Executive Summary

The following document, dated December 16, 2002, is the update of the University of Central Florida's Main Campus Master Plan for the period 2000-2010. This update is presented for review and comment by the Division of Colleges and Universities (DCU) and with their approval, for public review in accordance with Florida Statutes Division of Colleges and Universities.

The Master Plan consists of seventeen (17) elements indicated by a tab and corresponding element number. Each element contains the Master Plan Goals, Objectives and Policies and appropriate figures. Additionally, for reference purposes, the summarized data in the form of the Data Analysis for each element has been included herein in a separate section following the Master Plan Goals, Objectives and Policies section. The Master Plan document update is presented in a strike-through and underlined text format to indicate revisions to the 1995 adopted Master Plan.

Comments are encouraged and should be directed to:

Ms. Margaret Rackey-Mixon
Office of Facilities Planning
University of Central Florida
P.O. Box 163020
Orlando, Florida 32816-3020

The following sections of the Executive Summary generally address the major changes included in this Master Plan update. The summary is sub-divided into Master Plan elements as described in the State requirements.

2.1 Academic Mission

The Master Plan acknowledges significant progress toward the goal of becoming America's leading partnership university and seeks the continued prominence of public service.

UCF remains committed to its Mission to provide an undergraduate education rooted in the arts and sciences, while offering comprehensive graduate and professional programs and research opportunities. The current mission restates goals and visions summarized in the 1995 Mission, while reinforcing ties to the Central Florida geographic region through collaborative initiatives. Partnerships such as the I-4 High - Technology Corridor Council are highlighted as examples of the desire for continued collaboration with partners from industry, state and local government, and higher education.

2.2 Academic Program

The following table shows the projected enrollment growth for the period.

Year	FTE	Headcount
1999-2000	17,409	28,382

2005-06	21,185	34,849
2009-10	24,359	41,440
***2009-10 Plus 15%**	28,013	47,657

Main campus enrollment has grown from 14,667 FTE (26,502 headcount) in 1995-6 to 17,409 FTE (28,382 headcount) in 1999-2000; an increase of approximately 4.7% per year in FTE (1.8% per year in headcount). It is projected that the increases for the future will be as follows: 1999-2000 through 2005-6, 3.6% per year in FTE growth (3.8% in headcount); 2005-6 through 2009-10, 3.0% per year (3.8% per year headcount).

The above figures are based on official enrollment projections. Experience over the past decade indicates that these projections may be low due to:

a. The continued growth of the state population, and concentrated growth in the central Florida region (particularly, the I-4 high-tech corridor),
b. The dramatic growth of the college-age population,
c. UCF's increased "market share" among college-bound students compared to other universities in the state, and
d. The relatively new and growing emphasis on graduate studies at UCF.

* Based on the above factors and specific enrollment and demographic trends in the service area, it is further projected that the increases in the future may be higher: 1999-2000 through 2009-10, 6.1% per year FTE (6.8% per year headcount).

For the ten-year master planning period, thirteen new post-graduate degree programs are planned; five in Arts and Sciences, three in Education, two each in Engineering and Computer Sciences and Interdisciplinary, and one in Health and Public Affairs. The above includes five doctoral programs.

2.3 Urban Design

With such rapid growth and development since 1995, the importance of maintaining a vehicle-free central academic core and the well-established circular campus master plan have led to some important refinements of the urban design plan. A major new student activity center has developed around the Student Union and other new academic buildings and additions at the campus center. Another activity center is anticipated to develop at the site of the 1600-bed student housing and recreation complex south of the core. The new Urban Design Plan responds to the need to provide some connectivity to these new activity centers.

While reaffirming the previous Master Plan's validity of a dedicated pedestrian core, the Master Plan update responds to a need to emphasize and clarify internal campus organization with increased focus on pedestrian circulation inward to and outward from the campus core. This is being accomplished by emphasizing the radial approaches to the established campus circular design and core. This new radial emphasis is to occur along established master plan radii and be shaped by appropriate arrangement of future buildings around planned pedestrian-oriented open spaces. Vehicular access to the central core will become increasingly limited emphasizing only necessary service and access for people with disabilities. With the above exceptions, vehicles and parking will continue to be limited to locations outside the 1200-foot-radius central core. Since

1995, two 1300-car parking garages have been built and a third has been completed during the development of this Master Plan update, consistent with this concept.

Due to the rapid growth of the campus, the limitations of space within the central core and the growing need to provide open space for the increasing student population, the new Master Plan stresses the need increase allowed building heights within the core. Also, the University will consider re-development of older, low-rise buildings.

To provide needed academic building sites within the pedestrian core and to alleviate an existing safety issue of high pedestrian-vehicular conflict, it is planned to re-align the loop road outside two large parking areas serving the Administration Building and the central campus.

2.4 Future Land Use

The main campus contains 1,415 acres of which 990.5 acres are in wetlands or conservation areas. The remaining 424.5 acres is considered "developable" land. As of 1999-2000, 130 acres were developed (buildings and pavement), leaving 294.5 acres available for future use. The storm water master plan agreement reached with St. Johns River Water Management District provides strict limitations on development of this available acreage. However, based on Academic Program requirements the projected future space needs total 4.3 million square feet, which must be accommodated within this area.

While the Master Plan delineates areas of land use by category, it should be noted that in an environment as diverse as a University, land uses often blend into one another. Support spaces are integrated within academic buildings to provide efficient services which complement each other. Preserved lands are often available for passive recreational uses. And it is often a fine line between categories such as academic and research, or academic and open space (where outdoor classes take place) that substantiate the sensitive balance of land uses as described.

2.5 Academic Facilities

The projected need for academic facilities is based on the rapid enrollment growth projected in the Academic Program element as well as the following factors:

a. Existing general classroom space is operating at or above capacity and at one of the highest levels in the SUS (approximately 50 hours per five-day week); in some cases utilizing spaces originally designed as laboratories, theaters, library study spaces, etc.
b. Temporary rental facilities are employed both on and off campus to meet current classroom needs.
c. Some current classroom needs are being met by temporary modular units.
d. Research laboratories are over stressed by the continued use for graduate coursework and thesis and/or dissertation work, as well as faculty research.
e. The need for research space is increasing greater than the enrollment needs as the University moves toward its strategic goal of achieving national and international prominence in selected areas of research and scholarship.
f. The space needs for a full-time research faculty member is in the range of 1,000-1,500 net square feet, far in excess of the 291.26 NASF per FTE allowed by state space standards.

g. The state estimate of UCF's current office space shortfall is approximately 400,000 net square feet.

Based on the analysis, the total projected future space needs through 2009-10 amounts to a staggering 4.3 million gross square feet.

PROJECTION OF FUTURE SPACE NEEDS (GSF)			
SPACE TYPE	**GSF**		
	2004-05	**2009-10**	**2009-10 Plus**
Classroom	454,652	532,905	612,842
Teaching Laboratory	515,553	604,287	694,931
Research Laboratory	531,257	622,695	716,100
Office (incl. conference)	1,227,882	1,411,847	1,623,624
Study (excl. Library)	150,000	180,000	207,000
Library	393,900	442,722	442,722
Total	**3,273,243**	**3,794,456**	**4,297,218**
Note: The numbers exclude temporary and leased space.			

The need for PECO funding for major academic projects is projected to increase from the previous Master Plan's range of $10-15 million to $12-16 million per project during the early years of the planning period.

2.6 Support Facilities

Current and planned athletic fields in the northeast sector of the campus appear to satisfy desired activities and allow scheduling flexibility for field rotation to avoid damage from over use. Intramural and general-purpose fields are planned for expansion in primarily the southern sector and this growth will also provide for much-needed scheduling flexibility to avoid field fatigue.

Projections for space needs versus supply in Administrative, Physical Plant, Auxiliary and Student Support space show small shortfalls in all categories at the end of the ten-year master planning period. Office space needs are addressed in Academic Facilities.

The application of mixed-use buildings will be encouraged where significant amounts of support spaces have a sound connection to a particular land use and facility type. Logical building increments will be determined as much by site master planning and urban design parameters as they will be by specific programmatic elements.

With the need for compact growth of the University increased consideration will be given to higher density redevelopment of existing one-story support buildings within the campus core.

2.7 Housing

It is the goal of the University to provide enough owned and affiliated student beds on, or near, the campus to house at least 15% of the projected student headcount enrollment. In addition, 80% of the owned and affiliated beds shall be made available to freshmen.
The University has exceeded this goal through its affiliation with and management of approximately 3,750 beds in housing units immediately across Alafaya Trail. University-affiliated housing will apply similar rules and regulations to students there as on the main campus. Services such as shuttles are provided to create and maintain functional linkages to campus and to minimize impacts on the surrounding urban fabric.

To assist in meeting any increases in sustained demand for oncampus housing on the expanding campus, future housing shall be relatively dense, ranging from 57.2 to 125.0 student beds per acre. The redevelopment of areas of lower-density housing to higher densities will also be considered.

The University will continue to provide a variety of on-campus housing for students. Accessibility for people with disabilities shall continue to be a requirement for all University owned and affiliated housing.

2.8 Recreation and Open Space

As the University develops and fills more of its developable land, the need and importance of providing adequate recreation and open space is a constant consideration. While continuing to rely heavily on the community facilities for those students off campus, the facilities on campus are planned to grow in concert with the student population. Athletics will be concentrated in the northeast around the arena and in the south around the 1600-bed student-housing complex under construction from 2000 to 2002. This complex includes a new, multi-service recreational services building.

With the densification and urbanization of the campus core, the University will create new formal open spaces or "campus greens", through the careful placement of buildings as noted in the Urban Design Element. In concert with the Urban Design Element, the campus greens concept will be improved by enhancement of landscaping as noted in the Landscape Design Guidelines Element.

2.9 General Infrastructure

Stormwater

The University has negotiated a stormwater master plan with St. Johns River Water Management District. This master permit establishes drainage basins and the maximum developable impervious area for each basin on the campus. Certain sub-basins have or soon will reach their maximum developed acreage, which will result in requests for stormwater permit modifications. However, it is the intent of the University to complete an overall update the stormwater master plan in concert with the Campus Master Plan update.

Potable Water

The University maintains its own potable water distribution system and has relied upon on-site wells in the

past, but has now reached agreement with Orange County to provide potable water to the University. A right of way has been granted to Orange County for a major regional water distribution line across the south end of the campus. This new service is scheduled for 2003.

The University is upgrading its potable and fire protection water distribution systems to eliminate existing system deficiencies. This will help to insure adequate future levels of service as the campus continues to grow.

The University is in the process of removing irrigation water from the potable water system and providing reuse water from the City of Orlando's, Iron Bridge Waster Water Treatment Plant. This transition is scheduled for 2003.

Sanitary Sewer

The University recently deactivated its on-site treatment plant and now pumps all campus effluent to the Iron Bridge Water Treatment Plant. Adequate allotments of sanitary sewer discharge have been successfully negotiated. The on-campus distribution system requires normal maintenance and appropriate expansion consistent with growth.

Solid Waste

The University will continue to rely on concentrated on-campus collection and contractor-provided off-campus disposal of solid waste, including all hazardous materials in a manner that it environmentally responsible, in accordance with regulatory requirements and compatible with the best practices of a major urban public institution. The Orange County landfill is utilized for solid waste disposal. No significant changes are anticipated.

2.10 Utilities

Chilled Water

The University will continue to expand the chilled water distribution system as the campus grows. With the projected facilities' growth, additional chillers will be needed.

The University will benefit from the creation and continuing maintenance of a utilities CAD drawing and spreadsheet record of the system in order to fully track existing loads and understand the impacts of future building projects.

Electrical Power and Other Fuels

The University utilizes Florida Power electrical service provided through a substation on the south side of campus. The University will tie into the new electrical power substation on the north side of the campus with underground service. The University will continue to expand the electrical and gas systems as the campus grows.

Telecommunications

The University will continue to expand the telecommunications system as the campus grows. A new 475-foot radio tower will be built near the retention pond east of Lake Lee in the southwest corner of the campus, replacing the antenna currently located on the roof of the Library.

2.11 Transportation

Transit, Circulation and Parking

With the completion of Gemini Boulevard and construction of four parking garages, during the past Master Plan cycle, the current plan will continue to consolidate parking and alleviate vehicular congestion due to enrollment growth through continued transportation improvements.

The University will limit road widths to four lanes and will not widen any roads within the 1,200-foot loop defining the campus core. General vehicle access will be restricted in the core. The last section of the loop road, Gemini Boulevard, from Libra to North Orion shall be four-laned.

The University will continue to develop parking garages near the major entrances, University and North Orion Boulevards, to encourage student use and minimize on-campus traffic. The University may consider development of a second intermodal transportation terminal in conjunction with the east garage complex.

The University will build additional new parking garages to meet the additional parking needs.

The University supports the widening of Alafaya Trail (S.R. 434) north from McCulloch Road to Chapman Road in Seminole County and the development of a north-south regional connector to alleviate the crowding on Alafaya and non-University cut-through traffic. Exact routes for new roadways should be determined by Orange and Seminole Counties.

The University will conduct an update of the University commuter survey to determine appropriate Transportation Demand Management strategies that can be applied to the University. A broad range of transportation initiatives will be explored with Orange and Seminole Counties and with Lynx.

The University will work with the regional mass transit entity, Lynx, to provide increased public transportation opportunities to and from the campus to large student residential populations. Higher ridership strategies will be pursued, such as replacing the passenger fare with a student user fee and pass system. Bike racks will be requested on all transit vehicles. Lynx will be requested to inventory and evaluate all public transit stop locations; both on campus and in the immediate student service area of the community. Final report documentation will be required to be published to students.

In conjunction with area public transportation organizations, the University will undertake a feasibility study for an on-campus circulator to connect the two intermodal transportation terminals and major campus activity centers.

Pedestrian and Non-Vehicular Circulation

The University will coordinate with local counties and the Florida Department of Transportation to ensure proper signalization to facilitate the movement and safety of pedestrians. A safety-enhanced pedestrian crossing will be developed across Gemini Boulevard South to the new Academic Villages. Gemini Boulevard will be re-aligned in the area of Central Florida Boulevard to improve the safety of pedestrians. Sidewalks will be developed along North Orion Boulevard. Large volume pedestrian crossings at Gemini Boulevard will be evaluated to determine what levels of traffic calming and/or control should be pursued to improve pedestrian safety.

2.12 Intergovernmental Coordination

The University will continue to communicate with local authorities, particularly Orange County, the host community, on issues of mutual concern. The Campus Development Agreement with Orange County will be negotiated simultaneously with the Master Plan update. An update of the stormwater master plan will be pursued with the St. John's River Water Management District. The University will continue to coordinate with such entities as Lynx and MetroPlan Orlando regarding regional transportation issues.

2.13 Conservation

The University will continue to pursue conservation goals and adhere to environmental requirements within the context of a growing institution. Dedication of conservation land and other environmentally sensitive lands will be pursued. Protection of natural resources, as well as the natural function of unique features on the campus will continue to be a priority to the University.

2.14 Capital Improvements

The University will continue to schedule and budget for projects for ten years into the future.

2.15 Architectural Design Guidelines

To accommodate the anticipated enrollment growth within the academic core, the University will allow the height of structures to vary consistent with the area context. Additional design guidelines previously contained within the Master Plan have been incorporated into the Architectural Design Guidelines Element. The University will continue to utilize them and their subsequent updates in all future development.

The Campus Safety Committee was organized during the previous master planning cycle and continues to review projects and existing conditions for Crime Prevention Through Environmental Design concepts and principles.

Satellite campus design will be reviewed by the Director of Facilities for general compatibility with the external design goals of the host institution and interior design goals of UCF.

2.16 Landscape Design Guidelines

The University will add to its use of landscaping to create a sense of place and to visually exemplify educational experiences. The University will develop a Landscape Master Plan. The Landscape Master Plan will implement the Urban Design principles, including creating quads, plazas and common areas for student interaction and enhanced way finding. The Landscape Master Plan will seek signature landscape treatments to help define the urban design concept while utilizing native landscapes. This would include major campus entrances.

To the extent feasible, future landscaping will continue in the utilization of indigenous plant materials and xeriscaping. In addition, the use of shrubs, hedges and ground cover (except for locally appropriate grasses) will continue to be limited.

Public art in capital projects shall be coordinated with Art In State Building Committee.

A summary analysis of existing landscape and hardscape shall be used to determine enhancements which should be added to the Physical Plant Division's landscape improvement projects.

2.17 Facilities Maintenance

The existing periodic preventative maintenance schedules for various campus systems will continue to be utilized in effort to eliminate deficiencies. These schedules will be used to establish priorities for maintenance and related capital improvement projects.

GOAL 1: To offer the best undergraduate education in the State of Florida.

OBJECTIVE 1.1: To provide for the maintenance or modification of the missions of individual colleges within the University over the planning time frame.

POLICY 1.1.1: The colleges shall continually review and update their missions in relation to the University's mission statement, the five general goals, and the goals of the academic departments and disciplines within their colleges.

POLICY 1.1.2: The University shall complete mission reviews one year prior to when the DCU revisions are due. Each College and Department has established internal procedures for updating and modifying their mission statement, and the missions of the individual colleges are reviewed within the Strategic Planning Five Year Timeline (see Appendix A).

POLICY 1.1.3: These mission statements are forwarded to the Provost for consideration after they have been approved by the College. The Colleges are expected to develop missions and goals that address University level goals and are in concert with the overall mission of the institution.

POLICY 1.1.4: Proposed amendments to the adopted campus master plan shall reflect the most recent DCU-approved mission statement for the University.

OBJECTIVE 1.2: To provide for the maintenance or modification of the mission of the University over the planning time frame.

POLICY 1.2.1: The mission of the University is reviewed within the Strategic Planning five year timeline (see Appendix A). The University shall complete mission reviews one year prior to when the DCU revisions are due.

OBJECTIVE 1.3: To provide for new or modification of existing academic programs and degrees offered.

POLICY 1.3.1: Establishment of new or modification of existing academic programs and degrees offered occur in synchronization with DCU deadlines within the five year strategic planning cycle (see Appendix B).

OBJECTIVE 1.4: To establish priorities among the development of new or modified academic programs.

POLICY 1.4.1: Establishment of priorities among the development of new or modified academic programs and degrees offered occurs in synchronization with DCU deadlines within the five year strategic planning cycle (see Appendix B). The priorities for developing new academic programs and modifying or terminating existing programs are identified in Academic Program Element Policy 1.2.1.

POLICY 1.4.2: The colleges shall continually review and update their degree offerings according to productivity, demand, relation to the mission, and other pertinent factors.

OBJECTIVE 1.5: UCF shall continue its practice of developing a Campus Master Plan, updated at five (5)-year intervals.

POLICY 1.5.1: UCF shall pursue modifications, upgrades and expansion of its physical facilities and infrastructure which are incorporated into the most recently approved Master Plan.

POLICY 1.5.2: UCF shall submit to the Division of Colleges and Universities, within four years from the date of plan adoption and every five years thereafter, an evaluation and appraisal report which:

- Lists accomplishments during the implementation of the campus master plan, describing major problems associated with development and land uses, and the degree to which the goals, objectives and policies have been successfully reached;
- Identifies obstacles or problems which resulted in underachievement of goals, objectives, or policies;
- Identifies the need for new or modified goals, objectives, or policies needed to correct unanticipated and unforeseen problems and opportunities that have occurred since adoption of the campus master plan;
- Addresses local government and public participation in the process;
- Addresses the effects of changes to the State Comprehensive Plan and to the comprehensive plans of the host local government and any affected local governments;
- Identifies proposed and anticipated plan amendments necessary to address identified problems and opportunities; and
- Identifies a means of ensuring continuous monitoring and evaluation of the plan during the remainder of the overall planning period.

POLICY 1.5.3: UCF shall submit to the Division of Colleges and Universities, within five years from the date of plan adoption and every five years thereafter, a proposed plan amendment which incorporates the findings and recommendations contained in the evaluation and appraisal report, and which contains updated baseline data (as appropriate) and goals, objectives and policies to be accomplished during the remainder of the overall planning period.

POLICY 1.5.4: UCF shall undertake an annual review of the goals, objectives and policies and programmed improvements identified in the most recently approved Master Plan to determine if amendments modifying the plan are necessary. Should revisions to this Master Plan, either alone or in conjunction with other amendments, exceed the thresholds established in s. 240.155(9), F.S., said amendments shall be reviewed and adopted under the provisions of s. 240.155(6)-(8), F.S. Amendments to this Master Plan which do not exceed these thresholds shall be consolidated into a single submittal and sent to the SUS Office of Capital Programs for review and approval by the Division of Colleges and Universities.

GOAL 2: To achieve international prominence in key programs of graduate study and research.

OBJECTIVE 2.1: To receive "Carnegie Research Intensive" status for UCF in the next ten years.

POLICY 2.1.1: Selected graduate programs will be targeted and supported in order to achieve or retain international prominence.

GOAL 3: To provide international focus to our curriculum and research programs.

OBJECTIVE 3.1: To identify areas of international strength and potential in support of the teaching, research, and public service missions

POLICY 3.1.1: The University will explore methods of promoting the integration of international topics into the curriculum.

POLICY 3.1.2: The University will explore methods of promoting faculty development and exchange.

GOAL 4: To become more inclusive and diverse.

OBJECTIVE 4.1: To promote the participation of minorities and women as students and employees.

POLICY 4.1.1: UCF will continue to actively recruit and retain minorities and women.

POLICY 4.1.2: UCF shall comply with established Affirmative Action/Equal Employment Opportunity (AA/EEO) guidelines and requirements in student, faculty, administrator, and staff searches.

GOAL 5: To be America's leading partnership university.

OBJECTIVE 5.1: To promote partnerships as an area of emphasis at UCF.

POLICY 5.1.1: UCF will endeavor to increase partnerships across disciplines within the university.

POLICY 5.1.2: Public service will continue to be prominent at UCF, and the University will endeavor to increase partnerships within the community to enrich the educational, artistic, cultural, economic, and professional lives of those it serves in Central Florida and beyond.

OBJECTIVE 5.2: To promote outreach programs, volunteerism, and community-based research.

POLICY 5.2.1: UCF shall continue to systematically develop and engage in quality programs that are responsive to the needs of the community.

POLICY 5.2.2: UCF shall continue to encourage and support the development of high-quality continuing education programs.

POLICY 5.2.3: UCF shall continue to develop, engage in and support programs which enhance K-12 education.

2.1 (2) Academic Mission of the University Element Analysis

a) A description of how the University's mission has changed (or not) since its inception.

UCF at its founding was titled "Florida Technological University," and in keeping with that, its mission was expressly technological. However, the mission has broadened dramatically over the ensuing forty years to the present. Re-titled in the late 1970's as "University of Central Florida," the institution has developed into a major metropolitan university, rapidly growing, with a full complement of undergraduate and graduate programs. It is strongly oriented toward cutting-edge research in a wide variety of disciplines that span the academic spectrum. Emphasis is given to research and other partnership activities with special relevance to the dynamic "I-4 High Tech Corridor," which stretches across the central Florida region from Tampa through Orlando to the space coast.

b) A description of how the University's mission has changed since the last master plan was prepared.

The mission most recently adopted by the State University System for the University of Central Florida has maintained its overall tone and character. UCF remains committed to providing an undergraduate education rooted in the arts and sciences while offering comprehensive graduate and professional programs. The current mission restates goals and visions predicated in the 1995 Mission, while reinforcing ties to the Central Florida geographic region. Partnerships such as the I-4 High - Technology Corridor Council are highlighted, as examples of the desire for continued cooperation with the local community on issues of the economy, arts, culture and education.

~~c) A description of how the University fulfills or accomplishes the roles established by the Board of Regents~~ Division of Colleges and Universities ~~for the State University System.~~

~~The University fulfills the roles established by the Board of Regents~~ Division of Colleges and Universities ~~in a variety of ways. First, it participates in all the established SUS program and planning procedures, which emphasize the role of the institution within the context of the state system. Second, the President reports directly to the Chancellor and consults with him on a continuing basis about the special role of UCF. Third, the Provost works with the Executive Vice Chancellor and the Council of Academic Vice Presidents to implement BOR policy. In addition, the University works with its internal and external communities to further define, within parameters set by the legislature and BOR, the unique role and mission of UCF. Changes in the UCF mission statement and new degree programs are approved through BOR action. The general powers and duties of the President and the mission of higher education in Florida are set forth in F. S. Chapter 240. Other processes described in this section provide mechanisms for timely and appropriate responses to the needs of the SUS.~~

APPENDIX A: STRATEGIC PLANNING TIMELINE

The Strategic Planning Council is a Reporting Committee to the Faculty Senate and recommends to the President on all strategic planning issues including academic planning, institutional effectiveness, accountability, budget planning, and student services, Its scope does not include that of the Campus Master Planning Committee and the specifics of computer policy that are covered by the Computer Policy Committee. The Accountability Committee is a subcommittee of the Council and is responsible for the planning, implementation, and monitoring of the University's Institutional Effectiveness Program and the Accountability Plan.

The duties and responsibilities of this committee are:

· To develop and recommend to the President the University Goals and any budget or academic actions necessary to support these Goals.
· To develop and recommend to the President the University's Action Plan and any budget or academic actions necessary to support those recommendations.
· To develop and recommend to the President the University's Mission Statement.
· To review the annual reports of the Accountability Subcommittee and recommend an appropriate course of action to the President in response to recommendations or findings of the subcommittee.
· To study and make recommendations to the President on any planning issues as requested by the President.
· To provide an annual report to the President and to the Chair of the Faculty Senate of its actions and recommendations.

The proposed timeline for the annual planning activities is outlined below. The timeline and events will be modified on an annual basis as needed. The purpose of the timeline is to create a predictable framework for the planning process.

August

- Kickoff meeting with the President, Provost, and Steering Committee.

September

- Strategic Planning Committee (SPC) meets as a whole, gets charge from Chair, set subcommittees, selects Executive Committee, and discusses the year's agenda.

October

- SPC Executive Committee joins with Provost, deans, VPs, external strategic planning consultant, and other selected administrators to set yearly planning and budget priorities.
- SPC sends out call for white papers for Strategic Planning Initiative Award Program to faculty
- White papers due by mid November.
- SPC sends request to deans, etc, for appointees to initiatives review committee.
- Accountability Committee makes presentation on B.O.R. accountability report to President and Provost (open forum).
- Accountability subcommittees meet:
  SPC Chair meets with each committee to give them their year's charge.
  This starts the collection of data, setting of new measures, etc.
  Subcommittee reports are due by the first week of March.
  In Years #2 and #5, SPC sends requests to departments and colleges to do SWOT (strengths, weaknesses, opportunities, and threats) analysis.
  Department reports are due to colleges by end of November.
  College reports are due to SPC and Provost by end of December.
  These reports should include college-specific SWOT analysis.
- SPC prepares and sends newsletter to faculty making them aware of planned activities of SPC, calling for proposals, etc.

November

- Initiative review committee reads white papers and provides feedback to proposal teams by end of Fall semester.

December

- Review committee sends feedback to proposal teams.
- SPC issues call for proposals to faculty.
- Full proposals are due by last week of January.

January

- Mid-term report to the President and Provost.
- Full proposals are received by the end of the month.

In years #2 and #5, college and department reports are received at start of month. SPC Executive Committee reviews reports and provide input to Provost by last week of January.

February

- Initiative committee reviews full proposals.
- Recommendations are due to Provost by last week of February.

March

- Accountability subcommittee submit reports by end of first week.
- Reports are distributed to entire SPC.
- Second full SPC meeting occurs in third week of month to accept, amend, or reject accountability reports and to be apprised of year's progress.
- SPC Executive Committee briefs deans on year's activities.
- SPC prepares and sends Newsletter to faculty summarizing year's activities, announcing initiatives awards, and calling April open forum.

April

- SPC holds open meeting for all members of campus community.
- Executive Committee meets with Provost on policy issues related to the budget.
- Strategic Planning presentation to the President, Provost, and Chair of the Faculty Senate.

APPENDIX B: FIVE-YEAR STRATEGIC PLANNING CYCLE

Five-year Strategic Planning Cycle: (Timing is offset one year from ~~BOR~~ DCU).

Year #1	Obtain Approval of New UCF Strategic Plan in Fall Measure Attainment of UCF Goals Provide Input to ~~BOR~~ DCU for their Master Plan
Year #2	Measure Attainment of UCF Goals Receive New ~~BOR~~ DCU Master Plan
Year #3	Produce Mid Course Correction on Existing UCF Plan Provide Input to ~~BOR~~ DCU for their Mid Course Correction
Year #4	Measure Attainment of UCF Goals Receive ~~BOR~~ DCU Mid Course Correction
Year #5	Perform UCF SWOT Analysis and Prepare New Strategic Plan

Departments and colleges will provide SWOT analysis and updates to their own plans in support of SPC activities in Years #2 and #5.

GOAL 1: To offer the best undergraduate education in the State of Florida.

OBJECTIVE 1.1: UCF shall plan for and support on-campus (Main Campus Only) student enrollments of 28,013 FTE and 47,657 headcount by the year 2009-10.

POLICY 1.1.1: UCF shall plan for and support enrollment based on the following on-campus projections:

Year	FTE	Headcount
1999-2000	17,409	28,382
2005-06	21,185	34,849
2009-10	24,359	41,440
*2009-10 Plus 15%	28,013	47,657

POLICY 1.1.2: It is important to note that the FTE and Headcount projection data shown above are based on UCF's official projections. Based on numerous factors, elaborated on in more detail in section 2.5 "Academic Facilities Element," it should be noted here that allowances must be made that will factor in the realistic possibility of "low side enrollment projects" for purposes of campus planning. It is crucial for a complex campus such as UCF, which has most always exceeded funded growth, to be sufficiently prepared with the proper physical facilities. Therefore, the enrollment data reported (FTE and Headcount) can be estimated to be approximately 15% greater than expected.

OBJECTIVE 1.2: To define the future distribution and location of planned and future academic programs.

POLICY 1.2.1: UCF shall establish the following academic programs during the planning period, which have been approved for development by the Division of Colleges and Universities. It is important to note that the following list is based on UCF's official degree offerings. Strong emphasis has been placed on developing "Certificate Programs" for both undergraduate students as well as graduate students with several new (certificate) programs added each year. Certificate programs are designed to capture a very specific and unique market share and to facilitate partnerships between UCF and regional businesses. Certificate programs are not represented in the following table, but it is noteworthy to mention that the enrollment numbers in certificate programs have steadily increased over the last three to five years contributing to UCF's overall enrollment growth.

Arts and Sciences

Ph.D in TESOL

MFA in Film and Digital Media

Ph.D in Conservation Biology

Ph.D in Applied Sociology

MFA in Computer Graphics and Animation

Business Administration

No changes

Education

MA in Informal Education

M.Ed. in Mathematics and Science Education

MA in Web-Based Learning

Engineering and Computer Science

MS in Metropolitan Planning

MS in Software Engineering

Health and Public Affairs

Ph.D in Nursing

Interdisciplinary

MS and Ph.D. in Modeling and Simulation

OBJECTIVE 1.3: To define the future distribution and location of the planned student population.

POLICY 1.3.1: Planned student populations shall be distributed among University facilities approximately as follows:

1999-2000

Main Campus Summary	*Lower*	*Upper*	*Grad*	*T/D*	***Total***
Arts & Sciences	5,476	2,805	290	31	**8,602**
Business Administration	641	2,360	298	1	**3,300**
Education	426	814	522	28	**1,790**
Engineering	328	870	269	57	**1,523**

Health & Public Affairs	47	1,633	459	7	**2,146**
Multi/Interdisc. Studies	7	37	3	0	**47**
MAIN CAMPUS TOTAL	**6,926**	**8,520**	**1,840**	**123**	**17,409**
TOTAL CAMPUS	**6,999**	**9,875**	**2,271**	**124**	**19,269**

Projected 2005-06

Main Campus Summary	*Lower*	*Upper*	*Grad*	*T/D*	***Total***
Arts & Sciences	6,664	3,414	353	37	**10,468**
Business Administration	780	2,872	362	1	**4,016**
Education	519	991	635	34	**2,179**
Engineering	399	1,058	327	69	**1,853**
Health & Public Affairs	57	1,988	559	8	**2,612**
Multi/Interdisc. Studies	8	45	3	0	**57**
MAIN CAMPUS TOTAL	**8,428**	**10,368**	**2,240**	**149**	**21,185**
TOTAL CAMPUS	**9,333**	**12,934**	**3,105**	**163**	**25,535**

Projected 2009-20 10

Main Campus Summary	*Lower*	*Upper*	*Grad*	*T/D*	***Total***
Arts & Sciences	7,663	3,925	406	43	**12,037**
Business Administration	897	3,303	417	1	**4,618**
Education	597	1,139	731	39	**2,505**
Engineering	459	1,217	376	79	**2,131**
Health & Public Affairs	66	2,285	642	10	**3,003**
Multi/Interdisc. Studies	10	52	4	1	**66**
MAIN CAMPUS TOTAL	**9,691**	**11,921**	**2,575**	**172**	**24,359**
MAIN CAMPUS TOTAL + 15%	**11,145**	**13,709**	**2,961**	**198**	**28,013**
TOTAL CAMPUS	**10,939**	**15,160**	**3,639**	**192**	**29,930**
TOTAL CAMPUS + 15%	**12,580**	**17,434**	**4,185**	**221**	**34,420**

OBJECTIVE 1.4: To establish priorities for distribution of funding.

POLICY 1.4.1: After funds have been deducted for line items, specials, and other considerations, the Office of Academic Affairs shall apply the Pegasus model for the distribution of funds based on enrollment. The Office of Academic Affairs works with the colleges using DCU budget tables to determine the projected cost for new programs. Each new proposal must include the budget tables.

Once agreement is reached, the amount of the budget shall be considered to be the commitment of the University until the third year of implementation. At that time, it is expected that programs will be self sufficient or fully funded through the colleges' budgets.

POLICY 1.4.2: The colleges shall continually evaluate the programs they offer in relation to the relevance to and support of university goals. Based upon their findings, colleges may propose to implement new programs or terminate or modify existing programs. All these options are processed in cooperation with the Office of Academic Affairs. Proposed program lists related to UCF's academic priorities shall be developed at the college level throughout their planning processes. Priorities shall be discussed between the deans and Provost as appropriate. A university level list of program priorities is produced once every two years. This list is forwarded to the DCU for consideration and approval during the Academic Master Plan updating process.

POLICY 1.4.3: Program terminations may be handled through the DCU at any time. The procedure for program modifications varies depending on the magnitude of the proposed changes. Most minor modifications are made through the colleges and do not require DCU action.

POLICY 1.4.4: If a program is not on the DCU five year program list, the DCU will not accept a new degree proposal for the program. The availability of outside funding alone will not cause the university to consider a new degree program; however, such funding may allow a program to be implemented prior to the previous timeline.

POLICY 1.4.5: Grants awarded to faculty in the university take into consideration space, equipment, and other budgetary needs when they are under development. These budgets must be approved by the faculty members' "supervisor". Often grants provide funds for these considerations and serve to reinforce and support the academic mission of the department. The Division of Sponsored Research must review and submit all grant proposals on behalf of UCF. In this role, the Office assures that the university has the capacity to "house" the grant.

POLICY 1.4.6: Plan amendments which, alone or in conjunction with other plan amendments, exceed the thresholds established in s.240.155(9), F.S., shall be reviewed and adopted under the provisions of s.240.155(6)-(8), F.S. Amendments which do not exceed these thresholds shall be consolidated into an annual submission and submitted to the Office of Capital Programs for review and approval by the Division of Colleges and Universities.

2.2 (2) Academic Program Element Analysis

a) Excluding major new professional or doctoral programs, and within the constraints of the projected enrollment, provide projections of anticipated academic degree programs for Year 5 and Year 10. Identify existing and proposed new programs.

Existing Programs by College are outlined in Table 2.2(2)a).

Anticipated new programs by College are as follows:

Arts and Sciences

Ph.D in TESOL

MFA in Film and Digital Media

Ph.D in Conservation Biology

Ph.D in Applied Sociology

MFA in Computer Graphics and Animation

Business Administration

No changes

Education

MA in Informal Education

M.Ed. in Mathematics and Science Education

MA in Web-Based Learning

Engineering and Computer Science

MS in Metropolitan Planning

MS in Software Engineering

Health and Public Affairs

Ph.D in Nursing

Interdisciplinary

MS and Ph.D. in Modeling and Simulation

It is important to note that the following list is based on UCF's official degree offerings. Strong emphasis has been placed on developing "Certificate Programs" for both undergraduate students as well as graduate students with several new (certificate) programs added each year. Certificate programs are designed to capture a very specific and unique market share and to facilitate partnerships between UCF and regional businesses. Certificate programs are not represented in the following table, but it is noteworthy to mention that the enrollment numbers in certificate programs have steadily increased over the last three to five years contributing to UCF's overall enrollment growth.

UCF Name of Program	Bach	Mast	Spec	Doct
COLLEGE OF ARTS & SCIENCES				
Organizational Communication	X			
Communication		X		
Advertising/Public Relations	X			
Journalism	X			
Radio/Television	X			
Computer Science	X	X		X
Music Education	X			
TESOL		X		
Foreign Language Combination	X			
French	X			
Spanish	X	X		
English	X	X		
Interpersonal Communication (Speech)	X			
Liberal Studies	X	X		
Humanities	X			
Biology	X	X		
Mathematics	X			

Mathematical Science		X		X
Statistics	X			
Statistical Computing		X		
Philosophy	X			
Chemistry	X			
Industrial Chemistry		X		
Physics	X	X		X
Psychology	X			X
Clinical Psychology		X		
Industrial & Organizational Psychology		X		
Forensic Science	X			
UCF Name of Program	Bach	Mast	Spec	Doct
Anthropology	X			
Economics	X			
History	X	X		
Social Sciences (Interdisciplinary)	X			
Political Science	X	X		
Sociology	X			
Applied Sociology		X		
Theatre	X	X		
Motion Picture Technology	X			
Art (BA)	X			
Art (BFA)	X			
Digital Media	X			
Music	X			
COLLEGE OF EDUCATION				
Curriculum & Instruction		X	X	X
Educational Leadership		X	X	X
Instructional Technology		X		
Exceptional Child Education	X	X		
Counselor Education		X		
Elementary Education	X	X		
Early Childhood Education	X			
Art Education	X	X		
Business Education (Comprehensive)	X	X		
English Language Arts Education	X	X		
Foreign Language Education	X			
Mathematics Education	X	X		
Music Education		X		
Physical Education	X	X		
Reading Specialist		X		
Science Education	X	X		
Social Science Education	X	X		

UCF Name of Program	Bach	Mast	Spec	Doct
Technical/Vocational Education	X	X		
School of Psychology			X	
COLLEGE OF ENGINEERING				
Engineering		X		
Information Technology	X			
Aerospace Engineering	X	X		
Civil Engineering	X	X		X
Computer Engineering	X	X		X
Electrical Engineering	X	X		X
Environmental Engineering	X	X		X
Industrial Engineering	X	X		X
Materials Science and Engineering		X		X
Mechanical Engineering	X	X		X
Engineering Technology	X			
Electrical Engineering Technology	X			
COLLEGE OF HEALTH AND PUBLIC AFFAIRS				
Legal Studies	X			
Molecular Biology and Microbiology	X	X		
Biomolecular Sciences				X
Criminal Justice	X	X		
Public Administration	X	X		
Public Affairs				X
Social Work	X	X		
Communicative Disorders	X	X		
Health Services Administration	X			
Health Information Management	X			
Radiologic Sciences	X			
Cardiopulmonary Sciences	X			
Medical Laboratory Sciences	X			

UCF Name of Program	Bach	Mast	Spec	Doct
Nursing	X	X		
Physical Therapy		X		
Health Sciences	X	X		
COLLEGE OF BUSINESS ADMINISTRATION				
General Business Administration	X			
Business Administration		X		
Management	X	X		

Business Administration				X
Accounting	X	X		
Economics	X			
Applied Economics		X		
Finance	X			
Management Information Systems	X			
Marketing	X			
Taxation		X		
SCHOOL OF HOSPITALITY MANAGEMENT				
Hospitality Management	X			
SCHOOL OF OPTICS				
Optics		X		X

Legend: Bach - Bachelors Degree; Mast - Masters Degree; Spec - Specialist; Doct - Doctoral Degree

b) Distribution of projected FTE enrollment by college, undergraduate and graduate, for Year 5 and Year 10 of the planning time frame.

It is important to note that the FTE and Headcount projection data that follow are based on UCF's official projections. Based on numerous factors, elaborated on in more detail in section 2.5 "Academic Facilities Element," it should be noted here that allowances must be made that will factor in the realistic possibility of "low side enrollment projects" for purposes of campus planning. It is crucial for a complex campus such as UCF, which has most always exceeded funded growth, to be sufficiently prepared with the proper physical facilities. Therefore, the enrollment data reported (FTE and Headcount) can be estimated to be approximately 15% greater than expected.

Current and future projections of FTE by college and level are based on FTE projections supplied by the University as a percentage of existing credit hours by college and level.

TABLE 2.2 (2) b) FTE Enrollment by College and Level

1999-2000

Main Campus Summary	*Lower*	*Upper*	*Grad*	*T/D*	***Total***
Arts & Sciences	5,476	2,805	290	31	**8,602**
Business Administration	641	2,360	298	1	**3,300**

Education	426	814	522	28	**1,790**
Engineering	328	870	269	57	**1,523**
Health & Public Affairs	47	1,633	459	7	**2,146**
Multi/Interdisc. Studies	7	37	3	0	**47**
MAIN CAMPUS TOTAL	**6,926**	**8,520**	**1,840**	**123**	**17,409**
TOTAL CAMPUS	**6,999**	**9,875**	**2,271**	**124**	**19,269**

Projected 2005

Main Campus Summary	*Lower*	*Upper*	*Grad*	*T/D*	***Total***
Arts & Sciences	6,664	3,414	353	37	**10,468**
Business Administration	780	2,872	362	1	**4,016**
Education	519	991	635	34	**2,179**
Engineering	399	1,058	327	69	**1,853**
Health & Public Affairs	57	1,988	559	8	**2,612**
Multi/Interdisc. Studies	8	45	3	0	**57**
MAIN CAMPUS TOTAL	**8,428**	**10,368**	**2,240**	**149**	**21,185**
TOTAL CAMPUS	**9,333**	**12,934**	**3,105**	**163**	**25,535**

Projected 2010

Main Campus Summary	*Lower*	*Upper*	*Grad*	*T/D*	***Total***
Arts & Sciences	7,663	3,925	406	43	**12,037**
Business Administration	897	3,303	417	1	**4,618**
Education	597	1,139	731	39	**2,505**
Engineering	459	1,217	376	79	**2,131**
Health & Public Affairs	66	2,285	642	10	**3,003**
Multi/Interdisc. Studies	10	52	4	1	**66**
MAIN CAMPUS TOTAL	**9,691**	**11,921**	**2,575**	**172**	**24,359**
MAIN CAMPUS TOTAL + 15%	**11,145**	**13,709**	**2,961**	**198**	**28,013**
TOTAL CAMPUS	**10,939**	**15,160**	**3,639**	**192**	**29,930**

TOTAL CAMPUS + 15%	**12,580**	**17,434**	**4,185**	**221**	**34,420**

c) Based on projected FTE enrollment, distribute anticipated student headcount by campus for Year 5 and Year 10 of the planning time frame.

TABLE 2.2 (2) c) Current and Projected Main Campus Student Headcount

	1999-2000	**2004-2005**	**2009-2010**
Lower Division	9,224	11,326	13,023
Upper Division	14,049	17,250	19,834
Undergraduate			
Graduate	4,456	5,471	6,291
Graduate Thesis/Dissertation	653	802	922
Total Main Campus	**28,382**	**34,849**	**41,440**
Main Campus + 15%			**47,657**

d) From the projected headcount enrollment in Year 5 and Year 10, estimate the proportion of enrollment represented by:

1. On-campus resident students;

2. Off-campus students residing within one mile of campus; and

3. All other off-campus students.

Housing Projections are based on headcount enrollment projections documented in 2.c above at the University's goal of housing at least 15% of the student headcount, making available 80% of oncampus housing for freshmen ~~including 75% of all freshmen~~. Estimates of students living within one mile of campus use a percentage of 10.48% of the student body, based on the percentage provided in the 1995 Master Plan by the Department of Housing and Residence Life.

~~**TABLE 2.2 (2) d) On-Campus and Off Campus Housing Projections**~~

	~~**1999-2000**~~	~~**2005**~~	~~**2010**~~
~~On-campus~~	~~2,565~~	~~5,227~~	~~6,011~~
~~Off-campus within 1 mile of UCF~~	~~2,974~~	~~3,652~~	~~4,199~~
~~All other off-campus~~	~~22,843~~	~~25,970~~	~~29,860~~
~~**Total**~~	~~**28,382**~~	~~**34,849**~~	~~**47,657**~~

It is again extremely important to consider the very realistic possibility that UCF's enrollments will be in excess of what is reported (by as much as 15%). This would have a great impact on both the On and Off-Campus Housing options for students. Additional discussion about the enrollment projections is detailed in section 2.5 "Academic Facilities."

GOAL 1: To create a campus which is a cohesive environment, characterized by appropriate building placements that frame organized open spaces logical pedestrian circulation to the core of campus, and simplified vehicular circulation.

OBJECTIVE 1.1: To protect, enhance and develop symbolic campus spaces.

POLICY 1.1.1: The Master Planning Committee together with the Administration, Faculty and the Office of Facilities Planning shall review the future campus development for compliance with the Master Plan Urban Design Criteria, as well as all other appropriate master plan goals, objectives and policies.

POLICY 1.1.2: Axial arms of open space framed by buildings in the academic core shall be encouraged as visual corridors in and out of the university.

POLICY 1.1.3: Building edges shall reinforce the pattern of open spaces within academic core and housing areas.

POLICY 1.1.4: Landscaping and covered walkways can be used as tools of enclosure and space makers, as well as elements of continuity.

POLICY 1.1.5: Develop and infill academic quadrangles within the academic core. Preserve internal open spaces.

POLICY 1.1.6: Emphasize sequence of movement from open space to open space to reinforce pedestrian connectivity to the core of campus.

POLICY 1.1.7: Emphasize the inner campus as a pedestrian environment. Future buildings shall not obstruct axial pedestrian pathways. Vehicular access shall be minimized, while providing service access and access for parking for people with disabilities.

POLICY 1.1.8: Preserve and enhance open space by consolidating on-grade parking areas into parking structures outside the 1200 foot radius.

POLICY 1.1.9: A portion of future building construction budgets and funding shall be allotted to the development of the campus open spaces which they shall define.

POLICY 1.1.10: Gemini Boulevard should be realigned near Central Boulevard Avenue, creating a space which can be developed into a future academic quad, and simplifying the campus road network.

POLICY 1.1.11: The temporary T-600 parking area shall be a future open space for the campus, framed by continuous building edge as shown on Figure 3-1.

POLICY 1.1.12: The University shall consider the redevelopment of older, low-rise structures on campus when determining sites for future projects, in order to more efficiently use land at a higher density.

POLICY 1.1.13: In order to accommodate future program needs and protect open spaces on campus, future buildings shall be constructed at a minimum of 6 levels as budget and other program factors will

allow.

POLICY 1.1.14: The development of the campus spatial environment, as determined by the placement of buildings and open spaces shown on Figure 3-1, shall occur through the timing set forth in the University's PECO and other funded projects, in coordination with the Office of Facilities Planning.

POLICY 1.1.15: A 200 foot wide (minimum) green buffer shall be maintained around the entire periphery of the campus. Exceptions shall only be made for entrances, retention ponds and campus rights of way. In order to maintain the effectiveness of the buffer, non-invasive native plant species will be used in landscaping activities.

OBJECTIVE 1.2: To organize the placement of service and loading functions to avoid interference with campus open spaces and circulation.

POLICY 1.2.1: Service and loading areas shall be located adjacent to the 400 and 1200 foot rings for academic buildings.

POLICY 1.2.2: In order to minimize the number of sites for service and loading, their locations shall be selected to serve as many buildings as possible from one area.

POLICY 1.2.3: Non-vehicular paths shall be located so as not to cross or be adjacent to service areas.

POLICY 1.2.4: Service and loading areas shall be visually and acoustically screened from their surroundings, through the use of landscaping, fencing, walls and placement of buildings.

POLICY 1.2.5: Vehicular access to service areas shall be minimized and restricted to authorized vehicles only.

OBJECTIVE 1.3: To ensure compatibility of the university with the host community boundary and context area with respect to building location, orientation, mass and scale, landscape character and ground level character.

POLICY 1.3.1: Principal academic buildings shall be contained within the 1200 foot radius whenever possible.

POLICY 1.3.2: A 200 foot landscape buffer shall be maintained around the entire UCF campus.

POLICY 1.3.3: The University will coordinate, with the host community regarding issues related to the urban design character of the University with respect to the context area.

POLICY 1.3.4: Develop visual and physical links with the community that encourage public transportation and participation in campus activities.

POLICY 1.3.5: The campus shall maintain a relatively dense development pattern to efficiently use University land for future program accommodation.

OBJECTIVE 1.4: To maintain and enhance functional linkages between major campus activities.

POLICY 1.4.1: Campus activities of similar function shall be clustered together.

POLICY 1.4.2: Encourage separation of vehicular and non-vehicular circulation paths.

POLICY 1.4.3: Articulate vehicular and non-vehicular paths with landscaping, grading design and building edges.

POLICY 1.4.4: Permanent parking areas shall be constructed outside of the 1200 foot radius of the campus central core.

POLICY 1.4.5: Locate retail and support services close to campus housing (i.e., fast food, laundry, social activity centers, etc.)

POLICY 1.4.6: Locate parking facilities to support the academic, recreational and housing centers on the campus.

POLICY 1.4.7: The construction or installation of temporary and portable buildings on campus shall be discouraged.

OBJECTIVE 1.5: Campus buildings and facilities shall be energy efficient, as outlined in the UCF and SUS Guidelines.

POLICY 1.5.1: Whenever possible, care should be taken to minimize the east and west exposures of buildings.

POLICY 1.5.2: Provide overhangs and shading of south facing windows when appropriate.

POLICY 1.5.3: The University shall establish and enforce minimum thermal insulation values for exterior walls and roofs of all air conditioned facilities.

POLICY 1.5.4: Continue to connect all future and existing campus facilities to the centrally controlled Energy Management System (EMS).

POLICY 1.5.5: Position landscaping to help shade campus buildings.

POLICY 1.5.6: Windows may have tinting but the color and reflectance must comply with the UCF Architectural Guidelines and be approved by the Director of Facilities Planning.

POLICY 1.5.7: Light fixtures shall employ energy efficient measures, such as ballasts.

POLICY 1.5.8: Other energy saving features, such as occupancy controls on lighting, shall be considered for future and existing facilities.

2.3 (2) Urban Design Element Analysis

a) An analysis of the evolution of the development pattern of University buildings and open spaces.

1. There has been significant development on campus since 1995. The Communications Building was built in the north section of campus, near the Lake Clare housing development. The Health and Public Affairs Building was added to the east of the Student Center. Furthermore, the bookstore was added near the library, fulfilling a need for a student gathering space and contributing to the open space fabric in that area. Additionally, parking garages have been and are continuing to be built around the campus. Most of this new development has been spreading concentrically from the original campus development.

2. As program needs continue to demand more academic and support space on campus, development should respect the evolution around the circular pattern of the campus, while maintaining a relatively dense pattern. Particular attention should be paid to the creation of attractive open spaces, reinforced by careful site-planning. Of important concern is the preservation and enhancement of axial pedestrian links to and from the center of campus, which work to create long views and facilitate wayfinding on campus.

3. Please refer to the 1995 analysis for further information.

b) An identification of and assessment of the advantages and disadvantages of alternative spatial configurations by which future development on the campus may be organized. This analysis shall include consideration of methods to improve energy efficiency and alternatives for coordinating the pattern of buildings and spaces along the University/community boundary (graphic and companion narrative).

1. Buildings should be organized in a way which complement and frame the open spaces around them. The careful creation of open spaces provides the framework for memorable sacred places on campus, and provides a context for future program and the pedestrian experience on campus. The importance of these spaces cannot be underestimated, and indeed become the catalyst around which future buildings and pathways respond to and are mindful of.

2. An opportunity for this type of development is along the northeast axial, currently serving as temporary parking. Buildings along its edge would reinforce the important axial relation to the center that it has, as well as provide definition for quad-like open spaces along the middle. ~~An iconic building would serve as the northeastern terminus, at once being a gateway to the campus from the roadway and Arena and as a memorable building from within the campus.~~ A parking garage could be placed just to the southeast ~~of this building~~, providing support to both the new academic area and the arena. This axial quad could be

continued across the student union and mirrored as the front door to the campus where the Student Support Center ~~visitor center~~ is currently being shown.

3. Spatial configurations mentioned above are important for place making and establishing pedestrian importance on a college campus. Axial relationships to the center of campus should be enforced and in fact programmed in future growth framework- while maintaining the circular paths and roadways important to the history of the University of Central Florida.

c) An identification and assessment of alternative future activity location and linkage concepts for the campus and the context area (graphic and companion narrative).

1. The ~~anticipated~~ opening of the Academic Villages housing complex and new recreation Center south of the Student Resource Center (SRC) ~~will create~~ created a new activity center. Links to the center of campus from this area should be reinforced, particularly through the SRC. Furthermore, in addition to the proposed northeast academic spine, the area at the north end of Central Florida Boulevard provides an excellent opportunity for future development. Integration of a Student Support Center ~~campus visitor center~~ and academic buildings around an open green space would activate that area of campus and present a collegiate entranceway to the college.

2. Please refer to the 1995 analysis for additional information.

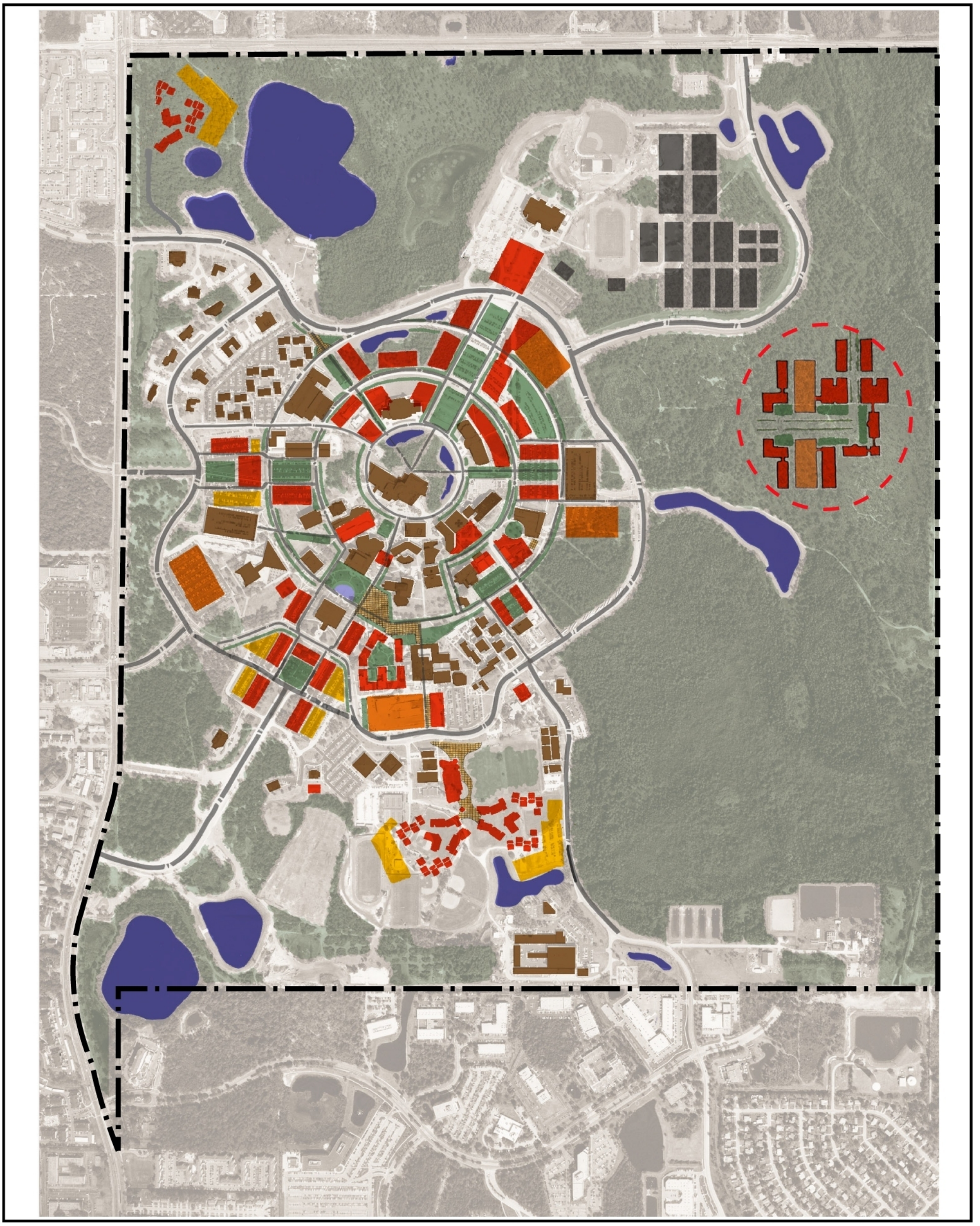


FIGURE 3-1

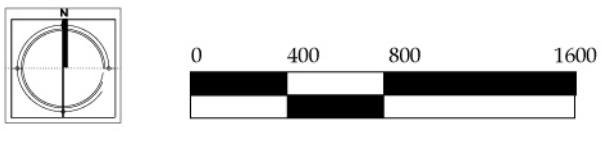
Urban Design

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000-2010



LEGEND

- New Buildings
- Existing Buildings
- Formal Open Spaces
- New Parking Garages
- New and Existing Surface Parking
- Lakes
- Potential Future Research Area

GOAL 1: To create development patterns that directs future growth into developable areas and away from environmentally sensitive areas, in a manner that is consistent with principles set forth in the Urban Design Element and is compatible with the surrounding community.

OBJECTIVE 1.1: To protect natural resources including surface waters and wetlands.

POLICY 1.1.1: UCF shall establish Conservation areas as identified on the Future Land Use Map (Figure 4-1) and on the Conservation Element Map (Figure 13-1). No construction is anticipated in these areas except for minimal structures and improvements necessary to ensure safe access and essential support functions.

POLICY 1.1.2: Before any such construction is authorized and a plan of development is approved, UCF shall review all available and economic options (including the costs of mitigation). If this review indicates that development in designated Conservation areas is the only viable option, then UCF shall pursue all reasonable efforts to minimize and mitigate any unavoidable impacts to these areas.

POLICY 1.1.3: Should mitigation be deemed necessary the Director of Facilities Planning shall be responsible for coordinating any necessary actions with the appropriate UCF departments. The Director shall also coordinate any mitigation requirements through the appropriate cognizant federal, state and regional agencies in accordance with their permitting processes.

POLICY 1.1.4: A definitive campus arboretum site shall be established and maintained for the study and preservation of native plant and animal species. The University will work with Friends of the Arboretum to develop the Arboretum into a renowned institution. Non-native species shall be limited to the arboretum outside of native natural communities.

OBJECTIVE 1.2: To minimize land use compatibility problems between the university and the host community.

POLICY 1.2.1: Pursuant to s.240.155(9), F.S., any amendment to the adopted Campus Master Plan shall be transmitted to the host and affected local governments and other external review agencies for review if such amendment, alone or in conjunction with other amendments, would:

a. increase density or intensity of use of land on campus by more than 10%;
b. decrease the amount of natural areas, open space, or on campus by more than 10%; or
c. rearrange land uses in a manner that will increase the impact of any future campus development by more than 10% on a road or another public facility or service provided or maintained by the state, the county, the host local government, or any affected local government.

POLICY 1.2.2: Proposed amendments to the adopted campus master plans which do not exceed the thresholds established in s.240.155(9), F.S., and which have the effect of changing land use designations or classifications, or impacting off-campus facilities, services or natural resources, shall be submitted to the host and affected local governments for a courtesy review.

POLICY 1.2.3: A 200 foot wide (minimum) green buffer shall be maintained around the entire periphery of the campus. Exceptions shall only be made for entrances, retention ponds and campus rights of way.

In order to maintain the effectiveness of the buffer, non-invasive native plant species will be used in landscaping activities.

OBJECTIVE 1.3: To correct existing land use compatibility problems on the university campus.

POLICY 1.3.1: All permanent academic functions shall be located between the 400 foot radius (Pegasus Circle) and the 1200 foot radius (Apollo Circle) whenever possible. Research functions may be located outside of the main academic area.

POLICY 1.3.2: Academic core areas important formal open space systems shall be created by locating academic uses that are linked, similar or adjacent to each other.

POLICY 1.3.3: Surface parking areas shall generally be located outside of the 1200 foot radius (Apollo Circle) and inside of Gemini Boulevard, in order to reduce vehicular vs. pedestrian conflicts on campus. Exceptions may be made for temporary non-paved lots. Surface parking areas shall continue to be consolidated in structures.

POLICY 1.3.4: Overflow parking areas may be located outside of Gemini Blvd., but shall never be located within the 1200 foot radius (Apollo Circle).

POLICY 1.3.5: Areas identified in the master plan as temporary classrooms, low density areas and parking lots shall remain as so until future projects for those areas are developed.

POLICY 1.3.6: All parking shall be removed from the area where the Temporary (T-600) parking lot is located by the year 2005.

POLICY 1.3.7: In order to preserve the open space nature of the campus and to minimize impervious surface needs, parking lot areas will continue to be consolidated into structured parking decks.

POLICY 1.3.8: In order to minimize automobile traffic, and therefore conflicts resulting from high vehicular levels of service, future parking decks shall be placed at strategic points near campus entrances. This will intercept a high volume of vehicles before they penetrate the campus circulation routes.

POLICY 1.3.9: Gemini Boulevard south shall be re-aligned in the direction of Central Florida Boulevard so that existing parking lots in the vicinity fall inside the Gemini Loop, creating development parcels for future academic and support buildings and therefore reducing present vehicular vs. pedestrian conflicts.

POLICY 1.3.10: The Master Planning Committee along with the administration, faculty and the Office of Facilities Planning shall review all proposals for compliance with the Master Plan's criteria for the Land Use Element.

POLICY 1.3.11: In the event that unforeseen changes are deemed necessary, to the Land Use Plan, the Master Planning Committee together with the administration, faculty, the Office of Facilities Planning and with the president's approval shall make the necessary amendments. Campus Master Plan

amendments that, alone or in conjunction with other amendments, exceed the thresholds established in s.240.155(9), F.S., and in the Future Land Use Element, shall be reviewed and adopted under the provisions of s.240.155(6)-(8), F.S.; and that amendments to the Campus Master Plan that do not exceed these thresholds shall be consolidated into an annual submission and submitted to the Office of Capital Programs for review and approval by the Division of Colleges and Universities.

POLICY 1.3.12: All decisions concerning land use and development on campus, especially those specifically mentioned in the Future Land Use Element, must be coordinated with the present Capital Improvements Plan and Urban Design Plan.

POLICY 1.3.13: Future development within each category shall comply with the following densities or intensities of use:

On-campus Dormitory Housing: 57.2-125.0 Residents Per Acre

Surface Parking: 124 Spaces per Acre

Structured Parking: 700 Spaces per Acre

Academic 2.5

East Academic Area

Athletic & Recreation Area: .30 FAR

Conservation Areas: .05 FAR

Ponds & Lakes: .05 FAR

Arboretum: .05 FAR

Specialized Housing: .10 FAR

Support Services: 1.0 FAR

Utilities: 1.0 FAR

Special Use: 1.0 FAR

Note: The FAR values assigned to conservation, arboretum and retention areas take into consideration that although these are zones of no-development there might arise the need to provide structures which house utilities and other similar needs.

OBJECTIVE 1.4: To coordinate future land uses with the availability of facilities and services.

POLICY 1.4.1: Projects that propose increases to campus infrastructure, utilities, facilities or services shall be approved only if such facilities are funded and already on-line to accommodate the need or will be on-line prior to occupancy of any structure to be served by such infrastructure, utilities, facilities or services.

POLICY 1.4.2: The following order of priorities shall be implemented concerning coordination of land uses with appropriate facilities and services:

- **Priority 1**
  Eliminate existing system deficiencies which may prevent future development.
- **Priority 2**
  Maintain the existing system as long as it is deemed capable of maintaining immediate needs.
- **Priority 3**
  Systems shall be expanded to accommodate needs.

POLICY 1.4.3: Campus development which might increase demands for solid waste collection and disposal shall be approved under provisions delineated in the General Infrastructure Element (2.9).

POLICY 1.4.4: Campus development which might increase amount of required impervious surface areas shall be approved on the provision of a drainage system that adheres to the conditions set forth in the General Infrastructure Element (2.9).

OBJECTIVE 1.5: To ensure the availability of suitable land on campus for utility facilities required to support future on-campus development.

POLICY 1.5.1: Within the academic core utility easements will be reserved along routes of easy access and where future building development is not planned, such as along the three pedestrian circular walks, along radial pedestrian walks and in dedicated radial open spaces.

OBJECTIVE 1.6: To minimize off campus constraints which limit future development on campus (i.e. traffic, utilities) and minimize on campus conflicts with land uses within the context area.

POLICY 1.6.1: The University shall request signalization for all Alafaya Trail access roadways as they become warranted.

OBJECTIVE 1.7: To coordinate future land uses with the appropriate topography and soil conditions.

POLICY 1.7.1: Development shall not occur within the present Federal Emergency Management Assistance 100 year flood line.

POLICY 1.7.2: UCF shall maintain a data base of existing topographic and soil conditions, which shall be updated on a regular basis, and as additional data developed for future construction projects become available.

POLICY 1.7.3: Areas containing severe soil constraints such as those that are found in and around

wetland sites and Lakes Lee and Claire shall remain undisturbed.

POLICY 1.7.4: Future development shall not alter the topographical features and surface water run-off patterns adapted by this Master Plan.

POLICY 1.7.5: Consistent with policies listed in this Element above, the University shall review future construction projects for consistency with existing topographic and soil data.

POLICY 1.7.6: UCF shall ensure that appropriate methods of controlling soil erosion and sedimentation to help minimize the destruction of soil resources be used during site development and use. Such methods shall include, but not be limited to:

- Phasing and limiting the removal of vegetation.
- Minimizing the amount of land area that is cleared.
- Limiting the amount of time bare soil is exposed to rainfall.
- Use of temporary ground cover on cleared areas if construction is not imminent.
- Special consideration shall be given to maintaining vegetative cover on areas of high soil erosion potential (i.e., steep or long slopes, banks of streams, stormwater conveyances, etc.).

POLICY 1.7.7: UCF shall require the integration of natural topographic and other physical features in project designs in order to develop the campus in harmony with its natural environment.

OBJECTIVE 1.8: To ensure that future campus development projects are consistent with regulations governing development in areas where historically or archaeologically significant resources may be present.

POLICY 1.8.1: In coordination with state and local historic preservation officials, UCF shall maintain an information file which identifies and locates properties under University ownership which may contain historic or archaeological resources which appear to qualify for inclusion in the National Register of Historic Places.

POLICY 1.8.2: The University shall consider the effect of any undertaking on any historic property that is included, or eligible for inclusion, in the National Register of Historic Places. The University shall afford the Department of State's Division of Historical Resources a reasonable opportunity to comment on such an undertaking.

POLICY 1.8.3: The University shall consult with the Department of State's Division of Historical Resources prior to any land clearing, ground disturbing, or rehabilitation activities which may disturb or otherwise affect any property which is included, or eligible for inclusion, in the National Register of Historic Places.

POLICY 1.8.4: Prior to a historic property being demolished or substantially altered in a manner that adversely affects its character, form, integrity, or archaeological value, the University shall consult with the Department of State's Division of Historical Resources to avoid or mitigate any adverse impacts, or to undertake any appropriate archaeological salvage excavation or recovery action.

2.4 (2) Future Land Use Element Analysis

a) An analysis of the amount of land that will be required to accommodate the projected future enrollment of the University, including:

1. The categories of land use and their densities or intensities of use;

2. The estimated gross acreage for each category; and

3. A description of the methodology used. The methodology should be based on floor area ratio (F.A.R.) or other acceptable means of establishing the relationship between land requirements and building areas.

    1. There are currently 1,415 acres of land which comprise the University of Central Florida's main Campus, the uses of which vary. A significant portion of these lands are undeveloped, or set aside as conservation lands, while academic and support programmed spaces are growing into a larger proportion of the total amount of land. These academic and support categories of land are broken in subcategories for the purpose of this analysis.

    2. However, it should be noted that in an environment as diverse as a University, land uses often blend into each other. Support spaces are integrated within academic buildings to provide efficient services which complement each other. Preserved lands are often available for passive recreational uses. And it's often a fine line between such categories such as academic and research, or academic and open space where outdoor classes take place. Educational institutions are by their very nature mixed-use, places which foster an integration of the many facets which comprise the whole.

    3. With that in mind, for the purposes of this analysis, the following area calculations are based on current numbers provided by the University. Each category holds forth its existing percentage of the total space, while the projections are tied exclusively to the NSF/FTE ratio. GSF numbers are based on a 1.5 muliplier, and an FAR (2.5) is used to calculate the gross area, to reflect a recommended six-story building height on future academic buildings.

Table 2.4(2)a) Future Additional Land Needs by Space Type(GSF)

	2004-05	Acres	2009-10	Acres	2009-10 Plus*	Acres
Classroom	454,652	4.18	532,905	4.89	612,842	5.63
Teaching Laboratory	515,553	4.74	604,287	5.55	694,931	6.38
Research Laboratory	531,257	4.80	622,695	5.72	716,100	6.58
Office (incl. conference)	1,227,882	11.28	1,411,847	12.96	1,623,624	19.91
Study (excl. Library)	150,000	1.38	180,000	1.65	207,000	1.90

Library	393,900	3.62	442,722	4.06	442,722	4.06
Administrative*	-	-	-	-	8,856	0.20
Physical Plant*	-	-	-	-	15,630	0.36
Auxiliary*	-	-	-	-	29,130	0.67
Student Support*	-	-	-	-	5,419	0.12
Total Additional Acres		30.00		34.83		45.81

*Support Space are based on a 1.0 FAR. No signifcant needs are projected for 2005 and 2010.

4. The current generalized breakdown of the 1415 total campus acreage is as follows: (based on UCF analysis taken from an April, 2000 aerial photograph):

   990.5 acres are in preserve or wetlands
   424.5 acres of land are "developable"

   Of the 424.5 developable acres, 293.6 acres are still available for development and 130.0 ac currently has impervious coverage (buildings and pavement).

b) An analysis of projected future space and building needs for academic facilities, developed in the "Analysis Requirements" of the Academic Facilities Element (tabular).

1. The gross building area necessary to meet the growth demands has been projected for five and ten year planning periods. Table 2.4(2)b) indicates the amount of gross square feet (GSF) required to satisfy the demand for space in the four categories listed. The GSF projections are a result of increasing the assignable square footage for each category by a 1.5 multiplier.

TABLE 2.4(2)b) Projection of Future Space Needs (GSF)

	Existing GSF	**2004-05**	**2009-10**	**2009-10 Plus**
Classroom	**231,168**	454,652	532,905	612,842
Teaching Laboratory	**325,266**	515,553	604,287	694,931
Research Laboratory	**197,781**	531,257	622,695	716,100
Office (incl. conference)	**69,315**	1,227,882	1,411,847	1,623,624
Study (excl. Library)	**n/a***	150,000	180,000	207,000
Library	**197,781**	393,900	442,722	442,722
Total		**3,273,243**	**3,794,456**	**4,297,218**

*Study space is mostly, but not entirely, accounted for via the Library. In that regard, recall Table 2.5(1)c) in the Academic Facilities Element showing Instructional Space-Use Standards for libraries, where besides the usual stack

areas for books and journals, provision is made for reading rooms and study carrels. The latter are classed as Study, but additional Study areas occur in scattered buildings across the campus. (At the present writing, roughly 20% of main campus study areas are outside the Library.)

(excluding temporary and leased space)

c) An analysis of projected future space and building needs for support facilities, developed in the "Analysis Requirements" of the Support Facilities Element (tabular).

1. The gross building area necessary to meet growth demands has been projected for five and ten year planning periods. Table 2.4(2)c) indicates the amount of gross square feet (GSF) required to satisfy the demand for space in the four categories listed. The GSF projections are a result of increasing the assignable square footage for each category by a 1.5 multiplier.

Table 2.4(2)c) Summary of Support Space Needs (GSF)

	Existing	1999-01	Surplus (Shortfall)	2004-05	Surplus (Shortfall)	2009-10	Surplus (Shortfall)	2009-10 Plus	Surplus (Shortfall)
Adminis-trative	**103,973**	70,118	33,854	85,327	18,645	98,111	5,862	112,828	(8,856)
Physical Plant	**183,513**	123,760	59,753	150,603	32,910	173,167	10,346	199,143	(15,630)
Auxiliary	**342,003**	230,645	111,358	280,671	61,332	322,723	19,280	371,133	(29,130)
Student Support	**63,626**	42,909	20,717	52,215	11,410	60,039	3,587	69,045	(5,419)

(excluding temporary and leased space)

d) An analysis of existing vacant and undeveloped land on the University campus to determine its suitability for use, including where available:

1. Gross vacant or undeveloped land area;

2. Soils;

3. Topography;

4. Natural resources; and

5. Historic and archaeological resources.

1. There are no new additions to this section. The 1995 plan has detailed soil, natural resource, and topography constraints, which still hold true for the purpose of the update. There are no areas nor buildings on the UCF campus that are considered to be of archaeological or historical significance.

2. Careful attention should be paid to the preservation of existing conservation and natural areas, and the prudent use of undeveloped land in the future. In order to efficiently use the University's land resources while allowing for the continuation of natural systems, future development should be relatively dense in character, and tie into the existing infrastructure on campus. Efforts should be made minimize the impact on the arboretum. Furthermore, attention should be paid to those locations where the impervious surface areas will not allow additional development.

e) An analysis of opportunities for redevelopment and for elimination of uses that are inconsistent with the University's character and proposed future land uses.

1. A significant opportunity for redevelopment lies in the area of the current Apollo Housing, next to the Student Resource Center. Its relatively low ratio of beds per acre can be significantly increased to an amount similar to the nearby Apollo housing, without detracting from its overall livability. Redevelopment of this area, while maintaining the current housing land use provides an opportunity to provide more housing on campus, while creating a quad area for the students. Other uses for this space include a future academic building or quad, which certainly provides a viable option for the area, and should be considered by the University.

2. Another opportunity for redevelopment occurs throughout the campus where older, low-rise structures currently stand. Increasing density in these spaces is a more efficient use of land, while conserving land which would be needed to accommodate additional program. Furthermore, more substantial buildings can be used to frame the formal open spaces which can be created around them, and provide visual context for the campus as a whole.

3. The final 1995 strategy holds for this update. Implementation of infill projects not only provide usable land, it will also present an opportunity to define open spaces on campus.

f) A finding as to whether each planned use of University property is consistent with the adopted conceptual State Lands Management Plan.

1. The campus of the University of Central Florida is presently in compliance with State Land Management Plans are its planned future uses. The role of UCF as an academic institution allows it a diverse range of uses, such as but not limited to educational, athletic and cultural uses.

g) If the analyses in 2 (a) – (e) indicate that the existing University campus will not prove sufficient capacity to accommodate the future needs of the University, an analysis shall be undertaken identifying how much additional land would be required to meet future needs including:

1. The categories of land use and their densities or intensities of use;

2. The estimated gross acreage for each category; and

3. A description of the methodology used. The methodology should be based on floor area ration (F.A.R.) or other acceptable means of establishing the relationship between land requirements and building areas.

1. Not applicable. The University of Central Florida has sufficient land for future programmed

needs, and no new land is necessary.

h) An assessment as to whether any portion of the University property should be declared surplus for release by the University for use or disposal by the State.

1. All of the land that comprises the University of Central Florida is considered essential to ensuring space for future growth. Therefore, none of it is considered to be surplus.

i) In the event additional land is determined to be necessary for the future development of the University, an analysis of the context area shall be undertaken to identify potential land areas for such expansion. This analysis shall consider, at a minimum, the following:

1. Existing land use;

2. Property values;

3. Constraints that may limit future development;

4. Future proposed land use;

5. Building conditions (if appropriate);

6. Property ownership; and

7. Potential acquisition and relocation costs.

1. Not applicable. The University of Central Florida has sufficient land for future programmed needs, and no new land is necessary.

j) In conjunction with the analysis conducted in 2 (i), an analysis shall be undertaken identifying and evaluating alternatives to additional land acquisition. At a minimum this analysis should address (narrative, graphic if appropriate):

1. Potentials for increasing development height, intensity or density on the campus;

2. Potentials for increasing the utilization of existing and future academic spaces to reduce future facility needs in order to fit within existing land resources;

3. Potentials for reducing the planned future student enrollment;

4. Potentials for transfer of programs to existing University satellite sites; and

5. Transfer of programs to other existing institutions (community colleges, etc.) which may have excess land development capacity.

1. Not applicable.

k) An analysis of constraints that may limit the amount or location of future land use development on the University campus, including:

1. Areas of vegetation, surface waters, wetlands, or wildlife habitat protected by State or Federal regulations;

2. Areas encumbered by Federal land use development restrictions related to airports or other Federally regulated facilities in the vicinity of the University;

3. Areas encumbered by flood hazard areas as defined by the Federal Emergency Management Agency;

4. Areas encumbered by stormwater management or other utility requirements of easements;

5. Areas on the University campus identified by the host community in its comprehensive plan to be developed for a particular land use or uses;

6. Areas encumbered by electromagnetic radiation, nuclear radiation, explosion or other catastrophic hazards; and

7. Areas encumbered by existing buildings or other facilities considered likely to remain for the planning period.

1. There is no change to the 1995 information. Please refer to the Utilities and General Infrastructure elements for further information.

l) An analysis of off-campus constraints that may limit the amount or location of future land use development on the University campus, including:

1. The availability of public facilities and services to serve new development (electricity, potable water, sanitary sewer, stormwater management, etc.);

2. Traffic capacity on roadways within the context areas. Traffic counts and origin/destination studies will be used to generate date; and

3. Other constraints.

    1. Please refer to the Utilities and Transportation element analyses for more information.

m) An analysis of the goals, objectives and policies adopted by the host community in their comprehensive plan related to development of land uses in the context area.

    1. There is no change to the 1995 report, as the Goals, Objectives and Policies adopted by the host community have not changed since this report was last published.

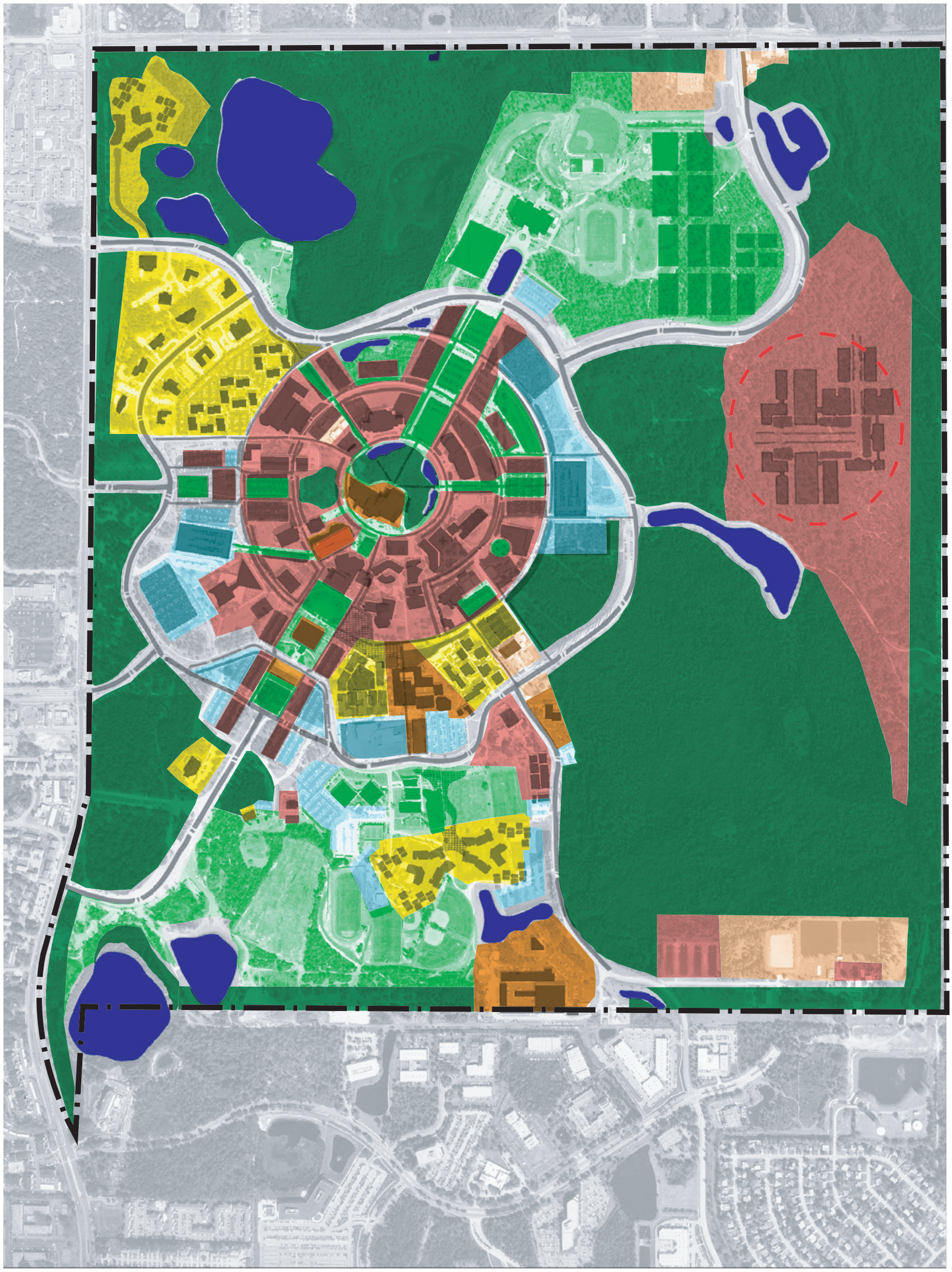


FIGURE 4-1

Land Use

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000-2010

0 400 800 1600

LEGEND

- Academic/Research
- Residential
- Utility
- Parking
- Support
- Conservation/Buffer
- Recreation/Open Space
- Lakes
- Potential Future Research Area

GOAL 1: To provide modern, well-equipped academic facilities on campus sufficient to meet general requirements of state-of the-art instruction in all of its various programs.

OBJECTIVE 1.1: The University must provide modern, well-equipped classrooms on campus, sufficient to meet general requirements of state-of-the-art instruction in all of its various programs.

POLICY 1.1.1: The University will seek to increase its classroom inventory by an average of at least 7,500 net square feet per year and thereby achieve a minimum classroom increase of 75,000 net square feet by the year 2009.

POLICY 1.1.2: While keeping pace with enrollment growth via the addition of future classrooms, the university will seek whenever possible to eliminate the use of leased classrooms, both on campus and in the surrounding neighborhood, especially "temporary" and/or modular structures never intended to provide a long-term approach to the problem of shortages. This will require an increase of the classroom inventory by 20,000 net square feet beyond the increase required by enrollment growth.

POLICY 1.1.3: The University shall apply space use standards established in Rule Chapter 6A-2, F.A.C., to determine future classroom building programs and to plan the renovation of existing classrooms to optimize existing classroom space.

OBJECTIVE 1.2: **The University must provide teaching laboratories sufficient to meet the specialized requirements of instruction in all of its various programs, at both the undergraduate and graduate levels.**

POLICY 1.2.1 The University will seek to increase its teaching laboratory inventory by approximately 8,000 net square feet per year.

POLICY 1.2.2: The University shall apply space use standards established in Rule Chapter 6A-2, F.A.C., to determine future teaching laboratory building programs and to plan the renovation of existing teaching laboratories to optimize existing laboratory space.

OBJECTIVE 1.3: The University must provide research laboratories sufficient to meet the needs of scholarship by undergraduate and graduate students as well as faculty in all of its various programs.

POLICY 1.3.1 The University will seek to increase its research laboratory inventory by an average of at least 15,000 net square feet per year.

POLICY 1.3.2: The University shall apply space use standards established in Rule Chapter 6A-2, F.A.C., to determine future research laboratory building programs and to plan the renovation of existing teaching laboratories to optimize existing laboratory space.

POLICY 1.3.3: The University shall consider placing future research facilities not essential to undergraduate education, as funding is available, in the area just east of the arboretum.

OBJECTIVE 1.4: The University must provide state-of-the-art Library facilities and Library resources sufficient to support the instruction of its undergraduate and graduate students as well as scholarship by its students and faculty.

POLICY 1.4.1: The University will seek to increase its library inventory by building above the bookstore next to the current library, and to consider such possibilities as off-campus storage systems.

OBJECTIVE 1.5: **To establish the timing and phasing of development of future academic space on campus.**

POLICY 1.5.1: Final authority for planning is vested in the University President, acting upon advice with the President's Advisory Staff (PAS). The PAS includes the five divisional Vice Presidents, and the Faculty Senate President. The University President also receives input on all master planning issues from the Chair of the University Master Planning Committee (see Appendix A).

POLICY 1.5.2: With regard to the timing and phasing of developments of future academic space on the main campus, the university will seek to include in its ongoing Capital Improvement Plan at least one future major academic building each year, for at least the next ten years.

OBJECTIVE 1.6: **To set priorities for the development of future academic buildings.**

POLICY 1.6.1: The specific priorities for development of future academic facilities shall be, in essence, those reflected in the draft ten-year Capital Improvement Plan presented elsewhere in this document (see Section 2.14, "Capital Improvements Element"). While this plan is subject to any necessary changes depending on circumstances (e.g., the available PECO funding--see next item), the general order in which the various Projects are listed shall be the order of priorities of the corresponding developments.

POLICY 1.6.2: The Capital Improvements Element shall be reviewed annually and amended as needed to reflect any changes to the timing and phasing requirements and priorities for the construction of academic facilities.

OBJECTIVE 1.7: To estimate the funding necessary for the development of future academic facilities.

POLICY 1.7.1: Allocations of funds for the development of future academic facilities shall be, insofar as possible, those reflected in the draft Capital Improvement Plan (see Section 2.14, "Capital Improvements Element"). Requests for PECO funds for each of the major academic projects cited in Objective 5 shall generally be in the range from $12 million to $16 million.

POLICY 1.7.2: Administrative procedures for the integration into the master plan of unforeseen academic facilities that may arise from grant awards, accelerated funding or other circumstances shall be as described in the following summary. Broadly, final authority for planning is invested in the University President, acting with advice from the President's Advisory Staff (PAS). The PAS includes the five divisional Vice Presidents and the Faculty Senate President. The University President also receives input on all master planning issues from the Chair of the University Master Planning Council (UMPC). (Refer to Appendix A).

OBJECTIVE 1.8: **To define appropriate locations for future academic buildings.**

POLICY 1.8.1: As shown in the Future Land Use and Urban Design Elements, sufficient space exists in the academic core to accommodate future academic buildings for the time horizon of this Master Plan. Future academic facilities shall be shown as identified in Figure 5.1.

POLICY 1.8.2: With regard to the locations for future academic buildings, the university will seek to meet the requirements of growth while maintaining an environmentally pleasing and inviting place in

which all of its students, faculty and staff can learn, teach and work.

OBJECTIVE 1.9: **To encourage energy efficiency and conservation techniques in all future facilities.**

POLICY 1.9.1 In order to encourage energy efficiency and conservation techniques in all future facilities, these issues shall be a centerpiece of design processes. Specifics in this regard will be as outlined elsewhere in the present document (cf. Section 2.14, "Capital Improvements Element").
In particular, future buildings shall comply with the criteria and specifications as stated in the Florida Energy Code, Section 8.

2.5 (2) Academic Facilities Element Analysis

a) A projection of future student credit hours distributed by campus or satellite facility (tabular).

Table 2.5(2)a) shows the projected student credit hours on the main campus at the University of Central Florida for the academic years 2004-05 and 2009-10. In keeping with earlier remarks regarding possible future "excess" enrollments, we have included, just below the official 2009 10 figures, others that are greater by 15%.

TABLE 2.5(2)a) Projected Student Credit Hours

Main Campus Summary	Lower	Upper	Grad	T/D	Total
2004-2005	337,120	414,720	71,680	4,768	828,288
2009-2010	387,640	476,840	82,400	5,504	952,384
2009-2010 (projection plus 15%)	445,786	548,366	94,760	6,330	1,095,242

b) A projection of future WSCH (Weekly Student Contact Hours) distributed by campus or satellite facility (tabular).

Table 2.5(2)b) shows projected Weekly Student Contact Hours (WSCH) on the main campus at the University of Central Florida for the academic years 2004-05 and 2009-10.

TABLE 2.5(2)b) Projected Weekly Student Contact Hours

Main Campus Summary	Classroom	Laboratory	Total WSCH
2004-2005	1,041,532	56,771	1,098,303
2009-2010	1,220,797	66,543	1,287,340
2009-2010 (projection plus 15%)	1,403,917	76,524	1,480,441

c) A projection or assumptions about the future space utilization for the space types identified in the DATA REQUIREMENTS section of this element (tabular).

Impact of Enrollment Growth. As indicated in the Data provided separately, in Table 2.5(1)a) and the subsequent material, the University of Central Florida is projecting enrollment growth over most of this decade that will amount to approximately 1000 FTE students annually. This is based on analysis by the Office of Institutional Research together with the Office of Enrollment and Academic Services. In brief, the 1999-2000 student FTE count reported by Institutional Research is 19,268, but by the year 2009-2010, the figure is projected to be 29,930. Thus enrollment growth

is officially expected to be about 10,000 FTE students over the coming ten-year period—representing an overall 55% increase in the student body.

As noted earlier, for campus planning, we must recognize that official enrollment projections are subject to significant uncertainty. Preponderance of experience over the past decade indicates that projections for UCF are consistently on the low side—even in the short run, let alone several years out. There are a number of reasons for this, and they do not seem likely to change much over the planning period in question. They include: ongoing growth of the state population, much of which is concentrated in central Florida (especially the I-4 high-tech corridor, from Tampa through Orlando to the space coast); dramatic overall growth of Florida's college-age population, ranging from mid-to-late teens through late twenties, much of which is concentrated in Central Florida; UCF's increasing "market share" among college-bound students, compared to other universities in the State system; and the relatively new and growing emphasis at UCF on graduate studies, both at the master's and doctoral levels.

In short, our strong belief is that UCF's official enrollment projections should be viewed as a lower limit on what the true figures are likely to be, rather than a close estimate of those figures. In specific terms, we anticipate that enrollments by 2009-2010 could be as much as ~~at least~~ 15% higher than those projected now—and consequently, it is imperative to cover such a possibility with current planning. To echo a statement made earlier, if the excess enrollments do not materialize, no great harm will be done; but if they do, then by that time it probably will be too late to make appropriate adjustments to the large-scale campus design and infrastructure.

At any rate, with reference to needs for academic facilities, we estimate that to serve an added 1000 FTE students annually will require added classrooms amounting to about 7,500 square feet per year, or, equivalently, 500 classroom seats per year. This conclusion can be reached by various lines of argument, the simplest of which is based on the current overall numbers of classrooms and students. On the main campus, according to 1999-2000 inventory figures, the University used about 140 thousand square feet of space as "classrooms" (however, see below.) At the same time, the student FTE total on the main campus is around 19 thousand. This works out to an average of 7.5 square feet per student, which translates into the quoted figure of 7,500 square feet per 1,000 students.

More refined methods of estimating the same quantity can be employed, based on, e.g., the assumption that the 1000 FTE students added each year will be distributed over the four levels of classroom instruction roughly as follows: lower level, 360 FTE; upper level, 510 FTE; graduate classroom, 120 FTE; and thesis/dissertation, 10 FTE. Then, using typical figures for class sizes by level, square footage per seat, and seat occupancy per week, one can arrive at a figure for square footage per FTE. Apart from details, and within the uncertainties attached to such figures, the result is consistent with that quoted previously. (It is also consistent with the SUS classroom usage standards shown in Table 2.5(1)c), especially given uncertainties involved in averaging over the varying standards for different instructional levels.)

Status of Current Classrooms. At the present time, it is clear that where classrooms are concerned, the UCF main campus already is operating "at or above capacity." Besides making full use of its regular academic buildings, which in some cases includes utilization of spaces designed originally for other purposes (laboratories, theaters, library study areas, etc.), the university has been forced over the past several years to rent temporary facilities both on and off campus for classrooms and other purposes (offices, labs, etc.). This will continue at least until the completion of major new buildings now on the drawing board takes place, starting with the Engineering II Building in mid 2001.

Meanwhile, some of the nominally "regular" academic buildings, though not rented, are deteriorating badly and will have to be taken out of service before much longer. These are not permanent structures at all, but instead modular units, never intended to be used on any but a temporary basis. Some are relatively new—two, three, or four years old—but others have been in continuous use for fifteen to twenty years, or even more.

Efficiency of Classroom Usage. To put the mentioned "full use" of existing facilities in perspective, one can remark that the university's fall semester figures for weekly hours of use involving general-purpose classrooms (excluding rented or temporary spaces) show that average usage per classroom is typically about 50 hours per week. This naturally is concentrated in the high-demand Monday through Friday period, so that during this five-day portion of the week, the *average* classroom usage is about ten hours per day. One clear implication is that not much relief from shortages can be found via attempts to increase the efficiency of existing classroom usage. On the contrary, the University's regular classrooms already are used essentially to their maximum capacity, the UCF weekly-average usage figures being among the highest in the SUS.

Planned Classrooms in Relation to Needs. With the above facts in mind, an assessment has been made to determine the adequacy of classroom space apt to come on line in the next several years, in terms of projected enrollment growth. The conclusion is that planned new construction will be able to accommodate the assumed new students, at current efficiencies of usage. It should even be possible during the next few years to reduce the rental of spaces off campus—and at the same time, turn back to laboratory and other usages a number of areas borrowed "temporarily" fifteen or more years ago, to meet the then-emerging classroom shortage. This of course assumes that PECO funding for new construction is somewhere near adequate to support the existing plans.

Teaching Laboratories. Turning from general-purpose classrooms to teaching laboratories, one finds an enrollment-related problem there also. In terms of currently existing spaces, teaching labs represent roughly three quarters as much total square footage as classrooms, as indicated earlier. This is reasonable, given that weekly hours of lab usage per student are much less on the average than those for classrooms—almost exactly five times less, according to typical data. On the other side of the picture is the fact that square footage per lab seat is typically about twice

that per classroom seat, say 30-35 sq.ft., compared to 15-17 sq.ft. One overall implication is that while enrollment growth does certainly lead to a need for more teaching laboratories, the need does not rise as steeply as that for classrooms, when couched in terms of square footage per added FTE student (two and one-half times less) or seats per added FTE student (five times less).

To be sure, the "efficiency" of lab utilization in terms of total hours per week is ordinarily much smaller than for classrooms. This evidently is one of the main reasons why, at present, the overall square footages of laboratories and classrooms are more or less comparable. On the other hand, it also means that more flexibility remains, at least in principle, for increasing the weekly hours of usage, if enrollment growth makes that necessary. To put the same point differently, there is often a possibility of scheduling added sections in existing laboratories, and this persists (at least from the simplistic standpoint of "free hours" in the schedule) long past the point when general purpose classrooms are utilized to the maximum extent feasible.

Having said this, we add that the University's new buildings on the PECO list do make provision for substantial added labs as well as classrooms. Moreover, though the overall square footages planned for teaching labs will be less than that for classrooms, the new labs constructed should adequately serve needs caused by growth throughout the decade.

Research Laboratories. Generally, needs for added research laboratories are not coupled as closely to enrollment growth as those for classrooms and teaching labs, but there is nonetheless some relation to enrollments. First, with growth comes the need for added faculty, and in the laboratory sciences, studio arts, and similar disciplines, the new faculty in many cases have needs for their own dedicated labs to support scholarship and other required professional development activities.

Secondly, research labs are often essential for thesis and dissertation work by students in disciplines with active graduate programs, especially at the doctoral level. To that degree, the distinction between research labs and teaching labs breaks down, inasmuch as instructional functions are intrinsic to both. The difference is one of degree, not of kind. (Besides, there are many cases on campus at present where one and the same lab is used both for graduate coursework and also thesis and/or dissertation work, not to mention faculty research, as such.)

Finally, enrollment growth often comes about not simply from increasing numbers of students in ongoing programs, but from the attraction of students to wholly new programs. Some of these bring with them distinctive laboratory needs, which simply are not met by previously existing types of facilities. Good examples are furnished by the university's strong push in recent years toward excellence in the key areas of "advanced materials characterization and analysis" (particularly in regard to its "I-4 High Tech Corridor" partnership activities) and microbiological sciences. These types of developments can only accelerate as the university moves toward its strategic goal of achieving national and international prominence in selected areas of research

and scholarship.

One other point regarding research labs is that the needs are likely to be much greater than might be inferred from the Data provided separately, Table 2.5(1)c), showing the Instructional Space-Use Standards. For instance, assignable square footage per FTE listed for "C&G Research Faculty" is 291.26 NASF per FTE. *Prima facie*, this appears a great deal too low. Typically, a full-time research faculty member in any of the physical sciences, life sciences, or engineering, who can be expected to hold Federal research contracts and/or grants, employ research associates or graduate assistants, technicians and other staff, etc., will need lab space in the range 1,000 to 1,500 square feet, if not more. While this sort of range might be reduced when calculating a "standard per FTE," due to the inclusion of research associates, grad assistants, etc., in the averages, it is hard to see how one can get down to 291.26 square feet per FTE that way.

In the specific case of UCF, a further approach to the projected need for research lab space is given by the published SUS study titled "Analysis of 2005-06 Space Needs by Category; Main Campuses." This is based on the space inventory as of June 30, 1998, together with projects funded for construction through 1999-2000. The "Net Space Need" for research labs in 2005-06 is shown as 168,707 square feet. This agrees well with our own sense that over the next five years, perhaps 80 new research faculty will be added (30 C&G and 50 E&G—see Table 2.5(2)d) below). If each of them required 1,500 square feet of lab space, then the total amount required would be about 120,000 square feet. The other 48,707 square feet to reach the SUS estimated can be explained in terms of "catch-up," since there is already a shortage at the present time.

Offices. While offices are not viewed, strictly speaking, as "academic spaces," mention of them is made here for two reasons. First, UCF's expected explosive growth of enrollments over the coming decade will unquestionably require very large increases of both regular faculty and staff, who cannot function properly without added office space. Thus offices, at least for instructional faculty, are a necessary adjunct to the added classrooms and labs that will be needed.

Secondly, the state's own estimate of "net space needs" for 2005 06 (referred to above) shows that UCF's shortage of office space will exceed that of any other space type by a large margin. Specifically, the state's estimate is that office shortages in that year will total about four hundred thousand square feet—more than the combined shortages of both classrooms and teaching labs.

In terms of total generated office needs (as opposed to shortages), we estimate that by 2009-10, based on the official projected enrollments, these will exceed nine hundred thousand square feet on the main campus. By the same token, if actual enrollments exceed projections by 15%, then office needs will exceed one million square feet.

In this regard, one must note that the figures cited represent aggregates of all "office-type" needs for the entire campus, not only faculty and staff offices *per se*, in both academic and administrative units, but also related spaces such as conference rooms and "office support" areas, e.g., supply closets. As such, they include the office figures quoted elsewhere in this document, under separate headings—e.g., those under Support Facilities, in Section 2.6.

Study Spaces. Another sort of space to be kept in mind is titled "Study." This is mostly, but not entirely, accounted for via the Library. In that regard, recall in the Data provided separately, Table 2.5(1)c) showing Instructional Space-Use Standards for libraries, where besides the usual stack areas for books and journals, provision is made for reading rooms and study carrels. The latter are classed as Study, but additional Study areas occur in scattered buildings across the campus. (At the present writing, roughly 20% of main campus study areas are outside the Library.)

Given that the state's overall estimate of UCF's 2004-05 need for main-campus "Study" space is around 300,000 square feet, while the Library part is estimated at less than 200,000 square feet (see below, Table 2.5(2)d), an added need for 100,000 square feet of such space is estimated (that is, exclusive of the Library). By 2009-10, this rises to an added 120,000 square feet, or perhaps 138,000 square feet, if an excess 15% of enrollments are assumed.

Area Campus Facilities. The enrollment growth projected for the next decade will affect space needs at the Brevard and Daytona area campuses, along with those at the "main" (Orlando area) campus. Indeed, since growth at the area campuses has become a special priority of the SUS, growth at those campuses is projected to occur more than proportionately to the overall growth. In specific terms, while the entire student body will be increasing by roughly 10,000 FTE over the ten-year period, the area-campus portion will be increasing by perhaps 1500 FTE. Furthermore, this will be divided more or less equally between the two locations mentioned, with a substantial part of it being taken also by other instructional sites in the UCF service area, that are now under development.

From what was said earlier, it follows that a ten-year enrollment growth of perhaps 500 FTE students at either area campus will require the addition of no more than roughly 3,750 square feet of general purpose classrooms (i.e., roughly 250 classroom seats). This need is sufficiently small that it can be dealt with in due course, without making special provision in advance. In particular, the university does not anticipate adding Brevard or Daytona campus facilities to its PECO list during the period mentioned. On the other hand, it will be necessary to augment the university's joint-use facilities at other community-college sites in the service area, and provision is being made for this on the mid- to long-term PECO list.

d) d) A projection of future net academic space needs based on the future WSCH and ASF distributed by campus or satellite facility. Future academic space needs shall be calculated at a minimum for the space types identified in the DATA REQUIREMENTS section of this element (tabular).

~~a)~~

Table 2.5(2)d) shows the projections of future needs for instructional, research, and library space, along with other study spaces (exclusive of the library) and offices, in terms of Net Assignable

Square Footage (NASF). The table is in two parts, the first of which shows projections for instructional and research space types. They are based on the SUS study "Analysis of 2005-06 Space Needs by Category; Main Campuses," mentioned above. To obtain NASF figures for the academic years of interest here, results of the study for the year 2005 06 are prorated according to the FTE enrollment figures for 2004-05 and 2009-10, respectively. (It should be noted that both of these are greater than the FTE projected previously for 2005-06, i.e., 21,649. This means that the NASF needs for 2004-05 are already greater than had been projected earlier for 2005-06.)

TABLE 2.5(2)d). Projection of Future Space Needs, Part I

SPACE TYPE	NASF		
	2004-05	**2009-10**	**2009-10 Plus***
Classroom	303,101	355,270	408,561
Teaching Laboratory	343,702	402,858	463,287
Research Laboratory	354,171	415,130	477,400
Office (incl. conference)	818,588	941,231	1,082,416
Study (excl. Library)	100,000	120,000	138,000
Total	**1,919,562**	**2,234,489**	**2,569,664**

* Figures for "2009-10 Plus" reflect enrollments 15% greater than those of the official projections.

The second part of the table shows projections of library space needs. These are based on the Instructional Space-Use Standards in the Data, Table 2.5(1)c), provided separately.

TABLE 2.5(2)d). Projection of Future Space Needs, Part II

	FTE		NASF/	NASF	
	2004-05	**2009-10**	**FTE**	**2004-05**	**2009-10**
Library					
Under Level Read Room	22,267	26,099	6.25	139,169	163,119
Begin Level Grad Carrel	3,105	3,639	7.5	23,288	27,293
Adv Level Grad Carrel	163	192	0	0	0
Law Student Carrel	0	0	3.65	0	0
Faculty Carrel	1375	1650	3.34	4593	5511
Library Stack Area					
First 150,000 Vol	150,000	150,000	0.1	15000	15000
Second 150,000 Vol	150,000	150,000	0.09	13500	13500
Next 300,000 Vol	300,000	300,000	0.08	24000	24000
Above 600,000 Vol	550,000	600,000	0.07	38500	42000
Library Service Area			5%	4,550	4,725
Total Library Space				**262,600**	**295,148**

Finally, we note again that these Library figures are conservative, inasmuch as they do not fully account for

the university's need for general "study space." If all of this were included here, then so-called "Library" needs for 2009-10 would increase, perhaps by another 138,000 NASF.

e) A projection of future academic gross building area needs (tabular).

The gross building area necessary to meet the growth demands has been projected for five and ten year planning periods. Table 2.5(2)e) indicates the amount of gross square feet (GSF) required to satisfy the demand for space in the four categories listed. The GSF projections are a result of increasing the assignable square footage for each category by a 1.5 multiplier.

TABLE 2.5(2)e) Projection of Future Space Needs (GSF)

SPACE TYPE	GSF		
	2004-05	2009-10	2009-10 Plus
Classroom	454,652	532,905	612,842
Teaching Laboratory	515,553	604,287	694,931
Research Laboratory	531,257	622,695	716,100
Office (incl. conference)	1,227,882	1,411,847	1,623,624
Study (excl. Library)	150,000	180,000	207,000
Library	393,900	442,722	442,722
Total	**3,273,243**	**3,794,456**	**4,297,218**

(excluding temporary and leased space)

f) An analysis translating the future net and gross building area requirements into building "increments". The basis for this analysis shall be fully described and shall be based on considerations of funding, prototypical building sizes, or other logical and replicable method of calculation. The analysis should also consider whether future new space needs would be best accomplished through renovations or additions to existing facilities.

University campuses are typically made up of buildings that house a wide range of uses. At the University of Central Florida many buildings accommodate varying proportions of academic, study and support space within a single structure.

Projecting future net and gross building area requirements into building "increments," can be misleading since it is unlikely that all of the future academic facilities will be accommodated in single use buildings. It is more likely that new academic facilities will be integrated across the campus in a diverse range of building type.

Moreover, the logical building increments will be determined as much by site planning and urban design parameters as they will be by the specific programmatic elements.

If we assume a prototypical campus building will be between 80 and 100 feet in width, six stories in height and not more than 300 feet in length we end up with between twenty and twenty-five new buildings. Each building would accommodate approximately 180,000 assignable square feet of space.

APPENDIX A: THE UNIVERSITY MASTER PLAN COMMITTEE

The University Master Plan Committee (UMPC) is comprised of representatives from a broad variety of constituencies, including five faculty by college, one faculty from either Biology or Environmental Engineering, one member from the Chair's Council, three administrators of whom two are chosen by the Vice President for Academic Affairs and one by the Vice President for Student Affairs, one student chosen by the Student Government Association, the Director of the Physical Plant, and the Director of Facilities Planning. In addition, the Director of Environmental Health and Safety and the Associate Director of Facilities Planning function as support staff to the UMPC.

The overall purpose of the UMPC is to recommend to the President of the University matters concerning the planning, development, and use of the University's physical resources. Among other matters, this includes the following goals:

1) To ensure that the Campus Facilities Master Plan and the Land Use Plan accommodate and support the academic plan of the University.

2) To develop and recommend policies for land use which can be used to guide the development of the Campus Facilities Master Plan and the Land Use Plan.

3) To guide the development of the Campus Facilities Master Plan and the Land Use Plan and to recommend these plans to the President or review and approval.

4) To review and make recommendations to the President on all changes of the Campus Facilities Master Plan and the Land Use Plan.

5) To monitor the execution of the Campus Facilities Master Plan and the Land Use Plan.

FIGURE 5-1

Academic Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000-2010

LEGEND

Future Buildings

Potential Future Research Area

*Although this diagram shows potential sites for future academic facilities, it is envisioned that these buildings could be programmed for academic mixed-uses, such as with support space.

0 400 800 1600

GOAL 1: To continue to plan and develop support facilities required to meet the needs of the projected future student enrollment.

OBJECTIVE 1.1: To define appropriate locations for future support facilities including: administrative offices, physical plant facilities, auxiliary facilities, and intercollegiate, intramural and recreational athletic facilities.

POLICY 1.1.1: Future administrative offices shall continue to be placed in and around the academic core area within the Gemini Road loop.

POLICY 1.1.2: Physical plant facilities shall continue to be located on the southern portion of the campus.

POLICY 1.1.3: Future athletic facilities shall continue to be located on the northeastern part of campus adjacent to the Arena.

POLICY 1.1.4 Support facilities housed in one-story buildings within the core of campus shall be re-developed at a higher density.

POLICY 1.1.5 Support space shall continue to be accommodated in mixed-use buildings whenever possible.

OBJECTIVE 1.2: The University shall identify support projects to meet the needs of the campus. The adopted campus master plan shall be amended as needed to reflect the timing and phasing requirements of these projects, defined in the Capital Improvements Element.

POLICY 1.2.1: The Future Visitor's Center shall be located on the current surface parking lot near the terminus of Central Florida Boulevard, as shown on 3.1 Urban Design Plan.

POLICY 1.2.2: Future student service areas shall be implemented as directed by the University's Capital Improvements Element, in conjunction with the urban design plan.

POLICY 1.2.3: Re-development of the Apollo housing area shall be at a higher density in order to provide more beds for students and for other University uses such as a Student Health Expansion.

POLICY 1.2.4: A future Convocation Center shall be sited near the existing Arena as funds become available.

POLICY 1.2.5: Allocation of funds for future support facilities shall follow the Capital Outlay Improvements plan.

2.6 (2) Support Facilities Element Analysis

a) A projection of future support service activities, identifying new or expanded activity requirements, distributed to the campus or satellite facility where the future activities are planned to occur.

The Ten-Year PECO List on the Facilities Planning website identifies at least 160,072 ASF (or 267,320 GSF) of support space to be programmed for the purposes of this master plan. Most new support space is accommodated in mixed-use buildings, although the Student Support Center and Student Union IV have been designated as having support-specific functions. Support space specifically noted in the PECO plan are the following:

Table 2.6(2)a) Future Support Space (ASF)

Project	Office	Support Services	Other	Total
Library Expansion	2,500			2,500
Classroom II	3,336			3,336
Arts II	10,000		27,000	37,000
Psychology	16,375	5,000		21,375
Math/Science	4,327			4,327
Hazardous Waste	200	1,183		1,383
Teaching Academy	3,705			3,705
Bus. Admin. II	15,583			15,583
Student Support Center	10,278	200	2,000	12,478
Multilingual/Multicultural Ctr.	3,876			3,876
Honors Center	2,362	810		3,172
Bio-Science Annex	5,765			5,765
Academic Villages	2,273	2,520		4,793
Baseball Stadium	1,420			1,420
Student Union IV	10,419		12,100	22,519
Rec. Services	2,680	3,100		5,780
Public Safety	11,060			11,060
Total	**106,159**	**12,813**	**41,100**	**160,072**

b) An analysis of the future needs of the athletic department for intercollegiate athletic facilities, intramural and casual-use athletic facilities.

With such factors as the on-campus student population, number of sports offered, and ideal standards for usage, the number of fields at UCF appear to be adequate to accommodate desired activities, although are close to approaching full capacity. With the future expansion of athletic fields in the northeast section of the campus, the University will have much more flexibility for field rotation to avoid compaction and abuse from over-use.

The existing and future facilities at the University will address the student need for recreation

space. The construction of a few additional intramural/general purpose fields would provide flexibility for programming and would alleviate field fatigue.

c) A projection or assumption about the future space utilization, for the space types identified in the DATA REQUIREMENTS section of this element (narrative, tabular).

The PECO list identifies three remodeling projects which affect existing support utilization. The Education Building, Howard Phillips Hall, and the Computer Center are all programmed to be remodeled, with offices and other support areas added. No other major plans calling for the modification of existing spaces have been noted.

d) A projection of future net support space needs (or land area requirements for athletic facilities), distributed to the campus or satellite facility at which the future needs are planned to occur.

Based on existing Assignable Square Feet (ASF), the analysis projects future demand for space in Table 2.6(2)b). The utilization of support facilities is directly related to FTE growth, and uses a factor of 17.9 NSF/FTE based on standards set in the 1995 plan. It should be noted that office space projections are discussed in 2.5 Academic Facilities Element.

Table 2.6(2)d) Summary of Support Space Needs (ASF)

	Existing	1999-01	Surplus (Shortfall)	2004-05	Surplus (Shortfall)	2009-10	Surplus (Shortfall)	2009-10 Plus*	Surplus (Shortfall)
Adminis-trative	**69,315**	46,746	22,569	56,885	12,430	65,407	3,908	75,219	(5,904)
Physical Plant	**122,342**	82,507	39,835	100,402	21,940	115,445	6,897	132,762	(10,420)
Auxiliary	**228,002**	153,763	74,239	187,114	40,888	215,148	12,854	247,422	(19,420)
Student Support	**42,417**	28,606	13,811	34,810	7,607	40,026	2,391	46,030	(3,613)

(excluding temporary and leased space)

* It is again extremely important to consider the very realistic possibility that UCF's enrollments will be in excess of what is reported (by as much as 15%). This would have a great impact space needs for the campus. Additional discussion about the enrollment projections is detailed in section 2.5 "Academic Facilities."

e) A projection of future support facility gross building area needs (tabular).

The gross building area necessary to meet growth demands has been projected for five and ten year planning periods. Table 2.6(2)c) indicates the amount of gross square feet (GSF) required to satisfy the demand for space in the four categories listed. The GSF projections are a result of increasing the assignable square footage for each category by a 1.5 multiplier.

Table 2.6(2)e) Summary of Support Space Needs (GSF)

	Existing	1999-01	Surplus (Shortfall)	2004-05	Surplus (Shortfall)	2009-10	Surplus (Shortfall)	2009-10 Plus	Surplus (Shortfall)
Adminis-trative	**103,973**	70,118	33,854	85,327	18,645	98,111	5,862	112,828	(8,856)
Physical Plant	**183,513**	123,760	59,753	150,603	32,910	173,167	10,346	199,143	(15,630)
Auxiliary	**342,003**	230,645	111,358	280,671	61,332	322,723	19,280	371,133	(29,130)
Student Support	**63,626**	42,909	20,717	52,215	11,410	60,039	3,587	69,045	(5,419)

(excluding temporary and leased space)

f) An analysis translating the future net and gross building area requirements into building "increments". The basis for this analysis shall be fully described and shall be based on considerations of funding, prototypical building sizes or other logical and replicable method of calculations. The analysis should also include consideration of whether future new space needs would be best accomplished through renovations or additions to existing facilities.

University campuses are typically made up of buildings that house a wide range of uses. At the University of Central Florida many buildings accommodate varying proportions of support, academic and study space within a single structure.

Projecting future net and gross building area requirements into building "increments," can be misleading since it is unlikely that all of the future support facilities will be accommodated in single use buildings. It is more likely that new support facilities will be integrated across the campus in a diverse range of building type.

Moreover, the logical building increments will be determined as much by site planning and urban design parameters as they will be by the specific programmatic elements.

If we assume a prototypical campus building will be between 80 and 100 feet in width, four stories in height and not more than 300 feet in length we end up with a need of one building at the end of the ten-year period. Each building would accommodate approximately 120,000 assignable square feet of space. More likely, however, support facilities will be integrated in mixed-use buildings during the next ten years.

g) An assessment of the adequacy of the existing intercollegiate, intramural and casual-use athletic facilities to meet the future needs for athletic facilities.

As stated earlier, the University of Central Florida appears to be in good condition, although the addition of fields in the northeast section of campus and the new recreational services building will further enhance the program. The addition of a few additional intramural/general purpose fields could provide flexibility for programming and alleviate field fatigue.

Any further field construction should continue to be designed efficiently in order to minimize the impact on the land and to allow the Department of Athletics and grounds crews to provide services more efficiently.

FIGURE 6-1

Support Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida
2000-2010

LEGEND

Future Buildings

*Although this diagram shows potential areas for future support facilities, it is envisioned that many new buildings could be programmed for mixed-uses, such as with academic and recreation space.

0 400 800 1600

GOAL 1: To ensure the provision of public and private housing facilities on campus and within the host community adequate to meet the needs of the projected University enrollment during the planning period.

OBJECTIVE 1.1: To ensure the availability of affordable housing units and support facilities, on campus and through University affiliated housing off-campus, that will meet the projected need for student housing.

POLICY 1.1.1: The university shall provide enough beds to house at least 15% of the projected student body including 80% of the beds will be made available to the freshman classes.

POLICY 1.1.2: The University will continue to provide a variety of on-campus housing options for students.

POLICY 1.1.3: University owned housing shall be built on campus grounds.

POLICY 1.1.4: Parking ratios for student housing shall not be less than one space per 1.85 residents.

POLICY 1.1.5: Future housing sites shall be located on the redeveloped Apollo housing complex, the area east of the Libra housing complex, and in the Northwest portion of campus, as shown on Figure 7-1.

POLICY 1.1.6: The Apollo housing area shall be redeveloped at a higher density to provide more student beds and provide opportunity for other University development.

POLICY 1.1.7: Support facilities for the south-central housing village shall occur around a centralized village green. These facilities shall also occur on the ground floor of their respective buildings and carry two or three floors of housing above them.

POLICY 1.1.8: Densities for future areas on-campus dormitories shall be relatively dense, similar to the new future Academic Village development with a minimum of 57.2 and maximum of 125.0 students per acre.

POLICY 1.1.9: Land for privately developed housing on campus shall be sub-leased . This area shall be leased to requesting alumni associations that meet the requirements set forth by the Greek Park Committee and the Division of Student Development and Enrollment Services.-

POLICY 1.1.10 The timing and phasing requirements and priorities for future on-campus student housing are identified in the Capital Improvements Element.

POLICY 1.1.11: Sanitary sewer, potable water, stormwater management and solid waste facilities shall be provided at established levels of service prior to occupancy of future housing facilities.

OBJECTIVE 1.2: To ensure the availability of off-campus housing and support facilities, within close proximity to the campus, which will meet the projected student enrollment.

POLICY 1.2.1: University-affiliated housing facilities off-campus shall be provided to ensure the availability of off-campus housing within close proximity to the campus. The University will apply

similar rules and regulations to students living in these facilities as on-campus housing, and provide services such as shuttles to create and maintain functional linkages with the main campus.

POLICY 1.2.2: The university shall provide information on projected student enrollment to private developers and local governments to ensure that the off-campus housing stock and support facilities shall continue to meet the demands of the projected student body not to be housed on campus.

POLICY 1.2.3: The university shall continue to provide information to students concerning the availability of off-campus affordable housing within the immediate context area.

POLICY 1.2.4: The University shall establish, in conjunction with Orange and Seminole Counties, a housing coordination committee for the purpose of:

- Monitoring the supply, costs and suitability of off-campus housing;
- Establish a registry of off-campus housing providers;
- Monitoring factors pertaining to safety, transit utilization, pedestrian access, etc.;
- Ensuring that future off-campus student-oriented housing opportunities are located within walking or bicycling distance to campus; and
- Ensuring that convenient service and shopping opportunities for students exist near off-campus student-oriented housing units.

OBJECTIVE 1.3: To prevent sub-standard housing and to provide resources for remodeling to an acceptable condition for student use.

POLICY 1.3.1: Preventive maintenance programs shall be established consistent with the policies below and with the Facilities Maintenance Element policies and reviewed on a periodic basis.

POLICY 1.3.2: Plumbing and HVAC units shall be inspected on a periodic basis, kept in reasonably good repair, and replaced as need and available funding dictate.

POLICY 1.3.3: On-campus housing shall be reviewed on a regular basis during the second quarter of every year in order to determine possible disrepair. These inspections shall be conducted by qualified University personnel.

POLICY 1.3.4: Routine maintenance shall be conducted on campus housing facilities exterior walls, windows and doors as needed. Routine roof maintenance shall be done every year.

POLICY 1.3.5: Campus housing interiors shall receive the following maintenance: walls shall be painted every 8 years or as needed, carpets (where applicable) shall be replaced every 7 years or as needed and ceilings shall be replaced every 10 years or as needed.

POLICY 1.3.6: The University shall identify ground level housing units that may be adapted for use by people with disabilities. The adopted campus master plan shall be amended as needed to reflect the timing and phasing requirements and priorities for adapting these units.

2.7 (2) Housing Element Analysis

a) An analysis of existing University policies regarding the percentage of students for which on-campus housing is provided.

The 1995 plan, in responding to the need to increase the percentage of students for which on-campus housing is provided, recommended a goal of housing 15% of the student body. This number was based on an average of comparable university's housing provisions. Since then, the University decided to remain with that policy, while emphasizing that within the 15%, there is a goal to provide housing for 80% of the freshmen class ~~house 75% of the freshman body~~.

This policy responds to the University's goal of enhancing the first-year experience of UCF's students and the overall collegiate environment. The Academic Village project currently under construction will help the University meet the housing provision goal while simultaneously improving the residential experience on campus. All housing on campus today contain handicap-accessible units, and future housing will continue to provide such provisions. More housing will be needed not only to meet this new goal but also to continue to strengthen the University community and alleviate the impact on neighborhoods surrounding UCF.

b) A projection of the number of students to be housed on-campus in University-provided facilities based on the existing policies for provision of on-campus housing. This projection shall include a description of handicap-accessible beds/units.

Projections of the number of students to be housing in on-campus and University affiliated housing are based upon the University's goal of providing housing for 15% of the study body.

Table 2.7(2)b) Projected Housing Needs

	1999-2000	2004-2005	2009-2010	2010 Plus**
Housing Supply	2,565	7,953*	7,953*	7,953
Need (15% of Headcount)	4,254	5,227	6,216	7,200
Difference	**(1,689)**	**2,726**	**1,737**	**753**

*Includes University affiliated Knights Krossing and Knights Court (3,750 beds) and addition of Academic Villages (1,638 beds), bringing the total supply to 7,953.

** It is again extremely important to consider the very realistic possibility that UCF's enrollments will be in excess of what is reported (by as much as 15%). This would have a great impact on both the On and Off-Campus Housing options for students. Additional discussion about the enrollment projections is detailed in section 2.5 "Academic Facilities."

In addition to the programmed housing supply mentioned above, this plan has identified three sites for potential housing expansion. Those areas include the Northwest portion of campus (+800 beds), a redevelopment of the Apollo housing area (+500 beds) and on the parking lot east of the Libra housing area (+400 beds). If built, these sites would provide an additional 1,700 beds to the campus.

c) A projection of the number of students to be housed in non-University provided facilities on-campus (fraternities, sororities, etc.).

There are currently twelve fraternity and sorority houses on campus, accommodating 302 students Three new houses in the Fraternity/Sorority Row at the existing density of fraternity housing at UCF today of 9.6 beds/acre could provide 90 additional beds over the next ten-year planning period, based on the current available acreage in the vicinity. However, other density options will be considered by the university in the designated housing areas.

d) An analysis of the existing housing provided on campus, including:

1. Age of buildings that house students and programs to retrofit or replace aged structures;

-Lake, Volusia, Osceola, and Polk Halls were built in 1967

-Brevard, Orange and Seminole were built in 1980

-Lake Claire facility (15 buildings) was built in 1993

-Citrus, Flagler and Sumter Hall were completed in 1998

2. Physical condition of those buildings; and

UCF addresses maintenance needs as they arise. Issues concerning life safety are constantly being addressed and maintained. Presently, all of the facilities on campus are considered to be "clean and acceptable" housing. As a result, there are currently no difficulties in renting existing

buildings. An engineering study that looks more extensively into the condition of the buildings is close to completion.

3. The existing rate structure charged for on-campus housing.

Table 2.7(2)d)3 2000 - 2001 RENTAL RATES

Room	Price per semester
Double Room in Brevard, Lake, Orange, Osceola, Polk, Seminole and Volusia Halls	$1,600.00
Double Room in Citrus, Flagler, and Sumter Halls	$1,675.00
Single Room in Lake, Osceola, Polk, and Volusia Halls	$1,700.00
Single Room in Lake Claire Courtyard Apartments	$1,775.00

e) An estimate of the number of additional on-campus housing units, by type, necessary to meet the needs described in (2) a) (apartment, suite, dormitory, etc.).

The University currently provides housing to at least 15% of the student body through on-campus and University affiliated housing. With the inclusion of the Knights Krossing and Knights Court Properties, as well as the addition of the Academic Village Housing Complex, the University complies with this goal. The University is committed to maintaining the 15% goal; this Master Plan shows potential sites on-campus for approximately 4,100 more beds.

f) An analysis of potential on-campus sites and of the capacity of these sites (beds). This analysis shall describe the method used to translate total beds required into building and site requirements.

The existing Fraternity/Sorority Row has the capacity of adding 3 more houses, which would provide 90 additional beds at the existing housing density of 9.6 beds/acre. Future housing developments should be constructed at a level more dense than the Fraternity area over the next

ten years as the University responds to the housing shortfall projected in 2.7(2)b) above. An initial recommendation is to redevelop the Apollo housing complex, not only the oldest on campus but also one of the least dense at 60 beds/acre. Comparatively, the Lake Claire complex has 73.9 beds/acre and the Libra facility has 150.8 beds/acre. Maintaining density will allow the University to fulfill the goal of providing more housing as enrollment expands and will contribute to development which will sustain the University's land reserves.

Furthermore, the current parking lot north of the steam plant is a recommended site for future housing, providing close proximity to existing housing to the west and to the campus core.

The ability to plan and develop future housing on campus is limited due to the availability of revenue bonds, which is the typical funding mechanism used for on-campus housing. Therefore, future housing sites have been identified, however, all potential sites are not fully described and/or associated with a funding source in the Capital Improvements Element.

g) A projection of the number of students that will be housed off-campus in facilities provided by others (private market housing).

Based on the housing supply reference in Table 2.7(2) a) above, projections of the number of students that will be housed off campus are as follows:

Table 2.7(2)g) Projection of Students Housed Off-Campus

	1999-2000	2004-2005	2009-2010	2009-2010 Plus
Off campus	25,817	26,896	33,487	39,714

h) An assessment of the student impacts on the occupancy of the host community's rental stock.

Approximately 13% of students who live off-campus find housing within a mile of campus based on the most recent calculations. Most of these students live at the Knight's Krossing and Knight's Court apartment complexes (roughly 3,800 students), across Alafaya Trail. The University has recently signed an agreement to take over operations of these two sites. Students will live under similar codes found elsewhere on the UCF campus and the University will take a larger presence at the facility, resulting in an enhanced collegiate environment for the students and establishing a sense of clarity within the larger community as a whole. Overall, students represent approximately 39% of the rental market in the area surrounding the University according to a list of apartment community statistics held at UCF's Department of Housing. The University is committed to both developing new housing on the UCF campus in an effort to

increase the overall number of students on-campus and working within the community to foster the growing neighborhood.

FIGURE 7-1

Housing Facilities

LEGEND

Future Housing

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000-2010

0 400 800 1600

GOAL 1: The University shall provide a variety of safe, efficient and enjoyable on-campus recreation and intercollegiate athletic facilities, physical laboratories and open space areas which promote the health, welfare and campus aesthetic ambience for the students, faculty and staff.

OBJECTIVE 1.1: The University shall rely upon a variety of public and private funding sources and programs to ensure the availability of recreation facilities, intercollegiate athletics and physical education laboratories for campus students and other user groups.

POLICY 1.1.1: The University's Campus Life and Physical Education Departments shall be responsible for the provision of adequate facilities for quality recreational and academic programs for all students of the University. The development of such programs and facilities shall be based upon existing and prospective student demand and user interest and the availability of funds from such sources as student and user fees.

POLICY 1.1.2: The University's Athletics Department shall be responsible for the provision of adequate facilities for participants in intercollegiate athletic programs, consistent with the adopted campus master plan. The need and phasing for specific facilities shall be based upon specific programming studies and the availability of funds from private and public sources such as spectator and user fees, alumni donations, etc.

POLICY 1.1.3: With regard to those students and faculty who reside off-campus, the University shall continue to rely upon the recreational facility planning and programming efforts undertaken by the host community and other local government jurisdictions to address their respective local and regional service population needs.

POLICY 1.1.4: As necessary, the University shall continue to rely upon service contracts and other contractual relationships with off-campus private and public facility providers to meet recreation, physical education or intercollegiate athletic needs.

OBJECTIVE 1.2: The University shall rely upon a variety of continuing in-house planning and facility development programs to ensure that recreation, intercollegiate athletic facilities, physical education laboratories and open space areas are adequately and efficiently provided.

POLICY 1.2.1: UCF shall continue to maintain and develop functional and aesthetically pleasing open spaces between structures and throughout the campus. This shall be accomplished through the application of building development and land use intensity guidelines consistent with the Urban Design and Future Land Use Elements and the open space preservation areas and policies as identified in the Conservation Element of this Plan.

POLICY 1.2.2: While future planning shall, in some cases, recognize the distinct need the Recreation, Intercollegiate Athletics, and the Physical Education programs for separate facilities, program representatives shall coordinate and attempt to share facilities wherever feasible.

POLICY 1.2.3: Future facilities shall continue to be developed in the south and northeast portions of campus, consolidating and strengthening recreation and athletic facilities.

POLICY 1.2.4: To the extent practical, future on-campus development which impacts recreation and

athletic land shall occur in phases to coincide with the efficient relocation of recreational, intercollegiate athletic and academic program laboratories. In order to implement this policy, the University's Office of Facilities Planning, Campus Life, Intercollegiate Athletics and Physical Education Departments shall initiate a study to provide for the orderly phased relocation of field and building facilities whenever such development occurs. The adopted campus master plan shall be amended as needed to incorporate the results of this study.

POLICY 1.2.5: As future campus development programs progress into the programming and design stage, the University's Office of Facilities Planning, Campus Life, Intercollegiate Athletics and Physical Education Departments shall consider those facilities and programs which could be maintained in these areas as part of the campus open space scheme.

POLICY 1.2.6: A future Frisbee golf course may be located on lands south and east of the Academic Village residential area, as shown on Figure 4-1 Future Land Use and 8-2 Future Recreation and Open Space.

POLICY 1.2.7: A future golf course may be located on lands in the southeast corner of the campus, primarily on the 218-acre tract acquired contiguous to the original main campus eastern boundary.

POLICY 1.2.8: The timing and phasing requirements and priorities for improvements to athletic, recreation and open space facilities necessary to correct existing deficiencies and meet the future demands are identified in the Capital Improvements Element.

OBJECTIVE 1.3: The University shall promote unrestricted or managed public access to all campus recreation and athletic facilities or open space areas to the maximum extent feasible.

POLICY 1.3.1: Campus open space areas shall be developed and maintained as areas of unrestricted public access wherever feasible. Such provisions for access would include those special provisions or design criteria necessary under federal regulations to provide for people with disabilities. Access to certain areas of environmentally sensitive habitat may be restricted (on occasion) if it is determined by the University to be necessary in order to best protect the local animal and plant species.

POLICY 1.3.2: The University shall establish the priority use of campus athletic and recreational facilities for campus students, faculty and staff. Non-campus user populations of campus facilities will be accommodated to the extent that campus user demands are adequately met while allowing for reasonable maintenance and restoration periods for the particular facility.

OBJECTIVE 1.4: To protect and enhance present campus open spaces.

POLICY 1.4.1: The University shall protect from encroachment the existing conservation areas and maximize the retention of open space by strictly enforcing the future placement of buildings, parking facilities, infrastructure and other man-made improvements consistent with sites selected and adopted in the Urban Design and Future Land Use Elements. The pattern of open spaces established in Figures 3-1 and 8-1 shall not be subject to encroachment without amending the adopted campus master plan.

POLICY 1.4.2: The University shall maintain densities and intensities for the development of the campus

which maximize the retention of on-campus open space as identified in the Future Land Use Element.

POLICY 1.4.3: The University shall select sites for infrastructure and academic and support facilities which are designed to maximize the retention of campus open space.

POLICY 1.4.4: The University shall create new formal open spaces, or "greens" through the careful placement of buildings as adopted in Figure 8-1.

2.8 (2) Recreation and Open Space Element Analysis

a) An analysis of the projected needs for recreation and open space facilities required to meet the needs of the future University population (students, faculty and staff) based on University standards and calculations or established level of service standards.

The University of Central Florida outdoor recreation facilities, although in a period of transition, appear to be in good standing with regard to student use and number of facilities. Looking at the on-campus student population, number of sports offered, and ideal standards for usage, the number of fields at UCF appear to be adequate to accommodate desired activities though close to capacity. With the future expansion of athletic fields in the northeast section of the campus, the university will have much more flexibility for field rotation to avoid compaction and abuse from over-use.

Calculations used to assess facility sufficiency take into consider a number of factors. First, the variety of fields, such as varsity-specific and intramural quality, affect the pattern of use and quality expected in a field. Fields that are reserved specifically for varsity-teams puts an extra burden on other fields which must accommodate a higher level-of-use. Additional factors include fields which require a unique layout such as baseball, diminishing the flexibility for use.

The methodology used for determining the number of fields an institution needs for appropriate athletic use is based on a number of factors: the number of teams training during a given season; the duration of practice and competition; and the type of field (natural turf or synthetic surface). Presently at UCF there are 15 intercollegiate teams, of which 8 use outdoor fields and 45 intramural teams (not all of which use fields). For the purpose of this analysis, roughly 25-30 of the intramural teams use all-purpose facilities for practice. In general teams are assumed to need approximately 9 hours of field time per week. Natural fields should ideally be programmed between 18-24 hours in any given week, and there are few limitations on synthetic fields.

Given these assumptions, the University of Central Florida appears in good condition with the addition of fields in the northeast section of campus. Additional intramural playfields beyond what is currently programmed will alleviate field conditions on fields designated as general use. If synthetic fields are used for any future facility, recreation use could be programmed for up to nine hours per day, reducing the impact on existing fields.

In summary, the existing and future facilities at the University appear to address the student for recreation space. The construction of a few additional intramural/general purpose fields could provide flexibility for programming and alleviate field fatigue.

b) An assessment of the adequacy of the existing recreational facilities and open spaces to meet the projected needs of the University (on-campus, and off-campus), including a description of the extent to which off-campus facilities may meet some or all of the University projected needs.

The 1995 Report highlighted the condition of the swimming pool, the need for an all-purpose recreation facility, the provision of lighting existing fields in order to extend use, additional tennis courts, and a more efficient layout of fields and corresponding support facilities.

The athletic facility to be located near the Academic Village housing will be a benefit to the campus and will alleviate some of the shortfalls identified in the 1995 plan. Furthermore, the relocation and construction of athletic facilities in the northeast section of campus (next to the arena) will not only provide additional field space, but also address the the site planning and land-use concerns which are much improved from the former conditions. Any further field construction should continue to be designed efficiently in order to minimize the impact on the land and to allow the Department of Athletics and grounds crews to provide services more efficiently.

c) An assessment of opportunities for alternative future facility siting in order to conserve the supply and character of campus open space.

The northeast section of campus, near the current arena is an appropriate site for the expansion of future athletic facilities and allows for the consolidation of support facilities. However, general purpose and intramural fields should be available in various locations on campus. The student recreation areas are now being re-developed in the south portion of the campus near the new Academic Villages, and a new Frisbee golf course is to be moved there. This location south of Gemini and west of Central Florida Boulevard would be well served by this addition, providing not only space currently not programmed for other use, but also an opportunity to formalize the campus edge and provide a collegiate atmosphere near the entrance.

d) An analysis of planned future recreation and open space facilities, as adopted by the host community in their comprehensive plan or other best available data.

Orange County Parks and Recreation Division is in the process of finalizing it's two-year Capital Improvements budget, which includes the expansion of the Little Econ Greenway Trail. The next planned phase, subject to Board of County Commissioners' approval, will extend east from its current terminus at Blanchard Park, then north to the south entrance of the University (Central Florida Blvd.). The University will coordinate with Orange County regarding specific alignment

and amenity details of the trail.

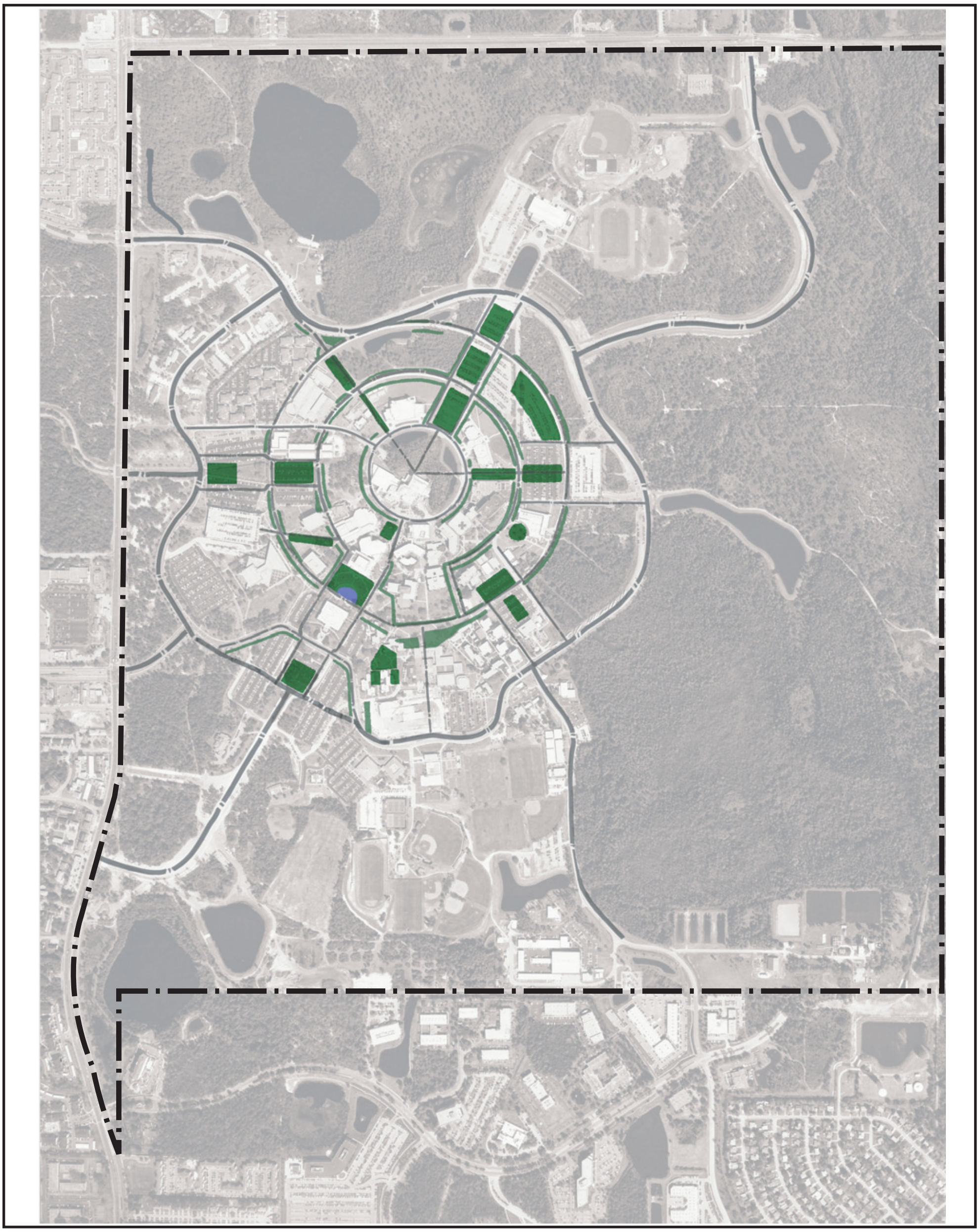


FIGURE 8-1

Formal Open Space Network

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000-2010

LEGEND

Formal Open Space

0 400 800 1600

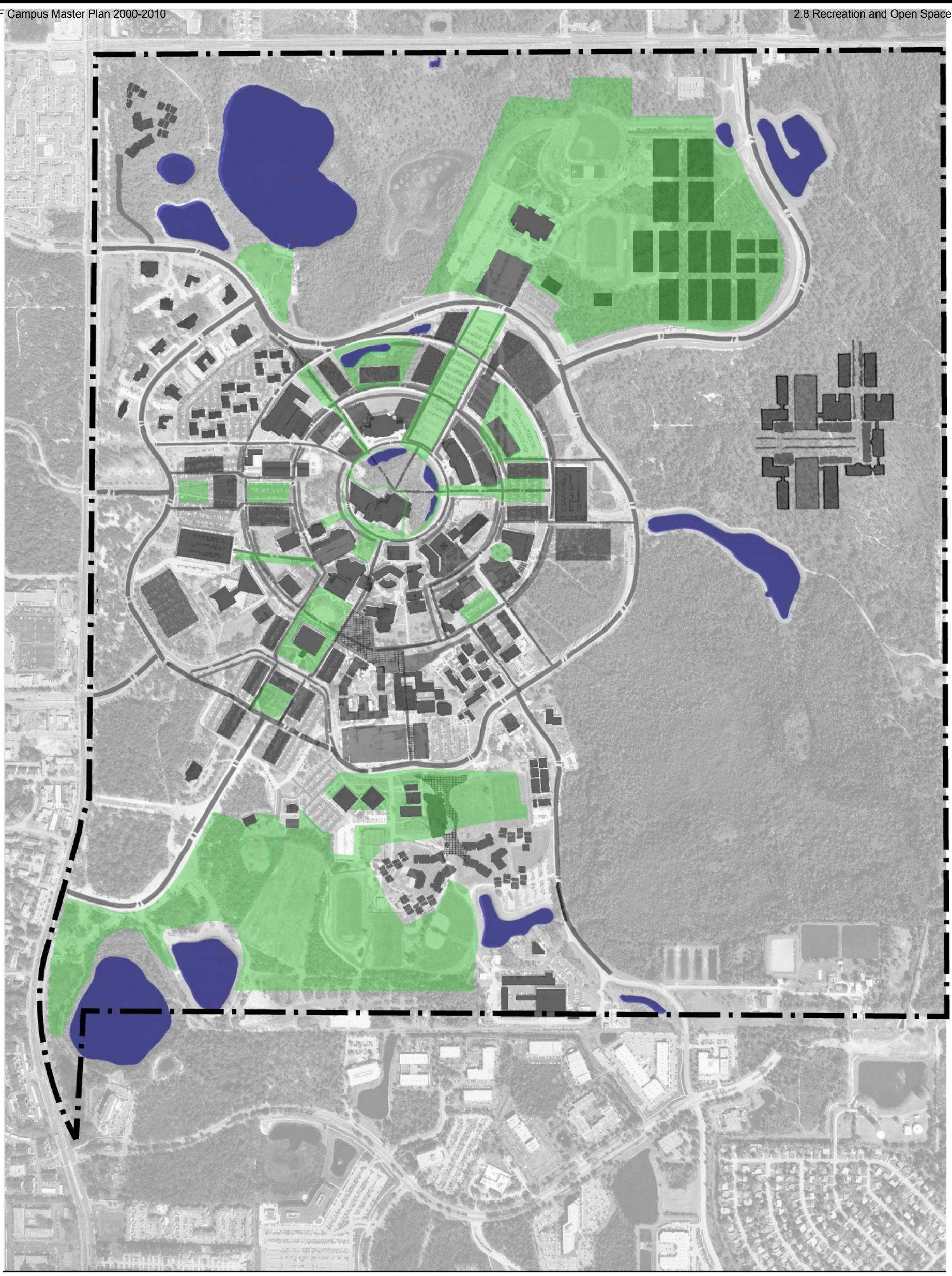


FIGURE 8-2

Recreation and Open Space

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000-2010

LEGEND

- Recreation/Open Space
- Lakes

0 400 800 1600

STORMWATER MANAGEMENT

GOAL 1: The future development of the UCF campus shall be based on the provision of an on-site stormwater management system which, to the extent possible, provides for adequate system capacity to protect campus populations and facilities while remaining sensitive to the natural functions and environmental attributes of the campus' native plant and animal communities.

OBJECTIVE 1.1: By 2003, UCF shall correct existing stormwater permitting deficiencies by modifying the existing SJRWMD stormwater master permit.

POLICY 1.1.1: The University shall continue to implement the St. Johns River Water Management District (SJRWMD) approved UCF Stormwater Master Plan. The University's Facilities Planning and Physical Plant offices shall be responsible for the continued permitting of the stormwater management system. The plan shall continue to recognize a variety of implementation priorities to (1) eliminate existing system deficiencies, (2) maintain the existing system and (3) expand the system to accommodate new drainage needs. UCF shall maintain a stormwater permit data bank within the facilities department to monitor modifications and additions to the permit from ongoing design and construction projects. Such monitoring data shall be electronically maintained and provided to all staff, consultants and reviewing agencies as requested.

POLICY 1.1.2: UCF shall design and construct stormwater management ponds as necessary during the planning period. The proposed location of these ponds is identified in the master stormwater permit. The timing and phasing requirements and priorities for these stormwater management improvements are driven by the Capital Improvements Element.

OBJECTIVE 1.2: Future development on the UCF campus shall occur based on a finding of adequate stormwater management system capacity to accommodate the proposed development.

POLICY 1.2.1: Any future development on the UCF campus which increases the amount of impervious surface area shall be approved per the provision of an on-site drainage system which serves the proposed development area under one or more of the following St. Johns River Water Management District (SJRWMD) permitted level of service standards:

1. Building finished floor elevations shall be a minimum 1' above the measured/calculated 100 floodwater elevation,

2. Stormwater quality treatment shall be provided at the greater of (a) 2.5" times the area of proposed impervious surface or (b) the calculated first 1" of runoff for the greater site,

3. Stormwater quantity treatment shall be based on treatment system capacity which detains the calculated stormwater volume for a 25 year/24 hour storm event.

POLICY 1.2.2: Any proposed increase in campus impervious surfaces shall be implemented only upon a finding that existing facility capacity is already on-line to accommodate the increased need, or that additional capacity will be funded and on-line at the time of need. In this respect, the University shall maintain a record of existing and committed impervious surface areas relative to the agency approved permit maximums, as amended.

POLICY 1.2.3: Pursuant to the St. Johns River Water Management District (SJRWMD) regulatory permit requirements, the University's Stormwater Management Sub-Element shall continue to take into account those off-site stormwater flows which travel through the campus' wetlands and drainage basins.

POLICY 1.2.4: The University shall rely upon the stormwater system permitting criteria and processes of the SJRWMD to coordinate drainage issues with off-campus entities.

OBJECTIVE 1.3: Through the year 2010, UCF shall protect natural drainage system functions by (1) generally prohibiting development within the campus' existing jurisdictional wetland areas, (2) by maintaining a common pre-post development rate of stormwater discharge for newly developed areas and (3) by maintaining or reestablishing normal wetland hydroperiod elevations.

POLICY 1.3.1: The UCF Office of Facilities Planning office shall be charged with reviewing all proposed development projects to ensure that increases in impervious surface can be accommodated in the capacity of the existing and/or committed drainage system.

POLICY 1.3.2: It shall be the policy of UCF that no stormwater discharges may cause or contribute to a violation of water quality standards in waters of the State.

POLICY 1.3.3: UCF shall continue to mitigate University-generated stormwater and to minimize stormwater borne pollutants through the implementation of a system of Best Management Practices (BMPs), which includes, but is not limited to:

1. Incorporating stormwater management retention and detention features into the design of parks, trails, commons and open spaces, where such features do not detract from the recreational or aesthetic value of a site.
2. Use of slow release fertilizers and/or carefully managed fertilizer applications timed to ensure maximum root uptake and minimal surface water runoff or leaching to groundwater.
3. Educating maintenance personnel about the need to maintain motor vehicles to prevent the accumulation of oil, grease and other fluids on impervious surfaces, where they might be conveyed to surface and ground waters by runoff, and the need to regularly collect and properly dispose of yard debris.
4. Avoid the widespread application of broad spectrum pesticides by involving only purposeful and minimal application of pesticides, aimed at identified targeted species.
5. Coordinating pesticide application with irrigation practices to reduce runoff and leaching to groundwater.
6. Incorporating features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent/minimize spillage.

POLICY 1.3.4: All stormwater management facilities shall be designed to retain on-site all volume of runoff generated by the University and shall not adversely impact adjacent property.

POTABLE WATER SUB-ELEMENT

GOAL 2: The future development of UCF shall be based on the provision of a campus potable water system which, to the extent possible, minimizes raw water consumption while providing for adequate system capacity to serve future campus population/facility needs.

OBJECTIVE 2.1: In order to reduce existing system deficiencies, UCF shall install one or more additional distribution line loops to improve the current estimated levels of line hydraulic flow capacity.

POLICY 2.1.1: The University shall design and construct potable water system improvements to (1) eliminate existing system deficiencies, (2) maintain/improve the existing system characteristics, and (3) expand the system to accommodate increased fire flow and/or consumptive needs.

POLICY 2.1.2: UCF shall increase its ability to provide potable water to the southern portion of the campus and improve fire flow during the planning period. The timing and phasing requirements and priorities for these potable water system improvements are driven by the Capital Improvements Element.

OBJECTIVE 2.2: Future development on the UCF campus shall meet adopted levels of service for potable water system fire flow and consumptive capacity to accommodate the proposed demand.

POLICY 2.2.1: Future development on the UCF campus which increases the demand for potable water shall be approved on the provision of a potable water distribution system which serves the proposed development under one or more of the following level of service standards:

1. Fire flows @ 20 pound PSI pressure for a 1 hour duration,
2. 15 gallons per day per FTE student, and/or
3. for buildings as follows:

- Classrooms - 39.2 GPD/1,000 GFA
- Office Buildings - 184 GPD/1,000 GFA
- Food Service Areas - 25 GPD/Dorm Resident
- Residences - 51 GPD/Dorm Resident w/o Food Service; 94 GPD/Fraternity/Sorority Resident
- Athletic Showers - 25,000 GPD for campus.

POLICY 2.2.2: Future increases in campus consumptive uses, whether residential or non-residential related, shall be approved only upon a finding that existing potable water treatment and distribution facility capacity is already on-line to accommodate the increased need, or that additional capacity will be funded and on-line at the forecast future time of need.

OBJECTIVE 2.3: Through the year 2003 or until such time as potable water becomes available from Orange County, UCF shall maintain the current quality and quantity of raw water available in the campus' potable water wellfield.

POLICY 2.3.1: The UCF potable water treatment and distribution system shall be primarily oriented to the needs of the campus and secondarily oriented to the needs of off-campus consumers. The

University shall make every effort to cooperate with the St. Johns River Water Management District (SJRWMD) with respect to the consideration and implementation of existing and future regional ground water management strategies.

POLICY 2.3.2: UCF shall continue to require low flow and low flush plumbing appurtenances in all new building construction.

POLICY 2.3.3: The use of "xeric" landscaping techniques, including the maintenance or installation of selected vegetation species, low volume irrigation and compact hydrazone concepts, shall be a required element of all new building and ancillary facility construction through the year 2010.

POLICY 2.3.4: The University shall continue to implement and operate a treated effluent water system for irrigation, fire protection systems, and other non-potable uses. Seminole County has agreed to construct the necessary apparatus to increase the on-campus capacity to 2 million gallons per day. This shall decrease the portable water demand for irrigation and fire flow, while increasing the portable water availability to the campus.

SANITARY SEWER

GOAL 3: The future development of UCF shall be based on the provision of a campus wastewater collection and treatment system which adequately serves the future campus' population needs and protects the function and quality of maintained natural areas.

OBJECTIVE 3.1: The University shall continue to operate and maintain its existing wastewater collection and transmission system to meet all regulatory standards.

POLICY 3.1.1: The University shall design and construct sanitary sewer system improvements to (1) eliminate existing system deficiencies, (2) maintain the existing system and (3) expand the collection and transmission system to accommodate increased flow and/or wastewater needs.

POLICY 3.1.2: UCF shall increase the capacity of its sanitary sewer/wastewater system during the planning period. The proposed location of these improvements will be determined with individual project requirements. The timing and phasing requirements and priorities for these sanitary sewer/wastewater system improvements are driven by the Capital Improvements Element.

OBJECTIVE 3.2: Future development on the UCF campus shall occur based on a finding of adequate collection and transmission capacity to accommodate the proposed demand.

POLICY 3.2.1: Future development on the UCF campus which increases the demand for wastewater collection and transmission shall be approved under the provision of a wastewater collection and transmission system which serves the future_campus development area under one or more of the following level of service standards:

1. Adequate collection line flow capacity at 70 percent full flow rates,

2. 15 gallons per day per FTE student, and/or

3. For buildings as follows:

    - Classrooms - 39.2 GPD/1,000 GFA
    - Office Buildings - 184 GPD/1,000 GFA
    - Food Service Areas - 25 GPD/Dorm Resident
    - Residencies - 51 GPD/Dorm Resident without Food Service; 94 GPD/Fraternity/Sorority Resident
    - Athletic Showers - 25,000 GPD for campus

POLICY 3.2.2: The University's wastewater collection and transmission system capacity shall recognize any existing contractual commitments with off-campus users. The University shall not enter into any new agreements with off-campus users beyond those under current contractual obligations.

POLICY 3.2.3: Proposed increases in campus generating uses, whether residential or non-residential related, shall be approved only upon a finding that existing wastewater collection and transmission capacity is already on-line to accommodate the increased need, or that additional capacity is funded and will be on-line at the forecast time of need. It shall be the responsibility of the University's Facilities Planning and Physical Plant offices to maintain a record of existing and committed project flows in order to determine that adequate system capacity is available for expanded use.

SOLID WASTE

GOAL 4: The future development of UCF shall be based on the provision of a solid waste on-campus collection and off-campus disposal system which adequately serves the future campus population needs and to the maximum extent feasible, protects the function and quality of the surrounding natural environment.

OBJECTIVE 4.1: By the year 2005, the University shall undertake the removal of debris from the old construction landfill in the southeast quadrant of the campus.

POLICY 4.1.1: The University shall establish as implementation priorities to (1) eliminate existing unregulated on-site disposal areas, (2) maintain the existing collection system and (3) expand the system to accommodate increased demand.

OBJECTIVE 4.2: Future development on the UCF campus shall occur based on a finding of adequate solid waste collection and disposal capacity to accommodate the future demand.

POLICY 4.2.1: Future development on the UCF campus which increases the demand for waste collection and disposal shall be approved under the provision of a solid waste collection and disposal system which serves the future development under one or more of the following level of service standards:

1. Twice weekly collection,

2. 3.9 pounds per day per FTE student, and/or

3. For buildings as follows:

    - Classrooms - PPD/1,000 GFA
    - Office Buildings - PPD/1,000 GFA
    - Food Service Areas - PPD/Dorm Resident
    - Residences - PPD/Dorm Resident without Food; Service PPD/Fraternity/Sorority Resident

POLICY 4.2.2: As necessary and appropriate, UCF shall continue to participate in the regional solid waste management waste reduction and facility planning strategies undertaken by Orange County. Such activities will include continued recycling efforts for paper, glass, metal and plastics as currently collected on-campus.

POLICY 4.2.3: The University shall continue to rely upon private vendors to collect and convey the campus' solid waste to area disposal sites. As part of the campus development process, the University's Office of Facilities Planning or the Physical Plant shall be responsible for coordination with the waste vendor to establish the appropriate dumpster sizing and pick-up scheduling for new campus development areas. This coordination activity shall also include the appropriate planning actions for the siting and scheduling of recyclable materials dumpsters.

POLICY 4.2.4: UCF shall continue to rely upon Orange County's solid waste facility planning efforts for plant expansion.

POLICY 4.2.5: Future increases in campus generating uses - whether residential or non-residential related - shall be approved only upon a finding by the University that existing solid waste disposal capacity is already on-line to accommodate the increased need, or that additional capacity will be funded and on-line at the forecasted future time of need. The University offices of Facilities Planning and Physical Plant shall be responsible for the review of all development proposals and perform the appropriate periodic coordination efforts with Orange County to determine that solid waste capacity is available.

2.9 (2) General Infrastructure Element Analysis

STORMWATER ANALYSIS

a) A facility capacity analysis, by geographic service area, indicating capacity surpluses and deficiencies for:

1. Existing conditions, based on the facility design capacity and the current demand on the facility capacity:

The University is divided into four major drainage basins (Basins 1 through 4). Each of these basins is further divided into sub-basins as shown on the above table. The master plan and subsequent stormwater permit were generated in the early 1990's based on projected development within the campus. Minor modifications have been made to the master permit as a result of changes in the projected growth.

The university currently maintains a master stormwater permit from the St. Johns River Water Management District (SJRWMD). This master permit allows for development within designated stormwater basins as it relates to an approved additional impervious area within each basin. Currently, the permitted impervious impacts are monitored by university staff to insure that the capacities listed in the permit are not exceeded. The Master Plan Consultant recommends the University maintain on-campus a current record in plan and table format of existing stormwater facilities and the current permitted impacts. These documents would be made available to any staff, consultant or regulatory agency as requested to review existing conditions and plan for future development. Attached is a current table (October, 2000) showing the drainage sub-basins and the available impervious area in each sub-basin that is still available for development. This information, along with plan data, should be maintained on campus and updated as new developments impact the current data.

2. The end of the planning time frame, based on the projected demand at current level of service standards for the facility, projected student populations and land use distributions, and any available existing surplus facility capacity.

The table indicates that in basin 4 several sub-basins will become deficient in impervious area at the end of the planning time frame. Sub-basins 1-E, 2-E, 4-F and 4-Z will exceed the permitted impervious area. This condition will require the University to modify the existing master permit. As a part of this modification, the University should evaluate all the sub-basins for potential modification based on projected growth over a longer planning period.

b) The general performance of existing stormwater management facilities, evaluating the adequacy of the current level of service provided by the facility, the general condition and expected life of the facility, and the impact of the facility upon adjacent natural resources:

The current stormwater system is functioning in accordance with the existing master permit. No adverse impacts have occurred as a result of contaminated discharges leaving the University property through the stormwater management system. Currently, several major construction projects are in-progress which are permitted under the master stormwater system. These projects will impact data on the attached table and will require additional reviews of future developmental impacts not discussed in this report.

The existing stormwater system is in good condition. No major repairs or replacements are anticipated. However, analysis of the proposed expansion will likely require additional modifications and additions to the permitted system. The life expectancy of the structural elements of the stormwater system are expected to exceed 25 years. Routine maintenance of stormwater facilities is required to meet this life span however. The maintenance includes routine inspections, mowing retention pond slopes and berms, flushing underdrains and storm piping systems and the removal of undesirable vegetation from ponds and conveyance ditches. Routine inspections should occur at least once a month for the entire stormwater system. These inspections should be documented in report format and stored for future review. Pictures should be included in the inspections a minimum of once a year.

The discharge points for this master system were selected based on pre-developed conditions in an effort to minimize impacts to adjacent natural resources. The University has made extensive efforts to reduce impacts to adjacent resources which include reducing the allowable impervious area of any sub-basin to levels below permitting thresholds, maintaining and enhancing existing wetlands systems by incorporating them into the master drainage system and restricting post development discharge rates to pre-1985 rates while providing water quality control.

c) An analysis of the problems and opportunities for stormwater management facility expansion or replacement to meet projected needs of the University.

The University will need to modify the existing master permit to accommodate expansion in several sub-basins. The modifications may include the transfer of available impervious areas from one sub-basin to another. The water management district has been receptive to this transfer provided the final outfall conditions remain the same and additional treatment is provided in higher pollutant loading areas. ~~The district is looking for additional treatment in pavement areas subject to heavy vehicular traffic and in grassed play fields subject to heavy fertilization and maintenance activities.~~

d) Existing regulations and programs which govern land use and development of natural stormwater management features shall be analyzed, including the strengths and deficiencies of those programs and regulations in maintaining the functions of natural stormwater management features.

The existing master stormwater permit (MSSW) from SJRWMD has been modified during the past five years to accommodate proposed construction not anticipated in the original application. Modification of the MSSW permit is a cumbersome and lengthy process which requires the University to make early decisions for site development criteria. The University should explore options which would streamline the permitting process with SJRWMD for individual projects which fall within acceptable design criteria established by the master permit and have been approved by the district, University staff and the engineer of record.

Current regulations require stormwater runoff to be "treated" prior to discharging into any natural wetland or water body. The university has maintained a stormwater management facility which accommodates these requirements and exceeds SJRWMD criteria for preservation. The stormwater system was also designed and is now functioning to enhance existing these wetlands by providing the natural hydration of each system to maintain the biological function. Because the biological function of the existing wetlands was considered in the original permitting design, the University should also consider habitat enhancements for these wetlands and other transitional (buffers) areas. These enhancements may potentially be done as a part of an academic study program.

POTABLE WATER ANALYSIS

a) A facility capacity analysis, by geographic service area, indicating surpluses and deficiencies for:

1. Existing conditions, based on the facility design capacity and the current demand on facility capacity.

UCF operates and maintains it's own potable water distribution system. On campus, there are four wells that pump water from the Floridian aquifer to a storage tank at the utility plant. Each well has a capacity of approximately 500 gallons a minute. The design capacity of this system is approximately 1,500 gpm based on using three of the four wells during normal operating conditions. The system uses a series of high service water pumps and an above ground storage

tank to maintain consistent pressure and provide fire flows when necessary.

UCF is in the process of upgrading the firewater protection system for the campus. This upgrade was initiated as a result of an engineering study of the existing water distribution system. The upgrade will increase water volume and pressure to accommodate present demands and growth through 2020. Also, the upgrade includes connecting to the Orange County Utilities system for water supply in 2001 and eventually decommissioning the campus water treatment plant. The current well system may be partially decommissioned and then used as a back up to the irrigation system once the master domestic water system is connected to Orange County.

In addition, a corrosion control system was installed in the UCF water system in 1998 to reduce levels of lead and copper in the water. This system puts a coating on the interior of the pipes, which prevents these metals from leaching out of the pipes and into the water when the water sits idle in the pipes. UCF's corrosion control system has been successful at controlling lead and copper concentrations.

2. The end of the planning time frame, based the projected demand at the current level of service standards for the facility, projected student populations and land use distributions, and any available existing surplus facility capacity.

At the end of the planning time frame, the irrigation water demand from the potable system should be negligible. UCF is in the process of removing irrigation water from this system and providing reuse water from the Iron Bridge Waste Water Treatment Plant for all the irrigation needs on campus. The removal of this demand from the potable system will create the excess capacity within the already upgraded system to provide domestic and fire flow demands for expansions shown in this planning period. In addition, the long term goal of the University is to have Orange County provide water service to the campus.

By the year 2005 the projected water demand will be based on a student population of 34,849, of which 5,227 will be housed on campus. This will generate a water demand as follows:

29,622 off-campus students x 5 gal/day per student = 148,110 gpd

5,227 on-campus students x 85 gal/day per student = 444,295 gpd

TOTAL DEMAND IN YEAR 2005 = 592,405 gpd

By year 2010, the project water demand, based on student populations, is as follows:

40,800 off-campus students x 5 gal/day per student = 204,000 gpd

7,200 on-campus students x 85 gal/day per student = 612,000 gpd

TOTAL DEMAND IN YEAR 2010 = 816,000 gpd

The current system has a daily capacity of approximately 1,500 gpm x 1,440 min./day = 2,160,000 gpd or slightly less than the desired peak factor of three times actually daily use. Because of the magnitude of this distribution system and the fact that irrigation water will be removed by year 2005, a peak factor of close to three is sufficient for the period being evaluated.

b) The general performance of existing potable water facilities, evaluating the adequacy of the current level of service provided by the facility, the general condition and expected life of the facility, and the impact of the facility upon adjacent natural resources.

The existing distribution system is being upgraded as a part of the overall expansion of the campus to accommodate new facility demand. The expansion of the distribution system will accommodate the immediate needs generated by current construction. When practical, as new construction expands the existing distribution facility, water main dead ends should be extended to a second tie-in point to provide two directions of service for any given point in the system.

In addition, the existing system consists primarily of PVC piping which has a life span in excess of 50 years. Isolated, older sections of piping will require replacement within the study period, however, the location and extent of replacement will need to be study in more detail based on maintenance records.

c) An analysis of the problems and opportunities for potable water facility expansion or replacement to meet projected needs of the University.

The planned transfer of the water distribution system to Orange County is the natural progression of growth in the area. As urban development surrounds the campus, it will be more economical to connect to the master public utility systems in lieu of maintaining a private on-campus system. The University, recognizing this opportunity, has negotiated with both Orange County and the City of Orlando to provide domestic water and irrigation water to the campus. The transfer of these facilities ensures that available capacity for the projected growth will be available to the University.

Expansion and transfer of the system will not alleviate the low pressure problem for building construction in excess of four stories. For buildings higher than this threshold, the need for additional booster pumps will be required to meet the necessary fire flows.

d) A description of the campus underground hydrology, including its potential for use as a potable water source.

The drinking water for the UCF campus originates from the vast Floridian aquifer, which supplies about 60 percent of Florida's drinking water. This source of drinking water is common within the Central Florida area. This source will be able to provide the required water needs during this study period.

In addition, UCF, as a part of the current upgrade, is tying the existing distribution system into an offsite water main. This tie-in provides the additional water needed for the campus during peak demands, fire flows and potential system failures. This additional source of drinking water will reduce the University's dependence on campus well water as the only source for drinking water.

e) An analysis of existing local, state and federal regulations governing potable water systems.

The current drinking water system is regulated by the Florida Department of Environmental Protection under Chapter 175 of the Florida Administrative Code and Section 403 of the Florida Statues. The state regulations are in addition to the federal "Safe Drinking Water Act" which establishes national standards for drinking water.

The water treatment plant operators at UCF are certified by the state. In addition, the Department of Environmental Protection oversees and regulates the water treatment facility. DEP requires that UCF send in a monthly report which details daily chlorine residuals at the plant and remote areas, number of gallons produced, and bacteriological results of well's and building's water samples.

As additions are made to the water distribution system, permits are required from the Florida Department of Environmental Protection. These permits insure that the new distribution piping meets current regulations regarding quality construction, water and long term maintenance. The University has been routinely acquiring these permits as needed.

SANITARY SEWER SYSTEM ANALYSIS

–

a) A facility capacity analysis, by geographic service area, indicating surpluses and deficiencies for:

1. Existing conditions, based on the facility design

capacity and the current demand on facility capacity.

The University recently deactivated their on-site treatment plant and now pump all campus effluent to the Iron bridge Waste Water Treatment Plant. This change has allowed the University to increase the available wastewater capacity on campus without additional expenditures to increase the treatment plant capacity. The new pumping system has adequate capacity to handle existing flows.

2. The end of the planning time frame, based the projected demand at the current level of service standards for the facility, projected student populations and land use distributions, and any available existing surplus facility capacity.

Based on the "Space Accommodation" plan generated for this study, additional gravity sewer lines will be required in the northeast quadrant of campus. These lines will be installed as individual projects require them. Existing lift stations will need to be analyzed as projects are implemented to determine the need to upgrade the pumps within the system. These stations may also be upgraded during routine maintenance procedures in order to expand available capacity within the existing system.

b) The general performance of existing sanitary sewer facilities, evaluating the adequacy of the current level of service provided by the facility, the general condition and expected life of the facility, and the impact of the facility upon adjacent natural resources.

The existing gravity and pumping systems are functioning as designed. Both systems appear to be in good condition and only periodic maintenance is anticipated based on current flows.

By removing the treatment plant from the system, UCF has reduced treated effluent discharges from campus. However, the use of reuse water for irrigation has also temporarily been halted due to this change. UCF has entered negotiations with the City of Orlando to provide the campus with reuse irrigation water from the Iron Bridge Waste Water Treatment Facility. Reuse water is anticipated to be available on campus by the year 2004.

c) An analysis of the problems and opportunities for sanitary sewer facility expansion or replacement to meet projected needs of the University.

The lift station servicing the Arena area will need to be upgraded as a result of the projected growth in this vicinity. The wet well for this station was oversized to accommodate larger pumps required for this growth. Individual projects should analyze their impact on the system to determine the need to upgrade both gravity and pump station systems.

Additional pump stations and gravity sewer systems will be required for future growth, particularly in areas where there currently doesn't exist any such system. This would include the northwest corner of campus and the northeast corner, east of the Arena. These systems can be designed and installed on a project by project basis.

d) An analysis of existing local, state and federal regulations governing potable water systems.

The wastewater collection and transmission system is currently regulated by the Florida Department of Environmental Protection. On-site septic systems are regulated by the Florida Department of Community Affairs (through local Health Departments). Authority is granted these agencies by Chapter 17 of the Florida Administrative Code. The University is currently in compliance with all applicable codes under these agencies review.

SOLID WASTE ANALYSIS

–

a) A facility capacity analysis, by geographic service area, indicating surpluses and deficiencies for:

1. Existing conditions, based on the facility design capacity and the current demand on facility capacity.

The University provides for the collection of solid waste through service areas and solid waste dumpsters. Servicing of the dumpster system is through a private vendor under a continuing contract renewable at the discretion of the University.

The University also maintains a series of dumpsters designated for recycled materials. These materials include paper, glass, metals and plastics. Typically these dumpsters are co-mingled with standard trash dumpsters.

Virtually all of the University's solid waste is disposed of at the Orange County Landfill. This is a class 1 landfill which uses the "high-rise" method of layering the refuse material above the groundwater table. This landfill services Orange County and some smaller municipalities outside the county.

2. The end of the planning time frame, based the projected demand at the current level of service standards for the facility, projected student populations and land use distributions, and any available existing surplus facility capacity.

The size and location of waste disposal facilities will be determined on individual project requirements. These requirements should be then incorporated into the master collection and disposal program under the existing contract. There is no limit on the amount of refuse going to the landfill since the producer pays as they generate the waste.

b) The general performance of existing solid waste collection and disposal facilities, evaluating the adequacy of the current level of service provided by the facility, the general condition and expected life of the facility, and the impact of the facility upon adjacent natural resources.

Current waste collection sites on campus are removed, to the extent possible, from pedestrian traffic and visual contact. Collection sites are typically screened or removed from view for aesthetic purposes. Vehicular access to the collection sites should be multipurpose in that additional parking, deliveries and

emergency access and storage areas are incorporated along this route.

The system of using outside vendors has been satisfactory over the previous five years and is meeting current expansion needs. The continued out-servicing of this contract for waste collection appears to be in the University's best interest.

c) An analysis of the problems and opportunities for solid waste collection and disposal facility expansion or replacement to meet projected needs of the University.

As the University grows the solid waste collection system needs to be studied further to identify areas of opportunity to combine facility locations and thus reduce the overall number of collection sites on campus. In addition, as a possible research program for recycled waste, the University should encourage the available academic community to study possible recycle and resource recovery systems to reduce offsite disposal volume and costs associated with this disposal method.

d) An analysis of existing local, state and federal regulations governing waste disposal systems.

UCF currently contracts with a third party to collect and dispose of waste generated by the university. This contract addresses the need for the vendor to dispose of these materials in accordance with current laws. Hazardous wastes generated by the University are collected and disposed of under separate contracts specifically for the removal of this material.

UCF also has in place a recycling program in accordance with state and federal laws mandating such programs. The recyclable materials include paper, plastic, glass and metals. Special dumpsters also recycle cardboard materials for off-site disposal.

e) An assessment of opportunities or available and practical technologies for the reduction, recycling and re-use of solid waste generated by the University. Investigation of emerging technologies to address this issue is encouraged.

With the rapid expansion of computer network systems, the use of electronic data transmission and storage should significantly reduce the amount of solid paper waste on campus. The University should study opportunities to reduce other forms of waste generation through the use of current technologies.

f) An analysis of the terms of any agreements for the collection and/or disposal of University-generated solid waste, including allocated capacity and duration of service. Identify any future limitations on University development resulting from these factors.

The existing contracts provide the University with collection, transmission and disposal of solid waste. The contract allows the University to renew or terminate based on satisfactory performance of the vendor. As recycling of new waste products becomes available to the public, the University will want to re-negotiate the existing contract or include these items in future contracts.

Table 2.9-1 UCF STORMWATER MASTER PLAN DRAINAGE TABLE SUMMARY

BASIN #	DRAINAGE AREA (A.C.)	TOTAL PROPOSED IMPERVI-OUS AREA (A.C.)	TOTAL POND SIZE @ NWL (A.C.)	POND NWL ELEV. (FT.)	POND CON-TROL ELEV. (FT.)	25 YR/ 24HR	100 YR/ 24HR D.H.W. (FT.)	WATER QUALITY VOLUME (AC-FT)	REMAIN IMPV. AL-LOWED (AC)
1-B	1.50	0.44	0.10	66.80	67.43	68.94	69.17		0.00
1-C	0.61	0.00	0.13	64.20	66.00	66.02	66.03		0.00
1-D	49.80	26.25	2.84	65.50	67.21	68.70	69.09	5.47	3.68
1-E	9.29	0.00				65.34	65.55		0.00
1-F	16.34	7.92	1.00	65.50	66.68	68.43	69.29	1.65	5.55
1-G	63.34	0.00				65.34	64.54		0.00
2-A	8.66	3.90	0.96	67.50	67.82	69.87	70.53		0.00
2-B	2.81	1.80	0.10	66.90	67.82	69.43	69.83		0.00
2-C	0.57	0.00	0.10	64.70	66.50	66.53	66.54		0.00
2-D	23.24	0.00				64.25	64.30		0.00
2-E	23.57	0.00				62.60	62.65		0.00
2-H	154.38	74.00	15.00	48.00	48.91	51.22	51.82	15.42	58.68
2-H3	32.53	16.50	3.00	53.00	54.00	55.80	56.31	3.44	16.50
2-Z	52.10	0.00				46.49	47.79		0.00
					65.90				
3-A	103.92	51.00	10.00	65.00	77.79	67.13	67.61	10.63	10.98
3-C	16.09	7.91	1.70	77.00		78.28	78.45	1.65	6.90
3-Z	13.95	0.00				56.90	57.20		0.00
4-B	63.85	34.15	2.00	68.00	69.84	71.73	73.07	7.11	7.60
4-F	44.33	27.20							0.00
4-K	39.51	19.80	3.50	67.00	67.92	69.17	69.50	4.13	19.30
4-L	85.92	43.95	5.10	58.00	59.70	61.30	62.14	9.16	30.33
4-M	13.19	5.52	0.50	57.75	59.53	60.72	60.92	1.15	0.00
4-R	115.84	59.00	8.00	59.00	60.29	62.04	62.40	12.29	44.93
4-Z	222.31	0.00				57.20	57.20		0.00
4-S	4.83	2.34	0.11	61.00	63.90	64.46	64.59	0.49	0.36
4Z-S	5.67	3.73							2.77
TOTALS	1169.19	374.41	54.03						207.63

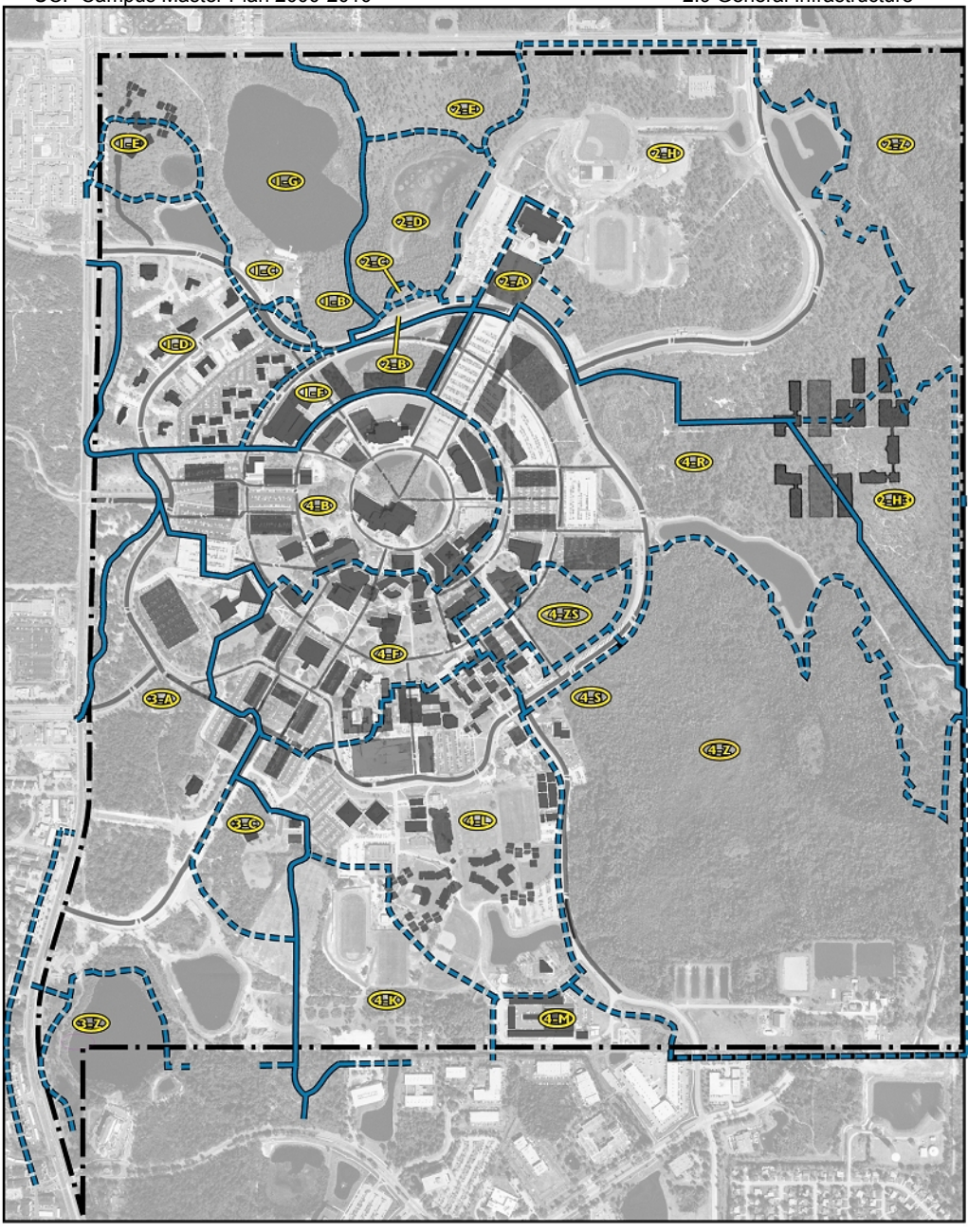


FIGURE 9-1

Stormwater Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 -2010

LEGEND

- Drainage Basin Divides
- Drainage Sub-Basins Divides
- 4-EM Sub-Basin Identification Area

0 400 800 1600

FIGURE 9-2

Potable Water Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 -2010

LEGEND

- Potable Water Lines
- OCU Piping
- UCF Piping & Booster Station

105

0 400 800 1600

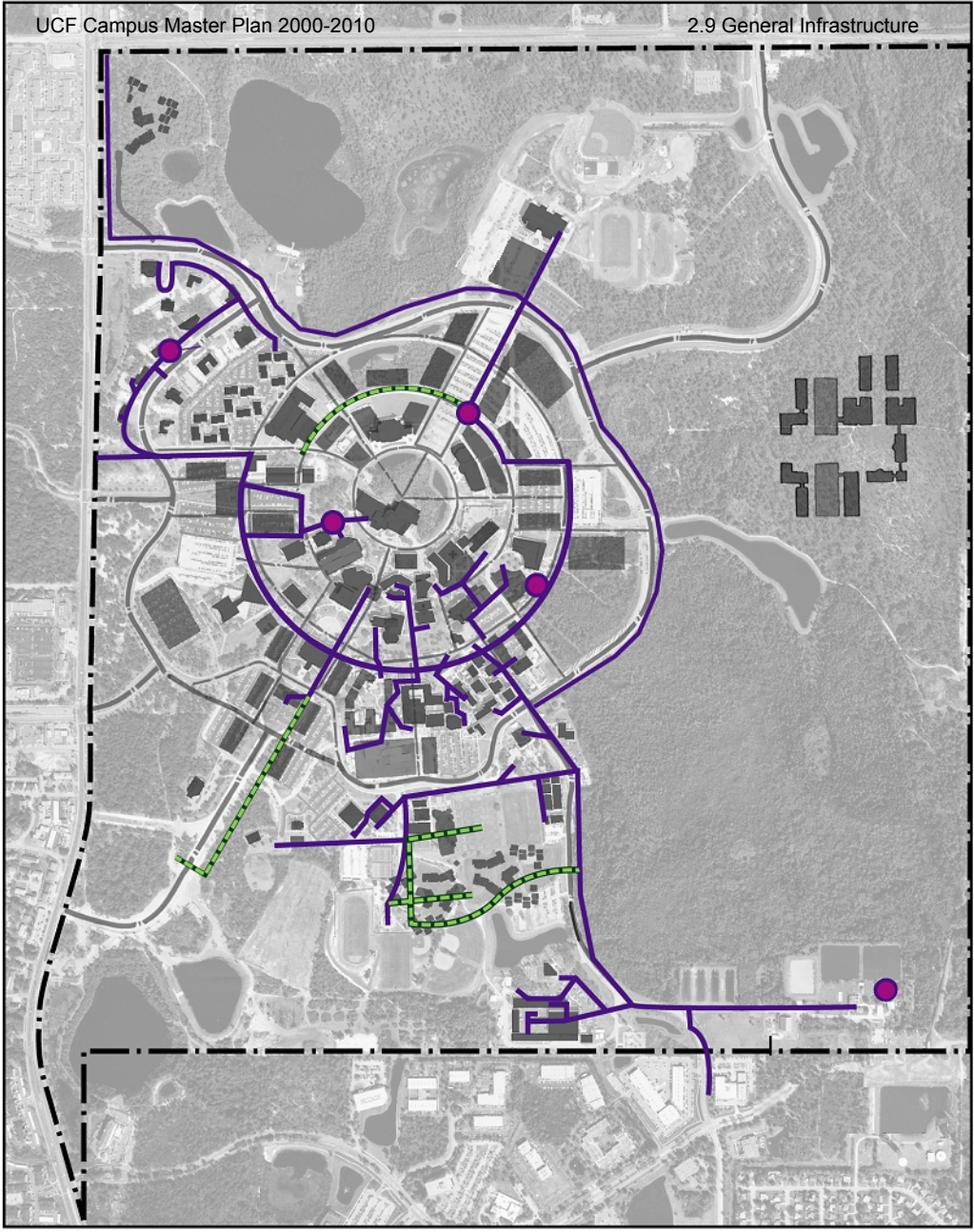


FIGURE 9-3

Sanitary Sewer Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

LEGEND

- Existing Sanitary Sewer Line
- Future Sanitary Sewer Line
- Lift Station

106

0 400 800 1600

CHILLED WATER SUB-ELEMENT

GOAL 1: The future development of UCF shall be based on the provision of an on campus chilled water generation and distribution system, which adequately serves the future campus population needs.

OBJECTIVE 1.1: Future development on the UCF campus shall occur based on a determination that there is an adequate chilled water generation and distribution system capacity to accommodate the proposed demand.

POLICY 1.1.1: Future development on the UCF campus which increases the demand for chilled water generation and distribution capacity shall be approved under the provision of a system which serves the future development under the following level of service standards:

1. Under the existing campus wide average service conditions, one (1) ton of plant capacity per 250 square of building floor area, or

2. A finding that future additional building design loads might be accommodated under the available generation and distribution system parameters.

POLICY 1.1.2: The University shall establish as overall implementation priorities the following: (1) continued servicing of the existing campus built areas, (2) the maintenance of 1,000 tons of residual plant capacity for emergency back-up purposes, (3) expansion of the existing plant generation and distribution system capacity in order to more efficiently serve existing demand, (4) maintenance of sufficient capacity to provide for the orderly and balanced equipment maintenance and (5) expansion of a plant and distribution system capacity to serve new development areas/buildings.

POLICY 1.1.3: UCF shall be solely responsible for the provision, maintenance and continued operation of a chilled water system to serve only the campus building needs.

POLICY 1.1.4: The University shall rely upon the land use and building programs identified in the Comprehensive Master Plan, and on-going implementing Capital Plans/Programs, to stage the construction of an expanded chilled water system, such that the expanded system is on-line at the time of the projected increased demand. This process shall be the shared responsibility of the Facilities Planning Office, the Physical Plant and the University's Administrator of Capital Funding. It shall be the responsibility of the Physical Plant to determine that sufficient plant and distribution system capacity is/will be available at such time any new building is proposed for construction.

POLICY 1.1.6: The University shall implement improvements to the chilled water distribution system as The timing and phasing requirements and priorities for the provision of future chilled water system improvements are driven by in the Capital Improvements additional facilities are added. This is anticipated to include the addition of the second chiller in the satellite plant and future satellite plants identified in the Analysis portion.

POLICY 1.1.7: Based on a balancing of other competing objectives, the University shall continue to subscribe to a variety of active and passive energy management/conservation strategies. As currently practiced, such strategies may include building site orientation design, stringent building insulation standards and, as appropriate, zonal airflow systems within buildings. The responsibility for administering these strategies shall fall to the Office of Facilities Planning and the

Physical Plant.

POLICY 1.1.8: The University shall continue to use treated wastewater effluent as a source of make-up water for the UCF Chiller Plant(s).

POLICY 1.1.9: The University would benefit from the creation and continuous maintenance of a utilities CAD drawing and load spreadsheet in order to fully track existing loads and understand impacts of future building projects.

ELECTRICAL POWER AND OTHER FUELS SUB-ELEMENT

GOAL 2: The future development of UCF shall be based on the provision of an on campus electrical power and natural gas distribution system which adequately serves the future campus population needs.

OBJECTIVE 2.1: Through ongoing inspection and coordination efforts with service providers, the University shall continue to identify and resolve any deficiencies in the servicing of electrical and natural gas power distribution systems.

POLICY 2.1.1: The University shall coordinate with Florida Power Corporation, Peoples Gas System or any successors concerning with regard to the replacement of outmoded or deteriorating service lines or facilities. At this time, the University's priority replacements needs include the conversion of the existing overhead primary line from the North substation to a underground line.

OBJECTIVE 2.2: The University shall ensure the provision of adequate electrical and natural gas services through the continued internal funding and coordination with external service providers.

POLICY 2.2.1: The University's Office of Facilities Planning and the Physical Plant shall be responsible for the continued coordination of power supply services with Florida Power Corporation and Peoples Gas System. To the extent feasible, it shall be the responsibility of these offices to determine that adequate plant and distribution system capacity is available to serve expanded needs and to promptly avail the University funding officer of any needs for UCF funds for maintenance, expansion or replacement.

POLICY 2.2.2: Future development on the UCF campus which increases the demand for electrical power and/or natural gas or other fuels shall be approved under the following level of service standards:

1. 5.25 Average Daily kWh electricity per FTE Student
2. 6.1 Peak Daily kWh electricity per FTE Student

POLICY 2.2.3: The University shall establish as overall implementation priorities the following: (1) continued servicing of the existing campus built areas, (2) maintenance of UCF owned power manhole and conduit system, (3) expansion of the existing line distribution system capacity in order to more efficiently serve existing demand.

POLICY 2.2.4: The University shall rely upon the land use and building programs identified in the Comprehensive Master Plan, and those ongoing implementing Capital Plans/Programs, to coordinate a staged expanded electrical system such the expanded system is on-line at the time of the projected increased demand. This process shall be the shared responsibility of the Office of Facilities Planning, the Physical Plant and the University's Administrator of capital funding programs. It shall be the responsibility of the Physical Plant office to determine that sufficient plant and distribution system capacity is/will be available at such time any new building is proposed for construction.

POLICY 2.2.5: The University shall implement improvements to the electrical power and natural gas distribution system as additional facilities are added. The timing and phasing requirements and priorities for the provision of future electrical power and natural gas distribution system improvements are-driven by identified in the Capital Improvements Element.

POLICY 2.2.6: Based on a balancing of other competing objectives and policies, the University shall, to the maximum extent feasible, continue to administer a variety of active and passive energy conservation strategies. As currently practiced, these strategies include appropriate building site design techniques, stringent building insulation standards and, as appropriate, zonal airflow and lighting systems. The responsibility for administering these strategies shall fall to the Facilities Planning and Physical Plant offices.

POLICY 2.2.7: The University shall install energy efficient equipment (i.e., electronic ballasts for fluorescent lighting fixtures, T-8 lamps, etc.) in new buildings and when retrofitting existing buildings.

TELECOMMUNICATIONS SUB-ELEMENT

GOAL 3: **The future development of UCF shall be based on the provision of an on campus telecommunications system which adequately serves the future campus population needs.**

OBJECTIVE 3.1: **Through ongoing inspection and coordination efforts with service providers, the University shall continue to identify and resolve any deficiencies in the servicing of telecommunications systems.**

POLICY 3.1.1: The University shall continue to identify and upgrade or otherwise replace existing conduits and telecommunications lines as additional facilities are added.

POLICY 3.1.2: The timing and phasing requirements and priorities for the provision of future telecommunication system improvements are driven by the Capital Improvements Element.

OBJECTIVE 3.2: The University shall ensure the provision of adequate telecommunications facility services through continued internal funding of improvements and coordination with external service providers.

POLICY 3.2.1: The University's Offices of Computer Services and Telecommunications shall be responsible for the continued coordination of telecommunications infrastructure and services with

off-site vendors and user groups. To the extent feasible, it shall be the responsibility of this office, the Facilities Planning Office and the Physical Plant to jointly determine that service capacity is available to serve expanded needs and to promptly avail the University funding officer of any needs for UCF funds for maintenance, expansion or replacement of such systems.

POLICY 3.2.2: The University shall establish as overall implementation priorities the following: (1) continued servicing of the existing campus built areas, (2) maintenance of the UCF owned telecommunications Telecom Utility Vault and duct bank system, (3) expansion of the existing telecommunications distribution system capacity in order to more efficiently serve existing demand and (4) expansion of the telecommunications distribution system capacity, including the designation of future demarcation sites to link new development areas/buildings with on and off-campus systems.

POLICY 3.2.3: The University shall rely upon the land use and building programs identified in the Comprehensive Master Plan, and ongoing implementing Capital Plans/Programs, to coordinate a staged expanded telecommunications system such the expanded system is on-line at the time of the projected increased demand. This process shall be the shared responsibility of the Computer Services and Telecommunications Office, the Facilities Planning Office, the Physical Plant and the University's Administrator of Capital Funding Programs.

2.10 (2) Utilities Element Analysis

STEAM AND CHILLED WATER SUB-ELEMENT

a) **A facility capacity analysis, by geographic service area, indicating capacity surpluses and deficiencies for:**

a. **Existing conditions, based on the facility design capacity and the current demand on facility capacity; and**

The existing plant capacity appears to be nearly fully loaded with the addition of new buildings onto the chilled water loop. At best, a single spare chiller's capacity may be available at this time. The 1999 chilled water analysis performed for UCF indicated a potential existing load of approximately 7,740 Tons (assuming campus-wide 90% diversity of full-load values). The total plant capacity, including the satellite plant, is 8,250 Tons.

2. The end of the planning time frame, based on the projected demand at current level of service standards for the facility, projected student populations and land use distributions, and any available existing surplus facility capacity.

Though specific space planning cannot be evaluated at this time, it is apparent that the addition of the second 2000 Ton chiller in the Satellite Plant will be needed in this planning period.

Future space additions on the North side of the 1200 foot radius sidewalk and the Arena could be served by new chilled water equipment in this area and could serve the existing loop through the 10" chilled water lines which connect the existing Arena to the campus chilled water loop.

The density of new facilities to the south should also promote the concept of a chilled water plant in that area.

The decision on installation of new chilled water plant(s) should be made with consideration to the size of the new buildings and the timeframe in which they will be built. Though chilled water plants impose additional first costs, the life cycle cost is frequently lower for academic buildings.

The design of the new plants should include analysis of potential opportunities to take advantage of deregulation. It may be attractive to consider gas-driven chillers, cogeneration, waste heat recovery or other technologies in the design and construction of those facilities.

Tie-in to the existing plant loop should be considered if either of these plants is installed.

b. The general performance of existing steam and chilled water facilities, evaluating the adequacy of the current level of service provided by the facility, the general condition and expected life of the facility, and the impact of the facility upon adjacent natural resources.

The campus does not utilize steam or hot water distribution. The chilled water system appears to offer quite reliable service to existing facilities. The control system could be improved to allow better manipulation of chiller operation and pumping. The control system upgrades would also allow for efficient tracking of campus chilled water loads. The bulk of

the chilled water equipment should serve throughout this planning period.

c. An assessment of opportunities or available and practical technologies to reduce University energy consumption. Investigation of emerging technologies to address this issue is encouraged.

The greatest single opportunity for improvement is the increased use of digital controls for plant optimization. This could streamline operation and maintenance of the plant systems, which has the opportunity for reduced energy consumption and improved information feedback to plant operations personnel.

Another opportunity to improve the planning and construction process involves creation and maintenance of an electronic database of building loads (design and operation). This database can be maintained as additional buildings enter the programming, design and operation phases and would aid the University in planning chilled water plant expansions in the future.

ELECTRICAL POWER AND OTHER FUEL SUB-ELEMENT

a) A facility capacity analysis, by geographic service area, indicating capacity surpluses and deficiencies for:

1. Existing conditions, based on the facility design capacity and the current demand on facility capacity:

Florida Power Corporation currently serves the majority of the campus via an underground loop system originating in the substation located at the south entrance of the campus.

Only a few buildings located on the north-west side of the campus (Lake Claire apartments and the fraternity/sorority houses) are not on this loop system, and are fed from the existing overhead distribution lines that FPC owns along Alafaya Trail (SR 434).

FPC also owns a substation towards the northeast side of Campus on North Orion Blvd. and McCulloch Rd. This substation currently does not serve any UCF property but has been preliminary identified by FPC to serve, if necessary, any future developments in the northeast side of campus, where the Arena is located.

2. The end of the planning time frame, based on the projected demand at current level of service standards for the facility, projected student populations and land use distributions, and any available existing surplus facility capacity:

Specific electrical demand information is not known for any of the new facilities, but the existing FPC south substation and underground feeders should be capable of providing the future demands of any building planned within the boundaries of the 1,200 foot radius. Coordination with Florida Power Corporation will be necessary to verify capacity and distribution methodology.

b) The general performance of existing electrical power and other fuel facilities, evaluating the adequacy of the current level of service provided by the facility, the general condition and

expected life of the facility, and the impact of the facility upon adjacent natural resources.

The current Florida Power Corporation service appears to be performing well. No limitations on expected equipment life are known at this time.

c) An assessment of opportunities or available and practical technologies to reduce University energy consumption. Investigation of emerging technologies to address this issue is encouraged.

The University has been proactive in their approach to energy efficiency through lighting efficiency, occupancy sensors and remote capability for classroom lighting control in new facilities. Existing facilities are being retrofitted as quickly as possible. One new technology that is being used at the University is dimmable fluorescent lighting. This technology dramatically reduces the energy use in classrooms and eliminates lighting fixtures.

TELECOMMUNICATIONS SYSTEMS SUB-ELEMENT

a) A facility capacity analysis, by geographic service area, indicating capacity surpluses and deficiencies for:

1. Existing conditions, based on the facility design capacity and the current demand on facility capacity:

The telecommunications infrastructure consists of an underground network of duct banks and manholes interconnecting the majority of the buildings on campus as well as the satellites hubs or nodes.

The main telephone trunk originates from the existing ROLM/Siemens telephone switch located in the Library Building to all the existing and new facilities. The data systems are connected to the Computer Science Building (CSB) via fiber optics cable.

2. The end of the planning time frame, based on the projected demand at current level of service standards for the facility, projected student populations and land use distributions, and any available existing surplus facility capacity:

As the campus continues to grow the demand for additional copper lines and fiber optic cables will rise, and the need for additional nodes (hubs) throughout campus will have to be reviewed with the Telecommunications Department. Also as technology keeps constantly changing the need to review standards increases in the same fashion.

b) The general performance of existing telecommunications systems and facilities, evaluating the adequacy of the current level of service provided by the facility, the general condition and expected life of the facility, and the impact of the facility upon adjacent natural resources:

The level of service provided by the telecommunications appears to be quite high. This is a great accomplishment considering the rapid changes in this field.

c) An assessment of potential electromagnetic hazards resulting from facilities required to meet future telecommunications needs of the University, and an analysis of practical ways to mitigate such hazards:

No hazards are known at this time.

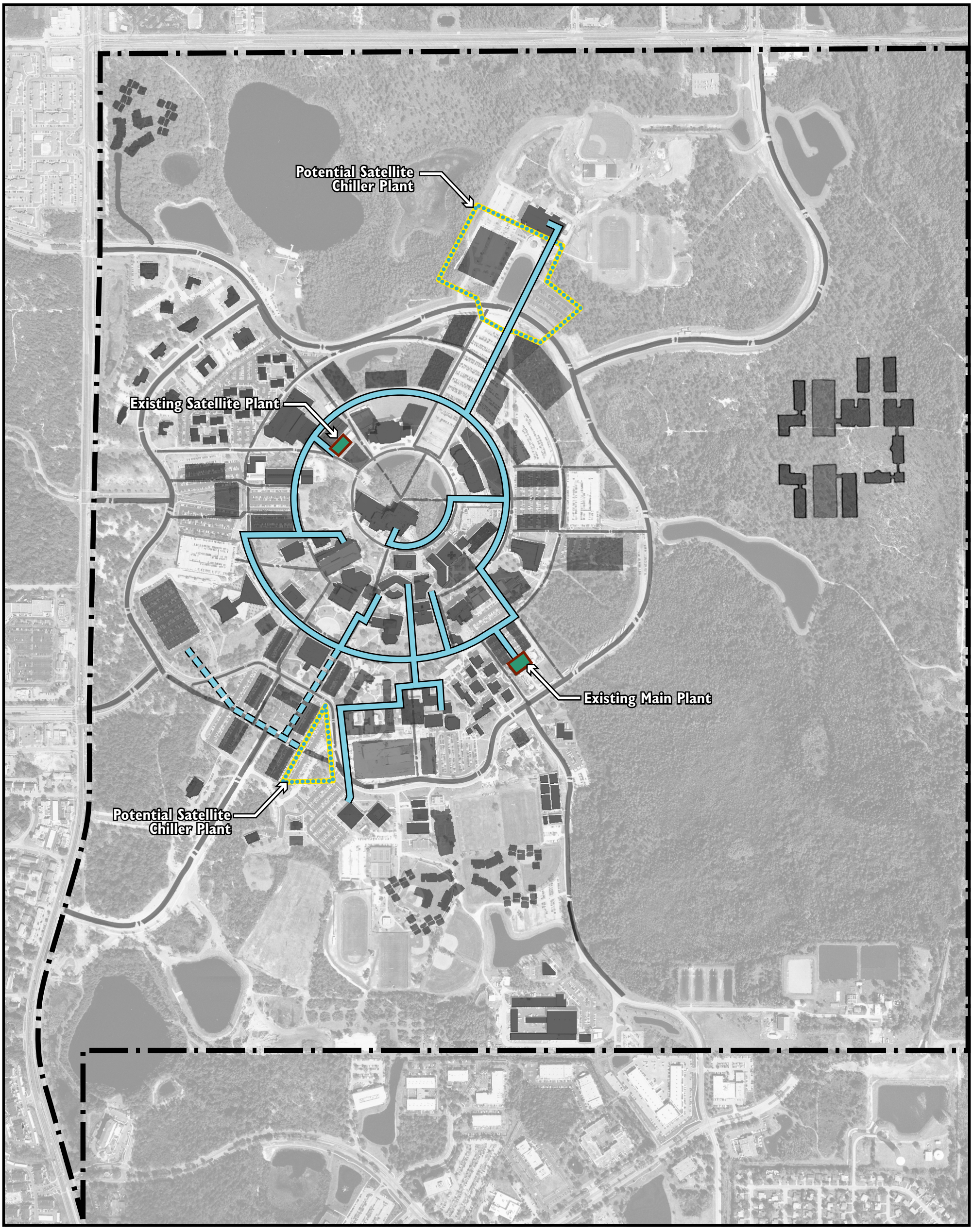


FIGURE 10-1

Chilled Water Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

LEGEND

Existing Chilled Water Line

Future Chilled Water Line

N

0 400 800 1600

115

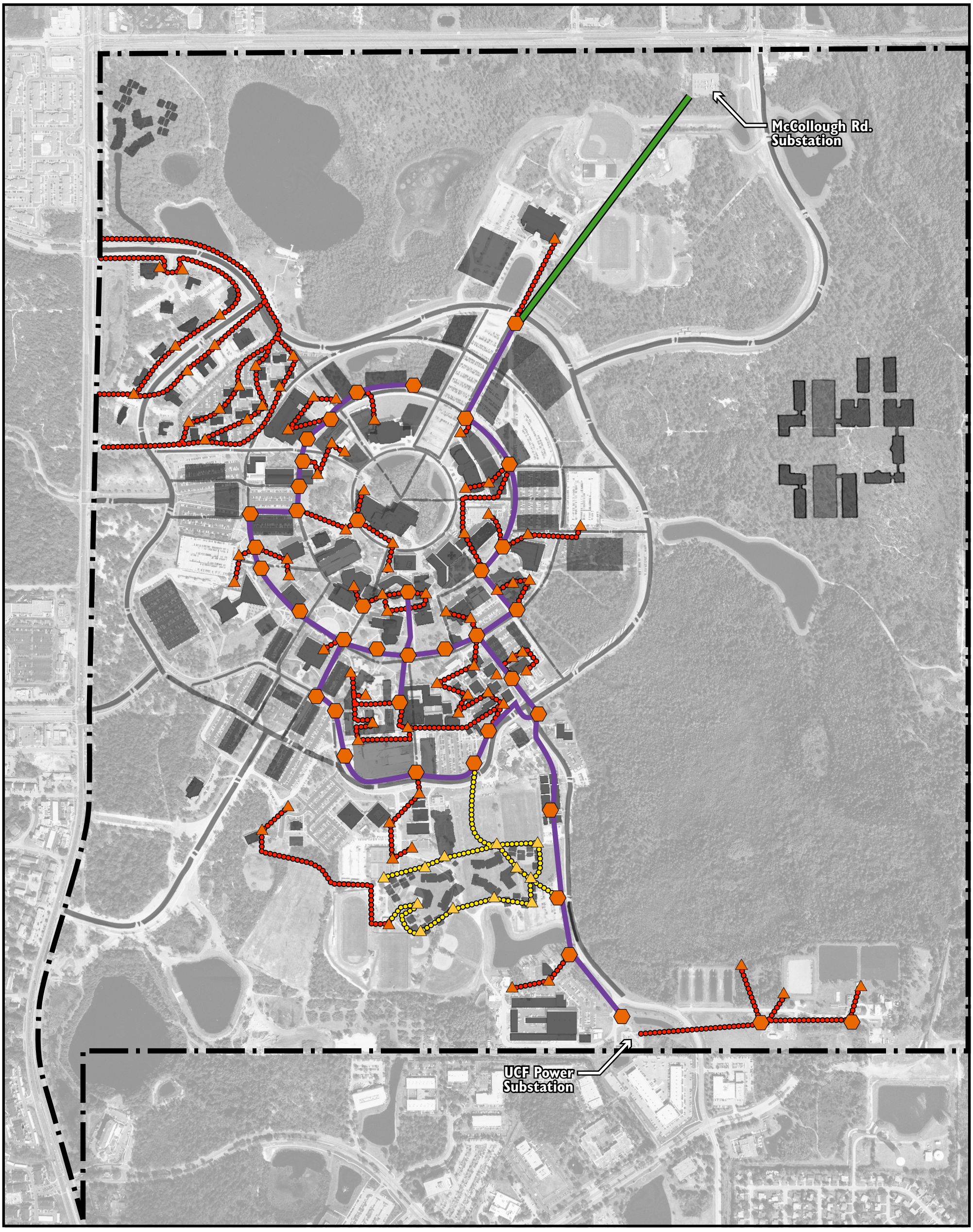


FIGURE 10-2

Electical Power Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

0 400 800 1600

116

LEGEND

- Future Underground Branch Feeder
- Existing Underground Branch Feeder
- Existing Underground Main Feeder
- Existing Overhead Main Feeder
- Underground Manhole
- Existing Transformer
- Future Transformer

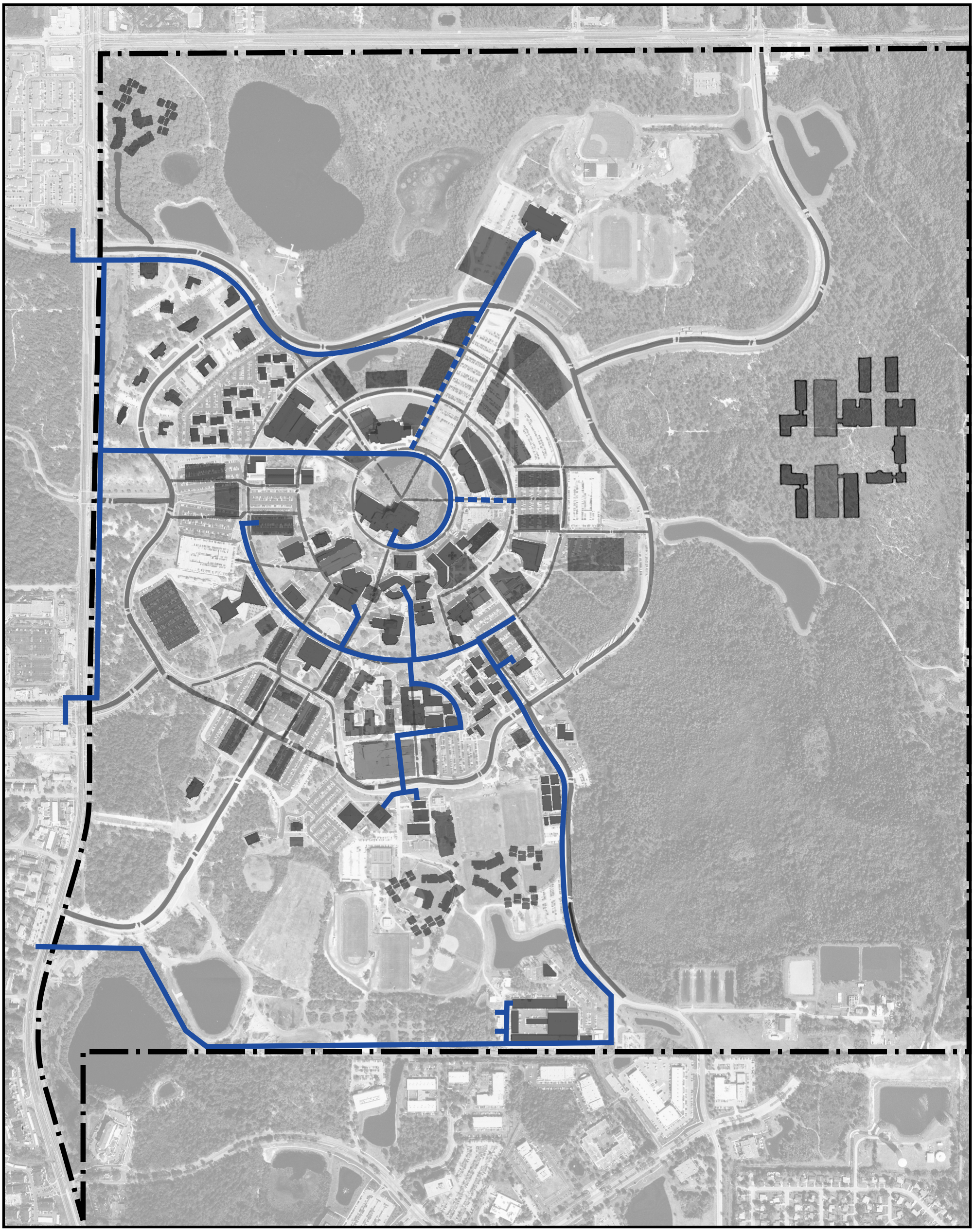


FIGURE 10-3

Natural Gas Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

LEGEND

Existing Natural Gas Line

Future Natural Gas Line

0 400 800 1600

117

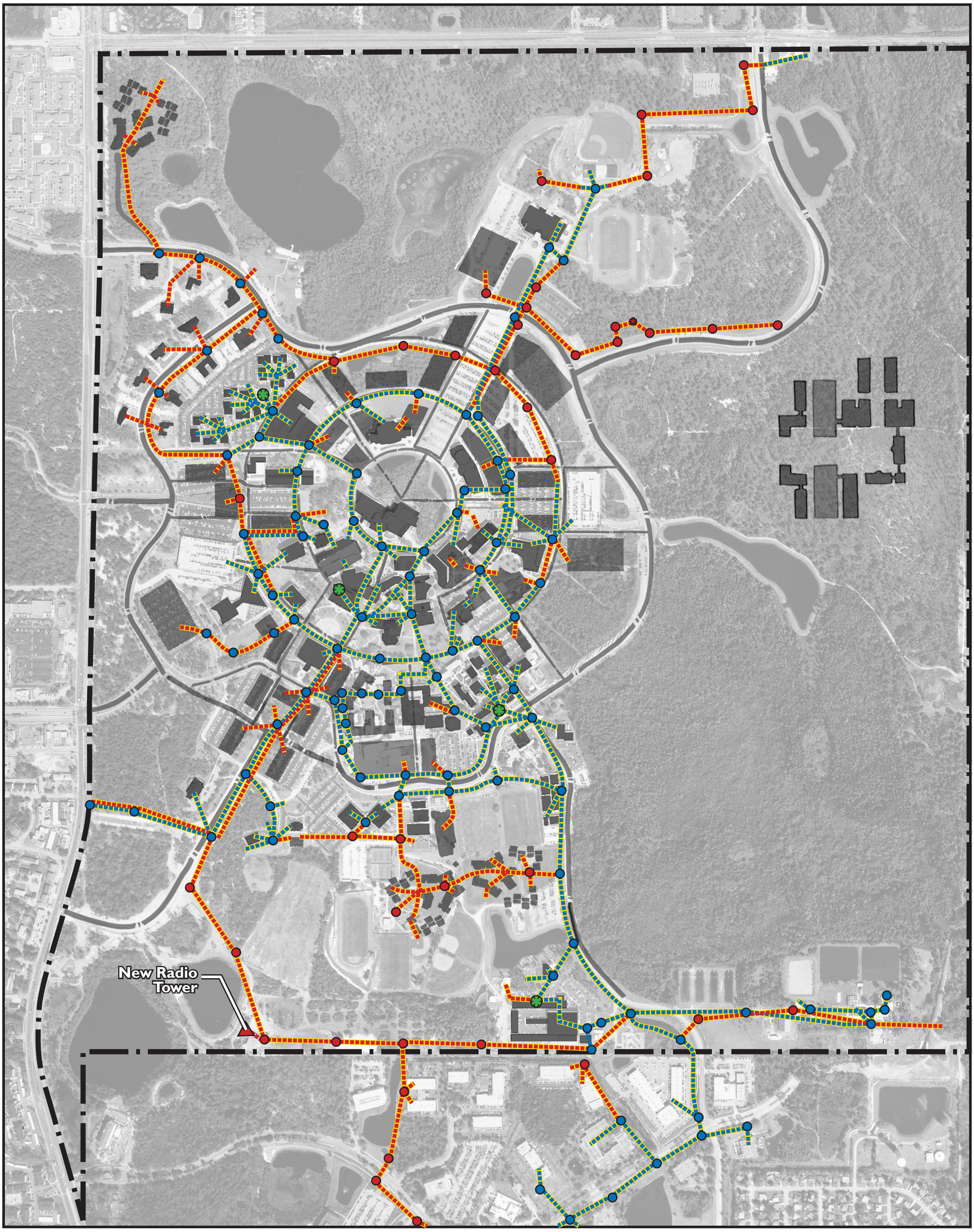


FIGURE 10-4

Telecommunications Facilities

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

LEGEND

- Existing Underground Duct Bank
- Existing Telecommunications Utility Vault
- Existing Telecommunications Switch Room
- Future Telecommunications Switch Room
- Future Underground Duct Bank
- Future Telecommunications Utility Vault

N

0 400 800 1600

TRANSIT, CIRCULATION AND PARKING SUB-ELEMENT

GOAL 1: It is the goal of the University to plan for future motorized and non-motorized traffic circulation systems to ensure the provision of adequate transit, circulation and parking facilities to meet future University needs.

OBJECTIVE 1.1: The University shall facilitate safe and efficient multi-modal access to, from and within the UCF campus.

POLICY 1.1.1: The University shall not widen any existing campus roadway beyond four lanes, and shall not widen existing two-lane roads within the 1,200 foot loop/campus core.

POLICY 1.1.2: The University shall maintain a minimum level of service of "E for all campus roadways, except when that level of service can only be accomplished by widening that campus roadway beyond four lanes.

POLICY 1.1.3: The University shall improve the internal circulation of the University by the four laning of Gemini from Libra Drive to -North Orion Boulevard; and by realigning South Gemini Boulevard in the vicinity of Central Florida Boulevard to eliminate vehicle-pedestrian conflicts. Any impacts to designated environmentally sensitive areas shall be mitigated consistent with Conservation Element policies.

POLICY 1.1.4: The University shall control access to Gemini Boulevard and North Orion Boulevard by limiting direct parking and building drive access, encouraging connections between adjacent uses, and attempting to consolidate access points.

POLICY 1.1.5: The University shall explore opportunities with Orange and Seminole counties and the Florida Department of Transportation, as appropriate, to ensure that signalization is available when needed to support roadway improvements.

POLICY 1.1.6: The University shall protect the restriction of general vehicular access to the campus core, as defined by the 1,200-foot ring of Apollo Circle.

POLICY 1.1.7: The University shall continue to minimize campus vehicular and non-vehicular conflicts by continuing to explore opportunities for the siting of additional multi-modal centers, particularly in conjunction with major new parking facilities, such as the one envisioned on the east side of campus.

POLICY 1.1.8: The University shall include provisions for bicycle lanes on newly constructed or improved existing campus roadways. Standards for bicycle racks and for their placement on campus are established in Landscape Design Element.

POLICY 1.1.9: The University supports the expedited widening of Alafaya Trail (SR 434) north from McCulloch Road to at least Chapman Road in Seminole County.

POLICY 1.1.10.: As a companion project serving as an interim facility in lieu of Policy 1.1.10, the University supports the four laning of SR 426 south of the Red Bug Road interchange.

POLICY 1.1.11: The University supports the development of an east-west collector road from Alafaya Trail (SR 434) west to Dean Road.

POLICY 1.1.13: In anticipation of the need for additional roadway capacity by the year 2010, the University shall coordinate with the Florida Department of Transportation, the Orange County and Seminole County Planning Departments, and the Orlando Metropolitan Planning Organization (MPO) to evaluate strategies and improvements to meet the projected need for additional east-west access to the UCF campus. The adopted campus master plan shall be amended as needed to incorporate the results and of this evaluation.

POLICY 1.1.14: The University shall coordinate with the Florida Department of Transportation, the Orlando Orange County Expressway Authority, and the Orange County and Seminole County Planning Departments to evaluate strategies and improvements to facilitate traffic near the southeastern portion of the campus.

POLICY 1.1.15: The proposed locations of the proposed traffic circulation improvements are identified in Figure 11-1. The timing and phasing requirements and priorities for additional parking are identified in the Capital Improvements Element.

OBJECTIVE 1.2: The University shall provide safe, adequate, accessible and effective campus parking facilities.

POLICY 1.2.1: The University shall provide sufficient campus parking throughout the planning period, maintaining a desired student to parking space ratio.

POLICY 1.2.2: The University shall provide an additional 3,000 parking spaces during the planning period. The future location of additional parking is identified in Figure 11-2. The timing and phasing requirements and priorities for additional parking are identified in the Capital Improvements Element.

POLICY 1.2.3: The University shall establish and maintain sufficient visitor parking at strategic campus locations.

POLICY 1.2.4: The University shall achieve the desired parking ratio by implementing Transportation Demand Management (TDM) strategies to provide viable parking alternatives, and by working with LYNX to determine the most efficient LASER routings to serve major student housing resources along Alafaya Trail and McCulloch Road.

POLICY 1.2.5: The University shall encourage transit usage and emphasize bicycle and pedestrian modes as a means of travel from parking lots to other on-campus destinations.

POLICY 1.2.6: The University shall provide parking facilities which maintain effective and energy efficient lighting at all facilities used after dusk and landscaping shall be placed with a strong emphasis on safety and security.

POLICY 1.2.7: Replacement parking budgets shall be an integral part of new construction budgets if

the new construction displaces existing parking spaces. Funds allocated for replacement parking shall be based on a percentage of the total construction costs.

OBJECTIVE 1.3: The University shall implement measures to improve transit service to, from and within the campus.

POLICY 1.3.1: The University should consider designating and implementing a second campus intermodal transportation terminal in conjunction with the East Garage Complex. The future location of this terminal is identified in Figure 11-2. The timing and phasing requirements and priorities for this terminal are identified in the Capital Improvements Element.

POLICY 1.3.2: The University shall work with LYNX to determine a strategy for eliminating the farebox for students on LASER buses. This strategy may include a system by which students could purchase a pass at the time of registration that would entitle them to unlimited LASER passage for the academic semester. The University could consider collecting an up-front transportation fee from the students and disbursinge the monies to LYNX in lieu of LYNX collecting fares directly from the students. Alternatively, or additionally, the University could encourage student government to utilize student government transportation fees for this purpose. The University should begin discussions with LYNX to determine the strategy as soon as possible after this Plan's adoption.

POLICY 1.3.3: The University, in conjunction with area public transportation systems and organizations, shall expand campus transit service to, from, and within the University.

POLICY 1.3.4: The University, in conjunction with area public transportation systems and organizations, shall identify residential concentrations of students as well as transit routes used most by campus patrons and increase transit service on these routes by decreasing bus headways, developing additional new routes, or modifying existing routes.

POLICY 1.3.5: The University, in conjunction with area public transportation systems and organizations, shall insure that bicycle racks are provided on transit vehicles serving the University from off-campus locations (both LYNX and LASER buses). Standards for bicycle racks and for their placement on campus are established in the Landscape Design Element.

POLICY 1.3.6: The University shall request that LYNX inventory and evaluate the positioning of all transit stop locations both on campus and within the area bounded by Chapman Road to the north, SR 50 to the south, South Tanner Road to the east, and Dean Road to the west. This inventory will include the availability of seating, shelter, lighting, amenities, etc., and shall be made available to students via the University's website and through the Parking Office.

POLICY 1.3.7: The University shall periodically update data regarding all transit, bicycle, and pedestrian services with the student commuter needs survey as outlined elsewhere in this Transportation Element.

OBJECTIVE 1.4: To encourage the use of alternative modes of transportation and reduce dependence on the personal automobile.

POLICY 1.4.1: UCF shall continue active participation in the University/Alafaya Corridor Transportation Association (UACTA) to promote transportation demand management techniques both on campus and in the context area around campus.

POLICY 1.4.2: Within three years after plan adoption, the University, in conjunction with UACTA, shall update the survey of the UCF students, faculty, and staff to identify commuter characteristics and travel patterns such as auto ownership, socio-economics, transit usage, parking preference, demographics, mode choice reasoning, origin-destination, etc. Furthermore, the survey will determine what TDM strategies, if implemented, will be most applicable to the students, faculty, and staff.

POLICY 1.4.3: Based upon the survey results, the University shall implement, with the assistance of UACTA, TDM strategies identified in the above survey. These strategies shall include, but shall not be limited to:

- Improved utilization of public or University provided transit services;
- Improved pedestrian and non-vehicular facilities;
- Increasing the number of students living on or within walking/biking distance of campus;
- Academic scheduling modifications; and
- Operational improvements to the on-campus roadway system, such as additional signalization.

Within three years of implementing TDM strategies, the University shall again survey the students, faculty, and staff to determine any shifts in commute patterns. The adopted master plan shall be amended as needed to reflect the results of this survey.

POLICY 1.4.4: The University shall explore a high-occupancy vehicle parking incentive program which provides preferential parking treatment for automobiles carrying three or more persons.

POLICY 1.4.5: The University shall coordinate with the Orange County and Seminole County Planning Departments to establish campus-wide ridesharing and carpool programs for UCF students, faculty and staff.

POLICY 1.4.6: The University shall evaluate the potential uses of distance learning as a technique to reduce the need for students to travel to the University.

POLICY 1.4.7: The University will continue to refine class scheduling as a method of mitigating peak-hour traffic conditions and to maximize utilization of existing transportation infrastructure investment.

POLICY 1.4.8: The University shall coordinate with the Orange County and Seminole County Planning Departments, as well as LYNX, to evaluate other options and strategies for reducing the dependence on the personal automobile, such as enhanced transit service from businesses and residences off-campus, and enhanced pedestrian and bicycle facilities. If any of these proves to be economically feasible and practical, the University shall amend the adopted campus master plan as

needed to incorporate these strategies into the overall transportation plan.

POLICY 1.4.9: The university will coordinate with the Expressway Authority for on-ramp onto East-West Expressway from west-bound Highway 50.

POLICY 1.4.10: The University will support completing an east-west parallel route to reduce congestion on University Boulevard.

OBJECTIVE 1.5: The University shall annually inventory and analyze parking and roadway traffic demand and operating conditions.

POLICY 1.5.1: Parking utilization and parking space ratios shall be annually monitored by the University to determine that adequate parking is being provided.

POLICY 1.5.2: The University shall annually collect and monitor traffic data on campus roadways and those roadways within the UCF context area.

POLICY 1.5.3: A system for recording accident and safety related data on campus by specific location and incident type shall be maintained by the University. This information shall serve as a basis for identifying improvements necessary to reduce the number of accidents and improve campus safety.

OBJECTIVE 1.6: To ensure the coordination of the University's transportation system improvements with the master plans and transportation improvement programs of UCF, the host community, and affected local governments.

POLICY 1.6.1: The University Master Planning Committee and Office of Facilities Planning, together with appropriate faculty and administration, shall review all campus development plans for compliance with the Master Plan's criteria for parking, circulation, and access as described in the Transportation Element.

POLICY 1.6.2: The University shall coordinate with Orange County and Seminole County concerning campus infrastructure development by submitting notice of development for review by the host community, as described in the Intergovernmental Coordination Element policies for reciprocal review.

POLICY 1.6.3: The prioritization and timing of on-campus transportation infrastructure improvements shall be concurrent with the construction of campus land uses which impact existing and proposed campus infrastructure. All necessary on-campus roadways and parking facilities required to support the Campus Master Plan development program must be in place and operating with available capacity to accommodate new development impacts without degradation in operations below the minimum levels of service, as defined and adopted by the University.

Table A

UCF Campus Roadway Levels of Service Capacities
Average Daily Traffic

No. Lanes	Level of Service (for NON-STATE other signalized roadways[1])				
	A	B	C	D	E
2L	N/A	N/A	4,800	10,900	11,900
4LD	N/A	N/A	11,600	23,800	25,400
6LD	N/A	N/A	30,800	47,800	51,000

(1) Florida Level of Service Standards and Guidelines Manual, 1998

PEDESTRIAN AND NON-VEHICULAR CIRCULATION SUB-ELEMENT

GOAL 1: To create logical patterns of pedestrian and non-vehicular circulation systems which enhance the overall urban and social-academic quality of the campus.

OBJECTIVE 1.1: To coordinate pedestrian and non-vehicular circulation systems with those to be developed by the host community, Seminole County, and the city of Oviedo, in their local comprehensive plan, bicycle plans or traffic circulation plans.

POLICY 1.1.1: The University shall work with the host community, Seminole County and the city of Oviedo, to coordinate the implementation of sidewalks, bicycle paths and lanes, and safety-enhanced pedestrian crosswalks along all vehicular corridors adjacent or leading into and out of campus.

POLICY 1.1.2: The University shall coordinate with Orange and Seminole counties and the Florida Department of Transportation, as appropriate, to ensure that signalization is available when needed to facilitate the movement and safety of pedestrian and non-vehicular traffic. Any new signals shall be interconnected with adjacent signals where applicable.

OBJECTIVE 1.2: To ensure that future pedestrian and non-vehicular circulation facilities are coordinated with the Campus Safety Plan.

POLICY 1.2.1: The Offices of the Facilities Planning, Physical Plant, Environmental Health & Safety and the Chief of Campus Police and the Parking Services Director shall meet on a regular basis to ensure that provisions concerning pedestrian and non-vehicular circulation facilities are incorporated into the Campus Safety Plan and associated programs.

POLICY 1.2.2: The Offices of the Facilities Planning, Physical Plant, Environmental Health & Safety and the Chief of Campus Police and the Parking Services Director shall coordinate the development of programs and procedures to improve the safety of persons using pedestrian and non-vehicular facilities on campus. The adopted campus master plan shall be amended as needed to incorporate these new and revised programs and procedures.

OBJECTIVE 1.3: To coordinate the locations for additional lighting along pedestrian and non-vehicular

circulation routes with recommendations contained within the Campus Safety Plan.

POLICY 1.3.1: The University shall include recommendations for type and location of future lighting requirements into the part of the Campus Safety Programs that addresses pedestrian and non-vehicular circulation systems.

POLICY 1.3.2: The Director of Facilities Planning, the Chief of Campus Police and the Physical Plant Director shall review all future plans for lighting along proposed pedestrian and non-vehicular systems to ensure compliance with both the Campus Safety Plan and the adopted UCF Architectural Design Guidelines.

POLICY 1.3.3: Appropriate lighting systems shall be constructed concurrent with pedestrian and non-vehicular circulation systems.

OBJECTIVE 1.4: To ensure that the future provision of pedestrian and non-vehicular circulation systems will meet the needs of the University and the projected student enrollment.

POLICY 1.4.1: The following order of priorities shall be applied to the future development of pedestrian paths and non-vehicular systems:

- Priority 1
  Provision of an at-grade, raised and textured pedestrian crossing at Gemini Boulevard and the South Academic Village.
- Priority 2
  Realignment of Gemini Boulevard in the area of Central Florida Boulevard to enhance the safety of pedestrians crossing in front of the Administration Building.
- Priority 3
  The construction of sidewalks and bicycle paths or bicycle lanes along one side of the completed Gemini Boulevard Loop, as well as along North Orion Boulevard.
- Priority 4
  The construction of pedestrian paths connecting buildings, which share academic quadrangles.
- Priority 5
  The construction of sidewalks and bicycle paths or bicycle lanes along all campus entrance roads leading to Gemini Boulevard.
- Priority 6
  The construction of pedestrian paths connecting the South Academic Village, on the southern portion of the campus, to the academic core.

POLICY 1.4.2: Pedestrian crosswalks shall be located at all points where pedestrian and other non-vehicular circulation crosses Gemini Boulevard, as well as at all access routes into campus. These crossings will be evaluated to determine what level of protection (traffic calming measures to pedestrian signalization) should be provided.

POLICY 1.4.3: In order to encourage greater pedestrian and non-vehicular activities, students who reside on-campus in housing served by dedicated parking, The University will consider options for

parking permits that restrict students from parking outside of residential parking areas.

2.11 (2) Transportation Element Analysis

TRANSIT, CIRCULATION AND PARKING SUB-ELEMENT

a) An analysis of the future parking needs for students, faculty, and staff and types of special events for the planning period. This analysis shall consider both the present parking ratios and utilization rates and modified parking ratios that may be considered appropriate or optimum.

The campus currently has 11,345 parking spaces available, of which 1,510 are located within temporary lots, leaving a total of 9,835 permanent spaces. With a 1999-2000 enrollment of 28,382 students, this equates to a student/parking space ratio of 2.88. The 1995 Master Plan reflected a ratio of 3.10 students per space as the desirable condition on the campus. Using this ratio as a basis for estimating future parking needs, it is anticipated that approximately 12,925 spaces will be required by Year 2010 to meet the projected student headcount of 40,070. Current plans call for the construction of two additional garages (one 1,280 space garage and one 1,720 space garage) to bring the total amount of available parking on-campus to 12,835 spaces, which would yield a student/ parking space ratio of 3.12. This ratio is very close to the 3.10 goal established in the 1995 Master Plan, leading to the conclusion that present and planned parking facilities should be sufficient to meet the projected demand for the horizon year of this master plan. A shortfall of only 90 (12,835 - 12,925 = -90) spaces is anticipated to occur within the time period between 2005 and 2010.

Utilization of the existing parking facilities was determined using the results of the recently completed parking inventory conducted by Parking Services. From the data analyzed (included as an appendix to this report), it appears that peak utilization of the existing parking facilities occurs on Wednesday during the 12:00 pm hour, at which all parking facilities on campus are at a 95% of capacity usage. As expected, the western side of campus experiences a higher average utilization, with western lots at approximately 77% of capacity through the course of the academic day and the West Garage showing an average utilization of 76% of capacity. All of the parking garages demonstrate consistent usage, ranging from 70 to 76% of capacity on average.

If the University's projections of 48,000 student headcounts for Year 2010 are realized, then there would be the potential for one additional 1,500-space parking garage, bringing the total available parking on-campus to 14,335 spaces, resulting in a student-to-parking ratio of 3.35. This sixth garage could be sited on one of the two locations illustrated in *Figure 2.11-3*. However, using the adopted student-to-parking ratio of 3.10, there would be a need for 15,485 total parking spaces. A shortfall of 1,150 on-campus parking spaces is therefore anticipated to occur by 2010. Siting of a seventh 1,500 space garage inside the Gemini Loop would be difficult due to the land constraints and the stress on the operating capacities of the campus roadways. Likewise, the provision of a peripheral garage on the outskirts of campus would require a dedicated transit shuttle service for it to be a viable parking alternative. Therefore, it is recommended that the University accommodate the projected shortfall by enhancing the transit service to the large concentrations of student housing along Alafaya Trail and McCulloch Road, working with LYNX to provide enhanced service in the form of decreased headways and more effective routing of buses. ~~for the LASER service. Accompanied by the potential to eliminate~~

~~the farebox on the LASER buses for the student ridership, these recommendations would make transit an attractive alternative to driving and parking for students who live near the campus.~~ By increasing transit usage in this way, the University could supplant the need for a seventh garage.

b) An analysis of the amount of land required to provide the amount of parking calculated in (2) a).

Using the parameters recommended in the 1995 Master Plan for land required for new parking, it is estimated that the potential shortfall of 90 parking spaces would be minimal, requiring less than one acre of additional land to create needed parking spaces. Conversely, the shortfall of 1,150 spaces could be met with surface lots, utilizing a land consumption of between 7.9 and 11.2 acres, depending on the area provided per parking space. The breakdown by condition is as follows:

Minimum Condition (300 SF/Space)	=	7.9 acres
Average Condition (350 SF/Space)	=	9.2 acres
Desirable Condition (425 SF/Space)	=	11.2 acres

A possible parking alternative for a projected 48,000-student campus would be to adopt a higher student-to-parking ratio than the accepted 3.10 and rely on enhanced transit service for students along the Alafaya and McCulloch corridors to alleviate the need for additional parking.

As a result of the 1995 Master Plan, the University embarked on a program of providing proximate structured parking to fulfill anticipated growth. Three ~~1,200~~ 1,300-space garages are currently operational, with two planned 1,500-space garages as shown in *Figure 2.11-3*. The recently completed parking study shows that these facilities enjoy consistently high utilization due to their proximity to campus attractions as well as other parameters such as after-hours security and lighting. The success of these facilities strongly suggests that the University should continue to plan for structured parking as growth occurs.

c) An assessment of the capacity of University lands to accommodate the amount of parking calculated in (2) a), including a determination of how much of the parking would have to be provided in structures.

There is certainly enough land available on the University property to accommodate the required parking, especially if it is provided in structures as has been the direction since the 1995 Master Plan. Structured parking consumes much less developable land than similarly sized surface lot facilities; for

instance, one 1,200-space garage consumes about 2.0 acres of land, as opposed to the 7.9-acre minimum requirement for a surface lot to simply meet the projected maximum shortfall. Structured parking also has the advantage of locating large pools of parking near new development anticipated to occur as part of this Master Plan update. Figure 1 also denotes two potential locations for a sixth garage; each location takes advantage of creating a dynamic relationship with an already constructed facility that can be linked to the campus and surrounding community via transit linkages, similar to the situation that currently exists at the West Garage and LYNX Superstop on the west side of campus. These linkage opportunities are discussed in further detail in the Transit portion of this Element.

The Academic Program Element estimates a doubling of resident on-campus students (2,565 to 5,227) by the year 2005, with an on-campus student population of 6,011 projected by year 2010. This shift toward more full-time campus residents places a focus on providing a balance between their parking needs and the needs of the commuter population. Well-located parking structures best meet the needs of both these populations.

d) An analysis of practical methods to accommodate the amount of parking calculated in (2) a) on the University campus, including at a minimum:

1. Reducing the number of permits issued;
2. Increasing utilization; and
3. Increasing use of public or University-provided transit.

The University serves a large regional area; therefore, it appears unlikely that a restriction in the number of permits issued would be a feasible approach to curbing parking demand. However, a fee structure that allowed reduced rates for some of the outlying, less utilized lots such as those adjacent to the Arena could increase the efficiency of the parking that exists on campus by making these remote lots more attractive to users. This approach would have to be coupled with an aggressive transit strategy that enhanced on-campus service, allowing headways of ten minutes or less to serve these lots or garages. Such a strategy, which includes the provision of an additional Transit Center to serve the east side of campus, as well as a dedicated campus shuttle system, is discussed in a later section of this Element.

e) An analysis of off-campus lands in the context area that may be available for University parking and the parking capacity of those sites.

No official off-campus parking is available within the context area. ~~However, some large lots are associated with companies within Research Park that are proximate to existing LASER transit routes~~

~~that serve the University. No counts exist for the number of spaces available or utilized by campus parking along these routes.~~

A more important factor is the number of parking areas provided by the numerous new student apartment complexes along Alafaya Trail and McCulloch Road at the north edge of campus. Enhanced transit service ~~in the form of a LASER rerouting~~ and decreased headways could help keep student residents from driving to, and parking on, the campus, thereby reducing the demand for additional parking spaces. Such transit service would also increase the appeal of these apartments for non-car owning or low-car ownership households. The University has recently been invited by LYNX to participate in an area study of transit service and improvements within the UCF area and Alafaya Trail corridor; the University should aggressively participate in this study to accommodate the recommendations contained within this Master Plan update.

f) An analysis of the impacts of off-campus University parking on the context area and alternatives for minimizing these impacts.

Currently, there is no official off-campus parking supply, and it is not anticipated that this Master Plan update will include a recommendation for University-controlled parking off-site.

g) An analysis of the projected traffic volumes/capacities and levels of service on University roads and roads in the context area, including an analysis of the traffic circulation model used by the host community in projecting traffic circulation in the context area.

As the number of enrolled students increases from 28,382 today to a projected enrollment of 40,070 in 2010, campus roadways will experience an increase in traffic. Campus roadways include a system of two, four, and six-lane facilities; projected volumes on these roadways was derived using current traffic distribution patterns and the trip-making characteristics defined in the 1993 SUS Survey. According to this methodology, it is projected that the campus will generate approximately 74,130 daily trips in the analysis year of 2010 given the current travel characteristics. Using that same methodology, the campus today should generate approximately 52,500 daily trips for the enrollment of 28,382. The OUATS Traffic Forecasting Model reflects this number accurately as it shows a daily trip generation of about 52,900 for the Traffic Analysis Zone (TAZ) that represents the University Campus. However, ground counts conducted by the University in Fall, 1999 indicate almost 67,400 daily trips into and out of the campus. Noted in the Campus Traffic Count Study conducted by the Department of Civil and Environmental Engineering during the Fall of 1999 is a suspicion that there is a significant amount of cut-through traffic that is not attributable to the land uses on the campus, but that "passes through" using the route from McCulloch Road on the north edge of campus, traveling along North Orion Boulevard, East Gemini Boulevard, and South Libra Drive south into Research Park or to the East-West

Expressway. This cut-through route is illustrated in *Figure 2.11-5*. As part of the Master Plan Update, a three-day afternoon peak-hour analysis was completed to quantify the amount of cut-through traffic that uses this route. This study showed that approximately 25% of all vehicles entering or leaving campus along this route was in fact cut-through traffic during the afternoon peak hour. The Department of Civil and Environmental Engineering is conducting a more thorough study of the cut-through traffic issue: preliminary results indicate that the daily percentage of cut-through traffic may actually exceed 25%. ~~By removing 25% of the counted daily traffic from the cordon count, a daily traffic volume of 50,550 is obtained, more in line with the expected traffic given the current enrollment. This cut-through issue suggests that an additional north-south route along the eastern boundary of campus may relieve much of the current and projected traffic congestion on the eastern campus edge.~~ Furthermore, if the enrollment at the University were to grow to 48,000 students by 2010, this would generate approximately 88,800 daily trips, increasing the need for additional route to relieve the congestion that would be prevalent during the peak hours of the day.

Two scenarios were analyzed: the first determined what capacity improvements (widenings) would be necessary to the on-campus roadway system to accommodate the projected demand; the second determined the level of transit and other non-vehicular circulation strategies must be implemented to allow for the roadway system to remain in its current lane configuration.

Year 2010 projections for the onsite roadway system yields that all roadways would operate at an acceptable level of service (LOS "E" or better as outlined in the 1995 Master Plan), as denoted on *Figure 2.11-5*, with the exception of North Orion Boulevard. This two-lane section that connects McCulloch Road to Gemini Boulevard near the East Parking Garage is projected to exceed its two-lane capacity (16,000 vehicles per day at LOS "E") by Year 2010. This segment is included in the aforementioned "cut-through" route, and this loading is indicative of the amount of non-University traffic using this route. An additional case assuming the provision of a two-lane north-south corridor on the east side of campus demonstrates the effect of its reduction in traffic volume on North Orion. A new piece of network would allow cut-through traffic to not impact the interior campus roadway system, and provides a useful additional travel corridor in this congested area of the region.

For the off-campus roadway system, the Orlando Urban Area Transportation Study (OUATS) traffic forecasting model was used to determine the projected traffic volumes on area roadways given the growth of the campus to Year 2010 expectations. A validation run for existing conditions was accomplished to determine the correlation between model projections and actual traffic counts; any adjustment needed for correlation was then applied to the results of the modeling effort. Two future scenarios were tested: first, a "baseline" run will be accomplished to determine the impact on area roadways; second, improvements to the regional roadway system (such as the previously mentioned new north-south corridor along the east side of campus) was input into the model to determine their effectiveness at relieving potential traffic congestion. The model results indicate that the provision of a north south corridor along the east side of campus will not only alleviate the existing cut-through traffic issue, but will also add relief to the Alafaya Trail corridor by providing an additional two lanes of

north-south capacity in this area. Both Alafaya Trail and University Boulevard are projected to operate at unacceptable levels in the forecast horizon year of 2010; however, both of these roadways are currently constructed to the maximum FDOT configuration of a six-lane cross-section and cannot be widened. Orange County is currently considering alternatives to add both east-west and north-south capacity through this activity area through their Roadway Conceptual Analysis (RCA) process.

The need for additional north-south capacity is reflected in the East Orange County Transportation Needs Study (EOCTNS), completed by Orange County in 1998. In that study, Orange County found a need for two additional lanes of north-south capacity between University Boulevard and Mitchell Hammock Road, as well as 4 to 6 lanes of additional capacity between SR 50 and University Boulevard in the corridor bounded by Dean Road on the west and Tanner Road on the east. A north-south roadway along the eastern edge of campus would satisfy the need in this area; in fact, the study did analyze a version of this concept (widening Gemini Boulevard East and Orion Boulevard, and extending Challenger Parkway to the north) as an alternative to widening existing roadways in the corridor. This alternative was not selected in favor of an alternative that sought to widen existing north-south roadways in the area, such as Rouse Road.

In planning such a corridor, Orange County could be a potential funding partner for the University in the design and construction of a new roadway facility within this corridor, as the EOCTNS was predicated on an enrollment at UCF that was lower than the 48,000 headcount that could result by 2010.

h) An analysis of improvements that would be required to on-campus roadways to meet the future traffic circulation needs of the University.

As stated in subsection Projected Traffic above, two scenarios were analyzed to accommodate the projected traffic loadings on on-campus roadways. If no additional north-south corridor were provided along the eastern edge of campus, both North Orion Boulevard and the east side of the Gemini loop would need to be widened to four lanes to satisfy projected traffic loadings. Additionally, Libra Drive between Gemini Boulevard and the Research Park would need to be widened, a virtual impossibility given the narrowness of the available corridor (wetlands on the east side and buildings on the west). For this reason, it is strongly recommended that the University investigate the feasibility of this potential north-south corridor project with Orange County as a partner. Meetings with Orange County Public Works and Engineering should be held as soon as possible to gauge their interest in becoming a funding partner in this project.

In addition to the proposed improvements on the east side of campus, an additional north access to McCulloch Road is proposed. This connection allows traffic (vehicular, bicycle, and pedestrian) from the existing and planned student apartment complexes along McCulloch Road to access the campus at

an additional location, spreading the demand from the northern Gemini/Alafaya access and the North Orion Boulevard access. The realignment of Gemini Boulevard in the vicinity of Central Florida Boulevard is also recommended to alleviate the pedestrian/vehicle conflicts that regularly occur in front of the Administration Building. In conjunction with this project, it is also recommended that the Parking Pass Office currently in the parking lot in front of the Administration be relocated, possibly to a dedicated location along Central Florida Boulevard; this configuration would allow for visitors to be "intercepted" at a campus portal, as wellas placing this activity outside of the realm of significant pedestrian activity. Finally, a new east-west connector roadway is proposed to connect Central Florida Boulevard to Libra Drive, serving the South Academic Village. In addition to these roadway improvements, several intersections should be monitored annually to determine if signalization is warranted. One of the analyzed roadway improvements, as well as potential signal locations, is illustrated in *Figure 2.11-6*.

This roadway improvement along with the aforementioned improvement should be supplemented by enhanced campus and local transit service as discussed in later sections of this element.

i) An analysis of improvements that would be required to off-campus roads in the context area, based on additional traffic projected to be generated by the University.

Improvements to the regional roadway system that were analyzed include the provision of a new north-south two-lane corridor on the east boundary of campus to provide a direct connection between McCulloch Road and Research Park/East-West Expressway and an additional northern connection to McCulloch Road from Gemini Boulevard. This connection allows for an alternative route to Alafaya Trail and provides much-needed north-south capacity in the region. The ongoing two Orange County RCA Studies for Alafaya/Dean Road Connector and the East-West Corridor Connector are aimed at providing relief in the east-west direction for University Boulevard. The University's support of these studies as well as the advancement of a concept for improvements on the east edge of campus will aid in relieving future traffic congestion on the immediate regional network.

j) An analysis of additional public or University-provided transit that will be required to meet the future needs of the University for the planning period

It is anticipated that transit improvements will comprise a major role in the development of a recommended concept for the Master Plan. Two types of transit service alternatives were analyzed: enhancements to existing LYNX ~~and LASER~~ routes to better serve the campus, and a dedicated on-campus circulator to serve student and faculty/staff travel among the campus uses and parking facilities. LYNX is currently beginning a transit study in the vicinity of the campus and has invited the University to be a member of the study team; the University should embrace this opportunity to advance transit service on and around the campus.

Current transit service to and from the campus focuses on the LYNX Superstop constructed as part of the West Parking Garage complex. With the planned addition of another garage on this site, approximately 2,700 structured parking spaces will be located adjacent to the major transit interface on campus. This concept should be carried forward on the east side of campus for the following reasons: most growth potential exists on this side of campus; with a new roadway facility and access to the east/north/south, this location becomes an important second "front door" to the region; and by locating a second garage adjacent to the existing East Garage, the same site characteristic that is planned for the West Garage Complex could be replicated on the east side of campus. ~~This East Garage Complex and Superstop could also be served by a simple rerouting of one of the existing LASER routes, as illustrated in *Figure 2.11-7*. This rerouting also allows LASER to serve the new student apartment facilities on McCulloch Road, as well as the north side of the existing Knight's Crossing complex.~~

Connection between these two Superstops can be accomplished via the implementation of a dedicated on-campus transit circulator. *Figure 2.11-8* illustrates the recommended routing for the circulator, which connects campus attractions (such as the Student Union) as well as serving both the East and West Garage Complexes. These two locations provide maximum opportunity for campus commuters to interface with the campus circulator~~, local transit service (LASER),~~ and the regional transit service (LYNX).

In the event that a headcount of 48,000 is achieved during the planning period, transit service to and around campus will play an even larger role in the movement of people on the campus. Provision of the East Campus Multi-Modal Center and campus circulator will allow for a "spreading" of mobility demand between the two sides of campus.

k) An analysis of the opportunities to implement transportation system management and transportation demand management techniques and strategies to minimize off-site impacts on roadways within the context area, including:

1. Operational modifications;
2. Improved utilization of public or University-provided transit;
3. Improvement of pedestrian and non-vehicular circulation facilities;
4. Increasing the number of students living on-campus;
5. Academic scheduling modifications;
6. Traffic management system approaches; and
7. Jobs-housing balance concepts.

Orange County is currently conducting a study of the University Boulevard corridor to determine operational modifications that will increase the operating efficiency of the corridor. One of the proposed improvements is the reallocation of turn lanes on the eastbound approach of the University Boulevard and Alafaya Trail intersection. This proposed improvement converts one of the three through lanes into the campus into a second left turn lane. This action significantly increases the operational efficiency of this intersection without making any physical modifications to the curb lines.

The success of the West Garage Superstop should be duplicated as the campus growth increases on the east side. This location could interface with student and faculty parking, bicycle parking, and transit service in the form of LYNX~~, LASER,~~ and local campus circulator service.

The pedestrian pathway system as shown in the overall Master Plan concept should be developed as it allows for a direct, friendly, and visible walking connection between campus attractions. Shade trees and lighting should be included as part of the overall pedestrian pathway system.

As part of this Master Plan update, the University is taking a dramatic step to increase the number of on-campus students. Provision of goods, services, and entertainment on campus is vital to recognize reductions in on and off-campus vehicular traffic as a result of more students living on campus.

Value pricing strategies could help increase utilization of some of the less-used remote lots. With reliable transit connections to the campus core provided by an onsite circulator, reduced-price parking in these lots could make them more attractive, reducing the number of vehicles accessing the core areas of campus. Additionally, provision of a better pedestrian and bicycle environment along Alafaya Trail will allow these modes to become more competitive with the automobile for the many off-campus students living in this corridor.

l) The planned location of future facilities identified in the Academic Facilities, Support Facilities and Utilities elements, with accompanying parking to serve these facilities.

Parking will be provided along with the new development of facilities as denoted in the illustrative Master Plan. Staff and service parking will be provided adjacent to the proposed buildings or in a proximate parking structure.

PEDESTRIAN AND NON-VEHICULAR CIRCULATION SUB-ELEMENT

a) An analysis of the amount and type of pedestrian and non-vehicular circulation facilities that will be required to meet the needs of projected University enrollment, including the basis for this analysis.

The pedestrian precinct system denoted in the illustrative Master Plan will be implemented to provide safe, direct, and comfortable pedestrian connections. Alternatives evaluated to reduce the potential for pedestrian/vehicle conflicts include traffic calming in the areas of significant pedestrian activity (such as the anticipated crossing of Gemini Boulevard between the south Academic Village and Central Campus), rerouting of Gemini Boulevard in the area of the Administration Building to alleviate the pedestrian conflict, and creating a better on-campus walking environment through the use of shade tree plantings along major pedestrian corridors. Significant crossing locations such as those mentioned would also be candidates for pedestrian push-button crossing signals; these locations should be monitored on an annual basis to determine the need for such a signal. These subject areas are illustrated in *Figure 2.11-9*.

Additional pedestrian and bicycle facilities should be included on the proposed additional connection to McCulloch Road and along the eastern corridor to encourage students living within walking or biking distance to campus to use those modes instead of a personal automobile.

b) An analysis assessing the need for pedestrian and non-vehicular circulation facilities in the context area with reference to those facilities serving areas of off-campus housing, or other off-campus student activities.

A connection to the McCulloch Road corridor and its growing housing supply was evaluated and recommended. Also, taming of the Alafaya Trail corridor as it forms the western border of campus should be explored to facilitate safer and better pedestrian and bicycle connections across this heavily auto-oriented corridor. Possible measures include traffic calming, streetscape, urban design actions, transition to "town" patterns of development rather than suburban "strip," bus shelters, and off-road bicycle paths. The University should also work with Orange County to provide connections from the Econlockhatchee Trail and Cady Way Trail systems into the campus for additional non-vehicular connectivity to the region.

c) An analysis of lighting conditions along pedestrian and non-vehicular circulation routes to identify areas where lighting is inadequate.

Lighting conditions in the core areas of campus were found to be more than adequate. The parking garages are also well lit, as are the pedestrian paths connecting them to the campus core. Lighting fixture frequency diminishes as distance increases from the campus core, but overall level of lighting remains adequate. From a personal safety standpoint, the Student Escort Patrol Service (SEPS) provides free door-to-door escort service for students after normal campus activity hours; better advertisement of this free service could make it more visible to the student population.

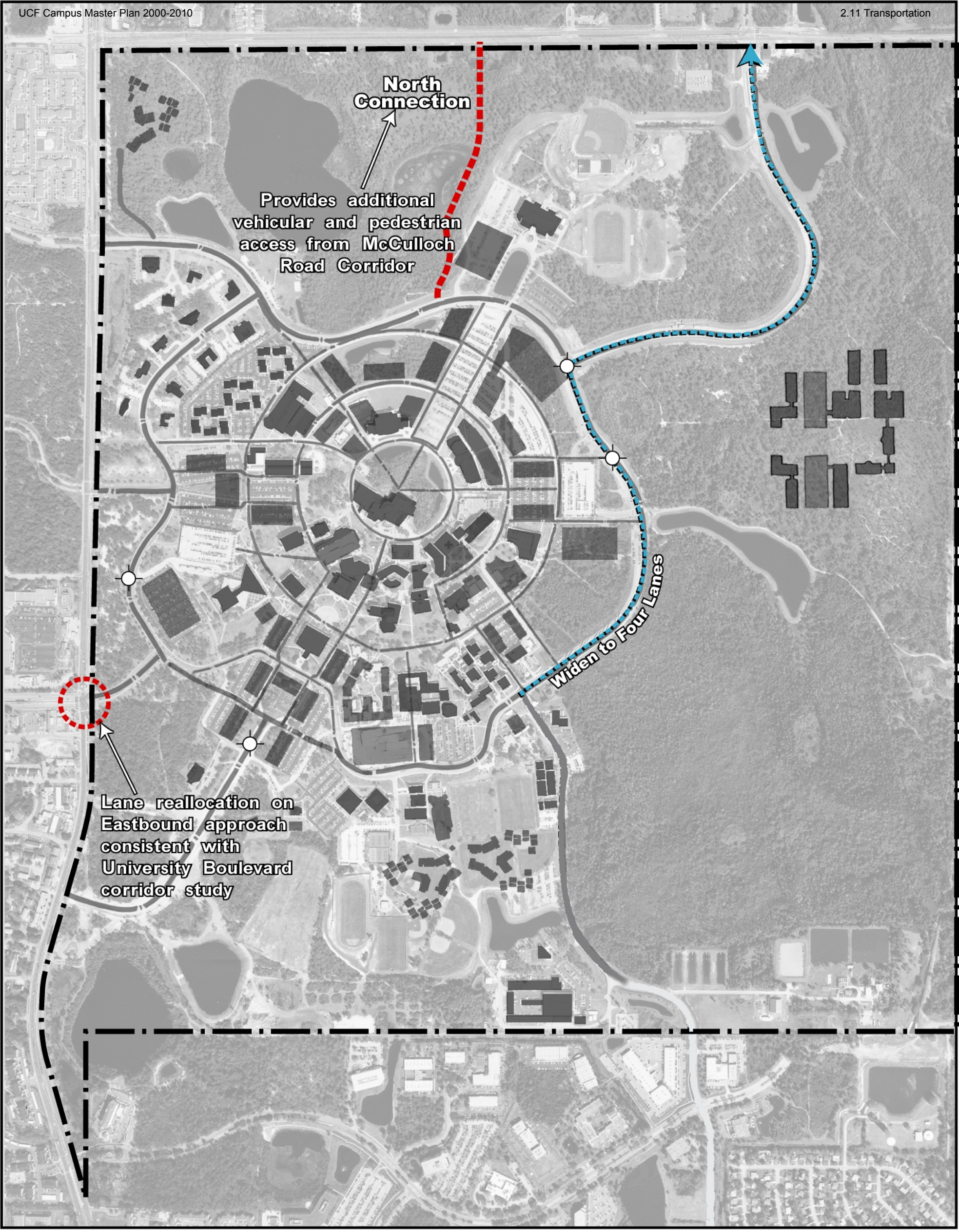


FIGURE 11-1

Roadways

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida
2000-2010

Guiding Principle:
Roadways should facilitate mobility for all users: vehicular, transit, bicycle, and pedestrian. Attention should be paid to achieving a balanced design that integrates all modes of tranportation.

LEGEND

- Widen from Two to Four Lanes
- Potential New Traffic Signal

0 400 800 1600

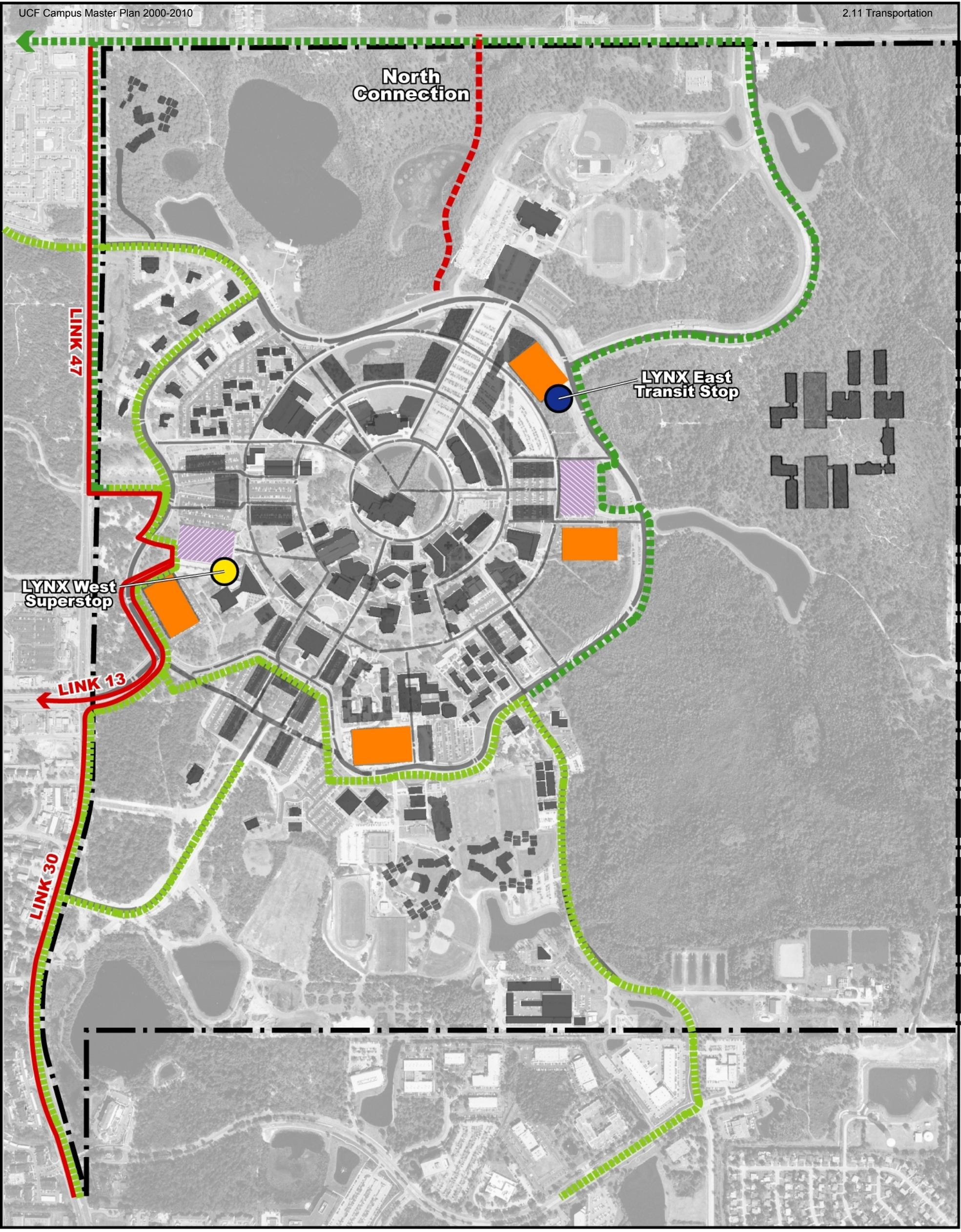


FIGURE 11-2

Parking and Transit

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

Existing Garage

Programmed Garage

0 400 800 1600

Guiding Principle:
Transit should be an integral component of the future transportation system for the campus. Provisions should be made for both regional connections and on-campus circulation.

LEGEND

- Existing LYNX Routes
- Existing Laser Routes
- Laser Expansion/Rerouting

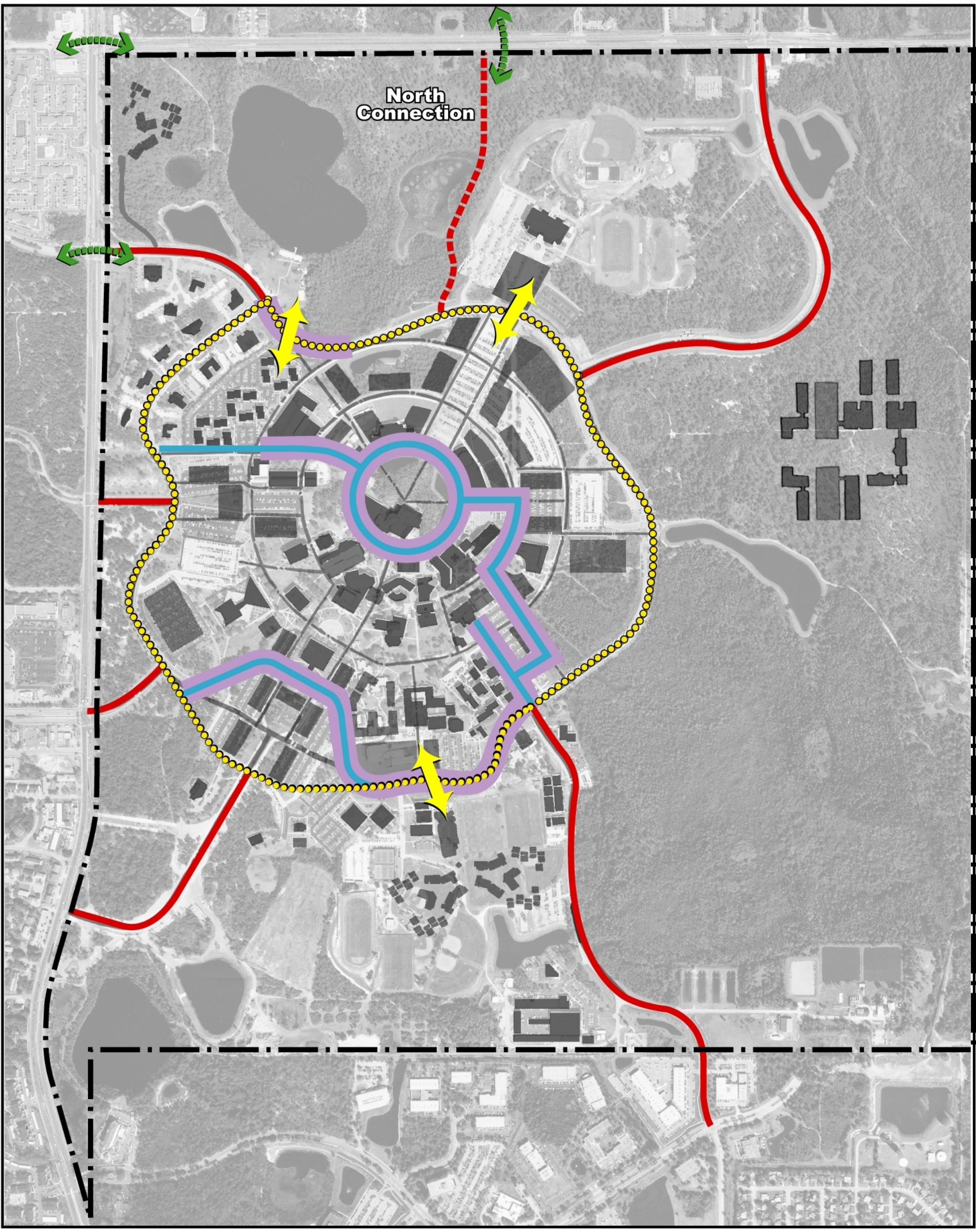


FIGURE 11-3

Pedestrian and Bicycle Circulation

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

Guiding Principle:

Circulation initiatives should include provisions for heavy pedestrian and bicycle usage. All circulation facilities should support the coexistence of all modes of travel on the campus.

LEGEND

Street Types

- Regional Campus Access
- Campus Circulation, Incorporate Low-Speed Elements to Provide Balance Among Modes
- Local Campus Access
- Pedestrian Activity Corridors/Roadways Traffic Calm Corridors to Provide Safe Crossings
- Major Crossing Movements

Initiatives

- Provide/Enhance Pedestrian and Bicycle Connections

0 400 800 1600

Figure 2.11-1

CAMPUS ROADWAYS BY STREET TYPE

LEGEND
Street Types

- Regional Campus Access
- Campus Circulation
- Local Campus Access
- Pedestrian Activity Corridors
- Major Crossing Movements

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

0 400 800 1600

Figure 2.11-2

EXISTING CAMPUS TRANSIT SERVICE

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

LEGEND

Existing LYNX Routes

Existing Laser Routes

0 400 800 1600

Figure 2.11-3

EXISTING AND PLANNED PARKING STRUCTURES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

LEGEND

Existing 1,200-Car Garage

Programmed 1,500-Car Garage

0 400 800 1600

Figure 2.11-5

PROJECTED DAILY TRAFFIC VOLUMES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

LEGEND

Widen Gemini/Orion to 4-Lanes

0 400 800 1600

Figure 2.11-6

ROADWAY CONCEPT

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

LEGEND

Potential New Traffic Signal

0 400 800 1600

Figure 2.11-7

"SUPERSTOP" EXPANSION CONCEPT

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

LEGEND

- Existing LYNX Routes
- Existing Laser Routes
- Laser Expansion/Rerouting

0 400 800 1600

Figure 2.11-8

CAMPUS CIRCULATOR CONCEPT

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

LEGEND

Existing Garage

Programmed Garage

0 400 800 1600

Figure 2.11-9

PEDESTRIAN/ BICYCLE CONCEPT

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

March 16, 2001

LEGEND

Street Types

- Regional Campus Access
- Campus Circulation
- Local Campus Access
- Pedestrian Activity Corridors
- Major Crossing Movements

Initiatives

- Provide/Enhance Pedestrian and Bicycle Connections
- Traffic Calm Corridors to Provide Safe Crossings
- Incorporate Low-Speed Elements to Provide Balance Among Modes

0 400 800 1600

GOAL 1: To achieve the goals, objectives, and policies of the University Master Plan through the use and promotion of intergovernmental coordination with local, regional, and federal government entities.

OBJECTIVE 1.1: To promote land use compatibility between the University and host local government through the coordination of the University's Master Plan with the comprehensive master plans of the host community.

POLICY 1.1.1: It shall be the policy of UCF that proposed amendments to the Comprehensive Policy Plan of Orange County which have the effect(s) of changing land uses or policies that guide the development of land within the context area, affect the provision of local services, or which otherwise impact University facilities or resources shall be submitted to the University Director of Facilities Planning for review and comment.

POLICY 1.1.2: The University shall establish, in conjunction with Orange County a process for reciprocal review of comprehensive plans.

POLICY 1.1.3: Proposed amendments to the adopted campus master plan which exceed the thresholds established in Chapter 240.155(9), F.S., shall be transmitted to the Orange County Planning Department, East Central Florida Regional Planning Council, St. Johns River Water Management District, Florida Game and Fresh Water Fish Commission, Florida Department of Transportation, Florida Department of State, Florida Department of Environmental Protection, Florida Land Management Advisory Council, the State of Florida Department of Community Affairs and other applicable governing bodies for review in accordance with the procedures established in Chapter 6C-21, Part 1, Florida Administration Code.

POLICY 1.1.4: Proposed amendments to the campus master plan which do not exceed the thresholds established in Chapter 240.155(9), F.S., and which have the effect of changing the manner in which development on campus may occur or impacting off-campus facilities, services or natural resources, shall be transmitted to the Orange County Planning Department for a courtesy review.

POLICY 1.1.5: The University's Director of Facilities Planning shall meet with appropriate Orange County officials for review and comment on enrollment projections of the UCF campus master plan, and to review appropriate elements of local government comprehensive plans by the University.

POLICY 1.1.6: Every effort shall be made to formalize the terms and conditions of the reciprocal plan review process through an interlocal agreement or memorandum of understanding.

OBJECTIVE 1.2: To establish administrative procedures and coordination mechanisms for the reciprocal review of campus and host community development plans.

POLICY 1.2.1: It shall be the policy of UCF that proposed development within the context area which has the potential to impact or affect University facilities or resources shall be submitted to the University's Director of Facilities Planning for review.

POLICY 1.2.2: The UCF Director of Facilities Planning shall meet with local officials to establish the criteria and thresholds for development proposals which would be subject to review by the University. The construction or renovation of single-family homes, and other small scale

developments are to be excluded from review by the University.

POLICY 1.2.3: Except when otherwise stated in Section 240.155, F.S., the provisions of the Campus Master Plan and associated campus development agreement supersede the requirements of Part II of Chapter 163, F.S.

POLICY 1.2.4: University officials shall participate and cooperate with local officials in the review of proposed campus enrollment projections to assess potential impacts on local, regional, and state resources and facilities.

POLICY 1.2.5: Once the campus development agreement is executed, all campus development may proceed without further review by the host local government if it is consistent with the adopted Campus Master Plan and associated campus development agreement.

POLICY 1.2.6: When it has been determined that enrollment projections on campus would have an adverse impact on local facilities, services or natural resources, University officials shall participate and cooperate with local officials and representatives from appropriate regional and state agencies in the identification of appropriate strategies to mitigate the impacts of campus development on local, regional, and state resources and facilities.

POLICY 1.2.7: University officials shall participate and cooperate with local officials in the review of proposed development within the context area to assess potential impacts on University resources and facilities.

POLICY 1.2.8: When it has been determined that enrollment projections on campus would have an adverse impact on local services, facilities or natural resources, University officials will participate and cooperate with Orange County and other pertinent regional and state agencies in the identification of appropriate strategies to mitigate the impact consistent with the terms and conditions of the interlocal agreement.

POLICY 1.2.9: UCF shall seek to execute a memorandum of understanding with Orange County that would require Orange County to transmit to the UCF Office of Facilities Planning any application for Development Order or Construction Permit within the designated context area surrounding the University which is subject review under policy above regarding establishment of criteria and thresholds for review of development proposals.

POLICY 1.2.10: When it has been determined that proposed development within the designated context area would have an adverse impact on the University's facilities and resources, UCF officials will participate and cooperate with local, regional or state officials in the identification of appropriate strategies to mitigate the impacts on UCF facilities and resources.

POLICY 1.2.11: Any dispute between the University and a host or affected local government regarding the assessment or mitigation of impacts shall be resolved in accordance with the process established in Subsection 240.155 (8), F.S.

OBJECTIVE 1.3: To assess and mitigate the impacts of on-campus development on the surrounding community, host and affected local governments, and service providers.

POLICY 1.3.1: As provided for in s. 240.155, F.S., within 270 days after adoption of the Campus

Master Plan by the Division of Colleges and Universities, a draft Campus Development Agreement shall be transmitted to appropriate host and affected local governments. This Agreement must:

- Identify geographic area covered by the Agreement;
- Establish the duration of the Agreement (5-10 years);
- Identify LOS Standards for public services and facilities, the entity to provide these services and facilities and any financial arrangements between the Division of Colleges and Universities and the service provides;
- Determine impact of proposed campus development on identified public services and facilities and any deficiencies likely to occur as a result;
- Identify facility improvements to correct deficiencies;
- Identify the Division of Colleges and Universities' "fair share" of the costs of needed improvements; and
- Be consistent with adopted Campus Master Plan and host local government comprehensive plan.

POLICY 1.3.2: The Division of Colleges and Universities and host government shall execute the Campus Development Agreement within 180 days after receipt of the draft agreement.

POLICY 1.3.3: Once the Campus Development Agreement is executed, all campus development may proceed without further review by the host local government if it is consistent with the Campus Development Agreement and the adopted Campus Master Plan.

POLICY 1.3.4: Once the Division of Colleges and Universities pays its "fair share" for capital improvements as identified in the Campus Development Agreement, all concurrency management responsibilities of the University and Division of Colleges and Universities are deemed to be fulfilled.

POLICY 1.3.5: Any dispute between the University and host local government which arises from the implementation of the Campus Development Agreement shall be resolved in accordance with the process established in s. 240.155 (16), F.S.

OBJECTIVE 1.4: To use University facilities and resources as shelters and for the staging of emergency services for an emergency event.

POLICY 1.4.1: The University shall work closely with the Orange and Seminole Counties' Office of Emergency Management, the Sheriff's Department, and the American Red Cross to develop standards and operating procedures for the activation and operation of emergency shelters on campus to house on-campus and near-campus students, faculty, and staff.

POLICY 1.4.2: The University shall participate in emergency exercises to evaluate management plans and procedures.

POLICY 1.4.3: Consistent with the pertinent Coastal Management Element Policy, the University

will make available to the Orange County emergency Management office annually a listing of available public shelters on the UCF campus.

OBJECTIVE 1.5: **To ensure the provision of adequate public services and facilities necessary to support development on campus and to meet the future needs of the University.**

POLICY 1.5.1: The University shall coordinate the provision of additional stormwater management facilities consistent with General Infrastructure Element.

POLICY 1.5.2: The University shall coordinate the provision of additional potable water facilities consistent with General Infrastructure Element Policy.

POLICY 1.5.3: The University shall coordinate the provision of additional sanitary sewer facilities consistent with General Infrastructure Element Policy.

POLICY 1.5.4: The University shall coordinate the provision of additional solid waste collection facilities consistent with General Infrastructure Element.

POLICY 1.5.5: The University shall coordinate the provision of additional electrical power and natural gas service consistent with Utilities Element

POLICY 1.5.6: The University shall coordinate with appropriate authorities, including the Expressway Authority, transportation system improvements consistent with Future Land Use Element, and Transit, Circulation and Parking Sub-Element.

POLICY 1.5.7: The University shall coordinate pedestrian and non-vehicular circulation improvements consistent with Pedestrian and Non-Vehicular Circulation Sub-element.

POLICY 1.5.8: The University shall coordinate the provision of affordable housing off-campus consistent with Housing Element.

OBJECTIVE 1.6: **To ensure the protection of natural, historical and archaeologically significant resources from the adverse impacts of development on campus.**

POLICY 1.6.1: The University shall coordinate the protection of environmentally sensitive areas, species, and natural resources consistent with Future Land Use Element policies 1.1.3, Conservation Element and Landscape Design Guidelines Element Policy.

POLICY 1.6.2: The University shall coordinate the protection of historical and archaeologically significant resources consistent with Future Land Use Element.

2.12 (2) Intergovernmental Coordination Element Analysis

a) Effectiveness of existing coordination mechanisms

1. The University has effectively utilized existing coordination mechanisms and established new ones during the last planning cycle. Of major note is the execution of the Campus Development Agreement executed with Orange County on January 16, 1998. This document addressed campus planning and community development concurrency issues as required by State statute. Additionally during the planning cycle the University has participated in local community workshops regarding community-based private student housing development and management.

2. In the area of transportation the University participates in the regional transportation planning body, MetroPlan, which seeks to address the overall transportation challenges of the rapidly growing area in which the University itself is growing rapidly. The University participates with the local area public transportation entity, Lynx, and through that participation has developed a public transportation mall adjoining the west parking garage to facilitate use of public transportation facilities by students, faculty and staff. In the area of fire protection the University has partnered with Orange County by providing land in its northeast corner for a recently-completed fire station serving the University and the adjoining neighborhoods.

3. A stormwater master plan has been implemented with the regional authority, St. Johns River Water Management District, thus providing adequate and environmentally sound stormwater management and capacity for the past and future growth of the campus. The University recently secured its long-term ability to meet potable water needs through coordination with Orange County by providing an easement through its southern property for a new regional water service line that replaces the on-site wells previously used. Again the University has coordinated with the host government and has upgraded its sanitary sewer infrastructure by sending its sanitary waste to City of Orlando's Iron Bridge facility for processing and re-use. As part of that agreement the University will receive treated effluent from Iron Bridge for non-potable uses.

b) Specific problems and needs within each master plan element which would benefit from improved or additional intergovernmental coordination

The rapid growth of the University means that increased development and infrastructure coordination with the host community and other governmental bodies, particularly contiguous Seminole County, will be vital to meet future needs in a planned and effective way. In the primary area of concern, transportation, there is need for increased coordination emphases in the immediate future. University and nearby roads are reaching levels of service that are critical and effecting everyone's impression of the ability of the University and host communities to meet growth needs. There is potential for public transportation and public-University transportation cooperation to provide critical transportation needs. The cumulative effect of growth of the University and the surrounding community has been to change the nature of the University and its environs from a semi-rural, suburban area to an increasingly urban center. This increases the need to coordinate environmental monitoring and conservation efforts. Overall the impact of University and community growth is to increase the importance and necessity for joint planning and coordination

of growth management efforts. As a center of learning the University occupies an important position in this partnership. As part of its mission it should provide critical knowledge and expertise and demonstrate its commitment to beneficent growth management.

Some issues which should be considered for increased intergovernmental coordination are:

2.1 Academic Mission

Sub-issue **Partnership campuses**

Sub-issue **Community outreach**

2.2 Urban Design

Sub-issue **Compatible urban fabric interface**

2.6 Support Facilities **Joint-use of facilities (Union, etc.)**

2.7 Housing

Sub-issue **Availability and proximity**

2.8 Recreation & Open Space **Joint-use of facilities**

2.12 Intergovern'l. Coord.

Sub-issue **Community safety**

2.14 Capital Improvements

Sub-issue **Funding of joint-use facilities**

c) Growth and development proposed in comprehensive plans in the area of concern and a comparison with the appropriate regional policy plan in order to evaluate the needs for additional planning coordination.

The University land use is appropriate for the surrounding land uses established in the Orange County Comprehensive Plan. On the north and west the campus is bordered by major community collector roads with appropriate uses on the other side of the roads (commercial and multifamily residential. To the south is the industrial use and the private University Research Park. To the east is single family residential which directly abuts the least-developed and in some cases environmentally sensitive eastern regions of the campus. Uses of this eastern region of the campus must be carefully studied for compatibility with the low density residential use adjoining the campus.

GOAL 1: The University shall maintain a balanced commitment to the preservation and enhancement of the natural resources and ecosystems found on campus lands while accommodating the continued development and expansion of the campus' built environment.

OBJECTIVE 1.1: To maintain or improve existing air quality on campus.

POLICY 1.1.1: The University shall continue to participate in and consider those programs which will maintain or improve existing air quality on campus lands. Such programs include participation in local transportation management associations, LYNX routing and terminal servicing activities and the promotion of bicycle and pedestrian circulation improvements.

POLICY 1.1.2: The University shall reduce mobile sources of air pollution through Transportation Element policies designed to discourage dependence on the personal automobile as the primary transportation mode on campus, and to encourage alternative modes of transportation on campus (i.e., public transit, bicycles, etc.).

POLICY 1.1.3: The University shall minimize emissions of air pollutants from and within buildings on campus through the installation of appropriate filtering devices on fume hoods and by minimizing the storage and use of volatile and hazardous materials in campus buildings.

POLICY 1.1.4: The University shall determine the potential impacts on air quality before construction of parking structures. Parking structures shall be designed to facilitate rapid ingress and egress of vehicles to minimize idling time, and to maximize air flow through them to eliminate pockets of stagnation where pollutant levels can build up.

POLICY 1.1.5: Within three years after plan adoption, the University shall implement a program for the monitoring of both indoor and outdoor air quality. Indoor sampling shall occur at chemistry laboratories, kitchens, and other sites where fumes are produced. Outdoor sampling sites shall include parking lots and congested intersections. failure to meet air quality standards adopted by the State Department of Environmental Protection shall result in an assessment of the probable cause and the preparation and implementation of a plan to improve and maintain air quality.

OBJECTIVE 1.2: To conserve, appropriately use, and protect the quantity and quality of projected water sources.

POLICY 1.2.1: By 2003, the University shall initiate a study of local groundwater conditions relative to establishing a cone of influence about each potable water wellhead. The adopted campus master plan shall be amended as needed to incorporate the results of this study.

POLICY 1.2.2: The University shall coordinate with the Department of Environmental Protection and the St. Johns River Water Management District to establish a wellhead cone of influence centered about the University's potable water source wells.

POLICY 1.2.3: By 2003, the University shall initiate a study oriented to the need and feasibility of relocating the potable water wells to one or more of the preserved land areas on the campus. The adopted campus master plan shall be amended as needed to incorporate the results of this study.

POLICY 1.2.4: The University shall continue to monitor and test raw well water, destined for

potable use, on a daily and monthly basis.

POLICY 1.2.5: The University shall continue to monitor and test treated potable water on a daily and monthly basis.

POLICY 1.2.6: The University shall continue to monitor Lake Claire compliance with existing standards for water quality.

POLICY 1.2.7: The University shall continue to implement a comprehensive water conservation program, to include:

1. the use of treated wastewater effluent for an expanded campus irrigation system and chilled water system make-up water,
2. the use of automated timers and other irrigation flow monitoring mechanisms,
3. xeriscape landscape treatments for new building construction and new campus common areas, and
4. the use of low flow and low flush fixtures in new building construction.

POLICY 1.2.8: The University shall not undertake activities on-campus which would contaminate groundwater sources or designated recharge areas unless provisions have been made to prevent such contamination or otherwise provide mitigation for such activities so as to maintain established water quantity and quality standards.

POLICY 1.2.9: The University shall further protect water quantity and quality through adherence to the General Infrastructure Element.

OBJECTIVE 1.3: To designate environmentally sensitive lands for protection based on state and regionally determined criteria.

POLICY 1.3.1: As hereby established by the adoption of this Plan, the University shall maintain, in a managed natural state, all of those sites identified for conservation on the Future Conservation Areas Map (Figure 13-1). Consistent with Future Land Use Element, no construction is anticipated in these areas except for minimal structures and improvements necessary to ensure safe access and essential support functions.

POLICY 1.3.2: Within two years after adoption of the master plan, the University shall coordinate with the Florida Fish and Wildlife Conservation Commission and other appropriate state and regional environmental agencies to conduct a management study for designated Conservation areas. The scope of this study shall include, but not be limited to:

1. Maps depicting the location of vegetative communities and management units within designated Conservation areas;
2. Identifying the University entity with responsibility for management of designated Conservation areas;

3. A description of how each management unit will be maintained or restored;
4. A monitoring and evaluation schedule;
5. A plan for the removal and control of exotic plants and wildlife;
6. A description of compatible uses; and
7. Developing specific guidelines to ensure the protection of the natural areas in the Arboretum.

The adopted campus master plan shall be amended as needed to incorporate the results and recommendations contained in the management study.

OBJECTIVE 1.4: To conserve, appropriately use, and protect native vegetative communities and wildlife habitat.

POLICY 1.4.1: The University shall develop the natural areas within the campus as a system of interconnected wetlands linked with upland buffers and preserves, as shown on the Future Conservation Areas Map (Figure 13-1).

POLICY 1.4.2: The University shall use plant species that are indigenous to the natural plant communities of the Central Florida area. In cases where non-invasive exotic plants are used to enhance the landscape, plantings shall be limited to those non-invasive species that are able to resist periods of drought and which require little fertilization and the use of pesticides.

POLICY 1.4.3: It is the intent of the University to remove all non-native invasive plants (whether grasses, shrubs or trees) which are identified on the Exotic Pest Plant Council's "Florida's Most Invasive Species List" from the campus grounds. As these species are located on the campus, the University shall coordinate with the Florida Department of Environmental Protection and other appropriate governmental entities to ensure the proper removal and disposal of these exotic species.

POLICY 1.4.4: The University shall establish a buffer of 50 feet for upland areas adjacent to identified on-campus wetland areas within the Riparian Habitat Protection Zone (RHPZ) of the Little Econlockhatchee River.

POLICY 1.4.5: Before any encroachment into the buffer established in above referenced Policy is authorized and a plan of development approved, the University shall review all available environmental and economic options (including the costs of mitigation). If this review indicates that encroachment into the buffer is the only viable option, then the University shall pursue all reasonable efforts to minimize and mitigate any unavoidable impacts.

POLICY 1.4.6: Any proposed development adjacent to an environmentally sensitive area shall be carefully sited and integrated into the existing landscape to have minimal visual impact on the area. Landscape treatment shall preserve significant existing vegetation to allow a gracious transition from developed areas to undeveloped areas to preserved areas. The existing vegetation shall serve to essentially buffer proposed development in order to maintain the natural and

undeveloped character of the area. Biological and hydrological impacts to environmentally sensitive area shall be avoided or minimized.

POLICY 1.4.7: Copies of land development criteria and standards which reflect the policies contained in the adopted campus master plan shall be provided to design consultants and appropriate University staff. The University shall standardize the construction review process to assure adherence to appropriate master plan policies.

POLICY 1.4.8: In order to consider the feasibility of plant or animal species relocation elsewhere on the campus, the University's Facilities Planning Director or Physical Plant Director shall continue to provide the appropriate University department ~~2~~ 4 weeks minimum written notice of the pending development of an undeveloped natural vegetation site.

POLICY 1.4.9: Should periodic controlled management burns of selected preserve areas of xeric or other pyroclimatic native habitat take place (i.e., sandhill, upland pine, pine flatwoods, etc.), such activities shall comply with all applicable regulatory guidelines and shall include direct coordination with the Florida Department of Agriculture and Consumer Services' Division of Forestry and the fire departments of Orange and Seminole counties.

OBJECTIVE 1.5: To restrict University activities known to threaten the habitat and survival of threatened and endangered species and species of special concern.

POLICY 1.5.1: The University shall continue to require the use of best management construction practices, including the use of soil stabilizers, silt screens, surface moisture applications and other techniques to reduce the impact of development activities.

POLICY 1.5.2: The University shall continue to protect and conserve threatened and endangered species of plants and animals, and species of special concern, as required by the Endangered Species Act of 1973, as amended, Chapter 39, F.A.C., and federal and state management policies relating to the protection of threatened and endangered species, and species of special concern.

POLICY 1.5.3: During the initial planning phase of any physical changes to the campus, the University shall perform a census of wildlife and plants in the area to be affected. Plants or animals identified in the "Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida", which is updated annually by the Florida Fish and Wildlife Conservation Commission, or otherwise afforded protection by the host communities and state and federal agencies, shall be noted. Protection plans for those identified species shall be formulated consistent with those of the host communities and appropriate state and federal agencies.

POLICY 1.5.4: University personnel shall, when encountering listed species, follow procedures and seek consultation with the appropriate agencies as identified in the Florida Fish and Wildlife Conservation Commission's "Wildlife Methodology Guidelines", dated January 15, 1988.

OBJECTIVE 1.6: To protect and conserve the natural functions of soils, lakes, floodplains, and wetlands.

POLICY 1.6.1: The University shall require that appropriate methods of controlling soil erosion and sedimentation to help minimize the destruction of soil resources be used during site development

and use. Such methods shall include, but not be limited to:

- Phasing and limiting the removal of soil;
- Minimizing the amount of land area that is cleared;
- Limiting the amount of time bare land is exposed to rainfall;
- Use of temporary ground cover on cleared areas if construction is not imminent;

Special consideration is to be given to maintaining vegetative covered areas of high soil erosion (i.e., banks of streams, steep or long slopes, stormwater conveyances, etc.).

POLICY 1.6.2: The University shall minimize stormwater-borne pollutants generated as a result of University operations and maintenance practices through adherence to General Infrastructure Element policies.

OBJECTIVE 1.7: **The University shall continue to implement a variety of existing programs and conserve the use of energy on the campus.**

POLICY 1.7.1: Energy conservation fixtures, air conditioning and lighting systems and other building specific energy use and management techniques shall continue to be a required element of all new buildings constructed on the campus.

POLICY 1.7.2: Where feasible, existing buildings shall be retrofitted with energy conservation lighting fixtures.

OBJECTIVE 1.8: To maximize on-campus reclamation of hazardous materials and consumer products.

POLICY 1.8.1: All University buildings shall be designed with facilities to accommodate collection, storage and disposal of recycled materials.

POLICY 1.8.2: The University shall coordinate on-campus recycling programs with those of local government in regard to materials collected, and disposal/collection procedures.

POLICY 1.8.3: The University shall provide on-campus facilities for the collection and storage of hazardous materials used in University operations as required by federal, state and local regulations.

POLICY 1.8.4: The University shall implement academic programs that promote awareness of environmental impacts of resource recycling.

POLICY 1.8.5: The University shall implement hazardous materials handling and storage procedures to include as a minimum the proper containerization, classification and labeling of all hazardous waste.

POLICY 1.8.6: The University shall utilize only licensed hazardous waste transportation and disposal companies.

2.13 (2) Conservation Element Analysis

(a) For each of the resources identified in (1) a) identify existing commercial, recreational, or conservation uses.

Refer to the 1995 Analysis for each of the resources identified in (1) a) 1 through 12.

~~The previously conveyed mitigation known as the MacKay Tract has been exchanged for a combination of wetlands and uplands located contiguously with the University as indicated in the Figure.~~

We are presently awaiting the status of the state's proposed Rule Chapter #17-521.100 covering wellfield protection from the Florida Department of Environmental Protection (FDEP). This draft rule was previously anticipated to be adopted by November 1994 and may impact the data analysis with regard to wellfield cones of influence.

(b) For each of the resources identified in (1) a) assess the available and practical opportunities and methods for protection or restoration of those resources on University property.

The UCF campus either has or is adjacent to an abundance of significant natural resource areas. Most notable are Lakes Lee and Claire, and an extensive forested wetland system within the southeastern portion of the campus which ultimately outfalls into the Little Econlockhatchee River. These areas provide not only habitat to a substantial wildlife population, but also offer attractive campus assets and recreational opportunities. The preservation of both the quantity and quality of these resources is vital to the function of these resources and to ensure the continued attractiveness of the campus.

The University has independently developed conservation strategies for wetlands, floodplains, mitigation sites, water quality, etc., as the need has arisen over the last twenty years. As a consequence, there are natural lands in conservation easements, with verbal commitments for long-term preservation, areas designated for the arboretum, and an extensive network of stormwater ponds. These areas, in combination with the large area occupied by wetlands that are, for the most part, undevelopable, constitute a large percentage of the land occupied by the UCF campus.

The University should, as a priority, develop a long-term strategy for the conservation and management of these lands. Objectives for this conservation plan should include:

1) Conservation of biodiversity within the myriad of upland and wetland communities on-site,
2) Measures to ensure the ability to manage (preferably including fire) these lands,
3) Ways to capitalize on the research and educational opportunities afforded by these lands,
4) Decisions on how protection will be guaranteed,
5) Ways to capitalize on the recreational community and aesthetic benefits of conservation lands and,

6) Measures to ensure the conservation of a viable, interconnected network of natural lands in perpetuity.

To initiate this plan, the University should proceed with the following steps:

1) Develop a detailed map of existing conservation lands that depicts natural communities of uplands and wetlands as well as stormwater ponds and lakes,
2) Determine what level of protection for their lands is currently in place, i.e., owned by the St. Johns River Water Management District (SJRWMD), conservation easements in place, verbal commitments for UCF administration, jurisdictional wetlands, etc.,
3) Identify those lands necessary for active use by the arboretum, for stormwater storage, etc.
4) Map the extent of habitat occupied by, and suitable for, protected species
5) Define the area within the 100-year floodplain that is occupied by native communities,
6) Map the regional linkages of natural communities off of the UCF campus,
7) Assign a leader to develop the conservation strategy through analysis and consensus among interested parties,
8) Organize a committee that includes representatives from UCF administration, UCF ecologists, environmental interest groups, arboretum personnel, recreation specialists, planners, and others as appropriate to outline issues and prepare maps of the overall conservation strategy, and
9) Prepare a management plan for the overall proposed conservation plan.

(c) For each of the resources identified in (1) a) identify known sources and rates of discharge or generation of pollution.

Updates to the following resources outlined in (1) a) 1-7 with regard to sources and rates of discharge or generation of pollution do not appear to be applicable in the context of this update. No data appear to have been collected with regard to the above-mentioned resources since the previous Data Analysis updated in 1995.

1. Air Quality (Received from UCF Professor, Dr. David Cooper)

At this time, there is no available quantitative monitoring data with regard to ambient outdoor air quality on the UCF campus. Ozone alerts for the Central Florida area have been issued by the State Health Department on an occasional basis since the summer of 1998. The University is a small player in terms of overall contribution to smog in our region. However, the institution will assist the Health Department and other agencies whenever possible to address this region-wide issue.

The University has a minimal number of industrial air pollution sources. The UCF campus decommissioned its main boiler at the Utility Plant in approximately 1990, although the stack remains. Likewise, the only incinerator on campus (for animal incineration at the Biological Sciences Building) was decommissioned and removed at approximately the same time. The UCF campus now has no

incinerators larger than small laboratory-scale units, and has small boilers at only a few buildings (individually): Polk Hall, Student Resource Center kitchen, Biological Sciences and Chemistry. There are also emergency generators at certain individual buildings (see attached generator list). These generators are all either diesel (UCF standard) or natural gas. The UCF Utility (HVAC) plant and Satellite Utility Plant both contain chillers that use various refrigerants. Some of the older units still use CFC/ HCFC's , while the newer ones use new generation refrigerants. The University has not had any reported releases of CFC/HCFC refrigerants and uses certified workers whenever refrigerant recharging/ recycling operations are to be performed.

2. Surface Water Quality

Although formal water quality monitoring is not required by a specific regulatory agency, Dr. John Osborne, UCF limnologist, has initiated the informal compilation of data by students on Lake Claire. Data collected over a 12-month period beginning in January of 1999 were provided for our review. However, no formal sampling methodology or quality assurance plan detailing analytical procedures were provided to facilitate interpretation.

While adequate nitrogen and phosphorous data were not available, existing data (i.e., dissolved oxygen, secchi, chlorophyll a, turbidity, conductivity, pH and alkalinity) suggest that Lake Claire functions as a freshwater oligotrophic system influenced primarily by groundwater discharging from the surrounding watershed. While remnant or altered sandhill comprises a portion of the watershed, some of the surrounding watershed has experienced development (including portions of the UCF campus). Low alkalinity, specific conductivity, acidity, and apparent nutrient availability appear to suggest that groundwater, which has infiltrated the sterile sands associated with higher elevation sandhills, influence surface water quality and account for the primary rehydration of the system.
Apparent low nutrient availability is suggested by the results of the Secchi disk and low levels of chlorophyll a. The undeveloped nature of the surrounding landscape helps to maintain the overall surface water quality of this lake.

Finally, dissolved oxygen ranged from approximately 70 to 83 % saturation during the summer and winter months, respectively. It would appear that dissolved oxygen tensions are maintained primarily by diffusion from the atmosphere, rather than photosynthesis from macrophytes or phytoplankton within the system. Concentrations ranged from approximately 5.5 ppm to 8 ppm during these same months, and appear to be adequate for supporting aquatic fauna in this system.

No data has been received from UCF staff regarding the status of surface water quality testing administered by Dr. Wanielista within the UCF interior Cypress Dome, also referred to as Wetland #8 in the Stormwater Master Plan.

3. Underground and Aboveground Tanks (Received from representatives of the UCF Physical Plant)

Some of the University's diesel generators have double-walled aboveground fuel tanks as large as 1,000 gallons. The University remediated and closed several old underground storage tanks in the 1990's (see

tanks map in the Data Report). Also shown on this map is the current fuel island that was installed in 1995 at the Physical Plant. This tank island is DEP compliant. A large 140,000-gallon oil tank by the water tower was emptied in 1999. It is not yet closed per DEP rules pending a use decision. Please see the attached Generator list dated January 14, 2000.

The previously provided tanks map need to be updated to reflect the location of generators on the list provided January 14, 2000.

4. Toxic Waste and Hazardous Materials (Received from representatives of the UCF Office of Environmental Health and Safety)

By virtue of its academic and engineering research activities, the University is a user of hazardous materials. All such materials are carefully monitored and regulated such that there is no indication of any prior or current toxic waste problems on the Campus property.

With respect to the campus ' prior land use history as a rangeland, there is no evidence that cattle dipping vats or arsenic pollution were ever present. Construction debris was also deposited into a small depressional “borrow pit” area located near the East property line of the Campus in the late 1960's (see the hazmat location map in the Data Report for detail). However, no evidence exists which would indicate that toxic materials were placed in this area is since it has been since claimed as a jurisdictional wetland by the SJRWMD.

The UCF Office of Environmental Health & Safety (EH&S) is responsible for the safe and legal disposal of all hazardous Chemicals and wastes generated by the University. Various campus departments, particularly those involved in engineering, science, or health-related research, generate hazardous Waste. EH&S contracts with licensed contractors for final disposal of these Wastes, after they are collected, profiled, and safely characterized at the Chemical Storage Building (#48). This building is shown on the attached hazmat map, as is the location of other labs and stores where stocks of hazardous materials are located.

The UCF Chemical Storage Building was built in 1989 at a cost of $214,500. Its original size was 1,824 gross square feet. A laboratory addition of 200 square feet was completed in 1994. The laboratory is used by the EH&S radiation safety program. The Chemical Storage Building is currently on the PECO capital projects list for a “Hazardous Waste Expansion” project in 2003. This project will help EH&S keep up with new research efforts and increased amounts of laboratory space on campus.

5. Surface and groundwater hydrology

No data has been received from UCF staff regarding this issue to date.

(d) For each of the resources identified in (1) a) assess opportunities or available and practical technologies to reduce pollution or its impacts generated by University activities. Investigation of emerging technologies to address these impacts is encouraged.

Please see answer to question (f) below.

(e) An analysis of current and project water needs and sources, based on the demand for industrial, agricultural and potable water use and the quantity and quality available to meet those demands. The analysis should consider existing levels of water conservation, use and protection, and applicable policies of the water management district.

No data has been received from UCF staff regarding this issue to date.

(f) An assessment of opportunities or available and practical technologies to reduce university energy consumption. Investigation of emerging technologies (i.e. solar) to address this issue is encouraged.

As outlined in the UCF Mission Statement, "The University of central Florida is a major metropolitan research university that is growing and striving to provide more than just academic leadership. It will serve as a major intellectual and creative resource, forging successful partnerships with public and private enterprises and participating fully in the economic development of its surrounding community and the state of Florida." It is, therefore, especially appropriate for an academic institution with these forward-looking goals to also be a leader in environmental design in its master planning and have an overall environmental management plan for the campus to oversee all activities from planning, development, to construction, operation and finally deconstruction. This achievement would result in a healthier environment for all members of the university, foster a more efficient and productive learning/work place and, conserve precious natural resources, and most important of all, act as an inspirational model for other academic institutions in Florida.

Many other universities, such as University of Florida, University of South Carolina, and Penn State, have already initiated plans to commit to sustainability (see Data Report).

UCF has the ability to take a systems-wide approach that engages the whole campus community. Sustainability needs to be defined through a whole systems approach of which a broad range of environmental, technological, and cultural problems can be discussed and addressed. The University should develop its own definition of sustainability in the process to define the parameters and set the objectives for what it takes to be sustainable. In more practical terms, there needs to be some kind of management plan to create this process and monitor it —an Environmental Management System (EMS).

EMS has served as corporate strategy to reduce waste, pollution, induce compliance and create cost-savings. However, this approach is not strictly a business strategy. It can also be adapted to any type of organization. Gulf Coast University has recently received a grant from the US EPA to adapt and implement Environmental Management System at its university campus in Naples, FL (Roy Bonnell, personal conversation). It will serve as a pilot project for the green initiatives at Gulf Coast. (See Data Report for detail.)

Even though more research is still needed, a general overview of EMS is presented here, along with the opportunities for implementation in a university setting. EMS will serve as a step-by-step approach to help the university define sustainability and identify, monitor, and address the immediate and long-term environmental and community impact of its services and activities.

An outline for a potential EMS for the UCF campus follows:

STEP 1

Draft an Environmental Policy Statement- University's commitment to the community and the environment. This independent statement will stress:

- Compliance
- Pollution prevention
- Communication
- Improvement

This statement can be easily incorporated as part of the 2000 Master Plan and as a separate, independent document.

STEP 2

Identify the environmental aspects (all activities that have significant environmental impact) of the university (see checklist of University Environmental Aspects, not comprehensive though, which follows)

Identification process:

1. Consider the five areas of the built environment

    - Site and Infrastructure Development-
      All aspects of the development of the site
    - Facility development/ Service provisioning-

All aspects of the construction of the building itself and providing for the buildings

- Facility Operations- Indoors
- Activities taking place within the Facility Operations - Outdoors
- Activities taking place outside the facility
- Facility Refurbishment, Transfer, and Closure

2. Consider the environmental and community impact of each of these areas

   - Land impact
   - Materials use
   - Energy consumption
   - Water consumption
   - Solid/ liquid and gas emissions
   - Community

3. Identify activities in each of these five areas that have the all or almost all of the above environmental and community impact.

4. Identify indicators for measurement – these indicators will help the university track sustainability.

5. Gather data for these indicators to compare them to national standards or track their performance.

Environmental Performance Evaluation (EPE) for UCF

A. Principal environmental aspects for each life-stage

–

Stage 1a: Site and Infrastructure Development

All aspects of the development of the site

- Ecological disturbances
- Provisioning of infrastructure
- Slope and drainage modification

Stage 1b: Facility development/ Service provisioning

All aspects of the construction of the building itself

- Choice of materials
- Choice of equipments
- Their delivery to the site
- Techniques and equipment used in construction
- Design of buildings (master planning and architectural elements)

- Site cleanup

Stage 2a: Facility Operations- Indoors

Activities taking place within the facility
- Energy consumption
- Water use
- Choice and use of office supplies
- Choice of food supplies
- Choice and operation of heating, ventilation, and air-conditioning equipment
- Recycling and disposal of paper
- Recycling and disposal of food waste
- Recycling and disposal of other debris

Stage 2b: Facility Operations- Outdoors

Activities taking place outside the facility
- Energy consumption
- Water use
- Maintenance of vegetation and plantings
- Any other activities having potential ecological impact

Stage 3: Facility Refurbishment, Transfer, and Closure

- Refurbishment for new uses
- Recovery of materials; components for reuse/ recycling

B. Indicators of Sustainability/ Types of Data Needed for each Category

Categories	**Overall question**	**Indicators**
Land Impact (For Stages 1 and 4)	Are there policies and actual measures taken to minimize the land impact during the _____ stage of this project?	- Natural resource preservation plan and comprehensive conservation policies - Extent of impervious surfaces, filling - Native vs. exotic and nuisance plants in landscaping and use of xeriscaping

		- Green space converted to parking space
Materials Use (For Stages 2, 3 and 5)	Are there policies and actual measures taken to purchase, use and re-use environmentally sound or sensitive materials during the _____ stage of this project?	- Choice of building materials - Choice and use of office supplies - Choice of office equipments (energy star) - Choice of home appliances (energy star) - Choice of food supplies - Choice of products for site/ facility maintenance - Choosing vendors with environmental policy - Recovery of materials during closure
Energy (All stages)	Are there policies and actual measures taken to minimize energy consumption and enhance energy conservation during the _____ stage of this project?	- Total and per capita consumption (i.e. street lighting, buildings, etc.) - Consumption of natural gas vs. coal - Passive/ active solar application - Car dependence
Water (All stages) **Water (Continued)**	Are there policies and actual measures taken to minimize water consumption and enhance water conservation during the _____ stage of this project?	- Total and per capita water consumption - Ground and surface water quality strategy - Use of reclaimed water - Pesticide and fertilizer use in maintenance
Solid/ Liquid Wastes and Gas emissions (For stages 2, 3, 4, and 5)	Are there policies and actual measures taken to minimize waste production and gas emissions or implement waste management during the _____ stage of this project?	- Total waste production - Food waste - Paper consumption - Recycling of solid waste (i.e. construction debris) - Waste water treatment/ disposal - Carbon dioxide emissions (electricity generation, trucking, and driving distance) - VOCs
Community (For stages 1, 3, and 4)	Are there policies and actual measures taken to foster a sense of community and environmental consciousness	- Sense of place (aesthetics) - Sense of community/ involvement and vitality - Environmental literacy/

among people during the _____ stage of this project? sensitivity

Other sample sustainability indicators used by schools like Penn State and University of Florida can be found in the Data Report.

C. Assessment of overall environmental impact of the built environment adapted from Prof. T. Graedel's (Yale Univ.) streamlined life-cycle analysis (SLCA)

	Land Impact*/ Materials	Energy	Water	**Solid/ liquid wastes and gas emissions**	**Community**	Total
Site and Infrastructure development*						/20
Facility development/ Service provisioning						/20
Facility operations-indoors						/20
Facility operations-outdoors						/20
Facility refurbishment, transfer, closure*						/20
Total	/20	/20	/20	/20	/20	**/100**

Grading System/Points

0 Had taken no significant measures to adopt sustainable practices in this area. (Potential for **Highest** Environmental Impact)

1 Has taken only limited measures to adopt sustainable practices in this area. (**Substantial** Environmental Impact)

2 Has taken a moderate measures to adopt sustainable practices in this area but lacks planning/ strategy. (**Moderate** Environmental Impact)

3 Has taken many significant measures to adopt sustainable practices in this area but still lacks a comprehensive strategy. (**Some** Environmental Impact)

4 Has a comprehensive strategy to adopt sustainable practices in this area; evidence of prompt action with strong leadership. (**Least** Environmental Impact)

Recommendations

A. EMS Approach Objectives and the Master Plan

–

- An Environmental Policy Statement stating the University's commitment to sustainability and environmental management should be either incorporated in the Master Plan or as an independent document

- The Master Plan already has all the elements that represent each of the five areas of the built environment identified above. These elements include:

  - Built Environment

    - Urban Design
    - Academic Facilities
    - Housing
    - Architectural Design Guidelines
    - General Infrastructure
    - Transportation
    - Land Use

- Recreation and Open Space

- Conservation

- Landscape Design Guidelines

- The focus needs to be analyzing the five to six major categories of environmental impact for each of these elements. In order to do this, indicators should be established and data gathered and analyzed.

After the analysis, changes in or addition of policies and objectives should be considered.

Table 2.13-1 Generator List

01/14/2000

Gen #	Bldg #	Building Name	Fuel	KW/Voltage	Make	Key	Ex.Time On	Ex.Time Off	Day	AM/PM	Fuel Level%	Fuel Cap
EG-1	2	Library	Nat. Gas	75/120/20B	Kohler	N/A	2:00	2:20	Tuesday	AM		
EG-2	5	Chemistry	Nat. Gas	50/120/20B	Kohler	N/A	4:00	4:15	Tuesday	AM		
EG-3	7	Student Ctr.	Nat. Gas	85/120/20B	Onan	N/A	4:15	4:45	Tuesday	AM		
EG-4	2	Library	Nat. Gas	100/120/20B	Kohler	N/A	6:00	6:30	Tuesday	AM		
EG-9	2	Math & Physics	Nat. Gas	30/277/480	Onan	N/A	5:00	5:30	Tuesday	AM		
EG-10	3	HVAC	Nat. Gas	80/277/480	Kohler	N/A	8:00	8:20	Monday	AM		
EG-11	20	Bio Science	Nat. Gas	140/277/480	Onan	N/A	3:45	4:00	Tuesday	AM		
EG-12	21	Education	Diesel	75/277/480	Olympian	N/A	2:00	2:22	Tuesday	AM		130 Gas
EG-13	27	Student Health	Diesel	30/277/480	Onan	N/A	3:00	3:30	Tuesday	AM		150 Gas
EG-14	26	Student Serv.	Diesel	15/277/480	Onan	WN65	5:30	6:30	Tuesday	AM		200 Gas
EG-15	4	WWTP	Diesel	200/277/480	Cat	CH751	10:00	10:00	Tuesday	AM		500 Gas
EG-16	Port	Phys. Plant	Nat. Gas	15/480		N/A						
EG-17	29	CC-2	Nat. Gas	100/277/480	Generac	501CH	0:45	1:15	Tuesday	AM		
EG-18	49	Police Station	Diesel	75/120/208	Cat	CH751	10:15	10:30	Tuesday	PM		80 Gals
EG-19	50	Field House	Nat. Gas	100/277/480	Kohler	WN65	5:00	5:30	Tues	AM		
EG-20	47	Water Plant	Diesel	200/277/480	Olympian	CH545	10:15	10:45	Thursday	PM		250 Gas
EG-21	16	Phys. Plant	Diesel	400/277/480	Cat	501CH	10:00	10:30	Monday	PM		750 Gas
EG-22	53	CREOL	Diesel	100/277/480	Cummings	N/A	2:15	2:45	Tuesday	AM		275 Gas
EG-23	54	CC-3	Diesel	600/277/480	Cat	N/A	3:30	4:00	Tuesday	AM		1000 Gals
EG-24	52	Student Union	Diesel	500/277/480	Onan	1250	5:00	5:30	Tuesday	AM		750 Gas
EG-25	75	Commications	Diesel	350/277/480	Cat	N/A	6:00	6:30	Tuesday	AM		1000 Gals
EG-26	80	Health&Pub.Af	Diesel	200/277/480	Cat	CH751	4:30	5:00	Tuesday	AM		1000 Gals
EG-27		Lift Station	Diesel	225/277/480	Cat		10:15	10:45	Thursday	PM		
EG-28	79	Classroom	Diesel	150/277/480	Kohler	CH505	2:00	2:30	Tuesday	AM		550 Gas

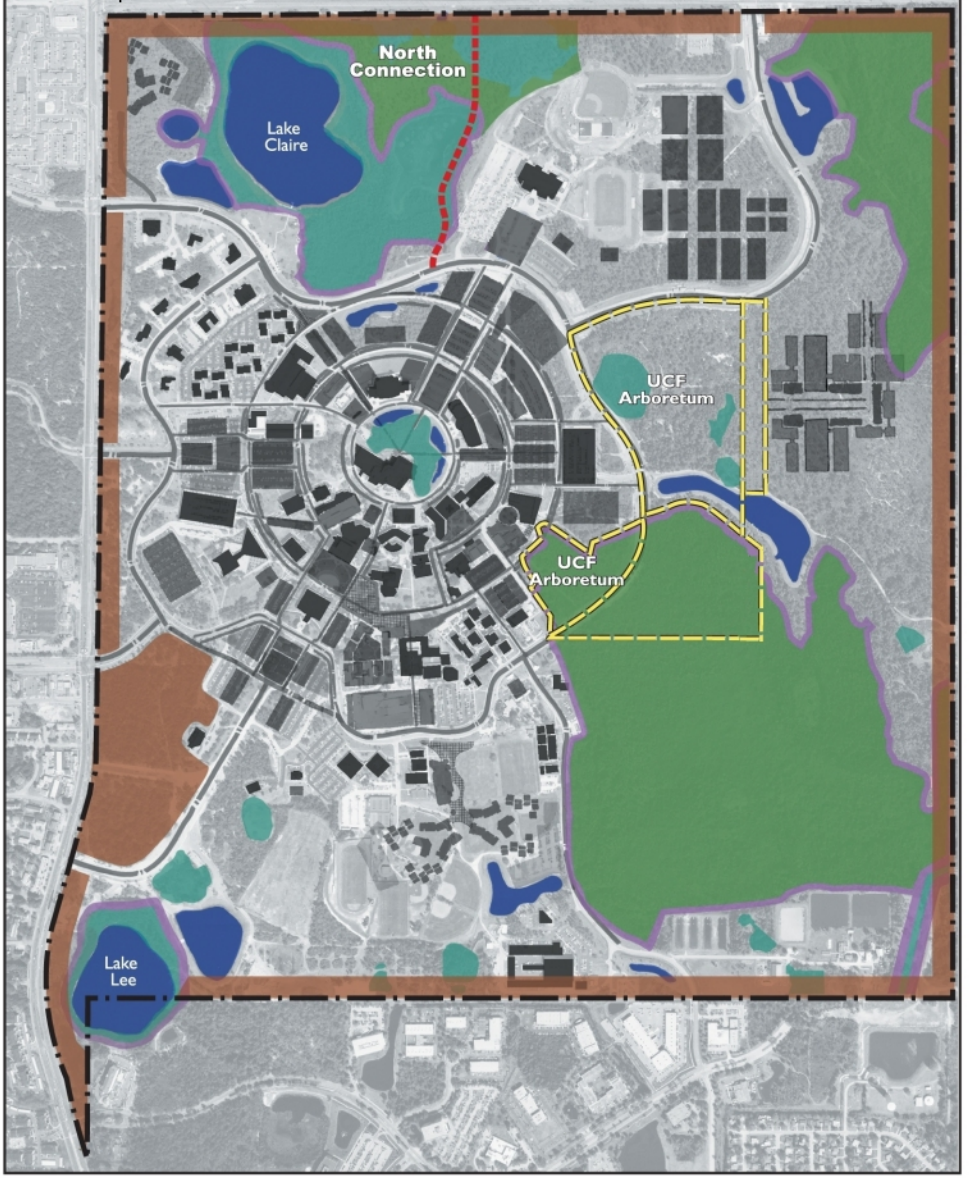


FIGURE 13-1

Conservation

2010 Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2000 - 2010

LEGEND

- Mitigation Sites (Wetland and Upland)
- 200' Campus Buffer
- 50' Riparian Buffer
- Conservation

0 400 800 1600

GOAL 1: To provide facilities to meet the academic needs of student enrollment as projected in the Academic Program element and the space needs as projected.

OBJECTIVE 1.1: To seek a reasonable share of state capital construction funds to construct teaching, research, and support facilities.

POLICY 1.1.1: All major campus construction and renovation projects will incorporate line item funding equal to approximately 10 percent of the project total cost for enhancement of campus utilities, communications, and stormwater infrastructure costs.

OBJECTIVE 1.2: **To include as a part of all capital construction activities and planning, provision for the renovation, repair, upgrading, and, in some cases, elimination of existing and aging facilities that do not serve existing or future needs.**

POLICY 1.2.1: Funding for building renovations will be requested to coincide with and compliment the construction of new buildings. In this way, areas which are vacated when a new building is completed are immediately renovated for the new occupants.

OBJECTIVE 1.3: To coordinate land use decisions and available resources to maintain level of service standards adopted in the campus master plan and meet existing and projected facility needs.

POLICY 1.3.1: Construction project priorities will be reviewed each year by appropriate on campus committees, but specifically by the University Master Planning Committee, to determine the order of priorities has changed due to changes in enrollment patterns or other factors such as the needs of the state to promote economic development in selected research fields.

POLICY 1.3.2: Criteria for the setting of priorities for new construction, renovations, and infrastructure will be established and will be the responsibility of the Office of Facilities Planning working with the University Master Planning Committee (UMPC), the Office of Physical Plant, and the Offices for Telecommunications and Computing. Primary criteria used in setting priorities for new construction include enrollment growth in the specific academic areas, auxiliary and Capital Improvement Trust Fund (CITF) projects required by enrollment growth sustained funding support from external sources through contracts and grants, and earmarked construction as a result of private donations.

POLICY 1.3.3: All final decisions on priorities for new construction, renovations and infrastructure rest with the President of the University.

POLICY 1.3.4: The campus 10 -year project list provides a schedule of committed and projected campus capital improvements by year along with the estimated cost of those improvements. The projects included are those which the academic master plan indicates will be needed to serve the expected program mix of students who will be enrolled.

Projected costs of projects which will be state funded, and the yearly distribution of those projects, are within the estimated resource guidelines projected by the Division of Colleges and Universities and Department of Education staffs. Funding for non-PECO funded projects depend on private donations, student fee collections, campus auxiliary funding sources, and the sale of revenue bonds. Non-PECO projects shown can be reasonably expected to be funded in the time frame shown in the 10-year project list.

Site locations for all planned projects shown on the 10 - year project list will be in the appropriate Land Use Category area as identified in the Future Land Use element

OBJECTIVE 1.4: To complete studies and review enrollment patterns, classroom needs, research laboratory needs, faculty and staff office needs, and infrastructure needs in relation to projected capital improvements funding to assure that adequate facilities and supporting infrastructure will be available when needed.

POLICY 1.4.1: All campus structures will be reviewed on an annual basis to determine the need for repairs, renewal, or renovations to meet on-going and changing needs of the campus.

POLICY 1.4.2: Campus infrastructure needs will be reviewed annually to determine if electric, water, waste water treatment, and telecommunications utilities are adequate to meet the needs of the campus for the next five years.

OBJECTIVE 1.5: **To be prepared to limit on-campus enrollment if adequate capital construction, including infrastructure, cannot be provided or funded.**

POLICY 1.5.1: Capital budget requests each year will be consistent with the provisions of the campus master plan and with campus development agreements entered into with external agencies.

GOAL 2: **To provide support facilities including utility plants, student services buildings, libraries, computer services buildings, food services buildings, and auxiliary services buildings, and other buildings to meet the needs of students who live on or near campus.**

OBJECTIVE 2.1: To seek additional funds to augment state capital construction funds.

POLICY 2.1.1: The University will seek external funds in the form of gifts and donations which can be matched by state funds to provide campus facilities.

POLICY 2.1.2: The University will obtain funding through the selling of revenue bonds to continue construction of student housing and parking structures on campus.

POLICY 2.1.3: The University will earmark funding in auxiliary enterprises budgets that can be set aside for specific construction needs such as parking lots, parking garage structures, expansion of the bookstore, and other auxiliary support space needs.

POLICY 2.1.4: The University will seek funding through the SUS Concurrency Trust Fund to meet off-campus construction requirements that may be needed as part of the campus master planning process.

POLICY 2.1.5: The University will seek funding through local sources with the backing of the UCF Foundation and the UCF Research Foundation to construct research and special purpose facilities on campus.

2.14 (2) Capital Improvements Element Analysis

a) An analysis of current University practices that guide the timing and location of construction, extensions or increases in the capacity of University facilities.

1. Refer to the 1995 Analysis that still applies.

2. In addition the University has effectively utilized the above to determine needs, estimated costs and priorities of facilities. This is evidenced by the record of effectively meeting the facility needs during a period of rapid growth and changing academic program needs and opportunities. This emphasis on growth has directed resources to new facilities and extensions of existing facilities, but as original facilities approach forty years of age on this relatively new campus the emphasis must necessarily either find new resources for maintenance and restoration or shift limited resources in that direction.

b) An estimate of the cost of each of the on-campus capital improvements identified in the other plan elements, including consideration of inflation factors and the relative priority of need ranking.

1. Refer to UCF Master Plan, Year 2000 Update, Element 2.14, Appendix B "University of Central Florida Capital Improvements Program Description".

c) An estimate of the cost of future capital improvements that may be required off the University campus to support the future infrastructure and traffic functions of the University.

1. None are know at this time. There is a potential obligation for contribution to off-campus improvements as a result of the negotiation and execution of the Campus Development Agreement following approval of this master plan update.

d) A description of the basis of the cost estimates.

1. The basis of the cost estimates is annual updates of the "Engineering News Record" construction cost indices as stipulated by the ~~Board of Regents~~ Division of Colleges and Universities for use by the University in any planning period.

e) An assessment of the University's ability to finance capital improvements including:

1. Forecasting of revenue and expenditures for the planning period;

a. 3-year committed

i. Refer to the 1995 Data Analysis that still applies.

b. 10-year projected

i. Refer to the 1995 Data Analysis that still applies.

2. Projection of operating costs for existing and future facilities; and

a. Refer to the 1995 Data Analysis that still applies.

3. Projections of other tax bases and revenue sources, such as impact and user fees

a. Refer to the 1995 Data Analysis that still applies.

f) An analysis comparing the host community's and the University's cost estimates for future improvements generated by University infrastructure impacts.

1. Refer to the 1995 Data Analysis that still applies.

MAIN CAMPUS HEAD COUNT	30,538	31,615	32,693	33,771	34,849	38,051	41,253	44,455	47,657		
PROJECT LIST Revised 07-02-2001	2001-02 YR #1	2002-03 YR #2	2003-04 YR #3	2004-05 YR #4	2005-06 YR #5	2006-07 YR #6	2007-08 YR #7	2008-09 YR #8	2009-10 YR #9	Net	Gross
PHASE I (July 1, 2001 - June 30, 2006)											
UTILITIES, INFRASTRUCTURE, CAPITAL RENEWAL	PECO	PECO	PECO	PECO	PECO					N/A	N/A
RECREATIONAL SERVICES BLDG.	CITF									60,817	80,794
MULTI-LINGUAL MULTI-CULTURAL CTR.	MATCH									10,870	16,285
WASTEWATER TREATMENT EXP.	PECO	PECO	PECO							0	0
ENGINEERING BUILDING II	PECO									65,382	101,452
HEALTH & PUBLIC AFFAIRS II	PECO									41,269	61,904
HONORS CENTER	PECO									10,250	15,375
CENTER FOR PUBLIC SAFETY/SECURITY	PECO									45,205	67,688
BIO-SCIENCE FIELD STATION	PECO									6,813	8,000
ACADEMIC VILLAGES PHASE I		BOND								176,057	246,719
ACADEMIC VILLAGES PHASE II		BOND								176,057	246,719
PARKING GARAGE IV		BOND								0	0
STUDENT SUPPORT CENTER		MATCH								12,478	18,717
TEACHING CENTER - ACADEMY		PECO								45,396	68,094
BUSINESS ADMINISTRATION II BLDG.		PECO								40,539	60,809
HAZARDOUS WASTE EXPANSION		PECO								4,699	7,284
JOINT SIMULATION FACILITY		PECO								0	0
WAYNE DENSCH RENOVATION		PECO								0	0
ALUMNI CENTER		PRIVATE								12,552	18,198
STUDENT UNION ADDITIONAL BUILDOUT			CITF							7,833	12,034
STUDENT RESOURCE CENTER			CITF							0	0
ENGINEERING FIELD STATION II			MATCH							5,056	7,583
HOSPITALITY MANAGEMENT SCHOOL			MATCH							74,345	109,043
FLA. CENTER for the ARTS & EDUCATION			MATCH							79,814	106,202
INTERCOLLEGIATE ATHLETIC COMPLEX			MATCH							33,074	45,330
PARTNERSHIP II			PECO							61,400	91,575
EDUCATION BUILDING REMODEL			PECO							0	0
PSYCHOLOGY BUILDING			PECO							49,841	74,506
BIO-SCIENCE ANNEX			PECO							35,865	53,798
BIO-SCIENCE RENOVATION			PECO							0	0
INTERCOLLEGIATE ATHLETIC NODE				PRIVATE						19,929	25,167
STUDENT HEALTH SERVICES EXPANSION				AUX						10,011	14,110
CREATIVE SCHOOL EXPANSION				AUX						6,271	9,407
PARKING GARAGE V				BOND						0	0
ENGINEERING BUILDING III				PECO						61,091	90,397
ARTS COMPLEX II - PERFORMANCE				PECO						56,157	77,508
MATH & PHYSICS BLDG. REMODEL					PECO					0	0
PHYSICAL SCIENCES ANNEX					PECO					44,221	66,614
CLASSROOM BUILDING II					PECO					46,300	69,450
PHASE I TOTAL										New Square footage: **190,810**	**279,651**
										Off Campus Square Footage: 215,559	306,820
										1995 Master Plan: 848,018	1,216,603

PROJECT LIST Revised 07-02-2001	2001-02 YR #1	2002-03 YR #2	2003-04 YR #3	2004-05 YR #4	2005-06 YR #5	2006-07 YR #6	2007-08 YR #7	2008-09 YR #8	2009-10 YR #9	Net	Gross
PHASE II (July 1, 2006 - June 30, 2010)											
UTILITIES, INFRASTRUCTURE, CAPITAL RENEWAL						PECO	PECO	PECO	PECO	N/A	N/A
ENGINEERING BLDG. I REMODEL						PECO				0	0

HOWARD PHILLIPS HALL REMODEL	PECO					0	0
LIBRARY EXPANSION	PECO					63,600	89,900
INTERDISC. RESEARCH BLDG. I	PECO					45,199	67,799
STUDENT SUCCESS CENTER	PECO					30,067	44,310
HUMANITIES & SOCIAL SCIENCES II		PECO				59,227	88,841
HEALTH & PUBLIC AFFAIRS II ANNEX		PECO				26,329	32,218
POLICE FACILITY EXPANSION		PECO				19,883	29,613
ARTS COMPLEX III - MUSIC		PECO				29,614	44,421
INTERDISC. RESEARCH BLDG. II		PECO				43,635	65,453
BUSINESS ADMIN. III BLDG.		PECO				44,347	66,520
HUMANITIES & FINE ARTS REMODEL			PECO			0	0
FILM - ARTS & SCIENCES II BLDG.			PECO			30,067	44,310
THEATER BLDG. RENOVATION				PECO		0	0
SIMULATION & TRAINING BUILDING				PECO		54,187	81,281
EDUCATION III BUILDING				PECO		41,476	68,094
RESEARCH PARK PAVILION				PECO		0	0
PHASE II TOTAL					New Square footage	**413,561**	**611,866**
					1995 Master Plan	74,070	110,894

Projects in black denote projects which are part of the 2000 Master Plan
Projects in green denote projects planned off campus and not calculated in the total square footage
Projects in blue denote projects which were part of the 1995 Master Plan
Funding sources denote building completion year

	NET	GROSS
PHASE I TOTAL	**1,254,387**	**1,803,074**
PHASE II TOTAL	**487,631**	**722,760**
PHASE I & II TOTAL	**1,742,018**	**2,525,834**

1998 CAMPUS DEVELOPMENT AGREEMENT	NET	GROSS
CDA Projections: 1996 through 2001	573,157	876,930
Actual Projects Built: 1996 through 2001	614,246	882,542
Difference	41,089	5,612
% Over	**7.2%**	**0.6%**
CDA Projections: 2001 through 2006	290,312	444,177
CIP Projections: 2001 through 2006	413,561	611,866
Difference	123,249	167,689
% Over	**42.5%**	**37.8%**

Project Name: Utilities, Infrastructure, Capital Renewal
Project Priority: Ongoing

Project Description: This line item includes but is not limited to a 2000-ton chiller, telecommunications infrastructure, the widening of Gemini Boulevard East and and Orion Boulevard, and the realignment of Gemini Boulevard.
Ongoing (Amount to be determined)
Gross Square Feet: N/A
Project Funding: Net Square Feet: N/A

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Recreational Services Facility
Project Priority: #1

Project Description: The Recreational Services Facility, located adjacent to the existing Recreational Service Building, will include expanded fitness services such as a wellness center, refreshment bar and indoor track.

Project Funding: 1998 - 2002

Planning	$802,494.00
Construction	$14,183,362.50
Equipment	$294,595.00
Total Project Cost	$15,280,451.50

Gross Square Feet: 84,794
Net Square Feet: 60,817

Funding Source: PECO,Match
Included on 1996 Campus Development Agreement: Yes

Project Name: Multilingual Multicultural Center
Project Priority: #2

Project Description: The Multilingual Multicultural Center, a joint-use project with the Office of International Studies & Center for Multilingual/Multicultural Studies, will house classrooms and offices focusing foreign language instruction. The facility will allow for the co-location of the Department of Foreign Languages and the Center of Continuing Education.

Project Funding: 1999 - 2001

Planning	$350,000.00
Construction	$2,238,138.00
Equipment	$164,585.00
Total Project Cost	$2,752,723.00

Gross Square Feet: 16,285
Net Square Feet: 10,870

Funding Source: Private,Match
Included on 1996 Campus Development Agreement: Yes

Project Name: Wastewater Treatment Expansion Project Priority: #3

Project Description: The Wastewater Plant Expansion purpose is to purchase an additional 1,000,000 MGD of waste water capacity for the University from Seminole County. The Iron Bridge Plant will receive the additional wastewater discharge.

Project Funding: 2002 - 2005

Planning	
Construction	$4,950,000.00
Equipment	
Total Project Cost	$4,950,000.00

Gross Square Feet:
Net Square Feet: 0

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Engineering Bldg. II Project Priority: #4

Project Description: The Engineering Bldg. II, the second of three phases, will house faculty offices and research labs for three departments. This facility will be located adjacent to the existing Engineering Building.

Project Funding: 1998 - 2001

Planning	$1,124,305.00
Construction	$15,125,695.00
Equipment	$2,202,472.00
Total Project Cost	$18,452,472.00

Gross Square Feet: 101,452
Net Square Feet: 65,382

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Health & Public Affairs II Project Priority: #5

Project Description: The Health & Public Affairs II building, the second of two phases, will house office space and teaching labs for Micro/Molecular Biology, Communicative Disorders, and Health Professions. The facility will be located adjacent to the existing Health and Public Affairs Building.

Project Funding: 1998 - 2001

Planning	$900,000.00
Construction	$8,400,000.00
Equipment	$1,125,000.00
Total Project Cost	$10,425,000.00

Gross Square Feet: 61,904
Net Square Feet: 41,269

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Honors Center Project Priority: #6

Project Description: The Honors Center will include Academic classrooms, media/reading room, computer lab, and office space for the Honors College. The facility will be located north of the campus bookstore.

Project Funding: 1999 - 2000

Planning	$323,801.00
Construction	$2,373,044.00
Equipment	$263,155.00
Total Project Cost	$2,960,000.00

Gross Square Feet: 15,375
Net Square Feet: 10,250

Funding Source: PECO,Match
Included on 1996 Campus Development Agreement: Yes

Project Name: Center for Public Safety / Security Project Priority: #7

Project Description: Also known as Partnership I, this project is a joint venture with the Navy, Forensic Science and Public Safety. This project consists of labs, offices and support spaces and will be located on Research Park land donated for use by these groups.

Project Funding: 1998 - 1999

Planning	
Construction	$9,084,000.00
Equipment	
Total Project Cost	$9,084,000.00

Gross Square Feet: 67,688
Net Square Feet: 45,205

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Bio-Science Field Station Facility Project Priority: #8

Project Description: Facility to house departments hazardous supplies. Located off WWTP Road (SE corner of Main campus). Confirm NASF information.

Project Funding: 1998 - 1999

Planning	$462,000.00
Construction	
Equipment	
Total Project Cost	$462,000.00

Gross Square Feet: 8,000
Net Square Feet: 7,606

Funding Source: UCF
Included on 1996 Campus Development Agreement: No

Project Name: Academic Villages Project Priority: #9

Project Description: The Academic Villages consists of multiple clusters of student housing, including residence halls and apartment buildings located in the southern part of campus.

Project Funding: 1999 - 2000

Planning	$2,850,592.00
Construction	$50,247,315.00
Equipment	$2,978,648.00
Total Project Cost	$62,919,313.00

Gross Square Feet: 493,438
Net Square Feet: 352,113

Funding Source: Bond
Included on 1996 Campus Development Agreement: Yes

Project Name: Parking Garage IV Project Priority: #10

Project Description: Parking Garage IV will be a multi-level (approx. 1300-space) parking structure located in close proximity to the UCF Arena to serve the north quadrant of the campus.

Project Funding: 2000 - 2001

Planning	$1,000,000.00
Construction	$12,000,000.00
Equipment	
Total Project Cost	$13,000,000.00

Gross Square Feet: NA
Net Square Feet: NA

Funding Source: Bond
Included on 1996 Campus Development Agreement: No

Project Name: Student Support Center Project Priority: #11

Project Description: The Student Support Center (Welcome Center), located in the current visitors parking lot, will serve as the primary information center for the campus focusing on undergraduate admissions and advising. The facility will have office space and auditorium for orientations and classes.

Project Funding: 2002 - 2003

Planning	$326,546.00
Construction	$2,818,075.00
Equipment	$394,837.00
Total Project Cost	$3,539,458.00

Gross Square Feet: 18,717
Net Square Feet: 12,478

Funding Source: Private,Match
Included on 1996 Campus Development Agreement: Yes

Project Name: Teaching Center- Academy Project Priority: #12

Project Description: The Teaching Center – Academy, located adjacent to the existing College of Education, will house, classrooms, teaching/computer labs and the Exceptional Education Institute.

Project Funding: 2000 - 2003

Planning & Construction	$4,250,000
Construction	$5,700,000.00
Equipment	$1,100,000.00
Total Project Cost	$11,050,000.00

Gross Square Feet: 68,094
Net Square Feet: 45,396

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Business Administration II Project Priority: #13

Project Description: The Business Administration II building, the second of three phases, will house faculty offices, classrooms, and teaching labs for academic departments within the College. The facility will be located adjacent to the existing College of Business Administration.

Project Funding: 2000 - 2003

Planning	$800,000.00
Construction	$8,500,000.00
Equipment	$1,000,000.00
Total Project Cost	$10,300,000.00

Gross Square Feet: 60,809
Net Square Feet: 40,539

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Hazardous Waste Expansion Project Priority: #14

Project Description: The Hazardous Waste Expansion Facility will include storage and disposal areas, as well as labs and office space. Doubling the Universitie's chemical waste storage capabilities will benefit multiple science and health programs that generate radioactive or other hazardous wastes on campus, as well as Physical Plant.

Project Funding: 2004 - 2005

Planning	$181,728.00
Construction	$1,228,482.00
Equipment	$89,790.00
Total Project Cost	$1,500,000.00

Gross Square Feet: 7,284
Net Square Feet: 4,959

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Joint Simulation Facility Project Priority: #15

Project Description: The project is meant to purchase and install “high tech, state of the art “computer simulation equipment for use in the Partnership II building.

Project Funding: 2002 - 2003

Planning	
Construction	
Equipment	$2,000,000.00
Total Project Cost	$2,000,000.00

Gross Square Feet: 0
Net Square Feet:

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Wayne Densch Renovation Project Priority: #16

Project Description: Renovate space to service the expanding needs of the university. No decision has yet been made on the user group to eventually occupy the renovated facility.

Project Funding: 2002 - 2003

Planning, Construction, Equipment	$2,000,000
Construction	
Equipment	
Total Project Cost	$2,000,000.00

Gross Square Feet: 21,450
Net Square Feet: 19,500

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Alumni Center Project Priority: #17

Project Description: Schematic drawings for Alumni Center. Alumni Affairs & Foundation will occupy facilities. Site TBD.

Project Funding: 2000 - 2004

Planning	$1,000,000.00
Construction & Equipment	$4,000,000
Equipment	
Total Project Cost	$5,000,000.00

Gross Square Feet: 18,198
Net Square Feet: 12,552

Funding Source: Private
Included on 1996 Campus Development Agreement: No

Project Name: Student Union Additional Build-out Project Priority: #18

Project Description: The Student Union Additional Build-out project consists of the construction of additional office, meeting and retail space, including student support spaces on the southwest side of the existing building.

Project Funding: 2001 - 2002

Planning	
Construction	$2,000,000.00
Equipment	
Total Project Cost	$2,000,000.00

Gross Square Feet: 12,034
Net Square Feet: 8,333

Funding Source: CITF
Included on 1996 Campus Development Agreement: No

Project Name: Student Resource Center Project Priority: #19

Project Description: The Student Resource Center project will remodel existing spaces for new retail, office and expanded food service use.

Project Funding: 2001 - 2002

Planning	
Construction	$3,977,933.00
Equipment	
Total Project Cost	$3,977,933.00

Gross Square Feet: 15,901
Net Square Feet: 14,800

Funding Source: CITF

Included on 1996 Campus Development Agreement: No

Project Name: Engineering Field Station II Project Priority: #20

Project Description: The Engineering Field Station II is a Physical Plant A&I minor project to construct a slab & provide utilities near the existing warehouse area on Neptune Drive. As funds are available, a warehouse structure will be built to enclose the equipment pads.

Project Funding: 2001 - 2002

Planning	$100,000.00
Construction	$600,000.00
Equipment	$100,000.00
Total Project Cost	$800,000.00

Gross Square Feet: 7,583
Net Square Feet: 5,056

Funding Source: Gen. Rev.
Included on 1996 Campus Development Agreement: No

Project Name: Hospitality Management School Project Priority: #21

Project Description: The proposed facility will be located adjacent to the new Omni Rosen Hotel. The project will consist of classrooms, teaching labs (kitchens) and offices for facility and staff.

Project Funding: 2001 - 2002

Planning	$13,000,000.00
Construction	$13,000,000.00
Equipment	
Total Project Cost	$26,000,000.00

Gross Square Feet: 109,043
Net Square Feet: 74,345

Funding Source: Private,Match
Included on 1996 Campus Development Agreement: No

Project Name: Florida Center for the Arts & Education Project Priority: #22

Project Description: The Florida Center for the Arts & Education will include a performing arts auditorium for theater and music. The University's Performing Arts graduate program will be based in this facility. Funds are not available until all donations are complete.

Project Funding: 2000 - 2004

Planning	$15,000,000.00
Construction	$45,591,395.00
Equipment	$1,908,605.00
Total Project Cost	$62,500,000.00

Gross Square Feet: 106,202
Net Square Feet: 79,814

Funding Source: Private,Match
Included on 1996 Campus Development Agreement: No

Project Name: Intercollegiate Athletic Complex Project Priority: #23

Project Description: The Intercollegiate Athletic Complex will include administrative offices, coaches' offices, as well as training facilities and lockers.

Project Funding: 2000 - 2002

Planning	$158,550.00
Construction	$5,841,450.00
Equipment	
Total Project Cost	$6,000,000.00

Gross Square Feet: 45,330
Net Square Feet: 33,074

Funding Source: Private
Included on 1996 Campus Development Agreement: No

Project Name: Partnership II Project Priority: #24

Project Description: Partnership II, a joint-use project with the Navy, STRICOM and UCF: Advanced Distributive Learning, Cognitive Sciences and Immersion Simulation groups, will include offices and lab spaces. The facility will be located on Navy owned property in the Research Park.

Project Funding: 2000 - 2001

Planning	$987,680.00
Construction	$12,677,012.00
Equipment	$1,335,308.00
Total Project Cost	$15,000,000.00

Gross Square Feet: 91,575
Net Square Feet: 61,400

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Education Building Remodeling Project Priority: #25

Project Description: The Education Building Remodeling project includes the renovation of three floors of the northern wing of the existing College of Education Building. The renovation will create required new faculty offices for the College.

Project Funding: 2001 - 2004

Planning	$500,000.00
Construction	$5,500,000.00
Equipment	$500,000.00
Total Project Cost	$6,500,000.00

Gross Square Feet: 49,473
Net Square Feet: 41,603

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Psychology Building Project Priority: #26

Project Description: The Psychology Building, (previously known as the Social Science Building), will include new offices and classrooms, as well as an operational clinic to serve out-patients for educational research and service to the community.

Project Funding: 2002 - 2004

Planning	$1,000,000.00
Construction	$11,500,000.00
Equipment	$1,500,000.00
Total Project Cost	$14,000,000.00

Gross Square Feet: 74,506
Net Square Feet: 49,841

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Bio-Science Annex Project Priority: #27

Project Description: The Bio-Science Annex, located adjacent to the exisiting Biology Building, will house research space for MicroBiology & Molecular Biology.

Project Funding: 1999 - 2002

Planning	$700,000.00
Construction	$8,000,000.00
Equipment	$1,125,000.00
Total Project Cost	$9,825,000.00

Gross Square Feet: 53,798
Net Square Feet: 35,865

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Bio-Science Renovation Project Priority: #28

Project Description: The Bio-Science Renovation includes the remodeling of the existing Biology Building for future use by the Department of Biological Sciences, as a result of space moves for the opening of the new Health and Public Affairs Building.

Project Funding: 1998 - 2001

Planning	$533,211.00
Construction	$5,209,686.00
Equipment	$557,103.00
Total Project Cost	$6,300,000.00

Gross Square Feet: 41,025
Net Square Feet: 31,558

Funding Source: PECO

Included on 1996 Campus Development Agreement: Yes

Project Name: Intercollegiate Athletic Node Project Priority: #29

Project Description: The Intercollegiate Athletic Node, located in the northeast part of campus, will include playing & practice fields for football, soccer, softball, baseball, tennis and an indoor/covered practice field.

Project Funding: 2001 - 2005

Planning	$3,323,768.00
Construction	$7,077,900.00
Equipment	$764,032.00
Total Project Cost	$11,165,700.00

Gross Square Feet: 25,167
Net Square Feet: 19,929

Funding Source: Private
Included on 1996 Campus Development Agreement: Yes

Project Name: Student Health Services Expansion Project Priority: #30

Project Description: The Student Health Services Expansion includes new offices and lab examination rooms.

Project Funding: 2005 - 2006

Planning, Construction, Equipment	$2,000,000
Construction	
Equipment	
Total Project Cost	$2,000,000.00

Gross Square Feet: 14,110
Net Square Feet: 10,012

Funding Source: Auxiliary
Included on 1996 Campus Development Agreement: Yes

Project Name: Creative School Expansion Project Priority: #31

Project Description: The Creative School Expansion will add special education kindergarten classrooms to the existing facility.

Project Funding: 2005 - 2006

Planning, Construction, Equipment	$1,500,000
Construction	
Equipment	
Total Project Cost	$1,500,000.00

Gross Square Feet: 9,407
Net Square Feet: 6,271

Funding Source: Auxiliary
Included on 1996 Campus Development Agreement: Yes

Project Name: Parking Garage V Project Priority: #32

Project Description: Parking Garage V will be a multi-level (approx. 1800-space) parking structure located in close proximity to the Education Complex at the main entrance of the campus.

Project Funding: 2000 - 2001

Planning	$2,000,000.00
Construction	$16,000,000.00
Equipment	

Total Project Cost	$18,000,000.00

Gross Square Feet: NA
Net Square Feet: NA

Funding Source: Bond
Included on 1996 Campus Development Agreement: No

Project Name: Engineering Building III Project Priority: #33

Project Description: The Engineering Building III, the last of three phases, will include offices, classrooms and research labs. This facility will be located in close proximity to the existing CREOL Building.

Project Funding: 2002 - 2005

Planning	$1,227,000.00
Construction	$16,000,000.00
Equipment	$1,762,000.00
Total Project Cost	$18,989,000.00

Gross Square Feet: 90,397
Net Square Feet: 61,091

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Arts Complex II-Performance Project Priority: #34

Project Description: Arts Complex II – Performance is the second of three buildings comprising the Center for the Performing Arts. The new facility will include a 1,200 seat concert hall and a 750 seat recital hall.

Project Funding: 2002 - 2005

Planning	$900,000.00
Construction	$19,078,945.00
Equipment	$2,000,000.00
Total Project Cost	$21,978,945.00

Gross Square Feet: 77,508
Net Square Feet: 56,157

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Math & Physics Building Remodel Project Priority: #35

Project Description: The Math & Physics Remodel, (previosuly known as the Physics Building Remodel) will include the renovation of space for offices and classrooms for the Physics Department. In addition, environmental health and safety concerns, including asbestos removal and life safety issues will be addressed in the remodeling.

Project Funding: 2003 - 2006

Planning	$500,000.00
Construction	$6,000,000.00
Equipment	$700,000.00

Total Project Cost	$7,200,000.00

Gross Square Feet: 22,776
Net Square Feet: 15,184

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Physical Sciences Annex Project Priority: #36

Project Description: The Physical Sciences Annex will consist of labs, teaching labs, classrooms, offices and support spaces. The building will be the "Annex" to the existing Math and Physics Building.

Project Funding: 2003 - 2006

Planning	$800,000.00
Construction	$9,000,000.00
Equipment	$1,200,000.00
Total Project Cost	$11,000,000.00

Gross Square Feet: 66,614
Net Square Feet: 44,221

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Classroom Building II Project Priority: #37

Project Description: Classroom Building II, the second phase of two buildings proposed, to be dedicated general classroom space, will be located adjacent to the existing Classroom Building. The new facility will incorporate high tech equipment to meet the demands of improved teaching techniques.

Project Funding: 2003 - 2006

Planning	$830,000.00
Construction	$9,500,000.00
Equipment	$1,670,000.00
Total Project Cost	$12,000,000.00

Gross Square Feet: 69,450
Net Square Feet: 46,300

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Engineering Bldg. I Remodel Project Priority: #38

Project Description: The Engineering Bldg. I Remodel will renovate the exisiting space for classrooms, research labs and offices.

Project Funding: 2004 - 2007

Planning	$200,000.00
Construction	$2,200,000.00
Equipment	$200,000.00
Total Project Cost	$2,600,000.00

Gross Square Feet: 21,522
Net Square Feet: 16,556

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Howard Phillips Hall Remodel Project Priority: #39

Project Description: The Howard Phillips Hall Remodeling project will remodel the exisiting space to accommodate offices and classrooms to support administrative fucntions of the University.

Project Funding: 2004 - 2007

Planning	$250,000.00
Construction	$2,800,000.00
Equipment	$280,000.00
Total Project Cost	$3,330,000.00

Gross Square Feet: 26,650
Net Square Feet: 20,500

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Library Expansion Project Priority: #40

Project Description: The Library Expansion consists of an addition that will provide necessary space to house the University's expanding collections of books. Study areas and carrels will also be provided.

Project Funding: 2004 - 2007

Planning	$985,000.00
Construction	$12,000,000.00
Equipment	$1,750,000.00
Total Project Cost	$14,735,000.00

Gross Square Feet: 89,900
Net Square Feet: 63,600

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Interdisciplinary Research Bldg. I Project Priority: #41

Project Description: The Interdisciplinary Research Bldg. I will be the companion facility to Interdisciplinary Research Bldg. II. The building will contain laboratories,

teaching labs and support spaces for interdisciplinary research.

Project Funding: 2004 - 2007

Planning	$1,000,000.00
Construction	$12,000,000.00
Equipment	$2,000,000.00
Total Project Cost	$15,000,000.00

Gross Square Feet: 67,799
Net Square Feet: 45,199

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Student Success Center Project Priority: #42

Project Description: The Student Success Center will provide administrative office space for student support services to assist in academic consulting and guidance.

Project Funding: 2004 - 2007

Planning	$600,000.00
Construction	$6,000,000.00
Equipment	$600,000.00
Total Project Cost	$7,200,000.00

Gross Square Feet: 44,310
Net Square Feet: 30,067

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Humanities & Social Sciences II Project Priority: #43

Project Description: The Humanities & Social Sciences II project will consist of classrooms, teaching labs, office space and support space for the College of Arts and Sciences.

Project Funding: 2005 - 2008

Planning	$1,000,000.00
Construction	$12,000,000.00
Equipment	$1,500,000.00
Total Project Cost	$14,500,000.00

Gross Square Feet: 88,841
Net Square Feet: 59,227

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Health & Public Affairs II Annex Project Priority: #44

Project Description: The Health & Public Affairs II Annex will involve the construction of classrooms,

teaching labs and office space for the Health and Public Affairs II Building.

Project Funding: 2005 - 2008

Planning	$500,000.00
Construction	$5,000,000.00
Equipment	$750,000.00
Total Project Cost	$6,250,000.00

Gross Square Feet: 32,218
Net Square Feet: 26,329

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Police Facility Expansion Project Priority: #45

Project Description: The Police Facility Expansion includes a new addition that will house classrooms, a lecture hall and office spaces to support academic and self-training programs.

Project Funding: 2005 - 2008

Planning	$400,000.00
Construction	$4,000,000.00
Equipment	$500,000.00
Total Project Cost	$4,900,000.00

Gross Square Feet: 29,613
Net Square Feet: 19,883

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Arts Complex III-Music Project Priority: #46

Project Description: Arts Complex III – Theater is the last of three buildings comprising the Center for the Performing Arts. The new facility will include production and shop areas for props used in theatrical performances, as well as office space.

Project Funding: 2005 – 2008

Planning	$600,000.00
Construction	$6,000,000.00
Equipment	$900,000.00
Total Project Cost	$7,500,000.00

Gross Square Feet: 44,421
Net Square Feet: 29,614

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Interdisciplinary Research Bldg. II Project Priority: #47

Project Description: The Interdisciplinary Research Bldg. II will be the companion facility to Interdisciplinary Research Bldg. I The building will contain laboratories, teaching labs and support spaces for interdisciplinary research.

Project Funding: 2005 – 2008

Planning	$1,000,000.00
Construction	$11,600,000.00
Equipment	$1,400,000.00
Total Project Cost	$14,000,000.00

Gross Square Feet: 65,453
Net Square Feet: 43,635

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Business Admin. III Bldg. Project Priority: #48

Project Description: The Business Admin. III Building is the third building to serve the College of Business Administration. The facility will include offices, classrooms and teaching labs.

Project Funding: 2007 - 2010

Planning	$800,000.00
Construction	$9,000,000.00
Equipment	$1,000,000.00
Total Project Cost	$10,800,000.00

Gross Square Feet: 66,520
Net Square Feet: 44,347

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Humanities & Fine Arts Remodel Project Priority: #49

Project Description: The purpose of this project is to complete the remodeling of the Humanities & Fine Arts Building. Floor five, two and one will be involved in the effort. The new areas will consist of classrooms, offices and support spaces for the College of Arts and Sciences.

Project Funding: 2006 - 2009

Planning	$500,000.00
Construction	$5,200,000.00
Equipment	$800,000.00
Total Project Cost	$6,500,000.00

Gross Square Feet: 50,374
Net Square Feet: 27,920

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Film - Arts & Sciences II Bldg. Project Priority: #50

Project Description: The Film - Arts & Sciences II Bldg. project will provide for classrooms, teaching labs, offices and support spaces for the UCF Film School.

Project Funding: 2006 - 2009

Planning	$600,000.00
Construction	$6,500,000.00
Equipment	$1,000,000.00
Total Project Cost	$8,100,000.00

Gross Square Feet: 44,310
Net Square Feet: 30,067

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Theater Bldg. Renovation Project Priority: #51

Project Description: The purpose of the project is to completely renovate the Theater Building and to correct any fire code and ADA violations that exist.

Project Funding: 2007 - 2010

Planning	$200,000.00
Construction	$2,000,000.00
Equipment	$400,000.00
Total Project Cost	$2,600,000.00

Gross Square Feet: 29,469
Net Square Feet: 14,588

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Simulation & Training Building Project Priority: #52

Project Description: The Simulation & Training building will include classrooms, research and teaching labs, simulator spaces, and offices for the Institute for Simulation and Training. Construction of this facility will be on campus rather than the current location in Research Park.

Project Funding: 2007 - 2010

Planning	$1,000,000.00
Construction	$11,600,000.00
Equipment	$1,400,000.00
Total Project Cost	$14,000,000.00

Gross Square Feet: 81,281
Net Square Feet: 54,187

Funding Source: PECO
Included on 1996 Campus Development Agreement: Yes

Project Name: Education III Building Project Priority: #53

Project Description: The Education III Building is the third building located in the College of Education Complex. The facility will include offices, classrooms and teaching labs.

Project Funding: 2006 - 2009

Planning	$1,240,000.00
Construction	$12,000,000.00
Equipment	$1,500,000.00
Total Project Cost	$14,740,000.00

Gross Square Feet: 87,125
Net Square Feet: 58,083

Funding Source: PECO
Included on 1996 Campus Development Agreement: No

Project Name: Various Facilities Project Priority: #54

Project Description: Various academic, support and residential facilities will be programmed and sited as further refinement is made in matching the space need to the student population. The square footage shown indicates the total remaining to meet the need of the projected on-campus student population through this planning cycle; approximately 13 buidlings.

Project Funding: 2007 - 2010

Planning	TBD
Construction	TBD
Equipment	TBD
Total Project Cost	TBD

(1.5 factor) Gross Square Feet: 1,986,258
Net Square Feet: 1,324,172

Funding Source: Funding not identified
Included on 1996 Campus Development Agreement: No

GOAL 1: **To develop a campus which recognizes a legacy of consistency and excellence in the architecture already in place, and sets a standard of excellence for future design endeavors.**

OBJECTIVE 1.1: To define the elements of consistency (materials, massing, color, detailing, etc.) that exist in the current campus so as to derive the principals to govern future designs.

POLICY 1.1.1: Buildings in the academic core are generally between 3 and 4 stories in height, however, buildings can exceed four (4) stories in height based on the height of adjacent structures, functional characteristics and aesthetic considerations. Exceeding six (6) stories in height must be approved by the Administration during the programming or initial design process.

POLICY 1.1.2: Buildings outside the core are generally between 1 and 4 stories in height, buildings can also exceed six (6) stories in height, if approved by the Administration during the programming or initial design process.

POLICY 1.1.3: Brick is the predominant building material on campus. Masonry and glass are secondary materials of enclosure.

POLICY 1.1.4: Architectural details are generally rendered in masonry.

OBJECTIVE 1.2: To create a palette of materials, textures, colors and scale that will continue the traditions of the existing architecture.

POLICY 1.2.1: Future campus buildings shall emulate the established qualities described in objective 1.1.

POLICY 1.2.2: The predominant masonry material on campus building facades shall continue to be brick.

POLICY 1.2.3: Architectural details shall generally be done in masonry, in order to provide visual interest and relief.

POLICY 1.2.4: The blend of brick materials that produces the "UCF Blend" shall be emphasized as the preferable blend, and brick that is not of a reddish tone or color, not currently used on campus, will be disallowed.

POLICY 1.2.5: The use of reflective glass has been discontinued as of July 1995.

POLICY 1.2.6: The maximum height of buildings shall not normally exceed six (6) stories. Buildings can exceed six (6) stories in height, if approved by the Administration during the programming or initial design process.

POLICY 1.2.7: Screen walls and service area enclosure materials, colors and finishes shall be consistent with the exterior elevations of the buildings which they serve.

POLICY 1.2.8: Project proposals shall comply with the UCF Design Guidelines published by the Office of Facilities Planning.

POLICY 1.2.9: The final judgment on matters concerning aesthetics and architectural character, for campus project proposals, shall be reserved for the President of the University.

POLICY 1.2.10: The Director of Facilities Planning shall review each design proposal for individual merit. Provisions shall be made so that unique or innovative design solutions appropriate to the atmosphere of a thoughtful academic community shall not be discouraged by campus policies or guidelines.

POLICY 1.2.11: The Office of the Director of Facilities Planning shall review each newly constructed, renovated or remodeled facility six months after completion so that any necessary adjustments may be made to the UCF Design Guidelines. -

POLICY 1.2.12: The designs for buildings on satellite campuses shall be afforded a courtesy review by the Office of the Director of Facilities Planning, for comment on the ways in which the quality of those designs may reflect the standards set forth by the UCF Design Guidelines.

OBJECTIVE 1.3: To adhere to existing guidelines and minimum standards for the campus graphics and signage program that will be harmonious with the architecture and landscape, and will stress permanence.

POLICY 1.3.1: Campus buildings graphics and signage shall comply with the UCF Design Guidelines and shall have their names displayed on the building near their respective main entrances.

OBJECTIVE 1.4: To establish guidelines and minimum standards for energy efficiency and life cycle costing.

POLICY 1.4.1: New buildings shall comply with the UCF Design Guidelines

OBJECTIVE 1.5: To establish guidelines and minimum standards for site lighting, plaza, sidewalk and other hardscape materials, furniture, building illumination, and landscape materials and design, and other elements that contribute to the overall environment and safety of the campus.

POLICY 1.5.1: Hardscape materials for plazas and sidewalks shall be medium broom finished and poured in place concrete. Exceptions may be made in special areas, such as campus entrances, where a specific contrast or effect is desired.

POLICY 1.5.2: Primary walkways (800 and 1200 foot radii) shall be 16 feet in width. Secondary walkways (all others) shall be a minimum of 6 feet in width.

POLICY 1.5.3: Site lighting and furniture, hardscape materials and design shall conform with the UCF Architectural Guidelines.

POLICY 1.5.4: The Campus Safety Committee shall consider the use of Crime Prevention Through Environmental Design (CPTED) concepts and principles to improve campus safety.

OBJECTIVE 1.6: To establish guidelines and standards for building siting and linkages that give consideration to campus safety issues.

POLICY 1.6.1: Future academic core buildings shall be sited so that their pedestrian entrances face the 800 foot radius (Mercury Circle) and their service entrances occur on the opposite end. Such siting will segregate vehicular and service traffic away from major pedestrian zones.

POLICY 1.6.2: Future academic buildings situated inside the 800 foot radius (Mercury Circle) shall be

serviced from the 400 foot radius (Pegasus Circle). Academic buildings which fall outside of the 800 foot radius (Mercury Circle) will be serviced off of Gemini Blvd.

POLICY 1.6.3: Projects enhancing campus safety and disabled accessibility shall be prioritized according to the following order:

- Priority 1
  Projects which reduce pedestrian vs. vehicular conflicts.
- Priority 2
  Projects which reduce bicycle vs. vehicular conflicts.
- Priority 3
  Projects which remove barriers to people with disabilities.
- Priority 4
  Projects which enhance lighting conditions on campus.
- Priority 5
  Projects which reduce bicycle vs. pedestrian conflicts.

OBJECTIVE 1.7: To establish guidelines and minimum standards for architectural treatments along the campus edges, that coordinate with the host community.

POLICY 1.7.1: An information kiosk, made of brick, may be located at each (existing or proposed) vehicular entrance into campus.

POLICY 1.7.2: Campus entrances shall be kept as open corridors looking into and out of campus.

POLICY 1.7.3: Campus entrances shall be further articulated with unique or contrasting landscape and/or architectural elements that distinguish them from campus edge treatments.

OBJECTIVE 1.8: To include references in the UCF Design Guidelines to standards mandated by State Legislation and Standards for the State University System developed by the Office of Capital Programs.

POLICY 1.8.1: The Director of Facilities Planning shall establish procedures for the review of all project proposals to ensure compliance with the UCF Design Guidelines.

2.15 (2) Architectural Design Guidelines Element Analysis

a) An assessment of the degree to which existing building designs are coordinated, and the degree to which they contribute to or detract from the present visual or functional quality of the University.

1. Refer to the 1995 Analysis.

2. In addition, it is noted that there has been a trend in the design of campus facilities since that update in which designs have begun to introduce other materials, colors and design details which deviate noticeably from the original, more esthetically cohesive campus esthetic. Whereas the older campus buildings were more consistently covered in the "UCF blend" of reddish-brown brick, many newer facilities have introduced increasing amounts of cream, or yellow colored brick. Also, newer structures have started to introduce metal, usually in a silver-metallic finish, as a significant exterior material. There is a noticeable trend in the newer designs to emphasizing horizontal lines. In design details the older facilities were more austere, using brick as a largely unarticulated exterior surfacing with simple, punched opening. Newer designs have relied on different trim materials or varying brick coursing/corbelling/coloring to articulate openings. Generally, the trend in the newer designs is to reflect contemporary design esthetic as opposed to reflecting the esthetic of the era of the older buildings.

3. The current trends, while moving away from the earlier esthetic, show an awareness of modern architectural esthetic that is more reflective of the high-tech, increasingly diverse world in which the University exists and of the more recent research-oriented, diversity-enhanced mission of the University. From the point of view of the current student and research-oriented faculty the newer facilities as individual designs may create an esthetic more reflective of the University's contemporary mission. That being said, when viewed together with the older designs, the newer designs, unless they have clearly identifiable visual connectivity with the older designs, may create a frenetic campus visual image. It is a matter of degree and interpretation, both very difficult, if not impossible to judge, since "beauty is in the eye of the beholder". If the design diversity reaches the threshold of visual schizophrenia for a significant number of the students and faculty, it may have an overall negative impact on the University mission.

4. The challenge for the designers and design directors/reviewers is to build a design bridge between 1) the older campus esthetic with the traditional values it connotes and the resulting esthetic consistency and 2) the more contemporary, progressive esthetic. This should be a major goal of the University's architectural design guidelines.

5. Another major issue of concern is the degree to which the "vertical" facilities reinforce the campus radial planning organization. The radial plan works well as an organizational element to create a pedestrian-only academic core. On the other hand, since most users are

overwhelmingly acclimated to an off-campus world of orthogonal urban planning, the radial plan creates great challenges in wayfinding. New students and visitors are particularly worthy of consideration, as their level of comfort with the campus environment will certainly affect their initial and perhaps overall impression of the campus. The University clearly values retention of freshman as four-year-plus students as reflected in its policy of providing on-campus housing for 75% of freshman. Ease of wayfinding is critical in the adjustment of new students and visitors to the large, potentially intimidating environment of a major university.

6. What is recommended to improve on the current situation is 1) clearly defined urban design and future land use goals and objectives and 2) policies which establish a means of achieving these goals and objectives. The goals and objectives should clearly state design principles which are to be achieved. The policies should establish procedures for communicating these principles and means for directing and monitoring progress toward achieving these principles.

b) An assessment of the accessibility of University buildings to disabled persons.

1. Refer to the 1995 Analysis.

2. The University has an active process of 1) requiring adherence of new designs to handicapped accessibility requirements, 2) providing handicapped student ombudsman review of all projects and 3) identifying and prioritizing handicapped accessibility deficiency correction concurrent with remodelings and renovations of existing facilities. Because of the relative youth of the campus, the backlog of existing deficiencies is of less impact than older universities. Nonetheless, the importance of accessibility to mission and to admission policy makes it a priority.

3. By policy all new facilities are to meet all accessibility requirements.

4. Deficiencies have been identified and cataloged for correction with scheduled remodeling or renovation.

GOAL 1: Create a high quality campus community landscape environment which affords outdoor comfort, security and "sense of place". Create a rich visual quality exemplifying the diversity of Central Florida's native environments and educational experiences.

OBJECTIVE 1.1: By 2001-2002 the University shall develop and implement a Landscape Master Plan for the University of Central Florida campus.

POLICY 1.1.1: Reinforce the important elements of the spatial organization defined in the Master Plan by developing an educational landscape character and experience for the areas outlined on the Landscape Master Plan. This distinctive landscape can be characterized by:

- Creating quads, plazas and common areas for student interaction and places for destination.
- Use of plant species that are indigenous to the natural plant communities of the UCF area. Native plantings which are intended to recreate a semblance of the original communities shall utilize plants typical of the scrub and sandhill.
- Limited plant palette-contrast to native materials.
- Use of trees of like species in large groups and masses. Trees planted to highlight and identify various campus signatures or other landscape treatments shall be restricted and reserved for species that are native to the UCF area.
- Limited use of unusual horticultural specimen. In cases where non-invasive, exotic plants are used to enhance the landscape, plantings will be limited to those non-invasive species that are able to resist periods of drought and that are expected to require little use of fertilizer and pesticides.
- Selective removal or relocation of existing trees to allow spatial definition.
- Existing non-native invasive plants (whether grasses, trees or shrubs) may be designated for removal from the campus grounds if such exotics are listed on the Exotic Pest Plant Council's list of "Florida's Most Invasive Species". As these species are located on the campus, UCF staff shall coordinate with the Florida Department of Environmental Protection and other appropriate governmental entities to ensure the proper removal and disposal of these exotic species.
- Limited use of shrubs, hedges and ground cover.
- Use of xeriscape principles and cover to conserve water and reduce chemical use.

POLICY 1.1.2: Develop the campus landscape outside of the institutional zone with the following criteria outlined and action items stated within Landscape Master Plan:

- Plant palette of indigenous plant material selected for availability and maintenance requirements.
- Use of trees in masses of like species to small groupings of 3-5 trees.
- Use of plants in informal groupings.
- Limited use of shrub masses.

POLICY 1.1.3: Develop a signature landscape treatment for all of the campus entrances, edges and corners which will reflect the University of Central Florida landscape character. Consider selecting signature landscape treatments that represent the campuses diverse native landscape.

POLICY 1.1.4: Reinforce and improve circulation hierarchy by developing distinct landscapes for each road type, intersections and the pedestrian/tram/service loop.

- Entrance Roads: Implement signature landscape treatments as specified within Landscape Master Plan.
- Edge - Enhance native vegetation with natural random placement of Oaks, Pines, Sweet Bays, Myrtles and other indigenous materials. Refer to Conservation Management Plans.
- Primary Loop Road: Median - Standardize ornamental and street trees as specified within Landscape Master Plan.
- Edge adjacent to developed areas - Screen surface parking lots with low mounds and shrubs.
- Edge adjacent to preserve/natural areas - Preserve and enhance existing vegetation with indigenous plant material.
- Campus Core Loop and Connector - Align connector with double row of Red Maple, Loblolly Bay, or Southern Magnolia; single row of Red Maple, Loblolly Bay, or Southern Magnolia on core loop road at regular spacing.
- Secondary Road - Align with alternative street tree to contrast with Primary Loop Road.
- Pedestrian and Service Loop Road - Align with Red Maple, Loblolly Bay, or Southern Magnolia.

POLICY 1.1.5: Develop design and construction criteria to preserve and enhance existing native vegetation in all areas adjacent to proposed development of the northern entrance road and the completion of the loop road.

POLICY 1.1.6: Maintain and protect from encroachment the existing natural preserve and proposed arboretum while encouraging appropriate access to contribute to the high quality campus landscape setting.

POLICY 1.1.7: Provide tree canopy in all surface parking lots where possible while maintaining safety visibility and efficient security lighting

POLICY 1.1.8: Tree selection and location shall promote safety and security, enhance natural environment, provide shade for vehicles and pedestrians and minimize maintenance requirements.

POLICY 1.1.9: Reinforce, integrate and improve existing and proposed landscape mall and axis, to experience the campus as a defined sequence of unique landscapes. Define edges of malls with existing plant material specified for each mall outlined within Landscape Master Plan.

POLICY 1.1.10: Incorporate appropriate "theme courtyards" as an opportunity for horticultural education, campus wayfinding and memorable campus spatial images, and to de-emphasize the

pedestrian loop as a spatial organizational element.

POLICY 1.1.11: The University shall develop landscape in housing areas as follows:

- Define central mall with strong linear green edges.
- Develop courtyards with thematic plantings.

POLICY 1.1.12: The University shall show the location of future buildings so as to indicate the open spaces depicted in the Landscape Concept Plan.

POLICY 1.1.13: Standardized bicycle rack style and placement shall be used in order to achieve simplicity and uniformity. Selection of the standardized bicycle racks shall be based on efficiency, ease of use, tamper resistance, maintenance, and accessibility. Bicycle facilities should be located convenient to academic and housing areas, in a secure location. Landscape treatment shall consist of canopy trees adjacent for shade and a durable, hard paved (preferably concrete) permanent surface under the bicycle rack.

POLICY 1.1.14: Public transportation facilities should be sited to allow for visibility and ease of access, both pedestrian and vehicular. The design of the shelter should be consistent with the architectural guidelines. Landscape treatment should provide shade if not provided by shelter.

POLICY 1.1.15: Emergency access facilities shall be kept clear of any impeding landscape.

POLICY 1.1.16: All trash collection facilities shall be screened from pedestrian or vehicular traffic with either fence or wall consistent with architecture guidelines or evergreen plant material.

POLICY 1.1.17: Maintenance facilities shall be screened from pedestrian or vehicular traffic with fence, wall or evergreen plant material.

POLICY 1.1.18: Projects with an associated public art budget and campus art projects should be coordinated within the design process and University of Central Florida's Public Art Committee to facilitate location, theme, and integration.

POLICY 1.1.19: The summary analysis of existing landscape and hardscape conditions and quality prepared within the Landscape Master Plan shall be used to determine deficiencies to be added to University's Physical Plant Division's landscape improvement projects list.

POLICY 1.1.20: Within one year after adoption of Landscape Master Plan, the campus master plan shall be amended to include revised design concepts and standards.

OBJECTIVE 1.2: **Modify and adopt a revised landscape design guidelines upon Master Plan adoption, adding recommendations and revisions recommended within Landscape Master Plan.**

POLICY 1.2.1: In concurrence with the Landscape Master Plan incorporate use of landscape material that blends with the natural, native surrounding plant palette. Organize and structure native materials within campus environment to create a sense of order and wayfinding.

POLICY 1.2.2: Within one year after adoption, the campus master plan shall be amended to include the revised plant material list and additional treatments stated within Landscape Design Guidelines.

POLICY 1.2.3: The University shall monitor conformance of future construction projects with revised Landscape Design Guidelines and Landscape Master Plan through University design review procedures.

OBJECTIVE 1.3: Adopt standards for overall campus furnishings, lighting fixtures and graphics depicted within Landscape Master Plan.

POLICY 1.3.1 Projects which may enhance campus safety, along with security and disabled accessibility shall be identified and prioritized according to the following:

1. Pedestrian/vehicular/bicycle conflicts;
2. Visibility;
3. Removal of barriers ; and
4. Enhanced lighting.

POLICY 1.3.2 The University of Central Florida Director of Facilities Planning will establish administrative procedures within the University's administrative structure (e.g. a design review process) to ensure the coordination of the landscape, furnishings and graphics on the campus in accordance with the adopted guidelines. Within one year after adoption, the campus master plan shall be amended to include these procedures.

OBJECTIVE 1.4: Adopt standards for campus edge treatments.

POLICY 1.4.1 With accordance of Conservation Management Plan and Landscape Master Plan, the University shall preserve existing natural buffer areas along campus edges. The University shall prohibit development for a 200' buffer area and establish understory (e.g. shrubs and ground cover) plantings of indigenous plant material in natural arrangements in areas where it has been removed.

POLICY 1.4.2 Create a signature architectural and landscape entry statement that enhances and contrasts the natural buffer/campus edge.

OBJECTIVE 1.5: Adopt standards for landscape edge treatments surrounding ponds, lakes and stormwater features.

POLICY 1.5.1: Retention lakes and drainage elements shall conform to the requirements of the local water management district regarding side slopes and wetland mitigation areas.

POLICY 1.5.2: The configuration of retention lakes shall be natural and curvilinear in outline. Rectilinear and pure geometric forms are not permitted. Wherever possible, side slopes shall vary and provide smooth transitions to existing grades. Gentle landforms around the lake shall reinforce the natural" context.

POLICY 1.5.3: Whenever possible, retention areas shall be incorporated into one single basin instead of multiple basins. Larger basins are more efficient relative to space and volumetrics. Single basins also avoid the appearance of the project area surrounded by a depressed moat".

POLICY 1.5.4: Landscape treatment for retention lakes shall respect maintenance and access setbacks but otherwise be set into a natural, existing vegetative context or planted with native material.

OBJECTIVE 1.6: Implement the landscape concept plan by allocating proportional campus landscape costs to programmed building costs for this period and by seeking supplemental funding allocated for landscape improvements.

POLICY 1.6.1: Landscape budgets shall be an integral and inviolate portion of new construction budgets, and shall be based upon a percentage of total construction costs. Funds allocated for landscape improvements shall not be redirected to fulfill funding shortages in other areas of the construction project.

POLICY 1.6.2: Landscape improvements that are independent from new building construction shall be considered as stand-alone or independent projects with respect to funding and capital expenditure programming .

POLICY 1.6.3: Apply the following descending priorities for implementing components of the Landscape Master Plan.

- Priority 1 Entrances and Intersections
- Priority 2 Malls and Courtyards
- Priority 3 Service/Pedestrian/Tram Loop
- Priority 4 Loop Road
- Priority 5 Parking Lots

POLICY 1.6.4: The University shall establish policies and procedures to retain landscape architects independently of architects for campus building, for the design and implementation of components of the Landscape Master Plan. The adopted campus master plan shall be amended to include these procedures.

POLICY 1.6.5: The University shall establish policies and procedures to seek separate funding mechanisms and revenue sources specifically targeted for landscape improvements as outlined in Master Plan. The adopted campus master plan shall be amended to include these procedures.

POLICY 1.6.6: The University shall complete a campus-wide analysis to document disabled conflicts and constraints imposed by landscape features. The adopted campus master plan shall be amended to include these procedures.

2.16 (1) Landscape Design Guidelines Element Analysis

As noted in the 1995 analysis, documentation of data relating to an inventory of existing landscape treatments, character, location and quality was not available and has not been completed to date. In addition, the 1995 analysis states that a landscape master plan was created in 1992 and is referenced in the goals, objectives and policies section of the 1995 master plan document. This data was not available and will be an important resource to understand how the character of the campus has changed or reflected this plan. Therefore, the following analysis is based on summary campus tour observations, photo documentation and guidelines established in the goals, objectives and policies.

a) Assessment of Coordination of Landscape Features and the Degree to which they Contribute or Distract from the Visual Quality of the Campus.

1. Refer to the 1995 Analysis.

2. Since 1995, the University has maintained the image of campus community built within a natural environment. The natural environment, composed of sand pine scrub, pine flatwoods, forested and non-forested wetlands, are the unique vegetative communities that create that sense of place for the University. The existing development has successfully maintained the diverse tree canopy at the core of the campus. Through further analysis of past aerial photographs, a pattern for new development along and beyond Gemini Boulevard has pushed the environment to the edges. In order to maintain this unique identity of a campus built within its own natural environment, the landscape communities that have been replaced need to be restored. They need to be designed and integrated within, and connected to, the campus core. Although it has been mentioned and debated that the campus lacks an overall landscape theme and design, the University has many unique environmental assets and opportunities. It only lacks a designed and updated maintenance and landscape plan to help shape and organize the overall theme of a campus structured, built and integrated within a natural ecosystem.

3. In addition, current landscape treatments, hardscape installations, signage, site furnishings and have been designed as a response to individual building architecture. As mentioned in the urban design element, campus quads, greens and plazas will also bring organization, sense of way finding and destination to the campus. Landscape spaces need to be identified and recognized as equal importance to architecture projects. It is these landscape spaces, which will blend and unify all current and future architecture facilities. Although standardization and blending of all the elements mentioned is not critical to the overall eclectic image of the campus, it is recommended that strong landscape spaces and a coordinated landscape palette will create an overall sense of unification and way finding to the University. Integration and understanding of urban design elements such as gateways, landmarks, campus corners, campus edge conditions, roadway character, and pedestrian treatments will further enhance and unify a sense of arrival, destination and place.

b) Assessment of Existing Treatment with Regards to their Impacts on Campus Safety

1. Refer to the 1995 Analysis.

2. Vehicular Circulation Routes

Current building projects along Gemini Boulevard have enabled opportunities to plant young live oaks and southern magnolias. Although there may be concerns for vehicle and pedestrian safety, tree canopy and minimal landscape understory within the medians will create a sense of enclosure for traffic calming. A standardized streetscape is not necessary to the overall theme of the University. The implementation of the diverse UCF vegetative communities into the formal greens can extend to Gemini Boulevard. It is the diverse tree canopy and integration of Pines, Oaks, Palms and Cypress that will complement the theme and provide a unique driving experience through a series of Central Florida's natural environments.

3. Parking Facilities

The implementation of gradual berming adjacent to Gemini Boulevard has been successful. Traditional landscape screening techniques of edging parking with shrubs does not complement the overall landscape theme. Although the graceful and natural berming screens downplay the overall size and scale of pavement, it allows enough visibility for location and access. Depending on future land use designations for surface parking lots, long term faculty and student interior parking lots can integrate tree canopy through the use of pavement cutouts. Coordination of tree locations around future facilities and in parking areas will establish canopy for the future.

4. Pedestrian Circulation Routes

Although the main 16' concentric ring walks are signed and provide tree canopy, there is no sense of arrival or destination to the walk. The walk can further be enhanced and recognized through techniques from simple hardscape scoring treatments to implementation with brick. The ring walks contribute to the university's overall sense of way finding. Within the concept of the urban design plan, the walks would serve as the essential link or main street to the four green malls. Implementation of designated bike and pedestrian paths will create order and scale to the large 16' walks.

New 6' walks have been a response to pedestrian created dirt paths adding to the series of numerous walks, which degrade the natural image of the campus. Pedestrian circulation volumes and patterns for the entire campus need to be studied and documented. The summary of these findings and future landscape and urban design plans need to be integrated to avoid future unnecessary walks and create an overall sense of way finding and further enhance the natural image of the campus. Simple landscape treatments and strong identified walks can direct and guide students to their destinations without future addition of concrete to the campus.

5. Bicycle Facilities

Currently, the number of bicycle facilities needs to be increased to be consistent with the amount of users on campus. The number of bicyclists will increase as the University detaches itself from the image of a "commuter campus" and creates stronger connections to the future development of housing along the edges of campus and within UCF. Locations of current and future facilities need to be coordinated with proposed designated bicycle routes. Aesthetically, bicycle parking lots need to be organized and located at strategic places around campus rather than along the entrances or facades of buildings.

6. Public Transportation Facilities

With the addition of proposed intermodal stations, transit stops have been integrated and organized into the overall circulation system. Signs and graphics still need to be enhanced. Further investigation of the facilities, furnishings and circulation routes is needed to complete this part of the analysis.

7. Emergency Access Facilities

As noted in the 1995 plan, emergency access appears to be adequate. Current and future facilities need to be analyzed and documented on an individual basis as improvements are made to specific buildings and facilities.

8. Planted Areas

Overall landscape planted areas still are in response to individual building projects and have no

sense of unification of adjacent building projects. As mentioned, landscape malls, plazas and parks need to be identified, designed, and installed to serve as the framework for future building projects. The creation of additional planted areas within the campus core will unify individual building architecture. Further investigation of soil types and vegetative communities will dictate the landscape palette for additional planted areas.

9. Site Furnishings

Although the campus has an array of campus furniture, a selection of a University bench, light pole, or signs can further enhance the overall quality and way finding of the campus. Further documentation of furnishing types and locations need to be documented to complete this analysis.

10. Lighting Location and Type

Without existing lighting fixture data and photometrics, accurate analysis cannot be made at this time. Initial visual observations conclude that fixtures throughout campus are not consistent. An organized lighting system with uniform colors and fixtures will improve safety and enhance the experience of night-time visitors.

11. Trash Collection Facilities

New dumpster locations make an attempt to screen dumpster facilities, but existing core facilities need to be studied. A specific study of these facilities should be undertaken on a campus-wide basis or as individual buildings and facilities are upgraded or improved.

12. Maintenance Facilities

Loading docks along Gemini are generally exposed to pedestrian and vehicular circulation. A specific study is needed on a campus-wide basis or individually as buildings or facilities are improved. The loading needs of individual facilities should be considered.

13. Campus Edge

The campus edges serve as the primary visual image of the campus. The campus corners such as the intersection of Alafaya and McCollough create a visual impression. Entrances also create an image.

Improving campus edges, corners and entrances will have several benefits, including creating a sense of arrival and making a strong first impression on visitors.

The term buffer always refers to the idea of screening the unwanted. Alafaya and the surrounding developments need to have a sense of connection. Although the intent of the buffer is to have an environmental buffer with minimal maintenance, maintenance is needed. Historically, in nature burning controls invasive understory and exotic species. The location, the activities (e.g., Frisbee football), and other factors of the buffer do not allow this natural process to occur and thus produces the current "clutter" image. By creating a maintenance program for this area, by organizing the pattern of the pine trees, and by incorporating berming techniques, the University can create a visual connection of University architecture from outside the University and still screen the unwanted automobile traffic on Alafaya Trail. Design concepts for the edges, corners and entrances should be explored in subsequent efforts to address the visual image of the University.

c) Assessment of the Ease or Difficulty of maintaining Existing Landscape Features

Maintenance program and data are still needed to further this analysis.

d) Assessment of the Physical Condition of Existing Landscape

In general, the overall physical condition of the campus appears to be in adequate condition.

e) Assessment of Accessibility of the Campus to disabled Persons

New building projects require approval from the University ADA personnel and are quite thorough. A campus-wide assessment of accessibility could be conducted as a subsequent activity or individual buildings and facilities could be evaluated and improved as necessary on an individual basis as renovations occur.

GOAL 1: To implement planned and routine maintenance programs which will provide facilities funded by Education and General (E&G) funds with a safe environment conducive to teaching and research.

OBJECTIVE 1.1: To establish the acceptable use and capacity of each building.

POLICY 1.1.1: The use and capacity of each building will be determined by the vice president in charge of the facility, the Vice President for Administration and Finance and staff.

POLICY 1.1.2: The vice president in charge of a facility desiring to change the use and/or capacity of that facility shall meet with the Vice President of Administration and Finance and his staff to determine that the use is acceptable to the University and the capacity meets the minimum SUS standards.

OBJECTIVE 1.2: To establish the desired level of performance for building elements.

POLICY 1.2.1: The exterior walls, windows, and doors of campus buildings are expected to last the life of the building with maintenance as scheduled in Objective 1.3 below. Roofs are expected to last 20 years under normal weather conditions, with maintenance as scheduled in another Objective in this Element.

POLICY 1.2.2: The interior walls, floors, stairs, doors, windows, and frames of campus buildings are expected to last the life of the building, with maintenance as scheduled in another Objective in this Element.

POLICY 1.2.3: The structural, plumbing, and electrical systems of campus buildings are expected to last the life of the building, with maintenance as scheduled in Objective 1.3 below. HVAC systems are expected to last 15 years, and elevators are expected to last 20 years, with maintenance as scheduled in another Objective in this Element.

POLICY 1.2.4: Exterior walls shall be brick. Exterior doors and windows shall be metal.

POLICY 1.2.5: HVAC ducts shall be sheet metal.

POLICY 1.2.6: Flat roofs shall be Fibertite.

OBJECTIVE 1.3: To establish a maintenance schedule for campus facilities.

POLICY 1.3.1: Exterior walls, windows, doors and exposed metal structures shall receive routine maintenance every 8 years. Roofs shall receive routine maintenance every year.

POLICY 1.3.2: Interior walls shall be repainted, carpet shall be replaced, and suspended acoustical ceilings shall be replaced on an as needed basis as funding is available.

POLICY 1.3.3: Systems: HVAC systems shall receive monthly maintenance. Lab hoods and exhaust fans shall be maintained every 6 months. Lab showers and eyewashes shall be tested quarterly. Backflow preventers shall be tested yearly. Electrical systems shall receive maintenance every 5 years. Elevators shall be maintained on a monthly basis, with one major renovation in the life of the elevator.

OBJECTIVE 1.4: To establish priorities for maintenance and improvement projects.

POLICY 1.4.1: In the first quarter of every year, 15 buildings shall be reviewed by the superintendents of

maintenance, utilities, building services, grounds, Environmental Health and Safety, Facilities Planning, and student disability services.

POLICY 1.4.2: Immediate and serious threats to the health, safety, and welfare of students, faculty, and staff as identified by the State Fire Marshall, the Office of Environmental Health and Safety, the Director of the Physical Plant, or the Director of Facilities Planning shall receive immediate attention. Maintenance problems which could quickly become serious, as determined by the Director of the Physical Plant, shall receive immediate attention.

POLICY 1.4.3: Buildings scheduled for major interior renovations shall not receive minor interior improvements within 12 months prior to the renovation.

OBJECTIVE 1.5: To establish a schedule for eliminating deficiencies relating to current standards.

POLICY 1.5.1: At least 90 percent of E&G facility related life safety code violations shall be corrected within two years of being identified.

POLICY 1.5.2: A committee composed of the Director of the Physical Plant, staff, and representatives from Equal Opportunity/Affirmative Action, and Student Disability Services to evaluate the "ADAAG Compliance Survey" and prioritize subsequent renovations to buildings by the end of 1995.

POLICY 1.5.3: All buildings scheduled to be connected by fiber optics to the Energy Management System (EMS) or have Variable Frequency Drives (VFD) installed (Library, Health & Physics, Phillips Hall, Recreational Services, and the Education Complex) shall be upgraded by the end of 2005.

POLICY 1.5.4: A minimum of 2 buildings every year for the next 20 years shall be reroofed as funds allow.

POLICY 1.5.5: At least 90 percent of E&G facility related fire code violations shall be corrected within two years of being identified.

POLICY 1.5.6: At least 90 percent of E&G facility related building code violations shall be corrected within two years of being identified.

POLICY 1.5.7: All asbestos abatement shall be completed as funding becomes available.

POLICY 1.5.8: All lead based paint in buildings to be renovated shall be identified and removed.

2.17 (2) Facilities Maintenance Analysis

a) Current improvements needs for each facility

Refer to "UCF Building Inventory Report", dated 5/4/2000, data provided by the UCF Budget Office. It is recommended that the 1994 ADAAG report be updated by removing items accomplished and adding others discovered or occurring in the interim.

b) Projected improvements needs for each facility during the planning period

Refer to "Critical Deferred Maintenance List for University of Central Florida" provided in the Data Report.

c) The projected level and frequency of building maintenance by facility

Refer to the 1995 Plan Maintenance Objective 1.3.

Edit Policy 1.3.1 to read:

Exterior walls, windows, doors and exposed metal structures shall receive routine maintenance every 8 years. Roofs shall receive routine maintenance every year.

Edit Policy 1.3.2 to read:

Interior walls shall be repainted, carpet shall be replaced, and suspended acoustical tile shall be replaced on an as needed basis as funding is available.

Edit Policy 1.3.3 to read:

Systems: HVAC systems shall receive monthly maintenance. Lab hoods and exhaust fans shall be maintained every 6 months. Lab showers and eyewashes shall be tested quarterly. Back-flow preventers shall be tested yearly. Electrical systems shall receive maintenance every 5 years. Elevators shall be maintained on a monthly basis, with one major renovation in the life of the elevator.

d) Assessment of the possibility of re-use

It is the University's position to renovate existing buildings to accommodate changes in programs and research resulting from continued growth and expansion of its mission.

e) Assessment of the major problems and opportunities for replacement/expansion/repair of existing facilities

Funding, time and staffing are the major problems/opportunities for replacement/expansion/repair of existing facilities.

f) Assessment of existing university facilities for each of the conditions listed in item (1), a), "Conformance to current Standards

On an annual basis each building on campus is surveyed to evaluate its "Building System Condition". This information is forwarded to the ~~Board of Regents~~ Division of Colleges and Universities.

Objective 1.5:

Eliminate Policy 1.5.3. Renumber remaining policies 1.5.4 through 1.5.9 (to become 1.5.3 through 1.5.8).

Edit current Policy 1.5.3 to read:

All buildings scheduled to be connected by fiber optics to the Energy Management System (EMS) or have Variable Frequency Drives (VFD) installed, (Library, Health & Physics, Phillips Hall, Recreational Services, and the Education Complex) shall be upgraded by the end of 2005.

Edit current Policy 1.5.8 to read:

All asbestos abatement shall be completed as funding becomes available.