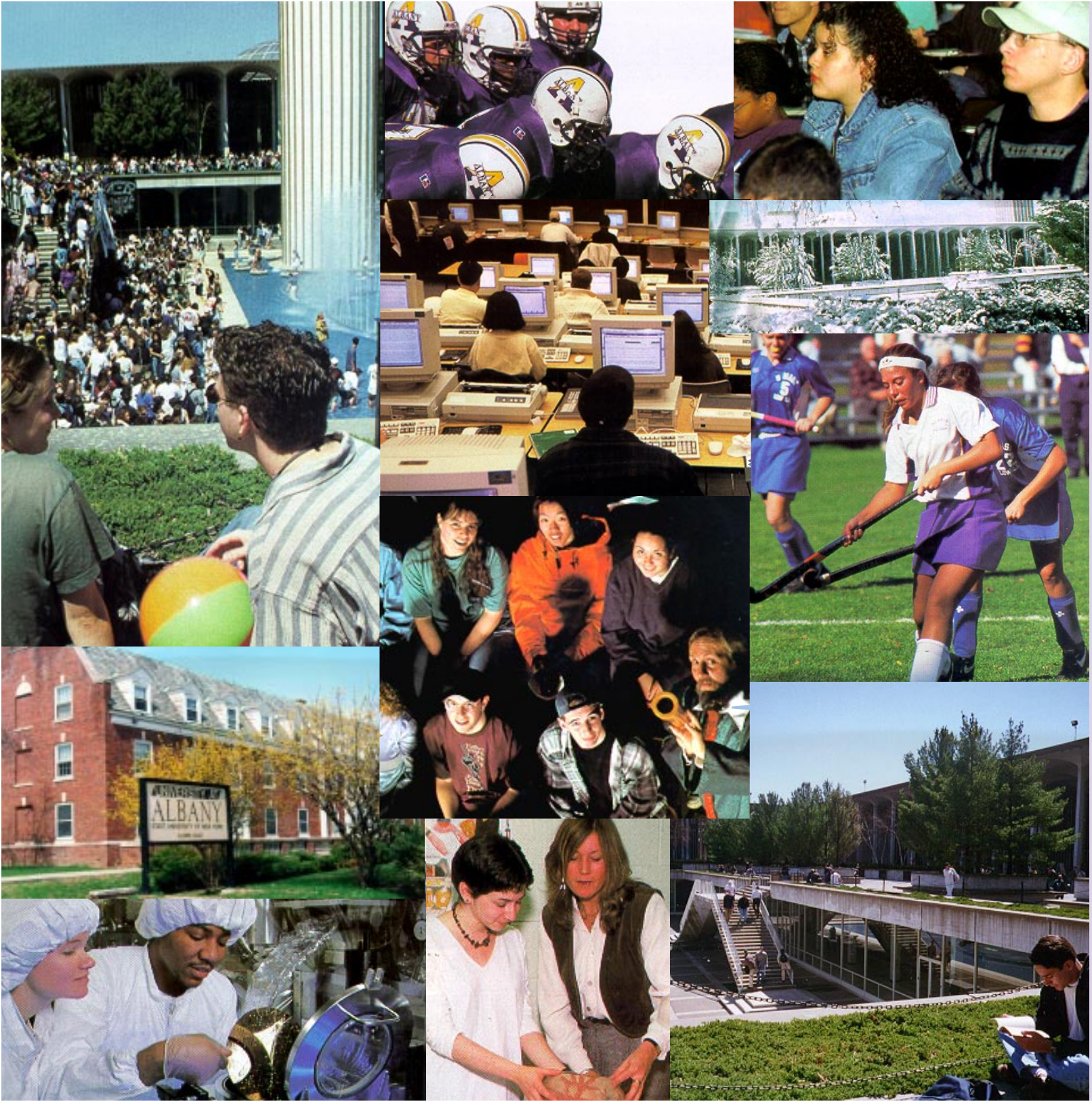

University at Albany

State University of New York

Master Plan Report

March, 1998

Hillier

ALBANY

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Master Plan

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ACKNOWLEDGMENTS

Many persons have contributed to this report. We cannot possibly acknowledge all whose ideas and suggestions have had an influence upon its development, but we do list here those who had a specific, or designated, role to play in its development and contributed significantly on a policy making level, a day-to-day level , or both. We also would like to thank all the people we interviewed and all of those who contributed their ideas at the public forums or through the web site.

Representing the University at Albany SUNY

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Carl Carlucci, Chair	Finance and Business	Steering Committee
James Doellefeld	Student Affairs	Student Support Services
Judy Genshaft	Academic Affairs	Instruct. & Org. Activities
Jeanne Gullahorn	Res./Grad. Studies	Research
Christian G. Kersten	Univ. Advancement	Support Services

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Bill Dosch	Physical Plant	Support Services
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Podium Winter Scene	Maxine Peacock
Technology Scene	Stan Blanchard
Pottery Scene	Mark Schmidt
Podium Summer Scene	The Hillier Group
Students (Lecture)	Mark Schmidt
Students (Telescope)	Joseph Schuyler

UNIVERSITY AT ALBANY MASTER PLAN
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LIST OF MAPS, PHOTOGRAPHS AND SKETCHES

Introduction
History of the University

The University at Albany celebrated its 150th anniversary in 1994. Since its inception in 1844, the University has developed from a Normal School, to a College for Teachers, to a Comprehensive Research University.

The Normal School

The State of New York founded the Normal School in Albany in 1844. The Normal School was a small (200-400 students) two-year institution located in downtown Albany on State Street with the mission of training new, and upgrading existing, common school teachers.

By 1890, the growth of public secondary schools in New York State was creating a demand for secondary school teachers, which required a four-year, rather than a two-year, curriculum. As the School underwent a period of transition, evolving, not so smoothly from a two-year to a four-year curriculum, the School's home on Willett Street was destroyed by fire and a new set of buildings erected on Western Avenue (1909).

The College for Teachers

The Normal School, in its new facility on Western Avenue, was renamed "The New York State College for Teachers" in 1914. This four-year institution developed a curriculum focused on the liberal arts and was supplemented by professional training exclusively for secondary school teachers. Student enrollment varied with demand, but hovered around 1000 until the 1950s when it grew to 2500 (1962).

The University at Albany

A rapid growth in college enrollment in the 1950's led to an expansion of the State University of New York system of higher education. To help meet the growing demands for higher education in the State, the State College for Teachers, in 1962, was given the mission of becoming a University. To meet the substantial existing and projected facility needs of this new emerging University, a new architecturally unique campus was developed, essentially all at once, in the 1960's.

Today, the University at Albany is one of the four Research University Centers in the State University of New York system and has the following characteristics:

- It is a Carnegie Research II University
- It has two main campuses with over 80 non-residential buildings
- It enrolls approximately 11,000 undergraduate and 5,000 graduate students
- It has over 220 degree granting programs including over 100 undergraduate, 83 masters and 38 doctoral.

The rapidly developing research and technological needs of the last decade or so have put severe demands upon the University's facilities which were designed for the needs of the early and mid-nineteenth century. This Master Plan is to assist the University in determining the type and quantity of facilities it will require to meet its mission over the next 10 years and beyond.

Excerpts from the Mission Statement of the University

The purpose of this Master Plan is to support the University in meeting the goals & objectives as articulated throughout its Mission Statement. "One of the four University Centers of the State University of New York, the modern University at Albany emphasizes the integration of teaching, research, creative expression, and public service in its undergraduate, graduate, and professional programs. Its educational mission sustains an intellectual climate in which the research and creative endeavors of the faculty enlarge their sense of inquiry on behalf of their students, so that at all levels students enjoy the stimulation and challenge of engaging in active, rather than passive, learning, and the satisfaction not only of assimilating the inherited wisdom of the past, but also of participating in the creation of new knowledge.

"The University benefits from the campus' location in New York's State Capital in preserving a tradition of addressing significant issues of public policy, which will continue to be an integral aspect of its mission....

"But more fundamentally, the mission of the University at Albany continues to be that of serving as a comprehensive research University wherein graduate programs in the Arts and Sciences and the professions reinforce each other and invigorate the undergraduate experience.....

"....Privileged to serve as a regional center of higher education and an imaginative catalyst for economic development, the University considers the expansion of partnerships with academic, business, cultural, and governmental organizations situated throughout northeastern New York essential to the success of its educational mission. At the same time, the University recognizes that the significant social issues, environmental concerns, and informational challenges confronting today's Americans and their systems of higher education are not exclusively regional in character, and that the opportunities to answer them through shared technology and pedagogy, laboratory research, the application of social and political theory to practice, and improved understanding among cultures are rarely within the domain of one geographic area. Consequently, the University at Albany extends its mission to serve the interests of New York by promoting the University's capacity as a national and international center for scholarship, education, and service, and by engaging in academic and professional programs, well beyond the University's regional borders, which promote knowledge and understanding."

Methodology and Milestones

Need for a Master Plan

Both the Uptown Campus, developed in the 1960s, and the Downtown Campus, developed in the early twentieth century, have grown substantially and have different programs and curricula today than they had originally. It was understood at the beginning of the Master Planning process that the University had outgrown its physical facilities and that research and technology were placing severe demands upon outmoded facilities. The State funds available to satisfy these needs are limited, however, so a Master Plan was required that would make the best use of existing space on campus and clarify the priorities among the various competing needs of the University.

The development of a Master Plan is the first step in the State University Construction Fund's process for implementing both capital and renovation projects. A carefully thought-out Master Plan can also minimize the disruptive effect of construction on campus and can maximize the use of existing space during construction.

To support the University's Mission, it needs to attain Carnegie Research I University status. A Carnegie Research I University is an institution that offers a full range of baccalaureate programs, is committed to graduate education through the doctorate and gives high priority to research. They award 50 or more doctoral degrees each year and receive $40 million or more each year in federal support.

Developing a Consensus

The University at Albany consists of several constituencies with varying views as to what constitutes the most important issues at the University. Therefore, before different alternative concepts were explored, it was important to develop a consensus among these varied points of view. The following means were used to develop a consensus at the University:

- A total of 92 interviews were conducted to gain a sense of the concerns and the desires of all the various constituents of the University, including faculty (teaching and/or research oriented), administration, staff and students.
- Meetings with representatives from the local communities were held to discuss the need for a Master Plan and the potential impacts to the campus and surrounding communities.
- Six open fora and several presentations were held on the Uptown and Downtown campuses, which provided the opportunity for informational exchanges among students, faculty and staff regarding the Master Plan and its impact on the campus facilities.
- A Steering Committee and four Sub-committees were formed. The role of the Steering Committee was to review the Master Plan, on a regular monthly basis as it developed and to help determine the most important issues for the Master Plan to address. The four Sub-committees (Instructional and Organized Activities, Research, Student Support Services and Support Services) represented more specific interests and reported on more specific issues and questions that needed resolution and/or clarification.
- A Goals and Objectives Retreat was held. At this retreat, the issues that had been raised during the interview, inventory and committee review process were discussed and prioritized, by the Steering Committee, into the Goals and Objectives of the Master Plan.

The Steps of the Master Plan Process

The preparation of the Master Plan followed a series of sequential steps beginning in the fall of 1996. The steps and their timing are indicated in the graphic, "Master Plan Process".

The first tasks; the interviews, the establishment of an existing data base, or inventory, and the development of a space program, took place in the fall of 1996 and the winter of '96-'97.

In addition, a categorized list of the most important issues was developed as a basis of discussion for the Steering Committee's Goals and Objectives Retreat, which took place on March 7, 1997.

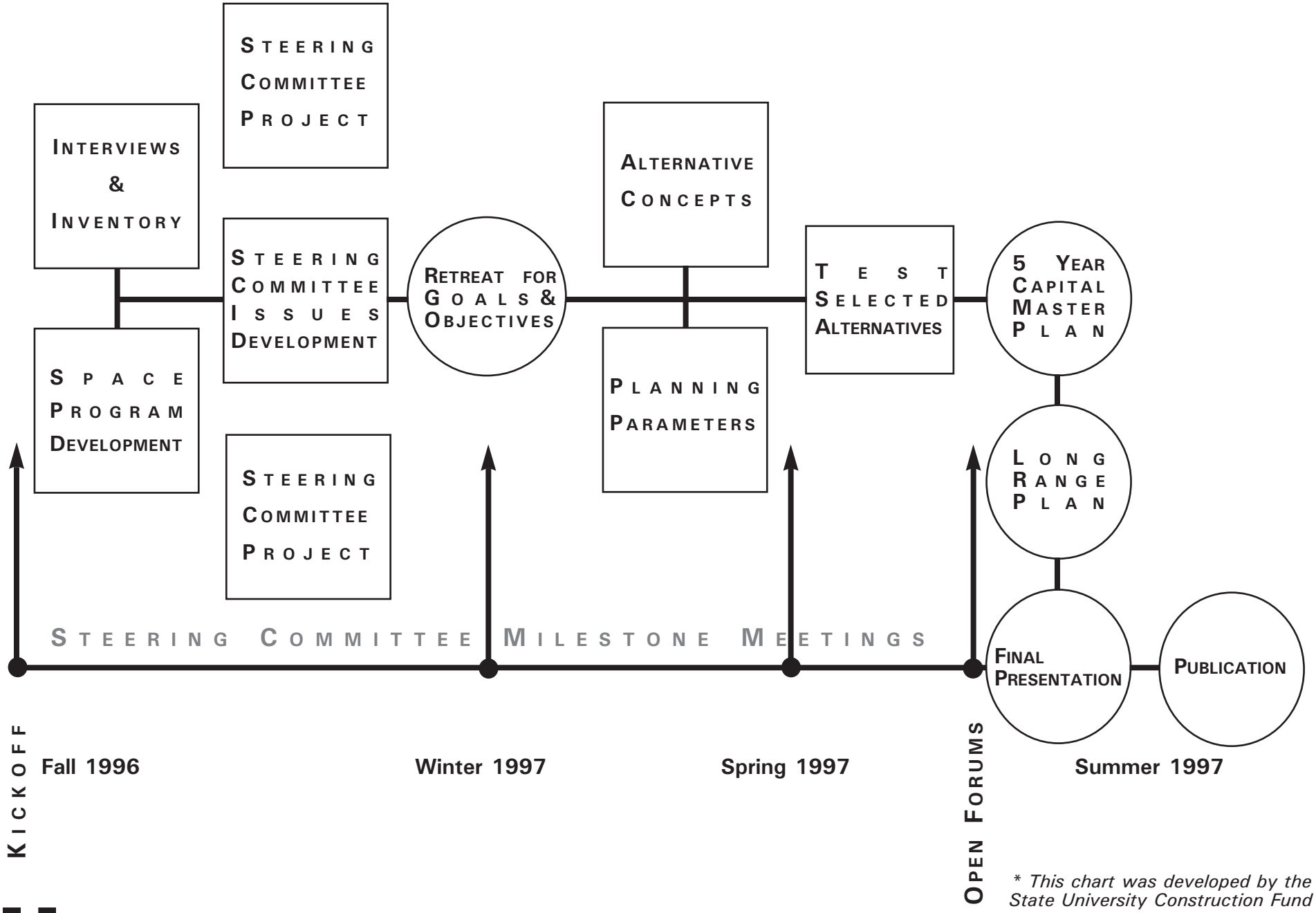
Based upon the Goals and Objectives agreed upon at the Retreat, planning parameters (i.e. a set of guidelines) and several Uptown and Downtown Campus Alternative Concepts were developed and were subjected to regular review by the Steering Committee. The Alternative Concepts phase occurred in the spring of 1997.

Then, one Alternative Concept (with some alternative building sites) was selected for testing (i.e. development of the scheduling and conceptual cost estimates for the Concept's proposed projects). This refining phase took place in the summer of 1997.

The final phase of the Master Plan included the final presentation and the documentation of all the work done to date on the project, including this report.

A separate, parallel strategic planning process has worked along side this process to inform the resulting goals, objectives and recommendations.

Master Plan Process *



** This chart was developed by the State University Construction Fund*

Date: January 7, 1997

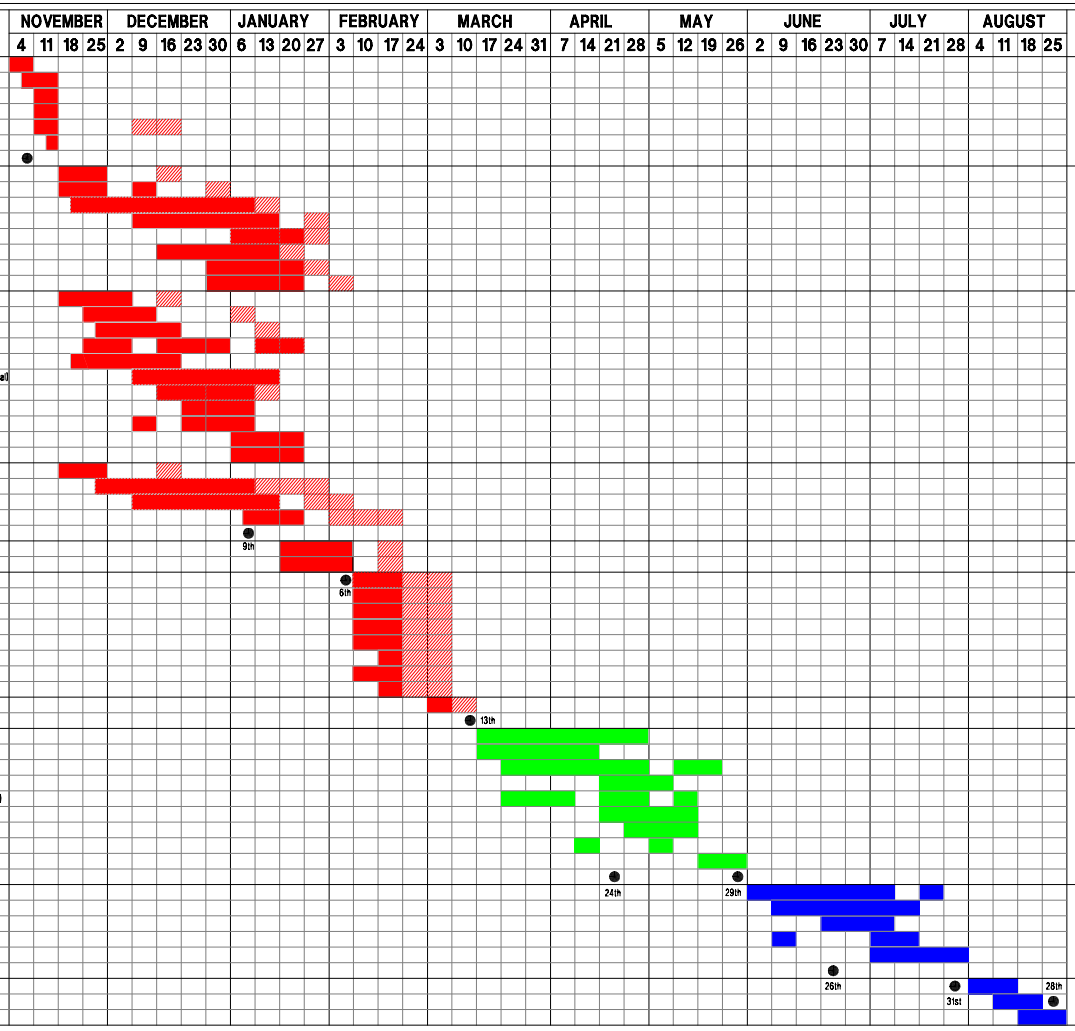
CAMPUS MASTER PLAN - UNIVERSITY AT ALBANY

SUCF # 01512

PROPOSED WEEKLY SCHEDULE

Hillier NEW YORK

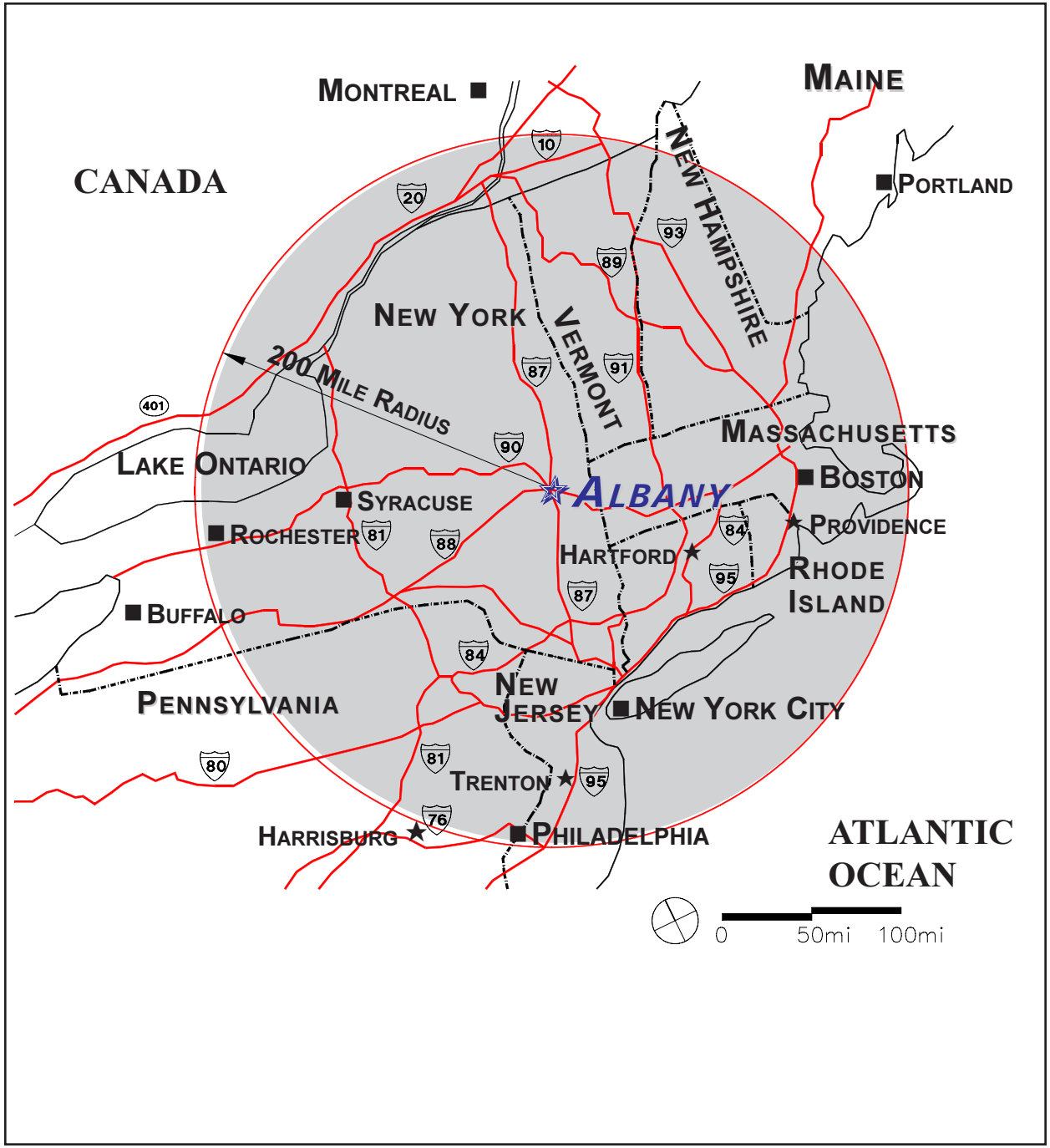
PHASE	TASK		DESCRIPTION
I. INVENTORY & ANALYSIS	1.0 PROJECT INITITATION	1.1	Orientation Meeting
		1.2	Review goals & objectives
		1.3	Prepare schedule
		1.4	Describe means & methods
		1.5	Establish program interview list
		1.6	Establish campus liaison
		1.7	Steering Committee meeting
	2.0 INVENTORY INITITATION	2.1	Assemble plan inventory reports
		2.2	Prepare key plans for survey
		2.3	Physical survey
		2.4	Prepare statistical utilization documentation
		2.5	Prepare updated inventory report
		2.6	Conduct functional analysis
		2.7	Prepare conditions assessment
		2.8	Evaluate building options & constraints
	3.0 SITE ANALYSIS	3.1	Assemble University site utility drawings
		3.2	Assess system capacity
		3.3	Evaluate Central Plant
		3.4	Document and analyze site circulation (pedestrian, parking, service, ADA)
		3.5	Prepare open space assessment (landscape, building massing, etc.)
		3.6	Evaluate adjacent land use (exist. & proposed, landscaping, develop. potential)
		3.7	Inventory of soils, drainage & physiographic conditions
		3.8	Examine external & internal security
		3.9	Review local climate conditions (building & landscaping)
		3.10	Provide updated site survey (buildings, site improvments, utilities)
		3.11	Identify site opportunities and constraints
	4.0 PROG. ANAL.	4.1	Review scope & schedule of interviews with liaison
		4.2	Conduct interviews
		4.3	Comprehensive space requirements analysis by deptartment
		4.4	Program refinements
		4.5	Steering Committee meeting
	5.0 SUMMARY WORKSHOPS	5.1	Goals & objectives workshop
		5.2	Steering Committee workshops
	6.0 GOALS & OBJECTIVES	6.1	Campus setting/background
		6.2	Inventory analysis
		6.3	Site analysis
		6.4	Program & comprehensive space requirements analysis
		6.5	Significance of each factor
		6.6	Summarize key issues & objectives
		6.7	Assessment of proposed program requirements & site/facilities condition
		6.8	Identify primary conceptual directions available
	PRESENTATION	7.0	Goals & objectives presentation meeting
		7.1	Steering Committee meeting
II. CONCEPT ALTERN.	8.0 DEVELOPMENT OF ALTERNATIVES	8.1	Develop 2-4 concepts based on 3,5,&10 year capital funding plan
		8.2	Evaluate architecture, programming, site impact, engineering impact, & cost
		8.3	Prepare phasing scenarios for each concept
		8.4	Prepare presentation materials
		8.5	Site & building accomodations (siting, adaptive reuse, functional organization)
		8.6	Pedestrian & Vehicular Circulation (parking & service, route analysis, etc.)
		8.7	Phasing & Staging (disruption ailysis, surge space)
		8.8	Property analysis (acquisistion/disposition)
		8.9	Greater community issues/impacts
		8.10	Steering Committee meeting
III. MAST. PL. DEVEL.	9.0 MAST. PLAN DEVEL.	9.1	Building Pre-Schematics & Development Plans (plans, sections, etc.)
		9.2	Site design concepts (site plan, signage, planting, seating, lighting, etc.)
		9.3	Capital Plan/Project Costs
		9.4	Phasing
		9.5	Preparation of final presentation
		9.6	Steering Committee meeting
	10.0 MAST. PLAN REP.	10.1	Prepare Draft Report
		10.2	Review & Modify
		10.3	Prepare Final Report



DELIVERABLES
1.0 -Project schedule updated bi-weekly
2.0 -Minutes of all Meetings
3.0 -Coded plans defining space utilization & occupancy
4.0 -Updated SUNY Inventory Report
5.0 -Updated Site Surveys
6.0 -Goals & Objectives Workpaper [6.1-6.8]
7.0 -Goals & Objectives Presentation Meeting
1.0 -Project schedule updated bi-weekly -Minutes of all Meetings 2.0 -Presentation materials 3.0 -Phase II - Technical Memorandum 3.1 Conceptual Plans 3.2 Programmatic analysis 3.3 Evaluations
1.0 -Project schedule updated bi-weekly -Minutes of all Meetings
2.0 -Master Plan Report [2.1-2.6] 3.0 -Phasing/Development Plan

** This "Proposed Weekly Schedule" is developed from and is an extension of the "Master Plan Process" chart and indicates key meetings, duration of task times and deliverables.*

Summary of Inventory & Analysis



Location Map

SUMMARY OF INVENTORY AND ANALYSIS

THE SETTING

Location

The City of Albany, capital of New York, is at a key point in the nation's transportation network because of its location at the point where Interstate 87 and Interstate 90 intersect.

Albany's traditional tie to the south to New York City, has been extended to the north to Montreal via the Northway (Interstate I-87) and its historic tie to the west to Buffalo and beyond has been extended to the east to Boston via I-90 and the Massachusetts Turnpike.

The accompanying "Location Map" shows Albany's location within New York state and the interstate highway network. As can be seen, a 200 mile radius circle centered at Albany reaches Boston (and all of New England's major cities) to the east, Philadelphia to the south, Rochester to the west and almost to Montreal to the north.

The 200 mile radius shown on the Location Map is not meant to suggest a limit to the reach of the University's influence, however. With goals to become a Carnegie Research I University and to increase and strengthen its undergraduate and graduate programs, it is expected that the University at Albany will continue to attract faculty and students from an international, as well as national, base.

The Region

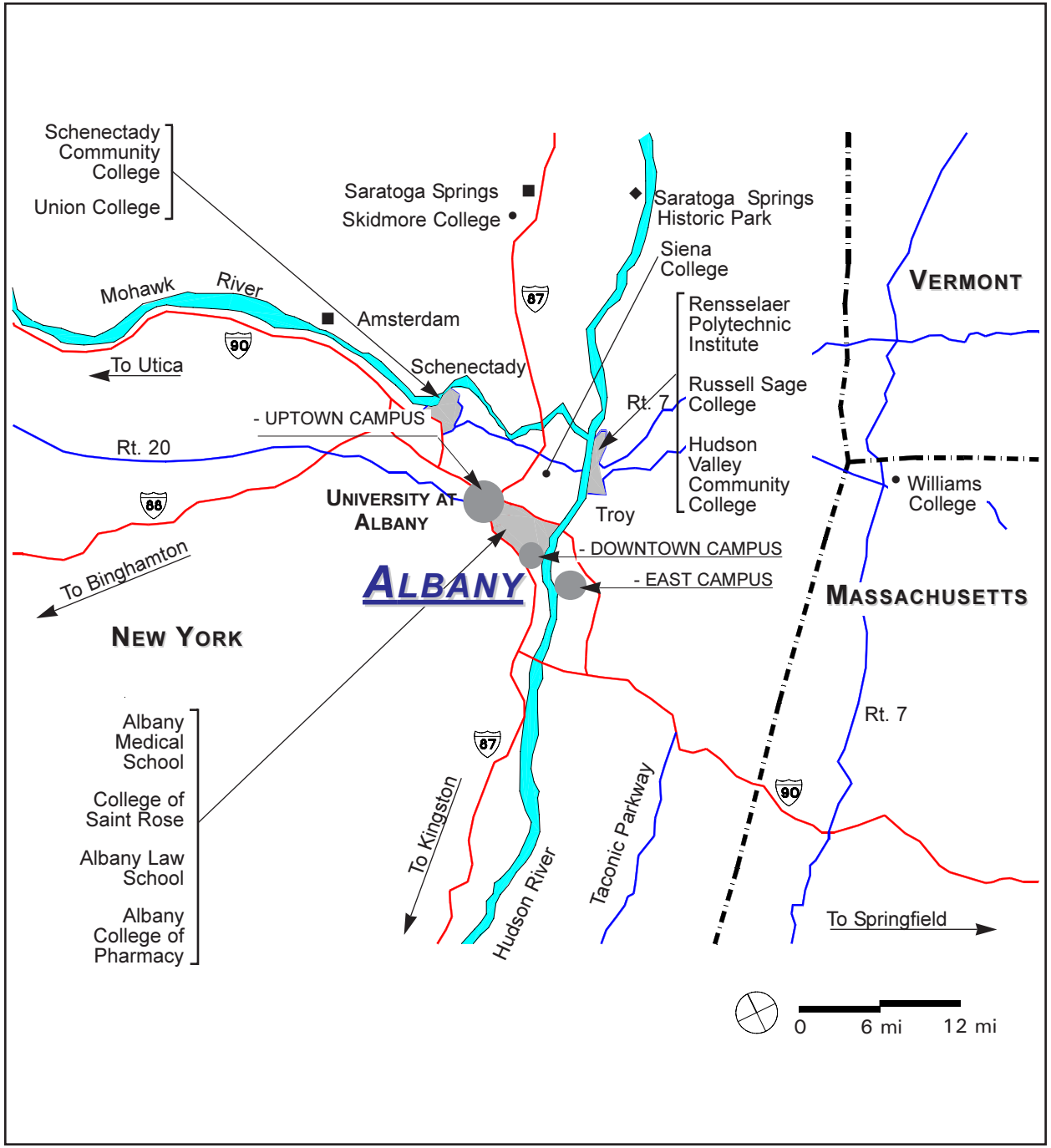
The tri-city area of Albany, Schenectady and Troy comprises the largest population center between New York City and Montreal on a north-south axis and between Syracuse and Hartford-Springfield on an east-west axis. Albany is not only the center of the State Government, but also is in an area with many recreational-cultural opportunities relatively nearby including skiing, horse racing, historic sites, health spas, music festivals, caverns and museums.

Of major importance to the University's role as the largest institution of higher education and research in the region, however, is the presence of many other higher education partners nearby including: the Albany Medical School, the Albany Law School, the Albany College of Pharmacy and the College of Saint Rose in Albany; Rensselaer Polytechnic Institute, Russell Sage College and Hudson Valley Community College in Troy; the Schenectady Community College and Union College in Schenectady and Skidmore College, Siena College and Williams College in surrounding communities within an hour's drive.

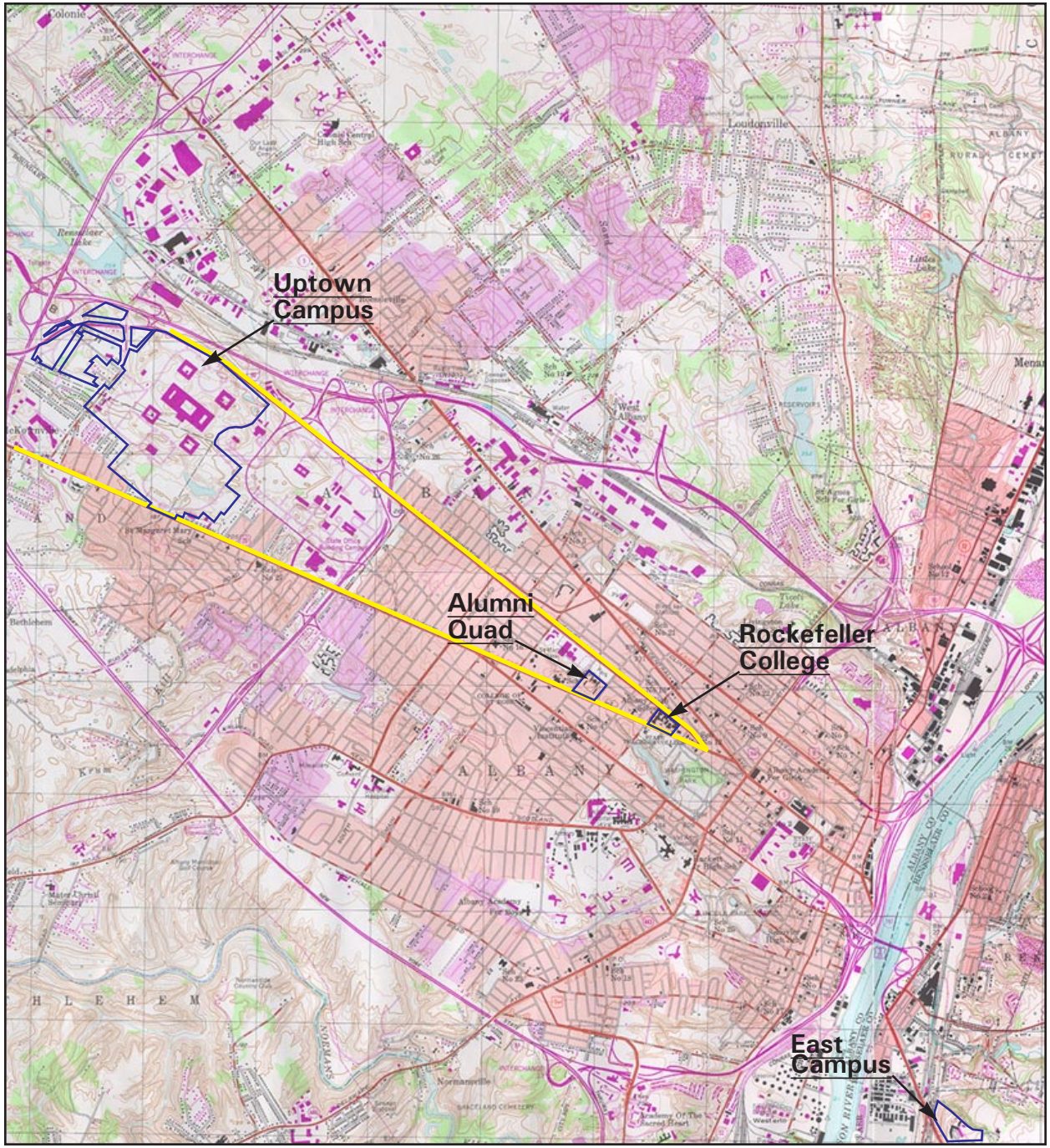
These schools and colleges, combined with Albany's governmental role, its strong regional highway network, its regionally significant population base and the year round recreational-cultural activities, provide a broad base upon which the University plans to increase its overall size, the proportion of its graduate students and its role in research.

The Albany Metropolitan Area

The two main campuses of the University are in Albany, itself. The Uptown Campus is in a somewhat suburban location in western Albany and the Downtown Campus (originally the New York State College for Teachers) is within a few blocks of Empire Plaza and the State Capitol. The two campuses are about



Regional Map



Composite Campus Map

four miles apart and are linked by two arterial east-west streets, Washington Avenue to the north and Western Avenue (routed as US Route 20, the historic road to Buffalo) to the south. The main entrance to both Rockefeller College and Alumni Quad on the Downtown Campus is from Western Avenue, whereas the main entrance of the Uptown Campus is off of Washington Avenue. The University also owns 423 State Street, a townhouse a few blocks west of Rockefeller College, which the University uses occasionally for meetings and small ceremonial functions.

The additional facilities used by the University include the Art Annex (Sculpture Studio) on Railroad Avenue, 1535 Western Avenue, and the East Campus, fifteen minutes away in the community of East Greenbush.

UPTOWN AND DOWNTOWN CAMPUSES

The University at Albany is a University Research Center, one of four in the State University of New York (SUNY) system. The University at Albany (the University) established in 1844, is the oldest state chartered institution of higher education in New York. The University is a Carnegie Research II Institution and has approximately 16,000 students enrolled in its eight degree-granting Schools and Colleges:

- College of Arts and Sciences
- School of Business
- School of Education
- School of Public Health
- Graduate School of Public Affairs
- School of Criminal Justice
- School of Information Science and Policy
- School of Social Welfare

UPTOWN CAMPUS

The vast majority of the University's facilities are in one of two locations, either "Uptown" or "Downtown". The Uptown Campus is sited on 505 acres and includes the College of Arts and Sciences, the School of Business and the School of Education. Most of the undergraduate students attend classes at the Uptown Campus where Freshmen and Sophomores are required to live.

Site Characteristics

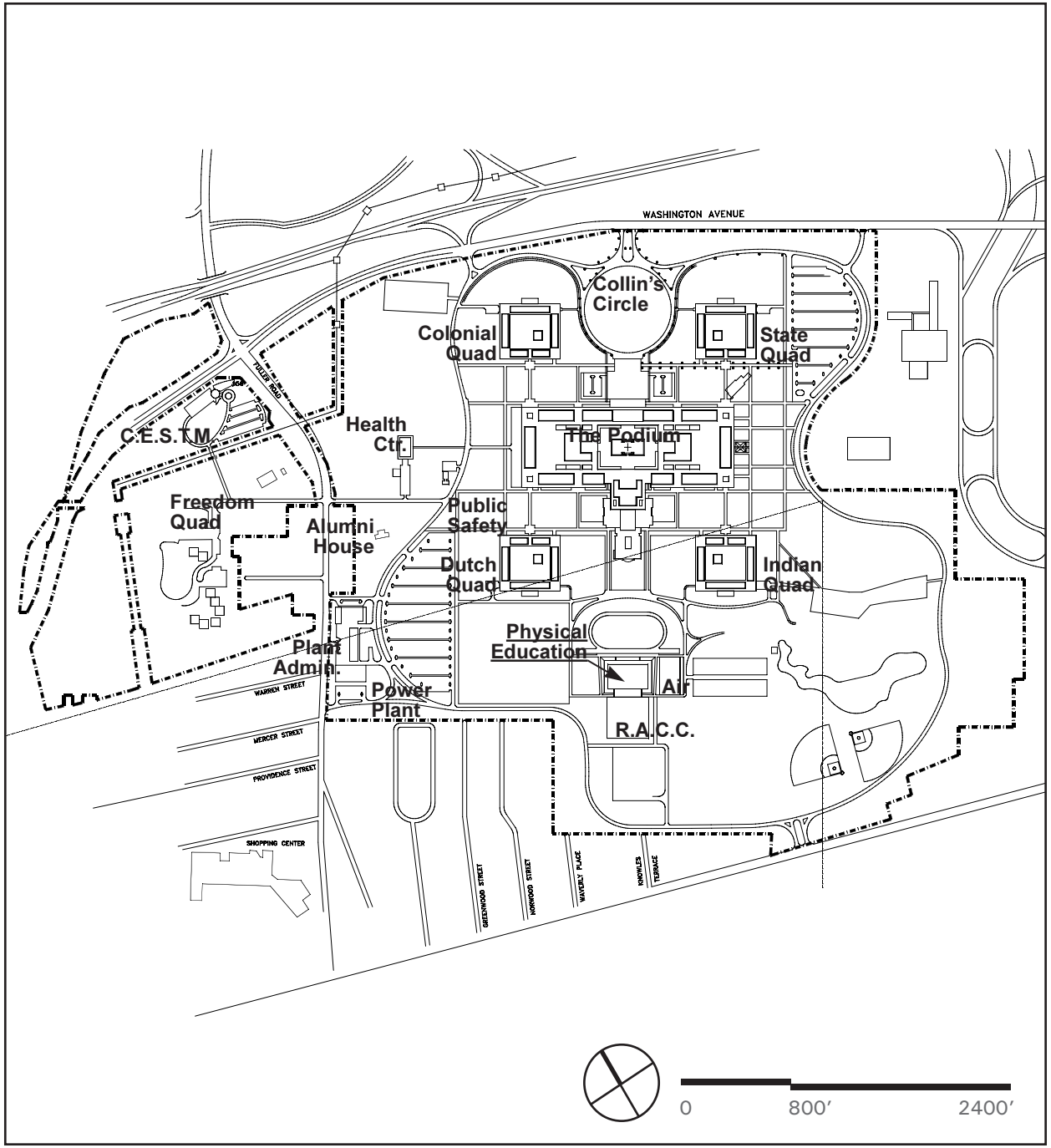
Topography

The topography of the site falls into two general categories, land that has been graded to accommodate development and undeveloped land. The center of the Podium is set at an elevation of 277 feet, a natural high point of the developed area of the site.

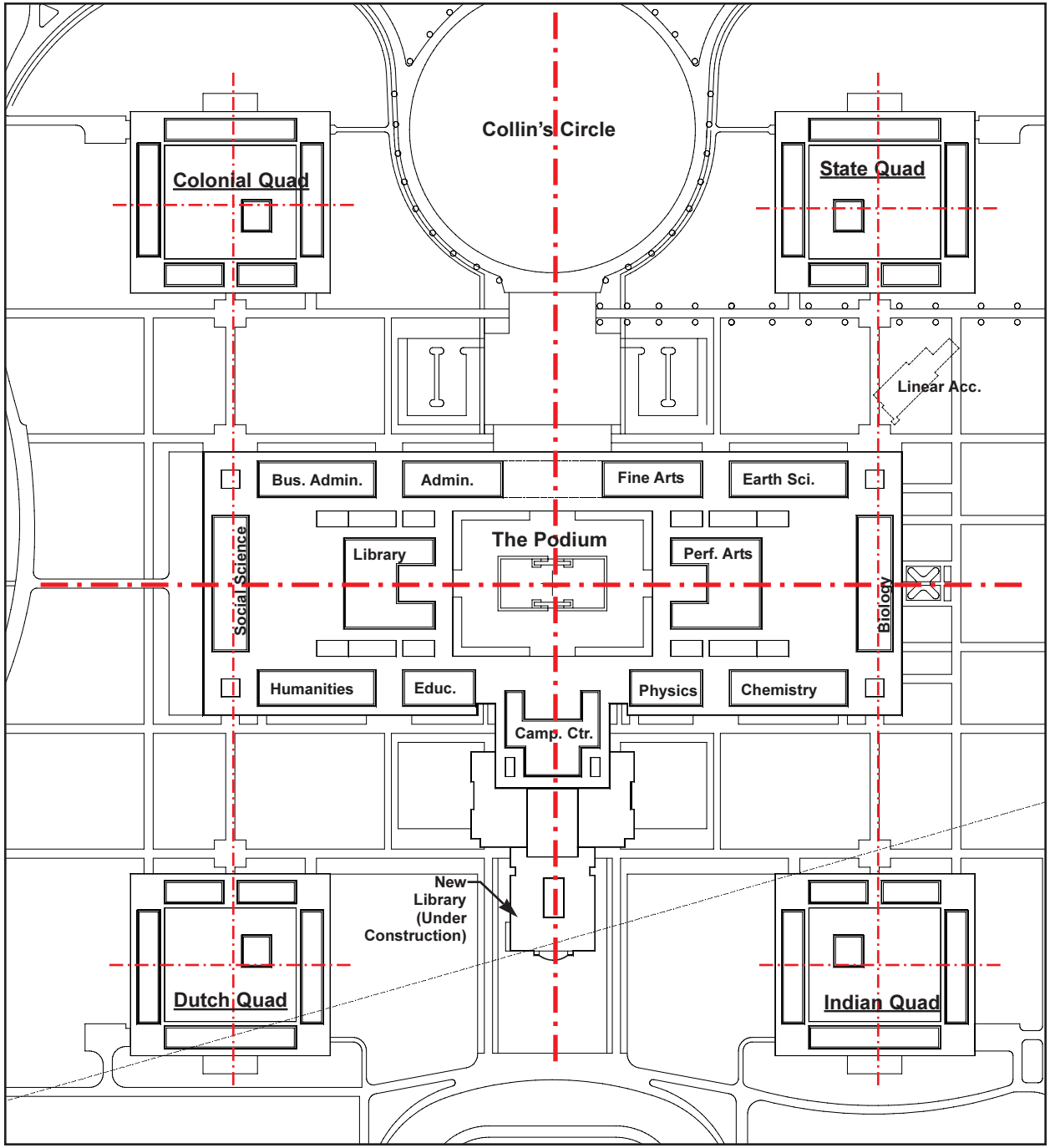
The grade along the northern edge of the Podium is at an elevation of about 274 feet and the land slopes gradually downward from there to the Washington Avenue entrance, which is at an elevation of about 258 feet. The grade along the southern edge of the Podium is a full story down at an elevation of about 264 feet. From this point, the grade drops gradually to the southeast to an elevation low point of about 190 feet at the Western Avenue entrance.

Soils

Most of the site has been developed and is classified as either Urban Land (land with more than 85% coverage) or Udipsamments (moderately well drained to excessively drained). The soil types for the undeveloped portions of the site are mainly Colonie and Elnora, both of which are loamy fine sand and are well drained, with a depth to bedrock of over five feet, so the soils are not seen as a restriction to future construction, if desired.



Uptown Campus Plan



Podium and Quadrangles Plan

Wetlands and Flood Zones

There are neither any New York State Department of Environmental Conservation Freshwater wetlands nor any flood zones mapped on the Uptown Campus.

The Historic Sequence of Building Construction

The Uptown Campus is quite unique for such a large facility in that it was essentially all constructed at one time. More specifically, all the buildings on the Podium and all four residential quadrangles were constructed from 1964 to1971, with the majority of buildings on the Podium being built between 1966 and 1968.

One significant off-Podium building dating from 1968 is the Physical Education building, which focused outdoor recreation and athletics on the south side of the campus and established a strong north-south axis through the center of the Podium. The only major projects that have been constructed since 1968 include; the Freedom Quad (1988), the Recreation and Convocation building (1992), the Campus Center addition (1995) and the new Library (under construction in 1997). For the most part each of these projects has reinforced the north-south axis and have respected the strong axial symmetry of the Podium.

Landscape Analysis

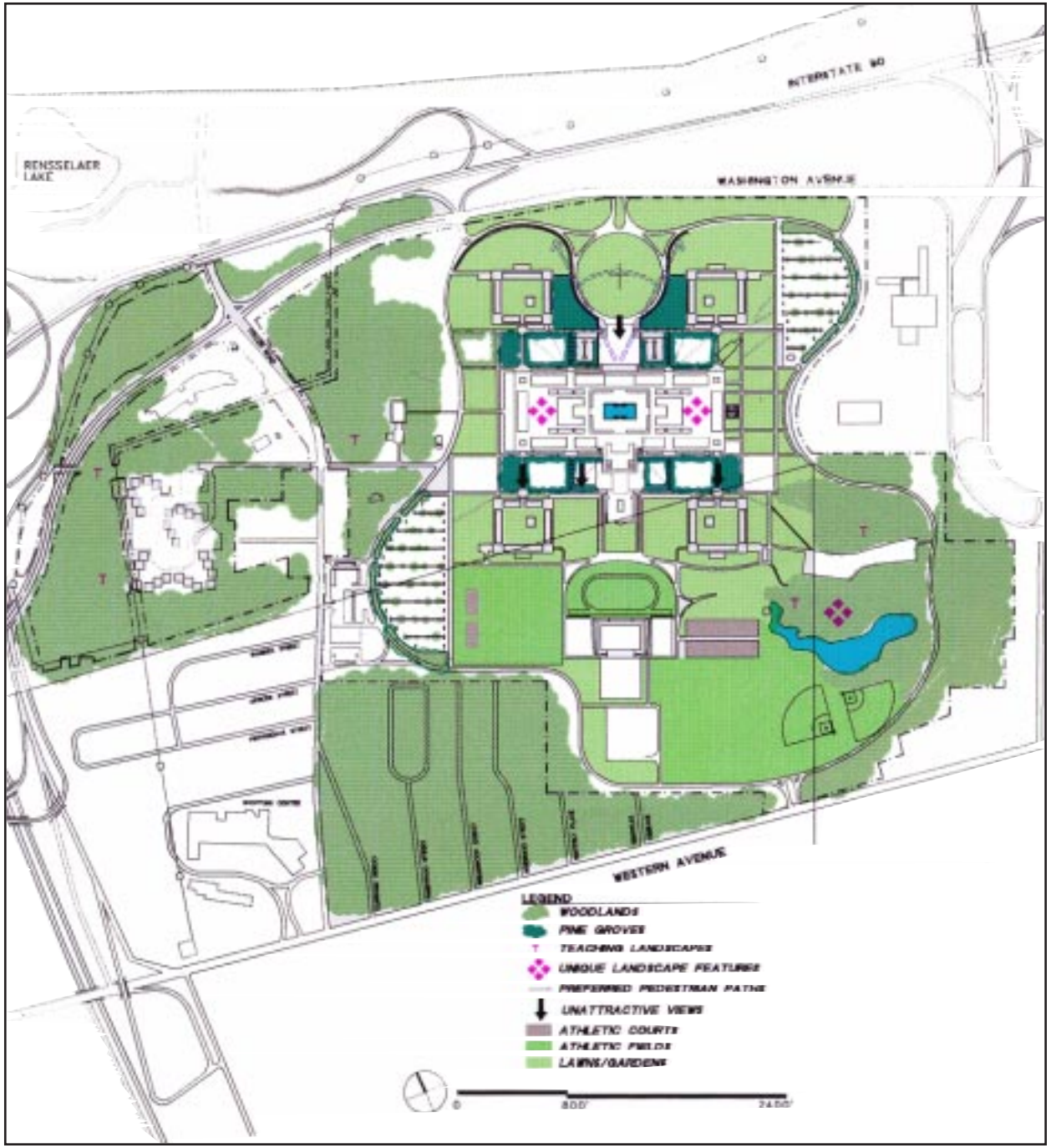
The landscape at the Uptown Campus reflects the strong design intent of Edward Durrell Stone's architectural concept, completed in the 1970's. Today we find four distinct landscape areas:

- the ceremonial entrance from Washington Avenue, providing visitors with long views to the Podium;
- the formal parterre of the campus core and dormitory quadrangles defined by lawns, a rigid system of rectilinear walkways, and groves of pine trees;
- the athletic complex and fields located in the southern one-half of the campus, off Western Avenue; and
- the wooded, undeveloped areas located along the curvilinear loop road which encircles the campus core.

Pine groves planted in gravel beds adjacent to the Podium, (originally intended as a greenbelt between the Podium and dormitory quadrangles) suffer from damage caused by parked cars and the effects of snow removal. This change in use has been both detrimental to the health of the trees and the overall plan for open space and pedestrian circulation.

The formal lawns which characterize the ceremonial entrance are high maintenance landscapes of monumental scale. The repetitive architectural style and absence of wayfinding elements in the landscape create a uniformity and lack of human scale that students, faculty, staff and visitors find disorienting and unattractive.

The interior of the raised Podium is a remarkable landscape which has aged well, but requires high levels of expert maintenance. Small, container plantings are generally in poor condition due to maintenance issues, species selection and lack of soil volume. However, two of the University's truly unique



Uptown Campus Landscape Analysis

Uptown Campus Looking East

Uptown Campus Looking North West

landscapes are located at either end of the Podium: the larch-magnolia garden at the west end and the pine-azalea garden at the east end. Brutal, cold winds make the Podium's open spaces undesirable in winter months and the Lower Fountain Plaza with its campanile is closed to pedestrian traffic through much of the academic year.

The athletic complex, to the south of the Podium, contains 14 athletic fields. Newly renovated fields have been fenced in order to maintain safe, high quality fields, but the introduction of chain link fencing has disrupted long established patterns of non-programmed use. The fencing is not buffered or screened and provides a negative gateway image for the campus.

Indian Lake provides passive recreational opportunities, wildlife and wetland habitats, and is one of several teaching landscapes. The lake is filling in due to sedimentation and will require a long term management plan to remain an open water resource. The woodlands west of Freedom Quad are another exceptional teaching landscape, providing a diversity of meadow and woodland habitats not dissimilar from Albany's native Pine Bush community.

Informal trails are located throughout the undeveloped areas, but there is no biking or jogging loop which links the entire campus. Pedestrian "desire lines" crossing diagonally through formal lawns, suggest the need for an enhanced pedestrian circulation system linking passive and active recreational areas to the campus core.

Traffic, Parking and Service Analysis

Traffic

The Uptown Campus of the University at Albany is located in the southeast quadrant of the junction of two interstate expressways, I-87 and I-90, and the New York State Thruway. Exit 2 of I-90 provides direct access to the campus from only the eastbound direction of I-90. The westbound Exit 2 connects to Fuller Road northwest of the campus. The Uptown Campus is bounded by two principal east/west arterials: Washington Avenue and US Route 20 (Western Avenue). Fuller Road is a minor arterial which passes through part of the Uptown campus, but also forms the western boundary for part of the Uptown Campus.

Traffic circulation through the Uptown Campus is provided by University Drive, which circumferences the main activity centers of the site. University Drive is a two-lane roadway, with 12-ft. wide travel lanes. This roadway is curbed and there are no offsets between the travel lane and the adjacent curb. These conditions relegate the use of the roadway virtually exclusively to automobiles as there is not adequate pavement width to designate space for alternative travel modes, such as bicycles. The features of University Drive also impair snow removal efforts due to the limited pavement width and curbs. Access between University Drive and the adjacent roadway system is provided at seven locations, as follows:

- Washington Avenue: University Drive East
Collins Circle
University Drive West
- Western Avenue: University Drive
- Fuller Road: Commissary
Plant Administration
Tricentennial Drive

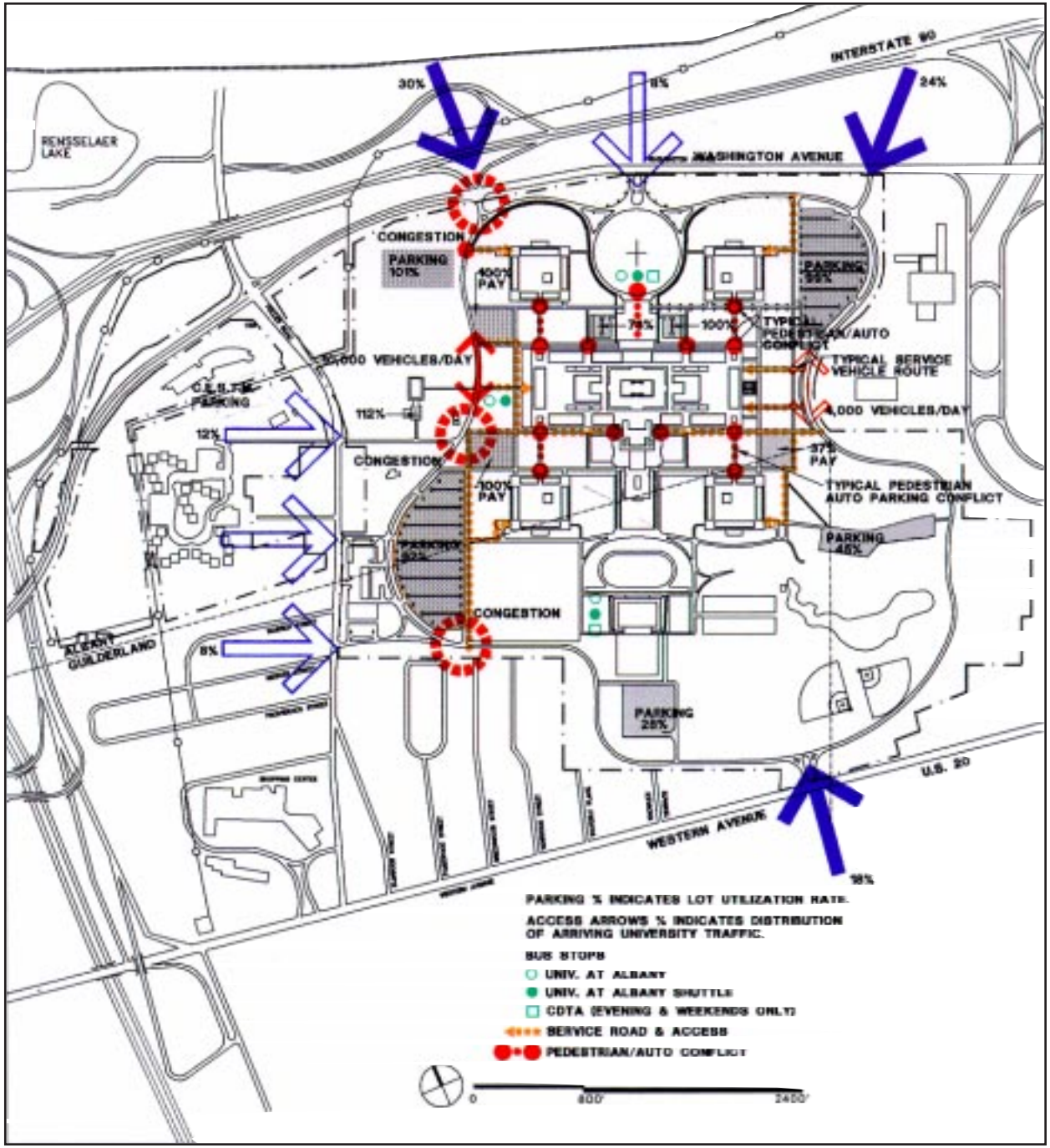
Traffic volume data collected in 1996 on the campus roadways indicate that the volume of traffic on University Drive West is 10,000 vehicles per day. Daily traffic volume on University Drive East is significantly lower, at 4,000 vehicles per day.

Peak hourly traffic volume data compiled for the various Uptown Campus access drives reveal that approximately 1,400 vehicles enter and 300 vehicles exit the Uptown Campus during the morning peak hour, which generally occurs during the period between 7 a.m. and 9 a.m. During the evening peak hour, approximately 1,200 vehicles enter and 1,600 vehicles exit the campus. This peak hour generally occurs between 4:00 p.m. and 6:00 p.m.

Primary access to the campus occurs at the access drives along Washington Avenue. These three driveways accommodate 62 percent of the peak hour traffic entering or leaving the campus. The access at Washington Avenue and University Drive West, which is opposite the I-90 eastbound Exit 2 ramps, is the most-used access location, utilized by 30 percent of the vehicular access to the campus. The three campus roadways to Fuller Road are used by 20 percent of the vehicles to access the campus, and 18 percent of the vehicular traffic accesses the campus from Western Avenue.

The connecting link roads between University Drive and Washington Avenue vary between 125-ft. and 300-ft. in length. These distances limit the available vehicle storage for queues that develop at the traffic signals. These queues routinely exceed the storage capacity during peak traffic hours, particularly at the Washington Avenue and University Drive West intersection. Queued vehicles consequently extend into the traveled way on University Drive, obstructing the internal vehicular circulation. The proximity of these link road intersections also confront motorists with multiple points of vehicular turning and lane-weaving conflicts within short distances.

The intersection of Washington Avenue and the connecting link to University Drive East also has capacity limitations which are related to the significant left-turn volumes entering the campus and right-turn volumes exiting the campus during peak hours. SEQRA mitigation of a proposed office development on Washington Avenue has identified improvements at this intersection to provide a center median for left-turns eastbound and westbound traffic. Another improvement at this intersection that would increase the capacity for traffic accessing the campus is construction of a separate right-turn lane on the connecting link



approach to Washington Avenue.

The significant volume of traffic on University Drive West has resulted in the development of traffic congestion that is inconsistent with the functional expectations of an internal circulation roadway. Turning traffic at the various internal service road and parking lot intersections with University Drive also impede traffic flow. One location of particular congestion is the intersection of University Drive West, Tricentennial Drive and Center Drive West. Center Drive West was originally designed as a service roadway. However, over time, use of this roadway has been opened to general traffic accessing designated parking within the Central Podium Area of the campus. The intersection of Center Drive West at University Drive is offset approximately 75-ft. from the intersection of Tricentennial Drive. This configuration, along with sight distance limitations due to roadway alignment and building locations, further exacerbates the congested operations in this area.

The southernmost access from University Drive West to Fuller Road has been cited as being a location where an inordinate number of vehicle accidents occur. These incidents typically relate to left-turn vehicles entering and exiting the campus. Fuller Road was originally designed as a two-lane road with 12-ft. travel lanes and 8-ft. shoulders. However, due to the traffic volume demand on this facility, it is currently used as a four-lane facility, with 10-ft. wide travel lanes. Because of abutting land use constraints, there is limited opportunity for widening of this roadway to increase the travel lane widths or to consider widening for a center left-turn median. It is suggested that conditions at this intersection be studied in greater detail to determine specific accident trends and to develop recommendations for improvements and/or modification of the access pattern at this location. One option that could be considered is restriction of specific turn movements or possibly redesignating this connection as a one way roadway (either entering or exiting).

Uptown Campus Traffic, Parking and Site Servicing Analysis

Pedestrian Access and Circulation

The existing provisions for pedestrian access between the Uptown Campus and the surrounding neighborhood is limited and discontinuous. There are no sidewalks or other facilities for pedestrians along Washington Avenue. Until recently, this has not been a critical concern as there were few destinations that were within reasonable walking distance along this roadway. However, new and ongoing development along Washington Avenue may induce demand for pedestrian accessibility in this corridor. As a partial response to address pedestrian activity along Washington Avenue, pedestrian signals have been provided at two of the signalized intersections on this side of the campus: 1) Washington Avenue and Collins Circle, and 2) Washington Avenue and University Drive East. Although this feature provides pedestrian actuated access to cross Washington Avenue, there are limited sidewalks or other amenities conducive to pedestrian travel.

Pedestrian facilities along Fuller Road are limited to sidewalk along the section between Western Avenue and the south campus access to University Drive. Pedestrian signals are provided at the signalized intersection of Fuller Road and Tricentennial Drive to facilitate pedestrians crossing Fuller Road between the Freedom Quad and the core Uptown Campus. However, there are no pedestrian connections from this point to other destinations along Fuller Road.

Western Avenue features a mix of residential and commercial development. Sidewalks are provided in sections of this corridor, but do not provide continuous pedestrian accessibility from the campus.

Internal pedestrian access on the Uptown Campus is similarly discontinuous. Significant sections of University Drive have no provision for pedestrians. As a response to increased need for parking, Carillon Drive and Center Drive have been designated by the University to allow special permit parking. This has resulted in these service roads being incorporated into the general internal roadway circulation patterns of vehicular traffic. The resultant vehicle-pedestrian conflicts contribute to an overall denigration of the pedestrian environment, especially between the residence quads and the Academic Podium. Vehicular access to the Visitors parking lot at Collins Circle is also in direct conflict with the significant pedestrian flow between the Academic Podium and the Collins Circle bus stop.

Pedestrian access between the core Podium area, the peripheral parking lots and the outparcel campus buildings also creates locations of significant vehicle-pedestrian conflicts. In particular, pedestrian crossings of University Drive West at the access to the Colonial parking lot and at Tricentennial Drive are focal areas of conflicting pedestrian and vehicle activities.

Parking

Parking facilities at the Uptown Campus currently provide designated parking for 5,524 vehicles, including faculty, staff , students and visitors. There are 15 parking lots on the University at Albany Campus, with a combined capacity of 4,315 spaces. In addition, there are 1,209 designated "on-street" parking spaces at various locations within the campus. These on-street spaces are located at Collins Circle and on the internal roadways surrounding the Academic Podium.

Parking at the University is administered by the Office of Parking Management. Four parking lots are designated as open parking for anyone with a valid University at Albany parking permit. These lots are generally adjacent to the four residential quads and are notated as such: Dutch Lot, Colonial Lot, Indian Lot and State Lot. Designated parking areas for faculty and staff are also provided within the Dutch Lot and State Lot. Additional parking for faculty and staff is available at Collins Circle. Priority parking is available in the Dutch and Colonial Pay Lots which are allocated to faculty, staff and students by lottery, and for which an additional permit fee is assessed. Special permits are also issued for medical, handicapped, occupational, and departmental reasons. Special permit parking is provided along the internal roadways surrounding the Academic Podium. An administrative lot, located at Collins Circle, provides parking for the Office of The President and for each Vice President. Parking is also provided for specific use areas on the campus including parking at the RACC, the Commissary, University Police/Office of Parking Management Facility and the Health Center.

Visitor parking at the Uptown Campus is provided at two designated lots: Collins Circle and Campus Center. These lots are attendant operated for which an hourly fee is charged. Overflow parking of the Collins Circle lot is also permitted within the pedestrian promenade between Collins Circle and the Podium. Alternative visitor parking is provided through the purchase of a temporary permit from the Office of Parking Management which are valid in the general open parking lots. On weekends, visitors are permitted to park free of charge in any legal space that is not otherwise restricted.

The University at Albany Parking Management Office issued approximately 10,000 parking permits for students and 3,000 permits for faculty and staff during the 1996-97 academic year. First year college students who reside in University Residence Halls are not eligible to receive a parking permit or park a vehicle on campus.

A survey of parking utilization at the Uptown Campus was conducted during the Fall 1996 semester. Observations of parking occupancies at the Uptown Campus show that utilization of three of the four non-restricted parking areas (i.e., State, Colonial and Dutch lots) consistently exceeded 80 percent of the designated capacity during normal daytime class hours. In fact, parking in undesignated areas of the Colonial Lot resulted in an occupancy rate in this lot that exceeded 100 percent of the capacity throughout the day. Conversely, the Indian Parking Lot was observed to be significantly underutilized. The average occupancy of this lot was less than 30 percent. Observations of the faculty and staff parking areas indicate that the parking at Collins Circle is fully-utilized, while the average occupancy at the Dutch and State faculty lots is approximately 50 percent of the designated capacity.

The average parking occupancy in the Special Permit parking areas around the Academic Podium is approximately 75 percent of the designated capacity. However, those parking spaces located nearest the Podium appeared to be in greatest demand and it was common during the observation period to note vehicles circulating around the Podium to find the nearest available parking space.

Utilization of parking areas associated with specific uses, such as the Administrative and Commissary lots, indicate that normal daily demand can generally be accommodated. One exception is at the Health Center, where the parking lot was fully-occupied throughout the day.

Observations of the utilization of the two designated visitor's parking lots show a significant disparity in their use. Parking demand at the Collins Circle Visitor's Lot consistently exceeded the available capacity throughout the day. Some of the excess demand was accommodated by permitting vehicles to park on the pedestrian promenade between Collins Circle and the Podium. At the same time, the average utilization of the Campus Center Visitor's Lot was 20 percent of the designated capacity. Reasons for this disparity of use may relate to the proximity of these parking areas to Visitor Activity Centers within the campus and also to the need for improved informational signing.

The parking utilization data was also reviewed to identify the peak hourly parking demand to evaluate the overall sufficiency of the existing parking supply. Table I-1 identifies the available capacity and peak hour parking demand for each of the Uptown Campus parking areas. Examination of the peak hourly utilization of each parking area indicates a peak demand of approximately 4,200 spaces. As noted previously, there are 5,524 designated parking spaces on the

Table I-1
Parking Utilization - Uptown Campus

Lot Name	Total Spaces	Peak Hour Parking Demand
Dutch Lot	1,146	1,068
Colonial Lot	324	329
Indian Lot	352	157
State Lot	819	813
Dutch Faculty / Staff	355	208
State Faculty / Staff	321	151
Dutch Pay Lot	173	108
Colonial Pay Lot	127	91
Campus Center Visitors Lot	140	28
Administrative Lot	59	34
Collins Circle Visitors Lot	75	75
Commissary Lot	55	30
Health Center Lot	49	51
Collins Circle	60	56
RACC Lot	320	84
Podium Areas	1,149	901
Total Parking Spaces	5,524	4,184

Uptown Campus. Considering that some of the apparent reserve capacity is located in specialized-use areas, such as at the RACC and the Administrative lots, the current parking occupancies suggest that 80 percent of the available parking for students, faculty/staff and visitors is utilized during the hour of peak demand. It may be concluded from this that there is an adequate supply of parking at the campus for the current demand. However, as noted before, the demand at some parking areas has been found to meet or exceed the designated capacity while other lots are significantly underutilized. This pattern is even more acute during the peak demand hour and suggests that some of the parking supply is functionally ill-suited, by its location and/or configuration, to the needs of the University community and visitors.

It is also noted that a significant portion of the parking supply on the campus is provided along the roadways adjacent to the Podium area (i.e. Carillon Drive, Center Drive and cross roads). More than 20 percent of the total parking supply (1,149 spaces) is provided along these roadways. Master Plan considerations for possible restoration to pedestrian and service access uses on some or all of these roadways would result in a considerable shortfall in the parking supply. The land requirement to replace all of this parking in kind, is approximately 7 acres.

The University has also been assuming a greater role in hosting Intercollegiate and Community Events that place additional demands on the parking supply. Many of these events occur during non-class periods such that the existing overall supply can accommodate the demand. However, the University lacks parking facilities capable of accommodating tour buses bringing visiting athletic teams or similar large groups.

Transit Services

Transit service to the Uptown Campus is provided by two bus systems--daytime campus operated system and the evening/weekend local transportation authority system under contract with the University. This combination of services generates a ridership of approximately 1 million passengers per year.

The daytime service (7:00 a.m.-7:00 p.m.) consists of a fleet of University at Albany buses that provide transportation between the Uptown Campus; Freedom Quad, CESTM and the Art Annex facility on Railroad Avenue; the Downtown Campus (Alumni Quad and the Draper Complex); Eagle Street (the Empire State Plaza) in downtown Albany and the School of Public Health at the East Campus. This bus fleet is comprised of utilitarian, "school bus"-style vehicles.

The "mainline" (Alumni and Wellington Routes) bus service leaves the Uptown Campus at Collins Circle and circulates to the Downtown Campus via Washington Avenue, headways vary from every 5 minutes to 15 minutes. Return service is provided to the Uptown Campus via Western Avenue. Bus stops within the Uptown Campus are located at the RACC, Tricentennial Drive and Collins Circle.

The Fuller Rd. Shuttle provides M-F daytime service between Collins Circle and University facilities along Fuller Rd. including Freedom Residential Quad, CESTM and the Art Annex on Railroad Avenue. Headways vary from 20 minutes to 45 minutes.

The All-Campus Shuttle operates 7 days per week including weekend days and every evening, providing service to Freedom Quad, Tricentennial Drive, Collins Circle, Indian Quad, Dutch Quad, the Social Science Bike Room and the RACC. Headways vary from 20 minutes to 45 minutes.

The School of Public Health Shuttle runs 7 day per week (days and evenings) every 45 minutes from Draper Hall at the Downtown Campus.

Evening (6:30 p.m.-1:00 a.m.) & weekend (all day) services are provided "free" with a valid University ID card on CDTA routes 10, 11, 12 and 17. These routes mimic the "mainline" University operated service that operates along the Washington and Western Avenue corridors. Headways vary from 20 minutes to 30 minutes. The routes 10, 12, and 17 also give our students access to local malls including Crossgates, Colonie Center, Stuyvesant Plaza, and Crossgates Commons.

In the spring of 1996, the University installed card access readers on all University Buses thus allowing users to swipe their ID card to determine if they have

Bus Drop-Off - Uptown Campus

Parking - Uptown Campus

access to the buses. All part-time and full time undergraduate and graduate students (without assistantships) have "free" access to the bus because they paid the full Transportation Fee. Faculty, Staff and graduate students with assistantships may purchase all-you-can-ride bus access for $70.00 per semester. Access to the specified CDTA routes on evenings and weekends is free with a valid University ID card. Faculty/Staff and visitors may also access the bus by paying $1.00 per ride.

Sentiments expressed during campus interviews suggest that the University at Albany schedule may be poorly coordinated with student class schedules and that the weekend and evening service may be inadequate **(Note: Since these interviews took place the evening and weekend CDTA schedules were revised and service was added to alleviate many of the students concerns related to inadequate weekend service and the mismatch of evening service vis-à-vis class schedules).** Other comments were made that the bus shelters be revitalized to enhance their use. **(Note: Since these interviews took place the University has replaced the Collins Circle and Tricentennial shelters, added a shelter at the RACC and rehabilitated the Shelters at Alumni Quad and Draper).** Geometric conditions at the RACC Circle which impede bus accessibility were also noted.

Utilities Analysis

A. Heating And Cooling Systems

The Central plant provides high temperature hot water (HTHW) for heating and chilled water (CW) for cooling to the various buildings on the campus. The following is a brief description of the major plant equipment and systems.

A.1 Heating System
There are four existing HTHW boilers with the characteristics listed in the accompanying table.

Information Item	Boiler #1	Boiler #2	Boiler #3	Boiler #4
Installation Date	1964	1964	1964	1970
Boiler Manufacturer	The International Boiler Work Co.	The International Boiler Work Co.	The International Boiler Work Co.	The International Boiler Work Co.
Model	LFW 32.5	LFW 32.5	LFW 32.5	TJWC 1008
Total Sq. Ft.	6500	6500	6500	10087
Capacity BTU/HR	65,000,000	65,000,000	65,000,000	100,000,000
Fuel Type	Natural Gas/Oil #6	Natural Gas/Oil #6	Natural Gas/Oil #6	Natural Gas/Oil #6
Fuel CFH/GPM	87,000/566	87,000/566	87,000/566	133,000/871
Burner Installation Date	1964	1964	1964	1970

Heating Plant Condition

Visual assessment of the equipment and piping and the information provided by the maintenance personnel revealed that, in general, the Boiler Room equipment is in fair to poor condition, and that repair work should be provided.

The system's conditions are summarized in the accompanying table.

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	BOILERS NO. 1, 2				X	X	Tubes and refractory are destroyed
2	BOILER NO. 3			X			Tubes are destroyed
3	BOILER NO. 4		X				
4	BURNERS				X	X	Can not meet emission standards
5	HTHW CIRCULATING PUMP NO. 1			X			Required bearings changing
6	HTHW CIRCULATING PUMPS NO. 2, 3, 4		X				
7	OIL PUMPS		X				
8	OIL TANKS		X				
9	OIL TANK HEAT EXCHANGERS		X				
10	SECONDARY WATER TO OIL HEAT EXCHANGER				X	X	Oil is leaking to water side of the heat exchanger
11	DRAIN PIPING TO THE BLOWDOWN TANK				X		
12	OTHER EQUIPMENT		X				
13	PIPING		X				

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

A.2 Chilled Water System

The chilled water system consists of two (2) 1000 ton absorption chillers (Nos. 1 & 2) which were originally installed in 1964 and manufactured by the Train Company (Model No. A 9 BB), as well as three (3) 1000 ton centrifugal chillers (Nos. 3, 4 & 5) which were installed in 1986 and manufactured by the Trane Company, (Model CVHE-100).

Visual assessment of the equipment and piping and the information provided by the maintenance personnel revealed that, in general, the Chilled Water Plant equipment is in fair condition, and that repair work should be provided, especially to the absorption chillers.

The system conditions are summarized in the accompanying table.

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	Absorption Chillers No. 1 & 2				X		Note 1
2	Centrifugal Chillers No. 3,4,5		X				
3	Chilled Water Circulating Pumps No. 1, 2, 3, 4		X				
4	Chilled Water Circulating Pump No. 5				X		Note 1
5	Redwood Cooling Tower				X		Note 1
6	Stainless Steel Cooling Tower	X					
7	Condensing Water Circulating Pumps CWP 1, 2, 3, 4, 5 & 6		X				

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

Note 1: SUCF may want to include chiller/pump/tower repairs in scope of Project 01827

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	HIGH TEMPERATURE WATER PIPING			X		X	Insulation, valves and pumps are at the end of their useful life. Differential pressure control is required. The underground Rickwell HTHW piping between the Heating Plant main pipe tunnel and the Infirmary failed 20 years ago and was replaced with a boiler.
2	CHILLED WATER PIPING		X				CW piping, pumps and control changes are anticipated as a result of the study noted above (see HTHW).
3	ENERGY MANAGEMENT			X			Approximately 50% of the campus buildings are not centrally monitored.

E= Excellent G= Good F= Fair P= Poor I= Improvements may be required

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	**SERVICE FROM OGS**		X				
2	**SERVICE FROM WASHINGTON AVE.**			X		X	The service lacks the backflow preventer required by code. Pressure is subject to significant fluctuations. Meter is 30 years old and should be replaced.
3	**WATER TOWER**			X		X	Restoration of the tank inside protective coating is required.
4	**SITE PIPING**			X			
5	**OVERALL CONDITION**			X			

E= Excellent G= Good F= Fair P= Poor I= Improvements may be required

B. HTHW And CW Distribution Systems

The campus wide CW and HTHW distribution systems are fed from the Power Plant. Two (2) 12 inch HTHW lines and two (2) 18 inch CW lines feed the tunnel system which serves the various buildings on campus.

Visual assessment of the distribution system piping and the information provided by the maintenance personnel revealed that, in general, the system is in fair condition, and that work should be provided, especially for the HTHW piping.

The system's condition is summarized in the accompanying table.

C. Water Supply System

The site water distribution system of the Uptown Campus is a multi-loop piping network supplying water to the domestic and fire protection needs of all buildings and equipped with site fire hydrants for outside fire protection. The main loop piping is 12 inches in diameter, the secondary loops are 8 inches in diameter. There is a huge (approximately 311,000 gallon capacity) water tower located at the center of the Academic Podium.

The site distribution piping is connected by two (2) 12 inch water services to the city municipal water supply system. One of the services is connected directly to the 20 inch street water main located on Washington Avenue, at the north side of the campus. The other service enters the site from the east and is connected to the OGS (Office of General Services) site system.

The system's condition is summarized in the accompanying table and recommendations for work on the water service for the Washington Avenue service as well as the water tower interior are indicated.

D. Sanitary Sewerage System

Sanitary flow from campus buildings is collected by a site gravity sanitary sewerage system which consists of (2) two individual subsystems. The Washington Avenue sanitary sewer subsystem serves buildings located in the northern section of the campus and discharges the flow into the Washington Avenue city sewer. The Western Avenue sanitary sewer subsystem serves buildings located in the southern section of the campus and outlets into the Western Avenue city sewer. The original sanitary sewer system was constructed in mid 1960's. The sewerage system is constructed from reinforced concrete and cement pipes. Sanitary sewer pipe diameters range from 6 to 12 inches. Total length of the sanitary sewer system is about 3.5 miles. Total number of sanitary manholes is about 100 units.

The system's condition is summarized in the accompanying table. As indicated, improvements to the Western Avenue Subsystem, the lift pumping station and the overall system may be required.

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	WASHINGTON AVE. SUBSYSTEM		X				
2	WESTERN AVE. SUBSYSTEM				X	X	Approx. 1,500 feet of pipe are damaged by tree roots. Lines are undersized and old.
3	LIFT PUMPING STATION			X		X	Station requires updating.
4	OVERALL CONDITION			X		X	

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	SUBSYSTEM NO. 1			X		X	*
2	SUBSYSTEM NO. 2			X		X	* Approx. 200 feet of pipe are damaged by tree roots.
3	SUBSYSTEM NO. 3		X	X			
4	SUBSYSTEM NO. 4		X	X		X	* Approx. 400 feet of pipe are damaged by tree roots.
5	SUBSYSTEM NO. 5			X		X	* Insufficient capacity
6	SUBSYSTEM NO. 6			X		X	* Approx. 250 feet of pipe are damaged by tree roots. Insufficient capacity.
7	SUBSYSTEM NO. 7		X			X	*
8	SUBSYSTEM NO. 8		X			X	*
9	OVERALL CONDITION		X			X	*

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

* System is 30 years old and has leaking joints throughout, causing frequent sink-holes.

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	OVERALL SITE GAS SYSTEM CONDITION		X				
2	OVERALL SITE FUEL OIL SYSTEM CONDITION		X				

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

E. Storm Sewerage System

Storm flow from campus buildings' roofs, roads, parking lots, sport fields and other open areas is collected by a site gravity storm sewerage system, consisting of eight major individual subsystems, and covering a total area of about 280 acres. Each storm sewerage subsystem has its own outlet point into either the Albany City sewer system or an on-site pond. Three of the storm sewer subsystems discharge the flow into the city sewers. Five subsystems outlet into the on-site pond located in the South-East section of the campus. The original storm sewer system was constructed in mid 1960's. The sewerage system is constructed from reinforced concrete pipes. Storm sewer pipe diameters range from 15 to 48 inches. Total length of the storm sewer system is about 9.4 miles. Total number of drainage access structures is about 360 units.

Based on the information provided by the campus maintenance personnel the site storm sewerage system is in good physical condition. The only storm sewer system deficiency that was identified based on the interviews with the campus maintenance staff and PB engineering evaluation is a tree root problem.

The system's condition is summarized in the accompanying table.

F. Natural Gas And Fuel Oil Systems

Based on the utility bills for the last five years, maximum gas demand of the campus is estimated at 180,000 to 200,000 CFH, with 80 to 90% of this load attributable to the Central Heating Plant. Due to the fact that the supply gas is high pressure, the system's capacity is adequate. Operation of both gas and fuel oil systems does not cause any complaints from the maintenance personnel. There is no record of excessive frequency of repairs or requirements for excessive maintenance efforts. This permits us to conclude that the systems are in good overall physical and operating condition.

The system's condition is summarized in the accompanying table.

G. Power Distribution System

G.1 Main Substation

Electrical service to the campus is provided from the OGS Substation. The incoming 115 kV service voltage from Niagara Mohawk is transformed to the distribution level of 13,800 volts by means of three (3) power transformers. Three (3) feeders, identified as N1, N2, and E1, originate from the switchgear lineup and feed the campus via an underground ductbank system.

G.2 Site Distribution

Each of the three campus feeders consists of one three-conductor (3/C), 350 kcmil, 15 kV, oil-filled, lead-covered cable. These feeders terminate in medium voltage incoming service switchgear located in each building as listed in the accompanying table.

BUILDING IDENTIFICATION	FEEDER N1	FEEDER N2	FEEDER E1
Infirmary	X		X
Dormitory #3	X		X
Dormitory #1	X		X
Health & Physical Education	X		X
Dormitory #2	X		X
Dormitory #4	X		X
Service Building	X		X
Social Science		X	X
Humanities		X	X
Library		X	X
Education		X	X
Lecture Hall		X	X
Student Facility		X	X
Physics		X	X
Chemistry		X	X
Biological		X	X
Power Plant	X		X
Commissary Building	X		X
Service Building	X		X
Linear Accelerator		X	X
Earth Science		X	X
Theater		X	X
Fine Arts		X	X
Administration Computer Center		X	X
Business Administration		X	X
Freedom Quad Complex	X		X
Center for Envir. Science & Tech. Mgmt.	X		X
New Library (near future)	X		X

NO.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	DUCTBANK				X		
2	MANHOLES		X				
3	FEEDER CABLES				X		FEEDER CABLES ARE AT IMMINENT RISK OF FAILURE AND MUST BE REPLACED.
4	INCOMING SERVICE SWITCHGEAR					X	
5	OVERALL CONDITION				X		

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

NO.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	25 FOOT POLES				X		SELECTED POLES ARE BADLY CORRODED AND NEED REPLACEMENT
2	FREQUENCY GENERATOR					X	
3	SIMPLEX 2350 MASTER TIME SYSTEM					X	LIGHTING CONTACTOR PANELS ARE OLD AND REQUIRE SERVICE OR REPLACEMENT
4	LUMINAIRES			X			
5	OVERALL CONDITION				X		

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

G.3 System Conditions

In general, the overall condition of the power distribution system is poor and in need of replacement.

The system conditions are summarized in the accompanying table.

H. Lighting System

H.1 System Conditions

Campus site illumination is provided by means of high pressure sodium (HPS) type luminaires mounted on poles.

The system conditions are summarized in the accompanying table.

In general, the overall condition of the lighting system is poor and in need of replacement or repair.

I. Fire Alarm System

I.1 System Conditions

The system is old and past its useful life expectancy. Though functionally operational, repair and maintenance is difficult because there are no spare parts available.

The system conditions are summarized in the accompanying table.

The overall condition of the Fire Alarm system is poor and in need of replacement.

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	LOCAL TRANSMITTERS				X		
2	FIRE ALARM PANELS (c.s.s.)					X	
3	ANNUNCIATOR PANEL (c.s.s.)					X	
4	WIRELESS TRANSMITTER (c.s.s.)				X		
5	ALARM SYSTEM,INC. PANEL (c.s.s.)					X	
6	UPS/BATTERIES (c.s.s.)			X			
7	SIGNALING TRANSFORMER (c.s.s.)					X	
8	BELL (c.s.s.)			X			
9	DIGITIZE ALARM RECEIVING PANEL (c.s.s.)					X	All systems should be integrated into a single monitoring/supervisory station.
10	INTERCONNECTING WIRING					X	The entire system should be upgraded to fiber optics.

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

c.s.s. - Indicates component is part of the Control Supervisory Station

Summary of Major Uptown Non-Residential Building Characteristics Podium

Name	No.	Floors	NSF	GSF
Social Science Building	26	3 & Basement	71,704	105,708
Business Administration	27	3 & Basement	56,573	98,595
Administration Building	28	3 & Basement	40,897	75,888
Fine Arts Building	29	3 & Basement	39,514	68,991
Earth Science Building	30	3 & Basement	57,395	96,692
Biology Building	31	3 & Basement	70,493	117,846
Chemistry Building	32	3 & Basement	62,140	105,708
Physics Building	33	3 & Basement	36,705	61,079
Campus Building	34	3 & Basement	85,165	150,884
Campus Center Addition	34A	1 & Basement	63,887	83,592
Education Building	35	3 & Basement	32,431	61,497
Humanities Building	36	3 & Basement	54,568	101,946
Library	37	3 & Basement	205,044	291,291
Lecture Center	38	Basement & Sub-basement	107,290	241,794
Performing Arts Center	39	3 & Basement	69,188	127,397
Computer Center	56	Basement	9,430	22,041
			1,062,424	**1,810,949**
Off - Podium				
Public Safety Building	14	1	3,490	5,726
Linear Accelerator	15	1 Below Grade	8,910	12,810
Commissary	17	2	25,320	34,074
Power Plant Building	18	3 & Basement	1,579	105,708
Service Building	19	2 & Basement	15,926	20,206
Health Center	25	2 & Basement	16,909	28,623
Physical Education	55	3 & Basement	101,594	148,125
Alumni House	57	2	7,630	10,830
Warehouse	101	1	25,006	24,600
Recreation & Convocation	105	2 & 2 Basements	77,300	131,728
			283,664	**522,430**

Buildings' Characteristics and Evaluation

Each building on the Uptown and Downtown Campuses was evaluated in terms of both its condition and its adaptability to its present and its future potential uses. The accompanying table, "Summary of Major Uptown Non-Residential Building Characteristics", lists the number of floors and the areas of each of the major buildings (non-residential) on the Uptown Campus. The table, “Summary of Uptown Campus Building Condition Survey”, indicates the condition of all the major non-residential buildings in terms of their; walls, roof, floors, windows, doors, finishes and ceilings.

Summary of Uptown Campus Buildings Conditions Survey:

Introduction

This chart summarizes the Buildings Conditions Survey for the academic buildings of Uptown Campus. It shows the following problem areas are typical throughout: 1. The windows, while in good condition, need to be replaced because they are single pane and do not meet the Energy Code. 2. The doors, while also in good condition, do not meet ADA standards. 3. Rooms and corridors which have exposed ceilings are in good condition; while those with acoustical ceilings are often fair or poor. 4. Floor tile in classrooms is generally fair to poor, while in corridors, it is in good condition. In addition, many exterior areas subjected to the elements, such as exterior stairs and the curtain walls of the sunken courtyards, are deteriorating and in need of repair.

On the other hand, the following items are in relatively good condition: exterior walls, roofs (except for localized leaking), interior stairs, terrazzo floors, and interior wall finishes, which generally just require painting.

SUMMARY OF UPTOWN CAMPUS BUILDING CONDITION SURVEY

Building	Walls	Roof	Floors	Windows	Doors	Finishes	Ceilings	Exceptions & Comments		
Social Science (26)	G	G	F**X**1	G**X**			G2	1-Corridor: G	2-Corridors: F	
Business Admin. (27)	G	G	G1	G**X**	G**X**	G	G**X**	1-Classroom: F/P	2-Corridors: F	
Administration (28)	G	G	G1	G**X**	G**X**	G	GX1	1-Corridor: F		
Fine Arts (29)	G	G	F**X**1	G**X**	G**X**	G2	G**X**3	1-Museum: G	2-Studio: P	3-Corridors: F
Earth Science (30)	G	G	F**X**1	G**X**	G**X**	G	F2	1-Corridor: G	2-Exposed Ceilings:G	
Biology (31)	G	G	F**X**1	G**X**	G**X**	G	P**X**2	1-Corridor: G	2-Exposed Ceilings:G	
Chemistry (32)	G	G	F**X**1	G**X**	G**X**	G2	F3	1-Corridor:G, Labs:P	2-Basement: F	3-Labs: P part of 2nd Fl: G
Physics (33)	G	G	F**X**1	G**X**	G**X**		G2	1-Corridor: G	2-Corridors: F	
Campus Center (34)	G	G	F**X**1	G**X**	G**X**	G2	F3	1-Corridor:G/F Labs:P	2-Stairs: F/P Bsmt.:F/P	3-Offices: F/P
Education (35)	G	G	G1	G**X**	G**X**	G	F**X**2	1-Classroom: F	2-Corridors: F	
Humanities (36)	G	G	F**X**	G**X**	G**X**	G1	F2	1-Stairs need Paint	2-Exposed Ceilings:G	
Library (37)	G	F1	P**X**	G**X**	F**X**	G	G**X**2	1-Carpeting:P 1stFl = +Bsmt.:G VCT:F	2-Ceiling Tiles:P	
Lecture Center (38)	G	F	F	G	G**X**	G	G1	1-Some Leakage		
Performing Arts (39)	G	F	G1	G**X**	G**X**	FX2	G3	1-Theatres: **X**	2-Theater Stg.: **X**	3-Theaters: **X** some Leakage
Campus Ctr. Add. (34A)	G	G	E	G	G	G	F1	1-Denting & Caps in metal ceilings		
Computer Center (56)	G	F	G	N.A.	G**X**	G	F**X**			
Physical Education (55)	G	G	F**X**1	G**X**	G**X**	G	F**X**	1-Terazzo Lobbies Good		
Recreation/Convocation (105)	G	G	G	G	G	G	G			

KEY: **E-Excellent** **G-Good** **F-Fair** **P-Poor** **X-Improvements Recommended** **N.A.- Not Applicable**

SUMMARY OF UPTOWN CAMPUS BUILDING ADAPTABILITY SURVEY

	Present Use:							Future Use:									
Building	Classrooms	Labs	Res.	Off.	Supp.	Resid.	Other	Classrooms	Labs	Res.	Off.	Supp.	Resid.	Other	Comments:		
Social Science (26)	G			G				G	F1	F	G	F	P		1-For soft labs only		
Business Admin. (27)	G			G				G	F1	F	G	F	P		1-For soft labs only		
Administration (28)				G				F	F1	F	G	F	P	G2	1-For soft labs only		
Fine Arts (29)	G			G			G2	F	F1	F	G	F	P	G2	1-For soft labs only	2- Exhibitions/Studio	
Earth Science (30)	G	F		G				G	G1	F	G	F	P		1-For soft labs only		
Biology (31)	G	F		G				G	G1	F	G	F	P		1-For soft labs only		
Chemistry (32)	G	F		G				G	G1	F	G	F	P		1-For soft labs only		
Physics (33)	G	G		G				G	G1	F	G	F	P	G1	1-For soft labs only		
Campus Center (34)	G			G	G		G1	G	G1	P	G	F	P		1-Kitchen, Dining, Mtg.Rooms, Lounges		
Humanities (36)	G			G				G	F1	F	G	F	P	G2	1-For soft labs only		
Library (37)				G	G		G1	G	F1	F	G	F	P	G1	1-For soft labs only	2-Reading Rm.Stacks	
Lecture Center (38)					G		G1	G2	F1	G2	F	G	P	G1	1- Lecture Halls	2-Only floor leveled	
Performing Arts (39)				G	G		G1	G	P	P	G	G	X	G1	1-Theaters, Practice Rooms, Workshops		
Campus Ctr. Add. (34A)					G		G1	G	F1	F	F	G	P	G1	1-Stores, Dining Rooms, Kitchen		
Computer Center (56)				G	G		G1	F	F2	F	G	G	X	G1	1- Computer Rooms	2-For soft labs only	
Physical Education (55)				G	G		G1	F	F	F	G	G	X	G1	1-Gymnasium, Pool, & other sports uses		
Recreation/ Convocation (105)				G	G		G1	G	F	F	G	G	X	G1	1-Gymnasium, Courts & Assemble uses		

KEY **E-Excellent** **G-Good** **F-Fair** **P-Poor** **X-Not Possible**

Finally, the table “Summary of Uptown Campus Building Adaptability Survey” indicates their adaptability for a variety of present and future uses including; classrooms, labs, research, offices, support, residential and other.

A more complete account of all the buildings' conditions and adaptability ratings is given in the Master Plan's Phase I, "Goals and Objectives Workpaper".

Mechanical Electrical and Plumbing Systems Evaluation

The existing Mechanical Systems (Heating, Ventilating and Air Conditioning Systems) consist of High Temperature Hot Water heat exchangers, Perimeter Heating, Heating and Ventilating units, Dual Duct Air Conditioning Units, Dual Duct Terminal Boxes, Air Distribution Systems, Pneumatic Controls and Fume Hood Exhaust Systems. The majority of the ventilation and air conditioning systems are inadequate for the present occupancies. Much of the mechanical equipment has exceeded its useful life of operation and requires replacement.

The power distribution system consists of a primary transformer, main disconnect switch and main distribution board. Each building’s service is provided by one normal and one emergency power HV feeder which terminate at HV disconnect switches inside the building’s electric service room. The primary transformer and main distribution boards are also located inside the electric service room. Most of the transformers are "PCB" type with the exception of few buildings where these transformers are replaced by dry type transformers. The main distribution board is rated at 120/208V-3 phase, 4 wire system.

The main distribution board feeds the lighting and power panels. Lighting panels are located in the electrical closet of each floor. These panel boards feed the lighting and receptacles. Power panels are located in the basement in mechanical rooms and electric service rooms which feed the HVAC and Plumbing equipment.

The existing Plumbing Systems consist of Sanitary, Storm, Domestic Cold and Hot Water services, Laboratory services and Plumbing Fixtures. None of the buildings have RPZ’s in the cold water mains. Domestic Hot Water generating systems have exceeded their useful life of operation. All other Plumbing systems are in fair condition.

Opportunities and Constraints

The purpose of the site analysis is to gain an understanding of those characteristics of the site and its present development that are most likely to affect the various scenarios that will be explored in developing the Master Plan.

A Lack of Continuity

The campus lacks continuity within its own bounds because it is divided in two by Fuller Road, the residential development west of Fuller Road and the cemeteries located on either side of Fuller Road.

In a larger context, the University lacks continuity with its neighbors. First, most of the University's buildings are set far back from the surrounding streets. Second, there are no vehicular or pedestrian connections between the University and its immediate institutional, residential or commercial neighbors to the east and south. Finally, the siting of most of the buildings on a raised podium on high ground gives the campus a sense of aloofness that separates it from the surrounding community.

No Clear Campus Entry

It is confusing for first-time visitors to find their way around the campus. The difficulty is caused by:

- A lack of signage
- No appropriate landmarks to identify special places or arrival points
- The architecture connecting all the buildings on the Podium with a colonnade so that they appear as one building which looks much the same from all four sides.

It appears that the central entrance to the Perimeter Road from Washington Avenue was meant to be the ceremonial entrance to the campus, but it does not work well, at present, for the following reasons:

- The traffic circle has such a large circumference that the first time visitor does not realize it is a drop-off
- The Podium colonnade has no breaks in it to indicate "entry"
- The point of tangency of the traffic circle serving the Podium is too far away from the Podium.

The fact that the circle does not work well as an entry point now, however, does not preclude the use of the circle, or some variation of it, as an entry motif in the future.

The Lake and its Surroundings

The lake and the hilly, wooded area adjacent to it were mentioned frequently during the interviews as one of the nicest areas on the Campus. This area is used for teaching and is a pleasant place to walk or sit. Development should not be allowed to infringe on this area, and it is a good candidate for any natural restoration that it might require.

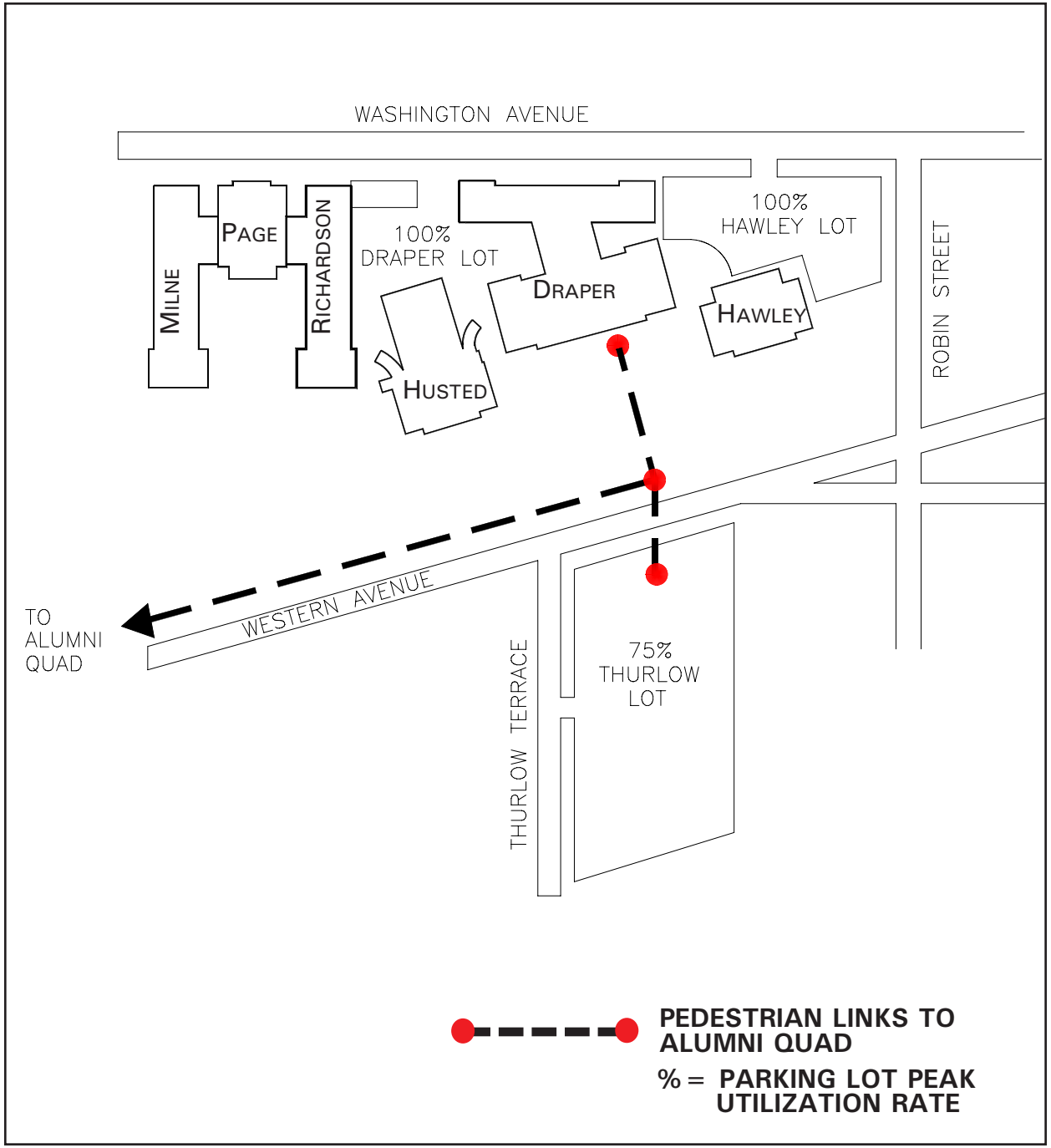
DOWNTOWN CAMPUS

Sites' Characteristics and Landscape Analysis

The Downtown Campus consists of two major sites, bounded by Washington Avenue, O'Leary Boulevard, Western Avenue and Robin Street. The eastern portion of the campus is anchored by Rockefeller College. The college is a collection of interconnected traditional style buildings, occupying a single city block parcel. The western portion of the campus is anchored by Alumni Quad, which is composed of five major structures arranged in a typical collegiate residential quadrangle. The 1500 feet between the Rockefeller College Campus and Alumni Quad is occupied by a section of Albany's mid-town residential neighborhood.

The residential components of the Uptown Campus and the Downtown Campus are addressed differently in this report. Whereas the Uptown Campus Quads are fully utilized for residential uses, Alumni Quad offers more potential opportunities for the future because it is currently underutilized.

The adjacent neighborhoods represent two extremes. To the north, the residential area is part of an economically challenged portion of the city. The central and south neighborhoods, however, are more successful, providing an urban collegiate environment for the Downtown Campus. The academic environment is reinforced by the presence of local educational institutions. These include the College of Saint Rose, the La Salle School and the Albany High School. In addition, the nearby midtown state and local government offices excellently supplement Rockefeller College's undergraduate and graduate programs. Green space is provide both within the Downtown Campus and the surrounding environs. The formal campus lawn is a valued component of Rockefeller College. Alumni Quad is located within landscaped lawns about an open courtyard. Washington Park dominates the southeastern corner of the



Rockefeller College Parking and Circulation Plan

Downtown Campus, with Beverwyck Park and Ridgefield Park bordering Alumni Quad.

Rockefeller College

The eastern component of the Downtown Campus, Rockefeller College consists of six interconnected buildings. The buildings represent New England architectural traditions, and were constructed in the first quarter of the twentieth century. The buildings are arranged in a rough line along Washington Avenue, with the southern portion of the site dominated by a formal college lawn. Originally constructed as the New York State Teacher's College, this campus component has developed into a renowned academic and research facility, and includes several independent research centers.

The districts immediately to the east of Rockefeller College have a strong relationship with this facility. The midtown offices of state and local government supplement the College's Criminal Justice, Public Administration, Political Science and Social Welfare programs. To the east, the City Adult Learning Institute is located immediately adjacent to the College and the Albany Elementary School borders the College to the west. Athletic opportunities are provided by the nearby YMCA.

Richardson Hall, Page Hall and Milne Hall form three sides of a small courtyard on the western portion of the site. An open peristyle connects Richardson to Husted Hall and an upper level bridge provides a link to Draper. The central mechanical plant is located within the Richardson basement.

Alumni Quad

Alumni Quad is the western component of the Downtown Campus. It occupies a single block parcel and consists of five structures arranged in a traditional residence quadrangle. The buildings are placed around a simply landscaped courtyard, at the approximate center of the site. Surrounding the quadrangle are smaller landscaped lawns. The central courtyard is depressed, and provides access to the surrounding building's lower levels. The grade rises away from the courtyard, and the buildings are set into this slope. Primary access to each building faces the surrounding streets, one level higher.

Collegiate residential neighborhoods border Alumni Quad to the east and south. To the west is the local academic neighborhood, which includes the College of Saint Rose and the La Salle School. To the north is Beverwyck Park, beyond which is Washington Avenue and an economically challenged residential neighborhood.

Traffic, Parking and Service Analysis

Traffic

The Downtown Campuses are both located between two principal east/west city arterials: Washington Avenue and Western Avenue. Rockefeller College is located at the convergence of these two roadways. The Downtown Campus complexes are separated by a distance of approximately 1500 feet. This distance is equivalent to the length of the academic Podium at the Uptown Campus.

Washington Avenue is a four-lane roadway with on-street parking permitted on both sides of the street. The section of Western Avenue adjacent to the Downtown Campus is a two-lane roadway which also permits parking on both sides. The north/south city streets in this area are either two-lane, two-way streets (i.e. Robin Street, Lake Avenue and Quail Street) or single lane, one-way streets (i.e. O'Leary Boulevard and Ontario Street). With the exception of Ontario Street, parking is permitted on both sides of these north/south city streets. Parking on Ontario Street is restricted to one side only. The intersections of these north/south streets at Western Avenue and at Washington Avenue are controlled by traffic signals.

Pedestrian Access and Circulation

All of the city streets within the campus area feature sidewalks on both sides of the street. Pedestrian crosswalks are delineated at the signalized intersections within this area. Pedestrian signals are provided at two crossing locations that are under semi-actuated control, whereby pedestrian activation of a push-button ensures adequate crossing time. These locations are as follows:

- Washington Avenue and Robin Street
- Washington Avenue and Lake Avenue

At locations where pedestrian signals are not provided, the operation of the signal is fixed-time, where pedestrian crossing time is allocated within the signal sequence timing of the vehicle control. The vehicle signals are visible from pedestrian crossing locations at these locations.

A pedestrian crossing is also delineated at the unsignalized intersection of Western Avenue and Thurlow Terrace, which is a T-intersection located opposite the Rockefeller College complex. This is a significant area of pedestrian activity between the University at Albany parking lot located at Thurlow Terrace and the Rockefeller College.

Parking

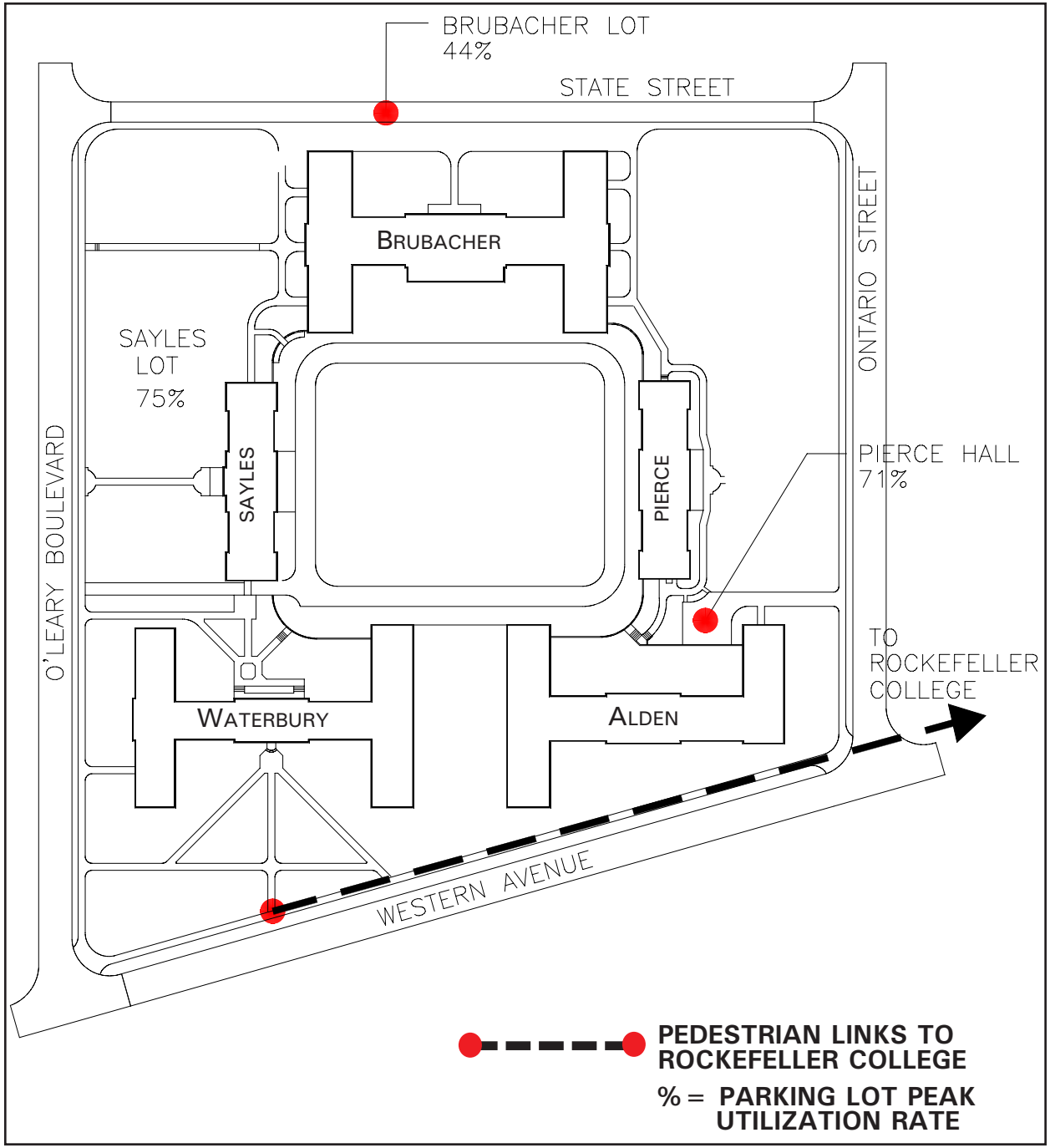
Parking facilities at the Downtown Campus currently provide designated off-street parking for 432 vehicles. At the Rockefeller College complex, open parking is provided for students and visitors at the Thurlow Terrace lot, which has a capacity for 226 vehicles. The Hawley Lot, located adjacent to the College, is restricted to use by faculty and staff and provides parking for 67 vehicles. The Draper Lot, which is located on the premises of Rockefeller College, is restricted to special permit parking and has a capacity for 22 vehicles. Parking at the Alumni Quad is provided at the State Street Lot and Sayles Lot, with parking capacities of 80 spaces and 30 spaces, respectively.

Seven parking spaces are also provided at Pierce Hall. As noted previously, on-street parking is permitted on city streets within proximity to both the Alumni Quad and Rockefeller College complexes. This parking is currently free and is not time-regulated, other than for limited periods for nighttime street cleaning. However, competition for this parking is shared between users of the University at Albany campus, city residents and local commercial establishments.

A survey of parking utilization at the Downtown Campus was conducted during the Spring 1997 semester. Samples of the weekday parking occupancies at each parking lot at the Alumni Quad and at Rockefeller College were obtained at approximate one-hour intervals from 12:00 noon through 8:00 p.m.

Observations of parking occupancies at the Downtown Campus show that the utilization of the faculty/staff and special permit lots at the Rockefeller College were each consistently at or near capacity throughout the observation period. However, the average utilization of the Thurlow Lot was only 60 percent of the designated capacity. Parking occupancy at the Alumni Quad parking areas generally utilized 50 percent of the available supply, but it is noted that the Alumni Quad buildings are currently only occupied at about one third of their capacity.

The parking utilization data was also reviewed to identify the peak hourly parking demand to evaluate the overall sufficiency of the existing parking supply. Table I-2 identifies the available capacity and peak hour parking use for each of the Downtown Campus parking areas. As indicated in this table, the peak demand at faculty/staff and special permit parking areas is at least as great as the available parking allows. However, this information is not sufficient to quantify any latent demand for parking that may exist, due to the expected use of



Alumni Quad Parking and Circulation Plan

on-street parking spaces within the vicinity of the campus.

Table I-2
Parking Utilization - Downtown Campus

Lot Name	Parking Capacity	Peak Hour Parking Demand
Rockefeller College		
Thurlow Lot	226	165
Hawley Lot	67	67
Draper Lot	22	22
Alumni Quad		
Brubacher Lot	80	35
Sayles Lot	30	16
Pierce Hall	7	5

Peak parking occupancy of the Thurlow Lot suggests that there is reserve capacity for student parking. The peak hour utilization was less than 75 percent of the available capacity. Again, this may not be a true reflection of the actual parking demand generated by the campus due to the availability of on-street parking on city streets.

Transit Services

As described in the Uptown Campus section of this report, transit service to the Downtown Campus is provided by two bus systems, the University at Albany buses and CDTA public transit bus routes. Bus shelters for both services are provided at the signalized intersections adjacent to the campus complexes. There are also designated bus stops and shelters at the frontage of Rockefeller College on both Washington and Western Avenues. Cross-town bus service is also available on Quail Street, which is located between the Alumni Quad and Rockefeller College complexes.

Utilities Analysis

A. HEATING SYSTEM

The Campus Boiler Plant was built in 1956 and is located in the basement of the Richardson Building. This plant was built to heat six buildings located on the Campus site. The main source of steam, at that time, was three (3) 150 H.P. boilers manufactured by Titusville Iron Work. In 1980 the Boiler Plant was rebuilt. One of the existing boilers was repaired, two others replaced with new boilers. The plant provides steam at 10-15 psig to the Downtown Campus.

The accompanying table is a description of the Boiler Plant equipment:

The system's conditions are summarized in the accompanying table and indicate a need for significant repair and replacement projects.

BOILERS

Information Item	Boiler #1	Boiler #2	Boiler #3
Installation Date	1980	1980	1956
Boiler Manufacturer	Weil McClain	Weil McClain	Titusville Iron Work
Model	H-1994-SF, Cast Iron, Sectional	H-1994-SF, Cast Iron, Sectional	Watertube Steel Boiler
Capacity	150 HP	150 HP	150 HP
Fuel Type	Natural Gas/Oil #4	Natural Gas/Oil #4	Natural Gas/Oil #4
Fuel CFH/GPH (unput)	6320/4760	6320/4260	10000/Presently not used
Burner Installation Date	1980	1980	1956
Manufacturer	"Preferred"	Preferred"	(2 Burners) Ray #5 & #6
Model	BHE45 3M4	BHE45 3M4	(2) AR-144

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	DISTRIBUTION PIPING				X		
2	BOILER NO. 3				X		
3	BOILER CONTROL SYSTEM					X	Obsolete
4	DOMESTIC WATER HEAT EXCHANGER				X		
5	CONDENSATE RETURN PUMPS					X	One is in poor condition, should be replaced
6	OTHER EQUIPMENT		X				
7	OVERALL CONDITION			X			

E= Excellent G= Good F= Fair P= Poor I= Improvements may be required

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	SERVICE #1 FROM WASHINGTON AVE.		X				
2	SERVICE #2 FROM WESTERN AVE.				X		
3	SERVICE #1 EQUIPMENT			X		X	
4	SERVICE #2 EQUIPMENT				X		
5	FIRE SERVICE EQUIPMENT				X		
6	OVERALL CONDITION			X			

E= Excellent G= Good F= Fair P= Poor I= Improvements may be required

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	OVERALL CONDITION			X		X	

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

B. WATER SYSTEM

Cold water for domestic needs is supplied from the city mains via two services: one 8 inch service from Washington Avenue entering the Richardson Hall and one 4 inch service from Western Avenue entering the Page Hall. Both services are equipped with meters and interconnected inside the buildings. However, the shut off valve on the interconnecting line is kept normally closed, and the demand supplied by the service No. 2 is practically negligible. Almost all campus demand is supplied via the service No. 1.

Distribution piping between the buildings of the campus is installed in the system of tunnels running under the buildings and interconnecting them.

The system's conditions are summarized in the accompanying table and indicate a need for repairs and replacement.

C. COMBINED SEWERAGE SYSTEM

The site combined gravity sewerage system serving Rockefeller College collects sanitary sewage from six buildings located on the site as well as storm runoff from the buildings' roofs, local roads, parking lots and grass areas and discharges it into 18 inch Western Avenue combined city sewer. The original site sewerage system was constructed in the early 20's. As new buildings were constructed on this site over the years new branches were added to the original sewer system. The last significant reconstruction to the sewer system occurred in late 50's. The system is constructed from cast iron and vitrified clay pipes.

The system's conditions are summarized in the accompanying table and improvements may be required.

D. NATURAL GAS AND FUEL OIL SYSTEMS

Natural gas is required for the campus boilers and for the cafeteria kitchen. In the kitchen, gas is the only fuel used. In the Boiler Plant natural gas is a primary fuel supplemented with Oil No. 4 as a secondary fuel.

Natural gas is supplied to the campus via two services. Both services are connected to the Washington Avenue gas main belonging to the local utility company. One service is 4 inches in diameter, enters the Richardson Hall's basement and is equipped there with a pressure regulator and a gas meter. This service supplies gas to the boilers. Another gas service is small, only 1-1/4 inch in diameter. It enters the site between the Richardson Hall and the Draper Hall.

The systems conditions are summarized in the accompanying table and indicate that repairs to the overall system, especially the oil supply system, may be necessary.

No.	SYSTEM ELEMENT	E	G	F	P	I	COMMENTS
1	GAS SERVICE PIPING		X				
2	OVERALL GAS SYSTEM CONDITION		X				Pressure regulators and meters are utility company's property.
3	OIL TANKS	X					
4	OIL PIPING	X					
5	OIL HEATING AND PUMPING EQUIP.		X				
6	OIL SUPERVISORY SYSTEM				X	X	Excessive false alarms.
7	OVERALL OIL SYSTEM CONDITION		X			X	

E = Excellent G = Good F = Fair P = Poor I = Improvements may be required

Buildings' Evaluation

Rockefeller College

The Rockefeller College buildings, in general, are constructed of load bearing brick masonry exterior walls with interior steel framing. The number of floors and the area of each building at the Downtown Campus are given in the table. "Summary of Major Downtown Building Characteristics." Although Draper Hall is well suited to traditional academic occupancy, its finish systems have deteriorated (see the table, "Summary of Downtown Campus Building Condition Survey") and its mechanical and electrical systems merit substantial modernization.

The Hawley Library houses the College's Dewey Library Collection. Similar to Draper, the building's finish systems are worn and the mechanical systems require renovation. Hawley Hall was originally constructed as an auditorium, and was renovated to serve as a library. Over the years the collection and use of the building have overgrown the available space. Provisions for computers are inadequate, and the building requires major expansion and reconstruction to provide for required College academic support.

Approximately two thirds of Husted Hall are currently occupied by non-Rockefeller College programs, which impede the growth of the college and interfere with proper academic functional adjacencies. While the floor plan is organized well for certain instructional uses, there are few classroom sized academic spaces. This lack of adequate classroom space is a serious concern to the College. Husted Hall requires a major renovation and reconstruction, to not only restore worn and deteriorated finish and support systems, but to reconfigure the building to better meet modern academic program requirements.

Typical of the Rockefeller College buildings, Richardson's finish, mechanical and electrical systems are in need of restoration and require modernization. This is also true of Page Hall and Milne Hall. Milne Hall is both similar in construction and condition to Richardson. While both Richardson and Milne are well suited to academic occupancies, over the years the College's academic programs have evolved so both buildings require major reconstruction, to both modernize systems and to reconfigure the buildings to meet the College's current program delivery requirements. Note that potential future uses of the Downtown Campus buildings are given in the table, "Summary of Downtown Campus Adaptability Survey."

Page Hall houses both the old gymnasium and the College's auditorium. The gymnasium has been decommissioned for several years and is currently being used as a file storage location. The gym is a below grade space which suffers from severe storm and ground water infiltration. The auditorium, however, has been well maintained and is a valuable component of both the College and the local community. Page Hall requires work on two levels. First is the reconstruction of the gymnasium space, to provide for College program support and to mitigate its water infiltration problem. Second, the auditorium should be modernized, with improved lighting and presentation systems, as well as a restoration of worn finishes.

Alumni Quad

The buildings of Alumni Quad are similar to those of Rockefeller College being constructed of masonry load bearing exterior walls with interior structural steel framing. The buildings are of a traditional architectural type and were constructed between 1935 and 1960. The architectural character of the quadrangle has been retained throughout each phase of construction, resulting in a cohesive appearance throughout the Quad.

As residential dormitories, the existing buildings are underutilized.Currently a portion of two buildings, Brubacher and Pierce Halls, have been leased to the College of Saint Rose.

In general, all of the buildings of Alumni Quad are in a similar condition. The buildings were constructed as dormitories, and conversion to any other sort of occupancy would require major renovation and reconstruction. The existing finish systems, both interior and exterior are worn and deteriorated, and the mechanical and electrical systems require extensive modernization.

Of the buildings, Brubacher Hall is currently in the best condition. Its upper two floors are unoccupied, while the lower two floors have been renovated by the College of Saint Rose. Alden and Waterbury Halls are also in fair condition, and are currently being occupied as dormitories. The remainder of the quadrangle buildings remain unoccupied, except for the basement of Pierce Hall. Approximately half of the Pierce Hall basement is also being used by the College of Saint Rose. Of the remaining buildings, Sayles Hall is in the worst condition. Pierce Hall is also in poor condition. It has deteriorated, its existing entrance portico has failed and it requires complete reconstruction.

Sayles Hall requires special note. While unoccupied, the internal spaces are of a higher level of detailing and configuration, unique to both the quadrangle and the University. Any renovation of these facilities should be carefully considered, in order to restore and retain the buildings' architectural character. The building spaces would not only support residential activities, but would also excellently support a conferencing center.

Additional research surrounding a Conference Center may look more closely into the parking needs and locational requirements (i.e. uptown/downtown, etc.)

Summary of Major Downtown Building Characteristics

Rockefeller College

Name	No.	Floors	NSF	GSF
Draper Hall	1	3 & 2 Basements	43,634	82,669
Hawley Hall	2	2 & 2 Basements	11,986	15,146
Husted Hall	3	2 & 2 Basements	26,046	40,390
Richardson Hall	4	3 & 2 Basements	29,598	58,724
Page Hall	5	2 & Basement	12,355	24,868
Milne Hall	6	3 & 2 Basements	23,114	41, 813
		Subtotal	**146,733**	**263,610**

Alumni Quad

Pierce Hall	9	3 & 2 Basements	26,615	33,725
Sayles Hall	10	3 & Basement	31,270	42,357
Brubacher Hall	11	3 & 2 Basements	76,096	102,347
Alden Hall	12	3 & 2 Basements	47,145	69,980
Waterbury Hall	13	3 & Basement	62,585	96,289
		Subtotal	**243,711**	**344,698**
		Total	**390,444**	**608,308**

SUMMARY OF DOWNTOWN CAMPUS BUILDING CONDITION SURVEY

Building	Walls	Roof	Floors	Windows	Doors	Finishes	Ceilings	Exceptions and Comments
ROCKEFELLER COLLEGE								
Draper Hall (01)	F	P	G	PX	FX	FX	PX	Roof replacement under design
Hawley Library (02)	PX	P	PX	FX	PX	PX	PX	Roof replacement under design
Husted Hall (03)	F	P	F	PX	FX	FX	PX	Roof replacement under design
Richardson Hall (04)	F	P	G	PX	FX	FX	PX	Roof replacement under design
Page Hall (05)	PX	P	F	PX	FX	PX	PX	Roof replacement under design
Milne Hall (06)	F	P	F	PX	FX	FX	PX	Roof replacement under design
ALUMNI QUAD								
Pierce Hall (09)	G	PX	PX	FX	PX	PX	G	Roof requires replacement, failed portico
Sayles Hall (10)	FX	PX	PX	PX	PX	PX	PX	Roof requires replacement, deteriorated
Brubacher Hall (11)	G	G	PX	FX	PX	FX	FX	
Alden Hall (12)	G	PX	PX	FX	PX	PX	PX	Roof requires replacement
Waterbury Hall (13)	G	PX	PX	FX	PX	PX	PX	Roof requires replacement
Dining Hall (13a)	G	G	F	FX	PX	FX	PX	

Key: E = Excellent G = Good F = Fair P = Poor X = Improvements Required N.A. = Not Applicable

SUMMARY OF DOWNTOWN CAMPUS ADAPTIBILITY SURVEY

	Present Uses:							Future Uses:							
	Classrooms	Labs	Research	Office	Support	Residential	Other	Classrooms	Labs	Research	Office	Support	Residential	Other	Comments
ROCKEFELLER COLLEGE															
Draper Hall (01)	F	X	G	G	G	X		G	P	E	E	E	P		For soft labs only
Hawley Library (02)							F							F	Library
Husted Hall (03)	F	X	G	G	G	X		G	P	E	E	E	P		For soft labs only
Richardson Hall (04)	F	X	G	G	G	X		G	P	E	E	E	P		For soft labs only
Page Hall (05)	P	P	P	P	F	X	F	P	P	P	P	G	X	E	Auditorium
Milne Hall (06)	F	X	G	G	G	X		G	P	E	E	E	P		For soft labs only
ALUMNI QUAD															
Pierce Hall (09)	Unoccupied							F	F	F	E	G	E		Code compliance issues if change of occupancy
Sayles Hall (10)	Unoccupied							G	F	G	E	G	E		Code compliance issues if change of occupancy
Brubacher Hall (11)	F	F		E	G			F	F	F	E	G	E		Code compliance issues if change of occupancy
Alden Hall (12)	Unoccupied							F	F	F	E	G	E		Code compliance issues if change of occupancy
Waterbury Hall (13)				G	F	G		F	F	F	E	G	E		Code compliance issues if change of occupancy
Dining Hall (13a)					G		G	P	P	P	P	G	P	G	Dining and Conference Support

Key: E = Excellent G = Good F = Fair P = Poor X = Not Possible

Mechanical, Electrical and Plumbing Systems Evaluation

The existing Mechanical Systems (Heating, Ventilating and Air Conditioning Systems) consist of Low Pressure Steam to Hot Water Heat Exchangers, Perimeter Heating, Heating and Ventilating Units, and Pneumatic Controls. The heating system satisfies the needs of all buildings. However, the majority of the Heating Control systems are inadequate for the present occupancies. Much of the mechanical equipment has exceeded its useful life of operation and requires replacement. Central air conditioning is recommended for all buildings. At present none of the buildings are centrally air conditioned.

The existing electrical system consists of a primary transformer, main disconnect switch and a main distribution board. Fuse cutouts are installed on the HV side and a main disconnect switch is installed on the LV side of the primary transformer. The main distribution board is rated at 120/208V-3 phase, 4 wire system. The primary transformer, main disconnect switch and power distribution board are located in the electric service room.

The main distribution panel feeds the lighting and power panel boards. Lighting panels are located in the corridor of each floor. These panel boards feed general lighting and receptacles. Power panels are located in the basement and first floor which feed the HVAC and Plumbing equipment. Most of the panel boards are part of the original construction and have passed their useful life. Some panel boards were installed in recent years and are in good condition.

The existing Plumbing Systems consist of Sanitary, Storm, Domestic Cold and Hot Water services, Laboratory services and Plumbing Fixtures. None of the buildings have RPZ's in the cold water mains. Domestic Hot Water generating systems have exceeded their useful life of operation. All other Plumbing systems are in fair condition.

Opportunities and Constraints

The development of the Downtown Campus is currently bound by its unique site and architecture. Both the Rockefeller College and the Alumni Quad are located on distinct parcels, which places limits on any potential expansion by the simple addition of new buildings. However, the projected University enrollment will place a significant load upon the two campus units, requiring a re-evaluation of existing building use, the careful addition of new structures,and the acquisition of adjacent parcels if possible, to handle the increase in students. Regarding adjacent parcels, the University should pursue partnerships with the City of Albany and explore the parcel across Robin Street, which is currently the Adult Learning Center and the City owned Beverwyck Park behind Brubacher Hall.

Of the two campuses, Alumni Quad is the most straightforward. The existing buildings occupy most of the useable grounds, leaving little opportunity for new construction. However, most of the existing buildings are currently unoccupied. Recommissioning Alumni Quad would add approximately 197,000 gsf of residential space back to the University. Because of the age of these buildings, their existing construction type and plan configuration, the Alumni Quad buildings should be reconstructed as dormitories or some other kind of residential occupancy. As such, only those areas being renovated will be required to be brought up to modern building codes and regulations. Any proposed use which would change the building's occupancy type would require the entire building be brought into compliance with the building code, which would require a significant expenditure of available resources.

While landlocked, the central courtyard presents a unique opportunity for development as a shared common green space. The remainder of the site should maintain its landscaped and lightly wooded nature.

Rockefeller College presents a more challenging site for development. The combination of both traditional academic buildings and open lawns create a collegiate environment unique to both downtown Albany and the Capital District region. This, combined with the adjacency of complimentary local state and government offices, has created both a site and environment extremely supportive to the College's Social Welfare, Criminal Justice, Political Science and Public Administration programs. This has supported the College's development of a national reputation for excellence. Any future development of Rockefeller College should further re-inforce this environment, and not move to either dismantle or relocate core Rockefeller College divisions. The buildings themselves, while requiring modernization and reconfiguration, are well suited for the College's program delivery.

Against this is a significant projected increase in enrollment, matched with the College's need for additional space to simply meet current program requirements. As such it will be necessary, in both the short and long term, to invest a significant amount of effort at Rockefeller College. This will result in new construction on this site. Any new structure must be designed to minimize its impact on the College's open space and respect the traditional nature of the existing campus buildings.

Both Alumni Quad and Rockefeller College have an existing and projected concern for faculty, staff and student parking. Unless one encroaches on the existing greenspace, such as Rockefeller College's landscaped lawns or Alumni Quad's courtyard, there is limited or no area available for additional parking. Such encroachment, however, is currently not acceptable to the University. According to the traffic consultant's studies, the existing street parking grid should be sufficient to accommodate both existing and projected loads (see Table V-3). However, the City of Albany could change this situation independent of the University's input, with the possible re-evaluation of streetside parking permits. If this occurs, the Downtown Campus' parking requirements will need to be re-investigated. In any case, the existing parking located south of Rockefeller College, while currently limited to a single street level lot, has potential for further development. This could

include additional above ground parking decks, serving both the College and the local community. However, since the Construction Fund does not support the development of parking garages, it would have to be a financially self sufficient endeavor.

Rockefeller College

Alumni Quad

Space Program Analysis

SPACE PROGRAM SUMMARY

INTRODUCTION

The program for current and future facilities for the University at Albany is based on the current physical space inventory as maintained by the University, growth projections by department as developed by the University, and the methodology for evaluating space as established by the State University Construction Fund. Working with the base of Fall 1995, the projections for space are for the Fall 2001 and the Fall 2006 semesters.

The evaluation focuses on both the Uptown Campus and Downtown Campus. Based on the University's enrollment projection through 2006, it is anticipated that with the availability of appropriate resources the University as a whole will grow from approximately 13,674 student FTEs (full time equivalent) to 17,475 FTEs. The projected enrollment not only includes the two primary campus sites, but also the School of Public Health. The focus of the Master Plan though is limited to the Uptown and Downtown Campuses, and the study pertains to the assessment of those campuses.

HOW THE PROFILES WERE DEVELOPED

The University's enrollment projections were initially proportioned between the campuses based on where the instruction currently occurs. As an example, Criminal Justice teaches proportionally a larger number of its lower level courses at the Uptown Campus than at the Downtown Campus. In developing a future profile of the Uptown Campus, it is assumed that the same percentage of the Criminal Justice lower level courses will continue to be taught at the Uptown Campus. This seems to be a reasonable assumption in that first and second year students are taking other university-wide courses offered only at the Uptown Campus.

The organized research space is developed as a function of Research Foundation grants and the staff supported by those grants, while the Departmental Research is developed as a function of faculty and graduate student FTEs. The growth rates used for grant sponsored research are commensurate with the related graduate program projections. Once again, using Criminal Justice as an example, the University projects substantial growth at the undergraduate level, but modest growth at the graduate level. The organized research growth is proportional to the more modest graduate enrollment projections.

Upon initial review of the two separate profiles, the Downtown Campus, based on instruction currently located at the campus and the projections by the University, had a projected enrollment of over 1,600 student FTEs. Based on a review of the current facilities by the Master Plan Team and the potential expansion on the Downtown Campus, it is determined that the future campus capacity is limited to approximately 1,300 FTEs. The result is that the profile of the Downtown Campus assumes that approximately 300 future student FTEs will be transferred to the Uptown Campus.

Housing need, based on the University's long term projection for 7,419 beds, is attributed entirely to the Uptown Campus with the need at the Downtown Campus remaining constant. This is primarily to simplify the accounting.

UPTOWN CAMPUS PROFILE

Description of Total Need

By 2001, the need for additional space at the Uptown Campus will grow from approximately 180,000 net square feet to over 320,000 net square feet. This does not include the need to expand dormitories which will contribute an additional 150,000 net square feet to the Uptown Campus by the year 2001, assuming that current housing policies and occupancy rates do not change. Overall need for non-residential space will grow to 527,000 net square feet by the year 2006. In addition, the need for dormitory space will expand by another 80,000 net square feet.

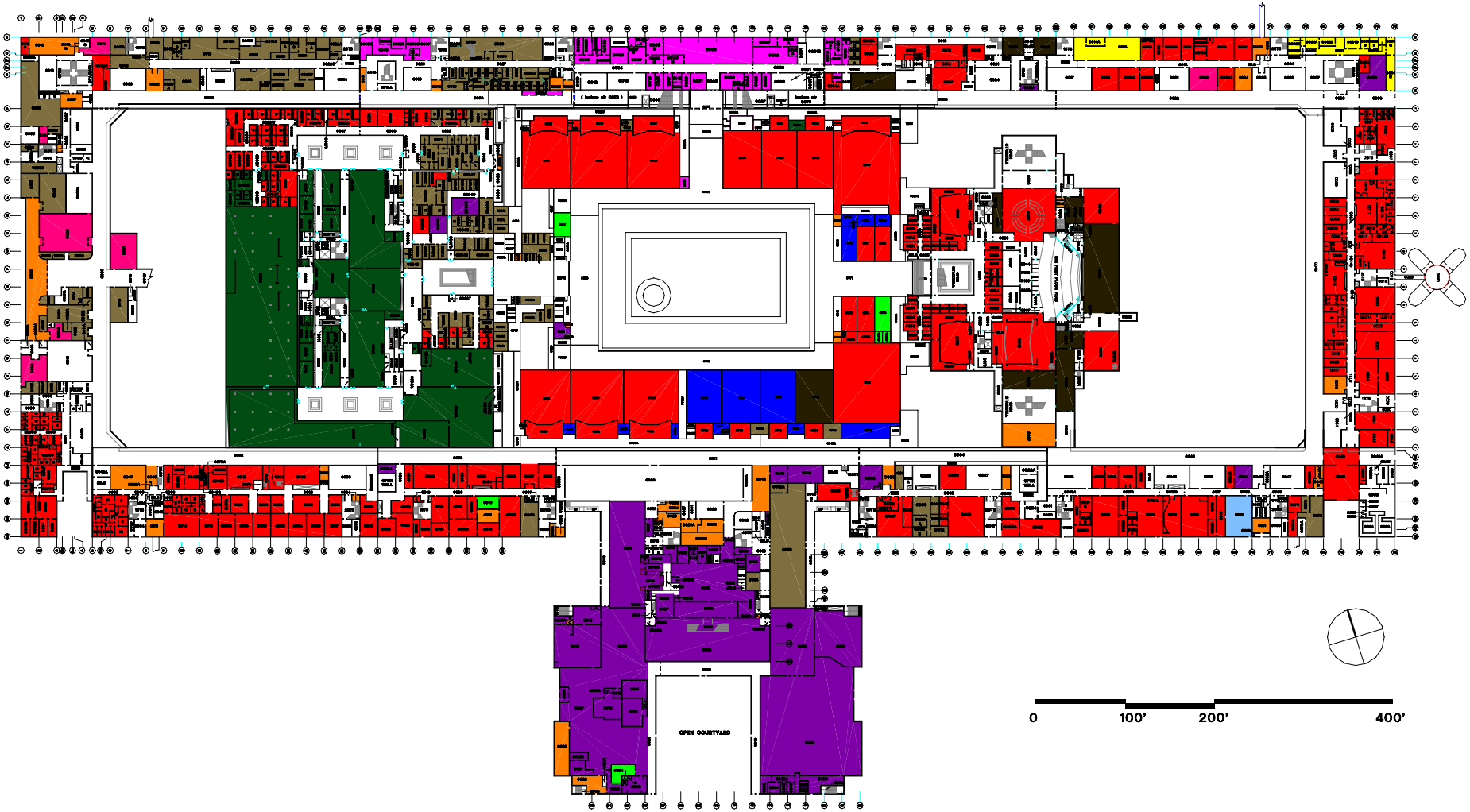
Inactive Space and Replacement Space

Several factors affect the total need. First, the Uptown Campus has approximately 65,000 square feet of space that's currently inactive. This includes both dormitories under renovation and the Air Structure. In addition, the University has several structures that are either leased space or substandard facilities, both of which have to be replaced by new construction.

Absent from the Evaluation

Not included in the assessment of the Uptown Campus is the new Library currently under construction. The CESTM is also not included. Both may offset the total need at the Campus but CESTM may be used for non-University purposes or functions.

Uptown Campus Profile							
Profile Based on Fall 1995							
Space Calculations for Fall 1995/2001/2006							
	1995	1995	Current	2001	Projected	2006	Projected
Category	Existing	Required	Deficit	Required	Deficit	Required	Deficit
	12,320 FTE's	12,320 FTE's		13,984 FTE's		15,648 FTE's	
Instructional & Research	557,925 nsf	559,319 nsf	1,394 nsf	652,555 nsf	94,630 nsf	772,906 nsf	214,981nsf
Organized Activity	5,884 nsf	5,884 nsf	0 nsf	10,492 nsf	4,608 nsf	10,492 nsf	4,608 nsf
Public Service	8,454 nsf	8,454 nsf	0 nsf	8,454 nsf	0 nsf	8,454 nsf	0 nsf
Instructional Resources	23,316 nsf	26,502 nsf	3,186 nsf	26,502 nsf	3,186 nsf	26,502 nsf	3,186 nsf
Electronic Data Processing	18,430 nsf	35,509 nsf	17,079 nsf	35,509 nsf	17,079 nsf	35,509 nsf	17,079 nsf
Library	200,777 nsf	308,750 nsf	107,973 nsf	321,749 nsf	120,972 nsf	338,813 nsf	138,036 nsf
Health & Phy Education	172,512 nsf	186,000 nsf	13,488 nsf	186,000 nsf	13,488 nsf	186,000 nsf	13,488 nsf
Student Activity Space	118,198 nsf	129,361 nsf	11,163 nsf	146,830 nsf	28,632 nsf	169,764 nsf	51,566 nsf
Health Services	16,320 nsf	18,278 nsf	1,958 nsf	18,278 nsf	1,958 nsf	18,278 nsf	1,958 nsf
Assembly & Exhibition	63,954 nsf	63,954 nsf	0 nsf	63,954 nsf	0 nsf	63,954 nsf	0 nsf
Administration	97,296 nsf	107,664 nsf	10,368 nsf	121,032 nsf	23,736 nsf	139,800 nsf	42,504 nsf
Central Services	77,138 nsf	69,560 nsf	-7,578 sf	78,956 nsf	1,818 nsf	90,935 nsf	13,797 nsf
Building Services	30,349 nsf	45,577 nsf	15,228 nsf	50,109 nsf	19,760 nsf	55,842 nsf	25,493 nsf
Special Use	9,917 nsf	9,917 nsf	0 nsf	9,917 nsf	0 nsf	9,917 nsf	0 nsf
Total Net Area	1,400,470 nsf	1,574,728 nsf	174,258 nsf	1,730,338 nsf	329,868 nsf	1,927,166 nsf	526,696 nsf
(Non-Residential)							
Total Residential Net Area	909,093 nsf	909,093 nsf	0 nsf	1,065,547 nsf	156,454 nsf	1,139,914 nsf	230,821 nsf
Currently Inactive Space						65,328 nsf	
Impact of Moving the School of Public Health Uptown						84,949 nsf	
Square Footage to be Taken Off-line						81,202 nsf	
Non-Residential Space In Residences						22,139 nsf	

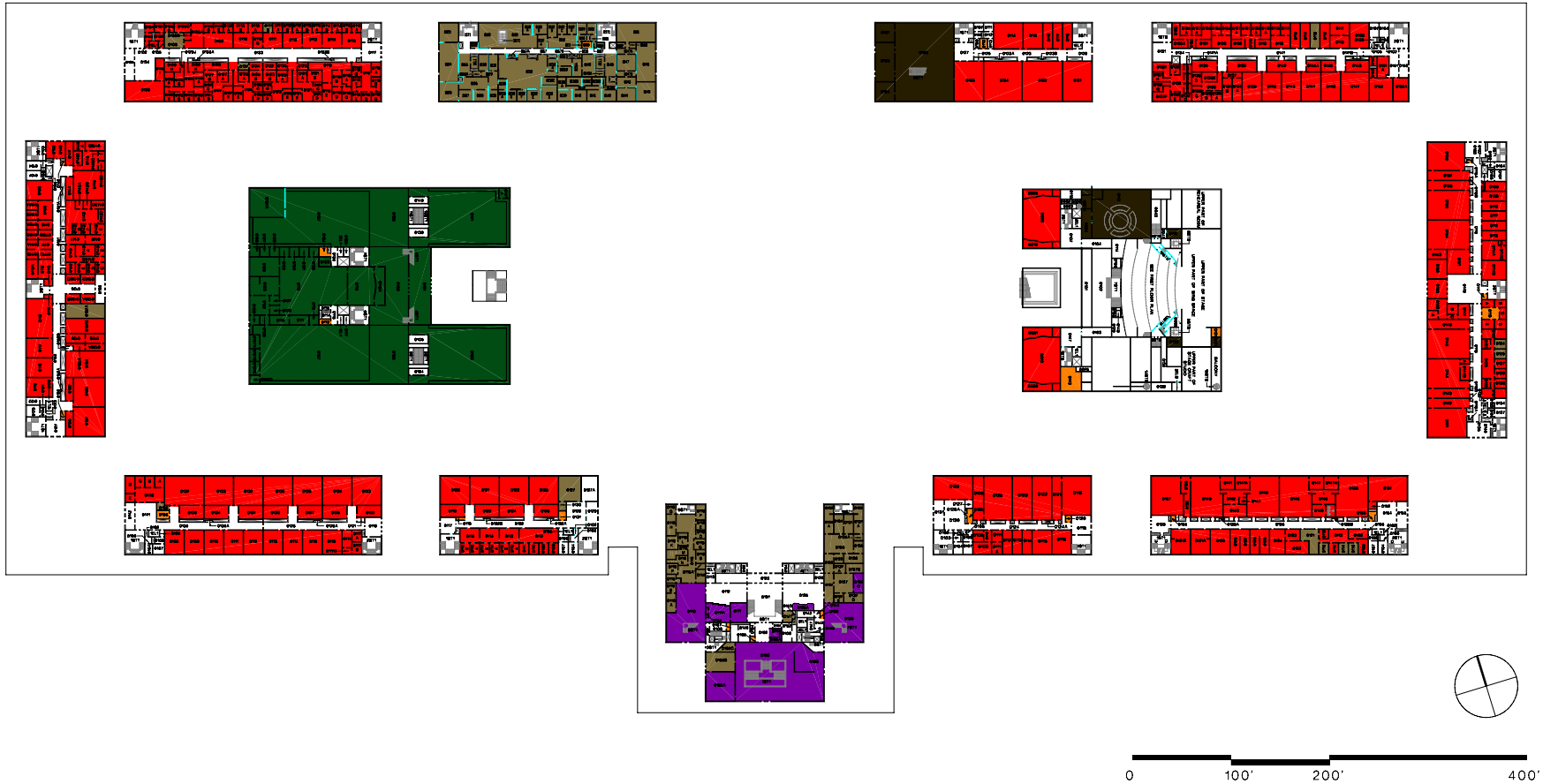


LEGEND

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Podium Basement Level

Podium Space Usage, by Level

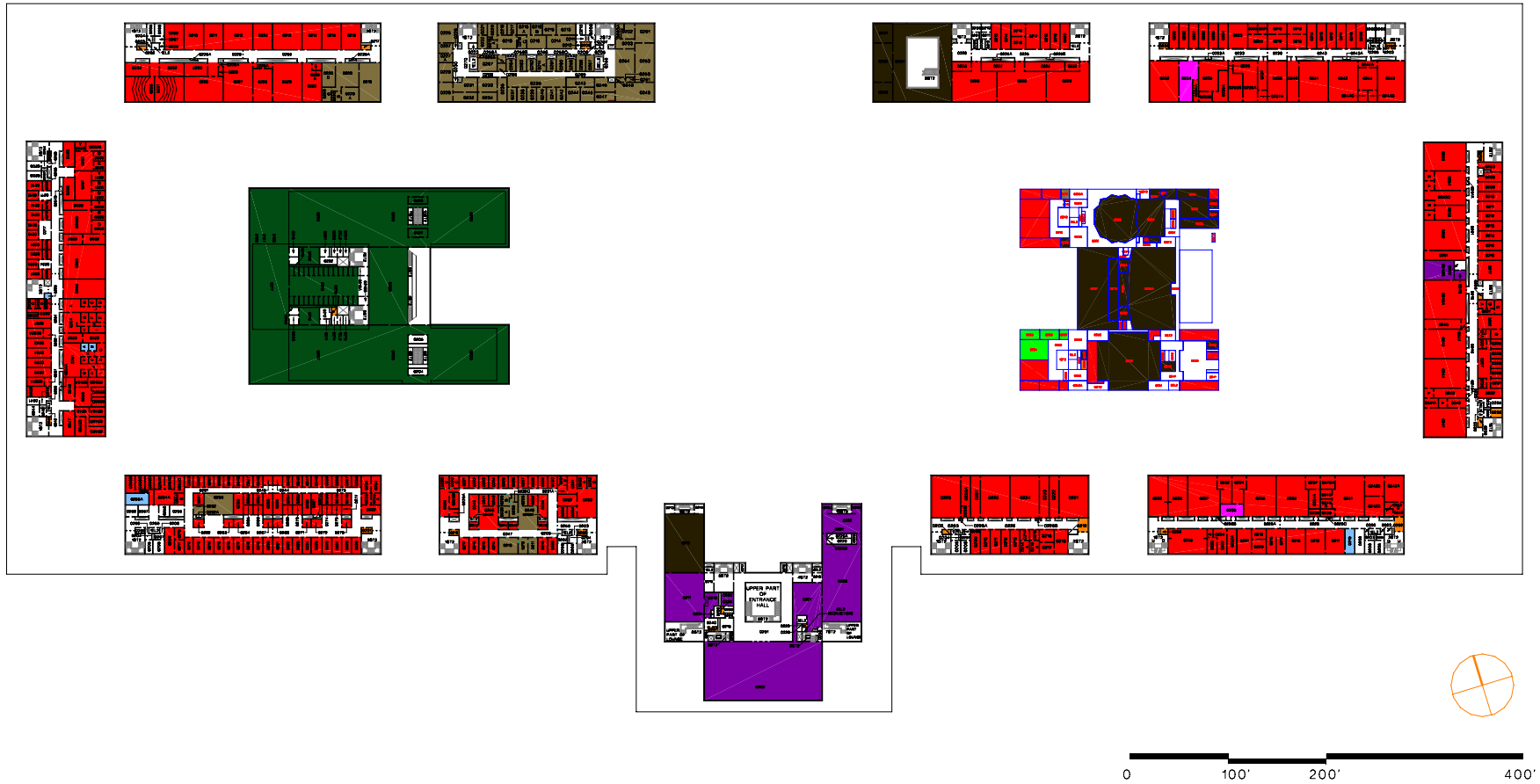


LEGEND

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Podium Level 1

Podium Space Usage, by Level

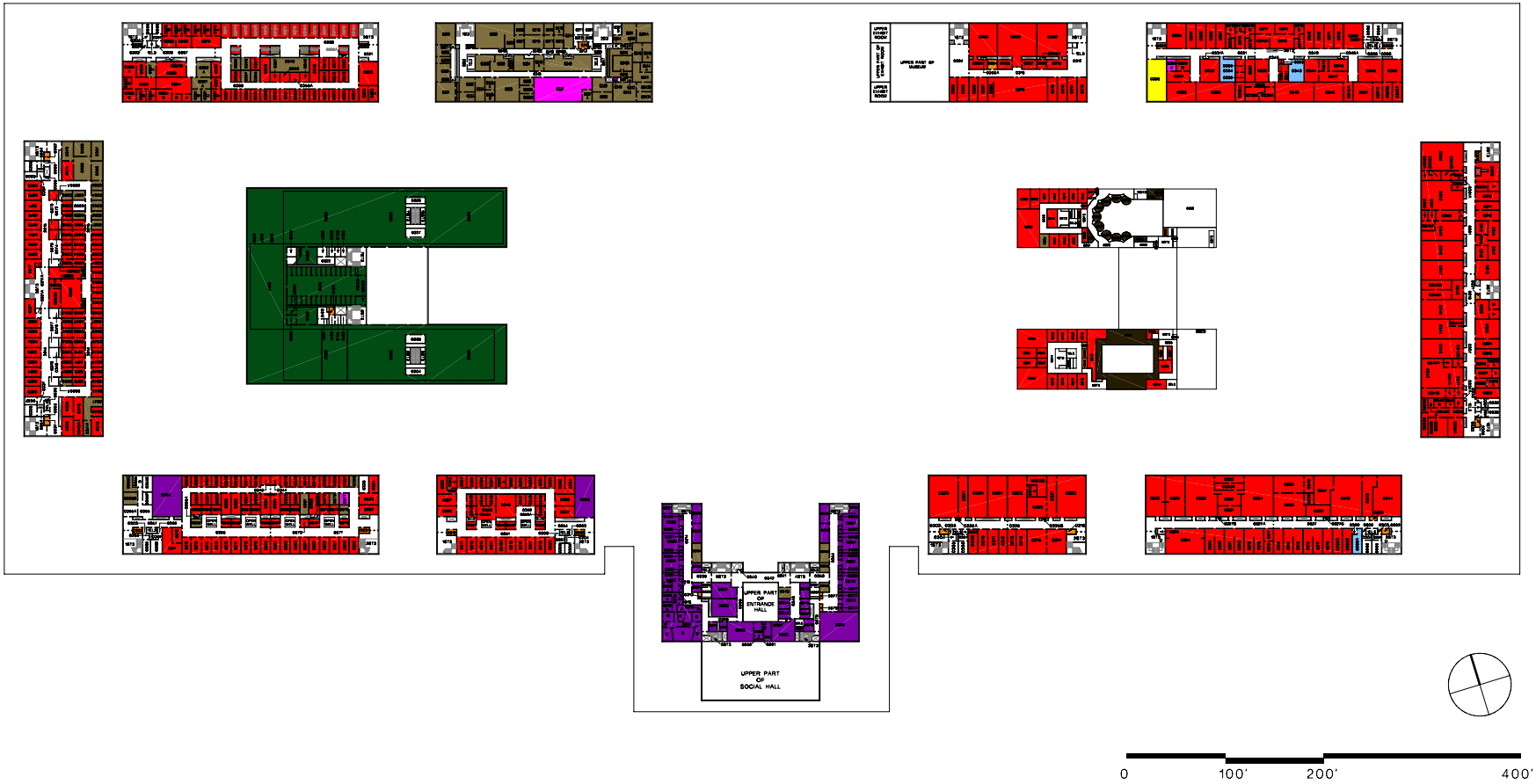


LEGEND

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Podium Level 2

Podium Space Usage, by Level



LEGEND

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Podium Level 3

Podium Space Usage, by Level

Downtown Campus							
Profile Based on Fall 1995							
Space Calculations for Fall 1995/2001/2006							
	1995	1995	Current	2001	Projected	2006	Projected
Category	Existing	Required	Deficit	Required	Deficit	Required	Deficit
	1,180 FTE's	1,180 FTE's		1,244 FTE's		1,308 FTE's	
Instructional & Research	87,684 nsf	110,068 nsf	22,384 nsf	107,601 nsf	19,917 nsf	124,852 nsf	37,168 nsf
Organized Activity	4,608 nsf	4,608 nsf	0 nsf	0 nsf	-4,608 sf	0 nsf	-4,608 sf
Public Service	30,013 nsf	30,013 nsf	0 nsf	30,013 nsf	0 nsf	30,013 nsf	0 nsf
Instructional Resources	0 nsf	2,500 nsf	2,500 nsf	2,500 nsf	2,500 nsf	2,500 nsf	2,500 nsf
Electronic Data Processing	191 nsf	191 nsf	0 nsf	191 nsf	0 nsf	191 nsf	0 nsf
Library	16,379 nsf	22,357 nsf	5,978 nsf	24,171 nsf	7,792 nsf	25,327 nsf	8,948 nsf
Health & Physical Education	0 nsf	0 nsf	0 nsf	0 nsf	0 nsf	0 nsf	0 nsf
Student Activity Space	6,452 nsf	12,390 nsf	5,938 nsf	13,062 nsf	6,610 nsf	13,734 nsf	7,282 nsf
Health Services	0 nsf	0 nsf	0 nsf	0 nsf	0 nsf	0 nsf	0 nsf
Assembly & Exhibition	7,333 nsf	7,333 nsf	0 nsf	7,333 nsf	0 nsf	7,333 nsf	0 nsf
Administration	7,272 nsf	9,440 nsf	2,168 nsf	9,952 nsf	2,680 nsf	10,464 nsf	3,192 nsf
Central Services	8,734 nsf	10,800 nsf	2,066 nsf	10,800 nsf	2,066 nsf	10,800 nsf	2,066 nsf
Building Services	4,432 nsf	6,291 nsf	1,859 nsf	6,169 nsf	1,737 nsf	6,756 nsf	2,324 nsf
Total Non-Residential Net Area	173,098 nsf	215,991 nsf	42,893 nsf	211,791 nsf	38,693 nsf	231,971 nsf	58,873 nsf
Total Residential Net Area	115,933 nsf	115,933 nsf	0 nsf	115,933 nsf	0 nsf	115,933 nsf	0 nsf
Currently Inactive Space						101,239 nsf	
Discounted by Services at Uptown Campus							

DOWNTOWN CAMPUS PROFILE

Specific Assumptions

Several categories have been reduced assuming that the Uptown Campus would provide most, if not all, of these services. This includes Physical Education (eliminated), Instructional Resources (reduced to 2,500 square feet), Centralized Electronic Data Processing (assumes a minimal space), and Health Services (eliminated). All other space categories are based on the student and faculty FTEs actually generated at the Downtown Campus.

1,300 FTEs

Given the site and the available opportunities for expansion, the Downtown Campus can only support 1,300 student FTEs. Currently with an enrollment of over 1,100 FTEs, the University anticipates growth in Downtown Campus' programs to exceed 1,600 student FTEs. With this projection and the limitations of the site, the University will have to channel part of this growth to the Uptown Campus. The evaluation is based on capping the enrollment at the Downtown Campus to 1,300 with the additional 300 FTEs transferred to the Uptown Campus.

Total Need

With the physical limitation of 1,300 student FTES, the Downtown Campus profile has an unique assessment for the Fall 2001 period. The need for space actually diminishes to 39,000 net square feet from the current deficit, the result of moving elements and programs to the Uptown Campus. By 2006, the need for space will increase to almost 59,000 net square feet.

Ground Level

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Rockefeller College Space Usage, by Level

Level 1

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Rockefeller College Space Usage, by Level

Level 2

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Rockefeller College Space Usage, by Level

Level 3

- INSTRUCTIONAL & DEPARTMENTAL RESEARCH
- ORGANIZED RESEARCH
- ORGANIZED ACTIVITY
- PUBLIC SERVICE
- INSTRUCTIONAL RESOURCES
- ELECTRONIC DATA PROCESSING
- LIBRARY
- HEALTH & PHYSICAL EDUCATION
- STUDENT ACTIVITY SPACE
- HEALTH SERVICES
- ASSEMBLY & EXHIBITION
- ADMINISTRATION
- CENTRAL SERVICES
- BUILDING SERVICES
- SPECIAL CATEGORY

Rockefeller College Space Usage, by Level

Goals & Objectives

GOALS AND OBJECTIVES

THE NEED FOR CONSENSUS

As pointed out in the Introduction of this report, the University at Albany consists of several constituencies with varying views as to what constitutes the most important issues and goals for the University. Therefore, before different scenarios or concepts were prepared depicting the University's future development, it was important that a consensus be reached among the University's constituencies as to what the University's goals and objectives are in regard to its future physical facilities. That consensus was gained in a three step process between November 1996 and March 1997.

Interviews

The first step in the consensus development process was to conduct interviews of individuals representing faculty, staff and students of the University as well as key people representing several Research Centers associated with the University. These interviews brought to light not only information as to the operations of the many departments and centers of the University, but also gave over one hundred key persons the opportunity to express their concerns and desires regarding university-wide issues and problems, as well as more focused issues and problems at the departmental level.

These interviews were conducted and confidentially documented by members of the consultant team. Each interviewee was given the opportunity to review the minutes of their individual interview for accuracy and completeness and to designate that specific additions, deletions and revisions be made.

Several open fora and informational presentations were scheduled between December 1996 and February 1997 and were open to all faculty, students and staff and to members of the local communities. These presentations provided an opportunity for informational exchange and for the further development and reinforcement of the comments received from the individual interviews.

Development of Issues

The second step in the consensus development process was to develop broad areas of agreement and potential areas of conflict (i.e. issues) among the various constituencies of the University. An initial list of over 100 issues representing a vast range of thoughts and concerns evolved, through discussions with the Steering Committee and analysis by the Steering Committee's four subcommittees into a list of 30 Condensed Issues, divided into four categories, as indicated on the accompanying table, "Condensed Issues".

Development of Goals and Objectives

This list of 30 Condensed Issues formed the basis of a day-long Goals and Objectives retreat held by the Steering Committee on March 7, 1997. After devoting the morning to a roundtable discussion on the relative importance of these 30 issues, the Steering Committee ranked the issues by a ballot vote using a system where each issue had to be placed in one of the following categories:

A = very important, must be done
B = important, should be done
C = somewhat important, would be nice to do
D = unimportant, not necessary to do

To insure that the ballot resulted in a prioritization of the issues, each member was limited to the numbers of "A's they could use. By assigning numerical values to each letter (A = 4, B = 3, C = 2 and D = 1), the completed ballots resulted in the Steering Committee's composite ranking of each issue from most important to least important.

The afternoon of the retreat was devoted to categorizing and structuring the ranked issues into six comprehensive goals, with each supported by its own related objectives. The result represents both a consensus and a set of guidelines for planning, the, "Master Plan Goals and Objectives", as indicated in the accompanying table.

CONDENSED ISSUES

Facilities Issues

1. Provide sufficient high quality, technologically suitable and flexible instructional space for classrooms, laboratories and their support areas.

2. Provide dedicated, flexible research space.

3. Provide and distribute space for student and faculty interaction throughout the campus.

4. Provide residential facilities configured to promote community, pride of place and dedicated to residential life.

5. Provide student activities space including facilities for commuter students that foster friendly interaction between resident & commuter students.

6. Provide a public safety facility in a prominent, identifiable and accessible space.

7. Provide dedicated space for faculty dining and lounges.

8. Provide an appropriate day care facility that is accessible and identifiable.

9. Provide a conference center.

Site & Environmental Issues

1. There is a need for outdoor intramural and recreational space.

2. The uptown campus needs an identifiable front door to welcome visitors, special guests and new and prospective students.

3. The campus is primarily a pedestrian environment that should create a clear identifiable pedestrian circulation system that encourages and facilitates the use of the campus, day and night, for all users with the least possible conflict with vehicular traffic and parking.

4. Provide parking facilities that are compatible with the campus architecture, the preservation of open space and the movement of pedestrians.

5. The natural environment shall be respected and enhanced to the greatest extent possible. The lake feature and it's immediate environs, especially, should be preserved.

6. Create an easily maintainable and colorful landscape environment that reinforces circulation paths, especially between the podium and dormitories, and uses appropriate plant species.

7. Provide convenient locales and interface between campus users and the bus transit system.

8. Improve the transition between the podium and its immediate surroundings by the use of landscaping and other softening techniques.

Relationship Issues

1. Undergraduate, graduate and research activities should be proximate to promote interaction.

2. Faculty offices should be in prominent locations and readily accessible to students.

3. Consolidate student services in a central campus location that is identifiable and accessible.

4. The health center should be easily accessible and visible.

5. Support services such as storage, deliveries, shops and warehousing should be allocated.

6. Enhance the University's appearance, orientation and facilities as they relate to welcoming, recruitment and development.

7. All buildings on the podium should be interconnected to the greatest extent possible without using the service tunnels.

Other Issues

1. Rockefeller College and Alumni Quad are historically significant and should be maintained and utilized in a fashion appropriate to their architecture and physical constraints.

2. The podium is historically and architecturally significant and should be retained and preserved for those functions for which it is best suited.

3. The podium's buildings should not be subject to over utilization as a result of their central location and prominence.

4. To the greatest extent possible, the University should house all of it's programs on it's owned property, rather than in leased or rented space.

5. The University at Albany is part of a greater community and will work within that greater community to promote mutual benefit and neighborly relations.

6. Improve campus identification and way finding through the development of a comprehensive signage system and the demarcation of recognizable landmarks.

MASTER PLAN GOALS AND OBJECTIVES

Goals

Provide sufficient high quality, technologically suitable and flexible instructional space for classrooms, laboratories and their support areas.

Provide dedicated, flexible research space.

Objectives

Use existing space appropriately.

Focus new construction projects on providing space that cannot be appropriately provided within the existing structure.

Provide adequate swing and surge space.

Provide spaces that promote faculty and undergraduate/graduate and resident/non-resident interaction through the careful design of renovation and construction projects.

Goals

Develop the campus as primarily a safe pedestrian environment.

Objectives

Minimize vehicular/pedestrian conflicts around the podium and in other areas with high pedestrian activity.

Develop a distinct campus-wide pedestrian walkway system separate from the roadways.

Concentrate visitor/event/visiting faculty parking in locations that are convenient to their destinations.

Develop connectivity between campus facilities

Reinforce and enhance desired pedestrian routes.

Improve pedestrian approaches to and onto the podium.

Goals

Develop a welcoming, user-friendly campus.

Objectives

Create a clear "front door" for the campus.

Develop a clear orientation system through the use of signage and landmarks.

Improve the visitors' ease and sense of arrival.

Create spaces of a "human scale" on the campus.

Develop informal spaces that encourage interaction.

Positively reinforce relationships between the inside of the facility and the outside environment.

Mitigate the effects of wind.

Goals

The podium's buildings should not be subject to over utilization as a result of their central location and prominence.

The Downtown Campus should not be subject to over utilization.

Objectives

Give academic functions first priority in the occupancy of the podium.

Where appropriate, new facilities can be de-centralized from the core of the University's existing facilities.

Consolidate and realign programs and functions where appropriate.

PLANNING PARAMETERS FOR BOTH CAMPUSES

Functional Relationships and Adjacencies

The Space Program in the preceding section determines the amount and kind of space each constituency of the University needs. In addition to this information, however, it is also necessary to understand how the constituencies relate to each other so reasonable and workable adjacencies and/or accessibility can be created or restored as part of the Master Plan process.

The University at Albany is made up of four primary constituencies that are linked to each other functionally. These constituencies include: students, academics/research (Faculty), administration/support (staff) and visitors.

Functional Relationships Uptown

One of the major advantages of the Uptown Campus is that it was all developed essentially at one time in accordance with a unifying design that clearly had functional relationships in mind. The accompanying graphic, "Functional Relationships Diagram", indicates with color the location of each of the major constituencies.

The "Students", called "Student Life", in the Diagram, are in the Quads, the Campus Center and the Physical Education Building. "Academic Research" is located in all of the buildings, save one devoted to "Administration", around the edge of the Podium. The facilities most used by "Visitors" are the Museum, and the Performing Arts Center, both in the center of the Podium, and the Recreation and Convocation Center (RACC), located among the outdoor recreation/athletic facilities in the southern part of the campus. The Diagram also indicates the location of visitor parking which is of special importance to visitors.

The Uptown Campus' basic layout functions well. All the students on campus are located within easy walking distance of the Podium which contains all their academic, student life and administrative needs. This desired linkage is shown by the arrows between the Quads and the Podium in the Diagram. Visitor parking is conveniently located close to the Performing Arts Center, the Museum and the RACC.

As the University has grown, however, it has become clear that there is not enough building space on the Podium to satisfy all of the academic/research, administrative and student life activity needs on the Podium. In keeping with one of the University's objectives, (Give academic functions first priority in the occupancy of the podium), "Administration", is a candidate for being relocated off the Podium. Research facilities that have expanded into spaces ill-suited to their needs in the buildings on the edge of the Podium are also candidates for relocation.

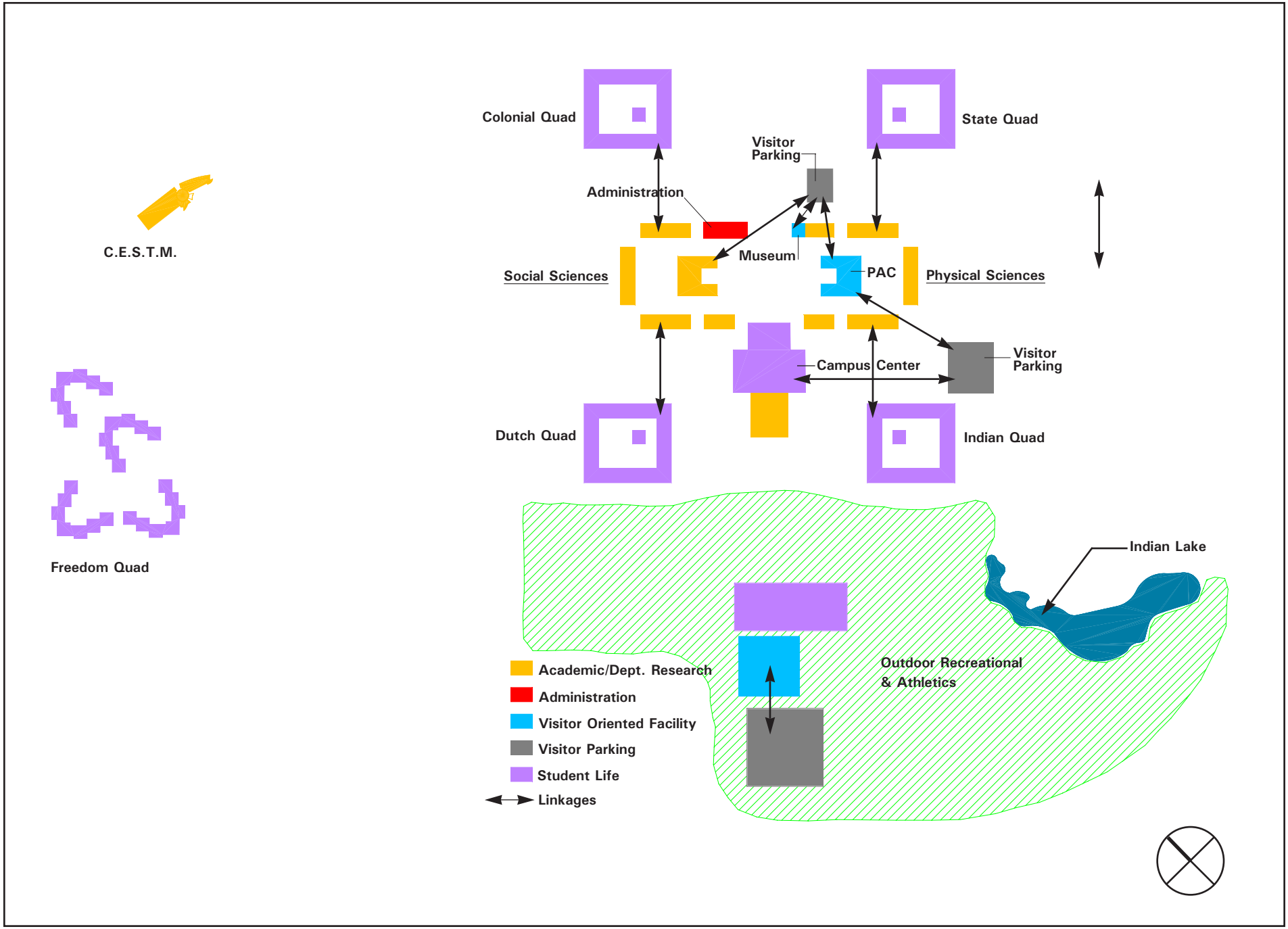
Two other suggestions are made concerning the Uptown Campus' functional relationships. First, although the visitor parking is well located, more such parking is needed in this 'front door' location. Second, the Podium is currently organized with the physical sciences on the east and the social sciences on the west. This arrangement should be kept intact as much as feasible, but should not present a barrier to building occupancy if growth among the various disciplines does not permit it.

Preferred Adjacencies

Because of the overall compactness of both the Uptown and Downtown Campuses, most functions, if not adjacent to each other, are within easy walking distance of each other. The interview process has, however, revealed some preferred adjacencies that are noted for they will be important to consider during the implementation stage of the Master Plan when the decisions will be made concerning who will occupy buildings and who will be relocated from the Downtown Campus to the Uptown Campus.

Clusters of Preferred Adjacencies

Of particular interest, for example, are situations where a group of activities have been frequently mentioned as belonging together, both by the constituent members, themselves, and by others.



Functional Relationships Diagram

The following six clusters of activities have been developed based upon the preferred adjacencies identified in the interview-questionnaire/issue development process;

- Undergraduate, Graduate and research activities
- The core constituent groups of Rockefeller College, i.e. Criminal Justice, Social Welfare, The Graduate School of Public Administration and Information Science and Policy
- Computer Science, Information Science & Policy, Chemistry, Physics, Biology and Mathematics Departments
- Financial Aid, Student Accounts, Registrar, Bursar, Parking Management, Food Service and Residential Life offices.
- School of Criminal Justice and the departments of Psychology and Sociology
- Support services including storage, deliveries, shops and warehousing.

Summary of Preferred Adjacencies

This summary lists three specific types of adjacencies that have been requested and are not mentioned above;

- Adjacencies mentioned by both parties as especially important
- Preference to be on or near the Podium
- Preference to be in a student high traffic area

Especially Important Adjacencies

- Music Department and Art Department
- Latin American & Caribbean Studies and Anthropology Department
- Undergraduate Studies and Academic Advisement Services
- Atmospheric Science Research Center and Physical Chemistry
- Human Resources and Administration
- Reading (School of Education) and Educational Psychology & Statistics

Preference to be on or Near the Podium

- Institutional Research
- National Research Center on Learning and English
- Physical Plant (Shops)
- Health Center (Pharmacy Satellite)
- University Counseling Center (Satellite)

Preference to be in a Student High Traffic Area

- Office of Withdrawal and Re-entry
- Advisement
- Admissions

Residential Capacity and Needs

Existing Capacity		Beds	
Uptown Campus			
Podium Towers		1,765	
Podium Low Rise		3,123	
Freedom Quad		410	
	Sub-total----------	**5,298**	
Alumni Quad			
Waterbury Hall		336	
	Sub-total----------	**5,634**	Maximum Current Capacity
Potential Additions, Uptown			
Ten Broueck Hall		93	Occupied by History Department & Others
Irving Hall		122	Under Renovation
	Sub-total----------	**5,849**	Potential Current Capacity Without Alumni Quad
Potential Additions, Downtown (Based on Existing Layout)			
Pierce Hall		104	
Sayles Hall		136	
Alden Hall		290	
	Sub-total----------	**6,379**	Potential Capacity Using Most of Alumni Quad
Total Need for Beds in 2006		**7,419**	
Net Need for Beds on Uptown Campus in 2006		**740**	Using all of Alumni Quad
		1,040	Using all of Alumni Quad Except Brubacher Hall
		1,570	Using Only Waterbury Hall at Alumni Quad

Residential Facilities

The University presently provides 5,634 beds between its Uptown and Downtown Campuses (see "Residential Capacity and Needs" adjacent). The substantial enrollment growth projected for the University in the next ten years would increase the total need for beds to 7,419 beds, if housing policies and residential occupancy rates remain unchanged. The accompanying table indicates how this shortfall of 1,785 beds could be reduced to a shortfall of 740 beds through a combination of reclaiming dormitory space now used for other purposes and converting all of Alumni Quad to residences for students. The feasibility of these re-use scenarios has not been investigated as a part of this Master Plan, however, and are included here only to give a sense of the shortfall. The University is currently analyzing whether it will provide these projected beds on campus or work to develop alternative housing arrangements, or even to utilize land that may become available on the adjacent Governor W. Averell Harriman State Office Campus.

Based on availability, other housing options may include married/family housing or housing for retired faculty.

It is important to note, that the State University Construction Fund does not provide the capital for residential construction or maintenance. This capital would have to be generated by the campus through its room rental charges.

PLANNING PARAMETERS FOR THE UPTOWN CAMPUS

Challenge of the Rigorous Existing Architecture

The colonnaded Podium at the University designed by Edward Durrell Stone, measures 560 by 1500 feet, and is unique in the nation, if not in the world. There are thirteen academic, administrative and student life buildings on the Podium, but they all present identical facades and they all are surrounded by a rigid 20 foot by 20 foot grid of three-story high precast concrete umbrellas creating the impression that there is one structure (with enclosed and open parts) rather than thirteen separate buildings.

The orthogonal grid and axial symmetry of the Podium is reinforced by the grading, landscaping and four residential quadrangles surrounding it. Along the north, or front, facade for example, the grade is about four feet below the Podium for its entire 1500 foot length and is only accessible by monumental stairs at the center and at both ends.

The visual constraint that the Podium and four quadrangles imposes is reflected in the two buildings constructed since the Podium was finished. Both the campus center extension and the RACC building are; symmetrical, on axis, of precast concrete and no higher than the roof of the Podium. The new library currently under construction shares these same attributes.

The architecture received mixed reviews among the many interviewed on the campus. There were those who liked it and there were many who felt the campus lacked color and warmth, especially in the winter months. Aside from individual likes and dislikes, however, the vast majority of persons interviewed mentioned the architecture, a clear indication of its strength and presence.

The University Property North of the Washington Avenue Extension

The Uptown Campus consists of three parcels: the large 391.65-acre parcel containing most of the facilities, the 72.6-acre parcel west of Fuller Road where Freedom Quad is located and a 14.4-acre parcel north of the Washington Avenue Extension and west of Fuller Road. This 14.4-acre undeveloped parcel was not seriously considered for any University uses because;

- It would be very difficult to provide access
- It has a long narrow shape
- It is quite far from the center of campus
- It is separated from the main campus by a heavily used four lane road
- It has a high tension electric power line along its entire length.

The Opportunities for Further Land Acquisition

The Uptown Campus is entirely surrounded by Interstate highways, the Governor W. Averell Harriman State Office Campus, the Police Academy and residential and commercial development.

The recent discussions concerning the relocation of state agencies from the Governor W. Averell Harriman State Office Campus to downtown Albany offers the potential for expansion of the Uptown Campus. Some of the potential uses under discussion for this prospect include: office space, residential facilities and a technology park.

Whichever use is selected, the University should explore partnership opportunities with the State of New York and the City of Albany. Of special note, the original Campus Master Plan recommended siting an athletic stadium on the parcel bounded by I-90 and the Washington Avenue Extension which currently houses an OGS park and ride facility.

Rockefeller College

Alumni Quad

PLANNING PARAMETERS FOR THE DOWNTOWN CAMPUS

At both the Rockefeller College and Alumni Quad, both the reconstruction of the existing buildings and proposed campus expansions must conform to certain set parameters. Most importantly, any development of the Downtown Campus should retain and enhance the existing collegiate ambience. Traditional building forms and organization should be maintained to provide improved platforms for program delivery without disturbing the nature of the existing campus as both an academic and cultural environment. The existing landscaped areas, especially the Rockefeller College Southern Lawn and the Alumni Quad's Central Courtyard, should be maintained and enhanced.

Programmatically, the Rockefeller Campus buildings should be reconstructed to provide both appropriate spaces and functional adjacencies for the core College programs and to enhance their identity within the College, the University and the local academic community. Alumni Quad should be revitalized and recommissioned, to support the students and faculty of the University. In the past, it has served well as a dormitory facility. With increased enrollment, Alumni Quad may once again become a home for students and faculty. Connections to the adjacent community and governmental services should also be maintained, as they are an integral part of the success and reputation of Rockefeller College.

Opportunities For Further Land Acquisition

As mentioned earlier, the University's growth in students will place a strain on all facilities including the Downtown Campus. The University should pursue other partnership opportunities with the City of Albany, with respect to the parcel across Robin Street (from the Downtown Campus) which currently houses the Adult Learning Center, as well as Beverwyck Park behind Brubacher Hall on Alumni Quad.

IMPLEMENTATION OF THE GOALS AND OBJECTIVES FOR THE UPTOWN CAMPUS

Establishing Zones

One of the Goals developed to guide the Master Plan is, "Develop the campus as primarily a safe pedestrian environment". One of the supporting Objectives for this Goal is, "Minimize vehicular/pedestrian conflicts around the Podium and in other areas with high pedestrian activity". In a similar vein, one of the most important issues developed prior to, and discussed at, the Goals and Objectives Retreat was, "The Podium is historically significant and should be retained and preserved for those functions for which it is best suited." Another issue discussed at the Retreat was, "The lake feature and its immediate environs, especially, should be preserved".

It was clear, even before alternative concepts were developed, that one way to meet the concerns and intent of the above Goals, Objectives and Issues, was to create planning zones on the Uptown Campus. Two kinds of zones were established;

- One special zone was created around the lake.
- A hierarchy of three other zones was created radiating out from the Podium.

The zone around the lake has been set at a distance of about 100-150 feet from the edge of the lake. The purpose of the zone is to limit development here so the lake is preserved as a natural feature. Further studies should be conducted of the lake and its surrounding area to determine the best boundary location for preservation of the lake.

The radiating zones established around the Podium are to separate pedestrians and automobiles and to preserve the historical and architectural integrity of the Podium.

The first zone, up to 300 feet from the Podium to the North and South and up to 400 feet from the Podium to the East and West, limits vehicular traffic to service and emergency vehicles and limits parking to visitors, the disabled, and to those with special needs. By doing this, conflict between student residents from the Quads and vehicles is minimized. The first zone also limits the height of any new building to the elevation of the Podium. This height limitation assures that the Podium's historic and architectural presence will not be compromised by any new development that might block or interfere with views to the buildings on the Podium.

The second zone radiating from the Podium extends from 300 or 400 feet to 1,200 feet from the Podium. Again, to assure that the Podium's colonnaded arcade continues to maintain its primacy on the site, no building in this zone can be higher than the roof of the Podium's buildings, or approximately 4 stories above ground at most locations.

The third zone includes all the University Property 1200 feet and further from the Podium. This zone is far enough away from the Podium so that no height restrictions are needed to control proposed development.

Potential Building Sites

In keeping with the intent of the zones, sites for new buildings were discussed and determined prior to the development of alternative concepts. The graphic, "Established zones and Potential Building Sites/Uptown Campus", indicates eleven sites selected for new buildings, spread among the three radiating zones.

- First zone, '0 to 300 or 400 feet'
  - Site 1: East of Podium
  - Site 2: North of Podium
  - Site 3: West of Podium

- Second zone, '300 or 400 to 1200 feet'
  - Site 2A: North of Podium
  - Site 4: Southeast of Podium
  - Site 5: Adjacent to Health Center
  - Site 6: Far west of Podium

First Zone Looking East

First Zone - Looking West

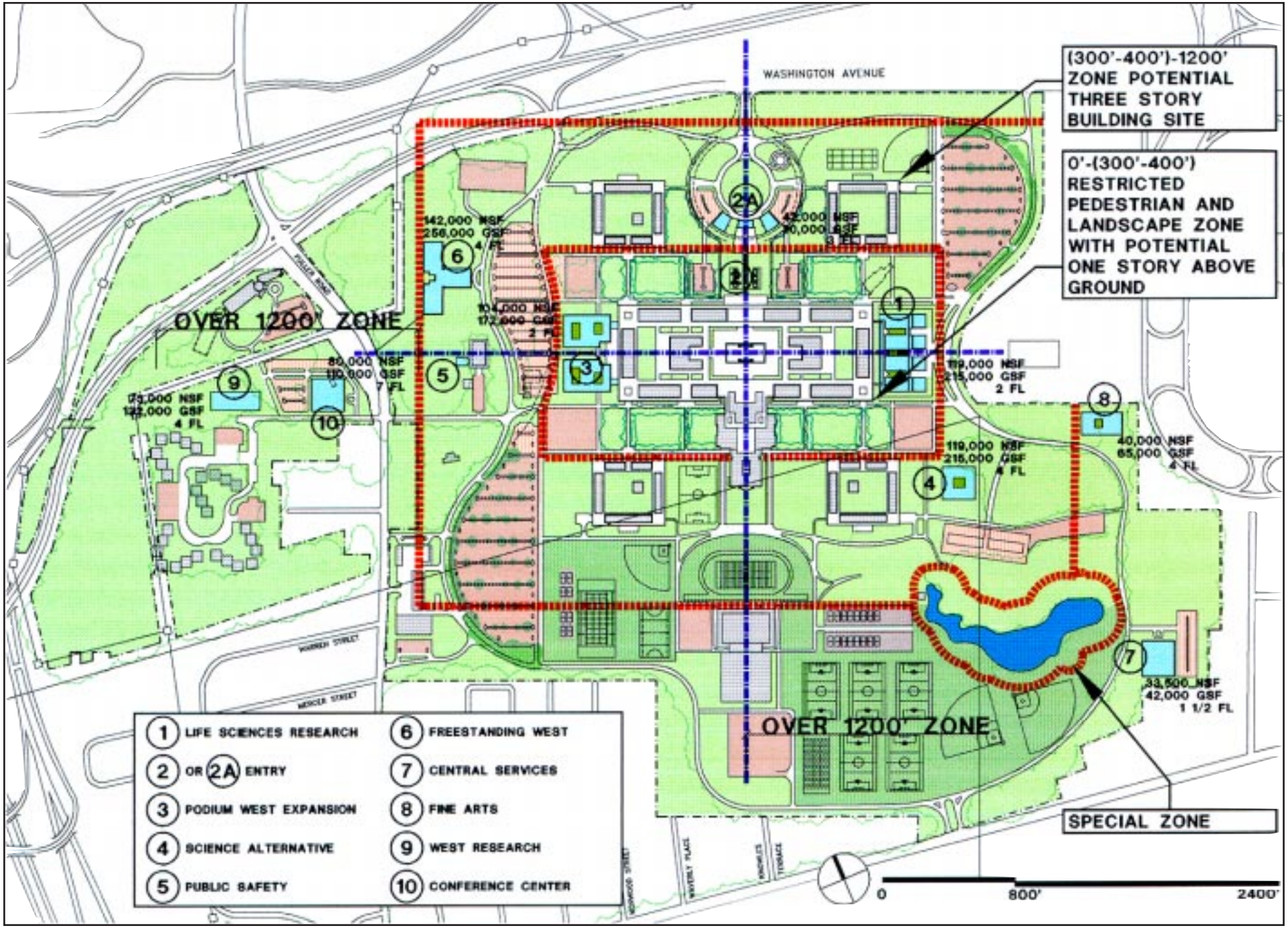
•Third zone, 'Beyond 1200 feet'

Site 7: East of Lake
Site 8: Far east of Podium
Site 9: Tricentennial Drive, West
Site 10: Tricentennial Drive, East

Appropriate uses for these various sites is discussed in "Alternative Concepts".

East Campus as a Long Range Space Bank

The East Campus is a 375,000 square foot facility located fifteen-minutes from the Uptown Campus in East Greenbush on the east side of the Hudson River. The East Campus is owned by the University at Albany Foundation for the benefit of the University. Space at the East Campus is leased for the School of Public Health as well as The New York State Department of Health. Because of its distance from the rest of the University, the age and condition of most of its facilities, and the lack of student support facilities, the East Campus was not considered for any change in use within the ten-year time frame of this Master Plan.



Established Zones and Potential Sites

IMPLEMENTATION OF THE GOALS AND OBJECTIVES FOR THE DOWNTOWN CAMPUS

The Master Plan implementation for the Downtown Campus must reconcile a restricted potential for building expansion against the rise in projected enrollment. In conjunction with these requirements the unique academic environment of the campus should be maintained, in order to support and reinforce the nationally recognized core Rockefeller College programs.

In order to reduce the space overload at the Downtown Campus, it is recommended that programs which are not part of the College's core curriculum be relocated. These are primarily Education and Arts & Sciences programs, and their relocation will not only provide relief to the Downtown Campus space allocation, but also provide improved functional adjacencies if relocated to the Uptown Campus. The departments which should be relocated, and the space they currently utilize at Rockefeller College are:

Anthropology--2,300 nsf for storage of field investigation equipment and samples.

The Center for Field Services--1,200 nsf

The Child Study Research Team--2,700 nsf for research clinic facility.

The Development Center for Community Colleges --1,500 nsf.

English for International Learners--300 nsf.

Environmental Health and Safety--100 nsf of office space.

Psychology--300 nsf of office space.

The Reading Clinic--1,600 nsf.

The Small Business Development Center--1,600 nsf.

The remainder of the programs located at Rockefeller College form the College's core curriculum. These departments are:

Criminal Justice

Information Science and Policy

Political Science

Public Administration

Social Welfare

This reallocation of program spaces fulfills two functions. As previously noted, it provides much needed relief to the Rockefeller College Space Program. In doing so it also reduces the loading based on future enrollment and growth by limiting required additional space to just core curriculum areas. By limiting the required space structures can be added to Rockefeller College with a minimal impact to the existing urban collegiate environment.

The extent of reconstruction proposed for the Downtown Campus also impacts implementation. With limited expansion capability at Rockefeller College, the expansion and reconstruction of the campus should be done in a modular fashion, with the careful creation of swing space to allow major interior renovations to take place without closing down the College. Detailed scheduling and phasing must be an integral part of the eventual implementation of the Downtown Campus Master Plan.

Alternative Concepts

ALTERNATIVE CONCEPTS

ASSUMPTIONS

Interior and Outdoor Recreation Facilities

The existing indoor (the Physical Education Building, the RACC, the air structure and fitness centers in each of the four residential quads) and outdoor (14 fields and 24 tennis courts) recreational facilities of the Uptown Campus are deemed adequate to satisfy the University's current athletic and recreational needs. The air structure skin, however, is in danger of failing, so it should be replaced with a permanent facility to ensure that its' current programs can be continued. Furthermore, since only the football field and the tennis courts are currently lighted, the other existing fields could be used more efficiently than they now are, if some or all of them were lighted. Of concern, however, is the 14 year old Air structure, which is not expected to stand much longer without a replacement "skin". To maintain the University's current recreational space needs, this facility should be permanently replaced.

Consideration for additional athletic facilities, such as an athletic stadium, may arise when the University's athletic programs grow.

The Alumni House

The Alumni House, built by the Alumni Association, offers a small scale and forest atmosphere very different from the Podium's environment. It is assumed the structure will be retained in its current location and will continue to be devoted to uses that do not require frequent student and/or faculty contact. This assumption does not preclude the possibility that some of the functions now in Alumni House could be better served by new facilities, such as a new building at the front door of the campus in the Collins Circle area.

Area West of Fuller Road

Until two years ago, the only facilities the University had west of Fuller Road and south of the Washington Avenue extension were Freedom Quad and the warehouse. This year, however, the Center for Environmental Sciences and Technology Management (CESTM), opened. This building, which is a state-of-the-art research center for the University that also leases space for incubator business firms, occupies the highly visible southwest corner of Washington Avenue and Fuller Road.

The development of CESTM sets a precedent for establishing more intensive land uses on the University land west of Fuller Road. If the demand develops for another research facility (beyond the proposed addition to CESTM), Building Site 9 on Tricentennial Drive is recommended for such a use. Furthermore, the northwest corner of Fuller Road and Tricentennial Drive now occupied by University warehouse facilities, is recommended for a conference center or conference/hotel center, when and if the opportunity for such a facility arises. In the meantime, it is recommended that the University warehouse facilities are relocated to a site on the east side of the campus with good access to the Perimeter Road.

COMMON ELEMENTS-UPTOWN CAMPUS

Before considering reasonable alternatives to be pursued in the development of a Master Plan, our analysis of the facilities and the input from the interviews strongly indicated that the following items were not options, but should be included in all alternatives:

- Improvement of teaching and research facilities to meet current and future demands
- Certain traffic and parking improvements
- Improvements to the "front door" of the University
- Restoration of the Podium setting
- Improvement of Podium internal pedestrian circulation
- Preservation of natural areas, especially the Lake

Teaching and Research Facilities Improvements

The creation of high quality flexible teaching and research space must be a final result of the alternative selected. Though the current facilities are deemed inadequate for their current need, sufficient space can be created through new construction and full rehabilitations of existing facilities.

Traffic and Parking Improvements

Intersection Improvements

The following intersections should be reconfigured to make them safer and more efficient:

- University Drive East and Washington Avenue
- University Drive West and Washington Avenue
- University Drive West and Fuller Road Connectors

University Drive West Realignment and Relocated Parking

University Drive West should be realigned to the west between Washington Avenue and the Alumni House to improve the safety of its intersection with Tricentennial Drive, increase the curvature (and safety by slowing vehicle speeds) of University Drive West and create space for parking that is to be removed from around the Podium (see "Restoration of the Podium Setting" below).

University "Front Door" Improvements

Although the north side of the Podium on the north-south axis of Collins Circle is clearly intended to be the front door of the University, the architectural similarity between all sides of the Podium and the very large diameter of Collins Circle defeat the intent of the original design. Since one of the Objectives of the Master Plan is to, "Create a clear 'front door' for the campus", all alternatives will explore ways of clarifying and strengthening the front door at the Collins Circle location including; reconfiguring the circle, adding an entrance building and/or redesigning the entry plaza.

Restoration of the Podium Setting

The original Edward Durrell Stone design placed the rigorous, colonnaded arcade of the Podium in a wide green band of pine trees and paths leading to the residential quads. This was done both to soften the hardness and monochrome color of the Podium and for safety reasons. In the 30 years that have passed since this design was originally implemented, however, most of the paths in this green band have been converted to aisles leading to parking spaces under the pine trees. Since the presence of these parked cars is a safety and aesthetic problem and threatens the well being of the pine trees as well (by compacting the soil over their roots), all alternatives considered removed all parking from around the Podium except for visitors, the disabled and for those having special needs.

The Podium's upper level plaza is framed by large containerized plantings set inside a three-story high arcade. Edward Durrell Stone's design intent is realized through the scale and repetition of these monumental, monochromatic elements. The architectural character should be preserved, but may be enhanced through the introduction of bold, simple bands of color. For example, at the perimeter of the plaza edge overlooking the lower level fountain, a seasonal or permanent planting of bright color could be introduced to frame the interior square.

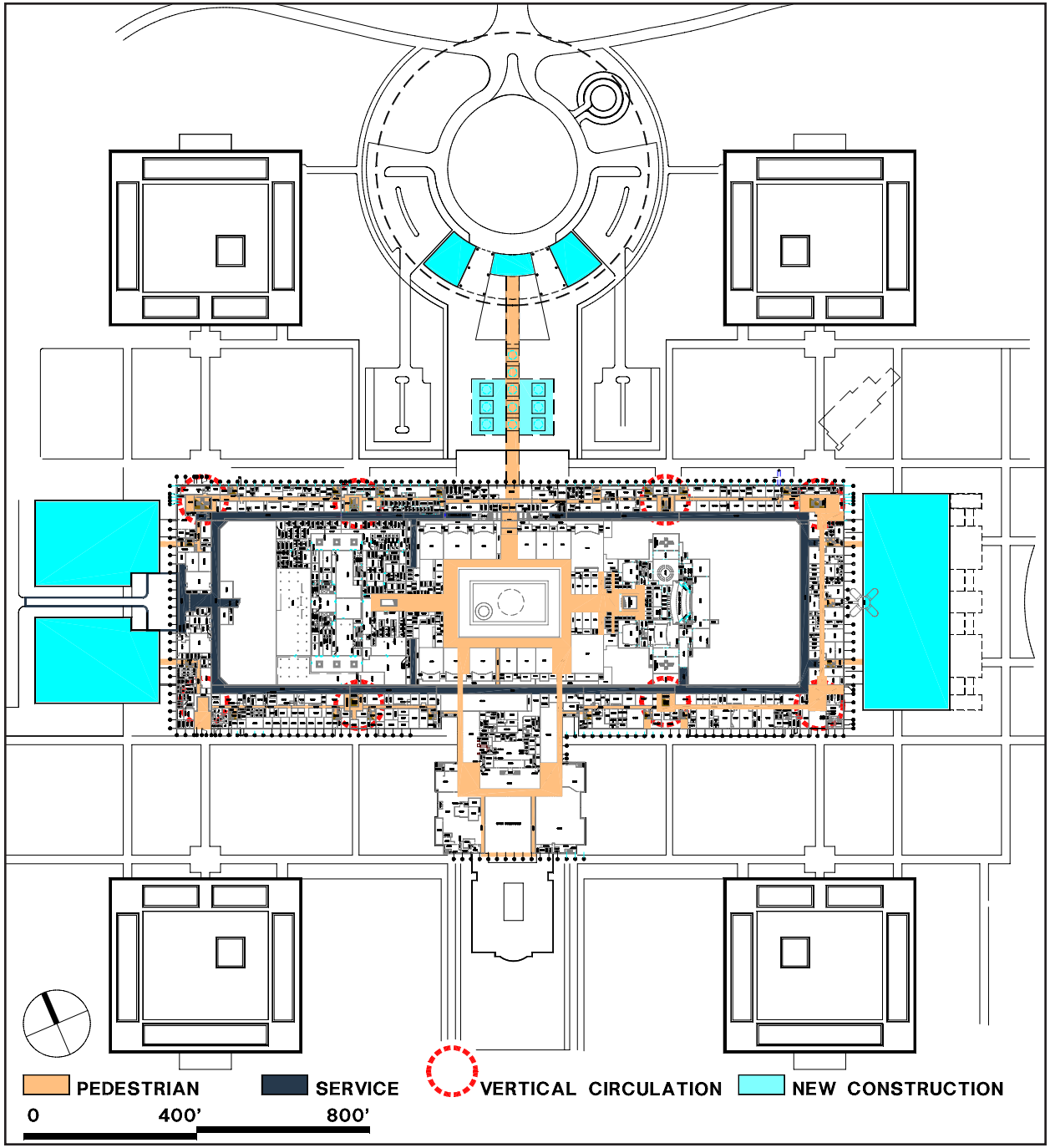
Trees in the large containers are maturing and careful consideration should be given to the scale, seasonal quality, and symmetry of species replacement.

Improvement of the Podium's Internal Pedestrian Circulation

During the inventory phase of the Master Plan process, a concern was expressed that the service tunnels under the Podium were used by students and others to get from building to building on the Podium, especially in cold, windy or snowy weather. Since the tunnels were intended to serve as a transportation system to support the movement of supplies and materials from the loading dock at the Social Science Building to the rest of the buildings on the Podium, there is a fear that one of the service vehicles will injure a pedestrian in the tunnel. Another concern is that the service tunnel also contains the aging HTHW distribution facilities and an unexpected failure in these systems (such as a ruptured steam pipe) could result in severe injury to a pedestrian in the service tunnel. All alternatives considered include the separation of pedestrians and service vehicles at the Podium's lower level so as to provide a safe and weather protected pedestrian system at the Lecture Center level of the Podium that will link all buildings on the Podium.

Preservation of Natural Areas

One goal of the Master Plan is to balance the need for new building sites with the preservation of existing green



Internal Pedestrian Circulation Plan

Internal Pedestrian Circulation Plan

- Pedestrians are separated from service vehicles and steam utility lines.
- Pedestrian movement is given priority at points of pedestrian-service vehicle crossing. (such traffic crossings will normally be closed to service vehicles).
- Better lighting, interior finishes, color and more comfortable heating are provided.
- Spaces are provided (e.g. at points of vertical circulation) to encourage informal social interaction.
- All major Podium facilities and the Collins Circle bus stop are linked with an all weather pedestrian system.

space on campus. Indian Lake, and the woods and fields west of Freedom Quad are two of the most distinctive natural areas on campus. These areas should be maintained. A preservation plan for Indian Lake should include: a study of the area's drainage patterns and water supply; a conditions survey of the upland landscapes, the lake edges, and wetland boundaries; a water quality management program; and, the identification of opportunities to enhance pedestrian access and views to and from the lake. The Freedom Quad landscape, a remnant of the Pine Bush ecosystem, provides a unique opportunity for ecological study and passive recreation within the campus property. The preservation of these and other natural areas will help promote landscape diversity and enrich the teaching and learning environments on campus.

Renovations

The extent of all renovations for buildings on the Podium is required to be complete and thorough, resulting in a comprehensive re-development and re-configuration of each building to best support existing and projected academic needs.

Landscaped Gardens

Landscaped Courtyards

ALTERNATIVE CONCEPT DIAGRAMS-UPTOWN CAMPUS

Life Sciences Research Building

The inventory and analysis revealed that many science research activities have occupied space formerly devoted to undergraduate academic use on the Podium. This infringement is expensive since the existing Podium buildings were not designed for high tech, laboratory use and it has deprived the academic undergraduate community of classroom, office and support space which they need.

In keeping with the first two goals of the University, namely, "Provide sufficient high quality, technologically suitable and flexible instructional space for classrooms, laboratories and their support areas" and "Provide dedicated, flexible research space", the provision of a new science research building is among the highest priorities for the Master Plan.

Two alternatives have been prepared for providing the new Science Research Building. Since the east side of the Podium is presently devoted to the physical, or hard, sciences and it is the intent of the Master Plan to retain this arrangement, both alternatives locate the new, proposed building on the east side of the campus. See the sketch diagrams "Life Sciences Research Building Plan and Sections--Alternative One" and "Life Sciences Research Building Plan and Sections--Alternative Two".

Both of the alternatives for the Life Sciences Building will provide the University at Albany with a consolidated, flexible, expandable and state-of-the-art base for its proposed status as a **Carnegie Research I University**.

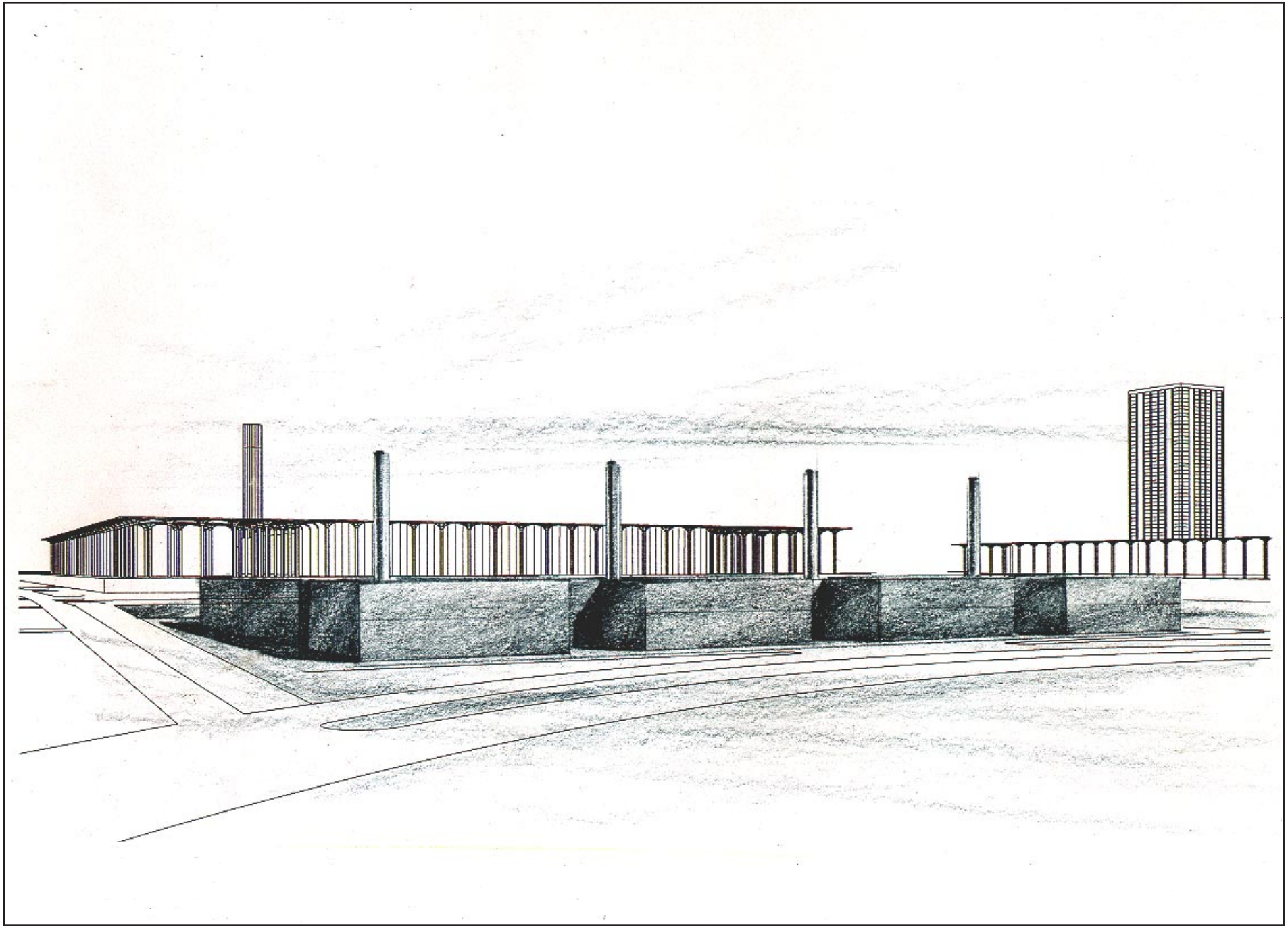
The specific advantages of both the proposed Life Sciences Buildings that will enhance the University's capability to attain a **Research I** status are;

- They consolidate the University's research areas into one building which enhances the goal of the University to become a **Research I** institution.
- They feature a modular laboratory plan which allows for maximum flexibility as programs evolve and grow. The laboratories are clustered and relate to each other through their shared support spaces, administrative areas and conference/teaching areas. Spatial assignments are capable of variation, either vertically, horizontally, by department or by research protocol.
- They allow for growth of the facility as future programs require additional space. This easterly expansion can be developed to house either general research areas or special, controlled areas which may require a more defined separation from academic areas.
- The space for the mechanical and electrical systems is planned to permit the reorganization of laboratories and related areas within a structured approach, allowing for future fume hoods and infrastructure improvements without requiring the closing of the research areas.

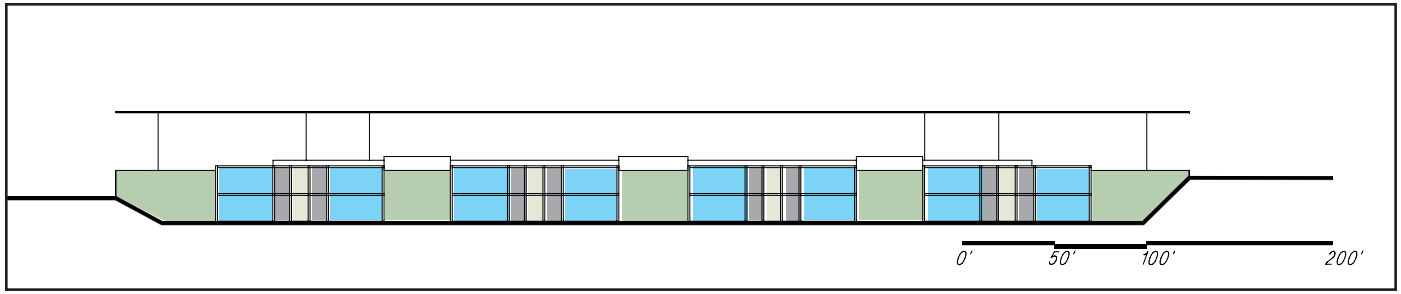
Alternative One for the Life Sciences Research Building (the alternative where the building is located adjacent to the Podium) has these additional advantages;

- The plan will allow for the interaction of the various University departments through the development of a central circulation spine uniting the research areas with the academic functions in an atmosphere which fosters communications between the faculty, researchers and students.
- The laboratories are located to allow for natural light, with vistas to be developed around open courtyards, atriums and the greenhouse.

The major advantage of Alternative Two for the Life Sciences Research Building (the free standing alternative) is that the separated location gives a clear definition to the building as a central research center for the University. A disadvantage of Alternative Two is that interaction with the academic side of the departmental functions is somewhat tenuous due to the added distance from the principle faculty and student populations.



Life Sciences Research Building Massing Perspective Sketch - Alternative One



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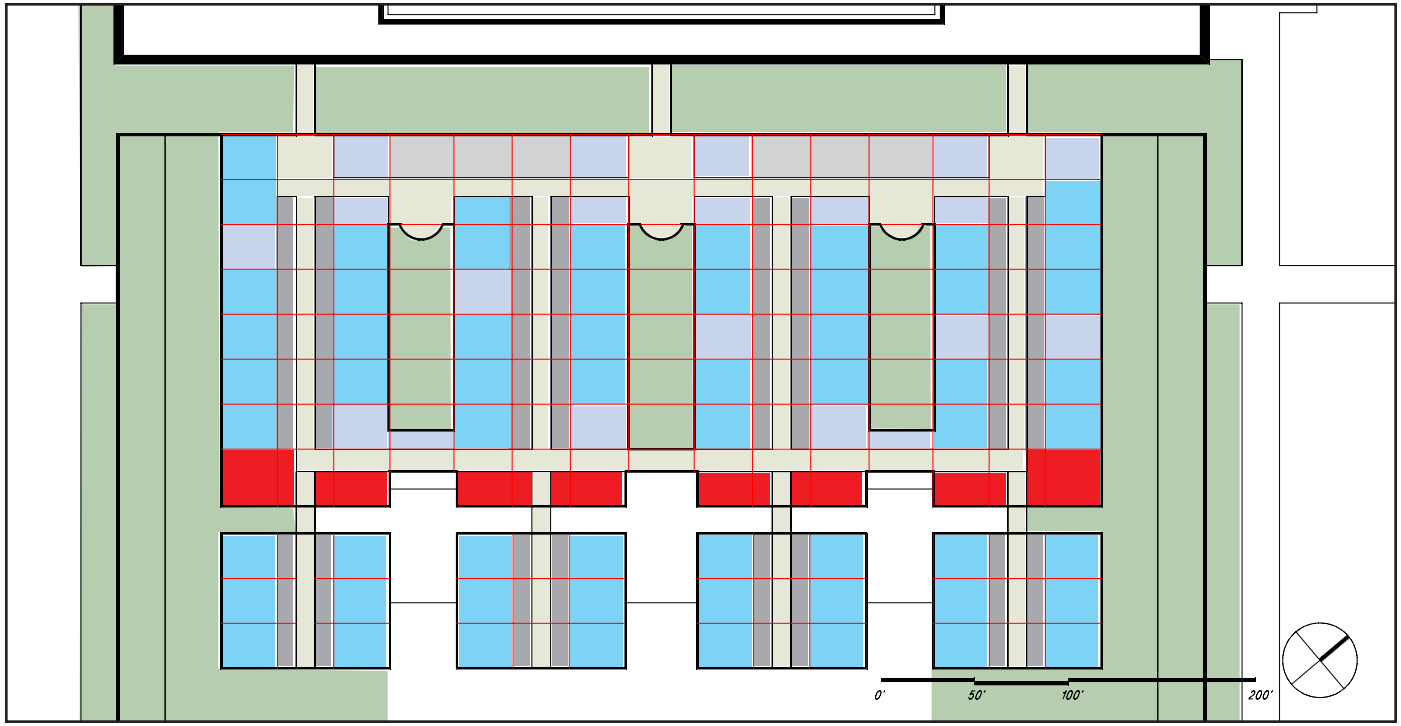

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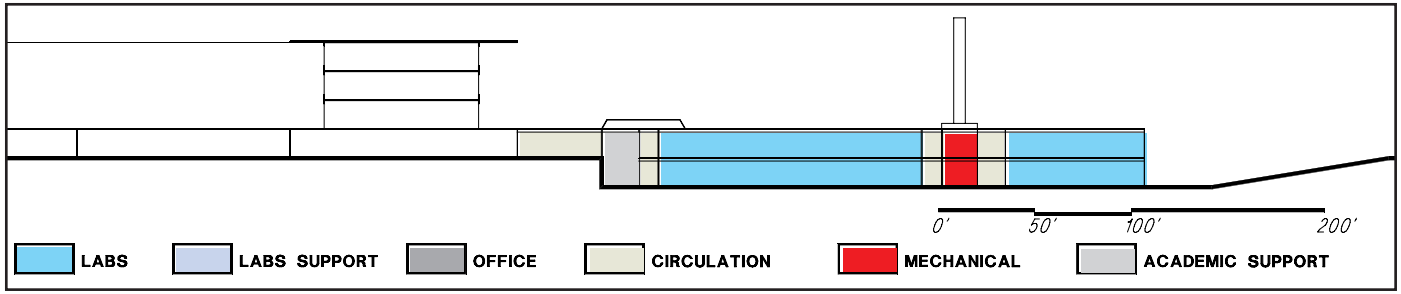

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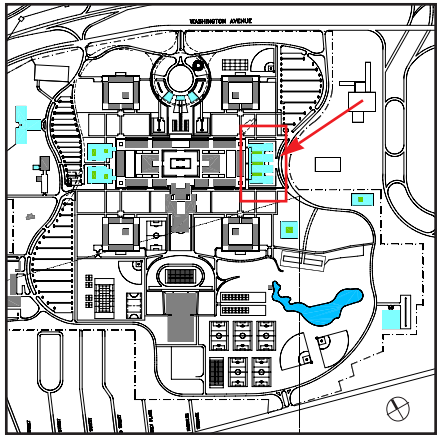


Life Sciences Research Building
Alternative One

1. Building is immediately adjacent to the Podium

- Provides maximum interaction between graduate and undergraduate science students
- Provides enclosed connections between Podium and building

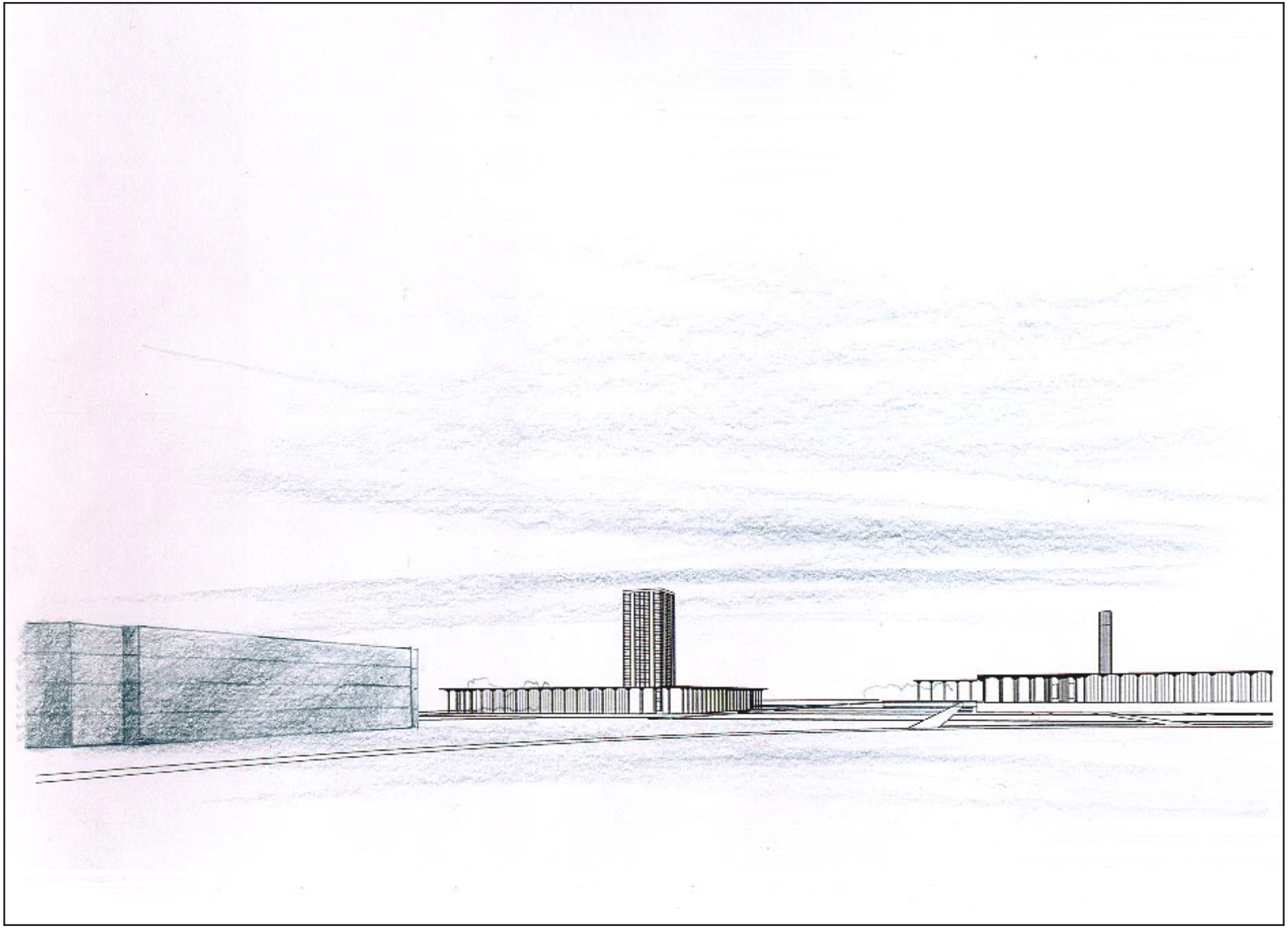
.

2. Building is in 0-400' zone

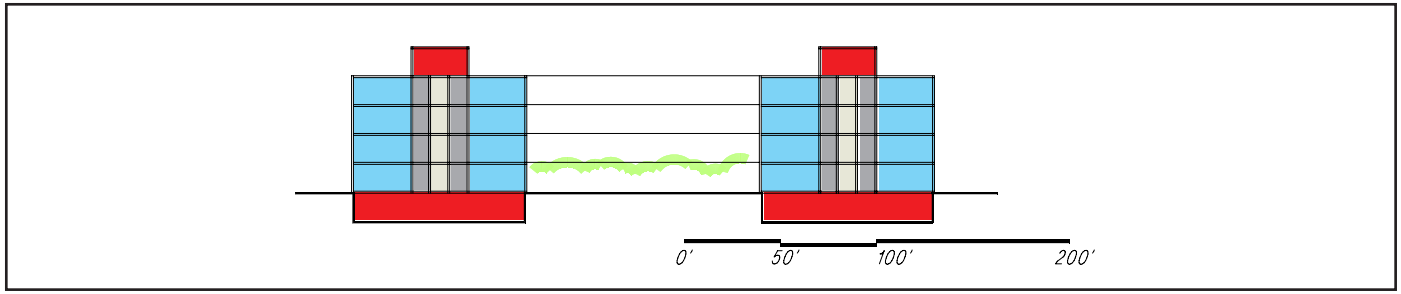
- Low height creates large horizontal floors
- Large floors are broken into smaller wings separated by landscaped courtyards

3. Low height gives maximum exposure to light and air

4. Building Area:
   119,000 NSF
   215,000 GSF



Life Sciences Research Building Massing Perspective Sketch - Alternative Two



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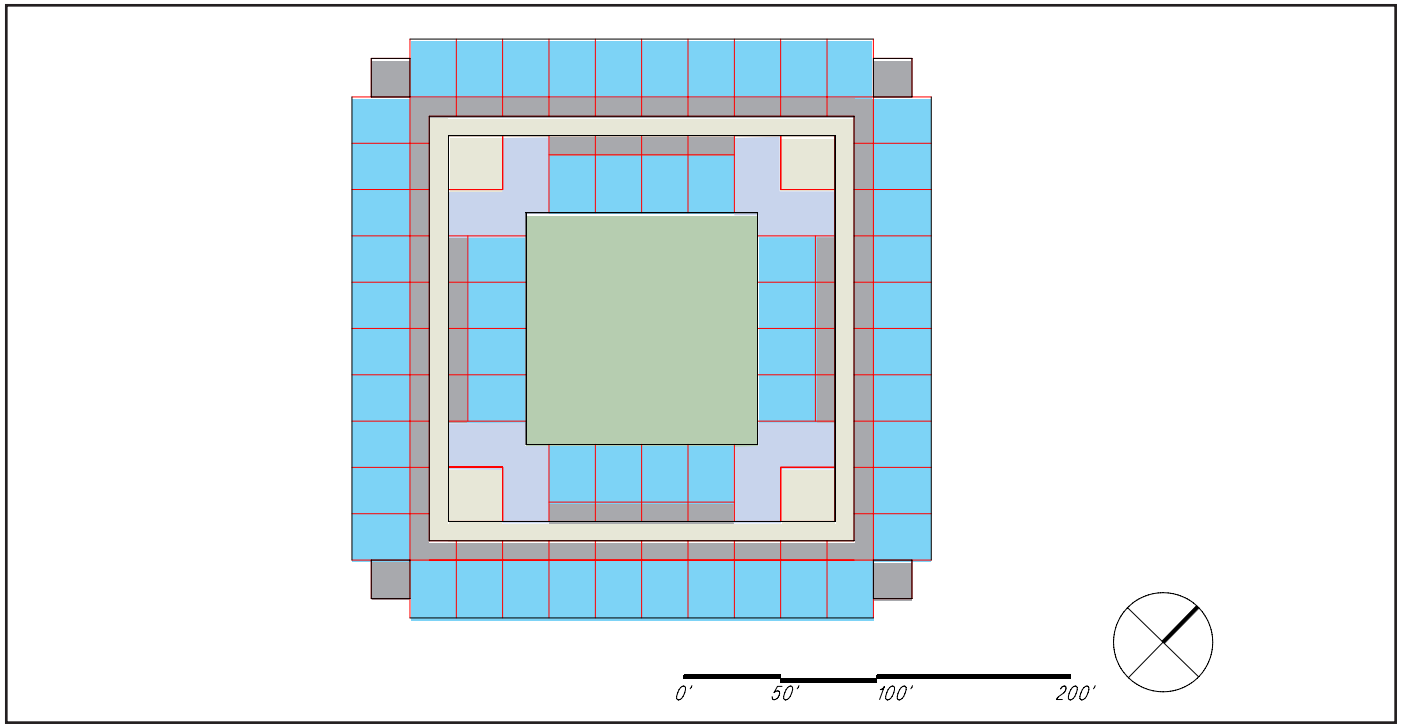

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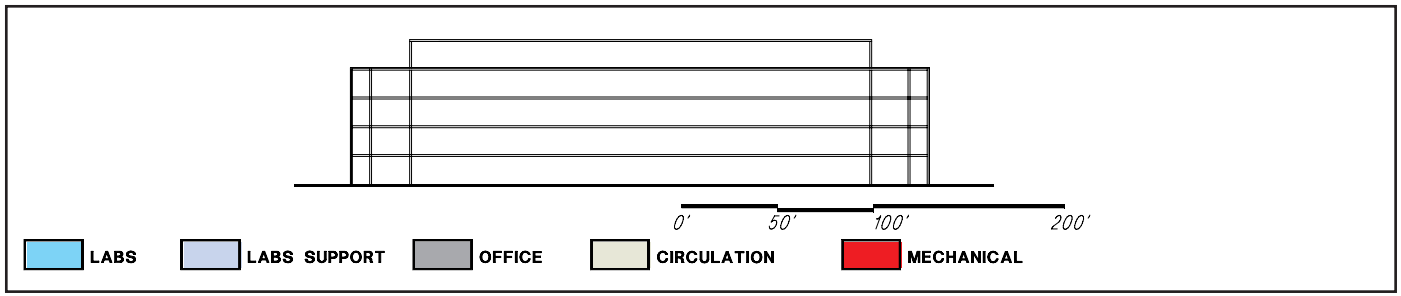

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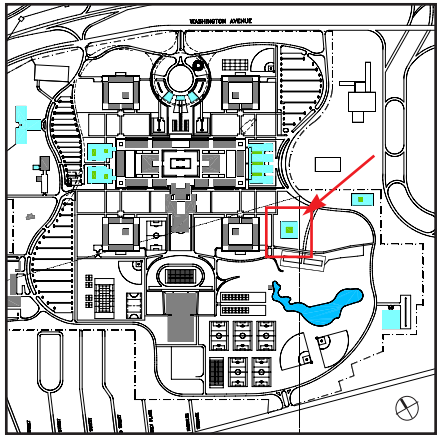


Life Sciences Research Building
Alternative Two

1. Building is located approximately 600 feet from the Podium

- Building is closer to existing and proposed parking
- Interaction between graduate and undergraduate science students is more tenuous
- Connection to the Podium is in the open air

2. Building is in 400-1200' zone.

- Four-story height gives smaller horizontal floors
- Building features a central landscaped courtyard which could be covered
- Building is adjacent to ancient wooded area

3. Building Area:
   119,000 NSF
   215,000 GSF

The Entry Building

An Objective of the Master Plan is to, "Create a clear 'front door' for the campus", because for all its formal symmetry, the Uptown Campus lacks a proper main entrance. A main entry does exist, of course, in the form of the circular loop road on the north side of the campus which leads to a drop off plaza that is directly on the north/south axis of the Podium. But visually, nothing clearly signifies to approaching visitors: This is the "front door" to the campus. Some kind of landmark is therefore highly desirable here, and preferably one which satisfies functional as well as aesthetic needs of the campus.

Two alternative concepts are proposed for an "Entry Building" as a viable solution—a building which should be carefully designed to be sympathetic with the existing campus architecture and at the same time, stand out to clearly "say"—through its siting, orientation, form and building materials—that this is the Gateway to the Academic Podium.

The functions envisioned for this building will also satisfy several University needs—first, to provide a visitor's center—particularly for prospective students and their families—in a most appropriate location; and two, to provide offices and facilities for persons visiting the University such as, alumni—and community guests.

The following are descriptions of two alternative proposals for the Entry Building which are also illustrated. It should be noted that these are concepts only, not designs, and that both have the following common characteristics: 1. They maintain the existing main campus access point on the north side of the Podium; 2. They are centered on the north/south axis, thereby respecting the symmetry of the campus; 3. They call for the reduction of the circular loop road diameter from 600 feet to 300 feet; 4. They are based on building programs of 70,000 gross square feet. 5. They feature visitor parking located on either side of the proposed new buildings.

Alternative One

Alternative One is located directly south of the new circular loop road and about 400 feet north of the Podium—well beyond the 300' line of restricted development. The plan of the building, in fact, follows the curve of the road, with a front radius of about 200 feet. This gently curving facade will act as a definite yet subtle contrast to the strict rectangularity of the Podium buildings.

The building would consist of two, 2½ story blocks separated by over 180 feet, connected only at the basement and third floor levels. The third floor would completely span the open plaza below, forming a wide, colonnaded gateway through which visitors will be able to see the full height of the Podium's Colonnade and beyond.

The vehicular drop off and main floor entry level would be located at an elevation corresponding to the mid-height of the Podium—six feet below the plaza level and six feet above the concourse floor level. From this mid-point, people will have the option of either walking down a central, skylight covered ramp/exhibition space to reach the concourse level or walking up either of two broad flanking ramps to reach the plaza level. And they can also enter the Entry Building itself.

The top of the building will be at the same height as the tops of the low-rise buildings at the four residential quads, maintaining the scale of the campus. The architectural treatment of this building should be sympathetic to the existing architecture, while at the same time being distinctive, in keeping with its entry "portal" function.

Alternative Two

This building would be located within the 300 foot line of restricted development, so its scale will be reduced to minimize its impact on the buildings of the Podium. Sited at a point midway between the loop road and the Podium, this two-story building would be partially submerged below grade, with the first floor level aligning with the level of the Podium concourse, with which it connects. This floor will in no way resemble a base-

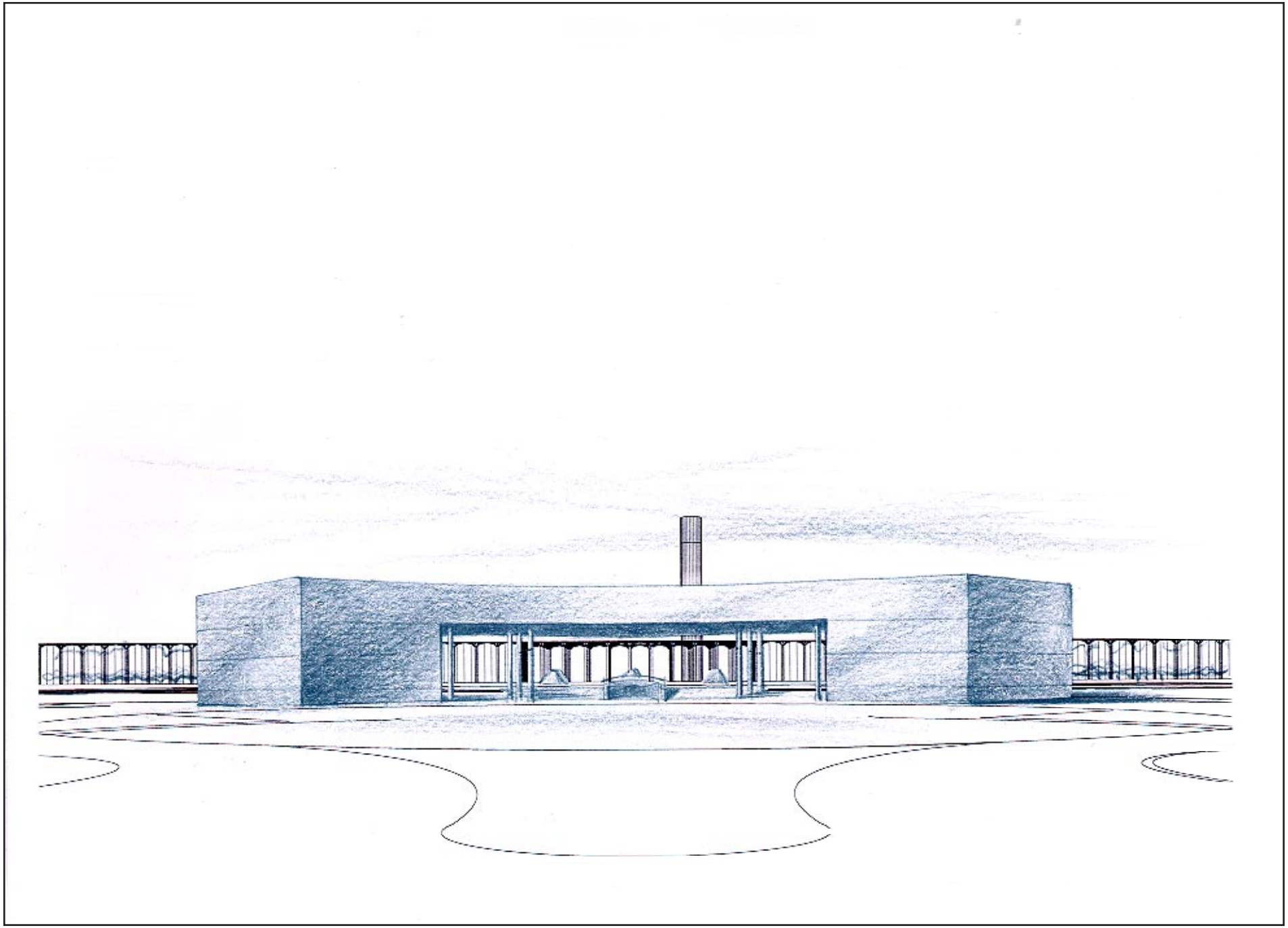
Podium Entry Plaza Looking South

Podium Entry Plaza Looking East

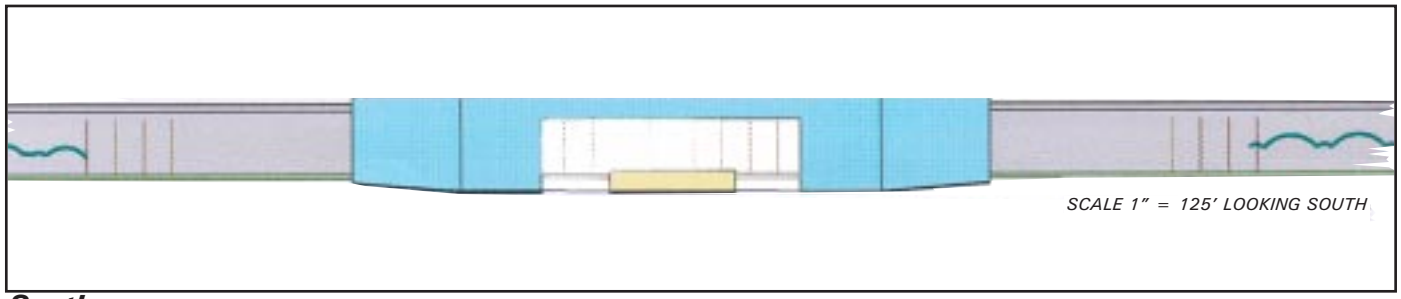
ment however, because the land surrounding the building will be excavated, contoured, and planted to create a garden setting.

The drop-off point for visitors is also mid-level in this scheme. Under a covered walkway, persons either walk down a broad ramp (which can also be used as an exhibition space) to the first floor or up to an open plaza that is at the same elevation as the second floor. This plaza level will have skylights that illuminate the first floor public spaces. On the plaza level, persons have direct access to offices located on the second floor, or they can continue walking south where another ramp leads to the plaza level of the Podium.

The second floor will actually consist of two separate pavilions that flank the plaza. Because the total height of the building is only two stories and it is partially submerged, the top of the pavilions will only project one-half story above the Podium plaza level. The pavilions will therefore be high enough to visually interrupt the bottom of the long row of columns along the Podium, while enabling the top of the colonnade to continue through uninterrupted. The pavilions will also serve visually as brackets or bookends defining a new approach to the Podium that will be at once more ceremonial and more welcoming.



Entry Building Massing Perspective Sketch - Alternative One



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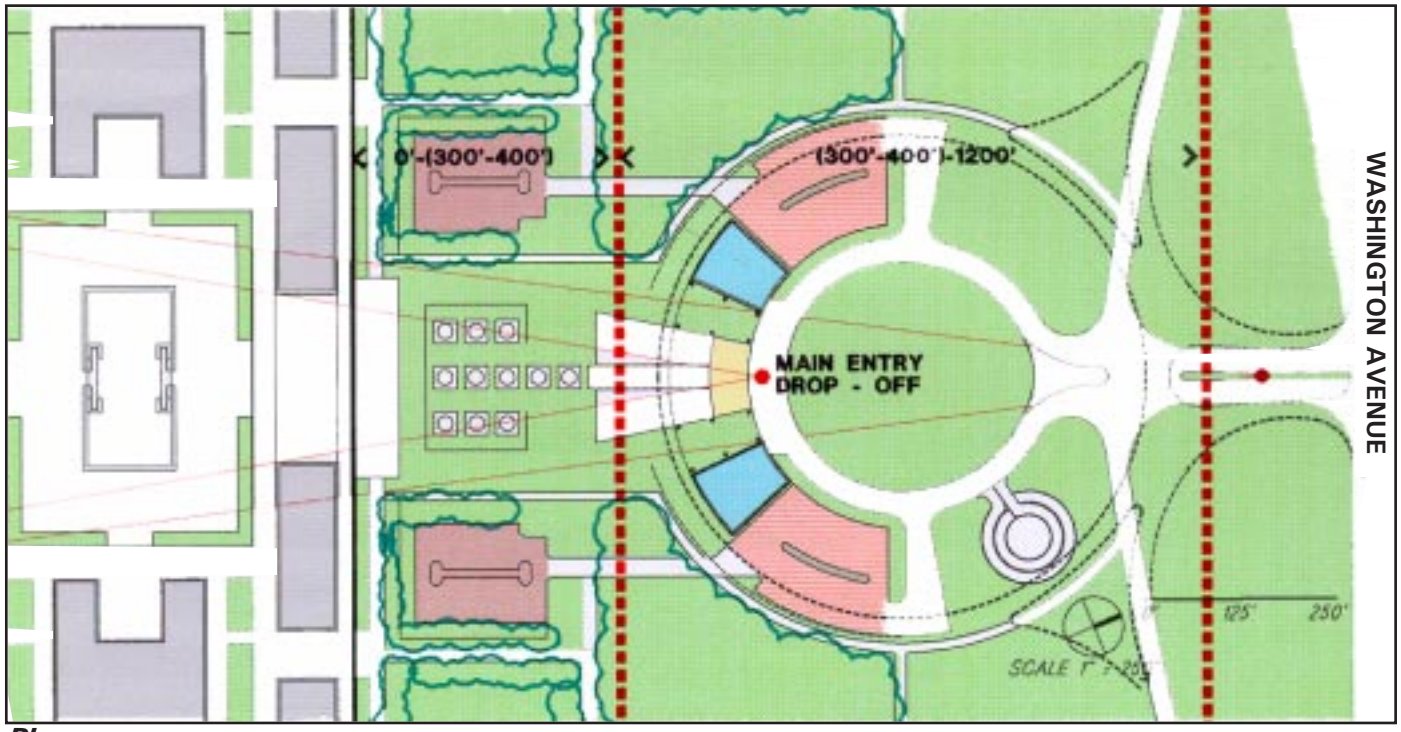

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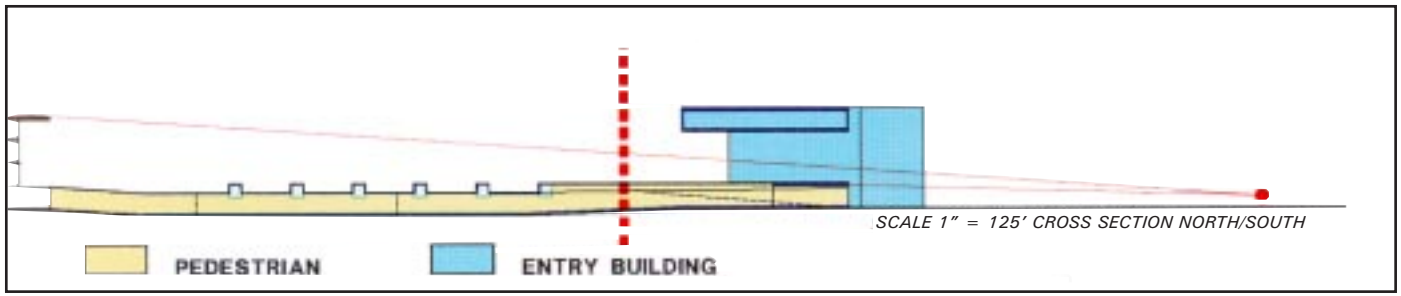

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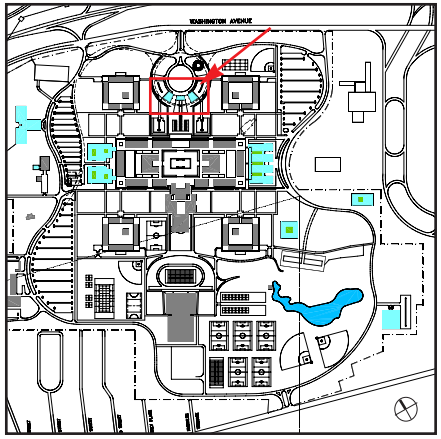


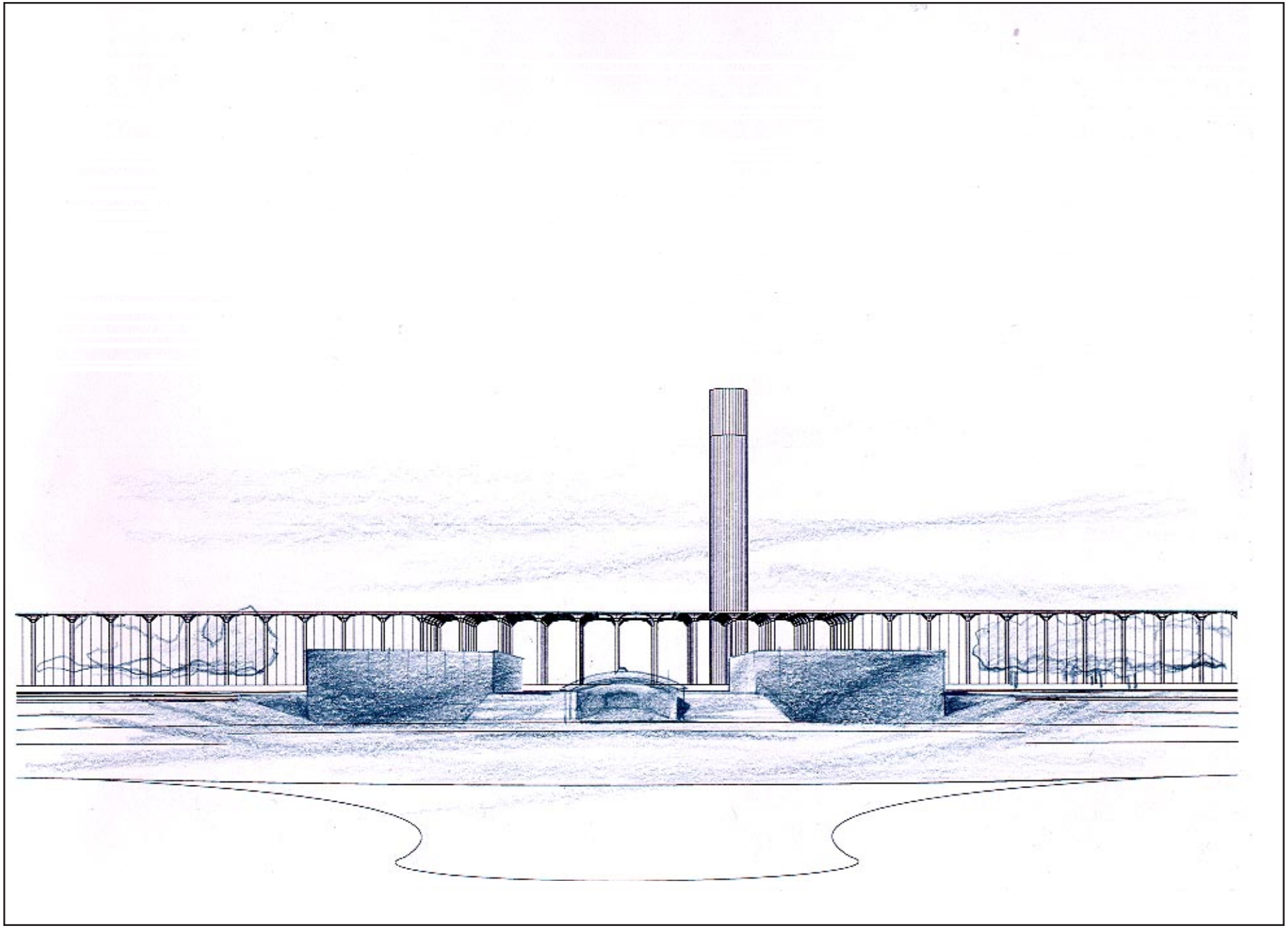
Entry Building
Alternative One

1. The building is in the 300'-1200' zone allowing it to be 3 stories high.

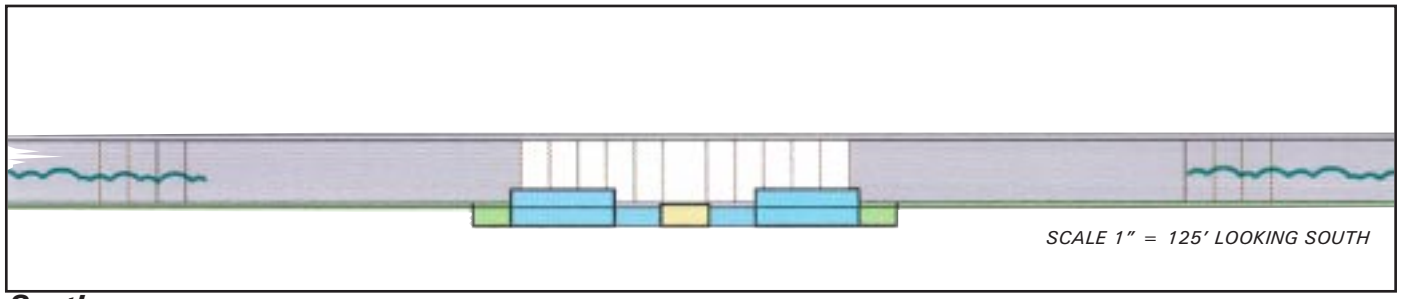
2. The mass of the building is curved as a welcoming, embracing gesture that reinforces Collins Circle and provides a foil to the orthogonal Podium.

3. The mass of the building is penetrated at the first level so the Podium buildings are still visible from Collins Circle and the building itself forms a front door gateway to the Podium.

4. Building Area:
   42,000 NSF
   70,000 GSF



Entry Building Massing Perspective Sketch - Alternative Two



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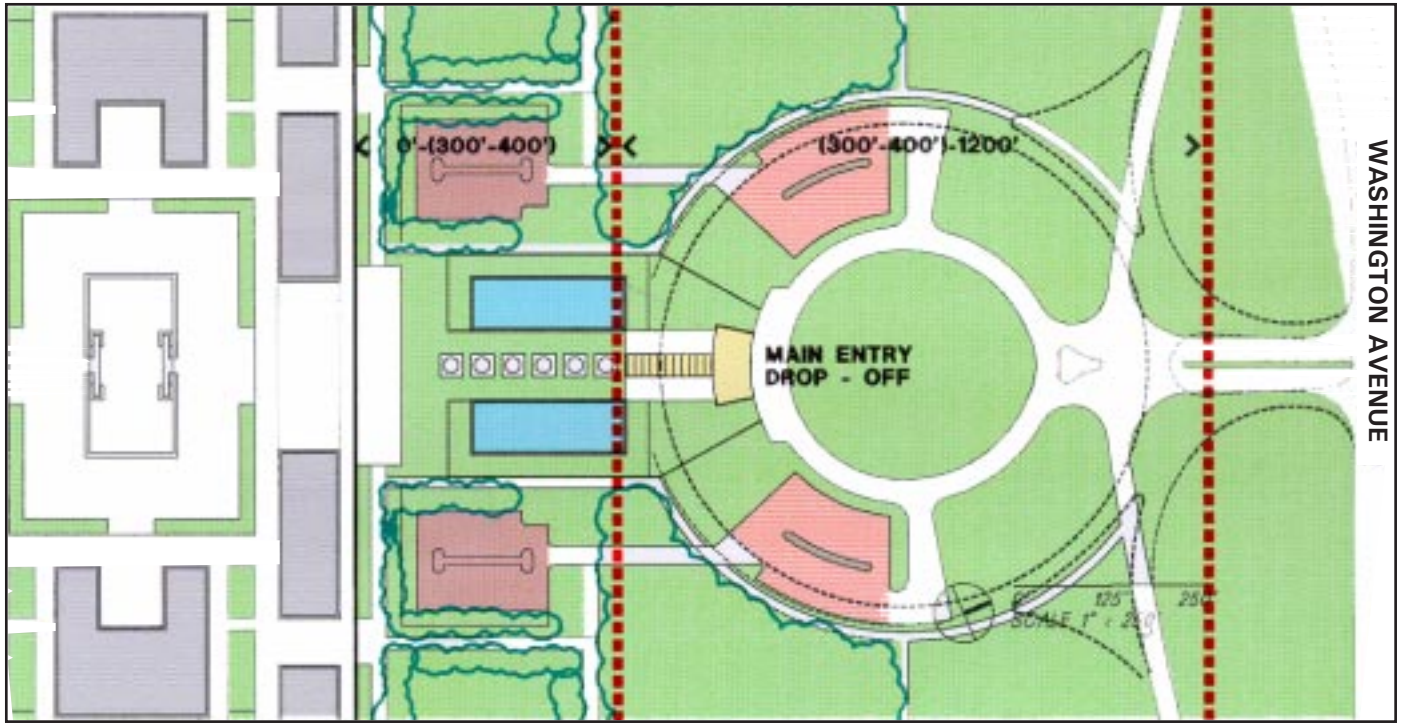

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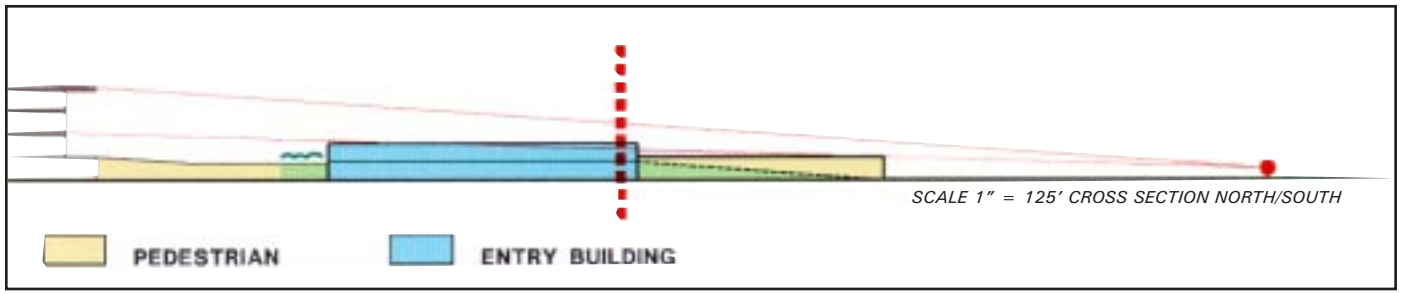

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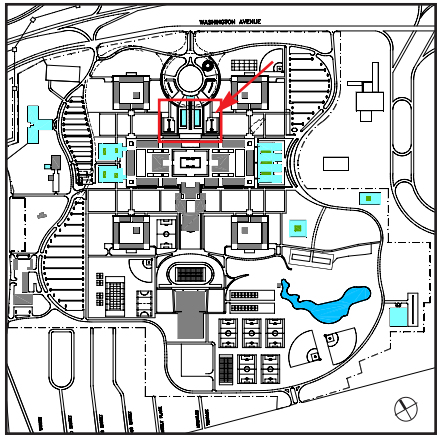


Entry Building
Alternative Two

1. The buildings are in the 0'-300' zone, so they can be no higher than the level of the Podium.

2. The buildings are placed on either side of main entry route to give a sense of closure and passage to the main pedestrian entry route to the Podium.

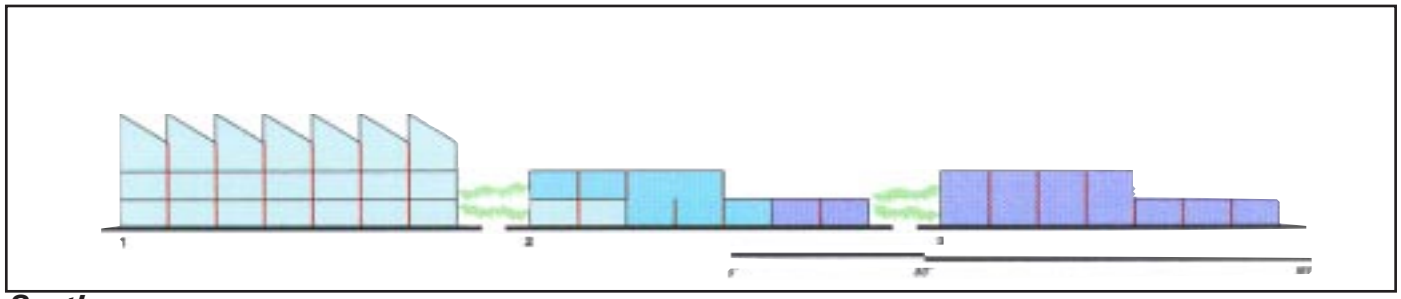
3. The buildings are set in a sunken garden, maximizing the exposure to light and air.

4. Building Area:
   42,000 NSF
   70,000 GSF

The Sculpture Studio

The existing Sculpture Studio is currently in leased space on Railroad Avenue and can only be reached easily by bus or car. The ideal situation for the Sculpture Studio would be to be located on campus within walking distance of the Podium, but far enough away so that the special storage needs and manufacturing type functions of the Studio could be met without negatively impacting academic life on the Podium.

The difference between the two alternatives developed for the Sculpture Studio depends on the future of the Fine Arts program. Both alternatives start with a free standing Sculpture Studio located east of University East Drive and near the University's boundary just south of the neighboring Police Academy (Building Site 8). Alternative One assumes that the Fine Arts Department will some day leave the Podium and be added to the Sculpture Studio. Alternative Two assumes that the Fine Arts Department remains on the Podium and the Sculpture Studio remains a free standing entity.



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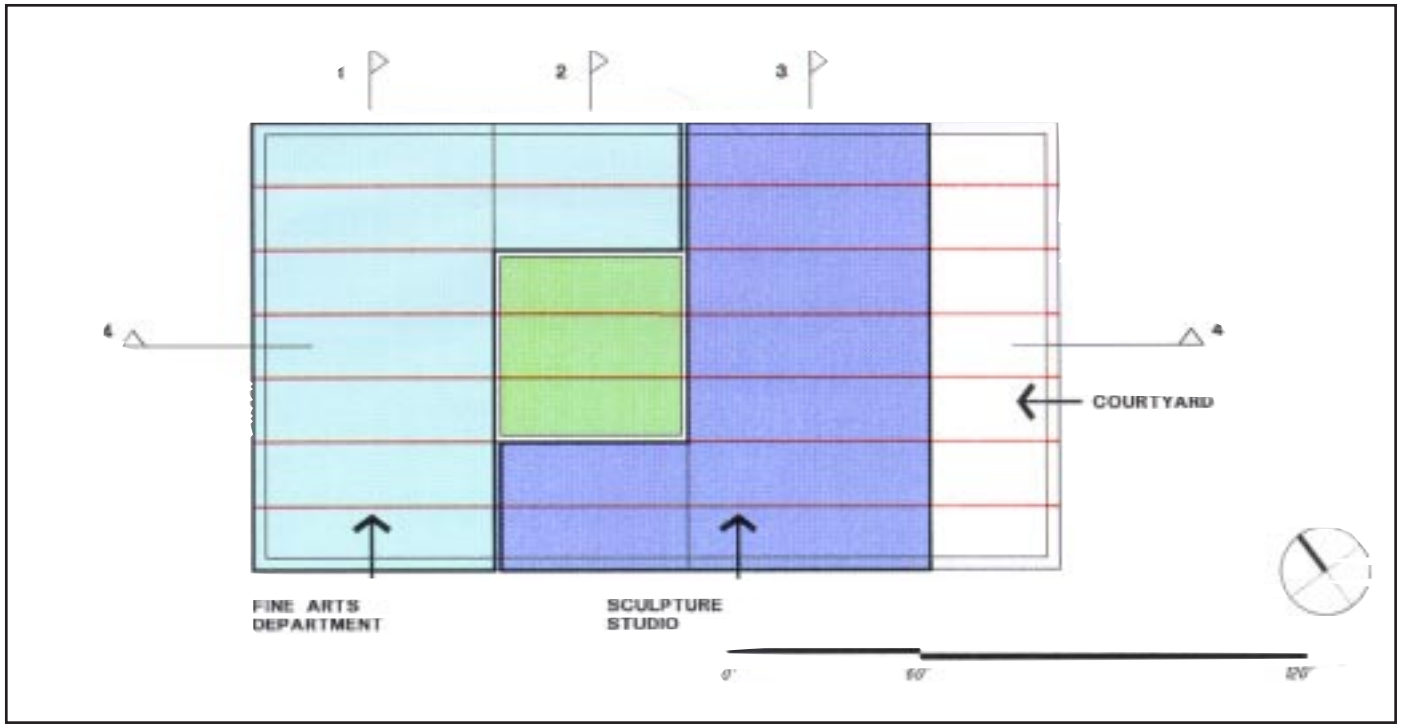

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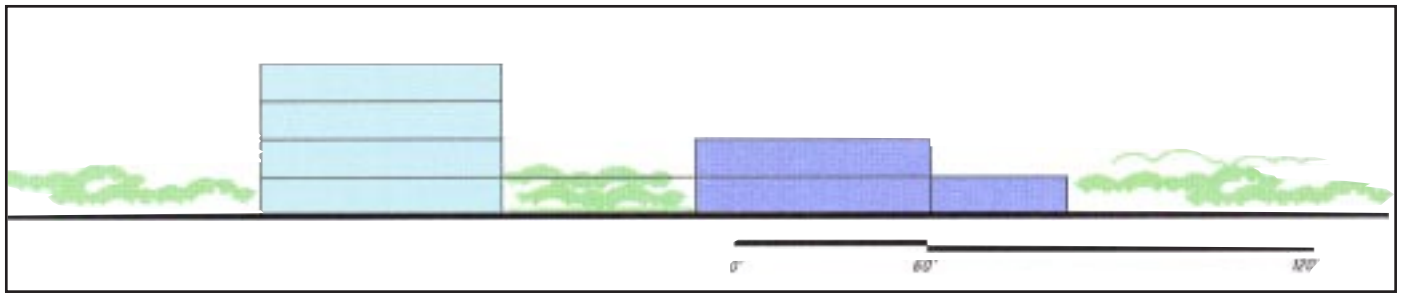

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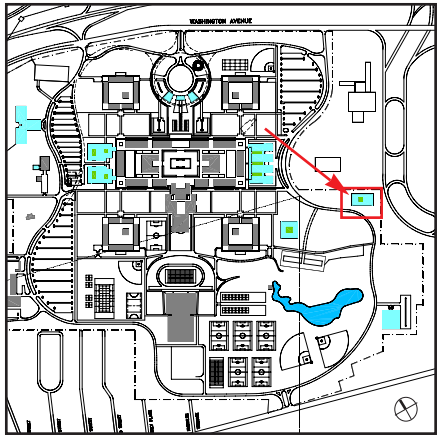


Sculpture Studio

1. The site is well suited for the manufacturing type activities and outdoor storage needs of the Studio
- It is on the edge of the property
- It is within walking distance of the Podium
- It is downwind from the Podium
- It is in a wooded area

2. The selected site is large enough to include the future addition of the remainder of the Fine Arts Department.
- Interaction among the various disciplines and levels of study in the Fine Arts would improve if the entire department were in the same building

3. Building Area:
   40,000 NSF
   65,000 GSF

COMMON ELEMENTS-DOWNTOWN CAMPUS

The Master Plan development for both the Rockefeller College and Alumni Quad result from the common need to provide improved academic and support space for the College's programs in the face of increased enrollment projections. While the traditional nature of the Downtown Campus limits the potential alternatives, it does allow for a modular implementation of improvements. As such, there are several core components which provide the foundation for the proposed Master Plan.

Rockefeller College

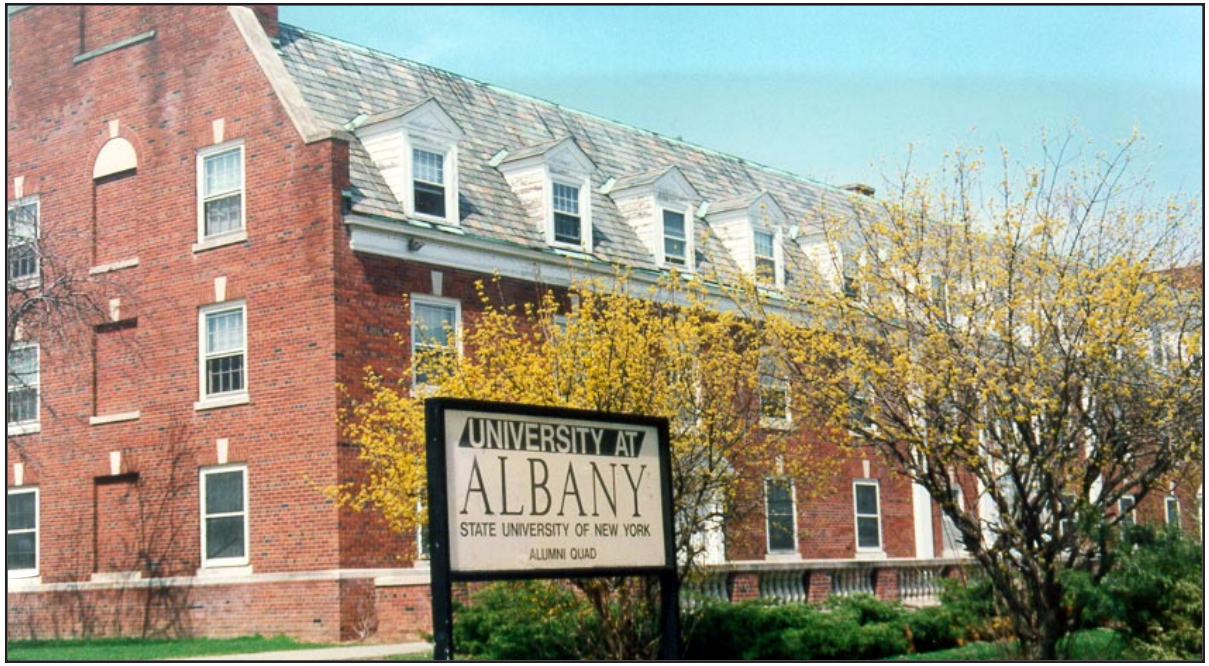
At Rockefeller College a balance must be maintained in providing increased space for academic program delivery without destroying the traditional campus lawn and its associated collegiate environment. However, even with the relocation of non-Rockefeller College departments there is not enough space within the existing buildings to accommodate upgraded and improved space for students and faculty. Thus, there will have to be significant new construction on the campus.

In order to maintain the integrity of the campus and the valuable landscaped green space the siting for the proposed expansions is limited. In order to accomplish this, two additions are proposed, providing a total of approximately 58,300 new nsf. The first site is located directly adjacent to the Hawley Library and bounded by Robin Street and Washington Avenue. The new addition would support an expansion and consolidation of the College's Library, and would not extend any farther south than the face of the existing Hawley Hall. This will prevent the proposed addition from seriously impacting the campus lawn. One second campus expansion site is located at the western border of Rockefeller College, just south of Milne Hall. While technically located on the south lawn, the slope, grade and landscaping of the site provides a natural division between this location and the perceived lawn area. Locating this new building close to the College's western border minimizes its impact on the College's open space, while providing an anchor and border to the existing open space. This new structure would provide instructional and research space for core academic programs.

A preferred selection for the second site would be the Adult Learning Center across Robin Street. Acquisition of this site would enable the University to accommodate its growth while preserving the integrity of the existing collegiate environment and traditional lawn.

The second major component to the Rockefeller College development is a staged reconstruction of the existing buildings. Over the duration of the Master Plan all buildings will be renovated and reconstructed. The extent of work is required to be complete and thorough, resulting in a ground up re-development and re-configuration of each building to best support both existing and projected academic delivery needs. This includes the development of new classrooms, improved academic research facilities, computerization infrastructure and a modernization of the College's mechanical and electrical systems. Two reconstructions are central to the Master Plan. The first is the development of Husted Hall as a central academic building, which will resolve the current shortfall of general classroom space. Second, the Page Gymnasium should be renovated, including a new mezzanine space, to provide a consolidated student activity facility in conjunction with the existing auditorium above. This will allow the relocation of the existing cafeteria and its redevelopment as academic space as part of the Husted Hall renovations.

The broad open lawn along Western Avenue is a significant factor contributing to the campus' desirable collegiate setting. In each alternative concept, the lawns and trees will be preserved. The proposed structures will be located to frame the open space and take advantage of long views across the green lawns. All construction projects should be staged to minimize soil compaction and should include provisions for lawn restoration.



Alumni Quad

Alumni Quad

Alumni Quad

The revitalization of Alumni Quad is a straightforward answer to the requirements of increased enrollment. The enrollment projections indicate a significant need for new dormitory facilities. As the College's enrollment increases, the buildings of Alumni Quad could be renovated to provide appropriate student housing. This will require a ground to roof renovation of each building to replace deteriorated finishes, and to modernize the facilities. This includes the reconstruction of the existing cafeteria facility.

Brubacher Hall currently has its lower two floors dedicated to the College of Saint Rose. At this time the Master Plan envisions no change in this relationship. However, the top two floors also represent potential dormitory space available to the University.

In all cases, Alumni Quad should serve to provide a buffer for dormitory requirements. As previously stated the relative expense of code compliance issues inhibits its use as a general space bank for any use which would cause a change in building occupancy.

Further, all rehabilitation and construction work performed on residential facilities is a cost which must be borne by the campus and paid for out of the room rental income it receives.

The development of the Alumni Quad site should follow the same parameters as with Rockefeller College, including the maintenance of the surrounding lawns and construction provisions.

ALTERNATIVE CONCEPT DIAGRAMS–DOWNTOWN CAMPUS

Rockefeller College

The development of Rockefeller College should be accomplished in a series of distinct modular tasks. This will provide flexibility in the implementation of the Master Plan, allowing the proposed improvements to be executed in a manner and order that corresponds best to the needs of the College and the available resources.

Hawley Library Renovation and Expansion. The existing Hawley Library is undersized, with portions of its collection distributed in Draper and Milne Halls. The Plan proposes an addition to Hawley Hall, located immediately to the east and bounded by Robin Street and Washington Avenue. The new four story addition should provide approximately 20,066 nsf (44,300 gsf) of library and instructional space.

The size of the addition is predicated on several parameters. First, the addition must be sufficient to eliminate the Library's existing and projected space allocation deficit. Second, it should allow the consolidation of those parts of the collection currently located elsewhere back into the library facility proper. Third, the addition should be sufficient to contain the entire existing collection. This will allow the temporary relocation of the existing library while Hawley Hall is being renovated.

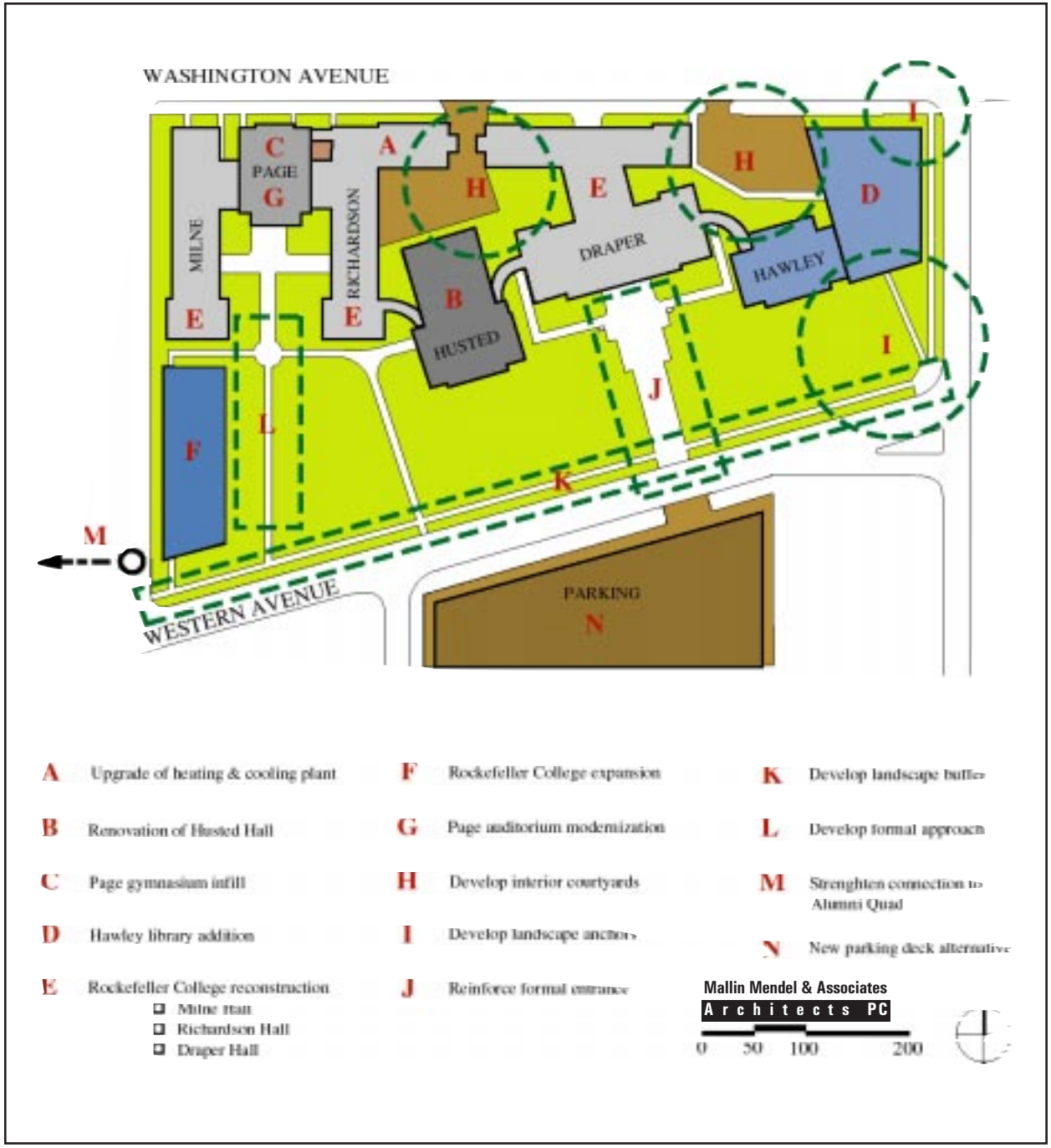
Rockefeller College Expansion Building. A new four story college expansion building, of approximately 32,260 nsf (54,842 gsf) is proposed for the western border of the Rockefeller College campus, immediately south of Milne Hall. In the long term this building will provide the required expansion of the organized research space.

Page Gymnasium Infill. The Page Gymnasium represents a significant volume of underutilized space within Rockefeller College. It also represents a major water infiltration problem on the campus. A primary component of this task is the investigation and mitigation of this problem, to prevent further deterioration of the building.

Subsequent, and in conjunction with, the resolution of the water mitigation problem, the existing gymnasium space should be reconstructed to provide for a central major student activity center. Comprising approximately 7,500 nsf, including a new mezzanine, this infill would allow the relocation of the existing student cafeteria and kitchen facility from Husted Hall to Page Hall. This provides a central location for large student gatherings in a more appropriate setting, separate from the academic buildings, reducing disturbance and noise. The available volume provides excellent potential for the development of a dynamic and attractive facility. This location allows the development of a relationship between the student center and the Page auditorium.

Reconstruction of Husted Hall. Once all non-Rockefeller College and non-academic functions have been moved out of Husted Hall, this building may be renovated as a central academic building. Configured to provide both general academic classrooms and instructional research spaces, this reconstruction resolves the overall lack of classroom space across Rockefeller College. The renovations would include not only a reconfiguration of the building to better support the College's current program delivery needs, but a new computer infrastructure and a modernized mechanical and electrical system. As with the other College buildings, these renovations represent a complete rebuilding of Husted Hall within its existing shell, resulting in approximately 28,480 nsf of instructional space.

Rockefeller College Reconstruction. This task implements the staged reconstruction of the remaining Rockefeller College academic buildings. This represents work done at Milne Hall, Richardson Hall and Draper Hall. Each building, in turn, would be reconstructed in order to reconfigure the building to better support the College's current program delivery needs, replace deteriorated and worn finishes, provide a new computer infrastructure and a modernized mechanical and electrical system. In general, the space allocations within each building would be organized in a sim-



ilar manner. The lower levels of each building, nominally located below grade, would contain building service and central service spaces. In some locations, such as Richardson Hall, additional instructional space would also be located here. The lower level of Draper Hall would also include the instructional resource and the administrative electronic data processing spaces. The first floor, the nominal entrance level, would primarily be instructional space, including classrooms and faculty offices. Also located on the first floor of each building would be a smaller student activity room. The second floor would be a combination of instructional and organized research spaces, with the upper floors housing primarily organized research spaces. Administrative space would be distributed across the upper two floors as necessary by detailed functional adjacency requirements.

As with Husted Hall, these renovations represent a complete rebuilding of the Rockefeller College buildings within their existing shells. Because of the similar nature of these renovations, they can easily be ordered to best fit the specific needs of the College and its departments, to minimize disturbance and consolidate appropriate programs. However, because of the intensive nature of the mechanical and electrical renovations, this task should be staged on a building per building basis, and not jump from one building portion to another building portion.

Page Auditorium Modernization. This recommendation covers the modernization of the Page Auditorium facility. The existing auditorium is in good condition, however its equipment and furnishings are beginning to show signs of age. The auditorium proper should be refinished, the furnishings refurbished or replaced, and the lighting and presentation support equipment upgraded and modernized.

The remaining tasks deal with the implementation of landscape and site concerns, and may be implemented as part of the previously listed tasks, as the available resources allow.

Rockefeller College Concept Plan

Develop Interior Courtyards. The existing interior courtyard adjacent to Draper Hall and the new courtyard created by the Hawley Hall addition are minimally landscaped and consist primarily of asphalt covered parking areas. In both cases they should be redeveloped to reduce the harshness of the environment and provide for the addition of landscaped open areas and vegetation. The Draper Hall service area should be reconfigured to provide for a more ordered use of space and efficient access to the surrounding building's service areas.

Develop Landscaped Anchors. The eastern corners of Rockefeller College should be developed to provide an anchor to the formal campus lawn and enhance the connections to the adjacent neighborhoods and green spaces. At the northeast corner of the site a small landscaped area should be developed, to soften the connection to the adjacent commercial and governmental office neighborhoods. The southeast corner of the site should be enhanced to develop a strong relationship with Washington Park.

Reinforce Formal Entrance to Draper Hall. The south entrance to Draper Hall is the nominal entrance to Rockefeller College proper. The existing concrete walk is minimal, and the landscaping at this entrance should be enhanced to re-inforce this location as the formal college entrance.

Develop the Western Avenue Landscaped Buffer. The development of a landscaped buffer along Western Avenue will reinforce the traditional collegiate nature and ambiance of the existing campus lawn. This will help define the edge of the campus within its urban context.

Develop Formal approach to Page Hall. Develop a new pathway to reinforce the entrance to the Page Hall Courtyard and the new College Expansion Building.

Strengthen the Connection to Alumni Quad. While distinct campus areas, the distance separating Rockefeller College from Alumni Quad is only 1500 feet, similar in distance to crossing the Uptown Podium. As part of the overall Downtown Campus development, consideration should be given to strengthening the pedestrian connection between the two campus units. This could include appropriate signage and the development of bike or pedestrian ways. Any improvements between the two campuses, however, would have to be done in co-operation with the City of Albany and the local residential neighborhoods.

New Parking Deck Alternative. In order to relieve the limited parking available on site, serious consideration should be given to the development of an above ground parking deck at the Thurlow Avenue parking lot. This would significantly increase the parking capacity at Rockefeller College, reducing both real and perceived shortfalls. However, such a venture must also be carefully considered, and developed with the input of the city and the neighboring community. Since the State University Construction Fund normally does not support parking structures, the proposed deck must be able to stand on its own financial merits.

The Adult Learning Center Annexation

As previously mentioned, a potential alternative for the development of the Rockefeller College would be the acquisition of the Adult Learning Institute property located immediately to the east of Rockefeller College.

Alumni Quad

The development of Alumni Quad represents its revitalization and recommissioning as a dormitory facility. Similar to the implementation of the Rockefeller College recommendations, the proposed work at Alumni Quad is equally modular and flexible. The recommendation tasks can thus be staged to best suit the needs of the University as enrollment increases. Since the majority of the buildings at Alumni Quad are currently unoccupied, many of the proposed recommendations can be undertaken without significant disturbance to the Downtown Campus operations.

The restoration of Pierce and Sayles Halls will add 239 beds to the University. Restoring the upper two floors of Brubacher Hall will provide an approximate additional 150 beds, for a sub-total of 389 beds.

Dormitory Facility Reconstruction. This task implements the staged reconstruction of the primary Alumni Quad dormitory buildings. This represents work done at Pierce Hall, Alden Hall, the renovation of Waterbury Hall and the modernization of the existing cafeteria and kitchen facility. Each building, in turn, would be renovated to restore it to good operating condition, including any required building code and handicap accessibility regulation requirements. Currently there are no elevators located in any Alumni Quad building. Serious consideration should be given towards providing a handicap accessible elevator in at least one of the building renovations. In general, the space allocations within each building would be organized in a similar manner. The lower levels of each building, nominally located below grade, would contain student lounge and activity spaces, with the upper stories renovated for student residences. The renovations at Alden and Waterbury Halls will have to be carefully scheduled and staged, since they are currently occupied dormitory spaces. Of immediate concern is the entrance portico at Pierce Hall. The existing portico has failed, and has become a safety hazard.

Currently, half of the Pierce Hall basement is being occupied by the College of Saint Rose. In order to take full advantage of Pierce Hall as a dormitory, this facility will have to be relocated.

As with similar Rockefeller College renovations, this recommendation represents a complete refinishing and refurnishing of the Alumni Quad buildings, including required reconstruction of the building shell components and roof replacements. Since the recommendations maintain the current occupancy type, the existing building configurations can be maintained, and major code compliance work limited to those areas directly effected by the proposed work. Because of the intensive nature of the mechanical and electrical renovations, this task should be staged on a building per building basis, and not jump from one building portion to another building portion.

Brubacher Hall Reconstruction. The renovation of Brubacher Hall represents a unique challenge to Alumni Quad. The lower two floors are currently allocated as Public Service space, leased to the College of Saint Rose. As of the time of this report, the College of Saint Rose will be allowed to maintain this area. Thus the restoration of the remainder of this building as University dormitories will have to be phased and implemented to minimize disturbance to ongoing classes. In addition, a degree of separation will be required, to segregate the College of Saint Rose activities from the residential use.

Sayles Hall Reconstruction. Sayles Hall represents a unique opportunity to the University. Its architectural character and internal space configuration not only would support traditional residential use, but in addition, Sayles could be easily renovated to provide for a first class University Conference Center, if it was decided not to develop such a Center on the Uptown Campus.

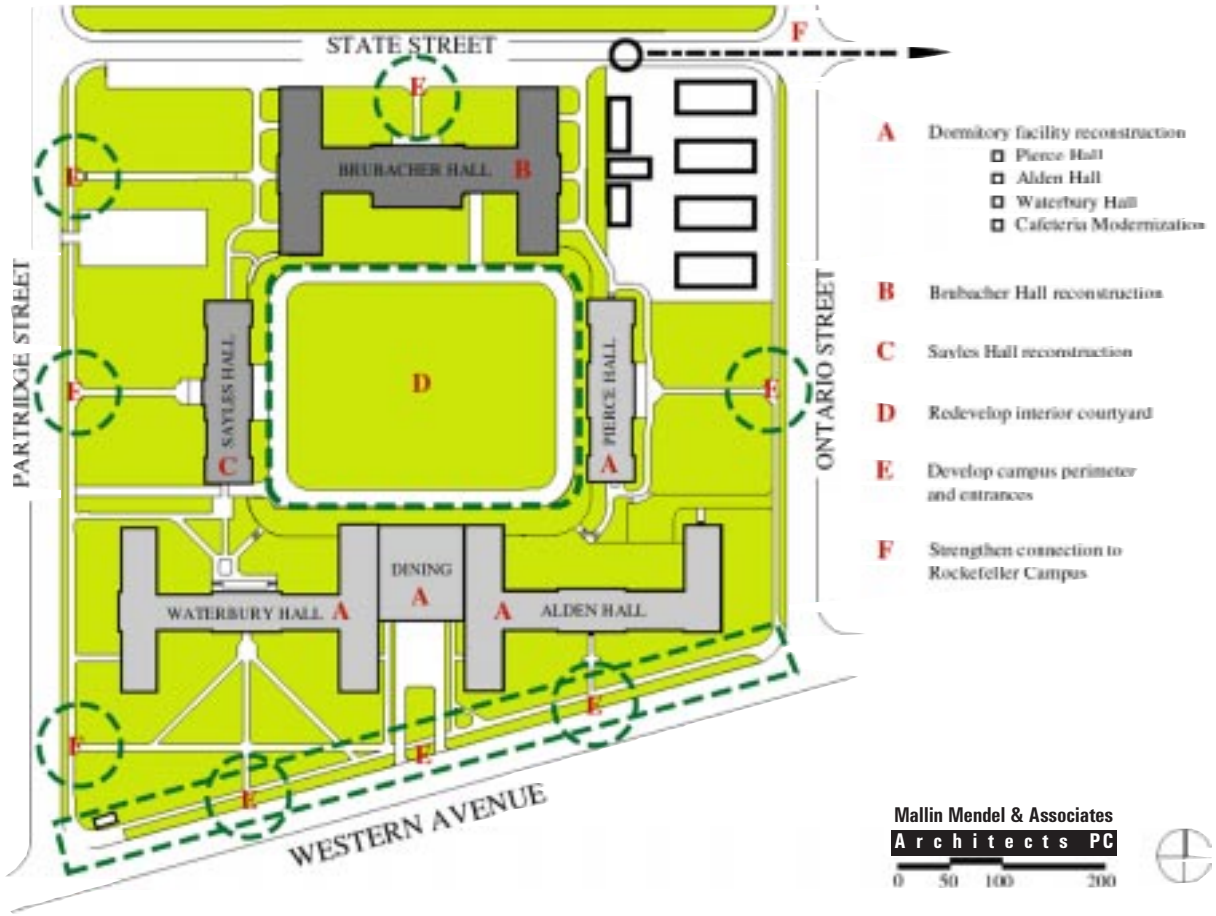
In either case, the renovations required to bring Sayles Hall back on-line would be similar to the other Alumni Quad buildings. This includes refinishing and restoration of the traditional woodwork, reconstruction of the building shell, roof replacement, and the modernization of the building's mechanical and electrical systems.

Re-develop the Interior Courtyard. The development of Alumni Quad as a residential campus will also require the improvement of the Quad's public spaces, with an emphasis on the currently underutilized central courtyard. The quadrangle landscaping should define pedestrian access, keep vehicular traffic off of the lawn areas and respond to the strong symmetry of this interior space.

Develop the Campuses Perimeter and Entrances. The green spaces which surround the Alumni Quad should be developed to provide a path system with an intuitive hierarchy and identify key entry points. The addition of new perimeter plant-

ings will define the campus borders and strengthen its overall identity.

Strengthen the Connection to Rockefeller College. While distinct campus areas, the distance separating Rockefeller College from Alumni Quad is 1500 feet, similar in distance to crossing the Uptown Podium. As part of the overall Downtown Campus development, consideration should be given to strengthening the pedestrian connection between the two campus units. This could include appropriate signage and the development of bike or pedestrian ways. Any improvements between the two campuses, however, would have to be done in co-operation with the City of Albany and the local residential neighborhoods.



Alumni Quad Concept Plan

PLANNING AND DESIGN CRITERIA

The following criteria are meant to be used as guidelines for future planners, architects and designers as they implement the various projects proposed in this Master Plan.

Planning Criteria for the Uptown Campus

Maintain the separation of vehicles and pedestrians.

The Master Plan has three proposals to foster vehicle-pedestrian separation:(1) all new proposed parking is inside the University Drive circumferential roadway, (2) all parking except visitor, disabled and special has been eliminated between the Podium and the residential quads and (3) a separate pedestrian internal circulation system has been proposed at the Lecture Center level of the Podium separate from the service tunnel.

Encourage public transit and linkage to the Downtown Campus.

The Master Plan proposes an interior pedestrian connection between the Podium and the Uptown Campus's major drop-off at Collins Circle. Efforts such as the "Urban Corridor Study" and the "Albany Urban Bikeway" should continue to seek ways to encourage the linkage between the two campuses by means other than the private automobile.

The "Urban Corridor Study" was recently commissioned to focus on the Parking and Transportation issues along Washington and Western Avenues. This study is jointly supported by the City of Albany, College of St. Rose, OGS, CDTA, CDTC, Albany School System, Crossgates Mall, affected Neighborhood Associations and the University. The Initial Phase, which includes data collection, detailed mapping of the affected areas and needs assessment, is already underway.

Maintain the Podium for academic uses.

The Master Plan proposes the relocation of other funded research, such as standard research centers, and administration off the Podium to allow their vacated space to be used for academic uses. The Master Plan also provides building sites (Building sites #2 or 2A, #6, #9 and #10) where other research and/or public contact type centers might be located rather than occupying space on the Podium.

Planning Criteria for the Downtown Campus

Throughout the implementation of the Downtown Campus Master Plan recommendations, several planning criteria should hold throughout.

First, the development of the Downtown Campus should re-inforce existing relationships with its adjacent neighborhoods. Of primary concern are the academic programs at Rockefeller College and their relationship with the adjacent state and local governmental offices. This complementary relationship is integral to the College's national reputation, and any redistribution of program spaces must strengthen this environment. At Alumni Quad, the restoration of the Quad as a dormitory facility should supplement the adjacent neighborhood community.

The development of Rockefeller College itself should similarly reinforce those characteristics upon which its reputation and recognition has been built. Thus, the appropriate development of the College's core curriculums is essential to the future success of the College. Not only should the proposed work improve academic program delivery, but it must also recognize that the co-location and synergy of these divisions at the Downtown Campus location is what defines the College's unique identity.

Within Alumni Quad the planning criteria is more strictly defined by the requirements of growing enrollment, and the existing building configuration, and availability of funding generated through room rents. With the increased dormitory load brought on by the projected enrollment, a staged revitalization of Alumni Quad to serve this need becomes the straightforward solution. The relative premium required to change building occupancy type inhibits the practicality of alternative development at this location. However, the development of Sayles Hall as a potential conference center, which could take advantage of both the

building's space configuration and the adjacent residential buildings, should be seriously considered. The benefits of a first class Conferencing Center, as part of the University's on-campus facilities, might outweigh the costs of additional renovation.

At both Rockefeller College and Alumni Quad care should be taken to maintain the integrity and the traditional collegiate ambiance of the existing lawns and open spaces. At Rockefeller College the formal Western Avenue lawn is a special resource within the city of Albany, and should be respected by any proposed site development. Similarly, the landscaped court within the Alumni Quad quadrangle should be revitalized and developed as a unique outdoor space.

In addition, the development of good access and circulation across the Downtown Campus would be beneficial to the revitalization of the Alumni Quad and the expansion of Rockefeller College. Consideration should be given to the development of an improved pedestrian link between the two campus units, for both foot and bicycle traffic. In addition, the University should take improved advantage of the existing Washington Avenue transit corridor, which connects the Uptown Campus to both Alumni Quad and Rockefeller College.

Design Criteria for the Uptown Campus

Maintain the zones established by the Master Plan.

The zones established by the Master Plan limit the height of new buildings in proportion to their closeness to the Podium. These height limitations are to protect the integrity and views of the unique and rigorous Podium architecture. The placement of higher buildings away from the Podium will allow future architects and designers more freedom in the design of their buildings since they will not have to compete with, or be intimidated by, the architecture of the Podium, if they are in the second or third zones.

Continued Respect for the Precedent and Strength of Existing Architecture

Rarely has a University Master Plan been conceived and executed with a more singular, strong, and uncompromising architectural vision than Edward Durrell Stone's plan for the Uptown Campus of the University at Albany. And with few exceptions, the campus, as it exists today, is true to his original conception: ten, three-story pavilions—one for each of the major disciplines of the University—organized around the perimeter of a large rectangular, 1540' x 580' base or Podium, and all linked by a full-height exterior loggia.

Completing this classically ordered composition are two more pavilions centered on the longitudinal axis of the Podium—the Library and the Performing Arts Center—which face each other across a sunken courtyard, and on the south end of this courtyard, the Student Center, placed directly on axis with the main, ceremonial entrance to the Podium. Other major, off-Podium buildings, such as the Physical Education Building—also by Stone—are designed in the same architectural idiom or are far enough away from the Podium so as not to interfere with its cohesive appearance.

The architectural treatment of the original campus is as rigorously consistent as its plan: The most predominant design element is the series of loggias, laid out in continuous twenty-foot by twenty-foot bays that extend nearly the full length and width of the Podium. Each bay is defined by four slim pre-cast concrete columns, each of which curves gracefully outward near its summit to form a broad "mushroom" cap. Together, these mushroom columns—a structural motif used extensively for the buildings as well as the loggias—form a series of vaulted ceilings that recall in modernist vocabulary, the soaring stone vaults of the great gothic cathedrals. And while very different from its venerable predecessors, this cathedral of learning is indeed awe-inspiring as one gazes down the nearly third of a mile long row of graceful arches.

The architectural treatment of the buildings continues the vertical emphasis of the loggias, with

all four facades of each building articulated by full height pre-cast concrete "fins" spaced approximately 3 feet on center, with infill panels consisting of either tall, narrow casement window units, doors, or pre-cast aggregate spandrel panels.

The overriding unity of the Uptown Campus is both its distinction and a source of often justified criticism. The campus suffers from a feeling of sameness that borders on monotony, which in turn makes orientation and finding one's way difficult despite the clarity of its organization. The buildings themselves lack a sense of individuality; such functionally diverse buildings as the Chemistry Building, the Fine Arts Building, and the Business Administration Building—for example—look identical from the outside, except for the small signs mounted at the corners of each building. The predominance of off-white and gray precast and straight, hard surfaces unrelieved by little except occasional trees and shrubs, is not very welcoming, and particularly during the harsh winters can be as cold as the weather.

An important challenge for the future development of the campus will be how to address these problems while maintaining a respect for the precedent and strength of the existing architecture. The architecture does indeed deserve this respect because:

1. These buildings have come to express, symbolize, and embody the University at Albany, no less than Thomas Jefferson's colonial pavilions stand for the University of Virginia, and McKim, Mead, and White's neo-classical buildings stand for Columbia University;

2. Stone's planning concept and its realization is truly unique in the history of American campus architecture;

3. Given its cohesiveness, only a colossal-scale renovation or rebuilding of the entire campus, would have a chance of successfully changing its character, and the constraints of costs and the existing structural systems simply make this untenable; and

4. For all its defects, the campus works and has a particular beauty of its own that can be brought out, built upon, enhanced, by the introduction of thoughtfully selected new elements, some ideas and guidelines for which are outlined in the following pages of this report.

Introduce Warmer Materials, Softer Edges, and Color

The introduction of warmer materials, softer edges, and color can do much—in a relatively expedient and economical way—to bring more variety and liveliness to the Uptown Campus and in particular, make the buildings of the Podium warmer, inviting, and perhaps even more effective in their use and operation.

Currently, the principal elements—aside from landscaping—which break up the regularity and formality of the architecture and provide some "colorful" accents amidst the predominant whites, light grays, and beiges, are the make-shift bulletin tackboards that wrap around all four sides of many of the free-standing columns throughout the Podium. As unsightly as these tackboards are, they clearly provide a necessary function throughout the campus. Finding a more aesthetically pleasing alternative is therefore a priority.

One possibility is to develop a standard campus kiosk, designed with a distinctive shape and color, thereby returning the columns to their former dignity, while providing a series of lively and functional "sculptures" throughout campus. The placement of these kiosks will be important—perhaps helping to define entrances to buildings and also serving as "nodes" for informal gathering places around the Podium.

While only usable in the warmer months, such informal gathering places—if well designed—have the potential for visually creating a more informal, friendlier atmosphere year-round. Thought should be given to introducing different kinds of seating—not stone benches, but perhaps wood or durable and colorful fiberglass or cast-resin furniture, arranged in ways that encourage interaction, and supplemented by plantings, bulletin boards,

public telephones, or even some built-in television monitors that relays information about classes, music, sports, and other campus events.

The entrances to most buildings are very poorly defined, and introducing special elements, material variations and/or colors here will add more interest and serve a needed purpose. Beyond the readily apparent need for better signage, thought should be given to the possibility of introducing a different, warmer, yet durable paving material in front of building entrances—such as brick pavers or quarry tile. Lightweight fabric canopies—carefully designed to be sympathetic with the architecture and perhaps done in color or just translucent—could also help define the doors and introduce a scale that is more intimate than the tall concrete arches overhead.

Another possibility—both for defining the entrances and in other areas of the Podium—is banners suspended from the three story vaults of the loggias. These banners, whether calling out a particular building's name, or illustrating its function, or containing the University insignia, or a work of art, can be an inexpensive way of adding color, movement and variety throughout campus—for they can be periodically changed. Similarly, the introduction of sculptures and mobiles—both from the University's Museum Collection and on loan from other institutions—should be considered.

Another idea for adding greater interest to the buildings themselves is to investigate different kinds of window treatments--blinds or shades—in materials that add both subtle color and texture to the buildings' exterior appearance.

Great care should be taken with these and all other solutions being considered to ensure a consistency of design, especially in relation to the color palette, so that the dignity of the original architecture—while enlivened—is also maintained.

Design Criteria for the Downtown Campus

At both Rockefeller College and Alumni Quad, the architectural character of the older buildings is a significant factor in the College's cohesive and attractive traditional collegiate environment. Any new work on this campus should respect these traditions, with the proposed new structures complementing the existing buildings in massing, material choice and detailing. Where required, the existing structures should be restored, to repair deteriorated construction, maintain the architectural traditions and extend the life span of the College's buildings.

Within both existing and new buildings, the building space allocation and configuration should be constructed to best support the program delivery and support requirements of Rockefeller College and the University. This is a straightforward criteria for the proposed new additions and expansion space. At the existing buildings, however, this will necessitate a properly phased and scheduled program of campus wide reconstruction and renovation. At Rockefeller College the existing buildings should be upgraded not only to provide appropriate plan modifications, but a state-of-the art data and telecommunications infrastructure; upgraded, durable and low maintenance finish materials; and the replacement of the aged mechanical and electrical systems. At Alumni Quad the revitalization of the unoccupied buildings will require similar intensive renovations, for the restoration of these buildings as dormitories.

Landscaped Environs

Landscape Features - Uptown Campus

LANDSCAPE PLANNING CRITERIA

Uptown Campus

The Figures, "Landscape Planning Recommendation/ Uptown Campus" with a "Pedestrian and Bicycle Paths and a Nature Walk Concept Plan" illustrate the location or extent of specific landscape and circulation planning recommendations that have been made during the Master Planning Process. The criteria upon which these recommendations are based include the following:

- recognize and respect the hierarchy of spaces created by Edward Durrell Stone in his original design concept;
- develop strong relationships between new and existing buildings and the landscape;
- provide safe, attractive pedestrian access throughout the campus, separating pedestrian and vehicular circulation where feasible;
- use pedestrian friendly zones to unify and link the campus;
- preserve unique natural areas, restore existing mature landscapes, and provide increased species diversity wherever possible;
- re-design the entry plaza and arrival sequence at the Podium to create attractive, welcoming spaces for visitors, faculty, students and staff.

The five and ten year Master Plan programs anticipate construction of new facilities and extensive renovation of existing buildings and infrastructure. This work will have a significant impact on the existing landscape resources. In order to preserve and protect these resources, and to effectively manage new installations, we recommend the preparation of a phased landscape management plan which would include targeted strategies for improving the health of trees within the "green envelope", approaches to reducing the high percentage of containerized plantings, maintenance plans for all natural areas, and programs for turf management at athletic fields and lawns.

Legend

A Entry Plaza
- Create signature entry plaza
- Maintain visual link to Podium entrance

B Green Envelope
- Create safe, pedestrian friendly environment
- Restore and enhance existing landscape
- Provide places of activity
- Respect desire lines

C Quad Linkage
- Provide attractive, buffered access between each quad and Podium

D Podium Gardens
- Preserve and enhance character of unique gardens

E Podium Plaza
- Provide additional landscape definition
- Increase year-round usage
- Minimize use of small, isolated containerized planters

F New Construction (all sites)
- Locate buildings for best physical and visual "fit" in the landscape
- Integrate landscape and building

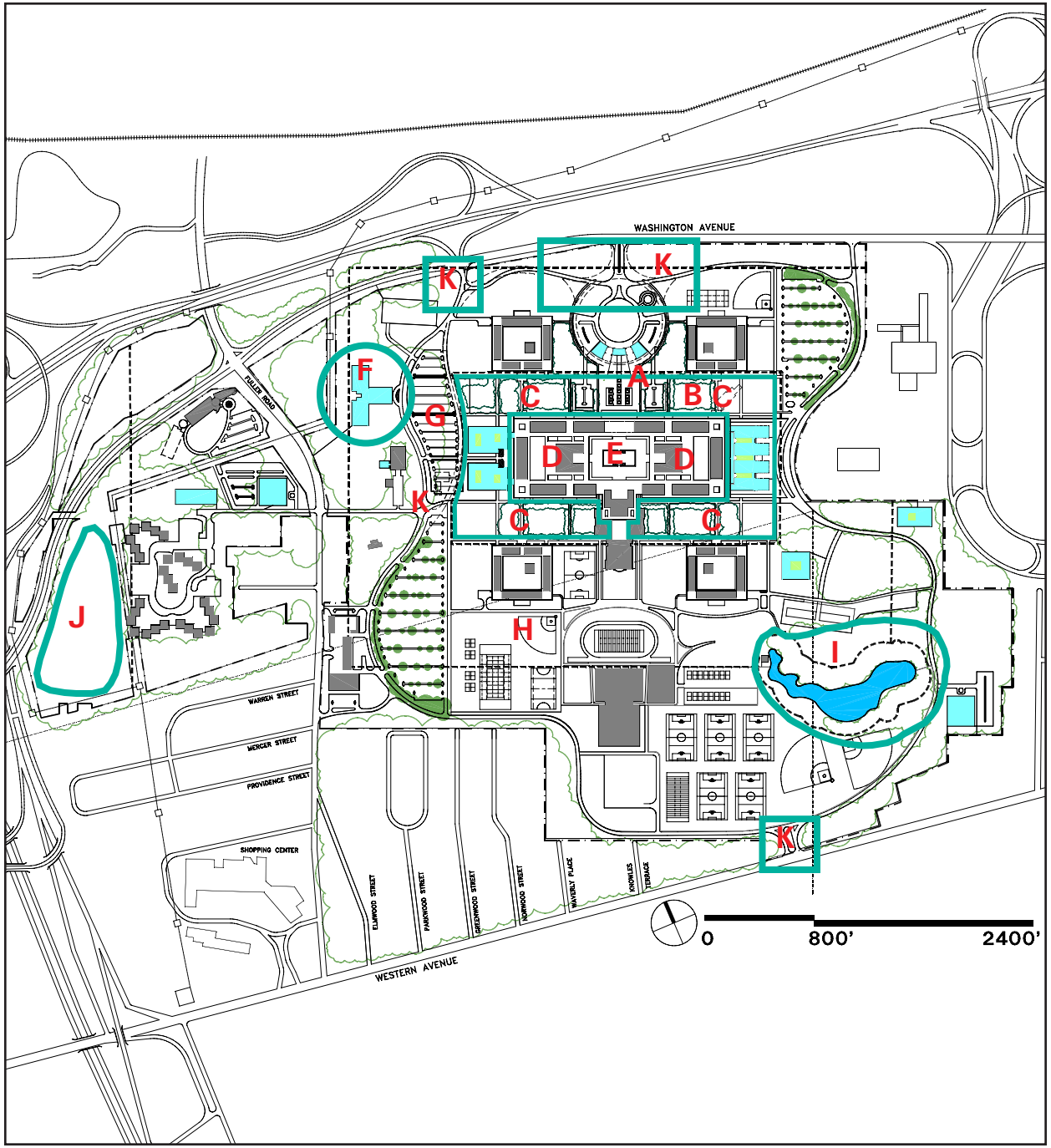
G New Parking (all areas)
- Provide safe, attractive pedestrian access to and from parking areas
- Plant and buffer all new lots

H Athletic Fields
- Provide increased opportunity for non-programmed usage

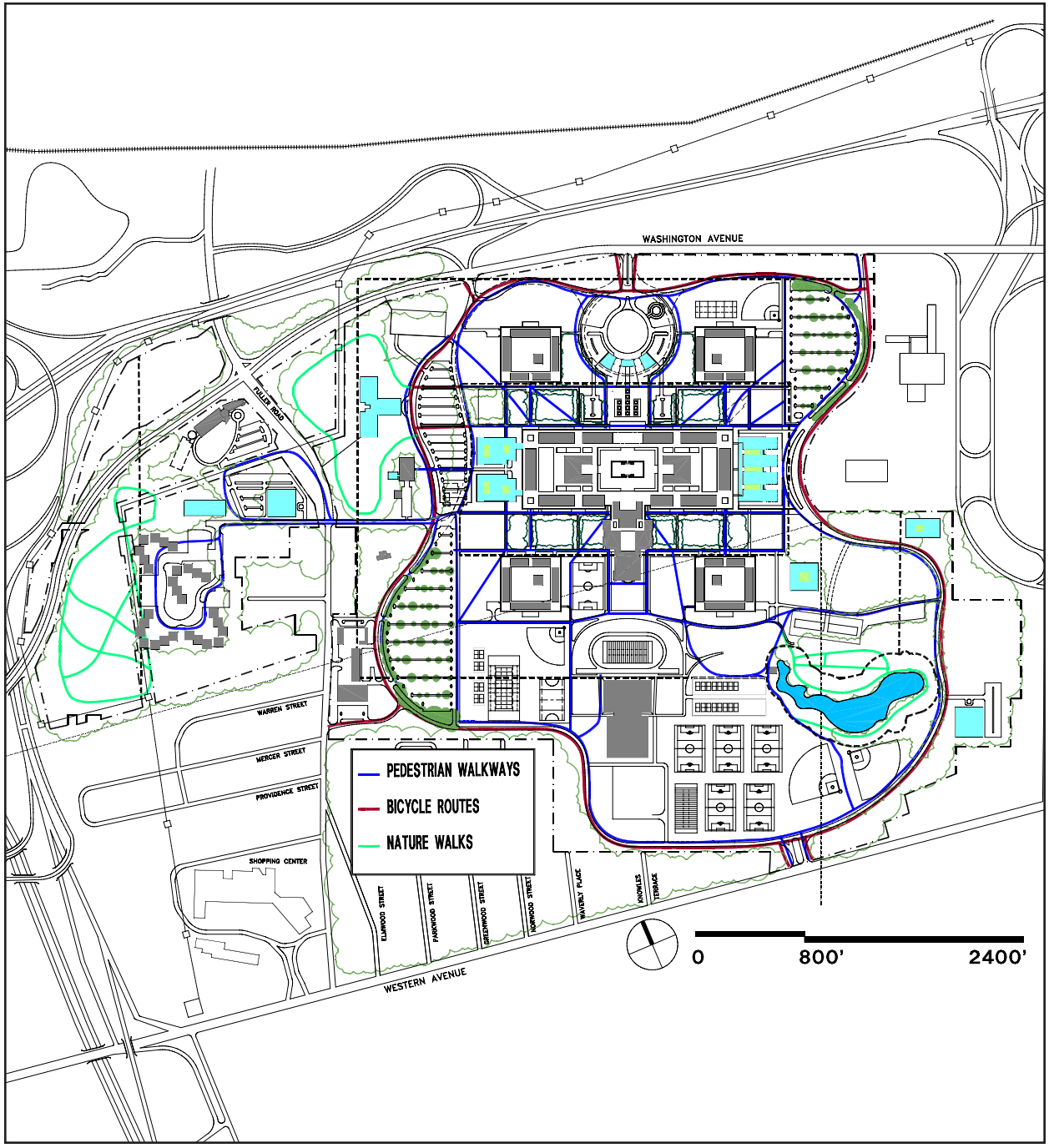
I Indian Lake Preservation
- Restore and enhance lake and supporting upland landscape

J Freedom Quad Ecosystem
- Preserve opportunities for study, research, and passive recreation

K Campus Entrances
- Create new entrance identity through new signage, graphics, and improved visual access



Landscape Planning Recommendations/Uptown Campus



Pedestrian and Bicycle Paths and Nature Walks Concept Plan

Downtown Campus

Rockefeller College

The Figure, "Landscape Planning Recommendations-Rockefeller College," illustrates the location of specific landscape recommendations for the Rockefeller College Campus. The criteria upon which these recommendations are based include the following:

- Reinforce and preserve the open lawn, mature trees and other desirable landscape features along Western Avenue;
- Provide definition for the campus edge along Washington Avenue and enhance the pedestrian experience wherever possible;
- Plant street trees to avoid overhead wires or select species appropriate to such location;
- Preserve the quality and scale of the courtyards at Draper Hall and Page Auditorium;
- Design new pathways to reinforce the architectural character of the campus and provide safe, convenient access to parking lots and bus stops.

New landscape features, such as street trees along Western Avenue, and low decorative fencing along Washington Avenue, will help define the campus edges and provide an identity for the institution within the urban context. Interior pathways are designed to respond to the existing axial relationships on campus, to reinforce neighborhood connections, and to provide safe access to the Thurlow parking lot.

Alumni Quad

The figure, "Landscape Planning Recommendations/ Alumni Quad," illustrates the location of specific landscape recommendations for Alumni Quadrangle. The criteria upon which these recommendations are based include the following:

At the campus perimeter,
- Plant new street trees to define the edge of the campus and strengthen the overall identity of the institution;
- Establish a hierarchy in the path system and identify key entry points through use of landscaping, change in paving materials, signage and pedestrian scale lighting.

At the interior quadrangle,
- Preserve the open lawn and reduce vehicular impact within quadrangle;
- Circle the edge of the quadrangle green with a landscape buffer which responds to the symmetry of the interior courtyard, defines pedestrian access, and restricts vehicular impact.

The design of open space at Alumni Quadrangle will need to respond to the program for space usage. The planting proposals illustrated in the Master Plan establish a landscape framework for both perimeter and interior spaces. The framework provides definition and identity at the neighborhood level and enhances the formal quality of the unique interior quadrangle.

As previously stated, all improvements to Alumni Quad must be funded through the room rents charged by the University.

Legend

A Western Avenue Gateway
- Provide welcoming gateway plaza in keeping with neighborhood character

B Washington Avenue Gateway
- Provide "pocket park" in keeping with urban context

C Ceremonial Entrance
- Reinforce arrival through signage, lighting, and landscaping
- Redesign entry pavement to provide sense of procession

D Preserve Lawn
- Preserve mature trees and lawn

E Street Trees
- Establish strong line of trees along Western Avenue, north of sidewalk

F New Paths
- Realign paths to create new connections, address maintenance issues, and provide safe crossing to parking

G Pedestrian Crosswalk
- Provide safe crossing to parking

H Balustrade
- Retain view of balustrade at courtyard

I Courtyards
- Preserve and enhance character of existing courtyards

J Service Yards
- Reclaim interior spaces providing attractive views into yards from buildings

K Washington Avenue
- Define and signify campus edge with distinctive fencing (low height)

Landscape Planning Recommendations/Rockefeller College

Legend

A Campus Entrance
- Identify and strengthen entrances with lighting, landscaping, and signage
- Create pathway hierarchy.

B Street Trees
- Establish strong line of street trees on Western Avenue north of sidewalk (to avoid overhead wires)

C Infill Street Trees
- Infill at existing line of street trees on Partridge and Ontario Streets

D Gateway
- Provide gateway sign for Alumni Quadrangle

E Screen View
- Screen view to service plaza with evergreen plantings

F Lawn
- Preserve open lawn for passive and active recreation

G Campus Green
- Preserve and define campus green by providing landscape buffer at edges and identifying access points.

H Interior "edge" lawns
- Maintain a minimum 15 feet wide lawn at interior of Hall facades
- Reduce vehicular impact.

Landscape Planning Recommendations/Alumni Quad

GRAPHICS PLANNING CRITERIA

Introduction

Wayfinding and graphic identity are important factors in a visitors experience to the campus and can be a powerful marketing tool. A successful wayfinding program guides people to their destination (and back) and promotes a positive image of the campus.

The University's identity should be instantly recognizable no matter if a person is uptown, downtown or in a conference in Nebraska. The proper corporate signature combined with wayfinding principles will provide a visitor the correct information at key decision points, while presenting the campus as a well planned and organized environment. New students are nervous, parents are anxious and visiting faculty must easily find their way to their destination without becoming frustrated; all of this impacts a person's first impression of the University.

The wayfinding issues have been addressed by The Hillier Group Graphic Design Studio following an analysis of the Uptown and Downtown Campuses. Through site surveys, analysis of architectural plans and review of the proposed campus master plan, we have compiled information regarding wayfinding principles, information hierarchy, existing conditions/signage and recommendations.

The purpose of this wayfinding report is to provide basic recommendations and guidelines to develop the components of a comprehensive wayfinding and identity program, which will serve current and future needs of the Uptown and Downtown Campuses.

The next phase of the process will be for the University to commission a graphic designer and wayfinding consultant to program and design a system based on the findings and recommendations in this report.

Wayfinding Tools

The basic premise of wayfinding is to establish clear pathways by delivering specific signals which direct the user from one point to another. A successful wayfinding system addresses functional and aesthetic issues which can have long-term effects on the campus and its end-users.

An effective wayfinding system has both "hardware" and "software" components. Hardware relates to specific sign types developed to meet a facility needs. "Software" involves the philosophy and environmental cues used to move a user from point to point.

Hardware = Signage
Circulation: The routes and paths one travels form point to point

Information: The messages one needs along the path

Decision point: The point along the path that the information is required

Identification: Arrival at a point

Menu of Sign Types: The different sign types required along the journey

Software = Environmental Cues
People: End-users needs; visitors, staff, students and deliveries

Architecture: Colors and materials

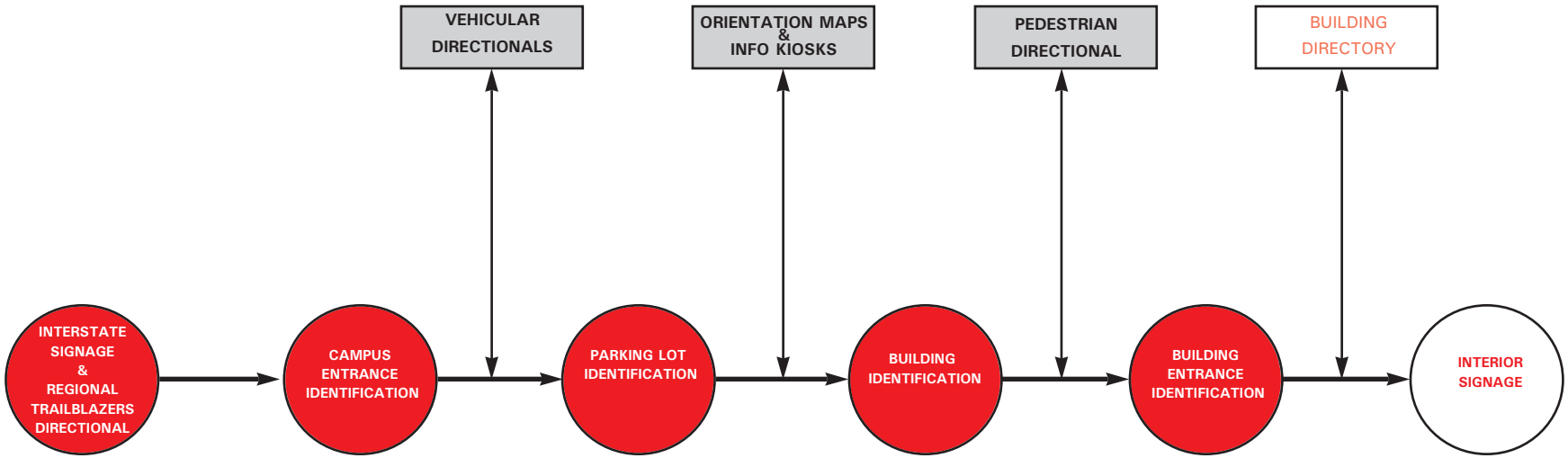
Transition points: Gates and entrances

Landscaping: Natural paths created by shrubs, trees and furniture

Landmarks: Points of orientation

Image: Culture and identity of the campus

INFORMATION HIERARCHY



Existing Conditions

Uptown Campus

The existing architectural language and campus circulation patterns present unique and interesting wayfinding difficulties. As the University Master Plan is implemented it will be important that the architecture is respected and advantages are taken of the natural opportunities that are presented.

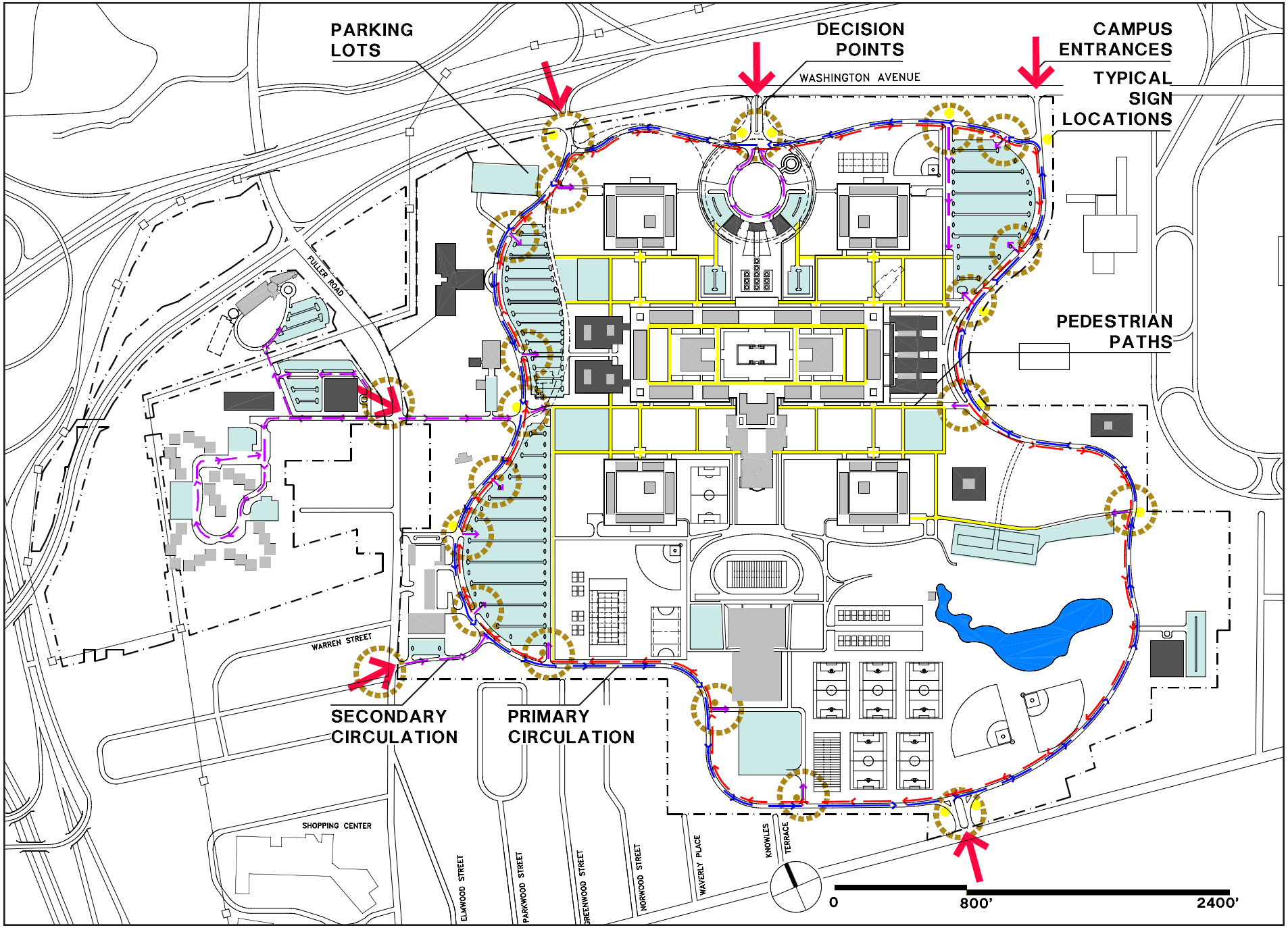
Orientation is a person's ability to determine their destination within a setting and comprehend the environment and spatial relationship relative to their location. The overall campus is very difficult to orient yourself within. The symmetry and repetitive nature of the architectural style causes everything to look the same.

The four quads which would be expected to provide landmarks, appear identical when traveling around the loop road. This makes it difficult to establish at which end of the campus you are (north, south, east or west), which then hinders you from making the right decision.

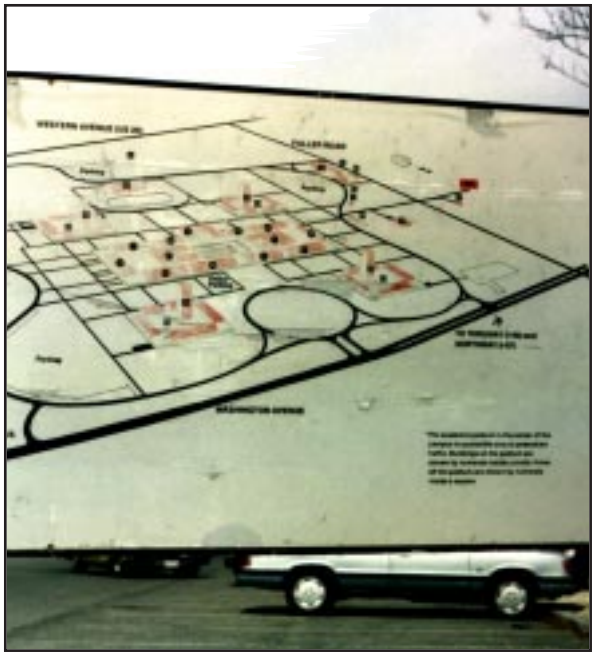
Parking in the proper area and close to your destination is an important transition during a visitor's journey. The current parking is difficult to navigate and the visitor parking appears beyond a cobblestone drive which appears as a restricted area rather than a clearly identified or welcoming path.

Pedestrian paths are not identified, nor are directions given to any destination. Traveling down the wrong pedestrian path is very frustrating; once it is realized to be incorrect, the walk back is long and time consuming.

The extreme perspective, repetitive vertical language and symmetry of the campus is an additional dis-orienting influence. Building entrances are difficult to recognize from a distance and nearly invisible from an oblique view point. Pedestrian intersections are virtually hidden among the vertical patterns around the Podium.



Analysis of Existing Graphics/Uptown Campus



Pamphlets and paper signs cover many columns around the campus, which leaves a negative impression of the Podium. A coordinated effort between landscaping and furniture can relieve this issue.

Both Campuses

Pedestrian paths are not identified, nor are directions given to any destination. Traveling down the wrong pedestrian path is very frustrating; once it is realized to be incorrect, the walk back is long and time consuming.

The overall image of the University is inconsistent from campus to campus. There is little graphic information or identity that connects the two campuses, communicating to the public that the school is located in the city and has unrelated campuses.

Existing Signage

The entrances to the campuses are currently marked with large silver signs that identify the school seal. This acts as the only identification of the school on the surrounding major thoroughfares and is inconsistent from campus to campus. The seal is not a easily recognizable symbol, many seals look the same and in a city such as Albany, the state capital, seals are not distinguishable from each other.

The entrances are not individually identified. Visitors can not establish either an orientation to the campus, or a confirmation that they have entered the campus at the proper point of entry.

The drive-up orientation maps are difficult to read from a car and are not oriented in the correct direction, making it difficult to locate oneself on the campus with the aid of the "you are here" arrow.

The existing directional signage portrays a negative first impression; the information appears old, faded and difficult to read. Visitors may not trust the information on the sign; therefore they are not utilizing the messages and directions. The directional signage

also has too much information for a visitor to comprehend. Many older signs have repetitive messages

Buildings and their entrances are inadequately signed from a visibility and hierarchy stand point.

Pedestrian paths are not signed, and paper "help" signs appear along many of the pedestrian paths. ("help" signs are paper signs which end users have put up themselves out of frustration due to the inability of their visitors to find their destination.)

Recommendations & Guidelines

Identity

Creating a strong school identification should be a priority. A symbol, logo or typeface that becomes synonymous with the University, would serve as an impressive marketing tool as well as unify the campuses.

The logo would be used on everything (eg signs, banners, brochures, printed materials, T-Shirts, web pages etc.)

Entrances

The main entry and secondary entrance signs should be identified with the new logo and given an identity. They can be identified as simply as Gate 1, 2 and 3 or named for the street they are located i.e. Western Avenue entrance. This would help when giving verbal instructions as well establish an orientation to the campus for the visitor.

Parking

As a visitor enters the campus their first priority is "Where do I park?". Parking areas should be clearly identified and a visitor should be directed to the parking area that is closest to their destination. Parking areas should be given an identity such as LOT A, B and C or named for the destination they serve i.e. Alumni Parking Lot, Dutch Quad Parking Lot, Podium Parking etc.

Parking areas should be separated into 4 different categories visitors, student, staff and delivery. Handicapped accessibility and reserved parking should also be taken into consideration as well as restricted areas.

Directional

Through programming and circulation analysis a list of priority destinations should be created for the exterior directional signage.

Currently there are 12 - 15 listings on the major directional signage, this listing should be decreased to 6 - 8 listings; this would make the information on the sign easier to comprehend. The minimum character height for vehicular directional signs is 4" high.

As the destinations are determined, routing can be developed. Routing to a destination shouldn't always be the fastest, it should be the clearest that works within the circulation and routing of all the destinations.

Orientation Maps

Establish one type of orientation map throughout the campus, (currently there are 3- 5 different types). A 2-D map is recommended rather than the isometric and 3-D maps that are currently used. Maps should include only basic information required by the visitor. The maps should be given a clearly defined and easily recognized space or structure on the campus. Correct orientation based on the maps positioning and a "you are here" identification is critical to the effectiveness of the map.

Vehicular maps should indicate major roads around the campus, entrances, parking and building names. Pedestrian maps may include more detailed information such as departments and amenities.

Pedestrian Information

Major pedestrian paths should be established. Building names and directional information should appear at decision points in the visitors' journey.

Building Identification and Entrances

Buildings should be clearly identified at two areas. First, the building should be easily recognized from a distance or parking area. The location for a building mounted sign shall provide for sufficient legibility and visibility. A ground mounted sign may also be used, as long as it is not obscured by cars. Entrances should be clearly identified from a pedestrian's vantage point from a minimum distance of 100 feet.

It should be noted that the design for all the signage that is being attached to or adjacent to the building should be respectful to the architecture and take advantage of the opportunities it allows.

Environmental Cues

Successful wayfinding can be reinforced through landmarks: public art, transition points: material changes, architectural elements; gateways and natural paths; and landscaping. These issues should be investigated and considered as related construction projects move forward.

Sign Design

Colors

The signs should follow a consistent color palette. The palette may be coordinated with school colors and incorporate natural materials that are consistent with the architecture and exterior environment in which the sign shall be located.

Materials

Signs shall be constructed of common sign materials such as aluminum, reflective vinyls, polyurethane paint and concrete footings, for mounting. Illumination should be used at campus entrances and major decision points. Tamper resistant hardware should be used wherever possible.

Changeability

The campus will be going through some major reconfiguration over the next 10 years, so it is imperative that the sign system be as flexible as possible to permit the constant updating that will be required as buildings change, departments move and circulation is redirected.

Legibility

Sign size is determined by the hierarchy of information required. Vehicular signs require a minimum of 4" character height. Pedestrian signs require 1" high characters. Copy that shall be read at a distance should equal 1" per 50'.

MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS PLANNING CRITERIA

Engineering Recommendations to Meet Short Term Deficiencies

The Master Plan's Phase I, 'Goals and Objectives Workpaper contains a matrix entitled, "Uptown & Downtown Campus-HVAC Building Short Term Deficiencies & Recommendations" that lists 10 different HVAC deficiencies, and suggested recommendations for correcting them. Each building on both campuses, including residential buildings, is evaluated in terms of these 10 parameters.

Engineering System Recommendations For New Buildings/Uptown

Life Sciences Research Building

Heating, Ventilating & Air Conditioning

Energy Supply - High Temperature Hot Water for heating and Chilled Water for cooling shall be generated and supplied from the central heating and cooling plant.

Heating System - Primary High Temperature Hot Water will be provided by the existing central plant to feed five (5) new heat exchangers for each building module. These dedicated heat exchangers shall provide secondary hot water for the following systems: perimeter heating system, pre-heating coil system, reheating coil system and instantaneous domestic hot water system. One exchanger shall be utilized for standby. Each heat exchanger shall be provided with two (2) new secondary hot water pumps (1-standby).

Cooling Generating Systems - Primary chilled water, supplied from the central chiller plant, will be supplied to the chilled water coils in five (5) variable air volume (VAV) air handling units.

Ventilation System - A state of the art HVAC system will be provided for each building module. Each building module quadrant shall have dedicated VAV air handling units to supply 100% outside conditioned air to the laboratory and office areas. Tracking system will be provided to monitor both supply and exhaust systems for each laboratory and maintain desired pressure levels. Each laboratory shall have multiple fume exhaust hoods, which will be individually monitored and collectively exhausted. The fume hood exhaust fans shall be exhausted by stacks located within an architectural stack, approximately 8' in diameter.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The domestic cold water will be supplied from the existing domestic water tower and will be adequately sized for the new building. The domestic hot water system shall be supplied hot water via a HTHW/HW instantaneous heat exchanger. The system will also have a hot water return system to all laboratories.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be adequately sized for the new building.

Lab Services - Labs will be provided with the following services: Acid waste, vacuum, compressed air, demineralized water, natural gas, hot water and cold water. The acid waste line will be glass piping and fed into an acid neutralization system prior to discharging into the campus sanitary system. Compressed air will be provided to the labs by duplex air compressors with an air dryer and filter located in the MER.

Fire Protection

Standpipe/Sprinkler - The building will be equipped with fire standpipe risers and fire hose cabinets located in stairwells. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - A new electric service room will be added to house the new electric equipment and provide service capacity for the new building and HVAC loads. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads, and a transformer to provide power for 277/480V loads. The transformers will be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads.

New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads. Panels for lab and office equipment will have transient voltage suppression surge.

Emergency Power - Emergency power will be derived from a new emergency generator that will supply power for emergency lighting, exit lighting, hood exhaust fans, selected laboratory equipment, and fire alarm equipment. Separate automatic transfer switches will be provided for life safety loads and equipment loads. Emergency panels will be located on the floors and at the equipment. The new generator will be sized to accommodate the adjacent Podium space.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new 277/480V panels. All branch circuiting and data/telephone wiring for labs will be accessible in raceways. Emergency shut-off will be provided in panels for lab equipment.

Entry Building

Heating, Ventilating & Air Conditioning

Energy Supply - High Temperature Hot Water for heating and Chilled Water for cooling shall be generated and supplied from the central heating and cooling plant.

Heating System - Primary High Temperature Hot Water will be provided by the existing central plant to feed four (4) new heat exchangers for each building module. These dedicated heat exchangers shall provide secondary hot water for the following systems: perimeter heating system consisting of new four pipe fan coil units in perimeter classrooms and offices, air handlers' pre-heating coils, and the domestic hot water instantaneous heater. Each heat exchanger shall be provided with two (2) new secondary hot water pumps (1-stand-by). One additional heat exchanger shall be utilized for stand-by.

Cooling Generating Systems - Primary chilled water, supplied from the central chiller plant, will be supplied to the chilled water coils in variable air volume (VAV) air handling units. Secondary chilled water will be supplied to perimeter four-piped fan coil units throughout perimeter of the building.

Ventilation System - Each building floor shall have a dedicated VAV air handling unit to supply 20% outside conditioned air to the interior areas. One variable volume air handling unit shall be dedicated to supply air to the corridors.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The domestic cold water will be supplied from the existing domestic water tower and will be adequately sized for the new building. The domestic hot water system shall be supplied hot water via a HTHW/HW instantaneous heat exchanger. The system will also have a hot water return system to all bathrooms.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be adequately sized for the new building.

Fire Protection

Standpipe/Sprinkler -The building will be equipped with fire standpipe risers and fire hose cabinets located in stairwells. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - A new electric service room will be added to house the new electric equipment and provide service capacity for the new building and HVAC loads. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads, and a transformer to provide power for 277/480V loads. The transformers will be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads. New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, and fire alarm equipment. Separate automatic transfer switches will be provided for life safety loads and equipment loads. Emergency panels will be located on the floors and at the equipment.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new 277/480V panels. All branch circuiting and data/telephone wiring will be concealed in raceways.

Sculpture Studio

Heating, Ventilating & Air Conditioning

Energy Supply - Hot water for heating and chilled water for cooling will be generated and supplied from the new central heating and cooling plant within the Sculpture Studio's Heating System. Gas from hot water boilers shall supply hot water for perimeter heating and pre-heated coils. Pumps will be provided for circulating hot water to pre-heat coils and perimeter heating.

Cooling Generating Systems: Chilled water will be circulated to four variable and volume A/C Systems.

Ventilation System - A state of the art HVAC system will be provided for the building. Each building quadrant shall have dedicated VAV air handling units to condition air to the studios and office areas. Studios shall have a mixture of exhaust systems such as: kiln, wood working dust, painting spray booths, printing shops, etc. The exhaust fans shall be exhausted by stacks located within an architectural stack, approximately 6' in diameter.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The domestic cold water will be supplied from the existing domestic water tower and will be adequately sized for the new building. The domestic hot water system shall be supplied by a gas fired hot water heater. The system will also have a hot water return system to all bathrooms.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be adequately sized for the new building.

Fire Protection

Standpipe/Sprinkler - The building will be equipped with fire standpipe risers and fire hose cabinets located in stairwells. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - A new electric service room will be added to house the new electric equipment and provide service capacity for the new building and HVAC loads. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads, and a transformer to provide power for 277/480V loads. The transformers will be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads.

New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads. Panels for studio and office equipment will have transient voltage suppression surge.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, hood exhaust fans, selected studio equipment, and fire alarm equipment. Separate automatic transfer switches will be provided for life safety loads and equipment loads. Emergency panels will be located on the floors and at the equipment.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new 277/480V panels. All branch circuiting and data/telephone wiring for labs will be concealed in raceways. Emergency shut-off will be provided in panels for studio equipment.

New Public Safety

Heating, Ventilating & Air Conditioning

Energy Supply - Natural gas for heating and Chilled Water for cooling shall be generated and supplied from the central cooling plant within the building.

Heating System - Gas fired hot water boilers shall supply hot water for perimeter heating and preheat coils. Pumps will be provided for circulating hot water to preheat coils and perimeter heating.

Cooling Generating Systems - Chilled water will be circulated to variable air volume (VAV) air-conditioning systems.

Ventilation System - Office areas shall be ventilated by the VAV air handling unit supplying 20% outside conditioned air.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The domestic cold water will be supplied from the existing domestic water tower and will be adequately sized for the new building. The domestic hot water system shall be supplied by a gas fired hot water heater. The system will also have a hot water return system to all bathrooms.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be adequately sized for the new building.

Fire Protection

Sprinkler - The building will be equipped with fire hose cabinets and fully sprinklered.

Electrical

Electric Service & Distribution - A new electric service room will be added to house the new electric equipment and provide service capacity for the new building and HVAC loads. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads. The transformer will be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads. New distribution equipment consisting of panels and feeders will be provided in the building to supply loads.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, and fire alarm equipment. Emergency panels will be located in the electric service room.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new 277/480V panels. All branch circuiting and data/telephone wiring will be concealed in raceways.

Central Service

Heating, Ventilating & Air Conditioning

Energy Supply - Natural gas for heating and Chilled Water for cooling shall be generated and supplied from the supplemental central cooling plant.

Heating System - Modular gas fired hot water boilers with multiple zones serving hot water perimeter baseboard heating (office and low bay areas) and air handlers heating coils and Heating & Ventilating (H&V) units' heating coils. H&V units shall be utilized for high bay vehicle and storage areas.

Cooling Generating Systems - Primary chilled water will be supplied from the new supplemental central chiller plant to variable air volume (VAV) air handling units' cooling coils.

Ventilation System - Office and low bay areas shall have a dedicated VAV air handling unit to supply 20% outside conditioned air. Heating and ventilating units shall ventilate high bay vehicle and storage areas.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The domestic cold water will be supplied from the existing domestic water tower and will be adequately sized for the new building. The domestic hot water system shall be supplied by a gas fired hot water heater. The system will also have a hot water return system to all bathrooms.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be adequately sized for the new building.

Fire Protection

Standpipe/Sprinkler - The building will be equipped with fire standpipe risers and fire hose cabinets located in stairwells. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - A new electric service room will be added to house the new electric equipment and provide service capacity for the new building and HVAC loads. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads, and a transformer to provide power for 277/480V loads. The transformers will

be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads. New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, and fire alarm equipment. Separate automatic transfer switches will be provided for life safety loads and equipment loads. Emergency panels will be located on the floors and at the equipment.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new 277/480V panels. All branch circuiting and data/telephone wiring will be concealed in raceways.

West Podium Extension Building

Heating, Ventilating & Air Conditioning

Energy Supply - High Temperature Hot Water for heating and Chilled Water for cooling shall be generated and supplied from the central heating and cooling plant.

Heating System - Primary High Temperature Hot Water will be provided by the existing central plant to feed four (4) new heat exchangers for each building module. These dedicated heat exchangers shall provide secondary hot water for the following systems: perimeter heating system consisting of new four pipe fan coil units in perimeter classrooms and offices, air handlers' pre-heating coils, and the domestic hot water instantaneous heater. Each heat exchanger shall be provided with two (2) new secondary hot water pumps (1-standby). One additional heat exchanger shall be utilized for standby.

Cooling Generating Systems - Primary chilled water, supplied from the central chiller plant, will be supplied to the chilled water coils in variable air volume (VAV) air handling units. Secondary chilled water will be supplied to perimeter four-piped fan coil units throughout perimeter of the building.

Ventilation System - Each building floor shall have a dedicated VAV air handling unit to supply 20% outside conditioned air to the interior areas. One variable volume air handling unit shall be dedicated to supply air to the corridors.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The domestic cold water will be supplied from the existing domestic water tower and will be adequately sized for the new building. The domestic hot water system shall be supplied hot water via a HTHW/HW instantaneous heat exchanger. The system will also have a hot water return system to all bathrooms.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be adequately sized for the new building.

Fire Protection

Standpipe/Sprinkler -The building will be equipped with fire standpipe risers and fire hose cabinets located in stairwells. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - A new electric service room will be added to house the new elec-

tric equipment and provide service capacity for the new building and HVAC loads. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads, and a transformer to provide power for 277/480V loads. The transformers will be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads. New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, and fire alarm equipment. Separate automatic transfer switches will be provided for life safety loads and equipment loads. Emergency panels will be located on the floors and at the equipment.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new 277/480V panels. All branch circuiting and data/telephone wiring for classrooms will be concealed in raceways.

Engineering System Recommendations for New Buildings/Downtown

Hawley Library Expansion

Heating, Ventilating & Air Conditioning

Energy Supply - Heating is provided by the central heating plant in Richardson Hall.

Heating System - The heating system will be modified with the installation of perimeter (four pipe) fan coil units.

Cooling Generating Systems - Primary chilled water will be supplied from the new central chiller plant in Richardson Hall to new perimeter (four pipe) fan coil units located through out the existing Hawley Library and the new Hawley Library extension.

Ventilation System - Windows shall provide natural ventilation.

Controls and Instrumentation - Perimeter fan coil units shall be independently and locally controlled for heating and cooling.

Plumbing

Domestic Water - The domestic cold water and domestic hot water will be existing to remain.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be existing.

Fire Protection

The existing fire protection will remain.

Electrical

Electric Service & Distribution - A new electric service room will be added with the Hawley extension to house the new electric equipment and provide service capacity for the campuses' master plan building and HVAC loads upgrades. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads. The transformer will be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads. New distribution equipment consisting of panels and feeders will be provided in the building to supply loads.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, and fire alarm equipment. Emergency panels will be located in the new electric service room.

Fire Alarm - The existing fire alarm system will be upgraded to comply with both current code and ADA code requirements.

Branch Circuitry - The existing Hawley Library will be upgraded and the new Hawley Library extension will be provided with lighting circuits derived from the new 277/480V panels. All branch circuiting and data/telephone wiring will be concealed in raceways.

Engineering System Recommendations for Building Renovations/Uptown

Former Biology Building

Heating, Ventilating & Air Conditioning

Energy Supply - Rebalance flow rates of existing High Temperature Hot Water and Chilled Water to the renovated building and new occupancy.

Heating System - High Temperature Hot Water will be provided by the existing central plant to feed the existing air handler heating coils, domestic hot water heat exchanger and three (3) new heat exchangers and pumping stations. One heat exchanger shall provide secondary hot water for the perimeter heating system; One heat exchanger shall provide hot water for the air handling heating coils heating system; and one heat exchanger shall be for stand-by.

Cooling Generating Systems - Chilled water will be supplied from the existing central chiller plant to the air handling units' chilled water coils.

Ventilation System - The existing air handling units will be replaced or retrofitted from a dual duct constant volume air handling system to a single duct variable air volume (VAV) air handling system. The existing low pressure ductwork air distribution, dual duct boxes and medium pressure ductwork will be replaced or retrofitted for the new occupancy.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The existing domestic cold water system will remain. The existing domestic hot water system, HTHW/HW instantaneous heat exchanger, will remain. Existing piping will be removed, replaced or retrofitted for the new occupancy. New backflow preventers (RPZ's) will be installed in domestic and fire water services.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will remain. Existing piping will be removed, replaced or retrofitted for the new occupancy.

Lab Services - Lab services will be deactivated. Existing piping: Acid waste, vacuum, compressed air, demineralized water, natural gas, hot water and cold water will be removed, replaced or retrofitted for the new occupancy.

Fire Protection

The buildings' existing fire standpipe risers and fire hose cabinets located in stairwells will remain. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - The existing electric service will remain. New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads.

Emergency Power - Existing emergency power, which is derived from the existing central plant emergency generator, will remain. Emergency panels will be relocated on the floors and at the equipment for the new occupancy.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new panels. All branch circuiting and data/telephone wiring for classrooms will be concealed in raceways.

Former Chemistry Building

Heating, Ventilating & Air Conditioning

Energy Supply - Rebalance flow rates of existing High Temperature Hot Water and Chilled Water to the renovated building and new occupancy.

Heating System - High Temperature Hot Water will be provided by the existing central plant to feed the existing air handler heating coils, domestic hot water heat exchanger and three (3) new heat exchangers and pumping stations. One heat exchanger shall provide secondary hot water for the perimeter heating system; One heat exchanger shall provide hot water for the air handling heating coils heating system; and one heat exchanger shall be for stand-by.

Cooling Generating Systems - Chilled water will be supplied from the existing central chiller plant to the air handling units' chilled water coils.
Ventilation System - The existing air handling units will be replaced or retrofitted from a dual duct constant volume air handling system to a single duct variable air volume (VAV) air handling system. The existing low pressure ductwork air distribution, dual duct boxes and medium pressure ductwork will be replaced or retrofitted for the new occupancy.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The existing domestic cold water system will remain. The existing domestic hot water system, HTHW/HW instantaneous heat exchanger, will remain. Existing piping will be removed, replaced or retrofitted for the new occupancy. New backflow preventer (RPZ's) will be installed in domestic and fire water services.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will remain. Existing piping will be removed, replaced or retrofitted for the new occupancy.

Lab Services - Lab services will be deactivated. Existing piping: Acid waste, vacuum, compressed air, demineralized water, natural gas, hot water and cold water will be removed, replaced or retrofitted for the new occupancy.

Fire Protection

The buildings' existing fire standpipe risers and fire hose cabinets located in stairwells will remain. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - The existing electric service will remain. New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads.

Emergency Power - Existing emergency power, which is derived from the existing central plant emergency generator, will remain. Emergency panels will be relocated on the floors and at the equipment for the new occupancy.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new panels. All branch circuiting and data/telephone wiring for classrooms will be concealed in raceways.

Podium Internal Circulation

Heating, Ventilating & Air Conditioning

Energy Supply - Rebalance flow rates of existing High Temperature Hot Water and Chilled Water to the nearest adjacent buildings supplying heating and cooling to the new corridor interior spaces.

Heating System - Provide new perimeter heating elements from the existing secondary heating system from the nearest adjacent building.

Cooling Generating Systems - none required.

Ventilation System -Provide corridor ventilation supplied by an existing low pressure ductwork air distribution system from the nearest adjacent building.

Controls and Instrumentation - none required.

Plumbing

Domestic Water - none required

Sanitary, Storm, and Vent System - none required.

Fire Protection

Provide sprinkler to the supplied from the nearest adjacent building.

Electrical

Electric Service & Distribution - Additional loads will be supplied from the nearest adjacent buildings' existing electric service.

Emergency Power - Additional emergency power loads will be supplied from the nearest adjacent buildings' existing emergency power electric service.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, etc. will be provided. Strobes will be provided throughout the space in corridors.

Branch Circuitry - Lighting circuits will be derived from existing panels in the nearest adjacent building. All branch circuiting will be concealed in raceways.

Former Administration Building

Heating, Ventilating & Air Conditioning

Energy Supply - Rebalance flow rates of existing High Temperature Hot Water and Chilled Water to the renovated building and new occupancy.

Heating System - High Temperature Hot Water will be provided by the existing central plant to feed the existing air handler heating coils, domestic hot water heat exchanger and three (3) new heat exchangers and pumping stations. One heat exchanger shall provide secondary hot water for the perimeter heating system; One heat exchanger shall provide hot water for the air handling heating coils heating system; and one heat exchanger shall be for stand-by.

Cooling Generating Systems - Chilled water will be supplied from the existing central chiller plant to the air handling units' chilled water coils.

Ventilation System - The existing air handling units will be replaced or retrofitted from a dual duct constant volume air handling system to a single duct variable air volume (VAV) air handling system. The existing low pressure ductwork air distribution, dual duct boxes and medium pressure ductwork will be replaced or retrofitted for the new occupancy.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The existing domestic cold water system will remain. The existing domestic hot water system, HTHW/HW instantaneous heat

exchanger, will remain. Existing piping will be removed, replaced or retrofitted for the new occupancy. New backflow preventers (RPZ's) will be installed in domestic and fire water services.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will remain. Existing piping will be removed, replaced or retrofitted for the new occupancy.

Fire Protection

The buildings' existing fire standpipe risers and fire hose cabinets located in stairwells will remain. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - The existing electric service will remain. New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads.

Emergency Power - Existing emergency power, which is derived from the existing central plant emergency generator, will remain. Emergency panels will be relocated on the floors and at the equipment for the new occupancy.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new panels. All branch circuiting and data/telephone wiring for classrooms will be concealed in raceways.

Health Center

Heating, Ventilating & Air Conditioning

Energy Supply - Provide new High Temperature Hot Water and Chilled Water services to the renovated building and new occupancy.

Heating System - High Temperature Hot Water will be provided by the existing central plant to feed the new air handler heating coils, domestic hot water heat exchanger and three (3) new heat exchangers and pumping stations. One heat exchanger shall provide secondary hot water for the existing perimeter heating system; One heat exchanger shall provide hot water for the new air handling heating coils heating system; and one heat exchanger shall be for stand-by.

Cooling Generating Systems - Chilled water will be supplied from the existing central chiller plant to the new air handling units' chilled water coils.

Ventilation System - The new air handling units will be a single duct variable air volume (VAV) air handling system. New low pressure ductwork air distribution, VAV boxes and medium pressure ductwork will be provided for the new occupancy. Dedicated exhaust systems for quarantined areas will be provided as well.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the HVAC system. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - The existing domestic cold water system will remain. The existing domestic hot water system will be upgraded with an instantaneous HTHW/HW heat exchanger. Existing piping will be removed, replaced or retrofitted for the new occupancy. New backflow preventers (RPZ's) will be installed in domestic and fire water services.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will remain. Existing piping will be removed, replaced or retrofitted for the new occupancy.

Fire Protection

The buildings' existing fire standpipe risers and

fire hose cabinets located in stairwells will remain. The building will be fully sprinklered.

Electrical

Electric Service & Distribution - The existing electric service will be upgraded to handle the new building loads. New distribution equipment consisting of panels and feeders will be provided throughout the building to supply loads.

Emergency Power - Existing emergency power, which is derived from the existing central plant emergency generator, will remain. Emergency panels will be relocated on the floors and at the equipment for the new occupancy.

Fire Alarm - A new addressable type fire alarm system with pull stations, strobes, horns, bells, area detectors, duct detectors, fan shutdown, etc. will be provided. Strobes will be provided throughout the space in corridors, bathrooms, meeting rooms, etc.

Branch Circuitry - Lighting circuits will be derived from new panels. All branch circuiting and data/telephone wiring for classrooms will be concealed in raceways.

Engineering System Recommendations for Renovations/Downtown

Upgrade Heating-Cooling Plant-Downtown

Heating

Energy Supply - The two existing 8,000 gallon No.4 oil tanks will remain. The existing natural gas service main will be evaluated to determine if the existing size is adequate for heating and other building gas requirements.

Heating System - Replace existing steam boilers (two-150 bhp Weil McClain) with higher capacity dual fuel fired steam boilers, each boiler to handle 66% of all Rockefeller College buildings heating loads. Demolish and remove obsolete high pressure water tube boiler. Provide new Vacuum Condensate Pump system.

Cooling Generating Systems - Provide two new central chillers within the existing boiler plant in Richardson. Primary chilled water shall be utilized for four piped fan coil units to be installed throughout the campus during each buildings renovation phase. The chiller plant shall consist of two centrifugal chillers with 134a refrigerant to produce primary chilled water. (A remote located cooling tower shall be architecturally enclosed.) The chilled water primary pumping station, consisting of two chilled water pumps and one spare pump, shall be located adjacent to the chillers. The primary chilled water piping shall be distributed to the buildings along the same route of the steam piping. Condenser water shall be distributed from two condenser water pumps and one spare pump from the chillers to the remote cooling tower.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the Heating and Cooling generating central plants systems. This DDC system will perform the following:Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - Provide a 'PVI' heater gas fired for the central domestic hot water system.

Electrical

Electric Service & Distribution - A new electric service room will be added with the Hawley extension to house the new electric equipment and service capacity for the campuses' master plan building and HVAC loads upgrades.

Emergency Power - Additional emergency power loads will be supplied from the upgraded emergency power electric service.

Renovate Hawley Library

Heating, Ventilating & Air Conditioning

Energy Supply - Heating is provided by the central heating plant in Richardson Hall.

Heating System - The heating system will be modified with the installation of perimeter (four pipe) fan coil units.

Cooling Generating Systems - Primary chilled water will be supplied from the new central chiller plant in Richardson Hall to new perimeter (four pipe) fan coil units located through out the existing Hawley Library and the new Hawley Library extension.

Ventilation System - Windows shall provide natural ventilation.

Controls and Instrumentation - Perimeter fan coil units shall be independently and locally controlled for heating and cooling.

Plumbing

Domestic Water - The domestic cold water and domestic hot water will be existing to remain.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be existing.

Fire Protection

The existing fire protection will remain.

Electrical

Electric Service & Distribution - A new electric service room will be added with the Hawley extension to house the new electric equipment and provide service capacity for the campuses' master plan building and HVAC loads upgrades. The electric equipment will consist of a new distribution switchboard, a transformer to provide power for 120/208V loads. The transformer will be provided with ground fault protection on the secondary side for power of HVAC equipment, lighting and miscellaneous loads. New distribution equipment consisting of panels and feeders will be provided in the building to supply loads.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, and fire alarm equipment. Emergency panels will be located in the new electric service room.

Fire Alarm - The existing fire alarm system will be upgraded to comply with both current code and ADA code requirements.

Branch Circuitry - The existing Hawley Library will be upgraded and the new Hawley Library extension will be provided with lighting circuits derived from the new 277/480V panels. All branch circuiting and data/telephone wiring will be concealed in raceways.

Renovate Husted Hall

Heating, Ventilating & Air Conditioning

Energy Supply - Heating is provided by the central heating plant in Richardson Hall.

Heating System - The heating system will be modified with the installation of perimeter (four pipe) fan coil units.

Cooling Generating Systems - Primary chilled water will be supplied from the new central chiller plant in Richardson Hall to new perimeter (four pipe) fan coil units located through out the Husted Hall.

Ventilation System - Windows shall provide natural ventilation.

Controls and Instrumentation - Perimeter fan coil units shall be independently and locally controlled for heating and cooling.

Plumbing

Domestic Water - The domestic cold water and domestic hot water will be existing to remain.

Sanitary, Storm, and Vent System - The sanitary, storm and vent system will be existing.

Fire Protection

The existing fire protection will remain.

Electrical

Electric Service & Distribution - New distribution equipment consisting of panels and feeders will be provided in the building to supply additional loads.

Emergency Power - Emergency power will be derived from the existing central plant emergency generator that will supply power for emergency lighting, exit lighting, and fire alarm equipment. Emergency panels will be located in the new electric service room.

Fire Alarm - The existing fire alarm system will be upgraded to comply with both current code and ADA code requirements.

Branch Circuitry - Husted will be provided with lighting circuits derived from the new 277/480V panels. All branch circuiting and data/telephone wiring will be concealed in raceways.

Implementation of The Master Plan

IMPLEMENTATION OF THE MASTER PLAN

The Master Plan, based upon the analysis of the sites and buildings, the consensus of the constituents as expressed in the Goals and Objectives and the projections in enrollment and research related activity as expressed in the Space Program, has proposed: zones and building sites to control and guide growth, new roads and parking facilities, new buildings, major renovation of existing buildings, new utility infrastructure, and criteria to guide future architecture, landscaping and signage. In other words, the Master Plan, to this point, has stated what, where and how new development should occur.

This final section of the Master Plan, implementation, addresses the proposed new facilities in terms of specific projects, their cost and their timing. The timing of projects is important in two ways; (1) it is a reflection of the priorities expressed by the University, since not all the important projects can take place simultaneously for funding and logistical reasons and (2) it evens the funding stream and lessens the disruptive impact of construction on the campus.

The accompanying graphic, "Project Schedule", shows the recommended Master Plan's projects over a 10-year period organized in six categories;

1. New Construction
2. Renovations
3. Special Projects
4. Site Utilities
5. Site Improvements
6. Projects in Design

As with the Master Plan itself this proposed schedule is subject to modification to meet the ever changing needs and priorities as defined by the University.

The State University Construction Fund, which has the responsibility of funding various projects of the Master Plan, usually divides the Master Plan into; a 3-year plan, a 5-year plan and a 10-year plan. Because of the number of high priority projects at the University at Albany, however, it has been decided to divide the Master Plan into a 5-year Capital Master Plan, a 6 to 10-year Long Range Master Plan and to recognize that other worthy projects must be delayed for the period beyond 10-years. The projects for the period beyond 10 years are not shown in the "Project Schedule", nor has their cost been estimated, but they are listed and a scenario has been developed for their phasing.

FIVE YEAR CAPITAL MASTER PLAN FOR THE UPTOWN CAMPUS

New Construction

Life Sciences Research Building

This building is required to provide state-of-the-art facilities for the Life Sciences Departments and research efforts at the University and its construction will allow such activities, now taking up space on the Podium, to vacate their space to academic uses.

The building is projected to be 215,000 gross square feet and scheduled for construction in years 3 and 4 of the Master Plan. Two sites have been recommended for the building, one east of and immediately adjacent to the Podium (Building Site #1) and the other about 600 feet southeast of the Podium (Building Site #4).

Entry Building

This building is required to give the Uptown Campus a better functioning and more identifiable "front door", and to provide space off the Podium for Admissions, and other similar uses requiring public contact, so the space they vacate on the Podium can be devoted to academic uses.

The building is projected to be 70,000 gross square feet and scheduled for construction in years 3 and 4 of the Master Plan. Two sites have been recommended for the building, one north of and immediately adjacent to the Podium (Building Site #2) and the other approximately 400 feet north of the Podium (Building Site #2A). Both proposed building sites are on the north-south, main entry axis to the Podium.

UNIVERSITY AT ALBANY MASTER PLAN-SUNY
PROJECT SCHEDULE

DESIGN
CONSTRUCTION

		SIZE (GSF)	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
NEW CONSTRUCTION	Life Sciences Research Building	215,000										
	New Sculpture Studio	16,850										
	Entry Building	70,000										
	Podium West Extension Building Phase I	86,000										
	Central Services	42,000										
	New Public Safety	8,700										
	Expand Hawley Library	7,340										
		445,890										
RENOVATIONS	Former Biology Building	84,000										
	Former Chemistry Building	72,800										
	Podium Internal Circulation	24,000										
	Former Administration Building	57,200										
	Health Center	15,400										
	Upgrade Heating-Cooling Plant-Downtown											
	Renovate Hawley Library	15,150										
	Renovate Husted Hall	40,400										
		308,950										
SPECIAL PROJECTS	Lighting Design											
	Landscape Design											
	Winterize Central Court Study											
	Graphic Manual Design											
SITE UTILITIES	Infrastructure Design											
	Infrastructure Construction											
SITE IMPROVEMENTS	Roads & Parking (including graphics signage and lighting)	6,500 LF										
	Parking Addition	1,130 spaces										
	Entry Passage	13,400 GSF										
	Entry Landscape											
PROJECTS IN DESIGN	Replace Podium Steps											
	Replace Aluminum Electrical Feeders-Library											
	Upgrade Exhaust System-Chem Bldg. Phase 1											
	Provide Emer. Primary Volt. Feeder & Ductbank											
	Replace Ceiling/Emergency Lighting											
	Provide Emergency Lighting-Uptown Phase II											
	Replace PCB Transformers											
	Campus CW & HTHW Systems Study											
	Rehab Fire Alarm System											
	Replace Roof-Various Buildings-Downtown											

Note: Italicized text=Downtown Campus

Note: The Master Plan proposes that all building on the Podium & the Physical Education Building be renovated as the budget allows.

6-Nov-97

Proposed Project Schedule (5 and 10 Years, Uptown and Downtown Campuses)

New Sculpture Studio

This building is required to get the Sculpture Studio out of its distant leased facilities and onto the campus in state-of-the-art facilities.

The building is projected to be 16,850 gross square feet and scheduled for construction in year 3 of the Master Plan. Building Site #8, at the eastern edge of campus has been recommended for the Sculpture Studio. An alternative development scenario for the Studio has the entire Fine Arts Department being relocated to this site at a future date (10 plus years).

New Public Safety Building

This building is required to replace the current undersized facility that is in poor condition. (The current public safety building is also scheduled for demolition to make way for proposed additional surface parking).

The building is projected to be 8,700 gross square feet and scheduled for construction in year 3 of the Master Plan. The building is proposed as an addition to the Health Center (Building Site #6).

Renovations

All of the buildings on the Uptown Campus were built at about the same time 30 or more years ago and none of them have had a major renovation. Consequently, it is the intent of the University and State University Construction Fund to renovate all of the buildings as funds become available and a reasonable schedule can be formulated which minimizes disruption and multiple relocations.

Former Administration Building

This building of 57,200 gross square feet, including some of the basement, will be renovated in year 5 of the Master Plan. The buildings current occupants will be relocated to allow this building to be renovated into high quality instructional space needed for the College of Arts & Sciences.

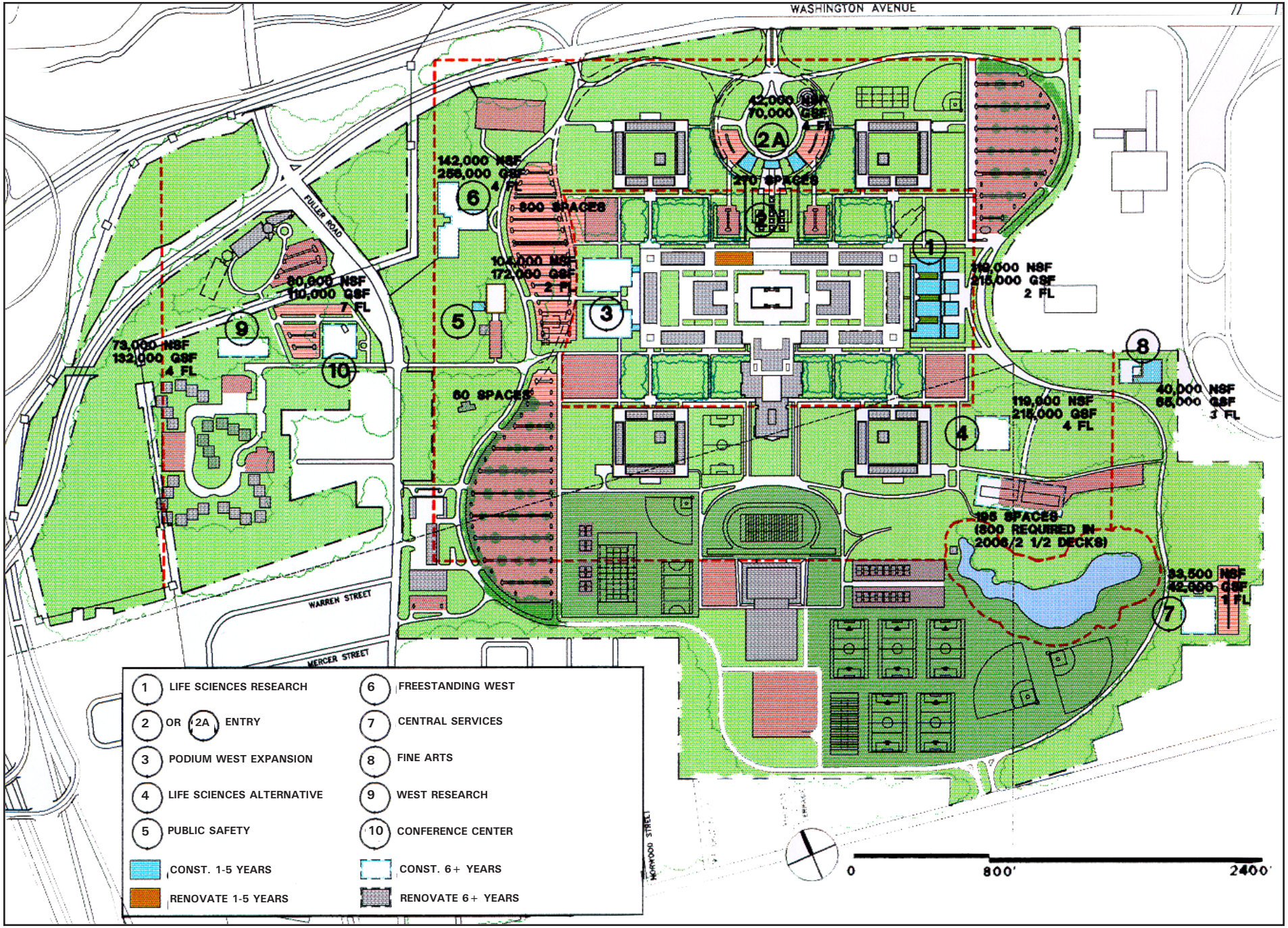
Podium Internal Circulation

A new internal pedestrian circulation system is needed in the Podium that does not conflict with the service vehicles in the service tunnel. This system can be achieved by utilizing and extending the existing building corridors at the basement level so that all of the buildings on the Podium are linked with a direct and understandable pedestrian network. This 40,000 gross square foot renovation is scheduled for Year 3 of the Master Plan.

Special Projects

During the course of the development of the Master Plan, several concerns were raised that were either too urgent or too general to be addressed by the State University Construction Fund construction project process. These concerns revolved around improving the lighting, landscaping, signage and wayfinding and the Podium central court area. Accordingly, the Project Schedule indicates four Special Projects that could commence as soon as the needed funds were to become available, namely:

1. Lighting Design
2. Landscape Design
3. Winterize Central Court Study
4. Graphic Plan and Manual Design



Five Year Capital Master Plan-Uptown Campus

Building Name	Building Designation	No. Floors	GSF
Public Safety	5	1	8,700
Entry Building	2 or 2A	3 or 2	70,000
Life Sciences Research Building	1 or 4	2 or 4	215,000
Sculpture Studio	8	2	16,850
Former Administration Building (Renovation)	F(R)	3	57,200

Site Utilities

1.0 Introduction

This section of the report examines the impact of new building construction during years 1 - 5 on the existing site utility systems. The analysis is based upon the "Project Schedule (5 and 10 Years, Uptown and Downtown Campuses)" for years 1-5 (see Drawing "Established Zones and Potential Building Sites" for all building designations):

The site utility systems analyzed include the following:

- Central Heating/Cooling Plant
- Site Chilled Water (CHW) and High Temperature Hot Water (HTHW) Distribution Systems
- Site Sanitary and Storm Drainage Piping
- Site Water Supply System
- Site Natural Gas
- Power Distribution System
- Site Lighting
- Fire Alarm System

2.0 Site Utility System Analysis

2.1 Central Heating/Cooling Plant and Site CHW and HTHW Distribution Systems

The Uptown campus has a central cooling and heating plant which is in fair condition and which will be upgraded and maintained for future operation. It may also be expanded in capacity to accommodate Uptown space expansion.

One major reason for the future viability of the Central Plant is that the site chilled and heating hot water lines are in tunnels and in good condition. These lines have not rotted out due to soil conditions, as is the case at other campuses.

The chilled water (CHW) distribution piping system has limited spare capacity. It cannot accommodate significant additional load. The High Temperature Hot Water (HTHW) System does have significant spare capacity.

The Podium is architecturally sensitive. Any new building near the Podium should be attached to the Central Plant when economically feasible. As a result, our recommended strategy will be to provide cooling from the Central Plant for all new buildings in proximity with the Podium, including the new Entry Building. Cooling systems will be independent of the Central Plant for all buildings remote from the Podium.

Since the Central Heating Distribution System has greater capacity to add new loads, our strategy is to connect new buildings to the Central Campus System and to extend existing high temperature hot water lines, except where the new building is so remote that the cost is prohibitive.

Table V-I on page #V-8 summarizes new cooling and heating loads for years 1-5. Additional central plant cooling requirements will be approximately 1,100 tons. This represents a significant increase in cooling load, since the existing plant capacity is currently 5000 tons, with a load of about 3000 tons and a spare available capacity under 1000 tons.

Additional central plant heating requirements for years 1-5 will be approximately 17,260 MBH which is a very small increase on the 295,000 MBH maximum plant rated capacity.

Recommendations

CENTRAL PLANT UPGRADE

The two (2) 1000 ton absorption machines are old and must be replaced. We recommend replacement with two stage absorption chillers or gas fired absorption chillers in order to reduce energy usage (by 40%) and to reduce the heat load to the cooling towers.

The two old cooling towers should also be replaced. A project to replace the HTHW pumps is in process. Replacement of two (#2 & #4) existing boilers is recommended. Major repair of boilers #1 and #4 is being provided by State University Construction Fund Project #01305. The Building Automation System should be replaced with a modern DDC system.

CENTRAL PLANT EXPANSION

In order to recommend a long term expansion for the Central Plant, an estimate of new cooling and heating loads beyond year 5 is required. According to the Master Plan, a summary of new cooling and heating loads is included in Table V-2 on page #V-8. These loads are segregated into central plant loads and independent loads according to the same strategy described above.

Table V-2 indicates an increase of 1,705 tons and 48,940 MBH of central cooling and heating respectively. Thus, we recommend the addition of two chillers at 1000 tons each and one boiler at 65,000 MBH. Only one of the two chillers may be required in the first five years. The second chiller could be installed later. The recommended chiller type would again be either 2-stage absorption (HTHW) or gas-fired absorption. The new boiler would be similar to the existing boilers. An architectural expansion of central plant space would be required.

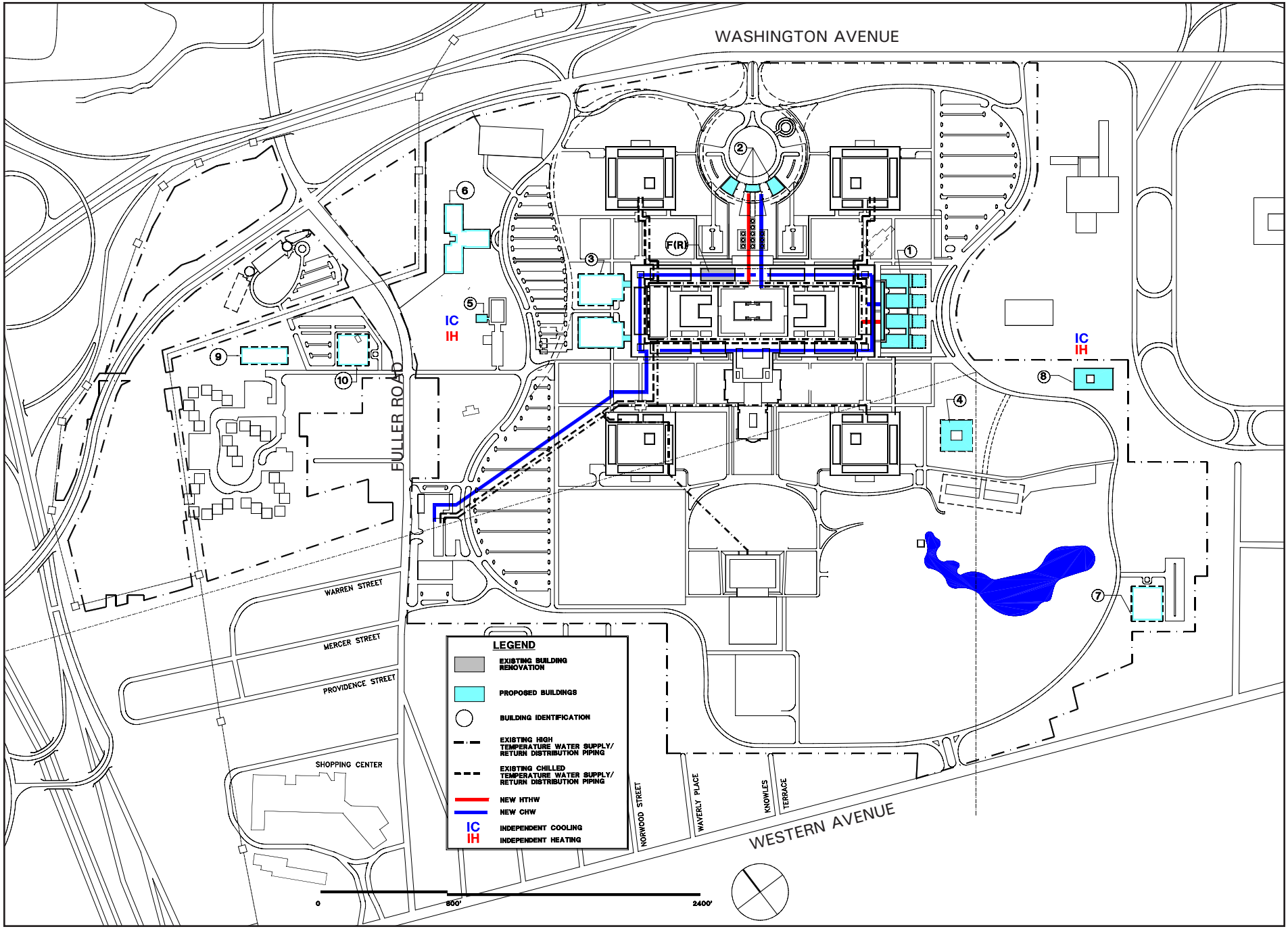
With the replacement of the two existing old cooling towers and absorption chillers, the new cooling towers could be sized to accommodate the two new chillers. The new boiler would utilize existing HTHW distribution lines. The two new chillers would require new chilled water lines to be run around the Podium. There is adequate space for these new lines in the tunnels.

INDEPENDENT SYSTEM TYPES

The final decision as to what type of independent cooling and heating systems should be installed in the buildings which will not be attached to the Central Plant cannot be made at this time. Likely candidates are centrifugal electric or gas absorption chillers for cooling; and gas-fired low temperature hot water for heating.

CHW AND HTHW DISTRIBUTION

The drawing “Modifications to CHW/HTHW” illustrates the proposed modifications to the CHW



Modifications to CHW/HTHW

and HTHW distribution piping systems for new buildings planned for years 1 thru 5. The Entry Building and Science Research Building will be connected to the existing CHW and HTHW systems. The Public Safety Building will be connected to the existing HTHW system, but will be independently cooled. Independent cooling and heating systems will serve the new Sculpture Studio.

Summary of Recommendations

The following summarizes our master plan recommendations:

- Repair/replacement to existing central plant boilers, chillers, pumps, automation, cooling tower systems is required.
- A cooling and heating plant expansion is recommended (2 chillers/1 boiler).
- Existing absorption chillers should be replaced by machines which are more energy efficient.
- A plant expansion will require new floor space.
- All new buildings should be connected to the campus HTHW heating system, unless so remote that connection is too expensive.
- Only new buildings near the Podium should be connected to the Central Cooling.

2.2 Site Sanitary and Storm Drainage

2.2.1 Sanitary Sewerage System

The Uptown Campus is presently served by a gravity sanitary sewerage system which consists of two subsystems. The Washington Avenue subsystem serves buildings located in the northern section of the campus and discharges the flow into the Washington Avenue city sewer. Preliminary assessment indicates that this subsystem has approximately 25% spare capacity. The Western Avenue sanitary sewer subsystem serves buildings located in the southern section of the campus and discharges into the Western Avenue city sewer. This subsystem is currently

TABLE V-1
ALBANY MASTER PLAN
NEW COOLING AND HEATING LOADS
YEARS 1-5

Bldg	Name	GSF	Additional Cooling (Tons)	Additional Heating (MBH)	Cooling Source	Heating Source	Comments
5	Public Safety	8,700	30	400	Independent	Independent	New Bldg.
2 or 2A	Entry Building	70,000	175	3225	Central Plant	Central Plant	New Bldg.
1	Life Sciences Research Bldg	215,000	1075	14400	Central Plant	Central Plant	New Bldg.
8	Sculpture Studio	16,850	85	1125	Independent	Independent	New Bldg.
F(R)	Former Administration	57,200	115*	1550*	Central Plant	Central Plant	Renovation
	Gross Total	367,750 GSF	1480 Tons	20700 MBH			

		COOLING	HEATING
Total Central Plant Load:	-	1365 Tons	19175 MBH
C.P. Diversity	-	0.8	0.9
Total Central Plant Load Yrs 1-5	-	1100 Tons	17260 MBH
Total Independent Load	-	115 Tons	1525 MBH
Independent Diversity		0.9	1
Total Independent Load Yrs 1-5		105 Tons	1525 MBH

* 40% increase in cooling and heating load

TABLE V-2
ALBANY MASTER PLAN
SUMMARY OF ADDITIONAL COOLING AND HEATING LOADS

	ADDITIONAL COOLING LOAD		ADDITIONAL HEATING LOAD	
YEAR	CENTRAL PLANT	INDEPENDENT	CENTRAL PLANT	INDEPENDENT
1-5	1100 Tons	105 Tons	17260 MBH	1,525 MBH
6-10	430 Tons	125 Tons	7380 MBH	2,400 MBH
10+	175 Tons	1120 Tons	24300 MBH	0 MBH
	1705 Tons	1350 Tons	48940 MBH	3925 MBH

BUILDING	ID	GSF	MAX FLOW (1)(CFS)	RECOMMENDED SUBSYSTEM CONNECTION
Public Safety	5	8,700	0.01	WESTERN AVE
Entry Building	2 or 2A	70,000	0.07	WASHINGTON AVE
Life Sciences Research Building	1 or 4	215,000	0.2	WASHINGTON AVE
Sculpture Studio	8	16,850	0.02	WESTERN AVE
Former Administration Building (Renovation)	F(R)	57,200	*	

1. Sanitary flows are derived from water flow requirements (see Site Water System below)

***Note:** It is anticipated that renovations to the existing Administration Building will not significantly alter the sanitary flow requirements of this building, and that modifications to the existing sanitary systems presently in service will not be required.

operating at capacity. For this reason, our Master Plan recommendations will center upon achieving a more even flow distribution between the two sanitary subsystems which will better serve the future needs of the Uptown Campus.

The estimated sanitary flow requirement for the new buildings to be constructed in years 1-5 is summarized in the accompanying chart:

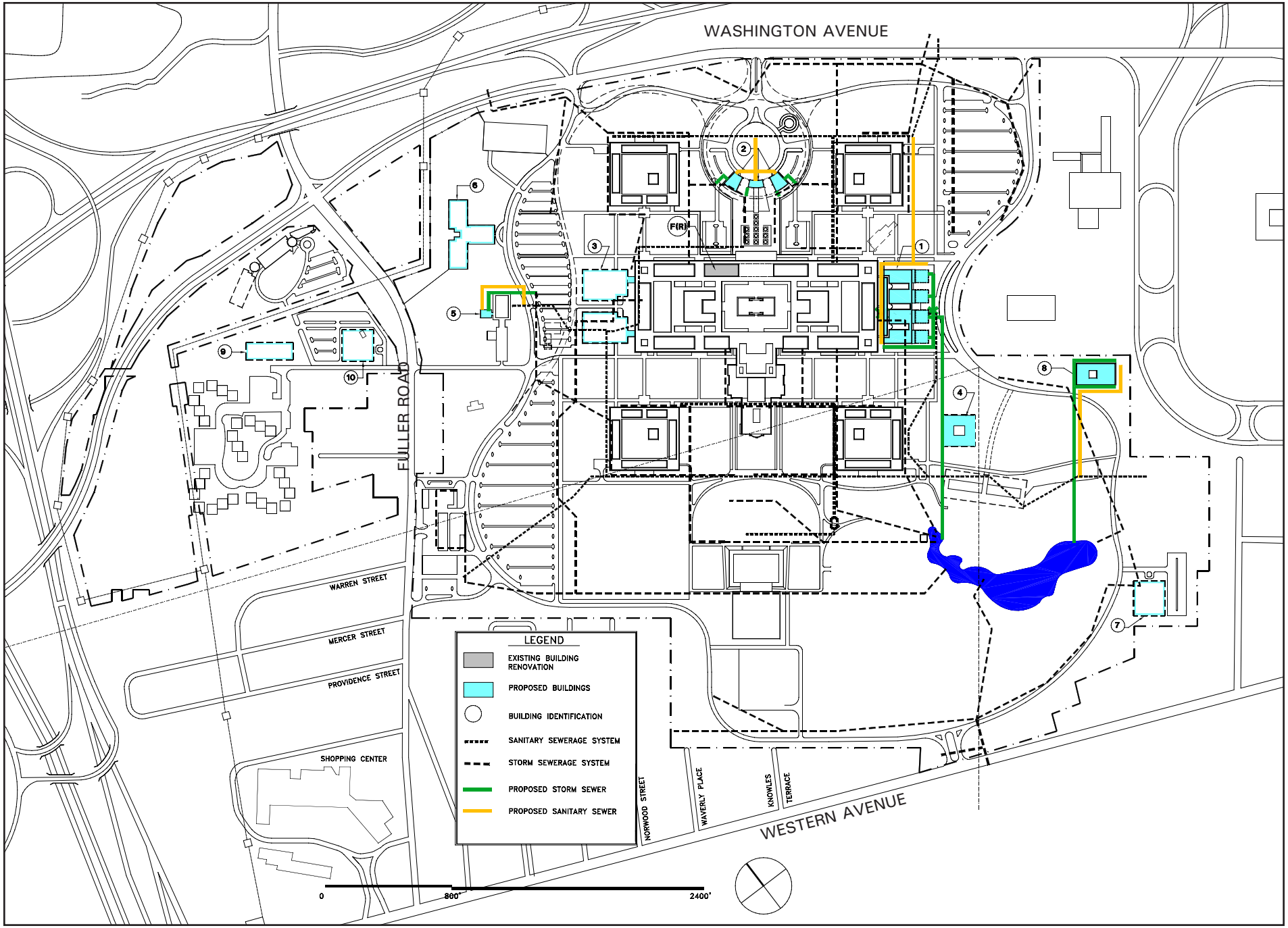
Recommendation

Branches of the existing Western Avenue subsystem which currently serve the Biology Building will possibly be disrupted during construction of the Life Sciences Research Building. Since the Western Avenue subsystem does not have any reserve capacity, it is recommended that both the Biology and Life Sciences Research Buildings be connected to the Washington Avenue sanitary subsystem rather than the nearby Western Avenue subsystem. As noted above it is critical at this time to alleviate the imbalance in loading on the two subsystems which currently exists. The Public Safety sanitary line will be connected to the Western Avenue subsystem. The minimal additional flow from both the Sculpture Studio and the Public Safety building should not adversely impact the flow conditions in the Western subsystem. Under the Long Term Capital Master Plan, the flows from the Public Safety building, as well as those from the Business Administration, Administration, and Social Science buildings, will be re-directed into the Washington Avenue subsystem. Finally, the Entry Building is in close proximity to the Washington Avenue subsystem and should be connected to same.

The drawing "Modifications to Storm/Sanitary" illustrates our recommendations for modifications to the sanitary sewerage collection system, including all new piping and connections to the existing system.

2.2.2 Storm Drainage System

The site storm sewerage system consists of eight major individual subsystems, and is reported to be in fair condition with up to 10% spare capacity



Modifications to Storm/Sanitary

BUILDING	ID	GSF	MAX FLOW (1)(CFS)	RECOMMENDED SUBSYSTEM CONNECTION
Public Safety	5	8,700	1.14	No. 6
Entry Building	2 or 2A	70,000	3.05	No. 2
Life Sciences Research Building	1 or 4	215,000	14.1	New Subsystem
Sculpture Studio	8	16,850	2.2	New Subsystem
Former Administration Building (Renovation)	F(R)	57,200	*	

1. Storm flows are estimated using the Rational formula Q = CIA, where C is the runoff coefficient (equal to 0.95 for roof surfaces), I is the rainfall intensity measured in inches per hour (equal to 6 inches per hour for a 10 year storm event and a time of concentration of 5 minutes), and A is the drainage area in acres.

***Note:** It is anticipated that renovations to the existing Administration Building will not significantly alter the sanitary flow requirements of this building, and that modifications to the existing sanitary systems presently in service will not be required.

existing in each subsystem, with the exception of subsystems Nos. 5 and 6, which are overloaded under a design storm event by as much as 35%. The only storm sewer system deficiency that was identified based on the interviews with the campus maintenance staff and PB engineering evaluation is a tree root problem.

The estimated storm flow requirement for the new buildings to be constructed in years 1-5 is summarized in the accompanying chart:

Recommendation

The preliminary condition assessment report for the site storm drainage system indicates that two subsystems (No. 5 and No. 6) are operating at 25-35% above capacity during a design rainfall event; all other systems have an estimated 5-10% reserve capacity. Since the estimated storm water flows from the new buildings are significant for all four buildings planned under this phase, we recommend that only the Entry Building and the Public Safety Building be connected to the existing nearby subsystems No. 2 and No. 6, respectively.

Both the Science Research and Sculpture Studio buildings will require new storm sewer subsystems discharging directly into the on-site pond located in the south-east area of the Campus. The estimated storm flows from these buildings are sufficiently large to merit a separate subsystem for each.

The drawing "Modifications to Storm/Sanitary" illustrates our recommendations for modifications to the site storm distribution piping system, including all new distribution piping and connections to the existing system.

2.3 Site Water Supply System

The site distribution piping is a multi-loop configuration connected by two (2) 12 in. water services to the city municipal water supply system. One of the services is connected directly to the 20 in. street water main located on Washington Avenue, at the north side of the Campus. The

other service enters the site from the east and is connected to the OGS (Office of General Services) site system. The site piping is in good condition.

The estimated domestic water requirements for the new buildings to be constructed in years 1-5 are summarized in the accompanying chart:

Recommendation

In determining service pipe diameters, the following factors have been taken into account:

- Per State University Construction Fund requirements, all new and renovated buildings will be completely sprinklered
- All buildings exceeding three stories in height will be equipped with standpipe systems
- Standpipe and sprinkler systems will be combined, with common services
- Any building having a single floor area greater than 52,000 sq. ft. (and less than 104,000 sq. ft.) shall have two (2) fire water services
- Domestic services shall be separate from fire services

As noted in the calculations for the Long Range water requirements (i.e., for years 6 thru 10 and beyond - see Long Range Master Plan - Site Water Supply System), the existing site water distribution system has sufficient capacity to supply considerably higher demand than the demand estimated above.

Therefore, we recommend that all new campus buildings be accommodated by expanding the existing 12 inch main multi-loop site distribution system to cover areas of new construction. New water mains should be equipped with fire hydrants and will be used to supply both domestic and fire water service to the new buildings.
The drawing "Modifications to Site Water/Gas" illustrates our recommendations for modifications to the site water distribution system. The Public Safety Building is small and can be supplied with domestic water from the adjacent building. Construction of the Science Research Building will necessitate the installation of a new 12 in.

BUILDING	ID	GSF	MAX FLOW (GPM)(1)
Former Administration Building (Renovation)	F(R)	57,200	*
Public Safety	5	8,700	4
Entry Building	2 or 2A	70,000	30
Life Sciences Research Building	1 or 4	215,000	92
Sculpture Studio	8	16,850	7
Total		367,750	133

1. Assumptions:

Anticipated GSF after all new construction: 4,135,000
Projected No. Full Time Equivalent Students: 15,648
Floor area per student: 265 sq.ft
Daily Water demand: 20 gal per equivalent student
or, 75 gpd / 1000 sq. ft.
Peak demand based on 12 hour duration with
2.5 diversity factor and 1.65 safety factor to account for laboratory demand and other miscellaneous. requirements:

$$\text{Max Flow} = \frac{75 \times 1.65 \times 2.5}{12 \text{ hrs} \times 60} = 0.43 \text{ gpm/1000 sq.ft.}$$

The additional 133 GPM is a 10% increase to the existing maximum demand of 1330 GPM. The total new domestic water demand will be 1463 GPM.

***Note:** It is assumed that renovations to the existing Administration Building will not significantly alter the water demand of this building, and that modifications to the existing services will not be required.

water service to the Podium to replace the existing service located within the new building's footprint. The new site main to the Sculpture Studio should be sized at 12 inches as the first phase of a future loop which will also serve both the Central Service Building and Building J5 (see the Long Range Master Plan).

2.4 Site Natural Gas

2.4.1 Central Heating Plant

The preliminary condition assessment of the Natural Gas system serving the Campus indicates that current maximum demand is approximately 200,000 CFH, and that nearly 80 to 90% of this demand (i.e., approximately 170,000 CFH) is attributable to the Central Heating Plant.

The anticipated increase in Campus GSF under the Master Plan is approximately 8% for years 1-5 and 30% under the Long Range Master Plan. This will result in a sizable increase in the demand for gas at the Central Plant. We assume that this increase in gas demand will be proportional to the increase in GSF, which will result in a Central Plant demand of nearly 185,000 CFH at the end of 5 years, and approximately 220,000 CFH over the Long Term Master Plan. In addition, our earlier recommendations concerning Central Plant upgrades indicate that additional demand for gas will be required for new boilers and/or absorption chillers.

Natural Gas is presently supplied to the Central Plant via a 2 inch service connected to the high pressure gas main located on Fuller Road. In order to satisfy the increased demand, we recommend that the service to the Central Plant be upgraded to 3 inches. Whether this upgrade should be scheduled for the first 5-year period or later should be determined by the utility company supplying gas.

2.4.2 Site Distribution

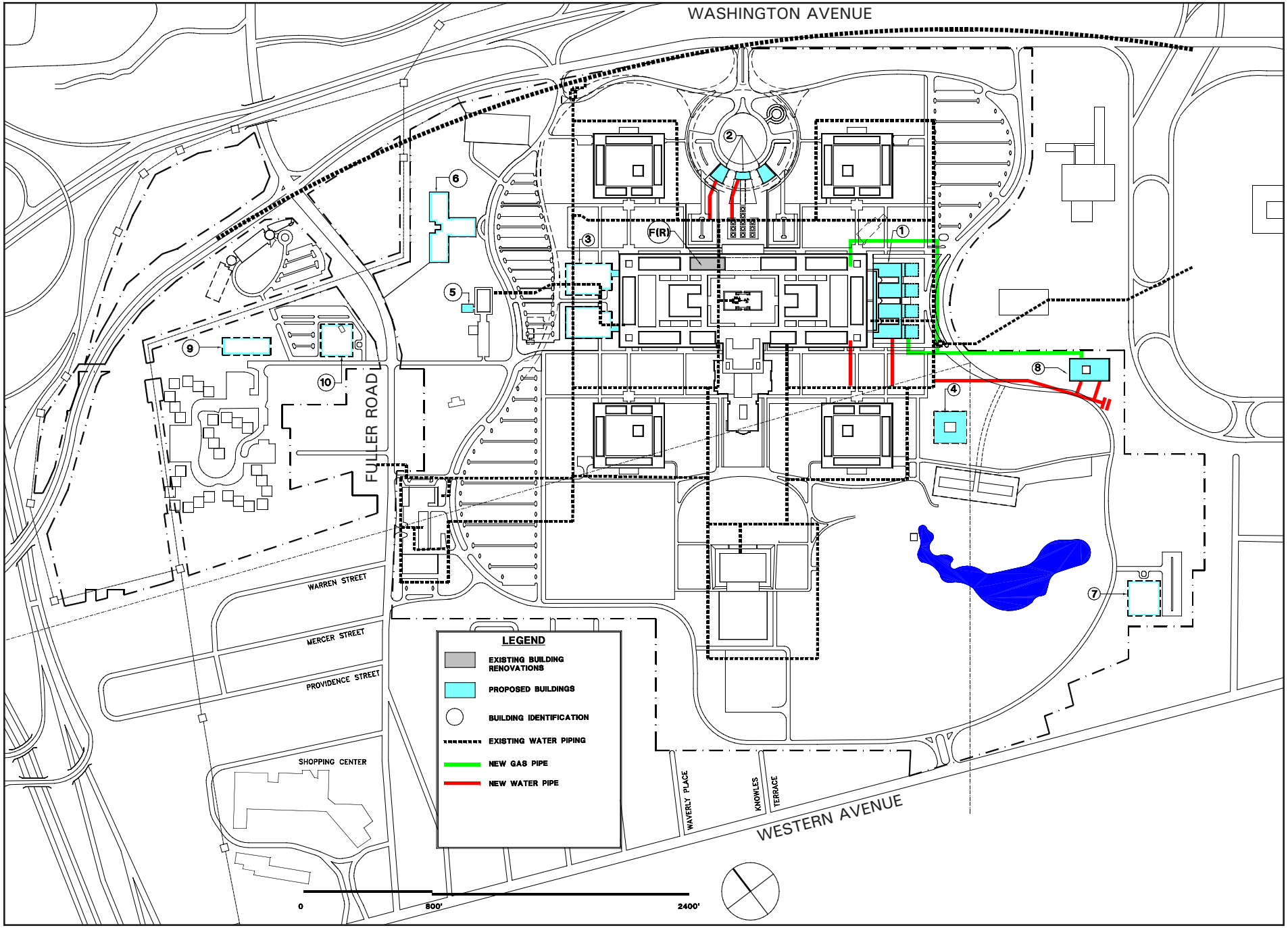
With the exception of the Central Heating Plant, which is supplied with Natural Gas from a high pressure gas main in Fuller Road (see above), the campus buildings are currently supplied with gas from two (2)-4 inch high pressure lines connected to the high pressure main located on Washington Avenue. We feel that the capacity of the two (2)-4 inch lines is substantially in excess of the present and future needs of the campus. New underground piping will have to be installed to supply gas to the new buildings. These lines can be connected to the nearest existing site main. Pressure regulators and meters will be installed at each building.

The drawing "Modifications to Site Water / Gas" illustrates the proposed modifications to the site Natural Gas system, including all new distribution piping and connections to the existing system. The Public Safety Building is small and can be supplied with Natural Gas from the existing adjacent building. It is assumed that gas will not be required in the Entry Building and therefore no gas service is shown for this building. Construction of the Science Research Building will necessitate the installation of a new 2 inch service to the Podium to replace the existing service which might be located in the footprint of the new building.

2.5 Site Electric Power

Existing Load:
The electrical demand of the campus, of course, varies from month to month. In order to establish a base line demand, the billing records for the 1995-96 fiscal year were examined. The records indicate that the maximum monthly peak demand of 13,100 kW occurred during the month of February. This peak demand will be considered as the existing campus demand load.

Also, according to the billing records, the next highest monthly peak demand of 12,500 kW occurred during the month of September. It is understood that real-time metering of the campus demand is scheduled during the month of September 1997. Such metering would offer a more accurate characterization of the campus load during a representative month. Pending the results of this real-time metering, the 13,100kW peak demand mentioned above may be revised.



Modifications to Site Water/Gas

Building Name	Square Footage	General Power & Lighting (kW)	Cooling & Heating (kW)	Total (kW)
Life Sciences Research	215,000	1011	1075	2086
New Sculpture Studio	16,850	79	85	164
Entry Building	70,000	301	175	476
Public Safety	8,700	37	30	67
Former Administration Building (Renovation)	57,200	269	115	384

Demand Subtotal (kW)	3177
Coincidental Demand Factor	80%
Coincidental Demand (kW)	2542
Power Factor	85%
Total Demand Load (kVA)	2990

The drawing "Modifications to Electrical Systems" illustrates the 5 year Master Plan recommendations to the site electric power ductbank system. The proposed ductbank plan takes into account the location of ductbanks proposed in the 6+ year plan.

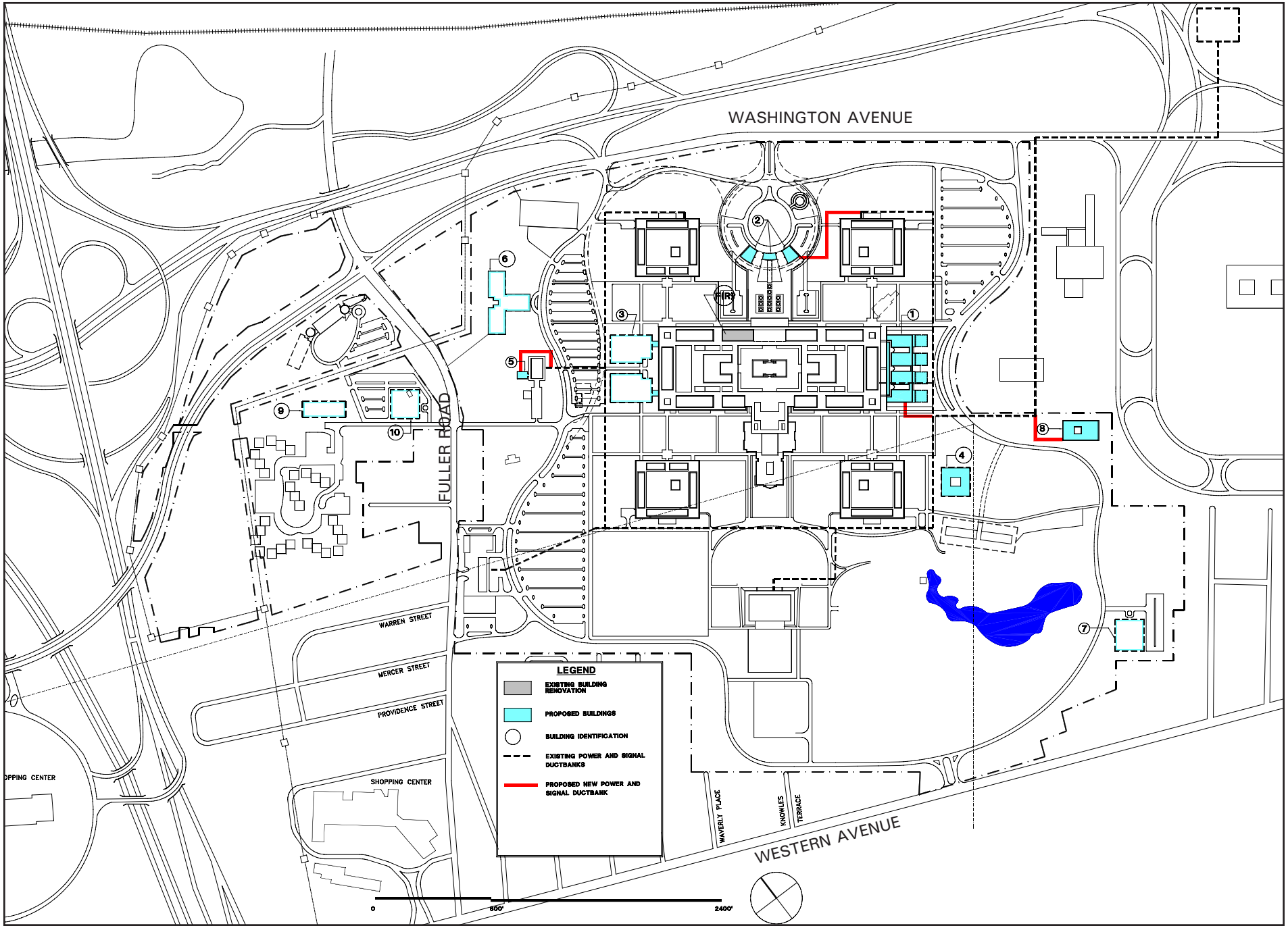
Load Growth Projections:
With the construction of four new buildings and the renovation of one existing building in years 1-5, the demand for power will increase accordingly. The estimated electrical demand for the five buildings is shown in the accompanying table. The cooling and heating demand for each building was conservatively estimated as the total cooling load only. Since the cooling season and the heating season are non-coincidental, the sum of the two demands would be artificially high; therefore, only the higher of the two, cooling was used for the estimate. Although it is not known at this time whether the type of cooling and/or heating system would be central plant or an independent system, an independent system was estimated as the worst case condition for electrical demand.

Total Projected Load
The sum of the existing campus load and the projected load growth for years 1-5 will yield the total projected load for the campus. The total projected load during years 1-5 is 18,400 kW, assuming a power factor of 85%, and is shown calculated below.

Existing Load (kW)	13,100
Power Factor	85%
Existing Load (kVA)	15,410
New Buildings Load, Years 1-5(kVA)	2,990
Total Load, Years 1-5 (kVA)	18,400

15 kV Feeder Cables:
The existing oil-filled, lead-covered 15 kV feeder cables are approximately 30 years old and are essentially beyond the end of their useful life. Over the years, the loss of the dielectric oil has since compromised the original physical properties of the cable and results in approximately one cable failure per year and two emergency repairs per year. This failure rate is unusually high and directly affects the safe and efficient operation of the campus power distribution system as well continually creating a largely unnecessary emergency repair operation by campus maintenance personnel.

There is a likelihood that the oil used in these cables of yesteryear contained polychlorinated-



Modifications to Electrical Systems

biphenyls (PCBs). The content of the oil should be tested to determine if it is indeed PCB-based. The mere presence of PCBs creates an environmental hazard and primarily places maintenance personnel at risk. If tests prove that PCBs are prevalent in the oil, then the PCBs should be abated in accordance with federal and state regulations.

Considering all the grave problems and risks associated with the 15 kV feeder cables, it is recommended that all 15 kV feeder cables be replaced as soon as possible with copper conductor, EPR type, shielded cables with 100% or 133% insulation. In their present condition and use, the cables are at imminent risk of failure.

Ductbanks:
With the possible release of the dielectric oil from the 15 kV feeder cables into the ductbank system (and quite possibly PCB-contaminated oil), the condition of the ductbank system is suspect. The presence of PCBs throughout the ductbank system is a situation that must be addressed in accordance with federal and state regulations.

Collapsed ductbank sections were reported by campus maintenance personnel. Generally, the mere presence of a collapsed ductbank is problematic. It is possible that the collapse is an isolated incident and will not pose a major problem. However, to be sure, it is recommended that a more investigative study be performed to determine the extent and nature of the collapse or collapses. Evidence of a collapsed ductbank could also be attributed to differential settling of the finished grade surface or surfaces, improper compaction of the subgrade, failure or cracking of the concrete envelope of the electrical ductbank, etc.

It is very likely that a ductbank system installed about 30 years ago will contain asbestos conduits (typically Orangeburg type conduits). These conduits are generally very frail, crumble under minimal stress, and as a result, are very difficult to reuse. The simple removal of existing cables and installation of new cables will practically obliterate whatever remains of the conduit. In doing so, the cable is likely to be damaged when pulled directly against the course edges of the concrete envelope. Furthermore, asbestos is another environmental hazard and should also be addressed in accordance with federal and state regulations.

Considering all of the problems associated with the existing ductbank system, it is not recommended that they be reused. New ductbanks should be installed with consideration for future expansion, renovation, and flexibility of operation of the campus power distribution system.

Additional Standby Feeders:
Currently, the two existing 15 kV feeder circuits, N1 and N2, are capable of supplying the campus peak demand loads. However, if both feeders fail, the remaining feeder, E1, does not have sufficient capacity to supply the campus.

The design of these 15 kV feeders is currently underway through State University Construction Fund project No. 37011. The scope of the design project is the replacement of cables and underground ductbank only. One of the recommended plans is the construction of a new on-campus 15 kV switchgear substation. This new on-campus substation will still obtain power from the OGS substation, similar to the three existing 15 kV feeders, but will also provide direct control of the flow of power by campus maintenance personnel. Flexibility will be greatly enhanced with a separate on-campus substation.

Essentially, instead of the three 15 kV circuits with 350 kcmil cables serving the campus, the new substation will provide a total of six 15 kV circuits with 350 kcmil cables. Thus, in maintaining the current size of 350 kcmil cables, each of the six circuits will roughly carry half the load that the existing three circuits did, or conversely, there will be roughly twice the capacity available, all the while maintaining a dual redundant feeder to all loads.

Second Utility Source:
Currently, the source of bulk utility power originates from Niagara Mohawk which is stepped down to 13.8 kV at the OGS substation. As such, the OGS substation and therefore, Niagara Mohawk, is the limiting factor in providing a true

alternate source of power (i.e., there is no true alternate source of bulk power).

The next step for true redundancy and reliability is obtaining a second bulk utility source of power directly from Niagara Mohawk. Integrating a second source of power from Niagara Mohawk would generally entail a new substation at 115 kV or other transmission voltage available near the campus and the construction of new ductbanks and circuits to provide an alternate source of power to the OGS substation. This option is technically feasible and possible; however, a thorough investigation must be performed to determine viability and feasibility on the part of Niagara Mohawk and the campus in terms of physical space, rights-of-way, cost, etc.

Radial vs. Loop Distribution System:
Both the existing distribution system and the system being designed under State University Construction Fund project No. 37011 are essentially radial distribution systems. A radial distribution system is simple and fairly economical since each feeder provides power to a succession of loads. The feeder cable is sized to deliver power to the string of loads. The compromise in a radial distribution system is that a feeder failure will drop power to all loads in the string.

An improved variation of the radial distribution system is to have dual radial feeders so that one serves as an alternate to the other. Reliability is increased, but the radial concept is unchanged.

A loop distribution system, on the other hand, will have increased flexibility because there are two feeders that can serve any combination of loads around the loop (e.g., 50-50, 75-25, 90-10, or 100-0 %). The compromise in a loop distribution system is the fact that the feeder cable will generally be larger because it must be sized to carry the entire load, not just half of the load. Another compromise in a loop distribution system is the possibility of a failure of two or more loop segments whereby neither side of the loop can provide power to the failed loop segment loads.

While it is technically possible to convert the existing campus power distribution system to a loop system, there are a few limitations that may be driven by cost and practicality. First, the existing feeder cable size of 350 kcmil would have to be increased to carry the entire loop load. Larger 15 kV cables would then necessitate larger conduits throughout the ductbank system. One solution to the larger conduit problem is to install two parallel sets of smaller cables which would be sized to carry the entire load. The second parallel set of cables would then require the use of an extra 4 inch conduit in the ductbank.

Another possible solution to the larger cable size in a loop distribution system is to employ the age-old concept of bulk power transmission: Increase the voltage, thereby decreasing the current.

24.9 kV Distribution System:
Converting the campus distribution system to a 24.9 kV level would essentially double the voltage, thereby reducing the current to one half its former demand, in order to supply the same capacity. The major components of such a concept are as follows.

Cables & Conduit: Even though the size of the conductor is reduced, insulation for 25 kV cable is thicker than that used for 15 kV cable. Depending on the size of the feeder cable, a 4 inch conduit may possibly be adequate.

Main Substation: There are two methods in which to derive the distribution voltage of 24.9 kV. The first method is to build a new 115-24.9 kV substation directly interconnected to the Niagara Mohawk transmission network. This method would render power from the OGS substation unnecessary. The second method is to build a new 13.8-24.9 kV substation where the OGS substation provides bulk power to the 24.9 kV substation. Both of these methods would provide the campus with their own substation for switching flexibility and control.

One of the bigger advantages to the 115-24.9 kV substation is that energy and peak demand rates would be substantially reduced since the interconnection voltage is much higher at 115 kV as

opposed to 13.8 kV. However, the risk is in owning a high voltage transmission substation. If there was a failure of a major piece of electrical substation equipment, e.g., transformer, circuit breaker, etc., Niagara Mohawk is not obligated to come rushing to repair or replace anything.

Unit Substation: The unit substation at each building must be replaced to accept a primary voltage of 24.9 kV. This would generally include the 24.9 kV disconnect switches and a 24.9 kV-480Y/277V transformer. Because of the higher voltage, the disconnect switches and transformer will be larger and therefore require slightly more space. Depending on space limitations, one alternative would be to use load-break elbow switches integral with the transformer. Operation of the load-break elbow switches is slightly more cumbersome because hot-sticks would be required as opposed to the lever operation in the standard knife switch. Fortunately, the secondary switchboard will not be impacted since the size of the transformer remains the same.

Conceivably, the biggest drawback to the 24.9 kV distribution system concept is cost. To seriously consider the 24.9 kV distribution system concept, a detailed engineering study must be performed to determine true feasibility. In addition, coordination must take place between this detailed engineering study and the design currently in progress under State University Construction Fund project No. 37011, since there is considerable overlap in equipment.

Site Improvements

Entry Passage

The entry plaza between Collins Circle and the Podium, although of an appropriate size to act as an outdoor vestibule to the Podium itself, causes the drop-off point on Collins Circle to be over 350 feet from the Podium, a considerable distance in cold windy weather. The Master Plan proposes that the drop-off area be lowered about 6 feet from its present elevation. This new elevation will place the drop-off midway between the elevations of the Podium and the basement (i.e. Lecture Center) levels. From here, gently sloped ramps could lead, either up to the entry plaza level or, down to a newly proposed pedestrian passage leading to the Podium basement level where it would link directly to the Podium internal circulation system described above.

This passage would be spacious, well lighted by night and sky lighted by day. To enliven this all-weather, front door to the Podium, it is suggested that some or all of the art now located in the Fine Arts Building be relocated to flank this entry passage in new sky lighted gallery space with glass walls between the galleries and the passage, so passersby could view the art as they moved toward or away from the Podium at this lower level.

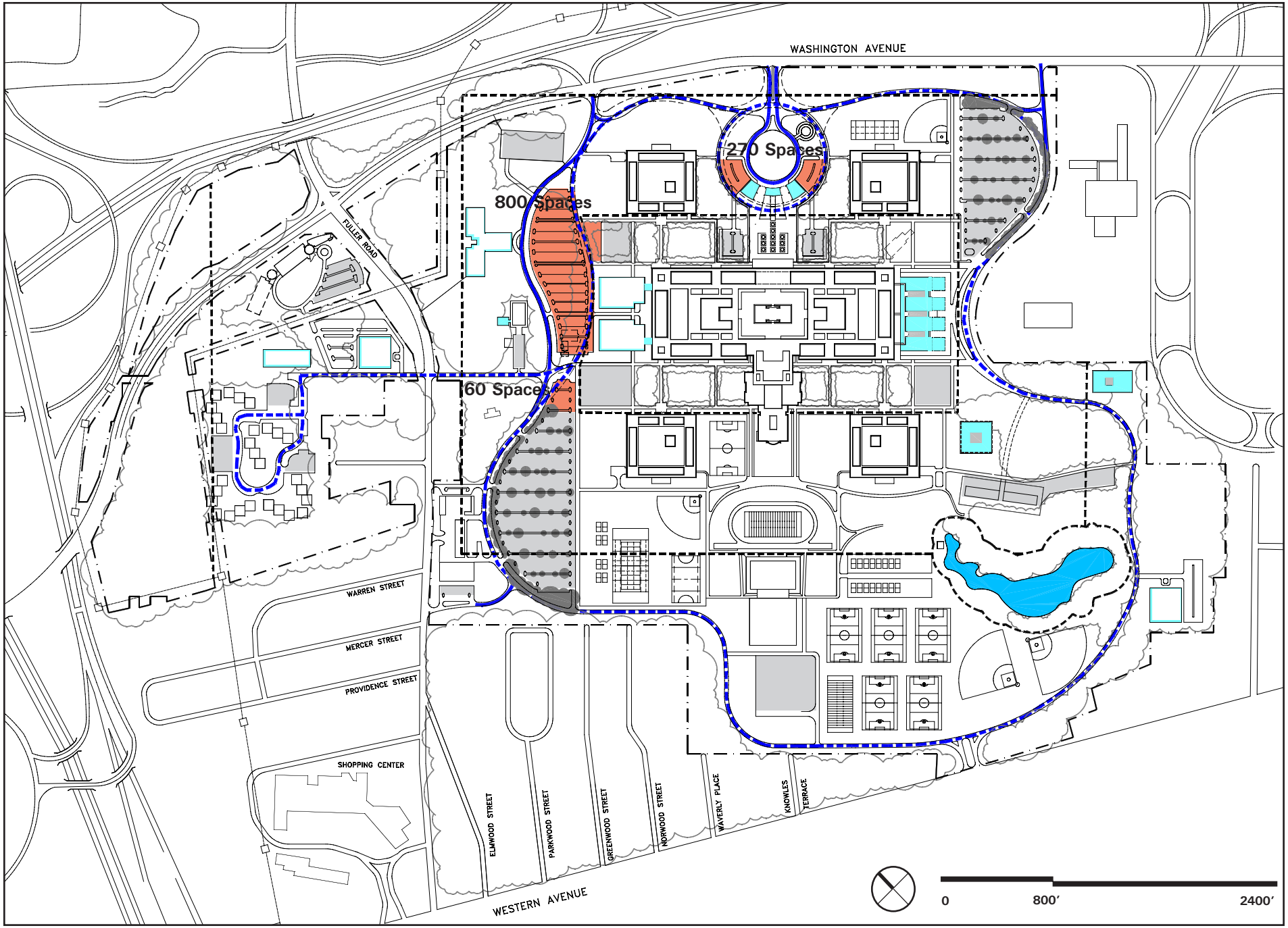
The entry passage, without the art galleries, would be 13,400 gross square feet and is proposed to be implemented in Year 2 of the Master Plan.

Traffic Circulation and Parking Improvements

The Goals and Objectives incorporated by the Master Plan include the basic principal of providing for a safe pedestrian environment. Inherent in this Goal is to provide that all components of the campus' transportation system serving the various transportation modes (i.e., vehicle, pedestrian, bicycle and transit) are sufficient and operate efficiently.

Intersection Improvements:

Improvements to the existing roadway system have been identified to address traffic operational inefficiencies and to reduce pedestrian/vehicular conflicts. These improvement recommendations relate primarily to the design of the intersection connections of University Drive to the external public roadway network. The links connecting these roadways limit the capacity for accommodating vehicle queues that develop in these areas, particularly along the Washington Avenue side of the campus. These conditions reduce the efficiency of processing vehicles through the intersection and also compromise the safety of the intersec-



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tions. The existing configuration of these intersections also presents a significant conflict between pedestrian and vehicular movements, as pedestrian movement between the main area of the campus and "off-site" destinations must cross an uncontrolled vehicle path on University Drive. In order to address these operational and safety concerns, it is recommended that the following intersections be reconstructed to change the priority of movement through them.

- University Drive East and Washington Avenue
- University Drive West and Washington Avenue
- University Drive West and Fuller Road

The recommended improvements at these locations are illustrated on “Circulation and Parking Plan/Uptown Campus (1-5 Years)”.

Other general recommendations for improvements to the campus roadway system include:

- Widen University Drive to bring the improved roadway up to current design standards and to facilitate winter snow removal efforts.
- Construct sidewalk connections along the perimeter of the campus to provide continuous pedestrian linkage and enhance the pedestrian links between the Podium area and inter- and off-campus destinations.
- Improve the existing sight distance conditions at the intersection of University Drive East and the access to the Indian Quad parking lot.
- Evaluate the feasibility to either 1) eliminate access to the Dutch parking lot opposite Plant Facilities Drive, or 2) close the access from the Plant Facilities Drive to Fuller Road. The intent of either of these improvements is to address the existing unsafe pattern of egress from the parking lot which is induced by the direct access to Fuller Road.
- Install a marked and signed pedestrian crosswalk across Fuller Road to connect to the existing sidewalk along the west side of Fuller Road.
- Monitor the intersection of Fuller Road and the University Drive connecting link for future installation of a traffic signal. A future signal at this location should include pedestrian signals and push-buttons.

University Drive West Realignment

It is recommended that University Drive West be reconstructed from Washington Avenue to the vicinity of the Alumni Conference Center driveway for the purpose of realigning this roadway. The suggested route is to redirect the road between the Health Center and the Public Safety Building. The new alignment of this roadway could be developed with a greater degree of curvature, similar to the alignment of University Drive East, which can promote reduced travel speeds and may also diminish the use of this road by non-campus "pass-thru" traffic.

This proposed realignment will also facilitate the reconstruction of the Tricentennial Drive intersection with University Drive. Since this new intersection will be to the west side of the existing Public Safety Building, the sight distance constraints imposed by the existing building will be alleviated. Center Drive West could also be reconstructed to be realigned opposite Tricentennial Drive. This would reduce the turning movement conflicts created by the existing offset intersections.

Collin’s Circle Reconfiguration

Collins Circle is the site of a primary bus stop serving the University at Albany and CDTA (public) transit systems. As such, this area of the campus experiences substantial pedestrian activity. The existing Collins Circle also provides access to the main visitor's parking, administration parking, and limited on-street faculty parking along its perimeter. The location and configuration of the parking lots at Collins Circle contributes to significant levels of conflict between pedestrian and vehicle traffic. In order to alleviate these conditions, it is recommended that Collins Circle be reconstructed. The proposed design maintains the essential design of the circle, but reduces its radius by one-half. In addition to mitigating the pedestrian/vehicular conflicts, the redesign of Collins Circle also introduces the ability to increase the parking supply in this preferred area of the campus and to improve the accessibility to these parking areas.

In conjunction with the proposed reconstruction of Collins Circle, it is proposed that the roadway connecting Washington Avenue and University Drive at Collins Circle also be reconstructed. The purpose of this is to reduce the median width so that the roadway will operate as a two-way divided boulevard, rather than as two separate one-way systems. It is also recommended that the STOP sign control at the intersection of University Drive with this entrance road be relocated so that University Drive is the STOP controlled street, giving priority to traffic entering and exiting from Washington Avenue to Collins Circle. These recommended improvements are illustrated on "Circulation and Parking Plan/Uptown Campus (1-5 Years)".

Parking

A central element of the Master Plan's Goals and Objectives is to minimize vehicular/pedestrian conflicts (Zone 1) around the Podium area. In order to accomplish this goal, it is recommended that parking along the roadways around the Podium and the residential quads be relocated. These roadways should be restored to the original intended pedestrian walkways, with limited parking provisions for handicapped parking and special needs.

The existing parking supply in the area of the podium has a capacity of 1,149 vehicles. Assuming that 149 parking spaces will continue to be provided for handicapped and other special use parking, the plan to eliminate parking from the Podium area will displace approximately 1,000 parking spaces. A review of current parking utilization indicates that 50 percent (500 spaces) of this displaced parking can be accommodated in existing parking areas, including a revitalized Indian Quad lot. The remaining 500 spaces will be relocated to a new proposed parking facility adjacent to the Colonial Pay lot. The construction of this parking lot will be enabled by the proposed realignment of University Drive West.

In determining the future parking requirements at the Uptown Campus for the 5-Year plan, the relationship of current FTEs to the peak hour parking

Table V-3
University at Albany Campus Master Plan
Parking Needs Estimate

	Existing		Projected 2001		
	Existing FTEs (1995)	Existing Peak Parking Demand	Projected FTEs	Estimated Peak Parking Demand	Estimated Parking Surplus/Deficit (See Note)
Uptown Campus	12,320	4,200	13,984	4,770	-570
Downtown Campus	1,180	310	1,244	330	-20
Total	13,500	4,510	15,228	5,100	-590

***Note**: The estimated parking deficit in the year 2001 is in addition to the spaces required to relocate parking from thePodium area of the Uptown Campus and from the courtyard areas of the Downtown Campus.*

utilization was examined. Using this methodology, it is assumed that the distribution of transportation modes for access to the campus will remain constant. That is, that future transit ridership, bicyclists and pedestrian access to the Uptown Campus will comprise the same proportion of future trips to the campus as exists today. A comparison of existing peak hourly parking demand at the Uptown Campus to current FTE figures indicates that the existing parking supply will be inadequate to meet demand in the 5-year forecast. Based on these analyses, it is estimated that the 5-Year increases in FTEs will produce a deficit of 570 parking spaces. The estimated parking demand for the 5-Year FTE projection is summarized on Table V-3.

The realignment of University Drive West enables the construction of a new parking lot adjacent to the Colonial Pay Lot which could have a capacity of approximately 800 spaces. This could either replace or supplement the existing Colonial Lot. The location of the proposed new Colonial Lot would be between the core area of the campus and University Drive, thus not duplicating the significant pedestrian-vehicle conflicts that exist with the current Colonial Lot location. If the existing Colonial Lot is maintained, it is recommended that the access be relocated to coordinate with the new Colonial Lot.

The construction new parking facilities along the realigned University Drive West has the potential for a capacity of approximately 800 spaces. As noted previously, 500 spaces are designated to accommodate parking displaced from the Podium areas. The additional 300-space capacity can be allocated toward the projected increased parking demand. The reconfiguration of Collins Circle also provides an opportunity to expand the parking facilities in this area to address the projected parking deficit. It is estimated that 270 additional parking spaces could be constructed in this area. In conjunction with the recommended construction of new parking facilities, it is also recommended that the campus parking policies and regulations be re-evaluated. It would be difficult to administer and enforce a separate free parking area designated for visitors only. However, it is suggested that a validation system to waive parking fees in the preferred lots for visiting prospective students or other approved activities could be instituted.

Entry Plaza

The proposed site improvements related to circulation and parking, and the construction of a new entry building will result in considerable physical change at the Podium Plaza and Washington Avenue entrance. The existing plaza, which contains unsightly evergreen mounds and a beautiful, but difficult walking pavement, should be redesigned at surface level as a memorable and welcoming pedestrian scale plaza. Visual axis needs to be maintained from the north side of the new entry building to the Podium facade and a hierarchy of architectural spaces and multi-seasonal plantings can enhance the arrival experience.

Graphics and Signage

There is a great need to improve signage and way finding at the University. At the Uptown Campus, the need is especially great because the uniform architectural style and the uniform color (i.e. concrete) on all faces of all buildings as well as on all faces of the Podium and the residential quads, can be very disorienting to the new comer on campus.

If a Graphic Design manual were prepared in Year 1 (see "Special Projects"), improved signage and wayfinding aids could be added to the campus, giving it color and identity, as well as making it easier to find one's way around, by Year 2.

Lighting

It is not clear whether or not the Uptown Campus is adequately lighted. It is clear, however, that there is the perception that areas are poorly lighted. Furthermore, lighting can be used to clearly identify pedestrian paths and outdoor meeting-gathering focal points, which are lacking.

If a lighting design were prepared for the Uptown Campus in Year 1 (see Special Projects), an appropriate lighting system could be installed on the campus in Year 2. A lighting analysis should be done, and any necessary improvements implemented.

Projects in Design (Pro Forma Projects)

Projects in Design are projects which State University Construction Fund has already funded and scheduled for construction. It is important to know of this work, so that all the other proposals and projects listed in the Project Schedule can be scheduled in a manner that will minimize disruption and multiple moves.

The Projects in Design, and their scheduled Year of construction, for the Uptown Campus, are:

1. Replace Podium steps (Years 2 and 3)
2. Replace aluminum electrical feeders-library (Year 3)
3. Upgrade exhaust system-Chemistry building Phase 1 (Years 1 and2)
4. Provide emergency primary voltage feeder and ductbank (Years 2 and 3)
5. Replace ceiling/emergency lighting (Years 2 and 3)
6. Replace PCB transformers (Years 2 and 3)
7. Campus CW & HTHW Systems Study
8. Rehabilitate fire alarm system (Years 3, 4 and 5)

Uptown Campus - Courtyard

Uptown Campus - Podium

FIVE YEAR CAPITAL MASTER PLAN – DOWNTOWN CAMPUS

The five year capital Master Plan for the Downtown Campus focuses on the need for expansion space, the general academic classroom shortfall and the modernization of the facilities' mechanical systems.

New Construction

There are two alternatives to provide expansion and swing space at the Rockefeller College. This is required to remedy immediate concerns for academic classroom space shortfalls and to provide the foundation for the long term reconstructions.

Alternative No. 1: Hawley Library Expansion and Renovation. Construct the approximately 44,300 gsf addition to the Hawley Library and renovate the existing building (Rockefeller College Task No. 1). This alternative provides a major modernized and expanded academic resource for the support of the College's programs.

Alternative No. 2: Rockefeller College Expansion Building. Construct the approximately 52,842 gsf new building anchoring the western border of the campus, immediately south of Milne Hall or on the parcel across Robin Street. (Rockefeller College Expansion Building). This alternative provides an immediate benefit to the students and faculty in the form of new general academic classrooms and instructional space.

The alternative not chosen should become part of the long range Master Plan, and implemented as the appropriate resources become available.

Renovations

Upgrade Heating-Cooling Plant-Downtown

Heating

Energy Supply - The two existing 8,000 gallon No.4 oil tanks will remain. The existing natural gas service main will be evaluated to determine if the existing size is adequate for heating and other building gas requirements.

Heating System - Replace existing steam boilers (two-150 bhp Weil McClain) with higher capacity dual fuel fired steam boilers, each boiler to handle 66% all of Rockefeller College buildings heating loads. Demolish and remove obsolete high pressure water tube boiler. Provide new Vacuum Condensate Pump system.

Cooling Generating Systems - Provide two new central chillers within the existing boiler plant in Richardson. Primary chilled water shall be utilized for four piped fan coil units to be installed throughout the campus during each buildings renovation phase. The chiller plant shall consist of two centrifugal chillers with 134a refrigerant to produce primary chilled water. A remote located cooling tower shall be architecturally enclosed. The chilled water primary pumping station, consisting of two chilled water pumps and one spare pump, shall be located adjacent to the chillers. The primary chilled water piping shall be distributed to the buildings along the same route of the steam piping. Condenser water shall be distributed from two condenser water pumps and one spare pump from the chillers to the remote cooling tower.

Controls and Instrumentation - Direct Digital Control system will be utilized for control of the Heating and Cooling generating central plants systems. This DDC system will perform the following: Operator Interface, Energy Management, Software Programming, Alarm Management, Loop Tuning, Trend Data Collection, Time-Of-Day Scheduling, Auto-Dial and LAN Coordinator.

Plumbing

Domestic Water - Provide a 'PVI' heater gas fired for the central domestic hot water system.

Electrical

Electric Service & Distribution - A new electric service room will be added with the Hawley extension to house the new electric equipment and service capacity for the campus Master Plan

building and HVAC loads upgrades.

Emergency Power - Additional emergency power loads will be supplied from the upgraded emergency power electric service.

Renovation of Husted Hall - Reconstruct Husted Hall to provide for a centralized general academic classroom and instructional space facility. These renovations directly relieve the current shortfall of classroom and instructional space at the Rockefeller College.

The renovations of Husted Hall and the Page Gymnasium directly effect the availability of classroom and academic space at Rockefeller College. The existing shortfall in classroom space is a critical concern to the faculty and staff.

Site Utilities

The site utility systems analyzed include the following:

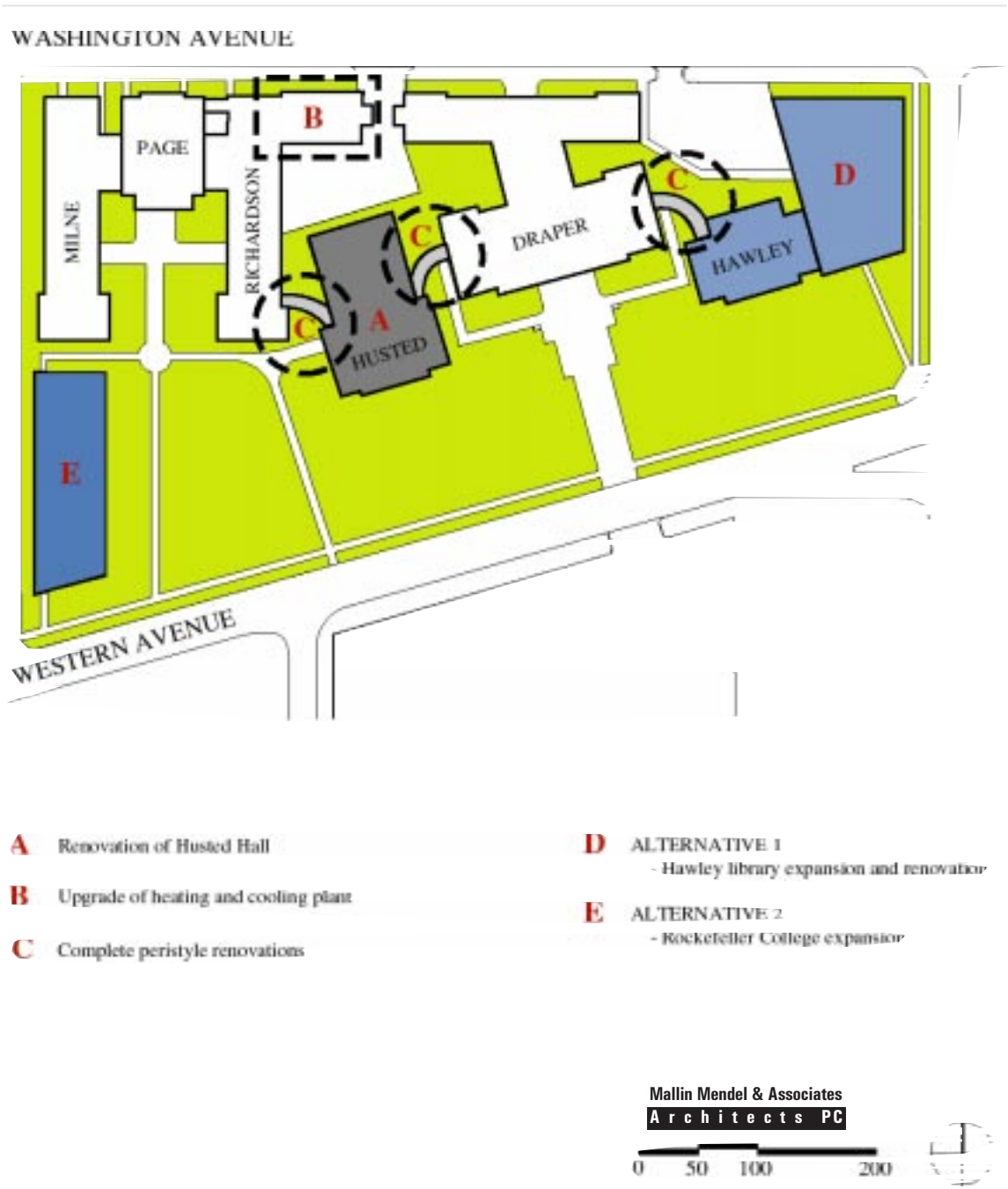
- Central Heating Plant
- Steam and Condensate Distribution Systems
- Site Combined Sanitary/Storm Sewerage System
- Site Water Supply System
- Natural Gas and Fuel Oil Systems
- Power Distribution System
- Fire Detection System

It is anticipated at this time that Master Plan expansion and renovation at the Downtown Campus will be addressed via new connections to existing city utility systems.

Site Improvements

Traffic, Parking and Service

The existing off-street parking supply to the Downtown Campus is generally sufficient to accommodate the 5-year FTE projections. However, the identified 20-space shortfall, if unaddressed, will further exacerbate the competition between the campus users and surrounding community residents for limited on-



Five Year Capital Master Plan - Rockefeller College

Downtown Campus Bus Stop

Downtown Campus Parking

street parking spaces. An Urban Corridor Study, which is to address parking and transportation issues along the Washington Avenue and Western Avenue corridors, has recently been initiated and is supported by the City of Albany, University at Albany, College of Saint Rose, Office of General Services, Capital District Transportation Authority (CDTA), Capital District Transportation Committee (CDTC), Albany School District, Crossgates Mall and several affected neighborhood associations. This study will provide a forum for investigating opportunities to strengthen the pedestrian and bicycle linkages between Alumni Quad and Rockefeller College facilities as well as between the Uptown and Downtown Campuses. These discussions should also explore opportunities for partnerships to increase the general availability of off-street parking within the vicinity of the Downtown Campus to accommodate the projected parking deficit as well as to reduce the present competition for on-street parking in the area. The construction of a parking deck over the Thurlow Lot should be one of the means discussed to accommodate the projected parking deficit.

Project in Design (Pro Forma Project)

Projects in Design are projects which the State University Construction Fund has already funded and scheduled for construction. It is important to know of this work, so that all the other proposals and projects listed in the Project Schedule can be scheduled in a manner that will minimize disruption and multiple moves.

There is one Project in Design scheduled for the Downtown Campus, "Replace Roof- Downtown Campus-Various Buildings", which is scheduled for Year 1 of the Master Plan.

THE LONG RANGE MASTER PLAN FOR THE UPTOWN CAMPUS (6-10 YEARS AND BEYOND)

New Construction

Podium West Extension

This building is required to provide facilities for the considerable growth expected in the social sciences and to provide space for those research centers located on the Downtown Campus and elsewhere off-campus that desire to be close to the academic Podium.

The building is projected to be 86,000 gross square feet and is scheduled for construction in years 7 and 8 of the Master Plan. The site recommended for the building is adjacent to, and west of the Podium (Building Site #3, see "Long Range Master Plan / Uptown Campus 6 -10 years). This site is selected as a building site for three reasons;

- It is on the Social Sciences side of the Podium
- It is adjacent to the Podium
- The building will balance the Research Science building on the east side of the Podium in terms of the strong north-south axis established by the Podium's architecture.

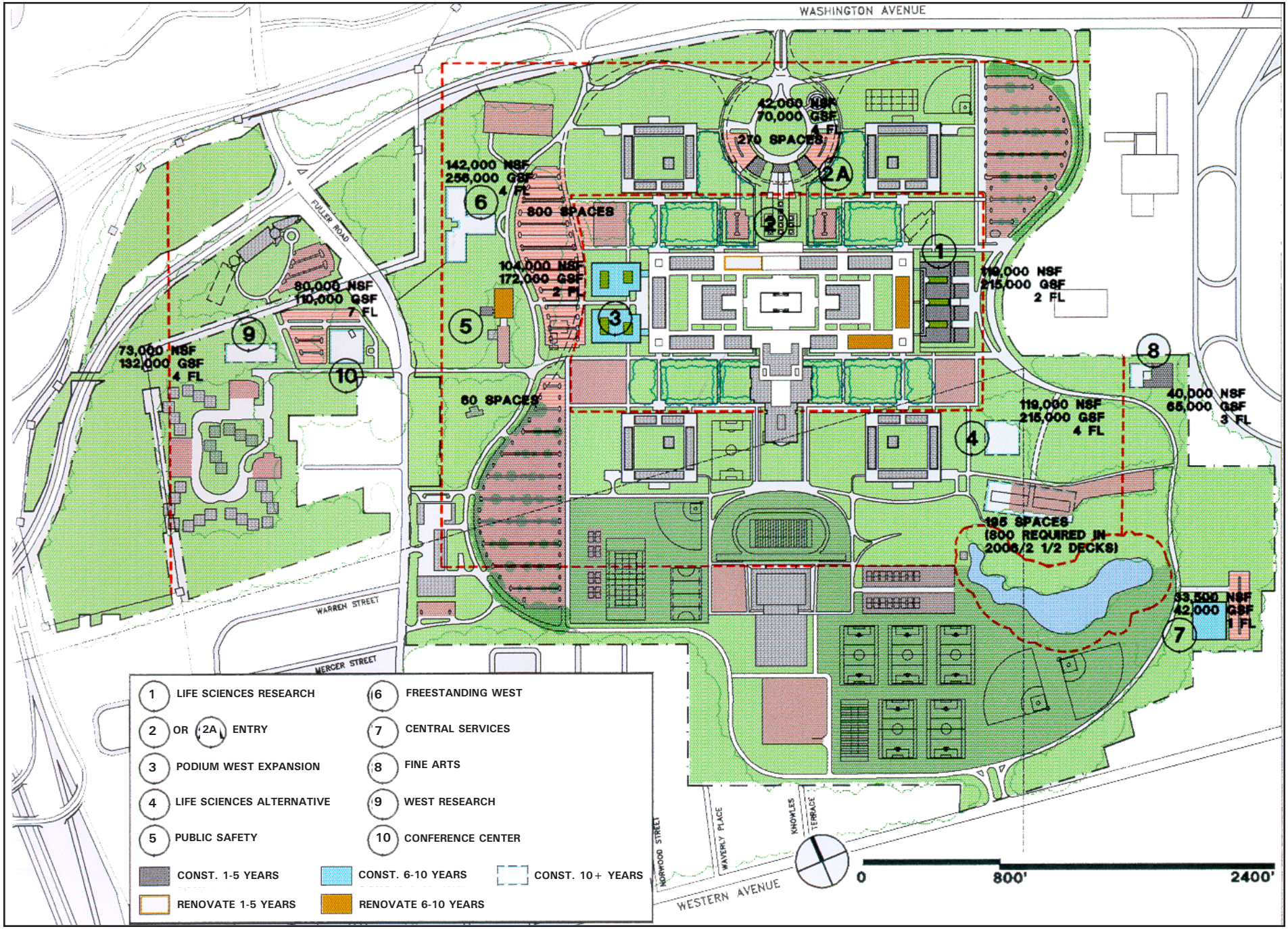
Central Service

One of the condensed, or final, issues that resulted from the early discussions on priorities was, "Support services such as storage, deliveries, shops and warehousing should be relocated." Another issue raised during the discussions that centered around alternative locations for various facilities, was that the current site of the warehouse on the corner of Fuller Road and Tricentennial Drive, is not appropriate for a warehouse function, but should be devoted to a more intensive and visible use such as a conference center.

Thus, a new Central Service building is required to; provide additional space for the expanding University, consolidate many of the storage-warehousing facilities in one place and allow the demolition of the existing warehouse so that the Fuller Road site can be cleared and be made available for other more intensive uses.

The building is projected to be 42,000 gross square feet and is scheduled for construction in year 8 of the Master Plan. The site recommended for the building is in the far eastern part of the campus (Building Site #7), and offers the following advantages;

- It is close to the Western Avenue campus entrance, but far from the academic center of the campus so truck traffic generated by the facility will have a minimum negative impact on the campus
- The site is a clearing in the woods so the construction will take a minimum of trees, but will still provide a buffer of trees around the building and its necessary outdoor storage and vehicle parking areas
- The site is large, so if the University elects to consolidate and centralize more of its central receiving-type functions in the future, it has the area to do so.



Long Range Master Plan - Uptown Campus (6-10 Years)

Beyond Ten Years

The total net space need projected for the Uptown Campus is 526,696 net square feet (see the "Space Program"). Subtracting the Library need of 138,036 NSF (since the new Library is already under construction) leaves a total net space need of 388,660 NSF, or about 641,300 gross square feet (GSF). The Master Plan provides building sites with a total capacity of 1,285,700 GSF. See the accompanying table "Capacity of Proposed Building Sites". Thus, the ten Building Sites provide more than double the capacity to meet the projected needs of the University through the year 2006.

Future parking needs are significant too. The Master Plan proposes a parking deck at the Indian Quad site and an underground parking garage at Collins Circle to provide parking for the University's growth through 2006. See "Traffic, Parking and Service" below.

Renovations

The construction of the Life Sciences Research Building will allow the Biology, Chemistry and Physics research operations to move out of their current facilities so they can be renovated. There is not enough space to renovate all the facilities simultaneously so it is expected that the buildings will be renovated one at a time. Another reason for renovating the buildings one at a time is that any construction on campus will be disruptive and construction on the Podium will be especially disruptive.

In a similar manner, after the Administration Building has been renovated for the College of Arts & Sciences another building on the west side of the Podium can be renovated. This renovation schedule attempts to keep the disruption in one area of the Podium.

The proposed Project Schedule shows the renovation of the former Biology and Chemistry Buildings occurring in Year 6 of the Master Plan. Although it is recognized that the sequence of renovation will be dependent upon many variables that are difficult to predict, the intent is to show that these buildings make sense to renovate first, because they are logical candidates to be emptied first.

Capacity of Proposed Buildings Sites

Site Designation	Proposed Building	NSF	GSF
1	Life Sciences Research	119,000	215,000
2 or 2A	Entry	42,400	70,000
3	Podium West Expansion	104,000	172,000
4	Science Alternative	119,000	215,000
5	Public Safety	5,300	8,700
6	West Hill	142,000	256,000
7	Central Services	33,500	42,000
8	Fine Arts	39,300	65,000
9	West Research	73,000	132,000
10	Conference Center	80,000	110,000
Totals		757,500	1,285,700

Beyond Ten Years

Since the University's facilities are, with a few exceptions, all over 30 years old and since they are lacking in state-of-the-art electronic infrastructure and heating-cooling systems, every building on the Uptown Campus, except those few that are less than 5 or 6 years old, needs to be renovated. The sequencing of such a task can not be accurately forecasted at this time because there are too many unknown variables to consider including possible changes in programs, possible changes in projected overall enrollment and possible changes in projected individual department enrollment, to mention a few.

Furthermore, because of their unique physical facilities and the necessity that their operations not be interrupted, the staging sequence of the Performing Arts Center, the Library and the Physical Education Building would have to be renovated in parts, rather than doing the entire building at once.

Temporary renovations are another consideration, in other words, if a department must move to a temporary space while it waits for its permanent home to be renovated, or if a department is not scheduled to relocate for several years, minor renovations are probably in order for such a department.

Site Improvements

Traffic, Parking and Service

The projected 10-Year growth, as reflected by forecasted FTEs, indicates that future additional parking facilities will be required at the uptown campus. As was shown in Table V-3, it is estimated that the future 10-year parking deficit will be 1,250 spaces. This represents an increase of 680 over the projected 5-year parking shortage. In order to minimize the green space impacts of providing these additional 680 parking spaces, it is recommended that parking structures be considered to meet the future parking demand. Preferred locations for a future parking structure include Indian Quad lot and at the Collins Circle.

1. Indian Quad Structure: Construct a two-level to three-level parking facility adjacent to the existing surface lot. The accessibility to this lot will be increased as a result of future construction of academic facilities in this area of the campus. Providing a decked facility at the Indian lot will also provide strategically located parking for high-attendance events such as athletic competitions, concerts, etc. The existing landscape in this area will also minimize the visual impacts of a parking structure at this site.

2. Collins Circle Structure: In order to preserve the visual qualities of the "front door" to the Uptown Campus, it is recommended that a parking structure at the Collins Circle be constructed as an underground facility. This parking garage could be integrated with the pedestrian passage connecting Collins Circle and the Podium. A parking facility at this location can provide ample and convenient parking to the academic core of the campus and will also, by being out of sight, complement the Master Plan provision for development of a landmark entrance building at the Collins Circle.

Table V-3a
University at Albany Campus Master Plan
Parking Needs Estimate

	Existing		Projected 2001			Projected 2006		
	Existing FTEs (1995)	Existing Peak Parking Demand	Projected FTEs	Estimated Peak Parking Demand	Estimated Parking Surplus/Deficit (See Note)	Projected FTEs	Estimated Peak Parking Demand	Estimated Parking Surplus/Deficit (See Note)
Uptown Campus	12,320	4,200	13,984	4,770	-570	15,970	5,450	-1,250
Downtown Campus	1,180	310	1,244	330	-20	1,308	350	-40
Total	13,500	4,510	15,228	5,100	-590	17,278	5,800	-1,290

Note: The estimated parking deficit in the years 2001 and 2006 are in addition to the spaces required to relocate parking from the Podium area of the Uptown Campus and from the courtyard areas of the Downtown Campus.

Building Name	Building Designation	No. of Floors	GSF
Podium West Expansion Ph I	3	2	86,000
Central Service	7	2	42,000
Biology Renovation	G(R)		84,000
Chemistry Renovation	H(R)		72,800
Health Center Renovation	I(R)	2	15,400
West Research	9	4	132,000
Conference Center	10	7	110,000
Freestanding West	6	4	256,000
Podium West Expansion Ph II	3	2	86,000

Site Utilities

1.0 Introduction

This section of the report examines the impact of new building construction and existing building renovations on the existing site utility systems. The analysis is based upon the following Long Range Master Plan construction schedule (for years 6-10 and beyond) which is summarized in the accompanying chart:

The site utility systems analyzed include the following:

- Central Heating/Cooling Plant
- Site Chilled Water (CHW) and High Temperature
- Hot Water (HTHW) Distribution Systems
- Site Sanitary and Storm Drainage Piping
- Site Water Supply System
- Site Natural Gas
- Power Distribution System
- Site Lighting
- Fire Alarm System

2.0 Site Utility System Analysis

2.1 Central Heating / Cooling Plant and Site CHW and HTHW Distribution Systems

Tables V-4 and V-5 identify new central plant and independent loads for years 6-10 and beyond 10 years, respectively. A summary of the important trends is as follows:

- Most new central cooling loads occur by year 10, and this new load represents a 30% increase to existing central plant maximum capacity.
- About half of the new central heating load occurs by year 10, and the new load represents a 15% increase to existing plant rated load.
- The most significant new independent cooling requirements occur beyond 10 years.
- The new independent heating (3925 MBH) is very small.

Recommendations

CENTRAL PLANT EXPANSION

Central Plant expansion required to accommodate the cooling and heating loads associated with the construction of new buildings and renovations to existing buildings planned for years 6 thru 10 and beyond is addressed in the section entitled "Five Year Capital Master Plan for the Uptown Campus".

INDEPENDENT SYSTEM TYPES

The final decision as to what type of independent cooling and heating systems should be installed in the buildings which will not be attached to the Central Plant cannot be made at this time. Likely candidates are centrifugal electric or gas absorption chillers for cooling; and gas-fired low temperature hot water for heating.

TABLE V-4
ALBANY MASTER PLAN
COOLING AND HEATING LOADS
EXPANSION AND RENOVATION DURING YEARS 6-10

Bldg	Name	GSF	Additional Tons Cooling	Additional HTG MBH	Cooling Source	Heating Source	Comments
E	Podium West Extension PHI.	86,000	220 Tons	4000 MBH	Central	Central	New.
F	Central Receiving	42,000	110 Tons	2000 MBH	Independent	Independent	New.
G(R)	Biology Renovation	84,000	170 Tons*	2250 MBH*	Central	Central	Renov.
H(R)	Chemistry Renovation	72,800	150 Tons*	1950 MBH*	Central	Central	Renov.
I(R)	Health Center Renovation	15,400	30 Tons*	400 MBH*	Independent	Independent	Renov.
		300,200	680 Tons	10600 MBH			

Total Central Plant Cooling Yrs. 6-10 — 540 Tons x .8 Div = 430 Tons
Total Independent Cooling Yrs 6-10 — 140 Tons x .9 Div = 125 Tons

Total Central Plant Heating Yrs 6-10 — 8200 MBH x .9 Div = 7380 MBH
Total Independent Heating Yrs 6-10 — 2400 MBH x 1.0 Div = 2400 MBH

*40% increase in cooling and heating.

TABLE V-5
ALBANY MASTER PLAN
COOLING AND HEATING LOADS
EXPANSION DURING YEARS 10 AND BEYOND

Bldg	Name	GSF	Additional Tons Cooling	Additional MBH HTG	Cooling Source	Heating Source	Comments
J1	Academic	132,000	330 Tons	6,100 MBH	Independent	Central	
J2	Academic	60,000	150 Tons	2,800 MBH	Independent	Central	
J3	Academic	256,000	640 Tons	11,800 MBH	Independent	Central	
J4	Academic	86,000	215 Tons	4,000 MBH	Central	Central	
J5	Academic	60,600	150 Tons	2,800 MBH	Independent	Independent	
	Totals	594,500 GSF	1485 Tons	27,500 MBH			

Total Central Plant Cooling Yr 10+...215 Tons x .8 Div = 175 Tons.
Total Independent Cooling Yrs 10+...1270 Tons x .9 Div = 1140 Tons.

Total Central Plant Heating Yr. 10+...24700 MBH x .9 Div = 22200 MBH.
Total Independent Heating Yr 10+...2800 x 1.0 Div = 2800 MBH.

BUILDING	ID	GSF	MAX FLOW (CFS)	RECOMMENDED SUBSYSTEM CONNECTION
Podium West Expansion Phase I	E	86,000	0.08	Washington Avenue
Central Services	F	42,000	0.04	Western Avenue
Biology Renovation	G(R)	84,000	*	
Chemistry Renovation	H(R)	72,800	*	
Health Center Renovation	I(R)	15,400	*	
West Research	9	132,000	0.13	Washington Avenue
Conference Center	10	110,000	0.11	Washington Avenue
Freestanding West	6	256,000	0.25	Washington Avenue
Podium West Expansion Phase II	3	86,000	0.08	Washington Avenue

* Note: It is anticipated that renovations to the existing Biology, Chemistry, and Health Center Buildings will not significantly alter the sanitary flow requirements of these buildings, and that modifications to the existing sanitary systems presently in service will not be required.

CHW AND HTHW DISTRIBUTION

The drawing "Long Term Master Plan Modifications to CHW/HTHW" illustrates our recommendations for modifications to the CHW and HTHW distribution piping systems associated with new building construction and existing building renovations. The drawing indicates those buildings for which a connection to the Central Plant heating and cooling systems is recommended. In addition, buildings for which an independent cooling and/or heating system is recommended are identified.

2.2 Site Sanitary and Storm Drainage Piping

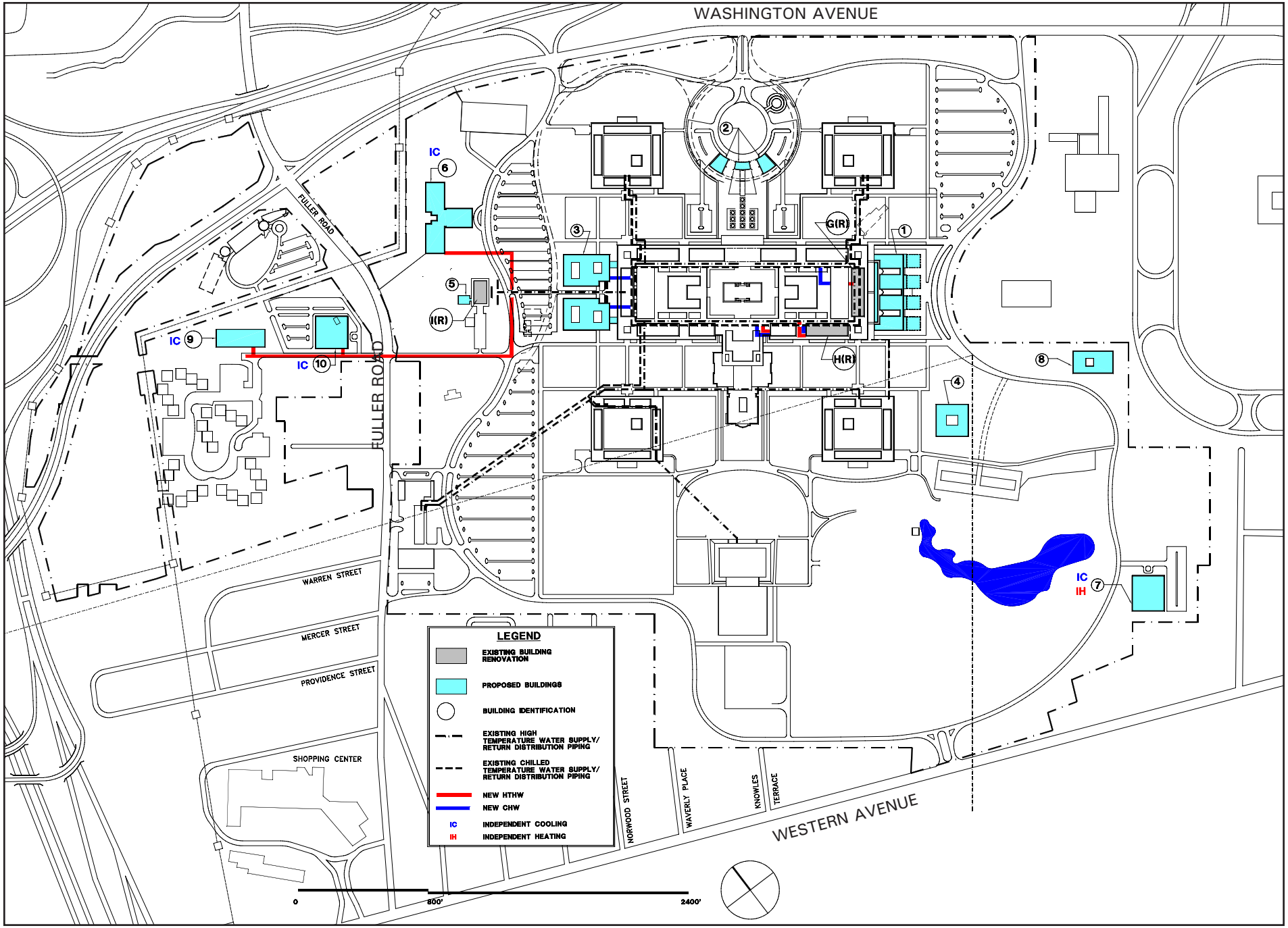
2.2.1 Sanitary Sewerage System

The estimated sanitary flow requirement for each new building is summarized in the accompanying chart:

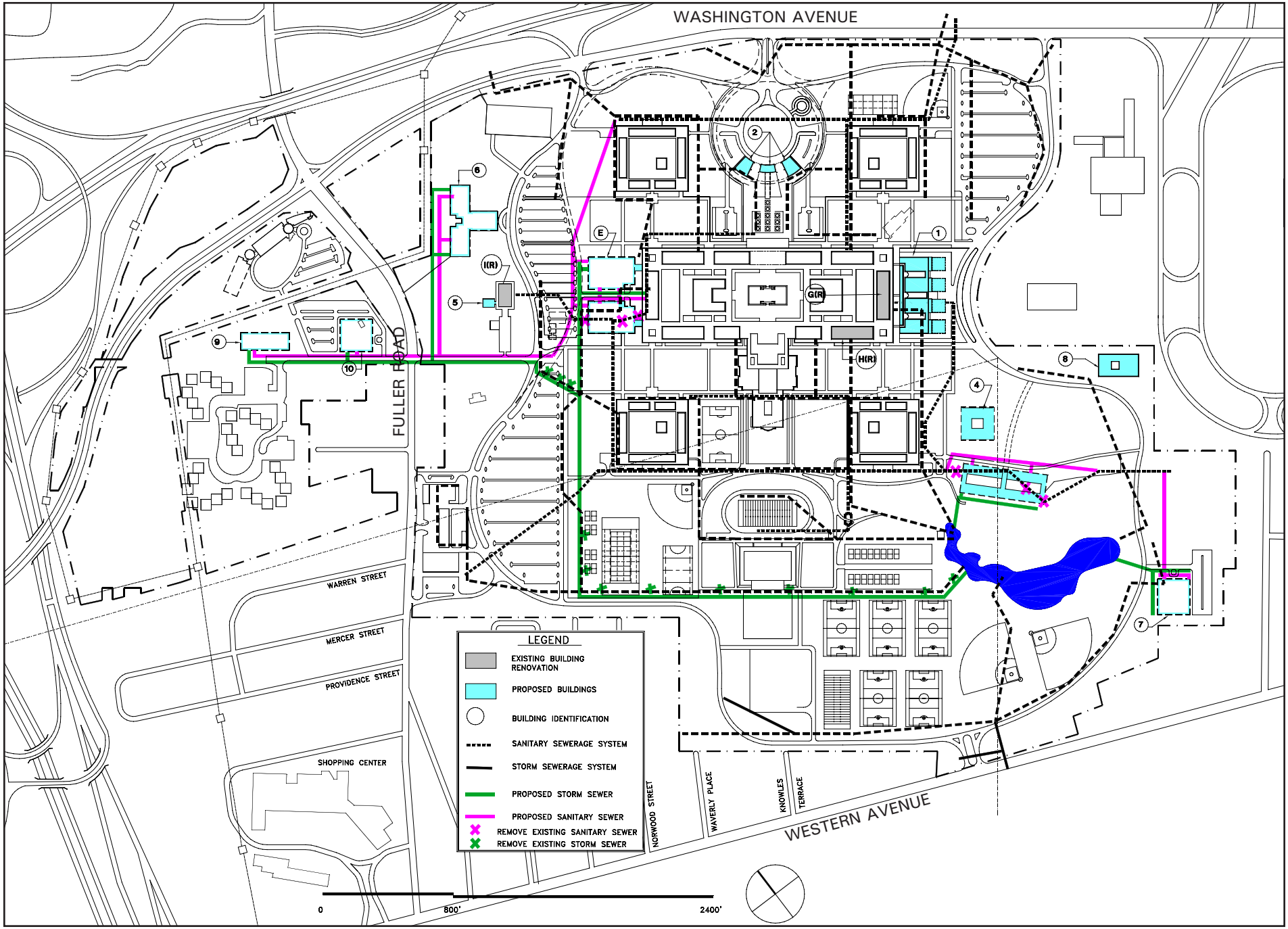
Recommendation

The condition assessment report for the site sanitary sewerage system indicates that the Washington Avenue subsystem (which serves the northern section of the campus) has approximately 25% spare capacity, while the Western Avenue subsystem (serving the southern half of the campus) is presently operating at or near its maximum capacity. In addition, the Western Avenue subsystem piping is currently experiencing severe tree root damage. Since there is no reserve capacity in the Western Avenue subsystem, it is recommended that most of the new buildings planned for years 6 thru 10 and beyond (i.e., Buildings 3,6,9 and 10) be connected to the Washington Avenue subsystem in order to alleviate the imbalance on the two sanitary subsystems which currently exists.

To this end, the drawing "Long Term Master Plan Modification to Storm/Sanitary" illustrates our Long Range Master Plan recommendations for modifications to the sanitary sewerage collection system, including all new collectors and connections to the existing system. New connections to



Long Range Master Plan Modifications to CHW/HTHW



Long Range Master Plan Modifications to Storm/Sanitary

the Western Avenue subsystem will be from the Central Service Building. In order to compensate for the increased loading this will introduce to this subsystem, we also recommend that the sanitary collectors currently serving the western side of the Podium (i.e., near the Social Sciences and Library Buildings) be disconnected from the Western Avenue subsystem, and a new sanitary service line be installed as indicated on the drawing "Long Term Master Plan Modifications to Storm/Sanitary". This new sanitary piping will be installed in this area to accommodate Buildings 3, 5, 6, 9, and 10, and to connect these buildings to the Washington Avenue subsystem. This will further alleviate the problem of overloading in the Western Avenue subsystem.

Segments of the Western Avenue subsystem will be disturbed by the construction of the proposed parking deck near Indian Quad. These sanitary collector segments will have to be relocated as indicated on the drawing "Long Term Master Plan Modifications to Storm / Sanitary".

2.2.2 Storm Drainage System

The estimated storm flow requirement for each new building is summarized in the accompanying chart.

Recommendation

The condition assessment report for the site storm drainage system indicates that of the eight (8) subsystems serving the campus, only subsystems No. 5 and No. 6 are operating at above capacity during a design rainfall event; all other subsystems have an estimated 5-10% reserve capacity.

As noted in the condition assessment, subsystem No. 6 is undersized by approximately 35%. We therefor recommend that a new storm sewer collector be installed as indicated on the drawing "Long Term Master Plan Modification to Storm/ Sanitary" to serve Buildings 3, 5, 6, 9, and 10. Buildings 7 and the Indian Quad parking deck will

BUILDING	ID	GSF	MAX FLOW (1) (CFS)	RECOMMENDED SUBSYSTEM CONNECTION
Podium West Expansion Phase I	3	86,000	5.63	New
Central Receiving	7	60,600	2.74	New
Biology Renovation	G(R)	84,000	*	
Chemistry Renovation	H(R)	72,800	*	
Health Center Renovation	I(R)	15,400	*	
West Research	9	132,000	4.32	New
Conference Center	10	110,000	2.05	New
Freestanding West	6	256,000	8.37	New
Podium West Expansion Phase II	3	86,000	5.63	New

* Note: It is anticipated that renovations to the existing Biology, Chemistry, and Health Center Buildings will not significantly alter the storm flows from these buildings, and that modifications to the existing storm systems presently in service will not be required.

1. Storm flows are estimated using the Rational formula Q=CIA, where C is the runoff coefficient (equal to 0.95 for roof surfaces), I is the rainfall intensity measured in inches per hour (equal to 6 inches per hour for a 10 year storm event and a time of concentration of 5 minutes), and A is the drainage area in acres.

BUILDING	ID	GSF	MAX FLOW (GPM) (1)
Podium West Expansion Phase I	3	86,000	37
Central Receiving	7	42,000	18
Biology Renovation	G(R)	84,000	*
Chemistry Renovation	H(R)	72,800	*
Health Center Renovation	I(R)	15,400	*
West Research	9	132,000	57
Conference Center	10	110,000	47
Freestanding West	6	256,000	110
Podium West Expansion Phase II	3	86,000	37
TOTAL			**306**

* **Note:** It is assumed that renovations to the existing Biology, Chemistry, and Health Center Buildings will not significantly alter the water demand of these buildings, and that modifications to the existing services will not be required.

1. Assumptions: Anticipated GSF after all new construction: 4,135,000
Projected No. Full Time Equivalent Students: 15,648
Floor area per student: 265 sq.ft
Daily Water demand: 20 gal per equivalent student
or, 75 gpd / 1000 sq. ft.
Peak demand based on 12 hour duration with
2.5 diversity factor and 1.65 safety factor to account for laboratory demand and other miscellaneous. requirements:

$$\text{Max Flow} = \frac{75 \times 1.65 \times 2.5}{12 \text{ hrs} \times 60} = 0.43 \text{ gpm/1000 sq.ft.}$$

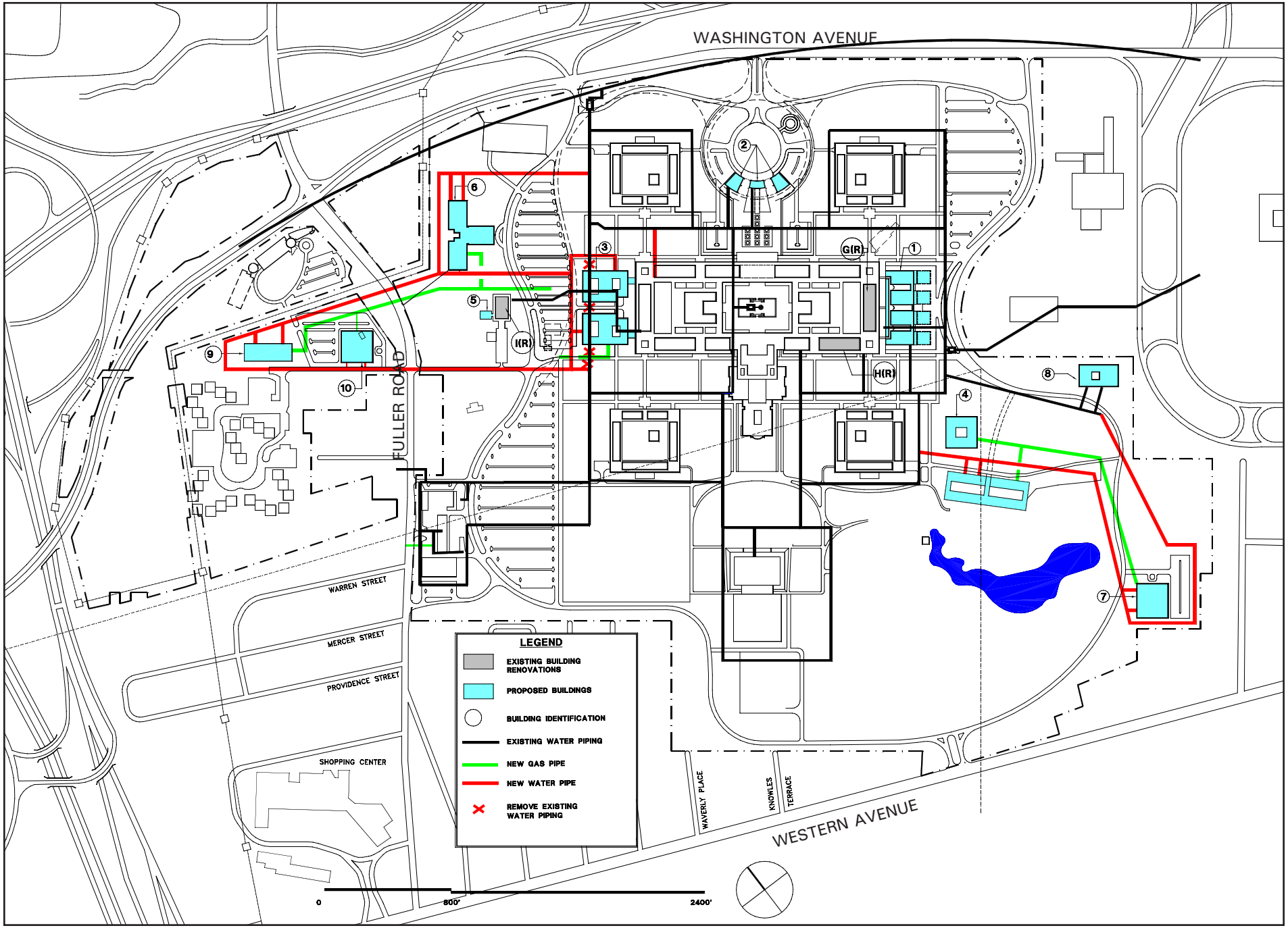
The additional 306 GPM, together with the 133 GPM calculated for years 1-5, constitute a total increase of 439 GPM. With this addition to the current demand of 1330 GPM, the total water demand will be 1769 GPM, which is a 33% increase.

require new storm sewer subsystems discharging directly into the on-site pond located in the south-east area of the Campus. The estimated storm flows from these buildings are sufficiently large to merit a separate subsystem for each.

The drawing "Long Term Master Plan Modifications to Storm/Sanitary" illustrates the Long Range Master Plan recommendations for modifications to the site storm distribution piping system, including all new storm sewer collection piping and connections to the existing system.

2.3 Site Water Supply System

The estimated domestic water requirements for buildings to be constructed during years 6 thru 10 and beyond are summarized in the accompanying chart.



Long Range Master Plan Modifications to Site Water/Gas

Building Name	Square Footage	General Power & Lighting (kW)	Cooling & Heating (kW)	Total (kW)
Podium West Extension II	86,000	370	220	590
Central Service	42,000	181	110	291
Biology Renovation	84,000	395	170	565
Chemistry Renovation	72,800	342	150	492
Health Center Renovation	15,400	72	30	102
West Research	132,000	620	330	950
Conference Center	110,000	517	275	792
Freestanding West	256,000	1,203	640	1,843
Podium West Extension II	86,000	404	215	619

Subtotal (kW)	6,244
Coincidental Demand Factor	80%
Coincidental Demand (kW)	4,995
Power Factor	85%
Total Demand Load (kVA)	5,876

The drawing "Long Term Master Plan Modifications to Electrical Systems" illustrates the 6+ year Master Plan recommendations to the site electric power ductbank system. The proposed ductbank plan takes into account the ductbanks proposed in the 1-5 year plan.

Recommendation

The total estimated long term load flowing through a 12 inch loop will result in a flow velocity of 2.5 fps and a friction loss of 1.7 ft. per 1000 feet of pipe. If the full load is applied to a single 12 inch line (e.g. when one service is in operation), the flow velocity will be 5.0 fps with a friction loss of 6.2 ft. per 1000 feet of pipe (0.62%). Both values are well within the usually accepted ranges for velocity (less than 6 fps) and friction loss (less than 1%).

Assuming that the maximum fire protection demand for the building systems is 1500 GPM, this would result in a maximum flow of 3269 GPM in the system, or 1635 GPM in each 12 inch leg. This is again acceptable from the standpoint of maximum fluid velocity (4.6 ft. per sec.) and friction loss (5.4 ft. per 1000 feet of pipe). Finally, assuming an outside fire demand of 2500 GPM (not simultaneous with the fire demand inside the buildings) total system flow of 4269 GPM, or 2135 GPM per 12 inch leg. Velocity and friction loss in this case will be 6 fps and 8.9 ft. per 1000 linear feet (0.89%), both of which are acceptable.

We conclude, therefore, that all new campus buildings can be accommodated by expanding the existing 12 inch main multi-loop site distribution system to cover areas of new construction. New water mains should be equipped with fire hydrants and will be used to supply both domestic and fire water service to the new buildings.

The drawing "Long Term Master Plan Modifications to Site Water/Gas" illustrates our recommendations for modifications to the site water distribution system. Construction of the Podium West Extension will necessitate the installation of a new 12 inch water service to the Podium to replace the existing service located within the footprint of the new building.

2.4 Site Natural Gas

2.4.1 Central Heating Plant

Recommendations concerning upgrades to the gas service to the Central Plant are discussed in the Five Year Capital Master Plan. Due to an anticipated increase in Natural Gas demand for the Central Plant, we recommend replacing the 2 inch high pressure gas service which currently serves the Central Plant with a 3 inch service.

2.4.2 Site Distribution

Recommendation

The drawing "Long Term Master Plan Modifications to Site Water/Gas" illustrates our recommendations for modifications to the site Natural Gas system, including all new distribution piping and connections to the existing system. With the exception of the Central Heating Plant, which is supplied with Natural Gas from Fuller Road, the campus buildings are currently supplied with gas from two (2)-4 inch high pressure lines connected to the high pressure main located on Washington Avenue. We feel that the capacity of the two (2)-4 in. lines is substantially in excess of the present and future needs of the campus. New underground piping will have to be installed to supply gas to the new buildings. These lines can be connected to the nearest existing site main. Pressure regulators and meters will be installed at each building. If the Podium West Extension requires gas service, this can be supplied from the Podium.

2.5 Site Electric Power

Load Growth Projections:

With the construction or renovation of nine buildings in years 6+, the demand for power will increase accordingly. This increase is a net increase in electrical power demand over that estimated in the 1-5 year plan. The estimated electrical demand for the nine buildings is shown in the table on the preceding page. The cooling and heating demand for each building was estimated as the total cooling load only. Since the cooling season and the heating season are non-coincidental, the sum of the two demands would be artificially high; therefore, only the higher of the two, cooling, was used for the estimate. Although it is not known at this time whether the type of cooling and/or heating system would be a central plant or an independent system, an independent system was estimated as the worst case condition for electrical demand.

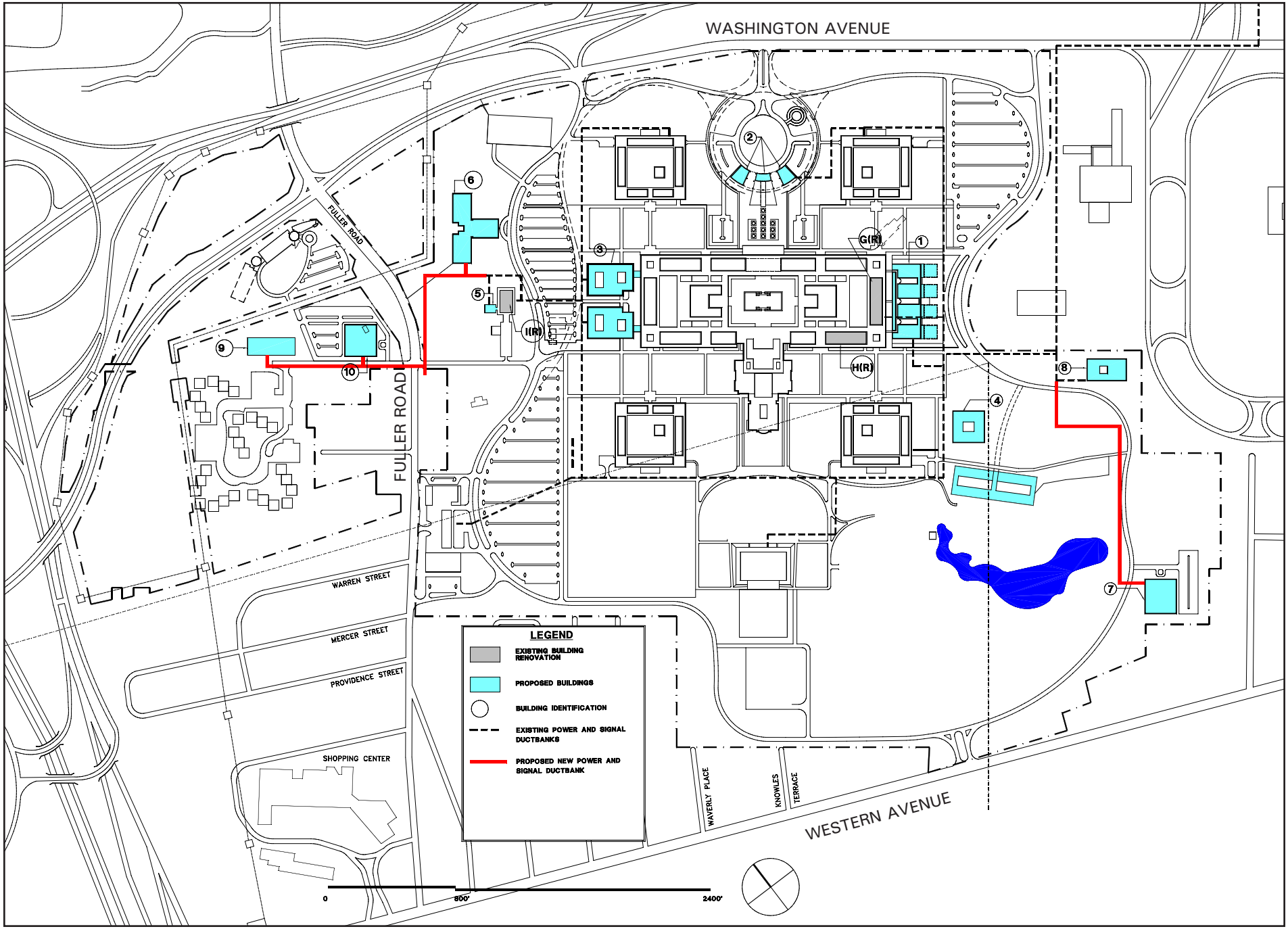
Total Projected Load:

The sum of the total projected load during years 1-5 and the projected load growth during years 6-10 will yield the total projected load for the campus. The total projected load is 24,276 kVA, assuming a power factor of 85%, and is shown calculated below.

Total Load, Years 1-5 (kVA)	18,400
Projected Load, Years 6+ (kVA)	5,876
Total Load, Years 6+ (kVA)	24,276

Power Distribution System:

In order to accommodate a future projected growth for years 6-10, major modifications to the existing power distribution system are necessary. The existing system using feeders from only the OGS substation will be incapable of providing adequate power to all campus loads. A supplemental power distribution system is needed such as a new on-campus substation, a second utility source, or perhaps an increase in the distribution voltage as previously described.



Long Range Master Plan Modifications to Electrical Systems

THE LONG RANGE MASTER PLAN FOR THE DOWNTOWN CAMPUS (6-10 YEARS AND BEYOND)

The Long Range Master Plan completes the recommended work tasks at the Downtown Campus, including the full reconstruction of Rockefeller College and the Recommissioning of Alumni Quad.

New Construction

Rockefeller College

As part of the long term development of the downtown Campus the expansion of the college facilities should be undertaken in accordance with one of the following Alternatives:

Alternative No. 1: Hawley Library Expansion and Renovation. Construct the approximately 44,300 gsf addition to the Hawley Library and renovate the existing building (Rockefeller College Task No. 1). This alternative provides a major modernized and expanded academic resource for the support of the College's programs.

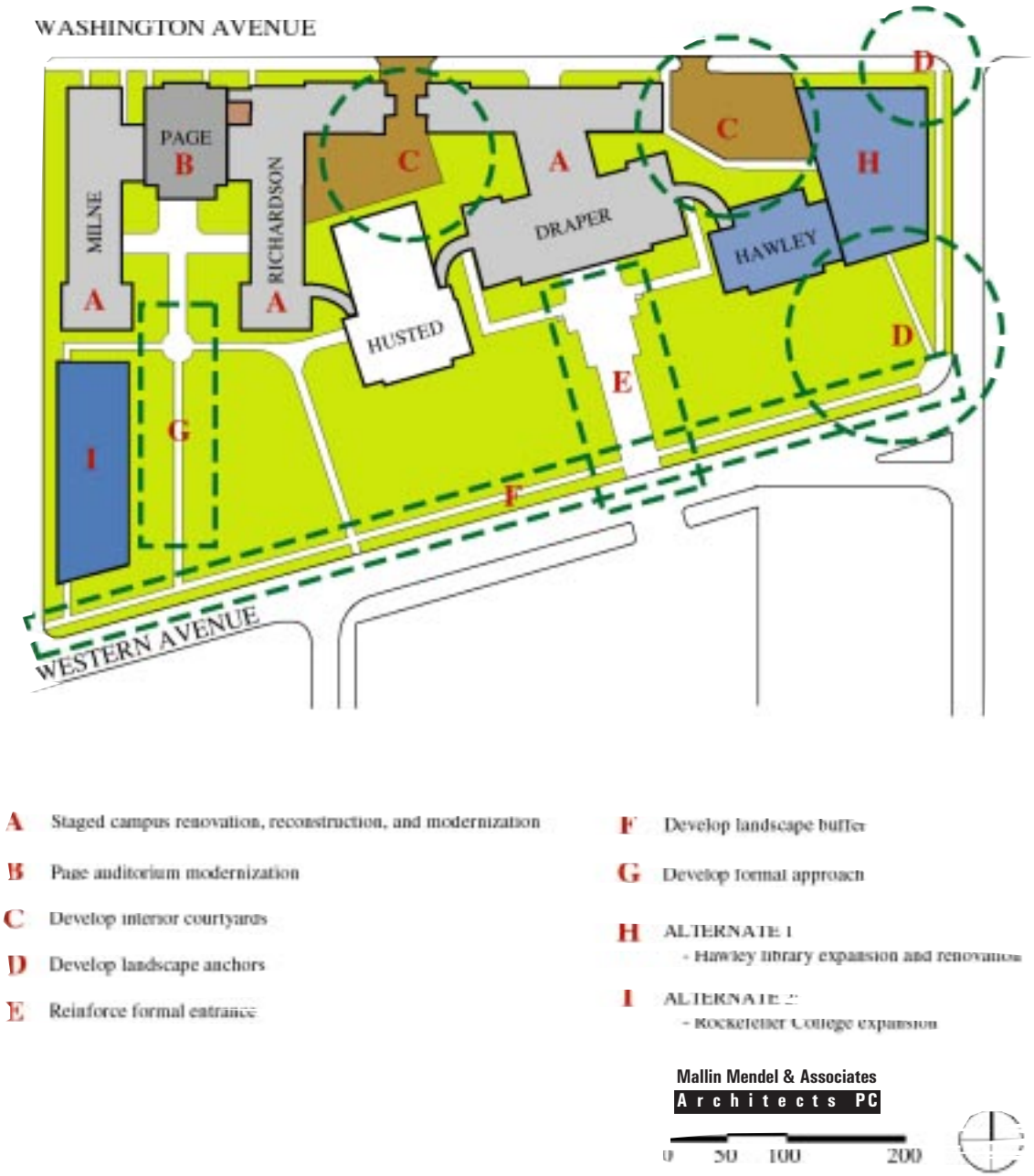
Alternative No. 2: Rockefeller College Expansion Building. Construct the approximately 52,842 gsf new building anchoring the western border of the camps, immediately south of Milne Hall (Rockefeller College Task No. 2). This alternative provides new general academic classrooms and instructional space.

Renovations

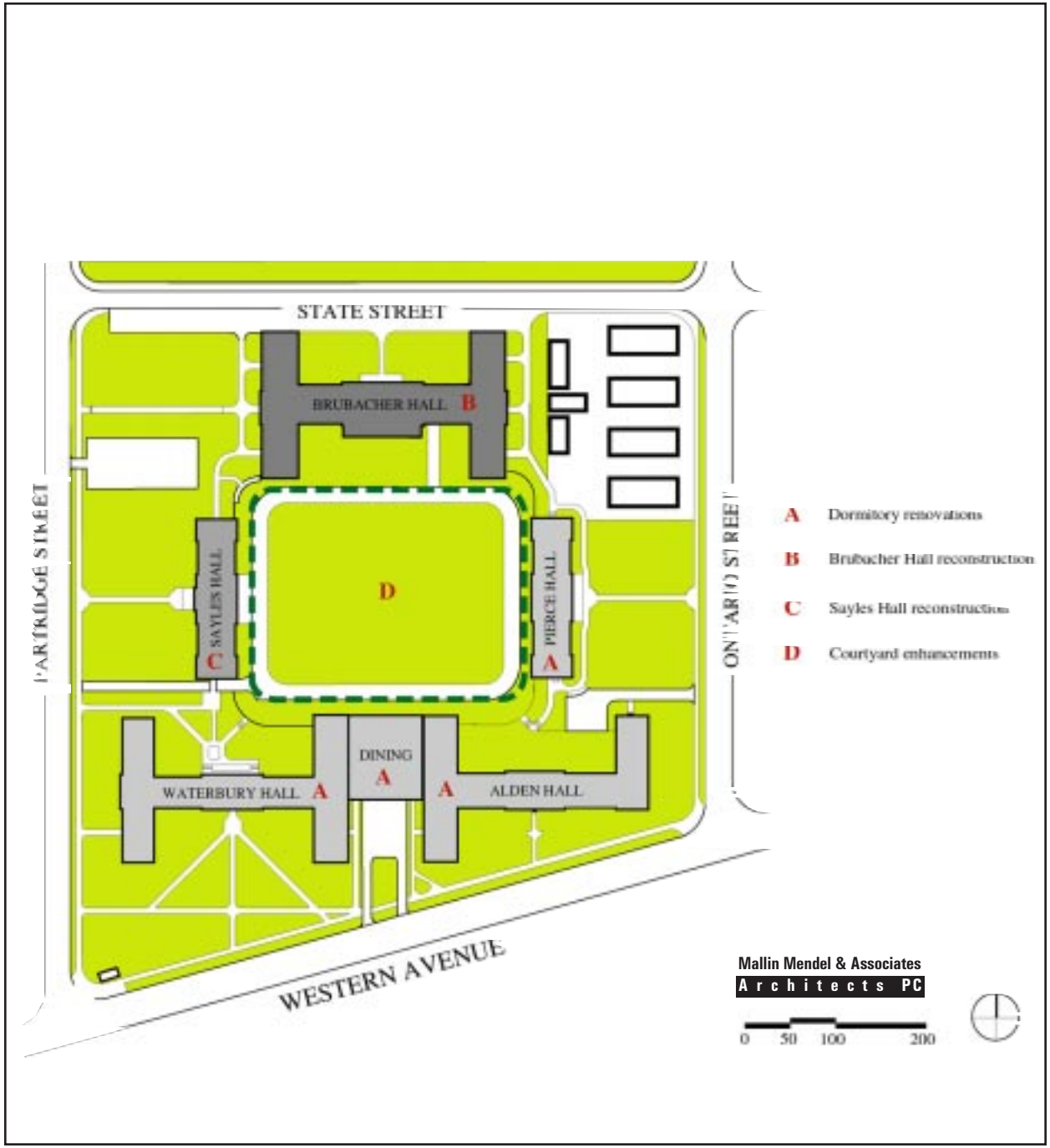
Rockefeller College

The long range plan provides for the reconstruction of the remainder of the Rockefeller College, including the modernization of the existing buildings and recommended sitework.

This work includes:
Rockefeller College Reconstruction. The staged



Long Range Master Plan - Rockefeller College



reconstruction of Draper Hall, Richardson Hall and Milne Hall. These renovations would be scheduled to best fit the specific requirements of the College, to match proposed functional adjacencies, department consolidations and requirements of the mechanical and electrical system upgrades.

Page Auditorium Modernization. The renovation and equipment upgrade of the existing Auditorium facility.

Landscape Improvements. This work includes the development of the interior courtyards, the development of landscaped anchors, the entrance to Draper Hall, the Western Avenue landscaped buffer and the formal approach to the Page Hall Courtyard.

Alumni Quad

The Master Plan recommendations for Alumni Quad all fall within the bounds of the Long Range Master Plan implementation. The proposed renovations should be staged to match the demands of the projected increases in the University enrollment.

Dormitory Renovations - The phased renovation and modernization of Pierce Hall, Alden Hall, Waterbury Hall and the existing cafeteria and kitchen facility. These renovations will provide the required residential space support as the University enrollment increases.

Brubacher Hall and Sayles Hall Renovations - The renovation of the remaining Alumni Quad Buildings are differentiated by two simple concerns. At Brubacher Hall, the lower two floors are to remain occupied by the College of Saint Rose. At Sayles Hall, consideration should be given to its development as a potential Conference Center rather than as an additional dormitory facility, if the University decides not to develop a Conference Center on the Uptown Campus.

Courtyard and Landscape Enhancements. This work includes the development of the quadrangle courtyard as well as improvements to the campus lawns.

Long Range Master Plan - Alumni Quad

Funding for those recommendations on Alumni Quad will be paid for out of Room Rents received by the University.

Site Improvements

Traffic, Parking and Service

The projected 10-Year parking requirements for the Downtown Campus shows that a modest parking shortage will occur as a result of the future academic uses. It is estimated that 20 parking spaces beyond those identified in the 5-Year plan will be required to meet the demand. Additionally, expansion of the Hawley Library and development of interior courtyards at Draper hall would displace approximately 90 existing spaces. Considerations for replacement of this parking should be addressed within the context of the comprehensive Urban Corridor Study that is currently underway. It is also noted that the potential exists to provide a parking deck at the campus' Thurlow Terrace parking lot to increase the off-street parking supply.

Site Utilities

The site utility systems analyzed include the following:

- Central Heating Plant
- Steam and Condensate Distribution Systems
- Site Combined Sanitary/Storm Sewerage System
- Site Water Supply System
- Natural Gas and Fuel Oil Systems
- Power Distribution System
- Fire Detection System

It is anticipated at this time that Master Plan expansion and renovation at the Downtown Campus will be addressed via new connections to existing city utility systems.

FUNDING

State University Construction Fund Funding

The graphic, "Project Schedule", referred to at the beginning of this section, shows all the Master Plan's projects over a 10-year period organized in six categories;

1. New Construction
2. Renovations
3. Special Projects
4. Site Utilities
5. Site Improvements
6. Projects in Design

As mentioned earlier, this graphic provides a recommended schedule for the design and construction of each project.

The funding for all the projects and/or items listed in the Project Schedule under, "New Construction", "Renovations", "Site Utilities", and ,"Projects in Design", is the responsibility of the State University Construction Fund (SUCF).

Potential Shared Funding

Those items under, "Site Improvements", that can logically be included in the cost of a new building, such as lighting, signage, and landscaping associated with a new building will be funded by the SUCF as a part of the funding for the building concerned.

Parking structures are the responsibility of the University, as are any parking spaces being relocated, as are the parking spaces now surrounding the Podium, for example. To the extent, however, that SUCF is responsible for any new road infrastructure that is required for safety and/or growth reasons, SUCF will contribute to grading, drainage and lighting of new parking areas directly affiliated with the new road construction.

Potential Special Projects

The four projects listed here, (Lighting Design, Landscape Design, Winterize Central Court Study, and Graphic Manual Design) are, obviously, not construction projects, but are design and feasibility study projects. Therefore , funding for these special projects would be the responsibility of SUCF to the extent that the subject of each design or study could be linked to the eventual construction of a SUCF funded building.

PRIORITIES ESTABLISHED BY THE MASTER PLAN

Great Needs and Limited Funds

The University at Albany is housed in a plant over 30 years old and is projected to grow from 13,674 full time equivalent (FTE) students to 17,475 FTE students by the year 2006, a 27.8% growth in the student body. The non-residential facilities required to serve this projected growth must grow from the current 1,573,568 net square feet to 2,159,137 net square feet, a net growth of 585,569 net square feet, or 37.2 %. In other words, the University's physical plant must grow by over a third of its existing size in the next 10 years to meet its enrollment projections. In addition to this new growth, the vast majority of the buildings at both the Uptown and Downtown Campuses are in need of major renovation.

In the face of this need as expressed by one institution, the SUCF is obligated to serve the needs of 38 institutions of higher learning in New York with limited funding. At their meeting of June 26, 1997, the Steering Committee discussed the priorities of their many and varied needs recognizing that the funds available for new construction, major renovations site improvements and capital maintenance project would probably be about $100 million over the first 5 years of the Master Plan.

Highest Priority Projects

The "Project Schedule" graphic reflects the outcome of that meeting. All the projects listed on the Project Schedule have high priority and those projects occurring first have the highest priority. There are four new building construction projects that have the highest priority:

1. Public Safety Building (Uptown)
2. Life Sciences Research Building (Uptown)
3. Sculpture Studio (Uptown)
4. Entry Building (Uptown)

The four renovation projects receiving the highest priority are:
- Upgrade Heating-Cooling Plant (Downtown)
- Podium Internal Circulation (Uptown)
- Former Administration Building (Uptown)
- Husted Hall (Downtown)

The six site improvements with the highest priority are;
- Realign West Perimeter Road and Collins Circle and make Selected Intersection Improvements (Uptown)
- Relocate Parking Away From Podium (Uptown)
- Construct Entry Passage at Entry Plaza (Uptown)
- Improve Landscaping at Entry Plaza (Uptown)
- Improve Graphics and Signage (Uptown and Downtown)
- Improve Lighting (Uptown and Downtown)

High Priority Projects

Assuming that the highest priority projects would be in put in place within Years 1-5 of the Master Plan, the University would then have sufficient surge space to begin the massive major renovation work it requires. During Years 6-10 of the Master Plan the following high priority renovation projects would be implemented;
- Former Biology Building (Uptown)
- Former Chemistry Building (Uptown)
- Health Center Building (Uptown)
- Hawley Library (Downtown)

The high priority new construction projects scheduled for Years 6-10 are;
- Podium West Extension Building (Uptown)
- Central Service (Uptown)

The reasons that these new construction, renovation and site improvement projects have the highest priorities among the many potential projects at the University are discussed in "Alternative Concepts".

Summary

On at least two other occasions in its 153-year history, the institution now known as the University at Albany, has had to undergo major changes in facilities and curriculum to meet the demands of a changing society. Today, with technological and research needs increasing rapidly, a similar challenge faces the University once again. At present, the existing needs cannot be adequately met in the University's aging facilities as they are now configured. The present shortfall can only become worse as the University attempts to meet its considerable projected growth in the next ten years.

This Master Plan is the first step in meeting the challenge before the University at Albany. It will only be a meaningful first step, however, if the support for the Plan that has been demonstrated within the University and from the wider community of which the University is a part, is also demonstrated by all the important jurisdictions that guide and fund the University.

The implementation of the construction, renovation, and site improvement projects proposed by this Master Plan, along with the continuing implementation of unlisted, but significant, capital maintenance projects would see the University at Albany meet all of its stated Goals and most of its stated Objectives within the time frame of the Master Plan.