Introduction

The 2005-2015 Master Plan represents the 5- year update of the plan adopted in 2003 and moves the planning timeframe forward to the year 2015. The update is presented for review and comment by the public and state and local agencies referenced in section 1013.30(6), Florida Statutes.

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 2000-2010 adopted Master Plan.
Written comments are encouraged and should be directed to:

Mr. James K. Davis, AICP
Office of Facilities Planning
University of Central Florida
P.O. Box 163020
Orlando, Florida 32816-3020

The updated Master Plan also reflects changes in how the adjacent off-campus neighborhoods are addressed by the University. Under the 2000-2010 Plan, an off-campus “context area” was identified and analyzed in order to determine University impacts on public services. Based upon results of the analysis, the University negotiated a Campus Development Agreement with the host local government, Orange County, and is in the process of finalizing the agreement to pay $4.8 million to help mitigate the University’s impacts on public services. That money has been targeted to improve transit service, bike and pedestrian amenities, construct a portion of the East West Road, and improve Woodbury Road to the south. In the near future, the University will initiate negotiations with Orange County to identify impacts generated under this Plan and will agree on a new budget and project list for the Division of College and University’s approval.

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.

Academic Program

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

Year	Annual FTE	FTE Headcount
2002-2003	22,626	35,442
2005-06	25,906	40,403
2014-15	30,135	48,526

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.

For the ten-year master planning period, twenty new degree programs are planned; five in Arts and Sciences, six in Education, four in Engineering and Computer Sciences, and five in Health and Public Affairs. The above includes four doctoral programs.

Thank you for your interest in the Campus Master Plan update.

2.1 Academic Mission Element
Goals, Objectives and Policies
2005-2015 Campus Master Plan Update

The academic mission of UCF was revised as part of the strategic planning process and was approved by out Board of Trustees in January 2002. The university also adopted a vision, values, and five overall goals and 12 strategic initiatives in support of those goals as part of the strategic planning process. All these documents appear in Appendix A and at the strategic planning Website referenced in the appendix.

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 to the five year new program list is are due. Each College and Department has established internal procedures for updating and modifying its mission statement, and the missions of the individual colleges were reviewed within the Strategic Planning process two years ago.
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 recently 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 was reviewed and revised two years ago within the Strategic Planning five year process. 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. The Office of Academic Affairs will solicit white papers for the development of a new list in Spring 2004. It is anticipated that the next DCU revision to its program list will be Fall 2004.

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

POLICY 1.4.1: Establishment of UCF's internal 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. The priorities for developing new academic programs and modifying or terminating existing programs are identified in the strategic plan as described in Academic Program Element Policy 1.3.1.

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 The University of Central Florida will be the nation's leading metropolitan research university recognized for its intellectual, cultural, technological, and professional contributions and renowned for its outstanding programs and partnerships.

POLICY 2.1.1: Selected graduate programs areas were targeted in the strategic plan for support in order to achieve or retain international prominence.

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.

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 drafted an international strategic plan to present to the provost in Spring 2004.

POLICY 3.1.2: The University will explore methods of promoting its four strategic goals:

- Infuse the undergraduate and graduate curricula with international and cross-cultural perspectives.
- Encourage socially enriching experiences for students, faculty members, and staff members that lead to international and cross-cultural understanding.
- Facilitate cross-cultural opportunities for the UCF community and the Central Florida metropolitan region.
- Promote international programs and partnerships that assure prominence for global competence.

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 by following the recommendations of the two Presidential Commissions: the Commission on the Status of Women; and the Commission on the Status of Racial and Ethnic Minorities.

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: UCF will arrange to create a way to categorize UCF partnerships.

POLICY 5.1.3: 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.

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.

UCF MISSION STATEMENT

The University of Central Florida is a public multi-campus, metropolitan research university, dedicated to serving its surrounding communities with their diverse and expanding populations, technological corridors, and international partners. The mission of the university is to offer high-quality undergraduate and graduate education, student development, and continuing education; to conduct research and creative activities; and to provide services that enhance the intellectual, cultural, environmental, and economic development of the metropolitan region, address national and international issues in key areas, establish UCF as a major presence, and contribute to the global community.

UCF VISION

The University of Central Florida will be the nation's ***leading metropolitan research university*** recognized for its intellectual, cultural, technological, and professional contributions and renowned for its outstanding programs and partnerships.

UCF CORE VALUES

Values Statement

Integrity, scholarship, community, creativity, and excellence are the core values that guide our conduct, performance, and decisions.

The UCF Creed

Integrity

I will practice and defend academic and personal honesty.

Scholarship

I will cherish and honor learning as a fundamental purpose of my membership in the UCF community

Community

I will promote an open and supportive campus environment by respecting the rights and contributions of every individual.

Creativity
I will use my talents to enrich the human experience.

Excellence
I will strive toward the highest standards of performance in any endeavor I undertake.

UCF GOALS

Goal 1: Offer the best undergraduate education available in Florida.
Goal 2: Achieve international prominence in key programs of graduate study and research.
Goal 3: Provide international focus to our curricula and research programs.
Goal 4: Become more inclusive and diverse.
Goal 5: Be America's leading partnership university.

STRATEGIC INITIATIVES

- Promote Excellence in Undergraduate Education
- Increase Prominence in Graduate Studies
- Foster Excellence in Research and Creative Activities
- Promote Visual and Performing Arts
- Contribute to Regional Economic Development
- Expand Access to Educational Excellence
- Enhance Collaboration
- Expand Partnerships with Schools
- Increase Operational Excellence
- Enhance UCF Community
- Increase Visibility
- Enhance University Resources

UCF Strategic Plan Website: http://www.spc.ucf.edu/

APPENDIX B: FIVE-YEAR STRATEGIC PLANNING CYCLE

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

Year #1	Obtain Approval of New UCF Strategic Plan in Fall Measure Attainment of UCF Goals Provide Input to DCU for their Master Plan
Year #2	Measure Attainment of UCF Goals Receive New DCU Master Plan
Year #3	Produce Mid Course Correction on Existing UCF Plan Provide Input to DCU for their Mid Course Correction
Year #4	Measure Attainment of UCF Goals Receive 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: The University of Central Florida will be the nation's leading metropolitan research university recognized for its intellectual, cultural, technological, and professional contributions and renowned for its outstanding programs and partnerships.

OBJECTIVE 1.1: UCF shall plan for and support on-campus (Main Campus Only) student enrollments of 30,135 FTE and 48,526 headcount by the year 2014-15.

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

Year	Annual FTE	Fall Headcount
2002-03	22,626	35,442
2005-06	25,906	40,403
2014-15	30,135	48,526

POLICY 1.1.2: It is important to note that the FTE and Headcount projection data shown above are based on UCF's official (main campus) projection data delineated apart from distance education or regional campus enrollments. The University has suggested that it try to achieve the goal of 20% graduate enrollment during this planning time line. 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 projections" for purposes of campus planning. It is crucial for a complex campus such as UCF, which has most always exceeded funded enrollment growth, to be sufficiently prepared with the proper physical facilities.

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

POLICY 1.2.1: Through an established approval process, UCF shall establish the following academic programs between 2004-05 and 2007-08. The Division of Colleges and Universities has a 5-year cycle for new program planning and development. Each year this list is reviewed by UCF's Academic Affairs division and revisions may be submitted to the Division of Colleges and Universities for approval. It is anticipated that this list will be updated in Fall 2004.

By college, the new programs to be implemented at UCF are:

College of Arts and Sciences
- MFA in Creative Writing (2005-06)
- MFA in Dance (2007-08)
- MFA in Film (2004-05)
- MFA in Music (2004-05)
- MS in Anthropology (2006-07)

College of Business Administration
- No changes during this time period

College of Education
- MS in Assistive Technology (2007-08)

MS in Exercise Physiology (2005-06)
MS in Marriage and Family Counseling (2004-05)
MS in Middle School Education (2005-06)
MS in Sport Leadership (2006-07)
PhD in Exercise Physiology (2006-07)

College of Engineering and Computer Science
BS in Biomedical Engineering (2004-05)
MS in Biomedical Engineering (2007-08)

MS in Software Engineering (2006-07)
PhD in Aerospace Engineering (2005-06)

College of Health and Public Affairs
BS in Nutrition (2005-06)
MS in Nutrition (2006-07)
MS in Urban and Regional Planning (2005-06)
PhD in Criminal Justice (2004-05)
PhD in Urban and Regional Planning (2007-08)

OBJECTIVE 1.3: To define the planned student enrollment distribution by college and level.

POLICY 1.3.1: Planned student enrollments 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 for new programs.

POLICY 1.4.1: Besides those funds distributed based on line items, specials, and other considerations, the Office of Academic Affairs shall apply the Pegasus model for the distribution of funds based on enrollment. Also, 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, including that portion expected to come from Academic Affairs, 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 through the established Program Review process.

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 approximately 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)~~1013.30, F.S., shall be reviewed and adopted under the provisions of s.~~240.155(6) (8)~~ 1013.30~~,~~ 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 Academic Program Element
Data and Analysis
2005-2015 Campus Master Plan Update

~~**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 referenced under Policy 1.3.1 of the Goals, Objectives and Policies for this element. ~~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/Interdise. 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 Undergraduate	14,049	17,250	19,834
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.~~ The University shall encourage beautification of the campus boundaries especially along Alafaya Trail and the South Connector Road to the Research Park.

POLICY 1.1.16: The University shall consider the use of Pedestrian and bicycle paths that connect the campus with the research park.

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.

POLICY 1.2.6: Golf cart use within the academic circle shall be minimized.

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~~ perimeter of the campus~~.~~ where not superceded by another element of the master plan.

POLICY 1.3.3~~2~~2: 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~~3~~3: Develop visual and physical links with the community that encourage public transportation and participation in campus activities.

POLICY 1.3.5~~4~~4: 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.

POLICY 1.5.9: The University shall encourage water management practices so that post development runoff is less than or equal to pre-development runoff.

a) Existing Development in the Campus Context Area

Orange County designates the University as Institutional Future Land Use and ~~.Tt~~he area in which the University ~~of Central Florida~~ is situated has been identified, by Orange County Planners, as an "Activity Center"; a term used to classify areas undergoing increasing growth and high density development. This growth, of which UCF has been a catalyst for, has brought to the area a mixed range of development, including: high-tech industries, commercial development, office parks, and a burgeoning housing market.

a)1. Campus Open Spaces Structure

Open space areas on campus are shaped by the building and landscape which surrounds them. ~~There are presently few spaces on campus that are contained or defined, and even fewer that display a sequence or are linked. Yet the framework needed to implement these qualities is presently in existence. Among t~~The space~~s containing these qualities (figure 3.1) is the area~~ between the Library and the Administration Building, ~~which~~ is both defined~~,~~ by the two buildings and landscape features, and has a visual sequence, from the Central Florida Boulevard entrance to the spaces flanking it. ~~Others include the new dormitory buildings, which are sited so that they form three small residential quadrangles; and the Greek Park area, which is done in the tradition of the campus "Frat Row". Most of the remaining areas, although lacking these qualities, present reasonable opportunities for the implementation of those same attributes. Among these are the area bounded by the Library,~~ Phillips Hall and the Arts and Humanities Building; which is unbounded on its eastern corner, the area ~~between the CREOL, Engineering and Business Administration, and Chemistry Buildings; which is undefined on most of its southeastern edge, and the large amorphous area between the Chemistry Building, the Health and Physics Building, and the dormitories on the southern part of campus.~~

a)2. Campus Visual Structure

~~There are approximately fifty two~~ ~~p~~Permanent building on campus~~,~~ range~~ing~~ in height from one to five stories. The exteriors of these buildings are predominantly brick. Architectural details, done in concrete and some curtain wall areas, are the only general exceptions. The predominance of brick, accompanied by the relative scale of the buildings on campus, help create a significant level of visual continuity. The campus is shaped by the natural landscape from which it has been carved. It is structured so that all academic and administrative buildings lie within an area (the Academic Core) between the 400 and 1200 foot circles radiating from the center of campus. Residential buildings lie outside the 1200 foot radius and are bounded on the outside by Gemini Boulevard. Athletic facilities lie outside Gemini Boulevard, and are mostly found in the southern part of campus, with the exception of the Fieldhouse and track facility located on the northeastern part of campus.

The UCF main campus is defined on all sides by a landscape buffer, with the only visual breaks into it occurring at the entrances into campus; which in turn help define these entrances. ~~Yet at present only the Central Florida Boulevard Entrance displays the character of a traditional campus entrance (see Figure 3.2).~~

~~**b) Building Service Areas**~~

~~The administration Building's service entrance is located at the center of its northeastern façade. The Library has a service yard located on its eastern side and accessed from Pegasus Circle.~~

-

~~The Theatre has a service area on its elevation facing Pegasus Circle, from where it is accessed.~~

-

~~At the Student Center the service area faces Gemini Boulevard S.E., and it is also accessed from there.~~

-

~~The Health and Physics Building is serviced from Mercury Circle on the side of facing it.~~

-

~~Computer Centers Phase I & II are Serviced from Pegasus Circle.~~

-

~~The Physical Plant complex's yard, on its southern side, is serviced from Libra Drive.~~

-

~~Building Services is serviced from its southeastern side by Libra Drive.~~

-

~~The Rehearsal Hall's Service area faces and is accessed by Pegasus Circle.~~

-

~~The Biological Science Building is serviced from its extreme southeastern corner.~~

-

~~The Central Receiving/Print Shop, with service areas on its southern side and its northwestern corner, is serviced from Libra Drive.~~

-

~~The Student Services Building also has two service areas one adjacent to the Rehearsal Hall's service area, the other faces Pegasus Circle from where they are both accessed.~~

-

~~The Student Health Center has a service area on its eastern side and off of Apollo Circle.~~

-

~~The Commons Building's service entrance is located on its northeastern side and it is accessed from a road adjacent to parking lot D1.~~

-

~~The Wayne Densch Athletic Facility has a service area located between the two buildings on their southern side.~~

-

~~The Engineering and Business Administration Buildings share a service area facing Pegasus Circle, from where it is accessible.~~

-

~~The Campus Police Building is serviced from its south side through Libra Drive.~~

-

~~The Arena/Fieldhouse is served from its rear, which faces northeast, and accessed by Gemini Boulevard North.~~

-

~~The Arts Complex is serviced from Aquarius Drive onto which its service areas faces.~~

-

~~The CREOL Building has a service area located on its eastern edge.~~

-

~~On Campus Dumpster Units~~

~~No.~~	~~Amount of Units~~	~~Location~~
~~1~~	~~1~~	~~S. Orlando Campus~~
~~2~~	~~1~~	~~ROTC~~
~~3~~	~~1~~	~~Visual Arts Complex #51~~
~~4~~	~~1~~	~~Bio-Science Building~~
~~5~~	~~1~~	~~Engineering~~
~~6~~	~~1~~	~~Business Administration~~
~~7~~	~~1~~	~~HVAC~~
~~8~~	~~1~~	~~Building 25~~
~~9~~	~~1~~	~~BPW Scholarship House~~

10	4	Dorms E, F, G, & Commons
11	1	Libra Portables
12	2	Cafeteria Marriott
13	1	Humanities Building
14	1	Bldg. Serv./ Creative School
15	1	University Theatre
16	1	Athletics 38/39
17	1	Bookstore SSC
18	1	Marriott SSC
19	1	Wild Pizza SSC
20	1	Student Center
21	1	Lake Claire
22	1	Library
23	2	Health & Physics
24	1	Physical Education Bldg.
25	1	Physical Plant
26	4	Dorms A, B, C, & D
27	1	Howard Phillips Hall
28	1	Administration Building
29	1	Waste Water
30	1	Police Station
31	2	Fieldhouse - Arena

On Campus Recycling Pick-Up Locations

No.	Amount of Units	Location
R-1	1	Administration
R-2	1	Business Administration
R-3	1	Physical Plant
R-4	1	Library
R-5	1	Recycling Center
R-6	1	Recycling Center

Refer to Figure 3.3

b) High Activity Building and Spaces

Recreation Center

Student Union

Phillips Hall Kiosk
Used as a quiet gathering and study space by students. Professors often hold outdoor classes in this area.

Sidewalk north of Chemistry
This is a high activity area in circulation terms. It is a main pedestrian artery linking Business and Engineering and the Library Computer Center areas. This sidewalk also feeds into a major parking area east of the Engineering Building.

Reflecting Pond between the Library and Administration
This area is very active gathering space for both socializing and studying.

South Entrance to the Library

~~landmark, and a place to meet.~~

Breezeway dorm mailboxes
~~A main point of entry into the Student Center, and adjacent to the Organizations lounge, it is often used as a space to hold bake sales, and other similar activities.~~

Entry to Student Center across from activities desk
~~Another major activity point of entry into the Student Center, used mainly by those whose destination is the activities desk.~~

Sidewalk between dorms and Oasis
~~Activated by dorm residents using food services~~

Green area north of Student Center
~~Used by student groups for pep rallies and gatherings, and by Greeks for RUSHES, Homecoming activities, special fairs and similar activities are often held in this area.~~

Lake Claire
~~Used for after hours socialization events, picnics, etc. by Greeks and other organizations.~~

As a general note, those spaces activated by their vicinity to the Student ~~Center will likely move to the Pegasus Circle area within the next two years, because of the construction of the new Student Union (Figure 3.4).~~

c) Existing Functional Linkages

Automobile
All vehicular access to the campus is through University Boulevard, Alafaya Trail, ~~and~~ Research Park, and McCulloch Road. ~~Improvements to the East-West Beltway Extension and the widening of University Boulevard have significantly improved access from the west and south.~~ Accessibility to the main campus from the eleven county service area and the area campuses is through various major roadways including I-4, the Beeline Expressway, the East-West Expressway, and State Road 50. University Boulevard is considered to the main vehicular entry into campus. Centaurus Drive, Gemini Boulevard North, and Central Florida Boulevard are the other important formal entrances. The Central Florida entry displays the most formalized type of entry into the campus, because of its axial relationship.
Pedestrian Hazards are created whenever vehicular circulation crosses parking lots, as it does in many instances throughout campus. The breakdown of Gemini Boulevard on the eastern part of the University contributes greatly to one such conflict. Other similar conflicts occur when service vehicles invade the pedestrian rings.

Bicycle
Bicycle transportation provides many students with an economical and efficient source of transportation, due to the proximity of off-campus housing. There are many bicycle paths found throughout campus including those flanking Libra Drive and Gemini Boulevard North, and going from Alafaya Trail along Central Florida Boulevard to the Administration Building.

Pedestrian
The campus of UCF was planned and developed with the pedestrian in mind, and based on a maximum walking time of eight minutes to the center of campus. The 1200 foot radius outer (Apollo) ring was implemented to serve this purpose, with the 800 foot radius innnter (Mercury) ring providing a five minute walking trip to the campus center. A third ring (Pegasus) on a 400 foot radius is the only one completed, and marks the center of campus. Secondary pedestrian paths provide access between buildings throughout campus (Figure 3.5).

Transit

~~There are currently seven transit routs serving the University, all of which are in standard 40 passenger autobuses. Their scheduling breakdown is as follows:~~

~~-~~

~~System Route~~	~~Frequency~~	~~Days~~	~~Operation Hours~~
~~Laser/ Alafaya Commons~~	~~30 min.~~	~~M-F~~	~~7:15 AM - 6:15 PM~~
~~Laser/ Quadrangle~~	~~30 min.~~	~~M-F~~	~~7:15 AM - 6:15 PM~~
~~Laser/ Research Park~~	~~30 min.~~	~~M-F~~	~~7:15 AM - 6:15 PM~~
~~Pegasus~~	~~20 min.~~	~~M-F~~	~~8:30 AM - 6:30 PM~~
~~Lynx/ 13~~	~~30 min.~~	~~M-S~~	~~5:45 AM - 12:00 AM~~
~~Lynx/ 30~~	~~60 min.~~	~~M-S~~	~~6:00 AM - 7:40 PM~~
~~Lynx/47~~	~~60 min.~~	~~M-S~~	~~5:00 AM - 7:40 PM~~

~~-~~

~~The Pegabus provides continuous free service to everyone on the UCF campus (Figure 3.6), Monday through Friday while school is in session. The black and gold Pegabus stop signs are located every 1 ½ blocks along the route. The Pegabus makes its loop in about twenty minutes, so a person is never more than twenty minutes from a free ride. It can also connect a person with the convenient Laser Lynx and Regular Lynx services, which access the greater community.~~

UCF is meeting time demand for transportation of its students. The UCF Shuttle Transportation System serves many local student residential communities providing safe and convenient transportation services to and from the main campus of UCF. The transportation service allows students to leave their vehicles at their place of residence. There is no per trip cost to ride and students have the available benefit of central access in the core facilities of the campus. The campus destination points are strategically selected to allow students a short distance to classrooms or campus activities.

d) Character of Existing Context Area

UCF is bordered by areas classified for diverse use. On its southern border lies the Central Florida Research Park, whose designation is mainly for high-tech industrial use. Small commercial areas, multi-family housing, and vacant land are found to the west of Alafaya Trail, and south of University Boulevard. A planned development called the Quadrangle ~~is in the works~~ exists to the north of University Boulevard. This complex is made up of a mix of offices, commercial areas and hotel facilities. The demand for space will undoubtably perpetuate as more corporations relocate to the UCF area.

e) 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~~2000. The Wayne Densch Sports Center ~~Communications~~ Building was built in the north section of campus, ~~near the Lake Claire housing development~~ adjacent to North Orion Boulevard. The Burnett Honors College ~~Health and Public Affairs~~ Building was added to the ~~east~~west of the Student Center~~. Furthermore~~, and the ~~bookstore~~Teaching Center Academy was added near the ~~library~~Education Complex~~, 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.

f) 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. A parking garage could be placed just to the southeast, 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 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.

g) 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 opening of the Academic Villages housing complex and new recreation Center south of the Student Resource Center (SRC) 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 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/CAPITAL IMPROVEMENTS

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Proposed Buildings
- Existing Buildings
- Open Spaces
- Proposed Parking Garages
- Proposed and Existing Surface Parking
- 6 Capital Improvements List

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

0 400' 800' 1600'

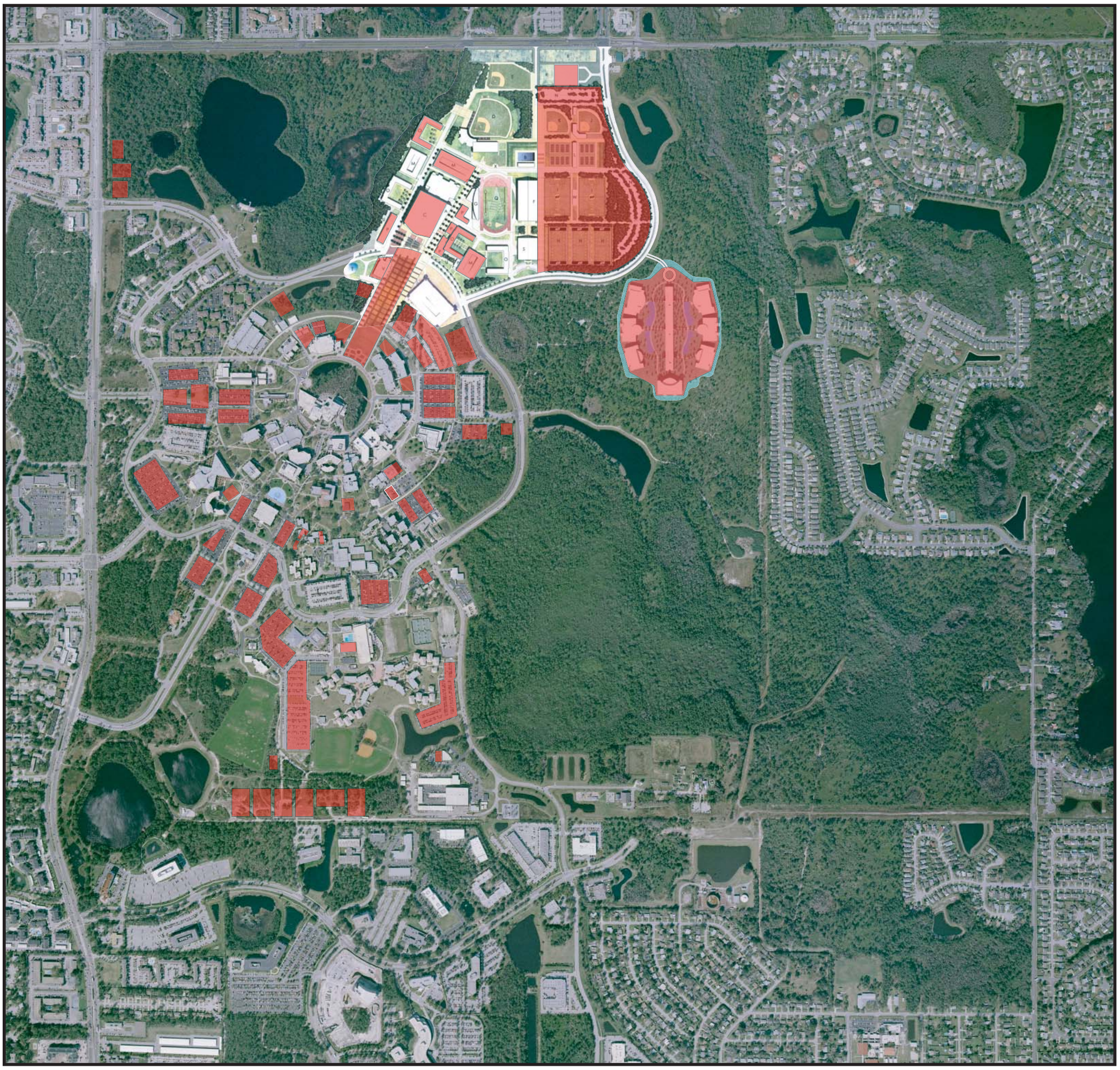

Figure 3-1-A

PROPOSED DEVELOPMENT

LEGEND

Proposed Buildings/Parking Garages /Parking Improvements

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

0 400' 800' 1600'

2.4 Future Land Use Element
Goals, Objectives and Policies
2005-2015 Campus Master Plan Update

GOAL 1: To create development patterns that direct future growth ~~into developable areas~~ to appropriate areas on campus ~~away from environmentally sensitive areas, in a manner that is consistent with principles set forth in the Urban Design Element~~ in a manner that promotes the educational mission of the university, the protection of environmentally sensitive areas, and compatibility with the surrounding community.

OBJECTIVE 1.0: Promote future land use development on the campus that provides for a full range of land uses and intensities of use, consistent with the goals, objectives and policies of the campus master plan , host local government's master plan, and affected local governments master plans and in accordance with the following policies.

Policy 1.0.1: Land use categories and related intensity of use shown in the Campus Master Plan on the Future Land Use Maps (Figures 4 1 and 4-2) shall be defined as follows:

Academic/Research Use: This land use category shall allow academic/research uses at intensities ranging up to a floor area ratio of 3.0 for new construction or renovation. The academic/research use classification identifies those areas on the campus that, due to topography, soil conditions, adjacent land uses, existing space utilization and utility locations, proximity to existing and planned multimodal transportation systems, and existing development patterns are appropriate for Academic/Research development. This promotes an increase in FAR ratios within the academic core areas, supports the cohesive functioning of academic units through space allocation and facilitates the clustering and concentration of existing and emerging academic/research areas on the campus in pedestrian zones within reasonable walking distance of classes.

Support Use: This land use category shall allow support facilities at intensities averaging 1.0 FAR. The Support classification includes administrative and similar nonacademic uses, and identifies those areas on the campus that, due to topography, soil conditions, adjacent land uses, existing space utilization and existing development patterns are appropriate for support facilities. This promotes providing support facilities on the campus within or immediately adjacent to academic/research and housing areas.

Residential Use: This land use category shall allow housing uses at densities ranging from 57.2 to 1~~2~~ 45.0 beds/acre. The housing classification identifies those areas on the campus that, due to topography,

soil conditions, adjacent land uses, existing space utilization and existing development patterns are appropriate for housing development. Generally, the housing land use will be promoted outside of the academic core to encourage students to walk to the academic core.

Utility Use: This land use category shall allow utility uses at intensities averaging 1.0 FAR. The utility classification identifies those areas on the campus that, due to topography, soil conditions, adjacent land uses, and existing and proposed development patterns, are appropriate for utility development and telecommunications facilities and can best serve the existing and projected demands for facilities on the campus.

Parking Use: This land use category shall allow parking uses at intensities ranging up to 800 spaces

per acre for structured parking. The parking classification identifies those areas on the campus where:

- the location of parking structures should help to direct trips to the campus in a manner that promotes and encourages a pedestrian-friendly academic oriented campus
- roadways with adequate capacity and on which heavy traffic will help to minimize impacts on adjacent land uses;
- due to topography, soil conditions, archaeological and historic sites,
- adjacent land uses, and existing and proposed needs, are appropriate for
- parking development; and
- structured parking facilities can be used to conserve available land and
- promote the development of the 'intercept' parking concept.

Recreation/Open Space Use: This land use category shall allow active (activity-based) and passive (resource-based) recreation uses as well as general open space areas. A maximum FAR of 2.0 is allowed under this land use designation. The classification includes areas designated for organized sporting events (football, soccer, softball, etc.), gymnasiums such as the Recreation Services Center, workout facilities for university teams such as the Wayne Densch Sports Center, and recreation areas for the passive enjoyment of nature (picnic areas, etc.). These areas are appropriate for recreation and open space uses due to topography, soil conditions, and adjacent land uses.

Conservation Use: This land use category shall allow conservation uses in conformance with the Conservation Element of the Master Plan. Conservation areas are identified in Figures 4-1 and 13-1 of this Plan. This land use category shall allow Conservation uses at an intensity of a 0.05 FAR. There shall be no construction in these areas except for minimal structures and improvements required to provide safe access and essential support functions except pursuant to an amendment to this Plan adopted in accordance with the requirements set forth in Florida Law and this Plan. The conservation classification identifies those areas on the campus that, due to topography, soil conditions, archaeological and historic sites, plant species and wildlife habitats, wetlands and their required setback buffer areas and instructional uses, are appropriate for conservation use.

Mixed Use: This land use category will allow for a mixture of land uses in a specific area(s) as shown in Figure 4-1. Uses allowable under this designation include academic/research, support, residential, parking, recreation/open space, retail/commercial and utilities at a maximum FAR of 3.0. The purpose of the category is to call out specific areas on campus that shall develop one or more uses that shall be defined through the planning and development process.

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

POLICY 1.1.1: UCF shall ~~establish~~ allow for Conservation areas as identified on the Future Land Use Map (Figures 4-1 and 4-2) 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~~ has been established by the 1996 Hartman survey and shall be maintained for the study and preservation of native plant and animal species. The

University will work with the Director and 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. discouraged within the boundaries of the Arboretum.

POLICY 1.1.5: Prior to clearing the 6.7 acre housing site in the Northwest Corner, the University shall construct a permanent fence along the northern boundary and northern two-thirds of the eastern boundary of the 6.7 acre site in order to separate the residential area from the conservation area.

POLICY 1.1.6: The parking facility to be constructed north of the arboretum shall not extend significantly beyond the footprint of the existing parking lot as shown in Figure 4-3.

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),~~ 1013.30(6) and (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~~ 1013.30(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.~~ A 200-foot natural or landscape buffer shall be maintained around the perimeter of the campus where not superceded by another element of the master plan as shown on Figure 4-1. ~~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.

POLICY 1.2.4: Prior to adopting any amendments Plan that affect lands designated as conservation, the University shall do the following:

(1) Perform reasonable site specific environmental analyses, including qualitative state and federal listed plant and animal species surveys, water quality impact analyses, and alternative location

assessments;

(2) Comply with section 1013.30, Florida Statutes, even for those amendments that fall within the exemptions set forth in Sections 1013.30(9)(a)-(c), Florida Statutes;

(3) Require no less than a two-thirds majority vote of the University's Board of Trustees to approve such amendments; and

(4) Notify the Director of the Arboretum of any proposed amendments to lands designated as conservation

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 1,200-foot radius (Apollo Circle) whenever possible. Research functions may be located outside of the main academic area.

POLICY 1.3.2: Academic core areas are important formal open space systems and 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 1,200-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 or for other mixed use areas outside of Gemini Boulevard. ~~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 1,200-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 200~~5~~ 8.

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~~ garages as budgets permit.

POLICY 1.3.8: In order to minimize automobile traffic, and therefore conflicts resulting from high vehicular levels of service, future parking ~~decks~~ garages 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 University Master Planning Committee along with the administration, faculty and the Office of Facilities Planning shall review all development proposals for compliance with the Campus Master Plan's criteria for the Future 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 1.3.1~~2~~ 1: 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, Urban Design ~~Plan~~ Element, and all other applicable master plan elements.

~~**POLICY 1.3.13 2:** 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/Research:~~
~~-~~
~~East Academic Area~~
~~-~~
~~Recreation/Open Space: .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) and the campus stormwater permit(s) issued by the St. Johns River Water Management District.

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~~ radius sidewalks, 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. Soil constraints shall be demonstrated through formal studies prior to development.

POLICY 1.7.4: Future development shall not alter the topographical features and surface water run-off patterns adopted by this Master Plan and the current adopted Campus Stormwater Master Plan approved by the St. Johns River Water Management District.

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.

GOAL 2: The University shall maintain commitment to the protection of its ecosystems and lands of significant environmental importance to ensure that these resources are protected for the benefit of present and future generations while accommodating the continued development and expansion of the campus' built environment.

OBJECTIVE 2.1: To designate environmentally sensitive lands for protection based on state and regionally determined criteria.

POLICY 2.1.1: The University hereby creates a new future land use designation of "Conservation Easement Lands" for the purposes of environmental protection of lands that are set aside in perpetuity pursuant to a recorded conservation easement. This new designation will allow very-low impact recreational or educational uses such as hiking, non-motorized boating, bird watching, horseback riding, fishing, primitive camping and nature study, that utilize natural amenities of such sites and such other uses that are not in violation of the recorded conservation easement.

2.4 ~~(2)~~ Future Land Use Element Data and 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.~~

Land Use Designation Summary

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. The current breakdown of the 1,415 total campus acreage is as follows: (based on analysis of January, 2004 aerial photograph and 1996 Hartmann Survey):

1018.8 acres in conservation, open space and recreation, and future impervious area
382 acres are available for future development
396 acres are currently developed
81.3 acres designated for the Arboretum

~~These academic and support categories of land are broken into subcategories for the purpose of this analysis.~~
~~2. However, I~~ 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~~ Some conservation areas are often available for passive recreational uses. ~~And it's often a fine line between such categories such as~~ Other examples of land uses blending together might include 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~~	~~10.91~~
~~Study (excl.~~	~~150,000~~	~~1.38~~	~~180,000~~	~~1.65~~	~~207,000~~	~~1.90~~

~~Library)~~						
~~Library~~	~~393,000~~	~~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 significant needs are projected for 2005 and 2010~~

~~-~~

~~-~~

The allowable land uses for on-campus development are illustrated in Figure 4-1 entitled *Future Land Use Map 2005-2015*. This figure identifies the following land use categories associated with future development sites which will accommodate proposed construction projects identified in the Capital Improvements Element of the Master Plan:

Academic/Research Land Use

Residential Land Use

Utility Land Use

Conservation Land Use

Conservation Land Use under St. Johns River Water Management District Conservation Easement

Recreation and Open Space Land Use

Ponds and Lakes

Parking Land Use

Support Land Use

Mixed Use

Existing and planned buildings and infrastructure are reflected in Figure 4-1 of the Future Land Use Element. It should be noted that the parcels proposed for development will be flexible, since the University performs a cost/benefit analysis for each set of site alternatives prior to constructing a building. Stormwater, utilities, relative location to other buildings and other criteria are considered to ensure the proposed site is most appropriate for the particular building. A description of proposed future projects is presented in the Capital Improvements Element of the Master Plan.

~~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).~~

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

~~-~~

~~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~~	~~532,005~~	~~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	393,000	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)

-

-

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

-

- 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.

-

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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)

-

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

-

- Gross vacant or undeveloped land area;

-

- Soils;

-

- Topography;

-

- Natural resources; and

-

- Historic and archaeological resources.

-

- 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.

- Careful attention should be paid to the preservation University policy calls for the preservation of areas of

ironmental significance ~~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~~ will be relatively dense in character as project budgets permit, and tie into the existing infrastructure on campus. Efforts should be made minimize the impacts of development on the arboretum. Furthermore, ~~attention should be paid to those locations where the impervious surface areas will not allow additional development~~. the University will approve new development only within the limits of all required permits from the St. Johns River Water Management District and other agencies as applicable.

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

~~-~~

~~. 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.~~

~~-~~

~~. 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.~~

~~-~~

~~. 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.~~

~~-~~

~~-~~

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

~~-~~

~~. 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.~~

~~. If the analyses in 2 (a) – (c) 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:~~

~~-~~

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

~~-~~

~~. The estimated gross acreage for each category; and~~

~~-~~

~~. 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.~~

~~-~~

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

~~. 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.~~

~~-~~

~~-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.~~

~~- 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:~~

~~-Existing land use;~~

~~-Property values;~~

~~-Constraints that may limit future development;~~

~~-Future proposed land use;~~

~~-Building conditions (if appropriate);~~

~~-Property ownership; and~~

~~-Potential acquisition and relocation costs.~~

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

~~- 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):~~

~~-Potentials for increasing development height, intensity or density on the campus;~~

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

~~-Potentials for reducing the planned future student enrollment;~~

~~-Potentials for transfer of programs to existing University satellite sites; and~~

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

~~-Not applicable.~~

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

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

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

~~-Areas encumbered by flood hazard areas as defined by the Federal Emergency Management Agency;~~

~~-Areas encumbered by stormwater management or other utility requirements of easements;~~

-

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

-

~~-Areas encumbered by electromagnetic radiation, nuclear radiation, explosion or other catastrophic hazards; and~~

-

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

-

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

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

-

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

-

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

-

~~-Other constraints.~~

-

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

~~- 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.~~

-

~~-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

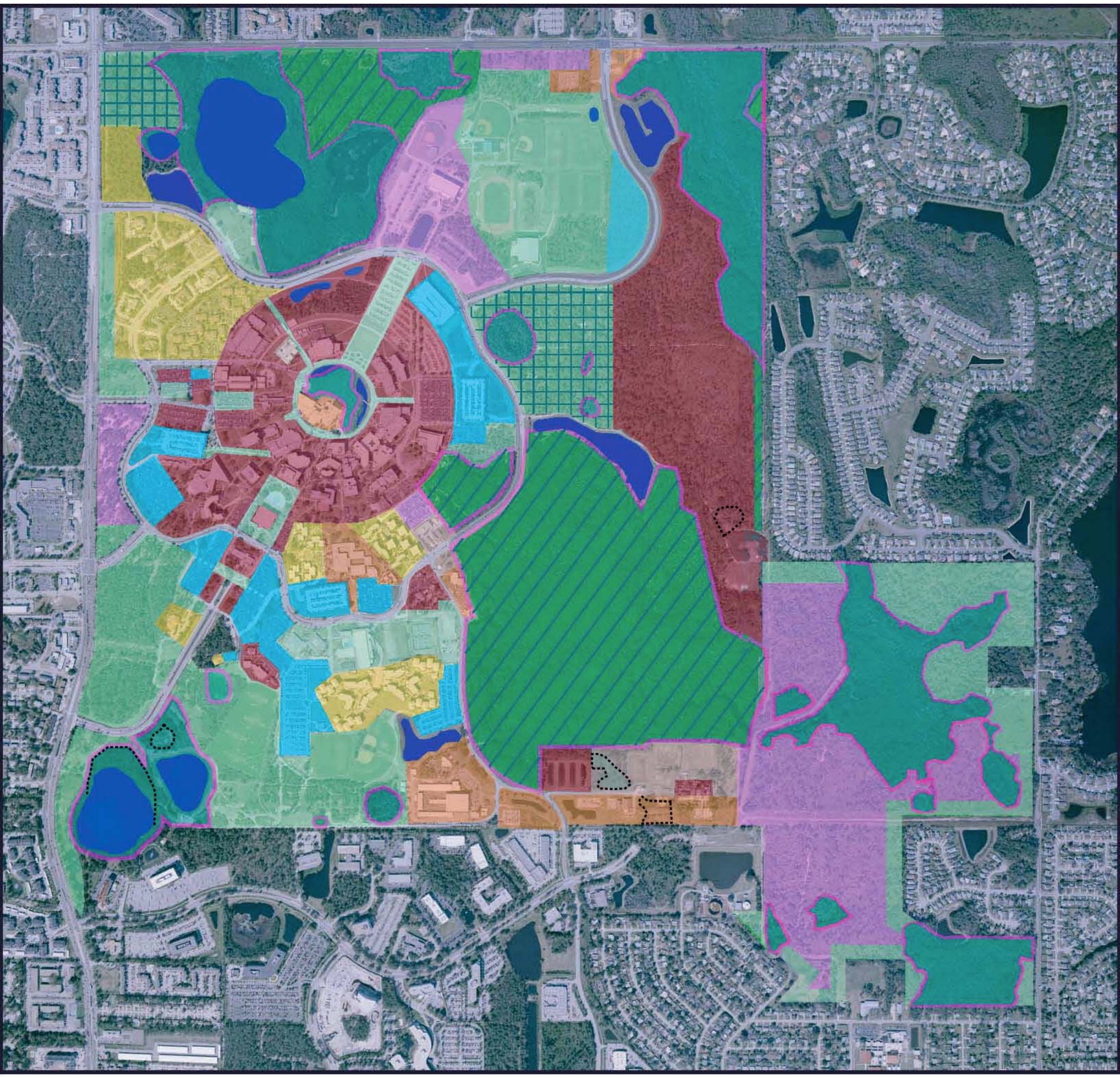
LAND USE

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015



All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

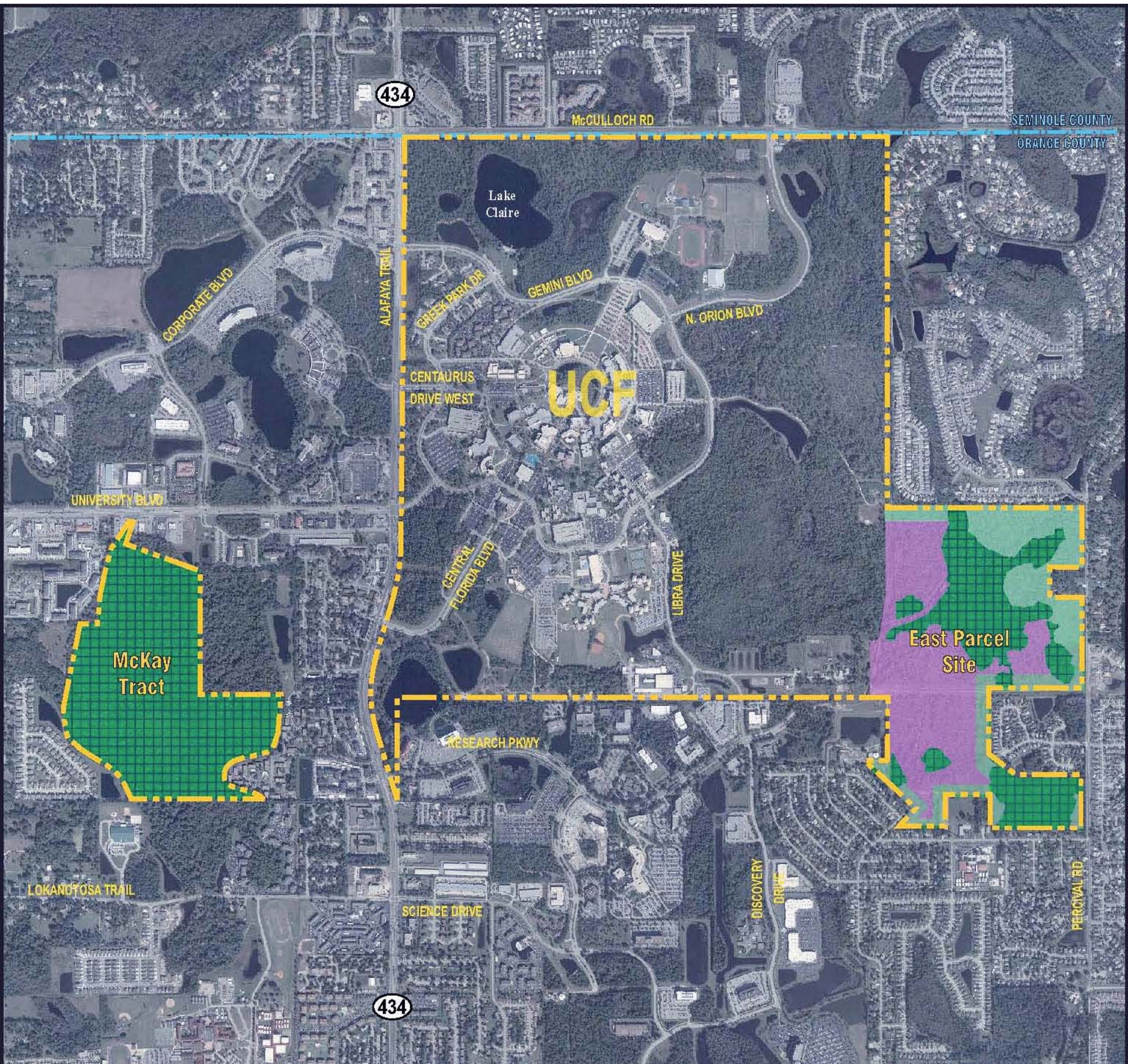


Figure 4-2

LAND PARCELS

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- UCF Campus/Tract Boundary
- Conservation/Wetland
- Recreation/Open Space
- Mixed Use

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

Not to Scale

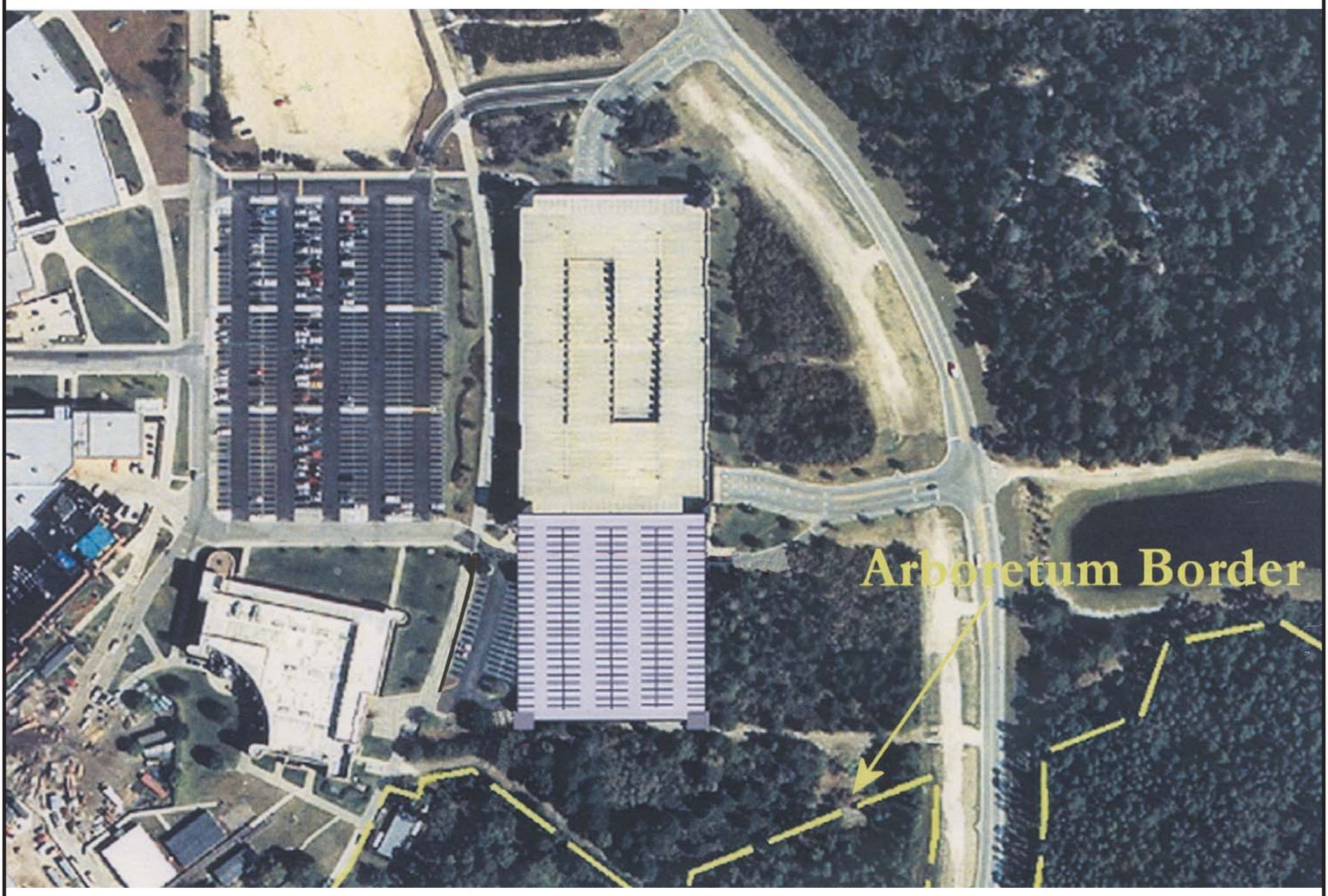


Figure 4-3

PARKING GARAGE EXPANSION

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

Not to Scale

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.

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 2005-06 and 2014-15. In keeping with earlier remarks regarding possible future "excess" enrollments, we have included, just below the official 2014-15 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
2005-2006	392,132	496,365	88,898	29,320	1,006,715
2014-2015	451,720	546,679	119,269	46,344	1,164,012
2014-2015 (projection plus 15%)	519,478	628,681	137,159	53,296	1,338,614

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 2005-06 and 2014-15.

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

Main Campus Summary	Classroom	Laboratory	Total WSCH
2005-2006	956,379	50,336	1,006,715
2014-2015	1,105,811	58,201	1,164,012
2014-2015 (projection plus 15%)	1,271,683	66,931	1,338,614

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 data provided separately in Table 2.5(1)a) and subsequent material, the University of Central Florida is projecting enrollment growth over much of this decade that amounts to approximately 1000 FTE students annually, tapering off to a lower figure as the ultimate target enrollment around 30,000 FTE at the main campus is approached. This is based on analysis by the Office of Institutional Research together with the Office of Enrollment and Academic Services.

In particular, while the 2003-04 FTE count reported by Institutional Research is 24,486, but by the year 2014-15, the projected figure becomes essentially stable at 30,015. In short, the overall enrollment growth is expected to be about 5,600 FTE students over the coming 10-year period—representing a 23% increase in student population at the main campus.

Having said this, we must recognize that for campus planning, these official enrollment projections are subject to significant uncertainty. 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 Florida's college-bound students, compared to other universities in the State system; and the relatively new and growing emphasis at UCF on graduate studies, especially at the doctoral level.

In short, our 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 2014-15 may be as much as 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 suitable 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 overall numbers of classrooms and students. On the main campus, for example, according to 1999-2000 inventory figures, the University used about 140 thousand square feet of space as "classrooms" (however, see below.) At that time, the student FTE total on the main campus was only 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 and/or updated 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 SUS classroom usage standards over past years, shown in Table 2.5(1) c)—especially given the uncertainties involved in averaging over the varying standards fo 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 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.).

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. Indeed, this process has already begun. The spaces in question 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—seven, eight, or nine 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 or at least cap the rental of spaces off campus—and at the same time, turn back to laboratory and other usages a number of areas borrowed "temporarily" twenty 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, "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 what is essentially 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.

At the same time, 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 very 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, many cases exist 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 the numbers of students in ongoing programs but from attracting students to wholly new programs. Some 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 key areas such as advanced materials processing and analysis (particularly in regard to "I-4 High Tech Corridor" partnership activities), biomolecular sciences, and nanosciences. 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 needs are likely to be much greater than might be inferred from the data provided separately in Table 2.5(1)c) showing "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 which 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, further evidence concerning the need for research lab space can be obtained from the existing SUS study titled "Analysis of 2005-06 Space Needs by Category; Main Campuses." This was generated some time ago, and it represented the last of its type published by the Board of Regents staff, before "devolution" of the system took place. The study was based on the UCF space inventory as of June 30, 1998, together with projects funded for construction through 1999-2000, along with student enrollments projected to 2005-06, which were used with the long-standing SUS formula for space needs in terms of enrollments.

At that time, UCF's "Net Space Need" for research labs in 2005-06 was estimated to be 168,707 square feet. However, this assumed total UCF enrollments of 21,649 FTE in that year. But in actual reality, the university already had surpassed that enrollment mark by 2001-02, and currently (i.e., as of 2003-04) its total enrollments are 26,775 FTE. By 2005-06, they are now projected to be 29,255 FTE. If translated into space terms (using the traditional enrollment-based formula), this excess growth implies that the earlier SUS estimate of research "net space need" by 2005-06 was short by a factor of nearly two—i.e., 335K square feet, rather than 169K square feet.

Offices. While offices are not viewed, strictly speaking, as "academic spaces," mention of them is made here for two reasons. First, UCF's continued growth of enrollments over the coming decade will require additional large increases of 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, even the state's earlier, summer 1998 estimate of "net space needs" for 2005-06 (mentioned above under "Research Laboratories") concluded that UCF's shortage of office space would exceed that of any other space type. Specifically, the 1998 estimate was that office shortages in 2005-06 would total about 400,000 square feet—more than the combined shortages of both classrooms and teaching labs. Since then, however, excess increases of enrollments, beyond the 1998 projections, have substantially boosted the 2005-06 figure for

unmet office needs—making the actual total closer to 500,000 square feet.

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.

To be sure, one must note that 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 University Library. In that regard, recall the Data provided separately in 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. (In general, roughly 20% of main campus study areas are outside the Library.)

Given that the state's overall 1998 estimate of UCF's 2004-05 need for main-campus "Study" space was around 300,000 square feet, while the Library part was 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 was estimated (that is, exclusive of the Library). If we use the updated enrollment projections, this increases by another 100,000 square feet, of the "non-library" part can be considered to be about 20,000 square feet.

Area Campus Facilities. The enrollment growth projected for the decade in question will affect space needs at the Brevard and Daytona area campuses, as well as other instructional sites in the UCF service area now under development, along with those at the Orlando area ("main") campus. Indeed, since growth at the area campuses has become a special priority of UCF, 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 6,000 FTE over the given ten-year period (about 16%), the area-campus portion will be increasing by perhaps 2000 FTE (about 50%). About one-third of this will be divided more or less equally between the two locations mentioned, with the remaining two-thirds being distributed among the remaining sites..

From what was said earlier, it follows that a ten-year enrollment growth of perhaps 300 FTE students at either of the two main area campuses will require the addition of no more than roughly 3,000 square feet of general purpose classrooms (i.e., roughly 200 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 o 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).

Table 2.5(2)d) shows the projections of future needs for instructional, research, and study space, in terms of Net Assignable Square Footage (NASF). They are based on the SUS study "Analysis of 2005-06 Space Needs by Category; Main Campuses," mentioned above, with adjustments for excess enrollments since it was published in 1998.

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

SPACE TYPE	NASF		
	2005-06	**2014-15**	**2014-15 Plus***
Classroom	347,257	416,507	478,983
Teaching Laboratory	393,773	472,299	543,143
Research Laboratory	466,618	559,670	643,621
Office (incl. conference)	405,767	486,685	559,688
Study (incl. Library)	1,130,413	1,355,838	1,559,214
Total	2,743,828	3,290,999	3,784,649

* Figures for "2014-15 Plus" reflect enrollments 15% greater than those of the official projections.

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	520,886	624,761	718,475
Teaching Laboratory	590,659	708,448	814,715
Research Laboratory	699,927	839,505	965,431
Office (incl. conference)	608,651	730,028	839,532
Study (incl. Library)	1,695,619	2,033,758	2,338,821
Total	4,115,742	4,936,499	5,676,974

(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, five stories in height and not more than 300 feet in length we end up with between twenty-six and thirty-three new buildings. Each building would accommodate approximately 150,000 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

LEGEND

Proposed Buildings

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

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All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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2.6 Support Facilities Element
Goals, Objectives and Policies
2005-2015 Campus Master Plan Update

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~~1: 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~~2: 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~~ 3: A future Convocation Center shall be sited near the existing Arena**.** ~~as funds become available.~~

POLICY 1.2.~~5~~ 4 : Allocation of funds for future support facilities shall follow the Capital Outlay Improvements plan.

a) As enrollment continues to grow at the University, support facilities must be provided that parallel those demands created by academic facilities. The focus of Support Facilities planning considers capital project as well as intramural and casual use athletic facilities. The analysis of indoor support space is based on assignable square footage of existing or new construction that can provide facilities for office/computer, student services, auditorium and audio-visual space.

The amount of space required for support facilities is related to enrollment growth and the type of facilities constructed. The amount of support space needed in the future will be determined by user demand and space needs as reported by support service providers in consultation with Facilities Planning.

~~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.~~

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 are currently limited with regard to student use and number of facilities. Looking at the student population, number of intramural sports offered, number of sport clubs, and ideal standards for usage, the number of fields at UCF are over capacity. The future expansion of intramural fields in the south section of the campus will allow increased capacity, more flexibility for field rotation to avoid compaction and abuse.

Calculations used to assess facility sufficiency take into consideration a number of factors. These factors include variety of fields (club sports, intramural sports, or open recreation), frequency of use, student enrollment, and unique layout diminishing the flexibility for use (i.e. softball field).

The methodology used for determining the number of fields an institution needs for appropriate recreation use is based on a number of factors. The general standards, as recommended by the National Intramural Recreational Sports Association (NIRSA), are 1 acre per 1000 students enrolled. Additionally, the number of fields can be adjusted based on number of teams, type of field (natural or synthetic surface), and appropriate field lighting. Application of this standard is dependent on the extent of land available and can be adjusted based on number of teams, type of field (natural or synthetic surface), appropriate field lighting, and scheduling of nighttime play. Presently at UCF there are currently 15 intramural sports that use outside fields, some with up to 150 teams, and 7 sport clubs. Current field space includes 18 acres of natural grass space and no lights on the fields with the exception of the two softball fields. Natural fields should ideally be programmed between 18 to 24 hours in any given week, but there are few limitations on synthetic fields.

Given these assumptions, the University of Central Florida appears in below average condition without additional fields in the south section of campus being built. If synthetic fields are used for future facilities, 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 do not appear to address the student's current and future needs for recreation space. The construction of additional recreation fields with synthetic surface and lights could provide flexibility for programming and alleviate poor field conditions.

~~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)
Administrative	69,315	46,746	22,569	56,885	12,430	65,407	3,908	75,219	(5,904)
Physical	122,342	82,507	39,835	100,402	21,940	115,445	6,897	132,762	(10,420)

Plant 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."

c) 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)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)
Administrative	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~~.

c) An assessment of the adequacy of the existing recreational facilities and open spaces to meet the projected needs of the University.

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 Recreation and Wellness Center, located by the Academic Village, has benefited the campus and helped alleviate many of the shortfalls identified in the 1995 plan. Additionally, the construction of a new leisure pool, repairs made to existing competitive pool, additional tennis courts, and a planned future addition to the Recreation and Wellness Center will also address previous concerns. Additionally, with the construction of a new leisure pool, repairs made to existing competitive pool, and additional tennis court, will also address previous concerns. The provisions adding fields, tennis courts, as well as lighting facilities continues to be at a premium when addressing the 1995 plan.

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 hosing 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.~~ 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 1.1.7: ~~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.~~ 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 1.1.8: The timing and phasing requirements and priorities for future on-campus student housing are identified in the Capital Improvements Element.

POLICY 1.1.9: 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.

~~**POLICY 1.1.10**~~

~~**POLICY 1.1.11:**~~

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 office ~~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 Housing Element
Data and Analysis
2005-2015 Campus Master Plan Update

a) Inventory of Beds (Design Capacity)

Building	Location	Design Capacity	~~Maximum Capacity~~ Utilization Capacity
Apollo Community			
Lake Hall	Main Campus	~~108~~109	108
Osceola Hall	Main Campus	~~108~~109	~~103~~98
Polk Hall	Main Campus	~~108~~109	~~108~~104
Volusia Hall	Main Campus	~~108~~109	108
Libra Community			
Brevard Hall	Main Campus	~~120~~122	~~128~~121
Orange Hall	Main Campus	~~158~~160	~~202~~158
Seminole Hall	Main Campus	~~162~~164	~~170~~162
Citrus Hall	Main Campus	116	116
Sumter Hall	Main Campus	232	232
Flagler Hall	Main Campus	232	232
Lake Claire Courtyard Apartments			
Building 55	Main Campus	47	47
Building 56	Main Campus	47	47
Building 57	Main Campus	47	47
Building 58	Main Campus	47	47
Building 59	Main Campus	47	47
Building 60	Main Campus	47	47
Building 61	Main Campus	47	47
Building 62	Main Campus	47	47
Building 63	Main Campus	47	47
Building 64	Main Campus	43	39
Building 66	Main Campus	47	47
Building 67	Main Campus	47	47
Building 68	Main Campus	47	47
Building 69	Main Campus	47	47
Building 70	Main Campus	47	47
Academic Village			
Building 101	Main Campus	143	143
Building 102	Main Campus	151	151
Building 103	Main Campus	169	169
Building 104-105	Main Campus	176	176
Building 106-107	Main Campus	180	180
Building 108	Main Campus	143	143
Building 109	Main Campus	151	151
Building 110	Main Campus	169	169
Building 111-112	Main Campus	176	176
Building 113-114	Main Campus	180	180
BPW House	Main Campus	17	15
Total		~~872~~3818	~~927~~3789

b) Graduate Student Housing

The University does not currently provide housing specifically designated for graduate students

c) Married Student Housing

The University does not currently provide housing specifically designated for married students.

d) Other On-Campus Student Housing

Fraternity/Sorority	Capacity
Pi Kappa Alpha Frat.	32
Zeta Tau Alpha Soro.	40
Delta Delta Delta Soro.	~~22~~52
Pi Beta Phi Soro.	30
Alpha Tau Omega Frat	32
Delta Gamma Soro.	30
Alpha Delta Pi Soro.	32
Kappa Delta Soro.	30
Sigma Alpha Epsilon Frat.	40
Sigma Phi Epsilon Frat.	46
Sigma Chi Fraternity	34
Kappa Sigma Fraternity	24
Total	~~368~~422

~~Scholarship Houses~~

~~-~~

~~Business and Professional Woman 15~~

~~-~~

~~New Total 383~~

~~-~~

e) Historically Significant Housing on Campus

The University does not own any historically significant housing on campus.

f) Description of On-Campus Housing

~~Seven residence Hall currently comprise UCF housing facilities. Four halls were constructed in 1967. The balance were constructed in 1980. The 1967 project consists of four two story suite style halls. The 1980 project consists of three buildings that are double loaded corridor suite types. The 1980 project has two four story buildings and one three story building. Currently, a maximum of six students share a bathroom. More commonly though, for students share a bathroom. There are no "gang" bathrooms.~~

~~-~~

~~A 702 bed apartment facility is now under construction. This new facility will be available for occupancy for the Fall 1994 semester. This project consists of fifteen buildings that contain twelve apartments each. Each apartment has four single bedrooms, two baths, kitchen, and living room. The design capacity of each building is 47. (One building has a professional staff unit which reduces the design capacity to 43).~~

~~-~~

The University's first housing project was opened in the fall of 1968. This project has a design capacity of 436 student spaces and consists of four residence halls (Volusia, Lake, Osceola, and Polk Halls) that are two story structures with suite-style living units. Each suite consists of two double rooms, a common living area and bath, and in some cases, a single room. This area is known as the Apollo Community.

The second housing project was build in 1980 (the Libra Community) with a design capacity of 445 and consists of three residence halls (Brevard, Orange, and Seminole Halls) and a commons building. Orange and Seminole Halls are four story buildings with Brevard Hall being a three story building. All rooms in this area are suite style with tow double rooms sharing one bathroom.

In 1994, the on-campus housing options for students were further diversified with the opening of the Lake Claire Courtyard Apartments. This facility, which consists of fifteen three story buildings and a commons building, has a design capacity of 697. The apartments were designed to meet the needs of single upper level undergraduates and graduate students. Aside from offering cooking facilities which the residence halls do not have, each apartment has four single bedrooms, two bathrooms, and a living room.

Phase II of the Libra Community opened in the spring of 1999. Citrus, Sumter, and Flagler Halls, with a capacity of 580, were designed to meet the continued demand to house lower level students on –campus. All rooms are double occupancy suite-style, with four students sharing a bathroom. The rooms are configured around a common lounge/student space. Additional commons space was added to the Libra Community with this project.

The Academic Village project (design capacity of 1,634) was constructed in two phases. Phase I opened in 2001 and Phase II opened in 2002. Each phase consists of a combination of double occupancy suite-style residence halls where four students share a bathroom and single occupancy apartments that house either two or four students. The student to bathroom ratio in the apartments is two students to one bathroom. The residence halls are three story structures with the apartment building ranging from two to four stories in height. Student programming space is included in both phases of the project.
Note: Bed counts below do not include student staff member accommodations.

1967 Project ~~(DRC 67)~~

Building	Single Occ. Rms.	Double Occ. Rms.	~~Triple Occ. Rms.~~
Lake Hall	12	48	~~0~~
Volusia Hall	12	48	~~0~~
Osceola Hall	12	48	~~0~~
Polk Hall	12	48	~~0~~

1980 Project ~~(DRC 80)~~

Building	Single Occ. Rms.	Double Occ. Rms.	~~Triple Occ. Rms.~~
Brevard	~~0~~	~~52~~60	~~8~~
Orange	~~0~~	~~63~~80	~~16~~
Seminole	~~0~~	~~73~~82	~~8~~

1993 Student Apartment Facility ~~(DRC 1993)~~

Building	Single Occ. Rms.	~~Double Occ. Rms.~~	~~Triple Occ. Rms.~~
~~Fifteen 3 Story bldgs.~~	~~702~~		
Building 55	46		
Building 56	46		
Building 57	46		
Building 58	46		
Building 59	46		
Building 60	46		
Building 61	46		
Building 62	46		
Building 63	46		
Building 64	42		
Building 66	46		
Building 67	46		

Building 68	46
Building 69	46
Building 70	46

1998 Residence Hall Facility

Building	Single Occ. Rms.	Double Occ. Rms.
Citrus Hall		56
Flagler Hall		112
Sumter Hall		112

2001 Academic Village

Building	Single Occ. Rms.	Double Occ. Rms.
101		70
102		74
103		82
104-105	172	
106-107	176	

2002 Academic Village

Building	Single Occ. Rms.	Double Occ. Rms.
108		70
109		74
110		82
111-112	172	
113-114	176	

g) University Owned Off-Campus Housing

~~The University does not own or utilize any off-campus housing Facilities.~~
The University does not own any housing facilities that are located off-campus but refers students to university affiliated housing when on –campus facilities have reached full capacity. Affiliated properties include Pegasus Landing (2,525 beds) and Pegasus Pointe (1,224 beds). The University provides UCF Residence Life services at Pegasus Landing and UCF Police provided services at both Pegasus Landing and Pegasus Pointe.

h) Estimates of University Housed Students By Classification

Undergraduate students:	~~894~~ 3,783 (including student staff members)
Graduate students:	6
Married Students	0

i) Full-Time Students Living in Non-University Rental Housing

~~Approximately 5447 students live in off-campus, non-university provided rental units within an eight mile radius of the main campus.~~
Considering current occupancy rates, there are approximately 6,500 students living off-campus along the Alafaya Trail corridor and University Blvd. immediately adjacent to UCF in privately owned, non-affiliated apartments that offer individual leases. Approximately 3,500 students live in privately owned affiliated housing.

j) Host Community's Rental Stock by Rental Range

~~Rental Range~~	~~Rental Supply~~
~~$300-425~~	~~1200~~
~~$426-550~~	~~2767~~

~~$551 up 3045~~

-

Apartment facilities that offer individual student leases:

Rental Range (per person)	*Rental Supply*
$401 to $499/mo	5,447
$455 to $585/mo	3,750 (UCF affiliated housing)
$500 to $993/mo	1,462

Private Apartment Facilities	*Rental Range/person*	*# of beds*
Boardwalk Apartments	$480 to $495/mo	480
College Station Apartments	$470 to $480/mo	304
Collegiate Village Inn	$435 to $740/mo	600
Gatherings Apartments	$430/mo	384
Jefferson Commons Apartments	$450 to $810/mo	912
Jefferson Lofts	$521 to $993/mo	734
Northgate Lakes	$405 to $489/mo	710
Riverwind Apartments	$475 to $490/mo	431
University House on Alafaya	$401 to $479/mo	896
Village Alafaya Club	$479 to $499/mo	840
Village at Science Drive	$510 to $530/mo	728

University Affiliated/Private Apartment Facilities		
Pegasus Landing	$495 to $560/mo	2,550
Pegasus Pointe	$455 to %580/mo	1,224

k) 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.~~ The 2000 plan, recognizing the need to provide on-campus housing for students at a comparable rate of other Florida public universities established, the goal of providing on-campus housing for 15% of enrollment. Freshmen will be given priority for 80% of the beds.

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.~~ More on campus housing will continue to strengthen the university community and alleviate the impact on neighborhood surrounding UCF.

l) 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 housed ~~ing~~ in on-campus~~-and University-affiliated housing~~ are based upon the University's goal of providing housing for 15% of the ~~study body.~~ Orlando campus headcount enrollment.

~~Table 2.7(2)b) Projected Housing Needs~~					~~*Includes University~~
~~-~~	~~1999-2000~~	~~2004-2005~~	~~2009-2010~~	~~2010 Plus**~~	

~~Housing Supply~~	~~2,565~~	~~7,953*~~	~~7,953*~~	~~7,953~~	~~affiliated Knights Krossing and Knights Court (3,750 beds) and addition of Academic Villages (1,638 beds), bringing the total supply to 7,953.~~
~~Need (15% of Headcount)~~	~~4,254~~	~~5,227~~	~~6,216~~	~~7,200~~	
~~Difference~~	~~(1,689)~~	~~2,726~~	~~1,737~~	~~753~~	

~~** 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."~~

Table 2.7(2)a)

Main Campus On-Campus Housing Needs	Fall 2003	Fall 2010	Fall 2015
Headcount Enrollment	38,176	46,372	48,771
15% of Headcount	5,726	6,956	7,315
University-owned beds	3789	5789	5789
Greek-owned beds	400	822	822
Total Beds Needed	1,537	345	704
Total Beds on Campus	4189	6,611	6,611
Beds Available in University Affiliated Housing	3,750	3,750	3,750

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 (+~~8~~ 400 beds), ~~a redevelopment of the Apollo housing area (+500 beds)~~ the central northeastern portion of campus (2,000 beds), and the redevelopment of the Apollo housing site (400 beds). ~~and on the parking lot east of the Libra housing area (+400 beds)~~. If built, these sites would provide an additional ~~1,700~~ 2,800 beds to the campus.

m) 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~~ 400 students. Due to an existing house expansion, 22 beds are being added in the fall of 2004.

~~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.~~ It is anticipated that 12 more Greek groups will have the ability to develop housing that will provide approximately 400 new beds.

n) 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
   -Academic Village Buildings 101, 102, 103, 104, 105, 106 and 107 were completed in 2001.
   -Academic Village Buildings 108, 109, 110, 111, 112, and 114 were completed in 2002.
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.~~ In January 2005, a program to renovate the mechanical, electrical, and life safety systems of Lake, Volusia, Osceola, and Polk Halls will begin. A building per year will be renovated with the process being completed in 2008.

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

Table 2.7(2)b) 2003 - 2004 RENTAL RATES

Room	Price per semester
Double Room in ~~Brevard~~, Lake, ~~Orange~~ Volusia, Osceola, Polk~~, Seminole and Volusia Halls~~	~~$1,600.00~~ $1,900
Brevard, Orange, Seminole	$1,950
Double room in Citrus, Flagler, and Sumter Halls	~~$,1675~~ $2,150
Double room in Academic Village	$2,200
Single Room in Lake, Osceola, Polk, and Volusia Halls	~~$1,700~~ $2,150
Single Room in Lake Claire Courtyard Apartments	~~$1,775.00~~ $2,300 -
Single Room in Academic Village Apartments	$2,450

o) 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 opportunities for more than ~~to at least~~ 15% of the student body through on-campus and University affiliated housing. With the inclusion of the Pegasus Landing and Pegasus Pointe ~~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~~ 2,800 more beds.

p) 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 Greek Park is build-out with all lots occupied. ~~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 Greek housing developments should be constructed at a level more dense than the current Greek Park (9.6 beds/acre) ~~Fraternity area~~ over the next ten years as the University responds to the housing shortfall projected in 2.7(2)a) 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.

q) 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)c) Projection of Students Housed Off-Campus

	~~1999-2000~~ Fall ~~2003~~	~~2004-2005~~ Fall ~~2010~~	~~2009-2010~~ Fall 2015	~~2009-2010 Plus~~
Off campus	~~25,817~~ 33,987 ~~–~~	~~26,896~~ 39,761 ~~–~~	~~33,487~~ 42,160	~~39,714~~

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

Approximately ~~13~~ 30% of students who live off-campus find housing along the Alafaya corridor

adjacent to the campus. ~~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

EXISTING AND PLANNED HOUSING

LEGEND

Future Housing

Existing Housing

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

0 400' 800' 1600'

2.8 Recreation and Open Space Element
Goals, Objectives and Policies
2005-2015

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 high quality 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 that the Recreation, Intercollegiate Athletics, and the Physical Education programs have 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. As these options become maximized, additional space should be explored.

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.

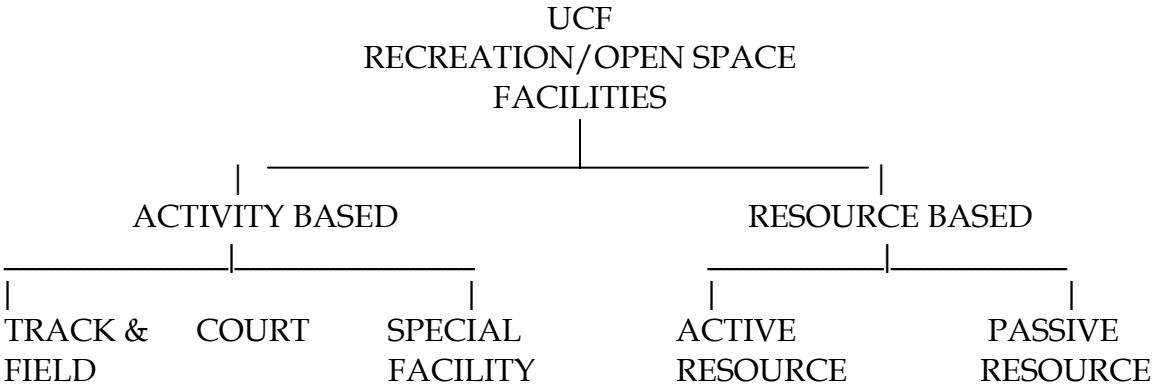
POLICY 1.4.2: The University shall maintain densities and intensities for the development of the campus which maximize the retention of on-campus open space as identified in the Future Land Use Element.

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 Recreation, Intercollegiate Athletics, Physical Education Laboratories and Open Space Element
Data and Analysis
2005-2015

In order to provide a comprehensive count of all existing recreation and open space facilities, an inventory of such facilities is organized based on the following chart.



Activity based facilities are defined as those facilities designed, constructed and designated for specific sports or recreation activities such as ball fields and ~~race~~ tracks. Resource based facilities refer to those facilities that are primarily used for general recreation or organized social functions. These resource based facilities are opened to all and not specifically designated for specific sports or recreational activities. Resource based facilities may include open fields, public parks, nature trails or conservation areas.

Resource based facilities can be further defined and categorized as active and passive resources. Active resource based facilities are generally accessible open spaces or parks where recreation activities are not specific. Examples of active resource based facilities include open fields, picnic areas, nature trails and public parks. Passive resource based facilities refer to those areas that are relatively inaccessible to any types of recreation activities and may include conservation and environmental mitigation areas. Although these are not accessible, they provide visual and climatic enhancements to the campus.

Facility Inventory

Off-Campus Recreation, Intercollegiate Athletics, Physical Education Facilities and Open Spaces

Non-university owned or managed recreation and physical education facilities used by the University are listed below:

1) Orlando Citrus Bowl, downtown Orlando. Approximately 16 miles from the campus. This 68,000 seat facility is used for varsity football home games.
2) Eastwood Golf course. Located seven miles south of the campus on Alafaya Trail, this facility is privately owned. It is used for intercollegiate athletics golf practice and tournaments and physical education classes.
3) Oviedo Bowling Lane. Located approximately three miles from campus and within the City of Oviedo, This facility is privately owned. UCF uses this facility for physical education classes.
4) Econlockhatchee River Park and Canoe Trail, State Park. This facility is a resource based recreation facility open to the public. The size of this regional facility is not available. The Trail provides access to the Econlockhatchee River.
5) Valencia East Campus facilities (used for physical education laboratories by the Physical Education Department).

University-Owned or Managed Facilities

~~Table 8.1 identifies those facilities which are owned and/or operated by the University.~~ As mentioned, these facilities are used primarily for physical education, intramural and intercollegiate sports and on-campus residential recreation. The facilities are also periodically rented and/or open to public use as noted in the usage column. ~~It should be noted that the area shown for each facility in the table includes supporting areas such as buffer areas, drainage areas, and/or spacing between fields or courts. These supporting areas are estimated to account for approximately 50% of the total recreation land area. Parking areas are not included in the table.~~

(1) FACILITY CODE #	DESCRIPTION	(2) Activity Based (in acres)			RESOURCE BASED (IN ACRES)		ESTIMATED USAGE
		TRACK & FIELD	COURT	SPECIAL FACILITY	ACTIVE	PASSIVE	
	Facilities Primarily Used by Intercollegiate Athletics Dept.						
1-1	Varsity baseball field	0.45					Varsity Team Fall & Spring ~~+ Intramurals &~~ Youth Camps (13 Wks) +Community Rental
1-2	Varsity baseball practice field	1.28					Fall/Spring Practice + Youth Camp (7Wks.)
2-1	Varsity football field #1	6.33					Fall/Spring Practice + Youth Camp (2 Wks)
2-2	Varsity football field #2	2.72					Fall/Spring Practice + Youth Camp (2 Wks.)
3-1	Varsity (lower) soccer practice field	3.46					Varsity Practice ~~+ Rugby Club Matches + Ultimate Club Tournament~~
3-2	Varsity soccer game field	9.20					Varsity Games + Community Rental
4	Competition track	Included in 3-2					Track & Cross Country Practice + Varsity Meets + Rental
5	Arena courts (5 basketball or 5 volleyball)			2.30			Men & Women Varsity Basketball practice & Home Games + Varsity Volleyball & Games + Youth Camps (10 Wks.) ~~+ Open Recreation, Intramurals, Concerts & Shows~~
	SUBTOTAL	29.44	0.00	2.30	0.00	0.00	
	Facilities Primarily used for Recreation						
	Recreation & Wellness Center			2.00			Campus Recreation
6	Lake Claire recreation area				4.45		Scheduled Picnics for Campus & Research Park Groups + Individual Use Year-round
7	Disc golf course				15.92		Campus Recreation Use + Intramural Tournament & Community Use Year-round
~~8~~	~~Recreation jogging track~~	~~Included in 2-1~~					~~Recreational Use~~
9-1	Intramural softball field #1 (lighted)	2.75					Intramural Leagues + tournaments ~~(8 Wks.) + Community Softball League (13Wks.)~~ + Campus/ ~~Community Practice~~ Open Recreation Use
9-2	Intramural softball field#2 ~~(lighted)~~	2.60					Tournaments +Open Recreation Use + ~~Youth Baseball Camp (7Wks.) + Rugby/Ultimate~~ Intramural Leagues & Tournaments
~~9-3~~	~~Intramural softball field#3 (lighted)~~	~~3.43~~					~~Intramural Softball (8Wks.) + Community Softball (30Wks.) + Youth Soccer Camps (6Wks.)~~
~~10*~~	~~*Note: This auxiliary play field is currently~~	~~play field is currently used for other functions~~					
11	Intramural multi-purpose field (~~2~~ 5 football or ~~2~~ 4 soccer)	~~3.40~~ 9					Youth Soccer Camps (6Wks.) + Intramural Football/Soccer (16 Wks.) + Sport club Games & Practice
~~12~~	Varsity (Upper) Soccer Field	~~3.46~~	1.5				~~Intramural Soccer & Football (16 Wks.) + Youth Soccer Camps (16 Wks.) & Rugby & Ultimate Tournaments~~
13	Outdoor basketball courts ~~2~~ 3 (lighted)		1.00				Campus Recreation Use
~~14~~	~~Outdoor volleyball courts 2 (lighted)~~		~~0.60~~				~~Community League (24 Wks.) + Campus Recreation Use~~
15	Sand Volleyball courts ~~2~~ 4 (lighted)		0.90				Campus Recreation Use + Campus & Intramural Tournaments + Open Space and Recreation ~~Youth & Varsity Campus (4Wks.)~~
~~16~~	Outdoor 3 wall racquetball courts 2 (lighted)		~~0.60~~				~~Campus Recreational Use~~
~~17~~	Outdoor 4 wall racquetball courts 4 (lighted)		~~0.64~~				~~Campus Recreational Use + Intramural Tournaments + Wallyball Recreation Use (one Court)~~
18	Swimming Pool (lighted)			1.02			Campus Recreation Use ~~+ 2 High School Teams Practice & Meets + High School Water Polo Practice+ Swim Club Practice +YMCA Youth Camps (12 Wks.) + UCF Youth Camp (6 Wks.)~~ + Aqua Aerobics ~~24 Weeks (7hrs./wk) +Varsity Team Practice +~~ Scuba

							Instruction~~+ P.E. Classes~~ + Special Events
~~19~~	Sport Club field ~~Arena Weight room~~	2.72		~~Included in 5~~			Sport Club Areas and Practices ~~Campus Recreation Use~~
~~20~~	~~Arena Exercise Room~~			~~Included in 5~~			~~Recreation Aerobics (1Wks.) + P.E. Classes + Combat Classes (1Wks.)~~
	SUBTOTAL	17.07	32.4	3.02	20.37	0.00	
	Facilities shared by physical education, recreation and intercollegiate athletics						
21	Tennis courts 6 (lighted)		2.43				Varsity Practice & Meets Fall & Spring + Intramural Tournaments + Campus Recreation + Youth Tennis Camp (2Wks.) + tennis club practice & Meets
~~22~~	~~Golf Range~~	~~13.6~~					~~Varsity Golf Team Practice & Sport Club Practice & Tournaments + P.E. Classes + Marching Band (10 Wks.) +Campus Recreation (Golf Practice)~~
23	Education building A. gymnasium (basketball, volleyball and scheduled events (3) B. Multi-purpose room (3) C. Weight room (3)			2.66			Sports + Clubs ~~Intramural Volleyball (10Wks.)~~ + Varsity Volleyball Practice & Games + P.E. Classes + ~~Campus Recreation~~
24	Recreation Building			0.84 4.42			~~Recreation Aerobic Classes (5 hrs/Wk)~~ + P.E. Classes (40 +hrs./Wk.) + Combat Arms Club (12 Hrs./Wk.) P.E. Classes + ~~Campus Recreation Use~~
	SUBTOTAL	0.00	2.43	7.92	0.00	0.00	
	UCF OPEN SPACE (4) Wetlands Upland Preservation Upland Riparian Habitat Preservation Zone Lakes					 273.37 25.36 39.39 32.18	
	SUBTOTAL	0.00	0.00	0.00	0.00	370.29	
	SUBTOTAL	46.51	34.83	13.24	20.37	370.29	
	TOTAL	94.58			390.66		

Level of Service Standard

Based on a review of the National Intramural Recreational Sports Association (NIRSA) the following level of service standards are presented for comparison purposes:

Field Space: 1 acre of space per 1000 students

Indoor Space Example: Weight room 1000 square feet per 1000 students

Collegiate College Comparisons (Indoor Recreation Space)

A. National schools similar in size
    - University of Texas at Austin 48,000 370,000 sq. ft.
    - Ohio State University 48,000 725,000 sq. ft.
    - Texas A & M 43,000 346,000 sq. ft.
B. Florida Schools
    - Florida State University 37,000 136,000 sq. ft.
    - University of Florida 48,000 136,000 sq. ft.
    - University of Miami 12,000 114,000 sq. ft.
    - University of South Florida 41,500 125,000 sq. ft.

UCF 2004 Fall Headcount: 42,000 students
1 acre per 2470 students (Field Space)
85,000 sq. ft. (indoor recreation space)

Analysis Requirements

This section discusses the problems, constraints and opportunities to efficiently provide recreation and open space facilities which meet the future demand of the University. As indicated by the LOS standards, UCF currently has a lower existing level of service for recreation space than does the NIRSA standards as well as other universities with similar enrollment. In addition to the LOS standard it is important to look at the Recreation planning principles as outlined by the NIRSA and SCUP through a joint effort. The planning principles include:

- Establish recreation as a pillar of the University's comprehensive plan
- Create and maintain a vision of physical development of recreational facilities, a vision which supports the mission and master plan
- Instill a real sense of community and enrich the experience of all who come to campus
- Foster a safe, secure, and accessing environment

Summary

The 85,000 square foot Recreation and Wellness Center along with the current plans to add a leisure pool, one tennis court, challenge course, artificial turf fields and support facilities is a welcome addition to the recreation needs of the UCF community.

However, existing recreation facilities appear to be insufficient to support the current and future needs of UCF and its student enrollment. Various student groups are unable to use facilities due to the lack of or overuse of them.

In addition to the number of facilities available, several other factors need to be considered to increase facility sufficiency. These include scheduling, extension of playing time, seasonal demand, recovery time and flexibility of fields or courts to be used for various kinds of activities.

Overall, UCF is currently below the national guidelines and standards for activity based recreation facilities. This can be supported in comparison to schools with similar enrollment that have much larger facility space. As the campus continues to grow, more land will be needed for buildings, parking and activity based recreation facilities. Future resource based recreation and open space must be carefully developed utilizing spaces formed between buildings.

Recommendations for Improvement

Based on UCF observations and interviews during the data collection, the following specific list of problems, constraints and opportunities were identified:

1. The swimming pool condition is deteriorating and in need of upgrading and repairs due to age. The existing pool is in demand. A new leisure pool is in the building stage and will assist with the recreation needs of participants. Repairs to the existing pool must be made to accommodate the competitive programs such as lap swimming, water polo, scuba certifications, and possible swim meets.

2. The recreation building is a start in beginning to serve the recreation needs of the UCF community. It is apparent that additional space will be needed and initial strides should be made within three - five years with expansion of current facilities.

3. Six, and soon to be seven, tennis courts shared by the entire campus are insufficient. Additional courts should be provided and determined by the number of users.

4. Total number of fields and the condition of those fields are currently faced with a severe shortage. An anticipated artificial turf field is being planned which will help alleviate this problem. However, provisions should be made to repair, light, and properly irrigate the existing fields.

5. In order to conserve the supply and character of campus open space, field areas should be designed to allow maximum flexibility for various recreation and intramural sports. For example, several field sports could share one large open area instead of designing one field for each individual sport or activity. Several recreation and intramural sport activities are seasonal and can be played on the same field as other sports by merely realigning the field lines.

6. To maximize the usefulness of outdoor facilities, appropriate storage areas, support buildings and safety shelter should be provided in proximity to all recreational facilities. Currently building #25 serves as the only restroom facilities and storage for all fields. The pavilions planned for the field expansion will be a welcome addition to that end.

7. Concern is expressed for any gap in reduction in service during expansion. This is a result of the severe need for recreational space for a residential campus.

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.~~

-The University of Central Florida outdoor recreation facilities are currently limited with regard to student use and number of facilities. Looking at the student population, number of intramural sports offered, number of sport clubs, and ideal standards for usage, the number of fields at UCF are over capacity. The future expansion of intramural fields in the south section of the campus will allow increased capacity, more flexibility for field rotation to avoid compaction and abuse.

Calculations used to assess facility sufficiency take into consideration a number of factors. These factors include variety of fields (club sports, intramural sports, or open recreation), frequency of use, student enrollment, and unique layout diminishing the flexibility for use (i.e. softball field).

The methodology used for determining the number of fields an institution needs for appropriate recreation use is based on a number of factors. The general standards, as recommended by the National Intramural Recreational Sports Association (NIRSA), are 1 acre per 1000 students enrolled. Additionally, the number of fields can be adjusted based on number of teams, type of field (natural or synthetic surface), and appropriate field lighting. Presently at UCF there are currently 15 intramural sports that use outside fields, some with up to 150 teams, and 7 sport clubs. Current field space includes 18 acres of natural grass space and no lights on the fields with the exception of the two softball fields. Natural

fields should ideally be programmed between 18 to 24 hours in any given week, but there are few limitations on synthetic fields.
Given these assumptions, the University of Central Florida appears in below average condition without additional fields in the south section of campus being built. If synthetic fields are used for future facilities, 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 do not appear to address the student's current and future needs for recreation space. The construction of additional recreation fields with synthetic surface and lights could provide flexibility for programming and alleviate poor field conditions.

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 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.~~
-The Recreation and Wellness Center, located by the Academic Village, has benefited the campus and helped alleviate many of the shortfalls identified in the 1995 plan. Additionally, with the construction of a new leisure pool, repairs made to existing competitive pool, and additional tennis court, will also address previous concerns. The provisions adding fields, tennis courts, as well as lighting facilities continues to be at a premium when addressing the 1995 plan.

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.~~

The south end of campus, near the Academic Village, is an appropriate site for the expansion of future recreation facilities and allows for the consolidation of support facilities. In addition to the current recreation fields, recreation center, tennis courts, and leisure pool, plans include adding a challenge course and new multi-purpose field area. Additional recreation areas include the Frisbee golf course which is housed at the entrance of campus and the Lake Claire recreation area over by Greek Park.

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.

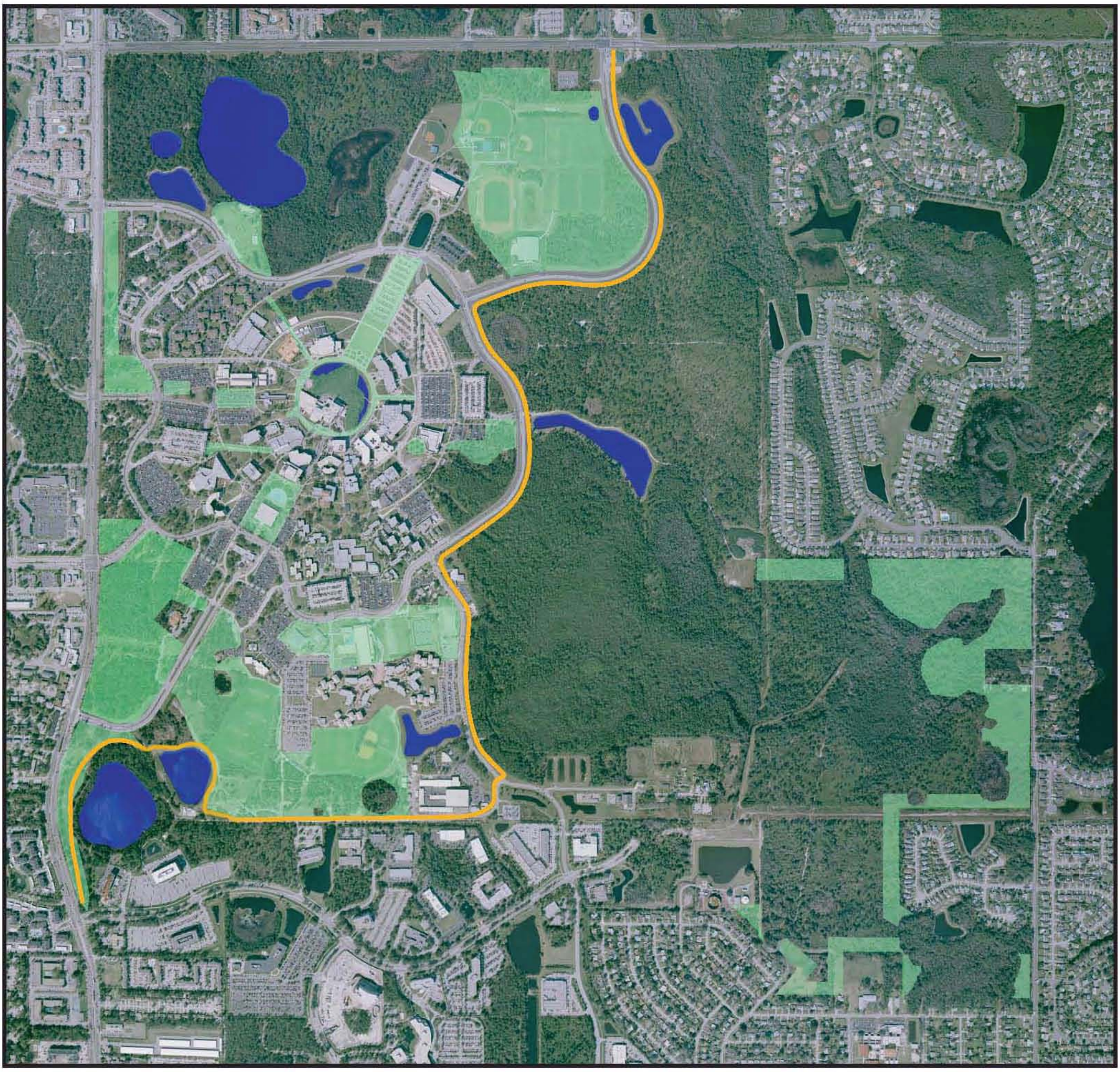


Figure 8-2

RECREATION AND OPEN SPACE

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Recreation /Open Space
- Lakes
- Proposed Little Econ Greenway Trail

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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 200~~3~~4, 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 shall be maintained ~~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 on a basin by basin basis. Basin stormwater ponds will provided treatment per the following: ~~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 basin. ~~greater site~~.
3. ~~—~~Post development stormwater discharge from the campus shall be less than the predevelopment discharge rate for the 25 year/24 hour storm event as determined per the approved SJRWMD Master Stormwater Plan. UCF will strive to exceed this standard by implementing changes so that post development discharge volumes will not exceed the predevelopment discharge volumes for the 25 year/24 hour storm event.
4. ~~—~~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 2015, 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 and volume 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 and the Stormwater Management Academy 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:

- Incorporating stormwater management retention and detention features into the design of parks, trails, commons and open spaces, and building roof tops where such features do not detract from the recreational or aesthetic value of a site.
- 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.
- 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.
- Avoid the widespread application of broad spectrum pesticides by involving only purposeful and minimal application of pesticides, aimed at identified targeted species.
- Coordinating pesticide application with irrigation practices to reduce runoff and leaching to groundwater.
- 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: The University shall seek out every opportunity to design all storm water management facilities ~~shall be designed~~ to retain on-site all volume of runoff generated by the University and shall not adversely impact adjacent property. At a minimum, the University will design the systems consistent with the SJRWMD criteria. Post development stormwater discharge volumes from the campus shall be less than the predevelopment discharge volume for the 25 year/24 hour storm event.

POLICY 1.3.5: The University shall seek out every opportunity to prioritize the use of storm water as follows:

1. Irrigation from existing stormwater ponds
2. Reclaimed water from the Iron Bridge
3. Ground water usage needs to be minimized or eliminated

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~~, provides water for both consumption and fire protection. This system shall be designed and operated in a manner that is safe, efficient and environmentally responsible. ~~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.~~ UCF shall ensure that adequate potable water supply and distribution piping is available for both new- and re-developed facilities.

POLICY 2.1.1: The University shall periodically 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.~~

POLICY 2.1.2: The campus water system shall have redundancy built into the supply and distribution network. This can be achieved by multiple water plant sources (i.e. Orange County and the Central Florida Research Park) and by multiple raw water wells. Interconnects with various utilities are desired for their capability to be used in emergencies.

POLICY 2.1.3: 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 2.2: 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.~~

-

1. Fire flow pressures of 60 psi residual for 2 hour sprinkler system flow
2. Fire flow volumes of approx. 1,000 gpm (ordinary to light hazard buildings) to 2,500 gpm (assembly occupancies and higher hazard buildings) Note: This is occupancy specific and must be accounted for in design phase of all new projects.
3. Category demands according to the following:
   - Offices 0.03 gpd/sf
   - Classrooms 0.06 gpd/sf

- Common areas 0.11 gpd/sf
- Res. Halls 70 gpd/bed
- Frat./Sororities 0.25 gpd/sf

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.~~ 2015.

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.

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.

Table 2.9-1 UCF STORMWATER MASTER PLAN DRAINAGE TABLE SUMMARY

Oct-04

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)
1-B	1.45	0.44	---	66.8	67.26	68.86	69.03	---
1-C	0.61	0	0.13	64.2	66	66.03	66.05	---
1-D	64.74	29.82	3.3	65.5	67.21	68.69	68.99	6.21
1-F	15.81	7.92	1	65.5	66.96	68.37	69.03	1.65
1-G	57.82	0	23.00	63.70	---	65.28	65.53	---
2-A	11.84	5.61	1.97	67.5	68.08	69.7	70.28	1.17
2-B	2.81	1.8	0.1	66.9	67.8	69.16	69.31	---
2-C	0.57	0	0.1	64.7	66.5	66.58	66.59	---
2-D	23.24	0	---	---	---	64.24	64.27	---
2-E	23.57	0	---	---	---	62.61	62.65	---
2-H	152.68	74	15	48	49.09	51.52	52.08	19.32
2-H3	32.53	16.5	3	53	54.1	55.87	56.36	3.44
2-Z	50.62	0	---	---	---	46.52	47.79	---
3-A	130.04	51	5	65	67.1	68.13	68.56	10.93
3-Z	13.95	0	8.67	---	---	56.9	57.2	---
4-B	65.34	34.15	2	68	70.42	71.99	72.9	7.11
4-F	35.24	25.95	---	---	---	---	---	---
4-K	34.59	19.8	3.5	67	68.08	69.15	69.47	---
4-L	87.4	43.95	5.1	58	60.42	61.63	62.19	13.28
4-M	13.19	5.52	0.5	57.75	59.83	60.75	60.92	1.15
4-R	115.84	59	8	59	60.42	62.18	62.55	12.29
4-S	4.83	2.34	---	61	64.03	64.86	65.06	0.49
4-Z	222.31	0	---	---	---	57.2	57.5	---
4Z-a	5.67	3.05	0.7	58	58.86	59.91	60.31	0.64
TOTALS	1169.19	382.05	81.27					

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 and development of the campus.

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 and indepenant consultant 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, 2004) 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, is maintained by the University's drainage engineer ~~should be maintained on campus~~ and is updated as new developments impact the current data.

Per recommendation of SJRWMD and public input, the University has reviewed existing development on campus and has updated the amount of impervious area coverage on campus. The required changes to the SJRWMD permit will be implemented through a permit modification to the Master Permit.

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 are currently deficient ~~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~~ 4-B, 4-K, 4-L and 4-M currently exceed the permitted impervious area for the existing stormwater ponds. The University has reviewed these deficiencies with the SJRWMD and will begin the process of updating the Master Stormwater permit to correct them and to provide the required treatment facilities. ~~. 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 except for the deficiencies found in Basin 4 and outlined above. 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, there will need to be upgrades to existing ponds in Basin 4 to correct existing deficiencies. 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.

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 was modified in March 2003 ~~has been~~ modified during the past five years to accommodate proposed construction not anticipated in the original application. Due to changes in SJRWMD regulations the March 2004 modification included changing the MSSW permit to an Environmental Resource Permit (ERP). The entire process for the modification took approximately 9 months. One outcome of the revised March 2004 permit was that SJRWMD will no longer accept letter modifications for individual projects on campus and all projects are now required to obtain a General ERP.

~~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 that serves most of the main campus. 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.~~ UCF upgraded its potable water distribution system by installing 16 inch looped water mains in 2000-2002. This improved the capacity of the system to meet fire- and potable- demands. Also, the upgrade include~~s~~ d connecting to the Orange County Utilities system for water supply that feeds the Acadmic Villages and the Recreation & Wellness Center (buildings # 88 and 101-115). These buildings are supplied potable water via a new OCU 24 inch main on the south of the campus. Pumping is accomplished at the new booster station (building # 307) that contains 4 high volume pumps, a generator, and automated controllers. ~~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:~~

~~Current water demand(2005):~~

~~29,622 off-campus students x 5 gal/day per student = 148,110 gpd~~
~~_____ off-campus students x 5 gal/day per student = _____gpd~~
~~5,227 on-campus students x 85 gal/day per student = 444,295 gpd~~
~~4,234 on-campus students x 85 gal/day per student = 359,890 gpd~~

~~TOTAL DEMAND IN YEAR 2005 = _____ 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~~ UCF water plant has a daily capacity of approximately 1,5 00 gpm x 1,440 min./day = 2,160,000 gpd. ~~The UCF Booster Station has a daily capacity of pumping _____ gpd of OCU water. 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 times the actual daily use 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 UCF water plant was constructed in 1968, but has received periodic upgrades since then. A current project to upsize the water feed lines from the wells and pumps is underway. ~~This will help extend the plants life and increase capacity to _____ gpd.~~

The booster station (bldg. 307) was constructed in 2001 and should not need significant repair or upgrades throughout the planning period.

~~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.

Potable water supplies remain generally available on the main UCF campus through the 2005-2010 planning period. However, some areas of campus still do not have water piping in the immediate vicinity. Also, some future buildings will likely require more water volumes at higher pressures than is currently available. Engineering studies on the campus as a whole, and on project-specific water requirements should continue.

~~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~~ ~~f~~ For building construction ~~in excess of four stories. For buildings higher than this threshold,~~ of 3 stories or more, the need for additional booster pumps ~~will~~ may 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, transmis sion 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.

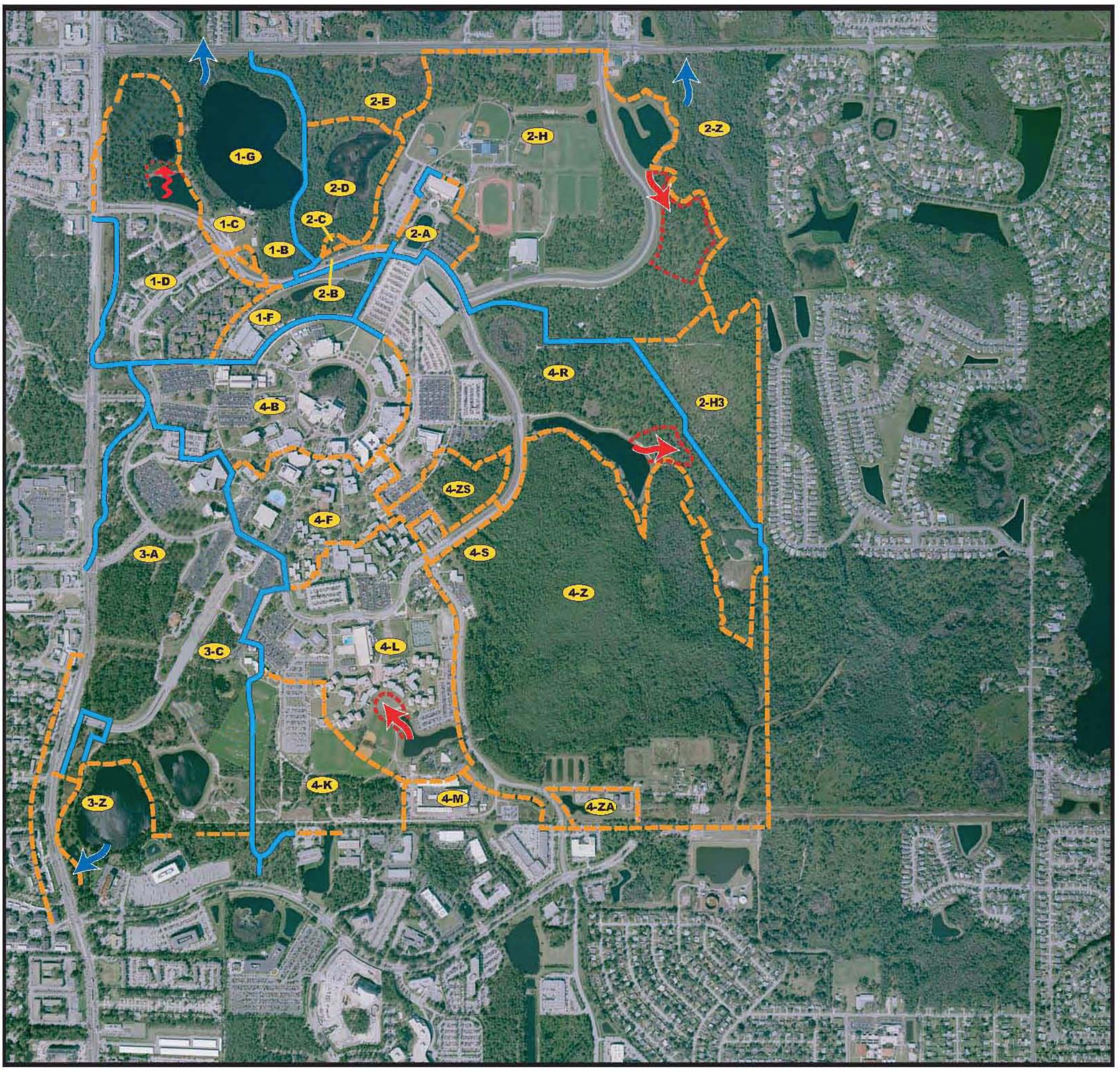


Figure 9-1

STORMWATER FACILITIES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Drainage Basin Divides
- Drainage Sub-Basins Divides
- 4-M Sub-Basin Identification Area
- Projected Pond Expansion
- Discharge Points
- Pond Expansion

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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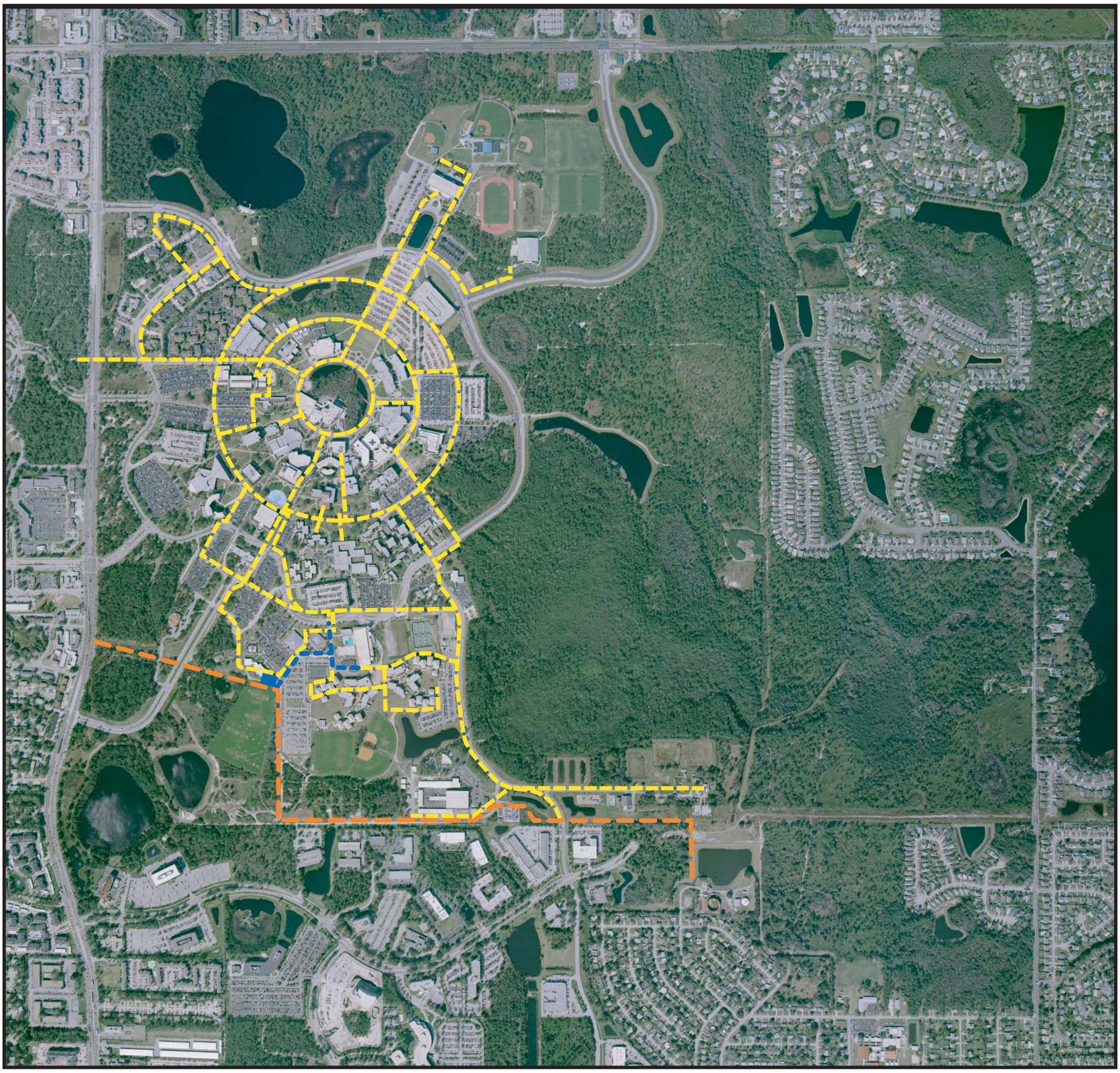

Figure 9-2

POTABLE WATER FACILITIES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

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

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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Figure 9-3

SANITARY SEWER FACILITIES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Existing Sanitary Sewer Line
- Proposed Sanitary Sewer Line
- Lift Station

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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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~~ variable air volume 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~~ would benefit from using treated wastewater effluent as a source of cooling tower 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 TeleData Services 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~~ TeleData Services Office, the Facilities Planning Office, the Physical Plant and the University's Administrator of Capital Funding Programs.

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~~ Telecom Utility Vaults (TUVs) interconnecting the majority of the buildings on campus as well as the satellites hubs or nodes.

The main copper telephone trunk originates from ~~the~~ existing ~~ROLM/~~Siemens telephone switches located in the Library Building and other buildings 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 Copper and fiber optic nodes ~~(hubs)~~ throughout campus will have to be reviewed with the ~~Telecommunications~~ TeleData Services 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.

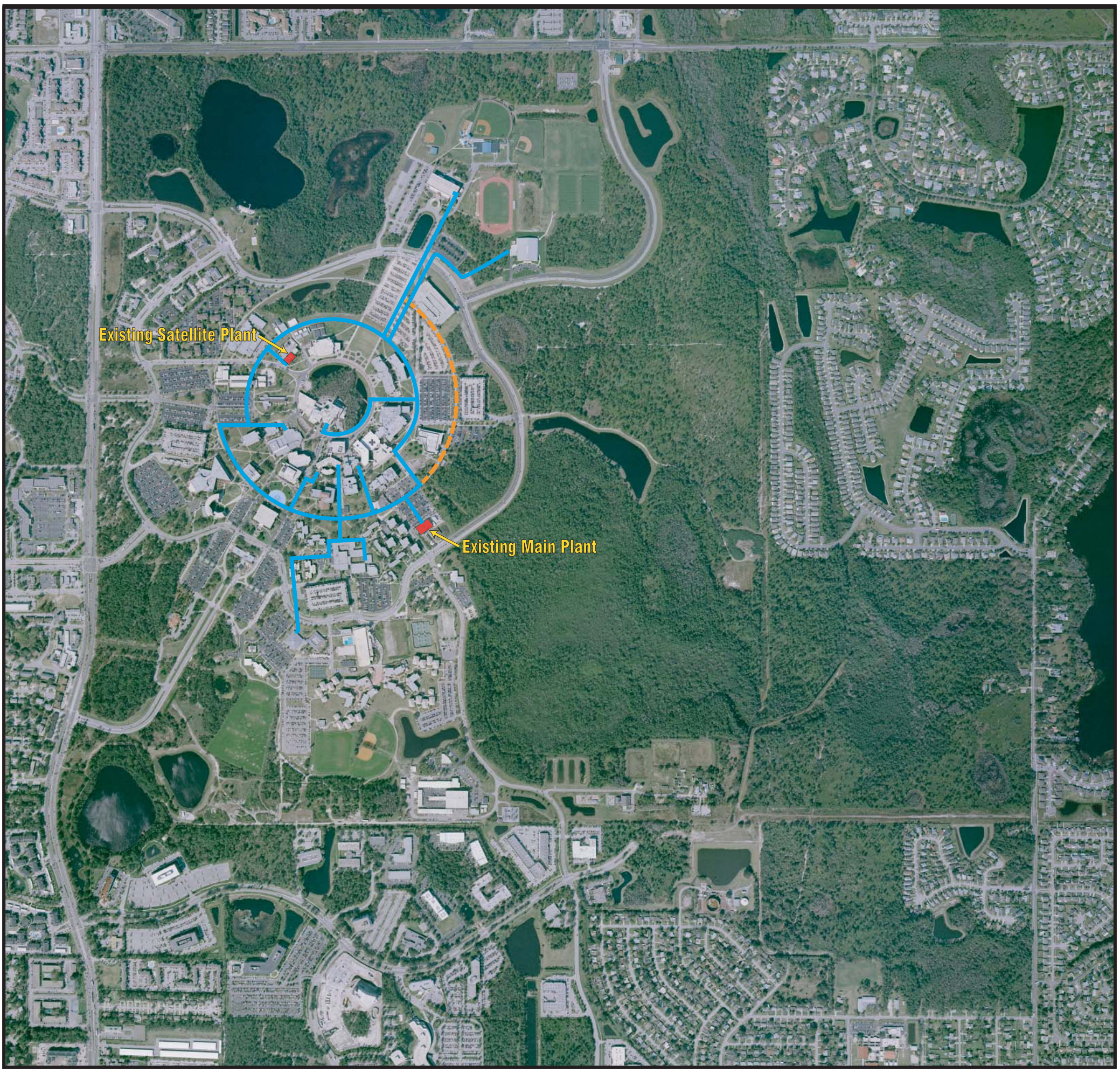

Figure 10-1

CHILLED WATER FACILITIES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Existing Chilled Water Line
- Proposed Chilled Water Line
- Plant

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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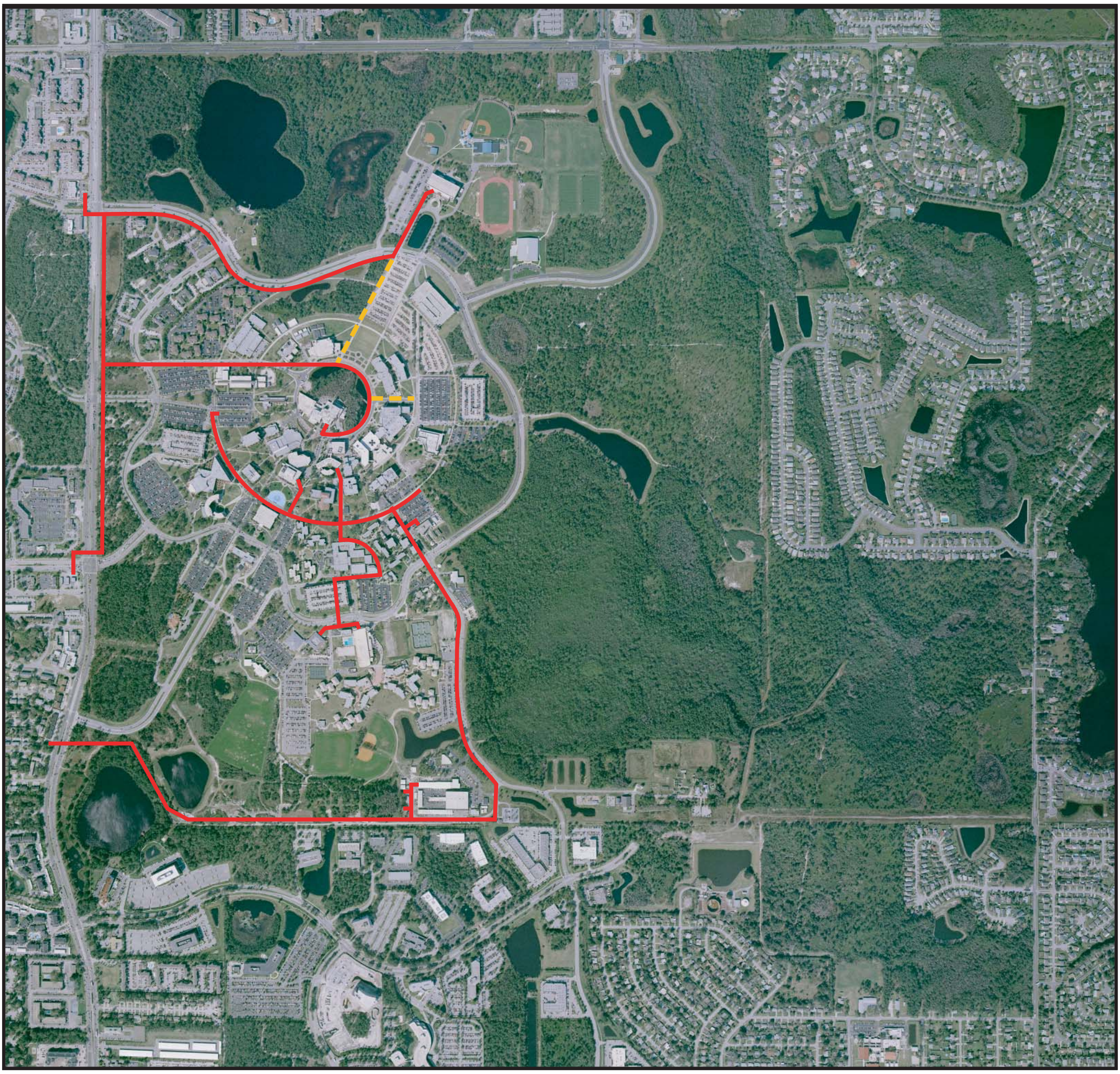

LEGEND

Existing Natural Gas Line

Proposed Natural Gas Line

Comprehensive Master Plan Update

University of Central Florida

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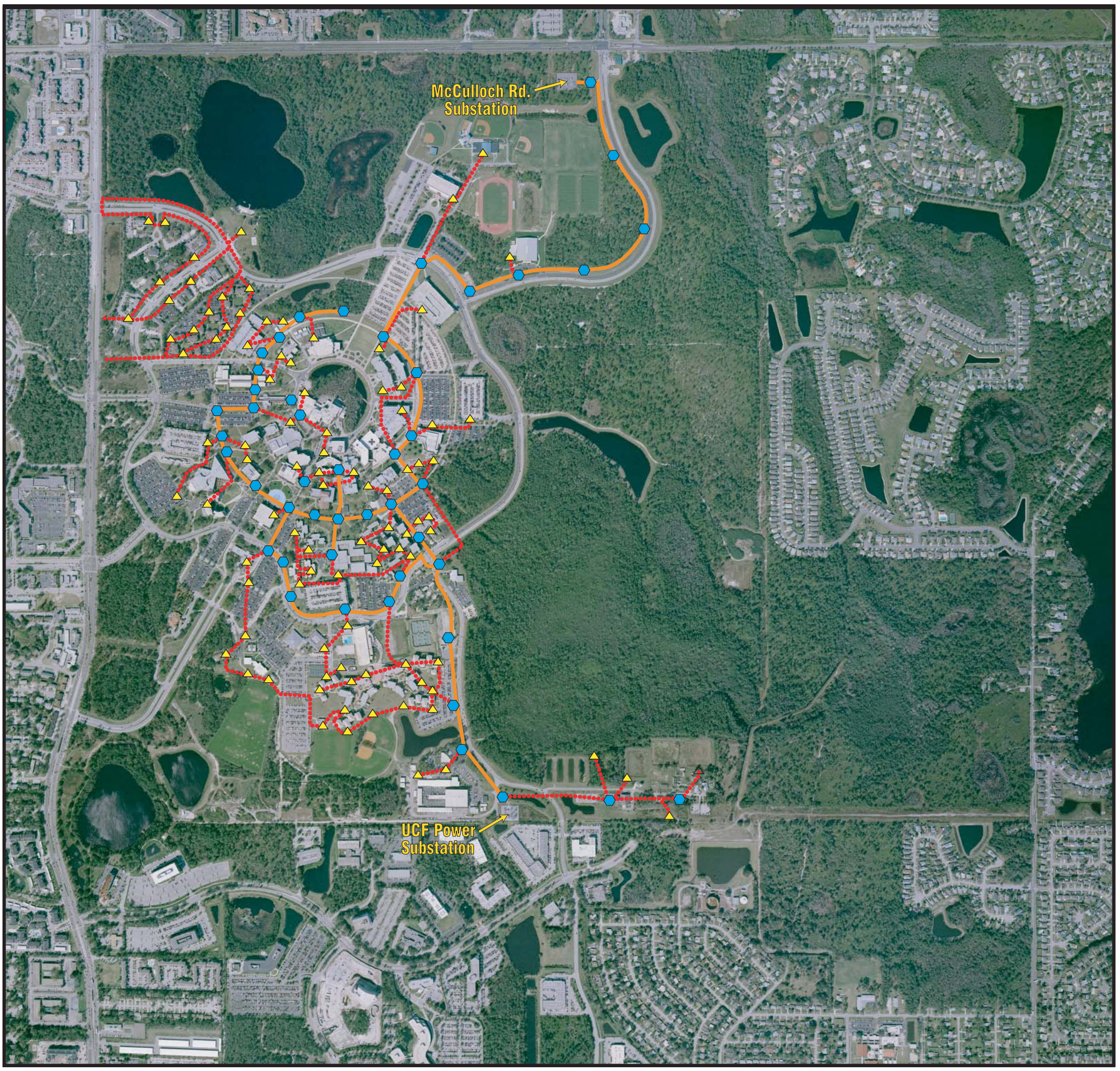

Figure 10-2

ELECTRIC POWER FACILITIES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

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

N

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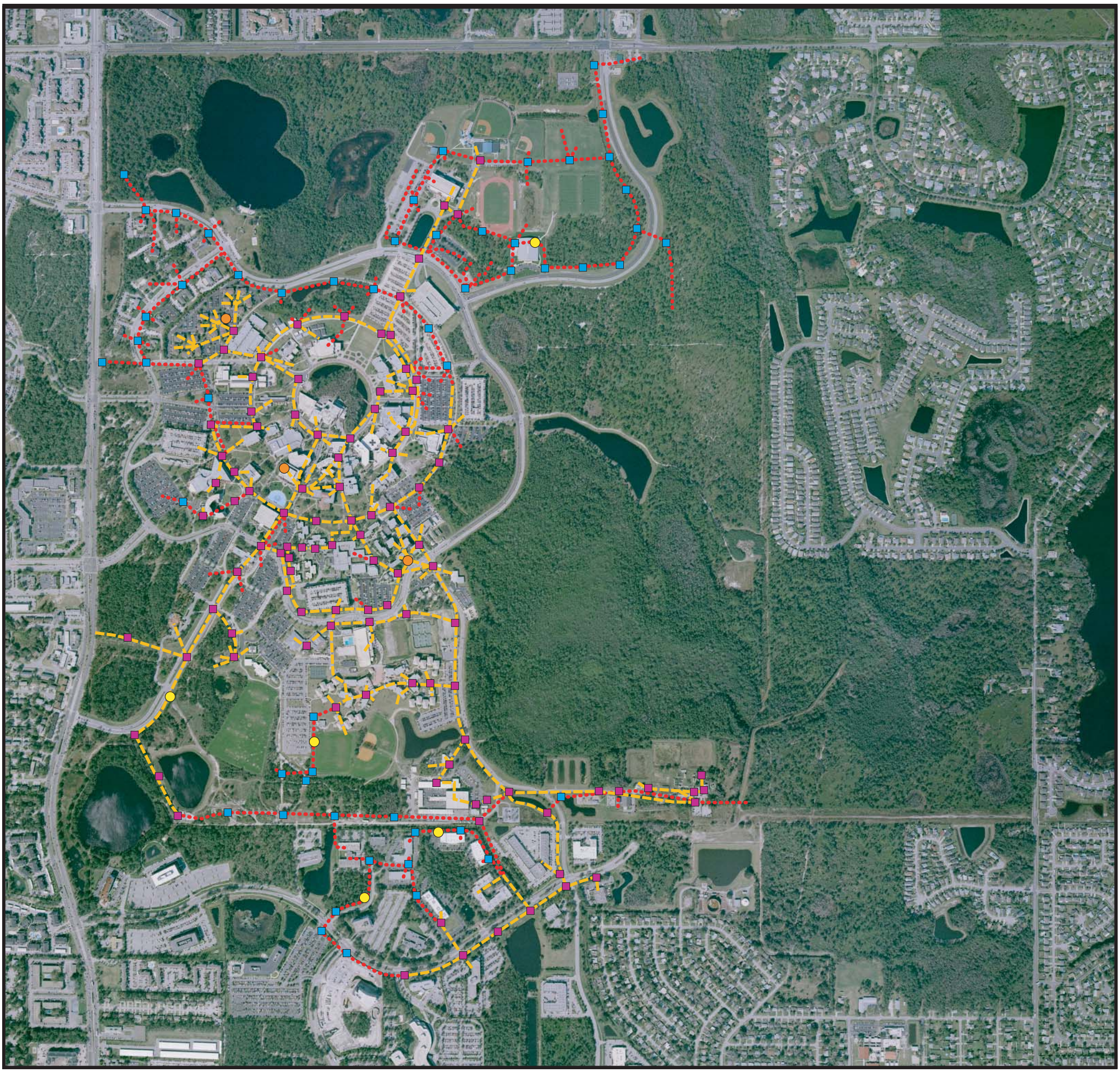

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

N

LEGEND

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

GOAL 1: 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 transportation needs.

OBJECTIVE 1.1: The University shall annually inventory and report parking demand, traffic demand, and traffic operating conditions.

POLICY 1.1.1: Parking utilization and parking space ratios shall be annually monitored by the University to determine that adequate parking is being provided.

POLICY 1.1.2: The University shall annually collect and report traffic data for on-campus roadways.

POLICY 1.1.3: On-campus traffic accident and safety-related data would be collected and reported annually. This information would continue to serve as a basis for identifying improvements necessary to reduce the number of accidents and improve campus safety.

POLICY 1.1.4: Every five years, 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 1.1.5: 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.

POLICY 1.1.6: 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 Radius Sidewalk, as defined in this Transportation Element.

POLICY 1.1.7: The University shall maintain a minimum level of service of ”E” for all campus roadways, except when that level of service could only be accomplished by widening that campus roadway beyond the lane-widening limits identified in *Policy 3.3.2*.

POLICY 1.1.8: The University shall improve the internal circulation of the University. If acceptable and found to be consistent with the University’s Capital Improvements Plan (CIP) and Future Land Use Element (FLUE), the University may widen Libra Drive to four lanes from Gemini Boulevard South to Research Parkway. Any impacts to designated environmentally sensitive areas shall be mitigated consistent with Conservation Element policies, the St. John’s River Water Management District (SJRWMD) regulations, and any applicable state and local environmental regulatory agencies.

POLICY 1.1.9: The University shall encourage limited vehicular access to Gemini Boulevard and North Orion Boulevard by limiting the number of new driveways and attempting to consolidate access points, through the creation of cross-access and shared-access points between adjacent driveways.

POLICY 1.1.10: The University shall explore opportunities with the host local government, affected local governments, and the Florida Department of Transportation, as appropriate, to

ensure that signalization and signal synchronization is available when needed to support roadway improvements or traffic operations.

POLICY 1.1.11: The University shall construct a northern connector road based on the needs addressed in the Goals, Objectives and Policies in the Transportation Element. In addition, the road will provide a second access route to McCulloch Road as shown in Figure 11-1.

POLICY 1.1.12: The northern connector road shall be limited to use for bicycles, pedestrians and the University's public transportation service, except during large sporting events or other special events on campus, during which time the University will permit vehicular traffic on this road.

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

POLICY 1.2.1: The University shall maintain effective lighting at parking facilities and locate landscaping with an emphasis on safety through the use of Crime Prevention Through Environmental Design (CPTED) standards.

POLICY 1.2.2: The University shall annually monitor campus parking through 2015 to maintain a student to parking space ratio range of 3.10:1 to 4.00:1.

POLICY 1.2.3: The University shall annually monitor visitor parking to establish and maintain sufficient visitor parking on-campus.

POLICY 1.2.4: 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.

POLICY 1.2.5: The University shall provide an additional 5,070 parking spaces through 2015, as identified in Figure 11-2. The timing, phasing requirements, and priorities for additional parking will be identified annually in the Capital Improvements Element.

GOAL 2: To create logical patterns of pedestrian and non-vehicular circulation systems which enhance the overall urban and social-academic quality of the campus.

OBJECTIVE 2.1: To continue to provide adequate on-campus pedestrian and non-vehicular circulation systems designed to meet the current and future needs of the University.

POLICY 2.1.1: Pedestrian crosswalks shall continue to be located, and enforced, 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 continue to be evaluated by the University Administration and Facilities Planning to determine the appropriate level of pedestrian safety (traffic calming measures to pedestrian signalization) that should be provided.

POLICY 2.1.2: By 2010, the University shall study and generate feasible options for parking permits that restrict students from parking outside of residential parking areas in order to encourage increased pedestrian, cyclist, and transit usage.

OBJECTIVE 2.2: To annually review future pedestrian and non-vehicular circulation facilities for consistency with the Campus Safety Plan.

POLICY 2.2.1: 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 2.2.2: 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 2.3: To annually review the need for additional lighting along pedestrian and non-vehicular circulation routes consistent with the recommendations contained within the Campus Safety Plan.

POLICY 2.3.1: 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 2.3.2: 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 2.3.3: Appropriate lighting systems shall be constructed concurrent with pedestrian and non-vehicular circulation systems.

GOAL 3: To develop a financially feasible multi-modal transportation system that integrates services provided by the public transit system (e.g.: the Central Florida Regional Transit Authority, a.k.a. LYNX) and the private transit system (UCF Knights Shuttle Service).

OBJECTIVE 3.1: To encourage the use of alternative modes of transportation and reduce dependence on the personal automobile.

POLICY 3.1.1: UCF shall continue active participation in the University/Alafaya Corridor Transportation Association (UACTA) to promote Transportation Demand Management (TDM) techniques both on-campus and in the context area around campus.

POLICY 3.1.2: The University shall implement, as appropriate, TDM strategies including, but 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.

POLICY 3.1.3: By 2015, the University shall study the effectiveness of providing a high-occupancy vehicle parking incentive program that provides preferential parking treatment for automobiles carrying two or more persons.

POLICY 3.1.4: By 2015, the University shall coordinate with the host local government, LYNX,

and affected local governments to establish campus-wide ridesharing and carpool programs for UCF students, faculty and staff.

POLICY 3.1.5: By 2015, the University shall study the potential effectiveness of distance learning as a technique to reduce the need for students to travel to the University.

POLICY 3.1.6: 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 3.1.7: The University shall coordinate with the host local government and affected local governments 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 3.1.8: The University will continue to coordinate with the Orlando-Orange County Expressway Authority (OOCEA) regarding future transportation improvements, as appropriate.

POLICY 3.1.9: The University will continue to coordinate with support completing an east-west parallel route to reduce congestion on University Boulevard.

POLICY 3.1.10: The University shall work with the host local government, affected local governments, and LYNX to evaluate other mobility options 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.

OBJECTIVE 3.2: To continue to improve future mobility options for UCF students, faculty, staff, and visitors by improving linkages between modes of travel.

POLICY 3.2.1: The University shall continue to encourage transit, bicycle, and pedestrian modes as a means of travel from residential areas and parking lots to other on-campus destinations.

POLICY 3.2.2: Visitor parking shall be connected to present and future walkways as well as the existing campus transit system.

OBJECTIVE 3.3: The University shall continue to facilitate safe and efficient multi-modal access to, from, and within the Campus, with an emphasis on maintaining traffic flow while minimizing conflicts.

POLICY 3.3.1: The University shall continue to monitor and improve ridership on its Shuttle Service through 2015.

POLICY 3.3.2: The University shall protect the restriction of general vehicular access to the campus core, as defined by the 1,200-foot Radius Sidewalk.

POLICY 3.3.3: 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.

POLICY 3.3.4: The University shall continue to include provisions for bicycle lanes on newly constructed or improved on-campus roadways, where feasible.

OBJECTIVE 3.4: The University shall implement measures to improve transit service to, from and within the campus.

POLICY 3.4.1: The University shall continue to plan for future campus intermodal transportation terminals in conjunction with proposed parking facilities, as identified in *Figure 11-2*. The timing and phasing requirements and priorities for terminals would be identified in the Capital Improvements Element.

POLICY 3.4.2: The University, in conjunction with area public transportation systems and organizations, shall continue to enhance campus transit service to, from, and within the University.

POLICY 3.4.3: The University shall continue to identify residential concentrations of students to provide convenient 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, as deemed appropriate by the University.

POLICY 3.4.4: The University shall continue to provide bicycle racks on transit vehicles serving the University.

POLICY 3.4.5: The University shall survey students every five years through 2015 regarding transit, bicycle, and pedestrian services.

GOAL 4: To provide adequate access (vehicular and transit) to the Campus while continuing to coordinate required transportation improvements with local communities and appropriate planning agencies, as detailed in the Intergovernmental Coordination Element**.**

OBJECTIVE 4.1: To ensure the continued coordination of the University's transportation system improvements with the master plans and transportation improvement plans of the host local government, affected local governments, METROPLAN ORLANDO (the local Metropolitan Planning Organization), and the Florida Department of Transportation (FDOT).

POLICY 4.1.1: The University will continue to coordinate with the host local government and affected local governments regarding their proposed transportation improvement projects.

POLICY 4.1.2: The University shall continue to coordinate with the FDOT, the host local government, and affected local governments, and METROPLAN ORLANDO to evaluate strategies and improvements to meet the projected need for additional access to the UCF campus. The adopted Campus Master Plan shall be amended, as needed, to incorporate the results and of their evaluations.

POLICY 4.1.3: Proposed on-campus traffic circulation improvements are identified in Figure 11-1. The timing, phasing requirements, and priorities are identified in the Capital Improvements Element.

OBJECTIVE 4.2: To continue to coordinate pedestrian and non-vehicular circulation systems with those developed by the host local government and affected local governments by reviewing their local comprehensive plans, bicycle plans, or pedestrian circulation plans and meeting with local governments, as necessary.

POLICY 4.2.1: The University shall continue to coordinate with the host local government and affected local governments regarding the implementation of sidewalk, bicycle paths and lanes, and safety-enhanced pedestrian crosswalks along all vehicular corridors adjacent or leading into and out of campus.

POLICY 4.2.2: The University shall continue to coordinate with the host local government,

affected local governments, and the FDOT, as appropriate, to ensure that signalization and signal synchronization is available when needed to reduce pedestrian and non-vehicular traffic conflicts. Any new signals shall be interconnected with adjacent signals, as appropriate.

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	10,000	12,600
4LD	N/A	N/A	11,100	21,700	25,200

(1) FDOT Quality/Level of Service Handbook, 2002

Table B

UCF Campus Roadway PM Peak Hour
Average Daily Traffic

No. Lanes	PM Peak Hour (for NON-STATE other signalized roadways[1])				
	A	B	C	D	E
1	N/A	N/A	250	530	660
2	N/A	N/A	580	1,140	1,320

(1) FDOT Quality/Level of Service Handbook, 2002

Note: The goals, objectives and policies for the sub-element referenced below have been revised and incorporated in to this draft Element above.

~~**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

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: 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.

University of Central Florida

Campus Master Plan Update

Transportation Element

(Section 2.11)

July, 2005

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1.0 INTRODUCTION

Since it's inception in 1963 as the Florida Technical University, the University has experienced tremendous growth to the point where it is now the second largest state university in Florida based on enrollment. During the 2003 academic year the University had a total enrollment of over 41,000 students. Current projections show the University approaching 50,000 students at build-out by 2016.

This growing student population results in increased infrastructure demands in the form of new and improved roads, pedestrian walkways, bicycle facilities, transit improvements, and parking in the form of surface lots and garages. The University has already added significant transportation infrastructure to accommodate this growth. However, additional improvements will be required in order to keep pace with the University's growth.

The Transportation Element supports the Transportation Goals, Objectives and provides the collection and analysis of existing data. This analysis becomes the basis for measurable performance standards for the Goals, Objectives, and Policies. This supporting documentation is broken into three major sections. This first section inventories the existing transportation facilities within and surrounding the University including roadway, transit and bicycle/pedestrian facilities, and documents the current operating conditions of these facilities. The second section details planned transportation infrastructure improvements within the University Campus as well as those planned the surrounding host community and state agencies. The second section also projects future operating conditions of the transportation system. The final section details recommended transportation improvements strategies to mitigate projected impacts. These improvements will address short term (2010) and long-term (2025) horizon years.

The purpose of this, and all Transportation Elements as stipulated by Florida Statute, is to plan and provide for a multi-modal transportation system, with an emphasis on the integration and coordination of transportation modes. The University of Central Florida maintains approximately xx centerline miles of internal roadways, as well as a fleet of 22 shuttle buses that provide a critical transit mode to and from the campus. In addition, the University also maintains an extensive network of pedestrian and bicycle facilities on campus. The increasing demands placed on all of these systems by the rapid growth of the student population creates an even greater need to integrate and coordinate all available modes on transportation within and surrounding the campus. The area that will be examined by this transportation element is shown in the context area map in Figure 2.11-1.

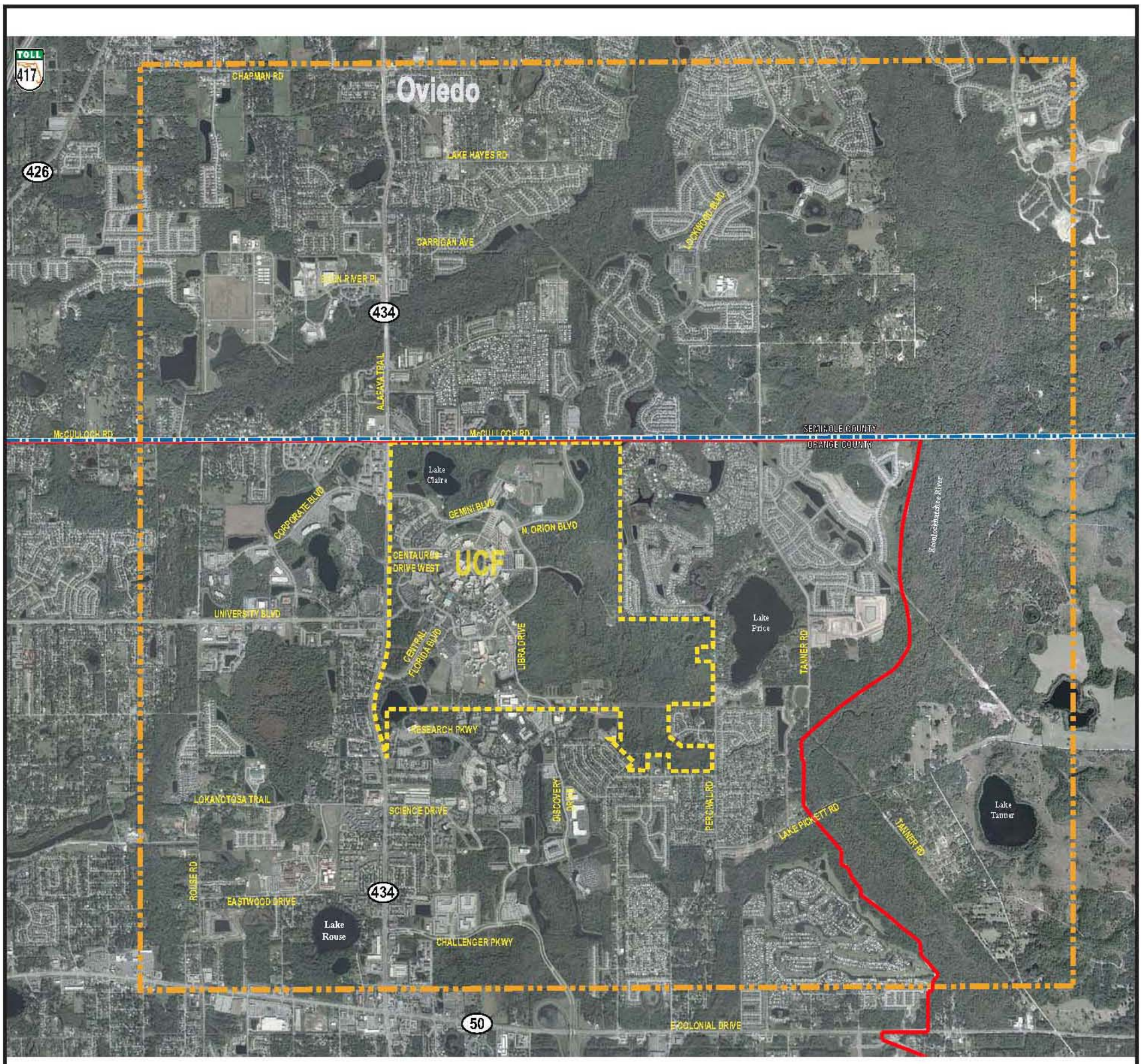

Figure 2.11-1

CONTEXT AREA MAP

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- UCF Campus Boundary
- Study Area
- Urban Service Area

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

0 400' 800' 1600'

2.0 EXISTING CONDITIONS

In order to evaluate the existing conditions of the transportation facilities within the UCF campus, as well as those external facilities and systems located within the context area, an inventory of the existing transportation systems and campus demographic data was performed.

A. *Campus Population and Employment*

The University of Central Florida has several campuses in the Central Florida area. The population chart below reflects the existing and projected population on the Main Orlando campus. As shown below, the number of students attending the University steadily increases over the fourteen (14) year period from 2003 to 2017 with a 23% increase in student population.

Table 2.11-1: UCF Projected Attendance for the Main Orlando Campus

School Year	Projected Population
2003-2004	38,176
2004-2005	38,587
2005-2006	40,403
2006-2007	41,922
2007-2008	43,342
2008-2009	44,827
2009-2010	45,639
2010-2011	46,372
2011-2012	47,036
2012-2013	47,665
2013-2014	48,084
2014-2015	48,526
2015-2016	48,771
2016-2017	49,117

Source: University of Central Florida, Office of University and Planning Support

The number of students attending the University will place an increasing demand on University facilities as well as the surrounding transportation infrastructure, transit and pedestrian systems. Typically on-campus students use other forms of transportation other than cars to move around campus. However, many students, faculty, and staff live off campus and currently drive automobiles to reach the campus. There is a correlation between an increase of students and the increase in number of additional faculty and staff to accommodate the students.

Without planned and scheduled improvements to the transportation and transit systems, there is the possibility that campus and surrounding roads could become congested, increasing delays and the potential for increased conflicts between pedestrians, bicyclists and vehicular traffic.

B. *Roadway Circulation*

For the purposes of this transportation element, the roadway, or traffic circulation system will be defined as all roadway facilities within the University Campus boundaries as well as the external facilities located within the context area, as shown in Figure 2.11-1. An inventory of the existing roadway facilities located within the context area is shown in Table 2.11-2. This inventory includes the following roadway characteristics: roadway name, segment limits, number of lanes, jurisdiction, adopted level of service (LOS), and functional classification.

Functional Classification System

The Florida Department of Transportation (FDOT) defines functional classification as, "The organization of roadways into a hierarchy based on the character of service provided. Typical classifications include arterial, collector, and local roadways." Roadways provide two functions within the classification noted above by providing varying levels of access and mobility. On the lower end of the spectrum a local road essentially serves as total, direct access to the adjacent land uses. At the opposite end of the spectrum is the limited access freeway, which provides total mobility and no access. Generally speaking, as mobility increases access decreases and vice versa. Figure 2.11-2 shows the relationship between access and mobility. Figure 2.11-3 shows the relationship of the various roadway types to one another. The functional classification of a roadway is used to set level of service standards and to evaluate operational characteristics. Generally speaking there are six major classifications:

- Expressway Freeway,
- Principal Arterial,
- Minor Arterial,
- Collector (Major and Minor), and
- Local

Table 2.11-2 Roadway Facility Inventory

Road Name	From	To	No. of Lanes	Jurisdiction	Functional Classification	Adopted LOS
Alafaya Trail (SR 434)	Colonial Drive (SR 50)	Science Drive	6LD	State	Minor Arterial	E
	Science Drive	University Boulevard	6LD	State	Minor Arterial	E
	University Boulevard	McCulloch Road	4	State	Minor Arterial	E
	McCulloch Road	Chapman Road	2	State	Minor Arterial	E
Central Florida Boulevard	Alafaya Trail	Gemini Boulevard	4	UCF	Minor Collector	E
Centaurus Drive	Alafaya Trail	Gemini Boulevard	2	UCF	Minor Collector	E
Chapman Road	Aloma Avenue	Alafaya Trail	2	Seminole County	Major Collector	E
Colonial Drive (SR 50)	Rouse Road	Alafaya Trail	4	State	Principal Arterial	E
Discovery Drive/Libra Drive	Research Parkway	Gemini Boulevard	2	UCF	Minor Collector	E
Gemini Boulevard	Central Florida Boulevard	Centaurus Drive	4	UCF	Minor Collector	E
	Alafaya Trail	N. Orion Road	4	UCF	Minor Collector	E
	N. Orion Road	Libra Drive	4	UCF	Minor Collector	E
Greek Park Drive	Centaurus Drive	Gemini Boulevard North	4	UCF	Minor Collector	E
Lake Pickett Road	Colonial Drive (SR 50)	Percival Road	2	Orange County	Major Collector	E
	Percival Road	S. Tanner Road	2	Orange County	Major Collector	E
Lockwood Boulevard	McCulloch Road	Oviedo City Limits	4LD	Seminole County	Minor Collector	E
McCulloch Road	Rouse Road	Alafaya Trail	2	Seminole County	Minor Collector	E
	Alafaya Trail	Lockwood Boulevard	4LD	Seminole County	Minor Collector	E
	Lockwood Boulevard	Old Lockwood	4LD	Seminole County	Minor Collector	E
Rouse Road	Colonial Drive (SR 50)	Lokonatosa Trail	2	Orange County	Minor Collector	E
	Lokonatosa Trail	University Boulevard	2	Orange County	Minor Collector	E
	University Boulevard	Seminole County Line	2	Orange County	Minor Collector	E
University Boulevard	Rouse Road	Alafaya Trail	6LD	Orange County	Minor Arterial	E
	Alafaya Trail	Gemini Boulevard	4LD	UCF	Minor Collector	E

Note: This table only includes those roadway segments included within the context area, as shown in Figure 2-1.

* Currently being widened to 6-lanes.

Roadways within the context area for the University's Campus Master Plan include the following classifications:

- Principal Arterial – This is the highest level of arterial and generally has restricted access and serves longer distance through trips servicing larger metropolitan areas. The facility type connects minor arterials and freeways as well as other principal arterials.
- Minor Arterial – This type of roadways provides connections between principal arterials and collectors. It typically serves moderate lengths with less emphasis on mobility than a principal arterial and with a greater level of access to adjacent land parcels.
- Collector (Major and Minor) – The collector street system provides a combination of land access and mobility, generally within residential neighborhoods or larger industrial or commercial developments and joins with other collector systems. Collectors distribute traffic from arterials to the local street system and their final destinations.
- Local – According to the AASHTO "Greenbook", the local street system comprises all facilities that do not fall into one of the higher roadway classifications. The primary function of a local street is to provide direct access to adjacent land uses and to connect to the collector roadway system.

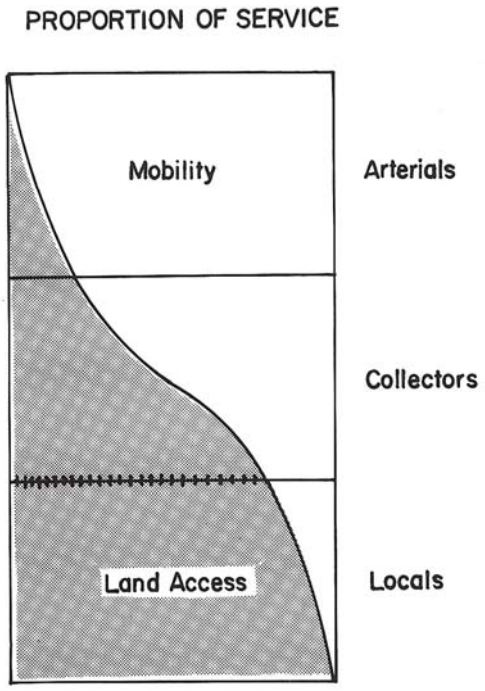

Figure I-5. Relationship of functionally classified systems in service traffic mobility and land access.

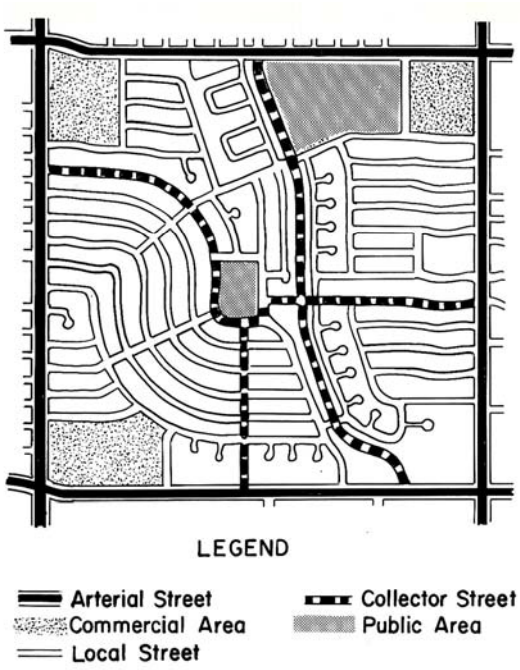

Figure I-4. Schematic illustration of a portion of a suburban street network.

Figure 2.11-3 Roadway Functional Classification

Figure 2.11-4 details the functional classification of all study roadways within the context area.

Level Of Service Standards

Level of service (LOS) is used to describe a qualitative measure of the operational performance of a roadway under existing or projected traffic conditions. There are six, alphabetical level designations used to describe the operating conditions of a roadway. These LOS designations range from the best, LOS "A", representing free-flow conditions, to the worst, LOS "F", representing breakdown conditions with significant delays. For the purposes of this update, this element will follow the LOS standards developed and adopted by the FDOT in the 2002 version of their Quality/Level of Service Manual. These standards are based on the research and analysis codified in the Highway Capacity Manual (HCM) developed by the Transportation Research Board (TRB) These standards delineate the threshold traffic volumes at which the perceived LOS changes from one designation to another, for a given roadway classification and area type. These threshold volumes are calculated using a variety of common traffic data including laneage, free flow speed, intersection spacing, percentage of heavy vehicles, as well as a host of other traffic variables.

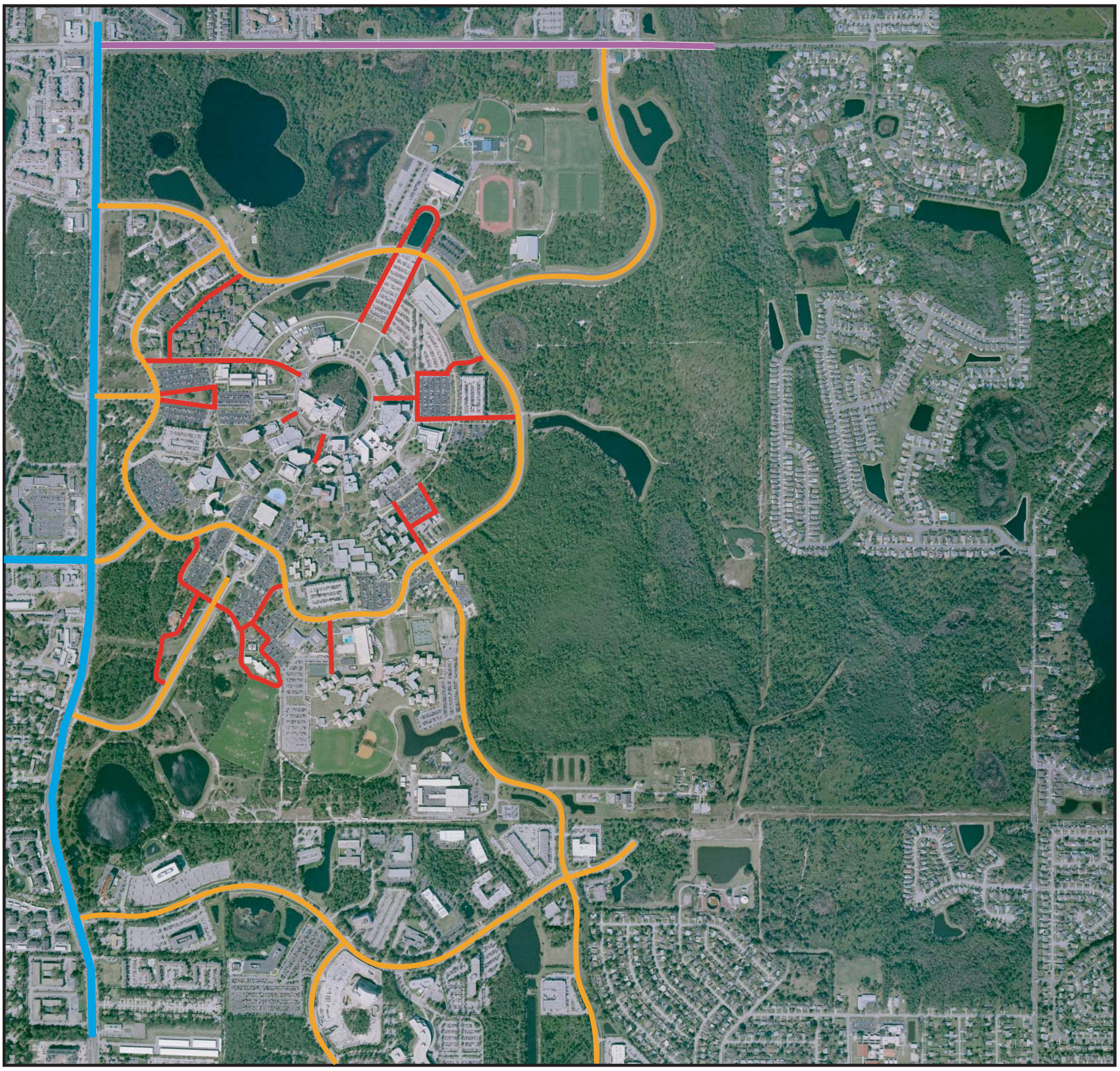

Figure 2.11-4

CAMPUS AREA ROADWAYS BY FUNCTIONAL CLASSIFICATION

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Minor Arterial
- Major Collector
- Minor Collector
- Local

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

0 400' 800' 1600'

Table 2.11-3 details an analysis of existing conditions of the roadways shown in Table 2.11-2 and contained within the context area. The existing conditions documented in Table 2.11-3 include the following information: number of lanes, adopted level of service (LOS) standard, peak hour adopted level of service (LOS) standard, current peak hour volumes, and current LOS.

A copy of Table 4-7 from the FDOT 2002 Quality/Level Of Service handbook is shown below as Figure 2-11.5. Figure 2.11-6 shows the existing (2003) traffic volumes, roadway geometry and Level of Service (LOS) for roadways within the Context Area.

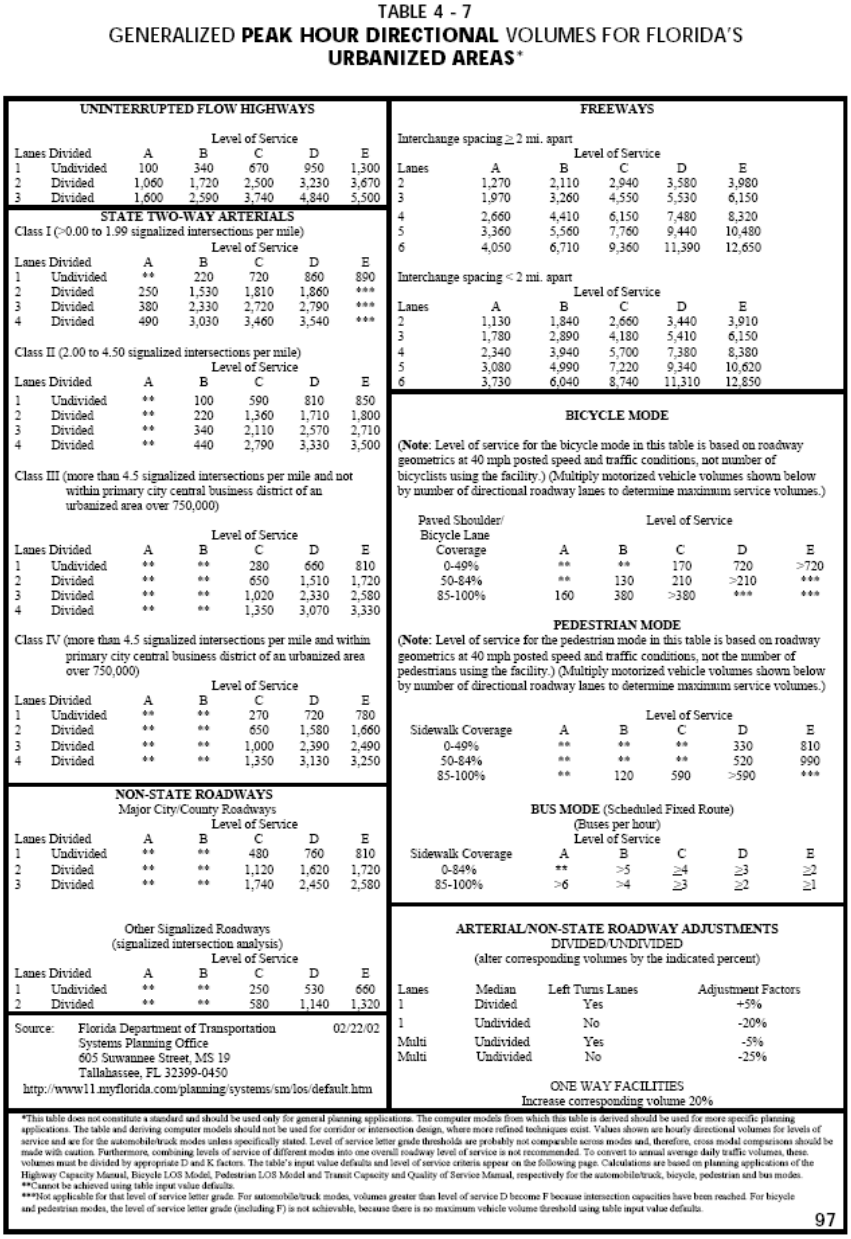

TABLE 4 - 7
GENERALIZED **PEAK HOUR DIRECTIONAL** VOLUMES FOR FLORIDA'S
URBANIZED AREAS*

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Divided	A	B	C	D	E
		Level of Service				
1	Undivided	100	340	670	950	1,300
2	Divided	1,060	1,720	2,500	3,230	3,670
3	Divided	1,600	2,590	3,740	4,840	5,500

STATE TWO-WAY ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Divided	A	B	C	D	E
		Level of Service				
1	Undivided	**	220	720	860	890
2	Divided	250	1,530	1,810	1,860	***
3	Divided	380	2,330	2,720	2,790	***
4	Divided	490	3,030	3,460	3,540	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Divided	A	B	C	D	E
		Level of Service				
1	Undivided	**	100	590	810	850
2	Divided	**	220	1,360	1,710	1,800
3	Divided	**	340	2,110	2,570	2,710
4	Divided	**	440	2,790	3,330	3,500

Class III (more than 4.5 signalized intersections per mile and not within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	A	B	C	D	E
		Level of Service				
1	Undivided	**	**	280	660	810
2	Divided	**	**	650	1,510	1,720
3	Divided	**	**	1,020	2,330	2,580
4	Divided	**	**	1,350	3,070	3,330

Class IV (more than 4.5 signalized intersections per mile and within primary city central business district of an urbanized area over 750,000)

Lanes	Divided	A	B	C	D	E
		Level of Service				
1	Undivided	**	**	270	720	780
2	Divided	**	**	650	1,580	1,660
3	Divided	**	**	1,000	2,390	2,490
4	Divided	**	**	1,350	3,130	3,250

NON-STATE ROADWAYS

Major City/County Roadways

Lanes	Divided	A	B	C	D	E
		Level of Service				
1	Undivided	**	**	480	760	810
2	Divided	**	**	1,120	1,620	1,720
3	Divided	**	**	1,740	2,450	2,580

Other Signalized Roadways
(signalized intersection analysis)

Lanes	Divided	A	B	C	D	E
		Level of Service				
1	Undivided	**	**	250	530	660
2	Divided	**	**	580	1,140	1,320

Source: Florida Department of Transportation 02/22/02
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450
http://www11.myflorida.com/planning/systems/sm/los/default.htm

FREEWAYS

Interchange spacing ≥ 2 mi. apart

Lanes	A	B	C	D	E
	Level of Service				
2	1,270	2,110	2,940	3,580	3,980
3	1,970	3,260	4,550	5,530	6,150
4	2,660	4,410	6,150	7,480	8,320
5	3,360	5,560	7,760	9,440	10,480
6	4,050	6,710	9,360	11,390	12,650

Interchange spacing < 2 mi. apart

Lanes	A	B	C	D	E
	Level of Service				
2	1,130	1,840	2,660	3,440	3,910
3	1,780	2,890	4,180	5,410	6,150
4	2,340	3,940	5,700	7,380	8,380
5	3,080	4,990	7,220	9,340	10,620
6	3,730	6,040	8,740	11,310	12,850

BICYCLE MODE

(**Note**: Level of service for the bicycle mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not number of bicyclists using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	A	B	C	D	E
	Level of Service				
0-49%	**	**	170	720	>720
50-84%	**	130	210	>210	***
85-100%	160	380	>380	***	***

PEDESTRIAN MODE

(**Note**: Level of service for the pedestrian mode in this table is based on roadway geometrics at 40 mph posted speed and traffic conditions, not the number of pedestrians using the facility.) (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine maximum service volumes.)

Sidewalk Coverage	A	B	C	D	E
	Level of Service				
0-49%	**	**	**	330	810
50-84%	**	**	**	520	990
85-100%	**	120	590	>590	***

BUS MODE (Scheduled Fixed Route)
(Buses per hour)

Sidewalk Coverage	A	B	C	D	E
	Level of Service				
0-84%	**	>5	≥4	≥3	≥2
85-100%	>6	>4	≥3	≥2	≥1

ARTERIAL/NON-STATE ROADWAY ADJUSTMENTS
DIVIDED/UNDIVIDED
(alter corresponding volumes by the indicated percent)

Lanes	Median	Left Turns Lanes	Adjustment Factors
1	Divided	Yes	+5%
1	Undivided	No	-20%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

ONE WAY FACILITIES
Increase corresponding volume 20%

*This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Values shown are hourly directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. Level of service letter grade thresholds are probably not comparable across modes and, therefore, cross modal comparisons should be made with caution. Furthermore, combining levels of service of different modes into one overall roadway level of service is not recommended. To convert to annual average daily traffic volumes, these volumes must be divided by appropriate D and K factors. The table's input value defaults and level of service criteria appear on the following page. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.
**Cannot be achieved using table input value defaults.
***Not applicable for that level of service letter grade. For automobile/truck modes, volumes greater than level of service D become F because intersection capacities have been reached. For bicycle and pedestrian modes, the level of service letter grade (including F) is not achievable, because there is no maximum vehicle volume threshold using table input value defaults.

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Figure 2-11.5 FDOT Level of Service Table

Table 2.11-3 Existing Roadway Conditions

Road Name	From	To	No. of Lanes	Adopted LOS	2003 AADT	K100	D	Adopted Pk. Hr. LOS Capacity	PM Pk Hr./Dir. Volume	Source	2003 LOS
Alafaya Trail (SR 434)	Colonial Drive (SR 50)	Science Drive	6LD	E	63,887	0.0662	0.5371	2,790	2,271	Orange Co. Annual Counts	B
	Science Drive	University Boulevard	6LD	E	62,142	0.0694	0.5193	2,790	2,240	Orange Co. Annual Counts	B
	University Boulevard	McCulloch Road	4LD*	E	55,807	0.0660	0.5201	1,860	1,916	Orange Co. Annual Counts	F
	McCulloch Road	Chapman Road	2	E	41,500	0.0672	0.5255	860	2,191	FDOT Annual Counts	F
Central Florida Boulevard	Alafaya Trail	Gemini Boulevard	4LD	E	10,267	0.0886	0.5275	1,320	600	UCF Study	D
Centaurus Drive	Alafaya Trail	Gemini Boulevard	2	E	8,088	0.0852	0.5051	660	348	GMB Study	D
Chapman Road	Aloma Avenue	Alafaya Trail	2	E	N/A	0.0672	0.5255	810	829	GMB Study	F
Colonial Drive (SR 50)	Rouse Road	Alafaya Trail	4LD	E	51,793	0.0685	0.5051	1,860	1,792	Orange Co. Annual Counts	C
Discovery Drive/Libra Drive	Research Parkway	Gemini Boulevard	2	E	14,189	0.0613	0.6078	860	870	GMB Study	F
Gemini Boulevard	Central Florida Boulevard	University Boulevard	4LD	E	N/A	0.0859	0.5570	1,320	853	UCF Study	D
	University Boulevard	Centaurus Drive	4LD	E	N/A	0.0859	0.5570	1,320	1,000	UCF Study	D
	Alafaya Trail	N. Orion Road	4LD	E	12,502	0.0859	0.5570	1,320	900	UCF Study/GMB Study	D
	N. Orion Road	Libra Drive	4LD	E	N/A	0.0859	0.5570	1,320	1,125	GMB Study	D
Greek Park Drive	Centaurus Drive	Gemini Boulevard North	4LD	E	N/A	0.0859	0.5570	1,320	775	UCF Study	D
Lake Pickett Road	Colonial Drive (SR 50)	Percival Road	2	E	11,226	0.0830	0.5943	660	932	Orange Co. Annual Counts	F
	Percival Road	S. Tanner Road	2	E	3,274	0.0920	0.5533	660	167	Orange Co. Annual Counts	D
Lockwood Boulevard	McCulloch Road	Oviedo City Limits	4LD	E	17,213	0.0942	0.6091	1,320	988	Seminole Co.Annual Counts	D
McCulloch Road	Alafaya Trail	Lockwood Boulevard	4LD	E	17,402	0.0964	0.5936	1,720	996	Seminole Co.Annual Counts	C
	Lockwood Boulevard	Old Lockwood	4LD	E	13,200	0.0846	0.5228	1,720	584	Seminole Co.Annual Counts	C
Rouse Road	Colonial Drive (SR 50)	Lokonatosa Trail	2	E	17,690	0.0889	0.5423	810	853	Orange Co. Annual Counts	F
	Lokonatosa Trail	University Boulevard	2	E	12,694	0.0918	0.5489	810	653	Orange Co. Annual Counts	D
	University Boulevard	Seminole County Line	2	E	10,792	0.0806	0.5531	810	481	Orange Co. Annual Counts	D
University Boulevard	Rouse Road	Alafaya Trail	6LD	E	60,188	0.0752	0.5181	2,790	2,345	Orange Co. Annual Counts	C
	Alafaya Trail	Gemini Boulevard	4LD	E	23,419	0.0752	0.5181	1,720	1,114	GMB Study	C

Note: This table only includes those roadway segments included within the context area, as shown in Figure 2-1.

LOS service volumes based on Orange County's and Seminole County's Comprehensive Plans and the 2002 FDOT Quality/Level of Service Manual.

2003 traffic volumes taken from FDOT, Orange and Seminole Counties, UCF traffic counts as well as UCF Traffic Impact Study prepared by GMB, 10/03, and UCF Traffic Study prepared by UCF Staff, 7/8/03.

**** This segment currently being widened to six lanes.***

Figure 2.11-6

EXISTING ROADWAY NETWORK AND DAILY TRAFFIC VOLUMES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

LEGEND

- 2-Lanes
- 4-Lanes
- 6-Lanes
- Average Daily Traffic
- UCF Campus Boundary
- Area Context Boundary
- County Line

C. *Parking System*

Since the majority (approximately 85%) of UCF's students commute to campus, as well as hundreds of staff and faculty members, the need for a large capacity of well-distributed parking is paramount. To accommodate parking demands, both permanent and temporary parking facilities are provided on campus. UCF has invested a great deal into providing this parking supply in to form of permanent and temporary parking facilities.

Parking is currently provided on the UCF campus in a variety of means such as surface lots, parking garages, metered spaces, and special locations, see Figure 2.11-7. There are currently four parking garages located around the perimeter of the campus and accessed by Gemini Boulevard. These include the North, East, West and South parking garages. Each of these garages will hold a maximum of approximately 1,300 vehicles for a total of 5,200 parking spaces in structured parking. Students primarily use these garages.

In addition to the structured parking, there are over forty (40) other surface parking lots spread throughout the campus. These surface lots are a combination of permanent and temporary spaces and are used by staff, faculty, students and others including specialty users such as motorcyclists. In total, the parking garages and surface lots add up to over 14,300 parking spaces available on campus. A detailed breakout of UCF's available parking supply is shown in Table 2.11-4.

Figure 2-11.7 Existing UCF Campus Parking Facilities

TABLE 2.11-4 UCF CAMPUS PARKING FACILITIES

Permanent Parking Areas

LOT	Reserved	Faculty	Staff	Student	Disabled	Meters	Service	Motor Cycle	Other	TOTAL
A2	43	37			10	6	5	14	4	119
A3			214		18					232
A4				203						203
A5	18	52				6	5	14		95
A6				213						213
A7				128						128
BPW				21	1					22
B2	1		37	256	6		4			304
VCC					4	12	2			18
C2	4		31	243	5		7	4	3	297
C3				78				10	4	92
C4			35		1		6	2		44
C6				27	1			3		31
C7		5		152	5				1	163
C8				79						79
CL	1				10		5			16
D1	2			216	4		13	5		240
D2	28	46			11		2	11		98
E1		95	321		10		2	19		447
E3	4			109					4	117
F1				174						174
F2				377	13					390
F3			16		2					18
F4	1		45		2					48
G1				394						394
G2				266						266
G5	1		161		5					167
G6	15	104			7		6	16		148
G7		20	54	407						481
H1				66	8					74
H2				132	3				132	267
H3				107	2				107	216
H4	1			28	1		2		27	59
H5				65	2				65	132
HPA	2						3	1		6
LIB					14		8			22
AV1	1			412	2		1	6	389	811
AV2	1		20	712	12			6	694	1445
T1100				46						46
North Garage				1294	4		5	16		1319
South Garage				1251	5		3	14		1273
West Garage				1246	12		7	14		1279
East Garage				1272	2		3	14		1291
TA										0
									Sub-Total	**13,284**

Temporary Parking Areas

C5			33		1		2		3	39
E5										0
E6										0
T200			34							34
T400				203	12					215
T600		23		376						399
T800				80	1					81
T900	1			268					1	270
									Sub-Total	**1,038**

Note: This does not include parking reserved for Greek housing.

GRAND TOTAL 14,322

UCF's parking supply is also segregated by user, i.e., student faculty, staff, disabled, etc. table 2.11-5 shows a detailed breakout of the Campus' parking supply by user type.

Table 2.11-5 Parking by User

Type of Parking	Number of Spaces	Percentage of Total (14,085)
Faculty	398	2.83%
Staff	995	7.06%
Student	9,652	68.53%
Reserved	171	1.21%
Disabled	204	1.45%
Metered	35	0.25%
Service	141	1.00%
Academic Village	1,081	7.67%
Lake Claire	332	2.36%
Greek Park	624	4.43%
Overflow	223	1.58%
Motorcycle	169	1.20%
Pay by Space	60	0.43%

Source: UCF Parking Services

As Table 2.11-5 clearly shows, the majority of the parking is allocated for students with slightly over 68% of the total spaces on Campus. Faculty and staff total approximately 10% of the total number of spaces allocated on the campus. Some types of parking spaces could be used by all users, including students, faculty, and staff. These types of parking include disabled, overflow, and motorcycle and comprise roughly 4.5 % of the total number of spaces. Residential areas such as the Academic Village, Greek Park, and Lake Claire comprise of 14.56% of the parking. These spaces may be used by students who keep their cars on campus not for the purpose of traveling to class, but for other means, such as trips off campus for tasks or to travel to and from their work.

Approximately 3,000 spaces on campus service "specialty" uses. These uses include: Reserved, disabled, metered, service, academic village, Lake Claire (residences), Greek Park, overflow, motorcycle, pay by space. Table 2.11-6 shows a breakout of these spaces.

Table 2.11-6 Specialty Parking

Reserved	171
Disabled	204
Metered	35
Service	141
Academic Village	1,081
Lake Claire	332
Greek Park	624
Overflow	223
Motorcycle	169
Pay by Space	60
Sub-total	3,040

Source: UCF Parking Services

One-third of the specialty parking spaces are allocated in the Academic Village. Approximately 3% of the spaces are metered or pay by space. According to the number of spaces allocated for students (9,470) and the number of students attending the University in 2003 and 2004 (38,176), there are parking spaces for approximately 25% of the total student body.

University staff performed a detailed parking utilization study for all of the major facilities on Campus. The report lists number of vehicles parked in each lot, utilization of the parking areas by location and time, average lot counts by location and time of day, and parking capacity by type. The data collected by the University spans five (5) days in September 2003. The information is detailed to the lot location, time of day, and capacity of the lot.

In general, most of the lots are more than 85% occupied during the day and several are at capacity (i.e., full). The peak time period in which the majority of lots are at capacity is between 10 am and 4 pm. However, some of the lots are at capacity at 8 am, indicating early classes and the resultant arrival of the first shift of students, faculty and staff on campus for classes and work activities. The availability of parking spaces between 10 am and 4 pm is less than 4% on most weekdays. Occupancy data was also broken out by user type, i.e., student, staff, faculty, etc. Generally, student parking was at or near capacity in most lots between the hours of 10 am and 4 pm, with minimal availability between 10 am and 12 noon. Availability in the student parking lots was seen after 4 pm on most days.

Table 2.11-7 shows a breakout of parking utilization by user type for several periods during an average weekday. A review of the table clearly shows that in general, student, staff and faculty parking facilities are heavily utilized during regular business hours, and that during the middle of the day less than ten percent of the Campus' parking supply is available for use. A copy of the most recent study, dated September 2003, is included in Appendix A.

Table 2.11-7 Parking Utilization by User Type (Average Weekday)

Lot Type	Capacity	8:00 A.M.		10:00 A.M.		12:00 P.M.		2:00 A.M.		4:00 A.M.		6:00 P.M.		Average	
		Occupied Spaces													
FACULTY	398	276	69.40%	392	98.44%	375	94.12%	390	98.09%	364	91.41%	242	60.75%	340	85.37%
STAFF	995	504	50.69%	877	88.16%	951	95.58%	942	94.69%	809	81.27%	516	51.82%	767	77.04%
STUDENT	9,652	5,758	59.65%	8,835	91.54%	8,939	92.61%	8,525	88.32%	6,701	69.43%	5,863	60.74%	7,437	77.05%
DISABLED	204	67	32.65%	106	51.76%	110	54.12%	103	50.39%	84	41.27%	56	27.45%	88	42.94%
OVERFLOW	223	38	17.04%	115	51.57%	165	73.90%	139	62.15%	142	63.86%	68	30.67%	111	49.87%
LAKE CLAIRE	1,413	1,292	91.46%	1,284	90.88%	1,285	90.97%	1,253	88.65%	1,197	84.69%	1,198	84.78%	1,252	88.57%
GREEK PARK	567	345	60.92%	416	73.44%	502	88.61%	509	89.70%	429	75.66%	401	70.65%	434	76.50%
MOTORCYCLE	169	12	7.34%	29	17.04%	36	21.30%	31	18.22%	29	16.92%	22	12.90%	26	15.62%
TOTAL	13,621	8,293	60.89%	12,054	88.50%	12,363	90.77%	11,891	87.30%	9,755	71.61%	8,365	61.41%	10,454	76.75%
AVAILABLE		***5,328***	***39.11%***	***1,567***	***11.50%***	***1,258***	***9.23%***	***1,730***	***12.70%***	***3,866***	***28.39%***	***5,256***	***38.59%***	***3,167***	***23.25%***

Source: UCF Parking Study, September 2003

D. *Transit Circulation*

Two transit systems; one public and one private currently serve the University. LYNX is the regional, public transit service provider that connects the University to greater Orlando area, including Downtown Orlando. The bus service enters the Campus via University Boulevard and utilizes the UCF/LYNX Super Stop, located near a parking garage, a large surface parking lot and outer perimeter pedestrian walkways.

It is important to note that the LYNX bus routes also have stops near several residential clusters where they may serve students. Three LYNX routes currently serve the UCF Campus. Theses include:

Link #13: This route is specific to the University, and its services the following areas:
Commencement at the Downtown Bus Station, East Robinson Street, Colonial Plaza Market Center, Audubon Park, VA Clinic, Winter Park Hospital, Winter Park Pines, Goldenrod, University Boulevard, and the UCF/LYNX Super Stop at the University.

Primary stops for the link include the following:
Downtown bus station, SR 436 & University Boulevard, Colonial Plaza Market Center, Aloma Avenue & Forsyth Road, Corrine Drive & General Rees Avenue, University Boulevard & Dean Road, Lakemont Avenue & Aloma Avenue, and the UCF/Lynx Super Stop

Link #30: This is a very long route that stretches from far western Orange County at the West Oaks Mall, all the way to the UCF Campus traveling almost entirely on SR 50, Colonial Drive.

Primary stops for this link include:
West Oaks Mall, SR 436 & Colonial Drive, Colonial Drive & Hiawassee Road, Valencia Community College (VCC), East Colonial Dive & Pine Hills Road, SR 50 & Dean Road, Colonial Drive & John Young parkway, SR 50 & Alafaya Trail, Colonial Drive & Magnolia Avenue, and the UCF/Lynx Super Stop.

Link #47: This route serves the general area of Oviedo, forming a large loop, and commences at the University, serving the following areas:
University of Central Florida, Oviedo Marketplace, Oviedo High School, Broadway Street, and Alafaya Woods.

Primary stops for the link include:
UCF/Lynx Super Stop, Alafaya Woods Boulevard & Mitchell Hammock Road Alafaya Trail & Alafaya Woods Boulevard, Alafaya Trail & Alafaya Woods Boulevard, Oviedo Marketplace, Reed Avenue & Jackson Street.

All three links circle areas where off-campus student housing exists as well as running along the edge of single family residential and commercial/retail areas in Orange and Seminole Counties. The routes provide the opportunity for the transit service to alleviate congestion on roadways potentially created by student vehicles going from off-campus areas to the University or associated service areas. Figure 2.11-8 shows all of the existing Lynx routes.

In addition to the three Lynx routes that service the UCF Campus, the University also maintains a fleet of twenty-two (22) shuttle buses that service two (2) on-campus and seven (7) off-campus transit routes. These buses are air-conditioned and can carry a maximum of forty (40) passengers. The UCF Shuttle system provides a significant transportation alternative to the single passenger automobile. The UCF shuttle system carries between 6,000 and 11,500 riders per day during the 2003 fall semester. This equates to between 130 and 3,800 riders per day, per route.

The seven off-campus routes that the University currently operates include:

Route #1 Pegasus Landing Shuttle
The shuttle travels to each of the separate phases in Pegasus Landing. Then traveling to UCF along Gemini Blvd. North, turning right on Greek Park Dr. and a left turn to Aquarius Agora Dr. The designated pick-up/drop-off point on campus is at the Student Union along Pegasus Drive. Returning back to Pegasus Landing

Route #2 Pegasus Pointe/College Station Shuttle
The shuttle has two designated pick-up/drop-off points inside the community property. The shuttle then travels along Alafaya Trail North turns right into College Station to the pick-up/drop-off locations inside the property, back out to Alafaya Trail toward the UCF campus turning right on Central Florida Blvd terminating in front of Millican Hall.

Route # 3 Jefferson Commons/Arbour Apartments Shuttle
The shuttle travels from the transit center at UCF (located by the education building and west parking garage) outbound to Alafaya Trail, south to Mackay Blvd. Turning right and heading to Arbour Apartments. There are two designated stops within the property. The shuttle then travels back toward Alafaya and stopping at the bus shelter between Jefferson Commons Phases 1 and 2. Continuing on, turning right into Jefferson Commons Phase 2 with three designated stops within the property. The shuttle then makes a return trip to the transit center at UCF.

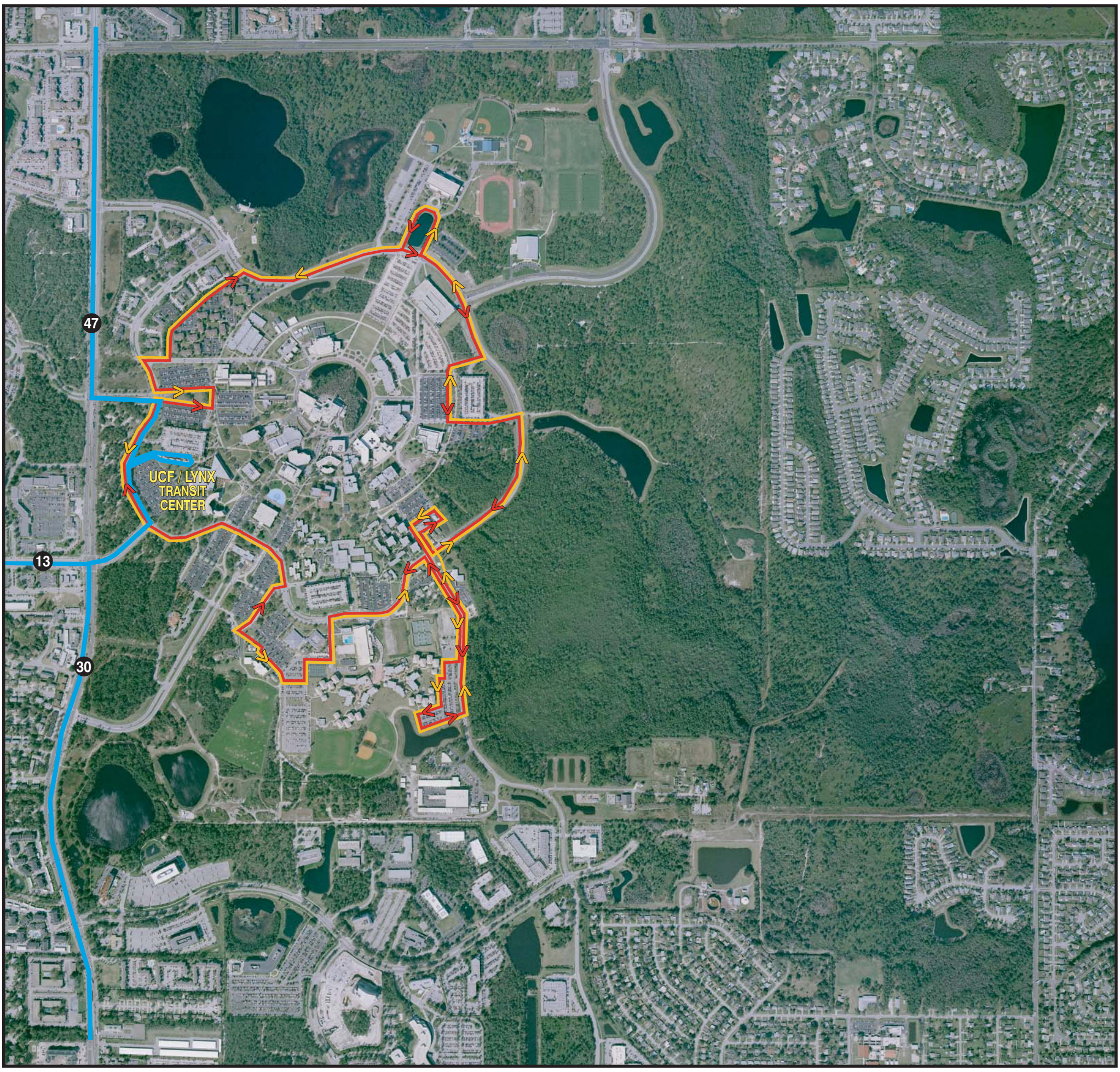

Figure 2.11-8

EXISTING CAMPUS TRANSIT SERVICE

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- 13 Existing LYNX Routes
- Black Shuttle Routes
- Gold Shuttle Routes

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

0 400' 800' 1600'

Route # 4 Village at Alafaya Club/University House/BoardWalk Shuttle
The shuttle route will begin pick-up/drop-off at the front entrance by the clubhouse in the Village at Alafaya Club turn left on Lokanotosa Trail then right turn into University House. The shuttle will pick-up/drop-off at the front entrance to the UH Clubhouse. The shuttle will continue on turn left on Alafaya Trail and turn right into the Boardwalk Apartments with a pick-up/drop-off point at the front entrance of the Clubhouse. Continuing back to Alafaya Trail North turning right on Central Florida Blvd. terminating at the front entrance to Millican Hall.

Route # 5 Village At Science Dr./IST/OTC/UTC/Research Pavilion
The shuttle travels from the student health center along Libra Drive turning right on Research Parkway. The first stop is at the UCF Human Resources then traveling around the University Tech Center (adjacent to the Theatre Dept) carrying through with two stops within the Orlando Tech Center. Next the shuttle stops outside the Institute for Simulation and Training. The shuttle turns off the research parkway to technology drive and going through the VSD with three stops around the property. The shuttle then makes the return trip to UCF with a stop outside the Research Pavilion and completing the trip back at the student health center.

Route # 6 Northgate/Tivoli/Riverwind Shuttle
The shuttle travels from the E1 parking lot adjacent to the HPA, Engineering, and Business Administration buildings exiting out to Gemini Blvd. East turning right on North Orion Blvd. Then turning left at McCulloch Rd. with a first shuttle stop at the Northgate Lakes Apartments (NGLA). Carrying out of NGLA and turning right into Tivoli Apartments there are two shuttle stops one on each side of the property. The shuttle then travels back out to McCulloch Rd. to Alafaya Trail North turning in Riverwind Apartments. The shuttle will return to UCF via North Orion Blvd continuing back on campus to the E1 parking lot destination.

Route # 7 Collegiate Village Inn Shuttle
The shuttle travels from the transit center at UCF (located by the education building and west parking garage) outbound to Alafaya Trail, south to University Blvd. Turning left into CVI. There are one designated stops within the property. The shuttle then makes a return to the transit center at UCF.

In addition, as previously noted UCF also maintains two on-campus routes, the Black and Gold Lines. These shuttle routes remain on-campus and travel primarily on Gemini Boulevard. The Black line travels in a counter-clockwise direction and the Gold Line travels in a clockwise direction.

Figure 2.11.9 shows all seven of the UCF Off-Campus Shuttle Routes.

Table 2.11-8 Average UCF Shuttle Ridership, Fall Semester, 2003

	Month	August	September	October	November	December	Average Daily Ridership Per Route for Fall Semester
Route #	Route						
1	Pegasus Landing	19,908	92,035	92,094	59,389	26,277	3,812
2	Pegasus Pointe/College Station/Addison Place	6,173	38,542	47,513	31,836	12,901	1,802
3	Jefferson Commons/Arbour Apts.	4,606	18,238	14,514	8,849	3,597	655
4	Alafaya Woods/University House/Boardwalk	10,127	48,122	34,838	20,163	5,853	1,567
5	Village at Science Drive	2,790	11,065	11,352	6,907	2,594	457
6	Northgate Lakes/Tivoli/Riverwind	3,615	18,875	15,840			782
6A	Northgate Lakes/Tivoli				6,963	3,350	382
6B	Riverwind				2,440	1,027	128
7	Collegiate Village Inn	2,068	10,130	9,963	6,799	3,245	424
8	Black and Gold Line	379	3,394	3,027	2,187	918	130
Totals		49,666	240,401	229,141	145,533	59,762	9,533
# of Days of Service per Month		5	21	23	17	10	76
Average Daily Ridership		**9,933**	**11,448**	**9,963**	**8,561**	**5,976**	**1,014**

Source: UCF Parking and Transportation Section

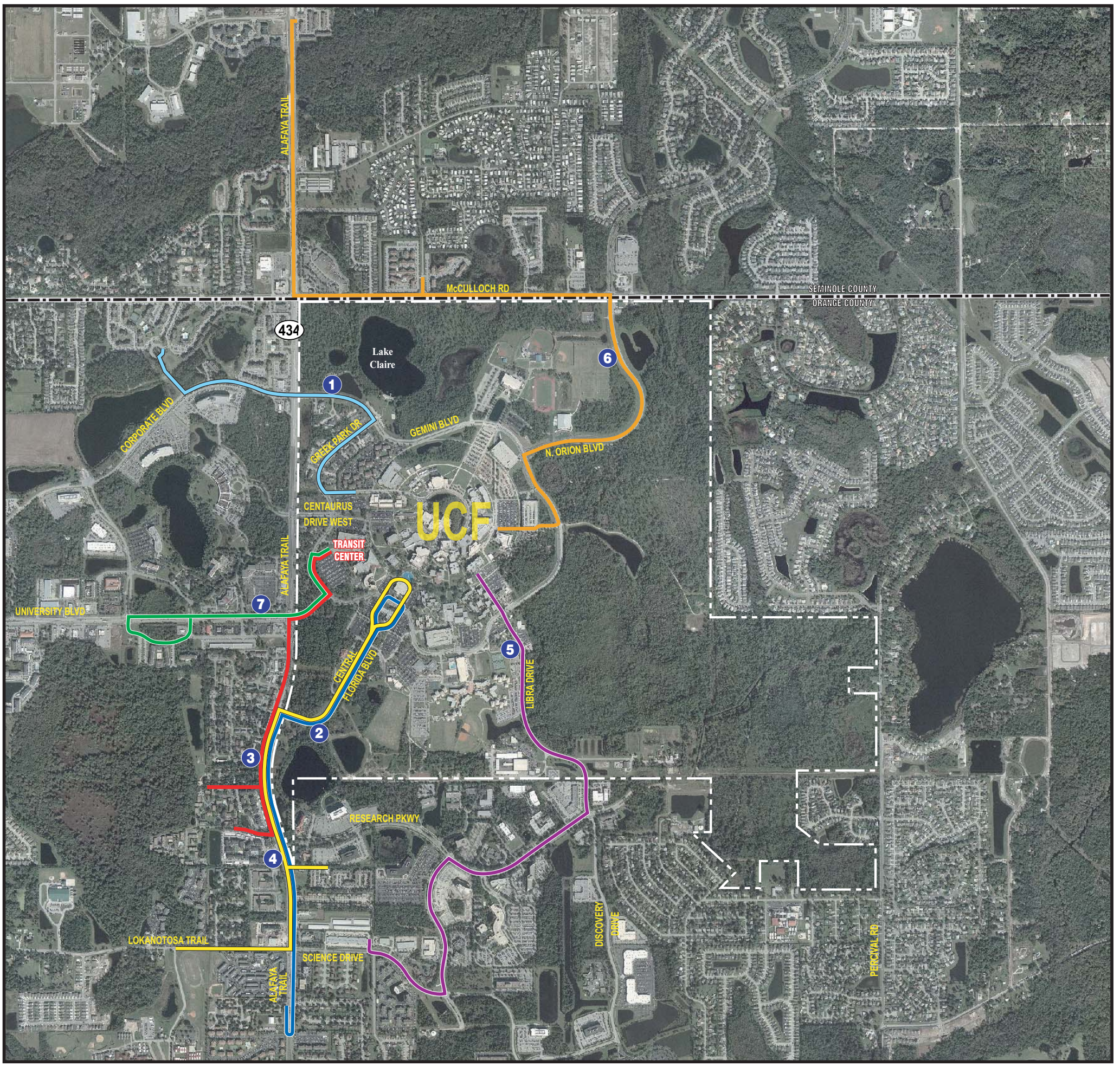

Figure 2.11-9

OFF-CAMPUS UCF SHUTTLE MAP

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

0 400' 800' 1600'

LEGEND

- 1 Pegasus Landing Shuttle
- 2 Pegasus Pointe/College Station Shuttle
- 3 Jefferson Commons/Arbour Apartments Shuttle
- 4 Village at Alafaya Club/University House/ Board Walk Shuttle
- 5 Village at Scenic Drive
- 6 Northgate/Tivoli/Riverwind Shuttle
- 7 Collegiate Village Inn Shuttle
- Campus Boundary

Table 2.11-8 details the average ridership of all UCF shuttle for the 2003 fall semester. A review of Table 2.11-8 clearly shows that a significant portion of the University's students, faculty and staff arrive each day via the shuttle system. This transit option significantly reduces the overall impact of the University on the surrounding roadway network.

E. *Bicycle and Pedestrian Circulation*

A key part of the University's multi-modal transportation system is the pedestrian and bicycle network. Since most students, faculty and staff walk between their destinations once on campus, it is important that a highly developed network exist that will allow for this circulation. To that end, the University has developed an intricate network of walkways throughout the Campus. Figure 2.11-10 illustrates the location of pedestrian and bicycle walkways on campus. This network is anchored by with three concentric paths as well as connecting paths that crisscross the campus and connect significant pedestrian generators such as academic buildings, parking facilities and on-campus residential units.

The pedestrian and bicycle network is key to ensuring that all of the other modes that access the Campus, such as personal vehicles (via parking facilities) and transit are utilized to their fullest extent.

To that end, the University has made significant investments in ensuring that the facilities necessary to encourage pedestrian and bicycle activity are in place, are aesthetically pleasing and are safe to use. These facilities see a great deal of use due to the large student population as well as the active group of bicycle enthusiasts who enjoy the Campus' scenic environment.

<u>Other Bicycle Facilities</u>
As noted above, bicyclists are able to use the walkway network throughout Campus. In addition, most of the buildings that have significant student involvement also have one or more bicycle racks located at their entrances.

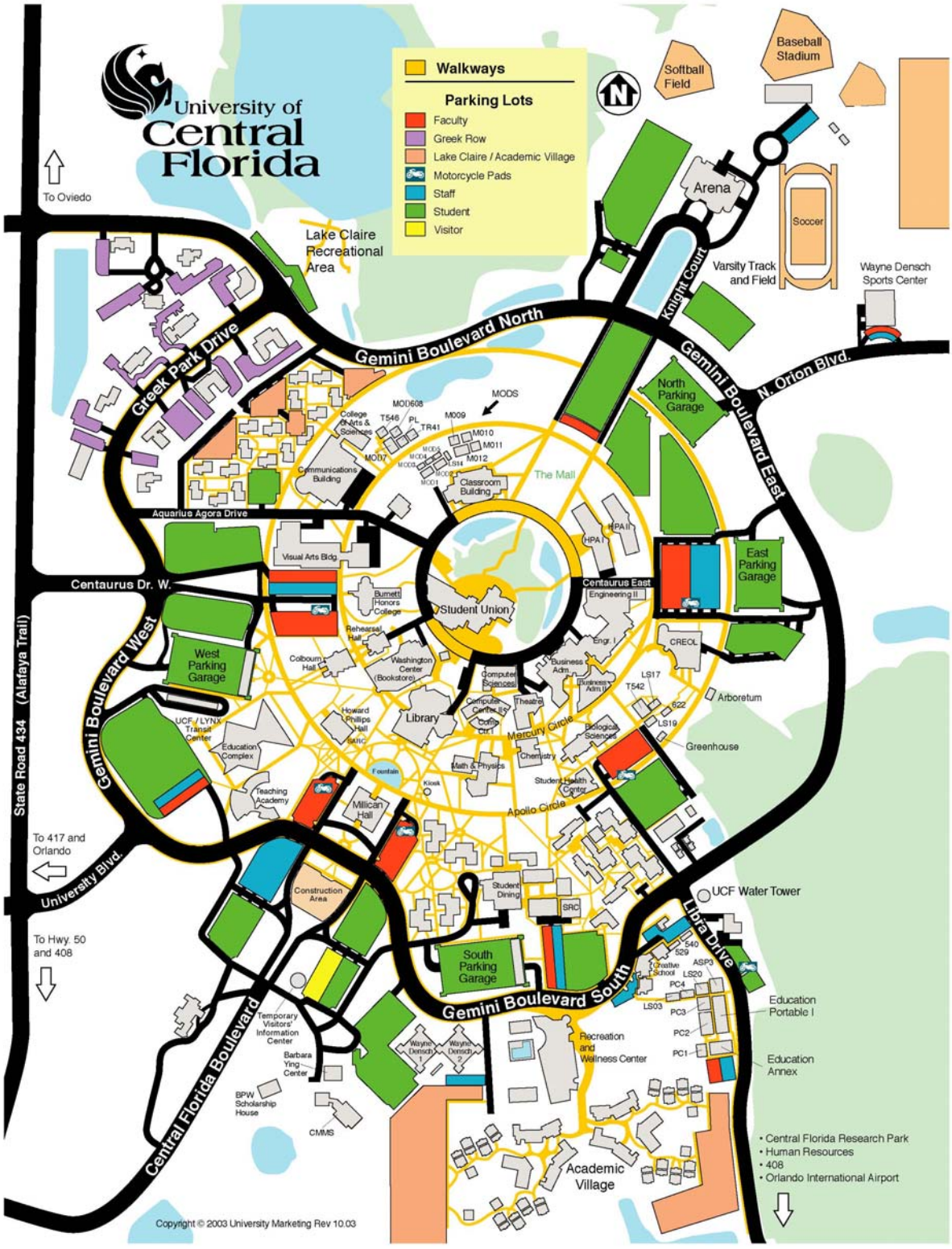

Figure 2-11.10 UCF Campus Map Detailing Pedestrian Walkways

F. *Other Mobility Options*

The University has been developing various mobility options to the use of the single-occupant vehicle and has been working to increase the student housing to enrollment balance within the context area. The primary mobility options and strategies to reduce the dependence upon the personal automobile offered by the University include enhanced transit service from businesses and residences off-campus and enhanced connectivity on-campus via pedestrian and bicycle facilities. One popular mobility option is the University's campus shuttle with on-campus headways of 10 minutes or less during peak-periods and special events and off-campus headways of 15 minutes to University-affiliated housing in the context area. The University has identified residential concentrations of students in need of convenient transit routes, increased transit service, decreased bus headways, developing additional new routes, or modifying existing routes, as deemed appropriate by the University. Detailed data and charts collected and summarized by the University are located in the Appendix of this section.

The University has evaluated opportunities to purchase park and ride lots within the context area. At this juncture, this option does not appear to be cost-effective so the University has emphasized alternative modes of access between on-campus destinations. The University provides high-quality transit, bicycle, and pedestrian options for travel between residential areas and parking lots to other on-campus destinations. The University, in conjunction with LYNX and University/Alafaya Corridor Transportation Association (UACTA), continues to improve regional and campus transit service to, from, and within the University. The data collected shows the ridership throughout the academic school year as well as the routes and locations of stops. Dormitories, visitor parking area, and campus parking lots are also connected to other campus destinations via a network of pedestrian walkways and bicycle paths as illustrated in Figure 2.11-10. Additionally, the University provides bicycle racks adjacent to classroom buildings and prohibits all non-service vehicles within the 1,200-foot Radius Sidewalk. The University has also adjusted class scheduling to mitigate peak-hour traffic conditions and maximize utilization of existing transportation infrastructure.

The University actively participates in the UACTA to promote Transportation Demand Management (TDM) techniques both on-campus and in the context area. The University has implemented, where appropriate, TDM strategies including, but not be limited to:

- Offering flex scheduling for University staff;
- 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
- Traffic operational improvements to the on-campus roadway system, such as additional signalization.

One future TDM strategy that the University plans to investigate includes the provision of high-occupancy vehicle parking incentive program that provides preferential parking treatment for automobiles carrying two or more persons.
Another future TDM strategy may include additional coordination with the host local government, LYNX, and affected local governments to establish campus-wide ridesharing and carpool programs for UCF students, faculty and staff. The University also plans to study the effectiveness of distance learning (cable or internet classes) as a technique to reduce the need for students to travel to the University. The University has also opened a satellite campus, the Rosen School of Hospitality Management, to significantly reduce the commute from the tourist-related areas of the community to the campus.

3.0 FUTURE CONDITIONS

G. *Future Socioeconomic Conditions*

The main campus of the University of Central Florida has been growing at a rapid pace over the last ten years and this pace is expected to continue for the near and mid-term planning horizons. Based on current projections, the student population on the main UCF Campus is projected to approach 50,000 full time students by 2016. Table 2.11-1 (shown again below) illustrates the current growth projections for the main campus. The University is committed to maintaining its goal of accommodating at least fifteen percent of the total student population on-campus. To that end, the University is in the process of planning, designing and constructing approximately 2,000 new residential dormitory units at the northern end of the Campus as a part of the Wayne Densch/Athletic Masterplan.

Table 2.11-1 UCF Projected Attendance for the Main Orlando Campus

School Year	Projected Population
2003-2004	38,176
2004-2005	38,587
2005-2006	40,403
2006-2007	41,922
2007-2008	43,342
2008-2009	44,827
2009-2010	45,639
2010-2011	46,372
2011-2012	47,036
2012-2013	47,665
2013-2014	48,084
2014-2015	48,526
2015-2016	48,771
2016-2017	49,117

Source: University of Central Florida, Office of University and Planning Support

H. *Committed Transportation Improvements*

Future Roadway Improvements
The University has been proactive in constructing roadway improvements as they have become needed. Recent roadway improvements to University facilities includes the widening to 4-lanes of Gemini Boulevard East between Libra Drive and North Orion Boulevard; Aquarius-Agora Drive was reworked to include new a sub-base, sidewalks, bike lanes, sidewalks, exterior lighting

As such, there are few new projects currently planned for construction. Specifically, the University has planned two significant roadway improvements, as well as a few other operations modifications.

- Gemini Boulevard West - Gemini Boulevard is planned to be realigned in accordance to the Campus Master Plan. This realignment entails eliminating the "wishbone" roadway geometry configuration in place of a smoother, curvilinear alignment that will improve traffic flow and reduce vehicle and pedestrian conflict points. Work includes bike lanes, left and right turn lanes, upgrading of the exterior lighting, new traffic signals, sidewalks, and landscaping. The segment of the existing Gemini Boulevard roughly between the South Parking Garage and the G-7 surface parking lot will be vacated for other uses such as pedestrian and bicycle facilities.

- North Connector – This new roadway will connect the north side of the new athletic facilities and the Wayne Densch Convocation Center to McCulloch Road, and to North Orion Boulevard. The access to McCulloch Road will be controlled via the use of removable bollards (or similar devices) and will only be opened to vehicular traffic during special events when additional ingress and egress points are needed to improve traffic flow conditions. The balance of the time this roadway will act as a pedestrian pathway.

- Centaurus West – Centaurus West will have several physical improvements including new sidewalks, a new right-turn lane, as well as upgraded exterior lighting and landscaping.

- Signalization Improvements – There are currently two locations that will be evaluated for the installation of new traffic signals; the intersection of re-aligned Gemini Boulevard West and Central Florida Boulevard, and, the entrance road to the UCF/Lynx Transit Center. The purpose of these signal will to be improve traffic circulation and safety, and in the case of the signal for the transit center, to improve access to that important facility. Both of these signals will be evaluated using actual traffic volumes and the Manual on Uniform Traffic Control Devices (MUTCD).

- Evaluate the Widening of Libra Drive - UCF is in the processing of developing a study to evaluate the impacts, benefits and potential drawbacks of widening Libra

Drive between Gemini Boulevard South and Discovery Drive. As this road is part of a known cut-through route and has significant right of way constraints, the feasibility of a potential widening will be closely evaluated.

Figure 2.11-11 details the currently proposed roadway improvements.

Future Parking Facilities

In seeking to accommodate the growth of the campus as well as making the most efficient use of the University's property, UCF will be constructing several new parking facilities. These include a mix of structured (garage) parking spaces as well as some additional surface parking lots. In order to accommodate the new residential units being constructed at the northern end of the campus as a part of the Wayne Densch athletic facilities, the University will be constructing two, 700-space parking garages.

These new parking garages are envisioned to be used entirely be the new students in this area. UCF will also be constructing approximately 600 new surface parking spaces to support the new athletic facilities located near the intersection of Gemini Boulevard East and North Orion Boulevard.

A new, 700-space parking garage is also planned immediately south of the existing East parking garage. This garage will be connected to the East Garage and will not impact any of the protected areas associated with the arboretum.

Finally, the existing large, G-7, 500-space surface parking lot located at the corner of University Boulevard and Gemini Boulevard West will be demolished and a 1,600 space parking garage (Parking Garage V) will be constructed in its place. This will results in a net gain of approximately 1,100 parking spaces when construction is complete.

Figure 2.11-12 shows a detail of the proposed Parking Garage V.

Figure 2.11-13 shows all of the existing and planned parking structures on the UCF Campus, and also includes the new surface lost planned in conjunction with the Wayne Densch Athletic Masterplan.

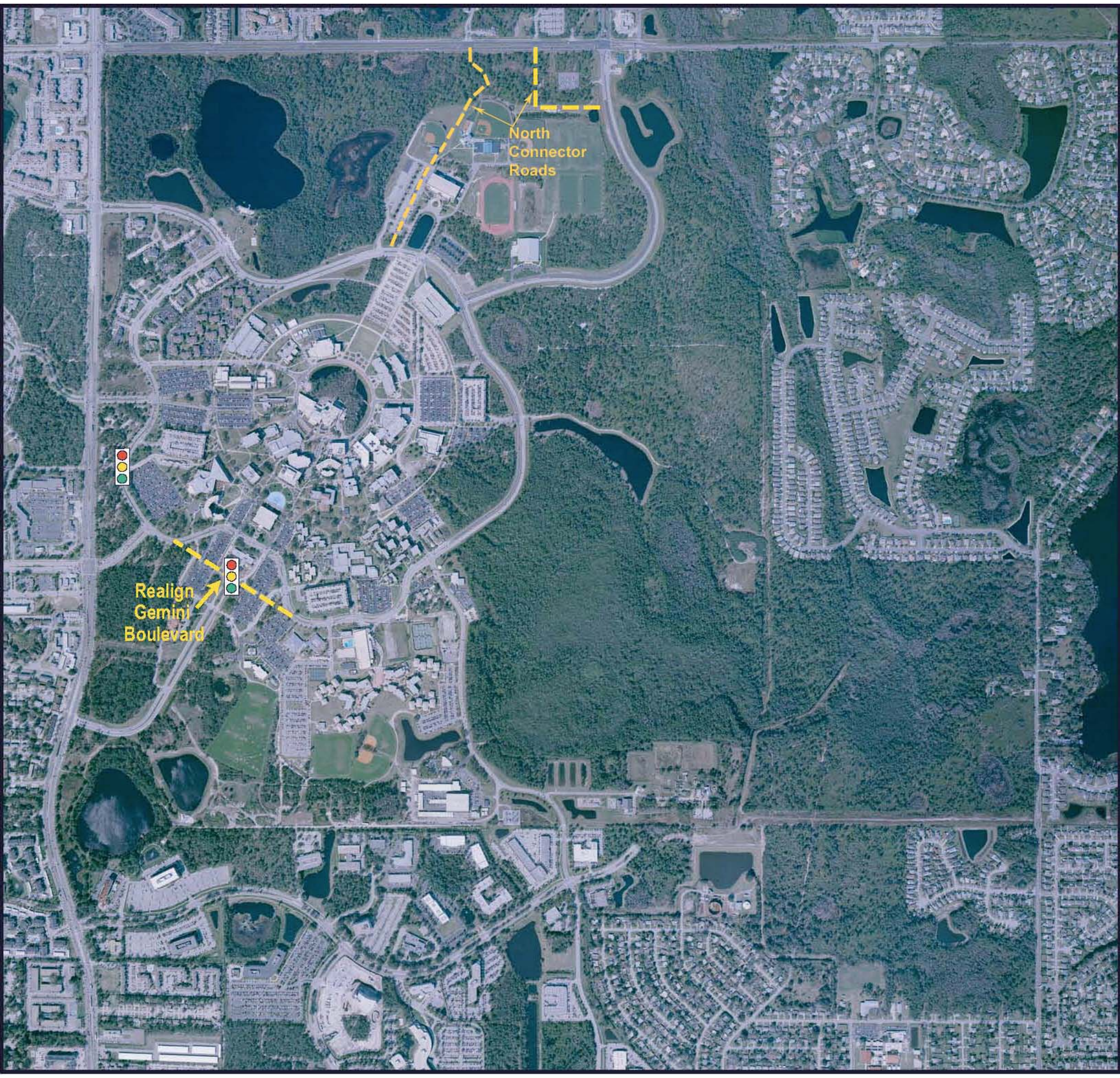

Figure 2.11-5

PROPOSED ROADWAY IMPROVEMENTS

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

Potential New Traffic Signal

Proposed New Roadway

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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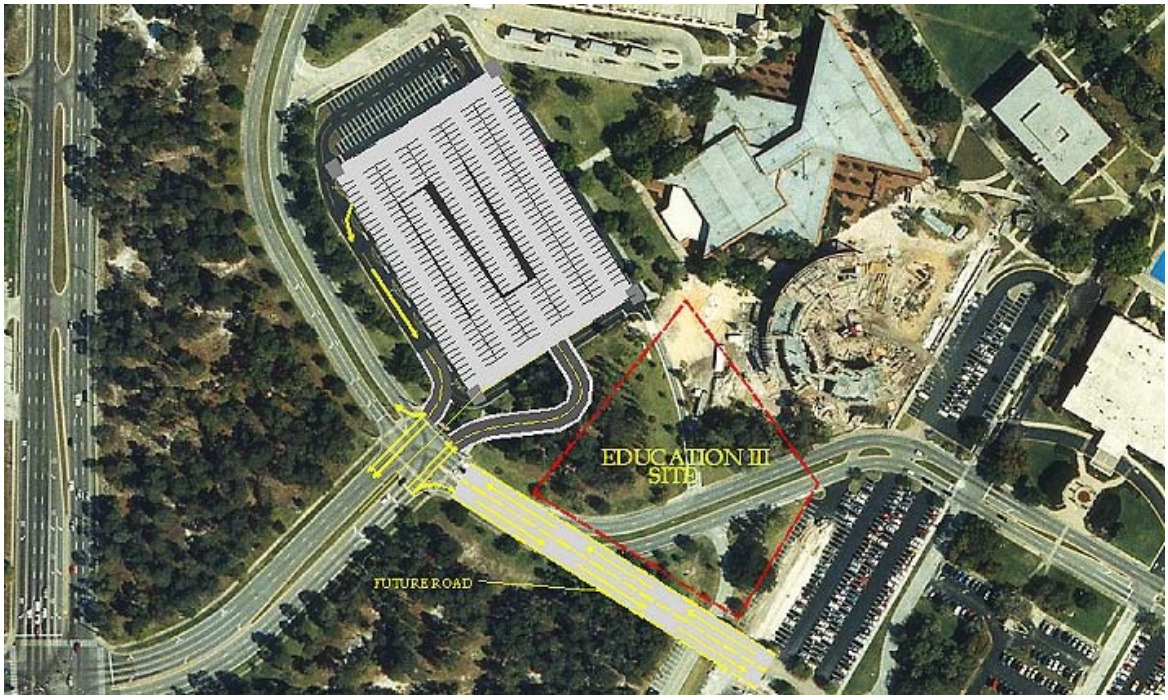

Figure 2.11- 12 Proposed Parking Garage Five

In total, these improvements will add approximately 3,500 new parking spaces, bringing the campus total to over 18,000 total spaces available on campus.

From a maintenance perspective, the drainage of parking lots A3 and A4 will be corrected and the surface of a variety of parking lots will be repaired and resurfaced.

Figure 2.11-13

EXISTING AND PLANNED PARKING STRUCTURES

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

LEGEND

- Existing 1,200-Car Garage
- Programmed 1,600-1,800 Car Garage
- Planned 700-Car Garage
- Planned 1,100-Car Garage
- Proposed Surface Parking Lots
- Proposed Connection

Pedestrian/Bicycle Facilities

At present the only significant improvement being evaluated to the existing pedestrian and bicycle network is the extension of the Little Econ Greenway (LEG). The existing Phase I of the LEG trail extends 4 miles from Blanchard Park to Goldenrod Road and features riverside recreation, picnicking, wildlife and horse and canoe trails. There are available parking areas on Harrel Road and Econlockhatchee Trail, just north of Colonial Drive. There is also a paved trailhead on the north side of 50, just east of Goldenrod Road. The LEG will eventually extend 10 miles linking the University of Central Florida to the Cady Way Trail, then to the Cross Seminole Trail system, through the City of Oviedo and back to Blanchard Park.

The LEG extension will enter the UCF campus just south of Central Florida Boulevard and will skirt the southern edge of the existing recreational fields before joining the Libra Drive corridor. The trail will then follow the Libra Drive corridor north until it hits North Orion Boulevard, which it will; then follow north to McCulloch Road and off the UCF Campus. Figure 2.11-14 shows all of the significant existing and planned pedestrian and bicycle facilities on the UCF Campus.

Figure 2.11-14

PEDESTRIAN BICYCLE NETWORK

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Pedestrian Activity Corridor
- Major Crossing Movements
- Shuttle Stops
- Provide/Enhance Pedestrian and Bicycle Connections
- Proposed Little Econ Trail Extension

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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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, state 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 1013.30(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~~ 1013.30(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, the East Central Florida Regional Planning Council, and other affected local government 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 1013.30 ~~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 1013.30 ~~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. 1013.30 ~~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. 1013.30 ~~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.

The University of Central Florida Intergovernmental Coordination Element promotes proper communication and coordination between the University and affected state and local governments. The rapid growth of the University means that increased development and infrastructure coordination with the host community and other governmental bodies, particularly Seminole County, will be vital to meet future needs in a planned and effective way. Per Florida law, "Affected state and local governments" include the following entities:

Orange County
Seminole County
City of Oviedo
City of Orlando
St. Johns River Water Management District
Florida Department of Community Affairs
East Central Florida Regional Planning Council
Florida Department of Transportation
Florida Department of State
Florida Department of Environmental Protection
Freshwater Fish and Game Commission

Intergovernmental Coordination and the Campus Master Plan Outreach Program

As reflected in the Goals, Objectives and Policies, the University will continue to develop and implement its community outreach program with respect to the Campus Master Plan. Currently, the University presents the Plan at various phases throughout the update process to local government boards, public workshops, and community meetings on an ongoing basis. The coordination process with local governments throughout the Plan update is critical to ensure that all input is considered prior to the Plan's final adoption.

Intergovernmental Coordination and the Campus Development Agreement

Per Section 1013.30 Florida Statutes, the University is required to enter into a campus development agreement(s) (CDA) with local government(s) that addresses the impacts of University development on local government support infrastructure. Negotiation of the CDA occurs in conjunction with every five-year update to the Campus Master Plan and includes the identification of a process whereby the impacts of development are assessed. The primary purpose of the CDA is for the University and local government to identify areas of impact from University-generated development on the local infrastructure system and to calculate the University's proportionate share of the impacts. The CDA typically includes one or more specific concurrency projects along with the estimated project cost, which is essentially a request to the State for Concurrency Trust Fund monies. Every project requested must be supported by adequate data and analysis in order to access Trust Fund dollars. The Campus Master Plan updates and the CDA are coordinated closely with local government representatives to ensure consistency with state and local comprehensive plans.

Intergovernmental Coordination and the UCF Facilities Planning Website

The above referenced website (www.fp.ucf.edu) houses the current and former Campus Master Plans in addition to a wealth of support documentation for the plan update. The website is a critical tool the University uses to communicate with state and local governments, the oncampus community and the public. The University will continue to utilize this electronic medium to provide easy access to the Campus Master Plan in order to streamline the local and state review process.

~~**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.~~

Intergovernmental Coordination and Transportation

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. Finally, the University will continue to coordinate with localities looking to interconnect multiuse trail systems through and/or around the campus.

The University will continue to implement its policy of close coordination with effected state and local governments with regard to transportation issues resulting from University-generated development including impacts on area and oncampus roadways, transit, parking and bicycle/pedestrian facilities. Please refer to section 2.11 for University policies regarding transportation.

Intergovernmental Coordination and Fire Protection

~~In the area of fire protection the~~ 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.

Intergovernmental Coordination and Stormwater Master Planning

~~A stormwater master plan has been implemented with the regional authority, St. Johns River Water Management District,~~ The St. Johns River Water Management District approved the update to the Campus Stormwater Master Plan in March, 2004, thus providing adequate and environmentally sound stormwater management and capacity for the past and future growth of the campus. The update significantly reduces University-generated offsite stormwater impacts on the surrounding community as discussed in the Stormwater Subelement of this plan. The University will continue to coordinate with state and local governments as it develops within the parameters of the approved Stormwater Master Plan. In addition, the University intends to sponsor public symposiums addressing this issue with local stormwater officials and the public.

Intergovernmental Coordination and Potable Water and Sanitary Sewer

The University ~~recently~~ has ~~secured~~ a ~~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~~ In addition, 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.~~

Intergovernmental Coordination and Environmental Protection

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.

Identification of Opportunities for Increased Coordination

~~Some issues which should be considered for increased intergovernmental coordination are~~: The University will explore the following opportunities for increased intergovernmental coordination through the year 2015 planning horizon:

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**

~~e) 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.~~

-

2.13 Conservation Element
Goals, Objectives and Policies
2005-2015 Campus Master Plan Update

GOAL 1: The University shall maintain a commitment to the protection of its ecosystems and lands of significant environmental importance to ensure that these resources are protected for the benefit of present and future generations while accommodating the continued development and expansion of the campus' built environment.

OBJECTIVE 1.0: The Environmental Management System Committee (EMSC) will serve as an oversight committee for the conservation element of the master plan. Changes to the master plan will be reviewed by the EMSC.

OBJECTIVE 1.1: To designate environmentally sensitive lands for protection based on state and regionally determined criteria.

POLICY 1.1.0: 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, except for minimal structures and improvements necessary to ensure safe access and essential support functions, there shall be no construction in these areas except pursuant to an amendment to this Plan adopted in accordance with the requirements set forth herein.

POLICY 1.1.1: As hereby established by the adoption of this Plan, the University shall maintain, in a natural state, all of those sites identified as conservation on the Conservation Areas Map (Figure 13-1). New areas shall be considered for potential designation as Conservation Areas based on documented conservation values, e.g., presence of imperiled or vulnerable species or natural communities or other features of state, regional, or local concern because of declines or vulnerability to further losses. Consistent with Future Land Use Element, except for minimal structures and improvements necessary to ensure safe access and essential support functions, there shall be no construction in these areas except pursuant to an amendment to this Plan adopted in accordance with all applicable state and local requirements.

POLICY 1.1.2: Within two years after adoption of the master plan, the University shall coordinate with the Florida Freshwater 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. A Geographic Information System (GIS) will be developed that includes digital overlays depicting the location of vegetative communities and management units within designated Conservation areas;
2. Digital overlays depicting documented locations of imperiled or vulnerable species of communities (e.g., ranked as G1-G3 or S1-S3 by the Florida Natural Areas Inventory);
3. Identifying the University entity with responsibility for management of designated Conservation areas;
4. A description of how each management unit will be maintained or restored;
5. A monitoring and evaluation schedule;
6. A plan for the removal and control of exotic plants and wildlife;
7. A description of compatible uses; and
8. 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.

POLICY 1.1.3: The University hereby creates a new future land use designation of "Conservation Easement Lands" for the purposes of environmental protection of lands that are set aside in perpetuity pursuant to a recorded conservation easement. This new designation will allow very-low impact recreational or educational uses such as hiking, non-motorized boating, bird watching, horseback riding, fishing, primitive camping and nature study, that utilize natural amenities of such sites and such other uses that are not in violation of the recorded conservation easement.

~~POLICY 1.1.3: Prior to adopting any amendments that affect lands designated as conservation, the University shall do the following:~~

~~1. Perform reasonable site specific environmental analyses, including qualitative state and federal listed plant and animal species surveys, water quality impact analyses, and alternative location assessments;~~

~~2. Comply with section 1013.30, Florida Statutes, even for those amendments that fall within the exemptions set forth in Sections 1013.30(9)(a)-(c), Florida Statutes;~~

~~3. Require no less than a two-thirds majority vote of the University's Board of Trustees to approve such amendments; and~~

~~4. Notify the Director of the Arboretum of any proposed amendments to lands designated as conservation.~~

POLICY 1.1.4: 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 1.1.5: The University shall minimize stormwater-borne pollutants generated as a result of University operations and maintenance practices through adherence to General Infrastructure Element policies (see section 2.9).

OBJECTIVE 1.2: To conserve, appropriately use, and protect native vegetative communities and wildlife habitat. To restrict University activities known to threaten the habitat and survival of imperiled and vulnerable species (inclusive of threatened and endangered species and species of special concern).

POLICY 1.2.1: The University shall maintain the natural areas within the campus as a system of interconnected wetlands and upland preserves, as shown on the Conservation Areas Map (Figure 13-1).

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 1.2.3: 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. The Department of Biology will periodically survey campus lands for the presence of such species and coordinate with the Florida Department of Environmental Protection and the UCF Physical Plant to ensure the proper removal and disposal of these exotic species.

POLICY 1.2.4: The University shall establish a buffer of minimally 50 feet for upland areas adjacent to identified on-campus wetland areas located within the Riparian Habitat Protection Zone (RHPZ) of the Little Econlockhatchee River. Where feasible, the buffer will be expanded to conserve wetland function.

POLICY 1.2.5: 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 1.2.6: Any proposed development adjacent to a designated conservation 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 designated conservation areas shall be avoided or minimized.

POLICY 1.2.7: 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 1.2.8: 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 and the EMSC four weeks minimum written notice of the pending development of an undeveloped natural vegetation site.

POLICY 1.2.9: Periodic controlled management burns of selected preserve areas of fire-maintained native habitat (i.e., sandhill, upland pine, pine flatwoods, etc.) shall be conducted as budgets allow, provided that such activities follow well-accepted ecological guidelines for prescribed burning, comply with all applicable regulatory guidelines, and include direct coordination with the UCF Administration, offices of UCF Facilities Planning, Physical Plant, Environmental Health & Safety Office, the Florida Department of Agriculture and Consumer Services' Division of Forestry and the fire departments of Orange and Seminole counties.

POLICY 1.2.10: 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 1.2.11: The University shall continue to protect and conserve imperiled and vulnerable species, including 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 1.2.12: The University shall coordinate with the Florida Freshwater Fish and Wildlife Conservation Commission to continually maintain the upland preserve located in the north

portion of the campus as the gopher tortoise relocation area for tortoises that test positive for Upper Respiratory Tract Disease. Fencing to prevent the tortoises from easily entering McCulloch Road will be established.

POLICY 1.2.13: 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 Freshwater Fish and Wildlife Conservation Commission, or otherwise afforded protection by the host communities and state and federal agencies, or ranked as G1-G3 (critically imperiled globally, imperiled globally, or vulnerable globally) or S1-S3 (same, but assessed as state scale) 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 1.2.14: University personnel shall, when encountering listed species, follow procedures and seek consultation with the appropriate agencies as identified in the Florida Freshwater Fish and Wildlife Conservation Commission's "Wildlife Methodology Guidelines", dated January 15, 1988.

OBJECTIVE 1.3: To conserve, appropriately use, and protect the quantity and quality of projected water sources.

POLICY 1.3.1: ~~By 2005, 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.~~ The University shall move forward with the plan of replacing potable water wells located througout campus with a potable water connection to the Iron Bridge plant in Seminole County.

POLICY 1.3.2: ~~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.~~ The University shall explore every opportunity to plant wetland species around existing and future ponds on campus thorughout the planning period.

POLICY 1.3.3: ~~By 2005, 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.~~ The University shall explore the idea of developing a wildlife corridor connecting the wildlife habitat from the southeast portion of campus to the preserve areas on the north side.

POLICY 1.3.4: The University shall continue to monitor and test raw well water, destined for potable use, on a daily and monthly basis per DEP requirements.

POLICY 1.3.5: The University shall continue to monitor and test treated potable water on a daily and monthly basis per DEP requirements.

POLICY 1.3.6: The University shall to monitor periodically Lake Claire for compliance with existing standards for surface water quality. The Biology Department shall advise the Environmental Health & Safety Department as to what parameters should be monitored.

POLICY 1.3.7: 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 1.3.8: 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.
NOTE: Details concerning the physical operation of the university's potable-, waste- and storm-water systems are found in the General Infrastructure Element (Section 2.9).

OBJECTIVE 1.4: To maintain or improve existing air quality on campus.

POLICY 1.4.1: 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: the area apartment shuttles, the on-campus black and gold-line shuttles, participation in local transportation management associations, LYNX connections and the promotion of bicycle and pedestrian circulation improvements. This includes the development of bicycle paths that would connect to existing Orange and Seminole County networks to accommodate student, faculty, and staff access. The Parking and Traffic, Master Planning, and Environmental Management Committees should hold a joint annual meeting to evaluate this subject.

POLICY 1.4.2: 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.) and alternative fuels and means of vehicular power (e.g., solar cells, hydrogen fuel cells, bio-fuels, hybrids).

POLICY 1.4.3: 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 as per the UCF Environmental Management System.

POLICY 1.4.4: The University shall determine the potential impacts on air quality before construction of parking facilities. 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 1.4.5: The University shall continue its indoor air quality program and shall implement a program for the monitoring outdoor air quality. The Civil & Environmental Engineering Department shall advise the Environmental Health & Safety Department of ambient air quality conditions on campus. Grants or in-house programs to periodically monitor ambient outdoor air should be sought. Failure to meet federal or state air quality standards shall result in an assessment of the probable cause and the preparation and implementation of a plan to improve and maintain air quality.

OBJECTIVE 1.5: **The University shall continue to implement a variety of existing programs and conserve the use of energy on the campus.**

POLICY 1.5.1: 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 1.5.2: Where feasible, existing buildings shall be retrofitted with energy conservation lighting fixtures.

OBJECTIVE 1.6: To maximize on-campus reclamation of hazardous materials and consumer products.

POLICY 1.6.1: All University buildings shall be designed with facilities to accommodate collection, storage and disposal of recycled materials.

POLICY 1.6.2: The University shall coordinate on-campus recycling programs with those of local government in regard to materials collected, and disposal/collection procedures.

POLICY 1.6.3: 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 1.6.4: The University shall implement academic programs that promote awareness of environmental impacts of resource recycling.

POLICY 1.6.5: The University shall continue to enforce hazardous materials handling and storage procedures per the UCF Environmental Management System.

POLICY 1.6.6: The University shall utilize only licensed hazardous waste transportation and disposal companies.

(a) For each of the resources identified in (1) a) identify existing commercial, recreational, or conservation uses.

From the conservation element analysis in the Master Plan approved in January 2003 by the UCF Board of Trustees, the following sub-elements were included: Air Quality, Surface Water Quality, Underground and Aboveground Tanks, Toxic Waste and Hazardous Materials, Surface and groundwater hydrology. Additionally, though not designated by number, a section on natural areas was included. Little specific, new information on these sub-elements was identified. If there has been no update, readers are referred to the Conservation Element Analysis section from the prior plan.

(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 contains an abundance of significant natural resource areas many of which are protected from future development.. Areas of interest include the Arboretum, Lakes Lee and Claire as well as, an extensive forested wetland system within the southeastern portion of the campus which ultimately outfalls into the Little Econlockhatchee River.
This campus was designed around a cypress wetland system located at the center of the campus adjacent to the student union. The majority of the campus development activity occurs around this cypress stand in order to protect the natural beauty of this area.
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 over 320 acres of natural uplands and wetland habitats preserved in perpetual conservation easements to the St. Johns River Water Management District. There are over 200 additional acres of natural areas on campus that have verbal commitments for long-term preservation, such as the arboretum and smaller isolated wetland areas. In addition, the campus contains an 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) A large 140,000-gallon oil tank by the water tower was emptied in 1999. The tank was removed and a closure assessment was performed in late 2003. This closure is pending review per Orange County EPD. Please see the attached Generator list dated November 2003.

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) Though there is no specific update, readers are referred to the section on the UCF Environmental Management System (EMS) below.

During the period since the development of the previous master plan, several significant changes have occurred at UCF. Following the suggestions from the previous plant, an Environmental Management System (EMS) was established at UCF. An EMS:

Develops an environmental policy that contains the commitment of the administration, as well as of the campus stakeholders, to compliance, prevention of pollution, and continual process improvement

Identifies of environmental issues and legal requirements affecting our campus

Sets of objectives and targets consistent with the environmental policy

Defines the structure and responsibilities for environmental activities including training, communication, documentation, operational control, and emergency preparedness and response

Monitors and evaluates actions taken in pursuit of the environmental objectives and targets, including revision of these goals and targets, as necessary

Reports EMS efforts to the administration.

See http://www.ehs.ucf.edu/EMS/EMSHome.html for additional information on the UCF EMS.

UCF officially adopted the **Environmental Policy** shown below:

The University of Central Florida is located in a growing metropolitan area in an environmentally sensitive, relatively undeveloped watershed. UCF is rapidly expanding, requiring increased infrastructure and services to accommodate a burgeoning student population.
As a major metropolitan research university, UCF has three broad missions-- teaching, research, and service. Recognizing that environmental stewardship encompasses all three missions, UCF will demonstrate its commitment to sustainability by:

Promoting an understanding of natural resource conservation and environmental health through formal and informal education of students, faculty, staff, and the surrounding Central Florida community;

Encouraging research to monitor and reduce the size of an individual's and an organization's environmental footprint and to maintain and restore natural system processes;

Being an institutional model of environmental excellence through compliance with regulations and continually striving to minimize adverse impacts on and improve the functioning of local and global ecological systems.

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. Summary of UCF Natural Areas Surveys

As part of a series of ongoing class assignments for a biology graduate course, Landscape Ecology (PCB 5328C), natural areas of the UCF lands were digitized from aerial photographs from 1939, 1967, 1972, 1984, 1994, and 1999. The data from the 1999 map showed 45% of the main 1,415-acre part of the UCF campus (not including the 135-acre MacKay Tract or 218-acre eastern area designated as a golf course in the previous plan) to consist of natural areas. Over half (54.7%) of this area was classified as wetlands (e.g., lakes, pond pine and cypress dominated communities); the remaining area was uplands (e.g., scrub, sandhill, and pine flatwoods communities).

Also since the development of the previous plan, two natural areas surveys were conducted on campus. The first was conducted from September 2001 to May 2002. The resurvey was conducted from June through August 2003.

The surveys focused on determining the status of endangered, threatened, and invasive exotic species. Special interest plants, as determined by Drs. Taylor and Stout, as well as gopher tortoises were also included.
As a result of the 2001-2002 study, four endangered and seven threatened plant species were identified (Table 1). Seven of these were mapped. In addition, 53 species of invasive exotic plants were identified and 18 of these were mapped. Those listed by the Florida Exotic Pest Plant Control are shown in Table 2. In all, 347 plants species were recorded on campus.

Table 1. Threatened and endangered plant species identified on the UCF campus.

Scientific Name	Common Name	Family	Status	Mapped (M)
Calopogon multiflorus	Grass-pink	Orchidaceae	Endangered	M
Centrosema arenicola	Pineland Butterfly Pea	Fabaceae	Endangered	
Garberia heterophylla	Garberia	Asteraceae	Threatened	M
Lilium catesbaei	Pine Lily	Liliacaeae	Threatened	
Pinguicula caerulea	Blue Butterwort	Lentibulariaceae	Threatened	M
Pinguicula lutea	Yellow Butterwort	Lentibulariaceae	Threatened	M
Pteroglossaspis ecristata	Giant Orchid	Orchidaceae	Threatened	
Sarracenia minor	Hooded Pitcher Plant	Sarraceniaceae	Threatened	M
Tillandsia fasciculata	Wild Pine	Bromeliaceae	Endangered	
Tillandsia utriculata	Giant Wild Pine	Bromeliaceae	Endangered	M
Pogonia ophioglossoides	Rose Pogonia	Orchidaceae	Threatened	M

Table 2. Invasive exotic plants identified on the UCF campus. Status of plant is in accordance with
Florida Exotic Pest Plant Control 2001 list as being Category I or Category II.

Scientific Name	Common Name	Family	Status	Mapped (M)
Abrus precatorius	Rosery Pea / Crab's Eye	Fabaceae	I	M
Begonia cucullata	Wax Begonia	Begoniaceae	II	M
Colocasia esculenta	Wild Taro	Araceae	I	
Dioscorea bulbifera	Air-potato	Dioscoreaceae	I	M
Eichhornia crassipes	Water Hyacinth	Pontederiaceae	I	M
Hydrilla verticillata	Hydrilla / Waterthyme	Hydrocharitaceae	I	M
Imperata cylindrica	Cogon Grass	Poaceae	I	M
Lantana camara	Lantana	Verbenaceae	I	M
Melia azedarach	Chinaberry	Meliaceae	I	M
Nephrolepis cordifolia	Sword Fern	Nephrolepidaceae	I	M
Panicum repens	Torpedograss	Poaceae	I	
Pistia stratiotes	Water-lettuce	Araceae	I	
Rhynchelytrum repens	Natal Grass	Poaceae	II	M
Ricinus communis	Castor Bean	Euphorbiaceae	II	M
Sapium sebiferum	Chinese Tallow	Euphorbiaceae	I	
Schinus terebinthifolius	Brazilian Pepper	Anacardiaceae	I	M
Solanum sp.	Soda Apple	Solanaceae	I	M
Urena lobata	Ceasar Weed	Malvaceae	II	

In the 2001-2002 survey, the highest concentration of federally listed plant species occurred in the northwest and northeast corners of campus. In the northwest corner, the threatened species Garberia (*Garberia heterophylla*) was found in great number (102 individuals), comprising fifty-seven percent of all individuals found on campus. Not only does this sandhill community support a large population of Garberia, it also contains the last remaining substantial population of the Scarlet Calamintor Red Basil, *Calamintha coccinea*. The northeast corner of campus was home to the highest number of listed species. These species included the endangered Grass-pink (*Calopogon multiflorus*), the threatened Blue Butterwort (*Pinguicula caerulea*) and Yellow Butterwort (*Pinguicula lutea*), the threatened Pine Lily (*Lilium catesbaei*), the threatened Rose Pogonia (*Pogonia ophioglossoides*), and the threatened Hooded Pitcherplant (*Sarracenia minor*). Eighty-two individuals of the threatened Hooded Pitcher Plant (*Sarracenia minor*) were marked as points and two polygons of additional individuals were also marked. During the 2003 resurvey, only four of the eleven threatened and endangered species were found. This discrepancy partially reflects the difference in the timing of the sampling, i.e., winter/spring versus summer. In terms of exotics, three new exotic invasive species were found in the later survey, *Parkinsonia aculeata*, *Sapium sebiferum* (I) and *Sesbania punicea* (II). In general, the areal extent of the exotic plants increased over this year period.

The locations of tortoise burrows were mapped and classified as being active, inactive or old. Active burrows are burrows currently being used as determined by indicators such as footprints, feces, food matter, and habitation. Inactive burrows are burrows not currently inhabited, but retain a complete shaft and open mouth. Old burrows are burrows which the mouth and shaft have collapsed leaving only the mound. In the 2001-2002 survey, gopher tortoise burrows were concentrated in three main areas including the northwest corner, the southwest corner and east middle section. The northwest corner was home to three active

burrows, two inactive burrows and eight old burrows. The eastern middle section, which included the Arboretum and Arboretum extension, was home to the most burrows with twenty-two active burrows, fourteen inactive burrows, and nine old burrows. The southwest section of campus had no active burrows, but retained six inactive burrows and eight old burrows. From the 2003 resurvey, there was a decrease in the number of inactive and active burrows. The majority of the burrows were found in the northwest and central east region of campus. A dramatic lost of gopher tortoise burrows were detected in the central-west corner of 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).

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 among people during the _____ stage of this project? -	– Sense of place (aesthetics) – Sense of community/ involvement and vitality – Environmental literacy/ 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 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.

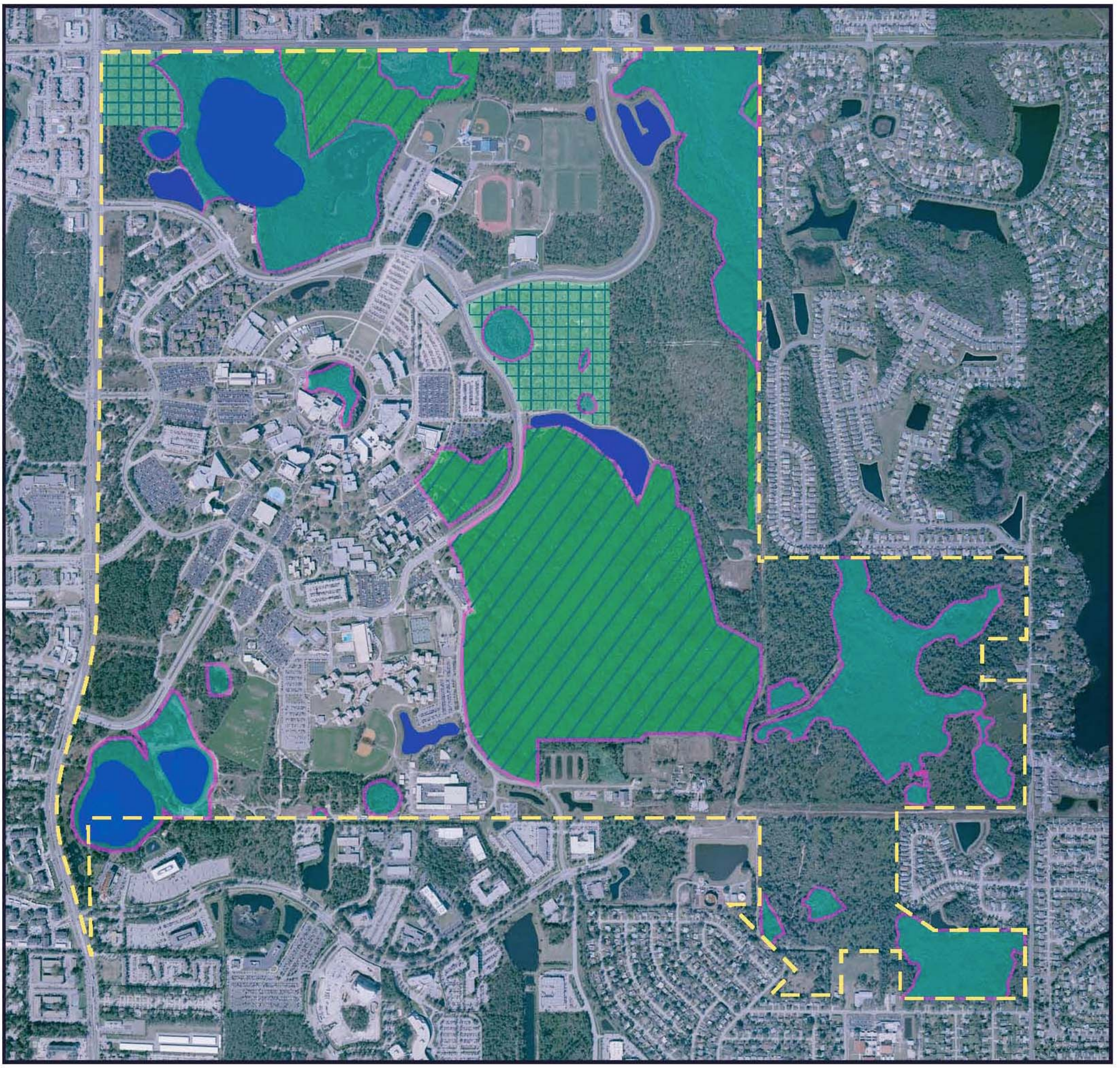

Figure 13-1

CONSERVATION

Comprehensive Master Plan Update

University of Central Florida

Orlando, Florida

2005 -2015

LEGEND

- Conservation (Wetland)
- Conservation (Upland)
- 50' Riparian Buffer
- Conservation Easement Lands
- Lakes

N

All maps are diagrammatic and conceptual. The various areas shown are approximate and not to survey accuracy. The intent of these maps is to illustrate general areas of existing or potential use.

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 Administration, University Master Planning Committee (UMPC), the Office of Physical Plant, and the Offices for ~~Telecommunications~~ Teledata Services 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 and the Board of Trustees as appropriate.

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 and renovation of student housing, on-campus healthcare facilities 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.

~~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.

Please refer to the following Capital Improvements List that shows all planned capital projects throughout the planning period.

~~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.~~

UNIVERSITY OF CENTRAL FLORIDA

CAPITAL IMPROVEMENTS LIST

	MAIN CAMPUS HEAD COUNT	40,403	41,922	43,342	44,827	45,639	46,372	47,036	47,665	48,084		
	PROJECT LIST Revised 06-09-04	2005-06 YR #1	2006-07 YR #2	2007-08 YR #3	2008-09 YR #4	2009-10 YR #5	2010-11 YR #6	2011-12 YR #7	2012-13 YR #8	2013-14 YR #9	Net	Gross
	(July 1, 2005 - June 30, 2014)											
1	UTILITIES, INFRASTRUCTURE	PECO	PECO	PECO							NA	NA
2	WASTEWATER TREATMENT EXP.	PECO	PECO	PECO							NA	NA
3	PARKING GARAGE V	BOND									NA	NA
4	BIO-SCIENCE RESEARCH CENTER	PECO									48,000	72,000
5	PHYSICAL SCIENCES		PECO								67,000	100,500
6	HAZARDOUS WASTE EXPANSION		PECO								4,699	7,284
7	MATH & PHYSICS BLDG. REMODEL		PECO								NA	NA
8	ARTS COMPLEX II - PERFORMANCE			PECO							56,157	77,508
9	BAND BUILDING			PRIVATE							32,000	40,000
10	SCIENCE ANNEX ENHANCEMENT			PRIVATE							N/A	N/A
11	CAREER RESOURCE CENTER			PRIVATE							22,000	30,000
12	CONVOCATION CENTER			PRIVATE							239,124	358,686
13	STUDENT HOUSING (UPTOWN UCF)			PRIVATE							732,316	1,098,474
14	RETAIL SPACE (UPTOWN UCF)			PRIVATE							71,494	107,241
15	INDOOR PRACTICE FACILITY (FIELDHOUSE)			PRIVATE							65,000	80,000
16	SOFTBALL STADIUM			UCFAA							6,845	10,268
17	AQUATICS CENTER			UCFAA							5,200	7,800
18	ROWING CENTER AT LAKE PICKETT			UCFAA							6,685	10,028
19	PRACTICE FIELDS			UCFAA							N/A	N/A
20	BASEBALL STADIUM PHASE II			UCFAA							3,800	5,700
21	EAST ATHLETICS CENTER			UCFAA							11,706	17,559
22	TENNIS CENTER			UCFAA							4,980	7,470
23	GOLF TRAINING CENTER			UCFAA							2,630	3,945
24	FOUR (4) PARKING GARAGES (UPTOWN UCF)			PRIVATE							N/A	N/A
25	RECREATIONAL SERVICES II			CITF							100,000	150,000
26	SCC-UCF JOINT USE FACILITY			PECO							52,615	78,363
27	VCC-UCF JOINT USE FACILITY			PECO							52,616	78,363
28	DBCC-SCC-UCF JOINT USE FACILITY			PECO							52,616	78,363
29	CAPITAL IMPROVEMENT RESERVE			PECO							**327,497**	**434,887**
30	GREEK HOUSING				PRIVATE						100,000	150,000
31	FLA. CENTER for the ARTS & EDUCATION				MATCH						314,335	471,503
32	MARKETPLACE ADDITION				PRIVATE						15,000	22,500
33	INTRAMURAL PRACTICE FIELDS				CITF						N/A	N/A
34	MEAL PLAN FACILITY				BOND						10,000	15,000
35	FOOD COURT				BOND						20,000	30,000
36	CLASSROOM BUILDING II				PECO						46,300	69,450
37	INTERDISC. RESEARCH & INCUBATOR FAC.				PECO						45,199	67,799
38	LIBRARY EXPANSION				PECO						63,600	89,900
39	ENGINEERING BLDG. I RENOVATION				PECO						NA	NA
40	HUMANITIES & SOCIAL SCIENCES II					PECO					59,227	88,841
41	HOWARD PHILLIPS HALL RENOVATION					PECO					NA	NA
42	NURSING ANNEX					PECO					N/A	N/A
43	CAPITAL IMPROVEMENT RESERVE					PECO					**134,732**	**133,644**
44	US READING CENTER					MATCH					41,216	61,824
45	CREATIVE SCHOOL EXPANSION						AUX				6,271	9,407
46	POLICE FACILITY EXPANSION						PECO				19,883	29,613
47	ARTS COMPLEX III - MUSIC						PECO				29,614	44,421
48	INTERDISC. RESEARCH BLDG. II						PECO				43,635	65,453
49	HUMANITIES & FINE ARTS RENOVATION							PECO			NA	NA
50	FILM - ARTS & SCIENCES II BLDG.							PECO			30,067	44,310
51	EDUCATION III BUILDING								PECO		41,476	68,094
52	THEATER BLDG. RENOVATION								PECO		NA	NA
53	SIMULATION & TRAINING BUILDING									PECO	54,187	81,281
54	BUSINESS ADMIN. III BLDG.									PECO	44,347	66,520
55	PARKING GARAGE VI									PECO	N/A	N/A
56	ENVIRONMENTAL CENTER									PRIVATE	30,000	45,000
57	ACADEMIC VILLAGES PARKING DECK									BOND	NA	NA
58	CAPITAL IMPROVEMENT RESERVE									PECO	**68,139**	**103,185**
	TOTAL								New Campus Sq. Ft.		**2,172,973**	**3,223,848**
									Off Campus Sq. Ft.		**478,867**	**716,620**

Funding sources denote probable building completion year

Projects in green denote projects planned **off-campus.**

	NET	GROSS
TOTAL	**2,651,840**	**3,940,467**

UNIVERSITY OF CENTRAL FLORIDA
CAMPUS DEVELOPMENT AGREEMENT
CAPITAL IMPROVEMENTS LIST

MAIN CAMPUS HEAD COUNT	34,849	38,051	41,253	44,455	47,657							
PROJECT LIST Revised 03-02-04	class	tlab	rlab	sdy	im	ae	gym	sac	off	css	Net	Gross
(July 1, 2005 - June 30, 2014)												
UTILITIES, INFRASTRUCTURE												
WASTEWATER TREATMENT EXP.												
PSYCHOLOGY BUILDING	1,400	3,000	12,500					5,250	15,291			
BIO-SCIENCE RESEARCH CENTER			42,000						6,000			
PHYSICAL SCIENCES												
HAZARDOUS WASTE EXPANSION			2,589						410	1,700		
MATH & PHYSICS BLDG. REMODEL												
ARTS COMPLEX II - PERFORMANCE	3,500	29,213				25,000	2,000		10,513			
SCIENCE ANNEX ENHANCEMENT		5,200	49,400						10,400			
CONVOCATION CENTER					2,800	24,600	145,301		42,480			
HOUSING								69,000				
SCC-UCF JOINT USE FACILITY												
VCC-UCF JOINT USE FACILITY												
DBCC-SCC-UCF JOINT USE FACILITY												
CAPITAL IMPROVEMENT RESERVE												
ALUMNI CENTER				750		6,156	105		6,280			
FLA. CENTER for the ARTS & EDUCATION	4,865					14,105			4,865	4,865		
MARKETPLACE ADDITION												
INTRAMURAL PRACTICE FIELDS												
MEAL PLAN FACILITY												
FOOD COURT												
CLASSROOM BUILDING II	40,000		1,500						3,500			
INTERDISC. RESEARCH & INCUBATOR FAC	16,835		33,670						16,835			
LIBRARY EXPANSION	800			54,614	5,000				2,800			
ENGINEERING BLDG. I RENOVATION												
HUMANITIES & SOCIAL SCIENCES II	7,000	10,000							37,174			
HOWARD PHILLIPS HALL RENOVATION												
NURSING ANNEX	5,000	10,000							7,089			
CAPITAL IMPROVEMENT RESERVE												
US READING CENTER		34,104			3,920				3,192			
CREATIVE SCHOOL EXPANSION												
POLICE FACILITY EXPANSION									16,811	2,115		
ARTS COMPLEX III - MUSIC		10,000							16,414			
INTERDISC. RESEARCH BLDG. II	11,812		23,624						11,812			
HUMANITIES & FINE ARTS RENOVATION												
FILM - ARTS & SCIENCES II BLDG.	7,173	14,275							7,173			
EDUCATION III BUILDING	21,294	21,294							11,154			
THEATER BLDG. RENOVATION	2,487					9,328			2,487			
SIMULATION & TRAINING BUILDING	5,000		26,992						15,000			
BUSINESS ADMIN. III BLDG.	15,000	5,000						5,000	16,966			
PARTNERHIP III												
CAPITAL IMPROVEMENT RESERVE												
TOTAL	**$142,166**	**$142,086**	**$192,275**	**$55,364**	**$11,720**	**$79,189**	**$147,406**	**$79,250**	**$264,646**	**$8,680**		

UNIVERSITY OF CENTRAL FLORIDA
CAMPUS DEVELOPMENT AGREEMENT
CAPITAL IMPROVEMENTS LIST

SPACE CATEGORY Revised 03-02-04	Main Campus Head Count	CLASSROOMS	TEACHING LABS	RESEARCH LABS	STUDY	INSTRUCTIONAL MEDIA	AUDITORIUMS/EXHIBITION	GYMNASIUMS	STUDENT ACADEMIC SUPPORT	OFFICES	CAMPUS SUPPORT SERVICES	Net	Gross
(July 1, 2005 - June 30, 2014)													
2005-06	**40403**	14,000	3,000	54,500	0	0	0	0	5,250	21,291	0	98,041	
2006-07	**41922**	0	5,200	51,989	0	0	0	0	0	10,810	1,700	69,699	
2007-08	**43342**	3,500	29,213	0	0	2,800	49,600	147,301	69,000	52,993	0	354,407	
2008-09	**44827**	62,500	0	35,170	55,364	5,000	20,261	105	0	34,280	4,865	217,545	
2009-10	**45639**	12,000	20,000	0	0	0	0	0	0	44,263	0	76,263	
2010-11	**46372**	0	44,104	0	0	3,920	0	0	0	36,417	2,115	86,556	
2011-12	**47036**	18,985	14,275	23,624	0	0	0	0	0	18,985	0	75,869	
2012-13	**47665**	23,781	21,294	0	0	0	9,325	0	0	13,641	0	68,041	
2013-14	**48084**	23,000	5,000	26,992	0	0	0	0	5,000	31,966	0	91,958	
												0	
		157,766	**142,086**	**192,275**	**55,364**	**11,720**	**79,186**	**147,406**	**79,250**	**264,646**	**8,680**	**1,138,379**	

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.

a) General Description of the Campus Architectural Character

Since they reside within the Academic Core, in close proximity to one another, the major academic buildings need to be engaging in architectural relationships. The core is meant to act as a frame for the architectural compositions it encapsulates. It should be natural for the core buildings to relate to one another in mass, form, and style.

The inherent symbolic content of the campus plan should not be ignored. The rings of the Academic Core carry astronomical and astrological names. The "helix shaped" roadway which was to circumnavigate the core is symbolic of the basic structure of life, the double helix. All of the roadways are named after constellations. The apses of the roadways were to contain "academic villages" that were directly connected to the core, which in turn contained all of the major academic buildings. It could be argued that the original campus plan represents an encapsulated universe. Some architectural schemes have responded to this symbolic content in plan and in form. For example, the CREOL Building, which has a long curved wall on its principal façade creates a large circular landscape island floating beyond the building that looks, in plan, like a planet in orbit. ~~(Figures 15.1, 15.2, 15.3).~~

b) Architecturally Significant Historic Buildings

Because the University is slightly more than ~~twenty~~ thirty ~~-~~five years old, no building could be described as being historically significant. It is, however, important to note that the Library was the first building to be constructed on campus, followed by the Administration Building ~~(Figure 15.4).~~

c) 1. Materials

The predominant exterior building material throughout the campus is brick, occasionally accented by certain architectural elements that are rendered in either stucco or exposed concrete.

1. Color

There are approximately nine different shades of brick on campus. They vary from dark brown to dark red. One particular blend of brick has been defined as the "UCF blend", which is the brick of choice for buildings residing within the Academic Core. Natural mortar has now become the standard for campus buildings since it tends to define the brick with a wall surface.

~~**c) 3. Detailing**~~

~~-~~

~~Exterior detailing of campus buildings is minimal. The most discernable detail or element of the campus is the "UCF Arch" (Figure 15.5). Most of the other architectural details are rendered in brick.~~

~~4.~~ 2. Style

The style of the campus can be described as multifaceted. A variety of styles are represented, which define and place buildings in a particular architectural period. The Library, Administration Building, and Health and Physics Building all relate, in that they exhibit a similar architectural element, the "UCF Arch". This grouping is also similar in form and shape. ~~One could argue that the Health and Physics Building is the most eclectic building within the grouping because of its unique architectural features.~~

~~Newer buildings have begun to exhibit a subdued "post modern" vocabulary. Examples include, the visual Arts Building and the Student Apartment Facility. Both of these projections have used a cream colored brick to denote certain architectural elements, such as columns or wall outcrops. They also use repetitive brick medallions to create rhythm and visual interest. It is important to note that this use of color (cream brick), in~~

~~these two projects, has been criticized by some as been too radical a departure from previous architecture, and does not relate well to the rest of campus.~~

~~5~~.3. Scale

~~The scale of most of the buildings within the academic core can be described as physically massive with large fields of uninterrupted brick on their exteriors. Most of the buildings within the core are approximately three stories high, with the Library being the tallest structure at five stories in height.~~

~~6.4~~. Siting

Buildings within the academic Core are directly affected by a concentric sidewalk system. The architecture within the core has responded to this condition by attempting to create at least two facades, facing each concentric sidewalk system. Since the core is the most dominant central geometric element on the campus, it would be natural that siting of buildings outside the core should be affected by the core's "lines of force".

~~c) 7. Image~~

~~-~~

~~Although campus architecture has managed to create an identifiable image, and it has often been said during the design phases of a project that buildings "don't look like or feel like UCF", the present build environment still has considerable gaps.~~

~~For example, few of the buildings on campus attempt to respond to a "sense of place". The buildings which do try to respond to the unique Florida climate are the Chemistry Building, with its central uncovered atrium and open overlooks, and the Humanities and fine Arts with its walkways and stair towers exposed to the environment.~~

~~-~~

~~Newer buildings attempt to communicate their function through their forms. For example, the soon to be constructed Computer Center Expansion Building is using the device of a "symbolic computer screen" depicting a "pixeled Pegasus" to denote the use of the building as a computer facility. This element will be placed in the main lobby of the building, and is meant to represent a large computer screen. The Pegasus is the symbol of the University, and is also the mainframe gateway logo for computers on campus.~~

d) 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.

e) 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 ~~institutional~~ campus community landscape ~~settings~~ environment which afford 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~~ 2006-2007 the University shall develop and implement a Landscape ~~Concept~~ Master Plan for the University of Central Florida campus ~~(attached).~~

POLICY 1.1.1: Reinforce the important landscape elements ~~of the spatial organization~~ defined in the Master Plan by developing ~~an~~ ~~institutional~~ ~~educational~~ landscape ~~character~~ themes ~~and experience~~ supportive of educational, cultural and recreational programs designed to enhance the colligate experience. ~~for the areas outlined on the Landscape Concept Master Plan.~~ This ~~distinctive~~ landscape can be characterized by:

- Creating quads, plazas and common areas for student interaction and places for destination.
- With the exception of certain woody ornamental and ground covers, use of plant species that are indigenous to the natural plant communities of ~~the~~ UCF ~~area~~ should be used. Where appropriate, ~~N~~ native plantings will be used ~~which are intended~~ to recreate a semblance of the original scrub and sandhill communities ~~shall utilize plants typical of the scrub and sandhill~~.
- ~~Limited, with the exception of certain existing woody ornamental, plant palette contrast to native materials.~~
- ~~Use of certain 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 whenever appropriate.
- ~~Limited use of unusual horticultural specimens.~~ The use of unusual, non-invasive, and exotic plants will be limited to exceptional landscape situations. ~~In cases where~~ Non-invasive, exotic plants ~~are used to enhance the landscape, plantings, where appropriate,~~ 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.~~ Physical Plant will coordinate the removal of any non-native invasive plants with UCF's Biology Department.
- With the exception of Argentine Behia, Burmuda, Centaped, Palsplaum and St. Augustine grass, landscape designs will limited use of shrubs, hedges and other ground covers.
- To the most appropriate extent possible, ~~use of~~ xeriscape principles and practices should be incorporated into landscape design and maintenance. ~~sand 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.

- ~~—~~Where appropriate, small groupings of 3 to 5 trees of like species should be used. ~~Use of trees in masses of like species to small groupings of 3-5 trees.~~

- ~~Use of plants in informal groupings.~~ —Informal and formal groupings of plants can be used to accentuate or establishe unique areas of landscaping outside the institutional zone.

- ~~Limited use of shrub masses.~~ —Shrub masses will be limited to identify special areas designated to support specific collegial activities.

POLICY 1.1.3: Develop a signature landscape treatment for all of the campus entrances, edges and corners which will reflect ~~initiate~~ the ~~institutional~~ the presents and character of the University of Central Florida ~~landscape character~~. The signature treatment should ~~C~~ consider selecting ~~a signature~~ plants that represent the campuses diverse native landscape. ~~of the tree and using this tree at all entries in a twisted grid arrangement with a grass ground plane.~~

POLICY 1.1.4: Reinforce and improve circulation hierarchy by developing distinct landscapes for each road type, intersections and ~~the~~ any pedestrian/tram/service loop.

Entrance Roads: ~~Median - Southern Magnolia - Single row - e.g. 6' of clear trunk (min.) —~~Medians will be landscaped with low profile flowering perennials, annuals and ground cover.

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 ~~- Staggered row of Oaks 30' on center~~ will be landscaped with native low profile plants and groundcover.

Edge adjacent to developed areas - ~~Single row of Oaks,~~ Screen surface parking lots with low mounds, ~~and~~ shrubs and trees.

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.~~ rows of Live or Laural Oaks.

Secondary Road - Align with alternative street tree to contrast with Primary Loop Road.

Pedestrian and Service Loop Road will be aligned with ~~- Align with Red Maple, Loblolly Bay, or Southern Magnolia.~~ East Palatka Holly, Oaks, select Elm varieties.

POLICY 1.1.5: ~~Develop a design and construction criteria~~ Follow best practices endorsed by the State of Florida 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~~ and encourage~~ing~~ appropriate access to these areas that will contribute to enhancing the overall educational and colligate experience. ~~the high quality campus landscape setting.~~

POLICY 1.1.7: Provide tree canopy within islands of no less that 144 square feet in all surface parking lots ~~where possible while~~ and maintain~~ing~~ adequate sight lines for visual safety visibility and efficient security lighting providing on less than 3 footcandles on average throughout the parking area.

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 ~~southern magnolias, with open lawn in the center of space~~ existing plant material specified for each mall outlined within Landscape Master Plan.

POLICY 1.1.10: Incorporate appropriate "theme courtyards" as an opportunity ~~for~~ to enhance the overall education and collegiate experience by creating memorable spaces. ~~horticultural education, campus amenities 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. Southern Magnolia - with open lawn in the center of space ;~~
- ~~Align streets with Red Maple ; and~~
- Develop courtyards with ~~thematic plantings~~ landscape and hardscape supportive of residence life programs and activities.

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~~ Master 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~~ UCF's 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 UCF's architecture guidelines ~~or evergreen plant material~~.

POLICY 1.1.17: Maintenance facilities shall be screened from pedestrian or vehicular traffic with fence~~,~~ or 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 guideline ~~plant material list~~ upon**

Master Plan adoption. ~~, adding specimen species appropriate to institutional settings and eliminating use of species which necessitate excessive maintenance recommendations and revisions recommended within Landscape Master Plan.~~

POLICY 1.2.1: In concurrence with the Landscape ~~Concept~~ Master Plan incorporate use of ~~plants with 'institutional' appearance which will contrast with the general native plant palette~~ 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 as stated within Landscape Design Guidelines.

POLICY 1.2.3: The University shall monitor conformance of future construction projects with revised ~~plant list~~ 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 ~~in Figure 16.3~~ within Landscape Master Plan.

POLICY 1.3.1 Projects which may enhance campus safety, ~~along with security~~ and handicapped accessibility shall be identified and prioritized according to the following:

1. Visibility;
2. Pedestrian/vehicular/bicycle conflicts;
3. Enhanced lighting; and
4. Removal of barriers.

POLICY 1.3.2 The University of Central Florida's Directors of Facilities Planning and Physical Plant 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 is 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 In accordance with the Conservation Management Plan and Landscape Master Plan, the University shall preserve existing natural buffer areas along campus edges. The University shall prohibit development within the —— 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 an institutional entrance that contrasted with 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 ~~Concept~~ Master Plan.

- ~~Priority 1 Entrances and Intersections~~
- ~~Priority 2 Loop Road~~
- ~~Priority 3 Malls and Courtyards~~
- ~~Priority 4 Service/Pedestrian/Tram Loop~~
- ~~Priority 5 Parking Lots~~
- 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: By ~~1995-96~~ ~~2002-2003~~ 2006-2007 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 ~~Concept~~ Master Plan. The adopted campus master plan shall be amended to include these procedures.

POLICY 1.6.5: ~~By 1995-96 2002-2003~~ 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: ~~By 1995-96 2002-2003 the University shall complete a campus-wide analysis to document handicapped conflicts and constraints imposed by landscape features. The adopted~~

~~campus master plan shall be amended to include these procedures.~~

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 flat woods, 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, t~~The University has many unique environmental assets and opportunities to incorporate into its landscaped environment. ~~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, c~~Current landscape treatments, hardscape installations, signage, and site furnishings ~~and~~ have been designed ~~as a response to individual building architecture.~~ to reflect, as closely as possible, the standards established by the University for landscape and hardscape treatments. 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 s~~ Standardization and blending of all the elements mentioned is ~~not~~ critical to the overall ~~eclectic~~ image of the campus~~,~~ . ~~it is recommended that s~~ A continued emphasis on a s ~~S~~trong landscape spaces and a coordinated landscape palette will ~~create an overall~~ re-enforce a 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~~ continued practice of using the diverse UCF vegetative communities ~~into the formal greens can extend to Gemini Boulevard. It is the~~ and its 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~~ designated tree islands in accordance with the landscape standards. Coordination of tree ~~locations~~ islands around future facilities and in parking areas, as found in the Wayne Densch Parking lots, will establish canopy for the future.

4. Pedestrian Circulation Routes

~~Although t~~ The main 16' concentric ring walks are signed and provide tree canopy~~, there is no sense of arrival or destination to the walk~~. Campus maps have been strategically placed along the 16' concentric rings walks to enable way finding and destination of 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 mall~~s~~. ~~Implementation of designated bike and pedestrian paths will create order and scale to the large 16' walks.~~

New ~~6'~~ 8' or 10' 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.~~ to respond to the constantly changing physical environment of the campus, thus changing the need for and location of walks. Consideration for pedestrian behavior of students must guide design and location of walks.

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, I~~ Landscape malls, plazas and parks need to be identified, designed, and installed to serve as the framework for accommodating pedestrians patterns, security, way finding and connectivity between existing buildings and 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~~ Compliance with the University's standards for benches, light poles, or signs ~~can further~~ will continue to 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 v~~ Visual observations conclude that fixtures throughout campus are ~~not~~ consistent. An organized lighting system with uniform colors and fixtures ~~will~~ creates a feeling of 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.~~ The use of compactors has eliminated most trash dumpsters from the core of the campus. In areas where the teaching process requires specialized trash collection, trash containers are usually placed within a screen enclosure.

12. Maintenance Facilities

Loading docks along ~~Gemini~~ Pegasus 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.~~ Hardscape screening of these areas needs to be reviewed as a method to attractively conceal the activities in the loading dock area. 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 McCullough 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.~~
Overall the maintenance is moderately difficult. The soil is very low in organic content and does not retain moisture well. The pH of the native soil is at 7.8 to 8.0 in most areas of campus. The ideal pH range for most non-native species is 5.5 – 6.5. and most native species prefer 6.5 – 7.5. Additives mixed into the soil to lower pH has limited success because the water used from the irrigation well water as a pH of 8.0 and the leaching of various chemical from building masonry, sidewalks, roadways and parking lots prevents a long lasting remedy.

Herbicides and insecticides have proven to be less effective due to the soil and water pH. This is addressed during spray applications by utilizing a pH buffer that is mixed with the insecticides and herbicides.

Compaction of soil and general wear and tear of the turf grass areas for campus also creates problems with maintenance. Cart, and vehicular traffic stress the turf grasses in most of the campus core. The result of this compaction is stress and wear on turf prohibits it growth; thus allowing weeds to germinate and eventually the turf dies and is replaced by weeds. Regular manual aerating is required to allow for growth and in some instances installing new turf is required. We are currently investigating spray adjutants that will reduce the compaction and help the turf sustain periods of high usage and drought.

The APPA (The American of Higher Education Facilities Officers) standards are currently being used by members of Grounds to benchmark maintenance activities and schedules of landscape . Upon completion of the project we will have establish existing environmental issues, training requirements, determine grounds staffing levels, and appropriate levels of maintenance.

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 extend the useful life of all buildings and prevent premature capital outlay for replacement. Through managed maintenance the Physical Plant Department will support the ~~provide~~ university facilities ~~funded by Education and General (E&G) funds~~ to provide the university community 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 his staff. The Facilities & Planning Department shall maintain documentation on the use and capacity of all facilities in the UCF Space Report.

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~~. The exterior walls of buildings shall be brick or masonry with a stucco finish. Exterior doors and window~~s~~ frames shall be metal.

POLICY 1.2.5: HVAC ducts shall ~~be sheet metal~~ not be internally lined with fiberglass or fibrous materials.

POLICY 1.2.6: ~~Flat roofs~~ Roofs are to be sloped and shall be single ply Fibertite or modified Bitumen Systems manufactured by GAF, Soprema or Siplast.

OBJECTIVE 1.3: To establish a maintenance schedule for campus facilities.

POLICY 1.3.1: The Physical Plant Department shall be responsible for the operation, maintenance, cleaning and minor renovations of the buildings, grounds and utilities for the E&G and Housing areas of campus. Physical Plant will provide oversight to the operation, maintenance and minor renovations of auxiliary buildings as needed.

POLICY 1.3.2: Auxiliary units shall be responsible for the operation, maintenance, and cleaning of

auxiliary buildings on campus. These units include but are not limited to Student Development and Enrollment Services, Business Services, and Athletics.

POLICY 1.3.3: Leased trailers on campus will be the responsibility of the Vice Provost for Academic Affairs.

POLICY 1.3.4: The University shall assure that campus standards are met when renovating, remodeling or constructing buildings on campus. The UCF Design & Construction Procedures, UCF Design Guidelines, UCF Cost Containment Guidelines and the Florida Building Code shall be adhered to.

POLICY 1.3.~~1~~5: 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~~6: Interior walls shall be repainted, carpet shall be replaced, and suspended acoustical ceilings shall be replaced on an as needed basis as funding ~~is~~ becomes available.

POLICY 1.3.~~3~~7: 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.

POLICY 1.3.~~3~~8: ~~Elevators shall be maintained on a monthly basis, with one major renovation in the life of the elevator.~~ Elevators shall receive a basic inspection monthly. Mandated changes will be done as funding is available. A renovation will be done once in the life of the elevator.

OBJECTIVE 1.4: To establish priorities for maintenance and improvement projects.

POLICY 1.4.1: The Physical Plant Department will identify maintenance and improvement projects on an ongoing basis. A master list of prioritized Critical Deferred Maintenance projects will be maintained and, as PECO funding becomes available, strategies will be devised to make corrections.

POLICY 1.4.~~1~~2: In the first quarter of every year, 15 buildings shall be ~~reviewed~~ inspected by the Physical Plant Department superintendents of maintenance, utilities, building services, and grounds; Environmental Health and Safety, Facilities Planning, and Student Disability Services.

POLICY 1.4.3: The Physical Plant Department will maintain buildings through a computerized system that will address preventive maintenance items by issuing work orders on a scheduled basis. This system will identify scheduled service, maintenance and inspection of mechanical systems, life safety systems and building components. Building cleaning maintenance will be based on task assignments for daily, semester or annual project work.

POLICY 1.4.4: The Physical Plant in conjunction with Housing Administration will identify and prioritize major repair and renovation projects for the residence halls on campus. Corrections will be made as funding becomes available.

POLICY 1.4.~~2~~5: 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~~6: 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~~2: 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, and Recreational Services~~, and the Education Complex~~) shall be upgraded by the end of 2006.

POLICY 1.5.~~4~~3: A minimum of 2 buildings every year for the next 20 years shall be re-roofed as funds allow.

POLICY 1.5.~~5~~4: 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~~5: 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~~6: All asbestos abatement shall be completed as funding becomes available.

POLICY 1.5.~~8~~7: All lead based paint in buildings to be renovated shall be identified and removed.

The Physical Plant plays a primary role in the facilities maintenance and operation of the university. Physical Plant maintains the university's facilities and grounds in support of the academic mission of the university. By establishing proactive routine, preventive and planned facility maintenance programs the division strives to be cost effective. On an annual basis each building on campus is surveyed to evaluate its "Building System Condition." This ongoing assessment is critical in providing a cost-effective operation and is essential in deterring the accumulation of deferred maintenance on campus. Routine data gathered includes: building name, number, age, exterior and interior materials, roof and structural systems as well as the condition of the building envelope, HVAC, elevator, electrical and plumbing systems.

As new construction is funded, the Physical Plant assists in assessing the needs, planning and construction of future facilities so that the university is in a positive position to meet future challenges and opportunities effectively. Our role is to focus on the new buildings' systems to insure they are consistent with university standards. The buildings must have sound, proven engineering designs with standard building systems components, was they are integrated into the existing maintenance programs on campus.

Physical Plant plays a major role in the appearance of the campus grounds and facilities, and consequently with the "first time" perception and opinion that the public makes regarding the university. It is important that first time visitors, as well as UCF students, faculty and staff see clean, well-maintained grounds and buildings on campus. To this end, the appearance of the campus and its facilities is critical to the success of the university mission and objectives.

As building deficiencies are identified, Physical Plant works in corroboration with Facilities Planning and Environmental Health and Safety to address issues. Subject to the availability of funding, issues regarding SREF, life safety codes, ADA compliance, hazardous materials (including asbestos, lead-based paints and other environmental or hazardous materials), roof management, and energy efficiency are prioritized and addressed.

As funding allows, Physical Plant's long term objectives include utilization of a maintenance schedule for campus facilities, continual prioritization of maintenance and improvement projects, and utilization of a schedule for eliminating deficiencies relating to current standards. Physical Plant employs a staff of over 300 employees who collectively provide support to the university community. On a daily basis the Physical Plant employees follow our motto "We make it happen."

The Physical Plant is comprised of two major sections: Operational Services and Administrative Services. Operational Services includes Engineering Services, Campus Utilities, Maintenance and Grounds. Engineering Services is responsible for the management of alterations to existing campus facilities as they relate to civil, electrical and mechanical engineering disciplines and university standards. Campus Utilities is responsible for the production, distribution and maintenance of chilled water, hot water and potable water systems on campus. Maintenance is responsible for the various maintenance programs relating to electrical systems, carpentry, plumbing, painting, roofing, signage, fire alarms, and elevators and building structures. Grounds is responsible for the campus landscape which includes a variety of tasks: pruning, edging, mowing grass, fertilization, chemical applications, irrigation, etc.

Administrative Services includes Building Services, Central Receiving, Postal, Work Management, Courier, Accounting, Personnel/Payroll, Computer Support and Special Services. Building Services is responsible for the cleaning of the buildings on campus; pest control, carpet and blind replacement, and daily trash pick up. The other Administrative Services areas provide key support to the Operational Services areas, such as ordering and receiving maintenance parts, building supplies and cleaning products. Work Management assures the timely dissemination of information regarding calls for requests to have maintenance performed in campus buildings. Accounting assures that parts are ordered and vendors are paid.

In summary, on a daily basis, Physical Plant supports the goal, “To implement planned and routine maintenance programs which will extend the useful life of all buildings and prevent premature capital outlay for replacement. Through managed maintenance the Physical Plant Department will support the university facilities to provide the university community with a safe environment conducive to teaching and research.

~~**2.17 (2) Facilities Maintenance Analysis**~~

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~~**a) Current improvements needs for each facility**~~

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~~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.~~

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~~**b) Projected improvements needs for each facility during the planning period**~~

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~~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**~~

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~~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.~~

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~~**d) Assessment of the possibility of re-use**~~

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~~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.~~

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