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**DRAFT GENERIC ENVIRONMENTAL
IMPACT STATEMENT:**

**UNIVERSITY AT ALBANY, SUNY
CAPITAL PROJECT PLAN**

**University at Albany, SUNY
Albany, NY**

December 9, 2009

DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT:

UALBANY CAPITAL PROJECT PLAN

UAlbany
Albany, NY



Stuart J. Spiegel, Vice President
O'Brien & Gere Engineers, Inc.

December 9, 2009



TABLE OF CONTENTS

List of Tables	iii
List of Figures.....	iv
List of Appendices.....	v
List of Abbreviations.....	vi
Executive Summary	1
1. Project Overview	11
1.1. Project Summary	11
1.2. Project Purpose (Public Need and Benefit)	13
1.3. Project Description	14
1.4. Baseline Project Parameters	32
1.5. Impact Evaluation.....	34
1.6. Regulatory Review and Approvals.....	34
1.6.1. State Environmental Quality Review Act (SEQRA).....	34
1.6.2. Permits and Approvals	36
1.6.3. New York State Executive Orders and Policies	38
2. Alternatives Considered.....	40
2.1. Purpose	40
2.2. No Action Alternatives.....	40
2.3. Project Alternatives	42
3. Environmental Setting	52
3.1. Land (Soils, Geology, Topography)	52
3.1.1. Existing Conditions	52
3.1.2. Potential Impacts	56
3.1.3. Mitigation Measures.....	58
3.2. Water Resources (Surface Waters, Ground Water)	80
3.2.1. Existing Conditions	80
3.2.2. Potential Impacts	81
3.2.3. Mitigation Measures.....	84
3.3. Water Supply and Wastewater	87
3.3.1. Existing Conditions	87
3.3.2. Potential Impacts	90
3.3.3. Mitigation Measures.....	93
3.4. Drainage	96
3.4.1. Existing Conditions	96
3.4.2. Potential Impacts	97
3.4.3. Mitigation Measures.....	98
3.5. Air.....	104
3.5.1. Existing Conditions	104
3.5.2. Potential Impacts	106
3.5.3. Mitigation Measures.....	110
3.6. Climate Change	113
3.6.1. Existing Conditions	113
3.6.2. Potential Impacts	117
3.6.3. Mitigation Measures.....	120
3.7. Plants, Animals, and Habitat (Flora, Fauna, Habitats)	125

3.7.1. Existing Conditions	125
3.7.2. Potential Impacts	132
3.7.3. Mitigation Measures.....	135
3.8. Aesthetic Resources (Noise, Light, Visual).....	138
3.8.1. Existing Conditions	138
3.8.2. Potential Impacts	142
3.8.3. Mitigation Measures.....	146
3.9. Cultural, Historic and Archaeological Resources.....	151
3.9.1. Existing Conditions	151
3.9.2. Potential Impacts	153
3.9.3. Mitigation Measures.....	154
3.10. Transportation.....	156
3.10.1. Existing Conditions	156
3.10.2. Potential Impacts	162
3.10.3. Mitigation Measures.....	164
3.11. Energy.....	167
3.11.1. Existing Conditions	167
3.11.2 Potential Impacts	170
3.11.3 Mitigation Measures.....	171
3.12. Public Health and Safety	173
3.12.1. Existing Conditions	173
3.12.2. Potential Impacts	177
3.12.3. Mitigation Measures.....	178
3.13. Community Character and Land Use	190
3.13.1. Existing Conditions	190
3.13.2. Potential Impacts	201
3.13.3. Mitigation Measures.....	203
3.14. Solid Waste.....	209
3.14.1. Existing Conditions	209
3.14.2. Potential Impacts	209
3.14.3. Mitigation	210
3.15. Summary of Potential Significant Environmental Impacts and Mitigation Options	216
4. Unavoidable Adverse Environmental Impacts	217
4.1. Nature of Impacts	217
4.2. Construction Phase	217
4.3. Operational Phase.....	218
5. Irreversible and Irretrievable Commitment of Resources	219
5.1. Land.....	219
5.2. Materials	220
5.3. Infrastructure and Services	221
6. Growth Inducing Aspects	222
6.1. Construction Activities	222
6.2. Population.....	222
6.3. Development Potential	222
6.3.1. Community.....	222
6.3.2. Infrastructure Improvements	223
6.3.3. Educational Opportunities.....	224
6.3.4. Support Facilities.....	225

7. Cumulative Impacts	226
7.1. Nature of Cumulative Impacts.....	226
7.2. Projects Under Review	226
7.2.1. Harriman State Office Campus Development.....	226
7.2.2. CNSE Albany NanoTech Development.....	227
7.2.3. University at Albany Uptown Campus Development	227
7.3. Cumulative Impacts.....	228
7.3.1. Land.....	228
7.3.2. Water Resources	228
7.3.3. Water Supply and Wastewater	228
7.3.4. Drainage	230
7.3.5. Air.....	230
7.3.6. Climate Change	231
7.3.7. Plants, Animals, and Habitat	232
7.3.8. Aesthetic Resources	232
7.3.9. Cultural, Historic and Archaeological Resources	233
7.3.10. Transportation	233
7.3.11. Energy	234
7.3.12. Public Health and Safety	235
7.3.13. Community Character and Land Use	235
8. Effects on the Use and Conservation of Energy.....	237
8.1. Proposed Energy Sources and Alternatives.....	237
8.2. Anticipated Short-term/Long-term Levels of Energy Consumption	237
8.2.1. Short-term Energy Consumption.....	237
8.2.2. Long-term Energy Consumption.....	237
8.3. Indirect Effects on Energy Consumption	237
8.4. Energy Conservation Measures	238
9. References	239

List of Tables

- ES-1. Capital Project List
- ES-2. Permits and Approvals
- ES-3. Baseline Project Parameters

- 1.1-1. Capital Project List
- 1.4-1. Baseline Project Parameters
- 1.6-1. Permits and approvals
- 2.2-1. Impacts of No Action Alternative
- 3.1-1. Generalized soil properties
- 3.1-2. Site-specific soil descriptions – Life Sciences Complex
- 3.1-3. Site-specific soil descriptions – Proposed Admissions Building
- 3.1-4. Site-specific soil descriptions – Proposed Student Housing Project
- 3.1-5. Site-specific soil descriptions – Proposed Athletics Improvements
- 3.1-6. Potential for impacts to land resources
- 3.1-7. Summary of potential impacts to land resources and mitigation options

- 3.2-1. Local stream gauging stations and discharge
- 3.2-2. Potential for impacts to water resources
- 3.2-3. Summary of potential water resources impacts and mitigation options
- 3.3-1. Estimated water demand for several projects
- 3.3-2. Potential for impacts to water supply and wastewater discharge
- 3.3-3. Summary of potential water supply and wastewater impacts and mitigation options
- 3.4-1. Potential for impacts to drainage
- 3.4-2. Drainage impacts for building construction projects
- 3.4-3. Summary of potential impacts to drainage and mitigation options
- 3.5-1. Existing air quality data
- 3.5-2. Potential for impacts to air resources
- 3.5-3. Summary of potential impacts to air resources and mitigation options
- 3.6-1. University at Albany 2007 GHG emissions as reported to ACUPCC
- 3.6-2. Potential for impacts on climate change
- 3.6-3. Projects with climate change mitigation incorporated
- 3.6-4. Summary of potential impacts to climate change and mitigation options
- 3.7-1. Potential for impacts to plants, animals and habitat
- 3.7-2. Summary of potential impacts to plants, animals, habitat and mitigation options
- 3.8-1. Typical noise levels of common sources
- 3.8-2. Typical noise levels of common construction equipment
- 3.8-3. Potential for impacts to aesthetic resources
- 3.8-4. Summary of potential impacts to aesthetic resources and mitigation options
- 3.9-1. Potential for impacts to cultural, historic and archaeological resources
- 3.9-2. Summary of potential impacts to cultural/historical/archeological resources and mitigation options
- 3.10-1. Potential for impacts to transportation
- 3.10-2. Summary of potential impacts to transportation and migration options
- 3.11-1. Estimated cost savings from energy reduction measures
- 3.11-2. Summary of potential impacts to energy resources and mitigation options
- 3.12-1. Potential for impacts to public health and safety
- 3.12-2. Summary of potential impacts to public health & safety and mitigation options
- 3.13-1. Comparison of key social and economic factors
- 3.13-2. City of Albany and Town of Guilderland Parks
- 3.13-3. Consistency between University at Albany Master Plan and Capital Project Plan
- 3.13-4. Potential for impacts to community character
- 3.13-5. Summary of potential impacts to community character and mitigation options
- 3.14-1. Summary of potential impacts to solid waste and mitigation options
- 5.1-1. Projects involving potential irreversible and irretrievable commitment of land
- 6.1-1. Potential educational opportunities from project implementation

List of Figures

- 1.1-1: SUNY Albany Campuses
- 1.1-2: Aerial View of Former Albany Country Club, April 21, 1962
- 1.1-3: Land Cleared for the Construction of the SUNY Albany Campus, 1962
- 1.1-4: Aerial View of the SUNY Uptown Campus, 1972
- 1.3-1: Conceptual Locations of Capital Project Plan Components

- 1.3-2: Rendering of Student Housing Project
- 1.3-3: Scaled Site Elevation Drawing of Student Housing Project
- 1.3-4: Concept Rendering of Campus Center Master Plan
- 1.3-5: Concept Rendering of New Business School Building
- 2.3-1: Alternative Locations and Recommended Site for Student Housing Project
- 2.3-2: Alternative Locations – Multi-Use Athletic Facility (Project No. 5)
- 2.3-3: Alternative Locations – State Quad Parking Lot Expansion (Project No. 9)
- 3.1-1: Soil Survey
- 3.1-2: USGS Topographic Map
- 3.2-1: Regional Surface Water Features
- 3.2-2: Local Surface Water Features
- 3.2-3: Municipal Water Sources
- 3.4-1: Sensitive Receptors
- 3.7-1: Rare Species and Ecological Communities
- 3.7-2: NYS Wetlands Map
- 3.7-3: National Wetlands Inventory (NWI) Map
- 3.9-1: National and State Register of Historic Places/Archaeological Sensitive Areas
- 3.10-1: Primary Road Networks
- 3.12-1: Local Fire, Police, and Medical Services
- 3.13-1: Potential Environmental Justice Areas
- 3.13-2: City of Albany and Town of Guilderland Parks
- 3.13-3: Uptown Campus Recreational Facilities
- 3.13-4: City of Albany Zoning Districts
- 3.13-5: Town of Guilderland Zoning Districts
- 3.13-6: Open Space Map

List of Appendices

- A United States Fish & Wildlife Service (USFWS) Correspondence, December 23, 2008
- B New York Natural Heritage Program (NYNHP) Correspondence, December 24, 2008
- C Student Housing Project Site, Wetland Survey Map
- D 2008 Rare Plant Status List
- E Inventory of Plant Species Observed on University at Albany Uptown Campus
- F Delta Engineers, Summary Table, Intersection LOS Ratings
- G Table of Potential Impacts and Mitigation
- H Summary of Potential Emissions From New Building Projects
- I Fuller Road Reconstruction Project Proposed Corridor Plan
- J Construction Planning

List of Abbreviations

ac	acres
AASHE	Association for the Advancement of Sustainability in Higher Education
ACUPCC	American College & University Presidents Climate Commitment
ADA	American Disabilities Act
ADAP	Albany Disabled Alert Program
AECM	Office of Architecture, Engineering and Construction Management
AHU	air handling unit
APAAC	Advisory Planning, Architecture, and Aesthetics Committee
BMP	best management practice
BRT	Bus Rapid Transit
Btu	British thermal unit
CDTA	Capital District Transportation Authority
CDTC	Capital District Transportation Committee
CEA	Critical Environmental Area
CESTM	Center for Environmental Sciences and Technology Management
CFC	chlorofluorocarbons
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	methane
CNSE	College of Nanoscale Science and Engineering
CO	carbon monoxide
CO ₂	carbon dioxide
CP-29	Commissioner Policy 29
CPR	cardiopulmonary resuscitation
DASNY	Dormitory Authority of the State of New York
dBA	decibels in the A scale
DGEIS	Draft Generic Environmental Impact Statement
DPW	Department of Public Works
EID	Environmental Information Document
ELG	Effluent Limitations and Guidelines
EMT	Emergency Medical Technician
EO	Executive Order
ESA	Endangered Species Act
Five Rivers EEC	Five Rivers Environmental Education Center
ft bgs	feet below ground surface
FTE	square feet of building space and total student enrollment
GHG	greenhouse gas
GP	General Permit
gpd	gallons per day
gpm	gallons per minute
gsf	gross square footage
HFC	hydrofluorocarbon
HIV	human immunodeficiency virus
hr	hour

HRTDC	Harriman Research and Technology Development Corporation
HTHW	high temperature hot water
HVAC	heating, ventilating, and air conditioning
IAAF	International Association of Athletics Foundation
LEED	Leadership in Energy and Environmental Design
LOS	Level of Service
mgd	million gallons per day
mmbtu	million British thermal units
mph	miles per hour
MTCO ₂ E	million tons carbon dioxide equivalents
NAAQS	National Ambient Air Quality Standards
NCAA	National Collegiate Athletic Association
NEC	Northeast Conference
NHPA	National Historic Preservation Act
NO _x	nitrogen oxides
N ₂ O	nitrous oxide
NOI	Notice of Intent
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NYCRR	New York Codes Rules and Regulations
NYISO	New York Independent System Operator
NYNHP	New York Natural Heritage Program
NYPA	New York Power Authority
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSERDA	New York State Energy Research and Development Authority
NYSOGS	New York State Office of General Services
NYSOPRHP	New York State Office of Parks, Recreation, and Historic Preservation
OSHA	Occupational Safety and Health Administration
OTR	Ozone Transport Region
PE	Physical Education
PFC	perfluorocarbon
PM ₁₀	particulate matter 10 microns in size
PM _{2.5}	particulate matter 2.5 microns in size
ppm	parts per million
Quads	quadrangles
RACC	Recreation and Convocation Center
RAD	Rape Aggression Defense
R&D	Research & Development
RTE	Rare, Threatened or Endangered
RU/VH	research university/very high research activity
SARC	Sexual Assault Resource Center
SBA	Service Building A
SBC	Service Building C
SEFCU	State Employee Federal Credit Union
SEMO	State Emergency Management Office
SEQRA	State Environmental Quality Review Act

SF ₆	sulfur hexafluoride
SHPA	State Historic Preservation Act
SHPO	State Historic Preservation Office
SPCC	Spill Prevention, Control and Countermeasure Plan
SPDES	State Pollutant Discharge Elimination System
sq ft	square feet
SSA	Security Services Assistants
SUCF	State University Construction Fund
SUNY	State University of New York
SWMP	Stormwater Management Plan
SWPPP	Storm Water Pollution Prevention Plan
TOGS	Technical and Operational Guidance Series
tpy	tons per year
ug/m ₃	microgram per cubic meter
USACE	United States Army Corps of Engineers
U.S.C.	U.S. Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish & Wildlife Services
USGS	United States Geological Survey
UPD	University Police Department
VOC	volatile organic compound
WMA	Wildlife Management Area
yr	year

Executive Summary

Overview. The University at Albany, State University of New York (UAlbany) has developed a Capital Project Plan that encompasses the foreseeable capital needs of its Uptown campus over a five year planning horizon. The Capital Project Plan is part of the continuing evolution of UAlbany's facilities and is largely driven by the need to address deferred maintenance and renovation needs to its existing facilities infrastructure. Specifically, the Capital Project Plan is comprised of 13 projects (listed below in Table ES 1), three of which construct new buildings, three expand existing structures, and the balance are focused on addressing deficiencies in site and grounds, including athletic facilities.

The Capital Project Plan was developed in the context of the University's larger goal to preserve its physical assets – over 60 percent of which were constructed over 40 years ago and are in dire need of maintenance and upgrade – and to provide modern, energy efficient, and functional facilities that meet the current instructional, research, residential, and support needs of a world-class institution of higher education.

Where new buildings in the Capital Project Plan are constructed or expanded, this work is largely tied to the need to provide surge space so that other existing, aging buildings on campus can be renovated and modernized. Site and grounds improvements are similarly tied to the larger goal of building renovations, but are planned in a manner to both help stage this construction work and to improve the quality of life for the UAlbany and greater communities.

The Uptown Campus, the site of this Capital Project Plan, currently encompasses 105 buildings and structures with over 4.5 million gross square feet of space on approximately 500 acres of land. It serves a University community that totals well over 20,000 persons. There are over 18,000 undergraduate and graduate students enrolled at the University; and over 5,000 persons are employed in the University's various academic, research, and staff support endeavors. Over 7,200 students live in University housing, with approximately 6,000 of them housed on the Uptown Campus site. There are over 7,000 parking spaces on the Uptown Campus; and the University operates and manages and contracts a bus transit system to help accommodate resident, commuter, and visitor transportation needs.

The cumulative acreage that would be impacted with impervious surfaces as a result of new/expanded building footprints and ancillary site work included in the Capital Project Plan is approximately 15 acres, or about 3 percent of the Uptown Campus property. The amount of new constructed building space is estimated to be approximately 500,000 gross square feet (gsf), an approximate increase of 11 percent over current gsf space levels; but this increase will be offset by over 300,000 gsf of academic and residential space that will be taken off-line for a series of subsequent, phased, interior renovations which would occur outside of the planning horizon of this document, well into the future, the duration of which will depend on funding and operational/construction capacity.

Where there will likely be a net increase in space, these increases are largely related to decompressing existing functions and providing modern and better functioning university facilities. For example, the Student Housing Project (Project No. 1) will provide apartment-style living rather than traditional dorm rooms to students; and the New Business School Building (Project No. 2) will provide larger classroom and instructional spaces with flexible table/chair setups rather than the traditional tablet

arm chair. Significant growth in enrollment or in daily visitors or net new persons utilizing the Uptown Campus are not envisioned as a result of implementation of the Capital Project Plan.

As described in the following document, the individual projects of the Capital Project Plan are in various stages of planning, with details for some projects considerably less mature than others. Locations and project parameters may not as yet have been selected and/or may be incomplete. These are among the factors that make this Draft Generic Environmental Impact Statement (DGEIS), pursuant to the New York State Environmental Quality Review Act (SEQRA), an appropriate vehicle for environmental review in this instance. The purpose of this review is to provide information about the cumulative extent of environmental impacts associated with the projects in the Capital Project Plan, whether those impacts are adverse and significant, and how those impacts may be avoided or minimized, known as mitigation. Mitigation may be incorporated into a project plan or design, or may be represented by additional steps or options that may be implemented.

Additional detail and analysis is provided in the following document, but the summary conclusion of this DGEIS is that the cumulative environmental impact of the Capital Project Plan is not significant given the mitigation measures that will be implemented by the University.

The following table provides a summary of the projects that constitute this Capital Project Plan.

Table ES 1. Capital Project List.

Project Name	Project Description	Approximate Construction Start
1. Student Housing Project	Construction of new student housing facilities with approximately 500 apartment-style beds	April 2010
2. Campus Center Master Plan	Construction of student activity and surge space of approximately 50,000 square feet (sq ft) under roof	Fall 2011
3. Construct New Business School Building	Construct new 90,000 sq ft academic facility	Summer 2010
4. Relocate Data Center	Relocate campus Data Center to another site on campus	Spring 2011
5. Implement Various Athletics Improvements	Phased series of improvements to athletics facilities, to include a new multi-use athletic facility (possibly a phased project).	Spring 2010
6. Purple Path Continuation	Construction of the Purple Path to encircle and incorporate pedestrian and bicycle paths around the perimeter of the Uptown Campus	Spring 2011
7. Northern Landscape Improvement Project	Perform activities consistent with Landscape Master Plan	Spring 2012
8. State Quad Parking Lot Expansion	Add approximately 250 spaces to west side of State Quad parking lot	May 2010
9. Multi-Discipline Science Surge Building	Construction of academic building of approximately 150,000 sq ft to facilitate Podium renovations	Fall 2013

Table ES 1. Capital Project List.

Project Name	Project Description	Approximate Construction Start
10. Service Building Renovation	Add approximately 24,000 sq ft addition for vehicle operations, small engine and metal shops	Fall 2010
11. Entry Improvements	Improve entrance aesthetics and safety at Washington and Western Avenues	2011
12. Bus Rapid Transit (BRT)	Based on recommendations in the Harriman – UAlbany Linkage Study, locate Bus Rapid Transit stations on campus	2013
13. Bicycle-Pedestrian Path	Develop a network of paths, improving connections between each quad, the Podium, and the Purple Path	2011

Public benefit and need. UAlbany, as part of the SUNY system, not only provides an education value to the citizens of New York State, but it also serves as an engine for the sustained growth and vitality of New York State. The availability of a high quality SUNY education encourages students to stay in the state for their educational experiences, and then apply their knowledge to the economic growth, social benefit, and improvement of the quality of life of the state’s residents, and the world at large. The University’s basic Carnegie classification is as a research university with a very high research activity (RU/VH). The Carnegie classification, developed by the Carnegie Foundation for the Advancement of Teaching, “has been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of research studies to ensure adequate representation of sampled institutions, students, or faculty” (see definitions of classifications at: <http://www.carnegiefoundation.org/classifications>). Several academic programs at University at Albany, SUNY are nationally ranked, including criminal justice, nanotechnology, microtechnology, information sciences, African studies, social welfare, public administration and policy, clinical psychology, and sociology.

The Capital Project Plan will allow UAlbany to preserve and modernize its facilities and continue to carry out this mission as one of four SUNY University Centers distributed across the state (the other University Centers are SUNY Buffalo, SUNY Binghamton, and SUNY Stony Brook) where undergraduate teaching, research, and advanced graduate and professional studies are the priorities.

The campus improvements encompassed by this Capital Project Plan will:

- Renovate, restore and update academic facilities to meet the needs of current instructional practices; over 60% of the campus is more than 40 years old
- Enhance facilities with the installation of 21st century technology and support
- Upgrade campus infrastructure to meet academic and research needs
- Increase the energy efficiency of the campus consistent with its goal of carbon neutrality under the American College and University Presidents Climate Commitment (ACUPCC)
- Complete projects that will improve the quality of life on campus for students, faculty, staff and visitors.

Impact Evaluation. This DGEIS evaluates the potential environmental impacts from the implementation of this Capital Project Plan under the following analytical framework:

- The selection of sites for the respective projects is interrelated. The University has evaluated potential sites as part of an overall campus site plan which is constrained by limited land availability at the Uptown Campus. The University has the most densely constructed academic and residential campus of all SUNY University Centers and, overall, it is among the most densely constructed campuses in the SUNY system.
- The quantitative project parameters presented in Table ES 3, as supplemented by the descriptions of the individual projects in the Capital Project Plan (in section 1.3), constitute the description of the action and represent the threshold limits for the respective projects. Should these parameters be modified significantly, a supplemental environmental impact statement may be required to address that element of the plan.
- For the purposes of cumulative impact analyses, since the exact construction start dates and project parameters are not yet known, except where specifically noted, it has been assumed that the projects described herein will all be implemented concurrently and, therefore, the maximum potential impacts on environmental resources have been evaluated. One example is air emissions from these projects – the potential stationary source air emissions from these projects have been estimated and have been evaluated cumulatively, rather than individually in any specific sequence, since the sequencing of the projects, again, is a factor potentially subject to change.

Regulatory review and approvals. Pursuant to New York State Environmental Conservation Law Article 8, State Environmental Quality Review Act (SEQRA); and Part 617 of Chapter 6 of the New York Code of Rules and Regulations, and the adoption of a positive declaration by the University at Albany, State University of New York, the University has prepared this Draft Generic Environmental Impact Statement (DGEIS) for the “Capital Project Plan.” In accordance with SEQRA, where available the DGEIS will address specific adverse environmental impacts which can reasonably be anticipated. Moreover, measures to reduce or mitigate the significant adverse impacts are identified.

The SEQRA regulations at 6 NYCRR Part 617.10 (a) state that “Generic EISs may be broader, and more general than site or project-specific EISs and should discuss the logic and rationale for the choices advanced. They may also include an assessment of specific impacts if such details are available. They may be based on conceptual information in some cases.”

The elements of the Capital Project Plan are in various stages of planning, with details for some projects considerably less mature than others. Locations and project parameters may not as yet have been selected and/or may be incomplete. These are among the factors that make a DGEIS appropriate in this instance for the University at Albany, SUNY Capital Project Plan in that it constitutes:

- “...a number of separate actions in a given geographic area which, if considered singly, may have minor impacts, but if considered together may have significant impacts...” (6 NYCRR Part 617(a)(1), and it also constitutes
- “...an entire program or plan having wide application...” (6 New York Codes, Rules and Regulations (NYCRR) Part 617(a)(4)).”

A wide range of permits and approvals will be required to construct the projects that comprise the Capital Project Plan. Permitting agencies are “Involved Agencies” pursuant to the SEQRA process. As Lead Agency, UAlbany will be coordinating with Involved Agencies throughout the SEQRA

process and through project completion. The involved agencies for this SEQRA process have been identified as:

- New York State Department of Environmental Conservation
- New York State Office of General Services (OGS)
- DASNY (Dormitory Authority of the State of New York)
- New York State Department of Transportation
- State University Construction Fund
- New York State Office of Parks, Recreation and Historic Preservation
- Albany County
- City of Albany
- Town of Guilderland

Approvals and permits that may be applicable to the projects in the Capital Project Plan may include those in Table ES2.

Table ES 2. Permits and approvals.

	Permit	Activity	Agency
	Federal		
1	Section 404 of the Clean Water Act	Work within waters of the United States (including federal wetlands)	USACE
2	33 CFR Sections 322-323	Permits for work or discharges into navigable waters	USACE
	State		
3	Article 15 of the ECL (Protection of Waters, 6 NYCRR Part 608)	Work within protected water bodies (including dredging).	NYSDEC
4	Section 401 of the Clean Water Act (401 Water Quality Certification)	Certification is used to ensure that federal agencies issuing permits or carrying out direct actions which may result in a discharge to the waters of the United States do not violate New York State's water quality standards or impair designated uses.	NYSDEC
5	Article 24 of the ECL(Freshwater Wetlands, 6 NYCRR Part 663)	Regulated activities that may impact a freshwater wetland.	NYSDEC
6	Permit to Construct an Air Emission Source (Article 19 of ECL; 6 NYCRR Part 201)	Permit to construct and operate an air emission source, if greater than 10 million BTUs.	NYSDEC
7	Petroleum Bulk Storage (Articles 17, 37 & 40 of the ECL; 6 NYCRR Parts 610, and 612-614)	Tank registrations. May include preparation and implementation of SPCC Plan.	NYSDEC
8	SPDES General Permit for Storm Water Discharges from Construction Activity (GP-0-08-001)	Storm water discharges from construction phase activities one-acre or greater. Includes preparation and implementation of SWPPP.	NYSDEC, Guilderland (T), Albany (C)

Table ES 2. Permits and approvals.

	Permit	Activity	Agency
9	SPDES Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (GP-0-06-002)	Storm water discharges from certain industrial activities (<i>i.e.</i> , vehicle maintenance). Includes preparation and implementation of SWPPP.	NYSDEC
10	Permit to Construct an Air Emission Source (Article 19 of ECL; 6 NYCRR Part 201)	Permit to construct and operate an air emission source.	NYSDEC
11	SEQRA (Article 8 of the ECL; 6 NYCRR Part 617)	Environmental impact assessment.	Lead Agency/University at Albany, SUNY
12	SHPA	Consultation for potential impact on cultural resources	NYSOPR&HP
13	Code Compliance and Certificate of Occupancy	NYS Building Code Review and approval to occupy building.	University at Albany, SUNY, DASNY, SUCF
14	Highway Work Permit	Cuts and reconfiguration of entrances	NYSDOT
	Local		
15	Highway Work Permit	Cuts and reconfiguration of entrances	Guilderland (T), Albany (C), Albany County
16	Sewer & Water Connections	District extensions and approval of sanitary sewer and water connections.	Guilderland (T), Albany (C)
Acronyms BTU – British Thermal Unit DASNY – Dormitory Authority State of New York ECL – Environmental Conservation Law GP – General Permit NYCRR – New York Codes, Rules and Regulations NYS – New York State NYSDEC – New York State Department of Environmental Conservation NYSDOT – New York State Department of Transportation NYSOGS – New York State Office of General Services NYSOPR&HP – New York State Office of Parks, Recreation & Historic Preservation ROW – Right-Of-Way SEQRA – State Environmental Quality Review Act SHPA – State Historic Preservation Act SPCC – Spill Prevention, Control and Countermeasure SPDES – State Pollutant Discharge Elimination System SUCF – SUNY Construction Fund SWPPP – Storm Water Pollution Prevention Plan USACE – US Army Corps of Engineers			

Project Location. All of the projects are to be implemented within the boundaries of UAlbany's Uptown Campus as identified in Figure 1.1-1. There is the potential for environmental impacts from these projects to reach outside the boundaries of the Uptown Campus. These potential impacts have been evaluated as part of this DGEIS.

Baseline Project Parameters. Table ES 3 presents a summary of the baseline project parameters for building construction projects in the Capital Project Plan. These parameters represent information from planning documents prepared for the respective projects (and referenced in the DGEIS), to the extent that concepts, feasibility studies, or other plans are available as of the preparation of this DGEIS. These parameters provide the basis for the environmental impact evaluation as documented

in Section 3 of this DGEIS. Significant project modifications from these criteria may necessitate further evaluation of environmental impacts, and the preparation of a supplemental EIS, for one or more of the respective projects prior to implementation.

Table ES 3. Baseline Project Parameters.

Project		Footprint/ New Impermeable Surfaces	Bldg. Height	Number of Occupants (occupants not new to campus)	Heating/ Chilling/ Power	Potable Water Needs	Wastewater Generation	Other Items
1	Student Housing Project	281,000 sf	Approx. 55 ft	Approx. 500 beds	Cooling: 400 tons Heating: 6.6 million Btu/hr	65 gal/ pers/ day = 32,500 gpd (residents)	32,500 gpd	350 parking spaces
2	Campus Center Master Plan	25,000 sf	55 ft	7,000 – 10,000 (building visitors)	Cooling: 125 tons Heating: 2.5 million Btu/hr Power: 100kW	15,000 gpd	15,000 gpd	
3	Construct New Business School Building	46,700 sf	roof: 35 ft 6 in skylight 10 ft	1,951	Cooling: 325 tons Heating: 3.75 million Btu/hr Power: 748-958 kVA	16 gal/ pers/day = 31,200 gpd	15 gal/ pers/day = 29,300 gpd	
4	Relocate Data Center	11,000 sf	Match existing building height +/- 6 ft	40	Cooling: 400 tons Heating: 560,000 Btu/hr Power: 2500 kVA capacity	444 gpd for staff; 25,000 gpd cooling makeup = 25,444 gpd	1500 gpd sanitary; 9,000 gpd cooling tower blowdown = 10,500 gpd	
5	Multi-Use Athletic Facility	93,000 sf	89 ft (same as at present)	10,000		50,000 gpd	50,000 gpd	
8	State Quad Parking Lot Expansion	50,000 sf	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	250 new parking spaces
9	Multi-Discipline Science Surge Building	100,000 sf	20 ft	1800	Cooling: 725 tons Heating: 10 million Btu/hr Power: 648 kVA capacity	36,000 gpd	36,000 gpd	
10	Service Building Renovations	24,325 sf	14 ft (addition)	122 (total)	Cooling: 32.5 tons Heating: 540,000 Btu/hr	375 gpd	375 gpd	22 new parking spaces
Totals		631,025 sf	N/A	N/A	Cooling: 2007.5 tons Heating: 23.95 million Btu/hr	190,519 gpd	173,675	372 new parking spaces

Information for the State Quad Parking Lot Expansion (Project No. 8), Multi-Discipline Science Building (Project No. 9), and Service Building Renovation (Project No. 10) is conceptual at this time; except for the description in Section 1.3, more information is currently unavailable. Total new building footprint area, heating and cooling needs, potable water needs and requirements for wastewater discharge capacity, and new parking spaces to be constructed as part of the Capital Project Plan, to the extent they are presently known, have been provided in the table above. The

potential adverse environmental impacts of these baseline parameters, and available mitigation, are described in this document individually and collectively, as appropriate.

It should be noted that numbers above will be significantly offset by contemplated, but not yet funded, long-term sequenced interior renovations of the existing Uptown Campus buildings to be implemented outside of the five year horizon of this DGEIS. Uptown Campus buildings will be vacated for renovation and thus reduce the need for water, wastewater, power, and heat/cooling generation needs. The duration of this long-term, sequenced, interior renovation effort is unknown (and unfunded) but could continue for 20 or more years into the future, given the aging condition of the buildings, construction capacity, operational needs, and funding concerns.

The immediate subsequent interior renovation projects that are likely first candidates for nearer term (5-10 years) renovation include the following:

- The existing School of Business building (100,000 gsf on the Academic Podium) after occupants are moved into the New Business School Building (Project No. 3) and other locations on campus;
- Chemistry (106,000 gsf on the Academic Podium) – or some other science building or portion of building – after occupants are moved into the Multi-Discipline Science Surge Building (Project No. 9);
- An additional residence hall of approximately 100 beds (or approximately 30,000 gsf) after the construction of Project No. 1 (Student Housing Project) is completed; and
- Academic Podium space, at approximately 50,000 gsf, once the Campus Center Master Plan (Project No. 2) and Data Center Relocation (Project No. 4) are implemented.

These offsetting reductions in resource need are not quantified – as the funding and project timelines for this work are purely conceptual – but will nonetheless mitigate the impact of the Capital Project Plan described and analyzed herein.

Alternatives. This DGEIS identifies a range of reasonable alternatives to the proposed components of the Capital Project Plan. These alternatives are considered reasonable in the context of the objectives and capabilities of University at Albany, SUNY. Consideration also was given to the environmental effects, reliability and cost effectiveness of these alternatives. In some instances, a final decision as to possible alternatives may not yet have been made since the specific project may as yet only be conceptual, or final scope may be predicated on another project that is planned and precedes it in its implementation.

Selection of project locations involves a complex interaction of factors including functionality (such as developing surge space in proximity to related campus uses or the need to maintain parking adjacent to athletic facilities, or expansion of existing buildings); accessibility of on-campus parking; interactions between projects in this Capital Project Plan (such as the use of parking spaces for a building necessitating the need for a parking replacement project); Campus Heritage and Preservation Plan concerns and other campus zoning guidelines that recognize the architectural significance of this Edward Durell Stone campus, while at the same time acknowledging the need to provide state of the art facilities to meet current and future educational needs; and general space limitations of the Uptown Campus.

The range of alternatives evaluated includes the “no action” alternative, as well as alternatives that address the following issues:

- sites
- sizes
- methodologies (design, construction methods and materials).

Availability of funding may impact the viability or delay the planning process or construction for a given project, or modify the order of priority and sequencing for some of the projects. Additionally, pedestrian safety and the differing amounts of traffic on certain portions of University Drive are considerations in the selection of locations of some of the projects in this Capital Project Plan.

Potential Impacts. The potential environmental impacts, and options for their mitigation where available, are compiled in a summary table appendicized to the DGEIS. The environmental resources with the highest potential for impacts were identified as:

- Water supply and wastewater: UAlbany is consulting with the City of Albany and the Town of Guilderland to address viable options that have been identified and will allow these municipalities to accept the wastewater generated by these projects without adversely impacting the capacity of these municipal systems. Options and mitigation steps are addressed in section 3 of this document.
- Drainage: Storm water issues are important in this area of the Capital District.. Therefore, particular attention will be paid to storm water management options for storm water that will be generated by these projects. Significant storm water retention capacity (approximately 2.2 million gallons) is available in Indian Pond after a 2008 maintenance dredging operation. For the Student Housing Project, present concepts include redirecting storm water to Indian Pond. This project action and the incorporation of other project-specific storm water management designs into the Capital Project Plan will minimize the potential for off-campus storm water impacts from these projects.
- Aesthetic resources (noise, light, visual): The construction of the Student Housing Project adjacent to the Tudor Road neighborhood has the potential for noise, light and visual impacts on the residential neighborhood. In response to stated concerns, plans have been developed to design a relocation of the University's Perimeter Road so that the road is moved towards the property line and housing and associated parking are moved further to the center of the campus, as far away from neighboring houses and sight lines as is possible. The project designs also include an earthen berm which would screen the roadway and an aggressive planting plan to provide a more impressive natural buffer to the developed site. Scaled site elevation drawings were provided at an October 29, 2009 public meeting to demonstrate the minimized visual impact of the project (and are provided as Figure 1.3-3).

Additionally, Project No. 5, "Implement Various Athletics Improvements" includes the relocation and replacement of University Field. While it will not have additional seating capacity, an upgraded UAlbany multi-purpose stadium that includes modern seating and amenities will enhance the spectator experience and will likely draw larger crowds to UAlbany athletic events. The University is prepared to take the necessary crowd and management planning steps to ensure a safe and enjoyable fan experience, and to minimize event day impacts to the surrounding neighborhoods. Described more fully in section 3, additional security, careful scheduling during non-peak hours, and the potential of shuttle bus services to more distance parking lots are under consideration.

- **Transportation:** A traffic study performed in 2009 by Delta Engineers has found that the cumulative addition of these projects, particularly the Student Housing Project, will not significantly impact levels of service at intersections with campus access points. Starting in spring 2010, Albany County will begin improvement of Fuller Road, a major road directly adjacent to campus, by adding turn lanes, a roundabout at the Tricentennial Drive intersection, and resignalizing to improve traffic flow at Fuller Road's intersections with both Western and Washington Avenues. In addition, a major redesign of the Washington Avenue/Fuller Road intersection, off campus just to the northwest, is in the planning stages; when implemented, this project will provide major relief to this intersection.
- **Community character and land use:** The development of these projects has the potential to impact adjacent neighborhoods, as indicated above. The University is committed to minimize these impacts wherever practicable with additional detail on mitigation steps provided in later sections.

Potential impacts and measures to mitigate these impacts are addressed in greater detail in the DGEIS.

1. Project Overview

1.1. Project Summary

The University at Albany, SUNY (UAlbany) has undergone a major transformation since it joined the SUNY system in 1962. The University has exceeded a student population of 18,000 for the first time in the 2008-2009 academic year, growing from 29 students at its inception in 1844, to 1,424 students in 1932, and 13,200 students in 1970. The University's academic and support infrastructure has grown over time to meet the needs of the students and the overall mission of University at Albany, SUNY as an educational and internationally recognized public research institution. Today, UAlbany consists of three campuses (see Figure 1.1-1), offering students and researchers exceptional opportunities to advance themselves and their chosen fields.

This project and, therefore, this document, addresses only UAlbany's Uptown campus, that is, the campus area bounded by Fuller Road to the west, Washington Avenue to the north, the Harriman Research and Technology Park to the east, and Western Avenue to the south.

The Uptown Campus was constructed between 1961 and 1971 on the former grounds of the Albany Country Club (see Figures 1.1-2 and 1.1-3). Classes were held on the Academic Podium for the first time in 1966. An aerial photo taken of the Uptown Campus in 1972 following the completion of construction is shown in Figure 1.1-4.

The UAlbany Uptown Campus has continued to evolve since its construction more than 40 years ago. Indeed, over 60 percent of the University's facilities are over 40 years old and suffer from both a deferred maintenance backlog and an inability to provide sufficient modern and efficient spaces for the myriad instructional, research, and student support functions necessary for the continued vitality of a world-class institution of higher education.

As described in the Executive Summary, the University has developed a Capital Project Plan that encompasses the foreseeable capital needs of the Uptown campus over a five year planning horizon. The Capital Project Plan is largely focused on advancing the goal of renovating the existing physical asset of the University.

The following table provides a summary of the projects that constitute this Capital Project Plan.

Table 1.1-1. Capital Project List.

Project Name	Project Description	Approximate Construction Start
1. Student Housing Project	Construction of new student housing facilities with approximately 500 apartment-style beds	April 2010
2. Campus Center Master Plan	Construction of student activity and surge space of approximately 50,000 square feet (sq ft) under roof	Fall 2011
3. Construct New Business School Building	Construct new 90,000 sq ft academic facility	Summer 2010

Table 1.1-1. Capital Project List.

Project Name	Project Description	Approximate Construction Start
4. Relocate Data Center	Relocate campus Data Center to another site on campus	Spring 2011
5. Implement Various Athletics Improvements	Phased series of improvements to athletics facilities, to include a new multi-use athletic facility (possibly a phased project).	Spring 2010
6. Purple Path Continuation	Construction of the Purple Path to encircle and incorporate pedestrian and bicycle paths around the perimeter of the Uptown Campus	Spring 2011
7. Northern Landscape Improvement Project	Perform activities consistent with Landscape Master Plan	Spring 2012
8. State Quad Parking Lot Expansion	Add approximately 250 spaces to west side of State Quad parking lot	May 2010
9. Multi-Discipline Science Surge Building	Construction of academic building of approximately 150,000 sq ft to facilitate Podium renovations	Fall 2013
10. Service Building Renovation	Add approximately 24,000 sq ft addition for vehicle operations, small engine and metal shops	Fall 2010
11. Entry Improvements	Improve entrance aesthetics and safety at Washington and Western Avenues	2011
12. Bus Rapid Transit (BRT)	Based on recommendations in the Harriman – University at Albany Linkage Study, locate Bus Rapid Transit stations on campus	2013
13. Bicycle-Pedestrian Path	Develop a network of paths, improving connections between each quad, the Podium, and the Purple Path	2011

It is important to note that the list of projects in Table 1.1-1 has been amended since the release of the public scoping document on February 2, 2009. Specifically, six projects have been deleted from this plan based on more accurate information regarding available funding, potential project phasing and program needs. The reasons for their deletion include:

- Multi-Use Athletic Facility – this project has been downsized in scope and instead incorporated into Project No. 5, Implement Various Athletics Improvements, as it is tied in phasing with the other athletic project, improvement of the existing track.
- Renovate Building 25 – this project involves an internal renovation of the building, and is not a capital project in the context of this plan, since it has no impacts outside the building.
- Construct Parking Structure – given the present State economic and budget environment, this project will not be funded or implemented within the five year window of this plan.
- Southern Landscape Improvement Project – this is a minor project in scope and scale that has commenced sooner than the planning horizon of this Capital Project Plan.
- Construct Combine Heat and Power Plant – similar to the Parking Structure, this project will not be funded and can not be initiated or implemented within the five year window of this plan.
- Podium West Building – given the present economic situation, this project will not be funded and can not be initiated or implemented within the five year window of this plan.

- Renewal of Main Fountain Area and Water Tower – this project represents a maintenance activity rather than a capital project and, therefore, it was concluded that it was inappropriately included in the earlier Scoping Document.

1.2. Project Purpose (Public Need and Benefit)

The University at Albany as part of the SUNY system, not only provides an education value to the citizens of New York State, but it also serves as an engine for the growth and vitality of New York State. The availability of a high quality SUNY education encourages students to stay in the state for their educational experiences, and then apply their knowledge to the economic growth, social benefit, and improvement of the quality of life of the state's residents, and the world at large. The University's basic Carnegie classification is as a research university with a very high research activity (RU/VH). The Carnegie classification, developed by the Carnegie Foundation for the Advancement of Teaching, "has been widely used in the study of higher education, both as a way to represent and control for institutional differences, and also in the design of research studies to ensure adequate representation of sampled institutions, students, or faculty" (<http://www.carnegiefoundation.org/classifications>). Several academic programs at UAlbany are nationally ranked, including criminal justice, nanotechnology, microtechnology, information sciences, African studies, social welfare, public administration and policy, clinical psychology, and sociology.

The Uptown Campus encompasses over 4.5 million gsf of space in 105 buildings and structures on nearly 500 acres of land. Over 60% of the University's buildings are more than 40 years old and in need of capital improvement. The Capital Project Plan will allow UAlbany to preserve and modernize its facilities and ensure the long-term viability of State assets. Moreover, it will allow the University to continue to successfully carry out its mission as one of four SUNY University Centers distributed across the state (the other University Centers are SUNY Buffalo, SUNY Binghamton, and SUNY Stony Brook) where undergraduate teaching, research, and advanced graduate and professional studies are priorities.

In addition to the renovation and deferred maintenance focus of the Capital Project Plan, Albany campus improvements encompassed by this Capital Project Plan will:

- Renovate, restore and update academic facilities to meet the needs of current instructional practices (on the preceding table, see Projects 2, 3, 9)
- Enhance facilities with the installation of 21st century technology and support facilities (on the preceding table, see Projects 3, 4, 10)
- Upgrade campus infrastructure to meet academic and research needs (on the preceding table, see Projects 4, 8, 9, 10)
- Increase the energy efficiency of the campus consistent with its goal of carbon neutrality under the American College and University Presidents Climate Commitment (ACUPCC) (on the preceding table, see Projects 4, 6, 11, 12)
- Complete projects that will improve the quality of life on campus for students, faculty and staff, assisting with recruitment, retention, and excellence (on the preceding table, see Projects 1, 2, 5, 6, 7, 11, 12, 13).

Where design and construction are required, they will be conducted consistent with the "Report of the SUNY Energy Strategic Planning Task Force, Recommendations for a University Energy Policy"

(March 2007) to “Design and construct new buildings or rehabilitate existing buildings using Leadership in Energy and Environmental Design (LEED) Silver criteria and life-cycle-cost analysis. Energy systems will be designed to maximize efficiency over the life cycle.” In addition, plans will be developed within the context of state Executive Orders (EO):

- EO No. 4, “Establishing a State Green Procurement and Agency Sustainability Program”
- EO No. 1 “1, “Directing State Agencies, State Authorities, and Other Affected Entities to be More Energy Efficient and Environmentally Aware”
- EO No. 142, “Directing State Agencies, and Authorities to Diversify Fuel and Heating Oil Supplies Through the Use of Biofuels in State Vehicles and Buildings”
- EO No. 24, “Establishing a Goal to Reduce Greenhouse Gas Emissions Eighty Percent by the Year 2050 and Preparing a Climate Action Plan.”

These Executive Orders provide direction and goals for increased energy efficiency throughout state government.

These individual projects of the Capital Project Plan are in various stages of planning, with details for some projects considerably less mature than others. Locations and project parameters may not as yet have been selected and/or may be incomplete. These are among the factors that make a Draft Generic Environmental Impact Statement (DGEIS) pursuant to the New York State Environmental Quality Review Act (SEQRA) appropriate in this instance. The following are more detailed descriptions for those projects for which descriptions are currently available.

1.3. Project Description

For the purposes of this DGEIS, the Proposed Action or Project is defined as University at Albany, SUNY’s “Capital Project Plan.” The following is a description of the components of the Capital Project Plan; the numbering system for the projects follows that of the preceding summary table. Figure 1.3-1 illustrates the conceptual locations of the Capital Project Plan components. Alternatives considered with respect to these projects (such as alternative locations on campus, project size, and/or methodologies (design, construction methods and materials)) are presented in Section 2 of this DGEIS.

1. Student Housing Project

The University at Albany offers a variety of on-campus living experiences. These include:

Living Centers (Description from: <http://www.albany.edu/housing/living/quads/>): There are four residential Quadrangles (Quads) on the uptown campus, each housing roughly 1,200 students. Each quad is comprised of 8 three-story residence halls with a 22 floor tower. The quads are located at the four corners of the Academic Podium providing a convenient access to the Academic Podium, the libraries, campus center, and the University’s athletic facilities.

Each of the 4 traditional quads offers a variety of living options from suite style with internal baths to traditional, corridor style rooms with community baths. The majority of bedrooms are designed as doubles. However, there are a small percentage of rooms that are designed as singles and triples.

Depending upon the number of bedrooms in the living space, there is typically a minimum occupancy of 2 (1 bedroom) to maximum occupancy of 6 persons (3 bedrooms).

The Quads are self-contained, equipped with study lounges, game and movie rooms, fitness centers, and cafeterias. Every room is furnished with a bed, mattress, desk and chair, dresser, closet, and lamp (either floor style or wall mounted).

University Apartments: Apartment style living is available on either Freedom or Empire Commons.

Empire Commons - Empire, the University's newest apartment complex, housing 1200 students, opened its doors in the fall of 2002. Located on Perimeter Road West, the complex contains recreational facilities including basketball and volleyball courts, a fitness center, game room, and a variety of meeting rooms for educational & social purposes in the community center. Students can opt for either ten or twelve-month contracts and sign up for consecutive years in the same apartment. The basic configuration of an apartment consists of four single occupancy bedrooms and two full baths with shared kitchen and living room.

(Excerpted from <http://www.albany.edu/housing/living/quads/commons/empire.html>, 10/1/08)

Freedom Apartments - Tucked away off Tricentennial Drive near the NanoTech facilities, Freedom Apartments was opened in the mid-1980s. Apartment occupancy ranges from 2 to 5 students. Freedom is home to the New York Giants for their annual summer pre-season training camp. It is serviced by the University shuttle, which provides easy access to the campus. Apartments are fully furnished. Kitchens are equipped with a full size refrigerator, ample cabinet space, an oven and range. (Excerpted from:

<http://www.albany.edu/housing/living/quads/commons/freedom.html>, 10/1/08)

Living/Learning Communities: Living/Learning communities are opportunities for students who are interested in a given topic or theme to take certain courses together and to live together in a campus residence hall. Theme houses are opportunities for students who are interested in a given topic or theme that live together in a campus residence hall. Each living/learning program focuses on a specific theme and offers courses and experiences throughout the year that relate to this theme.

In addition to living together in residence, students have the opportunity to work directly with faculty which has a special interest in the topical area. These include (excerpted from <http://www.albany.edu/housing/living/learning/>, 10/1/08):

Anime House: In this living/learning community, students must register for the course AWSS 361, "Gender and Nation in World Cinema: Anime." The course is designed to promote in-depth exploration of Anime, including but not limited to: history of the genre works by noted animators, and the relation of Japanese history and contemporary culture to Anime.

China House: Students participating in this program will have an opportunity to combine practical usage of the Chinese language with increasing sophistication in the disciplines associated with the academic study of China.

Francophone: This living learning community will be composed of students who will speak French at all times in the residence hall. This group will study and examine areas of the world outside of France where the French language is spoken.

Japan House: The goal of the Japan House is to encourage students pursuing Japanese language studies to practice and improve their language skills by using the language in a residential environment.

Student Leadership and Healthy Lifestyle: Located on the State Quad in Tappan Hall. The Student Leadership and Healthy Lifestyle is a theme house initiated by students who are interested in living with other students who share their interests in participating in both on-campus and off-campus programs that do not revolve around substance use. Healthy Lifestyle environment is defined as an area where all residents and their guests (including those of legal drinking age) agree to keep the room free at all times from substances that have the potential to damage their health or the community. Students must participate in two community service projects per semester.

Women's Leadership Project: Located on the Dutch Quad in Bleecker Hall, the Women's Leadership project is a theme house exclusively for women. It is designed to bring women together who wish to participate in community service both on and off campus, learn about women's issues and women's history, develop leadership skills through activism, mentoring, and the opportunity to network through programming and mentoring.

The Wellness Co-op: Located on the Colonial Quad, the Wellness Co-op is an opportunity to live together as a group of students who have the opportunity to use the Colonial Quad Wellness Center outside of normal operating hours and facilitate programs regarding health and wellness.

It is the goal of the University to continue to provide students with a variety of on-campus housing options. The breadth and the quality of housing is an important determinant in the selection of a college or university, and universities across the country, such as the University at Albany, are increasingly converting housing from simple dormitories to living-learning environments, linking them into other on-campus education, programming, and events that are served by core campus facilities.

On-campus housing continues to be popular at UAlbany such that it has difficulty meeting demand. In the fall of 2009, demand exceeded supply with approximately 400 students placed in "triples" and make-shift lounge spaces. This type of overcrowding will likely increase in the coming years as the University needs to expedite the pace of its residence hall renovations and will potentially take 100 or more additional beds off-line for rehabs. Therefore, to fill this bed need, and to expand the breadth of its active living-learning programs, UAlbany is pursuing construction of a new apartment-style housing complex on the Uptown campus.

A feasibility study contracted by the University in 2008 (S/L/A/M 2008) analyzed bed need numbers for the campus and reviewed a number of potential Uptown campus locations and configurations for a proposed facility. The University, to date (through 2009) has proceeded to analyze more specific site conditions and has commenced initial design in anticipation of construction. The planned new living center will likely be an approximately five hundred bed facility potentially configured as two, five-story buildings (approximately 55 feet tall) with four bedrooms in each apartment along with the construction of surface lot parking for approximately 350 cars. The site development will be designed and perhaps constructed as a UAlbany project through the Dormitory Authority of the State of New York (DASNY), an involved agency for purposes of this SEQRA process, which also is responsible for financing all or portions of the project. The site selected by the University is the wooded area of the southeast corner of the Uptown campus as identified in the project map (Figure 1.3-1).

On the matter of site selection, the entire Uptown campus was reviewed for potential site locations as part of this 2008 feasibility study. Further, the site selection process for this project, as for the others in the Capital Project Plan, was conducted in the context of the overall Capital Project Plan, its components, and the complex interaction of criteria presented herein for its component projects. Seven locations were initially analyzed and evaluated for a housing project based on extensive criteria such as potential development costs, parking displacement, traffic impacts, architectural consistency, student/pedestrian safety and security, and conformance with campus master planning principles (see Figure 2.3-1). This initial field of seven was reduced to a smaller field of three after the sites were fit-tested for available acreage and evaluated in greater detail. These three finalists included: the southern portion of the Dutch Quad Gold parking lot (referred to as “Dutch Quad West” in the study); the southern portion of the State Quad Gold parking lot (referred to as “State Quad East” in the study); and an undeveloped area in the southeast portion (“southeast corner”) of the Uptown campus.

Of these three, the Dutch Gold and State Gold parking lot locations were eliminated from further consideration. The feasibility study identified that construction of housing on either of these sites would displace a minimum of 600 surface parking spaces necessitating a parking replacement/relocation construction project at great expense to the University and the student housing rates which finance dormitory work. Moreover, the site location identified for such relocated parking was the southeast portion of the campus, a finalist site otherwise being considered for this housing project.

Both the State Gold and Dutch Gold sites have other negative attributes. Both sites would be restricted as to building height and architectural style due to their adjacency to existing Edward Durell Stone buildings in the center “zones” of the campus. The University’s master planning and preservation principles seek to preserve and enhance the formal site scheme of the Uptown Campus and to carefully consider the height, design, and aesthetics of any adjacent buildings. It does so in deference to the long-term legacy and permanence of campus facilities assets and, in part, because it is compelled to do so by state architectural and historic preservation laws which compel it to consider and adopt such principles. To locate the housing in either of these two sites would thus drive the construction of more costly, less efficient smaller, perhaps multiple, buildings with higher cost architectural treatments.

In addition, the Dutch Gold site was not selected as it is otherwise earmarked as a potential location for future athletics-related expansion. Any location on the Dutch Gold site, too, would have to be carefully arranged and compressed to avoid conflicts with the University’s nearby Central Plant and underground utilities spine. The State Gold Lot location was additionally rejected, as well, as it is otherwise better suited for construction of academic and/or research functions, rather than residential, as academic and research functions necessitate close integration with the faculty offices, research support, instructional, and administrative operations of the adjacent Academic Podium. Instead, residential spaces do not require such close proximity to the academic core and are more amenable to other, more distant, campus locales, similar to other Uptown Campus locations such as Empire Commons or Freedom Quad.

The feasibility study thus recommended the finalist, the southeast portion of campus consisting of approximately 11.5 undeveloped acres, east of Indian Pond. To date, a portion of this location has been used by the University on a limited basis for the deposition of yard waste. This site met the criteria identified by the feasibility consultant and UAlbany for the housing program for the following reasons:

- the site is large enough to accommodate a 500 bed facility;
- it was the only site under consideration that did not displace a large quantity of existing parking spaces, while it would include additional, new parking spaces for residents;
- the site development costs, based on preliminary estimates, were lower than at the other sites that were studied; and
- the site is located on the east side of campus, which has less vehicular traffic concerns and fewer contemplated alternative uses than the west side of campus.

The feasibility study acknowledged the adjacent presence of a residential neighborhood (the area partly consisting of Tudor, Clarendon and Cambridge Roads), and highlighted that the project “will require careful site planning to ensure that the new complex is appropriately buffered with respect to the adjacent properties.”

At the time of the writing this DGEIS document, the University has had two open meetings with concerned neighbors focusing on this project (September 17, 2009 and October 29, 2009). In response to stated concerns, plans were developed to design a relocation of the University’s Perimeter Road so that the road is moved towards the property line and housing and associated parking are moved further to the center of the campus, as far away from neighboring houses and sight lines as is possible (see Figure 1.3-2). The project designs also included an earthen berm which would screen the roadway and an aggressive planting plan to provide a more impressive natural buffer to the developed site. Scaled site elevation drawings were provided at the October 29, 2009 meeting to demonstrate the minimized visual impact of the project (see Figure 1.3-3). To accommodate this site arrangement, the University is working with Harriman Research and Technology Development Corporation (HRTDC) and NYSOGS to acquire 3.3 acres of adjacent State land (on the Harriman campus) to facilitate these site configuration concepts that will minimize impacts on adjacent neighborhoods (see dotted line area in Figure 1.3-2).

This residential facility will connect to selected existing utility services. Drinking water would be provided by City of Albany connections; and sanitary sewer capacity would be provided either through the municipal systems of the City of Albany or the Town of Guilderland. Site engineering and continued discussions with municipalities are ongoing. All such utility work requires municipal coordination and, in some cases, external agency approvals and permits, described in more detail elsewhere in this DGEIS. While only approximately 500 beds will be constructed as part of this project, the University may size the utilities so that an additional 250-500 beds and/or some other building or function could be constructed at or adjacent to this southeast site at some unknown time in the future, if ever. Sizing the utilities for such growth – even if never used – is a cost-effective means of planning and budgeting for a dynamic and continuing institution such as a university. Should such outyears construction/expansion on this site occur, in addition to the 500 bed project detailed herein, it will require the appropriate level of additional environmental review and coordination.

In addition to sanitary and potable water, it will likely be necessary to improve pedestrian options from the southeast portion of the campus into the academic center of the Uptown facilities. The construction start for the contemplated project could be as early as April 2010. The potential environmental impacts of this southeast site housing project are addressed elsewhere in this DGEIS.

Notwithstanding the planning and concept work to date and the likelihood of the southeast corner site as the location for the housing, at the time of publishing this DGEIS, the University is pursuing an alternate concept to fully locate this housing project on the adjacent State-owned Harriman Campus. The Harriman Campus location in mind is approximately 11 acres, inclusive of the 3.3 acres

mentioned above, and is directly adjacent to University property, due north of the southeast corner site. Specifically, on November 30, 2009, the University asked the Board of Directors of the HRTDC to consider this project for the Harriman Campus site. HRTDC, in conjunction with the NYSOGS, is the entity responsible for planning and development of the adjacent campus. To date, HRTDC and the State of New York have earmarked the Harriman Campus for private development with no land specifically identified for University at Albany projects. The outcome of this request is not yet known, but should this site be approved by the HRTDC and NYSOGS, the University may amend its housing construction plans, necessitating an amended environmental review, as appropriate, to address environmental issues and impacts specific to said new site.

For the purposes of this DGEIS document, however, the site selection for this housing project is deemed to be the southeast corner of the UAlbany campus, and the design concepts for that site that have been developed, described above, and publicly shared to date will be discussed and analyzed herein for environmental impact.

2. Campus Center Master Plan

The University's student union, or "Campus Center," suffers from a deferred maintenance backlog and is severely undersized relative to other colleges and universities and other metrics of space and functionality. Accordingly, the University is studying and developing design concepts under a master plan for the Campus Center which would expand the Campus Center structure and do so in a manner which facilitates future phased renovation of the existing building. This master plan is still underway as of the writing of this DGEIS, but with the continued participation of various campus committees and meetings with other constituents, the work that results from the master plan promises to transform the existing undersized and outdated Campus Center into an adequately sized modern facility that would meet the current and future needs of the campus.

The original portions of the Campus Center (at 143,000 gross square feet (gsf) were designed and constructed in the early 1960s to serve a student enrollment of 7,500. It was expanded in 1995 by 30,000 gsf and currently serves 18,000 students, receiving some 15,000 visitors a day. It still serves as the community center of the University at Albany, serving students, faculty, professional staff, alumni, and guests. It seeks to create an environment for getting to know and understand others through formal and informal interactions. It houses the Campus Center Facilities & Operations staff, the Student Service Center (Financial Aid, Student Accounts, and Registrar) offices, the Student Association offices, the Disability Resource Center; banking services; the University Book Store; a number of retail and student meal plan food service options; and various other student groups, administrative and student support offices.

Even with the addition in 1995, based on SUNY and other space need assessment models, the Campus Center is undersized for a university of this size and student population. Additionally, all the major building systems are original, well over 40 years old and in need of major repairs or replacement. The current spatial layout severely restricts the University's ability to provide needed programs and services, and does not allow for other needed functions. The proposed master plan project would add approximately 50,000 gsf of new space to meet needs that cannot be structurally housed in the current facility, and would renovate the existing 173,000 gsf over a 10 to 15 year multi-phased project.

The construction of an addition to the Campus Center was funded in the 2008-09 enacted State Budget. Currently in concept planning, this project would provide a two-story addition with construction potentially commencing as early as fall 2011. The expansion would potentially house

various new and relocated functions, including, perhaps, a multi-purpose student auditorium along with a “wellness center” that will co-locate various student counseling and health services with a fitness and exercise space. This phase will also improve pedestrian and kitchen/dining material flows and create one grand interior atrium “Main Street” that will link the original Campus Center, the 1995 addition, the new addition, the “Parents Fountain”, and the Science Library together. Work will also include systems and building improvements to the existing structure to accommodate this expansion. A concept rendering of the additional structure is provided as Figure 1.3-4.

After the addition is constructed, the added space and relocation of selected functions will facilitate the phased renovation of the existing building. The work, which is not currently funded, will involve an alternating series of relocations and renovations as the existing building must remain occupied and operating. This portion of the project, to start sometime five or more years in the future, will re-block and re-stack the existing building program to improve adjacencies, provide more spatial flexibility upgrade infrastructure and amenities.

When fully completed, the new and improved Campus Center will be sized and equipped with state of the art building systems and technology and provide the needed services and programs to once again adequately serve as the community center of the University at Albany, serving students, faculty, professional staff, alumni, and guests.

3. Construct New Business School Building

The School of Business at the University at Albany is organized with five academic departments: accounting and law; finance; information technology and management; marketing; and management. It is presently located in a building on the northwest corner of the Academic Podium adjacent to the Arts and Science Building and the Social Sciences Building. Its current facilities – like all other original academic buildings on the Podium – are outdated, in need of major renovations, and hampered by a spatial layout and structure that does not provide the flexibility to meet current and changing research and academic needs of the discipline. There aren’t sufficient existing surge spaces on campus to relocate the School and allow the necessary gut renovations to proceed to the existing building. Relocation, too, must consider that classroom scheduling, faculty, research, and myriad support functions (such as libraries, administrative offices, and student services) that are clustered on the Academic Podium and are shared among the various schools and departments on campus to achieve operational efficiencies. Accordingly, the University is in the design phase to construct a new Business School. This project was funded in the 2008-09 enacted State Budget.

This project involves the construction of an approximately 90,000 sq ft new building to be located at the site of the present Visitors’ Parking Lot P1, between Collins Circle and the Academic Podium. The existing visitor parking will be relocated to new lots adjacent to Collins Circle and an expanded State Quad Parking Lot (Project 8). The approximate construction start could potentially be as early as summer 2010. Schematic design plans indicate that the building will be three stories above grade and one below grade. The height of the building will be limited by the height of the Podium to adhere to existing campus architectural and preservation guidelines.

This new building will help achieve several University facilities and program objectives: it is the third and final piece in an effort that was articulated in the 1998 Campus Master Plan (Hillier Group 1998) to create a “front door” or “gateway” to the Uptown Campus, the other two pieces being the Entry Plaza and University Hall. The new building will create a new home for the School of Business that, unlike its current facilities, would enable it to “put the world within reach” by improving its image, demonstrating its programmatic excellence and distinction and enabling it to better foster research

and teaching and alumni relations; it will be transformational by providing several state of the art instructional spaces designed for collaborative teaching and learning; and it will provide the University the necessary surge space to begin the long-term renovation of the Academic Podium. By constructing the new Business School building, the functions in the existing Podium building which house Business can be vacated and gut renovated, setting the stage for a series of future gut renovations to the west end of the Academic Podium.

This new Business School building is currently being designed to provide 29 new, state-of-the art classrooms that will serve the needs of the School of Business as well as the instructional and scheduling needs of the entire University. Indeed, approximately one-half of the new building will be devoted to classrooms and instructional spaces. The addition and expansion of classroom resources helps meet a series of campus classroom challenges, which include a shortage of modern, collaborative classrooms spaces, an over-reliance on lecture halls, and an insufficient number of instructional resources that could serve as surge space so that renovations to existing classrooms can proceed. The University does not have the resources to construct a new, dedicated classrooms building and, therefore, has dedicated a significant portion of the new Business School's structure to this programmatic objective.

To enable construction of this new building, the existing visitor parking will be relocated to new lots adjacent to Collins Circle and an expanded State Quad Parking Lot (Project 8). A rendering of the concept site plan is provided as Figure 1.3-5.

The building is currently in the design phase, but will likely include the following spaces and features: classrooms, tunnel connections to the Podium, and mechanical spaces on the lower level; additional classrooms, computer labs, café, group study rooms, and stock market trading room on the first floor; additional instructional spaces, lounge area, Alumni Development and Career Services, and Student Services on the second floor; and department offices, seminar rooms, and faculty offices and conference rooms on the third floor

4. Relocate Data Center

The University's main Data Center is located below grade on the north side of the Academic Podium between the Fine Arts Building and the Arts and Sciences Building. The Data Center collects, manages and stores all of the University's electronic information, from academic records to donor information. This facility also contains the equipment that manages all incoming, outgoing and cross campus phone and network communications. It was built over 40 years ago to support the earlier technology of mainframe computing; and the electronic data infrastructure has undergone a monumental shift since that time. The Data Center occasionally floods during certain rain events threatening its viability. Additionally, the existing limited floor-to-ceiling height does not allow for the optimum cooling strategies for the space as the center migrates out of necessity, to greater virtualization, co-location and expansion. Growth projections for equipment (server racks, etc.), regardless of whether it was intended to support them, indicate that it will be filled to physical capacity within a five year window. However, because of structural limitations, the existing specialized power and cooling capacities required for such a facility are expected to be exceeded within two years. These limitations place constraints on the computing capacity that will be available for operations and research at the University. Additionally, there are a number of server rooms across campus that place a strain on facilities but cannot be consolidated in the present Data Center due to such limitations.

The importance of a data center to an institution such as the University at Albany cannot be underestimated. Data management capabilities may be a factor in the selection process for research funding, adding another factor to an already highly competitive process. Research computers, their accessibility, their power and their support systems are a key in attracting researchers and graduate students.

A new data center is contemplated of about 40,000 sq ft in floor space. The University had studied cost/benefit, site density, and utilities impacts when considering sites for the Data Center; and working with the SUCF, it had narrowed three possible sites (Building 25, Service Building C (SBC) site, and an undesignated “greenfield,” or undeveloped, area of the Uptown Campus) to a final selection of SBC. The SBC site was chosen as the high bay structure and proximity of utilities allow it to be renovated for a Data Center purpose such that the renovation will only result in a one-story addition of some 11,000 gsf.

Given the sophisticated power and cooling requirements of a Data Center, this project presents some special opportunities for energy-efficient design and operation. This project will offer an opportunity to consolidate some operations from around the campus, and improve the cost and operational efficiency as compared to the present. The estimated cost to relocate the Data Center is approximately \$30 million and is funded from 2009-10 enacted State Budget appropriations. It will be a sophisticated facility to design due to its power and cooling needs. Construction is anticipated to start in spring 2011.

5. Implement Various Athletics Improvements

The role of athletics and recreation at UAlbany is evolving in new and expanded directions as participation in National Collegiate Athletic Association (NCAA) Division I programs continues to evolve and grow in status and reputation on and off the field. Equally important, improved recreational opportunities are key features of expanded “wellness” programming for students and a discriminator in the selection of higher education options by prospective students. With this increased focus and demand on athletics and recreation, the aging and undersized facilities of the University, principally constructed in the late 1960s, can not adequately meet its current and aspirational needs. Accordingly, the University prepared a “UAlbany Athletics and Recreation Master Plan” (Sasaki 2004) to provide a design and planning framework for the University to implement the Department of Athletics and Recreation’s mission over a multi-year, multi-phased period.

This Athletics and Recreation Master Plan (Sasaki 2004) provided conceptual site and building improvements, as well as new construction concepts, for the Uptown campus. It outlined a six phase construction and improvement plan of some \$215 million (in 2004 dollars) to be implemented over an unidentified period of time which would provide the following improvements:

- | | |
|----------|---|
| Phase 1: | Synthetic Turf Fields – construct two varsity playing surfaces south of Indian Quad with seating for 2,500 spectators. |
| Phase 2: | Stadium and Recreational and Convocation Center (RACC, or SEFCU Arena) Improvements – construct a 14,000 seat synthetic turf, multi-use stadium for football, lacrosse, and other events, and expand and connect the SEFCU Arena to connect to this stadium, to be located south of the existing SEFCU Arena. |
| Phase 3: | Track and site improvements - relocate the track facility to the area west of the Physical Education building on the site of the existing tennis courts and provide seating for 3,500 spectators; relocate the tennis courts to a location |

- adjacent to a repurposed University Field, to be transformed into a campus “green.”
- Phase 4: South fields - focus on improving and reconfiguring the various practice fields south of Indian Pond; relocate the baseball field within the existing site and provide 2,500 seats; improve the soccer field by adding 2,500 seats, and make various other improvements to practice facilities
- Phase 5: Construct a new multi-purpose recreational facility – build a new indoor facility of some 196,000 gross square feet south of Dutch Quad and renovate one-third of the existing Physical Education building.
- Phase 6: Practice facility and parking – construct a new 113,000 gross square feet indoor practice facility adjacent between Indian Quad and the fields identified for phase 1 (above) to be used for varsity athletics along with a parking structure in the Dutch Quad lot along with other site improvements.

The 2004 Athletics and Recreation Master Plan was not funded, but it nonetheless provided the vision and framework for subsequent fund raising and campus site planning and resource decision making. Indeed, the first phase of this athletics master plan has essentially been constructed. Synthetic turf fields for varsity lacrosse, field hockey and recreational and intramural use, along with associated seating for 2,000 lacrosse spectators, were constructed and completed in late 2008 with a combination of state-appropriated monies, gifts and donations to the Athletics Department.

For the purposes of the five year outlook of this DGEIS, however, implementation of the full Athletics and Recreation Master Plan (Sasaki 2004), as described above, is not deemed feasible given University resource and construction capacity issues. Concept planning, however, is underway to potentially implement selected, more modest, features of the plan above, with a focus on the highest priority athletics site and facilities needs, as follows: (1) construct a synthetic turf field and other modest improvements to the football facilities to create a multi-purpose facility that would seek a capacity of 10,000 seats, which is unchanged from current capacity levels; and (2) construct improvements to the track. Descriptions of these potential improvements are provided below and their environmental impacts are considered elsewhere in this document.

Football facilities improvements

University Field at UAlbany was constructed in 1969 and is the home of UAlbany football with bleacher seating for 5,000 and hillside lawn seating for 5,000 at capacity (<http://www.albany.edu/sports/facilities-out.htm>). The playing surface is grass and is surrounded by a 400 meter track which is used for recreational purposes, but is deficient on a number of levels and is inadequate for varsity training or competition (see track description below).

The UAlbany Great Danes play football in the Division I Football Championship Subdivision (formerly known as Division I-AA) as an associate member in the Northeast Conference (NEC). The Athletic and Recreation Master Plan (Sasaki 2004) concluded that “the present shortfall in adequate space can only worsen as the University attempts to meet its projected enrollment growth and program improvements at the Division I level over the next 10 years.” This is seen as especially true with respect to University Field, which does not meet current Division I standards and hampers the competitive recruiting process for student-athletes, as well as the general student body. More specifically:

- the football facility is oriented east-west, rather than north-south as virtually all other football facilities, and thus provides sun and glare issues for players;

- seating is deficient, with extremely poor and distant sight lines and aging, unappealing bench and metal frame seating that is far removed for spectators;
- the press and coaches boxes are located on top of the Physical Education (P.E.) building and do not meet current building codes and modern media standards;
- the amenities, such as rest rooms, ticketing, and food/vending, are shared in inconvenient locations in the P.E. building; and
- the field surface is uncovered natural turf, which is hard to maintain in the Albany climate and remains unusable during wet and snow seasons for football or other uses.

At the present time, for the purpose of this DGEIS, the University is considering upgrades to the football facility to, in the future, emerge as a “multi-use athletic facility” (referred to in this DGEIS as such) (Heery 2008, Heery 2009). None of the options below are fully funded or in the design phase. They are instead in various stages of conceptual planning and could potentially be constructed. All of the concepts share the following features:

- Relocating University field to a location directly southeast of the P.E. building. The relocation area, circled in green, is shared as Figure 2.3-2.
- Targeting maximum spectator seating capacity to approximately 10,000, which is the same as current capacity. Seating, however, would be vastly improved through more modern grandstand construction and/or with more modern rented bleachers.
- Construction of a synthetic turf field as the playing surface.
- Installation of improved, code-compliant, permanent or temporary/rented press and coaches boxes.
- Construction of various utilities (water, power, sanitary, storm) improvements and connections.

The potential site on a location southeast of the P.E. building was identified and selected as an optimal site based on a thorough analysis of five alternates (Figure 2.3-2), more fully described in Section 2 of this document.

Track facilities improvements

The existing 400 meter track is in disrepair and can not be used for the competition needs of the existing varsity men’s and women’s track teams. It was originally constructed as a 440-yard track that was reconfigured to 400 meters. As a result, one turn is slightly shorter in length than the opposite turn. The current track does not meet NCAA or IAAF (International Association of Athletics Federation) regulations, and has not hosted a sanctioned meet or a championship meet of any type since 1993. More specifically, the track suffers from the following deficiencies:

- Deteriorated surface conditions.
- Does not meet standards for NCAA or IAAF.
- Does not allow for throwing events in infield and only minimal capability for other field events.
- Does not have the minimum number of lanes required to meet NCAA or IAAF standards. There are only seven lanes on the turns and the backstretch.
- The turns are not symmetrical.
- Does not allow for current technological scoring and timing systems.
- No drainage system for the track, resulting in puddles and water build up.

Accordingly, similar to, and integrated with, the approach to football facility improvements, the University is contemplating improvements to the track facilities within the next five years. Various

scenarios are being investigated but the work would retain the track in its current location and improve the facilities to meet NCAA and internationally accepted standards, which entails a 9-lane, 48-inch wide, durable, all weather track surface, multiple runways for field events and longer straight-aways on both sides. The work, too, will likely add an artificial turf field to the infield location; and improve lighting, seating, and other amenities.

6. Purple Path Continuation

The “Purple Path” is a planned multi-use recreational loop around the inner perimeter of the campus ring road of approximately five kilometers (3.2 miles). As contemplated, it would offer an opportunity for the campus community to have a dedicated corridor for non-motorized uses such as jogging, biking and walking where nothing formal of this nature exists. The paved surfaces would be maintained year-round, offering longer distance exercise options for those who wish to use it. The concept for the path includes both paved and non-paved surfaces in parallel, where possible, with non-paved surfaces remaining unplowed in the winter and available for cross country skiing or snowshoeing. The paved surface, where possible, will be 8 feet wide and designated as a multi-use path while the non-paved surface, where possible, will be 6 feet wide, constructed out of an aggregate material, and designated as a running path (Trowbridge & Wolf 2009b).

At present, the campus has no continuous walkways around the campus; the existing system of paths consists of varying surfaces, some paved, some unpaved. The intent for the Purple Path is to promote a low environmental impact, walkable campus environment. Residents in the surrounding neighborhoods have indicated that they also use the campus grounds for jogging and walking, and the continuation of the Purple Path will make this a more fulfilling and safer experience.

In 2005, the University’s Graduate Planning Studio published a report titled “The Purple Path – the Multiple Use Path for the University at Albany Community” (Graduate Planning Studio 2005). It evaluated the existing pedestrian options for the development of a proposal for the Purple Path. The stated objectives were to:

- “...help humanize the campus by offering students, faculty & staff a great place to run, walk & bike in a scenic and educational environment.”
- “...provide needed connections to local neighborhoods and retail establishments as well as regional transportation networks.”

Other benefits of the multi-use path are the potential for a reduction of automobile use due to the improved pedestrian access from around and off campus (such as better connection to bus routes); improved health and fitness of walkers and joggers; an improved, more accessible campus for both the campus, especially at its fringes, and the surrounding community; and an aesthetically improved perception of the campus and its gateways.

The report included a count of users in sections of the path, including those segments that are not constructed, but where pedestrians, runners and bicyclists make use of available space along the proposed route. Based on a breakdown of the proposed route into various sections, the section between Tricentennial Drive and the Social Science/Podium Exit saw the maximum use during the period studied, a total of 354 users over a one hour (12:00 – 1:00 p.m.) period.

The first section of the Purple Path was constructed in 2007. It runs one-third of a mile long, stretching from the corner of the baseball field to the entrance of the SEFCU Arena parking lot. It

consists of a two-lane trail -- a nine-foot-wide blacktop-paved path for walkers and a six-foot-wide path with crushed stone for runners -- with a grassy area between the two. The Path includes bench seating and enhanced lighting.

Based on 2009 design guidelines from the Landscape Master Plan (Trowbridge & Wolf 2009b) and recommendations from the 2009 Pedestrian & Traffic Safety Improvement Plan (Delta Engineers 2009), this project, in concept, will also address the following:

- Repair and replace underground utilities within the work area.
- Realignment of intersections along University Drive to be perpendicular with the roadway. This will solve existing sightline issues and improve the overall safety for drivers and pedestrians.
- Introduce new crosswalks and improve existing ones. This includes comprehensive signage on University Drive that requires vehicles to yield to pedestrians at each crosswalk.

Continuation of the planning and design process for the remainder of the Purple Path is anticipated to potentially restart in the fall of 2009. Construction of this project could start in summer 2011.

7. Northern Landscape Improvement Project

In 2005 the University prepared a Landscape Master Plan for selected portions of the campus (Trowbridge & Wolf 2008), and the 2009 “Campus Heritage Preservation Plan,” prepared for the University at Albany by Mesick, Cohen, Wilson and Baker Architects (Mesick Architects 2008), also addresses some landscape issues (page 57 *et seq.* of that document). In 2008 UAlbany embarked on a landscape master planning process in consultation with Trowbridge & Wolf Landscape Architects (Ithaca, NY). All three studies stress that landscaping is a critical component of the visual aesthetic of the Uptown Campus design. Governor Nelson Rockefeller selected Edward Durell Stone to design a campus that concentrated buildings in the center of the campus, leaving parkland and cars around the perimeter. Since the initial construction of the UAlbany Uptown campus, many of the plantings around the Academic Podium have been altered, are in poor health or dying, and/or are no longer the original species. Moreover, buildings and infrastructure added over the years (walkways, parking lots, etc.) have also impacted the vegetative landscaping. For example, seasonal visual effects of diverse plantings have not been fully considered in the existing landscaping.

The objective of the Northern Landscape Improvement Project is to continue the evaluation and upgrade of landscaping consistent with the historic nature of the Academic Podium with construction work to commence as early as spring 2012. The outdoor spaces between the Academic Podium and the two residential quadrangles to the north of the Podium – the State and Colonial quads – will undergo significant renovations. The concept design for this project is consistent with campus architectural preservation objectives and seeks to maximize pedestrian-only and recreational and green spaces. Where parking will remain, it will be better located adjacent to the Academic Podium and will be largely dedicated to handicapped spaces. In renovating these areas UAlbany intends to improve campus life, address critical maintenance issues, and improve public safety in the following aspects:

- **Increase Pedestrian Safety** – The interaction between vehicles and pedestrians will be minimized. The worn-down, intuitive paths will be formally constructed with attractive pavers and significantly improved with lighting, seating, and other amenities.

- **Address Underground Utility Upgrades** – The vast, hidden underground network of storm water, sewer, and other pipes and systems will be upgraded and repaired while the site is disturbed.
- **Restore Green Spaces** – The Landscape Master Plan (Trowbridge & Wolf 2009b) has surveyed every tree on campus ranked their condition (see below), with entire stands of trees in need of imminent replacement. This project will remove and replace trees consistent with a new planting, pathway, and lighting plan.
- **Improve Quality of Life** – A more park-like setting will be created with pedestrian pavers, improved lighting for security, new benches for informal gathering, and new, sustainable landscaping

In 2009, as part of UAlbany's Landscape Master Plan, Trowbridge & Wolf Landscape Architects conducted an overall assessment of vegetation on campus (Trowbridge & Wolf 2009a). A general plant health index was generated to give UAlbany a baseline for plant conditions. A total of 298 trees were surveyed at the State and Colonial quads, thus, providing an assessment of existing conditions, summarized as follows:

- approximately 6% of campus plantings are categorized as dead or dying and should be removed.
- 55% of campus plantings are in need of remediation.
- 39% of campus plantings are in good health.
- the campus landscaping is represented by several species often planted in monoculture, including Austrian pine, pin oak, honey locust, and red and sugar maples.
- the Austrian pines are heavily infested (72%) with an incurable fungal disease.
- the pin oak thrives in acidic, swampy conditions, and not the highly compacted soils on campus; many of these trees have died or been removed.
- tree selection needs improvement: recently planted ash (being decimated by insect infestation) and Norway maple (very invasive species) are not recommended for use; the thorny version of honey locust requires constant maintenance to protect passersby from injury.

Further, the landscape assessment articulated a need to provide greater species diversification to campus plantings. Currently, three species (pin oak, Austrian pine and honey locust) make up two-thirds of all campus trees. These three dominant species are planted in large monocultures, a practice that the landscape master plan will attempt to address by introducing a diversification of species based on a list of planting options recommended by UAlbany's landscape architect consultant.

The Austrian pine is the dominant evergreen on campus making up 33% of the entire share of trees. While this species was a good choice for the campus at the time of planting due to its salt tolerance and aesthetic magnificence, 72% of these trees have been decimated by the fungal disease known as *Diplodia pinnea*. *Diplodia* spreads quickly and is characterized by dead branches and blight near the tip causing the trees to die which can be seen in the existing monoculture groupings on campus. In the areas encompassed by the Northern Landscape Improvement Project, 88% of the Austrian pines currently suffer from *Diplodia*.

The pin oak is another dominant species on campus making up 18% of the entire share of trees. This species is native to swampy areas and, therefore, in conflict with the habitat found on campus. 42% of these pin oaks suffer from chlorosis and include symptoms such as the yellowing of leaves, stunted

growth and eventual death. In the areas encompassed by the Northern Landscape Improvement Project, 6% of these trees currently suffer from chlorosis.

As a further component of the planning effort for this project, a set of design guidelines was prepared for consistency in the landscape planning for the UAlbany Uptown Campus (Trowbridge & Wolf 2009b). These guidelines address campus spaces, site materials, American Disabilities Act (ADA) and code compliance, site furnishings (such as bike racks, lighting, benches), plants and landscaping, and LEED considerations. The latter includes topics such as erosion and sedimentation control, alternative transportation storm water management, light pollution reduction and water efficient landscaping; these all are critical environmental resource components, the discussion of which in these guidelines further institutionalizes appropriate consideration of these topics in University activities.

8. State Quad Parking Lot Expansion

There have been several parking studies performed for the University. In 2001, Creighton Manning Engineering (CME) prepared a report titled “University at Albany Campus-Wide Vehicular Parking Study” (CME 2001) which was updated in 2004 (CME 2004). These reports evaluated available parking, parking lot locations with respect to proximity to buildings, parking demand, and variation in demand, followed by options for future consideration. Stakeholder meetings were held so that the campus community would have input to the evaluation process. An important consideration was the growth in the future student population to 18,000 students and of the faculty and staff to 3,600, the former milestone which was reached in the 2008-2009 academic year. This study had several recommendations for addressing parking needs including the need for additional campus parking.

Subsequent studies such as the Concept Site/Landscape Design study by Thomas Balsley Associates in 2002, the Landscape Master Plan (Trowbridge & Wolf 2009b) and the Pedestrian and Safety Improvement Study (Delta Engineers 2009), supported the expansion of the State Quad Lot as a means accommodating parking displaced elsewhere on campus to support campus preservation and restoration, the beautification of the campus, and improving pedestrian safety.

This project would provide space for approximately 250 vehicles, depending on need based on planning evaluations, in an area due west of the existing State Quad Parking area in a site that is presently lawn space. This parking expansion will replace parking lost due to a number of planned projects. Specifically, the construction of the new Business School Building will likely displace some 100 specialty spaces in the area between the Podium and the new Business School site due to construction staging and contemplated green space enhancements. Other planned landscape improvements between the dormitories and the Podium could potentially displace another 200 parking spots that could be partially offset by this expansion. It is anticipated that construction for this project will begin in May 2010, in advance of the planned construction start for the Business School building.

9. Multi-Discipline Science Surge Building

A “surge” building is being contemplated for construction so that it may provide space for science programs and for occupants to be relocated and existing buildings can be renovated. There is an urgent need to address deferred maintenance and thus to gut renovate the 13 original and aging buildings on the Academic Podium. Renovations must recognize the fact that the academic, instructional and research functions need to continue uninterrupted, and the fact that there is virtually no unused space on campus to serve during these renovations. As previously stated, Project No. 3 will

facilitate the emptying of the existing Business Building which in turn will create surge space to begin the gut renovation of the non-science buildings on the west end of the Podium.

Similarly, and because of the unique infrastructure and building systems needed, a flexible, multi-discipline science and instructional surge building needs to be constructed adjacent to the east side of the Podium where most of the science buildings are located. This building would facilitate the renovation of science buildings such as Biology, Chemistry, Physics and Earth Science; the renovation of instructional spaces such as those in the Lecture Center; and the renovation of major campus assembly and meeting spaces such as those in the Campus center. Although specific configurations and detailed programming are still in the concept phase, conceptually this new building would need to be approximately 150,000 gsf, and two to three stories tall depending on the resolution of concerns around historic preservation of the Podium and availability of land in the area. This project is not presently funded nor is it in any formal planning or design phase.

Even with this new surge building, given the disruptions and inconveniences that would be caused by two to three concurrent major building renovations on the Academic Podium, it is projected that it will take well over 20 years to get through the renovation and restoration of the 13 buildings on the Podium, assuming available funding and ideal project phasing conditions. At this rate, some of these buildings will be over 60 years old before they are renovated and will require the interim infusion of significant critical maintenance and repair dollars to maintain safe and reliable occupancy. Therefore, the need for such surge space remains a very high priority to the campus and conceptual planning. Construction could potentially start as soon as fall 2013 should funding emerge and design commence on a fast track.

10. Service Building Renovation

This project involves renovations and expansion of selected service facilities to address the following: deferred maintenance needs; to consolidate operations and make space available for other projects and functions in this Capital Projects Plan; and to accommodate changing program needs.

Specifically, this project would renovate and expand Service Building A (SBA) located in the southwest quadrant of the campus and reconfigure and expand the existing Grounds Building service complex located in the southeast quadrant of the campus. Approximately 1,200 gsf would be added to SBA, approximately 2,500 gsf would be added to the Grounds Building proper, and a stand-alone 20,000 gsf one-story building would be constructed within the Grounds service complex. This project is currently in design with construction to begin as early as Fall 2010.

As a result of the work above, both SBC and Building 25 (the old Health Center building) will be made available as potential sites for the relocation of the Data Center (Project Number 4) and/or for other space needs of the campus anticipated with the implementation of other renovation work described herein. In addition, the work above would provide code-compliant, updated spaces for several maintenance shops and repair functions, including mechanical repair and vehicle operations. Both shops currently suffer from inadequate facilities such that, for example, they can not provide service to the University's planned hybrid electric bus fleet and other larger vehicles due to inadequate 1960s-era bay sizes and undersized hydraulic lifts.

Service Building A has not had a major rehabilitation since it was constructed in the early 1960s. A June 2007 condition assessment ranked several building components (HVAC, air handling units (AHU), electrical, roof, windows, lighting, etc.) as poor or fair. This work will renew, restore and

renovate the building. Further, the work will make the building handicapped accessible, improve exiting, life safety conditions, and energy efficiency.

In addition to this deferred maintenance and restoration, this project will expand the SBA space by some 1,200 gsf so that all of the units that deal with the renovation, repair and maintenance of the University will be housed in one location. Currently, the office of Architecture, Engineering & Construction Management (AECM) is housed in make-shift offices in the old Commissary Building (SBC). Bringing AECM into SBA allows for SBC to be used as the selected site for the data center relocation and to serve other campus space needs to help facilitate the renovation of the Academic Podium. In addition, the University's Five Quad EMT (emergency medical technician) services, including garages for its ambulances, will be relocated from Building 25 (the old Health Center) to a renovated SBA, allowing that building to be repurposed for other uses, similar to SBC.

The Grounds Building is a high bay pre-engineered metal type building that was constructed in 2006. Construction of an addition is proposed to house the campus general warehouse being displaced by the potential relocation of the Data Center. This would enable sharing of the existing loading dock and, with consolidation and increase efficient use of adjacent space within the existing building, improve the overall management and operational efficiency.

The potential 20,000 sq ft new pre-fabricated metal building addition to the complex will contain space for shops relocated from SBA. These shops are small engine, vehicle operations center, the metal shop, and mass transit operation. This project will increase operational efficiency, address long-standing work issues and allow the campus to properly service its modern bus fleet. Construction could begin as early as fall 2010.

11. Entry Improvements

In March of 2009 the University, in consultation with Delta Engineers, undertook a study titled the Pedestrian & Traffic Safety Improvement Plan (Delta Engineers 2009), which is ongoing at the time of this writing. Some of the goals of the program study include taking a comprehensive look at pedestrian & traffic safety on the Uptown Campus as well as incorporating data from past related studies to create a comprehensive plan for incorporating various efforts into an integrated implementation plan that unifies all planning related to pedestrian and traffic safety. Elements of this study include, but are not limited to, the identification of recommendations to improve the alignment, arrangement and composition of main entrances from Washington and Western Avenues. In coordination with this task, Delta Engineers completed a comprehensive traffic analysis to determine speeds and volumes for vehicular, pedestrian and bicycle traffic at critical locations along University Drive. In doing so, Delta provided ratings for the existing level of service (LOS) at all intersections which, in turn, will guide their design recommendations to improve LOS at campus intersections and help inform traffic analyses studied elsewhere in this DGEIS document.

The University, as part of the landscape master plan, also is working closely with Trowbridge & Wolf Landscape Architects to improve the design of the following campus entrances:

- Entrance at Western Avenue
- Entrance at Fuller Road and Tricentennial Drive
 - This entrance is slated for the construction of a roundabout by Albany County and is being reviewed and coordinated as such within the University's Pedestrian & Traffic Safety Improvement Plan
- Entrance off of I-90 at Washington Avenue

- Collins Circle entrance at Washington Avenue
- The easternmost campus entrance at Washington Avenue.

These entrances to campus are being re-considered in order to provide greater safety and aesthetic improvements which will enhance first impressions of the Uptown Campus. These improvements will include the re-design of existing landscape and plantings at the entrances as well as upgrading walkways and paths to improve access to the existing network of pedestrian facilities of the surrounding roadways. Construction activities, which could begin in 2011, may include improvements to turning lanes, bus stops and shelters, signals, crosswalks, pedestrian and vehicular signage, landscaping and grading, planting of new vegetation, traffic calming devices, and vehicular access control. Overall, this will develop a more inviting and secure environment for students, staff, visitors and the surrounding community to the campus.

12. Bus Rapid Transit (BRT)

This project is intended to develop an integrated, multi-modal transportation system over a ten plus-year period and to identify strategies and projects that would help to facilitate connections and linkages between the University at Albany and other mass transit facilities throughout the Capital District along with the Harriman Research and Technology Park and perhaps the College of Nanoscale Science and Engineering (CNSE) site. In concept, this project would establish a transportation spine linking the campuses to Crossgates Mall and downtown Albany.

The BRT service is conceived as an integral service in the wider Capital District Transit Authority (CDTA) service network and link to other regional resources such as the proposed Albany Convention Center. The proposed BRT service will provide a more convenient link from the three UAlbany campuses to student neighborhoods. The high level of transit service between job centers at the campuses and downtown, retail, entertainment areas, and the residential neighborhoods in-between will help the community meet environmental goals and also make living and working in Albany a more attractive choice in the future. The BRT service will be an enormous benefit to the UAlbany community as the University is the largest single generator of transit ridership along the proposed corridor.

The purpose of this project is to develop the design of the BRT to a level of detail that will allow preliminary engineering to be completed showing the required street modifications, stations, terminals and support infrastructure. This will provide the basis for implementation funding. Implementation of this plan is beyond the control of the University, which will collaborate with the CDTA and other transportation entities to make this concept a reality; however, based on reasonable planning schedules, a date of approximately 2013 is anticipated for implementation.

UAlbany, alongside its consultant for the Pedestrian & Traffic Safety Improvement Plan (Delta Engineers 2009), has been working closely with CDTA on the conceptual design for the proposed segment that will traverse the University campus. At the time of this writing the concept calls for a cross-campus spine which, in addition to a dedicated BRT lane, will provide a multi-use alternate route across campus between the Purple Path at University Drive East and University Drive West.

13. Bicycle-Pedestrian Path

The current layout of roadways and sidewalks from the inner campus toward the ring road does not provide adequate access to the future location of the Purple Path and requires upgrades to enhance and promote pedestrian, biking, and other sustainable modes of transportation and recreation. Motorized vehicles intersect too often with the pathways that extend from the Podium to the ring

road, and inadequate walking and biking facilities make it difficult for people to safely access the Purple Path. The intent of this project is to provide pedestrians with the right-of-way in all situations and reconfigure the pathways and roadways accordingly. Removing parking and restricting the majority of vehicle access from proposed car-free zones would improve the pathways that connect to the Purple Path.

Specific recommendations were made to the University to improve such pedestrian and bicycle circulation on the University at Albany uptown campus. A 2006 student-written report called the “University at Albany Golden Grid Bicycle and Pedestrian Plan” (Graduate Planning Studio 2006) highlighted a series of site improvements that could improve safety, usability, and image of the campus by constructing greenways, paths, trails, and bicycle lanes in roadways to encourage pedestrian and bicycle circulation.

This project would seek to implement all, or portions, of the recommended work, depending on funding and coordination with other projects described herein. Conceivably, the proposed project would design, construct, and improve new and existing paths, better connecting each quad and parking lot with the Podium. It would also include improved lighting, security, benches, bus shelters and bicycle racks adjacent to the paths. The creation of the Purple Path around the campus will be a valuable asset to the University community and would be linked to these other paths. A date of 2011 is anticipated for construction of the path, safety elements and other features.

1.4. Baseline Project Parameters

Table 1.4.1 presents a summary of the baseline project parameters for each project in the Capital Project Plan. These parameters represent information from planning documents prepared for the respective projects (and referenced herein), to the extent that concepts, feasibility studies, or other plans are available as of the preparation of this DGEIS. These parameters provide the basis for the environmental impact evaluation as documented in Section 3 of this DGEIS. Significant project modifications from these criteria may necessitate further evaluation of environmental impacts, and the preparation of a supplemental EIS, for one or more of the respective projects prior to implementation.

Table 1.4-1. Baseline Project Parameters.

Project		Footprint/ New Impermeable Surfaces	Bldg. Height	Number of Occupants (occupants not new to campus)	Heating/ Chilling/ Power	Potable Water Needs	Wastewater Generation	Other Items
1	Student Housing Project	281,000 sf	Approx. 55 ft	Approx. 500 beds	Cooling: 400 tons Heating: 6.6 million Btu/hr	65 gal/ pers/ day = 32,500 gpd (residents)	32,500 gpd	350 parking spaces
2	Campus Center Master Plan	25,000 sf	55 ft	7,000 – 10,000	Cooling: 125 tons Heating: 2.5 million Btu/hr Power: 100kW	15,000 gpd	15,000 gpd	
3	Construct New Business School Building	46,700 sf	roof: 35 ft 6 in skylight 10 ft	1,951	Cooling: 325 tons Heating: 3.75 million Btu/hr Power: 748-958 kVA	16 gal/ pers/day = 31,200 gpd	15 gal/ pers/day = 29,300 gpd	

Table 1.4-1. Baseline Project Parameters.

Project		Footprint/ New Impermeable Surfaces	Bldg. Height	Number of Occupants (occupants not new to campus)	Heating/ Chilling/ Power	Potable Water Needs	Wastewater Generation	Other Items
4	Relocate Data Center	11,000 sf	Match existing building height +/- 6 ft	40	Cooling: 400 tons Heating: 560,000 Btu/hr Power: 2500 kVA capacity	444 gpd for staff; 25,000 gpd cooling makeup = 25,444 gpd	1500 gpd sanitary; 9,000 gpd cooling tower blowdown = 10,500 gpd	
5	Multi-Use Athletic Facility	93,000 sf	89 ft (same as at present)	10,000		50,000 gpd	50,000 gpd	
8	State Quad Parking Lot Expansion	50,000 sf	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	250 new parking spaces
9	Multi- Discipline Science Surge Building	100,000 sf	20 ft	1800	Cooling: 725 tons Heating: 10 million Btu/hr Power: 648 kVA capacity	36,000 gpd	36,000 gpd	
10	Service Building Renovations	24,325 sf	14 ft (addition)	122 (total)	Cooling: 32.5 tons Heating: 540,000 Btu/hr	375 gpd	375 gpd	22 new parking spaces
Totals		631,025 sf	N/A	N/A	Cooling: 2007.5 tons Heating: 23.95 million Btu/hr	190,519 gpd	173,675	372 new parking spaces

Information for the State Quad Parking Lot Expansion (Project No. 8), Multi-Discipline Science Building (Project No. 9), and Service Building Renovation (Project No. 10) is conceptual at this time; except for the description in Section 1.3, more information is currently unavailable. Total new building footprint area, heating and cooling needs, potable water needs and requirements for wastewater discharge capacity, and new parking spaces to be constructed as part of the Capital Project Plan, to the extent they are presently known, have been provided in the table above. The potential environmental impacts of these baseline parameters, and available mitigation, are described in this document individually and collectively, as appropriate.

It should be noted that numbers above will be significantly offset by contemplated, but not yet funded, long-term sequenced interior renovations of the existing Uptown Campus buildings to be implemented outside of the five year horizon of this DGEIS. Uptown Campus buildings will be vacated for renovation and thus reduce the need for water, wastewater, power, and heat/cooling generation needs. The duration of this long-term, sequenced, interior renovation effort is unknown (and unfunded) but could continue for 20 or more years into the future, given the aging condition of the buildings, construction capacity, operational needs, and funding concerns.

The immediate subsequent interior renovation projects that are likely first candidates for nearer term (5-10 years) renovation include the following:

- The existing School of Business building (100,000 gsf on the Academic Podium) after occupants are moved into the New Business School Building (Project No. 3) and other locations on campus;

- Chemistry (106,000 gsf on the Academic Podium) – or some other science building or portion of building – after occupants are moved into the Multi-Discipline Science Surge Building (Project No. 9);
- An additional residence hall of approximately 100 beds (or approximately 30,000 gsf) after the construction of Project No. 1 (Student Housing Project) is completed; and
- Academic Podium space, at approximately 50,000 gsf, once the Campus Center Master Plan (Project No. 2) and Data Center Relocation (Project No. 4) are implemented.

These offsetting reductions in resource need are not quantified – as the funding and project timelines for this work are purely conceptual – but will nonetheless mitigate the impact of the Capital Project Plan described and analyzed herein.

Section 3 (Environmental Setting) of this DGEIS presents the existing conditions of the Uptown Campus and affected area with respect to environmental resources, describes the potential impacts (if any) to these resources based on the above project parameters and other relevant information, and describes mitigation options that either have been incorporated into the respective project plans or are reasonably available for implementation. Unavoidable adverse environmental impacts that remain are described in Section 4 of this document.

1.5. Impact Evaluation

The approach to the evaluation of potential impacts from the implementation of this Capital Project Plan was based on the following:

- The selection of sites for the respective projects is interrelated. As part of an overall campus plan, site locations for individual projects can not be considered in a vacuum, due to limited land availability at the Uptown Campus.
- The definition of this action, preceding in Section 1.4, is the descriptions of the individual projects in the Capital Project Plan. With the quantitative project parameters presented in Table 1.4-1, they constitute the description of the action, and represent the threshold limits for the respective projects. Should these parameters be modified significantly, a supplemental environmental impact statement may be required to address that element of the plan.
- Except where specifically noted, it has been assumed that the projects described herein will all be implemented at the same time and, therefore, the maximum potential impacts on environmental resources have been evaluated. One example is air emissions from these projects – the potential stationary source air emissions from these projects have been estimated and have been evaluated cumulatively, rather than individually in any specific sequence, since the sequencing of the projects is a factor potentially subject to change.

1.6. Regulatory Review and Approvals

1.6.1. State Environmental Quality Review Act (SEQRA)

Pursuant to New York State Environmental Conservation Law Article 8, State Environmental Quality Review Act (SEQRA); and Part 617 of Chapter 6 of the New York Code of Rules and Regulations

(NYCRR), and the adoption of a positive declaration by the University at Albany, State University of New York, UAlbany has prepared this DGEIS for the “Capital Project Plan.” In accordance with SEQRA, where available, the DGEIS will address specific adverse environmental impacts which can reasonably be anticipated. Moreover, measures to reduce or mitigate the significant adverse impacts are identified.

In 6 NYCRR Part 617.10 (a), the SEQRA regulations state that “Generic EISs may be broader, and more general than site or project-specific EISs and should discuss the logic and rationale for the choices advanced. They may also include an assessment of specific impacts if such details are available. They may be based on conceptual information in some cases.” The elements of the Capital Project Plan are in various stages of planning, with details for some projects considerably less mature than others. Locations and project parameters may not as yet have been selected and/or may be incomplete. These are among the factors that make a DGEIS appropriate in this instance in that it constitutes:

- “...a number of separate actions in a given geographic area which, if considered singly, may have minor impacts, but if considered together may have significant impacts...” (6 NYCRR Part 617(a)(1), and
- “...an entire program or plan having wide application...” (6 NYCRR Part 617(a)(4)).”

As part of the SEQRA process, the public was invited to comment on this proposed action. The following summarizes the public outreach and information activities to date:

- UAlbany staff and its SEQRA consultant were invited to attend and presented at a meeting on November 13, 2008 of the McKownville Improvement Association to present an outline of the projects included in the Capital Project Plan, and of the SEQRA process for this proposed action. Approximately 20 people attended. A question and answer session followed the presentation.
- On March 3, 2009, a “Town Meeting” was held at the University at Albany for university students, faculty and staff, to present an outline of the projects included in the Capital Project Plan, and of the SEQRA process for this proposed action. Approximately 60 people attended. A questions and answer session followed the presentation. This meeting was announced via email to the campus, on the UAlbany web site, as well as in the Albany Times-Union events calendar online and in print.
- An optional scoping meeting was held for the project on March 10, 2009. The scoping meeting was announced in a legal notice both online and in print in the Albany Times-Union, on the Times-Union events calendar (both online and in print), and on the UAlbany web site. Additionally, the McKownville Improvement Association circulated the announcement in emails to its members. Approximately 22 people attended the scoping meeting and four people made verbal comments. A court stenographer took a documentary record of the meeting and a transcript was produced. Following the formal scoping meeting, an informal question and answer session was held.
- On September 17, 2009, a public meeting was held at UAlbany with residents of the Tudor Road neighborhood, and other residents, to discuss the proposed Student Housing Project (Project No. 1). The public was presented with a concept outline of the project proposal, and was encouraged to make comments at that time. This meeting was announced on the UAlbany web site, as well as in the Albany Times-Union events calendar online and in print. University staff also visited the neighborhood and handed-out notices. Approximately 70 people attended.

- On October 29, 2009, a public meeting was held at UAlbany with residents of the Tudor Road neighborhood, and other residents, to discuss the proposed Student Housing Project (Project No. 1). The public was presented with preliminary site plans and project concepts, and was encouraged to make comments at that time. This meeting was announced on the UAlbany web site, as well as in the Albany Times-Union events calendar online and in print. In addition, the University mailed a meeting notice to every residence that signed-in at the September 27, 2009 meeting. Approximately 50 people attended.

Documents relating to the SEQRA process have been posted by UAlbany to a page on its web site dedicated to these activities, located at: <http://www.albany.edu/facilities/dgeis/>.

Preparation of this DGEIS was aided by the contribution of several agencies that provided technical information incorporated and referenced in this document. Key contributors included:

Infrastructure

- New York State Office of General Services (NYSOGS)
- Albany County Department of Public Works

Regulatory Programs

- New York State Department of Environmental Conservation (NYSDEC)
- New York State Department of Transportation (NYSDOT)
- United States Army Corps of Engineers (USACE)
- Albany County Health Department
- U.S. Environmental Protection Agency (USEPA)

Environmental Setting

- NYSDEC Natural Heritage Program
- New York State Office of Parks, Recreation & Historic Preservation (NYSOPRHP) – Field Service Bureau
- United States Fish & Wildlife Service (USFWS)
- City of Albany
- Town of Guilderland

Information sources are referenced throughout the document with reference citations provided at the end of this document in Section 9. Where appropriate, supporting information also is appendicized.

1.6.2. Permits and Approvals

A wide range of permits and approvals will be required to construct the projects that comprise the Capital Project Plan. Permitting agencies are “Involved Agencies” pursuant to the SEQRA process. As Lead Agency, University at Albany, SUNY will be coordinating with Involved Agencies throughout the SEQRA process. The involved agencies for this SEQRA process have been identified as:

- NYSDEC
- NYSOGS
- DASNY
- NYSDOT
- State University Construction Fund (SUCF)

- NYSOPRHP
- Albany County
- City of Albany
- Town of Guilderland

Table 1.6-1. Permits and approvals.

	Permit	Activity	Agency
	Federal		
1	Section 404 of the Clean Water Act	Work within waters of the United States (including federal wetlands)	USACE
2	33 CFR Sections 322-323	Permits for work or discharges into navigable waters	USACE
	State		
3	Article 15 of the ECL (Protection of Waters, 6 NYCRR Part 608)	Work within protected water bodies (including dredging).	NYSDEC
4	Section 401 of the Clean Water Act (401 Water Quality Certification)	Certification is used to ensure that federal agencies issuing permits or carrying out direct actions which may result in a discharge to the waters of the United States do not violate New York State's water quality standards or impair designated uses.	NYSDEC
5	Article 24 of the ECL (Freshwater Wetlands, 6 NYCRR Part 663)	Regulated activities that may impact a freshwater wetland.	NYSDEC
6	Permit to Construct an Air Emission Source (Article 19 of ECL; 6 NYCRR Part 201)	Permit to construct and operate an air emission source, if greater than 10 million Btus.	NYSDEC
7	Petroleum Bulk Storage (Articles 17, 37 & 40 of the ECL; 6 NYCRR Parts 610, and 612-614)	Tank registrations. May include preparation and implementation of SPCC Plan.	NYSDEC
8	SPDES General Permit for Storm Water Discharges from Construction Activity (GP-0-08-001)	Storm water discharges from construction phase activities one-acre or greater. Includes preparation and implementation of SWPPP.	NYSDEC, Guilderland (T), Albany (C)
9	SPDES Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity (GP-0-06-002)	Storm water discharges from certain industrial activities (i.e., vehicle maintenance). Includes preparation and implementation of SWPPP.	NYSDEC
10	Permit to Construct an Air Emission Source (Article 19 of ECL; 6 NYCRR Part 201)	Permit to construct and operate an air emission source.	NYSDEC
11	SEQRA (Article 8 of the ECL; 6 NYCRR Part 617)	Environmental impact assessment.	Lead Agency/University at Albany, SUNY
12	SHPA	Consultation for potential impact on cultural resources	NYSOPRHP
13	Code Compliance and Certificate of Occupancy	NYS Building Code Review and approval to occupy building.	University at Albany, SUNY, DASNY, SUCF
14	Highway Work Permit	Cuts and reconfiguration of entrances	NYSDOT

Table 1.6-1. Permits and approvals.

	Permit	Activity	Agency
	Local		
15	Highway Work Permit	Cuts and reconfiguration of entrances	Guilderland (T), Albany (C), Albany County
16	Sewer & Water Connections	District extensions and approval of sanitary sewer and water connections.	Guilderland (T), Albany (C)
Acronyms Btu – British Thermal Unit DASNY – Dormitory Authority State of New York ECL – Environmental Conservation Law GP – General Permit NYCRR – New York Codes, Rules and Regulations NYS – New York State NYSDEC – New York State Department of Environmental Conservation NYSDOT – New York State Department of Transportation NYSOGS – New York State Office of General Services NYSOPRHP – New York State Office of Parks, Recreation & Historic Preservation ROW – Right-Of-Way SEQRA – State Environmental Quality Review Act SHPA – State Historic Preservation Act SPCC – Spill Prevention, Control and Countermeasure SPDES – State Pollutant Discharge Elimination System SUCF – SUNY Construction Fund SWPPP – Storm Water Pollution Prevention Plan USACE – US Army Corps of Engineers			

1.6.3. New York State Executive Orders and Policies

The Governor’s Office has affirmed several previously issued Executive Orders (noted previously herein) that will apply to this Capital Project Plan, and support the need for some of its components, as well as additional Executive Orders that may impact these projects:

- EO No. 111 (issued June 10, 2001) – directing state agencies to be more energy efficient and environmentally aware: “Green and Clean State Buildings and Vehicles.”
- EO No. 142 (issued November 21, 2005) – directing state agencies and authorities to diversify transportation fuel and heating supplies through the use of biofuels in state vehicles and buildings.
- EO No. 2 (2008) – Establishing a State Energy Planning Board and Authorizing the Creation and Implementation of a State Energy Plan.
- EO No. 4 (2008) – Establishing a State Green Procurement and Agency Sustainability Program.
- EO No. 24 (August 6, 2009) – Establishing a Goal to Reduce Greenhouse Gas Emissions Eighty Percent by the Year 2050 and Preparing a Climate Action Plan.

With respect to EO No. 111, the key goal that applies to this Capital Project Plan is:

- II.B. New Buildings and Substantial Renovation of Existing Buildings – “In the design, construction, operation and maintenance of new buildings, State agencies and other affected entities shall, to the maximum extent practicable follow guidelines for the construction of ‘Green Buildings,’ including guidelines set forth in...the U.S. Green Buildings Council’s LEEDTM rating

system.” The LEED Green Building Rating Program of the U.S. Green Buildings Council provides strategies and standards for achieving environmentally responsible buildings in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

With respect to EO No. 142, the key goal that applies to this Capital Project Plan is:

- IV. “NYSERDA shall therefore develop a plan pursuant to which state agencies and public authorities shall purchase, allocate, distribute and utilize bio-diesel heating oil for use in state agency and public authority buildings that currently use oil...”

While EO No. 142 applies to the University at Albany, the University primarily uses natural gas to fulfill its fuel requirements, as well as low sulfur No. 2 fuel oil.

In 2007, DASNY announced that it will require new projects to meet LEED standards.

Additionally, State University of New York Chancellor John R. Ryan adopted the recommendations of the “Report of the SUNY Energy Strategic Planning Task Force, Recommendations for a University Energy Policy” (SUNY 2007) to “Design and construct new buildings or rehabilitate existing buildings using LEED Silver criteria and life-cycle-cost analysis. Energy systems will be designed to maximize efficiency over the life cycle.”

2. Alternatives Considered

2.1. Purpose

This section identifies a range of reasonable alternatives to the proposed components of the Capital Project Plan. These alternatives are considered reasonable in the context of the objectives and capabilities of the University at Albany. Consideration also was given to the environmental effects, reliability and cost effectiveness of these alternatives. In some instances, a final decision as to possible alternatives may not yet have been made since the specific project may as yet only be conceptual, or final scope may be predicated on another project that is planned and precedes it in its implementation.

Selection of project locations involves a complex interaction of factors including functionality (developing surge space in proximity to related campus uses or the need to maintain parking adjacent to athletic facilities, or expansion of existing buildings); accessibility of on-campus parking; interactions between projects in this Capital Project Plan (such as the use of parking spaces for a building necessitating the need for a parking replacement project), and the general space limitations of the Uptown Campus.

The range of alternatives evaluated includes the “no action” alternative, as well as alternatives that address the following issues:

- sites
- sizes
- methodologies (design, construction methods and materials).

Availability of funding may impact the viability or delay the planning process or construction for a given project, or modify the order of priority and sequencing for some of the projects. Additionally, pedestrian safety, the need for pedestrians to cross the campus loop road for routine purposes, and the differing amounts of traffic on certain portions of University Drive are considerations in the selection of locations of some of the projects in this Capital Project Plan.

2.2. No Action Alternatives

As required by SEQRA regulations, the “no action” alternative must be discussed in a DGEIS. By taking no action, UAlbany would not implement any of the 13 proposed projects that comprise the Capital Project Plan. By taking no action, the potential project-related impacts that will arise from the implementation of the Capital Project Plan would not occur. This alternative assumes that UAlbany can continue to function without the new buildings and infrastructure improvements that the Capital Project Plan represents. The following provides a summary of the impacts of the No Action Alternative on the University with respect to each of the projects.

Table 2.2-1. Impacts of No Action Alternative.

Project	Impact of No Action Alternative
1. Student Housing Project	Inability to meet student demand for on-campus housing; overcrowding would continue and University would be hampered from expediting renovations to existing facilities.

Table 2.2-1. Impacts of No Action Alternative.

Project	Impact of No Action Alternative
2. Campus Center Master Plan	Although the existing Campus Center is undersized for a University of this size enrollment, the need for expanded space for student activities and services goes unfulfilled. Moreover, a sequenced rehabilitation plan for the building, predicated on some level of expansion for flexibility, can not proceed.
3. Construct New Business School Building	Business School continues to operate without the advantages of up-to-date technology used at other universities; UAlbany potentially loses students and faculty to better equipped universities; the building, designed to provide surge space for subsequent Podium renovations, if not built, hampers efforts to address overdue upgrades of academic buildings on the Podium.
4. Relocate Data Center	The existing Data Center increasingly will encounter operational difficulties related to space as data processing needs increase and become more sophisticated, and the Data Center infrastructure becomes more inadequate, hampering research competitiveness.
5. Implement Various Athletics Improvements	The ability of the campus to provide intercollegiate and intramural sports facilities of a quality anticipated by athletes and students will compromise the selection process of UAlbany by students and student-athletes. Existing facilities, in need of repair, will continue to be neglected.
6. Purple Path Continuation	The completed Purple Path is intended to make the UAlbany campus more pedestrian and jogger friendly, offering safe recreational activities for the on-campus and off-campus community. This will not occur.
7. Northern Landscape Improvement Project	Landscaping will continue to be inconsistent and, in many cases, dying off, with negative impacts for the overall appearance and quality of life of the campus.
8. State Quad Parking Lot Expansion	Parking on campus will continue to be challenging for faculty, staff, students and especially visitors, whose lot will be removed with Project No. 3.
9. Multi-Discipline Science Surge Building	Without this science surge space for renovation of the Academic Podium, renovations to existing occupied buildings will be difficult, disruptive and largely unable to be implemented as major mechanical systems require long periods of shut-down to be properly abated for hazardous materials and fit-up.

Table 2.2-1. Impacts of No Action Alternative.

Project	Impact of No Action Alternative
10. Service Building Renovation	Consolidation of operations from SBC and Building 25 will not occur hampering long-term surge space needs and renovation plans for the Academic Podium.
11. Entry Improvements	Aesthetic and safety issues, including those for pedestrian safety, will continue.
12. Bus Rapid Transit	Facilitation of mass transit will continue to lag behind its potential, impacting sustainability and “green” objectives of UAlbany; issues regarding on-campus parking will increase at a rate higher than supply of parking spaces.
13. Bicycle-Pedestrian Path	Aesthetic and safety issues, including those for pedestrian safety, will continue; efforts to become more sustainable will be hampered.

2.3. Project Alternatives

The following summarizes the alternatives that have been considered for the individual components of the Capital Project Plan. As noted above, the selection of project locations involves a complex interaction of factors, including land and building space limitations on the Uptown Campus.

The numbering system for the projects follows that of the preceding summary table in Section 1.1.

1. **Student Housing Project** – There are a wide range of options and alternatives to provide student housing. The University is aware of these many options and has had seriously considered all of them prior to selecting the site and the 500 bed University-owned and operated apartment-style housing model under design for this project.

In general, housing can be located on-campus or off-campus; the building itself can be owned by the University, owned all or in-part by a University affiliate, or owned by a third-party entity, either fully privatized or through some other contractual arrangement, such as a master lease, with the University. The land, too, could be owned or ground-leased by the University, an affiliate, and/or a third party firm. Operation and maintenance of housing can be through University staff or through varying levels of privatization or third party arrangements. Given these variables, there are many arrangements and contractual options that can be structured for housing services.

Housing, too, is often provided by specialized third party firms that construct and invest in high density “student housing” facilities adjacent to campuses as profit-making ventures. This type of housing – not sanctioned by, or controlled by a college or university – is not currently marketed or provided anywhere adjacent to UAlbany, although it is prevalent in other areas of the state and the nation.

In the context of considering options, it is important to note that the University at Albany is a state entity under the State University of New York, and as such, under current state law, it is unable, in many cases, to pursue the myriad options described above. There are an array of existing state statutory restrictions on the University’s flexibility to finance, lease, and fashion land and construction arrangements.

A baseline requirement for the provision of any new housing for UAlbany students is the need for the University to operate and oversee any such facility, utilizing on-site University staff. In this manner, the disciplinary rules of the University are enforced, the safety and security of University students are better ensured, and University programs and living-learning initiatives are ingrained into the housing community. Moreover, the physical asset is maintained and protected for the long-term use and needs of the campus.

Another requirement is location. The facility must be constructed on or adjacent to the Uptown Campus for a variety of reasons. The first is financial: all student housing at the University at Albany – and other SUNY campuses – is self-supporting, that is, student room rents pay for the construction, operation, and maintenance of student beds. UAlbany's student population overwhelmingly demands Uptown housing as do their parents. Therefore, to ensure financial success, especially for a higher cost apartment-style project, an Uptown location is required. "Uptown" could suggest locations adjacent to the existing campus, but to construct or lease land that is not on the Uptown campus proper would burden the project with additional, likely unaffordable, costs and/or would be hampered by the laws which limit University property flexibility. A site on the University property was thus selected.

Another reason for the Uptown location is the need for proximity to existing beds. The sizing of the project – at 500 beds – is intended to reduce current overcrowding in existing residence halls and to provide "swing space," or additional bed capacity, so that existing Uptown Campus residence halls can be taken off-line for sequenced renovations far into the foreseeable future. Thus, even after construction, the project will maintain a similar population of Uptown students in residence and provide similar levels of more convenient access to the programs, events, security measures, and other amenities of the Uptown Campus.

Notwithstanding the reasons above for using an Uptown Campus location, the Uptown Campus is the desired area, as well, after serious study and consideration for expansion at the Downtown residential campus, Alumni Quad. This University-owned site, located three miles east of the Uptown campus, was studied as a potential site for new apartment style housing in 2006. The Student Housing Corporation, an affiliate of the University at Albany that owns and contracts with the University to operate the Empire Commons Apartments on the Uptown campus, sought proposals for concepts and costs to construct on that location. After review of proposals, serious issues of building lot size, parking availability, cost, and site density prevented advancement of the project.

Alternatives to the 500 bed project should thus be viewed in the context of the program and financial requirements and restrictions summarized above. In summary: the University must operate the beds; the location must be on or adjacent to the Uptown Campus; the project must be self-supporting; and University land was selected based on affordability and in recognition of State constraints on leasing and property flexibility.

With the above in mind, the University contracted for a feasibility study in 2008 to verify bed needs, review various available means to provide housing, and to analyze site locations on Uptown Campus property for construction of such housing.

The feasibility study, conducted by S/L/A/M Architects (SLAM 2008), verified a future need of some 500 apartment-style beds. The bed need is principally related to expanding capacity to address existing overcrowding in residence halls where approximately 400 students were housed

in triples and lounge spaces as recently as fall 2009. New beds are also needed to provide swing space so that the present pace of dormitory upgrades can be expedited. The current schedule renovates about 100 beds per year, which, on a base of 7,200 beds, is an untenable practice that threatens the long-term preservation of campus assets. Finally, new beds are needed, as each residence hall renovation results in a net bed loss, as spaces are reconfigured comply with current building code requirements and ADA standards.

The feasibility study analyzed the entire Uptown Campus, depicted in as Figure 2-3-1, for potential sites for construction of the 500 beds. The following criteria were used for initial site selection:

- provide an economical approach for development;
- sites need sufficient space to provide all 500 beds in a single contiguous location;
- any parking lost due to development requires replacement;
- the site location must be sufficient for certain new parking levels (100 new spaces to serve the new housing if the said new housing is located within University drive or 250 spaces if located outside of University Drive); and
- the site location should respect the existing campus site planning organization and its architecture heritage.

The last criterion above is related to fundamental University at Albany planning and architectural limitations:

- a) the University has limited available developable space on campus and is one of the most densely constructed campuses in the SUNY system. Areas for new construction are limited and must be planned with all future growth and expansion factors in mind; accordingly it is the objective of the University to reserve land and space that is closer to the Academic Podium for academic and research functions that require close adjacency to shared functions, staff, and other closely integrated University resources (such as classrooms and labs). Thus, housing is a function that can be located in more remote, but still pedestrian friendly locations, similar to how Freedom Quad and Empire Commons were sited on campus; and
- b) UAlbany's Uptown campus has a unique and formal site and architectural design which requires great care when designing building heights and styles. Any construction must respect the unique architectural integrity of the Podium, whereby the closer to the Podium, the more restrictive is the allowed construction. These principles were articulated in the 1998 Campus Master Plan (Hillier Group 1998) which created "massing zones" restricting heights of buildings to 3 stories if within 1,200 feet of the Podium. Outside the 1,200 foot zone, there is no height limit for proposed development. Therefore, some potential locations near the Podium would be constrained by these height limits, the concomitant lack of space given those limits, and the intent of UAlbany to reserve space near the Podium for academic uses.

Seven potential sites were identified and tested in the feasibility study against the criteria listed above. They were:

1. Campus strip of property between I-90 and Washington Avenue Extension
2. Green space adjacent to, and northwest of Colonial Quad ("Colonial Quad Northwest")
3. Parking lot space on Colonial Lot Gold
4. Alumni House location

5. Dutch Quad Gold parking lot (“Dutch Quad West”)
6. State Quad Gold parking lot (“State Quad East”)
7. Southeast undeveloped portion of campus (“Southeast Corner”).

From this list of seven, the first property, the median strip between two heavily travelled roadways, was immediately rejected due to the high cost of development and severely limited (and unsafe) access issues. The remaining six were evaluated using a 1-5 scoring system (1= poor and 5= good) that assessed the following elements of site feasibility: optimal housing density; compatibility with University site and architecture principles; impacts on parking; redevelopment costs; environmental impacts; availability of utilities; pedestrian safety (within loop road or not); and compatibility with proposed other development.

Colonial Quad Northwest, Colonial Quad Gold parking, and the Alumni House were rejected after this review having the lowest scores of 18, 16, and 26, respectively. Specific issues with these sites included the following:

Colonial Quad Northwest

- Traffic impact – located in a congested traffic zone (see Section 3.10 – Transportation) that would impact pedestrians.
- Service access would be poor.
- Limited development area that does not meet the criterion for beds and parking.
- Location is in the campus development zone restricting building height and architecture.

Northwest Lot

- Loss of 250 parking spots would need to be mitigated with construction elsewhere.
- Traffic impact – located in a congested traffic zone that would impact pedestrians.
- Limited development area that does not meet the criterion for 500 beds in one location.

Alumni House

- Traffic impact – located in a congested traffic zone that would impact pedestrians.
- Limited development area that does not meet the criterion for 500 beds in one location.
- Would require relocation of Alumni House.
- Location is in the campus development zone restricting building height and architecture.

Dutch Quad Gold, State Quad Gold, and the Southeast Corner had higher scores of 26, 26, and 29, respectively, and were further evaluated with more detailed site analysis including fit-testing, parking counts, site drawings, and utilities specifications. Additional evaluation found the following:

Dutch Quad West

- Site is restricted due to campus underground utility spine so development would need to occur on southern most portion of the lot.
- Displaces over 600 parking spaces which would require construction elsewhere on campus.
- With parking garage construction too costly, a suitable surface lot location could potentially be the Southeast Corner.
- Development at this location would impact planned future athletic growth and/or parking event needs.
- Pedestrian access, within University Drive, is good.

State Quad East

- Similarly displaces over 600 parking spaces which would require construction elsewhere on campus.
- With parking garage construction too costly, a suitable surface lot location could potentially be the Southeast Corner.
- Location is in the campus development zone restricting building height and architecture.
- Development at this location is better earmarked for future academic/research building expansion (as noted above).
- Traffic impact is lower than on the northwestern portion of the campus and pedestrian access, within University Drive, is good.

Southeast Corner

- Traffic impact is lower than on the western portion of the campus.
- Property is sizable and undeveloped.
- Does not displace existing parking and no replacement project would be necessary.
- No limitations with respect to congruence with campus building heights and architecture.
- Pedestrian access more favorable if loop road relocated.
- Site and building design would require careful consideration given proximity to Tudor Road residential neighborhood.

The location for this project that had been recommended in the feasibility study was the Southeast Corner location, to the east of University Drive East, across the road from the University Police and the pond, and south of the Boor Sculpture Studio (see Figure 2.3-1). The University has initiated design for construction on this site in anticipation of construction. The planned new living center will likely be an approximately five hundred bed facility potentially configured as two, five-story buildings (approximately 55 feet tall) with four bedrooms in each apartment along with the construction of surface lot parking for approximately 350 cars. The site development will be designed and perhaps constructed as a UAlbany project through DASNY, an involved agency, also responsible for financing all or portions of the project.

As mentioned earlier in this document, notwithstanding the planning and design work to date and the likelihood of the southeast corner site as the location of the housing, at the time of publishing this DGEIS, the University is pursuing an alternate concept to locate this housing project on the adjacent State-owned Harriman Campus. The Harriman Campus location in mind is approximately 11 acres directly adjacent to University property and due north of the southeast corner site. Accordingly, this Harriman Campus location conforms to the adjacency criteria for the project described above. Specifically, on November 30, 2009, the University asked the Board of Directors of the Harriman Research and Technology Development Corporation (HRTDC) to consider this project for the Harriman Campus site. HRTDC, in conjunction with the NYSOGS, is the entity responsible for planning and development of the adjacent campus. To date, HRTDC and the State of New York have earmarked the Harriman Campus for private development with no land specifically identified for University at Albany projects, hence earlier studies have not pursued this site as a viable alternate. The outcome of this request is not yet known, but should this site be approved by the HRTDC and NYSOGS, the University may amend its housing construction plans, necessitating an amended environmental review, as appropriate, to address environmental issues and impacts specific to said new site. For the purposes of this DGEIS document, however, the site selection for this housing project is deemed to be the southeast

corner of the UAlbany campus, and the design concepts for that site that have been developed and publicly shared to date will be discussed and analyzed herein for environmental impact.

2. **Campus Center Master Plan** – A final decision for the location of this project has not been made. The rendering provided as Figure 1.3-4 is only a site concept, not a design that has been fully vetted for structural, architectural, and other engineering specifications. Given that it is an addition to an existing building, structural and footprint limitations exist, the latter relative to nearby buildings, and of consistency with the character of the Academic Podium and other structures around the Campus Center. The addition will likely span and/or add to the east and west sides of the existing Campus Center extension. It could conceivably increase the GSF of the present Campus Center building by about 50,000 sq ft. These variations still remain to be refined as programming needs are evaluated.
3. **Construct New Business School Building** – Since this building also is intended to provide swing space for the renovation of the Podium, the objective was to locate it within proximity to the Podium so that integrated faculty, research, administration and instructional support functions can continue to be efficiently shared. Therefore, with this as a criterion, potential site options are limited. The selected location, south of and adjacent to Collins Circle (west of the Plaza), would preserve this objective. This option would result in the need to relocate the present visitor's parking lot (P1), thereby impacting the need for Project No. 9 (Multi-Discipline Science Surge Building), following. The site, too, was identified for a building in the 1998 Master Plan (Hillier Group 1998).
4. **Relocate Data Center** – The Data Center is a mission-critical University function that is deemed inextricably linked to the University's instructional, administrative, research, and operating needs. The size and complexity of the University's IT operation, along with matters of connectivity, staffing, and access to reliable power and cooling made the Uptown Campus, the current site of the Data Center, the continued preferable site of the relocated Data Center.

A state-of-the-art data center has high energy requirements for its operations. Today's high density equipment provides higher computing power by packing a large number of processing chips in each unit, thus requiring overwhelming power and cooling needs. Additionally, modern culture increasingly relies on electronic information technology, which has increased the need and prevalence of these units.

After study and analysis of three locations, the location of a new Data Center will likely be the Service Building C building, expanding on to the existing parking lot. Potential sites under prior consideration also included Building 25 (the former Health and Counseling Building) and expansion into the Building 25 parking lot as well as a new, free-standing building that would have been constructed on a site somewhere on campus. Both of these other sites were not as compelling after cost-benefit analysis, a review of site density, and after consideration of utilities needs. While the Data Center will likely require approximately 40,000 gsf of machine and service space, the specialized requirements of a Data Center can adequately be sized into the high bay structure of the SBC such that the only addition required would be approximately 11,000 gsf.

5. **Implement Various Athletics Improvements** – As noted in the description of this project in Section 1.3, preceding, a phased approach will be utilized to implement the Athletics Improvement Plan. These upgrades include relocation of the football field and improvements to the existing track and field facilities. Alternatives that may be considered are the types of

facilities to be included in the plan based on the evolving nature of athletic facility needs for both intramural and inter-university competition; the condition of existing facilities; the potential multi-purpose use of some facilities; the location of facilities based on some of these same factors; and the schedule for development of the facilities, which may be based on funding streams, ability to continue to use some existing facilities, phased construction to allow continued use of facilities during construction, and availability of staging areas and temporary use of other open and green space during the construction of facilities.

A report titled “Site Screening and Concept Design for Multi-Purpose Stadium” (“Site Screening Report”) prepared by Heery International, Inc. (2009) reviewed options for the location of a new multi-use facility. The existing football field was constructed based on the original 1968-1969 Master Plan for the campus. The campus’ 2004 Athletics and Recreation Master Plan (Sasaki Associates 2004) evaluated five potential locations for a new stadium (see Figure 2.3-2), all in the southeast area of campus where the University’s athletic facilities are presently located. The Master Plan, which was subsequently updated by Heery International (2009), evaluated various configurations of athletic facilities in this area of campus which, for the stadium, consisted of:

- Site 1 – at the location of the intramural fields east of the Physical Education Building.
- Site 2 – at the location of the present stadium.
- Site 3 – where the existing parking lot is located south of the SEFCU Arena.
- Site 4 – on the site of the varsity fields directly east of the SEFCU Arena.
- Site 5 – on the site of the varsity fields east of the SEFCU Arena near the southern entrance to campus.

The Site Screening Report provided a summary of some of the various factors that were included in the analysis of these stadium site options:

- site capacity for a stadium
- site work
- existing utility relocation
- relocation of existing structures and fields
- proximity to adjacent residential neighborhoods
- proximity to parking
- proximity to existing football operations and practice facilities
- relationship to campus geometry and fabric
- scale of existing buildings in relationship to the stadium
- ability to share amenities with SEFCU Arena due to the lack of amenities at the arena.

As a result of this site analysis, Site 4, as described above, was recommended for the new stadium, which will maintain the present capacity of 10,000 spectators, albeit with significantly improved seating and other amenities. The key factors that favored the location were considered to be the proximity to existing facilities, minimal neighborhood infringement of the building, the proximity to available parking, and the relationship to the campus geometry. Sites 1, 2 and 3 would have had some neighborhood infringement, as well as other disadvantages. However, as

mentioned previously, costs will dictate a more modest project. The University continues to study these alternatives.

6. **Purple Path Continuation** – By the nature of this project, there are few alternative implementation options. They involve site-specific issues relating to the location of the path, paralleling the perimeter road, especially where there is little space between the roadway and natural buffers or developed areas.
7. **Northern Landscape Improvement Project** - Since the initial construction of the UAlbany campus, many of the plantings around the Academic Podium have been altered, are in poor health or dying, and/or are no longer the original species selected for these locations. Moreover, buildings and infrastructure added over the years (walkways, parking lots, etc.) have also impacted the vegetative landscaping. Plantings across campus have been reduced to a monoculture, that is, a limited series of species that, when impacted by disease or other stressors, may die in large swaths across campus. The objective of this project is a more compatible, diverse landscape plan consisting of plantings appropriate to the climate, locations on campus, and current stressors, while remaining aesthetically consistent with Edward Durell Stone's vision of the campus. The variations in plantings on the north portion of the Podium would constitute alternatives to this project. These potential planting options are in the planning and evaluation stage.
8. **State Quad Parking Lot Expansion** – As described previously, alternatives have been considered to address parking issues across campus that were identified in parking studies of the uptown campus that were performed in 2001 and 2004 (CME 2001, CME 2004). Alternatives that were reviewed in these reports included:
 - policy alternatives to reduce parking demand, such as adjusting parking rates based on proximity of parking to the Podium, increasing citation fees for parking infractions, increasing parking permit fees, providing an incentive to keeping cars off campus, a reduction in parking in the vicinity of the Podium, and/or increasing bus service to campus. Many of these faculty and staff parking policy changes cannot be implemented, however, without negotiation and changes to union collective bargaining agreements.
 - construction alternatives, including expanding existing lots, providing peripheral parking, building new parking lots within the ring road, and building a parking garage.

Four potential locations were identified as sites for additional parking (see Figure 2.3-3):

- west of the Podium – Areas in close proximity to the Podium are considered prime locations for academic building(s). Alternate locations may provide a more viable option.
- northeast of State Quad - The report's map actually shows this location to be southeast of State Quad. It remains a potential option.
- between Indian Quad and Existing Quad Lot – Indian Lot expansion. However, this location is being considered for a Surge Building (see Project #10, below) and perhaps a location of a new Data Center (see Project # 4, preceding).
- area between the Dutch Gold Lot and the RACC – South Dutch Lot. The suggestion was that the tennis courts and athletic fields at this site could be relocated to the southern end of the Dutch Lot where utilization is low, while the new lot would be closer to the campus center.

This option begs the issue of the cost of this option to achieve a slight increase in convenience for drivers, as well as it being antithetical to the philosophy behind efforts to reduce the loss of green space and of unnecessary parking in the campus center. Moreover, the site is earmarked in the Athletic Master Plan for expanded athletic facilities.

In the 2004 update to the plan (CME 2004), changes to surface parking that had been performed in the interim were noted. Metrics were revisited and updated. For example, overall, in aggregate the University's parking facilities were found to be operating at a level where actual demand is less than 90% of the total supply, a University goal. However, several individual student lots – those closest to the Podium – were operating at 100% actual demand. This situation likely has not changed. Additionally, several policy options were raised to address this issue, including:

- extension of the parking ban to sophomores – this has not been implemented due to recruitment and retention reasons.
- flattening the classroom schedule, since the peak demand for classroom scheduling is from 10:00 a.m. through 2:00 p.m. Monday through Thursday – while some changes have been made, sweeping changes have not been implemented given faculty and student preferences for class scheduling.
- provide off-site parking for resident students, or parking only at peripheral lots; this option has not been implemented due to deficiencies in campus property ownership, busing and security.
- maximize the use of mass transit – Increasing use of mass transit has been and remains a focus of UAlbany, and is included in this Capital Project Plan (see Project #13, following) as an element of an integrated transportation management plan for the Uptown campus. Advances in mass transit are viewed as a necessary precursor to reducing parking spaces.
- construct a parking structure – This project initially was included in this Capital Project Plan. However, present economic conditions have resulted in an inability to fund such a project in the current five year planning horizon.

The State Quad lot site selected for this parking expansion was ultimately selected based on the reports above and the need for suitable space for the displacement of parking (Visitors Lot P1) from Project No. 3.

9. **Multi-Discipline Science Surge Building** – A potential location is considered at this time to be to the east of Indian Quad. The selection of a final location may be based on space programming activities (that is, what the long term schedule for renovation of existing buildings would be that would make use of this surge space), as well as the potential future end use, which likely would be at least a decade or more after it is constructed. A location somewhere close to the Podium is necessary, as instructional activities would be relocated to this building. Adjacency is desired to maintain classroom scheduling conventions and the use of nearby shared facilities.
10. **Service Building Renovation** – Other alternative locations are not being considered at this time. The vehicular service, mechanical, and engine repair operations to move from the Service Buildings require co-location with the functions, services, and staff housed in the Grounds Building.

11. **Entry Improvements** – The potential alternatives associated with these improvements to the five entry points to campus include options for architectural signage, road and traffic flow improvements, pedestrian safety improvements, and landscape upgrades for a more aesthetically pleasing first perspective of the Uptown Campus. A planning study will be conducted to evaluate these options for the University. These options will be characterized by differing functionalities (how well they improve safety for pedestrians, bicyclists and commuters), aesthetics, and cost. Their respective environmental impacts are anticipated to be equivalent, and are addressed herein.
12. **Bus Rapid Transit** – The concept of this project is to create a multimodal facility for transit and non-motorized users that will provide connections from The Harriman State Office Campus through to the NanoTech campus and potentially through to Crossgates Mall and back to downtown Albany. Conversations are ongoing with the CDTA to improve mass transit options to campus. Some aspects of this issue were described in the 2007 report “Harriman Campus-University at Albany Transportation Linkage Study” (NNCA 2007). The report described a series of potential short-term and long-term strategies for connectivity of the two campuses, but also for improved transportation flow in the surrounding area and increased utilization of mass transit. These included development of a multimodal facility for transit and non-motorized users, enhancements to existing CDTA services, improvements for non-motorized users on Fuller Road, and a number of traffic flow suggestions both internal and external to the Uptown Campus. Options for locations of bus stops will be dependent on transit flow studies to indicate where the best locations are on campus for siting them.

To the extent that this project enhances the use of mass transit, it may slow or reduce the demand for parking to some degree, and contribute to a reduction in greenhouse gas (GHG) emissions attributable to Scope 2 source emissions (see Section 3.6 – Climate Change). Besides being an important component of campus planning, encouraging the use of mass transit is important to the University’s GHG reduction planning.

13. **Bicycle-Pedestrian Path** – The 2006 Golden Grid Report provided a number of recommendations for the improvement of non-motorized access and flow on the Uptown Campus. These included options to reduce the number of cars (*e.g.*, car-sharing, improved mass transit, increased parking costs), park and trail enhancements, and improved pedestrian and bicycle paths throughout campus. The University has been planning with a number of local and regional agencies to improve bicycle and pedestrian access and utility.

3. Environmental Setting

The purpose of an EIS is to provide information about the extent of environmental impacts associated with a project, whether those impacts are adverse and significant, and how those impacts may be avoided or minimized, known as mitigation. Mitigation may be incorporated into a project plan or design, or may be represented by additional steps or options that may be implemented.

This section of the DGEIS is organized by environmental resource; it provides the following information relating to the SEQRA process:

- **Existing Conditions:** A description of existing conditions regarding the environmental resources at the University at Albany Uptown Campus and the surrounding area, as may be impacted by the Capital Project Plan.
- **Potential Impacts:** Potential environmental impacts that may occur, either as individual projects are implemented or as the Capital Project Plan in its entirety is implemented. For each environmental resource, a table is presented that is organized by project and, for summary purposes, indicates the general nature of potential impacts for the respective projects.
- **Mitigation:** Options available to mitigate these impacts that have either been or can be incorporated into the respective project plans or designs, or can be implemented as additional steps in project completion.

At the end of the text associated with the respective environmental resources, a summary table of Potential Impacts and Mitigation is presented; it is organized by project so that the environmental impacts associated with each project can be reviewed collectively.

3.1. Land (Soils, Geology, Topography)

3.1.1. Existing Conditions

This section provides information on the soils, geology, and topography that typify the project area. Potential impacts as a result of one or more of the proposed projects and associated mitigation measures are also identified. The information presented herein is based on field reconnaissance and the review of relevant studies, reports, and maps specific to the project site and surrounding areas.

Soils

The project sites are located over a thick layer of unconsolidated glacial sediments, consisting primarily of silty fine sands, underlain by varved silts and silty clays, followed by glacial till on top of bedrock (C.T. Male 2002). Surficial deposits, characterized as lacustrine silt, clay, and sand, were deposited approximately ten thousand years ago as a result of glacial activities (C.T. Male 2002). Unconsolidated deposits beneath the UAlbany Uptown Campus range to over 100 feet below ground surface (ft bgs).

As depicted in the *Soil Survey of Albany County, New York State* (“Soil Survey”) (United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) 2008), the general soil designations for the University at Albany Capital Project Plan site are Udipsamments (Ud) and Urban land (Ur), with a small area of soil designated as Elnora loamy fine sand (EnB) and Colonie loamy fine sand (CoB) (USDA NRCS 2008) (Figure 3.1-1). As defined in the Soil Survey, Ud soil is characterized as “nearly level to very steep areas of disturbed, sandy soils,” typically

consisting of Colonie loamy fine sand and Elnora loamy fine sand. The Soil Survey defines Ur as “nearly level to strongly sloping areas where asphalt, concrete, buildings, or other impervious materials cover more than 85 percent of the surface.”

As a result of site development activities, native soils likely do not exist due to the disturbance to the campus when it was initially constructed; large-scale grading was performed to prepare the property for construction of campus buildings (see Figure 1.1-3, “Land Cleared for the Construction of the SUNY Albany Campus, 1962”). Additionally, the construction of campus buildings and infrastructure (including subsurface utilities) over the last nearly 50 years has resulted in excavation and regrading of all of the Uptown Campus. Small regions of CoB and EnB classified soils are depicted in the Soil Survey along the northwest and southwest site boundaries, respectively. CoB soil is defined in the Soil Survey as very deep, well drained, gently sloping soil, typically described as dark brown to dark yellowish brown loamy fine sand. Similarly, EnB soil is described in the Soil Survey as very deep, well drained, gently sloping soil, typically described as dark brown to very dark gray loamy fine sand.

Hydric soils were not identified within the footprint of the UAlbany Uptown Campus. Hydric soils are of interest since they are indicative of the potential presence of wetland conditions, and are identified by the Natural Resources Conservation Service as:

“The definition of a hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (<http://soils.usda.gov/use/hydric/intro.html>, November 4, 2009).

Environmental criteria for wetlands, as defined in USACE (1987), include:

- the prevalent vegetation is hydrophytic
- the soils present have been classified as hydric or possess reducing soil characteristics
- the area is either permanently or periodically inundated at mean water depths less than or equal to 6.6 feet, or the soil is permanently or periodically saturated to the surface during the growing season.

To make a positive wetland determination, a minimum of one wetland indicator from each criterion (vegetation, soil, and hydrology) must be found.

Soil coverage on the site is illustrated on Figure 3.1-1, and soil properties summarized in Table 3.1-1.

Table 3.1-1. Generalized soil properties.

Soil	Slope	Permeability	Available water capacity ¹	Surface runoff	Erosion hazard ²	Depth to water table	Flooding hazard
CoB	3-8 %	Moderately rapid or rapid	Low	Slow or medium	Slight	> 6 feet	None
EnB	3-8 %	Moderately rapid or rapid	Low	Slow or medium	Slight	1.5-2 feet	None
Ud	0-45%	Moderately rapid	Low or very low	Slow or medium	Slight	> 6 feet	None
Ur	0-15%	Low	Low	High	Slight	None	None
Notes:							
1. Available water capacity for 40-inch profile.							
2. Erosion hazard, or the susceptibility of soil to erosion, is the potential inherent in the soil itself to erode if the forces that cause erosion are applied to an area that is not adequately protected.							

Source: USDA NRCS 2004

University at Albany's Capital Project Plan includes the construction of new building at multiple locations on the Uptown Campus. As a result, previous subsurface investigations were reviewed from various projects throughout the Uptown Campus for a description of actual subsurface soil condition at the Uptown Campus.

Fifty-four soil borings were advanced in 1999 as part of a subsurface investigation and geotechnical evaluation for the (then) proposed Life Sciences Complex. Construction has since been completed. The Life Sciences Complex is located on the eastern portion of the Uptown Campus. As reported by F.A. Dente Engineering, PC, filled and windblown sand was encountered at depths of approximately 18 feet below ground surface (bgs). Lacustrine sand and silt deposits and lacustrine varved silt and clay deposits were observed at depths ranging from 18 to 95 feet bgs and 95 to 200 feet bgs, respectively. The standard penetration test conducted during test boring advancement indicated that site overburden had relative densities ranging from generally loose to very compact. Soil descriptions are summarized in Table 3.1-2.

Table 3.1-2. Site-specific soil descriptions – Life Sciences Complex.

Approximate depth interval (feet)	Soil description	Approximate thickness (feet)
12 - 18	Windblown sand	6
95 - 200	Lacustrine varved silt and clay deposits	105

Source: F.A. Dente Engineering, PC 1999

As reported by Dente Engineering, 47 soil borings were completed as part of a subsurface investigation and geotechnical evaluation for the proposed Admissions Building (since renamed "University Hall"), to be located on northeast portion of the Uptown Campus, to the southwest of Collins Circle. In general, reworked and windblown sand was encountered at depths ranging from 0 to 15 feet bgs. Lacustrine sand and silt deposits and lacustrine varved silt and clay deposits was encountered underlying the sand at depths ranging from 15 to 95 feet bgs and 95 to 200 feet bgs, respectively. The standard penetration test conducted during soil boring advancement indicated that site overburden had relative densities ranging from generally loose to firm. The soil stratigraphy is summarized in Table 3.1-3.

Table 3.1-3. Site-specific soil descriptions – Proposed Admissions Building.

Approximate depth interval (feet)	Soil description	Approximate thickness (feet)
0 – 9	Reworked fine sand	
95 - 200	Lacustrine varved silt and clay deposits	105

Source: Dante Engineering 2002

As part of a Geotechnical Engineering Report, prepared for the proposed Student Housing Project by Stantec Consulting Services, Inc., three soil borings were advanced. The potential location of the project is in the southeast portion of the Uptown Campus. In general, topsoil was encountered at depths ranging from 0 to 4 inches, with fine sand and fine sand and silt layers underlying the topsoil. Standard penetration tests conducted during soil boring advancement determined relative densities ranging from 2 to 10, indicating generally loose soil. Table 3.1-4 summarizes soil stratigraphy.

Table 3.1-4. Site-specific soil descriptions – Proposed Student Housing Project.

Approximate depth interval (feet)	Soil description	Approximate thickness (feet)
0 – 0.3	Topsoil	0.3
14 - 75	Gray fine sand and silt, with some clay	61

Source: Stantec 2008

Eight soil borings were advanced in 2008 as part of a subsurface investigation and geotechnical evaluation for a conceptual Multi-Use Athletic Facility, to be located on the southern portion of the Uptown Campus, at one potential location, the site of the varsity fields east of the SEFCU Arena (Project No. 5, herein). Three soil borings were converted to ground water monitoring wells, located around the perimeter of the investigation area. In general topsoil was encountered at depths ranging from 0 to 0.7 feet bgs. Reworked fine sand was encountered at depths ranging from 0.7 feet bgs to 9 feet bgs. Lacustrine sand and silt deposits and lacustrine varved silt and clay deposits was encountered underlying the sand at depths ranging from 9 to 49 feet bgs and 49 to 61.5 feet bgs, respectively. Standard penetration test conducted during soil boring advancement indicated that the site overburden had relative densities ranging from generally loose to cohesive. The soil stratigraphy is summarized in Table 3.1-5.

Table 3.1-5. Site-specific soil descriptions – Proposed Multi-Use Athletic Facility.

Approximate depth interval (feet)	Soil description	Approximate thickness (feet)
0 – 0.7	Top soil	0.7
.7 - 9	Reworked fine sand	
9 - 49	Lacustrine sand and silt deposits	40
49 – 61.5	Lacustrine varved silt and clay deposits	12.5

Source: Dante Engineering 2008

These specific studies provide a description of subsurface conditions that appear to be relatively consistent across campus, of sands underlain by silts and clays to a depth of greater than 100 feet bgs. However, the respective construction projects will need to evaluate site specific conditions through site geotechnical investigations, as is industry practice.

Topography

The UAlbany Uptown Campus is situated within the Hudson-Mohawk Lowland Physiographic Province (C.T. Male 2002). The existing topography of the Capital Project Plan sites is relatively flat, with both natural and man-made grading features to accommodate development (Figure 3.1-2). Site elevations vary from approximately 190 feet above sea level at the northern end of the campus to 277 feet above sea level at the Podium, located in the center of the UAlbany Uptown Campus (The Hiller Group 1998).

Geology

The regional geology is characterized by limestones, shales, sandstones, and dolostones from the Ordovician Period dating back 440 to 505 million years ago (New York State Museum 1986). The UAlbany Uptown Campus is underlain by Normanskill Shale. Deposited during the Middle Ordovician period, Normanskill Shale consists of shale mudstone and sandstone (Fisher 1970).

In the soil boring data developed for the projects as described in “Soils,” preceding, Dente Engineering P.C. reported in boring logs in 1999 and 2002 that borings to depths of over 100 ft bgs did not encounter bedrock. This information is consistent with that reported in Moran *et al.* (1954), as referenced in C.T. Male’s 2002 DGEIS for the Redevelopment of the Harriman State Office Campus (C.T. Male 2002). The Moran report indicated a depth to bedrock at the adjacent Harriman Campus site of greater than 150 ft bgs.

Seismic activity. Based on review of the *Historic Seismic Zoning Map for New York State*, the UAlbany Uptown Campus is located within seismic zone C, which is identified as a region of intermediate seismic hazard (MCEER 1993). Each seismic zone (A, B, C, and D) is associated with a seismic zone factor (Z), “measuring effective peak acceleration in fractions of” earth’s gravitational acceleration (MCEER 1993). The majority of New York State has a moderate level of seismic hazard, with the highest hazards in the northern Adirondacks, the New York City Metropolitan area, and Western New York (MCEER 1993).

3.1.2. Potential Impacts

The following section represents an analysis of potential impacts to project area subsurface conditions, predominantly soils, topography, and geology as a result of the implementation of the Capital Project Plan. Construction and operational phase impacts are addressed. A discussion of proposed mitigation measures to minimize the potential impacts follows.

Construction Phase

Soils and topography. Demolition of and expansion of existing buildings, construction of new buildings, and landscape improvements will result in localized soil disturbances and the potential for alterations to site topography, depending on project-specific grading plans. New final grades and final topography are not anticipated to be steep, but rather consistent with the existing character of the Uptown Campus. Potential construction-related impacts to area soils and topography consist of:

- Localized soil disturbances as a result of excavation, grading, and restoration activities associated with perhaps minor alterations of existing buildings
- Localized soil disturbances as a result of clearing, excavation, and grading activities associated with the construction of new buildings
- Localized soil disturbances associated with landscaping and landscape rehabilitation following project implementation
- Increased erosion potential as a result of weather conditions and/or lack of appropriate mitigation measures
- Alteration of topsoil and topography as a result of excavation of existing soil and/or addition of fill.

Geotechnical evaluations will be necessary at specific project site locations to inform final designs, construction techniques, and potentially to provide site-specific information for use in development of storm water management plans.

Inadequately planned and executed construction techniques would cause additional impacts on local soil and topography. Without the anticipated implementation of appropriate erosion and soil controls described below, exposed soils could result in sedimentation of storm water runoff impacting the site, adjacent landowners, and down gradient land uses. Significant adverse impacts to site soil and

topography have not been identified as resulting of the construction phase of UAlbany's Capital Project Plan.

Geology. Excavation of newly constructed building foundations and basements has the potential to impact site bedrock, where present. The presence of bedrock in the near subsurface may require ripping, tearing or even blasting for bedrock removal as part of the site preparation process.

However, as a result of on-site subsurface investigations and geotechnical evaluations, bedrock was not observed at depths prior to 100 ft bgs. Therefore, the implementation of these projects is not likely to impact site geology.

Seismic activity. As previously indicated, the UAlbany Capital Project Plan site is located within seismic zone C, which is identified as a region of intermediate seismic hazard (MCEER 1993). Consistent with the New York State Building Code, an on-site subsurface investigation and geotechnical evaluation is required to identify specific seismic design requirements to comply with state building code. Dente Engineering conducted a subsurface evaluation and geotechnical investigation in 2002 for the proposed Admissions Building. As part of the investigation activities, shear wave velocities were measures to aid in making seismic design recommendations. Based on shear wave velocity measurements collected at one location and the relatively homogeneous subsurface conditions observed, Dente Engineering suggested that shear wave velocities and associated seismic hazards are uniform across the Site. Additional subsurface and geotechnical investigations may be required for future Capital Project Plan components in accordance with the New York State Building Code.

Operational Phase

Soils and topography. Operational phase activities will result in localized soil disturbances, soil erosion, and alterations to site topography without implementation of appropriate erosion and soil controls following the completion of construction-phase activities. Potential operation-related impacts to area soils and topography consist of:

- Localized soil disturbances associated with the maintenance of landscaping
- Increased erosion potential as a result of weather conditions and/or lack of appropriate mitigation measures.

Inadequately designed and implemented erosion and soil controls could result in sedimentation of storm water runoff impacting both on-site and off-site land uses. Significant adverse impacts to site soil and topography have not been identified as resulting of the operational phase of UAlbany's Capital Project Plan.

Ground water at the Uptown Campus is relatively shallow, observed at 5 to 15 ft bgs. Therefore, it is important that steps be taken to allow appropriate recharge of storm water when projects include the replacement of pervious surfaces with impervious surfaces, that is, recharge under analogous conditions to that at present, or for retention of storm water to minimize potential drainage issues (see Section 3.4 – Drainage). Otherwise, there is the potential for storm water runoff to be transported by surface conditions or drainage to other parts of campus, causing erosion, or localized inundation, pooling or overflows in already saturated areas.

Geology. Since site geology was not identified at depths exceeding 100 ft bgs, impacts to site geology are unlikely.

Summary. The following table presents a summary of the projects for which potential impacts to soils and topography, geology, or seismic activity may occur. However, as noted above, the impacts are not anticipated to be significant, and can be readily mitigated, as described in Section 3.1.4 following. A summary of anticipated impacts and available mitigation measures, specific for each project, is presented in Section 3.14.

Table 3.1-6. Potential for impacts to land resources.

Project Name	Potential for Impacts			Nature of Impacts
	Soils and Topography	Geology	Seismic Activity	
1. Student Housing Project	X			Construction
2. Campus Center Master Plan	X			Construction
3. Construct New Business School Building	X			Construction
4. Relocate Data Center	X			Construction
5. Implement Various Athletics Improvements	X			Construction
6. Purple Path Continuation	X			Construction
7. Northern Landscape Improvement Project	X			Construction
8. State Quad Parking Lot Expansion	X			Construction
9. Multi-Discipline Science Surge Building	X			Construction
10. Service Building Renovation	X			Construction
11. Entry Improvements	X			Construction
12. Bus Rapid Transit				Construction
13. Bicycle-Pedestrian Path	X			Construction

3.1.3. Mitigation Measures

Construction Phase

Soils and topography. Construction phase activities associated with UAlbany's Capital Project Plan

will be required to comply with applicable soil and erosion control requirements, including adherence to *New York State Standards and Specification for Erosion and Sediment Control* (NYSDEC 2005). Routine construction techniques to prevent erosion will be utilized. In addition, a construction storm water permit and Storm Water Pollution Prevention Plan (SWPPP) will be required on specific projects, consistent with NYSDEC's General Permit requirements.

The USEPA is currently developing *Effluent Limitations and Guidelines (ELGs) for the Construction and Development Industry*. The proposed regulations may require construction sites to implement additional erosion and sediment control measures, possibly requiring particular construction sites to also meet turbidity limits (USEPA 2009c). Implementation of best management practices (BMPs) will be required at construction sites currently required to obtain a National Pollutant Discharge Elimination System (NPDES) permit (USEPA 2009c). Construction activities occurring on the Uptown Campus currently operate under a USEPA Construction General Permit (CGP), due to expire in 2010. USEPA's *Effluent Limitations and Guidelines for the Construction and Development Industry* will not be finalized until after UAlbany's current CGP expired; however, effluent limitations and guidelines (ELGs) and provisions outlined in the document will be incorporated into UAlbany's USEPA CGP upon reissue. The University will be required to submit a Notice of Intent (NOI) for coverage under the new CGP at that time in 2010.

The University at Albany has a campus-wide "Stormwater Management Plan" (SWMP) (Woodard & Curran 2004). It contains a description of the regulatory applicability of federal and state storm water regulations, a public outreach and education program for awareness of storm water issues, a detection and elimination program for illegal discharges to storm water, a construction site runoff control program, a pollution prevention program, and a monitoring/recordkeeping/reporting program.

Potential construction phase mitigation measures to minimize the impacts to site soil and topography include:

- Stabilization of construction entrance(s) and road(s) to minimize dust and mud
- Installation of perimeter erosion and sediment control measures including silt fencing and straw bales
- Implementation of appropriate soil stabilization measures including grading and sloping of excavations
- Implement dust control measures
- Maintain the natural contour of the site to minimize soil and topography disturbances
- Limit land clearing activities to those areas where earthwork will be performed and progress as needed to preserve existing conditions
- Conserve and reclaim topsoil by stockpiling separately from subsoils
- Utilize subsoils that are suitable for use as fill or backfill material as an alternative to obtaining fill material from off-site sources
- Properly manage excess spoil off-site as necessary.

Following construction activities, restoration activities will be conducted to restore project soils, topography and landscaping to the extent possible. Restoration activities will prevent potential long-term erosion and sedimentation issues. In addition, landscaping activities provide storm water control and decoration to enhance the campus character. Restoration activities potentially include:

- Backfill of excavated areas to pre-construction contours
- Landscaping activities, including seeding and planting of landscaped gardens in accordance with SUNY Albany Landscape Master Plan
- Coordination between projects with coinciding construction phases to reduce construction-related impacts.

Hydric soils, which indicate the potential for wetland conditions, were not identified in the generalized soil survey for the campus. However, it may be necessary to evaluate the presence of hydric soils at project sites where new construction or the disturbance of site soils is an element of the project if both of the other two criteria for wetlands are met. This is not anticipated, except at the site in the southeast portion of the Uptown Campus for the Student Housing Project (Project No. 1). The reason is that vegetation at other proposed project locations consists of lawns or planted landscaping rather than hydrophytic vegetation characteristic of wetlands. Therefore, it is unlikely that all three wetland criteria will be met, as required by the USACE Wetland Manual (1987).

A wetland survey has been performed at the Southeast Corner site under consideration for the Student Housing Project (Project No. 1) where the vegetation has been allowed to undergo regrowth over the last 30 years since the southern portion of that parcel was graded. The wetland determination and delineation was performed pursuant to policy set forth by Section 404 of the Clean Water Act and in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987). The USACE and USEPA jointly define wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions [33 Code of Federal Regulations (CFR) Part 328.3(b), 40 CFR Part 230.3(t)]. Environmental criteria for wetlands, as defined in USACE (1987), consist of:

- the prevalent vegetation is hydrophytic
- the soils present have been classified as hydric or possess reducing soil characteristics
- the area is either permanently or periodically inundated at mean water depths less than or equal to 6.6 feet, or the soil is permanently or periodically saturated to the surface during the growing season.

To make a positive wetland determination, a minimum of one wetland indicator from each criterion (vegetation, soil, and hydrology) must be found. Three small wetlands of 0.27 acres (located to the west of the area of woody debris), 0.08 acres (located in the southeastern portion of the area), and 0.04 acres (located in the southwestern corner of the area) in size were observed on the property.

Wetlands at this location in the southeast area of the Uptown Campus appear to be the result of site grading approximately 30 years ago, leaving a level “bench” area across the Perimeter Road from Indian Pond, with the topography rising to the north. Local vegetation and localized drainage patterns formed in the period since this activity took place.

Ground water at the Uptown Campus is relatively shallow, observed at 5 to 15 ft bgs. Therefore, it is important that steps be taken to allow appropriate recharge of storm water when projects include the replacement of previous surfaces with impervious surfaces, that is, recharge under analogous conditions to that at present. There are a number of design options that can mitigate the potential for such conditions, and have significance for the LEED certification of a new building project; these may include:

- Green roofs for storm water runoff control (collection and use)
- Rain harvesting (collection for reuse)
- Rain gardens and landscaping
- Permeable pavement
- Vegetated swales
- Sustainable green streets and green parking lots.

Geology. No impacts to bedrock have been identified as resulting from the construction phase of the project; therefore, no mitigation is necessary.

Operational Phase

Soils and topography. Final design of specific projects will result in a loss of pervious surfaces from building footprints, parking lots, walks and other impervious surfaces. Also, final designs may result in landscaped slopes with the opportunity to channel storm water and result in soil erosion. To minimize the potential for erosion, projects should be designed consistent with good engineering practices and the campus-wide SWMP and, where necessary, site-specific measures be implemented to prevent soil erosion; these measures are otherwise required to be integrated into the campus-wide SWPPP. A site-specific SWPPP is recommended for projects, where appropriate, again, with integration into the campus-wide SWMP.

Generally, impacts to soils and topography have not been identified as resulting from the operational phase of the project due to the level topography of the Uptown Campus. Implementation of grading, landscaping, and other soil and erosion controls following construction phase activities will prevent localized erosion of site soils and preserve topography during the operational phase of the projects.

For the Student Housing Project site (Project No. 1) in the southeast of the Uptown Campus, measures will be incorporated into the project design to control storm water and minimize erosion. These measures may include the re-direction of surface storm water flow toward Indian Pond, which provides storm water retention for the campus. Indian Pond was dredged in late 2008 to remove sediments that have built up over time, thereby significantly increasing the available volume of the Pond.

Bedrock. No impacts to bedrock have been identified as resulting from the operational phase of the project, therefore no mitigation is necessary.

Summary

The following table presents a summary of the potential environmental impacts to land resources (soils, topography, geology) of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with	<ul style="list-style-type: none"> • Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A Stormwater Pollution Prevention Plan (SWPPP) will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
	construction	<p>entering surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents:</p> <ul style="list-style-type: none"> ➤ NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). ➤ New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). <p>• In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site.</p> <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes) • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • avoiding steep slope areas to the north of the construction area to the extent practicable • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion • managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) • installing mulch and/or erosion control matting on disturbed areas • installing rip-rap or erosion control matting at the

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>bottom of drainage</p> <ul style="list-style-type: none"> installing silt fencing and hay bales on slopes and around stockpiled material using trench plugs and dewatering equipment (i.e., pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings) seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping temporary erosion control devices will be removed from the site upon final site stabilization “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated
(Topography)	Alteration of topography through site grading	<ul style="list-style-type: none"> Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. Topography will be modified so as to direct storm water away from Tudor Road neighborhood, mitigating some present storm water issues
2. Campus Center Master Plan (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>following documents:</p> <ul style="list-style-type: none"> ➤ NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). ➤ New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). <ul style="list-style-type: none"> • In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site. <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes) • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion • managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) • installing mulch and/or erosion control matting on disturbed areas • installing rip-rap or erosion control matting at the bottom of drainage • installing silt fencing and hay bales on slopes and around stockpiled material • using trench plugs and dewatering equipment (<i>i.e.</i>, pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams.

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> • subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings) • seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping • temporary erosion control devices will be removed from the site upon final site stabilization • “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated.
(Topography)	Topography adjacent to the Campus Center is essentially level	<ul style="list-style-type: none"> • Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. • Minimize the amount of bare soil exposed at one time.
3. Construct New Business School Building (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> • Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> ➤ NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). ➤ New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). • In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site.</p> <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes) • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion • managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) • installing mulch and/or erosion control matting on disturbed areas • installing rip-rap or erosion control matting at the bottom of drainage • installing silt fencing and hay bales on slopes and around stockpiled material • using trench plugs and dewatering equipment (i.e., pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> • subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings)

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<ul style="list-style-type: none"> • seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping • temporary erosion control devices will be removed from the site upon final site stabilization • “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated.
(Topography)	Topography at this portion of campus (from Washington Avenue to the north side of the Podium) is essentially level	<ul style="list-style-type: none"> • Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration • Minimize the amount of bare soil exposed at one time.
4. Relocate Data Center (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> • Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> ➤ NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). ➤ New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). • In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site.</p> <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes) • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • avoiding steep slope areas to the extent practicable • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion • managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) • installing mulch and/or erosion control matting on disturbed areas • installing rip-rap or erosion control matting at the bottom of drainage • installing silt fencing and hay bales on slopes and around stockpiled material • using trench plugs and dewatering equipment (<i>i.e.</i>, pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> • subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings) • seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping • temporary erosion control devices will be removed from the site upon final site stabilization • “green” alternatives such as the use of pervious surfaces for access routes will also be

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
(Topography)	Topography at locations under consideration for data center is essentially level	<p>evaluated.</p> <ul style="list-style-type: none"> Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. Minimize the amount of bare soil exposed at one time.
5. Implement Various Athletics Improvements (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site. <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> restricting the limits of construction to the minimum practicable area required to complete

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>the work (including minimizing the location, number and width of required access routes)</p> <ul style="list-style-type: none"> restoring temporarily disturbed areas as soon as practicable to pre-development conditions minimizing the amount of bare soil exposed at one time stockpiling material away from steep slopes and flowing water to minimize erosion managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) installing mulch and/or erosion control matting on disturbed areas installing rip-rap or erosion control matting at the bottom of drainage installing silt fencing and hay bales on slopes and around stockpiled material using trench plugs and dewatering equipment (<i>i.e.</i>, pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings) seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping temporary erosion control devices will be removed from the site upon final site stabilization “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated
(Topography)	Topography on the southern portion of campus is essentially level	<ul style="list-style-type: none"> Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. Minimize the amount of bare soil exposed at one time.

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
6. Purple Path Continuation (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> • Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers or surface waters along the route. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> ➢ NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). ➢ New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). • In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site. <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion • managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor)

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<ul style="list-style-type: none"> installing mulch and/or erosion control matting on disturbed areas installing rip-rap or erosion control matting at the bottom of drainage installing silt fencing and hay bales on slopes and around stockpiled material using trench plugs and dewatering equipment (i.e., pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams.
(Topography)	Topography varies as the route of the Purple Path follows the perimeter road around campus. Design will follow the topography of the route around campus, and may be only minimally altered by construction of the project.	<ul style="list-style-type: none"> Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. Minimize the amount of bare soil exposed at one time.
7. Northern Landscape Improvement Project	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with landscaping	<ul style="list-style-type: none"> No mitigation necessary other than typical construction practices to prevent erosion.
8. State Quad Parking Lot Expansion (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). In accordance with the General Permit, the University or its agent will be responsible to

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site.</p> <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes) • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion • managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) • installing mulch and/or erosion control matting on disturbed areas • installing rip-rap or erosion control matting at the bottom of drainage • installing silt fencing and hay bales on slopes and around stockpiled material • using trench plugs and dewatering equipment (<i>i.e.</i>, pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> • subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		scarification to facilitate subsequent vegetative growth or plantings) <ul style="list-style-type: none"> • seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping • temporary erosion control devices will be removed from the site upon final site stabilization • “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated
(Topography)	Topography adjacent to the State Quad is essentially level	<ul style="list-style-type: none"> • Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. • Minimize the amount of bare soil exposed at one time.
9. Multi-Discipline Science Surge Building (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> • Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> ➢ NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). ➢ New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). • In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<p>within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site.</p> <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes) • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion • managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) • installing mulch and/or erosion control matting on disturbed areas • installing rip-rap or erosion control matting at the bottom of drainage • installing silt fencing and hay bales on slopes and around stockpiled material • using trench plugs and dewatering equipment (<i>i.e.</i>, pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> • subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings) • seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping • temporary erosion control devices will be removed from the site upon final site stabilization • “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
(Topography)	Topography adjacent to the Life Sciences building is slightly sloped	<ul style="list-style-type: none"> Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. Minimize the amount of bare soil exposed at one time.
10. Service Building Renovation (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site. <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes)

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<ul style="list-style-type: none"> restoring temporarily disturbed areas as soon as practicable to pre-development conditions minimizing the amount of bare soil exposed at one time stockpiling material away from steep slopes and flowing water to minimize erosion managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) installing mulch and/or erosion control matting on disturbed areas installing rip-rap or erosion control matting at the bottom of drainage installing silt fencing and hay bales on slopes and around stockpiled material using trench plugs and dewatering equipment (i.e., pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings) seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping temporary erosion control devices will be removed from the site upon final site stabilization “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated
11. Entry Improvements	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with landscaping	<ul style="list-style-type: none"> No mitigation necessary other than typical construction practices to prevent erosion.
12. Bus Rapid	Only minimal impact on soils for installation	<ul style="list-style-type: none"> No mitigation necessary other than typical construction practices to prevent erosion.

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
Transit	of bus shelters	
13. Bicycle-Pedestrian Path (Soils)	Temporary, localized soil disturbances as a result of clearing, excavation, and grading activities associated with construction	<ul style="list-style-type: none"> • Project activities requiring site clearing and/or excavation will include stabilization practices to minimize soil erosion. A SWPPP will be prepared to instruct personnel on mitigation measures to prevent pollutants in storm water runoff from entering storm sewers and surface waters. The SWPPP will be prepared in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities, Permit No. GP-0-08-001 (effective April 2008). It will include erosion and sediment control facilities that consider the following documents: <ul style="list-style-type: none"> ➢ NYSDEC Standards and Specifications for Erosion and Sediment Control (2005). ➢ New York State Stormwater Management Design Manual (the Design Manual) prepared by the Center for Watershed Protection for the NYSDEC (2008f). • In accordance with the General Permit, the University or its agent will be responsible to provide a qualified person to inspect disturbed areas for compliance with the SWPPP and the proposed erosion and sediment control measures. These inspections are to be completed at least every 7 days (1 inspection/week if disturbance <5 acres; 2/week if >5 acres). Based on the results of the inspection, the pollution prevention measures identified in the SWPPP are to be revised and implemented as appropriate by the Contractor within seven calendar days following the date of the inspection. Further mitigation measures are to be taken by the Contractor if warranted to keep sediment transport off site or discharge of sediment-laden runoff off site. <p>Mitigation measures that may be employed to limit erosion include:</p> <ul style="list-style-type: none"> • restricting the limits of construction to the minimum practicable area required to complete the work (including minimizing the location, number and width of required access routes) • restoring temporarily disturbed areas as soon as practicable to pre-development conditions • minimizing the amount of bare soil exposed at one time • stockpiling material away from steep slopes and flowing water to minimize erosion

Table 3.1-7. Summary of Potential Impacts to Land Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
		<ul style="list-style-type: none"> managing excess spoils off-site in accordance with applicable regulations (reuse alternatives should be considered by the contractor) installing mulch and/or erosion control matting on disturbed areas installing rip-rap or erosion control matting at the bottom of drainage installing silt fencing and hay bales on slopes and around stockpiled material using trench plugs and dewatering equipment (<i>i.e.</i>, pumps and hoses) to direct sediment laden water from dewatering operations to temporary sediment traps or other approved devices to allow for sedimentation prior to discharge to adjacent streams. <p>In addition, after construction activities are completed, the following restoration measures will be implemented:</p> <ul style="list-style-type: none"> subsoil will be properly graded and scarified before topsoil is added (loosening the soil surface where heavy equipment has been used by contour furrowing, imprinting with dozer, or scarification to facilitate subsequent vegetative growth or plantings) seeding and mulching (site restoration will occur earlier in areas where no further disturbance is anticipated), and appropriate landscaping temporary erosion control devices will be removed from the site upon final site stabilization “green” alternatives such as the use of pervious surfaces for access routes will also be evaluated
(Topography)	Topography varies with the route of the Bicycle-Pedestrian Path(s) around campus. Design will follow the topography of the routes around campus, and may be only minimally altered by construction of the project.	<ul style="list-style-type: none"> Contractors will be required to backfill excavations to the original ground surface level unless otherwise directed. Excavation areas will be filled according to the site-specific standards with suitable materials and compacted according to the contract specifications to minimize site alteration. Minimize the amount of bare soil exposed at one time.

3.2. Water Resources (Surface Waters, Ground Water)

3.2.1. Existing Conditions

Surface Water

The University at Albany Capital Project Plan sites are located within the footprint of University at Albany's Uptown Campus, between Patroon Creek and Krum Kill Creek. The Hudson River is located approximately 4.5 miles east of the UAlbany Uptown Campus boundaries, while the Mohawk River is located approximately 6 miles to the north. Rensselaer Lake is located approximately 0.4 miles to the northwest, within the Six Mile Waterworks Park, a City of Albany park. Rensselaer Lake was constructed in 1851, a 43 acre impoundment formed by a dam across Patroon Creek; it served as the City's first water supply. The City is currently considering developing the lake as an emergency water supply for the city in the event of a catastrophic need (excerpted from:

<http://www.albanyny.org/Government/Departments/WaterAndWaterSupply/SixMileWaterWorks.aspx>).

Regional surface water features are identified in Figure 3.2-1.

Stream gauging stations, operated by the United States Geological Survey (USGS) and in cooperation with local agencies, are established on Patroon Creek, the Hudson River, and the Mohawk River. Table 3.2-1 summarizes the location and daily mean discharge values observed at the local gauging stations during 2008.

Table 3.2-1. Local stream gauging stations and discharge.

Surface Water	Gauging Station Location	Minimum Daily Mean Discharge	Date(s) (in 2008)	Maximum Daily Mean Discharge	Date(s) (in 2008)
Patroon Creek	Albany, -NY - 500 feet upstream from Northern Boulevard	12 ft ³ /sec	Sept 5, 22, 23 October 15	357 ft ³ /sec	March 5
Hudson River	Green Island, -NY - just upstream from Troy lock and dam	4,710 ft ³ /sec	July 18	97,000 ft ³ /sec	March 9
Mohawk River	Cohoes, -NY - at School Street power plant	1,030 ft ³ /sec	July 17	57,700 ft ³ /sec	March 9

Source: USGS 2009

Surface water features present within the project boundaries consist of Indian Pond, a manmade retention basin, located on the southeast corner of the UAlbany Uptown Campus. Indian Pond also serves as a water supply for much of the campus green space irrigation. Starting in 2008, the first phase of the Indian Pond restoration project began. The first phase involved dredging the pond in order to restore it 6.6 million gallon capacity (UAlbany 2008a). Dredging was completed in late 2008. Local surface water features are identified in Figure 3.2-2.

Storm water drainage and wetlands are discussed in Section 3.3 and Section 3.6, respectively.

The University at Albany has an irrigation system supplied by Indian Pond and two on-campus ground water wells. This system (actually a combination of systems installed over time) is used to water landscaping for about 45 acres of the campus that is configured for irrigation, consisting of University Field, the intramural fields, the practice fields, the baseball fields, Life Sciences, University Hall, Collins Circle, the artificial turf fields (lacrosse and field hockey, and Empire

Commons. Woodard & Curran evaluated these systems as part of a comprehensive utility survey (Woodard & Curran 2008); pertinent information is provided below. Its report presents a series of recommendations to upgrade the components of the irrigation system.

Water quality. Surface waters in New York State are classified according to their best use (6 NYCRR 701.6). Surface waters with the best quality are classified “A” and are suitable for potable water. Other classification for the highest use of water, in descending order, are the following:

B - Primary and secondary contact recreation and fishing

C – Fish, shellfish, and wildlife propagation and survival

D – Fish, shellfish, and wildlife, but usually unable to support propagation.

The waters of Patroon Creek and Krum Kill Creek in the vicinity of the UAlbany Uptown Campus are classified “C” by the NYSDEC (6 NYCRR 863.5). The water in Rensselaer Lake is classified “B”. The portion of the Hudson River to the east of the project site is classified “C”, while water in the Mohawk River to the north of the project site is classified “A”.

Ground Water

Ground water elevations. As noted previously, there are ground water wells used for irrigation on-campus; one exists on the southern portion of the UAlbany Uptown Campus. The well was completed to a total depth of 24.6 feet bgs within a sand and gravel aquifer (USGS 2008). Additionally, there are two wells at Empire Commons that are used for irrigation. Ground water depth records maintained by the USGS New York Water Science Center from 2002 to 2008 indicate that ground water depths ranged from 5.11 to 13.12 feet bgs (USGS 2008).

Ground water in the area of the Uptown Campus is present in a principal aquifer known as the Pine Bush aquifer. The NYSDEC defines a principal aquifer within its Technical and Operational Guidance Series (TOGS) 2.1.3. as “...aquifers known to be highly productive or whose geology suggest abundant potential water supply, but which are not intensively used as sources of water supply by major municipal systems at the present time” (NYSDEC Memorandum 1990). Sole source aquifers do not exist in the project area (USEPA 2008).

3.2.2. Potential Impacts Construction Phase

Surface water. Construction-phase activities associated with UAlbany’s Capital Project Plan could result in impacts to surface water quality. Site clearing and grading in addition to a reduction in pervious surfaces could increase runoff and soil erosion. In the absence of appropriate mitigation measures, surface water quality impacts include:

- sedimentation as a result of erosion
- reduction in transparency (light penetration through the water column) as a result of erosion
- modification of surface water body substrate as a result of erosion
- alteration of surface water chemistry as a result of urban constituent runoff.

Inadequately planned and executed mitigation measures have the potential for adverse impacts to Indian Pond and its biota. The potential also exists for indirect impacts to off-site surface water features. With proper mitigation and compliance with applicable construction phase regulations and guidelines, including an Erosion and Sediment Control Plan and a SWPPP for each project, site surface water impacts will be short term in duration, and are not considered to be significant in either intensity or magnitude. UAlbany has a campus-wide SWMP that will serve as a basis for project-specific SWPPPs, which may be required to address project-specific storm water runoff issues.

Ground water. Potential ground water quality impacts could result during the construction phase of UAlbany's Capital Project Plan. Relatively small quantities of petroleum and/or raw materials are expected to be temporarily used during construction phase activities. Significant impacts to local ground water from petroleum and/or raw material release is unlikely with appropriate mitigation measures. Inadequately designed and implemented mitigation measures could result in the following impacts:

- potential petroleum/raw material release
- decreased quality of shallow ground water
- potential increase in constituent releases from developed land uses.

As noted previously, ground water at the Uptown Campus is relatively shallow, observed at 5 to 15 ft bgs. Therefore, it is important that steps be taken to allow appropriate recharge of storm water when projects include the replacement of previous surfaces with impervious surfaces (impervious surfaces are those that do not allow water to pass through and percolate to the subsurface, such as buildings, roadways, parking lots, sidewalks), that is, recharge under analogous conditions to that at present. Otherwise, there is the potential for storm water runoff to be transported by surface conditions or drainage to other parts of campus, causing erosion, or localized inundation, pooling or overflows in already saturated areas (see Section 3.1, preceding).

With proper mitigation and compliance with appropriate construction techniques, the potential for these impacts is not considered significant.

Operational Phase

Surface water. Operational phase activities will result in impacts to surface water quality and runoff without implementation of appropriate erosion and pollution prevention controls following the completion of construction-phase activities. An increase in impervious surfaces through the construction of additional buildings, the multi-use athletic facility and parking structures will incrementally increase surface runoff from the Uptown Campus. An increase in surface runoff has the potential to impact the capacity of campus storm water management systems as well as area surface water quality. The capacity of the campus storm water collection system was assessed by Woodard & Curran in 2008 and is discussed further in Section 3.4. Similar to construction-phase impacts, in the absence of appropriate mitigation measures, operational phase surface water quality impacts include:

- sedimentation as a result of erosion
- reduction in transparency (the depth that light penetrates in a water body) as a result of erosion
- modification of surface water body substrate as a result of erosion
- alteration of surface water chemistry as a result of urban constituent runoff.

Significant adverse impacts to surface water have not been identified as resulting from the operational phase activities.

Ground water. Expansion of existing buildings, construction of new projects, and an overall increase in impervious surfaces could result in impacts to ground water as a result of construction phase activities. The placement of subsurface structures, including basements, pipelines, piles and utilities, could potentially disrupt ground water quality and flow patterns. Additionally, the construction of new structures and additional paved surfaces reduces pervious surfaces on the Uptown Campus. A decrease in the infiltration of rainfall could increase storm water runoff and potentially impact both on- and off-site communities. Storm water drainage is discussed further in Section 3.4.

Select components of the Capital Project Plan may include the construction of basements at an estimated 10-20 feet below grade. In the absence of inadequately planned and executed construction techniques, potentially adverse impacts to ground water include:

- impacts to the quality of shallow ground water
- alteration of ground water flow patterns
- decrease in ground water recharge capabilities
- increase in potential pollutant loads.

Construction activities will be conducted in accordance with current federal and state regulations, guidelines, and policies, and with the campus' Stormwater Management Plan.

Summary. The following table presents summary of the projects for which potential impacts to surface waters and ground water may occur. However, as noted above, the impacts are not anticipated to be significant, and can be readily mitigated, as described in Section 3.2.3 following.

Table 3.2-2. Potential for impacts to water resources

Project Name	Potential for Impacts		Nature of Impacts
	Surface Water	Ground Water	
1. Student Housing Project	X	X	Construction runoff and erosion; storm water runoff and recharge
2. Campus Center Master Plan	X	X	Construction runoff and erosion; storm water runoff and recharge
3. Construct New Business School Building	X	X	Construction runoff and erosion; storm water runoff and recharge
4. Relocate Data Center	X	X	Construction runoff and erosion; storm water runoff and recharge
5. Implement Various Athletics Improvements	X	X	Construction runoff and erosion; storm water runoff and recharge
6. Purple Path Continuation	X		Construction runoff and erosion

Table 3.2-2. Potential for impacts to water resources

Project Name	Potential for Impacts		Nature of Impacts
	Surface Water	Ground Water	
7. Northern Landscape Improvement Project	X		Construction runoff and erosion
8. State Quad Parking Lot Expansion	X	X	Construction runoff and erosion; storm water runoff and recharge
9. Multi-Discipline Science Surge Building	X	X	Construction runoff and erosion; storm water runoff and recharge
10. Service Building Renovation	X	X	Construction runoff and erosion; storm water runoff and recharge
11. Entry Improvements	X		Construction runoff and erosion
12. Bus Rapid Transit			
13. Bicycle-Pedestrian Path	X		Construction runoff and erosion

3.2.3. Mitigation Measures

Construction Phase

Surface water. Construction phase activities associated with UAlbany's Capital Project Plan will be required to comply with applicable erosion and sediment control requirements, including adherence to *New York State Standards and Specifications for Erosion and Sediment Control* (NYSDEC 2005). Routine construction techniques to prevent erosion and surface water pollution will be utilized. In addition, a construction storm water permit and a SWPPP may be required on specific projects, consistent with regulatory requirements; the SWPPP will be integrated with the present campus-wide SWMP. As detailed in Section 3.1.4, construction activities will also be required to meet regulatory requirements outlined in the present campus-wide USEPA CGP. Potential construction phase mitigation measures to minimize the impacts to site surface water may include:

- Installation of perimeter erosion and sediment control measures including silt fencing and straw bales
- Implementation of appropriate soil stabilization measures including grading and sloping of excavations
- Limitation of land clearing activities to those areas where earthwork will be performed and progress as needed to preserve existing conditions
- Contractor adherence to performance standards to protect surface water resources
- Implementation of LEED-approved mitigation measures.

Following construction activities, restoration activities will be conducted to restore landscaping and the natural contour to the extent possible. Restoration activities will prevent long-term impacts to site surface water.

Ground water. Construction phase activities have the potential to impact site ground water quality in the absence of adequately designed and implemented mitigation measures. Potential construction phase mitigation measures to minimize the impacts to site ground water include:

- proper storage and labeling of petroleum/raw materials, such as bulk storage of fuels, oils and chemicals
- regular monitoring for leaks and preventative maintenance of construction vehicles and equipment
- proper disposal of construction waste.

Operational Phase

Surface water. Operational phase activities associated with UAlbany's Capital Project Plan will be required to comply with applicable erosion and sediment control requirements. Similar to construction phase surface water impacts, in the absence of appropriate grading, landscaping, and other erosion and runoff controls following construction phase activities, erosion and sedimentation could occur as a result. Potential operational phase mitigation measures to minimize impacts to site surface water include:

- adherence to appropriate storm water and surface water pollution prevention procedures
- implementation of LEED-approved mitigation measures
- limit soil disturbances and excessive mowing during routine grounds maintenance.

Operational phase activities will be conducted in accordance with current federal and state regulations, guidelines, and policies, in addition to implementation of a project-specific SWPPP that is integrated to the present campus-wide SWMP. Integrated into the design of each project will be provisions to address storm water control and storm water runoff.

Ground water. Operational phase activities associated with UAlbany's Capital Project Plan have the potential to impact site ground water as a result of increased impervious surfaces and/or the absence of adequately designed and implemented mitigation measures. Potential operational phase mitigation measures to minimize the impacts to site ground water include:

- proper storage and labeling of petroleum/raw materials, such as bulk storage of fuels, oils and chemicals
- regular monitoring for leaks and preventative maintenance of UAlbany fleet vehicles
- proper disposal of operation-related wastes
- installation of sustainable storm water runoff collection systems.

Summary

The following table presents a summary of the potential environmental impacts to water resources of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.2-3. Summary of Potential Water Resources Impacts and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Potential for sedimentation of Indian Pond due to erosion during construction • Potential for sedimentation of Indian Pond due to erosion after construction 	<ul style="list-style-type: none"> • Soils to be managed to prevent erosion through site-specific construction SWPPP • Soils to be managed to prevent erosion through site-specific construction SWPPP; stabilization of site through typical erosion control measures; landscaping of property
2. Campus Center Master Plan	<ul style="list-style-type: none"> • No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
3. Construct New Business School Building	<ul style="list-style-type: none"> • No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
4. Relocate Data Center	<ul style="list-style-type: none"> • No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> • No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
6. Purple Path Continuation	<ul style="list-style-type: none"> • No significant adverse impacts; no uses of or releases to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> • No significant adverse impacts; no uses of or releases to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> • No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> • No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
10. Service Building Renovation	<ul style="list-style-type: none"> • No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> • No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)

Table 3.2-3. Summary of Potential Water Resources Impacts and Mitigation Options.

Project	Potential Impacts	Mitigation
11. Entry Improvements	<ul style="list-style-type: none"> No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
12. Bus Rapid Transit	<ul style="list-style-type: none"> No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> No significant adverse impacts to surface or ground waters 	<ul style="list-style-type: none"> No mitigation necessary (also see “Water Supply and Wastewater” and “Drainage”)

3.3. Water Supply and Wastewater

3.3.1. Existing Conditions

Wastewater. The City of Albany is under consent order with the NYSDEC for certain sections of its system that are tributary to the South Wastewater Treatment Plant (Order on Consent DEC Case No. R4-2008-0912-137, February 12, 2009). The Consent Order was placed on the City as a result of combined sewer overflow (sanitary and storm water contributions) occurrences that create backflows into homes and from manholes onto ground surfaces. The Consent Order establishes a schedule for the City to continue to install backwater valves in affected homes and to locate and reduce specific infiltration and inflow sources. Infiltration occurs when ground water seeps into the sanitary sewer system through cracks or leaks in sewer pipes, and inflow occurs when rainwater is misdirected into the sanitary sewer system instead of storm sewers (examples are: roof leaders, yard and area drains, manhole covers, and cross connections from storm drains). Also, the Krumkill has allegedly experienced storm surges that overflows its banks and eventually backs up into the Woodville Pumping Station, causing heavy downstream flows.

The University is exploring several options with the City of Albany and the Town of Guilderland for connecting its waste water for the Capital Project Plan to municipal sewer systems. There are various options. One option includes connection to the Town of Guilderland; another would be connection to the Albany City lines off Western Avenue; another option is to connect north to City lines; and/or to implement a combination of these actions, amending existing UAlbany waste water connections from existing buildings to provide offsetting actions to target areas of capacity. Western Avenue connections, depending on location, either flow to the Woodville Pumping Station watershed or to the Beaver Creek Trunk Sewer. Although capacity in the two Western Avenue sewers is limited, either connection would be viable, provided that the stipulations in the Consent Order are met. The Consent Order stipulates that the City cannot increase the frequency and duration of combined sewer overflow events that are presently occurring. For the Student Housing Project, the University and its consultants have been discussing options for wastewater discharge to the City’s system in a manner that does not contravene the consent orders. Options that have been discussed include:

- evaluating whether and how much sanitary wastewater flows can be discharged to either of these lines without increasing the frequency and duration of overflows.
- evaluating whether the University can redirect sanitary wastewater flows from existing campus buildings to other wastewater collection sewers, such as to the Town of Guilderland or to the Washington Avenue sewer line, the latter which flows to the North Treatment Plant. This option

would offset some flows that otherwise would be directed to the two lines that are the subject of the consent orders, providing capacity for wastewater from the Student Housing Project. The North Treatment Plant has adequate capacity for additional sewage flows, as does the collection system tributary to it.

- the design and construction of a sewer line that would transmit sanitary sewage from the Student Housing Project to Washington Avenue, avoiding the affected portion of the City's sewer system completely. This option would necessitate the construction of a force main and pump station to bring the wastewater north over the rise in elevation on the campus, then a gravity sewer to the connection at Washington Avenue.

These discussions are ongoing with City, but reflect the fact that there are a hierarchy of viable options to address wastewater issues from the Student Housing Project. Wastewater from other project locations can be transmitted to either the Town of Guilderland system or the Washington Avenue sewer line, as is done at present.

In 2008 the results of a condition and capacity assessment of the University's Uptown utilities infrastructure, including storm water, sanitary sewer, water and irrigation systems, were documented in a report prepared by Woodard & Curran (2008). There are two wastewater interceptors that serve the UAlbany Uptown campus: the Northern Interceptor sanitary sewer, which begins at Colonial Quad and ends northeast of the softball fields north of State Quad; and the Southern Interceptor, which begins in the vicinity of SBA and traverses campus to the intersection of Justice Drive and University Drive East. Woodard & Curran (2008) modeled and evaluated the capacities of the two interceptors based on a variety of factors including actual flow metering, and pipe condition information. At the time, it was determined that there is no additional capacity in the southern interceptor because of pipe restrictions of up to 90%. The maximum observed instantaneous flow through the interceptor was 0.082 million gallons per day (mgd) as compared to an average daily flow of 0.03 mgd; the modeled flow in various segments of the northern interceptor sanitary sewer ranged from 0.47 mgd – 1.62 mgd, but this was for pipes in good condition. UAlbany's ongoing maintenance program, to date, has removed these restrictions and restored capacity.

Water supply. The closest public water supply well in the vicinity of UAlbany's Uptown Campus is a non-community public water supply system located approximately 2.6 miles from the project sites (New York State Department of Health (NYSDOH)). Private well locations are not mapped by the NYSDOH and, therefore, possible off-site private well locations are unknown. Based on the level of urban development around the UAlbany Uptown Campus and the location of existing housing, private water wells are assumed to be located mainly to the southwest of UAlbany project sites.

The municipal water source for the City of Albany is the Alcove Reservoir. The Alcove Reservoir is a surface water body, located on the Hannacroix Creek in the Town of Coeymans, approximately 5 miles southwest of UAlbany's Uptown Campus. The Basic Creek Reservoir, located in the Town of Westerlo, approximately 5.5 miles southwest of UAlbany's Uptown Campus (City of Albany Department of Water and Water Supply). The Basic Creek Reservoir is a secondary water source, used to maintain the elevation of water in the Alcove Reservoir (City of Albany Department of Water and Water Supply). Prior to distribution, water is treated at the Feura Bush Water Treatment Facility in the Town of Bethlehem. Treatment includes sediment removal, pH and alkalinity adjustment, and disinfection (City of Albany Department of Water and Water Supply). Municipal water sources are identified in Figure 3.2-3, including Rensselaer Lake; as noted previously, the City of Albany Water Department has been considering developing the lake as an emergency water supply.

UAlbany has two water supply connections, one located at the eastern side of the campus at the Harriman Campus, and the second located on Washington Avenue. The Washington Avenue connection is considered a backup because of low pressure. The average daily water demand at UAlbany is approximately 753,000 gallons per day (gpd), with average daily highs of 931,000 gpd in November and 893,000 gpd in October, based on usage during the 2006-2007 academic year (Woodard & Curran 2008). Woodard & Curran estimated the additional water demand from proposed campus expansion projects, that is, projects “that would add building footprint or student population” (Woodard & Curran 2008, Capacity Assessment, pg 1-11). This additional demand is presented in the Table 3.1-1. The table was excerpted from Table 1-5 in Woodard & Curran’s 2008 Capacity Assessment; several projects have been omitted since they already have been completed. Also, the following adjustments were made:

- the Student Housing Project has been downsized to approximately 500 beds from the 1000 beds evaluated in the report to reflect current construction plans.
- the report indicated an additional 15,000 seats for the Multi-Use Athletic Facility (rather than the no change in capacity plan described herein) with an estimate of 5 gallons per day per seat; while the incremental increase is from the present seating capacity of 10,000, water demand has been conservatively based on a capacity crowd.

The table presents a total of approximately 190,000 gpd of water needs for these projects.

Table 3.3-1. Estimated water demand for several projects.

Project Number/Name	Estimated Water Demand (gpd)
1. Student Housing Project	32,500
2. Campus Center Master Plan	15,000
3. Construct New Business School Building	31,200
4. Relocate Data Center	25,444
5. Implement Various Athletics Improvements	50,000
9. Multi-Discipline Science Surge Building	36,000
10. Service Building Renovations	375
Total	190,519

The following considerations are to be noted with respect to these estimated water demand values:

- The water demand estimate for the Data Center assumes that this building and its equipment will be water cooled and not air cooled; the water demand is largely to offset evaporative losses from cooling towers, as well as some nominal water demand for potable and sanitary uses for the building occupants.
- The water demand as estimated for the Athletic Master Plan/Multi-Use Athletic Facility is based on water use by a capacity crowd of 10,000 spectators for a major event. The early stages of implementation of the Athletic Master Plan will involve the reconfiguration and replacement of athletic fields requiring little or no net increase in potable water demand.
- The need for the Student Housing Project, the Business School, the Campus Center and the Surge Building are to allow renovation of similar facilities on campus. As described elsewhere herein, these renovations, in part, will be performed on a rotating basis and, therefore, the estimated net water demand may be less than that indicated in Table 3-1.1. There may be offsetting reductions

in water use and, therefore, wastewater generation, as buildings on campus are taken off line for renovation; the volumes of water involved will be dependent on the nature of the buildings. For example these offsetting reductions would apply to the renovation of student housing on campus, as the capacity of the Student Housing Project provides the opportunity for existing bed space on campus to be renovated on a rotating basis.

Therefore, typical water demand for the new facilities is anticipated to be in the range of 112,000 gpd to 140,000 gpd since the estimated water demand for the stadium at maximum spectator capacity (50,000 gpd, see Table 3.3-1) would only occur during capacity events, and not during normal campus operations.

A component of the Woodard & Curran (2008) condition and capacity assessment included an evaluation of UAlbany's irrigation system. The existing irrigation system consists of automatic and manual, some electrically controlled sprinkler systems and associated PVC and concrete lined piping and automatic valves used to irrigate lawns and planting beds (Woodard & Curran 2008). The Southern University Field, artificial turf fields, Practice Athletic Fields, and the Baseball Fields are irrigated using water pumped from Indian Pond (Woodard & Curran 2008). The Boor Sculpture Studio, Science Library, and University Police lawns and planting beds are serviced by the building potable water supply, while Empire Commons irrigation water is supplied by two irrigation pumping wells. The campus is currently moving the Science Library irrigation to use of the pond water.

The irrigation system is operated using two 40-horsepower vertical turbine pumps, capable of generating up 1,200 gallons per minute (gpm) of irrigation water. The capacity assessment concluded that the existing irrigation system has the capacity to service the existing irrigation zones on the Uptown Campus, with additional capacity if irrigation areas increase. Operation of the irrigation system zones is conducted both manually and automatically, ultimately distributing irrigation water through the piping and sprinkler head systems. The condition assessment of the irrigation system, conducted by Northern Designs, LLC, and documented by Woodard & Curran (2008), concluded that the existing irrigation water supply meets demands. However, Northern Designs recommended several actions to take to address water conservation, efficiency, and leakage issues that the University is beginning to implement.

3.3.2. Potential Impacts

Wastewater. As noted in 3.3.1, the City of Albany is under consent order with the NYSDEC for certain sections of its system that are tributary to the South Wastewater Treatment Plant. The Consent Order was placed on the City as a result of combined sewer overflow (sanitary and storm water contributions) occurrences that create backflows into homes and from manholes onto ground surfaces. The Consent Order establishes a schedule for the City to continue to install backwater valves in affected homes and to locate and reduce specific infiltration and inflow sources. Infiltration occurs when ground water seeps into the sanitary sewer system through cracks or leaks in sewer pipes, and inflow occurs when rainwater is misdirected into the sanitary sewer system instead of storm sewers (examples are: roof leaders, yard and area drains, manhole covers, and cross connections from storm drains). Also, the Krumkill has allegedly experienced storm surges that overflows its banks and eventually backs up into the Woodville Pumping Station, causing heavy downstream flows. The University is exploring two options for connecting their Housing project to City sewers along Western Avenue. One option would direct flows to the Woodville Pumping Station watershed while the other, located adjacent to the Harriman Campus entrance, would flow into the Beaver Creek Trunk Sewer. Although capacity in the two Western Avenue sewers is limited, either connection would be viable, provided that the stipulations in the Consent Order are met. The Consent Order

stipulates that the City cannot increase the frequency and duration of combined sewer overflow events that are presently occurring. For the Student Housing Project, the University and its consultants have been discussing options for wastewater discharge to the City's system in a manner that does not contravene the consent orders. Options that have been discussed include:

- evaluating whether and how much sanitary wastewater flows can be discharged to either of these lines without increasing the frequency and duration of overflows.
- evaluating whether the University can redirect sanitary wastewater flows from existing campus buildings to other wastewater collection sewers, such as to the Town of Guilderland or to the Washington Avenue sewer line, the latter which flows to the North Treatment Plant. This option would offset some flows that otherwise would be directed to the two lines that are the subject of the consent orders, providing capacity for wastewater from the Student Housing Project. The North Treatment Plant has adequate capacity for additional sewage flows, as does the collection system tributary to it.
- the design and construction of a sewer line that would transmit sanitary sewage from the Student Housing Project to Washington Avenue, avoiding the affected portion of the City's sewer system completely. This option would necessitate the construction of a force main and pump station to bring the wastewater north over the rise in elevation on the campus, then a gravity sewer to the connection at Washington Avenue.

These discussions are ongoing with the City, but reflect the fact that there is a hierarchy of viable options to address wastewater issues from the Student Housing Project. Wastewater from other project locations can be transmitted to either the Town of Guilderland system or the Washington Avenue sewer line, as is done at present.

With respect to the on-campus wastewater conveyance systems, the one proposed project that would be served by the northern interceptor sewer may not be impacted because capacity appears to be available for their use (Woodard & Curran 2008). The project that would produce sanitary wastewater and discharge to the northern interceptor is Project No. 3, the Business School Building. The condition of sewer pipes in the vicinity of the proposed location for the Business School Building ranges from poor to fair, depending on the specific pipe run, with flow capacities from less than 0.47 mgd to less than 1.32 mgd, depending on location, with average daily flow of only 0.03 mgd.

Use of the southern interceptor may be restricted due to the finding that its additional capacity is presently limited. The projects that may be impacted under present conditions are (Woodard & Curran 2008):

- Project No. 1 – Student Housing Project
- Project No. 4 – Relocate Data Center
- Project No. 5 – Implement Various Athletics Improvements
- Project No. 9 – Multi-Discipline Science Surge Building
- Project No. 10 – Service Building Renovation.

Project No. 10, Service Building Renovation, is unlikely to contribute substantial wastewater to the sewer system due to limited personnel and other users associated with the project.

In total, based on water use, the projects generating sanitary wastewater are anticipated to generate approximately 98,000 – 124,000 gpd (see Table 1.4-1), depending on whether there is a capacity event in progress at the stadium.

Water Supply. The implementation of the proposed projects will increase water supply demand on campus, both for normal potable and non-potable uses. However, the City of Albany Water Department has indicated that the City has the capacity to supply the 112,000 gpd – 140,000 gpd that the campus may need to serve these projects; that estimated demand assumes no offset for campus academic and student housing facilities that can be taken off line for rehabilitation on a rotating basis over several years, for example, because of the implementation of Project No. 1 (Student Housing Project) and Project No. 10 (Surge Building). Fire flows vary depending on the distance from the present supply.

Summary. The following table presents a summary of the projects for which potential impacts to water supply and waste water may occur. However, as noted above, the impacts are not anticipated to be significant, and can be readily mitigated, as described in Section 3.3.3, following.

Table 3.3-2. Potential for impacts to water supply and wastewater discharge.

Project Name	Potential for Impacts		Nature of Impacts
	Water Supply	Waste Water	
1. Student Housing Project	X	X	Water supply needs, wastewater discharge capacity (about 32,500 gpd)
2. Campus Center Master Plan	X	X	Water supply needs, wastewater discharge capacity (about 15,000 gpd)
3. Construct New Business School Building	X	X	Water supply needs of about 31,200 gpd, wastewater discharge capacity about 29,300 gpd
4. Relocate Data Center	X	X	Water supply needs of about 25,444 gpd, wastewater discharge capacity about 10,500 gpd
5. Implement Various Athletics Improvements	X	X	Water supply needs, wastewater discharge capacity (about 50,000 gpd for capacity stadium events)
6. Purple Path Continuation			
7. Northern Landscape Improvement Project	X		Irrigation water for landscaping
8. State Quad Parking Lot Expansion			
9. Multi-Discipline Science Surge Building	X	X	Water supply needs, wastewater discharge capacity (36,000 gpd)

Table 3.3-2. Potential for impacts to water supply and wastewater discharge.

Project Name	Potential for Impacts		Nature of Impacts
	Water Supply	Waste Water	
10. Service Building Renovation	X	X	Nominal additional water supply needs and wastewater discharge capacity
11. Entry Improvements	X		Water for landscaping
12. Bus Rapid Transit			
13. Bicycle-Pedestrian Path			

3.3.3. Mitigation Measures

Wastewater. UAlbany has recognized the implications of the condition of the sewer lines to the continued operation of the campus. Repairs and upgrades to sanitary lines are funded in the current maintenance plan. University staff are evaluating and prioritizing maintenance activities to clean or repair portions of the sewer system. The University's ongoing maintenance program will address pipe restrictions and restore the capacity of the system. In addition, as the Capital Project Plan progresses, the condition of the sanitary sewers which serve a particular project will need to be evaluated, specifically with respect to the location on the interceptor (which may dictate the availability of downstream capacity in the sewer system), the amount of wastewater being generated at that location, and the status of sewer maintenance. In these instances, appropriate measures may be required as part of project planning to ensure that adequate wastewater discharge capacity will be available.

Water Supply. The implementation of the proposed projects would benefit from an increase in the water supply to campus, which was evaluated based on a worst case scenario of fire flow needs to all corners of campus. Woodard & Curran (2008) suggested that this can be accomplished by installing a booster pump at the presently unused Washington Avenue connection to the City of Albany water supply. Necessary modifications to the water supply would also include an increase in supply lines, new fire hydrants, and the construction of new above grade valve house(s) for additional metering and backflow prevention. Moreover, it is important to note that the increase in need discussed above may be offset by water conservation programs currently being implemented on the Uptown Campus, including installation of low-flow fixtures and general conservation awareness. The University recently received a \$1 million water conservation project grant from federal stimulus funds.

Summary

The following table presents a summary of the potential environmental impacts to water supply and wastewater of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.3-3. Summary of Potential Water Supply and Wastewater Impacts and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Use of approximately 32,500 gpd of potable water • Generation of approximately 32,500 gpd of sanitary wastewater 	<ul style="list-style-type: none"> • City of Albany has indicated that adequate water supply is available for University's use • City's wastewater transmission capacity constraints may necessitate options that connect to one or more treatment plants, including Guilderland • Plan may also involve amending connections from existing buildings to provide offsetting capacity relief
2. Campus Center Master Plan	<ul style="list-style-type: none"> • Use of approximately 15,000 gpd of potable water • Generation of approximately 15,000 gpd of sanitary wastewater 	<ul style="list-style-type: none"> • City of Albany has indicated that adequate water supply is available for University's use • City's wastewater transmission capacity constraints may necessitate options that connect to one or more treatment plants, including Guilderland • Plan may also involve amending connections from existing buildings to provide offsetting capacity relief
3. Construct New Business School Building	<ul style="list-style-type: none"> • Use of approximately 31,200 gpd of potable water • Generation of approximately 29,300 gpd of sanitary wastewater 	<ul style="list-style-type: none"> • City of Albany has indicated that adequate water supply is available for University's use • This building connection will go to the North Treatment Plant which has additional capacity
4. Relocate Data Center	<ul style="list-style-type: none"> • Use of approximately 25,000 gpd of potable water for chiller make-up from cooling tower losses • Additional daily water demand for users (40 people at 11 gal each per day) approximately 444 gpd • Generation of approximately 1500 gpd of sanitary wastewater and 9,000 gpd of cooling tower blowdown 	<ul style="list-style-type: none"> • City of Albany has indicated that adequate water supply is available for University's use • Wastewater generation may be nominal and related to the staff located at the Data Center • Cooling tower losses would comprise 95% of water use

Table 3.3-3. Summary of Potential Water Supply and Wastewater Impacts and Mitigation Options.

Project	Potential Impacts	Mitigation
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> • Use of approximately 50,000 gpd of potable water (estimated maximum during capacity stadium events; this demand is for the entire stadium, whereas only the demand in excess of present average attendance would be new) • Generation of approximately 50,000 gpd of sanitary wastewater (estimated maximum during capacity stadium events; this demand is for the entire stadium, whereas only the wastewater generated in excess of present average attendance would be new) 	<ul style="list-style-type: none"> • City of Albany has indicated that adequate water supply is available for University's use • City's wastewater transmission capacity constraints may necessitate options that connect to one or more treatment plants, including Guilderland • Plan may also involve amending connections from existing buildings to provide offsetting capacity relief
6. Purple Path Continuation	<ul style="list-style-type: none"> • No use of water or discharge of wastewater 	<ul style="list-style-type: none"> • No mitigation necessary (also see "Water Supply and Wastewater" and "Drainage")
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> • Water largely provided by irrigation system • No wastewater generation 	<ul style="list-style-type: none"> • No mitigation necessary
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> • No water needs • No wastewater generation 	<ul style="list-style-type: none"> • No mitigation necessary
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> • Use of approximately 36,000 gpd of potable water • Generation of approximately 36,000 gpd of sanitary wastewater 	<ul style="list-style-type: none"> • City of Albany has indicated that adequate water supply is available for University's use for the components of the Capital Project Plan • City's wastewater transmission capacity constraints may necessitate options that connect to one or more treatment plants, including Guilderland • Plan may also involve amending connections from existing buildings to provide offsetting capacity relief
10. Service Building Renovation	<ul style="list-style-type: none"> • Demand for potable water an approximately additional 375 gpd • Additional waste water generation of 375 gpd. 	<ul style="list-style-type: none"> • No mitigation necessary
11. Entry Improvements	<ul style="list-style-type: none"> • Water largely provided by irrigation system • No wastewater generation 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.3-3. Summary of Potential Water Supply and Wastewater Impacts and Mitigation Options.

Project	Potential Impacts	Mitigation
12. Bus Rapid Transit	<ul style="list-style-type: none"> No water needed No wastewater generation 	<ul style="list-style-type: none"> No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> No water needed No wastewater generation 	<ul style="list-style-type: none"> No mitigation necessary

3.4. Drainage

3.4.1. Existing Conditions

The University at Albany is served by a storm sewer system consisting of conveyance pipes, catch basins, drainage manholes and drainage inlets. According to the campus-wide SWMP prepared for the Uptown Campus in 2004, “Stormwater from Empire Commons, the Colonial Quadrangle, Collins Circle, the State Quadrangle and all of the parking areas north of the Academic Podium is collected and discharged through two connections to the Albany County Municipal Storm Sewer System...Stormwater from the remainder of the SUNY Albany campus discharges to Indian Lake [sic]...” (Woodard & Curran 2005). Overflow from this retention basin discharges into the Town of Guilderland storm sewer system and then flows into the Krum Kill. The “Stormwater Management Plan” was prepared to meet the requirements of the state’s General Permit for Storm Water Discharges from Small MS4s (GP-02-02). This plan establishes the general requirements for construction storm water plans prepared on a project-specific basis. Stormwater control for a specific project is subject to design considerations of individual projects.

For Woodard & Curran’s evaluation of UAlbany’s drainage infrastructure (Woodard & Curran 2008), not all pipes, manholes and other equipment were inspected; a representative sample of equipment was inspected to gain a perspective of the infrastructure systems as a whole. In general, the study found that:

- over 50% of the storm sewer pipes were found to be in good to excellent condition, indicating no cracks and blockages of no more than 5%.
- of the catch basins examined, approximately 35% had substantial or greater amounts of sediment present, impacting their hydraulic function, but one third have been cleaned to date.
- drainage manholes (123 total) also were impacted by sediment to a lesser extent (16% with substantial or greater sediment) impacting hydraulic function.

The Capacity Assessment Report divided the storm water system into 14 subsystems. The conclusions of this assessment were that:

- nine of the 14 drainage subsystems were adequate for up to the 25 yr, 24 hr rainfall event.
- the remaining five subsystems have structures where storm water approaches within two ft of the rim elevation of the catch basin, indicating the potential for runoff in these areas.

These conditions are similar to those found in the storm sewer systems of many municipalities.

Indian Pond provides storm water retention capacity for the Uptown Campus. Woodard & Curran (2008) calculated that for every inch of rainfall on campus, approximately 1.6 million gallons of water is directed to the pond which, seasonally, is used for irrigation water on campus. Not all of the potential acreage on campus that could be serviced by the pond for irrigation is served at the present time, but plans to expand this use are progressing.

In addition, Indian Pond was identified as containing significant sediment deposits, estimated at the time as approximately 12,200 cubic yards, or equated to approximately 2.5 million gallons of storm capacity. In 2008, a sediment removal project was conducted which removed approximately 11,000 cubic yards of sediment from the pond, restoring a significant amount of its storm water capacity (approximately 2.2 million gallons).

UAlbany is a member of the Stormwater Coalition of Albany County, a countywide organization made up of 11 towns, villages and cities, and UAlbany. The coalition formed an intermunicipal agreement earlier this year to address storm water issues that are common to them, in response to a federal mandate to control water pollution from storm water runoff as part of the federal Clean Water Act. The coalition received two state grants from the Environmental Protection Fund totaling \$358,000 to get started. The University's active membership in this group emphasizes the importance that UAlbany places on addressing storm water issues.

3.4.2. Potential Impacts

In its 2004 Stormwater Management Plan, the following requirements are noted: "...construction activities that trigger the regulatory thresholds are undertaken on campus, permit coverage must be obtained prior to commencement of construction" (Woodard & Curran 2005). As part of the construction storm water permit application, a SWPPP also must be prepared. Thresholds are defined as large construction sites (soil disturbances of five acres or more) and small construction sites (soil disturbances of 1-5 acres). These construction projects may be undertaken by one of several agencies: SUCF, DASNY, NYSOGS, and UAlbany. This plan includes by reference the latest edition of NYSDEC's standards for erosion and sediment control, which is contained in "New York Standards and Specifications for Erosion and Sediment Controls" and was released in August, 2005 (NYSDEC 2005).

The 2004 Stormwater Management Plan also addresses BMPs that include:

- parking lot and street cleaning
- storm drain maintenance
- vehicle maintenance, washing and storage
- oil/water separator maintenance
- hazardous materials and waste storage
- landscaping and lawn care
- pesticide and herbicide application
- roadway maintenance
- spill response
- litter control.

Woodard & Curran, in its Condition Assessment Report (2008), indicated the potential for storm water impacts to the following proposed projects due to capacity limitations in five storm water subsystems (the following list is based on Figure 3-1 in Woodard & Curran 2008):

- Project No. 1 – Student Housing Project
- Project No. 2 - Campus Center Master Plan
- Project No. 3 – Construct New School of Business Building
- Project No. 4 – Relocate Data Center
- Project No. 5 - Implement Various Athletics Improvements
- Project No. 7 – Northern Landscape Improvement Project
- Project No. 8 - State Quad Parking Expansion.

Where possible for each project, a greater use of pavers rather than blacktop will reduce impermeable surfaces and enhance the opportunity for storm water percolation into the ground, decreasing runoff.

Summary. The following table presents summary of the projects for which potential impacts to drainage may occur. However, as noted above, the impacts are not anticipated to be significant, and can be readily mitigated, as described in Section 3.4.3 following.

Table 3.4-1. *Potential for impacts to drainage.*

Project Name	Potential for Impacts - Drainage	Nature of Impacts
1. Student Housing Project	X	Construction, Post-construction
2. Campus Center Master Plan	X	Construction, Post-construction
3. Construct New Business School Building	X	Construction, Post-construction
4. Relocate Data Center	X	Construction, Post-construction
5. Implement Various Athletics Improvements	X	Construction, Post-construction
6. Purple Path Continuation	X	Construction
7. Northern Landscape Project	X	Construction, Post-construction
8. State Quad Parking Lot Expansion	X	Construction, Post-construction
9. Multi-Discipline Science Surge Building	X	Construction, Post-construction
10. Service Building Renovation	X	Construction, Post-construction
11. Entry Improvements	X	Construction
12. Bus Rapid Transit		
13. Bicycle-Pedestrian Path	X	Construction

3.4.3. Mitigation Measures

Based on the results of the Woodard & Curran report (2008), the following are potential mitigation measures that could be implemented with respect to drainage on campus on a project-specific basis, depending on the respective project from the Capital Project Plan. These potential impacts are described in greater detail elsewhere (Woodard & Curran 2008):

- evaluate, clean and/or repair/restore storm sewer pipes downstream of a proposed project to improve capacity;
- evaluate, clean and/or repair/restore storm drains in the vicinity of a proposed project to improve capacity;
- evaluate and repair/restore storm sewer pipes downstream of a proposed project to improve capacity;
- evaluate and repair/restore storm drains in the vicinity of a proposed project to improve capacity;
- continue to schedule periodic maintenance of Indian Pond to maintain storm water capacity;
- extend the irrigation system on campus to minimize the outflow of Indian Pond;
- implement other storm collection options into new building systems to reduce the impact on the campus storm water system, such as green roofs, rain barrel collection systems, green parking lots, and porous pavement systems.

Additionally, architectural concepts for projects on campus have included suggestions to address storm water drainage, consistent with LEED principles and NYSDEC guidelines, such as the use of decorative pavers instead of concrete around the proposed Business School Building (IKON5 Architects, n.d.). Such options also will be included in the SWPPPs associated with the respective projects.

With respect to the following projects, there are a number of potential project-specific options available to mitigate storm water impacts:

- **Implement Various Athletics Improvements (Multi-Use Athletic Facility)** - Due to the size and nature of improvements, it appears a storm water management facility will need to be provided to directly service the Multi-Use Athletic Facility. The storm water management facility should be designed in accordance with the NYS Stormwater Management Design Manual and also mitigate increased runoff rates under post-developed conditions to equal or less than pre-developed conditions for the 1, 10, and 100-yr storms.
- **Campus Center Master Plan, Business School Building, Relocate Data Center, Multi-Discipline Science Surge Building** - Due to the size and location of proposed improvements, it appears separate storm water management facilities would not directly service each of the proposed projects. However, proprietary devices such as water quality filters or similar devices along with underground storm water detention could be other alternatives that could be considered. It may also be possible to provide storm water management facilities downstream of the proposed locations that could be designed to include additional areas within the campus. A holistic review of storm water on campus may offer opportunities to offset the control of storm water runoff from these projects with more cost-effective control of storm water elsewhere on campus. Proposed facilities should be designed in accordance with the NYS Stormwater Management Design Manual and provide sufficient mitigation to reduce post-developed runoff rates to pre-developed conditions or desired rates.

- Service Building Renovation - Due to the size and location of proposed improvements it will be necessary to perform a drainage evaluation and consult with the City of Albany as to the appropriate option for storm water management.
- It appears the existing storm water pond located in the southeast portion of the site would be utilized to provide water quality and quantity control and no additional storm water management facilities are required.
- Student Housing Project - It is likely that this project will utilize the existing capacity in Indian Pond located in the southeast portion of the site to provide storm water quality and/or quantity mitigation. Due to the size and nature of improvements, a storm water management facility may need to be provided to directly service a portion of the Student Housing Project. If so, this storm water management facility should be designed in accordance with the NYS Stormwater Management Design Manual and also mitigate increased runoff rates under post-developed conditions to equal or less than pre-developed conditions.

Table 3.4-1 provides calculations of estimated runoff volumes that would result from incremental additional impervious surfaces from four of the major projects in the Capital Project Plan. Of note is the estimated increased runoff volume that would result from the construction of the Student Housing Project, including walkways and the parking lot for the student residents (for purposes of this evaluation, this parking lot and the State Quad Parking Lot Expansion were both assumed to result in 100% impervious surfaces). For the 100 year storm, the runoff volume is estimated at a total of 2.5 million gpd for the listed projects. One option for the Student Housing Project site is to direct this runoff to Indian Pond. As noted previously herein, maintenance dredging of Indian Pond was conducted in 2008, with the removal of approximately 11,000 cubic yards of sediment; this is the equivalent of approximately 2.2 million gallons of restored retention capacity. Therefore, subject to more detailed evaluations following the completion of the design of the project, the option of using Indian Pond for storm water management for this project appears to be viable.

Table 3.4-2. Potential Drainage Impacts for Building Construction Projects

Project	Existing CN	Proposed CN	Existing Runoff (in) for 1, 10 and 100-yr storms	Proposed Runoff (in) for 1, 10 and 100-yr storms	Increased Runoff Volume (cfd/gpd) for 1, 10, and 100-yr storms
Student Housing Project (6.76ac of new impervious surface)	39 (open space, lawn)	98 (impervious surface)	1-yr = 0.04 10-yr = 0.11 100-yr = 0.77	1-yr = 2.17 10-yr = 4.26 100-yr = 6.76	1-yr = 52,267/390,984 10-yr = 101,836/761,786 100-yr = 146,987/1,099,539
Construct New Business School Building (1.1 ac of new impervious surface)	39 (open space, lawn)	98 (impervious surface)	1-yr = 0.04 10-yr = 0.11 100-yr = 0.77	1-yr = 2.17 10-yr = 4.26 100-yr = 6.76	1-yr = 8,505/63,621 10-yr = 16,571/123,960 100-yr = 23,918/178,919

Table 3.4-2. Potential Drainage Impacts for Building Construction Projects

Project	Existing CN	Proposed CN	Existing Runoff (in) for 1, 10 and 100-yr storms	Proposed Runoff (in) for 1, 10 and 100-yr storms	Increased Runoff Volume (cfd/gpd) for 1, 10, and 100-yr storms
Campus Center Master Plan (addition only) (0.57ac of new impervious surface)	39 (open space, lawn)	98 (impervious surface)	1-yr = 0.04 10-yr = 0.11 100-yr = 0.77	1-yr = 2.17 10-yr = 4.26 100-yr = 6.76	1-yr = 4,407/33,198 10-yr = 8,587/64,235 100-yr = 12,393/92,706
State Quad Parking Lot Expansion (2.3ac of new impervious surface)	39 (open space, lawn)	98 (impervious surface)	1-yr = 0.04 10-yr = 0.11 100-yr = 0.77	1-yr = 2.17 10-yr = 4.26 100-yr = 6.76	1-yr = 17,783/133,026 10-yr = 34,648/259,185 100-yr = 50,010/374,100
Multi-Use Athletic Center (2.1 ac of new impervious surface)	39 (open space, lawn)	98 (impervious surface)	1-yr = 0.04 10-yr = 0.11 100-yr = 0.77	1-yr = 2.17 10-yr = 4.26 100-yr = 6.76	1-yr = 16,237/121,461 10-yr = 31,635/236,646 100-yr = 45,662/341,576
Multi-Discipline Science Surge Building (2.3 ac of new impervious surface)	39 (open space, lawn)	98 (impervious surface)	1-yr = 0.04 10-yr = 0.11 100-yr = 0.77	1-yr = 2.17 10-yr = 4.26 100-yr = 6.76	1-yr = 17,783/133,026 10-yr = 34,678/259,185 100-yr = 50,010/374,100
Service Building Renovation (24,000 sf of new impervious surface)	39 (open space, lawn)	98 (impervious surface)	1-yr = 0.04 10-yr = 0.11 100-yr = 0.77	1-yr = 2.17 10-yr = 4.26 100-yr = 6.76	1-yr = 4,260/31,867 10-yr = 8,300/62,088 100-yr = 11,980/89,616

Key:

CN = curve number

cfd = cubic feet/day

gpd = gallons/day

Assumptions:

1. Above calculations based on the following storm data for Albany County:

<u>Storm Frequency</u>	<u>24-hr Rainfall Amount</u>
1-yr	2.4-inches
10-yr	4.5-inches
100-yr	7.0-inches

2. Increased Runoff Volume was obtained by calculating the change in the amount of runoff under existing and proposed conditions for the additional impervious surfaces proposed.

3. Hydrologic Soil Group “A” was used to calculate the existing CN. The Site Utilities Study Final Report dated November 2008 as prepared by Woodard & Curran indicated 86% of the soils on the campus are HSG “A” soils.

Summary

The following table presents a summary of the potential environmental impacts to drainage of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.4-3. Summary of Potential Impacts to Drainage and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Generation of storm water during construction • Increase in impermeable surfaces for building and parking lot of approximately 6.76 acres • 100 yr storm would generate approximately 1.1 million gpd in storm water 	<ul style="list-style-type: none"> • Site to be managed to prevent erosion through site-specific construction SWPPP • Use of storm water control techniques in construction of site (e.g., vegetated swales, permeable pavers, rain gardens); preparation of a SWPPP for the completed project site • Redirection of storm water from the site to Indian Pond; Indian Pond was dredged in fall 2008, restoring approximately 2.2 million gallons in retention capacity
2. Campus Center Master Plan	<ul style="list-style-type: none"> • Construction to result in 0.57 ac of new impervious surfaces • 100 year storm would generate approximately 93,000 gpd storm water 	<ul style="list-style-type: none"> • Due to the size and location of proposed improvements, it appears separate storm water management facilities would not directly service each of the proposed projects. • However, proprietary devices such as water quality filters or similar devices along with underground storm water detention could be other alternatives that could be considered. • It may also be possible to provide storm water management facilities downstream of the proposed locations that could be designed to include additional areas within the campus. • Proposed facilities will be designed in accordance with the NYS Stormwater Management Design Manual and provide sufficient mitigation to reduce post-developed runoff rates to pre-developed conditions or desired rates.
3. Construct New Business School Building	<ul style="list-style-type: none"> • 100 year storm would generate approximately 179,000 gpd storm water • Increase in impervious surfaces as a result of this project of 1.1 ac 	<ul style="list-style-type: none"> • Proposed facilities will be designed in accordance with the NYS Stormwater Management Design Manual and provide sufficient mitigation to reduce post-developed runoff rates to pre-developed conditions or desired rates.

Table 3.4-3. Summary of Potential Impacts to Drainage and Mitigation Options.

Project	Potential Impacts	Mitigation
4. Relocate Data Center	<ul style="list-style-type: none"> Siting identified as existing SBC building with 11,000 sf addition 	<ul style="list-style-type: none"> Proposed facilities will be designed in accordance with the NYS Stormwater Management Design Manual and provide sufficient mitigation to reduce post-developed runoff rates to pre-developed conditions or desired rates.
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> Project estimated to result in 2.1 acres of new impervious surfaces 100 year storm estimated to generate approximately 342,000 gpd storm water 	<ul style="list-style-type: none"> Due to the size and nature of improvements, it appears a storm water management facility will need to be provided to directly service the Multi-Use Athletic Facility. The storm water management facility will be designed in accordance with the NYS Stormwater Management Design Manual and also mitigate increased runoff rates under post-developed conditions to equal or less than pre-developed conditions for the 1, 10, and 100-yr storms.
6. Purple Path Continuation	<ul style="list-style-type: none"> Potential for erosion on slopes 	<ul style="list-style-type: none"> Design with permeable surfaces, and account for drainage flow where slopes are encountered.
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> No significant adverse impacts. Project involves enhancement of permeable surfaces 	<ul style="list-style-type: none"> Opportunity for design to include principles of rain gardens appropriate to selected landscaping
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> Increased impermeable surfaces of 2.3 ac 100 year storm to result in generation of approximately 374,100 gpd storm water 	<ul style="list-style-type: none"> Opportunities to include permeable surfaces in design of parking lot addition Proposed facilities will be designed in accordance with the NYS Stormwater Management Design Manual and provide sufficient mitigation to reduce post-developed runoff rates to pre-developed conditions or desired rates.

Table 3.4-3. Summary of Potential Impacts to Drainage and Mitigation Options.

Project	Potential Impacts	Mitigation
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> 100 year storm to result in generation of approximately 374,100 gpd storm water 	<ul style="list-style-type: none"> Due to the size and location of proposed improvements, it appears separate storm water management facilities would not directly service each of the proposed projects. However, proprietary devices such as water quality filters or similar devices along with underground storm water detention could be other alternatives that could be considered. It may also be possible to provide storm water management facilities downstream of the proposed locations that could be designed to include additional areas within the campus. Proposed facilities will be designed in accordance with the NYS Stormwater Management Design Manual and provide sufficient mitigation to reduce post-developed runoff rates to pre-developed conditions or desired rates.
10. Service Building Renovation	<ul style="list-style-type: none"> Generation of storm water during construction Increase in impermeable surfaces for building addition of 24,325 sq ft 100 yr storm would generate approximately 89,600 gpd in storm water 	<ul style="list-style-type: none"> Perform drainage evaluation upon final site selection Proposed facilities will be designed in accordance with the NYS Stormwater Management Design Manual and provide sufficient mitigation to reduce post-developed runoff rates to pre-developed conditions or desired rates.
11. Entry Improvements	<ul style="list-style-type: none"> No adverse impacts – construction and operation of campus entry points will only involve the alteration of existing entrances for safety and aesthetic purposes 	<ul style="list-style-type: none"> No mitigation necessary
12. Bus Rapid Transit	<ul style="list-style-type: none"> No adverse impacts – construction and operation of bus shelters which are only facilities 	<ul style="list-style-type: none"> No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> Potential for erosion on slopes 	<ul style="list-style-type: none"> Design with permeable surfaces, and account for drainage flow where slopes are encountered.

3.5. Air

3.5.1. Existing Conditions

Air

National Ambient Air Quality Standards (NAAQS), established by the Clean Air Act, include six criteria pollutants including:

- carbon monoxide
- lead
- nitrogen dioxide
- particulate matter
- ozone
- sulfur oxides.

NYSDEC (2007d) provides summary tables of annual ambient air quality as well as real-time air quality data for criteria pollutants separated by region within New York. The nearest non-urban monitoring station is at the Loudonville Reservoir, located at 300 Albany Shaker Road in Albany, NY. The monitoring station is located approximately 3 miles east of UAlbany's Uptown Campus. Impairment of air quality is based on comparison with state and NAAQS. There were no exceedances of these standards at the Loudonville Reservoir monitoring station, indicating that existing air quality in this area is not impaired. Regional data is summarized in Table 3.5-1.

Table 3.5-1. Existing air quality data.

Constituent	Averaging time	New York State Ambient Air Quality Standard	National Ambient Air Quality Standard	2007 Observations (Loudonville, NY)
Carbon Monoxide (CO)	8-hour	9 ppm	9 ppm	1.0 ppm
	1-hour	35 ppm	35 ppm	1.5 ppm
Lead	Quarterly Average	-----	1.5 µg/m ³	-----
Nitrogen Dioxide	Annual (Arithmetic Mean)	0.05 ppm	0.053 ppm	-----
Particulate Matter (PM ₁₀)	24-hour	-----	150 µg/m ³	-----
Particulate Matter (PM _{2.5})	Annual	-----	15.0 µg/m ³	-----
	24-hour	-----	35 µg/m ³	-----
Ozone	8-hour	0.08 ppm	0.08 ppm	0.075 ppm
	1-hour	0.12 ppm	0.12 ppm	0.114 ppm
Sulfur Oxides	Annual (Arithmetic Mean)	0.03 ppm	0.03 ppm	0.003 ppm
	24-hour	0.14 ppm	0.14 ppm	0.017 ppm
	3-hour	0.5 ppm	-----	0.020 ppm

Source: NYSDEC 2008e. Key: µg/m³ = micrograms/cubic meter

In addition, all of New York State is considered an Ozone Transport Region/Moderate Non-Attainment Region for nitrogen oxides (NO_x) and volatile organic compounds (VOCs). These pollutants are considered near surface ozone precursors. Revisions to the Clean Air Act (1990) recognize the importance of regulating upwind from non-attainment areas within an ozone transport region (OTR). In New York State, emissions of NO_x and VOCs within the OTR are limited to 100 tons per year (tpy) NO_x and 50 tpy VOCs.

Existing Emission Source and Air Permits

In 2009, UAlbany modified its air permit status with the NYSDEC. The University previously held a Title V permit for emissions originating from the Uptown Campus because of the level of emissions associated with the use of No. 6 fuel oil for the University's high temperature hot water (HTHW) generators Nos. 1, 3, and 4. This elimination of combustion of No. 6 fuel oil in favor of very-low

sulfur No. 2 oil included the change-out of boiler controls, burners and nozzles specific to burning No. 6. As a result, the University greatly reduced the emissions of sulfur compounds. This modified permit was issued effective May 4, 2009 and is accompanied by 73 pages of permit conditions. The University's emissions are capped, that is, there is an upper limit on the allowable emissions from the present equipment.

Sensitive Receptors

Sensitive receptors include organizations that serve populations susceptible to potentially adverse health effects as a result of environmental conditions (*i.e.*, children and the elderly). Those organizations include churches/synagogues, mosques, schools, and senior homes. The UAlbany Uptown Campus is considered a sensitive receptor. Because of the predominantly developed characteristics of the area surrounding the University's Capital Project Plan sites, there are sensitive receptors located proximal to the project site. A public school is located within one mile of the campus school and a day care center (UKids) is located on campus, on the ground floor of the Dutch Quad. The nearest residence is located less than one mile away. Figure 3.4-1 depicts the locations of sensitive receptors proximal to the UAlbany Uptown Campus.

3.5.2. Potential Impacts Construction Phase

The construction phase of UAlbany's Capital Project Plan will result in emissions from direct and indirect sources. Direct emissions include stationary, mobile, process, and fugitive sources located at the Uptown Campus. Indirect emissions include sources outside the UAlbany Uptown Campus that support construction activities, including emissions from electricity generation and construction related traffic. Indirect emissions also include sources associated with the generation, transportation, treatment and disposal of wastes generated during construction phase activities (NYSDEC 2009c).

The construction phase of the UAlbany Capital Project Plan will result in temporary adverse impacts to ambient air quality. Site clearing, grading and demolition activities, in addition to construction-related traffic and waste generation, will generate dust and emissions. The following are several potential impacts to air quality as a result of construction activities:

- airborne dust generated by construction equipment
- vehicle emissions generated from the operation of construction equipment
- vehicle emissions generated from construction-related traffic, including workers and deliveries, entering and exiting the project site
- additional vehicle emissions generated from construction-related traffic delays and modifications in traffic patterns
- emissions associated with the manufacture and transport of construction materials
- fugitive emissions resulting from the demolition of existing structures. Asbestos-containing materials may be present
- emissions associated with energy generated to support construction phase activities
- indirect emissions generated from the transportation, treatment, and disposal of construction-related wastes.

Additionally, as a result of construction activities, the potential exists for traffic delays and modification of traffic patterns, resulting in localized increases in vehicle emissions. Since these

projects are located within the footprint of the Uptown Campus, the potential for transportation-related impacts generally would not extend off campus, but rather will be limited to the Uptown Campus, and could cause disruptions in existing travel patterns. Project No. 12, Entry Improvements, may impact localized traffic at the entry points to the campus when construction activities are occurring at these locations.

Construction-related impacts to ambient air quality are anticipated to be minor in magnitude and intensity, and limited in their impact area.

Operational Phase

Operational phase emissions as a result of UAlbany's Capital Project Plan will include direct and indirect emissions sources. Direct emissions sources associated with operation phase activities include vehicle emissions from fleet vehicles owned by UAlbany and emissions associated with on-site heat, hot water, and steam generation. Potential receptors for these emissions include both the off-campus and on-campus community.

Alternatively, energy planning may result in the construction of new buildings with distributed heating and chiller operations that would be associated with the new buildings.

The operational phase of UAlbany's Capital Project Plan will also contribute additional indirect mobile emissions sources from projects including the Multi-Use Athletic Facility and the BRT system. Indirect emissions generated from these projects will fluctuate, with increases in emissions experienced during athletic facility events and operational hours of the BRT system. During instances of maximum use, there will be short-term, localized increases in mobile source emissions in the project area. Additional operation-related indirect emissions include sources associated with off-site electricity generation and transportation of waste.

As noted above, UAlbany operates a central heating plant that is used to provide comfort heating and cooling to campus buildings. The heating plant combusts natural gas as a primary fuel, and recently switched from No. 6 fuel oil as the back-up fuel to No. 2 fuel oil. With this change, the facility surrendered its Title V permit and obtained a state facility permit with annual limits on nitrogen oxides and sulfur dioxide emissions.

The additional demand of the principal building construction projects was analyzed to determine if the resulting additional air emissions from the heating plant, combined with current emissions, would exceed the limits in the air permit.

The following assumptions were made in this analysis:

- Current emissions from natural gas consumption were based on the maximum natural gas consumption from calendar years 2006, 2007 and 2008, obtained from the facility's emission statements.
- Current emissions from No. 2 fuel oil consumption were based on the maximum fuel oil consumption (both No. 2 and No. 6) from calendar years 2006, 2007 and 2008, obtained from the facility's emission statements. No. 6 fuel oil consumption was converted to equivalent No. 2 fuel oil consumption based on heating values provided in the emission statements.

- Emission factors were obtained from Conditions 2 and 3 of the existing air permit. Since the facility is limited to 250 million Btu/hr (MMBtu/hr) input at any given time, it was conservatively assumed that all fuel would be combusted in the two units that are rated at 125 MMBtu/hr.
- Sulfur content of the No. 2 fuel oil was assumed to be 0.3%.
- Potential emissions from the campus expansion were based on an assumed heating requirement of 20 MMBtu/hr, which was calculated based on estimates of heating requirements for the Student Housing Project, Campus Center Master Plan, Business School Building, Data Center and Multi-Discipline Science Surge Building, as available at the time of the preparation of this DGEIS.
- To be conservative, for future potential emissions from these projects, it was assumed that an additional 20 MMBtu/hr would be required for 8,760 hours/yr.
- To be conservative, for future potential emission from these projects, it was assumed that only No. 2 fuel oil would be combusted at 100% load (20 MMBtu/hr) and 8,760 hours/yr of operation, since it yields the highest nitrogen oxide and sulfur dioxide emissions. In reality, the facility would combust natural gas, which would yield significantly lower emissions than those presented in this analysis.
- Current maximum emissions and future potential emissions from these projects were summed together and compared to the limits for nitrogen oxides and sulfur dioxide in UAlbany's current permit.

A summary of the emission rate calculations can be found in Appendix H. The calculations show that the estimated worst case total future emissions, including the building construction projects contained in the Capital Project Plan are 55% and 33% of facilities nitrogen oxides and sulfur dioxide emission limits, respectively.

Appropriate modifications to UAlbany's existing New York State Air State Facility Permit will be required for stationary emission sources that are identified and included in these projects. These sources would include the combustion sources and emergency generators in new or renovated buildings. The existing boilers would still run for heating and to run the absorption chillers.

In conclusion, actual future annual emissions should be lower, given the extremely conservative assumptions made in this analysis.

Therefore, potential impacts as a result of operational activities associated with UAlbany's Capital Project Plan include:

- vehicle emissions generated from student, faculty, and staff commuter traffic
- vehicle emissions generated from visitor traffic
- emissions associated with the manufacture and transport of operational phase materials
- emissions generated from the transportation, treatment, and disposal of operational-related wastes
- emissions associated with energy generated to support operation phase activities.

The new multi-use athletic facility will have the same capacity as University Field. Therefore, there will not be an increase in mobile source emissions from at present.

As described herein, the operational phase of UAlbany's Capital Project Plan is not anticipated to cause adverse environmental impacts to ambient air quality when appropriate mitigation measures are implemented as discussed below.

Summary. The following table presents a summary of the projects for which potential impacts to air emissions may occur. However, as noted above, the impacts are not anticipated to be significant, and can be readily mitigated, as described in Section 3.1.4, following. Project Nos. 6, 7, 8, and 14 will encourage non-motorized transportation and may offset air impacts.

Table 3.5-2. Potential for impacts to air resources.

Project Name	Air Quality - Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Construction; heating/chiller plant
2. Campus Center Master Plan	X	Construction
3. Construct New Business School Building	X	Construction
4. Relocate Data Center	X	Construction (will likely need extra dedicated chiller installed)
5. Implement Various Athletics Improvements	X	Construction (may need its own installed heating and chiller plant)
6. Purple Path Continuation	X	Construction
7. Northern Landscape Improvement Project	X	Construction
8. State Quad Parking Lot Expansion	X	Construction
9. Multi-Discipline Science Surge Building	X	Construction
10. Service Building Renovation	X	Construction
11. Entry Improvements	X	Construction
12. Bus Rapid Transit	X	Construction; bus operations
13. Bicycle-Pedestrian Path	X	Construction

3.5.3. Mitigation Measures

Construction Phase

Construction phase mitigation measures which may be implemented to eliminate or minimize potential impacts to ambient air quality include:

- Use of appropriate exhaust reduction fixtures on construction equipment – On June 17, 2009, the New York State Environmental Board approved regulations that will lead to a major reduction in air pollution emitted by heavy-duty diesel trucks. The regulations require that this type of vehicle owned by New York State agencies and authorities and by contractors working on behalf of the state be retrofitted to decrease emissions by Dec. 31, 2010. This will apply to UAlbany, and for projects at UAlbany.
- Implementation of appropriate construction techniques to minimize fugitive dust.
- Removal, transport, and disposal of asbestos-containing materials removed from existing buildings in accordance with applicable federal and state regulations and guidelines.
- Recycling and other sustainable waste management techniques of wastes generated during construction phase activities.
- Purchase of construction materials produced locally and/or made from recycled materials.
- Use of alternative fuel/fuel efficient vehicles to support construction activities.

Operational Phase

Operational phase mitigation measures which may be implemented to eliminate or minimize potential impacts to ambient air quality (both direct and indirect) include:

- installation of energy-efficient equipment, including Energy Star-certified products (this is a University goal) to reduce energy use and, therefore, air emissions from campus stationary combustion sources
- compliance with appropriate air emission regulations and permit conditions
- promotion of the use of public transportation provided by CDTA and UAlbany, carpooling, and alternative fuel vehicles.

Project No. 4 (Relocate Data Center) will promote more efficient energy utilization than at present. Project No. 6 (Purple Path Continuation), No. 11 (Entry Improvements), No. 12 (Bus Rapid Transit), and No. 13 (Bicycle-Pedestrian Path) projects will improve transportation and promote more energy-efficient transportation to and around campus. As a result, these projects will reduce the energy footprint while achieving the same underlying objectives as at present.

Related climate change and GHG impacts and mitigation measures are detailed in the following section.

Summary

The following table presents a summary of the potential environmental impacts to air resources of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.5-3. Summary of Potential Impacts to Air Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Generation of emissions associated with heating, chilling and hot water • Potential for generation of emissions from emergency generator(s) 	<ul style="list-style-type: none"> • Will require modification of existing state facility permit • A highly conservative analysis of potential air emissions from the proposed projects in the Capital Project Plan indicates that even under such assumptions, there will not be a significant impact on air emission.
2. Campus Center Master Plan	<ul style="list-style-type: none"> • Generation of emissions associated with heating, chilling and hot water • Potential for generation of emissions from emergency generator(s) 	<ul style="list-style-type: none"> • Will require modification of existing state facility permit • A highly conservative analysis of potential air emissions from the proposed projects in the Capital Project Plan indicates that even under such assumptions, there will not be a significant impact on air emission.
3. Construct New Business School Building	<ul style="list-style-type: none"> • Generation of emissions associated with heating, chilling and hot water • Potential for generation of emissions from emergency generator(s) 	<ul style="list-style-type: none"> • Will require modification of existing state facility permit • A highly conservative analysis of potential air emissions from the proposed projects in the Capital Project Plan indicates that even under such assumptions, there will not be a significant impact on air emission.
4. Relocate Data Center	<ul style="list-style-type: none"> • Generation of emissions associated with heating, chilling and hot water • Potential for generation of emissions from emergency generator(s) 	<ul style="list-style-type: none"> • Will require modification of existing state facility permit • A highly conservative analysis of potential air emissions from the proposed projects in the Capital Project Plan indicates that even under such assumptions, there will not be a significant impact on air emission.
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> • Generation of emissions associated with heating, chilling and hot water • Potential for generation of emissions from emergency generator(s) 	<ul style="list-style-type: none"> • Will require modification of existing state facility permit • A highly conservative analysis of potential air emissions from the proposed projects in the Capital Project Plan indicates that even under such assumptions, there will not be a significant impact on air emission.

Table 3.5-3. Summary of Potential Impacts to Air Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
6. Purple Path Continuation	<ul style="list-style-type: none"> Impacts associated with construction – emissions from construction equipment No emissions following completion of construction 	<ul style="list-style-type: none"> No mitigation necessary, except as relates to required emissions controls for construction equipment
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> Impacts associated with construction - emissions from construction equipment No emissions following completion of construction 	<ul style="list-style-type: none"> No mitigation necessary, except as relates to required emissions controls for construction equipment
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> Impacts associated with construction – emissions from construction equipment No stationary sources of emissions following completion of construction No significant increase in mobile source emissions; project intended to offset loss of parking spaces elsewhere on campus 	<ul style="list-style-type: none"> No mitigation necessary, except as relates to required emissions controls for construction equipment
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> Generation of emissions associated with heating, chilling and hot water Potential for generation of emissions from emergency generator(s) 	<ul style="list-style-type: none"> Will require modification of existing state facility permit A highly conservative analysis of potential air emissions from the proposed projects in the Capital Project Plan indicates that even under such assumptions, there will not be a significant impact on air emission. This analysis does not include the Multi-discipline Science Surge Building, which is conceptual and for which there is no information available at the present time; however, emissions based on heating demand for this building might be considered to be of the magnitude of the New Business School Building and, therefore, would not alter these conclusions
10. Service Building Renovation	<ul style="list-style-type: none"> Generation of emissions associated with heating, chilling and hot water Potential for generation of emissions from emergency generator(s) 	<ul style="list-style-type: none"> A 6,000 sf portion of the 24,325 sf addition will be unheated Will require modification of existing state facility permit A highly conservative analysis of potential air emissions from the proposed projects in the Capital Project Plan indicates that even under such assumptions, there will not be a significant impact on air emission.

Table 3.5-3. Summary of Potential Impacts to Air Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
11. Entry Improvements	<ul style="list-style-type: none"> Impacts associated with construction -emissions from construction equipment No emissions following completion of construction 	<ul style="list-style-type: none"> No mitigation necessary, except as relates to required emissions controls for construction equipment
12. Bus Rapid Transit	<ul style="list-style-type: none"> Impacts associated with construction of bus shelters – emissions from construction equipment Bus emissions anticipated to be offset by increased use of mass transit 	<ul style="list-style-type: none"> No mitigation necessary, except as relates to required emissions controls for construction equipment
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> Impacts associated with construction – emissions from construction equipment No emissions following completion of construction 	<ul style="list-style-type: none"> No mitigation necessary, except as relates to required emissions controls for construction equipment

3.6. Climate Change

3.6.1. Existing Conditions

Greenhouse Gases (GHGs)

Scientific evidence has demonstrated that human activities have accelerated the production of GHGs. The six main GHGs and the processes they originate from include (USEPA 2009):

- carbon dioxide (CO₂) – Combustion of fossil fuels, solid waste, wood products, and other chemical reactions
- nitrous oxide (N₂O) - Combustion of fossil fuels and solid waste as well as emissions resulting from agricultural and industrial activities
- methane (CH₄) – Emissions resulting from livestock, agricultural activities, and from the production and transport of coal, natural gas, and oil
- hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) – Synthetic GHGs emitted from industrial processes and used as refrigerant substitutes to ozone depleting substances such as chlorofluorocarbons (CFCs).

American College & University Presidents Climate Commitment (ACUPCC)

In May 2008, the University's then Interim President George M. Philip signed the ACUPCC. The ACUPCC operates as a platform for institutions of higher education to serve as leaders within their communities and neighborhoods by establishing "...ways to minimize global warming emissions and by providing the knowledge and the educated graduates to achieve climate neutrality" (ACUPCC 2008).

By signing the ACUPCC, UAlbany has committed to taking the following steps in becoming a carbon neutral campus:

1. Initiate the development of a comprehensive plan to achieve climate neutrality as soon as possible.
 - a. Within two months of signing this document, create institutional structures to guide the development and implementation of the plan.
 - b. Within one year of signing this document, complete a comprehensive inventory of all GHG emissions (including emissions from electricity, heating, commuting, and air travel) and update the inventory every other year thereafter.
 - c. Within two years of signing this document, develop an institutional action plan for becoming climate neutral, which will include:
 - i. A target date for achieving climate neutrality as soon as possible.
 - ii. Interim targets for goals and actions that will lead to climate neutrality.
 - iii. Actions to make climate neutrality and sustainability a part of the curriculum and other educational experiences for all students.
 - iv. Mechanisms for tracking progress on goals and actions.
2. Initiate two or more of the following tangible actions to reduce GHGs while the more comprehensive plan is being developed.
 - a. Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent.
 - b. Adopt an energy-efficient appliance purchasing policy requiring purchase of Energy Star-certified products in all areas for which such ratings exist.
 - c. Establish a policy of offsetting all GHG emissions generated by air travel paid for by the institution.
 - d. Encourage use of and provide access to public transportation for all faculty, staff, students and visitors to our institution.
 - e. Within one year of signing this document, begin purchasing or producing at least 15% of our institution's electricity consumption from renewable sources.
 - f. Establish a policy or a committee that supports climate and sustainability shareholder proposals at companies where our institution's endowment is invested.
 - g. Participate in the Waste Minimization component of the national RecycleMania competition, and adopt three or more associated measures to reduce waste.
3. Make the action plan, inventory, and periodic progress reports publicly available by providing them to the Association for the Advancement of Sustainability in Higher Education (AASHE) for posting and dissemination.

In July 2009, the campus completed a comprehensive inventory of GHG emissions, including emissions from electricity, heating, and daily commuting (no data is presently available for air travel), with completion of UAlbany's Sustainability Plan scheduled for May 2010. Additionally, the university is completing an Energy Action Plan, detailing campus energy issues including conservation, efficiency and renewable sources. While developing the GHG inventory and the Energy Action Plan, its authors have remained consistent with the University at Albany, State University of New York, Master Plan Report (The Hiller Group 1998) to maintain the principles and goals of the university.

The GHG inventory was submitted to the ACUPCC reporting system (<http://acupcc.aashe.org/ghg-report.php?id=897>) (accessed August 9, 2009). For 2007, UAlbany's GHG emissions for ACUPCC reporting are summarized in Table 3.6-1.

Table 3.6-1. University at Albany 2007 GHG Emissions as reported to ACUPCC (metric tons of carbon dioxide equivalents (MTCO₂E)).

Scope 1 Emissions (stationary combustion, mobile combustion, fugitive emissions)		
Total		64,830
	Stationary combustion	36,647
	Mobile combustion	869
	Fugitive emissions	11
Per Full-time enrollment		4.2
Per 1000 sq ft		13.6
Scope 2 emissions (purchased electricity)		
Total		27,304
	Purchased electricity	27,304
	Purchased cooling	0
	Purchased steam	0
Scope 3 emissions (commuting, solid waste, paper purchasing)		
		21,945
	Commuting	15,625
	Air travel	0
	Solid waste	2,925
	Paper purchasing	695
	Scope 2 T&D losses	2.7

These data were based on 4,750,117 sq ft of gross building space and total student enrollment (FTE) for the academic year 2007-2008 of 15,376 (7,503 residential students and 3,160 part-time commuter students).

As compared to the average of 255 other Doctorate Granting Universities that reported emissions in 2007-2008 (Sinha *et al.* 2009), UAlbany's emissions were:

- Stationary combustion – 21.5% lower
- Purchased electricity – UAlbany was only 37% of the average emissions.

These are the two categories that can be compared with the most reasonable accuracy, since the underlying data are usually based on fuel use and utility records.

On the basis of emission intensity, UAlbany:

- For Scope 1 emissions, 4.21 MTCO₂E/FTE, as compared to an average of 6.02
- For Scope 2 emissions, 1.78 MTCO₂E/FTE, as compared to an average of 3.91.

While these institutions range considerably in size, UAlbany compares favorably with the average institution.

Sustainability

The University at Albany acknowledged its commitment to environmental sustainability and climate change well before signing the ACUPCC. On February 1, 2006 the University Task Force on Environmental Sustainability was established. The mission of the University at Albany's Task Force on Environmental Sustainability is (University at Albany 2008c):

...to promote sustainability at the University at Albany by encouraging the conservation and efficient use of natural resources on campus, initiating projects that reduce the University's environmental impact and setting an example of sustainable living for the community at large. Further, the task force seeks to increase awareness of the University's responsibility to operate in an environmentally accountable manner; teach the principles of sustainable living to our students and colleagues; and demonstrate the economics and other benefits of sustainable living to all.

The Task Force is comprised of eight committees, with members from UAlbany's faculty, staff, and students. The creation of the Task Force meets ACUPCC criterion (1.a.) of creating "institutional structures to guide the development and implementation of the plan" (ACUPCC 2008). By gathering data and developing an "environmental scorecard" as a benchmark of existing conditions, the goal of the Task Force is to reduce consumption and waste generation, and to protect environmental resources through sustainable practices. As noted elsewhere herein, UAlbany is responding to state mandates under several EOs):

- EO No. 4, "Establishing a State Green Procurement and Agency Sustainability Program"
- EO No. 111, "Directing State Agencies, State Authorities, and Other Affected Entities to be More Energy Efficient and Environmentally Aware"
- EO No. 142, "Directing State Agencies, and Authorities to Diversify Fuel and Heating Oil Supplies Through the Use of Biofuels in State Vehicles and Buildings"
- EO No. 24, "Establishing a Goal to Reduce Greenhouse Gas Emissions Eighty Percent by the Year 2050 and Preparing a Climate Action Plan."

The University's actions with respect to energy and climate change are consistent with these Executive orders, especially EO 24 and EO 111. The steps taken to date that have led to greater energy efficiency comply with EO 111, and the University continues to evaluate opportunities for energy efficiency. Additionally, The University is in the process of preparing a Climate Action Plan as part of its obligations under the ACUPCC; further, its obligation under the ACUPCC is to become carbon neutral by 2050, a stricter threshold than that in EO 24.

UAlbany has instituted numerous programs to raise awareness and promote sustainable living practices. Sustainability initiatives at the campus include (University at Albany 2008c):

- energy reduction campaigns in residence halls, resulting in reductions in energy use and indirect GHG emissions (e.g., energy use, water use), as well as over \$39,000 in total energy savings
- encouraging the use of mass transit
- planning for the implementation of projects that emphasize or improve access to mass transit or other transportation modes
 - Development of the initial phase of the Purple Path
 - Increased access to BRT, and route improvements (Project No. 13)
 - Development of the Bicycle-Pedestrian Path (Project No. 14)
- installation of motion light sensors
- antibiotic-free chicken and meat in dining halls

- placement of multipurpose recycling bins in centralized locations on campus
- establishment of electronics recycling program
- annual campus clean-up day
- use of green seal approved cleaning products
- reduction in paper towel use through automated dryers
- distribution of thermal insulated refillable mugs to residents
- 100% biodegradable bags used in all food outlets in Campus Center
- fully compostable coffee cups used by coffee vendors
- purchase of locally produced grass-fed beef
- sponsoring on-campus Farmer's Markets
- removal of trays from dining halls to reduce water, waste and use of detergents
- used textbooks and environmentally friendly products available at the bookstore
- energy efficient front loading washers and dryers installed in residence halls
- participation in "RecycleMania" – a national collegiate recycling contest.

These sustainability initiatives serve as stepping-stones in meeting the Task Force goals of (University at Albany 2008c):

1. Calculating, including a full account of generated wastes, the resources required to run the UAlbany community of 20,000 plus members.
2. Identifying measures to lower consumption, protect environmental resources, and reduce waste, including documentation of health and financial benefits.
3. Study of campus impact on the world and taking responsibility for the consequences.

3.6.2. Potential Impacts

Construction Phase

The construction phase of the UAlbany Capital Project Plan will result in temporary local increases in GHG emissions, primarily as a result of fossil fuel combustion. Direct and indirect GHG emissions, as previously defined in Section 3.4, will result from energy-generation and vehicle emissions. Potential impacts to climate change as a result of construction phase activities include:

- GHG emissions generated from the operation of construction equipment
- GHG emissions generated from construction-related traffic, including workers and deliveries, entering and exiting the project site
- additional GHG emissions generated from construction-related traffic delays and modifications in traffic patterns
- GHG emissions generated from the manufacture and transport of construction materials
- GHG emissions generated from transport, treatment, and disposal of construction-related wastes
- GHG emissions associated with energy generated to support construction phase activities
- clearing and/or modification of wooded areas during site clearing activities, resulting in a decrease in potential carbon sequestration.

Construction-related impacts to climate change are anticipated to be temporary and localized. UAlbany is obligated, by signing the ACUPCC, to reduce GHG emissions. Potential construction-phase mitigation measures are detailed below.

Operational Phase

Operational phase activities associated with UAlbany's Capital Project plan will result in increased GHG emissions. Direct and indirect emissions sources, as defined in Section 3.4., will emit GHGs due to energy-generation and fossil fuel combustion required to support operation-related activities. Implementation of the Capital Project Plan will increase stationary direct GHG emissions sources, most notably from the Combined Heat and Power Plant.

Similar to indirect air emissions sources outlined in Section 3.4., the potential exists for an increase in indirect GHG emissions during the operational phase. Implementation of UAlbany's Capital Project Plan will increase the size of the Uptown Campus, consequently resulting in an increase in energy required to operate the Uptown Campus. Indirect mobile emissions sources associated with operational phase activities will also contribute to a potential increase in GHG emissions. UAlbany Capital Project Plan projects, including the multi-use athletic facility and the BRT system, have the potential to contribute additional mobile GHG emissions during periods of maximum use. Operation-related emissions associated with these projects are anticipated to remain localized and short-term. Additional operation-related indirect GHG emissions will result from the transportation, treatment, and disposal of operational-related wastes.

Potential impacts to climate change as a result of operational activities associated with UAlbany's Capital Project Plan include:

- GHG emissions generated from student, faculty, and staff commuter traffic
- GHG emissions generated from visitor traffic
- GHG emissions associated with the manufacture and transport of operational phase materials
- GHG emissions generated from the transportation, treatment, and disposal of operational-related wastes
- GHG emissions associated with energy generated to support operation phase activities.

The operational phase of UAlbany's Capital Project Plan is not anticipated to result in adverse environmental impacts to climate change. By signing the ACUPCC, UAlbany is obligated to implement appropriate mitigation measures and sustainable practices during construction and operational phase activities.

Table 3.6-2. *Potential for impacts on climate change.*

Project Name	Climate Change - Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Construction equipment emissions; indirect operational (heating/cooling)

Table 3.6-2. Potential for impacts on climate change.

Project Name	Climate Change - Potential for Impacts	Nature of Impacts
2. Campus Center Master Plan	X	Construction equipment emissions; indirect operational (heating/cooling)
3. Construct New Business School Building	X	Construction equipment emissions; indirect operational (heating/cooling)
4. Relocate Data Center	X	Construction equipment emissions; indirect operational (heating/cooling)
5. Implement Various Athletics Improvements	X	Construction equipment emissions; indirect operational (heating/cooling)
6. Purple Path Continuation	X	Construction; offset by long term reduction in mobile source emissions
7. Northern Landscape Improvement Project	X	Construction; offset by CO ₂ sequestration by plantings
8. State Quad Parking Lot Expansion	X	Construction
9. Multi-Discipline Science Surge Building	X	Construction equipment emissions; indirect operational (heating/cooling)
10. Service Building Renovation	X	Construction equipment emissions; indirect operational (heating/cooling)
11. Entry Improvements	X	Construction
12. Bus Rapid Transit	X	Construction; offset by long term reduction in mobile source
13. Bicycle-Pedestrian Path	X	Construction; offset by long term reduction in mobile source emissions

Note that emissions impacts from operation of the relocated Data Center will be offset to some degree by greater efficiency from the installation of new, modern cooling systems for the instrumentation.

Potential mitigation measures are discussed below.

3.6.3. Mitigation Measures

SEQRA

On March 11, 2009, the NYSDEC's Office of Air, Energy and Climate Change issued a new draft policy titled "Assessing Energy Use and Greenhouse Gas Emissions in Environmental Impact Statements" (NYSDEC 2009c). This draft policy, prepared for NYSDEC staff who may review an Environmental Information Document (EID) that "...included a discussion of energy use or greenhouse gas (GHG) emissions." It provides a background description of direct and indirect emissions in a number of categories, tools to estimate emissions, alternatives analysis and potential mitigation measures. The mitigation measures that are presented as examples are not anticipated by NYSDEC to be applicable to all proposed projects. However, they were reviewed for appropriateness in the context of this DGEIS, and items included below where potentially feasible for one or more of the projects in the Capital Project Plan. This draft policy was finalized July 15, 2009.

A number of climate change mitigation measures are integral to the planning and design of a project, so that they may not be explicitly recognized as mitigation, but serve to minimize or reduce the GHG emissions. These include:

- Design of energy efficient buildings to reduce cooling and heating requirements. SUNY and New York State are committed to a certification of new buildings as LEED Silver, which incorporates such considerations into the project design.
- Incorporate on site generation of heat and power from renewable resources
- Install high efficiency HVAC systems
- Eliminate or reduce use of refrigerants in HVAC systems
- Use energy efficient roof coatings
- Maximize interior daylighting
- Incorporate window glazing to optimize daylighting, heat loss and solar heat gain
- Incorporate motion sensors, and lighting and climate control.

Therefore, by this practice, "mitigation" is incorporated into the following projects:

Table 3.6-3. Projects with climate change mitigation incorporated

Project Name
1. Student Housing Project
2. Campus Center Master Plan
3. Business School Building
4. Relocate Data Center
5. Implement Various Athletics Improvements
9. Multi-Discipline Science Surge Building
10. Service Building Renovation

Construction Phase

Construction phase mitigation measures implemented to eliminate or minimize potential impacts to climate change as required by SEQRA and the ACUPCC include:

- Use of appropriate emissions reducing fixtures on construction equipment
- Recycling and other sustainable waste management techniques of wastes generated during construction phase activities
- Purchase construction material produced locally and/or produced from recycled materials
- Restoration of natural areas disturbed during construction phase activities
- Use of alternative fuel/fuel efficient vehicles to support construction activities.

Operational Phase

Operational phase mitigation measures to be implemented to eliminate or minimize potential impacts to climate change include:

- Installation of energy-efficient equipment, including Energy Star certified products
- Recycling and other sustainable waste management techniques of wastes generated during operational phase activities
- Use of environmentally-conscious products (*i.e.*, reusable bags, water bottles, and eating utensils and products made from recycled materials)
- Promote use of public transportation provided by CDTA and UAlbany, carpooling, walking, biking, and alternative fuel vehicles
- Implementation of sustainable design measures (*i.e.* LEED) including orientation of building to minimize energy usage and building transportation.

Several projects included in UAlbany's Capital Project Plan can be considered potential operation phase GHG mitigation measures in conjunction with the measures listed above. The Purple Path Continuation (Project No. 6), the BRT system (Project No. 12), and Bicycle-Pedestrian Path (Project No. 13) projects promote alternate and sustainable forms of transportation. Implementation of these projects as part of the Capital Project Plan plays an important role in reducing operation-related mobile source GHG emissions. Additionally, the Northern Landscape Improvement Project (Project No. 7) provides a means of reestablishing natural areas, increasing the potential for carbon sequestration, when implemented as part of the Capital Project Plan and the UAlbany Landscape Master Plan.

Summary

The following table presents a summary of the potential environmental impacts to climate change of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.6-4. Summary of Potential Impacts to Climate Change and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> Generation of greenhouse gases associated with heating, chilling and hot water 	<ul style="list-style-type: none"> UAlbany has signed the American College and University Presidents Climate Commitment obligating the university to move to a carbon neutral position As the next step in its commitment, UAlbany is preparing a Climate Action Plan indicating how it will achieve that goal Net total campus stationary source emissions will be significantly lower than pre-2009 levels due to discontinued use of No. 6 fuel oil.
2. Campus Center Master Plan	<ul style="list-style-type: none"> Generation of greenhouse gases associated with heating, chilling and hot water 	<ul style="list-style-type: none"> UAlbany has signed the American College and University Presidents Climate Commitment obligating the university to move to a carbon neutral position As the next step in its commitment, UAlbany is preparing a Climate Action Plan indicating how it will achieve that goal Net total campus stationary source emissions will be significantly lower than pre-2009 levels due to discontinued use of No. 6 fuel oil.
3. Construct New Business School Building	<ul style="list-style-type: none"> Generation of greenhouse gases associated with heating, chilling and hot water 	<ul style="list-style-type: none"> UAlbany has signed the American College and University Presidents Climate Commitment obligating the university to move to a carbon neutral position As the next step in its commitment, UAlbany is preparing a Climate Action Plan indicating how it will achieve that goal Net total campus stationary source emissions will be significantly lower than pre-2009 levels due to discontinued use of No. 6 fuel oil.

Table 3.6-4. Summary of Potential Impacts to Climate Change and Mitigation Options.

Project	Potential Impacts	Mitigation
4. Relocate Data Center	<ul style="list-style-type: none"> • Generation of greenhouse gases associated with heating, chilling and hot water • Data centers are a major source of greenhouse gases by virtue of the energy that is released as waste heat 	<ul style="list-style-type: none"> • UAlbany has signed the American College and University Presidents Climate Commitment obligating the university to move to a carbon neutral position • As the next step in its commitment, UAlbany is preparing a Climate Action Plan indicating how it will achieve that goal • Net total campus stationary source emissions will be significantly lower than pre-2009 levels due to discontinued use of No. 6 fuel oil.
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> • Generation of greenhouse gases associated with heating, chilling and hot water • Some indirect emissions from autos due to increased attendance at stadium events; to be offset in part by University's emphasis on mass transit opportunities 	<ul style="list-style-type: none"> • UAlbany has signed the American College and University Presidents Climate Commitment obligating the university to move to a carbon neutral position • As the next step in its commitment, UAlbany is preparing a Climate Action Plan indicating how it will achieve that goal
6. Purple Path Continuation	<ul style="list-style-type: none"> • Generation of greenhouse gases associated with construction; none following construction 	<ul style="list-style-type: none"> • No mitigation necessary, subject to review of portions of final route
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> • Generation of greenhouse gases associated with construction; none following construction, except for landscape maintenance • Improved landscape and tree survivability contributes to carbon sequestration 	<ul style="list-style-type: none"> • No mitigation necessary
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> • Generation of greenhouse gases associated with construction; none following construction, except for parking lot maintenance (e.g., snow plowing) 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.6-4. Summary of Potential Impacts to Climate Change and Mitigation Options.

Project	Potential Impacts	Mitigation
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> Generation of greenhouse gases associated with heating, chilling and hot water 	<ul style="list-style-type: none"> UAlbany has signed the American College and University Presidents Climate Commitment obligating the university to move to a carbon neutral position As the next step in its commitment, UAlbany is preparing a Climate Action Plan indicating how it will achieve that goal Net total campus stationary source emissions will be significantly lower than pre-2009 levels due to discontinued use of No. 6 fuel oil.
10. Service Building Renovation	<ul style="list-style-type: none"> Generation of greenhouse gases associated with heating, chilling and hot water not anticipated to be significant (6,000 sf of additional 24,325 sf will be unheated) 	<ul style="list-style-type: none"> UAlbany has signed the American College and University Presidents Climate Commitment obligating the university to move to a carbon neutral position As the next step in its commitment, UAlbany is preparing a Climate Action Plan indicating how it will achieve that goal Net total campus stationary source emissions will be significantly lower than pre-2009 levels due to discontinued use of No. 6 fuel oil.
11. Entry Improvements	<ul style="list-style-type: none"> Generation of greenhouse gases associated with construction; none following construction 	<ul style="list-style-type: none"> No mitigation necessary
12. Bus Rapid Transit	<ul style="list-style-type: none"> Generation of greenhouse gases associated with construction; none following construction – bus emissions anticipated to be offset by reduction in commuter auto use 	<ul style="list-style-type: none"> No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> Generation of greenhouse gases associated with construction; none following construction Some reduction in greenhouse gas emissions through use of bicycles rather than autos 	<ul style="list-style-type: none"> No mitigation necessary

3.7. Plants, Animals, and Habitat (Flora, Fauna, Habitats)

3.7.1. Existing Conditions

Ecological Rankings

The New York Natural Heritage Program of the NYSDEC published the second edition of a document entitled Ecological Communities of New York State in 2002 (Edinger *et al.* 2002). The primary objective of its report was to classify and describe “ecological communities representing the full array of biological diversity of New York State.” Through this classification, the Natural Heritage Program hopes to assess and protect the biological diversity of New York State. Each community in the report is assigned an “element rank” consisting of a combined global and state rank. The global rank reflects the rarity of the community throughout the world. The state rank reflects the rarity of the community within New York State.

Based on site location and the extensive development of the University at Albany project site, the majority of the terrestrial setting can be characterized as a terrestrial cultural ecosystem, with a small percentage described as successional northern hardwoods. Edinger *et al.* defines terrestrial cultural ecosystems as “...communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical conformation of the substrate, or the biological composition of the resident community is substantially different from the character of the substrate or community as it existed prior to human influence.” Terrestrial cultural ecosystems on the University at Albany Uptown Campus include mowed lawn, mowed roadside/pathway, paved road/path, and urban structure exteriors. Terrestrial cultural ecosystems have been assigned a global ranking of G5 and a state ranking of S5. The G5 global ranking indicates that the community is “demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery” (Edinger *et al.* 2002). The S5 state ranking indicates that the community is “demonstrably secure in New York State” (Edinger *et al.* 2002).

A small percentage of the UAlbany Uptown Campus can be described as successional northern hardwoods. Edinger *et al.* describes successional northern hardwoods as “a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed.” Successional northern hardwoods have been assigned a global ranking of G5 and a state ranking of S5.

Typical flora and fauna of terrestrial cultural ecosystems and successional northern hardwoods are described below.

Flora and Fauna

Typical site flora (vegetation). The UAlbany Capital Project Plan site is developed beyond its natural state. Approximately 50% of UAlbany’s Uptown Campus is composed of buildings, road, parking lots and sidewalks, with portions of campus maintained as open space, limited undeveloped forest, and landscaped areas (personal communication, December 15, 2008).

As reported by Edinger *et al.*, terrestrial cultural ecosystems typically support flora such as landscaped grasses, native and ornamental trees and shrubs, and taller grasses, sedges, and rushes. Urban structure exteriors “...may be sparsely vegetated with lichens, mosses, and terrestrial algae; occasionally vascular plants may grow in cracks” (Edinger *et al.* 2002).

An inventory of plant species observed on campus has been cumulatively compiled (personal communication, December 15, 2008). The UAlbany Uptown Campus contains a typical variety of

urban/suburban plant species. Appendix E presents an inventory of the plant species observed on the Uptown Campus.

A Tree Identification and Assessment was conducted by Trowbridge & Wolf LLP (Ithaca, NY) as part of the University at Albany Landscape Master Plan (Trowbridge & Wolf LLP 2008). Consistent with Edinger *et al.*, tree species identified during this assessment include: cherry (*Prunus sp.*), red maple (*Acer rubrum*), white pine (*Pinus strobus*), white ash (*Fraxinus americana*), and green ash (*F. pensylvanica*) (Edinger *et al.* 2002). Additional tree species commonly observed on the Uptown Campus include: black pine (*Pinus nigra*), scotch pine (*Pinus sylvestris*), Austrian pine (*Pinus nigra*), crabapple (*Malus sp.*), sugar maple (*Acer saccharum*), silver maple (*Acer saccharinum*), Norway maple (*Acer platanoides*), pin oak (*Quercus palustris*), northern red oak (*Quercus rubra*), white oak (*Quercus alba*), American beech (*Fagus grandifolia*), purple beech (*Fagus sylvatica var. atropunica*), Honey locust (*Gleditsia triacanthos*), ginkgo tree (*Ginkgo biloba*), Littleleaf Linden (*Tilia cordata*), American linden (*Tilia Americana*), white birch (*Betula poulifolia*), European birch (*Betula pendula*), Siberian spruce (*Picea abies*), and Norway spruce (*Picea abies*) (Trowbridge & Wolf LLP 2008).

Additionally, Trowbridge & Wolf (2009a) completed a Site Vegetation Assessment as part of the process for the development of the Landscape Master Plan. This assessment concluded that:

- approximately 6% of campus plantings are categorized as dead or dying and should be removed.
- 55% of campus plantings are in need of remediation.
- 39% of campus plantings are in good health.
- the campus landscaping is represented by several species often planted in monoculture, including Austrian pine, pin oak, honey locust, and red and sugar maples.
- the Austrian pines are heavily infested (72%) with an incurable fungal disease.
- the pin oak thrives in acidic, swampy conditions, and not the highly compacted soils on campus; many of these trees have died or been removed.
- tree selection needs improvement: recently planted ash (being decimated by insect infestation) and Norway maple (very invasive species) are not recommended for use; the thorny version of honey locust requires constant maintenance to protect passersby from injury.

These observations are driving the Northern Landscape Improvement Project (Project No. 7).

Typical site fauna. As reported by Edinger *et al.* (2002), terrestrial cultural ecosystems, such as areas of moved lawns, support fauna including gray squirrel (*Sciurus carolinensis*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), and mockingbird (*Mimus polyglottos*). The shelter of urban structures provide a habitat for birds including common nighthawk (*Chordeiles minor*), rock dove (*Columba livia*), and house sparrow (*Passer domesticus*) (Edinger *et al.* 2002).

The following animal species have been observed on-site (personal communication, December 15, 2008):

- Red fox (*Vulpes vulpes*)
- Woodchuck (*Marmota monax*)
- Deer mouse (*Peromyscus maniculatus*)
- Little brown bat (*Myotis lucifugus*).

The following animal species have been observed on the UAlbany Uptown Campus in the vicinity of Indian Pond (personal communication, December 15, 2008):

- various fish species
- Canada goose (*Branta canadensis*)
- Snapping turtle (*Chelydra serpentina*)
- Painted turtle (*Chrysemys picta*)
- Eastern garter snake (*Thamnophis sirtalis*).

Federally-listed endangered or threatened species. Administered by the USFWS, the federal Endangered Species Act (ESA) identifies terrestrial and aquatic species in danger of extinction (endangered) and species likely to become endangered in the foreseeable future if not protected (threatened). Correspondence between UAlbany representatives and USFWS New York Field Office representatives (see Appendix A for a copy of the correspondence) indicates that several federally listed or proposed endangered or threatened species are known to exist within Albany County (USFWS 2008a, USFWS 2008b). The federally-listed endangered species likely to occur in Albany County is bog turtle (*Clemmys muhlenbergii*). Federally-listed threatened species likely to exist in Albany County include Indiana bat (*Myotis sodalis*) and Karner blue butterfly (*Plebejus melissa samuelis*). Given the components of UAlbany's Capital Project Plan will be developed within the footprint of the UAlbany Uptown Campus, no further USFWS consultation is deemed necessary.

State-listed rare, threatened, and endangered species. The New York Natural Heritage Program (NYNHP) compiles and maintains information on New York State rare native plants and animals and significant ecological communities, including native rare, threatened, and endangered (RTE) species, as well as species of special concern. Appendix D documents the active inventory list of rare plant species occurring in Albany County. Compiled by the NYNHP, the active inventory list contains plants with less than 30 occurrences in the state and considered vulnerable to extinction.

Based on correspondence from representatives of the NYNHP during the UAlbany Capital Project planning process (see Appendix B for a copy of the correspondence), state-listed threatened species potentially existing within or in the vicinity of the project area include frosted elfin (*Callophrys irus*) (NYNHP 2008). Additionally, state-listed endangered species potentially occurring within or in the vicinity of the UAlbany Capital Project Plan area includes Karner blue butterfly (*Plebejus melissa samuelis*) (NYNHP 2008). Species of special concern likely existing within or in the vicinity of the project, as documented by the NYNHP, include inland barrens buckmoth (*Hemileuca maia maia*) and worm snake (*Carphophis amoenus*). Species of special concern are not yet recognized as threatened or endangered species; however, concern exists for their continued welfare (NYNHP 2008). These findings indicate that state-listed rare, threatened, and/or endangered species may exist in the vicinity of the project site. Figure 3.7-1 illustrates the reported approximate extent of rare species and ecological communities in the vicinity of the project site.

An ecological evaluation was performed at the proposed site of the Student Housing Project (Project No. 1). The ecological evaluation consisted of mapping the boundaries of general vegetative covertypes and investigation of the potential presence of reported rare, threatened, and endangered species and the habitats which support them. The ecological evaluation performed on the site resulted in the identification and mapping of eight covertypes (*successional northern hardwoods, successional southern hardwoods, pine plantation, landfill/dump, shallow emergent marsh, red maple-hardwood*

swamp, artificial pond, and mowed lawn/landscaped area). These covertypes are identified by Edinger, *et al.*, as being common in New York State and globally, and generally are not unique in terms of floral and faunal species supported. During the on-site assessment, two biologists traversed the site in search of the habitat requirements and presence of the following species. Observed vegetative and animal species were recorded and used to produce the cotype mapping. Examples of the resources focused on during the ecological field investigation included:

- The main food source for the Karner blue butterfly and frosted elfin, wild lupine (*Lupinus perennis*), as well as larval food, wild indigo (*Baptista tinctoria*), or associated vegetative species.
- The preferred habitat of the inland barrens buckmoth, scrub oak barrens, and associated species such as multiple oak species (*Quercus spp.*) and pitch pine (*Pinus rigida*).
- Worm snake habitat, including presence of suitable amounts of forest litter, and associated ecological communities, such as Appalachian oak-hickory forest, chestnut oak forest, oak-tulip tree forest, or pitch pine-oak-heath rocky summit.
- Organic soils (peat or muck) preferred by the bog turtle, as well as associated vegetative species, including shrubby cinquefoil (*Potentilla fruticosa*), mosses (*Sphagnum spp.*), and horsetail (*Equisetum spp.*).
- Living, dying, or dead oak species, such as red oak (*Quercus rubra*), white oak (*Quercus alba*), and black oak (*Quercus velutina*), as well as pignut (*Carya glabra*) and shagbark hickory (*Carya ovata*), required for the Indiana bat.
- Characteristic species found in pitch pine-scrub oak barrens habitat, including tree species such as pitch pine (*Pinus rigida*), quaking aspen (*Populus tremuloides*), scarlet oak (*Quercus coccinea*), scrub oak (*Quercus ilicifolia*), or dwarf chinquapin oak (*Quercus prinoides*), as well as herbaceous species such as big bluestem (*Andropogon gerardii*), Pennsylvania sedge (*Carex pensylvanica*), and yellow indiagrass (*Sorghastrum nutans*).

While some oak species were observed on-site, they were not dominant and do not represent significant roosting habitat. Other listed species, associated habitats, and food sources were not observed during the field investigation. Further, the covertypes and vegetative species identified on-Site do not appear to support the rare, threatened, or endangered species or habitats identified as part of the evaluation as potentially present in the vicinity of the site.

Habitats

Typical habitat. As noted above, the terrestrial cultural ecosystem consists of a mix of landscaped grasses, native and ornamental trees and shrubs, and taller grasses, sedges, and rushes. Conifers and deciduous hardwood trees including aspen, birch, cherry, red maple, and white pine are also present within the limited areas of successional hardwood forests. The developed nature of the site, including the urban structures, support landscaped grasses, ornamental trees and shrubs as well as mosses, lichens, and terrestrial algae. The developed setting with pockets of hardwood forests support various birds and mammals, such as squirrels, American robins, mourning doves, mockingbirds, and house sparrows.

Indian Pond, located on the southeast portion of the site, serves as a functioning storm water retention basin and source of irrigation water for the Uptown Campus and supports a variety of plant and animal species. While it is not mapped as a federal or state wetland (see “Wetlands,” following), it is likely that Indian Pond, portions of its shorelines, and some adjacent lands may be defined as wetlands in accordance with either state or federal criteria, or both.

Albany Pine Bush. The Albany Pine Bush is an inland pine barren located less than one mile to the west of the Uptown Campus. Inland pine barrens can be described as “a shrub-savanna community that occurs on well-drained, sandy soils that have developed on sand dunes, glacial till, and outwash plains” (Edinger *et al.* 2002). The landscape features scattered pitch pines (*Pinus rigida*) with a dense shrub layer typically consisting of scrub oaks (*Quercus ilicifolia* and *Q. Prinoides*) and a low shrub layer of sweet-fern (*Comptonia peregrina*), blueberries (*Vaccinium angustifolium* and *V. pallidum*), and black huckleberry (*Gaylussacia baccata*) (Edinger *et al.* 2002). Edinger *et al.* assigns pitch pine-scrub oak barrens a global ranking of G2 and a state ranking of S1. A habitat with a G2 ranking is “imperiled globally because of rarity...or very vulnerable to extinction throughout its range because of other factors” (Edinger *et al.* 2002). A habitat with a S1 ranking is “especially vulnerable in New York State” (Edinger *et al.* 2002).

Originally covering approximately 40 square miles, less than 20% of the original Albany Pine Bush ecosystem remains today (USFWS 1997; Albany Pine Bush Preserve Commission 2005). Despite its reduction in size as a result of area development and resulting habitat fragmentation, the Albany Pine Bush is still considered one of the largest worldwide (Albany Pine Bush Preserve Commission 2005). Conservation of the Albany Pine Bush is important because of its diverse plant and animal species, including the state- and federally-listed RTE species Karner blue butterfly (*Lycaeides melissa samuelis*) and frosted elfin (*Incisalia irus*).

In addition to habitat fragmentation, the Albany Pine Bush ecosystem is threatened by invasive species (Nature Conservancy 2001; Albany Pine Bush Preserve Commission 2005). Invasive species reduce the integrity of the native plant and animal species supported by the Albany Pine Bush. Common invasive plant species include Austrian pine (*Pinus nigra*), Cottonwood (*Populus deltoidea*), blackberry (*Rubus alleghensis*), honeysuckle shrubs (*Lonicera sp.*), purple loosestrife (*Lythrum salicaria*), wisteria (*Wisteria sinensis*), and Japanese stilt grass (*Microstegium vimineum*).

The Albany Pine Bush Preserve Commission was formed in 1988 by the New York State Legislature as a public and private partnership to protect the Albany Pine Bush while managing it as a recreational and educational resource. The Albany Pine Bush Commission was created with the goal “of protecting and managing the unique and endangered natural communities of the Albany Pine Bush for ecological, recreational and educational benefits” (Albany Pine Bush Preserve 2005). The preserve spans 2,750 acres and contains approximately 20 miles of marked multi-use trails (Nature Conservancy 2001; Albany Pine Bush Preserve Commission 2005). In June 2007, the Albany Pine Bush Discovery Center opened “as the gateway to the Pine Bush,” providing hands-on educational programs, exhibits, and access to the Karner Barrens East and West Trails (Albany Pine Bush Discovery Center n.d.). In addition to individual and group educational opportunities, the Albany Pine Bush Preserve has supported UAlbany student and faculty research projects and class programs (personal communication, July 24, 2009).

Federally-listed critical habitats. Critical habitats are federally-designated areas that are essential for the conservation of threatened or endangered species and, therefore, may require special management and protection. Review of correspondence from the USFWS for the UAlbany Capital Project Plan indicates that no federally-listed critical habitats exist within the Capital Project Plan area (USFWS 2008). The nearest federally-listed critical habitat is the Massasoit National Wildlife Refuge located in Sudbury, Massachusetts, approximately 170 miles east of the Uptown Campus (USFWS 2008). The Massasoit National Wildlife Refuge provides critical habitat for the Plymouth red-bellied turtle (*Pseudemys rubriventris*). Such findings indicate that no critical habitats are located at UAlbany project sites and, therefore, no further USFWS consultation is deemed necessary.

Wetlands

State-regulated wetlands. Review of NYSDEC Freshwater Wetland map covering the project area (Albany quadrangle) indicates that no NYSDEC-mapped wetlands exist within the confines of the UAlbany Capital Project Plan sites (NYSDEC 2007). As illustrated on Figure 3.7-2, the closest mapped state freshwater wetlands are located to the southwest and northeast of the UAlbany Uptown Campus (NYSDEC 2007).

In 2008, the University completed a maintenance dredging project to remove sediments that had built up over the years and restore volume so that Indian Pond could better perform its function as a storm water retention unit. The NYSDEC, in a letter dated April 10, 2008, confirmed that the pond is classified as a Class C water body, and appears isolated; it was noted that the pond is “not near a state regulated wetland.” No permit was required for the maintenance dredging of Indian Pond.

Federal wetlands. The National Wetland Inventory (NWI) map for the Albany quadrangle was reviewed to identify whether NWI-mapped wetlands exist within the proposed Capital Project Plan boundaries (see Figure 3.7-3) (USFWS 2008a). The presence of NWI-mapped wetlands in the project area would indicate the potential presence of USACE-jurisdictional wetlands. Based on review of the map, no NWI-mapped wetlands exist on the UAlbany Uptown Campus.

As part of the planning process for the Student Housing Project (Project No. 1), a wetland survey was performed of the proposed project site and adjacent lands in the southeast portion of the campus. The wetland survey identified the following (see Appendix C for a map locating these areas):

Wetland 1 (WL1) - approximately 0.27 acre, located in the eastern portion of the project area. It consists of mainly emergent vegetation with some scattered and overhanging trees. Dominant tree species observed in this area consist of Eastern cottonwood (*Populus deltoides*), black willow (*Salix nigra*), and elm (*Ulmus spp.*). Dominant shrub species include black willow. Dominant herbaceous species observed include spotted touch-me-not (*Impatiens capensis*), smooth goldenrod (*Solidago gigantea*), common rush (*Juncus effuses*), white avens (*Geum canadensis*), boneset (*Eupatorium perfoliatum*), and bittersweet nightshade (*Solanum dulcamara*).

Wetland 2 (WL2) - approximately 0.08 acre, located in the southeastern portion of the project area. Dominant tree species observed within this wetland include willow (*Salix spp.*) and red maple (*Acer rubrum*), while dominant herbaceous species include spotted touch-me-not and garlic mustard (*Alliaria officinalis*). The wetland slopes toward the adjacent residence and transitions to mowed lawn beyond the campus property line.

Wetland 3 (WL3) - approximately 0.04 acre, located in the southwestern corner of the project area. It is bordered to the west by a paved parking area and to the south by a residence. The wetland slopes to the west and is dominated by common reed (*Phragmites australis*), touch-me-not, common evening primrose (*Oenothera biennis*), rough goldenrod (*Solidago rugosa*), smooth goldenrod, and beggars lice (*Hackelia virginiana*).

Wetland 4 (WL4)

This wetland is approximately 0.05-acre located in the southeastern portion of the Site. This wetland is located in a depressional area and was delineated with four flags labeled W4-1 to W4-5. It consists of *red maple-hardwood swamp* covertype. Dominant tree species observed within this wetland include red maple and eastern cottonwood, while dominant herbaceous species include skunk cabbage

(*Symplocarpus foetidus*) and spotted touch-me-not. Hydrologic indicators in this wetland included saturation to the surface and apparent drainage patterns.

Wetland 5 (WL5)

This wetland is approximately 0.01-acre and located in the northeastern portion of the Site and north of WL4. This wetland is located in a depressional area and was delineated with three wetland flags labeled W5-1 to W5-3. The wetland is classified as *red maple-hardwood swamp* and is dominated by elm, spotted touch-me-not, sensitive fern (*Onoclea sensibilis*), and white avens with some areas of lady fern (*Athyrium filix-femina*) located along the northern portion of depressional area. Organic streaking was observed in sandy soils within this wetland.

Wetland 6 (WL6)

This wetland is approximately 4.18-acres and surrounds Indian Pond. This wetland consists of *shallow emergent marsh*. The wetland is bordered by a walking trail on all sides and it slopes down towards the Pond on the eastern portion of the wetland. Dominant vegetative species within this wetland include eastern cottonwood, common reed, sensitive fern, and bittersweet nightshade. Soils within this wetland were saturated to the surface.

Wetland 7 (WL7)

This wetland is approximately 0.43-acre and is located southwest of WL6 and adjacent to the baseball field. This wetland was classified as *shallow emergent marsh* and consisted primarily of common reed. Soils within this wetland were saturated to the surface.

Wetland 8 (WL8)

This wetland is approximately 0.29-acre and is located just north of WL6. It consists of an open water area in a topographic depression with a significant portion of standing water and was classified as *red maple-hardwood swamp*. Dominant tree species within this wetland include box elder (*Acer negundo*), red maple, and eastern cottonwood, while dominant herbaceous species consist of spotted touch-me-not and sensitive fern. The main hydrologic indicator in this wetland was saturation of soils at 10 inches.

One soil boring, SB3, was performed in an undelineated area in the northeastern portion of the Site in an area dominated by elm, red maple, spotted touch-me-not, and garlic mustard. However, this area also contained significant densities of ground ivy (*Glechoma hederacea*) and English ivy (*Hedera helix*), which are not wetland indicator species. This area lacked hydrologic indicators of a wetland and was therefore not delineated as such.

An additional soil boring, SB8, was performed in an undelineated topographic depression located in the western portion of the Site. Although positive indicators of wetland hydrology were not encountered in this area, the depressional nature of this area has potential to allow for accumulation of storm water runoff and water retention. Dominant species observed in this area included yellow buckeye (*Aesculus flava*), box elder, glossy buckthorn (*Frangula alnus*), honeysuckle (*Lonicera tatarica*), white snakeroot (*Eupatorium rugosum*), spotted touch-me-not, Virginia creeper (*Parthenocissus quinquefolia*), ground ivy, and common reed. Due to a lack of confirmed hydrology, this area was not delineated as wetland.

New York State Critical Environmental Area (CEA). Pursuant to Section 617.7(c)(iii) of SEQRA. CEAs must be evaluated, at a minimum in the process and context of determining significance.

NYSDEC describes the designation: “To be designated as a CEA, an area must have an exceptional or unique character with respect to one or more of the following:

- a benefit or threat to human health;
- a natural setting (*e.g.*, fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality);
- agricultural, social, cultural, historic, archaeological, recreational, or educational values; or an inherent ecological, geological or hydrological sensitivity to change that may be adversely affected by any change.”

According to the NYSDEC web site (<http://www.dec.ny.gov/permits/6184.html> accessed May 21, 2009), there are no CEAs in Albany County.

3.7.2. Potential Impacts Construction Phase

Flora/Fauna. Federal and state listed threatened and endangered species potentially exist within the project area. Based on correspondence with a biology professor at the University, endangered plant species have been observed on the Uptown Campus. Virginia ground-cherry (*Physalis virginiana*) and winter grape (*Vitis vulpine*) are endangered plants in New York State and have been observed on the Uptown Campus (personal communication 2009). Threatened and/or endangered animal species have not been observed on the Uptown Campus. A habitat survey at the site of the Student Housing Project did not observe habitat of the rare, threatened or endangered species reported as previously observed on campus, or reported by state and federal agencies as being present in the county.

As previously noted, the University at Albany Uptown Campus is dominated by buildings, roadways, and parking lots, with portions of campus maintained as landscaped areas and undeveloped forest. Construction-related activities in the form of clearing, excavating, and grading of existing ground cover and trees and building of new structures will result in impacts to site flora and fauna. Potential impacts to flora and fauna as a result of construction phase activities include:

- Modification or loss of on-site cover and food sources for common flora and fauna inhabiting the Uptown Campus
- Modification or loss of habitat, including wintering, foraging, breeding and nursery habitats
- Interference with migratory patterns
- Harassment of wildlife due to construction-related noise and activities
- Introduction of invasive species
- Fragmentation and degradation of quality of habitat.

Potential adverse impacts to flora and fauna will be limited to particular areas of the Uptown Campus. Capital Project Plan projects proposed to be constructed adjacent to the Podium and currently developed areas will have minimal impacts to flora and fauna in comparison to projects proposed to be constructed in forested areas. Forested areas currently exist on the southeast portion of the Uptown Campus, in the area of the planned Student Housing Project. Potential mitigation measures to minimize disturbances to flora and fauna are detailed below.

Habitat. As noted in Section 3.7.1., the highest ranking terrestrial habitat on The Uptown Campus is G5 S5. A habitat with a G5 ranking is “demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery” (Edinger *et al.* 2002). The highest state ranking given to a habitat found on the Uptown Campus is S5. A habitat with a S5 ranking is “demonstrably secure in New York State” (Edinger *et al.* 2002). A small percentage (those scattered areas on campus where there are groves of trees) of the Uptown Campus can be described as successional northern hardwoods with a ranking of G5 S5. These existing wildlife habitats are of high or moderate quality and have the potential to be impacted as a result of construction phase activities. However, with the highest rankings of G5, these habitats would not be considered sensitive.

Mapped wetlands were not noted for the Uptown Campus on either New York State freshwater wetlands maps or federal NWI maps. However, a wetland survey performed at the proposed site of Project No. 1, Student Housing Project, noted the presence of a number of wetland areas on the site. If this site is utilized for the Student Housing Project or another development, it is the intent of the University to avoid these wetlands if possible, or to apply for a wetland permit to the USACE with an appropriate mitigation plan.

Likewise, it may be necessary to perform a wetland survey at the sites of other of the construction projects to evaluate whether wetlands are present. The projects where this may be a consideration include:

- Project No. 4 – Relocate Data Center, depending on the location of the site selected
- Project No. 6 - Purple Path Continuum
- Project No. 13 - Bicycle-Pedestrian Path.

Present concepts for the location of other projects indicate that they would be developed on sites that are clearly not wetlands, such as existing parking or lawn areas; since they do not exhibit characteristic hydrophytic wetland vegetation, one of the three required criteria for wetlands, most potential locations on the Uptown Campus will not be defined as wetlands.

Although the Albany Pine Bush is neighboring the Uptown Campus, the construction phase of the UAlbany Capital Project Plan is unlikely to directly impact Pine Bush resources. Implementation of the Capital Project Plan may offer mutually beneficial opportunities for UAlbany and the Pine Bush Preserve, including improved local pedestrian and bicycle paths for access to the Pine Bush Preserve, and the opportunity to re-establish characteristic Pine Bush vegetation on campus as part of landscaping options in appropriate, if limited, locations.

Potential impacts to habitats on the Uptown Campus due to construction-related activities include:

- Modification or loss of on-site cover and terrestrial and forest habitats
- Modification or degradation of Indian Pond habitat
- Fragmentation and degradation of quality of habitat.

Potential adverse impacts to Uptown Campus habitats will occur, but will be limited to specific sites where new construction will occur (see Figure 1.3-1).

Operational Phase

Flora/Fauna. Impacts to site flora and fauna, including habitat modification or loss and harassment of wildlife, were not identified as a result of the operational phase of the Capital Project Plan. Listed activities and their associated impacts are solely related to the construction phase of UAlbany's Capital Project Plan. The operation of specific components of the Capital Project Plan may improve urban plant and animal habitats through the planned landscaping activities associated with construction phase restoration activities. The Northern Landscape Improvement Project will provide habitat for urban wildlife within the boundaries of the Uptown Campus. Significant adverse impacts to site flora and fauna have not been identified as resulting from operational phase activities.

Habitat. Impacts to site habitats, including modification or loss of terrestrial and forest habitats and degradation of quality, were not identified as a result of the operational phase of the Capital Project Plan. Listed activities and their associated impacts are solely related to the construction phase of UAlbany's Capital Project Plan. Significant adverse impacts to site habitats have not been identified as resulting from operational phase activities.

The potential for impacts with respect to plants, animal and habitat is the displacement or alteration of habitat due to construction on open space and vegetated areas within the boundaries of the Uptown Campus. Open space on campus generally is landscaped; however, even open urban landscapes provide habitat for characteristic species. Other projects either would be implemented on existing developed sites (such as the construction of a parking structure, likely to be sited on an existing parking lot). The following table summarizes the potential impacts in this category.

Table 3.7-1. Potential for impacts to plants, animals and habitat

Project Name	Plants, Animals Habitat - Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Displacement/alteration of urban terrestrial habitat
2. Campus Center Master Plan	X	Displacement/alteration of urban terrestrial habitat
3. Construct New Business School Building	X	Displacement/alteration of urban terrestrial habitat
4. Relocate Data Center	X	Displacement/alteration of urban terrestrial habitat
5. Implement Various Athletics Improvements	X	Displacement/alteration of urban terrestrial habitat
6. Purple Path Continuation	X	Displacement/alteration of urban terrestrial habitat
7. Northern Landscape Improvement Project	X	Alteration of urban terrestrial habitat
8. State Quad Parking Lot Expansion	X	Displacement/alteration of urban terrestrial habitat
9. Multi-Discipline Science Surge Building	X	Displacement/alteration of urban terrestrial habitat

Table 3.7-1. Potential for impacts to plants, animals and habitat

Project Name	Plants, Animals Habitat - Potential for Impacts	Nature of Impacts
10. Service Building Renovation	X	Displacement/alteration of urban terrestrial habitat
11. Entry Improvements	X	Displacement/alteration of urban terrestrial habitat
12. Bus Rapid Transit		
13. Bicycle-Pedestrian Path	X	Displacement/alteration of urban terrestrial habitat

3.7.3. Mitigation Measures

Construction Phase

Flora/Fauna. Potential construction phase mitigation measures to eliminate or minimize impacts to flora and fauna on the Uptown Campus include:

- Installation of temporary erosion control devices to reduce impacts to surrounding non-construction areas, including adjacent surface waters and habitats
- Stabilization of sloped areas and stockpiles material from site clearing to reduce impacts from erosion
- Replacement of trees and restoration of ground cover removed during site clearing and grading activities
- Potential to incorporate select appropriate native Pine Bush plants into campus landscape and restoration activities.

Habitat. On a project-specific basis, project siting will be evaluated for the potential for wetlands and critical habitat (habitat for rare, threatened, endangered species) to be present. Although such areas of the Uptown Campus are anticipated to be limited because of land disturbances from existing development and use, where the potential is present for these habitats, a wetland survey and habitat survey will be performed during the siting process.

Potential construction phase mitigation measures to eliminate or minimize impacts to habitats on the Uptown Campus include:

- Install temporary erosion control devices to reduce impacts to surrounding non-construction areas, including adjacent surface waters and habitats
- Stabilize of sloped areas and stockpiled material from site clearing to reduce impacts from erosion (given site limitations, materials normally stockpiled on site may be managed on an as-needed basis to reduce the need for space)
- Maximize replacement of trees and restoration of ground cover removed during site clearing and grading activities
- Incorporate native Pine Bush plants into campus landscape and restoration activities.

Operational Phase

Flora/Fauna. No impacts to flora and fauna have been identified as resulting from the operational phase of the project. Implementation of habitat restoration and landscaping activities following construction phase activities is intended to restore site flora and fauna to the extent practicable; therefore, no operational phase mitigation is necessary.

Habitat. No impacts to habitat have been identified as resulting from the operational phase of the project. Implementation of habitat restoration and landscaping activities following construction phase activities is intended to restore site habitat to the extent practicable; therefore, no operational phase mitigation is necessary.

Summary

The following table presents a summary of the potential environmental impacts to plant, animals and habitat of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.7-2. Summary of Potential Impacts to Plants, Animals, Habitat and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> Removal of wetland habitat Removal of wooded habitat Field habitat survey does not indicate presence of habitat of rare, threatened or endangered species listed for Albany County 	<ul style="list-style-type: none"> Based on site wetland survey, locate buildings so as to avoid some wetland areas and/or replace wetland habitat elsewhere on campus, subject to approval of wetland mitigation plan by USACE. Removal of some wooded habitat is an unavoidable adverse impact of this project; new plantings will be placed to provide buffer of the site from the Tudor Road neighborhood.
2. Campus Center Master Plan	<ul style="list-style-type: none"> No significant adverse impacts - loss of landscaping and urban habitat Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary
3. Construct New Business School Building	<ul style="list-style-type: none"> No significant adverse impacts - loss of lawn area on campus Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary
4. Relocate Data Center (if site is existing building)	<ul style="list-style-type: none"> No significant adverse impacts - loss of landscaping and urban habitat Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary

Table 3.7-2. Summary of Potential Impacts to Plants, Animals, Habitat and Mitigation Options.

Project	Potential Impacts	Mitigation
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> Most of project site presently consists of existing outdoor athletic facilities – some loss of landscaping and urban habitat Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation No significant adverse impacts 	<ul style="list-style-type: none"> No mitigation necessary
6. Purple Path Continuation	<ul style="list-style-type: none"> No significant adverse impacts, since route follows perimeter road - loss of landscaping and urban habitat 	<ul style="list-style-type: none"> Review of route for potential sensitive habitat (e.g., wetlands), especially on southeastern portion of campus
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> No significant adverse impacts - loss of existing landscaping; replacement with landscaping more appropriate to campus and survivability of plantings Vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> No significant adverse impacts - loss of landscaping (lawn) Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> No significant adverse impacts - loss of landscaping and urban habitat Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary
10. Service Building Renovation	<ul style="list-style-type: none"> No significant adverse impacts - loss of landscaping and urban habitat Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary
11. Entry Improvements	<ul style="list-style-type: none"> No significant adverse impacts – replacement of existing landscaping Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary

Table 3.7-2. Summary of Potential Impacts to Plants, Animals, Habitat and Mitigation Options.

Project	Potential Impacts	Mitigation
12. Bus Rapid Transit	<ul style="list-style-type: none"> No significant adverse impacts – possible loss of minimal landscaping and urban habitat due to construction of bus shelters Site vegetation consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> No significant adverse impacts - loss of landscaping and urban habitat along pathway routes Campus vegetation generally consists of lawn and other landscape plants, not characteristic hydrophytic wetland vegetation 	<ul style="list-style-type: none"> Review of routes for potential sensitive habitat (e.g., wetlands), especially on southeastern portion of campus

3.8. Aesthetic Resources (Noise, Light, Visual)

3.8.1. Existing Conditions

Noise

According to the NYSDEC's Program Policy "Assessing and Mitigating Noise Impacts" (NYSDEC 2001): "Noise is defined as any loud, discordant or disagreeable sound or sounds. More commonly, in an environmental context, noise is defined simply as unwanted sound. Certain activities inherently produce sound levels or sound characteristics that have the potential to create noise." This publication references *The Aggregate Handbook* (Barksdale 1991) for a table of examples of typical noise levels from common sources; this table has long been used to represent noise level benchmarks in environmental reviews.

Table 3.8-1. Typical noise levels of common sources.

Sound Source	Decibel Level (dBA)
Soft Whisper	32
Library	35
Living Room	45
Light Auto Traffic (at 50 ft)	50
Air Conditioning Unit (at 20 ft)	62
Large Office	60-65
Freeway Traffic (at 50 ft)	72
Freight Train (at 50 ft)	75
Heavy Truck (at 50 ft)	90
Shout (at 0.5 ft)	100
Jet take-off (at 2000 ft)	105

Source: Barksdale 1991

By contrast, the following table from the NYSDEC policy (as excerpted from Cowan 1994) presents sound levels of common construction equipment at a distance of 50 ft.

Table 3.8-2. *Typical noise levels of common construction equipment.*

Equipment	Decibel Level
Augured earth drill	80
Backhoe	83-86
Cement mixer	63-71
Chain saw cutting trees	75-81
Compressor	67
Garbage truck	71-83
Jackhammer	82
Paving breaker	82
Wood chipper	89
Bulldozer	80
Grader	85
Truck	91
Generator	78
Rock drill	98

Source: NYSDEC 2001

It is important to note that sound level reduction follows the so-called inverse square law, that is, at distances greater than 50 ft from a sound source, every doubling of the distance produces a 6 dB reduction in the sound. Therefore, at 100 ft from the source, a backhoe would have a sound level of 77-80 dB.

The Uptown Campus is located in an urban setting, with existing ambient noise levels in the vicinity of the project areas impacted by traffic, residential and industrial activities. Mobile and stationary sources currently emitting noise from the Uptown Campus remain at fairly consistent levels on a daily basis. Periodic increases in noise generated from campus activities typically result from athletic, cultural or academic events, or other campus activities drawing large crowds, such as the annual commencement ceremonies.

According to the City of Albany Code, Chapter 255-24 Article V, “unreasonable, unnecessary or unusual noise...which either annoys, disturbs, injures or endangers the comfort, repose, health, peace or safety of a reasonable person of normal sensitivities” is considered unlawful between the hours of 6:00 pm and 8:00 am. Additionally, the “operation of any machine or the exercise of any trade or calling or in the use of or operation of any...machine or device for the production of sound...which either annoys, injures or endangers the comfort, repose, health or safety of a reasonable person of normal sensitivities” is considered unlawful between the hours of 8:00 pm and 6:00 am, with the exception of emergency situations involving the “protection or preservation of life or property” (Code of the City of Albany, NY).

The Town of Guilderland Code identifies “Specific acts considered to be unreasonable noise” and a violation of Chapter 205-6 Article II, including (Town of Guilderland Code):

- Sound reproduction systems operating “in such a manner as to create a noise disturbance for any person other than the operator of the device”

- Loudspeakers and public-address systems operated between the hours of 8:00 pm and 9:00 am, “such that the sound therefrom creates a noise disturbance across a residential property line”
- Loading, unloading and handling of objects similar to boxes, crates, or containers as well as the pumped loading or unloading of liquid, gas, or powdered materials between the hours of 10:00 pm and 7:00 am.

Noise level thresholds, potentially applicable to construction and operational phase activities associated with the Capital Project Plan, as identified within the Town of Guilderland Code, include (Town of Guilderland Code):

- A sound-level reading above 75 dBA taken at a residential property, arising from a commercial property, industrial property, a public space to a public right-of-way between the hours of 7:00 am and 10:00 pm.
- A sound-level reading above 50 dBA taken at a residential property, arising from a commercial property, and industrial property, a public space or a public right-of-way between the hours of 10:00 pm and 7:00 am the following day.

Light

The Uptown Campus’s exterior light primarily consists of pole lights and fixtures affixed to structures within campus parking lots, around buildings, and along pedestrian walkways. The existing athletic fields have extensive lighting, used for evening athletic events. Exterior and interior lighting on the Uptown Campus has been carefully designed to maintain the original architectural character and aesthetic appeal of Edward Durell Stone’s design. The University has had a Lighting Master Plan (Naomi Miller Lighting Design, undated) prepared for the Uptown campus. It summarizes the multiple objectives of exterior campus lighting as being related to:

- security and safety
- sustainability
- lighting performance
- energy performance
- technology and technical performance.

As a result of these sometimes conflicting objectives, lighting considerations include the following factors:

- color of light (white light v. orange) and color quality
- uniform lighting
- seeing at a distance
- minimizing glare and “light pollution”
- making criminals more visible
- energy efficiency
- maintenance frequency
- equipment life.

Recommendations in the Lighting Master Plan for exterior lighting include “dark sky friendly optics” and 13, 16 and 24 foot pole heights. The reference to dark sky friendly optics (see www.darksky.org) is the move from non-cutoff (cutoff also refers to shielded) and semi-cutoff light optics to controlled lighting (cutoff) and dark-sky–friendly (full-cutoff) fixtures to reduce glare, light trespass, and urban

sky glow. The intent is to provide the campus with a consistent lighting aesthetic, provide lighting consistent with the above objectives, and minimize environmental impacts to the extent possible.

Sources of light pollution and light trespass typically include light projected above a horizontal plane or light reflected from illuminated surfaces such as roadways. With respect to dark sky friendly lighting, or nighttime friendly lighting as it also is known, the terminology above is usually defined as follows:

- Full-cutoff - used to minimize light pollution; optics direct the light on the ground below the fixture; light not allowed to emit above 90 degrees.
- Cutoff - controlled lighting; <2.5% of the light is allowed to escape the fixture above 90 degrees.
- Semi-cutoff - vast majority of the light is emitted below 90 degrees.
- Non-cutoff - light is emitted in all directions.

Nighttime friendly lighting reduces the potential for impacts to nearby receptors, while still meeting the goals of safety, security, cost, efficiency, technology and operations.

Visual

The NYSDEC Program Policy “Assessing and Mitigating Visual Impacts” states that “aesthetic resources of statewide significance may be derived from one or more of the following categories” (NYSDEC 2000):

1. A property on or eligible for inclusion in the National or State Register of Historic Places [16 U.S.C. § 470a *et seq.*, Parks, Recreation and Historic Preservation Law Section 14.07]
2. State Parks [Parks, Recreation and Historic Preservation Law Section 3.09]
3. Urban Cultural Parks [Parks, Recreation and Historic Preservation Law Section 35.15];
4. The State Forest Preserve [NYS Constitution Article XIV]; Adirondack and Catskill Parks;
5. National Wildlife Refuges [16 U.S.C. 668dd], State Game Refuges and State Wildlife Management Areas [ECL 11-2105]
6. National Natural Landmarks [36 CFR Part 62]
7. The National Park System, Recreation Areas, Seashores, Forests [16 U.S.C. 1c] National Recreation Area, Staten Island; Finger Lakes National Forest, Schuyler County;
8. Rivers designated as National or State Wild, Scenic or Recreational [16 U.S.C. Chapter 28, ECL 15-2701 *et seq.*]
9. A site, area, lake, reservoir or highway designated or eligible for designation as scenic [ECL Article 49 or DOT equivalent and APA Designated State Highway Roadside]
10. Scenic Areas of Statewide Significance [of Article 42 of Executive Law]
11. A state or federally designated trail, or one proposed for designation [16 U.S.C. Chapter 27 or equivalent]
12. Adirondack Park Scenic Vistas [Adirondack Park Land Use and Development Map]
13. State Nature and Historic Preserve Areas [Section 4 of Article XIV of the State Constitution]
14. Palisades Park [Palisades Interstate Park Commission]
15. Bond Act Properties purchased under Exceptional Scenic Beauty or Open Space category.

The NYSDEC policy uses a 5 mile radius as a safe zone for potential visual impacts. A 5 mile radius extends from the approximate center of the UAlbany Uptown Campus to the western portion of the Town of Guilderland in the west to the Towns of North Greenbush and Rensselaer in the east. In a north to south direction, a 5 mile radius extends from the Town of Latham to the Town of Bethlehem, respectively. The topography is relatively flat in this region, with most notable elevation changes to the east and west of the Uptown Campus. Based on personal observations, the viewshed from areas to the east, west and south of the Uptown Campus is characterized by a typical suburban setting, with rolling hills and wooded and forested areas. Structures, vegetation, and changes in topography influence ground level site lines. It is important to note that summer foliage screens the viewshed which may otherwise be visible during other seasons.

Based on personal observations, the viewshed from areas to the north of the Uptown Campus is also characterized by a typical suburban and commercial setting; however, it has little topographic relief. Structures and vegetation more strongly influence ground level site lines. As a result of the regional characteristics and varying topography, the Uptown Campus is not visible from areas along a 5 mile radius.

As previously noted, the Uptown Campus has little topographic relief, with few of its structures visible from more than a few blocks off campus other than the four high rise residence halls. Structures and vegetation influence the existing ground level site lines. The viewshed is characterized by a typical campus setting, with the Edward Durell Stone aesthetic driving the visual quality. There is not a regional viewshed that is available from campus, such as surrounding mountains or hillsides, nor is the campus a visual focus from off campus locations.

The UAlbany Uptown Campus is partially visible to local traffic from Interstates 87 and 90, as well as from the primary roads serving the campus, including Washington Avenue, Western Avenue, and Fuller Road. In general, campus structures maintain a low profile, with the exception of the water tower, located in the center of the Academic Podium; and Livingston, Stuyvesant, Eastman, and Mohawk Towers, located at the four corners of the Academic Podium within the residential Quads. The Quads serve as student residential communities, each comprised of 8 three-story residence halls with a 22-floor tower. Implementation of the projects included within UAlbany's Capital Project Plan will enhance and expand the existing residential, academic, and service buildings on the Uptown Campus, while maintaining relatively low building profiles.

3.8.2. Potential Impacts Construction Phase

Noise. The Uptown Campus is located in the vicinity of Interstates 87 and 90 and other major roads within the City of Albany and Town of Guilderland. Primary existing noise sources consist of vehicle traffic. Construction activities will result in temporary noise generation at the project sites. The amount of noise generated due to construction activities will vary depending on the type of equipment used and the duration of activity. However, these impacts are expected to be minimal, localized and short-term in duration. They will be restricted to typical daytime working hours. Based on the characteristics of existing noise levels on the Uptown Campus as compared with anticipated noise levels during construction, significant adverse impacts from noise impacts are not anticipated.

The City of Albany Code, Chapter 255-32 Article V, indicates that the operation of a pile driver, steam shovel, pneumatic hammer, derrick, steam or electric hoists, or other apparatus generating loud or unusual noise conducted between the hours of 10:00 pm and 7:00 am will be considered unlawful,

unless in emergency circumstances, with written permission obtained from the Commissioner of Buildings (The City of Albany Code).

The Town of Guilderland Code identifies “construction, repair, demolition or excavation” activities between the hours of 6:00 pm and 7:00 am as “unreasonable noise” and a violation of Chapter 205-6 Article II (Town of Guilderland Code).

Construction phase activities will be conducted within the limitations established by the City of Albany and Town of Guilderland Codes.

Light. Temporary lighting may be utilized during construction phase activities to illuminate construction, staging, and/or roadways, or for security during the construction period. However, these impacts are expected to be minimal, localized and short-term in duration. They will be restricted to typical daytime working hours. Based on the characteristics of existing light levels on the Uptown Campus as compared with anticipated light levels during construction, significant adverse impacts from project lighting are not anticipated.

Visual. Construction activities may impact the visual aesthetics of the Uptown Campus. However, these impacts are expected to be minimal, localized, and short-term in duration. Based on the characteristics of existing visual aesthetics on the Uptown Campus as compared with typical visual characteristics of a construction project, significant adverse impacts to visual resources are not anticipated.

Operational Phase

Noise. Potential noise impacts resulting from the operational phase of the Capital Project Plan should be consistent with present land uses on the Uptown Campus. Athletic events and other activities held at the proposed Multi-Use Athletic Facility and track and field complex may contribute additional noise if the upgraded facilities draw a larger number of spectators; however, impacts are anticipated to be minimal and temporary. Note that the capacity of the new facility would be essentially unchanged from that at present (10,000 spectators).

Implementation of the Capital Project Plan may result in changes in mobile and stationary source noises, but generally should remain consistent with current levels. It should be recognized that there may be an increase in frequency in events at the proposed Project No. 5 (Implement Various Athletics Improvements) (see below) as compared with the existing University Field. This may result in noise impacts beyond the campus footprint to the nearby residential area on a greater frequency than at present.

Sound from the use of outdoor athletic stadiums occurs immediately before, during and immediately after events, and potential noise may result from vehicle traffic ingress and egress, fans cheering, marching band music, concert music, and the public address (PA) speaker system. Currently, UAlbany operates an existing athletic stadium (University Field) with a maximum capacity of 10,000 persons. The stadium includes a PA system and vehicle event parking consisting of several on-campus parking lots capable of servicing capacity events. The existing stadium is located in the central part of the main campus, and the nearest off-campus noise-sensitive receptors areas that may be potentially impacted by stadium noise are residences located in a zone with a radius of about approximately one-half mile of the stadium, which may include the McKownville neighborhood across Western Avenue from the Uptown Campus. Sound from the stadium travelling towards the

residences east of the stadium is reduced predominantly due to distance attenuation and intervening obstructions including UAlbany campus structures and trees.

The proposed stadium is expected to be approximately the same capacity as the existing stadium, and will also include a PA system and parking. The proposed stadium location is anticipated to be within a few hundred feet to the southeast of University Field. Event types at the proposed stadium are anticipated to be generally consistent with those currently held at the existing stadium. The proposed stadium is expected to feature general facility upgrades including improvements in seating and PA system clarity that may result in increased event attendance.

Potential noise impacts from operation of the proposed stadium would only occur if the stadium significantly increases both its sound level and existing sound levels at the nearest residences. According to NYSDEC, increases in sound levels of 0 to 3 dBA should have no appreciable effect on receptors (NYSDEC, 2001). Though seating capacity of the proposed stadium is not increased, actual attendance may increase somewhat due to the improved facilities. However, assuming a 25 percent increase in average stadium attendance, sound levels would increase by only 1 dBA according to standard decibel addition of sound. The increase would be due to additional sound from increased traffic and fan cheering sound. Increased attendance is not expected to result in a significant change to music or PA system sound levels. Further, distance to the nearest residence likely will increase; even if it was moved closer and the distance marginally reduced by 200 to 400 ft (an example provided by way of example, since it is not one of the studied options), or by approximately 20 percent, according to the inverse square law of noise propagation, such a change in location would result in less than 2 dBA of additional sound. As a result the total increase in sound from the proposed stadium would be less than 3 dBA.

Additionally, the construction of the new Student Housing Project (Project No. 1) will result in the removal of a yet undetermined number of trees at the Southeast Corner location, the site being considered for the project. Therefore, noise impacts from the Student Housing Project (Project No. 1) are anticipated to occur.

Light. Potential light impacts resulting from the operational phase of the Capital Project Plan should be consistent with present land uses on the Uptown Campus. There likely will be greater use of the proposed Multi-Use Athletic Facility (Project No. 5) than of the existing facility; the proposed stadium will offer higher quality facilities and more use options for the campus and the surrounding community. Therefore, some operational elements will require careful consideration on the part of the University, *e.g.*, ensuring that stadium lighting during evenings is restricted when the facility is not in use. In general, new light sources and lighting patterns will be introduced as components of the Capital Project Plan are completed following recommendations from UAlbany's Lighting Master Plan (Naomi Miller Lighting Design, undated). Significant adverse impacts to aesthetics as a result of light pollution are not anticipated during the operational phase. However, for those projects that may be in proximity to off-site neighborhoods, depending on final site selection, some impacts are anticipated.

Additionally, the construction of the new Student Housing Project (Project No. 1) will result in the removal of a yet undetermined number of trees at the site that might otherwise provide some light buffer during the summer months when the trees are in leaf. However, lighting at the residential center will be evident to some extent in the surrounding areas when in operation, given the height of five stories that was suggested by the feasibility study. In this regard, the student housing units are more likely to be less utilized in the summer months and, therefore, any lighting impacts will be

minimized during that period. See “Mitigation,” following, for a description of options to reduce lighting impacts to the adjacent neighborhood.

Visual. The Uptown Campus is partially visible from Interstates 87 and 90 as well as from primary roads serving the University. The visual aesthetics of the University will be enhanced through the operational phase of the Capital Project Plan through implementation of projects including the Northern Improvement Project (Project No. 7) and Entry Improvements (Project No. 11).

Building designs will be integrated with the existing campus architecture. The University’s administration is sensitive to the potential for architectural inconsistencies, especially around the Podium, to adversely impact the visual aesthetic of the campus. As a result, architects engaged in campus projects are made aware of the cultural connection to the original Edward Durrell Stone architectural plan for the campus. Therefore, with this sensitivity as a foundation, and the absence of scenic viewsheds that would otherwise be impacted, adverse impacts to visual resources are not anticipated as a result of the operational phase of the Capital Project Plan. The University has established the Advisory Planning, Architecture, and Aesthetics Committee (APAAC) to help guide design and construction considerations for projects on campus. These projects, such as are contained in the Capital Project Plan, involve numerous site planning, aesthetics, and architectural design choices that are beyond the sole decision-making purview of the project planners. The APAAC is thus constituted as a representative committee of members of the campus community, and are asked to help filter through site planning options, discuss and help steer the conversation regarding the orientation and location of buildings, and consider how ancillary issues and projects, such as parking, could be addressed from among several options and ultimately recommended to the University President.

The potential for impacts with aesthetic resources is largely in the construction phase of the projects, which can be disruptive and will be unavoidable. Noise and lighting impacts will occur with greater frequency at the proposed Multi-Use Athletic Facility (Project No. 5), since it is anticipated that events will be held there with greater frequency. The lighting design can be developed to focus lighting efficiently and effectively where needed, and reduce stray light pollution that may impact a nearby neighborhood or student residences, depending on the final sighting of such a project. For other projects, lighting under normal operations will be consistent with existing land uses on campus.

The recommended location of the Student Housing Project (Project No. 1) at the time of the writing of this DGEIS is in the southeast portion of the Uptown Campus, adjacent to the Tudor Road residential area (see Figure 2.3-1). The Harriman State Office Campus is located to the north of the Tudor Road neighborhood and is visible from the dead end road. The potential project site is currently wooded, providing a buffer between the Uptown Campus and local residences. The wooded area is primarily composed of deciduous trees, providing a seasonal screen. The Student Housing Project, whether parking lots, a roadway, or the housing itself, is being designed to be effectively screened from the abutting neighborhood (see Figure 2.3-2). Potential mitigation measures that are being considered and are outlined below. APAAC can assist with an evaluation of the site design so that mitigation of potential impacts is integrated into the site plan to the extent practicable.

The following table summarizes the potential impacts in this category.

Table 3.8-3. Potential for impacts to aesthetic resources.

Project Name	Noise, Light, Visual Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Construction; operation (noise, light, visual)
2. Campus Center Master Plan	X	Construction
3. Construct New Business School Building	X	Construction
4. Relocate Data Center	X	Construction; potentially operation, based on site selection (noise, light, visual)
5. Implement Various Athletics Improvements	X	Construction; increased frequency of use
6. Purple Path Continuation	X	Construction; lighting for security and nighttime use
7. Northern Landscape Improvement Project	X	Construction; operation (noise, light, visual)
8. State Quad Parking Lot Expansion	X	Construction; lighting for security and nighttime use
9. Multi-Discipline Science Surge Building	X	Construction
10. Service Building Renovation	X	Construction
11. Entry Improvements	X	Construction and nighttime use of facilities
12. Bus Rapid Transit	X	Lighting for security and nighttime use of facilities
13. Bicycle-Pedestrian Path	X	Potential lighting for security and nighttime use

3.8.3. Mitigation Measures

Construction

Noise. During construction, contractors will be responsible for implementing appropriate noise mitigating measures to reduce noise related impacts. NYSDEC's program policy "Assessing and Mitigating Noise Impacts" (DEP-00-001, NYSDEC 2001) suggests that limiting activity to normal workday hours is an effective mitigation. Potential noise mitigation measures during construction phase activities may also include:

- Use of noise attenuation devices and/or building materials
- Use of sound attenuating silencers to mitigate engine exhaust noise

- Utilization of engineering controls that minimize noise generation and allow employees to work in designated work areas without hearing protection.

Light. Construction phase activities may require the use of temporary lighting during evening work hours. Adverse impacts to aesthetic resources are not anticipated as resulting from construction-related lighting. Potential mitigation measures to minimize impacts may include:

- use of focused lighting to illuminate construction areas without interfering with the surrounding areas
- restriction of construction activities to standard workday hours.

Visual. Potential impacts to aesthetic visual resources are anticipated to be minimal and short-term. Mitigation techniques which may minimize construction phase impacts include:

- where possible, minimize clearing of trees and brush surrounding project areas to maintain a buffer between the project and residential areas (Note that the University is seeking to maintain at minimum a 100 foot buffer between project developments and its property line when a project site is adjacent to a residential neighborhood. The City of Albany's minimum setback is 25 feet).
- use of designated staging areas for material, equipment, and vehicles to reduce the spread of construction activities beyond designated work areas.

Operational Phase

Noise. With respect to most of the projects in the Capital Project Plan, operation-related noise associated with the Capital Project Plan is anticipated to be comparable to existing noise levels on the Uptown Campus. The potential for temporary increases in noise levels may exist. Mitigation options that will be considered to reduce noise impacts during operation include, but are not limited to, the following, individually or in combination:

- berms,
- plantings,
- site orientation selection,
- compliance with the Town of Guilderland and City of Albany code requirements,
- landscaping and banking for noise abatement,
- use of noise attenuation devices and/or building materials.

With respect to the Student Housing Project (Project No. 1), at the time of the writing this DGEIS document, the University has had two meetings with concerned neighbors focusing on this project (September 17, 2009 and October 29, 2009). In response to stated concerns, plans were developed to design a relocation of the University's Perimeter Road so that the road is moved towards the property line and housing and associated parking are moved further to the center of the campus, as far away from neighboring houses and sight lines as is possible. The project designs also included an earthen berm which would screen the roadway and an aggressive planting plan to provide a more impressive natural buffer to the developed site. This design also will provide a noise buffer between the residences and the project, although noise will be evident at times at the residences.

The University inquired of the University Police Department whether there have been complaints from neighbors regarding noise from the Freedom Quad on the other side of campus. The objective was to evaluate whether additional administrative measures might be necessary at the location of the proposed Student Housing Project based on lessons learned at the Freedom Quad residences. The University Police Department indicated that there had been no documented complaints from the adjacent neighborhood, indicating that present UAlbany and University Police Department practices and procedures are adequate to control unwanted noise impacts to the adjacent neighborhood.

Light. With respect to potential operational impacts, the Student Housing Project (Project No. 1) and the Multi-Use Athletic Facility (Project No. 5) have the greater potential for lighting impacts to off-campus receptors due to their operational characteristics and the location of the projects with respect to adjacent neighborhoods. Options to mitigate these impacts have been included in the campus' Lighting Master Plan and include nighttime friendly lighting options defined as follows:

- Full cutoff - used to minimize light pollution; optics direct the light on the ground below the fixture; light not allowed to emit above 90 degrees.
- Cutoff - controlled lighting; <2.5% of the light is allowed to escape the fixture above 90 degrees.
- Semi-cutoff - vast majority of the light is emitted below 90 degrees.

These lighting options will significantly reduce light pollution when implemented across campus, but especially with respect to the projects adjacent to off-campus neighborhoods, such as the Student Housing Project (Project No. 1) and the stadium operations under Project No. 5 (Implement Various Athletics Improvements) where these lighting options will be incorporated into the specific project designs. At the Student Housing Project site, the following measures are being evaluated for effectiveness and incorporation into the project design to significantly reduce lighting impacts on the adjacent Tudor Street neighborhood from the project:

- the perimeter road will be relocated to the east of the project development, allowing the buildings to be located further to the west and as far as possible on the site from the property boundary to further reduce the impact of light spillover
- the parking lot that will be associated with the building will be placed between the building and the property boundary to reduce the impact of room lighting that may escape the building
- lighting to be selected will be shielded and focused in the direction of the buildings and the ground to reduce light spillover
- a berm is being considered between the property line and the project, associated with aggressive plantings, to act as a year round light buffer between the neighborhood and the property.

However, these designs will not totally eliminate potential light impacts at these locations.

Visual. The design of Capital Project Plan components will be integrated into the existing campus architecture and character. Visual aesthetics of the Uptown Campus is expected to be enhanced as a result of the operational phase of the Capital Project Plan. Operational phase visual impacts are anticipated to be minimal, with the potential for select projects to be partially visible from the Uptown Campus. Potential mitigation measures to minimize operations-related visual impacts may include:

- ensuring forested buffers and earthen berms where possible between the Uptown Campus and neighboring areas
- landscaping and banking for visual aesthetics

- low-profile and/or downsized design considerations.

The Student Housing Project site has the potential to be visible from the abutting neighborhood. Overall, this project will maintain a relatively low building profile in comparison to the existing water tower and four residential Quads but, given topography in this location, adjacent neighbors would likely see portions of the developed area. At the time of the writing this DGEIS document, the University has had two meetings with concerned neighbors focusing on this project (September 17, 2009 and October 29, 2009). In response to stated concerns, plans were developed to design a relocation of the University's Perimeter Road so that the road is moved towards the property line and housing and associated parking are moved further to the center of the campus, as far away from neighboring houses and sight lines as is possible. The project designs also included an earthen berm which would screen the roadway and an aggressive planting plan to provide a more impressive natural buffer to the developed site. The setback of the project, and the plantings on an earthen berm will reduce sight lines from the Tudor Road neighborhood and other residences.

Summary

The following table presents a summary of the potential environmental impacts to aesthetic resources (noise, light, visual) of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.8-4. Summary of Potential Impacts to Aesthetic Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Impact on Tudor Road neighborhood and other nearby residences from generation of noise from student housing, parking area, and additional traffic on perimeter road • Impacts of lighting from Tudor Road neighborhood • Visibility of buildings from Tudor Road neighborhood 	<ul style="list-style-type: none"> • Measures to be taken to reduce these impacts: <ul style="list-style-type: none"> ○ Buildings to be located as far west on property as possible, away from property boundary with neighborhood ○ Lighting in parking lot and around buildings to be shielded and focused down to reduce spillover ○ Berm to be constructed along property boundary to reduce sight lines ○ Conifer plantings along slopes of berm to decrease site lines, and to buffer noise, light and sight lines relative to building
2. Campus Center Master Plan	<ul style="list-style-type: none"> • No significant adverse impacts: <ul style="list-style-type: none"> ○ Noise generation from building operation minimal ○ Exterior security lighting and interior lighting consistent with adjacent campus buildings; not visible to residential areas or other sensitive receptors ○ Visual profile consistent with adjacent campus buildings 	<ul style="list-style-type: none"> • Lighting to be shielded and focused down to reduce spillover and dark sky impacts. • No other mitigation necessary

Table 3.8-4. Summary of Potential Impacts to Aesthetic Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
3. Construct New Business School Building	<ul style="list-style-type: none"> No significant adverse impacts: <ul style="list-style-type: none"> Noise generation from building operation minimal Exterior security lighting and interior lighting consistent with adjacent campus buildings; not visible to residential areas or other sensitive receptors Visual profile consistent with adjacent campus buildings 	<ul style="list-style-type: none"> Lighting to be shielded and focused down to reduce spillover and dark sky impacts. No other mitigation necessary
4. Relocate Data Center	<ul style="list-style-type: none"> Noise generation from mechanical systems Condensation from potential chilling equipment 	<ul style="list-style-type: none"> Operating parameters to be set during work hours Mechanical equipment to be sited towards campus service buildings Lighting to be shielded and focused down to reduce spillover and dark sky impacts. No other mitigation necessary
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> Potential for increased noise and traffic from events at new stadium if additional amenities increases numbers of spectators Lighting may be increased at new facilities 	<ul style="list-style-type: none"> Based on distance from residential neighborhoods, incremental additional noise not likely to represent a significant adverse impact; may be noticeable on days of capacity events Lighting may be visible from surrounding neighborhoods during evening events, depending on final location and configuration of Multi-Use Athletic Facility
6. Purple Path Continuation	<ul style="list-style-type: none"> Installation of security lighting along path route, consistent with existing campus aesthetics 	<ul style="list-style-type: none"> Lighting to be shielded and focused down to reduce spillover and dark sky impacts.
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> No adverse impacts 	<ul style="list-style-type: none"> No mitigation necessary
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> Installation of security lighting in parking lot, consistent with existing campus aesthetics Car noise transferred from location of other parking, displaced by other project construction 	<ul style="list-style-type: none"> Lighting to be shielded and focused down to reduce spillover and dark sky impacts. Lighting at this location not visible from residential neighborhoods; visibility from Washington Avenue consistent with existing character of campus No other mitigation necessary

Table 3.8-4. Summary of Potential Impacts to Aesthetic Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> No significant adverse impacts: <ul style="list-style-type: none"> Noise generation from building operation minimal Exterior security lighting and interior lighting consistent with adjacent campus buildings; not visible to residential areas or other sensitive receptors Visual profile consistent with adjacent campus buildings 	<ul style="list-style-type: none"> Lighting to be shielded and focused down to reduce spillover and dark sky impacts. No other mitigation necessary
10. Service Building Renovation	<ul style="list-style-type: none"> No significant adverse impacts: <ul style="list-style-type: none"> Noise generation from building operation minimal Exterior security lighting and interior lighting consistent with adjacent campus buildings; not visible to residential areas or other sensitive receptors Visual profile consistent with adjacent campus buildings 	<ul style="list-style-type: none"> Lighting to be shielded and focused down to reduce spillover and dark sky impacts. No other mitigation necessary
11. Entry Improvements	<ul style="list-style-type: none"> No significant adverse impacts - replacement of existing entry lighting 	<ul style="list-style-type: none"> No mitigation necessary
12. Bus Rapid Transit	<ul style="list-style-type: none"> Installation of security lighting at bus shelters, consistent with existing campus aesthetics Bus noise if routes include neighborhoods Bus noise as buses transit campus Visual impacts not anticipated 	<ul style="list-style-type: none"> Lighting to be shielded and focused down to reduce spillover and dark sky impacts. Develop bus routes to minimize transit of residential neighborhoods and noise at night in residential neighborhoods No other mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> Installation of security lighting along path route, consistent with existing campus aesthetics 	<ul style="list-style-type: none"> Lighting to be shielded and focused down to reduce spillover and dark sky impacts.

3.9. Cultural, Historic and Archaeological Resources

3.9.1. Existing Conditions

The New York State Historic Preservation Act of 1980 (SHPA) was established as a state counterpart to the National Historic Preservation Act (NHPA). The SHPA created the New York State Register of Historic Places, the official list of sites, buildings, structures, areas or objects significant in the history, architecture, archaeology, or culture of the state, its communities, or the nation. The act requires state agencies to consult with the New York State Office of Parks, Recreation, and Historic Preservation – Field Services Bureau (also known as the State Historic Preservation Office, NYSOPRHP, or SHPO) if it appears that the project may or will cause any change (beneficial or

adverse) in the quality of any historic, archaeological, or cultural property that is listed on the National or State Registers of Historic Places, or that is eligible for listing on these registers.

State and National Registers of Historic Places

A site must have achieved significance at least 50 years ago to be considered for the New York State Register of Historic Places. Based on a review of the State and National Registers of Historic Places, an eligible site for listing on these registers is located contiguous to the Uptown Campus (<http://www.nysparks.state.ny.us/shpo/resources/index.htm>). The Strassburg Residence, located less than one mile to the southwest of the Uptown Campus, is eligible for listing on the National Register of Historic Places. The Strassburg House is located at 1 McKown Road, Guilderland, and was nominated to the National Register with an objection by the owner (National Register of Historic Places – Nomination Form, <http://www.nr.nps.gov/multiples/64000557.pdf>, accessed December 1, 2009). The house was nominated based on its architectural significance; it is in the Queen Anne style, for which the period of significance was 1875-1899 (listing at <http://www.nationalregisterofhistoricplaces.com/NY/Albany/state4.html>, accessed December 1, 2009). The location of the Strassburg Residence, as well as other sites on the National and State Registers, is identified on Figure 3.9-1.

Additionally, there has been some anecdotal interest in the placement of the Academic Podium and its buildings on the New York State Register of Historic Places based on its architectural significance as a major representation of the work of Edward Durrell Stone. However, the requisite 50 years from its completion has not passed for consideration of its potential significance and eligibility.

Archaeological Sensitivity

Nonetheless, the University has the APAAC (see Section 3.8.2) to guide development and construction and has prepared historic preservation guidelines (available online) to steer campus construction. The Archaeological Sensitivity Maps for New York State define areas within the state where the discovery of archaeological resources is predicted (http://www.nysparks.state.ny.us/shpo/disclaimers/disclaimer_gis.htm). These areas contain locations of known sites that are included in the NYSOPRHP Archaeological Site files and the New York State Museum Archaeological Site files. Exact locations of sites are not disclosed by the state. Based on a review of NYSOPRHP's on-line resource databases (accessed August 20, 2009), the project site is located within an area identified as an archaeological sensitive area. Indeed, the approximate 0.5 square mile region has been designated as such. Given the extensive, long-term development established on the Uptown Campus, however, it is unlikely that undisturbed artifacts would be discovered (see clear cut site disturbance photo from development of campus, Figure 1.1-3). Archaeologically sensitive areas within the boundaries of the Capital Project Plan are identified on Figure 3.9-1.

A Phase IA literature review and archeological assessment was performed for the vicinity of the Uptown Campus in 2001 (Hartgen 2001). The vicinity of the Uptown campus has some historic note in that it “is located between historic thoroughfares in close proximity to Rensselaer Lake and the first railroad in New York state” (Hartgen 2001, page 10). The study found at that time:

- no structures were listed on State and National Registers of Historic Places in an area that would include the Uptown campus
- “seven precontact archeological sites, six historic archeological sites and one site of unknown date (were identified) within a one-mile radius of the project area.”

Based on the information provided in the 2001 report, which was obtained from NYSOPRHP records, of these sites, one of the archeological site locations may be within the footprint of the Uptown campus, that of the Site D 1851 Water Conduit historic site; the location is unclear in this report. Two of the precontact sites may be within the footprint of the Uptown campus, since the exact locations of these sites are unclear. Depending on the amount of ground disturbance that already has occurred at the location of these capital construction projects, a Phase IB archeological survey may be required by NYSOPRHP to determine the potential for impacts to these or other historical/archeological resources that may be present.

Most of the Uptown Campus has previously been significantly disturbed during the clearing, grading and excavation that occurred during the development of the UAlbany Uptown Campus, and subsequent building construction and placement of underground utilities and infrastructure. Figure 1.1-3 provides a view of the campus in 1962 during its development, and shows the extensive clearing and ground disturbance. As a result, it is not likely that archeological and cultural resources survived these activities. An archeological consultant acting as part of the planning for one project in this Capital Project Plan is discussing this position with NYSOPRHP to establish concurrence. Therefore, at a minimum, projects in undeveloped areas of campus may require that Phase IA/IB surveys be performed, whereas for sites in obviously highly disturbed areas, this may not be necessary.

3.9.2. Potential Impacts Construction Phase

National/State Register of Historic Places. Activities conducted under this Capital Project Plan will not impact sites on the State or National Register of Historic Places. However, the status of buildings on campus may change during the period during which projects in this Plan will be implemented. Therefore, an awareness of this status is necessary as each project is planned and implemented.

Archeological Resources. The greater 0.5 square mile vicinity of the UAlbany Campus is considered by NYSOPRHP to be a potential archaeologically sensitive area. However, the Uptown Campus and the neighboring Harriman and Center for Environmental Services and Technology Management (CESTM) campuses have been significantly disrupted from their natural character by the considerable development that has occurred since the 1960s (see photo of the initial development of the UAlbany campus in Figure 1.1-2 and Figure 1.1-3). It is likely that subsurface resources already have been destroyed or, if still present, their context otherwise lost. Regardless, based on the NYSOPRHP information regarding resources in the general vicinity of the Uptown campus, the potential presence of archeological resources will need to be evaluated on a project-specific basis, with emphasis of those projects where there would be a disruption in the subsurface that could impact resources (see summary table following).

Operational Phase

There are very limited known historic, cultural, or archaeological resources within the boundaries of, or adjacent to, the Uptown Campus. However, the potential for impacts to these resources likely would occur during construction rather than the operational phase of the proposed projects in the Capital Project Plan.

The following table summarizes the potential impacts in this category. Projects that do not disturb ground surfaces, or only involve surface disruptions, do not have the potential to result in impacts.

Table 3.9-1. Potential for impacts to cultural, historic and archaeological resources.

Project Name	Cultural, Historic, Archaeological - Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Construction
2. Campus Center Master Plan		
3. Construct New Business School Building		
4. Relocate Data Center		
5. Implement Various Athletics Improvements		
6. Purple Path Continuation	X	Construction
7. Northern Landscape Improvement Project		
8. State Quad Parking Lot Expansion		
9. Multi-Discipline Science Surge Building	X	Construction
10. Service Building Renovation		
11. Entry Improvements		
12. Bus Rapid Transit		
13. Bicycle-Pedestrian Path		

3.9.3. Mitigation Measures

Construction Phase

There appear to be very limited known historic, cultural, or archaeological resources within the boundaries of, or adjacent to, the Uptown Campus. However, the potential presence of historic resources may exist. As a result, there remains an obligation for a Phase I A archeological assessment to be conducted prior to the construction of a project that will impact more than the immediate ground surface (see preceding table), so that the potential for impacts to archeological and historic resources can be evaluated on a project-specific basis. The need for a Phase IB archeological field reconnaissance in these instances will then be evaluated based on the conclusions and recommendations of the Phase 1A assessment.

Operational Phase

No impacts to site historic, cultural, or archaeological resources have been identified as resulting from the operational phase of the Capital Project Plan; therefore, no mitigation is necessary.

Summary

The following table presents a summary of the potential environmental impacts to cultural, historic and archeological resources of the implementation of individual projects in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.9-2. Summary of Potential Impacts to Cultural/Historical/Archeological Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> Potential for disruption of undiscovered archeological resources due to construction 	<ul style="list-style-type: none"> Historic information indicates that the portion of the site where project will be located has been significantly disrupted by grading activities. Background research as part of a Phase 1A investigation indicated that “the location of the project area has high sensitivity for the presence of cultural resources. There are no previously reported sites or map-documented structures within the project area. Approximately 90 percent (10.5 acres) of the project area is not considered archaeologically sensitive due to past disturbances (mostly deep fill) or steep slopes (i.e., greater than 15 percent).” Also, southern half of the site, away from the steep slopes, was graded relatively level approximately 30 years ago. Archeological report being filed with NYSOPRHP for concurrence.
2. Campus Center Master Plan	<ul style="list-style-type: none"> Impacts not anticipated 	<ul style="list-style-type: none"> Central portion of the campus was extensively and significantly disturbed during grading and construction of the campus, as confirmed in a 1962 photograph. Subsurface at location would have been significantly disturbed during excavation and grading for existing Campus Center
3. Construct New Business School Building	<ul style="list-style-type: none"> Impacts not anticipated 	<ul style="list-style-type: none"> Central portion of the campus was extensively and significantly disturbed during grading and construction of the campus, as confirmed in a 1962 photograph.
4. Relocate Data Center	<ul style="list-style-type: none"> Impacts not anticipated 	<ul style="list-style-type: none"> This portion of the campus was extensively and significantly disturbed during grading and construction of the campus, as confirmed in a 1962 photograph.
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> Impacts not anticipated 	<ul style="list-style-type: none"> This portion of the campus was extensively and significantly disturbed during grading and construction of the campus, as confirmed in a 1962 photograph.

Table 3.9-2. Summary of Potential Impacts to Cultural/Historical/Archeological Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
6. Purple Path Continuation	<ul style="list-style-type: none"> Impacts not anticipated; activity will involve only surface features at previously disturbed location 	<ul style="list-style-type: none"> No mitigation necessary
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> Impacts not anticipated; activity will involve only surface features at previously disturbed location 	<ul style="list-style-type: none"> No mitigation necessary
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> Impacts not anticipated; activity will involve only surface features (modifying lawn to parking lot) at previously disturbed location 	<ul style="list-style-type: none"> No mitigation necessary
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> Potential for disruption of undiscovered archeological resources due to construction 	<ul style="list-style-type: none"> Central portion of the campus was extensively and significantly disturbed during grading and construction of the campus, as confirmed in a 1962 photograph. Phase IA/IB investigation may be necessary if Surge Building site is selected outside the historically disturbed area.
10. Service Building Renovation	<ul style="list-style-type: none"> Impacts not anticipated 	<ul style="list-style-type: none"> This portion of the campus was extensively and significantly disturbed during grading and construction of the campus, as confirmed in a 1962 photograph. Area would have been disturbed during excavation and grading during construction of existing Grounds Building
11. Entry Improvements	<ul style="list-style-type: none"> Impacts not anticipated; activity will involve only surface features at previously disturbed location 	<ul style="list-style-type: none"> No mitigation necessary
12. Bus Rapid Transit	<ul style="list-style-type: none"> Impacts not anticipated; activity will involve only surface features (bus shelters) at previously disturbed location 	<ul style="list-style-type: none"> No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> Impacts not anticipated; activity will involve only surface features at previously disturbed location 	<ul style="list-style-type: none"> No mitigation necessary

3.10. Transportation

3.10.1. Existing Conditions

This section identifies baseline traffic and highway conditions for the road networks supporting the UAlbany Capital Project Plan sites. Primary access to the area will continue to be provided by Washington Avenue to the north, Fuller Road to the west, Western Avenue to the south, and SUNY Campus Road, surrounding the perimeter of the Uptown Campus. Parking deficiencies may be an increasing challenge on the Uptown Campus as the campus population grows. In addition to parking

lot expansions proposed as part of the Capital Project Plan, alternate forms of transportation will be promoted as a potential solution to limited parking and as a sustainable alternative.

The description of existing traffic and highway conditions relies upon recent evaluations conducted for in the vicinity of the Uptown Campus. These evaluations are summarized below. Additionally, pedestrian safety, the need for pedestrians to cross the campus loop road for routine purposes, and the differing amounts of traffic on certain portions of University Drive are considerations in the selection of locations of some of the projects in this Capital Project Plan.

Road Network

A review of the area indicates that the primary effects of traffic generated by the proposed development would be confined to the following roadways. Figure 3.10-1 illustrates the primary road networks accessing the UAlbany Capital Project Plan site.

Washington Avenue is a city street, which traverses in an east-west direction, from Fuller Road in the west to Eagle Street in the east. Washington Avenue Extension continues to the west from Fuller Road to New Karner Road. Washington Avenue and its extension form a link between the Town of Colonie and the City of Albany. Washington Avenue and Washington Avenue Extension consist of two lanes per direction from New Karner Road in the west. The posted speed limit is 40 miles per hour (MPH) in the vicinity of the campus. There are three entrances off Washington Avenue to the northern portion of the UAlbany Uptown Campus onto University Drive West, Collins Circle, and University Drive East. Three of the access points to the Uptown Campus from Washington Avenue are signaled (have a traffic light) and have right- and left-hand turning lanes.

Fuller Road (County Route 156) is a county street, which traverses in a north-south direction in the City of Albany and Town of Guilderland, from Central Avenue in the north to Western Avenue in the south. Fuller Road has a speed limit of 40 MPH and consists primarily of one travel lane per direction in the vicinity of the site from its intersection with Western Avenue to its intersection with Washington Avenue. Fuller Road consists of two lanes traveling north to Central Avenue and one lane widening to two lanes, traveling south to Washington Avenue. From the north, there are four entrances off Fuller Road to the western portion of the UAlbany Uptown Campus onto Tricentennial Drive, Alumni Drive, and Great Dane Drive. A traffic light is present at one of these access points with a left-hand turning lane.

Traffic analyses determine LOS, which is used to represent the effectiveness of the road infrastructure. The LOS designations and their respective Description of Performance are (U.S. Transportation Research Board 2000):

A	Excellent (Free Flow)
B	Very Good (Reasonably Free Flow)
C	Good (Stable Flow)
D	Acceptable (Approaching Unstable Flow)
E	Poor (Unstable Flow)
F	Failing (Forced or Breakdown Flow)

These designations are based on the amount of queuing (or wait) time, and other factors.

Greenman-Pedersen, Inc. (GPI) prepared a traffic analysis on behalf of the Albany County Department of Public Works (DPW) for a redesign and reconstruction of Fuller Road from

Washington Avenue to Western Avenue (GPI 2008) (see a description of this project below). GPI used 2007 as the base year for the traffic analysis. Peak hourly traffic is the 4:00 p.m. to 5:00 p.m. period during which the total number of vehicles approached 1500 (source: Albany County DPW, October 2007; referenced in GPI 2008). The analysis indicated that, with projected traffic volumes and intersection configurations, in the year 2029, based on regional growth projections, the Railroad Avenue and Western Avenue intersections with Fuller Road will be operating at a LOS of E, defined as “poor.” At present the analysis indicates that:

- the LOS at Western Avenue is D (acceptable) to the east and C (good) to the west on Western Avenue, and E (poor) to the south on Fuller Road,
- the LOS at other intersections on Fuller Road between Washington Avenue and Western Avenue are either A (excellent), B (very good), and C (good).

Western Avenue is a city street, which traverses in an east-west direction, from Carman Road in the west to Madison Avenue in the east. Western Avenue forms a link between the County of Schenectady and the City of Albany. Western Avenue varies from two lanes per direction at its intersection with Carman Road to up to six lanes per direction at its intersection with I-90. The posted speed limit is 40 MPH in the vicinity of campus. There is one entrance off Western Avenue to the southern portion of the UAlbany Uptown Campus onto University Drive East and University Drive West. A traffic light is present at the campus access point.

Interstate 90 is an east-west interstate route, running from Massachusetts into Washington State through the City of Albany. The posted speed limit is 65 MPH in most areas of its length in New York State.

As part of a pedestrian and traffic improvement study performed for the University, Delta Engineers (Binghamton, NY) (Delta Engineers 2008) performed a traffic evaluation of major intersections on and off the Uptown Campus. The study included the collection of traffic counts and modeling of LOS at these intersections, as well as the increase of recommended improvements on LOS. The traffic counts reported here were taken on April 29, 2009 at 3:30 p.m. to 6:30 p.m.; a month earlier, Delta Engineers performed preliminary evaluations to determine the busiest day and the peak period for more intensive analysis. The study confirmed the long expressed observation on campus that traffic on the perimeter road is significantly heavier along the northwest portion as compared to the southeast portion – data indicated a fivefold increase along the northwest stretch of the road as compared to the southeast portion during the same peak period.

The following presents a summary of this evaluation at the noted intersections. The Delta Engineers traffic study included modeling “Anticipated Design” which included the following assumptions:

- increased campus enrollment for Fall 2009;
- an expected increase in traffic from the NanoTech facilities from growth, with the increase applied to the Fuller/Tricentennial and University Drive/Tricentennial intersections;
- the addition of Project No. 1 (Student Housing Project) with 500 new beds in the southeast corner of campus; and
- the addition of 12 BRT buses per hour.

Appendix F presents a table of the results of the traffic study performed by Delta Engineers, with an accompanying map indicating the intersections referenced on the table. The study concluded the following:

- The intersection of the Perimeter Road with the entry to the University Administration Building, at the southeast corner of campus: LOS is A or B in all directions both at present and following construction of the Student Housing Project, which would be located just to the north of this on-campus intersection.
- Washington Avenue/Collins Circle Drive intersection: acceptable or better in all directions at present and after “Anticipated Design”
- Washington Avenue/I-90 Exit 2 intersection: in most directions, LOS at this intersection is poor or failing.
- Fuller Road/Tricentennial Drive intersection: acceptable or better in all directions but one under “Anticipated Design” conditions. Albany County DPW has proposed to install a roundabout at this location as part of the Fuller Road improvements to improve traffic flow at this intersection (see “*Roadway Projects*” following).
- Fuller Road/Alumni Drive intersection: acceptable or better in all directions but one under “Anticipated Design” conditions. Due to the relatively low volume of traffic using this entrance, it may become a BRT-only route with a pre-emptive signal for the BRT.
- Fuller Road/Great Dane Drive intersection: LOS is poor or worse (F) for westbound traffic leaving campus from Great Dane Drive, excellent (A) in other directions. No improvements were suggested here because of the relatively low volume of traffic using this intersection.
- Western Avenue/Entrance Road South intersection – LOS is good (C) or better in all directions under “Anticipated Design” conditions, the same as under existing conditions. Since this evaluation included the proposed Student Housing Project, this result reflects no adverse impact to traffic at this intersection associated with this project.

Traffic Sources

Traffic entering and exiting the Uptown Campus primarily consists of students, faculty, staff, visitors and deliveries and services, although a significant amount of traffic “short-cuts” through the Albany road network to other local roads. When construction activities occur on site, a specific entrance is designated for use by construction vehicles to minimize the disruption of campus traffic flow by construction vehicles.

In an evaluation of potential transportation improvements for the adjacent Harriman Campus, a “Transportation Linkage Study” (NNCA 2007) proposed several strategies that incorporated interactions with the UAlbany Uptown Campus. Some of these recommended strategies were independent of the University, but involve issues in common, such as improved bicycle access to the campuses, level of service and pedestrian improvements to Fuller Road, and level of service improvements to other intersections. The strategies in common were an improvement in non-motorized facilities, the creation of bike lanes on ring roads, an improvement in BRT service in the “transportation spine” of the two campuses, and the joining of the Harriman and UAlbany Ring Roads.

This last option presents potential challenges for the University since it opens the campus ring road to the potential of cut-through traffic, with its accompanying issues of speeding, increased volume, and concomitant general safety issues. The Chazen Companies has evaluated for the Harriman campus the potential traffic implications of a connector road between UAlbany and the adjacent Harriman Office Park (Chazen 2007a, Chazen 2007b). The concept is to develop a more direct connector road for this traffic. The concept has disadvantages, not the least of which is that it would draw more traffic to the UAlbany on-campus road network, which represents an increased hazard to students and pedestrians. No action has been taken to date on this last issue.

Roadway Projects

A project to realign Washington Avenue at Fuller Road, and the intersection to the north of the CNSE, has been discussed by various planners. A plan layout as obtained from the Albany County DPW public information web site (<http://www.albanycounty.com/dpw/documents/pdf/FullerRoad-20080421/20090310-fuller-road-plan.pdf>, updated 10 March 2009) is provided in Appendix I. The plans would install a roundabout at that intersection, and at Tricentennial Drive, including crosswalks. A center turn lane will be installed that will extend from Loughlin Drive to the approach to Western Avenue. Additionally, a roundabout is proposed for the Fuller Road intersection with the Route 90 ramp, north of Washington Avenue; this component of the project is to be phased after the aforementioned improvements (see Albany County DPW information at: <http://www.albanycounty.com/dpw/public-meeting-docs.asp?id=2111>). Taken together, these improvements are anticipated by the county to markedly improve flow in the Fuller Road and Washington Avenue corridors.

As a result of this re-alignment, a parcel of land may become available on both sides of Fuller Road where the present intersection exists. A 14.4 acre expansion of the land area that will become available on its side of Fuller Road is being planned by CNSE. This project was discussed by representatives of Albany County and CNSE at a public information meeting held on May 8, 2008. The land to the north of Washington Avenue, as presently configured, is University land with limited use. As proposed, a bridge would be constructed for Washington Avenue (two lanes both directions) over Fuller Road, which would go over the roundabout. Estimates provided at the November 2008 meeting were \$23 million for the highway construction.

CNSE potentially would create a new entrance on Fuller Road just south of the CESTM Building. Also, going east on Washington Avenue, there would be an entrance just north of the employee parking lot along Washington Avenue.

The May 2008 newspaper article indicated that project elements being considered are “a complete reconstruction of the Fuller Road driving surface,” reconstruction of its base, improvement of drainage, installation of a grass and shrub median near Western Avenue to provide a “boulevard” look, construction of sidewalks on both sides of Fuller Road, and 4 ft shoulders for bicyclists.

Albany County’s web site for the project (<http://www.albanycounty.com/departments/dpw/public-meeting-docs.asp?id=2111>) provides details of both the Fuller Road Corridor upgrade and intersection projects.

The City of Albany is intends to perform a timing optimization study along both Washington and Western Avenues. The objective is to evaluate whether timing improvements will enhance traffic flow along both of these busy traffic corridors.

Alternative Forms of Transportation

The University’s Office of Environmental Sustainability and the Sustainability Task Force promotes environmental awareness and the adoption of sustainable practices, including the utilization of alternate forms of transportation as a substitute to commuting to and from campus and traveling around town in a personal vehicle.

Public Transportation Access. Public transportation serving the University at Albany Uptown Campus includes:

- **Capital District Transportation Authority (CDTA)** – Provides UAlbany students, faculty, and staff with bus transportation along Washington and Western Avenue. This route connects UAlbany's Uptown and Downtown Campuses, while making stops at shopping malls and area attractions. This service is free when valid UAlbany identification is shown (CDTA 2008). Additionally, CDTA and the Capital District Transportation Committee (CDTC) have teamed up to launch a new online carpool matching service under the title iPool2 (www.ipool2.org).
- **GreenRide Campus Edition** – An online tool providing ridesharing and alternative transportation programs, specifically for colleges, universities, and school districts. Programs include carpooling, vanpooling, bike-to-work, and park-and-ride (GreenRide 2008).

University at Albany Transportation Access. Transportation services available to students, faculty, and staff of UAlbany include:

- **UAlbany Bus Shuttles** – The University provides students, faculty and staff with free bus shuttles, operating during weekday and weekend hours. Five shuttle routes are established, servicing the Uptown Campus, Downtown Campus, Health Sciences Campus, Health Center, and shopping in Crossgates Mall.
- **Ride share programs**
 - **Zipride** - UAlbany is working on partnering with Zipride (<http://www.albany.zipride.com>) to establish a ride sharing service for University students, faculty, and staff. The Zipride service matches potential drivers and riders based on individual travel plans entered into the searchable online database. The service is free and is available for commuting and single trips.
 - **iPool2** – As previously mentioned, UAlbany, CDTA, and CDTC have partnered to offer a carpool sharing program. Potential carpooling partners are matched through the iPool2 website (<http://www.ipool2.org/en-US/>) based on commute information. The carpool matching service is free and offered to individuals who live and work in the Capital District.

Pedestrian/Bicyclist Access. Pedestrian and bicycle routes available to the community and UAlbany students, faculty, and staff for recreation and as an alternate form of transportation include:

- **Purple Path/Golden Grid** – The extension of the Purple Path (Project No. 6) is a proposed 5 kilometer multi-use path designed for walking, jogging, and biking. The first section of the Purple Path, running one-third of a mile long, was constructed in 2007 from the corner of the baseball field to the entrance of the SEFCU Arena parking lot, with plans for completion included in UAlbany's Capital Project Plan. The Golden Grid Bicycle-Pedestrian Path (Project No. 13) serves as a connection for pedestrians and bicyclists between the Purple Path and the podium. This network of paths will not only offer trails for the purpose of exercising, but enhance the accessibility of the campus by foot and bike.
- **Bike share program** – This program is scheduled to begin in the Fall of 2009. Students will be able to rent a bike on a short term basis from residential quad offices. A pilot program was initiated at State Quad during the 2008-2009 academic year.

A component of one of the concepts being advanced for the Southeast Corner location as a potential site for the Student Housing Project (Project No. 1) is the relocation of University Drive East. The

roadway would be wrapped around the dormitories, so that students would not be required to cross the road to walk to classes. Although traffic along the eastern portion of the campus loop road is significantly less than along the west side of campus, this measure would increase pedestrian safety.

3.10.2. Potential Impacts

Construction Phase

During construction phase activities associated with the Capital Project Plan, traffic patterns and volumes on, entering and exiting the campus and surrounding roadways, including University Drive, Washington Avenue, Fuller Road, and Western Avenue, will be affected. Additional construction-related vehicle traffic has the potential to cause traffic delays if not mitigated. The University typically incorporates traffic mitigation into its on-campus construction projects when access to roads, walkways and parking lots occurs, and will continue to do so for these projects in the future.

Access for construction vehicles will be designated to minimize impacts on surrounding neighborhoods and the run distance within the campus road system. A construction vehicle routing plan will be incorporated into each project.

Operational Phase

Operational phase activities associated with the Capital Project Plan have the potential to impact traffic on, and in the vicinity of, the Uptown Campus. Over the course of implementing the Capital Project Plan, the University anticipates some level of potential growth in visits to the campus in conjunction with its structural growth. As a result, traffic associated with daily operational activities may increase, along with the topical, noticeable but temporary, increases in traffic as a result of campus events including student move-in day, athletic events, and commencement events.

A notable project in the Capital Project Plan with the potential to impact traffic entering and exiting the Uptown Campus is the new Multi-Use Athletic Facility that will be phased as a component of Project No. 5, Implement Various Athletics Improvements. Although the growth from a facility that can hold approximately 5,000 spectators in bleacher seating and an additional 5,000 in hillside lawn seating, to a facility with seating capacity for 10,000 spectators is not significant, it is likely that the new quality of seating at the proposed facility may be a more significant attraction and increase the number of attendees at events over that at present, regardless of the apparent similar capacities. The Multi-Use Athletic Facility is anticipated to host an increased number of events as compared to University Field, including those held by UAlbany athletic teams, area high school teams, and the New York Giants summer training events that are open to the public. In addition to increased use of the athletics facility, the new facility may be attractive for increased spectator capacity in comparison to the existing facilities. UAlbany anticipates maximizing the use of on-campus parking and parking facilities at the adjacent Harriman Campus (with shuttle service), since most sporting events will occur during hours (evenings and weekends) when the Harriman Campus parking areas will be only lightly utilized, if at all. A traffic flow plan will be prepared and implemented by the campus to direct traffic flow to major roadways and keep traffic from local neighborhoods. This approach has been successful at other campuses with similar facilities.

There will be an increase in overnight on-campus vehicles from students who will reside in the new Student Housing Project (Project No. 1). However, these student vehicles will not necessarily be active on a daily basis as the students will walk to classes; therefore, the students in the new housing project will not consistently contribute to on-campus or off campus traffic, and the use of these vehicles will be random, generally unpredictable, and not part of normal or peak commuter patterns. Therefore, the impacts on area traffic patterns will be negligible. The new Student Housing Project

actually may reduce on-campus traffic since a number of current commuters will reside in the new housing, therefore negating their need to commute. As noted in the traffic study performed by Delta Engineers (2009), consideration of this project did not adversely affect the LOS at the nearby Western Avenue/Entrance Road South intersection where the LOS in all directions will remain good or better; nor will the intersection of the Perimeter Road with the entry to the University Administration Building, just south of the site of the Student Housing Project, decrease from either A or B in all directions.

The potential increase in capacity of the State Quad Parking Lot (Project No. 8) will replace existing parking that will be eliminated by the new Business School Building (Project No. 3) and Northern Landscape Improvement Projects (Project No. 7) and, therefore, will not significantly increase parking capacity on campus. However, as noted with respect to the new Student Housing Project, this new parking capacity will be used by faculty, visitors and commuting students. Information about traffic patterns for visitors is not available, but for students, faculty and staff is predictable, for the students based on class schedules. Therefore, vehicle trips to and from campus by way of its several entrances will continue to be spread over two to three hours in the morning and the afternoon. The results of the Delta Engineers (2009) traffic study do not indicate any anticipated changes in LOS at intersections on the northern portion of campus; as noted, the present traffic dynamic is not anticipated to increase significantly.

The University's philosophy of improving access to pedestrian, bicycle and mass transit opportunities will help offset potential increases in vehicle counts associated with the above facilities. The Purple Path Continuation (Project No. 6), the Bus Rapid Transit Plan (Project No. 12), and the Bicycle-Pedestrian Path ("Golden Grid") (Project No. 13) will contribute to a reduction in some commuters that would otherwise drive to campus.

Additionally, the County Route 156 Fuller Road Reconstruction Project and the Washington Avenue/Fuller Road Intersection Project will improve the level of service on these roads. UAlbany will work with Albany County Department of Public Works, the City of Albany, and the Town of Guilderland to incorporate consideration of potential traffic impacts from the above projects into the final plan for these projects, so that potential traffic flow impacts on off campus roads can be efficiently addressed.

The following table summarizes the potential impacts in this category from specific projects. Projects that do not involve the potential for increased vehicles do not have the potential to result in impacts, except for construction vehicles during that phase of the project.

Table 3.10-1. Potential for impacts to transportation.

Project Name	Transportation - Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Construction only; may mitigate traffic when completed
2. Campus Center Master Plan	X	Construction only
3. Construct New Business School Building	X	Construction only

Table 3.10-1. Potential for impacts to transportation.

Project Name	Transportation - Potential for Impacts	Nature of Impacts
4. Relocate Data Center	X	Construction only
5. Implement Various Athletics Improvements	X	Construction; vehicles to on and off campus (Harriman Campus) lots during events
6. Purple Path Continuation	X	Construction only; may mitigate traffic when completed
7. Northern Landscape Improvement Project	X	Construction only
8. State Quad Parking Lot Expansion	X	Construction only
9. Multi-Discipline Science Surge Building	X	Construction only
10. Service Building Renovation	X	Construction only
11. Entry Improvements	X	Construction only
12. Bus Rapid Transit		Mitigate traffic
13. Bicycle-Pedestrian Path		Construction only; will mitigate traffic

3.10.3. Mitigation Measures

Construction Phase

Traffic flow conditions will be monitored during the construction phase of the Capital Project Plan to assess the impact on existing service levels. To facilitate the flow of traffic in the project area during the construction phase, a traffic management program complying with local and New York State guidelines will be implemented. Construction-related vehicle parking will be limited to project staging areas to prevent interference with public traffic and parking, and with access of emergency vehicles. Parking on or adjacent to access roads or in non-designated areas will be prohibited. As necessary, traffic signs, lighting and flagmen will be utilized to warn and regulate traffic along affected roadways.

General traffic mitigation measures during construction phase activities may consist of:

- Acquisition of highway permits for work within roadway rights-of-way
- Post-mounted and wall-mounted traffic control, work zone, and information signs,
- Traffic cones, drums, and lights
- Flagmen and equipment.

Operation Phase

Several projects included within UAlbany's Capital Project Plan have the ability to mitigate traffic impacts associated with the operational phase including the Purple Path Continuation, the BRT system, and the Bicycle-Pedestrian Path. Implementation of these projects offers students, faculty, staff, and visitors opportunities to use alternate forms of transportation to access and safely navigate the Uptown Campus. In addition to mitigating operational phase traffic impacts, project offering alternate forms of transportation will also mitigate potential air and climate change-related impacts.

General improvements and techniques to improve and mitigate traffic flow during the operational phase include:

- Establish privileged parking zones for buses, carpool vehicles, and/or alternative fuel and hybrid vehicles
- Access road and Entry Improvements (Project No. 11)
- Peripheral lots with shuttle services to interior portions of the campus.

Summary

The following table presents a summary of the potential environmental impacts to transportation of the implementation of individual projects in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.10-2. Summary of Potential Impacts to Transportation and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Parking for 350 cars to be located on site. • Relocation of perimeter road closer to property line and Tudor Road neighborhood, with attendant auto noises 	<ul style="list-style-type: none"> • (a) On-campus residences reduces commuting traffic to campus from off-campus housing (b) Student cars typically not used during weekday peak travel at nearby intersections • (a) Relocation of road will slow traffic through this length of perimeter road, reducing noise that may otherwise occur (b) traffic through east side of campus is significantly less than west side of campus where most of the major commuter parking is located and where cut-throughs of campus occur • Traffic study indicates no impact on present LOS of C or better at Western Avenue/Entrance Road South intersection, nor of B or better at the intersection of the Perimeter Road and the entry to the University Administration Building.
2. Campus Center Master Plan	<ul style="list-style-type: none"> • Not anticipated to induce additional traffic to or on campus – project provides additional space for student services and various other activities, maximum incremental additional occupancy of about 250 persons 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.10-2. Summary of Potential Impacts to Transportation and Mitigation Options.

Project	Potential Impacts	Mitigation
3. Construct New Business School Building	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus – project provides additional space for instruction and various Business School programs 	<ul style="list-style-type: none"> Traffic study indicates LOS at Washington Avenue/Collins Circle Drive intersection, closest to parking location, Acceptable or better in all directions No mitigation necessary
4. Relocate Data Center	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus – project intended to provide additional space and increased infrastructure for data needs, with additional consolidation of some equipment at one location 	<ul style="list-style-type: none"> No mitigation necessary
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> Present stadium can accommodate 10,000, with 5,000 in seats; however, enhanced stadium facility with seating for 10,000 and improved facilities may result in increased attendance and use for additional events Potential for increase in traffic for University intercollegiate sporting events. Only 10-12 events on the scale of a UAlbany football game are anticipated during a typical year, with an additional 8 - 10 events on the level of a UAlbany lacrosse game. Smaller events are likely to be scheduled throughout the year, such as commencement, local high school football or lacrosse games. The University will work to avoid scheduling other major events on campus concurrently with home football games. 	<ul style="list-style-type: none"> Intent is to use faculty, commuter and visitor parking lots for weekend (e.g., intercollegiate football and other major) events and will seek events in off hours when the Uptown parking capacity is available for use Additional parking opportunities on adjacent Harriman Campus, with shuttle buses provided by University (similar program used by Syracuse University among many others) Will coordinate with campus and local police for traffic control, preparation of transportation management plan for use on days of events to control peak traffic conditions Mass transit initiatives, including Project 12, Bus Rapid Transit (BRT), are intended to minimize automobile traffic to campus and would be expected to be used heavily for larger events
6. Purple Path Continuation	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus – project enhances non-motorized movement around campus 	<ul style="list-style-type: none"> No mitigation necessary
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus 	<ul style="list-style-type: none"> No mitigation necessary

Table 3.10-2. Summary of Potential Impacts to Transportation and Mitigation Options.

Project	Potential Impacts	Mitigation
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> Project intended to offset parking losses due to construction projects on other parking lot(s) 	<ul style="list-style-type: none"> No mitigation necessary
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus – project intended to be used to replace displaced academic activities during long-term renovation of buildings on Academic Podium 	<ul style="list-style-type: none"> No mitigation necessary
10. Service Building Renovation	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus – project provides additional space for maintenance facilities, combines some functions in one building 	<ul style="list-style-type: none"> No mitigation necessary
11. Entry Improvements	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus; enhances safety of access for existing traffic. 	<ul style="list-style-type: none"> No mitigation necessary
12. Bus Rapid Transit	<ul style="list-style-type: none"> Will result in additional bus trips on campus; anticipated to be offset by fewer car trips through increased use of mass transit 	<ul style="list-style-type: none"> Develop bus routes to minimize transit through residential neighborhoods No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> Not anticipated to induce additional traffic to or on campus – project enhances non-motorized movement around campus 	<ul style="list-style-type: none"> No mitigation necessary

3.11. Energy

3.11.1. Existing Conditions

The University has initiated a process to evaluate energy use on campus and to identify opportunities to improve energy efficiency and potential use reduction. An energy action plan was developed by the Facilities Department at UAlbany in 2008 and is currently being implemented. The goals of the energy action plan are:

1. Meet annual/short-term utility budget objectives,
2. Minimize impact of future changes in utility rates and weather/climate, and
3. Prepare the campus for carbon neutrality/energy independence.

Energy benchmarking was performed based on 2007-08 utility usage and costs to compare the campus' energy usage with national averages, and to provide preliminary estimates of the potential for energy reduction. The University uses about 168,000 Btu/sf/yr and spends about \$3.45/sf/yr on annual utility costs. This energy use intensity is higher than the national average of 120,000 Btu/sf/yr

for colleges and universities. Some of the important findings of the fall 2008 benchmarking exercise were:

1. Electricity accounts for 51% of the total annual utility costs at UAlbany.
2. On a Btu basis, electricity is three times more expensive than natural gas. Therefore, measures that reduce electricity yield a higher dollar savings per Btu.
3. Water is 18% of the annual utility costs, which is higher than that of typical universities. While this cost is largely due to high water rates, water usage on campus is somewhat higher than benchmark values. UAlbany plans to perform a water audit of the campus to evaluate water usage and losses, and recently has been awarded a grant from the New York State Environmental Facilities Corporation for \$1 million in water system conservation measures.
4. 48% of the electricity used annually by the campus is consumed by the Academic Podium buildings. Student housing consumes about 25% of the total electricity. Most buildings are submetered so that the data can be obtained on a building-specific basis for evaluation.
5. More than half of the electricity used by the buildings is for lighting and equipment, most of which is occupant-controlled. Heating, ventilation and air-conditioning systems that are controlled by the Physical Plant only account for a third of the annual electric usage.
6. Most buildings on campus have a significant off-peak load, which has been targeted for reduction.
7. Three quarters of the natural gas and oil used on campus is for space heating; the remaining is for cooling from absorption chillers and for domestic hot water.
8. Residence halls, including kitchens, account for more than half of the water usage on campus.

Based on the benchmarking exercise and a preliminary audit of Academic Podium buildings performed by the UAlbany Energy Manager, it is estimated that the University can realistically reduce its energy usage by 14% to achieve an energy use intensity of 140,000 Btu/sf/yr and energy costs savings of \$2 million per year. The energy action plan recommends a portfolio approach to achieve the energy cost savings and includes a comprehensive package of measures that encompass energy conservation, energy efficiency projects and renewable energy and cogeneration technology. The proposed projects can be implemented while maintaining building occupancy. The table below summarizes the estimated costs and savings from the various approaches, and includes anticipated funding opportunities through New York State Energy Research and Development Authority (NYSERDA):

Table 3.11-1. Estimated cost savings from energy reduction measures.

Strategy	Utility Cost Savings (\$/yr)	Net Project Costs Estimate (Including NYSERDA Incentives)	Simple Payback (Years)
A. Energy Conservation <i>Policy and Behavioral Changes</i>	\$400,000	\$50,000	0.1
B. Energy Efficiency Projects	\$1,200,000	\$15,000,000	12.5
C. Renewable Energy	\$400,000	\$6,000,000	15.0
TOTAL	\$2,000,000	\$21,050,000	10.5

Source: University at Albany, SUNY

The proposed projects include occupant behavioral changes to reduce lighting and plug loads, upgrades to lighting, mechanical, energy management and water systems, renewable energy technologies and combined heat and power project.

The University has already adopted two major energy conservation policies/initiatives. One of them is the Intersession Energy Savings Initiative that was implemented during the 2008-09 Winter Intersession, and which saved the University over \$250,000 in avoided utility costs. The other is the Space Temperature Set Point Policy that specifies space temperatures for occupied and unoccupied periods, and is estimated to save \$100,000 annually in reduced heating/cooling costs. The Intersession Energy Savings Initiative occurred over a four week period. For two weeks, the building temperatures were set at 65°F in the daytime and 55°F at night. For the remaining two weeks, in these buildings:

- building temperatures were set at 55°F
- air handling units were shut down
- lighting was shut off except for emergency lighting.

These actions did not affect certain building uses such as animal labs, fume hoods, and other systems that require continuous operations.

Additionally, the University participated in the Energy Star's "Change the World 2008" Campaign and distributed over 1,300 compact fluorescent lamps to students in residence halls in exchange for incandescent light bulbs, which were permanently removed from use; this exchange is estimated to reduce energy use and to save \$10,000 per year in energy costs. The University has seen a reduction of 6% in electrical and fuel usage in the fiscal year 2008-09 compared to year 2007-08 due to these efforts and occupant behavioral changes.

The University has launched an education campaign in Fall 2009 to encourage academic building occupants to reduce lighting and plug load and water usage. Energy Challenges will be conducted in Fall 2009 that will include both academic departments and buildings, and student residence halls. It is estimated that the education and energy campaigns will save nearly \$150,000 per year based on estimates of lighting usage and the occupant's ability to control lighting and the building systems based on the recent successes described above.

The University is in the process of developing a comprehensive energy efficiency project in collaboration with New York Power Authority (NYPA) and NYSERDA to achieve significant reductions in annual energy costs. The project will upgrade the lighting and HVAC systems in the Uptown and Downtown academic and residence hall buildings. It is estimated that the project will reduce campus electricity usage by 10-15% and fuel usage by 5-7% resulting in annual cost savings of about \$1.2 million. The comprehensive energy project also may include the installation of a 50-100kW photovoltaic system on-site at the Uptown Campus.

It is estimated that the entire portfolio of measures included in the comprehensive energy project may take 5-7 years to implement due to budgetary constraints, and planning and design requirements.

UAlbany's existing power plant is fired by natural gas and No. 2 fuel oil, and serves space heating, domestic hot water and cooling needs on campus. Electricity is purchased from the New York Independent System Operator (NYISO) local utility. The campus has both electric and gas absorption chillers. Absorption chillers differ from the more compression chillers in that the cooling effect is driven by heat energy, rather than mechanical energy. Gas absorption chillers can be installed

economically as a cooling only system, or as part of an integrated cooling and heating facility. In many parts of the country, the cost difference between electricity and natural gas is sufficient to justify absorption chillers. Additional cost savings can be realized through the use of heat recovery.

The University has completed an evaluation of the electrical system infrastructure to determine whether the electrical demand from the components of the Capital Project Plan will necessitate electrical system upgrades. It was determined that no upgrades to the electrical infrastructure would be necessary to implement these projects.

Additionally, the account manager at National Grid for the University was contacted with regard to the utility's ability to serve the campus with natural gas. The campus is served with both medium and high pressure gas mains. The utility representative indicated that there is adequate excess capacity to serve the proposed projects in the Capital Project Plan. With respect to the Student Housing Project, there is an existing main in close proximity to the site.

Executive Orders. As noted elsewhere herein, University at Albany, SUNY is responding to state mandates under several EOs):

- EO No. 4, "Establishing a State Green Procurement and Agency Sustainability Program"
- EO No. 111, "Directing State Agencies, State Authorities, and Other Affected Entities to be More Energy Efficient and Environmentally Aware"
- EO No. 142, "Directing State Agencies, and Authorities to Diversify Fuel and Heating Oil Supplies Through the Use of Biofuels in State Vehicles and Buildings"
- EO No. 24, "Establishing a Goal to Reduce Greenhouse Gas Emissions Eighty Percent by the Year 2050 and Preparing a Climate Action Plan."

The University's actions with respect to energy and climate change are consistent with these Executive orders, especially EO 24 and EO 111. The steps taken to date that have led to greater energy efficiency comply with EO 111, and the University continues to evaluate opportunities for energy efficiency. Additionally, The University is in the process of preparing a Climate Action Plan as part of its obligations under the ACUPCC; further, its obligation under the ACUPCC is to become carbon neutral by 2050, a stricter threshold than that in EO 24.

3.11.2 Potential Impacts

The construction of the projects in this plan will use energy that otherwise would not have been used. Fossil fuels will be expended to power construction equipment, light construction sites, and transport workers and materials to the construction sites.

In operation, new buildings will use energy over and above that presently used on campus and site improvements will likely improve lighting.

Under a NYSERDA-sponsored program, UAlbany is using energy consultants to develop an estimate of energy needs for these buildings. The need assessment utilizes a model where the inputs are based on the building design. Therefore, project-specific information will not be available until project concepts are finalized, a design consultant is engaged, and the project design is complete. However, the goal for energy use is less than 99,000 Btu/sf/yr. Consultants have been engaged for Project No. 3,

Business School Building, and Project No. 4, Relocate Data Center, both of which are presently in design.

3.11.3 Mitigation Measures

As described above, energy-saving measures are continuing on campus. Energy efficiency options are being evaluated for inclusion in project designs, so that mitigation essentially is an integral part of these projects. Boiler upgrade projects have been implemented over the last five years, as have upgrades of electrical chillers. The potential reductions in energy use through these projects and the use of more modern, energy efficient upgrades, will be monitored by the campus, starting the winter of 2009 – 2010. These equipment upgrade projects are ongoing.

Summary

The following table presents a summary of the potential environmental impacts to energy resources of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.11-2. Summary of Potential Impacts to Energy Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Cooling: 400 tons • Heating: 6.6 million Btu/hr • Power: 100 kW 	<ul style="list-style-type: none"> • Bringing this building on line will not significantly impact energy supplies or ability to deliver energy to the campus. • No new electrical facilities will be required. • As part of UAlbany's commitment to reduce GHG emissions under the ACUPCC, and its sustainability planning process, the University is evaluating energy efficiency options. • Project designed for LEED Silver (minimum) with emphasis on energy efficiency and sustainability
2. Campus Center Master Plan	<ul style="list-style-type: none"> • Cooling: 125 tons • Heating: 2.5 million Btu/hr • Power: 100kW 	<ul style="list-style-type: none"> • Bringing this building on line will not significantly impact energy supplies or ability to deliver energy to the campus. • No new electrical facilities will be required. • As part of UAlbany's commitment to reduce GHG emissions under the ACUPCC, and its sustainability planning process, the University is evaluating energy efficiency options. • Project designed for LEED Silver (minimum) with emphasis on energy efficiency and sustainability

Table 3.11-2. Summary of Potential Impacts to Energy Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
3. Construct New Business School Building	<ul style="list-style-type: none"> • Cooling: 325 tons • Heating: 3.75 million Btu/hr • Power: 748-958 kVA 	<ul style="list-style-type: none"> • Bringing this building on line will not significantly impact energy supplies or ability to deliver energy to the campus. • No new electrical facilities will be required. • As part of UAlbany's commitment to reduce GHG emissions under the ACUPCC, and its sustainability planning process, the University is evaluating energy efficiency options. • Project designed for LEED Silver (minimum) with emphasis on energy efficiency and sustainability
4. Relocate Data Center	Cooling: 400 tons Heating: 560,000 Btu/hr Power: 2500 kVA capacity	<ul style="list-style-type: none"> • Bringing this building on line will not significantly impact energy supplies or ability to deliver energy to the campus. • No new electrical facilities will be required. • As part of UAlbany's commitment to reduce GHG emissions under the ACUPCC, and its sustainability planning process, the University is evaluating energy efficiency options; waste heat capture may be an option for this facility. • Project designed for LEED certification with emphasis on energy efficiency and sustainability
5. Implement Various Athletics Improvements	Not yet defined	<ul style="list-style-type: none"> • No new electrical facilities will be required. • Energy efficiency options to be evaluated at the time of design.
6. Purple Path Continuation	<ul style="list-style-type: none"> • Impacts not anticipated, except for electricity for security lighting along path 	<ul style="list-style-type: none"> • No mitigation necessary
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> • No adverse impacts – no post-construction energy use, except for maintenance equipment 	<ul style="list-style-type: none"> • No mitigation necessary
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> • No significant adverse impacts; energy use for security lighting only 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.11-2. Summary of Potential Impacts to Energy Resources and Mitigation Options.

Project	Potential Impacts	Mitigation
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> • Cooling: additional 725 tons • Heating: additional 10 million Btu/hr • 2500 kVA capacity 	<ul style="list-style-type: none"> • No new electrical facilities will be required. • Energy efficiency options to be evaluated at the time of design. • Project designed for LEED Silver (minimum) with emphasis on energy efficiency and sustainability
10. Service Building Renovation	<ul style="list-style-type: none"> • Cooling: additional 32.5 tons • Heating: additional 540,000 Btu/hr 	<ul style="list-style-type: none"> • No new electrical facilities will be required. • Energy efficiency options to be evaluated at the time of design. • Project designed for LEED Silver (minimum) with emphasis on energy efficiency and sustainability
11. Entry Improvements	<ul style="list-style-type: none"> • No significant adverse impacts following construction; improvements are passive except for energy used to light entrances 	<ul style="list-style-type: none"> • Use of energy efficient entrance lighting systems • No other mitigation necessary
12. Bus Rapid Transit	<ul style="list-style-type: none"> • Nominal additional fossil fuel use for buses whose routes are directed through campus • Project is intended to offset fossil fuel use by commuters through enhancement of mass transit opportunities 	<ul style="list-style-type: none"> • No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> • Impacts not anticipated, except for electricity for security lighting along path 	<ul style="list-style-type: none"> • No mitigation necessary

3.12. Public Health and Safety

3.12.1. Existing Conditions

Fire

The majority of the Uptown Campus is within the City of Albany, with a portion of campus within the Town of Guilderland. The University's Uptown Campus is protected by the Albany Fire Department and McKownville Fire Department. The Albany Fire Department is a professional fire department of approximately 260 persons. McKownville Fire Department is a volunteer fire department of approximately 50 persons, with a long history of volunteerism coming from the UAlbany SUNY student population. Fire protection services are dispatched through the automated fire alarm system on campus managed by 24/7 central staff. The nearest of the City's eight fire stations to the project site is Engine No. 4, located at Pine Bush Station on Washington Avenue Extension. McKownville Fire Department is located at 1250 Western Avenue. Both stations are within a 1.5-mile radius of the UAlbany Uptown Campus, enabling a rapid response to emergencies. Local fire departments are identified on Figure 3.12-1.

Fire safety and emergency procedures are reviewed during student orientation, as well as safety training for faculty, staff and students, and implemented periodically during routine fire drills both as a matter of good practice and required SUNY policy. Students, faculty and staff in all buildings receive fire drills.

Police

Police protection for UAlbany's Capital Project Plan area is provided by the University Police Department (UPD). That force currently consists of 36 sworn personnel. UPD officers have enforcement authority on the UAlbany campus and areas immediately adjacent to the campus, while maintaining agreements with the Albany City Police and the Guilderland Police regarding shared enforcement efforts on campus and within the adjoining city and town. UPD has access to national and statewide databases of police records and driver/vehicle identification information.

Requests for police service made using campus telephones (911), emergency and blue light telephones, and other telephones ((518) 442-3131) are dispatched through the UPD building, located on the east side of the Uptown Campus. Police officers are contacted by radio and respond to police service requests using UPD vehicles. Local police departments are identified on Figure 3.12-1.

Medical Services

University Health Center and University Counseling Center. The University Health Center and University Counseling Center is located at 400 Patroon Creek Boulevard in leased space in a new state of the art medical building, approximately one mile east of the Uptown Campus. UAlbany Bus Shuttles offer transportation to this off-campus location as part of their routine routes. The University Health Center and University Counseling Center offer the following services to UAlbany students (University at Albany 2009):

- general medical care
- human immunodeficiency virus (HIV) testing
- immunizations
- laboratory tests
- pharmacy
- psychiatrist
- self-help "cold" clinic
- women's health clinic.

Emergency Medical Services. The first responders on campus are from the Five Quad Volunteer Ambulance Service (V.A.S.). Five Quad V.A.S. is a New York State certified ambulance agency that is run and operated by UAlbany students. Five Quad provides Basic Life Support 24 hours a day, seven days a week during the fall and spring semesters. Each semester, Five Quad has between 50 - 90 active members (including actively participating alumni), 20 - 30 members-in-training, and two functional ambulances. Five Quad is not on-call during the summer, but it does provide events support. Its active membership is composed of CPR certified attendants, New York State Emergency Medical Technicians, Drivers, and Crew Chiefs (see: <http://www.fivequad.org/>).

In addition, the Albany Fire Department's Paramedic Unit and Rescue Squad provide EMS to the University at Albany campus. The Paramedic Unit's primary role involves the application of advanced life support in the event of emergencies. These units are equipped with defibrillators, backboards and splints, and life saving drugs (City of Albany 2008b). The Paramedic Unit, a member of Engine #10, is located at 130 Brevator Street, approximately 1.3 miles from UAlbany's Uptown

Campus. The Rescue Squad's primary responsibility is response to emergencies involving trapped residents, specialized rescues, and EMS calls; it also serves as the City's primary hazardous materials response and water rescue unit (City of Albany 2008b). The Rescue Squad is equipped with self-contained breathing apparatuses, forcible entry tools, hazardous materials equipment, and basic life support equipment. The Rescue Squad is housed at the Arbor Hill Fire Station, located on the corner of Manning Boulevard and Lark Drive, approximately 6 miles from the UAlbany Uptown Campus.

Private contractors supply ambulance service to residents of the City of Albany and Town of Guilderland.

Emergency medical services in the vicinity of the Uptown Campus are identified on Figure 3.12-1.

Hospitals. In addition to the medical services provided by privately contracted ambulances and Five Quad available to the Capital Project Plan project area, the project site is within a 5 mile radius of Albany Medical Center and St. Peter's Hospital. Albany Medical Center is located at 43 New Scotland Avenue and St. Peter's Hospital is located at 319 South Manning Boulevard. Persons who may need health care will be transported to an available facility according to the pre-established policies of the transporters and health care providers. Local hospitals are identified on Figure 3.12-1.

University at Albany Personal Safety Programs and Initiatives

Health and safety of students, faculty, staff, and visitors is a key priority of the University. Personal safety initiatives continue to be developed to improve campus personal safety programs. Personal safety programs implemented on campus include:

- The Whistle Watch Safety Program – Students, faculty and staff supplied with free whistles to alert people in the event of a problem.
- The Light Sense Program – Free miniature flashlights provided to use in dimly lit areas and off-campus.
- Albany Disabled Alert Program (ADAP) – Provides free personal attack alarms to those not able to use a Whistle Watch whistle.
- Operation Identification – Nationwide system to identify lost or stolen property through the engraving on a personal number and the police agency's identifying number. This service is available through the UPD.
- Rape Aggression Defense (RAD) – Self-defense course offered for women by the UPD.
- Don't Walk Alone – Volunteer safety escort service provided on the UAlbany Uptown Campus during the evening.
- Park, Walk, and Talk – UPD program designed to have officers park their cars and create a closer relationship with the campus community.
- The University at Albany Mountain Bike Patrol – UPD bike patrol allows greater access to the campus and community.
- The Sexual Assault Resource Center (SARC) – The SARC offers sexual assault and relationship violence education and support for the UAlbany community.
- Emergency & Blue Light Phones - These phones connect directly to the UPD when picked up to report suspicious or emergency situations. They are easily identified on campus by their blue lights.

- Security Services Assistants (SSA) – This program established a patrol of uniformed security officers on campus to patrol major areas on campus and aid the UPD during special events.
- Drug and Alcohol Education and Prevention Programs – Mandatory drug and alcohol abuse programs for new students and for students identified as having a behavioral, drug or alcohol problem.
- Operation Safe Corridor – A partnership between the Albany City Police Department, the UPD, and the College of Saint Rose Safety and Security Department that meets regularly to address safety issues in the Pine Hills area, specifically, the creation of safe routes for pedestrians. The committee has distinguished a specific route between Western Avenue and Central Avenue as Operation Safe Corridor streets. Enhancements, including uniformed patrol and surveillance cameras are currently in place with additional improvements in the planning stages (University at Albany 2007 Annual Security Report).

Office of Environmental Health and Safety

The goal of the campus Office of Environmental Health and Safety to prevent injury, illness, and environmental damage through the recognition, evaluation, and control of potential hazards arising from University activities, and to comply with federal, state and local safety and environmental regulations. Its staff includes specialists in fire safety, building code administration, occupational health and safety, electrical and life safety, chemical safety, hazardous substances, radiation safety, and general environmental compliance. This office, along with the University Police Department, has developed and implements the Campus' Emergency Response Plan, in conjunction with other UAlbany departments depending on the nature of the incident.

Emergency Preparedness

Analogous to the University's commitment to day-to-day safety initiatives, emergency planning and response procedures have been developed by the campus Emergency Management Team in the event an incident occurs on or in close proximity to campus. The three priorities of the Emergency Management Team include the protection of life and security, security of crucial infrastructure and facilities, and resumption of UAlbany's teaching and research programs (University at Albany 2009).

In the event a situation occurs on or off campus that poses a threat to the health and safety of the campus community, the Chief of UPD, the Vice President for Student Success, and selected others will release a timely warning campus-wide. The campus population will be notified using various modes of communication depending on the nature of the incident. Communication methods include:

- Email
- Hard copy notification
- Notifications online
- SUNY NY Alert (in the case of a critical campus-wide emergency).

SUNY NY Alert is an emergency messaging service that allows critical emergencies to be communicated throughout the UAlbany community. The service is offered through the State Emergency Management Office (SEMO) and SUNY to those who sign up for email, phone, and text message alerts (University at Albany 2009).

3.12.2. Potential Impacts

Construction Phase

Construction-related activities associated with the Capital Project Plan may utilize local fire, police, and medical services. Construction phase activities will result in increased traffic and persons on the Uptown Campus in addition to an increased potential for construction-related hazards. As a means of preventing construction-related incidents, compliance with University health and safety protocol (as administered by the campus office of Environmental Health and Safety) in addition to applicable federal, state and local laws and regulations will be required. While construction activities associated with the Capital Project Plan may utilize local fire, police, and/or medical services, the type and magnitude of activities are not expected to result in a significant increase in the amount or type of service requests.

Periodic minor and major construction projects are common in the City of Albany, at the University at Albany Uptown Campus, and at the adjacent Fuller Road NanoTech facility. None of the projects is unusual with respect to the types of construction projects seen in the city and on campus. Municipal and campus emergency services are aware of these projects, and are trained and capable of responding to issues should they arise during the construction phase of one of the projects in this plan.

Operational Phase

The operational phase of the Capital Project Plan may utilize local and University police, and medical services. In conjunction with the structural growth of the Uptown Campus, the University population and visitation is projected to marginally increase, resulting in a similar marginal increase in demand on emergency services. Daily operational activities will require the support of fire, police, and medical services, typical of existing service provided to the University.

The implementation of several Capital Project Plan components, including the Student Housing Project and the Multi-Use Athletic Facility will increase fire, police, and medical service requirements during periods of increased usage (*i.e.*, game/event days, academic year):

- The Student Housing Project is proposed to house approximately 500 occupants. Fire, police, and medical services will be required to respond to student and facility emergencies. This housing facility primarily will be occupied during the academic year (August to May), with the potential for occupancy during the summer months. The number of occupants that would be new to the campus is far less than the 500 beds, as a portion of the beds is devoted to reduce overcrowding elsewhere on campus, and another portion is related to providing swing space for other campus beds lost due to renovations. The number of occupants new to the campus is estimated at approximately 150.
- Emergency services will typically be present during athletic events held at the Multi-Use Athletic Facility and track and field facilities in the case of spectator or athlete medical emergencies, as in the past. The capacity of the stadium will stay the same, but the potential for increased usage and increase in attendance of the multi-use stadium may also require additional police support during heavily attended events for security and traffic control. As is the current practice, such support will likely be supplemented on an event-by-event basis, usually by the University's own security staff and University Five Quad V.A.S.

The following table summarizes the potential impacts in this category from specific projects.

Table 3.12-1. Potential for impacts to public health and safety.

Project Name	Public Health & Safety - Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Construction; student resident health and safety during use
2. Campus Center Master Plan	X	Construction; student, faculty, staff health and safety during use
3. Construct New Business School Building	X	Construction; student, faculty, staff health and safety during use
4. Relocate Data Center	X	Construction; student, faculty, staff health and safety during use
5. Implement Various Athletics Improvements	X	Construction; attendee, student, faculty, staff health and safety during use
6. Purple Path Continuation	X	Construction
7. Northern Landscape Improvement Project	X	Construction
8. State Quad Parking Lot Expansion	X	Construction; student, faculty, staff health and safety during use
9. Multi-Discipline Science Surge Building	X	Construction; student, faculty, staff health and safety during use
10. Service Building Renovation	X	Construction; student, faculty, staff health and safety during use
11. Entry Improvements	X	Construction
12. Bus Rapid Transit	X	Construction
13. Bicycle-Pedestrian Path	X	Construction

3.12.3. Mitigation Measures**Construction Phase**

Significant impacts to public health and safety and local emergency services were not identified as a result of the construction phase of the project; therefore, no construction-related mitigation is necessary. Local and University emergency services will facilitate adequate response. In addition, construction activities will be conducted in accordance with Occupational Safety and Health Administration (OSHA) laws and regulation. Building permits will be required prior to construction of facilities, with a review of New York State Building Code and Fire Code conducted prior to the initiation of construction activities.

Operational Phase

Operational phase activities associated with UAlbany's Capital Project Plan will result in impacts to public health and safety. Most notably, an increased demand may be placed on fire, police, and medical services in response to the change in Uptown Campus facilities and growth in campus visitation. Safety systems to be installed in Capital Project Plan facilities likely will include, but not be limited to, fire detection and alarms, sprinklers, emergency telephones, and security access control. Potential operational phase mitigation measures to minimize the impacts to public health and safety include:

- Increase in fire, police, and/or medical service support personnel, the latter services of which are provided with University staff
- Update existing emergency planning and response procedures to correspond with changes in the Uptown Campus built environment.

Summary

The following table presents a summary of the potential environmental impacts to public health and safety of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) • Potential increased impact on municipal emergency services when project is constructed (additional calls for emergency services – EMS, fire, campus police) initially to be offset by reduction in use of other housing units as University renovates existing housing on a rotating basis. • On-campus housing providing a clean, safe, controlled environment for students to live, reducing impacts on the demand from local neighborhoods for public health and safety services 	<ul style="list-style-type: none"> • Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> ○ contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers ○ maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) ○ adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures • Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan. • With 6,400 beds currently on the Uptown Campus, the net increase in new students residing on campus will be marginal.(anticipated to be less than 150 beds)

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
2. Campus Center Master Plan	<ul style="list-style-type: none"> • Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) • Potential increased impact on municipal emergency services when project is constructed (additional calls for emergency services – EMS, fire, campus police). 	<ul style="list-style-type: none"> • Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> ○ contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers ○ maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) ○ adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures • Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan. • The Campus Center Expansion and renovations are not designed for new populations, but to better serve the existing campus community.

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
3. Construct New Business School Building	<ul style="list-style-type: none"> Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) 	<ul style="list-style-type: none"> Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan. Nominal increased need for emergency services over the long term is anticipated.

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
4. Relocate Data Center	<ul style="list-style-type: none"> Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) 	<ul style="list-style-type: none"> Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures Construction activities would likely result in impacts on traffic flow on campus roads, which could be mitigated by the implementation of a traffic plan. Nominal increased need for emergency services over the long term is anticipated.

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> • Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) • Need for coordination with campus police and other municipal agencies for traffic control during major campus events at new facility 	<ul style="list-style-type: none"> • Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> ○ Construction contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers ○ maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) ○ adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures • Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of above traffic plan. • Potential need for coordination with local police for traffic control, preparation of transportation management plan for use on days of events. However, the maximum capacity of the new facilities will only be nominally increasing from current levels (20% additional seating capacity).

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
6. Purple Path Continuation	<ul style="list-style-type: none"> • Potential increased short-term impact on municipal emergency services during construction activities (additional calls for emergency services – EMS, fire, campus police). • Construction of this project anticipated to increase pedestrian and bicyclist safety around campus, and improve access for off campus pedestrians who use the campus for recreational walking. 	<ul style="list-style-type: none"> • Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> ◦ contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers ◦ maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) ◦ adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures • Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan. • Post-construction service needs not expected to increase from present campus requirements, since campus community uses existing paths and grass along perimeter road for walking/jogging.
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> • No significant adverse impacts associated public health and safety anticipated 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) 	<ul style="list-style-type: none"> Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan.

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> • Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) • Science surge building will be utilized for relocation of academic activities from other buildings on a rotating basis while those buildings undergo renovation; therefore, there is a potential for long-term, though nominal, increase in need for emergency services as those renovations are occurring, as for any rehabilitation project. 	<ul style="list-style-type: none"> • Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> ◦ contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers ◦ maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) ◦ adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures • Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan. • Since intent is to provide space for renovation of other buildings on a rotating basis, only nominal increased need for emergency services over the long term is anticipated; increased need may be for response at buildings undergoing renovation activities.

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
10. Service Building Renovation	<ul style="list-style-type: none"> Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police) 	<ul style="list-style-type: none"> Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan. Since intent is to provide more space for existing, on-going activities, only nominal increased need for emergency services over the long term is anticipated.

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
11. Entry Improvements	<ul style="list-style-type: none"> • Potential increased short-term impact on emergency services during construction activities (additional calls for emergency services – municipal and campus EMS, fire, police), especially given impacts on local roads and traffic during construction (Western Avenue, Fuller Road, Washington Avenue). • Completion of entry improvements will increase pedestrian, bicyclist and commuter safety at entry points to the campus. 	<ul style="list-style-type: none"> • Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> ◦ contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers ◦ maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) ◦ adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures • Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan.
12. Bus Rapid Transit	<ul style="list-style-type: none"> • No significant adverse impacts associated with Public Health & Safety anticipated. Encouragement of mass transit use anticipated to lower commuter traffic volume on campus, providing an increase in safety for campus and users from surrounding community. 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.12-2. Summary of Potential Impacts to Public Health & Safety and Mitigation Options.

Project	Potential Impacts	Mitigation
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> • Potential increased short-term impact on municipal emergency services during construction activities (additional calls for emergency services – EMS, fire, campus police). • Construction of this project anticipated to increase pedestrian and bicyclist safety around campus. 	<ul style="list-style-type: none"> • Potential impacts on emergency services can be mitigated by implementation of the following measures: <ul style="list-style-type: none"> ○ contractor adherence to a “Maintenance and Protection of Traffic Plan”, which would be coordinated with UAlbany and off-campus emergency service providers ○ maintenance of secure construction sites including secure storage of construction-related equipment and materials (<i>i.e.</i>, locked trailers, flammable and/or chemical storage cabinet) ○ adherence to best management practices associated with the proper storage and use of chemical and petroleum products during construction operation phases, including spill response procedures • Construction activities would likely result in impacts on traffic flow on-campus roads, which could be mitigated by the implementation of a traffic plan. • Post-construction service needs not expected to increase from present campus requirements, since campus community uses existing paths, roads and grass adjacent to perimeter road for walking. Jogging and bicycling, and this project is intended to improve safety.

3.13. Community Character and Land Use

3.13.1. Existing Conditions

Community Character – Local

The community surrounding University at Albany’s Uptown Campus is comprised of a mixture of residential, commercial, and industrial uses, providing an attractive setting to live and work. The University is located in close proximity to retail, food, and entertainment venues. The Albany NanoTech complex is located adjacent and to the west of the Uptown Campus, offering state-of-the-art nanotechnology research and development facilities, while the W.A. Harriman State Office

Campus is located directly to the east of the Uptown Campus. The New York State government offices, State Museum, and State Library are located approximately four miles southeast of the Uptown Campus in the City of Albany. In addition to the educational opportunities available to UAlbany students in the areas of politics and public policy, downtown Albany offers a historic setting with restaurants, shopping, and cultural events.

Given the urban development of the entire area, open space is limited. The closest recreational and open space area to the Uptown Campus is the Albany Pine Bush, located less than one mile to the west. This ecologically diverse and rare habitat contains trails for walking, biking, and cross country skiing in addition to an educational center. A trailhead to the eastern portion of the Albany Pine Bush Preserve can be accessed through the Rensselaer Lake Preserve and Park, located to the west of the Uptown Campus.

The University's strategic location within the City of Albany and Town of Guilderland offer the following opportunities:

- Access to major highways - The University is proximal to the crossroads of Interstates 87 and 90, providing access to cities in both north-south and east-west directions, respectively.
- Colleges and universities – The University serves as the largest institution of higher education and research in the region, with multiple smaller colleges and universities in the area, providing Capital Region residents with a variety of educational choices.
- Opportunities in research and development and public policy.
- Cultural, sports and entertainment events at the Times Union Center or the Palace Theater.

UAlbany is located both in the City of Albany and the Town of Guilderland. It is set in an area that is characterized by commercial land uses at Crossgates Mall to the west and Stuyvesant Plaza to the southwest. A residential neighborhood is located to the west across Fuller Road between the Stuyvesant Plaza and the NanoTech facilities (the McKownville residential neighborhood) and to the south and southwest (south of Western Avenue); a residential neighborhood including Tudor Road and Clarendon Road (the Eagle Hill neighborhood) to the southeast (north of Western Avenue); the Harriman Office Campus to the east; and Washington Avenue and the Route 90 corridor to the north. The McKownville Neighborhood consists of about 800 residences and has a well established, active residents' group, the McKownville Improvement Association (www.mckownville.org). It advocates for community character issues, such as improved pedestrian and bicycle access on local roads, transit services, and improved streetscapes, among other issues (also see "Comprehensive Plan – Town of Guilderland" in Section 3.13.1, herein). The Eagle Hill Neighborhood is active as well, providing robust attendance at recent Student Housing Project (Project No. 1) public meetings.

Community Character – Regional

Traveling outside of the City of Albany and Town of Guilderland's urban developed setting offers a wider array of recreational and research and development partnership opportunities including:

- The Adirondack Park and Catskill State Park, offering skiing, hiking, camping and boating
- Cultural and entertainment events at the Saratoga Performing Arts Center
- Regional research and development facilities including Saratoga Technology and Energy Park and the Luther Forest Technology Campus.

Socioeconomics. The majority of UAlbany's Uptown Campus is located within the City of Albany, with the southwest portion of campus within the Town of Guilderland. Based on 2000 census data, the Uptown Campus is located within a demographically diverse area. Table 3.13-1 compares key social and economic factors between the City of Albany, Town of Guilderland, and New York State.

Table 3.13-1. Comparison of key social and economic factors.

Characteristics		City of Albany	Town of Guilderland	New York State
GENERAL				
Total Population		95,658	32,688	18,976,457
Race	White	63.1%	92.1%	67.9%
	Black or African American	28.1%	2.5%	15.9%
	American Indian and Alaska Native	0.3%	0.1%	0.4%
	Asian	3.3%	3.8%	5.5%
	Native Hawaiian and other Pacific Islander	0.0%	0.0%	0.0%
	Other	2.2%	0.4%	7.1%
	Two or more races	3.0%	1.0%	3.1%
EDUCATION				
High school graduate or higher		81.2%	92.5%	79.1%
Bachelor's degree or higher		32.5%	45.0%	27.4%
ECONOMIC				
Median household income		\$30,041	\$58,669	\$43,393
Median home value		\$98,300	\$135,300	\$148,700
Per capita income in 1999		\$18,281	\$29,508	\$23,389
Poverty rate		21.7%	4.1%	14.6%

Source: U.S. Census Bureau, 2000 Census

The top five employment sectors in the City of Albany consist of:

1. Education, health and social services
2. Public administration
3. Retail trade
4. Professional, scientific, management, administrative and waste management services
5. Arts, entertainment, recreation, accommodation and food services.

The top five employment sectors in the Town of Guilderland are comparable to the City of Albany and consist of:

1. Education, health and social services
2. Public administration
3. Retail trade
4. Professional, scientific, management, administrative and waste management services
5. Finance, insurance, real estate, and rental and leasing.

Community Services. Existing community services are summarized in Sections 3.9 through 3.11, Transportation, Energy, and Public Health and Safety, respectively.

Environmental Justice. Environmental justice is defined as the fair treatment and meaningful involvement of all people regardless of race, color, native origin, or income with respect to the development, implementation and enforcement of environmental laws, regulation, and policies (NYSDEC 2008). Fair treatment means that no group of people, including racial, ethnic, or socioeconomic group, should bear a disproportionate share of negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. Commissioner Policy 29 (CP-29) (NYSDEC 2003) provides guidance for incorporating environmental justice concerns into the SEQRA process. The state has identified potential environmental justice areas defined as a “minority or low-income community that may bear a disproportionate share of the negative environmental consequences” (NYSDEC 2008e).

Based on a review of potential environmental justice areas mapped by the NYSDEC, potential areas of environmental justice exist within Albany County, including areas on and in the vicinity of the Capital Project Plan site (NYSDEC 2008e). The closest potential area subject to environmental justice considerations is located within the boundaries of the Uptown Campus and extends approximately one-half mile to the northwest. Figure 3.13-1 depicts potential areas of environmental justice in Albany County.

Potential areas of environmental justice are determined by census block groups. A census block group is a unit containing between 250 and 500 housing units; used by the U.S. Census Bureau for reporting purposes (NYSDEC 2003). As detailed in CP-29, a census block group is designated as a potential environmental justice area, if according to 2000 U.S. Census data; it meets one or more of the following criteria (NYSDEC 2003):

- At least 51.1% of the total population in an urban area were members of a minority community;
- At least 33.8% of the total population in a rural area were members of a minority community; or
- At least 23.59% of the total population had income levels below the federal poverty level (low-income community).

According to 2000 U.S. Census data, the potential environmental justice area on and in the vicinity of the Uptown Campus had a poverty rate of 33.33%, exceeding the poverty threshold outlined in CP-29. Census data is collected differently based upon a number of factors, including residency. The 2000 U.S. Census considered students living in college dormitories, institutions, and military group housing as residents of group living quarters (U.S. Census Bureau 2003). Residents living in group quarters were not accounted for in the determination of poverty statistics (U.S. Census Bureau 2003). Therefore, dormitories located on the Uptown Campus would not have been included in the calculation of poverty status for the census block ground-designated as a potential environment justice area. Conversely, students living in apartments were included in the calculation of poverty statistics for the census block designated as a potential environmental justice area (U.S. Census Bureau 2008a). When contacted, the NYSDEC indicated that the apparent designation of campus environmental justice areas at UAlbany and elsewhere around the state is an anomaly of the manner in which these areas are determined, as described above.

Recreation. The City of Albany and Town of Guilderland offer a variety of recreational activities, including an established system of parks offering jogging/walking trails, basketball and tennis courts, baseball and recreational fields. Table 3.13-2 summarizes area parks and their approximate distance from UAlbany’s Uptown Campus; Figure 3.13-2 depicts the locations of parks within 2 miles of campus.

Table 3.13-2. City of Albany and Town of Guilderland Parks.

Park/Facility	Location	Approximate Distance from Uptown Campus (miles)
CITY OF ALBANY		
American Legion Memorial Park	Frisbie and McCarty Avenue	4
Arbor Hill Courts	73 North Swan Street	4
Arbor Hill Park	Manning Boulevard, below Lark Drive	3.5
Bayhill Park	Sheridan Avenue and Dove Street	3.5
Beverwyck Park	640 Washington Avenue	2.5
Bleeker Stadium	Clinton Avenue, below Manning Boulevard	3
Buckingham Lake Park	Berkshire Boulevard and Colonial Avenue	3
City Boxing Program	91 Quail Street	3
Colby Park	19 Colby Street and Garfield Place	3
Hackett Park	North Pearl Street and North Second Street	4.5
Hoffman Park	Hoffman Avenue and McCarty Avenue	4
Hoffman Community Center	7 Hoffman Avenue	3.5
Krank Park	65 First Avenue	4
Lark Park	2 Lark Street	3.5
Lincoln Park	Eagle Street and Morton Avenue	3.5
Livingston and Lake Playground	Livingston Avenue and Lake Avenue	3
Madison Avenue Playground	Madison Avenue and Ontario Street	2.5
Mater Christi Playground	New Scotland Avenue	2
McKown Park	30 McKown Street	3.5
Mount Hope Playground	Mount Hope Drive	4
Mullens Park	41 North First Street	4
Oak Street Playground	Oak Street and Second Street	3.5
Philip Street Park	77 Philip Street	4
Public Bath #2	90 Fourth Avenue and South Pearl Street	4
Rensselaer Lake Park	Pine Bush Preserve	0.5
Ridgefield Park	316 Partridge Street, Ridgefield Street	4.5
Rosemont Playground	92 Rosemont Street	1.5
St. Vincent Community Center	844 Madison Avenue	2.5
Shaker Park	Shaker Park Road and Rosemary Drive	3
South Allen Street Playground	South Allen Street	2
Swinburne Park	Clinton Avenue and Manning Boulevard	2.5
Washington Park	State and Willet Street	3
Westland Hill Park	Central, Colvin, Lincoln, and Austin Avenue	1.5
Whitehall Park	124 Whitehall Road	3
Wilkie Playground	Colonie and Lark Street	3.5
Woodlawn Park	Woodlawn Avenue and Partridge Street	3.5
TOWN OF GUILDERLAND		
Towasentha Park	188 Route 146	5
DiCaprio Park	East Lydius Street	6
Nott Road Park	6073 Nott Road	4
Roger Keenholts Park	French's Hollow Road	6.5
Fort Hunter Park	Ronald Place	7.5
McKownville (Abele) Park	Strawberry Lane	1
Volunteer Firefighters Memorial Park	DiBella Drive	6

Source: City of Albany 2007 and Town of Guilderland

In addition to local and state parks, UAlbany's Department of Athletics and Recreation provides a variety of sports and fitness programs to students, faculty, and staff. Health and wellness programs and facilities include:

- SEFCU Arena and Fitness Center
- Varsity Strength and Conditioning Complex
- University Gymnasium and Swimming Pool
- Air Structure (or “Bubble”)
- Athletic and recreational fields.

Figure 3.13-3 depicts recreational facilities on UAlbany’s Uptown Campus.

An incomplete system of pedestrian and bicycle paths travel the perimeter of the Uptown Campus along University Drive. The existing paths are constructed using various surface media including gravel, dirt, and asphalt, and vary in width. Users of the paths consist of faculty, staff, students, and neighborhood residents. In addition to path discontinuity, the primary concern of users involves pedestrian and bicycle safety. The existing perimeter path contains twenty-three vehicle rights-of-way (University at Albany Department of Geography and Planning 2005). Multiple vehicle crossings in combination with narrowing path widths and vehicles travelling at excessive speeds, increases the potential for vehicle-pedestrian conflict.

The Capital Project Plan contains two projects, the Purple Path Continuation (Project No. 6) and the Bicycle-Pedestrian Path (Project No. 13), with the objectives of incorporating the existing pathways, while improving pedestrian safety and surface quality.

Land Use. Primary land uses in the area surrounding the UAlbany Capital Project Plan site include residential, commercial, and office uses. The Albany NanoTech Complex, an 800,000 square foot state-of-the-art research and development (R&D) facility and home of the University’s CNSE, is located to the west of the Capital Project Plan site. The W. Averell Harriman State Office Campus (the Harriman Campus) is located to the east of the Uptown Campus on approximately 330 acres (C.T. Male 2002). Currently, the Harriman Campus contains multiple buildings and 2.8 million square feet of space occupied by numerous state and government agencies including Department of Civil Service, Department of Labor, Department of Correctional Services, Department of Agriculture and Markets, Department of Taxation and Finance, Office of General Services, and the Department of Education (C.T. Male 2002). Redevelopment of the Harriman Campus into a new Harriman Research and Technology Campus is ongoing, with proposals to redevelop and modernize the existing site into an office, technology, and R&D campus (C.T. Male 2002; Harriman Research and Technology Development Corporation 2009).

City of Albany Zoning. UAlbany’s Uptown Campus and the Capital Project Plan sites are primarily located within the City of Albany. Since the University at Albany is a New York State entity, municipal zoning ordinances do not apply to it. However, the following information relating to City of Albany and Town of Guilderland zoning provides a benchmark description of the surrounding areas, and of municipal planning and intent for those areas.

According to the City of Albany Zoning Ordinance, the purpose of the document is (City of Albany 2008a):

...to promote the public health, safety and general welfare; lessen congestion in the streets; secure safety from fire, panic and other dangers; provide adequate light and air; avoid undue concentration of population; facilitate the provision of transportation, water, sewerage, schools,

parks and other community facilities; and promote, preserve and encourage the aesthetic concept of the development of the City of Albany.

The northern and southeastern portion of UAlbany's Uptown Campus and Capital Project Plan site located within the City of Albany are currently zoned as Commercial Office District (C-O) (City of Albany Zoning). Permitted uses within a Commercial Office District include (City of Albany 2008a):

- Auditoria
- Banks
- Colleges
- Hospitals
- Houses of worship
- Museums and art galleries
- Nursing homes
- Offices
- Funeral homes
- Business services.

The current zoning ordinance limits buildings to a maximum height of 85 feet and maximum lot coverage of 60%. The surrounding areas are zoned as follows (City of Albany 2008a):

- Highway Commercial (H-C)
- Residential Office (R-O)
- Single-Family Low-Density Residential District (R-1A)
- Single-Family Medium-Density Residential District (R-1B)
- One- and Two-Family Residential District (R-2A)
- One- and Two-Family Medium-Density Residential District (R-2B)
- Multifamily Low-Density Residential District (R-3A).

Figure 3.13-4 illustrates the current City of Albany zoning districts on the Uptown Campus and surrounding areas.

Town of Guilderland Zoning. The southwest portion of UAlbany's Uptown Campus is located within the Town of Guilderland. According to the Town of Guilderland Zoning Law of 1987, the purpose of the code is (Town of Guilderland 2009):

...to encourage appropriate and orderly physical development; to promote in all possible ways public health, safety, convenience and general welfare; to classify, designate and regulate the location and use of buildings, structures and land for agricultural, residential, commercial, industrial or other uses in appropriate places and for said purpose to divide the Town of Guilderland into districts of such number, shape and area as may be deemed best suited to carry out these regulations and provide for their enforcement.

The section of UAlbany's Uptown Campus and Capital Project Plan sites located within the Town of Guilderland is currently zoned as Single-Family Residential District with a minimum lot area of 15,000 square feet (R-15) (Town of Guilderland 2006). Permitted uses within an R-15 District include (Town of Guilderland 2006):

- Single-family dwelling
- Public schools
- Public recreation and parks owned and maintained by the Town of Guilderland
- Family day-care homes and group family day-care homes
- A two-family dwelling constructed on any lot fronting on Carmen Road, provided that certain requirements are met, as outlined in the Town of Guilderland Code.

The current zoning ordinance limits buildings to a maximum height of two and a half stories or 35 feet, whichever is less, except as indicated in § 280-32A of the Town of Guilderland Code. The maximum lot coverage (in feet) within an R-15 zoning district is 30. The surrounding areas are zoned as follows (Town of Guilderland 2006):

- Single-Family Residential District with a minimum lot area of 10,000 square feet (R-10)
- General Business District (GB)
- Local Business District (LB).

Figure 3.13-5 illustrates the current Town of Guilderland zoning districts on the Uptown Campus and surrounding areas.

Current Uses. Although not subject to local zoning, UAlbany's Uptown Campus is comprised of features similar to a Commercial Office District, for which site uses include auditoria, college, and offices, with special permit uses for laboratories. UAlbany's Uptown Campus, the site of UAlbany's Capital Project Plan, is located on approximately 500 acres and serves as the University's main campus. The University is a public research university with approximately 18,000 undergraduate and graduate students. Facilities on the Uptown Campus include academic and administrative buildings, dormitories, and athletic facilities. The College of Arts and Sciences, the College of Computing and Information, the School of Business and the School of Education reside on the Uptown Campus. The existing facilities and associated land development occupy approximately 50% of the Uptown Campus.

Constructed between 1964 and 1971, the Uptown Campus Academic Podium and student residential quadrangles display the unique architectural style of Edward Durell Stone. The Podium and residential quads were designed with a north-south axial symmetry, carried throughout the majority of facilities on campus. Major construction projects have occurred on campus since then.

Major highways serving the campus include Interstates 90 (the New York State Thruway) and 87 (the Northway). The existing buildings are served by water, sanitary sewers, gas, electrical power, a storm drainage system, and outdoor lighting.

Past Uses. The UAlbany Uptown Campus location was established in the early 1960s on land formerly owned by the Albany Country Club. As shown on Figure 1.1-2, prior to construction of the Uptown Campus, the land appears to be covered with a combination of forested and grassy areas. The

existing road networks, including Interstates 87 and 90, Western Avenue and Fuller Road, can be identified from the aerial photo in Figure 1.1-2 as well. Residential neighborhoods currently located off of Western Avenue and Fuller road and adjacent to the Uptown Campus are also established. The site of the former Albany Country Club was selected for construction of the Uptown Campus during Governor Nelson Rockefeller's administration. Rockefeller was also involved in the selection of Edward Durell Stone as the designer.

Construction of the Uptown Campus primarily occurred between 1961 and 1971. During site preparation activities, the area was cleared of trees and graded to smooth contours in the land. Figure 1.1-3 depicts the land cleared at the commencement of construction. The first classes were held on the Academic Podium in the Fall of 1966, with construction completed in 1971. Figure 1.1-4 depicts the Uptown Campus following construction in an aerial photograph. Washington Avenue has been constructed, providing access to the newly constructed Uptown Campus. Residential development in the vicinity of the Uptown Campus appears to be consistent between the 1962 and 1972 aerial photographs; however, commercial development has increased to north of the Uptown Campus along Railroad Avenue.

Comprehensive Plan – City of Albany. The City of Albany does not currently have a comprehensive plan in place. A Comprehensive Plan Board has been selected by the city's Common Council to develop the framework and provide guidance to the consultants selected to compose the document. The development of this plan is currently in progress.

Under the *Capitalize Albany* Executive Committee, established in 1994 by Albany Mayor Gerald D. Jennings, the *Capitalize Albany* economic development strategy evolved. The goal of this development strategy is "...to create and develop an environment that attracts public and private investment in large-scale transformational development projects that will materially improve the economic well being of the City of Albany" (Capitalize Albany 2005). The strategy primarily focuses upon Arts, Entertainment and Tourism, Business Development, Riverfront Revitalization, and Neighborhoods. The University's CNSE is mentioned within the economic development strategy as it pertains to relationships established with Albany NanoTech.

Comprehensive Plan – Town of Guilderland. The Town of Guilderland Comprehensive Plan (the Comprehensive Plan) was developed in 2001 by Clough, Harbour & Associates LLP and Behan Planning Associates. A Community Outreach Program was established to provide the public an opportunity to contribute to the preparation of the Comprehensive Plan via surveys, focus groups, and neighborhood outreach programs. The Community Outreach Program, in conjunction with other resources, generated vital information necessary to establish the guiding principles of the Comprehensive Plan.

The area within the Town of Guilderland inclusive of the southwest portion of the Uptown Campus is known as McKownville. The area is characterized by its commercial and office development along Route 20 (Western Avenue) and adjacent neighborhoods. Increasing commercial growth has placed stress on the area roadways, water and sewer infrastructure and has created a "pedestrian unfriendly environment" (Town of Guilderland 2001). McKownville is characterized in the Comprehensive Plan as containing "...a small park with a playground and softball field...three religious institutions, a fire station, a post office, and a portion of the SUNY Albany campus...McKownville offers an urban-like atmosphere with shopping services, recreation, education, and community gathering place" (Town of Guilderland 2001). Recommendations to address traffic and pedestrian access to University at Albany, SUNY along Route 20 are made within the Comprehensive Plan.

The Comprehensive Plan establishes a community vision which includes the University at Albany in the following goals and objectives (Town of Guilderland Comprehensive Plan 2001):

1. Business, Employment, and Fiscal Resources

Goal: Promote a diverse economic base that provides income, employment and fiscal resources to the community in a manner that is compatible with the future land use plan and character of Guilderland.

Objective: Encourage partnerships with the University at Albany to promote economic development opportunities in the Town.

2. Cultural Resources

Goal: Recognize Guilderland's historic resources and preserve and enhance cultural opportunities in the community.

Objective: Develop closer ties with the University at Albany and increasing community access and awareness of its diverse array of programs and facilities.

3. Recreation

Goal: Provide sufficient, well-located, and affordable, active and passive recreational opportunities for all Guilderland residents.

Objective: Work with other municipalities, the school districts, the YMCA, the University at Albany, and private recreation providers to maximize year-round recreational opportunities for Town residents, especially youth.

Master Plan – University at Albany. The University at Albany Master Plan Report (the Master Plan) was developed in 1998 by The Hillier Group to address improvements to the university's physical, technological and research facilities in order to meet growing demands. To successfully meet the varying needs and views of the university's students, faculty, and staff, a representative campus population was interviewed to develop a consensus on key issues. Goals and objectives were established by the Master Plan to guide future campus development. Components of the Capital Project Plan remain consistent with the UAlbany Master Plan. Table 3.13-3 illustrates how the components of the Capital Project Plan meet the goals and objectives established by the Master Plan.

Table 3.13-3. *Consistency between University at Albany, SUNY Master Plan and Capital Project Plan.*

University at Albany Master Plan (1998)		University at Albany Capital Project Plan
Goals	Applicable Objectives	Applicable Projects
<ul style="list-style-type: none"> • Provide sufficient high quality, technologically suitable and flexible instructional space for classrooms, laboratories and their support areas • Provide dedicated, flexible research space 	Use existing space appropriately	
	Focus new construction projects on providing space that cannot be appropriately provided within the existing structure	1. Student Housing Project 2. Campus Center Master Plan 3. Business School Building 4. Relocate Data Center 5. Athletics Improvements 8. State Quad Parking Lot Expansion 10. Service Building Renovation

Table 3.13-3. Consistency between University at Albany, SUNY Master Plan and Capital Project Plan.

University at Albany Master Plan (1998)		University at Albany Capital Project Plan
Goals	Applicable Objectives	Applicable Projects
	Provide adequate swing and surge space	1. Student Housing Project 9. Multi-Discipline Science Surge Building
Develop the campus as primarily a safe pedestrian environment	<ul style="list-style-type: none"> Develop a distinct campus-wide pedestrian walkway system separate from the roadways Develop connectivity between campus facilities Reinforce and enhance desired pedestrian routes 	6. Purple Path Continuation 12. Bus Rapid Transit 13. Bicycle-Pedestrian Path
Develop a welcoming, user-friendly campus	<ul style="list-style-type: none"> Create a clear “front door” to the campus Improve the visitors’ ease and sense of arrival 	3. Business School Building 7. Northern Landscape Improvement Project 11. Entry Improvements
The podium’s buildings should not be subject to over utilization as a result of their central location and prominence.		2. Campus Center Master Plan 3. Business School Building

Source: University at Albany Master Plan, The Hillier Group, 1998

Open Space. The New York State Open Space Conservation Plan (2009a) defines open space as land which is not intensively developed for residential, commercial, industrial or institutional use; and includes forested land (NYSDEC 2009a). The document identifies several priority conservation projects within Albany County including: the Albany Pine Bush, Black Creek Marsh/Vly Swamp, the Five Rivers Environmental Education Center, and the Helderberg Escarpment. These features are identified on Figure 3.13-6 and described below.

The Albany Pine Bush is identified on Figure 3.13-6 and previously described in Section 3.7.

The Black Creek Marsh and Vly Swamp are located at the base of the Helderberg Escarpment at John Boyd Thatcher Park in Albany County, approximately 8 miles southwest of the Uptown Campus. These wetland systems are recognized for their biological diversity, and most notably their amphibian species diversity. The Black Creek Marsh offers hiking trails, hunting, fishing, trapping, and bird watching. In addition to being a NYSDEC operated Wildlife Management Area (WMA), it is included on the National Audubon Society’s listing of Important Bird Areas in New York State. The NYSDEC continues to acquire parcels of land to expand buffer zones as a means of protecting the wetland systems from encroaching development. The Black Creek Marsh and Vly swamp are identified on Figure 3.13-6.

The Five Rivers Environmental Education Center (Five Rivers EEC) is located in Delmar, NY, approximately 5.5 miles southwest of the Uptown Campus. Designated as a National Environmental Study Area by the National Parks Service, the Five Rivers EEC offers a variety of educational opportunities including public educational programs and in-depth workshops on various environmental topics, guided trail walks, and a resource library (NYSDEC 2009b). The center receives over 100,000 visitors each year to experience its fields, forests, and wetlands. The Five Rivers EEC is considered a priority conservation project by the NYSDEC as it continues to establish buffer areas between its lands and surrounding development. The Five Rivers EEC is identified on Figure 3.13-6.

The Helderberg Escarpment, located approximately 9 miles southwest of the Uptown Campus, is home of John Boyd Thatcher Park and Thompson Lake State Park. The Escarpment is known for its geologic features, including scenic vistas, karst geology, and cave formations. The natural habitat supports several rare and endangered species of flora and fauna and is included on the National Audubon Society's list of Important Bird Areas in New York State (NYSDEC 2007). The escarpment and view shed to the north and east and the habitat areas to the south are in need of increased protection as a result of encroaching area development (NYSDEC 2007). The Helderberg Escarpment is identified on Figure 3.13-6.

The UAlbany Uptown Campus contains approximately 50% open space, primarily consisting of athletic fields, grass and landscape areas, and wooded areas. Most of this space is integral to the site plan and for programmed activities, and not available for new construction.

As noted earlier in this document, UAlbany has established the APAAC to help guide design and construction considerations for projects on campus. These projects, such as are contained in the Capital Project Plan, involve numerous site planning, aesthetics, and architectural design choices with long lasting institutional impacts. The APAAC, a representative committee consisting of members of the campus community, are asked to help filter through site planning options, discuss and help steer the conversation regarding the orientation and location of buildings, and consider how ancillary issues and projects, such as parking, could be addressed from among several options presented by Facilities Management staff. The APAAC helps influence and recommend a narrower set of options that would be provided to the President regarding site planning, color, building shape, and other elements of architectural design of buildings and other facilities.

3.13.2. Potential Impacts

Construction Phase

Construction of the Capital Project Plan will not affect present or future land uses in the project area, which consists of the residential neighborhoods, offices and commercial facilities directly surrounding the Uptown Campus. Construction activities associated with the Capital Project Plan represent the replacement or renovation of existing facilities, addition of new facilities, and the aesthetic enhancement of the Uptown Campus. Lands, currently unused, but part of the Uptown Campus, will be utilized to construct specific components including the Student Housing Project (Project No. 1), Purple Path Continuation (Project No. 6), State Quad Parking Lot Expansion (Project No. 8), and Multi-Discipline Science Surge Building (Project No. 9).

The University has a limited amount of land available for development. The University has as one of its campus planning objectives to maintain open space. Therefore, renovation of existing structures is a preferred option in situations where that is possible. As a result, renovation of existing structures, or additions to existing structures, in addition to evaluation of alternative project sites for new buildings, has been a significant factor in the consideration of these projects in order to maintain community character and land use for the Uptown Campus. Implementation of the Capital Project Plan remains consistent with the UAlbany Master Plan and the Town of Guilderland Comprehensive Plan.

Construction-related activities will result in community character and land use impacts including:

- Temporary development of staging areas for demolition and construction equipment
- Temporary construction-related closures and detours for pedestrians.

These impacts will be temporary and localized. Adequately designed and implemented mitigation measures will be utilized to minimize potential construction-related impacts to both on campus and off site community character and land use.

Operational Phase

With respect to aspects of community character, the Capital Project Plan will have impacts, although they are not considered to be significant adverse impacts:

- Socioeconomics – no significant impacts on local economics, although new buildings likely will require increases in supplies and services to be derived from the community.
- Community services – while University has its own police, fire and EMT services, the new buildings may result in a nominal number of additional calls for support from surrounding communities.
- Environmental Justice – activities will not impact environmental justice communities.
- Recreation – no significant impacts to recreational resources; the completion of the Purple Path and Pedestrian-Bicycle Paths will enhance campus and local community recreation opportunities.
- Land use – the Capital Project Plan is consistent with campus land use plans and zoning. Construction of the Student Housing Project in the southeast corner of the Uptown Campus will impact adjacent neighborhoods, as detailed elsewhere herein.
- Open Space – no significant impacts to open space resources.

The operational phase of the Capital Project Plan will result in positive impacts to current land uses on the Uptown Campus and surrounding areas and is consistent with present land uses. Implementation of the Capital Project Plan remains consistent with the UAlbany Master Plan and the Town of Guilderland Comprehensive Plan. As previously identified in Table 3.13-3, the Capital Project Plan will meet goals and objectives outlined in the University's Master Plan, while maintaining an acute awareness of, and consistency with, the architectural vision for the campus of Edward Durell Stone. As such, it is not anticipated that structures adjacent to the Academic Podium will exceed its height, and will maintain architectural consistency with other structures around campus.

Additionally, implementation of the Capital Project Plan will serve as a catalyst in meeting the Town of Guilderland's community vision of developing potential economic, community, and recreational opportunities between UAlbany and the Town of Guilderland. Operation-related activities associated with the Capital Project Plan may benefit existing and adjacent community character and land uses by:

- Enhanced recreational opportunities (see Project Nos. 5, 6, 13)
- Expanded athletic facilities to enable increased attendance and provide visiting athletic teams up-to-date facilities (see Project No. 5)
- Facilitating growth of the University's research and development and academic opportunities, consequently attracting future students to UAlbany and the surrounding area (see Project Nos. 3, 4, 9)
- Maintaining the Uptown Campus character as envisioned by Edward Durell Stone.

The following table summarizes the potential impacts in this category from specific projects.

Table 3.13-4. *Potential for impacts to community character.*

Project Name	Community Character - Potential for Impacts	Nature of Impacts
1. Student Housing Project	X	Construction; operation (Tudor Road Neighborhood)
2. Campus Center Master Plan		
3. Construct New Business School Building		
4. Relocate Data Center	X	Construction; operation (McKownville neighborhood)
5. Implement Various Athletics Improvements		
6. Purple Path Continuation	X	Improve campus aesthetics
7. Northern Landscape Improvement Project	X	Improve campus aesthetics
8. State Quad Parking Lot Expansion		
9. Multi-Discipline Science Surge Building		
10. Service Building Renovation		
11. Entry Improvements	X	Improve campus aesthetics
12. Bus Rapid Transit	X	Reduce on-campus auto traffic
13. Bicycle-Pedestrian Path	X	Improve campus aesthetics

3.13.3. Mitigation Measures**Construction Phase**

Construction phase activities associated with the Capital Project Plan will not result in significant adverse environmental impacts to community character and land use. Construction-related impacts will be localized and temporary in nature. Potential mitigation measures to minimize impacts include:

- Coordination between project teams and contractors (*i.e.*, construction staging and schedule) during the construction phase to minimize potential effects on current land uses
- Restoration of temporary staging following construction activities
- Establish safe pedestrian crossings and detours around construction areas.

Operational Phase

There will be no significant adverse impacts to community character and land use as a result of the operational phase of the Capital Project Plan. There will be no development outside the footprint of the Uptown Campus, and neither views, nor noise and other aesthetic aspects of community character will be significantly impacted by the proposed elements of the Capital Project Plan.

It is recognized that the Student Housing Project may be somewhat visible from the Tudor Road neighborhood to some degree, perhaps in months when the intervening trees are not in leaf, and there will be some level of lighting at the Student Housing Project for safety and security, as noted elsewhere in this document. Potential mitigation measures already discussed with neighborhood groups include the relocation of the perimeter road, moving housing as far to the center of campus as possible (approximately 400 feet from the property boundary), buffering the site with berms and plantings, and other mitigation measures to be implemented to reduce the potential impact of this project, which will be analogous to an apartment building being constructed at a similar location.

Overall, UAlbany's Capital Project Plan is anticipated to positively impact the University and surrounding community through an improvement in aesthetics and non-vehicle access to campus. It is intended that mitigation measures be incorporated into the planning, design and construction of individual projects, as appropriate, as described in the summary table below.

Summary

The following table presents a summary of the potential environmental impacts to community character of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.13-5. Summary of Potential Impacts to Community Character and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> • Socioeconomics – no significant adverse impacts on local economics, although new building likely will require supplies and services to be derived from the community. • Community services – while University has its own police and EMT services, the project may result in a nominal number of additional new calls additional calls for support from surrounding communities. • Environmental Justice – will not adversely impact environmental justice communities. • Recreation – no significant adverse impacts to recreational resources • Land use – construction of the Student Housing Project in the southeast corner of the Uptown Campus will impact adjacent neighborhoods, as detailed elsewhere herein. • Open Space – no significant adverse impacts to open space resources. 	<ul style="list-style-type: none"> • Measures to be taken to reduce the impacts to the adjacent neighborhood: <ul style="list-style-type: none"> ○ Buildings to be located as far west on property as possible, away from property boundary with neighborhood ○ Lighting in parking lot and around buildings to be shielded and focused down to reduce spillover ○ Berm to be constructed along property boundary to reduce sight lines ○ Conifer plantings along slopes of berm to decrease site lines, and to buffer noise, light and view of the buildings
2. Campus Center Master Plan	<ul style="list-style-type: none"> • Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus; project will remove some limited open space adjacent to the Campus Center • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.13-5. Summary of Potential Impacts to Community Character and Mitigation Options.

Project	Potential Impacts	Mitigation
3. Construct New Business School Building	<ul style="list-style-type: none"> • Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus; project will remove 1.1 acres of green space near the site for relocation of visitor parking • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> • New trees and other landscaping features will be added as part of the project
4. Relocate Data Center	<ul style="list-style-type: none"> • Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus; project will remove some open space if a new building is constructed for this use • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> • No mitigation necessary
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> • Socioeconomics – no significant adverse impacts on local economics, although events at new stadium likely will require supplies and services to be derived from the community. • Community services – while University has its own police and EMT services, the project may result in additional calls for support from surrounding communities. • Environmental Justice – will not adversely impact environmental justice communities. • Recreation – no significant adverse impacts to recreational resources • Land use – will result in a reconfiguration of land uses in this area of campus. • Open Space – no significant adverse impacts to open space resources. 	<ul style="list-style-type: none"> • Mitigation consists of adequate consultation and planning with surrounding municipalities to coordinate needs for external services, if necessary

Table 3.13-5. Summary of Potential Impacts to Community Character and Mitigation Options.

Project	Potential Impacts	Mitigation
6. Purple Path Continuation	<ul style="list-style-type: none"> Open Space and Recreation – no significant adverse impacts associated with open space and recreation, either on or off campus; project will facilitate safer use of campus for students, faculty, staff, visitors and recreational walkers and bicyclists from surrounding community Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> No mitigation necessary
7. Northern Landscape Improvement Project	<ul style="list-style-type: none"> No significant adverse impacts associated with community character and land use anticipated Intent of landscaping project is to replace existing landscaping with plantings selected for survivability and greater consistency with original architectural plans for the campus 	<ul style="list-style-type: none"> No mitigation necessary
8. State Quad Parking Lot Expansion	<ul style="list-style-type: none"> Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus; project will remove approximately 50,000 sq ft (1.1 acres) to 70,000 sq ft (1.6 acres) of existing lawn space west of the existing parking lot (based on a typical design minimum of 9 ft x 18 ft for a parking space) Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> No mitigation necessary

Table 3.13-5. Summary of Potential Impacts to Community Character and Mitigation Options.

Project	Potential Impacts	Mitigation
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> • Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus; project will remove some open space at a location surrounding the Podium, exact site undetermined. • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> • No mitigation necessary
10. Service Building Renovation	<ul style="list-style-type: none"> • Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus; project will remove some open space adjacent to the grounds building • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> • No mitigation necessary
11. Entry Improvements	<ul style="list-style-type: none"> • Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life • Project is intended to facilitate safer entrance and egress at campus entrances, and improve the visual aesthetics of the entrances to the benefit of the community and the campus. 	<ul style="list-style-type: none"> • No mitigation necessary

Table 3.13-5. Summary of Potential Impacts to Community Character and Mitigation Options.

Project	Potential Impacts	Mitigation
12. Bus Rapid Transit	<ul style="list-style-type: none"> • Open Space and Recreation – no significant impacts associated with open space and recreation, either on or off campus; project will remove small amount of open space for construction of bus shelter • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life • Enhanced availability of mass transit intended to reduce traffic volume on campus 	<ul style="list-style-type: none"> • No mitigation necessary
13. Bicycle-Pedestrian Path	<ul style="list-style-type: none"> • Open Space and Recreation – no significant adverse impacts associated with open space and recreation, either on or off campus; project will facilitate safer use of campus for students, faculty, staff, visitors and recreational walkers and bicyclists from surrounding community • Environmental Justice – no significant impacts associated with environmental justice; project will not adversely impact off-campus socioeconomics, demographics, or quality of life 	<ul style="list-style-type: none"> • No mitigation necessary

3.14. Solid Waste

3.14.1. Existing Conditions

In Albany County, solid and hazardous waste management services are provided by private contractors. Contractors pick-up wastes and are responsible for transporting and disposing of such wastes at appropriately permitted facilities. Several waste management facilities exist within the area. In addition, UAlbany operates a very active recycling program that is one component of its “Go Green” sustainability initiative (<http://www.albany.edu/gogreen/>, November 11, 2009). The University disposes of approximately 2,500 tons of garbage per year. In the 2007-08 academic year, it recycled 302.93 tons of mixed paper, 6.32 tons of co-mingled product (glass, plastic, tin), 40.37 tons of scrap metal, 1.6 tons of tires, 5.88 tons of computers, and 1/2 tons of batteries. (<http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml>, November 11, 2009).

3.14.2. Potential Impacts

The projects in the Capital Project Plan will generate solid waste consisting primarily of office waste. Refuse will be containerized and stored prior to hauling off-site to a permitted waste management

facility; the University's waste currently is transported to Albany County's Rapp Road Landfill for disposal. It is anticipated that the all of the projects in the Capital Project Plan will generate solid waste as part of their respective construction activities. The projects that will contribute to the solid waste load of the campus while in operation will be:

- Project No. 1 - Student Housing Project
- Project No. 2 – Campus Center Master Plan
- Project No. 3 – Construct New Business School Building
- Project No. 4 - Relocate Data Center
- Project No. 5 – Implement Various Athletics Improvements (specifically, the Multi-Use Athletic Facility)
- Project No. 9 – Multi-Discipline Science Surge Building
- Project No. 10 – Service Building Renovation.

Generally, these facilities will utilize 10-yard containers for daily weekday non-recyclable trash pickup, or other size containers, as are appropriate to the building and use. Regular waste pick-ups will be scheduled to minimize waste accumulations. As such, no significant adverse impacts relating to solid waste management were identified.

3.14.3. Mitigation

Construction phase. As part of SUNY's efforts to achieve LEED certification for individual projects, where appropriate, the following performance criteria related to construction methods and materials have been identified as options for these projects:

- evaluate material selection for interior and exterior building materials for recycled content and local material
- evaluate interior material selection for indoor air quality impacts
- divert construction and land clearing debris from landfill disposal
- redirect recyclable-recovered resources back to the manufacturing process
- redirect reusable materials to appropriate sites.

Operational phase. Wastes will be stored in an enclosed, lidded facility prior to transportation and management off-site. Waste oil and other fluids and materials (*i.e.*, tires, batteries) generated from vehicle maintenance activities will be stored appropriately and disposed off-site in accordance with applicable regulations. In addition, UAlbany will be required to comply with state initiatives aimed at reducing wastes and promoting reuse. These initiatives include Executive Order No. 142, which establishes waste reduction and recycling initiatives for state agencies.

Summary

The following table presents a summary of the potential environmental impacts to solid waste of the implementation of individual projects, in the Capital Project Plan, and available mitigation of these impacts, as appropriate.

Table 3.14-1. Summary of Potential Impacts to Solid Waste and Mitigation Options.

Project	Potential Impacts	Mitigation
1. Student Housing Project	<ul style="list-style-type: none"> No significant adverse impacts associated with solid waste management anticipated Options available to minimize solid waste generation and to divert materials away from landfills consistent with campus' recycling and sustainability program (http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml) 	<ul style="list-style-type: none"> Solid waste, consisting predominantly of typical residential trash, will be stored in an enclosed, lidded unit prior to transportation and management off-site. During the construction phase, contractors will be required to identify performance criteria related to construction methods and materials, which include: <ul style="list-style-type: none"> an evaluation of material selection for interior and exterior building materials for recycled content and local material diversion of construction and land clearing debris from landfill disposal redirecting recyclable-recovered resources back to the manufacturing process redirecting reusable materials to appropriate sites. As the Student Housing Project is intended to reduce over-crowding and to facilitate renovation of other housing units on campus, there will be little net increase in on-campus solid waste generation
2. Campus Center Master Plan	<ul style="list-style-type: none"> No significant adverse impacts associated with solid waste management anticipated Options available to minimize solid waste generation and to divert materials away from landfills consistent with campus' recycling and sustainability program (http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml) 	<ul style="list-style-type: none"> Solid waste, consisting predominantly of typical office trash, will be stored in an enclosed, lidded unit prior to transportation and management off-site. During the construction phase, contractors will be required to identify performance criteria related to construction methods and materials, which include: <ul style="list-style-type: none"> an evaluation of material selection for interior and exterior building materials for recycled content and local material diversion of construction and land clearing debris from landfill disposal redirecting recyclable-recovered resources back to the manufacturing process redirecting reusable materials to appropriate sites.

Table 3.14-1. Summary of Potential Impacts to Solid Waste and Mitigation Options.

Project	Potential Impacts	Mitigation
3. Construct New Business School Building	<ul style="list-style-type: none"> No significant adverse impacts associated with solid waste management anticipated Options available to minimize solid waste generation and to divert materials away from landfills consistent with campus' recycling and sustainability program (http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml) 	<ul style="list-style-type: none"> Solid waste, consisting predominantly of typical office trash, will be stored in an enclosed, lidded unit prior to transportation and management off-site. During the construction phase, contractors will be required to identify performance criteria related to construction methods and materials, which include: <ul style="list-style-type: none"> an evaluation of material selection for interior and exterior building materials for recycled content and local material diversion of construction and land clearing debris from landfill disposal redirecting recyclable-recovered resources back to the manufacturing process redirecting reusable materials to appropriate sites.
4. Relocate Data Center	<ul style="list-style-type: none"> No significant adverse impacts associated with solid waste management anticipated Options available to minimize solid waste generation and to divert materials away from landfills consistent with campus' recycling and sustainability program (http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml) 	<ul style="list-style-type: none"> Solid waste, consisting predominantly of typical office trash, will be stored in an enclosed, lidded unit prior to transportation and management off-site. During the construction phase, contractors will be required to identify performance criteria related to construction methods and materials, which include: <ul style="list-style-type: none"> an evaluation of material selection for interior and exterior building materials for recycled content and local material diversion of construction and land clearing debris from landfill disposal redirecting recyclable-recovered resources back to the manufacturing process redirecting reusable materials to appropriate sites.

Table 3.14-1. Summary of Potential Impacts to Solid Waste and Mitigation Options.

Project	Potential Impacts	Mitigation
5. Implement Various Athletics Improvements	<ul style="list-style-type: none"> No significant adverse impacts associated with solid waste management anticipated Consistent with the nature of events scheduled at the stadium, anticipated attendance and potential tailgating, litter and recycling collection will be provided at parking lots to minimize litter on campus and as vehicles leave on-campus and off campus parking lots. Options available to minimize solid waste generation and to divert materials away from landfills consistent with campus' recycling and sustainability program (http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml) 	<ul style="list-style-type: none"> Solid waste, consisting predominantly of typical office trash and waste from concessions during athletic events, will be stored in an enclosed, lidded unit prior to transportation and management off-site. During the construction phase, contractors will be required to identify performance criteria related to construction methods and materials, which include: <ul style="list-style-type: none"> an evaluation of material selection for interior and exterior building materials for recycled content and local material diversion of construction and land clearing debris from landfill disposal redirecting recyclable-recovered resources back to the manufacturing process redirecting reusable materials to appropriate sites.
6. Purple Path Continuation	No significant adverse impacts associated with solid waste management anticipated – minimal amounts of solid waste generated during construction, none during operation.	• No mitigation necessary
7. Northern Landscape Improvement Project	No significant adverse impacts associated with solid waste management anticipated – minimal amounts of solid waste generated during construction, none during operation.	• No mitigation necessary
8. State Quad Parking Lot Expansion	No significant adverse impacts associated with solid waste management anticipated – minimal amounts of solid waste generated during construction, none during operation.	• No mitigation necessary

Table 3.14-1. Summary of Potential Impacts to Solid Waste and Mitigation Options.

Project	Potential Impacts	Mitigation
9. Multi-Discipline Science Surge Building	<ul style="list-style-type: none"> No significant adverse impacts associated with solid waste management anticipated Options available to minimize solid waste generation and to divert materials away from landfills consistent with campus' recycling and sustainability program (http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml) 	<ul style="list-style-type: none"> Solid waste, consisting predominantly of typical office trash, will be stored in an enclosed, lidded unit prior to transportation and management off-site. During the construction phase, contractors will be required to identify performance criteria related to construction methods and materials, which include: <ul style="list-style-type: none"> an evaluation of material selection for interior and exterior building materials for recycled content and local material diversion of construction and land clearing debris from landfill disposal redirecting recyclable-recovered resources back to the manufacturing process redirecting reusable materials to appropriate sites.

Table 3.14-1. Summary of Potential Impacts to Solid Waste and Mitigation Options.

Project	Potential Impacts	Mitigation
10. Service Building Renovation	<ul style="list-style-type: none"> No significant adverse impacts associated with solid waste management anticipated Options available to minimize solid waste generation and to divert materials away from landfills consistent with campus' recycling and sustainability program (http://www.albany.edu/gogreen/recycling-and-waste-reduction.shtml) 	<ul style="list-style-type: none"> Solid waste, consisting waste from maintenance and repair activities, which may include cardboard, oils, paints solvents, scrap metal; it will be stored in an enclosed, lidded unit prior to transportation and management off-site. Wastes may include hazardous wastes (e.g., cleaning solvents, paints) to be managed in accordance with state and federal hazardous waste regulations; UAlbany is subject to regulations as a large quantity generator of hazardous wastes. During the construction phase, contractors will be required to identify performance criteria related to construction methods and materials, which include: <ul style="list-style-type: none"> an evaluation of material selection for interior and exterior building materials for recycled content and local material diversion of construction and land clearing debris from landfill disposal redirecting recyclable-recovered resources back to the manufacturing process redirecting reusable materials to appropriate sites.
11. Entry Improvements	No significant adverse impacts associated with solid waste management anticipated – minimal amounts of solid waste generated during construction, none during operation.	<ul style="list-style-type: none"> No mitigation necessary
12. Bus Rapid Transit	No significant adverse impacts associated with solid waste management anticipated – minimal amounts of solid waste generated during construction, none during operation.	<ul style="list-style-type: none"> No mitigation necessary

Table 3.14-1. Summary of Potential Impacts to Solid Waste and Mitigation Options.

Project	Potential Impacts	Mitigation
13. Bicycle-Pedestrian Path	No significant adverse impacts associated with solid waste management anticipated – minimal amounts of solid waste generated during construction, none during operation.	<ul style="list-style-type: none">• No mitigation necessary

3.15. Summary of Potential Significant Environmental Impacts and Mitigation Options

The table in Appendix G provides a summary of the potential impacts noted in the preceding text, and the common mitigation options. The potential significant environmental impacts were derived from an evaluation of the respective project parameters as presented in Table 1.4-1 and the environmental baseline information in the preceding Section 3.

4. Unavoidable Adverse Environmental Impacts

4.1. Nature of Impacts

Potential unavoidable adverse environmental impacts may result as a consequence of the Capital Project Plan. While Section 3 identifies potential construction- and operational-related impacts and mitigation, certain adverse impacts cannot be fully avoided. Based on the information provided in Section 3, none of the unavoidable adverse environmental effects identified in this section are considered significant and will be mitigated as discussed in the previous Section.

4.2. Construction Phase

The presence of construction activities is a common element of daily life on the UAlbany Uptown Campus. As noted in this document, the Uptown Campus was constructed largely in the 1960s. In recent years, there has been the construction of capital projects, including new buildings, as well as a constant program of rehabilitation of facilities and infrastructure. Appendix J presents an estimate of the number of construction and personal vehicles of construction workers that would be expected on campus for the respective projects in this Capital Project Plan, sequenced over the planning period, assuming project schedules with various levels of certainty that remain, at this time, speculative.. The busiest point in the anticipated schedule would be the 2011 calendar year, when over 300 vehicles, approximately 72% of which will be personal vehicles of construction workers, will be entering and leaving campus daily. The numbers of construction vehicles reflects the number of daily trips over the daily construction work day, while the personal vehicles of the workers largely will enter and leave the campus at the beginning and end of the work day.

To provide context, the Uptown Campus has approximately 6000 vehicles on campus per day. In a worst case scenario, such as Fall 2011 (see Appendix J) 318 total additional vehicles would represent a five percent increase. Additionally, construction worker activity, too, usually occurs prior to the 8:30-9:30 am and 4:30-5:30 peak times, which would further minimize this impact.

Potential unavoidable adverse environmental impacts as a result of construction phase activities associated with the Capital Project Plan include:

- short-term disruption and exposure of soils as a result of excavation, grading, and restoration activities
- increased potential for sedimentation and erosion as a result of disruption and exposure of soils
- consumption of petroleum hydrocarbon fuels during construction phase activities and the subsequent release of air pollutants and GHGs, including carbon monoxide, particulate matter, carbon dioxide, and nitrous oxide
- potential short-term and localized increases in dust and vehicle/equipment emissions due to construction activities
- temporary construction-related noise
- increased traffic on campus due to the personal vehicles of construction workers; this will occur concurrent with traffic peaks on campus at the beginning and end of the work day

- increased truck traffic on campus from construction vehicles which is anticipated to be the 2011-2012 academic year.

The potential unavoidable adverse environmental impacts identified above will be temporary in nature and limited in scope. UAlbany has a staging plan to mitigate to an extent the impacts of construction, and will utilize a routing plan presently in preparation to minimize on campus traffic impacts.

4.3. Operational Phase

Potential unavoidable adverse environmental impacts as a result of operational phase activities associated with the Capital Project Plan include:

- commitment of previously undeveloped land on the Uptown Campus for implementation of components of the Capital Project Plan
- modification or loss of existing terrestrial and forested habitats, vegetative cover, and landscaped open space as a result of implementation of the Capital Project Plan
- displacement of wildlife associated with existing habitats
- potential for increased surface runoff as a result of an increase in impervious surfaces
- consumption of petroleum hydrocarbon fuels and the subsequent release of air pollutants and GHGs, including carbon monoxide, particulate matter, carbon dioxide, and nitrous oxide
- noise and lighting impacts to surrounding residential neighborhoods resulting from the development of one or more of these projects in proximity on the Uptown Campus, particularly the Student Housing Project (Project No. 1)
- localized and short-term increase in traffic levels along roadways in the vicinity of the Uptown Campus during normal campus activities and during periodic, recurring events including sporting events at the multi-use stadium.

The potential unavoidable adverse environmental impacts identified above are not anticipated to be significant. Appropriately designed and implemented mitigation measures, as detailed in Section 3, will minimize the potentially unavoidable adverse environmental impacts associated with the implementation of the Capital Project Plan, as presented herein and summarized in the table in Appendix G.

5. Irreversible and Irretrievable Commitment of Resources

5.1. Land

Implementation of the project would require the irreversible and irretrievable commitment of resources from the land. Raw materials such as sand, gravel and other land resources will be utilized during the site preparation and construction activities associated with the Capital Project Plan.

In addition, the construction of new buildings and facilities, including the Student Housing Project, school of business building, data center building, multi-use stadium, and additions to the footprints of existing buildings will require the commitment of approximately 15 acres of land (see Table 1.4-1), the exact amount of which will be dependent on the final design of these projects.

The following table summarizes the potential irreversible and irretrievable commitment of land from specific projects.

Table 5.1-1. *Projects involving potential irreversible and irretrievable commitment of land.*

Project Name	Commitment of Land
1. Student Housing Project	X
2. Campus Center Master Plan	X
3. Construct New Business School Building	X
4. Relocate Data Center	X
5. Implement Various Athletics Improvements	X
6. Purple Path Continuation	X
7. Northern Landscape Improvement Project	
8. State Quad Parking Lot Expansion	X
9. Multi-Discipline Science Surge Building	X
10. Service Building Renovation	X
11. Entry Improvements	
12. Bus Rapid Transit	
13. Bicycle-Pedestrian Path	X

The use of currently undeveloped land for the implementation of Capital Project Plan components will modify the existing terrestrial and forested habitats. The natural habitat, including vegetative cover and food sources of native plant and animal species, will be altered. As discussed in Section 3.6.1, based on a site habitat survey at the location of the Student Housing Project (Project No. 1), rare, threatened and endangered plant and animal species have not been identified in that area. Other projects in the Capital Project Plan will be sited on developed locations (such as the Business School on the site of the present Visitor's Parking Lot), or on presently landscaped areas or lawns; available information, as referenced herein, does not indicate that these urban scapes contain habitat for rare, threatened or endangered species.

Construction-related activities will also result in the alteration of native soils and site topography. The construction of the building foundation and basement will alter subsurface conditions. Rock and soil fill for foundations and other construction-related activities will be transferred between on-site and off-site sources. The modification of surface and subsurface conditions at the proposed site is irreversible for the life of the project.

5.2. Materials

Typical of construction and development projects, natural and man-made materials will be consumed during the construction and operational phases of the Capital Project Plan. Materials will be utilized directly during on-site construction and operation of the Capital Project Plan, as well as indirectly in the transportation of other materials, services, and people to the site. Construction of the proposed facility will utilize materials such as lumber, petroleum products, iron ore, and other minerals.

In addition to the removal of existing vegetative cover from the site in preparation for construction, lumber will be utilized in the construction and daily operation of the facility in products such as construction materials, flooring, furniture and office products.

Implementation of the project would require the irretrievable commitment of resources such as petroleum products, iron ore, and other minerals. Resources such as fuel, oils and building materials will be consumed during both the construction and daily operational activities at the proposed facility. Additionally, the transportation of materials and construction works to and from the proposed project site will consume these resources.

As noted in Section 3.6.3., construction and operational phase activities will utilize methodologies and mitigation techniques with the objective of reducing environmental impacts resulting from GHG production and the commitment of natural resources. Potential measures to be impacted during construction and operational phase activities include:

- Recycling and other sustainable waste management techniques of wastes generated during construction and operational phases
- Use of environmentally conscious building materials, including those produced locally and/or produced from recycled materials
- Diversion of construction, land debris, and recyclable resources from landfill disposal.

5.3. Infrastructure and Services

Implementation of the Capital Project Plan would require the commitment of additional infrastructure and services already supplied to the Uptown Campus including:

- Water for potable, sanitary, and fire protection needs
- Sanitary sewer and treatment capacity
- Electricity and natural gas
- Solid waste management facility capacity
- Police and fire protection services
- Roadway service capacity.

Based on the evaluation provided in this DGEIS, the commitment of resources is not expected to result in significant adverse impacts and is expected to be offset by a long-term series of campus buildings which will be taken off-line for interior renovations.

6. Growth Inducing Aspects

6.1. Construction Activities

The proposed implementation of the Capital Project Plan will result in the employment of construction workers to provide support in both general and technical construction activities. It is assumed that regional and New York State-based contractors will perform the majority of the work at the campus. In addition to regional employees, it is assumed that contractors from outside the region with specialized support capabilities will likely provide their services during the construction phase of the Capital Project Plan.

The local economy in the region (the greater Albany County area) will likely experience a sustained boost as a result of construction activities associated with the Capital Project Plan, both with respect to construction employment, and secondary services that support the construction industry. The construction activities are not expected to result in significant growth inducing aspects, but the operational impacts will expand and continue the University's contribution to the regional economy.

6.2. Population

The UAlbany Uptown Campus employs over 5,000 people. Implementation of the Capital Project Plan will necessitate the hiring of a small number of additional employees to serve the anticipated change in campus facilities. Enhancements to the Uptown Campus as a result of the Capital Project Plan may attract additional students, faculty, or staff to relocate to the region; however, significant population growth as a result of the project and the creation of new jobs is not anticipated as much of the Capital Project Plan herein is related to site improvements and surge spaces for future renovation needs.

6.3. Development Potential

Since the Capital Project Plan will primarily be supported by existing UAlbany staff, the proposed Capital Project Plan will not likely induce development within areas such as community, infrastructure, education and support facilities. Construction of the Capital Project Plan components will be implemented in multiple phases over a five plus year planning horizon. Future development has been accounted for in the site selection and design of the Capital Project Plan components to accommodate future on-campus growth needs.

6.3.1. Community

The Capital Project Plan serves as a springboard in meeting the community goals and objectives outlined within the Town of Guilderland Comprehensive Plan. As previously discussed in Section 3.13.1., the Comprehensive Plan establishes a community vision including the University in the following goals and objectives:

1. **Business, Employment, and Fiscal Resources**

Goal: Promote a diverse economic base that provides income, employment and fiscal resources to the community in a manner that is compatible with the future land use plan and character of Guilderland.

Objective: Encourage partnerships with the University at Albany to promote economic development opportunities in the Town.

2. Cultural Resources

Goal: Recognize Guilderland's historic resources and preserve and enhance cultural opportunities in the community.

Objective: Develop closer ties with the University at Albany and increasing community access and awareness of its diverse array of programs and facilities.

3. Recreation

Goal: Provide sufficient, well-located, and affordable, active and passive recreational opportunities for all Guilderland residents.

Objective: Work with other municipalities, the school districts, the YMCA, the University at Albany, and private recreation providers to maximize year-round recreational opportunities for Town residents, especially youth.

The City of Albany does not yet have a Comprehensive Plan in place, but is currently working on formulating such a plan ; however, the Capital Project Plan is expected to meet the goal "...to create and develop an environment that attracts public and private investment in large-scale transformational development projects that will materially improve the economic well being of the City of Albany" under the *Capitalize Albany* economic development strategy (Capitalize Albany 2005).

Potential development within the surrounding communities of Albany and Guilderland, as spurred by the Capital Project Plan, is consistent with applicable zoning and the Town of Guilderland Comprehensive Plan. However, the potential for additional development is anticipated to be marginal, given the development already in place in the area surrounding the Uptown Campus and the fact that the Capital Project Plan is focused on renovation and surge spaces. Implementation of the project is anticipated to benefit the City of Albany and Town of Guilderland through the development of mutually beneficial relationships.

6.3.2. Infrastructure Improvements

Expansion of utility capacities to facilitate construction and operation of the project is not anticipated; project-related service connections will be installed, with some requiring extension of existing service to the project sites. The Capital Project Plan will necessitate infrastructure improvements on campus. These will include continued repair and upgrade of sewer lines to restore capacity; the potential construction of new water mains and one or more pump stations; and construction and/or expansion of storm water management facilities. As one component of these activities, the University recently completed a root cleaning project on the southern interceptor, restoring capacity that had been lost over the years. Additionally, UAlbany may need to discuss and integrate its infrastructure needs with those of the City of Albany and the Town of Guilderland, especially with respect to wastewater and storm water management.

With respect to the latter, as noted earlier herein, the University at Albany is a member of the Stormwater Coalition of Albany County, a countywide organization made up of 11 towns, villages and cities, with the University serving as the only non-municipal entity. The coalition formed an intermunicipal agreement earlier this year to address storm water issues that are common to them, in response to a federal mandate to control water pollution from storm water runoff as part of the federal Clean Water Act. The University will continue to use this venue as a mechanism to conceptualize solutions to common, and interrelated, storm water management issues among the members.

6.3.3. Educational Opportunities

As one of four SUNY University Centers with undergraduate, graduate, and professional studies, and research opportunities, the Capital Project Plan will allow UAlbany to continue its mission as an internationally recognized public academic and research institution. As previously noted, the campus improvements encompassed by this Capital Project Plan will:

- a) Update academic facilities to meet the needs of current instructional practices
- b) Enhance facilities with the installation of 21st century technology
- c) Upgrade campus infrastructure to meet academic and research needs
- d) Increase the energy efficiency of the campus consistent with its goal of carbon neutrality under the ACUPCC
- e) Complete projects that will improve the quality of life on campus for students, faculty and staff.

The following table summarizes these opportunities from specific projects, keyed to the letters of the preceding items.

Table 6.1-1. *Potential educational opportunities from project implementation.*

Project Name	Educational Opportunities
1. Student Housing Project	b, e
2. Campus Center Master Plan	a, b, e
3. Construct New Business School Building	a, b, c, e
4. Relocate Data Center	b, c, d
5. Implement Various Athletics Improvements	c, b, e
6. Purple Path Continuation	c, d, e
7. Northern Landscape Improvement Project	e
8. State Quad Parking Lot Expansion	c
9. Multi-Discipline Science Surge Building	a
10. Service Building Renovation	c
11. Entry Improvements	c, e
12. Bus Rapid Transit	d
13. Bicycle-Pedestrian Path	d, e

The Capital Project Plan has the potential to enhance relationships between the University and other institutions of higher education, both regionally and nationally in that the Capital Project Plan will provide modern, renovated, and more efficient and attractive facilities. Educational growth opportunities resulting from the proposed facility are anticipated to generate positive impacts for UAlbany and potentially other institutions of higher education.

6.3.4. Support Facilities

The Capital Project Plan is expected to update and enhance the Uptown Campus facilities and infrastructure to meet academic and research needs of the growing University. The community surrounding the Uptown Campus is characterized as a developed urban area with a mixture of residential, commercial, and industrial uses. The Capital Project Plan may facilitate economic growth of existing support facilities in the hotel, retail, and restaurant service sector, as well as in industries and services which interact with the research, educational, and operational needs of a growing major public university. UAlbany is located in close proximity to support and service facilities including conference facilities, day care, retail, food, banks, hotels, and entertainment opportunities.

7. Cumulative Impacts

7.1. Nature of Cumulative Impacts

Cumulative impacts are defined as “...impacts on the environment that result from the incremental or increased impact of an action(s) when the impacts of that action are added to other past, present and reasonably foreseeable future actions” (NYSDEC 1992). As a result, cumulative impacts related to this Capital Project Plan can occur in two ways:

- From interrelationships between one or more projects in the Capital Project Plan – this type of cumulative impact is addressed where appropriate within this DGEIS, and is one objective for addressing the Capital Project Plan pursuant to SEQRA in a generic environmental impact statement.
- From interrelationships with projects in the area of the Uptown Campus for which the University at Albany is not the sponsor, as described following.

7.2. Projects Under Review

In evaluating the development of the project for its cumulative impacts, the project was reviewed in the context of local and state planning efforts associated with other proposed and existing projects in the area:

- Redevelopment of the Harriman State Office Campus
- Continued Development of the Albany NanoTech facilities
- Continued development of the UAlbany Uptown Campus.

Projects that are speculative in nature have not been considered or addressed in this DGEIS.

7.2.1. Harriman State Office Campus Development

As previously indicated, the Harriman Campus contains multiple buildings and 2.8 million square feet of space on 330 acres occupied by numerous state and government agencies including NYSDOT, Department of Civil Service, Department of Labor, Department of Correctional Services, Department of Agriculture and Markets, Department of Taxation and Finance, Office of General Services, and the Department of Education (C.T. Male 2002). Redevelopment of the Harriman Campus into the Harriman Research and Technology Campus is ongoing, with proposals to redevelop and modernize the existing site into an office, technology, and R&D campus, housing both public and private agencies (C.T. Male 2002). The redeveloped campus will introduce state-of-the-art products and technologies, while stimulating local economic development. The existing facilities are located in a prime area for collaboration between state and local government, Albany NanoTech, and University at Albany research opportunities.

The University is represented on the governing board of the development entity for the Harriman Campus. As mentioned previously, UAlbany is discussing the Harriman Campus as a potential site for Project No. 1, Student Housing. Approximately 240 of the 330 acres (73%) on the Harriman Campus is currently vacant; growth will be supported by existing utilities, roads and infrastructure

(C.T. Male 2002). Since the SEQRA process for the Harriman Campus was completed, which included the preparation and public review of a DGEIS, little development has occurred on the campus. However, issues relating to storm water, wastewater collection and traffic may have arisen that may require additional review for proposed projects at this location.

7.2.2. CNSE Albany NanoTech Development

A project to realign Washington Avenue at Fuller Road, and the intersection to the north of the CNSE, has been discussed by various planners. The plans would install a roundabout at that intersection, and the next intersection north. As a result of this re-alignment, a parcel of land may become available on both sides of Fuller Road where the present intersection exists. A 14.4 acre expansion of the land area that will become available on its side of Fuller Road is being planned by CNSE. This project was discussed by representatives of Albany County and CNSE at a public information meeting held on May 8, 2009. The land to the north of Washington Avenue, as presently configured, is University land with limited use. As proposed, a bridge would be constructed for Washington Avenue (two lanes both directions) over Fuller Road, which would go over the roundabout. Estimates provided at the November 2008 meeting were \$23 million for the highway construction.

As currently proposed, the 14.4 acres gained by CNSE would be utilized for the construction of a multi-use, state-of-the-art research and development and education green (eventually zero-energy) facility focused on the development and deployment of nanotechnology-enabled innovations and instructional programs to address a host of critical 21st century challenges and opportunities, including: alternative energy technologies that support the national need to develop renewable, “green” sources of energy; environmentally friendly technologies that offer new paradigms for a clean and sustainable environment; cutting-edge nanobioscience and nanomedicine technologies for vital occupational, public, and environmental health and safety applications; and leading-edge nanoelectronics technologies that offer novel applications for a host of critical industries, including national defense, homeland security, information technology, telecommunications and transportation, among many others.

CNSE potentially would create a new entrance on Fuller Road just south of the CESTM Building. Also, going east on Washington Avenue, there would be an entrance just north of the employee parking lot along Washington Avenue.

The May 2008 newspaper article indicated that project elements being considered are “a complete reconstruction of the Fuller Road driving surface,” reconstruction of its base, improvement of drainage, installation of a grass and shrub median near Western Avenue to provide a “boulevard” look, construction of sidewalks on both sides of Fuller Road, and 4 ft shoulders for bicyclists.

7.2.3. University at Albany Uptown Campus Development

The proposed Capital Project Plan has been developed to encompass the foreseeable capital needs of the Uptown Campus over a five year planning horizon and is focused on renovations and surge spaces for renovations. The individual projects of the Capital Project Plan are in various stages of planning, with details for some projects considerably less mature than others. Given varying project maturity, the Capital Project Plan will ultimately be implemented using a phased approach. UAlbany’s size and student, faculty, and staff population are not expected to significantly increase as a result of implementing this plan.

7.3. Cumulative Impacts

7.3.1. Land

The type of potential cumulative land impacts are similar in nature to impacts discussed in Section 3.1.2, which generally relate to the disturbance of soils and site topography. The implementation of the Capital Project Plan will directly impact, with anticipated impervious surfaces, a total of approximately 15 acres of land on the Uptown Campus based on the collective footprint of the components in the Capital Project Plan (see Table 1.4-1). This represents approximately 3 percent of the Uptown Campus property.

The University at Albany will mitigate potential impacts utilizing the following, or other appropriate, measures:

- measures to limit soil disturbance
- erosion control and stabilization measures implemented during construction related activities
- measures to limit land clearing and conserve existing topsoil.

The previously noted mitigation measures will minimize short-term impacts during construction. To minimize impacts following construction activities, UAlbany will incorporate storm water control measures into each project to prevent soil erosion.

Implementation of the proposed project in conjunction with the redevelopment of the Harriman Campus and future development of the Albany NanoTech facility and the Uptown Campus is not anticipated to adversely impact the land.

7.3.2. Water Resources

The type of potential cumulative water resource impacts are similar in nature to impacts discussed in Section 3.2.2, which generally relate to sedimentation of surface water, reduction in surface water quality, and impacts to shallow ground water quality and flow.

The University will mitigate potential impacts through the implementation of the following, or other appropriate, measures:

- measures to limit erosion and sedimentation
- adherence to appropriate storm water and surface water pollution prevention procedures
- proper labeling and storage of petroleum/raw material
- proper disposal of construction and operation-related wastes
- implementation of LEED approved mitigation measures.

The University's implementation of proposed mitigation measures should minimize the occurrence of significant adverse environmental impacts on water resources.

7.3.3 Water Supply and Wastewater

The implementation of the proposed projects will increase water supply demand on campus, both for normal potable and non-potable uses. However, the City of Albany Water Department has indicated that the City has the capacity to supply the 112,000 gpd – 140,000 gpd that the campus may need to

serve these projects; that estimated demand assumes no offset for campus academic and student housing facilities that can be taken off line for rehabilitation on a rotating basis over several years, for example, because of the implementation of Project No. 1 (Student Housing Project) and Project No. 10 (Surge Building).

The City of Albany is under consent order with the NYSDEC for certain sections of its system that are tributary to the South Wastewater Treatment Plant (Order on Consent DEC Case No. R4-2008-0912-137, February 12, 2009). The Consent Order was placed on the City as a result of combined sewer overflow (sanitary and storm water contributions) occurrences that create backflows into homes and from manholes onto ground surfaces. The Consent Order establishes a schedule for the City to continue to install backwater valves in affected homes and to locate and reduce specific infiltration and inflow sources. Infiltration occurs when ground water seeps into the sanitary sewer system through cracks or leaks in sewer pipes, and inflow occurs when rainwater is misdirected into the sanitary sewer system instead of storm sewers (examples are: roof leaders, yard and area drains, manhole covers, and cross connections from storm drains). Also, the Krumkill has allegedly experienced storm surges that overflows its banks and eventually backs up into the Woodville Pumping Station, causing heavy downstream flows.

The University is exploring several options with the City of Albany and the Town of Guilderland for connecting its waste water for the Capital Project Plan to municipal sewer systems. There are various options. One option includes connection to the Town of Guilderland; another would be connection to the Albany City lines off Western Avenue; another option is to connect north to City lines; and/or to implement a combination of these actions, amending existing UAlbany waste water connections from existing buildings to provide offsetting actions to target areas of capacity. Western Avenue connections, depending on location, either flow to the Woodville Pumping Station watershed or to the Beaver Creek Trunk Sewer. Although capacity in the two Western Avenue sewers is limited, either connection would be viable, provided that the stipulations in the Consent Order are met. The Consent Order stipulates that the City cannot increase the frequency and duration of combined sewer overflow events that are presently occurring. For the Student Housing Project, the University and its consultants have been discussing options for wastewater discharge to the City's system in a manner that does not contravene the consent orders. Options that have been discussed include:

- evaluating whether and how much sanitary wastewater flows can be discharged to either of these lines without increasing the frequency and duration of overflows.
- evaluating whether the University can redirect sanitary wastewater flows from existing campus buildings to other wastewater collection sewers, such as to the Town of Guilderland or to the Washington Avenue sewer line, the latter which flows to the North Treatment Plant. This option would offset some flows that otherwise would be directed to the two lines that are the subject of the consent orders, providing capacity for wastewater from the Student Housing Project. The North Treatment Plant has adequate capacity for additional sewage flows, as does the collection system tributary to it.
- the design and construction of a sewer line that would transmit sanitary sewage from the Student Housing Project to Washington Avenue, avoiding the affected portion of the City's sewer system completely. This option would necessitate the construction of a force main and pump station to bring the wastewater north over the rise in elevation on the campus, then a gravity sewer to the connection at Washington Avenue.

These discussions are ongoing with City, but reflect the fact that there are a hierarchy of viable options to address wastewater issues from the Student Housing Project. Wastewater from other project locations can be transmitted to either the Town of Guilderland system or the Washington Avenue sewer line, as is done at present.

Other projects in the area of the Uptown Campus with potential implications for water supply or wastewater generation would be related to the NanoTech facilities or the Harriman Campus. Plans at those locations are speculative at this time, although reportedly the next facility at the NanoTech campus will be a zero-discharge facility; therefore, there would be no cumulative impacts with respect to wastewater discharge.

7.3.4. Drainage

Area residents have noted issues in their neighborhoods related to storm water. The naturally-occurring high ground water table condition limits the amount of storm water infiltration to the subsurface. This results in a challenging storm water management issue in the area of the Uptown Campus. The City of Albany also is faced with addressing complex storm water runoff conditions resulting in combined sewer overflows, a situation faced by many older cities in the Northeast and elsewhere in the country. The addition of impervious surfaces from the construction of the facilities contained in the Capital Project Plan will result in the generation of approximately an additional 2.5 million gpd of stormwater based on the 100 year storm (see Table 3.4-2).

As detailed earlier in this document, the University will address storm water through a combination of expanding Pond capacity, proper grading, and localized detention systems, as appropriate and consistent with SWPP and other permitting requirements.

As noted earlier herein, UAlbany is a member of the Stormwater Coalition of Albany County, a countywide organization made up of 11 towns, villages and cities, and the University. The coalition formed an intermunicipal agreement earlier this year to address storm water issues that are common to them, in response to a federal mandate to control water pollution from storm water runoff as part of the federal Clean Water Act. The University will continue to use this venue as a mechanism to conceptualize solutions to common, and interrelated, storm water management issues among the members.

In the DGEIS for the redevelopment of the Harriman Campus (C.T. Male 2002), it was noted that storm water generally infiltrates into the ground due to the relatively level topography. Since the preparation of that document, there has been little development of the Harriman Campus. As development of the Harriman Campus occurs, individual project proponents may have to address storm water control in a more aggressive manner than was considered in 2002 due to the issues relating to storm water that have been raised since that time.

7.3.5. Air

The type of potential cumulative air quality impacts are similar in nature to impacts discussed in Section 3.5.2, which generally relate to dust generation during construction-related activities, stationary source emissions during building operation, mobile source emissions, and indirect emissions.

Air quality mitigation measures will be implemented by the University in addition to compliance with appropriate air permits. UAlbany recently modified its operations to eliminate the use of No. 6 fuel

oil, thereby significantly reducing its air emissions. As indicated by the worst case estimates presented herein of potential air emissions when totaled, based on the needs of the individual projects (burning No. 2 fuel oil full time rather than natural gas, which is the operational plan under the issued state permit), implementation of the proposed plan still will result in significantly fewer air emissions than under UAlbany's previous operations (*i.e.*, using No. 6 fuel oil). Under this highly conservative calculation (see Appendix H), emissions of nitrogen oxides would remain at less than 55% of the levels in the campus' revised permit, while sulfur dioxide would remain less than 33% of permitted emissions. As a result, UAlbany, having reduced its emissions profile even with these projects, in conjunction with the redevelopment of the Harriman Campus and future development of the Albany NanoTech facility and the Uptown Campus is not anticipated to adversely impact the area's air quality.

Therefore, UAlbany with respect to the potential for cumulative impacts from air emissions, the following mitigation measures apply to the Capital Project Plan:

Construction

- construction techniques to minimize fugitive dust
- use of typical construction equipment controls to reduce emissions from fossil fuels.

Mobile source emissions

- the net number of vehicles on campus is anticipated to be essentially the same
- encourage the use of alternative fuel/fuel efficient vehicles and/or alternative forms of transportation (biking, Bus Rapid Transit) as components of the Capital Project Plan to reduce the present impacts of mobile source emissions.

Stationary Source Emissions

- as presented in Appendix H, highly conservative estimates (in favor of the protection of human health and the environment) of emissions from the components of the Capital Project Plan indicate that when all of these sources come on line, the emissions still will be significantly below the level of when No. 6 fuel oil was being used on a regular basis
- with emissions below those prior to 2009, even upon implementation of the Capital Project Plan, UAlbany has taken steps to reduce the potential for cumulative impacts with respect to additional development at the NanoTech facility or at the Harriman Campus.

7.3.6. Climate Change

The type of potential climate change impacts are similar in nature to impacts discussed in Section 3.6.2, which generally relate to construction- and operations-related GHG emissions and decrease in potential carbon sequestration as a result of site clearing activities. As a signatory to the ACUPCC, the University has committed to become carbon neutral by 2050, and is preparing a Climate Action Plan to achieve that goal. Reduction of energy use will be one aspect of the plan, with a concomitant reduction in GHG emissions.

The University will mitigate potential impacts utilizing the following, or other appropriate, measures:

- installation of energy-efficient equipment
- recycling and other sustainable waste management techniques
- purchase of environmentally-conscious products

- use of alternative fuel/fuel efficient vehicles and/or alternative forms of transportation
- replacement of trees and enhanced landscapes
- implementation of LEED approved mitigation measures.

Therefore, implementation of the proposed project in conjunction with the redevelopment of the Harriman Campus and future development of the Albany NanoTech facility and the Uptown Campus is not anticipated to result in significant adverse impacts to climate change.

7.3.7. Plants, Animals, and Habitat

The type of potential cumulative flora and fauna impacts are similar in nature to impacts discussed in Section 3.7.2, which generally relate to modification or loss of site cover and habitat, harassment of wildlife due to construction-related noises and activities, and the fragmentation and degradation of quality of habitat.

The University will mitigate potential impacts utilizing the following, or other appropriate, measures:

- measures to limit erosion and sedimentation
- replacement of trees and restoration of ground cover removed during site clearing and grading activities
- incorporation of compatible native plants into campus landscape and restoration activities.

Based on correspondence with a local researcher, USFWS, and the NYSDEC (Natural Heritage Program), federal- and state-listed rare, threatened, or endangered species are known to exist within Albany County. According to the USFWS, no federally-listed critical habitats exist within the Capital Project Plan area. Additionally, state-mapped wetlands, NWI-mapped wetlands, and New York State CEAs do not exist within the proposed Capital Project Plan boundaries.

A wetland survey performed on the property in the southeast portion of the Uptown Campus, on and adjacent to the location of the Student Housing Project (Project No. 1), noted eight wetland areas (see Appendix C). It is the intent of the University to either avoid these wetlands in the development of the project or, if this is not possible, to obtain a wetland permit from the USACE, supplemented by an appropriate wetland mitigation plan. The University's implementation of proposed mitigation measures such as this should minimize the occurrence of significant adverse environmental impacts on the existing ecological system. Indeed, Project No. 7, the Northern Landscape Improvement Project, will enhance the urban habitat that exists on the Uptown Campus.

Additionally, a habitat survey on the proposed site of the Student Housing Project did not find habitat that would support rare, threatened or endangered species that have been observed in Albany County. Therefore, the Capital Project Plan will not degrade or reduce this valuable habitat in the County.

7.3.8. Aesthetic Resources

The type of potential cumulative aesthetic impacts are similar in nature to impacts discussed in Section 3.8.2, which generally relate to temporary construction-related noise, light, and visual impacts and the potential for additional operations-related noise and light sources in conjunction with increased site visibility. The Harriman Campus has set as its goal the development of buildings for offices and research and development uses. This will potentially alter the aesthetic perception of the

Harriman Campus in that currently landscaped open space will be altered, potentially increasing traffic and noise.

The University will mitigate potential impacts to aesthetic resources utilizing the following, or other appropriate, measures:

- berms
- plantings
- site orientation selection
- ensuring landscaped buffers and earthen berms where possible between the Uptown Campus and neighboring areas
- locate buildings as far from the neighboring residential area as possible
- provide landscaping and banking for noise abatement
- use of noise attenuation devices and/or building materials
- restriction of construction activities to standard workday hours
- use of designated staging areas for material, equipment, and vehicles to reduce the spread of construction activities beyond designated work areas
- minimize clearing of trees and brush surrounding project areas to maintain a buffer.

Implementation of the proposed Capital Project Plan at the Uptown Campus may result in adverse impacts due to the proximity of the Student Housing Project to adjacent neighborhoods, but a mitigation plan, shared with the community, as discussed in earlier sections, will address said impacts.

With regard to the redevelopment of the Harriman Campus, since such redevelopment plans are under discussion, they remain unknown at this time and will likely take place over a 10 to 20 year planning horizon. It is thus difficult to assess the potential for cumulative impacts with that plan. The 2002 DGEIS for the redevelopment of the Harriman Campus concluded that significant adverse cumulative impacts to aesthetic resources relating to the future development of the NanoTech facility and the Uptown Campus were not anticipated.

7.3.9. Cultural, Historic and Archaeological Resources

No cumulative significant adverse impacts on historic and archaeological resources are anticipated. While the vicinity of the UAlbany Campus is considered by NYSOPRHP to be a potential archaeologically sensitive area, the Uptown Campus and the neighboring Harriman and Albany NanoTech campuses have been significantly disrupted from their natural character by the considerable development that has occurred since the 1960s. It is likely that subsurface resources already have been destroyed or, if still present, their context otherwise lost. Future activities to be conducted in identified sensitive areas will be coordinated with the NYSOPRHP to obtain site clearance through the performance of a Phase IA study (and a Phase IB study if necessary) prior to the initiation of construction activities.

7.3.10. Transportation

The nature of potential cumulative impacts on traffic are similar in nature to impacts discussed in Section 3.10.2, which generally relate to impacts to construction- and operations-related traffic patterns and volumes. Three projects in the Capital Project Plan include the construction of parking

spaces Project No.1, Student Housing; Project No. 2, Business School; and Project 8, State Quad Lot. The Student Housing Project will provide 350 spaces for student housing, and is not expected to increase traffic, as these students either currently already reside on-campus or were commuters who will no longer be traveling during peak hours. The two latter projects are intended to replace spaces otherwise lost due to other construction and site improvement plans. Construction-related traffic is addressed in Section 4.2 herein, and anticipated numbers of construction-related vehicles associated with the respective projects over the construction periods are presented in Appendix J.

UAlbany will mitigate potential impacts utilizing the following, or other appropriate, measures:

- implementation of general traffic mitigation measures during construction activities including traffic control and work zone signs, traffic cones, drums, lights, and flagmen
- implementation of maintenance and protection of traffic plans to facilitate traffic flow
- improved access to pedestrian, bicycle, and mass transit opportunities (these mitigation options are defined projects in the Capital Project Plan).

Additionally, the County Route 156 Fuller Road Reconstruction Project and the Washington Avenue/Fuller Road Intersection Project will improve the level of service on roads accessing the Albany NanoTech, facility and the Uptown Campus. These projects are being planned and implemented by the County in recognition of the increase in traffic in the vicinity of UAlbany from a variety of sources, including the University.

Lastly, a traffic study was performed (Delta 2009) at the intersections with campus access points and Washington, Avenue, Fuller Road and Western Avenue; it took into account these projects, particularly the location of the Student Housing Project and its associated student parking in the southeast corner of the Uptown Campus. Current levels of service were not significantly impacted, if at all, based on the study results.

As a result of proposed traffic mitigation measures, significant cumulative adverse impacts related to increases in traffic are not anticipated.

7.3.11. Energy

The energy requirements of the new facilities that comprise the Capital Project Plan would total approximately a cooling load of 2007.5 tons and a heating/hot water demand of 23.95 million Btu/hr. UAlbany has taken a proactive approach to the reduction of energy use, measured in intensity (Btu/sf/yr). This approach is intended to reduce energy use and, as a result, produce a concomitant reduction in energy costs and GHG emissions. An energy action plan was developed by the Facilities Department at UAlbany in 2008 and is currently being implemented. Energy benchmarking was performed based on 2007-08 utility usage and costs to compare the campus' energy usage with national averages, and to provide preliminary estimates of the potential for energy reduction. The University uses about 168,000 Btu/sf/yr and spends about \$3.45/sf/yr on annual utility costs. This energy use intensity is higher than the national average of 120,000 Btu/sf/yr for colleges and universities. Based on the benchmarking exercise and a preliminary audit of Academic Podium buildings performed by the UAlbany Energy Manager, it is estimated that the University can realistically reduce its energy usage by 14% to achieve an energy use intensity of 140,000 Btu/sf/yr and energy costs savings of \$2 million per year. The energy action plan recommends a portfolio approach to achieve the energy cost savings and includes a comprehensive package of measures that encompass energy conservation, energy efficiency projects and renewable energy and cogeneration

technology. Therefore, the University is positioning itself to reduce energy use as measured by intensity.

Additionally, as a signatory to the ACUPCC, the University has committed to become carbon neutral by 2050, and is preparing a Climate Action Plan to achieve that goal. Reduction of energy use will be one aspect of the plan.

There is limited development occurring in the immediate vicinity of UAlbany as of this writing. Energy usage is increasing in residential, commercial and other land use areas due to the continual and growing dependence on electronics. Therefore, in this sense, there is and will be a cumulative impact on energy needs of many of the components of this Capital Project Plan. The University has completed an evaluation of the electrical system infrastructure to determine whether the electrical demand from the components of the Capital Project Plan will necessitate electrical system upgrades due to electrical demand that will exceed the capacity of the infrastructure. It was determined that no upgrades to the electrical infrastructure would be necessary to implement these projects.

7.3.12. Public Health and Safety

The type of potential cumulative impacts related to public health and safety are similar in nature to impacts discussed in Section 3.12.2, which generally relate to the increased need for police, fire and ambulance services during construction and operational phases to serve an anticipated increase in employees and visitors to the campuses.

Measures to mitigate potential significant cumulative adverse impacts to health and safety services include:

- implementation of project-based on-site safety systems
- construction of buildings in accordance with local, state and federal building and fire codes
- coordination with public safety agencies (police, fire, EMS, hospitals) regarding the new facilities,
- coordination with public safety agencies (police, fire, EMS, hospitals) for events at the multi-use athletic facility
- update of emergency planning and response procedures.

Consequently, implementation of the Capital Project Plan in conjunction with redevelopment of the Harriman Campus and future development of the Albany NanoTech and the Uptown Campus is not anticipated to produce significant cumulative adverse impacts related to health and safety issues, including impacts on existing resources.

7.3.13. Community Character and Land Use

The type of potential cumulative impacts related to community character and land use are similar in nature to impacts discussed in Section 3.13.2, which generally relate to consistency with local planning efforts, and sustainability of infrastructure capacities.

Measures to mitigate potential significant cumulative adverse impacts to the community character and existing land uses include:

- coordination between project teams and contractors (*i.e.*, construction staging and schedule) during the construction phase to minimize potential effects on current land uses

- design and construction activities consistent with environmentally sensitive practices, which include conserving land and open spaces while fostering the development of innovative technologies.

Implementation of the proposed Capital Project Plan, in conjunction with the redevelopment of the Harriman Campus and future development of the Albany NanoTech facility and the Uptown Campus are consistent with local development goals and master plans, which promote the research and development of high-end technologies in addition to advancements in higher education and the partnerships between those institutions and area municipalities. Implementation of the Capital Project Plan in conjunction with redevelopment of the Harriman Campus and future development of the Albany NanoTech facility and the Uptown Campus is not anticipated to produce significant cumulative adverse impacts on the community character and land use envisioned for those areas by the municipalities. The redevelopment of the Harriman Campus is not yet underway, but is intended to take place over a 10 to 20 year planning horizon. Little development has occurred since the DGEIS for the Harriman Campus was presented to the public in 2002; therefore, it is difficult to assess the potential for cumulative impacts with that plan, and the status with respect to the original planning horizon.

8. Effects on the Use and Conservation of Energy

8.1. Proposed Energy Sources and Alternatives

The project will use existing energy resources during both construction and operation phases. The implications of the use of energy, as well as potential conservation opportunities are summarized in this section.

The site is serviced by existing underground electrical transmission lines and natural gas mains within existing highway rights-of-way serving the Uptown Campus. Existing infrastructure is sufficient to support the Capital Project Plan and no new power sources are proposed. Service connections will be extended to the project sites.

8.2. Anticipated Short-term/Long-term Levels of Energy Consumption

8.2.1. Short-term Energy Consumption

Construction activities will consume gas, diesel and electricity to power equipment and vehicles. Consumption activities are expected to continue through construction phases, but are not expected to significantly impact existing reserves.

8.2.2. Long-term Energy Consumption

The University has taken a proactive approach to the reduction of energy use, measured in intensity (Btu/sf/yr). This approach is intended to reduce energy use and, as a result, produce a concomitant reduction in energy costs and GHG emissions. An energy action plan was developed by the Facilities Department at UAlbany in 2008 and is currently being implemented. Energy benchmarking was performed based on 2007-08 utility usage and costs to compare the campus' energy usage with national averages, and to provide preliminary estimates of the potential for energy reduction. The University uses about 168,000 Btu/sf/yr and spends about \$3.45/sf/yr on annual utility costs. This energy use intensity is higher than the national average of 120,000 Btu/sf/yr for colleges and universities. Based on the benchmarking exercise and a preliminary audit of Academic Podium buildings performed by the UAlbany Energy Manager, it is estimated that the University can realistically reduce its energy usage by 14% to achieve an energy use intensity of 140,000 Btu/sf/yr and energy costs savings of \$2 million per year. The energy action plan recommends a portfolio approach to achieve the energy cost savings and includes a comprehensive package of measures that encompass energy conservation, energy efficiency projects and renewable energy and cogeneration technology. Therefore, UAlbany is positioning itself to reduce energy use as measured by intensity.

8.3. Indirect Effects on Energy Consumption

The project will result in the following indirect effect on energy consumption, which is not expected to significantly impact existing reserves: use of gasoline, diesel and alternative fuels in motor vehicles traveling to and from the project site. However, the Capital Project Plan incorporates components that will encourage the use of mass transit and non-motorized transportation.

8.4. Energy Conservation Measures

Energy requirements will be consistent with energy policy recommendations established in the 2007 Energy Conservation Construction Code of New York State (NYSDOS 2007). In addition, UAlbany is pursuing a site and facility design strategy that promotes sustainable design practices in support of:

- EO No. 111 (issued June 10, 2001 – directing state agencies to be more energy efficient and environmentally aware: “Green and Clean State Buildings and Vehicles.”)
- EO No. 142 (issued November 21, 2005) – directing state agencies and authorities to diversify transportation fuel and heating supplies through the use of biofuels in state vehicles and buildings.
- EO No. 24, “Establishing a Goal to Reduce Greenhouse Gas Emissions Eighty Percent by the Year 2050 and Preparing a Climate Action Plan.”

The University’s actions with respect to energy and climate change are consistent with these Executive orders, especially EO 24 and EO 111. The steps taken to date that have led to greater energy efficiency comply with EO 111, and the University continues to evaluate opportunities for energy efficiency. Additionally, The University is in the process of preparing a Climate Action Plan as part of its obligations under the ACUPCC; further, its obligation under the ACUPCC is to become carbon neutral by 2050, a stricter threshold than that in EO 24.

Additionally, former Acting SUNY Chancellor John R. Ryan adopted the recommendations of the “Report of the SUNY Energy Strategic Planning Task Force, Recommendations for a University Energy Policy” (March 2007) to “Design and construct new buildings or rehabilitate existing buildings using Leadership in Energy and Environmental Design (LEED) Silver criteria and life-cycle-cost analysis. Energy systems will be designed to maximize efficiency over the life cycle.”

The University has taken a proactive approach to the reduction of energy use, measured in intensity (Btu/sf/yr). This approach is intended to reduce energy use and, as a result, produce a concomitant reduction in energy costs and GHG emissions. An energy action plan was developed by the Facilities Department at UAlbany in 2008 and is currently being implemented. Energy benchmarking was performed based on 2007-08 utility usage and costs to compare the campus’ energy usage with national averages, and to provide preliminary estimates of the potential for energy reduction. The University uses about 168,000 Btu/sf/yr and spends about \$3.45/sf/yr on annual utility costs. This energy use intensity is higher than the national average of 120,000 Btu/sf/yr for colleges and universities. Based on the benchmarking exercise and a preliminary audit of Academic Podium buildings performed by the UAlbany Energy Manager, it is estimated that the University can realistically reduce its energy usage by 14% to achieve an energy use intensity of 140,000 Btu/sf/yr and energy costs savings of \$2 million per year. The energy action plan recommends a portfolio approach to achieve the energy cost savings and includes a comprehensive package of measures that encompass energy conservation, energy efficiency projects and renewable energy and cogeneration technology. Therefore, UAlbany is positioning itself to reduce energy use as measured by intensity.

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