USF UNIVERSITY OF SOUTH FLORIDA POLYTECHNIC

UNIVERSITY OF SOUTH FLORIDA POLYTECHNIC
2010 - 2020 MASTER PLAN UPDATE

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USF POLYTECHNIC
2010 - 2020 MASTER PLAN UPDATE

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Based on USF Lakeland Campus 2005-2015 Master Plan
Reynolds, Smith and Hills, Inc.
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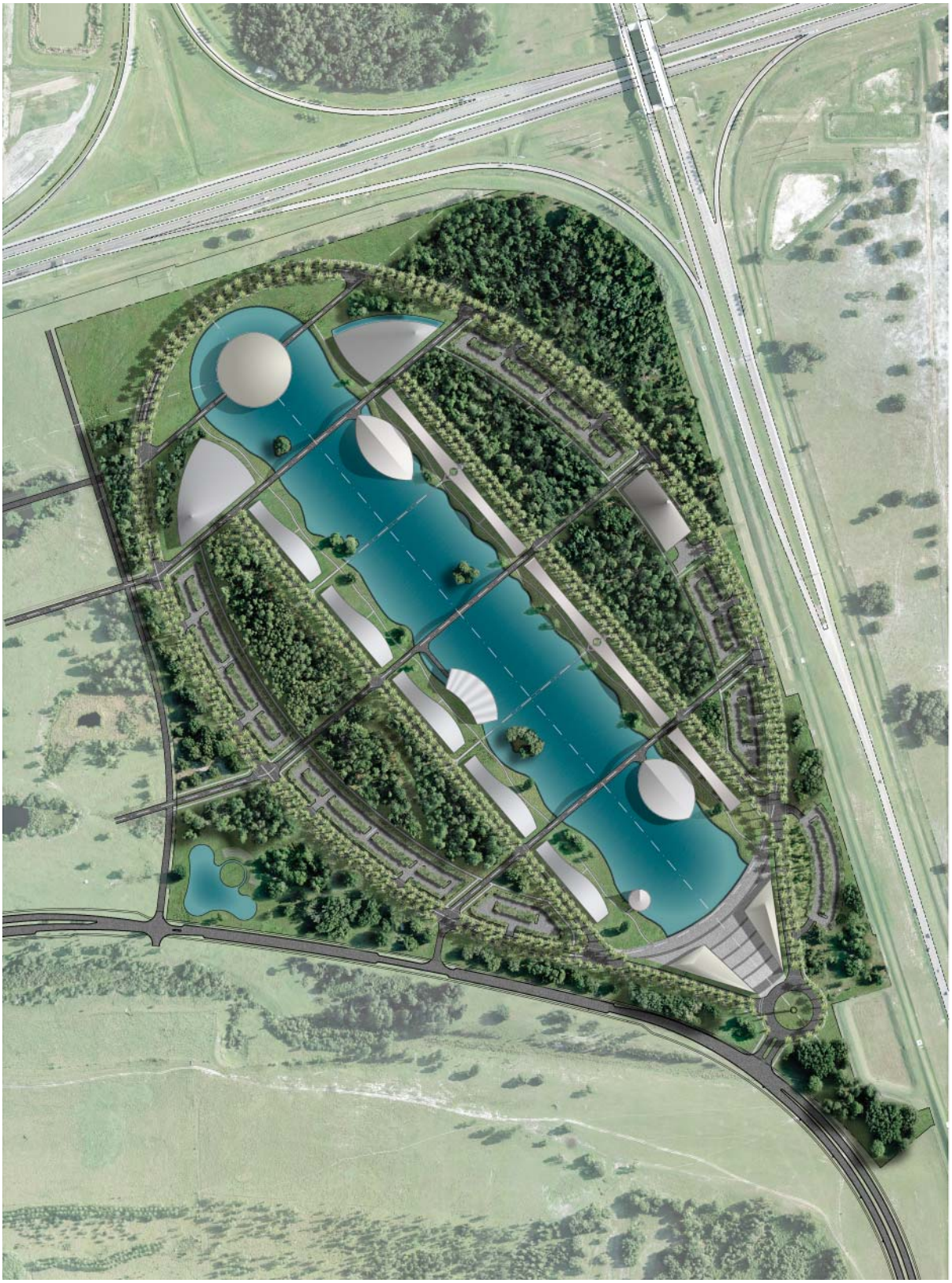

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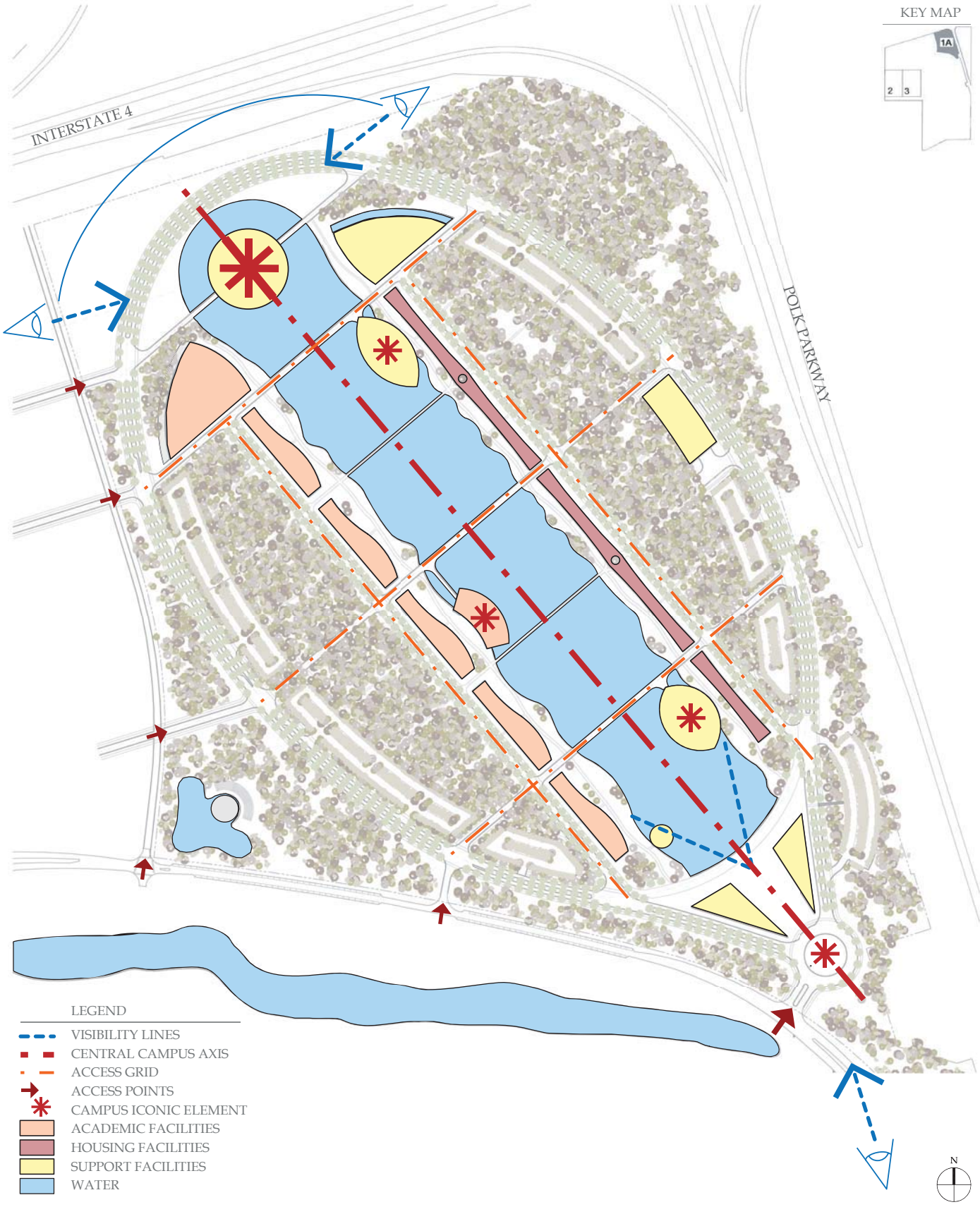

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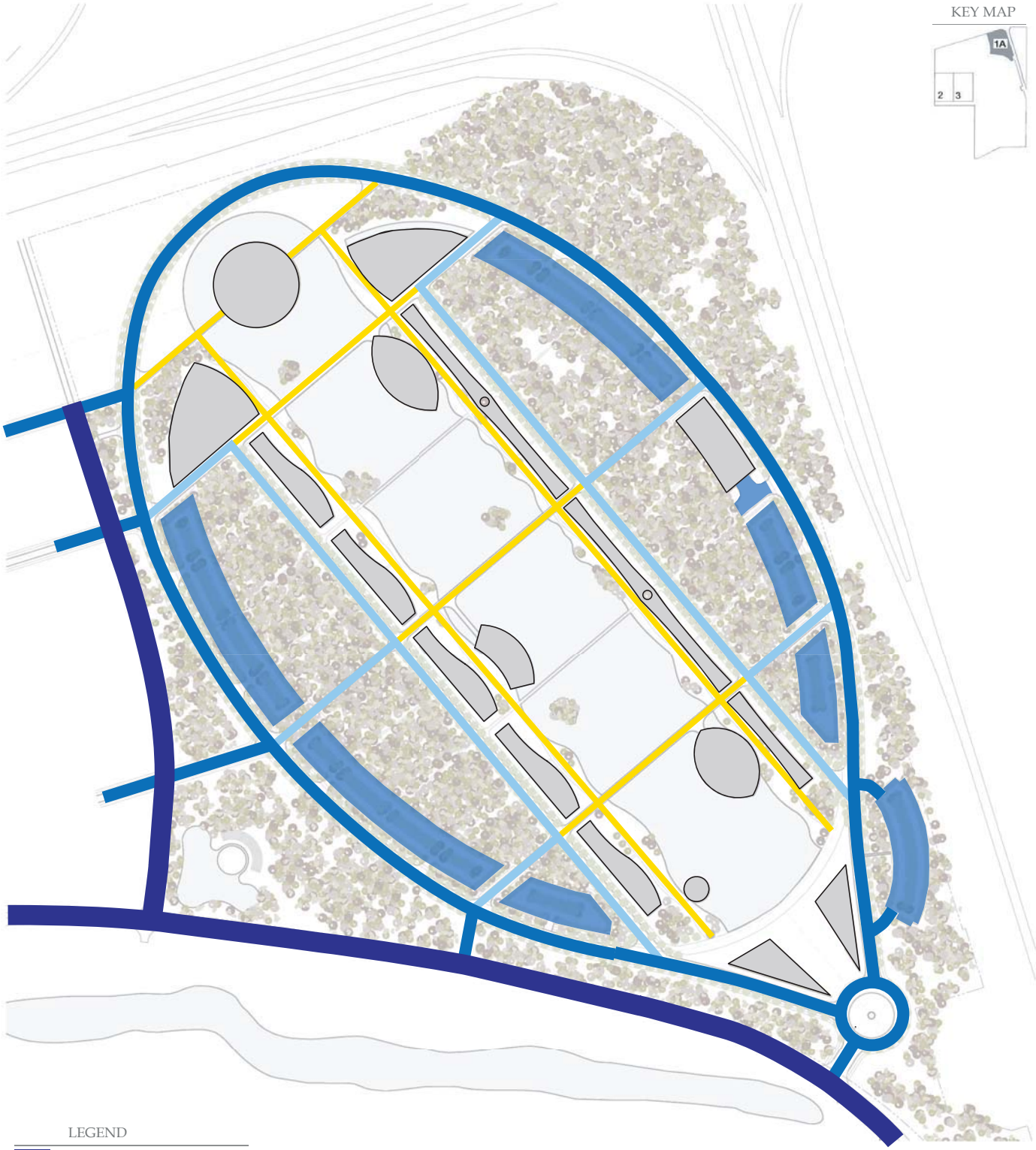

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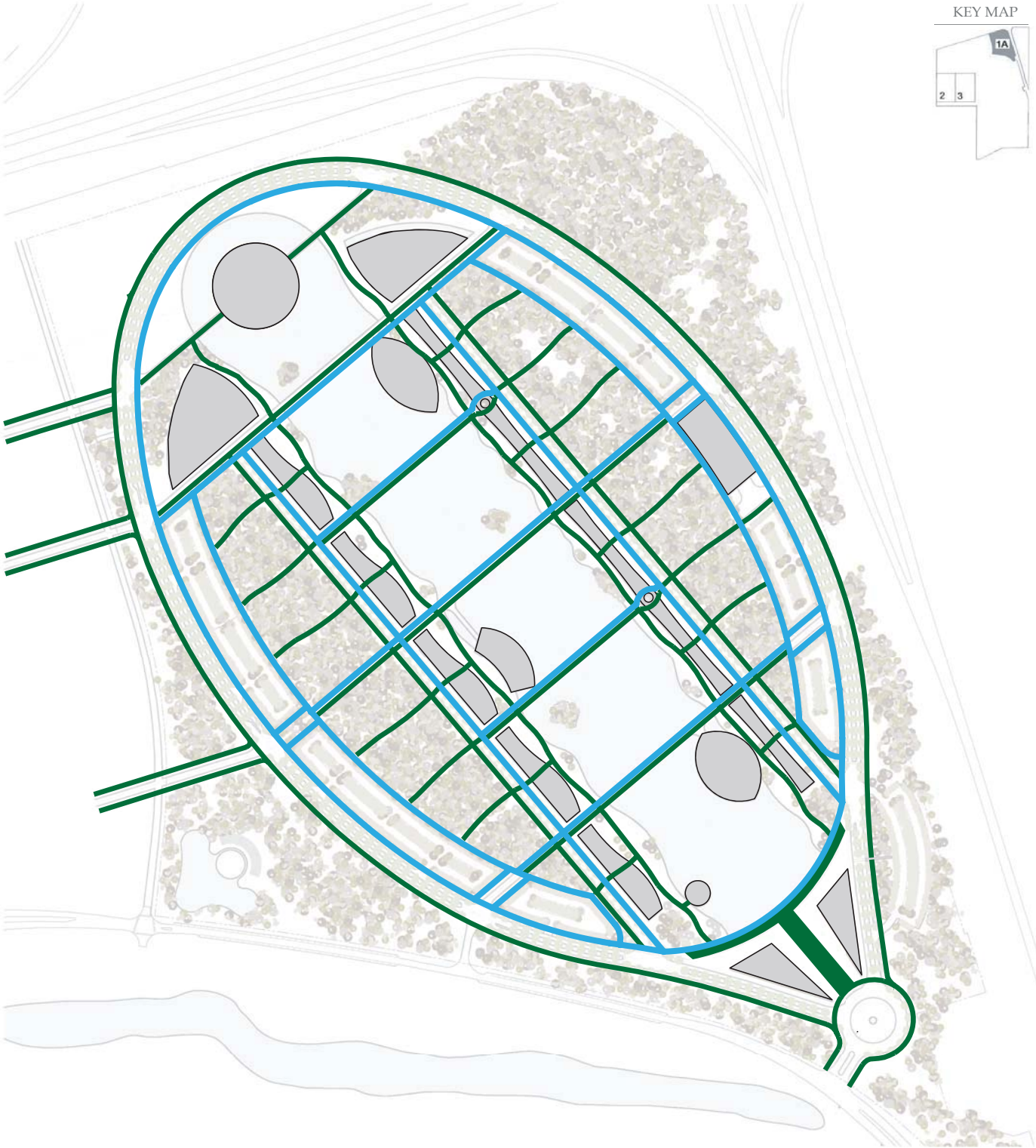

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EXECUTIVE SUMMARY

The University of South Florida *was founded in 1956* as the first public university established specifically to address the needs of Florida's rapidly emerging urban regions. *Today, the University of South Florida System is comprised of two separately accredited institutions, USF and USF St. Petersburg. USF consists of the main campus in Tampa, which includes USF Health, the College of Marine Science in St. Petersburg, and two regional campuses – USF Sarasota Manatee and USF Polytechnic located in Lakeland.*

The USF System is committed to providing students at the undergraduate, graduate and professional level with high quality learning opportunities, building community and business partnerships, and research for discovery and innovation. Successes in these endeavors led to dual designations for the USF System by the Carnegie Foundation for the Advancement of Teaching as a Very High Research and a Community Engaged University.

The USF System is focused these strategic priorities: Student Success, Research and Innovation, Community Engagement, Global Literacy and Impact, and Integrated, Interdisciplinary Inquiry.

This Master Plan Update is a revision of the "Final Master Plan, USF Lakeland Campus, 2005-2015 Master Plan, August 2006" prepared by Reynolds, Smith and Hills, Inc. It provides a structure for the initial phase one construction and future growth of the USF Polytechnic Campus for a ten-year planning period (2010-2020). The graphic portions of the Master Plan Update are entirely new. The revisions to the narrative portion are contained primarily in chapters 3.0 Campus Design Element, 4.0 Future Land Use Element, 15.0 Architectural Design Guidelines Element, and 16.0 Landscape Architectural Design Guidelines Element. The revisions are based on USF Polytechnic comments to the previous Master Plan document and the university's desire to investigate design alternatives more in harmony with the existing landscape. The revisions to the original text contained herein are indentified in red italics. The change to the name of the university from USF Lakeland to USF Polytechnic has been highlighted throughout the document, although corrections to the previous documents' grammar and/or spelling have not as they do not represent qualitative revisions.

A summary of anticipated campus development is articulated below for the 18 elements and planning options are discussed as they relate to the growth potential and are illustrated on the *Figure 3.1: Campus Master Plan.* This document establishes the framework of goals, objectives and policies that will guide development of the *USF Polytechnic* Campus for the next ten years and beyond. The following narrative is a summary of the eighteen elements.

1.0 Academic Mission Element

Polytechnics value an applied learning-centered campus environment where students and faculty engage in interactive, problem- and solution-based learning and applications of innovative research and technology. Students are expected to participate in dynamic learning communities, collaborative learning labs, graduated field experiences, and professional internships. In a learning environment with high technology application expectations, students may be required to purchase a USF polytechnic laptop equipped with software applications required for successful completion of courses and degree program learning experiences. Students will be required to build an ePortfolio, demonstrating their development of knowledge, skills and performance competencies throughout their degree program completion.

Faculty are expected to demonstrate currency and thoroughness in knowledge of the discipline, including innovative or challenging perspectives. Rather than being "sages on the state," they are expected to serve as "guides on the side" and emphasize hands-on pedagogies with practical classroom-and field-based applications. Faculty are also expected to engage students in multi-

disciplinary thinking and identification of connections among disciplines, in inquiry and creative thinking, connecting learning activities and experience to the application of research and technology to find solutions to real-world problems in real, in-demand career path workplaces. Faculty are expected to provide students with learning opportunities that promote ethical behavior, social responsibility, and civic and community engagement. Polytechnic faculty are strong practitioner-scholars whose work reflects collaborative, cross-disciplinary approaches, yielding applied solutions to real-world problems.

2.0 Academic Program Element

USF Polytechnic is an integral part of the University of South Florida system. *With the approval of the Board of Governors and the SACS Commission on Colleges in 2009-2010, a plan for implementation of general education offerings and a pilot Freshman Cohort allows for the development of a full four-year plus Masters student experience and a true destination environment. The general education core for this campus focuses on a group of courses that are tightly linked to the polytechnic core values as articulated in the USF Polytechnic 2007-2012 Strategic Plan. The structure of USF Polytechnic's colleges will accommodate its existing degree programs, allow for the development of new degrees, and reflect commitment to interdisciplinary engagement. These colleges are: the College of Technology & Innovation, the College of Human & Social Sciences, and the College of Applied Arts & New Media. Within these colleges will be existing and new degree programs in five areas of distinction: applied health sciences; mathematics and science education; business and entrepreneurship; manufacturing engineering and technology; and information technology.*

3.0 Campus Design Element

Central Florida's landscape is the primary inspiration for the USF Polytechnic Campus design. Whether coastal, swamp, marsh, or lake, water plays an important role in defining the regional culture and the imagery and built form of the campus. Water based elements not only enhance the architectural expression, but also provide ecologically sensitive surroundings that may be developed into valuable educational tools. The campus, however, is not only a center of learning, but is significant, through its formal arrangement and iconographic imagery, as an institution that endeavors to represent to man's highest aspirations.

Three fundamental concepts form the genesis of the Master Plan Update. The first is the idea of framing structures about a central axis within a large open landscape. This is an historical theme that is found in many successful urban and rural university campuses, that carries a natural gravitas. The second is that a clear geometrical order allowsflexible growth while controlling haphazard development. And third, the continuity of a style within an order provides a uniform aesthetic that gives intimate richness and forms a counterpoint to the grandeur of the campus' formal axial core.

During the conceptual approach, multiple configurations were considered in the development of the campus Master Plan Update. Primary variables considered in each design were: (i) the creation of a strong formal order at a scale that addressed the campus as a whole; (ii) the creation of an iconic structure marking the campus within the local, regional and global context; (iii) recognition and conservation of the natural landscape, open space and vegetation areas; (iv) the location of a perimeter vehicular ring road and peripheral campus parking; (v) the creation of a symbolic campus entrance; and (vi) the creation of a variety of building types and public spaces in order to create a "pedestrian-friendly" campus environment.

The Master Plan Update, in response to the primary variables listed above, envisions the following critical design components: (i) a large body of water, or central lake, located on a northwest-southeast axis through the site. The scale of the central lake creates an immediate campus core and affords dramatic

views from within the campus and into the campus from offsite locations. It provides primary stormwater treatment and conveyance as well as storage capacity for site irrigation; (ii) the Phase One building, rising above the canopy of live oak trees at the northwest head of the central lake, is fully visible from Interstate 4, Polk Parkway, and from the campus entry along the central lake axis. The Phase One building shall create a recognizable iconic symbol for the USF Polytechnic campus; (iii) conserve, to the greatest possible extent, the existing topography and existing tree canopies within the campus; (iv) the elliptical vehicular ring road and surface parking at the periphery of the site segregates vehicular traffic and allows the conservation of the existing vegetative buffer to the context area roadways, such as Interstate 4 and Polk Parkway; (v) the campus entry, located at the southeastern corner of the site from the loop road, provides opportunities for a symbolic marker and quickly frames axial views through the administrative buildings towards the iconic Phase One building; and (vi) the placement of administrative, academic, residential, and other support facilities around the central lake to accentuate the strong campus core while the distribution of pedestrian walkways and paths form a grid through the campus that leaves all classrooms, offices and dorm rooms within a 10 minute walk.

4.0 Future Land Use Element

As student enrollment increases, the ability to plan for campus expansion is a major consideration. The *4.1 Future Land Use Map* articulates future creation of additional *buildings and their relationship with the existing buildings, pedestrian walkways and paths, internal open spaces, and visual axes*. Building accessibility is an important component of their location. *Campus academic and residential facilities are located along the east and west banks of the central lake and are accessed by tree lined pedestrian walkways. Smaller scaled pathways circulate pedestrians transversely across the site from peripheral surface parking lots to the campus core and from building to building as each facility takes advantage of the natural landscape and according vistas. Two administration buildings are prominently located at the campus entrance, providing significant architectural features and a gateway to the central lake and campus beyond. Opportunities for future development of academic and residential buildings lie between their respective buildings and the perimeter ring road.*

5.0 Academic Facilities Element

The Phase One building will provide a multi-functional facility for the campus during the first phase of construction. Classrooms, offices, and student services will be accommodated in an approximately *100,000* gross square foot building. The location of this facility will be at the *northwest* terminus of the *central lake and serve as the iconic head of the USF Polytechnic campus. Phase Two buildings for the residence dormitories and Wellness Center will be located south of the Phase One facility and along the east bank of the central lake as campus development continues. Future building construction will proceed south along the east and west banks of the central lake toward the campus entry. A Research "Incubator" building is proposed south of the Phase One building along the west bank of the central lake adjacent to the proposed research park.*

6.0 Support Facilities Element

Phase One will support multiple campus functions, including the provision of student support services *such as the information commons, student center and academic support services. Phase One will also include facility support services such as the central energy plant, proposed as a part of the Site/Infrastructure construction along the eastern portion of campus ring road, security services, and facility maintenance.*

7.0 Housing Element

Residential housing will provide 500 *-1000* bed spaces *along the east bank of the central lake. A separate Wellness Center housing academic, athletic, recreational, and student support facilities is proposed to be located north of the housing facility.*

8.0 Recreation and Open Space Element

With the proposed development planned for the land south of the *USF Polytechnic* Campus, alternative facilities for recreation and open space may be possible in order to maximize academic, research and support functions on Parcel 1A of the campus property. The Town Center development currently being considered directly south of the proposed University site is planned to provide gathering areas, plazas and some civic-oriented open space. The recreation and open space programming efforts for the *USF Polytechnic* Campus have not been finalized and coordination with the adjacent development will continue in order to ensure the adequate provision of these facilities for *USF Polytechnic* students, faculty and staff.

9.0 General Infrastructure Element

10.0 Utilities Element

Services for the campus will be provided from the City of Lakeland and regional providers with connections for potable water and sanitary sewer from the north. The Land Donation Agreement between USF and Williams Acquisition Holding Company, Inc. address the stormwater management facilities for the *USF Polytechnic* Campus. Alternative sources of energy (cogeneration), as well as thermal storage, and other energy conservation measures shall be considered for the reduction of University energy consumption. Utility planning, especially for the production and distribution of chilled water, shall consider available options to conserve energy through sustainable design. The design phase for facility chilled water and heating plant shall include a full life-cycle analysis of available energy conservation options in the production and distribution of chilled water as well as the options for central and local heat generation and heat recovery.

11.0 Transportation Element

Transit/Parking/Pedestrian/Non Vehicular:
The symbolic campus entry into USF Polytechnic provides prominent vistas of the Phase One building, and into the campus core along the axis of the central lake. From the entry, vehicular traffic is directed along the periphery of the site along the perimeter ring road. Campus parking areas are located off the ring road and will be appropriately landscaped and buffered to the campus core by pergolas and vegetation. No parking spaces will be provided within the campus core so as not to disturb the framework of pedestrian walkways and paths that connect the peripheral roads and parking to the core. Additional campus entries to the west allow future connections to proposed private research development. The Town Center developer will provide the loop road, south of the campus. As student enrollment increases, so does the need to provide alternative transit opportunities coordinated with adjacent private development.

12.0 Intergovernmental Coordination Element

With the development of *USF Polytechnic's* first campus master plan, the University can parallel its efforts to develop as the surrounding host community continues its dynamic growth, community interaction and

long-range planning. The ability of the City of Lakeland to supply basic services to the *USF Polytechnic* campus will determine the rate of growth, as well as the ability of the campus to accommodate anticipated growth while respecting and managing the naturally occurring resources of uplands, wetlands and wildlife and vegetation. Interaction with the context area through sound land planning efforts, constructive interaction with the FDOT and the coordination with the City of Lakeland, will be the key to successful growth and development at the campus.

13.0 Conservation Element

Development guidelines will be in place to ensure the minimization of disturbance to those sensitive environmental areas. Any wetlands on campus will provide both conservation and educational functions. Therefore, preservation, avoidance and restoration projects can be a part of a research-based program for the University. All wildlife habitats at the campus will be available for teaching purposes. Jogging/fitness trails will be created as part of campus development to take advantage of the naturally occurring resources.

14.0 Capital Improvements Element

USF Polytechnic's legislative budget request for finding of projects (see Table 14.1 in 14.0 Capital Improvements Element) provides a schedule of 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 projection program enrollment and enhancement. 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 Florida Board of Governors and the State University System. 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 project list.

15.0 Architectural Design Guidelines Element

The master plan seeks to establish a framework that will guide and structure appropriate building placement and orientation, open space, visual linkages, movement patterns, and the logical distribution of land uses. It is essential that the design of new buildings take into account guidelines for building siting as well as architectural treatment. Poorly sited buildings, no matter how well designed, will always be a detriment to the overall campus environment. The composition of the *USF Polytechnic* campus, its buildings and landscape shall reflect the design and character of a cohesive campus. The objective of establishing architectural design guidelines is to establish design parameters for future development that will help to create a campus of coherence and beauty.

16.0 Landscape Design Guidelines Element

Through the coordination of plantings with unified styles and materials of hardscape and architectural elements, site furnishings and graphics, the campus image may be developed in a manner that promotes a holistic approach to the design of exterior spaces for the *USF Polytechnic* Campus. The repetition of colors, materials, and design elements of site materials, furnishings and graphics all contribute to the overall visual quality of the campus. Through the consistency of design and repetition of patterns and

colors the built landscape begins to establish a visual theme in campus appearance. Use of existing stands of vegetation along with an indigenous plant material pallet will enhance open spaces, buffer parking lots, service areas and roadways along with reinforcing the architectural character of the University.

17.0 Facilites Maintenance Element

Appropriate methods can be implemented to initiate green building development along with the Leadership on Energy and Environmental Design (LEED) criteria when applicable. Harvesting free energy is an important aspect in increasing building energy performance. The design of the campus will take into consideration building placement for passive solar orientation and natural ventilation to the use of existing vegetation for shade. Increased efficiency through the application of state-of-the-art equipment is another critical element toward optimizing building energy performance and to optimize HVAC equipment efficiency by not over sizing plant equipment. There is a national consensus to produce a new generation of buildings that deliver high performance both internally and externally. New trends have developed to improve industry standards, design guidelines, policies and educational tools that support the adoption of sustainable design and building practices. These national trends provide an enormous opportunity to initiate change in the way buildings are designed, built and maintained. *USF Polytechnic* will strive to adhere to these standards where feasible.

18.0 Coastal Management Element

USF Polytechnic will establish a hurricane evacuation policy to provide all future enrollment projections with shelters. In 2004, four major hurricanes threatened the state of Florida and many universities were presented with difficult decisions regarding the safety of their students, faculty and staff. In light of these unprecedented events, *USF Polytechnic* has determined that current policies will continue to be evaluated to provide the University with the best and safest scenario for hurricane evacuation procedures. Ongoing coordination is necessary with the host communities regarding evacuation procedures.

SUMMARY

The development of the USF Polytechnic Master Plan Update has been accomplished through close collaboration with USF Polytechnic. The revisions contained here are based on the original master planning process established during the creation of the "Final Master Plan, USF Lakeland Campus, 2005-2015 Master Plan, August 2006" prepared by Reynolds, Smith and Hills, Inc. This process established project criteria through extensive academic programming efforts including the active participation of faculty, staff, students and administration. The Master Plan Update has attempted to conform to the goals, objectives and policies previously established where they did not conflict with new direction from the university. The placement of new facilities, and future development opportunities have been revised to create an iconic campus in harmony with its environment, that captures the aspirations of an institution dedicated to the quality of life of its community.

1.0 ACADEMIC MISSION OF THE UNIVERSITY ELEMENT

As outlined in the Strategic Plan "Vision 2012" the University of South Florida Polytechnic will be a premier destination campus for applied learning, research, and innovative technology. Our students and graduates will inspire and lead change, locally and internationally.

The campus holds itself to high standards of excellence, engage in innovation and continuous improvement. It challenges conventional practices and sets and achieves meaningful performance benchmarks.

USF Polytechnic values a learner-centered campus environment where students and faculty have world-class opportunities for interactive, problem-and solution-based learning and for application of innovative research and technology. We promote the development of dynamic learning communities, collaborative learning labs and professional internships that foster academic, personal, and professional achievement. We schedule classes and provide flexible program delivery options to meet the needs of our students and communities and to enable timely degree completion.

USF Polytechnic embraces diversity, creating an open campus environment that respects and values individual uniqueness, differences in ideas and experiences, academic freedom and discourse, civility, caring, and compassion.

USF Polytechnic values interdisciplinary thinking, blending two or more academic, scientific or artistic disciplines in teaching and research. We provide learning and research experiences that develop learners' abilities to identify and make connections among disciplines.

USF Polytechnic serves as a key resource for communities and seek collaborative partnerships to enhance civic, social, educational, and economic development. We provide students with service learning opportunities that build value for community service.

USF Polytechnic places high priority on meaningful and measurable impact. We are committed to research and the advancement of knowledge to promote educational, social, and economic factors that enhance quality of life. We expect our graduates to make meaningful contributions to our communities and the world.

USF Polytechnic believes educated people value integrity and take responsibility for their actions. We believe that learning should contribute to the development of ethical, socially responsible action, and we provide learning opportunities that promote ethical behavior, social responsibility, and civic engagement.

Prominence in and engagement with the communities and region served by USF Polytechnic will be fostered by a site which is visible and accessible to the public, improved wayfinding and community oriented facilities.

Goal 1A: Recruit, develop, and retain world-class practitioner scholars with capacity to deliver the polytechnic vision in teaching, research, and community engagement.

Objective1A.1 Develop and implement a comprehensive faculty recruitment, development, and incentive plan that aligns with the polytechnic vision.

Objective 1A.2 Develop a faculty culture that values applied learning, applied research, interdisciplinary thinking, and integration of innovative technology.

Objective 1A.3 Develop clear, well-articulated criteria for promotion and tenure that reflect the nature of faculty work on a polytechnic, undergraduate and master's level campus.

Objective 1A.4 Provide faculty resources and professional development sufficient for successful tenure and promotion, including a faculty mentoring program.

Objective 1A.5 Secure resources to recognize and reward faculty achievement in research and creative activity, outstanding teaching, and community engagement and impact.

Objective 1A.6 Increase the number of faculty receiving regional, national, and international awards.

Objective 1A.7 Secure funding for endowed chairs in the five areas of distinction: applied health sciences; mathematics and science education; business and entrepreneurship; manufacturing engineering and technology; and information technology.

Objective 1A.8 Develop a comprehensive research support infrastructure to enable faculty to conduct world-class research with administrative support for grant development, management, and compliance.

Goal 1B. Recruit students locally, nationally, and internationally who are prepared for a polytechnic learning environment, and provide programs and opportunities that enhance student retention and academic, personal, and professional success.

Objective 1B.1 Collaborate with feeder institutions (community colleges and pre K-12 schools) to develop a common understanding of a polytechnic campus and program admissions requirements. Develop a recruitment and marketing plan for middle schools and high schools.

Objective 1B.2 Develop a comprehensive enrollment management plan for marketing, recruitment, admissions, advising, retention, and graduation of diverse and high quality students.

Objective 1B.3 Recruit, retain, and graduate higher numbers of underrepresented students in both undergraduate and graduate programs.

Objective 1B.4 Provide exceptional customer service to students in all administrative areas.

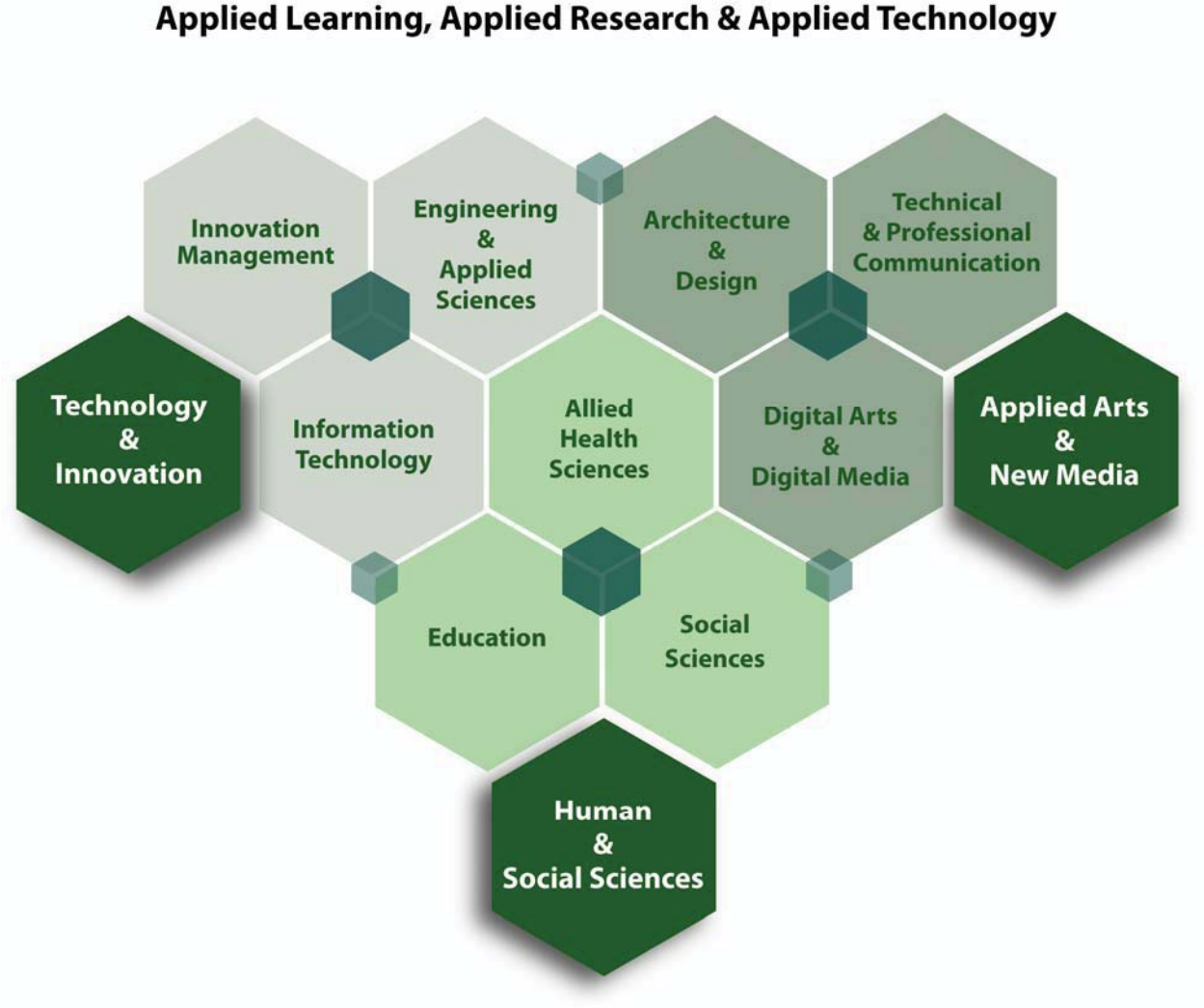
Objective 1B.5 Increase student participation in programs that serve as models for academic, social, and cultural integration of underrepresented students, e.g., McNair Scholars, ENLACE (Engaging Latino Communities for Education), Project Thrust Corporate Mentoring Program.

Objective 1B.6	***Develop early admissions/access programs, and enhance advising to increase retention and ensure timely completion of degree programs.***
Objective 1B.7	***Increase scholarships available for students.***
Objective 1B.8	***Develop student leadership, mentoring, and learning community programs to contribute to student success and create a sense of belonging to USF Lakeland.***
Objective 1B.9	***Increase comprehensive student life activities to include academic and technology extra- and co-curricular activities; social and community engagement opportunities; and personal, academic, and career support services.***
Objective 1B.10	***Create opportunity for student participation in honor societies and academic award programs.***
Objective 1B.11	***Develop a system for tracking graduates and establish a strong alumni base.***

2.0 ACADEMIC PROGRAM ELEMENT

In 2008, the Central Florida Development council hired SRI International, an independent research firm, to conduct a detailed analysis of the region's current economic strengths and opportunities. The resulting "cluster analysis" study identified seven industry sectors that were already represented in the regional economy and primed for future growth: research & engineering services; logistics & supply chain management; life science & medical services; education & government; construction & real estate; business & financial services; and agriculture & agritechnology.

As the region's public and private sectors mobilize to cultivate and exploit these clusters, USF has nurtured USF Polytechnic as the ideal higher education complement to central Florida's economic development initiatives. This process of aligning the institution's design with its socio-economic context has energized and synchronized USF Polytechnic and its key community stakeholders. It has also provided a distinct focus for the development of academic programs: each of the industry clusters maps directly to specific academic programs or proposed for future development at USF Polytechnic.



As the USF System has evolved, it has dramatically expanded access to Florida residents and highly motivated students from around the world. The diversity of its four campuses will continue to accommodate the development of distinctive models of higher education – what the USF Board of Trustees has described as "mission differentiation: - to serve the current and emerging education, research and economic development needs of the state, nation and world.
Goal 2 of the USF Polytechnic Strategic Plan includes recruitment of students locally, nationally, and internationally who are prepared for a polytechnic learning environment. A comprehensive student recruitment plan is being developed to include regional, state, national and international markets.

Home Campus FTE Enrollment in Current Degree Program Majors Source: USF Data Warehouse	**FALL 2009**	**FALL 2010 Projections based on historical trends and information from USF Polytechnic recruiters and academic advisors**
Undergraduate Majors		
Elementary Education	175	182
Industrial Engineering	11	14
General Business Administration	200	208
Marketing	19	20
Management	18	19
Applied Science	168	175
Psychology	132	137
Information Technology	122	127
Interdisciplinary Social Science	93	97
Criminology	61	63
General Studies	6	18
Non Degree	28	30
Graduate Majors		
Educational Leadership	86	95
Counselor Education	44	48
Reading Education	18	20
Business Administration	17	20
Information Technology (if approved)		18

The structure of USF Polytechnic's colleges must accommodate its existing degree programs, allow for the development of new degrees, and reflect commitment to interdisciplinary engagement. Each of the three interdisciplinary colleges will initially have three academic divisions and their respective academic degree programs as presently approved by the USF System Board of Trustees and Board of Governors for delivery at USF Polytechnic:

College of Technology & Innovation

Innovation Management – B.A., B.S., Business Administration; B.A., B.S., Management; B.A., B.S., Marketing; MBA

Engineering & Applied Sciences –B.S., Applied Science; B.S. Industrial Engineering

Information Technology – B.S., Information Technology

College of Human & Social Sciences

Social Sciences – B.A., Criminology, B.A., General Studies, B.A., Interdisciplinary Social Sciences, B.S., Psychology

Education - B.S., Elementary Education, M.A., Counselor Education, M.Ed. Educational Leadership, M.A., Reading Education

Allied Health Sciences

College of Applied Arts & New Media

Architecture

Technical & Professional Communication

Digital Arts & Digital Media

This academic structure will be included in the organizational charts submitted with the initial SACS Accreditation Application in early 2010 and with the USF 5th Year Report. It will enable USF Polytechnic, following USF System degree and program approval procedures and SACS and Board of Governors notification and approval requirements, to develop new degree programs in a polytechnic model, including programs in identified economic development industry sectors and in the five areas of distinction identified in Goal 3 of the USFP Strategic Plan. Examples of potential future "polytechnic" programs that would be developed for delivery 2012-2015 are:

B.A., Digital Arts & Digital Media
B.S., Communication Sciences & Technology
B.S., Interdisciplinary Engineering
B.S., Manufacturing Engineering Technology
M.S., Manufacturing Engineering
Pre-Pharmacy Program
B.S., Medical Technologist
B.S., Agricultural & Biological Engineering
B.A., Architecture
B.A., Design
B.S., M.Ed., Integrated STEM Education (Elementary Track, Secondary Track)
B.S., M.Ed., Technology-Mediated Learning
B.S., Forensic Science/Studies

Following SACS accreditation guidelines and substantive change notification requirements, the following initial modifications/additions are planned for completion for inclusion as part of the Initial SACS Accreditation Application:

1. *Completion of approval of the M.S., in Information Technology, already in process.*
2. *Completion where possible of new concentrations in the B.S., in Applied Science and B.A., General Studies where appropriate: Nutrition, Entrepreneurship, Supply Chain Management, Health Information Management, Organizational & Interpersonal Communication, Juvenile Crime (including Cyber Crime & Safety).*

Goal 2A. Expand and create academic programs that focus on applied learning, applied research, applied technology, and interdisciplinary approaches in a polytechnic model. Develop and implement new degree programs in five areas of distinction: applied health sciences; mathematics and science education; business and entrepreneurship; manufacturing engineering and technology; and information technology.

Objective 2A.1 ***Increase campus autonomy in program development.***

Objective 2A.2 ***Carefully assess potential long-term regional workforce development needs. Expand program offerings at the baccalaureate, post-baccalaureate, master's, and graduate certificate levels; cooperative programs and internships; collaborative degree and professional development programs with businesses and other agencies.***

Objective 2A.3 ***Develop new degree programs in five areas of distinction: applied health sciences; mathematics and science education; business and entrepreneurship; manufacturing engineering and technology; and information technology. Focus on a polytechnic model of applied learning, applied research, and applied, innovative technology in all programs.***

Objective 2A.4 ***Integrate globalization issues in program curricula.***

Objective 2A.5 ***Increase general education course offerings to match FTIC enrollment growth, and develop first-year experience programs for all entering freshmen and transfer students.***

Objective 2A.6 ***Develop competency- and skills-based student outcomes and assessments in all programs.***

Objective 2A.7 ***Develop comprehensive program information publications, both print and online.***

Objective 2A.8 ***Achieve separate institutional and program accreditation.***

Objective 2B.1 Increase campus autonomy in program development.

Objective 2B.2 Carefully assess potential long-term regional workforce development needs. Expand program offerings at the baccalaureate, post-baccalaureate, master's, and graduate certificate levels; cooperative programs and internships; collaborative degree and professional development programs with businesses and other agencies.

Objective 2B.3 Develop new degree programs in five areas of distinction: applied health sciences; mathematics and science education; business and entrepreneurship; manufacturing engineering and technology; and information technology. Focus on a polytechnic model of applied learning, applied research, and applied, innovative technology in all programs.

Objective 2B.4 Integrate globalization issues in program curricula.

Objective 2B.5 Increase general education course offerings to match FTIC enrollment growth, and develop first-year experience programs for all entering freshmen and transfer students.

Objective 2B.6 Develop competency- and skills-based student outcomes and assessments in all programs.

Objective 2B.7 Develop comprehensive program information publications, both print and online.

Objective 2B.8 Achieve separate institutional and program accreditation.

University of South Florida Polytechnic

Enrollment Projections

June, 2009

BOG Projections

USF Polytechnic			1-year	3-year	5-year	
FTE		2009-10 estimated	2010-11	2012-13	2014-15	5-Year Projected Average Annual Growth Rate
Total Lower		31	53	236	452	1358.1%
Total Upper		795	823	922	1,621	103.9%
Total Grad I		123	126	135	149	21.1%
Total Grad II		-	-	-	-	0.0%
Total FTE		949	1,002	1,293	2,222	134.1%

BOG Projections Extended by Year

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
LL	4	11	22	31	53	92	236	315	452
UL	496	596	757	795	823	915	922	1200	1621
GRAD	102	112	134	123	126	130	135	141	149
Total	602	719	913	949	1,002	1,137	1,293	1,656	2,222
% Growth		19.44%	26.98%	3.94%	5.58%	13.47%	13.72%	28.07%	34.18%
Headcount	2,582	3,448	4,229						
(Est. 2009-2015)				4,412	4,659	5,116	5,431	6,624	7,999

Projected FTE Summary

	Projected					
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
I. Growth in Existing Courses	922	941	969	998	1068	1100
II. UL New Programs pre SACS Accred.	27	61	116	121	228	565
III. UL New Programs Post SACS Accred.					105	175
IV. Lower Level + Freshmen and Sophomore			52	174	255	382
Grand Total:	949	1,002	1,137	1,293	1,656	2,222

3.0 *CAMPUS* DESIGN ELEMENT

The spatial organization of the USF Polytechnic Campus evolves through the development of pedestrian walkways and paths emanating from the campus core (see Figure 3.1: Campus Master Plan). The core is created by a large body of water, or central lake, that is located on the northwest/southeast axis through the site (see figure 3.2: Campus Design Configuration). The Phase One building is sited at the northwest head of the lake, while residential and academic buildings flank the lake's eastern and western banks respectively. Two administration buildings anchor the southeastern lakeshore and frame vistas of the lake and Phase One building from the campus entry. Pedestrian walkways and paths lead from the core to wooded parks and lawns that serve as large outdoor gathering spaces for informal and formal activities. Beyond the lawns, the walkways terminate at the campus parking areas, located along the vehicular perimeter ring road. Natural wooden areas lie beyond the ring road and form the edges of the campus. The proposed architectural and landscape architectural elements possess a consistency in form, pattern, material and color that connects the USF Polytechnic Campus together and creates a distinctive sense of place that may be appreciated by students, faculty, staff as well as the local and extended community.

Goal: **The *USF Polytechnic* Campus Master Plan Update will establish an integrated and coherent order of campus open spaces defined by a unified architectural framework.**

Objective 3.1 ***Locate* the building program identified on *USF Polytechnic's* Ten Year Capital Improvements Plan, as well as other near term projects identified by *USF Polytechnic, in order to define: (i) the campus core; (ii) the iconic symbol of the university; (iii) the campus entries and system of peripheral vehicular circulation and parking; (iv) a network of pedestrian circulation; and (v) a hierarchy of open space culminating with a consistence campus edge.***

Policy 3.1.1 *USF Polytechnic* shall give priority to siting the buildings identified on the Ten Year Capital Improvements Plan and other near term projects identified by *USF Polytechnic* in positions indicated *herein*. These locations will provide the spatial definition of the *central lake, pedestrian walkways and paths, and wooded lawns and parks within the campus*.

Policy 3.1.2 Construct campus academic buildings *consistent with the criteria defined in the 15.0 Architectural Design Guidelines Element* in order to provide definition of open spaces and preserve land resources.

Policy 3.1.3 *USF Polytechnic* shall initiate land use and design review processes established for the purpose of reviewing and ensuring compliance with master plan goals, objectives, and policies in accordance with the 15.0 Architectural Design Guidelines Element.

Policy 3.1.4 *USF Polytechnic* will identify where implementation of City of Lakeland and/or Williams SPI Overlay District design standards *are* appropriate related to the *campus* design character of *USF Polytechnic*/host community context area described in 12.0 Intergovernmental Coordination Element.

Policy 3.1.5 The timing and phasing requirements and priorities for the development of buildings, facilities, and open spaces *shall be* consistent with the principles established are listed in the 14.0 Capital Improvements Element.

Policy 3.1.6: In all building designs, *USF Polytechnic* shall seek to *control* the massing and height of buildings, within the context of the campus design and architectural guidelines, in order to maintain the character and expression of the existing landscape and secure the future development potential of the existing campus lands.

Policy 3.1.7: *USF Polytechnic* shall use the USF System Campus Development Committee (CDC) established for the purpose of reviewing and ensuring land use compliance with goals, objectives, and policies in accordance with the *USF Polytechnic* Campus Master Plan. Design review shall continue to be performed by the President, appropriate Vice President, and Executive Vice President.

Objective 3.2 **Establish a hierarchy of campus open spaces including *the central lake,* pedestrian walkways and paths, *open lawns and parks, and natural wooded areas.***

Policy 3.2.1 *USF Polytechnic* shall position future buildings as shown on the 10-year plan so that their *massing* contributes to the definition of public space. Facades and entries shall *facilitate public use.* Mechanical or service areas shall be separated from the public entries and placed away from the public spaces.

Policy 3.2.2 *USF Polytechnic* shall utilize future buildings and additions as described on pages herein in Objective 3.2 *and in the 4.0 Future Land Use Element* to shape a coherent set of public open spaces.

Policy 3.2.3 *USF Polytechnic* shall establish a *hierarchy* of *campus* open spaces *accentuating* the preservation and enhancement of the existing landscape. The establishment of a clear circulation system, including implementation of new pedestrian walkways and paths as described herein in Objective 3.2, *shall articulate a variety of scale and detail.*

Policy 3.2.4: Buildings shall be set back from the adjacent roadway center line as indicated in the 15.0 Architectural Design Guidelines Element.

Policy 3.2.5: Future buildings shall be carefully sited to minimize impacts to existing trees. At the time of construction, trees shall be protected from damage through the use of perimeter barricades placed at the tree drip lines or critical root zones (whichever is greater), both during and after construction.

Policy 3.2.6 *USF Polytechnic* shall explore procedures for funding campus landscape improvements independent of individual building construction projects. Site design that is funded through new building project budgets shall be monitored for consistency with the overall campus landscape design intent. Funds should be distributed in a targeted manner, prioritized for funding development deemed to have the greatest potential for impact on and improvement of the campus. The intent shall be to implement a campus landscape framework that is visibly composed as a whole rather than a collection of individual, unrelated small landscape pieces. *USF Polytechnic* recognizes the value of landscape development as infrastructure of the built

environment that is integral to the process of campus development for the use of students, faculty, staff and visitors.

Objective 3.3 **Provide service and emergency access to campus buildings via service drives. Separate service and pedestrian functions to the greatest extent possible.**

Policy 3.3.1 *USF Polytechnic* shall enforce a policy-designating service and emergency access routes on campus. Service access routes shall be reviewed for adequacy during the plan review process.

Objective 3.4 **Accommodate the initial demand for parking in surface lots at *the perimeter of the campus.* As student enrollment increases, investigate alternative transportation *options*.**

Policy 3.4.1 *USF Polytechnic may choose to build parking structures in lieu of creating additional surface parking.*

Policy 3.4.2 *USF Polytechnic* shall investigate *alternative transportation options to accommodate* future *campus* growth. The preservation of land for academic, *residential and support* facility growth shall be of priority.

Objective 3.5 **Enhance functional linkages between campus facilities.**

Policy 3.5.1 *USF Polytechnic* shall establish functional linkages between campus facilities by initiating systematic implementation of pedestrian circulation and wayfinding demarcation. *USF Polytechnic* shall encourage tree planting, appropriately scaled pedestrian lighting, signage and installation of amenities such as benches and bike racks; and by systematic phasing of new building projects provide programmatic activity linkages and reinforcement of pedestrian movement patterns.

Objective 3.6 **Decrease energy consumption on campus as measured per capita and per building.**

Policy 3.6.1 *USF Polytechnic* shall encourage compactness in the development of the campus in order to increase efficiency of utility line services, to encourage pedestrian movement over vehicular movement on campus, and to preserve land resources.

Policy 3.6.2 *USF Polytechnic* shall require new building design to respond to the particular climatic conditions of Central Florida and shall require issues of energy conservation including building orientation and siting, massing, shading and shape to be addressed during the design. *USF Polytechnic* shall encourage climatic responses such as; walkways, breezeways, shaded courts, solar screens and operable windows.

Policy 3.6.3 *USF Polytechnic* will endeavor to support the use of the United States Green Building and the Leadership on Energy and Environmental Design (LEED) Green Building Rating System (LEEDS) principles in the design and construction of facilities in the interest of sustainability.

4.0 FUTURE LAND USE ELEMENT

The established land use pattern of the *USF Polytechnic* campus is maintained in the proposed *Master Plan Update*. The first phase of development for the campus will be *the construction of the Phase One building in the northwest portion of Parcel 1, and a select portion of the site infrastructure throughout Parcel 1A* including the connection to the Pace Road extension that provides access into the campus. Early campus development costs will be primarily *related to site infrastructure, which will include the following: The central lake; the perimeter vehicular ring road and parking, select pedestrian walkways, paths and emergency serviceways; campus entries; drainage conveyance and treatment; select site utilities; a central energy plant and related features. This first phase of work will facilitate future phases of development with minimal disruption to campus life as well as capitalize on potential efficiencies of scale and current "Construction Market Conditions". As student enrollment increases and funding becomes available* (see Figure 4.1: Future Land Use), *future phases of residential and academic development will take place along the east and west banks of the central lake respectively, and administrative development at the southern end of the lake. The general growth of the campus development shall occur from the northwest towards the southeast.*

Goal: **The Land Use goal of the *USF Polytechnic* Campus Master Plan is to clarify a campus land use pattern and *define the* relationship between land uses on and off the campus.**

Objective 4.1 **Ensure the effective use of land and containment of walking distances in the academic/residential core through *proper* density development. Abide by the limits for each land use as described and illustrated in this plan element.**

Policy 4.1.1 *USF Polytechnic* shall abide by the land uses as described and illustrated in this plan element in locating facilities, to maintain compatibility of uses, to maintain efficient use of the land resource, and to limit excessive walking distance between functions.

Policy 4.1.2 *USF Polytechnic* shall abide by land management procedures that ensure careful use of *USF Polytechnic's* land resources. Those procedures shall consist of the application of policy actions as described herein and will be administered by the Office of Facilities Planning and Construction.

Policy 4.1.3 *USF Polytechnic* shall assess unforeseen land uses that may arise from grant awards or other unanticipated circumstances by comparing those unforeseen uses with the uses and 10-year density guidelines set forth for land use districts in this plan element. Upon the determination of appropriate location and consistency with density guidelines, *USF Polytechnic* will undertake pre-planning and site planning studies. In the event that the appropriateness is in question, the subject use will be submitted for review.

Policy 4.1.4: In all building designs *USF Polytechnic* shall seek to *control* the height of buildings, within the context of the *campus* design guidelines contained in this element, and the architectural guidelines contained in 15.0 Architectural Design Guidelines Element, in order to maintain the *coherent* future development potential of the existing campus lands.

Objective 4.2 **Preserve and protect existing natural resource areas.**

Policy 4.2.1 *USF Polytechnic* shall protect natural resources in accordance with provisions in the 8.0 Recreation and Open Space Element. *USF Polytechnic* shall adhere to the 13.0 Conservation Element policies regarding environmental management, and shall require adherence to these standards by all parties performing design and construction of facilities on University property.

Objective 4.3 **Identify and protect any historic and archaeological resources that may be discovered on the *USF Polytechnic* campus.**

Policy 4.3.1 *USF Polytechnic* shall maintain an inventory and evaluation of all archaeological properties under University ownership that appear to qualify for preservation.

Policy 4.3.2 *USF Polytechnic* shall consult and coordinate 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 4.3.3 *USF Polytechnic* shall consider the effects of such an undertaking identified in Policy 4.3.2 above on any historic property that is included, or eligible for inclusion, on the National Register for Historic Places. *USF Polytechnic* shall afford the State Division of Historical Resources a reasonable opportunity to comment on such an undertaking.

Policy 4.3.4 Prior to a historic property or site being demolished or substantially altered in a way that adversely affects its character, form integrity or archaeological or historical value, *USF Polytechnic* 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.

Policy 4.3.5 *USF Polytechnic* will undertake Phase III recovery prior to disturbing any site identified as significant in the USF archaeological survey.

Objective 4.4 **Preserve a circulation pattern and major utility corridors to ensure adequate access and utility capacity.**

Policy 4.4.1 *USF Polytechnic* shall create and preserve circulation patterns with selective geometric and safety improvements.

Secondary campus serviceways may be altered or realigned from the proposed master plan in conjunction with development projects.

Objective 4.5 **Ensure that future land uses are compatible with and appropriate to topographic and soil conditions on campus.**

Policy 4.5.1 *USF Polytechnic* shall, through the Office of *Campus Planning and Facilities Operations*, maintain its regular procedure of assessing the suitability of development sites relative to topography, soils conditions (including the presence of sink holes), drainage, utilities and infrastructure connections,

and vehicular and service access and program affinities as part of the initial pre-planning and siting studies for individual projects as those projects are brought into implementation. *USF Polytechnic* shall require the integration of natural topographic and other features in project designs in order to develop the campus in harmony with its natural environment.

Policy 4.5.2 *USF Polytechnic* shall maintain existing soils data and topographic conditions, which shall be updated as additional data developed for future construction projects become available.

Policy 4.5.3 As part of the design process for any programmed improvement (major project) and prior to approval and acceptance of the design by the University system, *USF Polytechnic* shall require that geotechnical testing be conducted to determine relevant soil characteristics of the site and to ensure that the design(s) reflect consideration of these conditions.

Policy 4.5.4 *USF Polytechnic* shall ensure that appropriate methods of controlling soil erosion and sedimentation to help minimize the destruction of soil resources shall 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.).

Objective 4.6 **Ensure that the development of future land uses takes place in a way that is coordinated with the availability of adequate facilities and services to support the uses. This includes adequate area and locations for utility requirements to serve the estimated 10-year development, and utility extensions are accomplished in cost-effective increments.**

Policy 4.6.1 Each development project representing a change in the amount of impervious surface will be measured against the effect it will have on stormwater detention capacity.

Policy 4.6.2 Preserve the physical plant/maintenance area for future physical plant operation expansion adequate to serve utility needs of future land use development.

Policy 4.6.3 *USF Polytechnic* shall, through the Office of *Campus Planning and Facilities Operations*, coordinate future land uses with the availability of facilities and services to ensure that utilities and infrastructure needed to support future development are available at adopted levels of service, consistent with the concurrency provisions contained in s.1013.30, F.S. The Office of *Campus Planning* shall review and evaluate all future construction projects to ensure that adequate provisions for infrastructure and utilities have been incorporated into the design by documenting:

- The provision and maintenance of necessary utility easements, corridors, and points of connection.
- The provision of adequate supply lines to accommodate future development and facility expansion.
- The provision of open space and safe and convenient traffic flow and parking at established levels of service.

Objective 4.7 **Ensure that measures can be undertaken to minimize or avoid off-campus constraints to campus development and to minimize or avoid conflicts of campus development within the context area. Accordingly, the density and scale of development on the campus properties should be compatible with the adjacent off-campus uses.**

Policy 4.7.1 Through interlocal agreements and memoranda of understanding, *USF Polytechnic* shall work with the host community to minimize both campus conflicts with the host community land uses within the context area and also off-campus constraints that may limit future development on the campus.

Policy 4.7.2 *USF Polytechnic* shall initiate a procedural model for review and monitoring of growth and change in land use and propose such model as a monitoring measure with the host communities (see also 12.0 Intergovernmental Coordination Element).

Policy 4.7.3 *USF Polytechnic* shall, through the Office of *Campus Planning and Facilities Operations*, include in its project and site suitability assessments an evaluation of the relationship of the project to on-campus and off-campus development constraints, conflicts, or limits vis-a-vis traffic, infrastructure, and drainage.

Policy 4.7.4 If the acquisition of additional lands is necessary for the continued growth and expansion, *USF Polytechnic* shall coordinate with the appropriate local government on any required amendment to the local government's Comprehensive Plan.

Policy 4.7.5 Proposed amendments to the adopted campus master plan which do not exceed the thresholds established in s.1013.30 (9), F.S., and which have the effect of changing land use designations or classifications, or impacting off-campus facilities, services or resources, shall be submitted to the host local government for a courtesy review.

Policy 4.7.6 *USF Polytechnic* shall participate with the City of Lakeland in the reciprocal review of plans and development proposals, consistent with provisions established in the 12.0 Intergovernmental Coordination Element.

Policy 4.7.7 *USF Polytechnic* shall ensure that uses at the edges of the campus are compatible with off-campus uses by providing wooded park-like open space with views of the campus from the perimeter loop road and landscaped street edges on all sides of the campus.

Policy 4.7.8 *USF Polytechnic* shall coordinate through the Office of *Campus Planning and Facilities Operations* with the City of Lakeland, Polk County and FDOT to construct pedestrian/bicycle linkages between the campus and adjacent neighborhoods and edge conditions.

Objective 4.8 **Ensure that incompatible use relationships are eliminated or mitigated in the event that such incompatibilities exist or arise.**

Policy 4.8.1 *USF Polytechnic* shall, through the Office of *Campus Planning and Facilities Operations*, undertake an annual review of the schedule of capital improvements to ensure that the capital improvements are consistent with the land use and development factors as described in this plan element, and that such improvements are acknowledged in the periodic review.

Policy 4.8.2 *USF Polytechnic* shall periodically review the status of land use and facilities program development on the campus, including currently unforeseen projects and grant award opportunities. Trends or needs for change in land use patterns, density, program affinities and relationships to open space, circulation and utility patterns that might affect the land use plan will be identified and determined whether such circumstances should be corrected to maintain the integrity of the land use plan and constraining factors, or cause the plan to be altered or amended to reflect valid needs. *USF Polytechnic* will report its periodic findings to the president and recommend circumstances when and by which amendment of the adopted campus master plan may be merited, or where projects should be limited or amended.

Policy 4.8.3 *USF Polytechnic* shall identify any circumstance whereby future land acquisition may be necessary or appropriate to accommodate currently unforeseen development projects or strategies (such as remote parking, grant opportunities, utility corridors, etc.), and shall determine the appropriate timetable, funding, and development coordination measures associated with the prospective acquisition. Similar measures will be applied in the event of any circumstance calling for the sublease of University land to others.

Policy 4.8.4 Campus master plan amendments that, alone or in conjunction with other amendments, exceed thresholds established in S.1013.30(9), F.S., shall be reviewed and adopted under the provisions of S.1013.30(6)-(8), F.S.

5.0 ACADEMIC FACILITIES ELEMENT

There is an acknowledgment of the University's and *USF Polytechnic*'s research vision and the consequent need for capacity and flexibility to accommodate that vision. The master plan indicates building sites currently envisioned to accommodate the academic facilities program in *interdisciplinary and* functionally appropriate relationships. It also delineates additional "placeholder" sites for flexibility in the event that the sequence or magnitude of academic space development shifts during the next ten years. Each academic facility will occupy an appropriate sector of the campus, providing functional proximity to like academic facilities that will foster interaction between and among students and faculty *from multiple disciplines*. Figure 5.1: Proposed Academic Facilities indicates currently proposed locations for academic facilities based on programmatic and land use relationships and site suitability. Specific locations and site layouts for some projects may change during the plan period due to modifications in building programs and contingencies in site availability driven by sequencing of projects. These locations are important in underscoring that each future building must be sited so as to reinforce the civic structure of the campus.

Goal: **The Academic Facilities goal of the *USF Polytechnic* campus plan is to develop academic facilities required to meet the needs of the projected student enrollment and to consolidate and link the zones of academic activity on the campus *in an interdisciplinary fashion*.**

Objective 5.1 **Provide academic facilities necessary to meet projected FTE student enrollment *in a polytechnic environment* and projected growth in academic functions within the ten-year planning period (see Table 5.1: Projections for Student Enrollment).**

Table 5.1 Projections for Future Student Enrollment

STUDENT ENROLLMENT	*2014-2015*	*2019-2020*
FTE	*2,222*	*3,354*
HEADCOUNT	*7,999*	*12,074*

Source: USF *Polytechnic* Institutional Research, Rickes and Associates, March 2005

Policy 5.1.1 *USF Polytechnic* shall provide academic space as illustrated in Table 5.2. The timing and phasing requirements and priorities for these facilities are listed in the 14.0 Capital Improvements Element.

Table 5.2 Projections for Future Academic Gross Building Area Needs

Space Type	Year Five *2014-2015*		Year Ten *2019-2020*	
	2,222 FTE *7,999* Headcount		*3,354* FTE *12,074* Headcount	
	Rickes Associates Guidelines	Interpolated Tampa Factors	Rickes Associates Guidelines	Interpolated Tampa Factors
Classroom	*51,846*	*41,986*	*77,310*	*63,378*
Teaching Laboratory	*46,464*	*71,388*	*70,012*	*107,832*
Library	*101,526*	*61,753*	*106,541*	*93,214*
Research Laboratory	*25,671*	*120,272*	*34,831*	*181,546*

Note: Square foot shown includes a 1.6 multiplier for reflecting gross square feet.
Source: USF *Polytechnic* Institutional Research, Rickes and Associates, *November 2009*

Policy 5.1.2 *USF Polytechnic* shall identify and secure funds for future academic facilities in accordance with the capital improvements program as described in 14.0 Capital Improvements Element.

Policy 5.1.3 The adopted campus master plan shall be amended as needed to incorporate unforeseen academic facilities that may arise from grant awards, accelerated funding or other circumstances if inconsistent with the Land Use Districts descriptions and densities as described in 4.0 Future Land Use Element.

Policy 5.1.4 *USF Polytechnic* shall encourage energy efficiency and conservation techniques in all future facilities as set forth in the 15.0 Architectural Design Guidelines Element, 17.0 Facilities Maintenance Element and 3.0 Campus Design Element.

Policy 5.1.5 *USF Polytechnic* shall take into consideration comparative analysis to peer institutions, per the campus' Strategic Plan Mission and Goals, for academic space formulas and shall reassess methods used to calculate space projections.

Objective 5.2 Provide high quality, state-of-the art facilities for research and instruction on campus, located in such a way as to reinforce academic programs, improve functional relationships and strengthen interdisciplinary activity.

Policy 5.2.1 Accommodate future academic facilities in a way that reinforces and improves proposed patterns of land use, circulation, parking, and open space while making wise use of limited land resources.

Policy 5.2.2 Reinforce the integrity of the academic clusters delineated in the land use plan for maximum interaction among disciplines.

Policy 5.2.3 *USF Polytechnic* shall recommend appropriate locations for future academic facilities as described and delineated in this element, based on currently

with other academic uses, and sequencing. However, USF Polytechnic may, due to changes or reconsideration of any factors affecting location, recommend sites other than those currently identified, provided that such alternative sites are consistent with general land use and density provisions set forth in 4.0 Future Land Use Element.

Policy 5.2.4 *USF Polytechnic* shall, notwithstanding unforeseen changes in academic facilities locations as described in Policy 5.2.3, endeavor as much as possible to locate academic facilities in the appropriate academic land use clusters as delineated in 4.0 Future Land Use Element. The Office of *Campus Planning and Facilities Operations* will undertake a comparative study of alternatives in any instance where a location for an academic facility other than designated herein must be considered.

6.0 SUPPORT FACILITIES ELEMENT

The Master Plan Update projects a program of support facilities which will include, but not necessarily be limited to the following: a student Wellness Center, library, administrative/faculty offices, auditorium, convocation hall, and central plant. These facilities will reflect USF Polytechnic's goal to enhance the quality of campus and community life. The balance of campus facilities accommodate a wide array of functions that strengthen the basic support needs of USF Polytechnic (see Figure 6.1: Proposed Support Facilities).

Goal: **The Support Facilities goal of the *USF Polytechnic* Campus Master Plan is to provide a full, diverse complement of support functions in close proximity to the academic core.**

Objective 6.1 **Provide student services, administrative services, physical plant functions and general auxiliary functions necessary to meet projected student enrollment (see Table 6.1: Projections of Future Student Enrollment).**

Table 6.1 Projections for Future Student Enrollment

STUDENT ENROLLMENT	*2014-2015*	*2019-2020*
FTE	*2,222*	*3,354*
HEADCOUNT	*7,999*	*12,074*

Source: USF-Lakeland Institutional Research, Rickes and Associates, March 2005

Policy 6.1.1 *USF Polytechnic* shall provide support facilities as described and as shown on Table 6.1 and Figure 6.1. The timing and phasing requirements and priorities for these facilities are listed in the 14.0 Capital Improvements Element.

Policy 6.1.2 *USF Polytechnic* shall identify and secure funds for future support facilities as described in the 14.0 Capital Improvements Element.

Objective 6.2 **Accommodate future support facilities in a way that reinforces and improves the proposed patterns of land use, circulation, parking, and open space while making wise use of limited land resources.**

Policy 6.2.1 Phase development of support facilities in such a way that there will be adequate support activities and facilities available for incremental growth and change in student enrollment at all levels.

Policy 6.2.2 *USF Polytechnic* shall recommend appropriate locations for future support facilities as described and delineated in this element, based on currently known factors such as program requirements, affinities and relationships with other uses, and sequencing. However, *USF Polytechnic* may, due to changes or reconsideration of any factors affecting location, recommend sites other than those currently identified, provided that such alternative sites are consistent with general land use and density provisions set forth in 4.0 Future Land Use Element. Any changed site that is inconsistent with such factors shall require amendment to the plan.

Policy 6.2.3 Phase and locate development of support facilities to reinforce *USF Polytechnic's* capacity to conduct events, activities and functions that will serve the general public and foster interaction between *USF Polytechnic* and the community.

Objective 6.3 **Provide support facilities in locations as generally delineated in Figure 6.1: Proposed Support Facilities.**

Policy 6.3.1 *USF Polytechnic* shall, notwithstanding unforeseen changes in support facilities locations as described in Policy 6.2.2 above, endeavor as much as possible to locate support facilities in intended areas. Support facilities will also be sited in appropriate locations where proximity of a support function to other uses (*such as parking related to event activities or student services related to the academic core*) will enhance those uses and not otherwise diminish the integrity of future land use patterns. The Office of *Campus Planning and Facilities Operations* will undertake a comparative study of alternatives in any instance where a location other than designated herein must be considered.

7.0 HOUSING ELEMENT

The ten-year residential housing program for the USF Polytechnic Campus Master Plan Update provides for up to 1000 beds that are to be developed in 250 bed phases. The program is projected along the eastern bank of the central lake, with pedestrian linkages to the academic core across the lake, campus support facilities to the north and south, adjacent open space and recreational facilities, and parking located along the perimeter vehicular ring road (see Figure 7.1: Proposed Housing Facilities). Future residential housing program is projected east of the adjacent walkway/serviceway, parallel to the original housing program.

Goal: ***The Housing goal of the USF Polytechnic Campus Master Plan is to provide diverse, safe, housing opportunities for students on campus, and to encourage the development of affordable housing in the vicinity of the campus.***

Objective 7.1 **Provide up to 500 student beds in new residence facilities within the ten-year planning period. *USF Polytechnic* will endeavor to maintain a minimum ratio of at least 5 percent of the full-time student enrollment in on-campus housing over the next 10 years.**

Policy 7.1.1 *USF Polytechnic* shall locate new housing as is determined to be financially feasible as delineated in the 4.0 Future Land Use Element and endeavor to plan multi-storied housing facilities as allowed by funding mechanisms to reserve land for future campus facility needs.

Policy 7.1.2 The timing and phasing requirements and priorities for future student housing are listed in the 14.0 Capital Improvements Element. MPCIP non-PECO bonds will be used to fund housing facilities.

Policy 7.1.3 *USF Polytechnic* shall, through the 15.0 Architectural Design Guidelines Element, specify that construction of housing be designed to reinforce and enhance the spatial order and coherence of the campus, thus lending to a sense of continuity in the development of the campus.

Objective 7.2 **Encourage and support improved and expanded housing opportunities off campus in close proximity to *USF Polytechnic*.**

Policy 7.2.1 *USF Polytechnic* shall, in conjunction with the City of Lakeland, Williams Acquisition Holding Company, Inc or its assigns and Polk County:

- Monitor the supply, costs, and suitability of off-campus housing;
- Monitor factors pertaining to safety, transit utilization, pedestrian access, etc.;
- Promote the location of new off-campus student oriented housing opportunities within walking or bicycling distance to the campus; and
- Promote the location of convenient service and shopping opportunities for students near off-campus student-oriented housing units.

Policy 7.2.2 *USF Polytechnic* has no explicit policy at this writing relative to the number and type of student housing to be housed off-campus. However, *USF Polytechnic* shall consider the formulation of such a policy in the event that cooperation with the host community or other factions should result in better definition of mutually acceptable housing opportunities for students.

Objective 7.3 **Provide residential support services commensurate with any increase in the on campus housing stock.**

Policy 7.3.1 *USF Polytechnic* shall provide enhanced support facilities for campus housing, including programs to accommodate student activities, food service, cultural events, recreation facilities, adequate residential parking and improved bicycle and pedestrian connections.

Policy 7.3.2 *USF Polytechnic* shall endeavor to create socially active residential environments that are global in design, create useable, pleasant outdoor spaces, and are compatible with the campus context.

8.0 RECREATION AND OPEN SPACE ELEMENT

Proposed *open spaces for campus* recreation include *the central lake, open lawns, and semi and fully wooded parks. The Wellness Center, located north of the residential housing provides enclosed recreational and athletic facilities.. Plazas, courtyards, loggias and other forms of interior/exterior* gathering areas will be incorporated into the overall campus layout in order to promote a healthy and safe environment while preserving sensitive lands (see Figure 8.1: Proposed Recreation and Open Space Facilities). *Future open space and recreational fields shall be located nearby off campus areas.*

Goal: **The Recreation and Open Space goal of the *USF Polytechnic* Campus Master Plan is to provide adequate recreational options for the campus community in a diverse open space environment that links the campus and the larger community.**

Objective 8.1 **Provide recreational facilities and open space to meet campus community demand through the coordinated use of public and private resources.**

Policy 8.1.1 *USF Polytechnic* shall establish a private donor program for the purpose of contributing to the development and maintenance of on-campus recreation and open space facilities and shall coordinate the distribution of these funds with other public University funding sources.

Objective 8.2 **Provide increased facilities to serve on-campus recreation and physical education.**

Policy 8.2.1 *USF Polytechnic* shall provide a *Wellness Center to house the recreation and athletic facilities* to meet on-campus recreation and physical education within the 10 year planning time frame. The proposed provisions for recreation and open space facilities are identified on Figure 8.1. The timing and phasing requirements for these proposed improvements are established in the 14.0 Capital Improvements Element.

Objective 8.3 **Provide increased opportunities for on-campus access to varied, high quality open spaces.**

Policy 8.3.1 *Within the 10-year planning time frame in accordance with the capital improvements program as established in the 14.0 Capital Improvements Element, USF Polytechnic shall establish a hierarchy of campus open spaces including: (i) the zone of the central lake; (ii) the zone between the lake and the residential/academic buildings; (iii) the plazas and courtyards within the zone of the residential and academic buildings; (iv) the primary and secondary pedestrian walkways and paths adjacent to the residential and academic buildings; (v) the wooded park/lawns inside the ring road; and (vi) the natural wooded zone beyond the ring road.*

- *Develop a hierarchy of open spaces by the judicious placement of both natural and built design elements*, in order to provide inviting, humane outdoor living spaces appropriate to the climate of west central Florida.
- Design lawns *and wooded parks adjacent to residential and academic* facilities in order to provide a physical setting that promotes an

atmosphere of collegiality *and reinforces the campus structure and character.*

- Develop pedestrian *walkways and paths integrating* the campus core *with the park/lawns, the perimeter parking and natural wooded areas.*
- Encourage the programmatic inclusion of interior and exterior courtyard spaces in all buildings or closely clustered groups of buildings as appropriate.

Policy 8.3.2 *USF Polytechnic* shall affirm a belief that naturalistic parklands are necessary to the quality of urban life and that the institution seeks continuity with the natural communities and processes that support human life.

Policy 8.3.3 *USF Polytechnic* shall maintain densities and intensities for the development of its campus (established in the 4.0 Future Land Use Element), including sites for infrastructure, academic and support space, which maximize the retention of open space.

Objective 8.4 **Preserve and protect the naturally occurring native vegetation on the campus site.**

Policy 8.4.1 *USF Polytechnic* shall preserve and protect all naturally occurring native vegetation wherever feasible.

Objective 8.5 **Coordinate with the host communities to promote provision of adequate recreation and open space off-campus to serve the community living in the context area and to ensure continuity of campus open space resources within the larger regional open space system.**

Policy 8.5.1 *USF Polytechnic* shall establish a procedure and assign responsibility for regularly scheduled coordination meetings with City of Lakeland Parks and Recreation Department officials relative to the provision of recreational facilities. *USF Polytechnic* shall pursue any interlocal agreements or memoranda of understanding necessary to ensure that parks and recreational facilities will be available to meet the future needs of *USF Polytechnic*.

9.0 GENERAL INFRASTRUCTURE ELEMENT

Stormwater Management Sub-Element

Goal 9A: **The Stormwater Management goal for the *USF Polytechnic* campus plan is to provide an adequate stormwater management system that accommodates the future University stormwater needs and meets the requirements of the applicable approval authorities.**

Objective 9A.1 **Provide a sufficient stormwater management system in a design that is consistent and enhances the overall Master Plan scheme.**

Policy 9A.1.1 *USF Polytechnic* shall identify the stormwater detention pond locations, as indicated on the Master Plan, as "no build" zones

Policy 9A.1.2 Stormwater detention ponds shall be constructed as identified on Figure 9.1: Proposed Stormwater Management. These ponds will be wet ponds based on existing ground water conditions. If feasible the ponds shall be lined *or utilize reclaimed water or well water to maintain a wet pond appearance. Options will comply with the State requirements for the various systems.*

Policy 9A.1.3 *USF Polytechnic* shall coordinate during the campus development that stormwater detention ponds and conveyance pipes are located and constructed to avoid conflicts with buildings shown on the Master Plan.

Policy 9A.1.4 *USF Polytechnic*, prior to the design and construction of any ponds within the stormwater system, shall thoroughly investigate issues including geotechnical information and regulations of approval agencies.

Objective 9A.2 **Recognizing that natural drainage flows southeast to northwest, appropriate considerations will be given for maintaining and protecting the natural drainage patterns and hydrological conditions.**

Policy 9A.2.1 *USF Polytechnic* shall enhance the new stormwater facilities with the following appropriate design features:

- Gradual side slopes
- Natural aquatic plant material*, as feasible.*
- Ensure that "feature" ponds are properly designed as “wet ponds” *per the options described in Section 9A.1.2*
- Sufficient water flows to maintain a "wet appearance"

Objective 9A.3 **Prevent any further degradation and improve the quality of receiving waters.**

Policy 9A.3.1 *USF Polytechnic* shall implement a regular stormwater facility maintenance program to *maintain* adequate water quality and design capacity of the facilities.

Policy 9A.3.2 *USF Polytechnic* shall coordinate, as appropriate, with the host community regarding the National Pollutant Discharge Elimination System (NPDES) program.

Policy 9A.3.3 *USF Polytechnic* shall *manage* University-generated stormwater and 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, 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 grease, oil 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 dispose of yard debris.
- Avoiding the widespread application of broad spectrum pesticides by involving only purposeful and minimal application of pesticides, aimed at identified target species.
- Coordinating pesticide application with irrigation practices to reduce runoff and leaching into groundwater.
- Use of turf blocks and other porous surface treatments to minimize impervious surface area and reduce the flow of runoff pollutants *as feasible*.
- Incorporating features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent or minimize spillage.
- Pursuing licensing for grounds superintendents and staff to use restricted pesticides and to ensure that fertilizers will be selected and applied to minimize surface water runoff and leaching to ground water.

Policy 9A.3.4 *USF Polytechnic* shall ensure that no stormwater discharges cause or contribute to a violation of water quality standards in waters of the State.

Objective 9A.4 **Coordinate and phase the increased stormwater facility capacity to meet the future needs of *USF Polytechnic*.**

Policy 9A.4.1 *USF Polytechnic* shall ensure that the detailed Stormwater Management Sub-Element will comply with the host communities and SWFWMD Level of Service regulations *related to Water Quality Treatment. The type of treatment will be determined during the design / permitting process and will be based on the current permitable treatment options/systems.*
USF Polytechnic will discharge said treated runoff to the west to the Williams Parcel for the necessary pre/post attenuation per the agreement with the Williams Company. The offsite systems will be designed, permitted, constructed and maintained by the Williams Company to support the full build out of the University.

Policy 9A.4.2 *USF Polytechnic* shall ensure that the stormwater management facilities comply with the design criteria established in the USF Building and Design and Construction Guidelines and shall be in place and operational at

established Levels of Service, prior to occupancy of any new University building.

Policy 9A.4.3 The *USF Polytechnic* Office of Facilities Planning shall review all proposed construction and development on campus to ensure that 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.

Policy 9A.4.4 *USF Polytechnic* shall annually review future construction programs and priorities for deficiency remediation as part of the capital improvements requirements and procedures of the Florida Board of Education to ensure improvements are provided when necessary, based on needs identified in other master plan elements. Refer to Figure 9.1: Proposed Stormwater Management.

Potable Water Sub-Element

Goal 9B: The Potable Water goal for the *USF Polytechnic* campus plan is to provide an adequate potable water system that accommodates the future University potable water needs and meets the requirements of the applicable approval authorities.

Objective 9B.1 Provide sufficient potable and non potable water systems in a design that is consistent and enhances the overall Master Plan scheme.

Policy 9B.1.1 *USF Polytechnic* shall establish and adopt the following Levels of Service standards for potable water and fire flow:

- Provide a minimum level of service of 17 GPD/FTE student, 18 GPD/faculty and staff member and 88 GPD/resident for the future Residence.
- Provide adequate fire protection with a goal of 1,500 GPM for four hours
- Maintain an operating pressure of a minimum of 40 psi throughout the building systems.
- Refer to Figure 9.2: Proposed Water Distribution

Policy 9B.1.2 *USF Polytechnic* shall approve proposed increases in *potable water* uses, whether residential or nonresidential, 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 when needed.

Objective 9B.2 Provide adequate fire protection with a goal of 1,500 GPM for four hours.

Policy 9B.2.1 *USF Polytechnic* shall provide sufficient fire protection with strategically placed fire hydrants during the construction of new facilities.

Policy 9B.2.2 *USF Polytechnic*, in order to provide sufficient fire protection, shall install fire hydrants only on six-inch or larger water lines.

Policy 9B.2.3 *USF Polytechnic* shall conduct on-site fire flow tests at least annually to verify adequacy of fire protection or identify deficiencies. The tests shall be conducted in accordance with the methodology described in the American Water Works Association Manual Number 31, entitled "Distribution System Requirements for Fire Protection" and NFPA 25. The results of such tests shall be provided to the City of Lakeland Fire Department.

Objective 9B.3 ***USF Polytechnic* shall implement and expand its water conservation program.**

Policy 9B.3.1 *USF Polytechnic* shall implement and promote its water conservation program as follows:

- Require the use of xeric landscaping techniques, including the maintenance or installation of selected vegetative species, low irrigation and compact hydrazone concepts for all new building and ancillary facility construction.
- Maintain and install sub-metering on new facilities to be able to monitor accurately the amount of water being utilized in the various irrigation and building facilities.
- Create an awareness program of water usage utilizing the information above.
- Install an irrigation system controlled by a computerized, rain-sensitive system.
- Explore opportunities to coordinate with the host communities *or other local municipalities for the connection to a reclaimed system, said system would contribute to the Campus Irrigation and Pond Management needs.*
- Explore the use of collected stormwater or other "gray" water sources for landscape irrigation purposes.
- Use efficient low water volume plumbing fixtures in new University buildings.
- Conduct water audits and other leak detection programs.

Objective 9B.4 **Cooperate with the City of Lakeland Water Department and all other appropriate State and Federal agencies to ensure safe and sufficient water supply at a cost effective rate.**

Policy 9B.4.1 *USF Polytechnic* shall ensure that all potable water pipes or lines to new buildings be a minimum of eight inch diameter distribution pipes at building service interface.

Policy 9B.4.2 *USF Polytechnic* shall maintain, as appropriate, a technical design standards manual to ensure the compatibility of future potable lines for ease of ongoing maintenance.

Policy 9B.4.4 *USF Polytechnic* shall coordinate the provisions of off-campus potable water facilities required to meet future University needs with the host community or appropriate service provider as described in the 12.0 Intergovernmental Coordination Element. *USF Polytechnic* shall follow established procedures scheduling for coordinating with appropriate City of Lakeland officials relative

to University water needs. *USF Polytechnic* shall pursue any interlocal agreements or memoranda of understanding necessary to ensure that potable water will be supplied to the campus to meet the future needs of *USF Polytechnic*, for those portions of the campus to be served by outside sources.

Objective 9B.5. : **Protect and conserve potable water sources and facilities.**

Policy 9B.5.1 *USF Polytechnic* shall identify the new potable water corridors as "no build" zones.

Refer to Figure 9.2: Proposed Water Distribution

Sanitary Sewer Sub-Element

Goal 9C: **The Sanitary Sewer goal for the *USF Polytechnic* campus plan is to provide an adequate sanitary sewer system that accommodates the future University sanitary sewer needs and meets the requirements of the applicable approval authorities.**

Objective 9C.1 **Provide for reliable and efficient collection and transmission of all wastewater generated by *USF Polytechnic* in an environmentally safe manner.**

Policy 9C.1.1 *USF Polytechnic* shall coordinate with the host communities to ensure that off-campus sanitary sewer facilities that may be affected by additional demands are improved as appropriate in accordance with procedures identified in the IntergovernmentalCoordination Element.

USF Polytechnic shall continue to follow established procedures to coordinate with appropriate City officials relative to campus sewage requirements. *USF Polytechnic* shall pursue any interlocal agreements or memoranda of understanding necessary to ensure that sanitary sewer *discharge will be effectively conveyed and treated offsite by the host community to support the future needs of USF Polytechnic*.

Policy 9C.1.2 *USF Polytechnic* shall ensure that proposed increases in *sewage discharge,* whether residential or nonresidential, be approved only upon a finding that existing sanitary sewer treatment and collection system capacity is already on-line to accommodate the increased need, or that additional capacity will be funded and on-line when needed.

Objective 9C.2 **Maintain at a minimum the wastewater collection service at its present level of service with the implementation of the 10-year Master Plan.**

Policy 9C.2.1 *USF Polytechnic* shall establish and adopt the following Level of Service standards for design of the sanitary sewer system.

- Provide a minimum level of service of 14 GPD/FTE student, 15 GPD/faculty and staff member and 75 GPD/resident for the future Residence.

Policy 9C.2.2 *USF Polytechnic* shall identify the main sanitary sewer trunk lines as "no build" zones.

Objective 9C.3 Reduce the impacts of sewage generation.

Policy 9C.3.1 *USF Polytechnic* shall implement, where practical, the following techniques for reducing the impacts of sewage generated on the campus:

- Utilizing low volume plumbing fixtures.
- Implementing a leak detection and repair program.
- Eliminating stormwater, swimming pool and other illegal connections.
- Using pump stations and force mains to by-pass bottlenecked gravity mains.

Policy 9C.3.2 *USF Polytechnic* shall explore the feasibility of using reclaimed water for its on-campus irrigation *if available from a surrounding local community.*

Refer to Figure 9.3: Proposed Sanitary Sewer System.

Solid Waste Sub-Element-ELEMENT

Goal 9D: The Solid Waste goal for the *USF Polytechnic* campus plan is to provide for future University solid waste collection and disposal requirements in a safe, cost-effective, environmentally sound and an aesthetically satisfactory manner.

Objective 9D.1 Coordinate with the City of Lakeland and Polk County in establishing an appropriate level of service for solid waste collection.

Policy 9D.1.1 *USF Polytechnic* shall assist in providing solid waste collection services for the residential and academic uses on campus.

Policy 9D.1.2 *USF Polytechnic* shall establish the following Level of Service standard for solid waste collection:

- Provide a minimum Level of Service for non residential solid waste based on area of buildings and the following table

45,000 Sq. ft.	248 pounds/day
1,000,000 Sq. Ft.	5,500 pounds/day

- Provide a minimum Level of Service for residential solid waste based on 5 pounds/resident/day

Policy 9D.1.3 *USF Polytechnic* shall coordinate the provision of on and off-campus solid waste collection and disposal facilities required to meet future University needs with the host community or appropriate service provider as outlined in 12.0 Intergovernmental Coordination Element. *USF Polytechnic* shall pursue any interlocal agreements or memoranda of understanding necessary to ensure that solid waste collection and disposal services will be supplied to the campus to meet its future needs.

Policy 9D.1.4 *USF Polytechnic* shall develop specific training and ensure it is provided to all employees who handle solid waste.

Objective 9D.2 **Define procedures to reduce *USF Polytechnic* generated solid waste and increase recycling and reuse programs.**

Policy 9D.2.1 *USF Polytechnic* shall take steps to reduce the quantity of solid waste generated by expanding its recycling program to include additional interior and exterior drop-off locations. These drop-off facilities shall be installed in the individual buildings, residential areas or in convenient other locations. Awareness programs directed toward students, faculty and staff shall also be included in this recycling program.

Objective 9D.3 **Establish a program to illustrate solid waste collection locations for convenient service while avoiding potential pedestrian conflicts and visual impacts.**

Policy 9D.3.1 *USF Polytechnic* shall establish a unified screening program for solid waste collection locations. Included will be the implementation of aesthetic coordination as well as standardized solid waste containers.

Policy 9D.3.2 *USF Polytechnic* shall, during the design of specific building programs identify opportunities to configure, enhance or screen solid waste collection facilities from pedestrian corridors.

Objective 9D.4 **Encourage and support proper management in the disposal of hazardous and other special wastes.**

Policy 9D.4.1 *USF Polytechnic* shall meet all State and Federal regulations in the collection and transportation of its hazardous wastes and materials.

Policy 9D.4.2 *USF Polytechnic* shall monitor the volume and type of hazardous waste collection and temporary storage on site to determine feasibility of constructing and operating the next higher level of storage facility on campus. If such a determination is made to proceed, *USF Polytechnic* shall amend the adopted campus master plan to reflect the timing, location, and scope of such a facility.

10. UTILITIES ELEMENT

Steam and Hot Water Sub-Element

Goal 10A: **The Steam/Hot Water sub-element goal of the *USF Polytechnic* Campus Master Plan is to provide adequate heating in the most cost effective manner providing for flexibility in the growth of the campus.**

Objective 10A.1 **Based on Life Cycle Cost Analysis an assessment of a steam/hot water will be made prior to facility expansion.**

Policy 10A.1.1 *USF Polytechnic* shall evaluate methods to use waste heat recovery to reduce consumption of hot water. If any of these are demonstrated to be cost effective or otherwise feasible, the adopted campus master plan shall be amended as needed to reflect their implementation.

Policy 10A.1.2 Implement energy conservation measures to reduce the hot water load demand and use of high efficiency heating gas-fired equipment.

Policy 10A.1.3 Pursue the possibility of heat waste recovery program from placing electric utilities co-generation plant in the campus to supplement heating plant load demand.

Objective 10A.2 **Provide hot water, steam or electric resistance heating plants and/or components for each new facility.**

Policy 10A.2.1 *USF Polytechnic's* Facilities Planning and Physical Plant Department will be responsible for reviewing all proposed development projects to ensure that adequate hot water capacity exists.

Policy 10A.2.2 Proposed increases in hot water use, whether residential or nonresidential, shall be approved only after a finding that existing hot water distribution 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.

Objective 10A.3 **Provide sufficient steam and hot water to meet the future needs of *USF Polytechnic*.**

Policy 10A.3.1 *USF Polytechnic* shall implement hot water improvements to accommodate all phased facility development plans and be located as indicated on Figure 10.1: Proposed Utilities Distribution. The timing and phasing requirements for these improvements are established in the 14.0 Capital Improvements Element.

Policy 10A.3.2 *USF Polytechnic* shall establish and adopt a level of service standard for hot water which provides and maintains a range of 140-180 degrees (F) hot water supply temperature to meet building heating demands.

Policy 10A.3.3 Provide isolation shut off valves and service valves in the heating hot water distribution loop to allow a continuous supply of hot water in other areas of the campus when piping leakages occur.

Policy 10A.3.4 Provide corrosion protection to all underground heating hot water piping distribution systems.

Policy 10A.3.5 Develop heating hot water hydraulic piping modeling to simulate the actual hot water flow rate condition of the existing distribution system and identify the present and future pumping deficiencies.

Policy 10A.3.6 Develop complete verified hydraulic models for the modifications and expansions of the piping system throughout the campus.

Policy 10A.3.7 Develop and implement non-destructive testing procedures and practices to evaluate the status of existing underground piping systems.

Policy 10A.3.8 Meter hot water loads to implement load management and load history for planning and conservation measures.

Policy 10A.3.9 Implement energy conservation measures to reduce the hot water load demand and use of high efficiency gas fired heating equipment.

Policy 10A.3.10 Continue to pursue the possibility of implementing a heat waste recovery program by placing an electric utilities co-generation plant in the campus to supplement heating plant load demand.

Policy 10A.3.11 Develop a plan for total future complete campus build out required heating capacity and methodology for incremental addition of boilers.

Policy 10A.3.12 Establish a plan for providing heating for the first phase of the campus that could potentially be built prior to the central plant. Provide means for future tie in to the central plant for any buildings built prior to the central plant.

Chilled Water Sub-Element

Goal 10B: The Chilled Water sub-element goal of the *USF Polytechnic* Campus Master Plan is to provide an adequate chilled water service to the campus facilities in the most cost efficient manner that will support future expansion.

Objective 10B.1 Provide a central chilled water plant to a thermal capacity level to properly serve a phased development plan.

Policy 10B.1.1 *USF Polytechnic* shall require that a computerized life cycle cost analysis of the HVAC system be submitted for all new facilities to determine the amount of chilled water which will be required from the central chilled water system.

Objective 10B.2 Develop a chilled water distribution system to accommodate future facilities and interconnect plants.

Policy 10B.2.1 The timing and phasing requirements for any improvements are established in the Capital Improvements Element.

Policy 10B.2.2 No outside sources from either private or public facilities will be required for chilled water production because all chilled water originates from within the campus.

Policy 10B.2.3 *USF Polytechnic* shall establish and adopt a level of service standard for chilled water which provides and maintains a maximum of 45 degrees chilled water supply temperature at a minimum pressure of 60 psig to meet building cooling demands.

Policy 10B.2.4 *USF Polytechnic's* Facilities Planning and Physical Plant Department will be responsible for reviewing all proposed development projects to ensure that adequate chilled water capacity exists.

Policy 10B.2.5 Proposed increases in chilled water use, whether residential or nonresidential, shall be approved only after a finding that existing chilled water distribution 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.

Policy 10B.2.6 *USF Polytechnic* shall adhere to a policy for replacing ozone-depleting refrigerants with environmentally safe refrigerants.

Policy 10B.2.7 Develop and implement a campus utility load profile for chilled water peak demand to determine the campus diversified peak load factor and establish firm capacity of the chiller plant that will be essential in accommodating future campus growth.

Policy 10B.2.8 Set and implement a 75% firm capacity criterion to optimize the chiller plant capacity redundancy to an acceptable level commonly used in educational institutions and still provide satisfactory cooling load demand when chilled water equipment failures occur.

Policy 10B.2.9 Evaluate possible ways to preserve the life service of the chilled water piping by providing corrosion protection to the underground chilled water distribution system.

Policy 10B.2.10 Develop complete verified hydraulic models for the modifications and expansions of the piping system throughout the campus.

Policy 10B.2.11 Develop and implement non-destructive testing procedures and practices to evaluate the status of existing underground piping systems.

Policy 10B.2.12 Meter chilled water loads to implement load management and load history for planning and conservation measures.

Policy 10B.2.13 Develop a plan for total future complete campus build out required chiller capacity and methodology for incremental addition of chillers.

Policy 10B.2.14 Establish a plan for providing cooling for the first phase of the campus that could potentially be built prior to the central plant. Provide means for future tie in to central plant for any buildings built prior to the central plant.

Electrical Power and Other Fuels Sub-Element

Goal 10C: **The Electrical Power and Other Fuels sub-element goal is to provide adequate, reliable, and cost effective electrical service to support campus operations and expansions through the ten-year planning period.**

Objective 10C.1 **Implement design and construction standards to establish the levels of service and installation required to ensure that adequate, reliable, and cost effective service is provided to future and rehabilitated facilities**.

Policy 10C.1.1 *USF Polytechnic* shall implement electrical energy system improvements and the timing and phasing requirements for these improvements are established in the 14.0 Capital Improvements Element.

Policy 10C.1.2 *USF Polytechnic* shall hold regularly scheduled meetings with *Tampa Electric Company (TECO)* to negotiate the terms and conditions under which *TECO* would assume operation of *USF Polytechnic* system and continue to provide primary service to future University facilities.

Policy 10C.1.4 Include local service provider participation in all modifications to the master plan and in planned expansion programs to ensure adequate electrical service will be available when needed.

Policy 10C.1.5 *USF Polytechnic* shall require that a computerized life cycle cost analysis be submitted for all new and renovated facilities to determine whether natural gas and/or electricity will be the source of fuel.

Objective 10C.2 **Reduce unnecessary energy losses in the *USF Polytechnic* owned distribution system and in university-owned and operated facilities.**

Policy 10C.2.1 Study alternative energy sources (e.g., co-generation, onsite generation for peak demand shaving, etc.).

Policy 10C.2.2 *USF Polytechnic* shall use energy efficient lighting fixtures, electronic ballasts, and high lumen efficiency lamps in all new and renovated buildings.

Policy 10C.2.3 *USF Polytechnic* shall use infrared survey equipment to determine the status of the primary electrical distribution for energy reliability.

Objective 10C.3 **Create a computerized data based load tabulation of electric power requirements, for new buildings proposed in the master plan, which can be upgraded for changes on as needed or programmed basis.**

Policy 10C.3.1 *USF Polytechnic* shall require that a report be submitted for each new facility indicating the amount of electricity which will be required for each new facility.

Policy 10C.3.2 *USF Polytechnic* shall require that the campus electrical power distribution system be modified to meet the electricity demands created by the new facilities.

Policy 10C.3.3 *USF Polytechnic's* Physical Plant Department and Facilities Planning and Construction Department will be responsible for reviewing all proposed development projects to ensure that adequate electrical energy capacity exists.

Policy 10C.3.4 Proposed increases in electrical energy use shall be approved only after a finding that existing electrical energy distribution 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.

Objective 10C.4 **To limit the expansion of *USF Polytechnic* owned electrical distribution system to within the campus boundaries.**

Policy 10C.4.1 Electrical system improvements shall be implemented based on the following priorities:

- Maintaining the existing system; and
- Expanding the system to accommodate new electrical energy needs.

Objective 10C.5 **To identify, inventory, and study any emergency generators on the campus.**

Policy 10C.5.1 Program funds to perform an inventory and study of emergency generators on campus.

Telecommunications Sub-Element

Goal 10D: **The Telecommunications sub-element goal is to provide each building on the *USF Polytechnic* campus with communications connectivity for telephone, data, and video networks.**

Objective 10D.1 **To plan, design and implement communications infrastructure at the *USF Polytechnic* Campus in order to correct existing deficiencies and meet the voice, data and video communications needs within the ten-year planning period.**

Policy 10D.1.1 Program funding for design and construction to encompass student housing and the physical education, recreation, and athletics areas.

Policy 10D.1.2 Program funding for design and construction to provide redundant/alternative pathways for the campus fiber backbone.

Policy 10D.1.3 Program funding for design and construction of fiber optic cable to all classrooms, offices, and dormitories to provide connectivity for faculty, staff, students, and residents.

Policy 10D.1.4 Include participation by the local host community communications provider, the local CATV company and other service companies in all modifications to the Master Plan and in planned expansion programs to ensure adequate telecommunications will be available when needed.

Policy 10D.1.5 Program funding for design and construction to upgrade and create additional radio and microwave systems to meet the needs of *USF Polytechnic's* educational mission.

Policy 10D.1.6 *USF Polytechnic* shall implement future telecommunications system improvements and the timing and phasing requirements for these improvements are established in the 14.0 Capital Improvements Element.

Policy 10D.1.7 Telecommunications system improvements shall be implemented based on the following priorities:

- Elimination of system deficiencies;
- Maintaining the system; and
- Expanding the system to accommodate new telecommunications system needs.

Policy 10D.1.8 *USF Polytechnic's* Eastern Regional Data Center (ERDC) will be responsible for reviewing all proposed development projects to ensure that adequate telecommunications system capacity exists.

Policy 10D.1.9 Proposed increases in telecommunications system use, whether residential or non-residential, shall be approved only after a finding that existing telecommunications system 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.

Objective 10D.2 **To standardize on a data local wide area network, for campus-wide use, that will serve USF-Lakeland's network needs to the ten-year planning period and beyond.**

Policy 10D.2.1 Program funding for design and construction to provide adequate copper connectivity for voice, multi-mode fiber for data, and single mode fiber for video/data to all buildings on the USF-Lakeland campus.

Objective 10D.3 **To identify, inventory, and study any electromagnetic field generators on the campus**.

Policy 10D.3.1 Program funds to perform an inventory and study of electromagnetic fields on campus.

Objective 10D.4 **To identify, inventory, and study any video system on the campus.**

Policy 10D.4.1 Program funds to perform an inventory and study of video systems on campus.

Objective 10D.5 **Maintain a periodically revised *USF Polytechnic* voice/data/video Construction Standard for use in all new construction and renovation projects requiring these services.**

Policy 10D.5.1 ERDC, or other designated entity, shall produce, distribute, and update as necessary a set of construction standards for campus-wide voice/data/video systems, based on technology to support *USF Polytechnic* through the ten-year planning period..

Policy 10D.5.2 ERDC will coordinate with other responsible departments to coordinate the joint use of underground infrastructure trenches to minimize redundant construction costs.

11.0 TRANSPORTATION ELEMENT

Transit, Circulation and Parking Sub-Element

The USF Polytechnic Campus Master Plan provides clear definition of vehicular and pedestrian circulation. It provides on-site surface parking for the initial five-year phase at a ratio of approximately 2:1 (students/parking spaces). As enrollment and facilities increase to the full 10-year build out, the ratio will increase to approximately 4:1 or possible more. Parking will initially utilize approximately 12.5 acres and possibly grow to 16.5 acres. In order to conserve land for the projected growth of academic, residential and support facilities, to improve environmental and stormwater management, and to serve the university and community with a restored open space environment, the Master Plan will promote better opportunities for local and campus transit systems, bikeways, and other alternative approaches to on-site parking.

Goal 11A: **The Transit, Circulation, and Parking goal of the *USF Polytechnic* Campus Master Plan is to encourage options for flexible transit and vehicular access to the campus and to array parking in accessible concentrations around the perimeter of the campus core.**

Objective 11A.1 **Reduce the impacts on-campus of future traffic generated by the 10-year master plan, especially at peak hour.**

Policy 11A.1.1 *USF Polytechnic* shall construct on-campus housing as the marketing and financial opportunities are available. This housing will reduce both internal and external traffic generation, especially at peak hour.

Policy 11A.1.2 *USF Polytechnic* may pursue funding for the establishment and operation of an off-campus park and ride program. Upon receipt of such funds, the adopted campus master plan shall be amended as needed to reflect the operation of this program.

Policy 11A.1.3 *USF Polytechnic* shall evaluate and provide the use of distance learning and telecommuting to reduce the need to travel to the campus.

Policy 11A.1.4 *USF Polytechnic* shall evaluate and implement, as appropriate, opportunities of incorporating bicycle facilities "commuter centers" within the proposed parking structures to encourage the use of transit, carpooling, and bicycling.

Policy 11A.1.5 *USF Polytechnic* shall analyze and implement as appropriate, techniques such as computerized technology to govern parking spaces and better utilize future resources. Such techniques may include revenue access control systems and transportable variable message signs to facilitate traffic flow.

Objective 11A.2 **Reduce the impacts off-campus of future traffic generated by the 10-year master plan**.

Policy 11A.2.1 *USF Polytechnic* shall continue to jointly plan with the host communities, Transportation Planning Organization (TPO), the City of Lakeland and the Polk County Planning Commission to develop programs and incentives to enhance transit service in the campus context area and to mitigate any transportation impacts.

Policy 11A.2.2 *USF Polytechnic* may explore opportunities and potentials for "partnering" with the private sector to construct residential housing in the context area adjacent to the campus.

Policy 11A.2.3 Consistent with provisions contained in s.1013.30 F.S., *USF Polytechnic* shall mitigate impacts on the surrounding transportation network caused by development on-campus as established in the campus development agreement (CDA).

Policy 11A.2.4 *USF Polytechnic* shall coordinate on-campus traffic signalization with the City of Lakeland and/or Polk County.

Objective 11A.3 Provide a safe, efficient transportation system considering the needs of motorized and non-motorized vehicle parking.

Policy 11A.3.1 USF-Lakeland shall evaluate opportunities for off campus or remote parking lots including convenient access to on-campus shuttles and other non-vehicular transit options.

Policy 11A.3.2 *USF Polytechnic* shall explore options in the operation of internal pedestrian oriented shuttle systems.

Policy 11A.3.3 *USF Polytechnic* shall evaluate designs/improvements for intersections as idle times and accident reports warrant. If these prove to be economically feasible and practical, *USF Polytechnic* shall amend the adopted campus master plan to incorporate these strategies into the overall transportation plan.

Objective 11A.4 Provide for convenient pedestrian and bicycle ways within the transportation program.

Policy 11A.4.1 *USF Polytechnic* shall enhance the pedestrian corridors with landscaping and design standards as established in the pedestrian element and urban design elements of this plan. As campus development continues, the master plan will reflect additional and/or enhanced sidewalks and linkages to new facilities, where feasible.

Policy 11A.4.2 *USF Polytechnic* shall provide convenient bike rakes at all facilities and endeavor to complete the provision of continuous bike lanes. As campus development continues, additional bike lanes will be considered, when feasible *(see Figure 11.2: Pedestrian and Bicycle Circulation).*

Objective 11A.5 Enhance and encourage the utilization of alternative modes of transportation (including mass transit, bicycle and pedestrian ways) and reduce the dependence on the single-occupant vehicle as the primary mode of travel.

Policy 11A.5.1 *USF Polytechnic* shall evaluate opportunities to incorporate the bus locations with "commuter centers", which would provide facilities to assist in attracting riders to the mass transit system.

Policy 11A.5.2 *USF Polytechnic* shall adhere to guidelines established, for the on-campus bus/shuttle stops. *USF Polytechnic* shall continue to explore opportunities for mass transit rail to the campus area in cooperation with the TPO and the host communities. Opportunities for creating stations near the campus shall be encouraged with the implementation of mass transit rail.

Policy 11A.5.3 *USF Polytechnic* shall provide to all enrolling students information regarding the availability and scheduling of the bus system and on campus shuttle system.

Policy 11A.5.4 *USF Polytechnic* shall implement transportation demand management (TDM) strategies designed to encourage the use of alternative modes of transportation and reduce the dependence on the single-occupant automobile as the primary mode of travel. *USF Polytechnic* shall consider:

- Operational modifications;
- Improvement of pedestrian and non-vehicular facilities;
- Academic scheduling modifications, including scheduling more classes during non-peak hours;
- Parking pricing strategies designed to make other modes of travel more economical and to provide revenue for improved TDM services and facilities;
- Traffic system management approaches;
- Location of student-oriented housing in close proximity to the campus;
- Designation of preferential parking locations for carpoolers.

Policy 11A.5.5 *USF Polytechnic* shall coordinate with the City Of Lakeland and Polk County to evaluate other options and strategies for reducing the dependence on the personal automobile.

Policy 11A.5.6 *USF Polytechnic* shall evaluate and implement enhanced mass transit opportunities with the Transportation Planning Organization (TPO) and the host communities in accordance with procedures described in 12.0 Intergovernmental Coordination Element.

Policy 11A.5.7 *USF Polytechnic* shall if feasible develop, provide and coordinate a campus "loop" neighborhood circulator system with the local bus service. With a limited number of bus stops, regional access and circulation will become more convenient.

Policy 11A.5.8 *USF Polytechnic* shall encourage the increased utilization of bicycles and pedestrian circulation through the provision of shaded sidewalk connections and continuous on-road bike lanes to reduce the demand of internal and external vehicular trips.

Objective 11A.6 **Ensure that transportation system improvements shall be coordinated and phased with *USF Polytechnic*'s future land uses.**

Policy 11A.6.1 *USF Polytechnic* shall implement traffic circulation and transit improvements as described in this element and on Figure 11.1: Vehicular Circulation.

Policy 11A.6.2 *USF Polytechnic* shall adopt a transportation funding strategy to ensure adequate revenue to finance parking improvements consistent with the

Master Plan. This may include increased parking rates and the establishment of a transportation access fee.

Objective 11A.7 **Coordinate required transportation improvements within the context area with the host communities.**

Policy 11A.7.1 *USF Polytechnic* shall continue regular coordination with the host and affected local governments and the FDOT to ensure that transportation facility improvements are available when needed to support the growth of the campus. *USF Polytechnic* shall pursue any memoranda of understanding or interlocal agreements necessary to ensure that transportation facilities are available to meet the future needs of the campus.

Objective 11A.8 **Coordinate resolution of issues associated with projected impacts in level of service with the host community.**

Policy 11A.8.1 *USF Polytechnic* shall establish no less than a p.m. peak hour Level of Service "D" for all on-campus roadways.

Policy 11A.8.2 *USF Polytechnic* shall continue to coordinate with the City, County, TPO and FDOT to assure planned public roadway projects along the periphery of the campus are scheduled and funded.

Objective 11A.9 **Provide emergency travel routes and a buildings identification systems to all new and renovated campus buildings**

Policy 11A.9.1 All new buildings will be designed in accordance with NFPA1. *USF Polytechnic* will remediate access and building justification as soon as practical.

Objective 11A.10 **Provide increased parking capacity without significantly increasing the acreage required for the parking facilities.**

Policy 11A.10.1 *USF Polytechnic* may propose multi-level parking facilities during the planning time frame to be constructed when feasible.

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Policy 11A.10.2 *USF Polytechnic* shall strongly encourage the use of periphery 'Park and Ride' lots for students and staff desiring less expensive parking. On campus shuttle service shall be supportive of this parking alternative.

Objective 11A.11 **Provide methods to reduce the impacts and demands of future on campus parking.**

Policy 11A.11.1 *USF Polytechnic* shall evaluate and implement, as appropriate, mitigation techniques. These programs may include the following:

- Explore the possibility of establishing remote parking lots off-campus and shuttle systems to these lots;
- Encourage the utilization of remote (Park and Ride) parking lots and structures and mass transit with the establishment of commuter centers and utilization of bicycles;
- Create designated parking zones for visitors, faculty and students to discourage driving from class to class;

- Evaluate academic classroom schedules encouraging more classes to be scheduled in off-peak hours, thus reducing parking demands by "reusing" the same parking space; and
- Provide preferential parking locations for those who carpool regularly.

Objective 11A.12 **Locate, program and design on-campus parking facilities to be accessible to the various land uses and circulation systems while minimizing pedestrian vehicle conflicts.**

Policy 11A.12.1 *USF Polytechnic* shall adhere to its design guidelines that ensure proper signage and traffic circulation to the parking structures and lots and address concerns regarding landscaping, lighting, signage, security and pedestrian circulation issues.

Policy 11A.12.2 *USF Polytechnic* shall implement parking improvements as described in this element. The timing and phasing requirements and priorities for these improvements are established in the 12.0 Capital Improvements Element.

Pedestrian and Non-Vehicular Circulation Sub-Element

Goal 11B: **The Pedestrian and Non-Vehicular Circulation goal of the *USF Polytechnic* Campus Master Plan is to strengthen the functional and aesthetic nature of pedestrian movement between and among the various areas of the campus.**

Objective 11B.1 **Provide convenient, safe and direct on-campus pedestrian and bicycle way connections to off-campus pedestrian and bicycle ways where the campus interfaces with off campus development.**

Policy 11B.1.1 *USF Polytechnic* shall coordinate with the City of Lakeland and Polk County in the systematic implementation of on campus pedestrian and bicycle facilities to ensure continuity within the larger regional system of pedestrian/bicycle facilities in accordance with procedures described in 12.0 Intergovernmental Coordination Element.

Policy 11B.1.2 *USF Polytechnic* shall work with the host community through coordinated efforts of *USFP* University Police and local police departments, community action groups, and planning entities to improve the safety of off-campus routes connecting to the campus in accordance with procedures established in the 12.0 Intergovernmental Coordination Element.

Objective 11B.2 **Coordinate locations for future pedestrian and non-vehicular circulation facilities to be developed on and off the campus with recommendations made by *USF Polytechnic* Police Department, Facilities Planning and Construction and Parking and Transportation Services.**

Policy 11B.2.1 Records may be made of actual observed pedestrian flow. Such campus wide observations should be scheduled biannually to assess any changes in pedestrian and non-vehicular movement patterns which may merit changes in prioritizing implementation of new pedestrian and non-vehicular facilities. Additional observations should be scheduled during periods of new campus development that may affect patterns of pedestrian and non-vehicular

movement. As campus development continues, the master plan will reflect additional and/or enhanced sidewalks and linkages to new facilities, where feasible.

Objective 11B.3 **Coordinate locations for lighting and improvements in lighting delivery with recommendations made by *USF Polytechnic* Police Department.**

Policy 11B.3.1 *USF Polytechnic* shall consult the campus Police Department in determining locations for lighting and additional lighting along pedestrian and non-vehicular circulation routes. *USFP* Campus Police acting as environmental design consultant (CPTED) to *Campus Planning and Facilities Operations* shall provide input to identify areas in which they feel a risk factor exists. Their input will be based on on-site observation and crime data.

Policy 11B.3.2 *USF Polytechnic* shall initiate a campus-wide blue light emergency telephone plan as well as complementing *USFP* Campus Police escort and "Safe Team" services.

Objective 11B.4 **Provide pedestrian and non-vehicular circulation facilities to meet both the aesthetic and functional needs of the users and to encourage increased pedestrian and bicycle movement on campus.**

Policy 11B.4.1 *USF Polytechnic* shall evaluate bicycle and commuter facilities in the programming for campus parking. Commuter facilities shall include storage facilities within campus building where feasible, locked covered storage and lockers at minimum, and may include bicycle rental facilities as well. *USF Polytechnic* shall also evaluate the feasibility of pedestrian bridges to and from any proposed parking area.

Policy 11B.4.2 *USF Polytechnic* shall encourage utilization of pedestrian and non-vehicular facilities and improve the safety of persons using the facilities through implementation of improvements as identified in this element. The timing and phasing requirements and priorities for these improvements are established in the 12.0 Capital Improvements Element.

Policy 11B.4.3 *USF Polytechnic* shall encourage "24 hour" activity on campus by concentrating and reinforcing programmatic activity and by diversifying the hours of intense activity.

Objective 11B.5 **Establish a series of strong pedestrian corridors to link campus functions.**

Policy 11B.5.1 *USF Polytechnic* shall develop primary *southeast-northwest and northeast-southwest* pedestrian corridors.

12.0 INTERGOVERNMENTAL COORDINATION ELEMENT

USF Polytechnic initiated the policy measures necessary to effectuate development agreements with the host communities, setting forth mitigation measures and accords necessary to address the public impacts of development identified in the plan. The *USF Polytechnic* Master Plan will include requisite and voluntary policies having to do with monitoring, coordination and interaction with the host communities.

Goal 12A: To achieve the goals, objectives and policies of the *USF Polytechnic* Campus Master Plan through the use of joint processes for collaborative planning, decision making, and coordinating growth and development with local agencies and governmental entities.

Objective 12*A*.1 To establish a process for the reciprocal review by University and local government officials of growth management plans, campus master plans, and plan amendments.

Policy 12*A*.1.1 It shall be the policy of *USF Polytechnic* that proposed amendments to local government comprehensive plans which have the effect of changing land uses or policies that guide the development of land within the designated context area surrounding the campus, affect the provision of local services, or which otherwise impact university facilities and resources, should be submitted to the USF System's Office of Facilities Planning and Construction by *USF Polytechnic's* Associate Vice President for Facilities Planning and Development for review.

Policy 12*A*.1.2 Proposed amendments to the adopted campus master plan which exceed the thresholds established in s.1013.30 (9), F.S., shall be transmitted to the appropriate local, regional and state agencies for review in accordance with the procedures established in Chapter 6C-21, Part I, Florida Administrative Code.

Policy 12*A*.1.3 Proposed amendments to the adopted campus master plan which do not exceed the thresholds established in s.1013.30 (9), F.S., and which have the effect changing land use designations or classifications, or impacting public facilities, services or natural resources, shall be transmitted to the host and affected local governments for a courtesy review.

Policy 12*A*.1.4 *USF Polytechnic* planning officials shall meet with officials from the City, County and regional agencies on a regular (at least annually) basis, or as required for the purpose of coordinating planning activities. Other local, regional, state and federal agencies shall be invited to participate in these meetings as appropriate.

Policy 12*A*.1.5 Disputes between *USF Polytechnic* and a local government shall be resolved by the process established in s.1013.30 (8), F.S.

Objective 12*A*.2 To initiate reciprocal development review process that assesses the impacts of proposed campus development on significant local, regional and state resources and facilities, and to assess the impacts on off-campus development of university resources and facilities.

Policy 12*A*.2.1 It shall be the policy of *USF Polytechnic* that proposed development within the context area which has the potential to impact or affect University facilities and resources shall be transmitted by *USF Polytechnic*'s Associate Vice President for Facilities Development and Planning to the University System's Director of Facilities Planning and Construction for review.

Policy 12*A*.2.2 The *USF Polytechnic* planning officials and the University System's Director of Facilities Planning and Construction shall meet with City and County officials to establish the criteria and thresholds for development proposals which would be subject to review by *USF Polytechnic*. *USF Polytechnic* shall adhere to development thresholds, developed in cooperation with City and County officials, which allows for both to review significant development proposals within the context area. Established thresholds for review will allow for exceptions to the review process for development proposals which are mutually agreed to be not significant.

Policy 12*A*.2.3 Upon receipt of an application for a development order proposed for the context area, *USF Polytechnic* planning officials and the University System's Director of Facilities Planning and Construction shall assess the potential impacts of the proposed development on *USF Polytechnic* facilities and resources. Findings shall be remitted in writing to the appropriate local government.

Policy 12*A*.2.4 When it has been determined that proposed development on campus would have an adverse impact on local services, facilities or natural resources, *USF Polytechnic* officials will participate and cooperate with City and County officials in the identification of appropriate strategies to mitigate the impacts.

Policy 12*A*.2.5 When it has been determined that proposed development within the designated context area would have an adverse impact on campus facilities and resources *USF Polytechnic* officials will participate and cooperate with City or County officials in the identification of appropriate strategies to mitigate the impacts on campus facilities and resources.

Policy 12*A*.2.6 Any dispute between *USF Polytechnic* and any host or affected local government regarding the assessment or mitigation of impacts shall be resolved in accordance with the process established in s.1013.30 (8), F.S.

Policy 12*A*.2.7 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 12*A*.2.8 Once *USF Polytechnic* pays its "fair share" and annually reports construction of capital improvements, as identified in the campus development agreement, all concurrency management responsibilities of *USF Polytechnic* are deemed to be fulfilled.

Objective 12*A*.3 To increase on-going coordination between *USF Polytechnic* and public agencies to create a better community and environment.

Policy 12*A*.3.1 *USF Polytechnic* will work with host community agencies and organizations

as described in 7.0 Housing Element to coordinate, improve, and increase the availability of safe affordable housing in the *USF Polytechnic* area.

Policy 12***A***.3.2 *USF Polytechnic* is within the city service area and will take advantage of the provision of fire, rescue, and emergency medical services.

Policy 12***A***.3.3 All plans will continue to be reviewed by the State Fire Marshall.

Policy 12***A***.3.4 *USF Polytechnic* shall coordinate with the city and county in support of the use of appropriate funding mechanisms in order to coordinate and facilitate the safe use of bicycles and reduce automobile impacts on the area.

Policy 12***A***.3.5 *USF Polytechnic* will continue to cooperate with the appropriate entities in the evaluation of traffic impact on adjacent roadways and endeavor to mitigate impact through increased on-campus housing, improved transit service, and other mitigation techniques described in the 11.0 Transportation Element.

Policy 12***A***.3.6 *USF Polytechnic* and the local transit system should work together to promote ridership by disseminating information at registration, through target mailings, and at appropriate locations and events on and off-campus. Strategically placed stop shelters will continue to be installed to increase convenience of service.

Policy 12***A***.3.7 *USF Polytechnic* will develop and implement the Master Stormwater Management System and associated permits, and produce a technical design standards manual for new system to ensure adequate level of service and ease of maintenance.

Policy 12***A***.3.8 *USF Polytechnic* will work closely with the City to ensure that adequate water supply is available to the campus. Close involvement with regulatory agencies must also continue to ensure that health, safety and quantity issues are addressed.

Policy 12***A***.3.9 *USF Polytechnic* will continue with the regulatory process of FDEP to ensure that State sanitary codes are met. Also, *USF Polytechnic* should meter its utility upgrade so accurate flow data can be generated and used for service needs and future projections.

Policy 12***A***.3.10 *USF Polytechnic* will assess the transportation of campus-generated waste for the most economically feasible alternative as well as for the disposal of all other organic and recyclable wastes.

Policy 12***A***.3.11 *USF Polytechnic* shall maintain and periodically update its Emergency Operations Plan in coordination with Polk County Emergency Management Operations (EMO), the American Red Cross, and the host communities. The plan shall identify the extent to which University buildings can, and will, be used to provide shelter for students, faculty, staff, and the general public, and will designate suitable campus open spaces for use as staging areas for emergency supplies, equipment, and resources.

Goal 12B: ***Develop collaborative public and private partnerships that enhance research and funding opportunities, including leveraging state and federal funding.***

Objective 12B.1 ***To negotiate collaborative partnerships for research and funding.***

Policy 12B.1.1 *Achieve increased visibility by developing and implementing an annual image and marketing plan that communicates our vision and mission and highlights our achievements and contributions to the region.*

Policy 12B.1.2 *Establish mutually beneficial partnerships with pre K-12 school systems and human services organizations; identify mutually beneficial research and grant development opportunities.*

Policy 12B.1.3 *Establish an Office of Community Education and Outreach and provide community education opportunities to support lifelong learning for all generations.*

Policy 12B.1.4 *Develop an infrastructure for campus advancement and development, and achieve ambitious fund-raising goals through collective efforts and creative vision of the campus community.*

Policy 12B.1.5 *Encourage and support faculty and staff involvement in civic, professional, and local service organizations.*

Policy 12B.1.6 *Strengthen the Alumni Organization in the central Florida region and promote alumni affinity with USF Polytechnic.*

13.0 CONSERVATION ELEMENT

USF Polytechnic has initiated policy measures necessary to effectuate development agreements with the host communities, setting forth mitigation measures and accords necessary to address the public impacts of development identified in the plan. This master plan includes requisite and voluntary policies having to do with monitoring, coordination and interaction with the host communities.

Goal: **The Conservation Goal of the *USF Polytechnic* Campus Master Plan is to be a model for conservation policies to improve the environment and to improve air, water and open space quality in the vicinity of the campus.**

Objective 13.1 **Identify mitigation techniques including traffic and parking demands to maintain or improve the air quality.**

Policy 13.1.1 *USF Polytechnic* shall participate in and consider those programs which will maintain or improve existing air quality on campus lands. Such programs include participation in local transportation management associations, transit routing and terminal servicing activities and the promotion of bicycle and pedestrian circulation improvements.

Policy 13.1.2 *USF Polytechnic* shall reduce mobile sources of air pollution through 11.0 Transportation Element policies designed to discourage dependence on the personal automobile as the primary transportation mode on campus, reduce emissions caused by idling times at signals, and to encourage alternative modes of transportation on campus (i.e., public transit, bicycles, etc.).

Policy 13.1.3 *USF Polytechnic* shall minimize emissions of air pollutants from and within buildings on campus through the installation of appropriate filtering devices on fume hoods and by minimizing the storage and use of volatile and hazardous materials in campus buildings.

Policy 13.1.4 *USF Polytechnic* shall monitor both indoor and outdoor air quality. Indoor sampling shall occur at chemistry laboratories, kitchens, and other sites where fumes are produced. Outdoor sampling sites shall include parking lots and congested intersections. Failure to meet air quality standards adopted by the State Department of Environmental Protection shall result in an assessment of the probable cause and the preparation and implementation of a plan to improve and maintain air quality.

Policy 13.1.5 *USF Polytechnic* shall explore and implement, as appropriate, alternative fuel vehicles for on-campus utilization, including the campus shuttle systems.

Policy 13.1.6 Copies of land development criteria and design standards which reflect the policies contained in the adopted campus master plan shall be provided to design consultants and appropriate campus staff. *USF Polytechnic* shall standardize the construction review process to assure adherence to appropriate master plan policies.

Objective 13.2 **Protect identified jurisdictional native vegetative communities whether upland or wetland**.

Policy 13.2.1 *USF Polytechnic* shall identify and *attempt to* protect those jurisdictional native vegetative communities from development by designating them as "no build" zones. (see Figure 13.1: Conservation Plan).

Other opportunities to protect environmentally sensitive lands based upon State and Local criteria shall be evaluated. Should development be necessary to occur within these areas, mitigation techniques as provided by the regulatory agencies shall be coordinated with the host community and permitting agencies by *USF Polytechnic*.

Policy 13.2.2 *USF Polytechnic* shall endeavor to use plant species that are indigenous to the natural plant communities of the Lakeland and Central Florida area. In cases where non- invasive exotic plants are used to enhance the landscape, plantings shall be limited to those noninvasive species that are able to resist periods of drought and which require little fertilization and minimal use of pesticides.

Policy 13.2.3 *USF Polytechnic* shall maintain and improve existing vegetative communities through the removal of ecologically undesirable vegetation. It is the intent of *USF Polytechnic* to remove all non-native invasive plants (whether grasses, shrubs or trees) which are identified on the Exotic Pest Plant Council's "Florida's Most Invasive Species List" from the campus grounds. As these species are located on the campus, *USF Polytechnic* 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.

Objective 13.3 Conserve and protect the quantity and quality of potable water sources.

Policy 13.3.1 *USF Polytechnic* shall identify any proposed potable *and non-potable* well locations as "no build" zones.

Policy 13.3.2 *USF Polytechnic* shall not undertake activities on-campus which would contaminate groundwater sources or designated recharge areas unless provisions have been made to prevent such contamination or otherwise provide mitigation for such activities so as to maintain established water quantity and quality standards.

Policy 13.3.3 *USF Polytechnic* shall continue to monitor and test treated potable water on a monthly basis.

Policy 13.3.4 *USF Polytechnic* shall monitor surface waters for compliance with existing standards for water quality where required by permit.

Policy 13.3.5 *USF Polytechnic* shall implement a comprehensive Water Conservation Plan, to include, but not be limited to:

- the exploration of the potential interdependencies between chilled water make-up/discharge, stormwater, and treated wastewater and irrigation;
- the use of automated timers, irrigation flow monitoring mechanisms, rain and ground moisture sensors;
- xeriscape landscape treatments for new building construction and new campus common areas;

- the use of low flow and low flush fixtures in new building construction, and water audits and other leak detection programs.

Policy 13.3.6 *USF Polytechnic* shall ensure the status and integrity of all proposed underground storage tanks on a periodic basis through its ongoing monitoring program.

Policy 13.3.7 *USF Polytechnic* shall construct a series of stormwater treatment facilities located within the Greenway providing reduction of stormwater pollutants prior to their eventual outfall.

Objective 13.4 Identify measures to conserve and appropriately use energy.

Policy 13.4.1 *USF Polytechnic* shall evaluate and implement, as appropriate, solar energy as an alternative source of power for irrigation systems and lighting, shuttles, phones, etc.

Policy 13.4.2 *USF Polytechnic* shall minimize stormwater-borne pollutants generated as a result of University operations and maintenance practices.

Policy 13.4.3 *USF Polytechnic* shall encourage the use of a recycling program by creating awareness informational packages and installing additional convenient recycling centers.

Policy 13.4.4 *USF Polytechnic* shall coordinate on-campus recycling programs with those of local government in regard to materials collected, and disposal/collection procedures.

Objective 13.5 Expand the use of conservation and energy saving techniques with the construction of new facilities.

Policy 13.5.1 Energy conservation fixtures, air conditioning and lighting systems and other building specific energy use and management techniques shall be a required element of all new buildings constructed on the campus.

Policy 13.5.2 *USF Polytechnic* shall consider, during development of building programs, the utilization of courtyards, arcades and other shade and ventilation techniques to further reduce energy demands. Landscaping and building orientation should also be considered.

Objective 13.6 Designate environmentally sensitive lands for protection based on state and locally determined criteria.

Policy 13.6.1 *As determined feasible, USF Polytechnic* shall *seek to* maintain the jurisdictional areas based upon the most recent Florida Department of Environmental Protection criteria, standards and guidelines.

Policy 13.6.2 *USF Polytechnic* shall maintain, in a managed natural state, all of those sites identified for preservation on Figure 13.1: Conservation Plan. No construction is anticipated in these areas except for minimal structures and improvements necessary to ensure safe access and essential recreational support functions.

Policy 13.6.3 During the initial planning phase of any physical changes to the campus, *USF Polytechnic* shall perform a census of wildlife and plants in the area to be affected. Plants or animals identified in the "Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida", which is updated annually by the Florida Fish and Wildlife Conservation Commission, or otherwise afforded protection by the host communities and state and federal agencies, shall be noted. Protection plans, or relocation off site, for those identified species shall be formulated consistent with those of the host communities and appropriate state and federal agencies.

Objective 13.7 **Restrict campus activities known to threaten the habitat and survival of threatened and endangered species and species of special concern.**

Policy 13.7.1 *USF Polytechnic* shall 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 13.7.2 Any proposed development adjacent to an environmentally sensitive area shall be carefully sited and integrated into the existing landscape to have minimal visual impact on the area. Landscape treatment shall preserve significant existing vegetation to allow a gracious transition from developed areas to undeveloped areas to preserved areas. The existing vegetation shall serve to essentially buffer proposed development in order to maintain the natural and undeveloped character of the area.

Policy 13.7.3 *USF Polytechnic* shall continue its on-going evaluation of monitoring and disposing of chemical and medical wastes. New technologies to assist in transporting and disposing of such wastes shall be evaluated by *USF Polytechnic*.

Policy 13.7.4 *USF Polytechnic* 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 13.7.5 *USF Polytechnic* shall protect and conserve the natural functions of soils, rivers, flood *zones* and wetlands*, as feasible.*

Policy 13.7.6 *USF Polytechnic shall construct new facilities in conjunction with appropriate flood zone requirements. USF Polytechnic shall, to the maximum practical extent, locate buildings outside of the Federal Emergency Management Agency's (FEMA) recognized 100-year flood zone. In those locations where encroachment into the floodplain is deemed unavoidable, USF Polytechnic shall provide Base Flood protection and abide by all agency regulatory requirements.*

Policy 13.7.7 USF shall protect*, conserve, mitigate or relocate (as permitted by the regulatory agencies)* threatened and endangered species of plants and

conducted prior to development to establish the presence of any such species.

Policy 13.7.8 University personnel shall, when encountering listed species, follow procedures and seek consultation with the appropriate agencies as identified in the Florida Fresh and Wildlife Conservation Commission's "Wildlife Methodology Guidelines", dated January 15, 1988.

14.0 CAPITAL IMPROVEMENTS ELEMENT

Goal: **Provide educational and support facilities to all enrolled students in a manner that protects the investment and maximizes the use of facilities and promotes orderly, planned campus development.**

Objective 14.1 ***USF Polytechnic*** **shall, through the coordination of land use decisions and available projected fiscal resources, provide a schedule of capital improvements to maintain the levels of service established in the master plan and to address the existing and projected facilities needs.**

Policy 14.1.1 *USF Polytechnic*, in cooperation with the State University System's Office of Capital Programs and in conformance with criteria established in Policy 3, schedules and funds capital improvements identified in the 10-year Capital Improvements Schedule.

Policy 14.1.2 *USF Polytechnic* shall evaluate, rank and revise the order of priority as necessary for facilities and projects identified in the 10-year Capital Improvements Schedule. Building locations indicated in the 10-Year Capital Improvements Plan may be exchanged for other building locations, as depicted in the Campus Master Plan, if the alternative location is deemed preferable due to unforeseen or changed conditions related to program, cost, or other justifiable reason, and is within the same Future Land Use area. Any such location changes shall be effected by approval of the USF Board of Trustees without a Campus Master Plan amendment provided that the project supports the primary land use function and is consistent with Figure 4-2, *Table 4.1* and *Table 4.2* included in 4.0 Future Land Use Element of this document, as well as with the Campus Development Agreement with the City of Lakeland.

Policy 14.1.3 *USF Polytechnic* shall adopt the following criteria to evaluate and prioritize capital improvement projects which shall be related to the individual elements of the master plan and which considers:

- University budget impact and financial feasibility;
- The elimination of future capacity deficits;
- Locational needs based on projected student enrollment increases;
- The accommodation of expansion and improvement demands;
- Plans and priorities based on funding availability.

Policy 14.1.4 *USF Polytechnic* shall continue to adopt a ten (10)-year Capital Improvement Program and annual capital budget as part of its annual budgeting process.

Policy 14.1.5 *USF Polytechnic* shall negotiate and enter into a campus development agreement with the City of Lakeland, which addresses the requirements and provisions of this plan and those required by Section 1013.30 F.S. At a minimum, the campus development agreement shall:

- Identify the 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 Florida Board of Governors and the service provider;
- 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 USF Board of Trustee's "fair share" of the costs of needed improvements; and
- Be consistent with adopted campus master plan and host local government comprehensive plan.

Objective 14.2 **To provide the needed improvements identified in the other elements and to manage the expansion or improvement process so that facility needs do not exceed the ability of *USF Polytechnic* to fund and provide provision of the needed capital improvements both in terms of initial construction costs, on-going operation and maintenance costs and impact costs.**

Policy 14.2.1 *USF Polytechnic* shall base the coordination of land use decisions associated with the implementation of capital improvements upon the development requirements of this plan, the development agreements called for by this plan and the availability of necessary facilities needed to support this development at the time needed.

Policy 14.2.2 *USF Polytechnic* shall make provisions for programming the future facility costs to consider the cost of the site improvements, utility extensions and associated easements, parking, traffic circulation improvements, operation and maintenance etc., necessary for the proper function of the individual facility and to include the cost of facilities necessary to support future capacity requirements.

Policy 14.2.3 *USF Polytechnic* shall make provisions for the adoption of the capital budget as part of the annual budgeting process and will include provisions which are consistent with campus development agreements resulting from the adopted master plan.

Policy 14.2.4 *USF Polytechnic* shall use the level of service standards adopted as part of this plan in implementing the capital improvements identified in this campus master plan.

Policy 14.2.5 *USF Polytechnic* shall ensure that future facility costs and programming efforts include consideration of the following:

- Site improvements;
- Utility extension and easements;
- Parking needs and traffic circulation improvements; and
- Compliance with applicable policies and standards.

Policy 14.2.6 *USF Polytechnic* shall adhere to sound fiscal policies in providing the capital improvements of this campus master plan and shall not proceed with new capital improvements, expansions or replacements until adequate funding sources have been identified and committed. Table 14.1 is the currently planned schedule for funding and is subject to change.

Objective 14.3 **To use the Capital Improvements Element as a means to meet the needs of *USF Polytechnic* for the construction of capital facilities to correct existing deficiencies, to accommodate desired future growth and to replace exhausted or obsolete facilities.**

capital facilities when it is determined that the facility is nearing the end of its useful life.

Policy 14.3.2 *USF Polytechnic* shall continue to adhere to existing capital improvement programming procedures adopted by SUS and shall amend this master plan, as needed, to revise the Capital Improvement Program priorities established in the 10-year Capital Improvements Schedule on an annual basis.

Capital Improvements Implementation

The campus 10-year project list (see Table 14.1) provides a schedule of projected campus capital improvements by year along with the estimated cost of those improvements. The projects included are those that the academic master plan indicates will be needed to serve the expected projection program enrollment and enhancement. Projected costs of projects that will be state funded, and the yearly distribution of those projects, are within the estimated resource guidelines projected by the Florida Board of Governors and the State University System. 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.

Table 14.1 *USF Polytechnic* Ten-Year Capital Improvement Plan

PROJECT	RECEIVED YEAR TO DATE	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	PROJECT COST	SOURCE OF FUNDING
USFP I-4 Campus Phase I	$ 26,471,200	$ 10,000,000										$ 36,471,200	PECO
USFP I-4 Campus Phase IB FECG		$ 10,241,976	$ 2,260,000									$ 12,501,976	FECG
USFP I-4 Campus Phase IB PRIVATE	$ 9,241,976	$ 1,000,000	$ 2,260,000									$ 12,501,976	PRIVATE
USFP I-4 Campus Phase 2A Wellness PECO					$ 5,000,000							$ 5,000,000	PECO
USFP I-4 Campus Phase 2A Wellness FECG		$ 100,000	$ 1,700,000	$ 1,700,000	$ 1,500,000							$ 5,000,000	FECG
USFP I-4 Campus Phase 2A Wellness PRIVATE	$ 100,000	$ 1,700,000	$ 1,700,000	$ 1,500,000								$ 5,000,000	PRIVATE
USFP Research Enterprise/Incubator FECG		$ 700,000										$ 700,000	FECG
USFP Research Enterprise/Incubator PRIVATE	$ 700,000											$ 700,000	PRIVATE
USFP Central Utility Plant/Infrastructure							$ 5,000,000	$ 5,000,000	$ 2,000,000	$ 5,000,000	$ 5,000,000	$ 22,000,000	PECO
USFP Utilities/Infrastructure							$ 1,500,000	$ 1,500,000	$ 2,000,000	$ 2,000,000	$ 5,000,000	$ 12,000,000	PECO
USFP Housing				$ 47,600,000			$ 52,394,000					$ 99,994,000	BOND
USFP I-4 Campus Phase II							$ 10,691,455	$ 42,875,911	$ 41,414,409	$ 8,500,000		$ 103,481,775	PECO
TOTAL	**$ 36,513,176**	**$ 23,741,976**	**$ 7,920,000**	**$ 50,800,000**	**$ 6,500,000**	**$ -**	**$ 69,585,455**	**$ 49,375,911**	**$ 45,414,409**	**$ 15,500,000**	**$ 10,000,000**	**$ 315,350,927**	

Source: State University System 5 Year CIP-2, dated 05-28-09

15.0 ARCHITECTURAL DESIGN GUIDELINES ELEMENT

The basic objective within this element is to establish the Architectural Design Guidelines that ensure that future development of the USF Polytechnic campus is consistent with the initial phase one construction in scale, massing, surface treatment, materials and detailing. The basic guidelines outlined herein will formulate architectural themes that give form to the academic mission of USF Polytechnic.

Plan Framework for Design Guidelines

The master plan establishes essential guidelines and design parameters for future development. These guidelines structure the logical distribution of land uses, building scale, placement, orientation and architectural treatment, as well as vehicular and pedestrian circulation, in order to create a visually and spatially cohesive campus character. The Architectural Design Guidelines also form the basis of the design review process, from budgeting, designer selection, through project design review. Each new building design on campus has two primary functions:

- To accommodate its program in a manner that is appropriately functional, elegant, and beautiful.
- To enhance and reinforce the overall campus urban design framework including open space, circulation and architectural character.

The identity and architectural character of the *USF Polytechnic* Campus should take into account the unique characteristics of the semitropical climate of central Florida as well as the campus' direct relationship to the Interstate 4 "High Tech Corridor".

***Architectural Guidelines*:**

The Phase One building, which will initially house all campus administration, support, and educational functions, is the first building on campus to be constructed. As such it will physically articulate the Architectural Design Guidelines that will set the standard for all future construction to follow. The following general guidelines address the character of all future buildings:

- *Structure - The architectural form and building structure shall be fully integrated. The building structure, whether structural steel or cast in place or pre-cast concrete, shall be expressed so that it is the primary definition of the interior space and exterior form.*
- *Space and Light- The spatial organization of a building interior shall be simple, open and provide a clear hierarchy. Natural light shall be the primary source of daily illumination for all primary interior spaces and shall define the building structure and space. Porches, loggias, pergolas, trellises, operable louvered walls, doors and openings shall be utilized to take advantage of the local climate and support the interweaving of interior and exterior spaces.*
- *Glazing and Surface Treatment - Exterior and interior glazing systems shall be clean, simple, and flush. The size of the glazed units shall be maximized in order to minimize joints and allow expression of the building structure. Non-glazed, non-structural surfaces shall maintain a similar clean, simple, and flush expression that does not detract from the primary expression of the building structure. Joints shall be as tight as possible. Provide reveals between dissimilar materials sized appropriately to the location and scale.*
- *Materials and Color - The material palette shall be kept to a minimum and the patterning shall be clean, simple, and quiet. The palette of materials employed shall be expressed honestly in their natural colors. Primary materials shall be cast in place concrete, pre-cast concrete, steel, stone, glass and stainless steel or bronze for ornamental metal work. Structural steel shall be coated with intumescent fire protection as required to conform to local codes and painted in order to avoid cladding. Cast in place concrete shall be either white concrete, grey concrete painted white, or grey concrete finished with broken ceramic tile. It shall be detailed so as to avoid the expression of pour lines, control joints and form ties. Other acceptable materials are native*

woods, painted metal panels, clay/ceramics, and plaster. Wood species used in the buildings shall be local so that they react favorably with the building environment. Mold resistant materials shall be utilized to the greatest possible extent.

- *Lighting and Devices - The interior and exterior Lighting shall be fully integrated into the architecture and placed so as to accentuate the building's structure and form. It shall be indirect and concealed from view to the greatest possible extent. The use of exposed fixture as design elements shall be avoided. Other non-lighting devices including, but not limited to smoke detectors, security cameras, public address and fire alarm speakers, sprinkler heads, fire alarm pulls, and fire strobes shall be concealed from view, where possible, or fully integrated into the architecture.*
- *Mechanical, Electrical and Plumbing - The Mechanical, Electrical and Plumbing systems are to be fully integrated into the architecture. All conduits, ducts, or piping shall be concealed from public view. All access doors or hatches shall be located in back of house spaces or concealed from public view to the greatest possible extent. Registers, grilles and louvers, if they are within the public view, shall be integrated into the architecture in a manner that is clean, simple, and quiet. Mechanical system shall utilize passive heating and cooling to the greatest possible extent.*
- *Circulation, Wayfinding and Signage - Building plans shall maximize openness, visibility, and clarity of circulation so that the signage may be minimized. Building entrances or entry sequences shall be clearly understandable. The wayfinding and signage systems shall be fully integrated into the architecture. The design of individual signage shall be clean, simple, and quiet. Signage shall not be hung from ceilings or mounted independently off floors. The use of signage pylons or boards shall be discouraged.*
- *Building Furniture and Amenities - Building Furniture and Amenities including, but not limited to benches, drinking fountains, information booths, ticket or vending machines shall be arranged together and fully integrated into the architecture. Free standing elements shall be discouraged.*

Specific Campus Buildings

The following criteria for each individual building describes its location, purpose, organization, setbacks, massing and height, and base relationship to the surrounding environment and should be referenced with Figure 15.1: Architectural Design Guidelines Plan.

- *Phase One Multi-purpose Building (A) - The Phase One building is sited within the northwest end of the central lake and forms the head of the campus core. It is a standalone building of dramatic sculptural form that rises above the canopy of live oaks, creating an iconic symbol of USF Polytechnic visible from, Interstate 4 and Polk Parkway, and* within the campus*.*

- *Wellness Center and "Incubator" Research Buildings (B1, B2) – These two very different programs occupy buildings that form the "shoulders" of the campus. They are south of the Phase One building along the east and west banks of the lake respectively and north of residential and academic buildings. The Wellness Center is a multi-purpose building that will house student services, food service, a gymnasium, as well as a swimming and diving center. The "Incubator" Building will be a research center with potential connections to the proposed Williams research development located on the adjacent property to the west. The footprints, scale, and massing of the two buildings are roughly symmetrical about the campus' main axis and, to the greatest extent possible, the buildings' height shall remain below the canopy of the adjacent live oak trees. They shall be setback a minimum of 25' from any road, walkway or path. Their ground floors shall be visually open in order to encourage the interaction of interior and exterior spaces.*

- *Residential Housing (C) – Residential Housing is sited along the east bank of the central lake, parallel to the campus main axis, between the Wellness Center and the Administrative buildings. It shall be comprised of repeatable housing units of approximately 110-125 beds each. The extent of each building unit is defined by the grid of pedestrian walkways and paths crossing the site from northeast to southwest. The ground floor shall house all communal functions and be*

literally and/or visually open to the surrounding landscape in order to encourage the interaction of interior and exterior spaces and provide pedestrian circulation out of the sun or rain. Single and double occupancy rooms shall be organized along two single loaded corridors aligned about the longitudinal axis. The space between the corridors shall be open to the ground floor and shall be naturally daylighted. Exterior building surfaces (facades and roofs) shall, when the units are taken together, create a continuous form along the entire length of the lake front.

- *Academic Buildings (D) – Opposite the residential housing, the Academic Buildings are sited along the west bank of the lake, parallel to the campus main axis. Each academic building forms a repetitive unit containing classrooms, lecture halls, research laboratories and faculty offices for the colleges on campus. The exterior building surfaces (facades and roofs) shall, when the respective units are taken together, create a continuous form along the entire length of the lake front. The ground floor shall be literally and/or visually open to the surrounding landscape in order to encourage the interaction of interior and exterior spaces and allow protected north-south pedestrian circulation at the ground floor.*

- *Lake Facilities (E1, E2, E3) – The Lake Facilities - Library, Auditorium, Research building (D), and Convocation Center – are located either partially or wholly within the lake. Like the Phase One building, they are standalone iconic buildings of dramatic sculptural form, befitting their institutional role within the university.*

- *Administrative Buildings (F) – The two Administrative Buildings are located symmetrically about the campus' main axis at the southeast end of the lake. As they are adjacent to the campus entry, they will house the welcoming and orientation centers for the campus as well as the university's primary administrative offices. The buildings are set back from the vehicular ring road a minimum of 25' and form a public plaza between them that rises from the campus entry and falls towards the southern bank of the lake. The ground floor shall be visually open to the plaza in order to encourage the interaction of interior and exterior spaces. To the greatest extent possible, the height and massing of the buildings shall remain below the canopy of the existing adjacent live oak trees.*

- *Central Plant (G) – The Central Plant is sited along the eastern portion of the vehicular ring road evenly located between the north and south poles of the campus. It is a standalone building that will house the central plant, the central security, voice/data and telecom systems as well as the campus' central receiving and distribution center. The plant is set back from the ring road a minimum of 30'. To the greatest extent possible, the height and massing shall of the building shall remain below the canopy of the existing adjacent live oak trees. The building envelope shall be glazed to allow the visual understanding of the building's internal functions.*

Goal: **The Architectural Design Guidelines goal of the USF Lakeland Campus Master Plan is to create *an iconic image for the university, as well as a unified and coherent architectural environment.***

Objective 15.1 **Establish the standards for selection of materials in accordance with the measures documented in this plan element.**

Policy 15.1.1 *USF Polytechnic* shall place priority on quality construction and shall require materials to be cost effective over the life cycle of the building and shall require decisions regarding exterior wall materials and building color to be guided by criteria established in architectural design guidelines outlined in this plan element.

Policy 15.1.2 *USF Polytechnic* shall require adherence to guidelines for technical performance as outlined in this plan element.

Policy 15.1.3 *USF Polytechnic* shall identify future landmark buildings as such and shall direct the architects of these buildings to specify the use of materials and detailing appropriate to their institutional purpose.

Policy 15.1.4 *USF Polytechnic* shall require design of future parking structures to respond to guidelines outlined in this plan element.

Policy 15.1.5 *USF Polytechnic* requires that materials, glazing systems, lighting systems, and HVAC to be designed to meet contemporary standards. System energy conservation standards are mandated to be in compliance with Florida Energy Conservation in Building Act of 1974. An energy analysis is required in compliance with the above legislation be submitted for all subject projects at the advanced schematic design stage of development.

Policy 15.1.6 *USF Polytechnic* shall coordinate with other institutions in the design of Campus facilities occupying sites on other campuses.

Policy 15.1.7 *USF Polytechnic* will endeavor to support the intent of the United States Green Building and the Leadership on Energy and Environmental Design (LEED) Green Building Rating System principles to the extent practical in the design and construction of facilities in the interest of sustainability.

Objective 15.2 **Establish standards for buildings, siting and circulation in accordance with the measures documented in this plan element.**

Policy 15.2.1 Land use and design review processes will be developed as a means of maintaining campus unity, order, and amenity.

Policy 15.2.2 *USF Polytechnic* shall undertake a periodic review of the *USF Polytechnic* Design and Construction Guidelines to determine whether they are being fulfilled in the actual development of campus facilities. The determination should be based on whether the design as executed satisfies the master plan objectives. The review should occur after at least two buildings/site development projects have been developed to form an ensemble with one another and with existing buildings and campus spaces.

Policy 15.2.3 *USF Polytechnic* shall require the placement of buildings to be in conformance with building placement guidelines as identified in Figure 15.1: Architectural Guidelines Plan and described in this plan element.

Policy 15.2.4 *USF Polytechnic* shall require future building design to respond in a manner sympathetic to the characteristics of the regional climate and to address points outlined in this plan element including sunscreens and covered continuous arcades on the southern exposures.

Policy 15.2.5 *USF Polytechnic* will effectuate a priority program for assuring accessibility to all buildings based on the priorities identified in the American Disability Act

Accessibility Guidelines as capital improvements are initiated. Among the priorities that will be implemented as *USF Polytechnic* expands will be:

- Ensuring accessible routes from designated parking spaces to facilities;
- Ensuring accessible classrooms, offices, housing, and restrooms; and
- Ensuring accessible campus routes between facilities.

Policy 15.2.6 Archaeologically significant historic structures shall be preserved and protected in accordance with policies identified in the 4.0 Future Land Use Element.

Policy 15.2.7 *USF Polytechnic shall produce campus-wide design standards/prototypes that shall be adhered to for all site amenities including, but not limited to, bus shelters, pavilions, trellises, drinking fountains and bicycle racks.*

Policy 15.2.8 *USF Polytechnic* shall prohibit the use of one-story occupied metal trailer buildings except on an absolutely temporary basis with removal dates prescribed and monitored.

Objective 15.3 **Establish guidelines for architectural treatments along the campus edges in accordance with measures documented in this plan element, and the 3.0 Campus Design Element and 16.0 Landscape Architectural Design Guidelines Element.**

Policy 15.3.1 *USF Polytechnic* shall require the design of buildings to respond to the guidelines as outlined in this plan element.

Policy 15.3.2 *USF Polytechnic* shall require service areas to be designed to efficiently support building functions and to be located away from public open spaces and thoroughfares to the greatest possible extent possible.

Policy 15.3.3 Bicycle racks shall be included in all programs for parking structures, occupied facilities, and recreational facilities. Bicycle racks shall be installed in new construction and major renovation projects.

16.0 LANDSCAPE ARCHITECTURAL DESIGN GUIDELINES ELEMENT

The basic objective of the *Landscape Architectural Design Guidelines is to: (i) Guide the* design of a campus-wide landscape master plan that will set consistent goals and practical recommendations for the overall quality and character of the USF Polytechnic campus; and (ii) aid the *designer in determining primary project objectives and* establishing general criteria to be used in directing future site and building design efforts. Figure 16.1 indicates typical sections that are representative of campus *landscape elements and* planting areas.

Plan Framework for Landscape Architectural Design Guidelines

Each future project will present its own set of specific and unique opportunities and constraints. The role of the design guidelines is to assure that the specific designs implemented within the master plan framework are consistent with, and contribute positively to the overall development and the larger context. They will be used in an ongoing design review process as an effective mechanism to guide and control the project design. The guidelines seek to foster quality and consistency in landscape materials, form, and organization, that results in a coherent campus environment.

As defined in 3.0 Campus Design Element, the organization of campus is primarily defined by *the central lake, the Phase One building at the head of the lake, and the academic and residential buildings that flank the lake. Pedestrian walkways, paths and serviceways, provide a diverse circulation grid through the semi-wooded lawns, parks and natural wooded landscape (see Figure 16.1).* The campus character, determined largely by the treatment of *these areas*, should emphasize the natural beauty, harmony, and simplicity of the Central Florida landscape.

The following guidelines are recommended as a basis for achieving the desired character and quality of the campus landscape. (See also the 3.0 *Campus* Design Element and 8.0 Recreation and Open Space Element.) (See Figure 1: *USF Polytechnic* Campus Master Plan)

Landscape Standards

Plantings

New plantings and husbandry of significant existing plantings will be an important component of the future campus landscape. The campus tree canopy is the foundation of all campus plantings. Plantings should be both functional and attractive and should achieve the following broad guidelines:

- *Functional Plantings* - Plantings should reinforce the basic structure of the master plan, positively shape open space areas, and be functional rather than simply decorative in defining and unifying streets, paths and open spaces.
- *Planting Scale* - Tree, shrub, and hedge plantings should be appropriate to the scale, uses, and microclimate of the campus setting.
- *Indigenous Species* - The use of native plants should be the highest priority in all plantings, and where possible, community associations should be established to promote attractive and sustainable plantings. To the degree possible, landscape plans should include the use of plant species that are indigenous to the natural plant communities of the region and which promote the use of xeriscape principles. In cases where non-invasive exotic plants are used to enhance the landscape, plantings should be limited to those non-invasive species that are able to resist periods of drought and which require little fertilization and use of chemicals.
- *Planting Style* - The dominant landscape character of the campus should be one of informal naturalism. Exceptions to this include *the vehicular ring road* and *the pedestrian/service* axes *adjacent to the residential and academic* buildings. The informal naturalistic approach has the advantage of allowing work to be phased over time and is readily achievable at a

maintainable level of perfection, compatible with the remaining islands of native landscape, and widely accepted as an appropriate and desirable aesthetic theme.

- *Diversity of Species* – *The formal rows of trees along the roads and primary pedestrian paths should be limited to 2-3 species of trees. In the park and recreational areas the use of a great variety of plants is encouraged. However,* the use of exotic materials with unusual habit or color should be *strongly limited*.
- *Removal of Invasive Species* - Existing non-native invasive plants 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 USF Polytechnic Campus, USF 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.
- *Transition to Preserved Vegetation* - Introduced plantings should blend with preserved vegetation.
- *Street Tree Planting* - Selected tree species should be utilized to reinforce primary campus boulevards that penetrate the campus. Opposite placement of street trees *as opposed to staggered placement* is recommended to create a stronger sense of order.
- *Campus Entrances* - Create a sense of arrival and identity for the *USF Polytechnic* Campus through integrated design of signage, lighting with appropriate landscapes and landforms that allows signage visibility and provides ample background for signage structures.
- *Parking* - *To the greatest practical extent,* existing trees and under-story vegetation should be preserved along parking perimeters. Ample shade trees should be planted in parking medians to mitigate harsh environs, provide cooling shade, reinforce circulation and reduce glare. *The use of planted pergolas to screen and protect vehicles is encouraged.* In areas devoid of existing vegetation, *low shrubbery or* grass mounds may be introduced along parking perimeters to create an open, airy landscape that screens parking mass and is responsive to security issues.
- *Pedestrian Corridors* - Their design should be simple, coherent, and expressive. Tree colonnades should be used to define the corridor edges. The inclusion of canopy trees along major, axial pedestrian walkways between primary campus facilities serve as a framework for campus pedestrian circulation, provide shaded comfort and also assist in way-finding. Strategic planting of landscape materials should be considered to reinforce desired circulation. Where axial walkways intersect vehicular routes, special pavings are recommended to better demarcate pedestrian crossings.
- *Building Foundation Plantings* - Planting at building edges that face streets and campus open spaces should consist of small colorful ornamental trees in a simple mulched or lawn "terrace" around the building. In high exposure areas such as building entrances, plant materials should be selected for year-round attractiveness. Building plantings should have a measure of under-story plantings but not be perceived as fussy or overdone. Sufficient foundation plantings can be designed in association with new facilities, with courtyard and niche plantings.
- *Service Areas* - Visually separate service areas from major streets and functionally separate service from public spaces. Screen plantings are *highly* recommended *for* site treatment *areas as they will blend into the natural landscape.* New buildings should be designed to orient service areas away from pedestrian circulation and building entries.

Walkways

- Campus walkways should be constructed with asphalt or *either stone or clay pavers or crushed aggregate on a gravel bed* and *shall* be sized to accommodate pedestrian flows and service vehicles. A hierarchical system of pedestrian ways shall be implemented in conjunction with the development of the built campus environment. Pedestrian walkways

shall be designed in a manner that promotes logical and convenient use and discourages short cutting.

- *Walkways shall be a* minimum width of eight feet with the exception of minor, low use walkways that may be six feet wide. Walks serving combined pedestrian/service/emergency functions should be reinforced for vehicular travel and should be a minimum width of *20 feet for one way service and 24' wide for two way traffic.*
- Specialty pavements should be used for unique places within the campus to identify significant public spaces and activity areas. Within more urban areas walkways shall be wider and accented with special paving materials. Specialty pavements include stone *and clay.*

Bicycle Ways

- Bicycle routes should be identified *on the travel surface and made distinct from other circulation means.* Bicycle routes within roadway curb cuts should be a minimum of five feet in width. Proposed shared bicycle/pedestrian ways should have a minimum width of ten feet and should clearly identify travel lanes with *appropriate* graphics.

Gateways

- New major campus gateways should be developed as significant landmarks, including appropriate planting, signage, lighting, and architectural treatment to distinguish them from secondary entries. Primary vehicular gateways should include a visitor information booth.
- Pedestrian gateways to the campus should be readily recognized by visitors and include appropriate signage and special plantings.

Campus Edges

- Existing vegetation along campus edges should be preserved consistent with the master plan design.
- Additional judicious plantings along campus perimeters should be designed to provide campus enclosure and definition of campus edges yet allow appropriate levels of campus visibility and identification from the host community.
- Proposed site features within the campus master plan should be developed for an iconic treatment *including, but not limited to* the Phase 1 building, the central lake, and all campus entryways.

Furnishings

- The introduction of site furnishings and custom site amenities on the proposed USF Polytechnic campus will serve to create a pleasant, comfortable and attractive environment for study and leisure. Site furnishings include benches, tables, litter receptacles, bicycle racks, bollard and chain barriers, and newspaper dispensers. Their design, materials, style and color should be compatible with other site elements of the built landscape, including signage, pavements and other special site amenities. Site furnishings shall be typically located in campus quads, courtyards and plazas and near building entrances and other exterior spaces that foster social interaction or quiet reflection.

Bicycle Racks – In order to encourage and accommodate bicycle ridership to the campus and on the campus, bicycle parking should be located *within the building to the greatest possible extent.* Where *this is not* feasible, covered bike storage shelters are encouraged. Outdoor storage areas should be conveniently sited in proximity to building entries, with good visibility and paved surface, configured with respect to adjacent components of the landscape, and in numbers proportional to demand. A single rack type that accommodates all bike types should be established as a campus wide standard.

Seating - Opportunities for informal seating such as steps and low site walls incorporated into buildings and site design work, should be encouraged. Seating should be provided in pedestrian plazas, near building entrances, along walkways, and other appropriate spaces. Selected seating should blend in with the context area and compatible with other furnishings. Benches shall be durable, placed on a permanent concrete base.

Tables and chairs - Locate tables and benches to receive shade in the summer months. Standards for tables and chairs should be established either campus wide or by campus district. Table furnishings should be inviting and comfortable, and in character with the architectural surroundings. The plan recommends placing movable table and chairs near food service and lounge spaces. Shade, in the form of umbrellas, building shade structures, trellis, or trees, should be provided for table seating areas.

Pergolas – Pergolas with climbing plants at all surface parking locations are encouraged to assist in shielding vehicles from view as well as providing shade and reducing heat islands.

Litter Receptacles - A standard should be established for litter/recycling receptacles. Receptacles should be distinguished by color coded label for recycling (glass, cans, trash). Selected standard ash urns should be placed at each building entry. Receptacles should be of sufficient size to accommodate anticipated use. Receptacles should be durable, located in areas out of predominant view.

Telephones - Public phones should be visibly located in proximity to outdoor gathering spots and near seating. Multiple phones should be clustered or aligned. Blue light phones should be clearly visible and easily accessible from all areas of the campus.

Newspaper Dispensers - Dispensers should be grouped together, aligned and plumb, and located in proximity to major lounge/food service areas or primary classroom buildings. Placement of a variety of services including newspapers, telephones, receptacles, and seating in a coordinated composition is encouraged.

Public Transportation Facilities

- Covered public transportation facilities should be located adjacent to drop-off points and, where feasible, integrated with exterior plazas that offer seating and relaxation in comfortable, friendly surroundings. A campus standard for manufactured public transportation facilities should be selected based upon its functional and life cycle considerations and its compatibility of design style and materials with campus architecture and site furnishing elements.

Lighting

- Campus lighting should be organized in simple patterns that reinforce the basic structure of open spaces and sidewalks. Where lights follow streets or sidewalks, they should be placed in straight rows on one or both sides. Walkway lighting will ordinarily require lighting from only one side. Roadway lighting may require lighting on two sides, in which case lights should be placed opposite one another rather than in a staggered, alternating pattern.
- Principal roadways should be illuminated with a visible source luminary to reinforce principal campus organization during evening hours*, and conform to the criteria established for lighting.*
- Secondary roads, parking areas, and service areas should be illuminated *to meet university criteria established for lighting.*

- *Primary and secondary walkways should be illuminated by visible source luminaries designed to meet university criteria established for lighting.*
- Specialty lighting should be provided for athletic fields and courts, building facades, and unique activity spaces such as the proposed amphitheater. Entrance lighting may use exposed or concealed source fixtures. If exposed source fixtures are used, they should be compatible with walkway fixtures.
- Light sources for roadways and walkways should be *as required to meet university criteria*. A light level of 1/2-foot candle should be maintained on all roads and walks.
- Metal halide lighting, florescent, par bulbs that exhibit 'white' light or more natural color range light are recommended in pedestrian and vehicular drop-off areas to promote natural color rendition.
- Lower level bollard lighting should be used in areas of pedestrian concentration.
- Up-lighting or down-lighting landscape lighting in planted areas and under trees may be used where there is minimal glare and spillage.
- Fixtures designed to illuminate the facades of buildings should consist of concealed up-lighting designed to enhance not only the building but also the adjoining landscapes.
- The placement, intensity and direction of exterior lighting shall not create a hazard to vehicular or pedestrian traffic nor create glare to adjoining properties.

Sculpture and Fountains

- Potential sites for sculpture and fountains should be identified during the implementation of the campus master plan.
- Appropriate scale and character of sculptural elements is critical to their success. They should be understood as objects that will endure over time, and should be of a classical, timeless quality rather than of a style associated with short-lived trends. Their scale should be large enough to fit with surrounding spaces, buildings, and landscaping.

Graphics

A set of University Signage Guidelines should be designed to establish a unified system of coordinated messages, styles, colors and materials. The signage and graphic standards must present a coordinated system of materials, styles and messages that is consistent in form and signage placement. Campus signage includes three primary signage types for the wayfinding system: Entryway Signage, Directional Signage and Wayfinding Signage.

- *Identify Campus Boundaries and Entrances*
  A formal arrangement of landscape elements and signage shall be incorporated at key entrance points and campus boundaries to create an arrival statement and establish a sense of place. A hierarchy of entrance elements shall be established to visually distinguish the importance of one entrance over another. These elements shall maintain the same vocabulary of form, proportions, and materials at each location, so that they will be recognized and remembered as belonging to *USF Polytechnic*.

- *Provide Efficient Access to Major Public Facilities on Campus*
  Entrances into the campus that directly access major public facilities shall include the facility identification on the entrance signage.

- *Wayfinding Inside the Campus*
  Due to the fact that visitors are the most unfamiliar with the campus and require the most assistance, destinations listed on directional signs should reflect primarily visitor-oriented destinations. Pedestrian directional signs should be provided to help visitors reach their

destinations from parking areas. This will also encourage the use of pedestrian corridors. (See Figure 1: *USF Polytechnic* Campus Master Plan)

Retention and Stormwater Management Facilities

- Coordinate all proposed grading and drainage with the requirements of the Southwest Florida Water Management District (SWFWMD) and all other regulating agencies.
- Articulate land forms, drainage swales and drainage ponds to satisfy all engineering and permitting requirements and to be visually and experientially pleasant to the public.
- Add plantings and other amenities along retention pond edges to enhance views.

Goal: **The Landscape Architectural Design Guidelines goal of the *USF Polytechnic* Campus Plan is to create a spatial order and landscape vocabulary that *enhances the architectural design of the Master Plan and* unifies the campus in a manner that is inviting, safe, and that allows the natural and formal landscapes to complement one another.**

Objective 16.1 **Establish the overall conceptual framework as described in this plan element.**

Policy 16.1.1 *USF Polytechnic* shall place the priority on the development of open space, primary pedestrian *and* bicycle ways and Central *Lake* as proposed in the campus master plan design. Related tree planting and lighting throughout the site and including *the* campus entries shall be developed in accordance with the capital improvements program as described in the 14.0 Capital Improvements Element (Table 14.1).

Policy 16.1.2 *USF Polytechnic* shall place priority on the implementation of the Central *Lake* with appropriate preservation of existing tree canopy and introduction of new plantings within the initial phases of development.

Policy 16.1.3 *USF Polytechnic* shall establish a continuous campus wide pedestrian and bicycle circulation system in accordance with guidelines outlined in this plan element under *Landscape Standards: Walkways and Bicycle Ways*.

Policy 16.1.4 *USF Polytechnic* shall establish a proposed landscape framework within the 10 year planning time frame through a systematic approach to implementation that emphasizes the formation of the larger campus framework over the independent development of building specific landscape treatments. Establish highest priority for the implementation of landscape enhancements associated with the *Central Lake, open spaces* and campus entrances.

Objective 16.2 **Establish standards for plant materials and planting criteria as described in this element under *Landscape Standards - Plantings.***

Policy 16.2.1 *The Master Plan designer, in coordination with USF Polytechnic* Facilities Planning and Construction and campus representatives from Physical Plant shall implement a study to establish a coordinated set of Campus Landscape Architectural Guidelines for all campus landscapes, site furnishings and

lighting. The Campus Landscape Architectural Guidelines shall be written in coordination with the criteria established in this plan element under *Landscape Standards: Plantings*.

Policy 16.2.2 *USF Polytechnic* shall require site and landscape design to be in accordance with an established set of Landscape Architectural Guidelines to set standards for selection and use of plant materials and encourage designs to follow criteria outlined in this plan element under *Landscape Standards: Plantings.*

Policy 16.2.3 *USF Polytechnic* shall initiate a tree inventory of existing trees to access the health and longevity of the existing campus forest. A long-term tree maintenance program utilizing a campus wide tree inventory to assess the extent of the tree work and tree removals should be initiated to assure the long-term health and safety of preserved campus trees. In addition a tree inventory will provide a guide for planned new tree planting and maintenance of mixed-age plantings. The Landscape Architectural Guidelines will address the preservation of existing tree masses and the introduction of substantial tree canopy.

Policy 16.2.4 Non-native invasive plants (whether trees, shrubs or grasses) which are identified on the Exotic Pest Plant Council's Florida's "Most Invasive Species List" *shall* be removed from the campus grounds *to the greatest practical extent.*

Policy 16.2.5 *USF Polytechnic* shall *make all reasonable attempts to* ensure *that* existing plant materials *indentified as valuable and that are* in conflict with campus improvements are relocated when at all practical.

Policy 16.2.6 *USF Polytechnic* will endeavor to use colorful flowering trees and shrubs whenever feasible.

Objective 16.3 **Establish the standards for selection of furnishings, lighting, and graphics as described in this plan element under *Landscape Standards - Furnishings, Lighting, and Graphics*.**

Policy 16.3.1 *The Master Plan designers in coordination with USF Polytechnic* Facilities Planning and Construction and campus representatives from Physical Plant shall implement a study to establish a set of Campus Signage Guidelines for all campus graphics. The Campus Signage Guidelines shall be written in coordination with the criteria established in this plan element under *Landscape Standards: Graphics*.

Policy 16.3.2 *USF Polytechnic* shall require graphic and signage design to be in accordance with an established set of Campus Signage Guidelines *in order* to set standards for selection and use of campus graphics and signage and encourage design that follows criteria outlined in this plan element under *Landscape Standards: Plantings.*

Policy 16.3.3 *USF Polytechnic* shall adhere to campus standards or lighting based on criteria outlined in this plan element under *Landscape Standards: Lighting* and in accordance with an accepted set of Landscape Architectural Guidelines.

Policy 16.3.4 *USF Polytechnic* shall adhere to campus standards or lighting based on criteria outlined in this plan element under *Landscape Standards: Furnishings* and in accordance with an accepted set of Landscape Architectural Guidelines. *USF Polytechnic* shall require selection and placement of new furnishings to be in conformance with established campus standards on all future site improvement projects.

Objective 16.4 **Establish the standards for campus edge treatment as described in this plan element under *Landscape Standards - Gateways and Campus Edges*.**

Policy 16.4.1 *USF Polytechnic* shall follow guidelines set forth in this plan element under *Landscape Standards: Gateways and Campus Edges* in implementing campus entry and edge improvements.

Policy 16.4.2 *USF Polytechnic* shall adhere to campus standards for campus edge treatments based on criteria outlined in this plan element under *Landscape Standards: Campus Edges* and in accordance with an accepted set of Landscape Architectural Guidelines.

Objective 16.5 **Establish the standards for treatment of retention and stormwater management facilities that allow such facilities to function as public open space and recreation that complements other campus land uses.**

Policy 16.5.1 *USF Polytechnic* shall adhere to campus standards for campus edge treatments based on criteria outlined in this plan element under *Landscape Standards: Retention and Stormwater Management Facilities* and in accordance with an accepted set of Landscape Architectural Guidelines.

Objective 16.6 **Identify major proposed public open spaces to receive priority for implementation of concentrated improvement efforts.**

Policy 16.6.1 *USF Polytechnic* shall encourage artist involvement on major site improvement projects *in the effort to enhance and articulate the Master Plan design.*

Policy 16.6.2 *USF Polytechnic* shall establish a priority program *verifying design compliance with* the *American Disability Act Accessibility Guidelines Study* in accordance with the capital improvements program as described in the 14.0 Capital Improvements Element.

Objective 16.7 **Establish options for funding campus site improvements independent of individual building projects.**

Policy 16.7.1 *USF Polytechnic* shall explore procedures for funding campus landscape framework improvements independent of individual building construction projects, while at the same time monitoring site design funded through new building project budgets for consistency with the overall campus landscape

design intent. Campus site implementation should be prioritized so that development having the greatest campus impact can occur more quickly. The intent shall be to implement a campus landscape framework that is visibly composed as a whole rather than a collection of individual, unrelated small landscape pieces.

17.0 FACILITIES MAINTENANCE ELEMENT

USF Polytechnic will abide by the facilities maintenance policies set forth in this Campus Master Plan. One notable addition to the facilities maintenance policies in this plan is that *USF Polytechnic* will prohibit the use of trailers except as temporary space to meet exigent need with dates for removal clearly set at the outset.

Goal: **To provide for properly functioning buildings that are readily maintainable.**

Objective 17.1 **Building exteriors shall have a minimum useful life of forty years without the need for major repair or replacement efforts in that period.**

Policy 17.1.1 *USF Polytechnic* shall utilize and improve upon, as appropriate, the criteria that has been established in the USF *Polytechnic* Design and Construction Standards for new construction and renovations. Those documents consist of specifications for materials and fixtures, which have proven to be cost effective from initial capital, energy and maintenance cost standpoints.

Policy 17.1.2 *USF Polytechnic* Facilities *Operations* shall utilize early planning coordination, review, inspection and forecasting systems to provide the necessary level of maintenance. This coupled with the receipt of adequate resources for the maintenance and operation of buildings will insure that buildings function properly.

Policy 17.1.3 *USF Polytechnic* shall not use one-story occupied metal trailer buildings other than as temporary space. Installation of additional units should be prohibited, unless on an exigent need basis with removal dates prescribed and monitored. One story modular facilities are inefficient in terms of land use, energy consumption, and maintenance funds.

Policy 17.1.4 *USF Polytechnic* shall review all buildings by means of the formal and automated Integrated Facilities Information System, currently being implemented with the University System. This program establishes standards for the review of systems components and the resultant prioritizing of maintenance and improvement projects.

Policy 17.1.5 *USF Polytechnic* will interface the facilities audit program with the scheduled maintenance program to insure that buildings are effectively maintained and will reach their useful life.

Policy 17.1.6 In the creation or renovation of any occupied or visible facility *USF Polytechnic* shall promote the use of low maintenance, durable materials which contribute to energy efficiency.

Policy 17.1.7 *USF Polytechnic* shall ensure that exterior and interior colors and materials shall be compatible with other colors and materials on the campus and shall be conducive to the functions and users of the facility.

Policy 17.1.8 *USF Polytechnic* will require the use of materials with integral color to reduce the need for maintenance of painted surfaces, except in special cases.

Policy 17.1.9 The schedule and timing of maintenance, renovation, and code violation projects will continue to be updated and prioritized in the annual CIP 1-5, 5MR and 5CO.

Objective 17.2 Interior spaces shall have a useful life of twenty years without need of major renovation or repair in that period.

Policy 17.2.1 *USF Polytechnic* space needs will be surveyed by the Educational Plant Survey Team every 5 years. One-story metal trailers will not be used to meet Campus needs except in exigent circumstances with dates for removal clearly specified. Continued use of such space beyond the specified removal date will require justification to the University system Chief Financial Officer.

Objective 17.3 Building systems shall have a useful life of twenty years.

Policy 17.3.1 *USF Polytechnic* shall select materials and equipment which meet optimum life-cycle cost criteria and meet the standards as established by the Facilities Maintenance organization. One story metal trailers will not meet the materials and equipment maintenance standards. See Policy 17.1.3.

Policy 17.3.2 The Integrated Facilities Information System implemented by USF Physical Plant shall be utilized and become the model by which all campus physical plant divisions establish and maintain a current data base prioritization for the scheduled maintenance projects and associated costs.

18.0 COASTAL MANAGEMENT ELEMENT

The *USF Polytechnic* Campus is not located in the designated Coastal High Hazard area of Polk County. With the exception of essential personnel and individuals with special needs, *USF Polytechnic* does not currently provide on-campus shelter in the event of a natural disaster. Nevertheless, all State University System master plans are required to address programs and procedures planned or in place. The following policies provide the framework for *USF Polytechnic* to meet the State requirements.

Goal : **Protect *USF Polytechnic's* students, faculty, staff, and physical property in the event of natural disasters.**

Objective 18.1: **Continue coordination with local communities and agencies for the preparation of plans to adequately protect students, faculty, staff, and *USF Polytechnic's* physical property in the event of a natural disaster.**

Policy 18.1.1: *USF Polytechnic* shall continue its ongoing working relationship with Polk County Emergency Management Operations, the American Red Cross, and the host communities to ensure that appropriate plans are incorporated for the off-campus sheltering of students, staff and faculty.

Policy 18.1.2: *USF Polytechnic* shall maintain and periodically update its own Emergency Operations Plan in coordination with Polk County Emergency Management Operations, the American Red Cross, the host community and adjacent jurisdictions.

Policy 18.1.3: *USF Polytechnic* shall construct new facilities in accordance with revised adopted building code standards.

Policy 18.1.4: New buildings shall be constructed in accordance with the public shelter standards and criteria (if a shelter deficit exists) unless the State Department of Community Affairs and the County Emergency Management Office, exempts the building or any part thereof because of the building's location, size, or some other characteristic.

Policy 18.1.5: New buildings shall be planned, designed, and built to deal with natural disasters not only for health and safety, but also to provide for expedient restart/continuation of mission-critical programs, including research, by increasing the number of emergency generators, storage of diesel fuel, storage of other emergency supplies and equipment necessary for self-sufficiency.

Policy 18.1.6: *USF Polytechnic* shall designate parking lots as potential emergency staging areas. These parking lots can also be used for staging emergency resources. As the campus continues to develop and the above and other open spaces are replaced by structures in accordance with the Future Land Use Map (refer to Figure 4.1), *USF Polytechnic* shall, on an annual basis, review and update its staging area information and incorporate it in its emergency preparedness plan, as well as in each update of the Master Plan.

Policy 18.1.7: *USF Polytechnic* shall maintain and modify, as appropriate, the emergency recovery plan which addresses such issues as "restarting" the campus after

a natural disaster. Issues such as road clearing, facilities start-up, reuse of facilities, and operations are to be considered as well as coordination with the host communities.

Policy 18.1.8: *USF Polytechnic* shall consider opportunities available to incorporate hurricane evacuation and shelter plans of the host communities by designating potential staging areas in accordance with procedures as described in the 12.0 Intergovernmental Coordination Element.