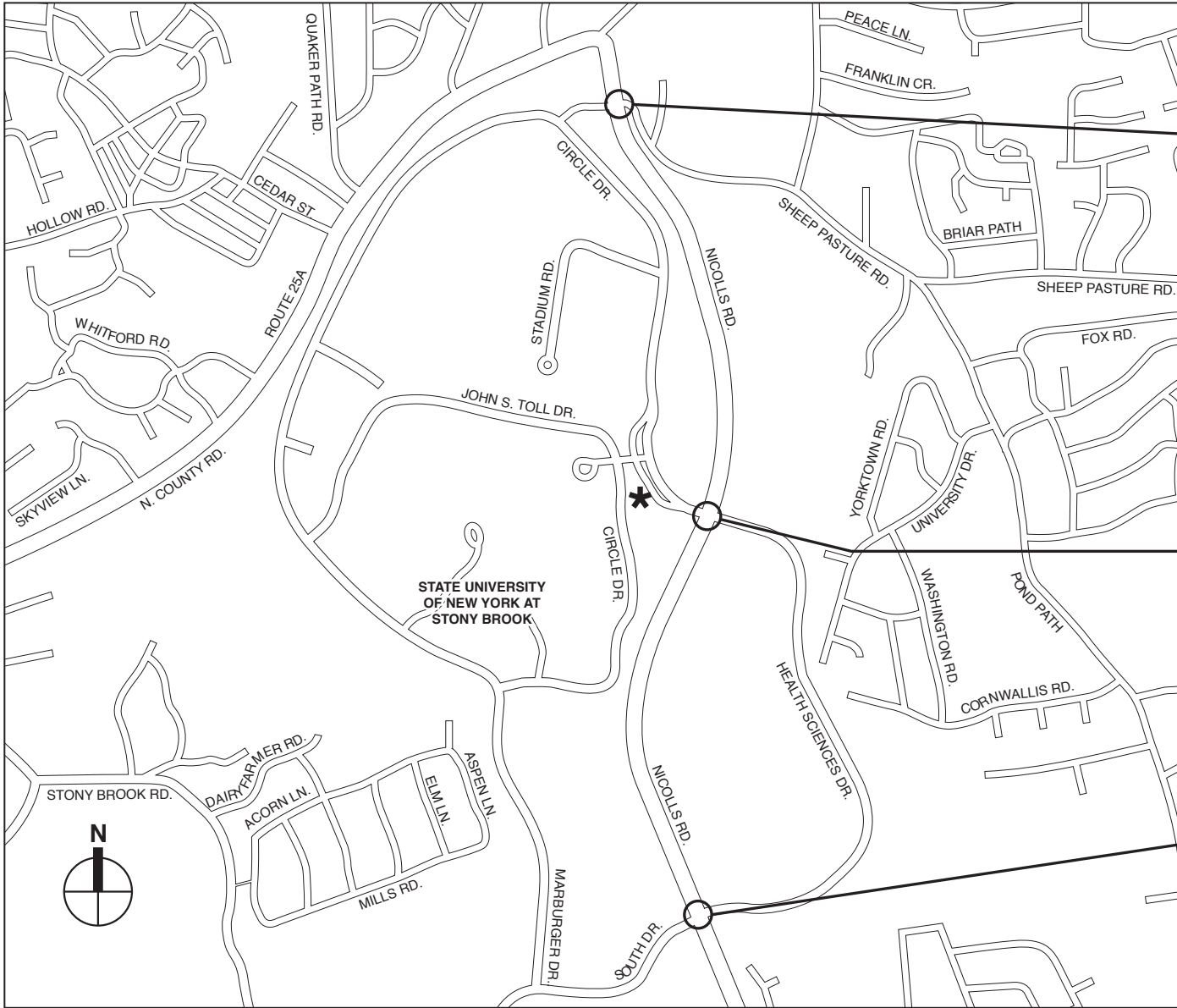
This section examines the potential for air quality impacts from the proposed hotel on the SUNY Stony Brook campus. Air quality impacts can be either direct or indirect. Direct impacts stem from emissions generated by stationary sources at a projected or potential development site, such



- Intersection Analyzed
- * Project Site

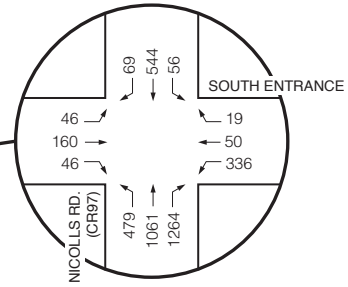
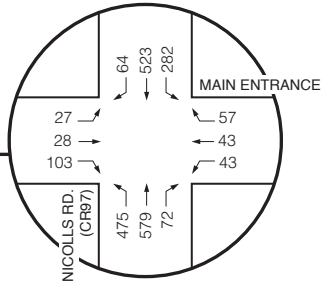
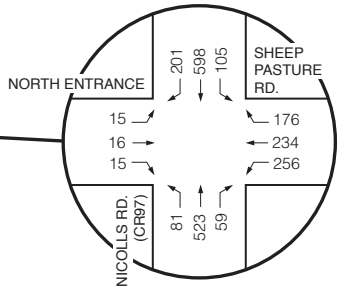
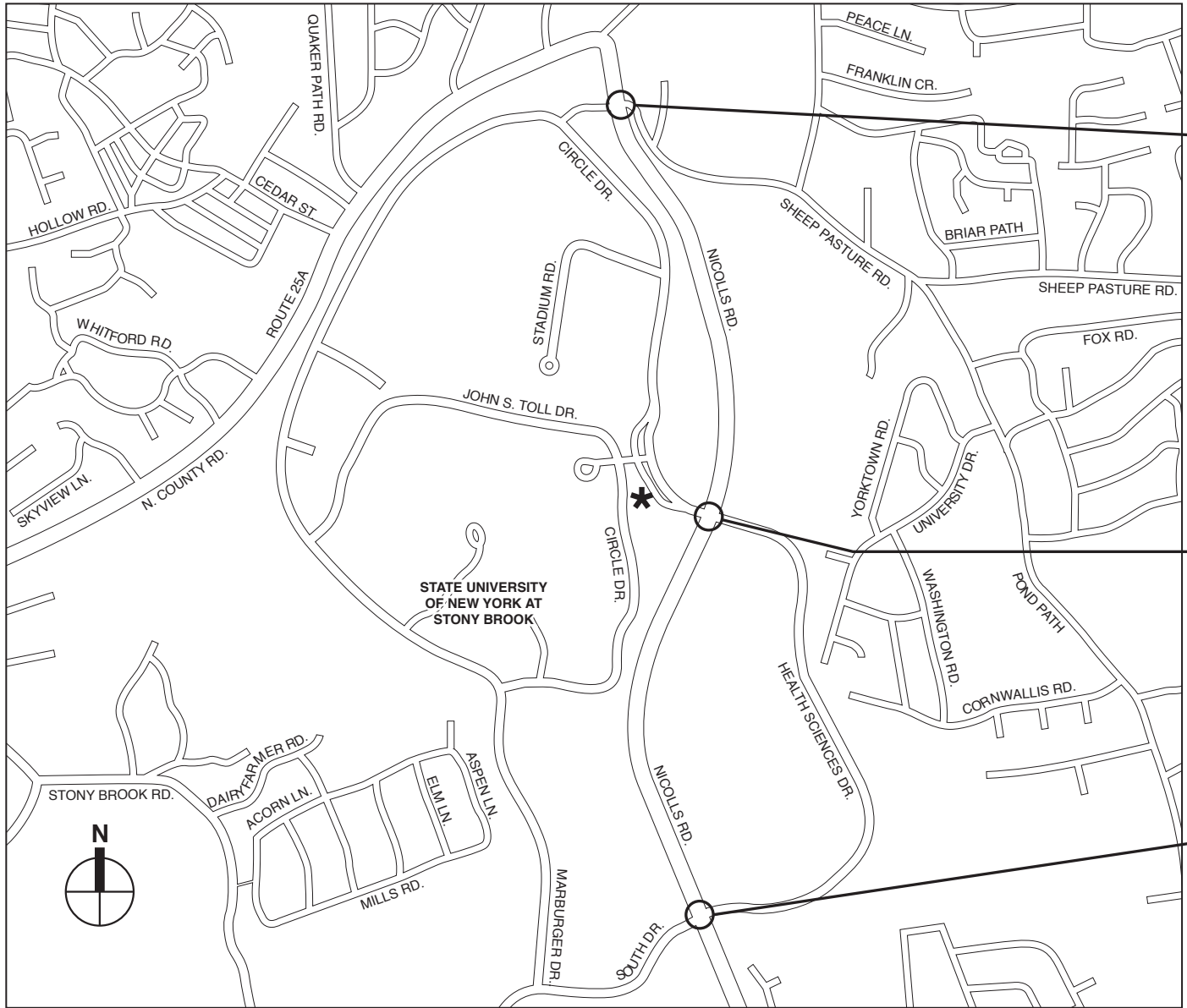
STONY BROOK
UNIVERSITY HOTEL PROJECT

2012 Project Generated Traffic Volumes
AM Peak Hour (7:30 - 8:30 AM)
Figure 1-17



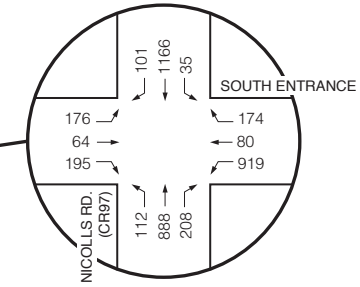
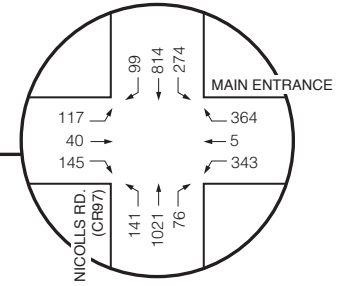
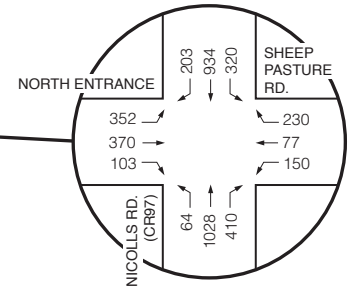
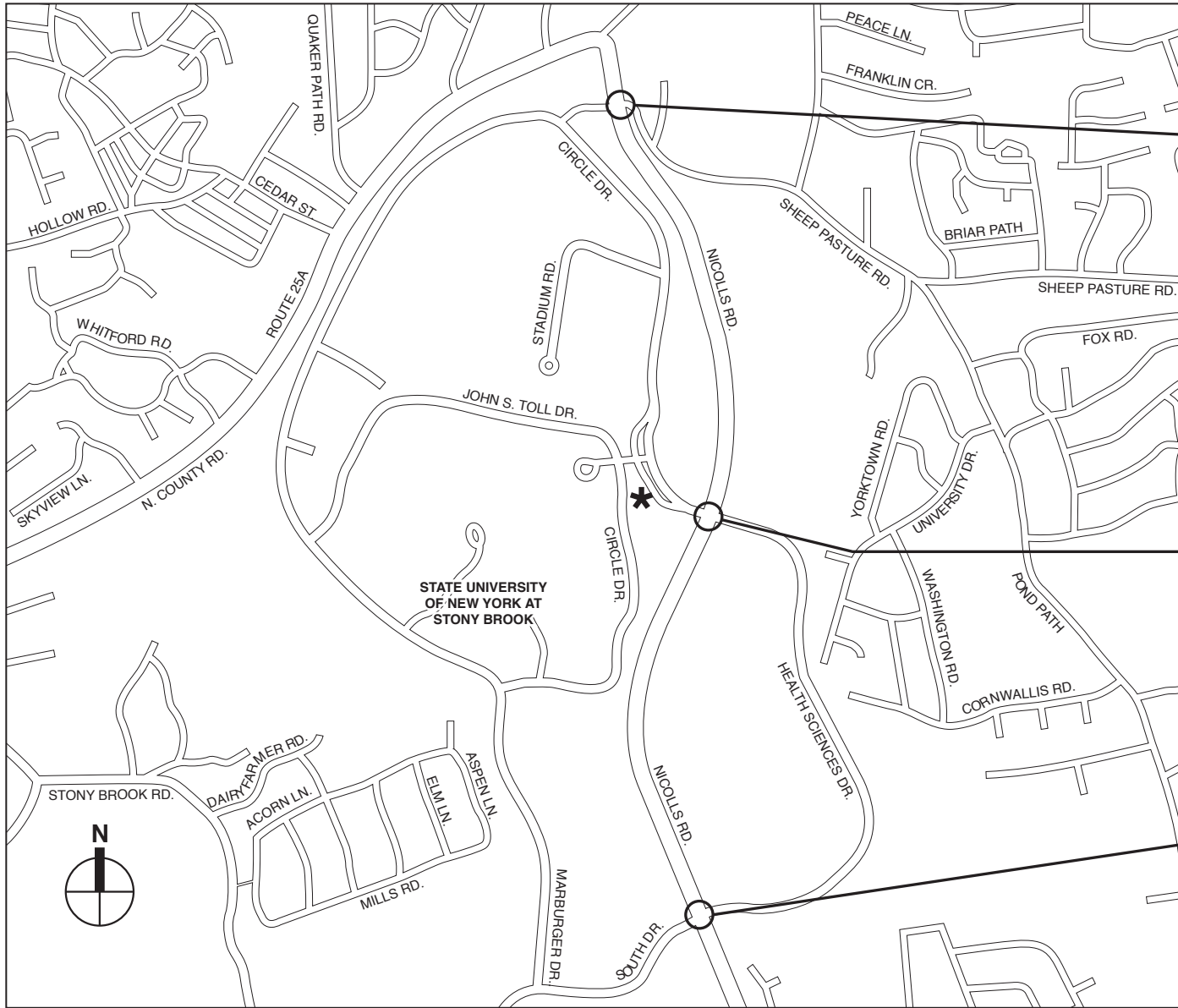
- Intersection Analyzed
- * Project Site

2012 Project Generated Traffic Volumes
 PM Peak Hour (4:30 - 5:30 PM)
Figure 1-18



- Intersection Analyzed
- * Project Site

2012 Build Traffic Volumes
AM Peak Hour (7:30 - 8:30 AM)
Figure 1-19



- Intersection Analyzed
- * Project Site

2012 Build Traffic Volumes
PM Peak Hour (4:30 - 5:30 PM)
Figure 1-20

as emissions from fuel burned on-site for heating, ventilation, and air conditioning (HVAC) systems. Indirect impacts are caused by potential emissions from nearby existing stationary sources and the potential for emissions due to mobile sources/vehicles generated by the projected and potential developments.

The proposed project would not utilize the campus' existing cogeneration plant for electrical energy or steam needs. Therefore, the proposed project would not result in any modification to the cogeneration plant's Title V operational permit. Thus, no further review of that facility's permit is required under EPA's Prevention of Significant Deterioration (PSD) and NYSDEC's non-attainment new source review (NNSR) programs.

The proposed project would include natural gas-fired hot water heaters and direct-fired gas heaters for hot water and space heating. The proposed project would be exempt from State and local permitting regulations due to the equipment's small size and the maximum potential emissions. The primary pollutants of concern when burning oil are SO₂ and particulate matter, and NO₂ when burning natural gas. Since monitored concentrations of these pollutants indicate that levels are well below the standards in the study area, it is not expected that the proposed project would result in significant adverse air quality impacts due to stationary sources.

The proposed project is not expected to significantly alter traffic conditions. The proposed project would generate a maximum of 95 peak hour trips at the proposed entrance on Nicolls Road. Since the proposed project would not result in a significant number of additional trips at nearby intersections in the study area, a quantified assessment of air quality mobile source impacts is not warranted.

M. NOISE

The noise analysis for the proposed project considers the potential for significant adverse noise impacts from the noise levels that would be produced by traffic generated by the proposed hotel. A screening analysis was conducted to determine whether there are any intersection locations where traffic generated by the proposed project would have the potential to cause significant noise impacts (i.e. where traffic volumes with the proposed hotel would result in more than a doubling in traffic volumes over the Existing condition). Sound levels are measured in decibels (dBA) and therefore increase logarithmically with sound source strength. In this case, the sound source is traffic volumes. For example, assume that traffic is the dominant noise source at a particular location. In order for an approximate 3.0 dBA increase to occur (the lowest perceptible change in noise levels), a doubling of traffic volumes would be required. NYSDEC has published guidance indicating that increases from 3.0 to 6.0 dBA may have the potential for adverse impacts in cases where sensitive receptors are present.¹

Because no significant increases in traffic are expected with the proposed hotel (i.e. traffic volumes would not double from the Existing to Build condition), the proposed project would not result in significant adverse noise impacts from mobile vehicular sources. í

¹ NYSDEC, *Assessing and Mitigating Noise Impacts*, October 6, 2000.

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