



**FLORIDA INTERNATIONAL UNIVERSITY  
BOARD OF TRUSTEES  
CAMPUS MASTER PLAN AD HOC COMMITTEE**

**FIU, Modesto A. Maidique Campus, Graham Center 243**

**Thursday, October 5, 2023  
9:00 AM**

**Chair:** Natasha Lowell

**Vice Chair:** Alan Gonzalez

**Members:** Elizabeth M. Bejar, Javier I. Marques, Marc D. Sarnoff, Alexander P. Sutton, Roger Tovar

**Staff Liaison:** Aime Martinez, *Chief Financial Officer and Senior VP for Finance and Administration*

**AGENDA**

- |   |                       |
|---|-----------------------|
| <b>1. Call to Order and Chair's Remarks</b>           | <b>Natasha Lowell</b> |
| <b>2. Discussion Item</b> <i>(No Action Required)</i> |                       |
| <b>2.1 2015-2030 Campus Master Plan (CMP) Update</b>  | <b>Natasha Lowell</b> |
| <b>3. New Business</b> <i>(If Any)</i>                | <b>Natasha Lowell</b> |
| <b>4. Concluding Remarks and Adjournment</b>          | <b>Natasha Lowell</b> |

**CAMPUS MASTER PLAN SUBCOMMITTEE  
WORKSHOP OUTLINE**

9:00-9:10 a.m.	<b>Opening Remarks</b>	Chair Natasha Lowell
9:10-9:30 a.m.	<b>Introduction</b> <ul style="list-style-type: none"><li>• Purpose</li><li>• Master Planning Context</li><li>• Planning Scope</li><li>• Target Timeline</li></ul>	John Cal AVP, Facilities Management
9:30-10:00 a.m.	<b>Framework</b> <ul style="list-style-type: none"><li>• Major Planning Goals (p. 3)</li><li>• Campus Guiding Principles (p. 3)</li><li>• Development Options</li><li>• Indicators of Master Plan Success</li><li>• Five Year Capital Improvement Plan (CIP)</li></ul>	John Cal
10:00-10:30 a.m.	<b>Critical Start Points</b> <ul style="list-style-type: none"><li>• Enrollment Strategy &amp; Numbers through 2030</li><li>• Consultant Introduction</li><li>• Space Needs</li></ul>	Elizabeth Bejar, Provost John Cal Krisan Osterby, DLR Group
10:30-10:50 a.m.	<b>Biscayne Bay Campus (BBC)</b> <ul style="list-style-type: none"><li>• Space Needs (pp. 172-173)</li><li>• Land Use (p. 49)</li><li>• Capital Improvement Plan (pp. 174-175)</li><li>• Illustrative Plan (pp. 8-9)</li></ul>	Krisan Osterby
10:50-11:10 a.m.	<b>Engineering Center (EC)</b> <ul style="list-style-type: none"><li>• Space Needs (pp. 167-168)</li><li>• Land Use (p. 48)</li><li>• Capital Improvement Plan (pp. 170-171)</li><li>• Illustrative Plan (pp. 6-7)</li></ul>	Krisan Osterby
11:10 a.m.-12:15 p.m.	<b>Modesto Maidique Campus (MMC)</b> <ul style="list-style-type: none"><li>• Space Needs (pp. 167-168)</li><li>• Land Use (p. 43)</li><li>• Capital Improvement Plan (pp. 164-165, 169)</li><li>• Illustrative Plan (pp. 4-5)</li></ul>	Krisan Osterby
12:15-1:00 p.m.	<b>Open Discussion/"Big Ideas"</b> <ul style="list-style-type: none"><li>• Public-Private Partnerships</li><li>• Research/Industry Park</li><li>• Re-development of MMC West Side</li></ul>	Aime Martinez, CFO & SVP

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# 2015-2030 DRAFT CAMPUS MASTER PLAN UPDATE

SEPTEMBER 2023



# Draft

## **CAMPUS MASTER PLANNING CONSULTANTS**

DLR Group	Campus Planning
Miller Legg	Landscape Architecture and Civil Engineering
SGM Engineers, Inc	MEP Engineering



## ACKNOWLEDGMENT

---

Kenneth A. Jessell     President

### **FIU EXECUTIVE COMMITTEE/VICE PRESIDENTS**

Elizabeth Bejar	Provost, Executive Vice President + Chief Operating Officer
Charlie Andrews	Interim Vice President, Student Affairs
Aime Martinez	Chief Financial Officer, Senior Vice President for Finance and Administration
Michelle Palacio	Senior Vice President, Strategic Communications, Government and External Relations
Scott Carr	Athletics Director
Carlos Castillo	General Counsel
Juan Carlos Cendan	Senior Vice President, Health Affairs + Dean, Herbert Wertheim College of Medicine
Bridgette Cram	Interim Vice President, Innovative Education and Student Success
Andres Gil	Senior Vice President, Research & Economic Development + Dean, University Graduate School
Bobby Grillo	Vice President, Information Technology + CIO
EK Hudson	Senior Vice President, Human Resources
Javier Martinez	Vice President, Operations and Safety + Chief of Staff
Aime Martinez	Chief Financial Officer + Senior Vice President, Finance and Administration
Michelle Palacio	Senior Vice President, Strategic Communications, Government and External Affairs

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Robert Griffith	Director Facilities Planning
Paulo Costa	Construction Project Manager

### **PLANNING FOCUS GROUPS**

Group 1	MMC & EC - Academics and Research
Group 2	MMC & EC - Student Life
Group 3	MMC & EC - Infrastructure
Group 4	BBC

### **PARTICIPANTS**

Luis Salas	Professor, Associate Vice President of Research
Julissa Castellanos	Assistant Vice President, Regional and World Locations
Gloria Jacomino	Director, Academic Space Management
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Roger Clegg	Assistant Vice President Business Services
Joe Paulick	Associate Vice President, Auxiliary Operations
Andrew Naylor	Senior Director, Housing Administration

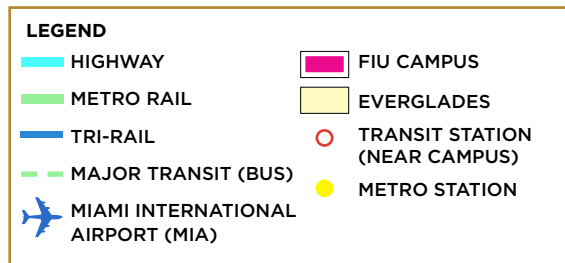
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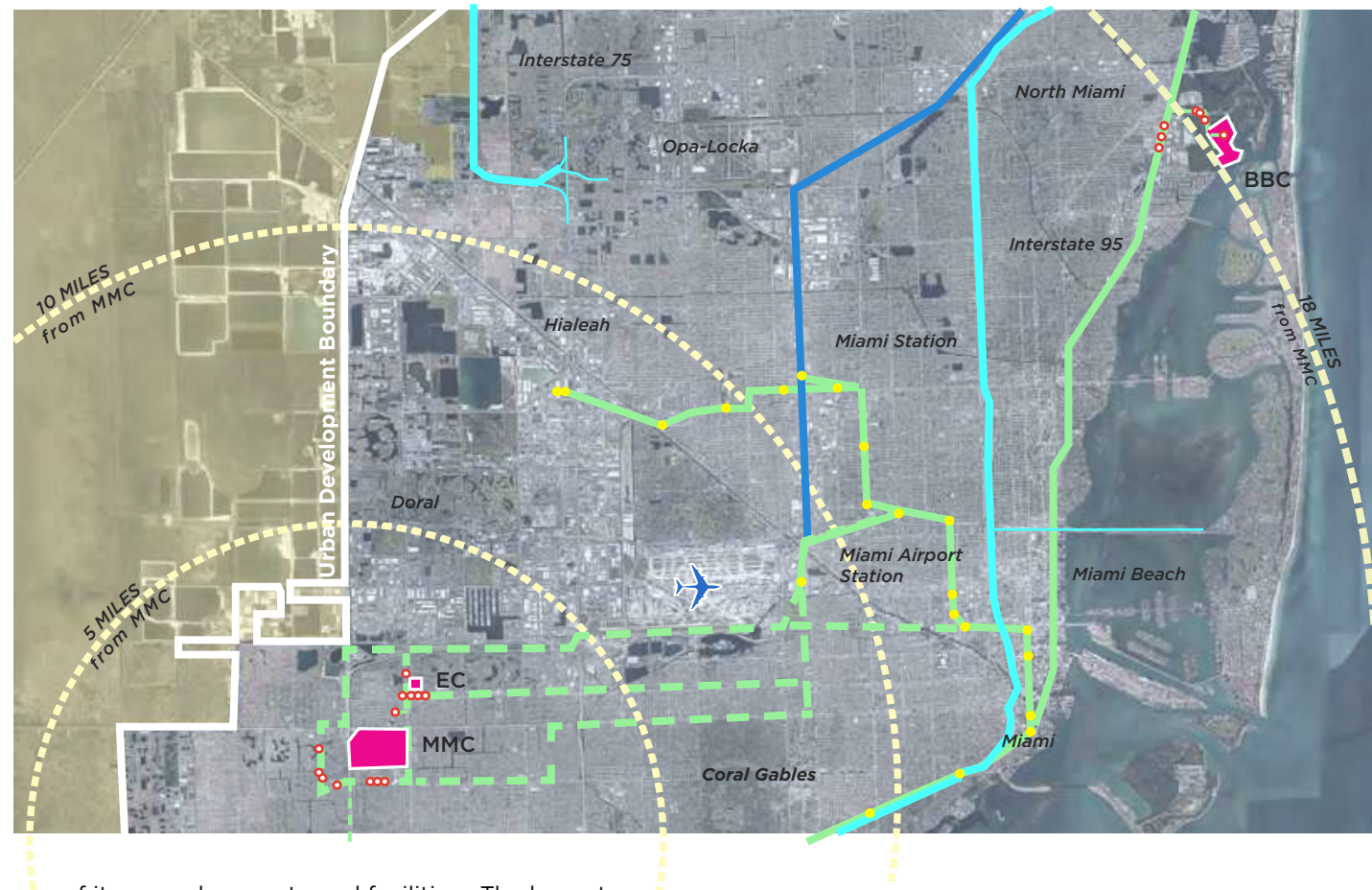
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## INTRODUCTION



**FIGURE 0.1 - FIU REGIONAL CONTEXT MAP**



The Florida International University (FIU) 2015-2030 DRAFT Campus Master Plan maintains previous physical and capital planning; builds upon the momentum of recent strategic planning, and establishes unfolding new initiatives to support FIU in its goal to be “Worlds Ahead”. The plan also recognizes successful achievements of previous planning objectives and priority improvements since the previous master plan in June 2015.

The 2030 planning effort is concentrated on FIU’s two principal campuses, Modesto A. Maidique and Biscayne Bay, which represent the majority

of its owned property and facilities. The largest campus, Modesto A. Maidique (MMC), occupies approximately 344 acres located at the crossroads of the Florida Turnpike (SR 821) and Southwest 8th Street (US 41) in west central Miami-Dade County. The Biscayne Bay Campus (BBC), a 195 acre branch campus on Biscayne Bay, is located within the City of North Miami in northeast Miami-Dade County. Planning efforts also covered the Engineering Center (EC), a 36 acre extension of the main campus located 1 mile north of Modesto A. Maidique at the northeast intersection of SW 107th Avenue and West Flagler Street. [Figure 0.1a]

In response to the evolving dynamics of higher education participation and enrollment, FIU anticipates no major growth or decline – both for students attending classes in person and virtually. Past planning goals have been reevaluated to verify their applicability in this era of rapid change. To maximize public participation for this planning process, FIU collected feedback from a wide cross section of on-and off-campus groups through interviews, focus groups, public hearings and campus open house forums.



The 2020-2030 Campus Master Plan Update provides a framework of flexible growth opportunities for FIU based on the following **Major Planning Goals**:

1. **Support University Strategic Plan: “Next Horizon 2025” and new plan currently being developed.**
2. **Develop a sustainable campus environment.**
3. **Develop better options with transportation and access.**
4. **Establish better connectivity with neighboring communities.**
5. **Meet enrollment needs for academic and research facilities and for housing.**
6. **Optimize development within land use constraints.**

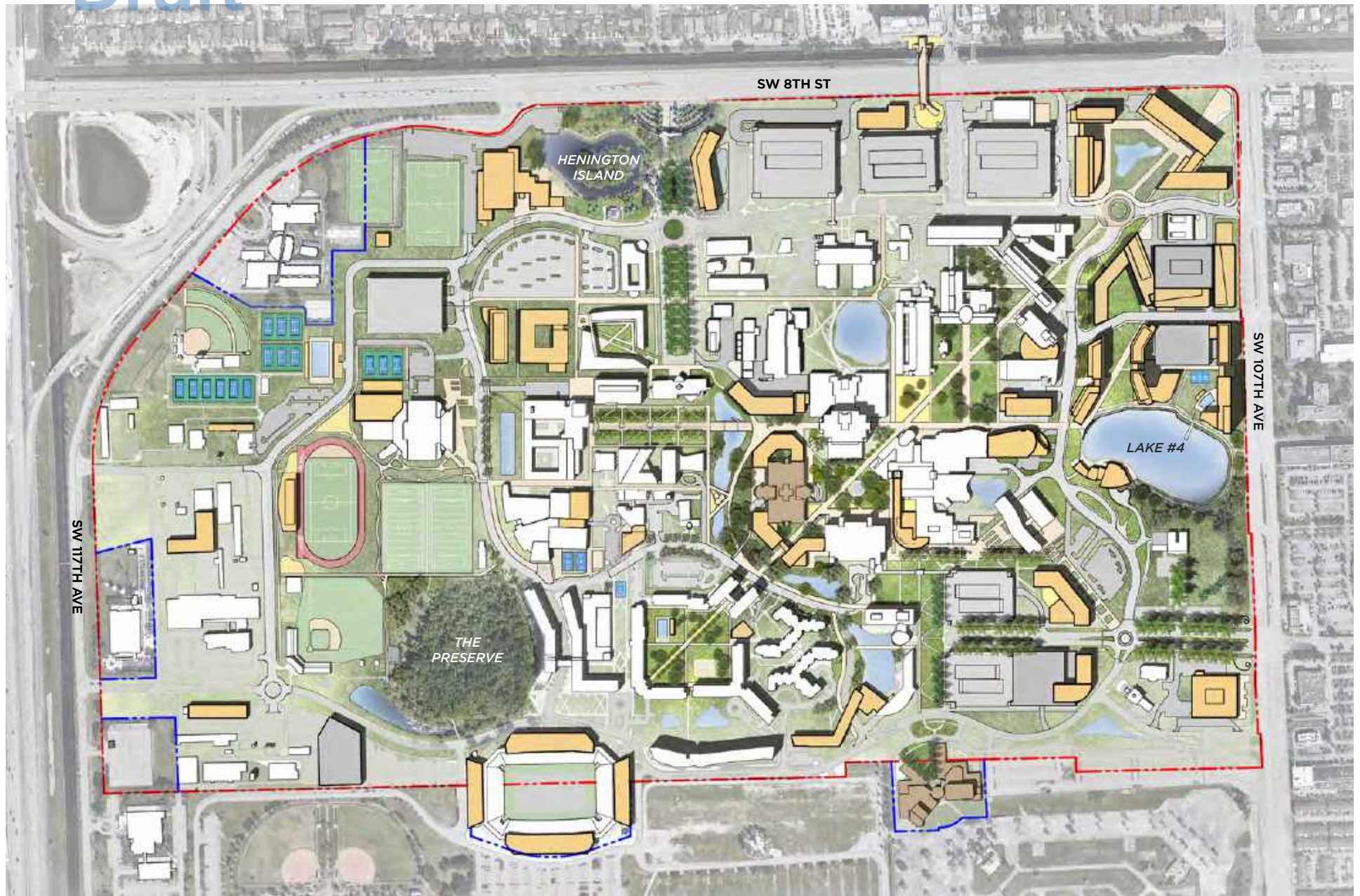
In addition, the following **Guiding Principles** help to inform the Campus Master Plan Update and support the University Strategic Plan:

1. **Develop forward looking, innovative and interdisciplinary learning and research environments.**
2. **Reinforce a culture of sustainability and a sustainable campus environment.**
3. **Strengthen FIU’s identity and sense of place through the expression of its campus environment. Strengthen the FIU brand and legacy.**
4. **Create a more compact and comprehensive urban environment with multi-modal solutions to transportation & infrastructure.**
5. **Establish better connectivity with neighboring communities.**

6. **Create a safe, transparent, connected, pedestrian-friendly campus.**
7. **Site core academic programs along main axes.**
8. **Develop student life mixed use communities.**
9. **Foster learning through multipurpose open space.**
10. **Reinforce FIU’s opportunistic character by maximizing flexibility for future expansion.**

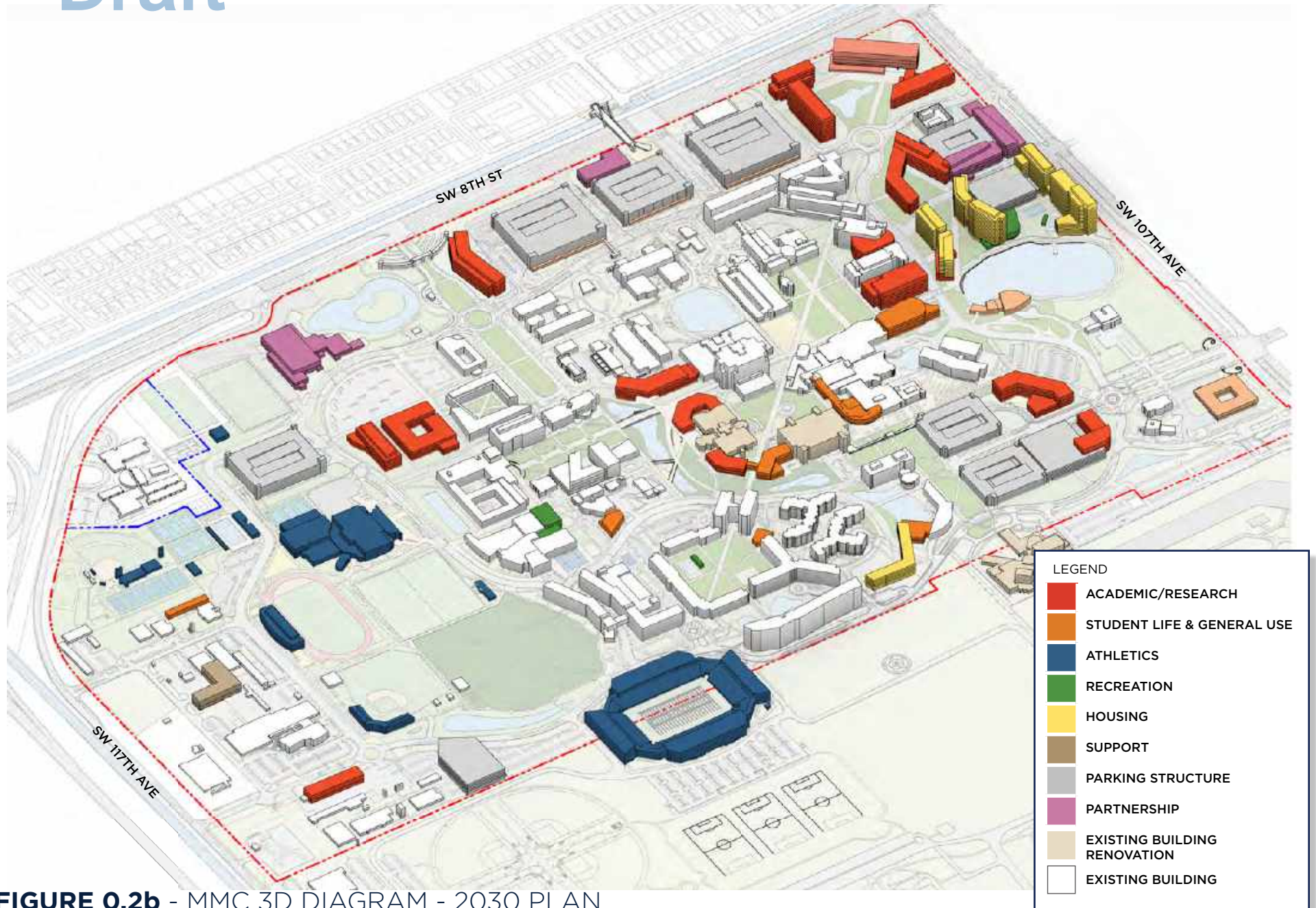
The narrative for this executive summary summarizes each of the eighteen elements identified by the State University System planning guidelines. Together, they provide a holistic and integrated guide for effectively planning campus change in the years to come.

The following illustrative plans depict the future visions and concepts for each FIU campus.



**FIGURE 0.2a - MMC 2030 PLAN**

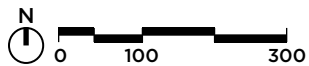




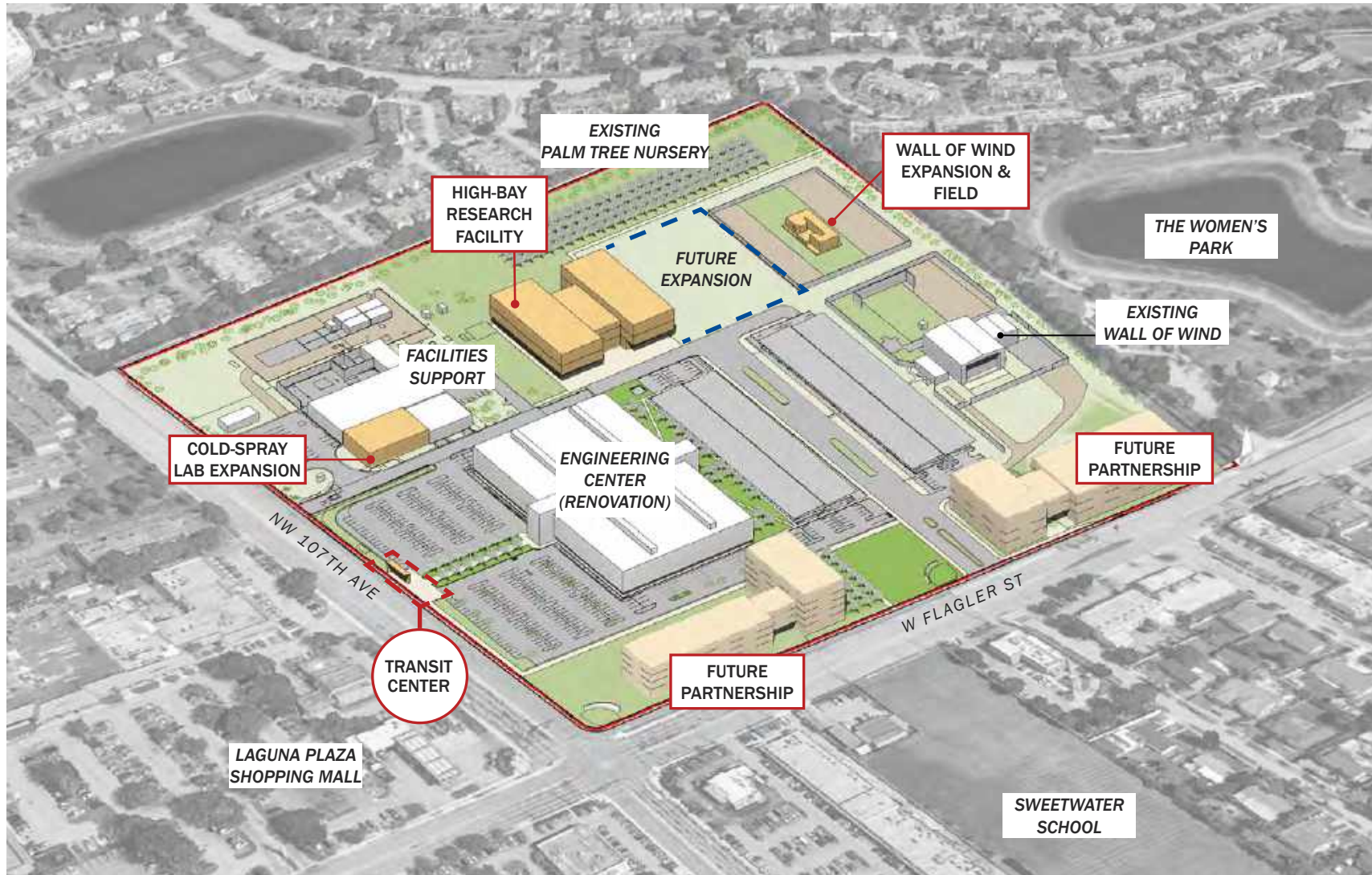
**FIGURE 0.2b** - MMC 3D DIAGRAM - 2030 PLAN



**FIGURE 0.3a - EC 2030 PLAN**







**FIGURE 0.3b** - EC 3D DIAGRAM - 2030 PLAN





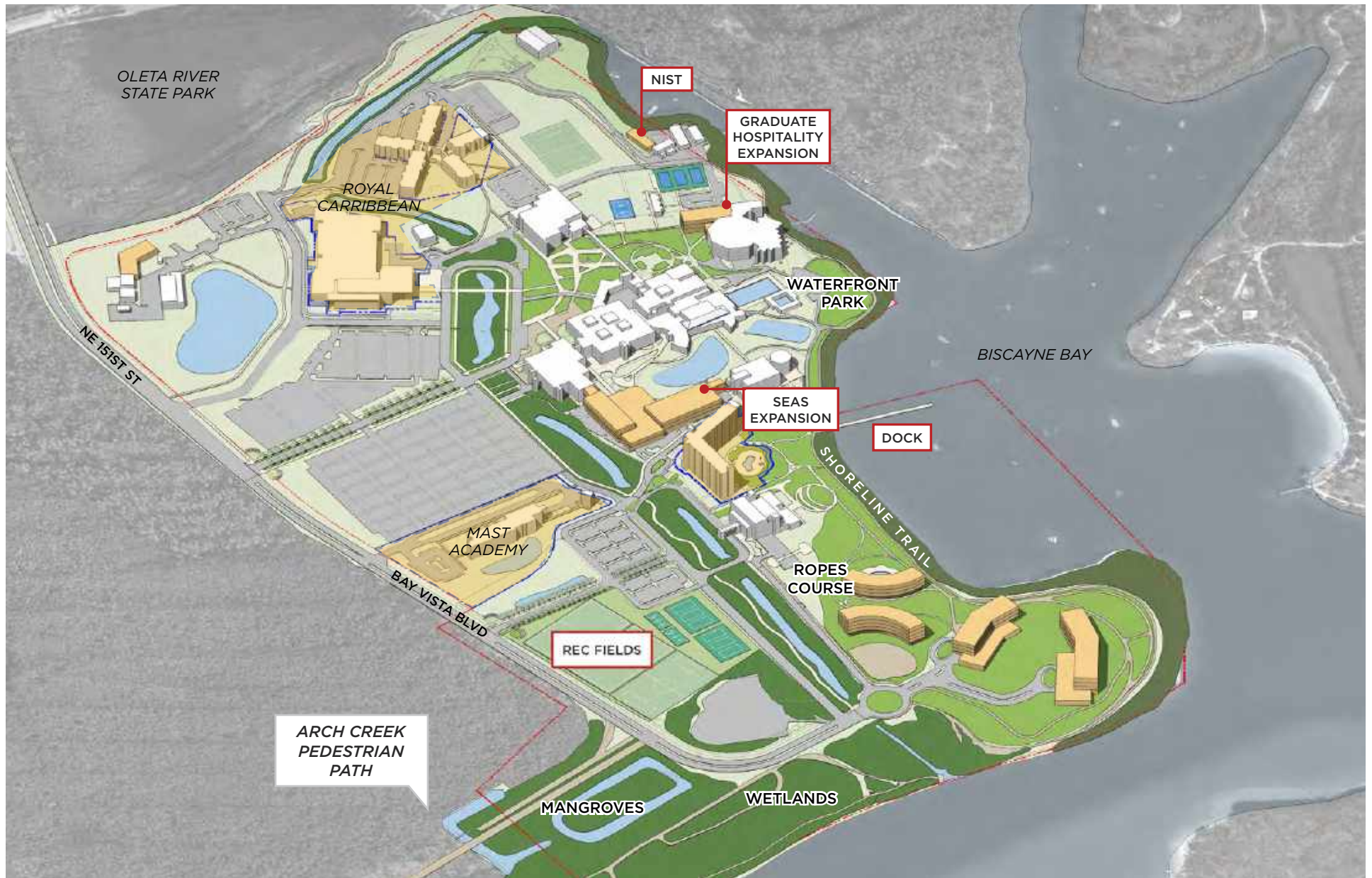


**FIGURE 0.4a - BBC 2030 PLAN**



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**FIGURE 0.4b** - BBC 3D DIAGRAM - 2030 PLAN



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**ACADEMIC MISSION**

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## 1.0 ACADEMIC MISSION

Since its founding in 1965, FIU has established itself as one of South Florida's top research institutions as well as its largest public university. As a member of State University System (SUS) of Florida, FIU offers an immense selection of undergraduate, graduate and professional programs. Its student body mirrors the diverse and vibrant culture of South Florida with an ever-increasing percentage of minority groups and international students, fostering a dynamic environment that drives real talent and innovation in Miami and globally.

FIU's "Next Horizon 2025" highlights three strategic priorities:

- *Amplify Learner Success & Institutional Affinity*
- *Accelerate Preeminence & Research and Innovation Impact*
- *Assure Responsible Stewardship*

These strategic priorities build upon prior strategic plans while responding to ongoing rapid changes in the higher education landscape and workforce.

### Mission Statement

**Florida International University is an urban, multi-campus, public research university serving its students and the diverse population of South Florida. We are committed to high-quality teaching, state-of-the-art research and creative activity, and collaborative engagement with our local and global communities.**

### Vision Statement

**Florida International University will achieve exceptional student-centered learning and upward economic mobility, produce meaningful research and creative activities, and lead transformative innovations locally and globally, resulting in recognition as a Top-50 public university.**

## University Service Areas

South Florida is one of the most dynamic, artistically expressive, ethnically diverse and cosmopolitan regions in the United States. As the gateway for Central America, the Caribbean and South America, it is a global center for trade, finance, health care, tourism and manufacturing. To meet its consumer's needs, FIU has two main campuses – the 342.2-acre Modesto A. Maidique Campus, in western Miami-Dade County and the 198.6-acre Biscayne Bay Campus, on Biscayne Bay in northeast Miami-Dade County. In addition to the two main campuses, Modesto A. Maidique Campus also encompasses the Engineering Center, a 36 acre site located North of the City of Sweetwater.

## Next Horizon 2025 Strategic Plan Framework Vision:

FIU will achieve exceptional student-centered learning and upward economic mobility, produce meaningful research and creative activities, and lead transformative innovations locally and globally, resulting in recognition as a Top-50 public university. This plan identifies three strategic priorities:

1. Amplify Learner Success & Institutional Affinity
2. Accelerate Preeminence & Research and Innovation Impact
3. Assure Responsible Stewardship

These strategic priorities will be operationalized with guidance from the 2025 Commission on Strategic Investments.

FIU's Institutional Values Statement commits to:

**Truth** — in the pursuit, generation, dissemination, and application of knowledge

**Freedom** — of thought and expression

**Respect** — for diversity and the dignity of the individual

**Responsibility** — as stewards of the environment and citizens of the world

**Excellence** — in intellectual, personal, and operational endeavors

## GOAL

Florida International University (FIU) is a top public, urban, multi-campus, research university serving Southeast Florida, the state, the nation and the international community. It fulfills its mission by imparting knowledge through excellent teaching, promoting public service, discovering new knowledge, solving problems through research, and fostering creativity.

### Objective 1.1

#### **Maintain College/School Missions:**

**The missions of individual colleges and schools shall be reviewed annually and modified to support FIU's mission in accordance with the Division of Academic Affairs planning, implementation and evaluation annual cycle.**

#### **Policy 1.1.1**

FIU shall review and prioritize proposals for new academic programs in accordance with the current FIU Strategic Plan's procedures and subsequent modifications of its mission statement.

#### **Policy 1.1.2**

Priorities shall be established among prospective new programs based on the following criteria:

- Local, regional, national and international need
- Potential enrollment
- Maturity of the program being modified

#### **Policy 1.1.3**

The Academic Mission, Strategic Themes and Institutional Goals of FIU shall reflect both the recent and planned substantial growth in research activity.

#### **Policy 1.1.4**

The Campus Master Plan shall be amended, as needed, to reflect any revisions or modifications to the missions of individual colleges and schools.

### **Objective 1.2**

#### **Modification to University Mission:**

**The University Mission shall be modified at each interval required by State Statutes, and no less than ten (10) years after adoption, as part of the Florida Board of Education Master Plan process.**

#### **Policy 1.2.1**

The Office of the President shall develop mission statement revisions in accordance with the internal

in coordination with the Executive Committee, the Strategic Planning Advisory Committee, Administrative Council, and the University Council.

#### **Policy 1.2.2**

The campus master plan shall be amended, as needed to reflect any revisions or modifications to the University's mission statement.

### **Objective 1.3**

#### **Maintain and Up-to-Date Master Plan:**

**The University shall participate in the periodic updating of the adopted campus master plan in accordance with the Florida Board of Education**

#### **Policy 1.3.1**

FIU shall submit to the SUS Board of Governors, within 4 years from the date of plan adoption and every 5 years thereafter, an evaluation and appraisal report which:

1. Lists accomplishments during the implementation of the campus master plan, describing major problems associated with development and land uses, and the degree to which the goals, objectives and policies have been successfully reached;



2. Identifies obstacles or problems, which resulted in under achievement of goals, objectives and policies;
3. Identifies the need for new or modified goals, objectives or policies needed to correct unanticipated and unforeseen problems and opportunities that have occurred since adoption of the campus master plan;
4. Addresses local government and public participation in the process;
5. Addresses the effects of changes to the State Comprehensive Plan and to the comprehensive plans of the host local government and any affected local governments;
6. Identifies proposed and anticipated amendments necessary to address identified problems and opportunities; and
7. Identifies a means of ensuring continuous monitoring and evaluation of the plan during the remainder of the overall planning period.

### **Policy 1.3.2**

FIU shall submit to the Florida Board of Governors according to BOG Chapter 21.

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**ACADEMIC PROGRAM**

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## 2.0 ACADEMIC PROGRAM

With 49,130 undergraduate and graduate students enrolled in the Fall of 2023, Florida International University continues to provide a vast and rapidly expanding array of educational opportunities with nearly 190 degree programs.

The majority of students have the advantage of taking classes at multiple campuses and centers throughout the Miami-Dade area and abroad. Additionally, advancements in technology have created a paradigm shift allowing for an ever-increasing percentage of on-line student enrollment.

A critical success factor for FIU's academic programs has been the cultivation of an interdisciplinary, team-based pedagogy. As a result, FIU has fostered partnerships with businesses, health service providers, and the community to encourage interdisciplinary teaching and research. FIU is committed to providing high quality education to the South Florida area at both an undergraduate and advanced degree level, and continue supporting growth in both student population and academic degree programs.

Florida International University is planning to maintain a steady headcount without major enrollment increases or decreases from year to year by the end of the 2030 planning period.

The HC and FTE projections are based on Fall 2019 enrollment data and informed by strategic planning within the following schools and colleges.

- Arts, Sciences & Education
- Business
- Chaplin School of Hospitality and Tourism Management
- Communication, Architecture + The Arts
- Engineering and Computing
- Herbert Wertheim College of Medicine
- Honors College
- Law
- Nicole Wertheim College of Nursing & Health Sciences
- Robert Stempel College of Public Health & Social Work
- Steven J. Green School of International and Public Affairs



## GOAL

FIU shall develop and maintain academic programs reflecting and implementing the Missions of the University and individual schools and colleges.

## OBJECTIVES AND POLICIES

### Objective 1.2

Support projected Enrollment, Program Growth and Campus Distributions.

### Policy 1.1.1

Enrollment projections shall be as shown on Table 2.3 of the Inventory and Analysis Report. The methodology for enrollment projections shall factor FIU's market share projections.

### Objective 1.2

Support Planned and Proposed Academic Programs:

Locate academic programs to support the academic mission and sustainable levels of enrollment at the Modesto A. Maidique and Biscayne Bay Campus through 2030.

### Policy 1.2.1

Locate the academic programs of the following colleges and schools at the Modesto A. Maidique through 2030. Review campus and program enrollments annually to assure that the University is meeting its enrollment goals for each location.

Architecture and Arts

Arts and Sciences Business Administration  
Education

Engineering and Computer Science (offered at EC)

Honors College Law

Medicine

Nursing and Health Sciences

Hospitality and Tourism Management

Journalism and Mass Communication

Public Health and Social Work

### Policy 1.2.2

Locate academic programs of the following colleges and schools at Biscayne Bay Campus through 2030. Review campus and program enrollments annually to assure that the university is meeting its goals for each location.

Architecture and Arts

Arts and Sciences

Business

Education

Medicine

Nursing and Health Sciences

Hospitality and Tourism Management

Journalism and Mass Communication

Public Health and Social Work

### Policy 1.2.3

Provide the specific academic programs within each college as contained in Table 2.3 in the Campus Master Plan: Inventory and Analysis.

**Policy 1.2.4**

As one of the largest providers of online learning in the country, monitor and develop online programs based on market demand and aligned with the academic mission.

**Policy 1.2.5**

Reflect priorities for new academic programs documented by the Florida Board of Governors as outlined in the State University System 2025 Strategic Plan.

**Policy 1.2.6**

Distribute Funding based on a pro rata basis to existing academic programs based on existing and projected enrollments

**Policy 1.2.7**

Priorities for new academic programs shall be based on the following criteria;

1. Local, regional, national and international need
2. Potential enrollment
3. Maturity of program being modified

**Policy 1.2.8**

Review and prioritize unforeseen potential academic program elements and grant opportunities with the Office of Sponsored Research Administration (OSRA). Apply the follow criteria:

- Compliance with State and Federal regulations
- Appropriateness to Academic Program and Mission
- Capacity of physical and administrative infrastructure

**Policy 1.2.9**

Amend the Campus Master Plan to include any approved unforeseen program elements.

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3.0

URBAN DESIGN

## 3.0 URBAN DESIGN

The physical environment of FIU's campuses is integral to the educational experiences of its students and to the health and well-being of all who come in contact with the university. As such, urban design is informed by the goals of creating memorable campus spaces and well-connected pedestrian networks, incorporating sustainable design strategies, maximizing the impact of art, and increasing the amount and quality of student spaces.

With increased density of facilities in the campus core and the need to expand on-campus housing, maintaining high quality campus environments is essential to supporting a successful student experience, as well as safety, security, branding and wayfinding. Recent mixed-use development in the adjacent neighborhood of Sweetwater has introduced a high-rise building typology to the urban context of FIU, and creating precedent for mid and high-rise on-campus housing. Development must be planned to effectively preserve, define and enhance campus open space through the use of regulating axes, campus streets and a hierarchy of landscapes.

The surrounding urban context has been historically disconnected from FIU's campuses. Accessible and permeable campus edges are

a key consideration as FIU's campuses expand and foster relationships with their respective host communities. Each location should address the following actions cultivate effective and sustainable urban environments.

### **Modesto A. Maidique Campus**

Growth at Modesto A. Maidique Campus should continue to leverage infill building sites and facility additions to create a compact and pedestrian-friendly urban setting. Development should be guided by major pedestrian corridors to preserve and reinforce the rich outdoor tropical open spaces.

Realignment and improvements to the campus loop road should better define the central academic core of campus while allowing for the placement of future facilities in key adjacencies. To effectively implement this goal and promote pedestrian circulation, surface parking should be redistributed into mixed-use parking structures located outside of the campus loop road at the campus edges.

## GOAL

Florida International University shall create high quality, memorable campus environments suited to education and a sense of collegiality, comprising a pedestrian friendly, dense, compact development pattern within a rich outdoor tropical environment.

## OBJECTIVES AND POLICIES

### **Objective 1.1**

Develop, enhance and preserve existing and proposed major pedestrian corridors on campus. All future development shall place buildings and landscape features so as to preserve and reinforce the significance of each these corridors. [Figure 3.1a]

### **Policy 1.1.1**

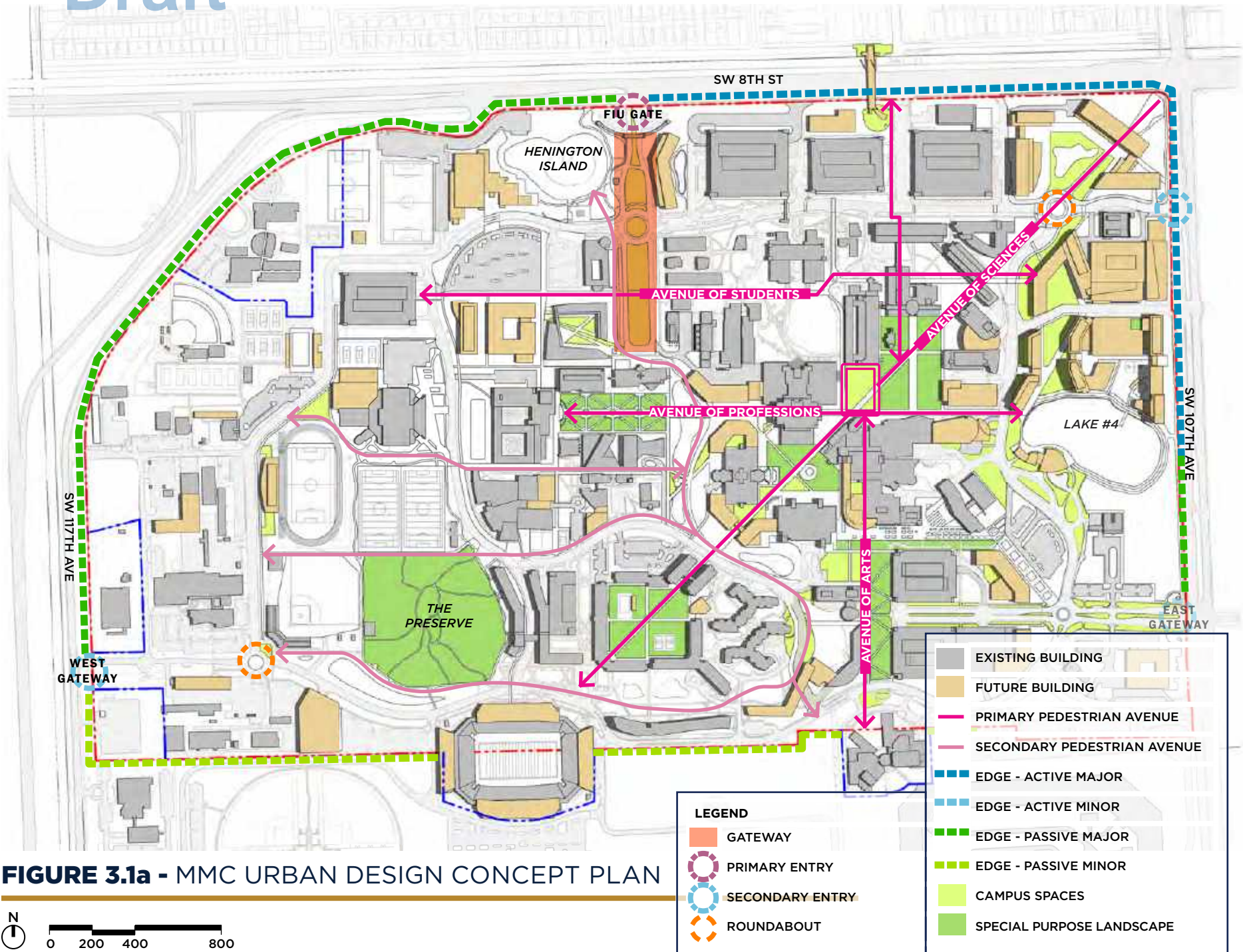
#### **MODESTO A. MAIDIQUE CAMPUS – Primary Axes**

#### ***Existing East-West Pedestrian Walkway 1***

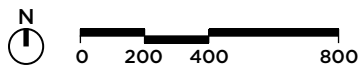
**(Avenue of the Professions):** The “Avenue of the Professions” connects the Rafael Diaz-Blart Hall, through the Green Library to the Earnest R. Graham Center and onto SW 107th Avenue.



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**FIGURE 3.1a - MMC URBAN DESIGN CONCEPT PLAN**



Future buildings along this avenue shall be oriented and configured in a manner to reinforce the axis.

**Existing East-West Pedestrian Walkway 2 (Avenue of the Students):** The “Avenue of the Students” extends from the west façade of Owa Ehan at the northern end of the building west to the Panther Parking Deck. This axis bisects several significant spaces including the Ryder Quad, College of Education and the Business School district.

**Existing Major North-South Pedestrian Walkway 1 (Avenue of the Arts):** The “Avenue of the Arts” pedestrian corridor connects the Graham Center to the Wertheim Performing Arts Center. This axis is well defined with Parking Garage Gold & Blue to the east and the Art Museum and the Advanced Research Building to the west.

**Existing Diagonal Major Pedestrian Walkway 1 (Avenue of the Sciences):** The “Avenue of the Sciences” links a sequence of spaces extending from the Panther Village quadrangle through the Foundation Court northeast to the emerging Academic Health Center, terminating at the intersection of SW 8th Street and SW 107th Avenue.

Proposed Diagonal North South Major Pedestrian Walkway 2 – a major pedestrian corridor is proposed connecting various campus precincts from north west or south east (from Henington Island to North to 17th Street to south.

**North-South Axis 1 (107th Avenue Main Vehicular Entrance):** One of two established signature campus gateways to FIU, this visual corridor connects the SW 107th Avenue entrance to the Management and Advanced Research Center along the Avenue of the Arts.

**North-South Axis 2 (8th Street Main Entrance):** The second established signature campus gateway provides a visual corridor from SW 8th Street to the Ryder Business Administration.

#### **Policy 1.1.2 MODESTO A. MAIDIQUE CAMPUS – Secondary Axes**

**North-South Axis 3 (Connecting the Stadium to the Avenue of the Professions):** Develop a pedestrian circulation corridor from the eastern side of FIU Community Stadium north to the Avenue of Professions.

**North-South Axis 4 (8th Street Secondary Entrance):** Continue to develop the visual and pedestrian corridor from SW 8th St. through the Science Building to the Graham Center.

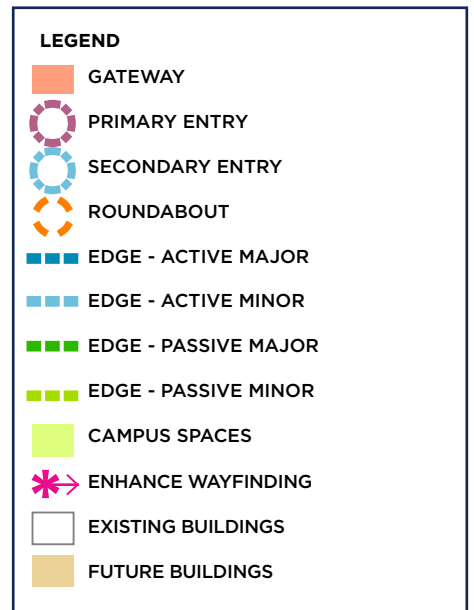
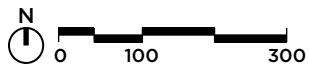
**East-West Axis 4 (117th Main Vehicular Entrance):** Develop an enhanced visual and vehicular corridor from SW 117th Avenue through the campus support area that connects to the Campus GreenBelt.

**Policy 1.1.3  
Engineering Center East-West Axis (107th to Wall of Wind):** Develop a pedestrian focused corridor from SW 107th Avenue east through the existing Engineering Center connecting to the Wall of Wind. [Figure 3.2]





**FIGURE 3.2 - EC 2030 URBAN DESIGN CONCEPT PLAN**





## **Policy 1.1.4**

### **Biscayne Bay Campus *East-West Axis 1:***

Remove portions of the existing surface parking lots and develop and enhance the arrival and drop-off experience north of Academic One and Two. Expand the academic core to define and enclose the quad with future development towards the southern quad that defines the visual corridor that frames bay views.

## **Policy 1.1.5**

### **Biscayne Bay Campus *East-West Axis 2:***

Develop an east-west axis that defines the visual corridor of the southern quad. Centered on the academic buildings to the west, the axis shall preserve the view to Biscayne Bay.

## **Policy 1.1.6**

### **Biscayne Bay Campus *North-South Axis 1:***

Develop an enhanced visual and pedestrian connection extending from the North Quad south to the Koven's Conference Center, along the existing mangrove stand.

## **Objective 1.2**

Develop, protect and enhance Campus Spaces as a sequence of distinct interconnected open spaces. Place future buildings and landscape features to preserve and reinforce the open space network of quadrangles, plazas, promenades, courtyards and special-purpose landscape areas.

### **Policy 1.2.1 UNIVERSITY-WIDE**

Establish a Design Review Process that ensures all future buildings are sited to avoid encroachments upon designated open spaces, major pedestrian corridors and view corridors.

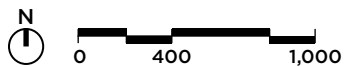
### **Policy 1.2.2**

Secure funding for new and enhanced open spaces by:

1. Allocating proportional costs to future building programs and budgets.
2. Establishing funding line items for open space enhancements.



**FIGURE 3.3 - BBC 2030 URBAN DESIGN PLAN**



DLR GROUP



### **Policy 1.2.3**

Identify and name Campus Spaces as a way to identify and relate each space to its location and proximity to uses or buildings. The naming of spaces, such as Founder's Park, will strengthen the brand of the University and its broader wayfinding strategy.

Four types of Campus Spaces have been identified throughout the three campuses. Variations of each are dependent on the connection to the surrounding context, building engagement and the use of the spaces within the campus:

**Quad:** A quadrangle is a green space that is usually square or rectangular in plan. The sides are entirely or mainly defined by buildings and reinforced by the landscape design. The single most important aspect of a quadrangle is clear spatial definition. The specific qualities of each quad vary with size, purpose and context but all are primarily informal articulated spaces, characterized by open usable green space with a combination of shade trees planted in asymmetrical groups and paths configured to provide direct pedestrian access to key buildings and spaces beyond.

Quads should have significant areas shaded and protected from rain by structures. These should be used for individual and group interaction and study.

**Courtyard:** Courtyards are spaces between or within buildings but are more compact than quads. They offer either private or semi-private spaces providing immediately accessible opportunities for informal outdoor gathering, studying and collaborating. Courtyards are predominately hardscape spaces with landscape material along its edges or as a central focal point.

**Promenade:** Promenades are public places for walking that directly connect one point to another. More than just a wide sidewalk or trail, a promenade is of significant importance with distinct hardscape materials, lighting, pedestrian seating and formal canopy plantings. Promenades may define one edge or bisect a larger space. The space is characterized by pedestrian-friendly features and a clearly defined architectural volume that can allow for congregation as well as settings for small group study areas. Promenades should have continuous areas shaded and/or protected from the rain by structures.

**Plaza:** Plazas occur at points of entry or gateways to the campus, various districts and key buildings throughout the Campus. The specific qualities of each may vary but all will be primarily characterized by hardscape elements and architectural character with canopy trees reinforcing the spatial geometry of the space. Plazas should incorporate significant spaces shaded by and protected from the rain by structures, ample pedestrian seating and aesthetic features such as art.

### **Objective 1.3**

Preserve and enhance Special Purpose Landscapes within the Florida International University campuses to serve as areas for teaching, research, recreation, social gatherings and community engagement. Each has a unique and focused purpose that enhances the pedagogical environment of the campuses.

### **Policy 1.3.0**

#### **MODESTO A. MAIDIQUE CAMPUS**

**- Henington Island:** Preserve the teaching and research environment of Henington Island. Establish a no-build zone.

## **Policy 1.3.1**

### **MODESTO A. MAIDIQUE CAMPUS – The**

**Preserve:** Preserve the teaching and research environment of the Preserve. Establish a no-build zone to ensure the space will remain open for passive recreational use.

## **Policy 1.3.2**

### **MODESTO A. MAIDIQUE CAMPUS –**

**President’s Garden:** Preserve and enhance the existing palm tree collection at the Reagan House as a prominent greenspace feature of the East Gateway campus entrance on SW 107th Ave.

## **Policy 1.3.3**

### **MODESTO A. MAIDIQUE CAMPUS – Palm**

**Collection:** Preserve and enhance the existing palm tree collection in the Green Library Quad to ensure continued teaching and research opportunities.

## **Policy 1.3.4**

### **MODESTO A. MAIDIQUE CAMPUS – The**

**GreenWay:** Create a signature pedestrian corridor and informal landscape that provides a critical stormwater infrastructure function, opportunities for research and teach and connectivity from the Wertheim Performing

Arts Center north to Henington Island and west along the existing service road to the Preserve.

## **Policy 1.3.5**

### **BISCAYNE BAY CAMPUS – The Green Spine:**

Continue the restoration and preservation of the existing mangroves from the southern portion of the campus north to the quad.

## **Policy 1.3.6**

### **BISCAYNE BAY CAMPUS – The BayWalk:**

Continue to develop the coastline as a BayWalk. With over a mile of undeveloped bay-front exposure, providing unequalled connectivity to water and research and teaching opportunities, the BayWalk provides an amenity that is unequalled by most university campuses.



## **Objective 1.4**

**Enhance the internal vehicular circulation of Campus Streets within the FIU campuses to become a binding element within the Campus as well as a means of circulation for visitors, service and emergency access.**

### **Policy 1.4.1 MODESTO A. MAIDIQUE CAMPUS – Campus GreenBelt – Parkway**

Continue to develop the existing ring road into a complete street multi-purpose circulation corridor that defines the limits of the central academic core. This Parkway should be distinguishable from other internal vehicular streets by enhancing its aesthetic character through a well-defined landscape and hardscape palate. A minimum of 80 ft. from building face to building face should be reserved for the Parkway.

## **Policy 1.4.2**

### **MODESTO A. MAIDIQUE CAMPUS – Campus GreenBelt – Main Street**

Develop a more urban condition along the Campus GreenBelt in key student areas and within the Academic Health Center. This “main street” will be similar in character to that of other commercial streets adjacent to traditional universities set in an urban environment, such as Georgia Tech’s Technology Square or MIT’s University Park. A minimum of 80 ft. from building face to building face should be reserved for the Main Street.

## **Policy 1.4.3**

### **MODESTO A. MAIDIQUE CAMPUS – Secondary Streets**

There are several variations of secondary streets within the Modesto A. Maidique Campus. The type is determined by the adjacent building orientation, concentration of activity and adjacent community context.

**Typical** – Varies in number of vehicular travel lanes but is primarily utilized as building service or parking access corridors. Sidewalks are separated from the travel lanes and enhanced with shade trees.

**Urban** – Located within the Academic Health Center and similar to a city streetscape, these streets vary in width but are pedestrian friendly with wide sidewalks, active ground floor building uses, shade trees and street furniture evenly spaced and buildings engaging the streets. Urban streets are often the first impression of the campus for students, staff and visitors.

## **Policy 1.4.4**

### **MODESTO A. MAIDIQUE CAMPUS – Gateways**

There are three primary gateways to the Modesto A. Maidique campus with each intersecting the Campus GreenBelt. The 107th Avenue and 8th Street main entrances are key ceremonial spaces defined by towers and arched walls on each side and formal landscape treatments. The western entrance from SW 117th Avenue should be enhanced to the level of the other two ceremonial entrances. This includes widening the existing drive to allow for a landscaped median with a landscape zone and sidewalks to each side.

The remaining entrances to the campus are secondary gateways. While primarily associated with service access streets to parking structures, these gateways are often the first impression of the campus to many visitors, students, faculty and staff. These streets should be enhanced to include pedestrian friendly elements such as wide sidewalks, canopy trees and campus wayfinding elements. Two new entrances constructed since 2014 should be evaluated.

## **Policy 1.4.5**

### **MODESTO A. MAIDIQUE CAMPUS – Traffic Circle**

Traffic Circles allow for a sense of arrival to various districts within the campus as well as traffic-calming device. Too often, traffic circles are difficult for pedestrian crossings at high volume vehicular and/or pedestrian locations. Future traffic circles should be limited to significant vehicular intersections along the Campus GreenBelt.

## **Policy 1.4.6**

### **ENGINEERING CENTER**

Enhance the entrance from West Flagler Street with materials similar to Modesto A. Maidique Campus. Visually link the two campuses.

## **Policy 1.4.7**

### **ENGINEERING CENTER**

Provide better internal circulation. Develop an internal vehicular street that extends main entrance from Flagler Street to the entry drive from SW 107th Avenue.

## **Policy 1.4.8**

### **BISCAYNE BAY CAMPUS**

Develop a secondary internal vehicular street connection between the academic campus to the north and the conference center to the south west of the existing mangroves to increase campus connectivity.

## **Objective 1.5**

**Define and enhance the Campus Edges to create a welcome and aesthetically pleasing interaction with the surrounding community through the appropriate placement of buildings, massing, and scale based on the existing or proposed character of the surrounding community. Provide an enhanced ground level character and access to existing or proposed transit while still clearly delineating the boundaries of the campus.**

### **UNIVERSITY WIDE**

#### **Policy 1.5.0**

Continue active dialogue with the planning staff of Miami-Dade County, City of Sweetwater, and City of North Miami and other entities within the context area to provide the mutual review of urban design implications of future developments near the campus/community interface.

#### **Policy 1.5.1**

Four types of Campus Edges have been identified throughout the three campuses. Variations of each are dependent on the connection to the surrounding context and the use of the spaces within the campus:

**Active Major:** An active major edge is similar to that of a downtown city streetscape with wide sidewalks, large canopy street trees and building placement that engages the street with appropriate active ground floor façade articulation. While final building placement shall be specific to place, a comfortable distance between building and the curb is between 20 ft. to 30 ft. The distance should remain relatively consistent in order to create a pedestrian friendly condition.

**Active Minor:** An active minor edge has few if any buildings adjacent to the boundary. The edge is delineated by open landscape that separates but maintains visibility and permeability with buildings generally placed between 40 ft. to 60 ft. from the curb.

**Passive Major:** A passive major edge is similar to a traditional public park, generally a large open space with canopy trees, minimal hardscape and a clear understory of lawn or meadow. It has limited permeability, generally screening views into the campus.

**Passive Minor:** A passive minor edge clearly delineates the boundary between the public realm and the campus through the use of dense vegetation and site elements such as decorative walls and fencing. It enhances the visual perception of the University as well as providing buffer element that screens maintenance yards or service areas from the adjacent properties.

## **Policy 1.5.2**

### **MODESTO A. MAIDIQUE CAMPUS**

SW 107th Avenue – North: Develop the edge along SW 107th Avenue from the 8th Street intersection to the north edge of Lake #4 as an active major edge. [Figure 3.1a]

## **Policy 1.5.3**

SW 107th Avenue – South: Develop the edge along SW 107th Avenue at the Reagan House President’s Garden from the north edge of Lake #4 to the SW 17th Street entry as an active minor edge.

## **Policy 1.5.4**

SW 8th Street – East: Pedestrian traffic will significantly increase along SW 8th St between SW 107th Avenue and FIU Gate, the main entrance to campus at SW 112th Avenue with the new Engineering Phase 1 building, the future Complete Streets pedestrian bridge and a future transit center and bus station on the north side of Parking Garage 6. Develop this edge of campus as an active major edge with pedestrian-oriented streetscape development.

## **Policy 1.5.5**

SW 8th Street – West: Future development to the west of the main entrance at FIU Gate will increase the need for parking near Henington Island. Develop the edge along SW 8th Street as a passive major edge that incorporates Henington Island as a special part of the MMC landscape.

## **Policy 1.5.6**

SW 117th Ave: Continue to develop the edge along SW 117th Avenue as a minor passive edge.

## **Policy 1.5.7**

### **ENGINEERING CENTER**

NW 107th Avenue: Develop the edge along NW 107th Avenue as an active major edge, with pedestrian-oriented streetscape at the future transit center and bus station across from the Engineering Center. In future development, pedestrian safety should be addressed at the intersection of W Flagler St and NW 107th Ave due to the proximity of commercial business centers and services.

## **Policy 1.5.8**

West Flagler Street: Develop the edge along West Flagler Street as an active major edge.

## **Policy 1.5.9**

Women’s Park: Continue to develop the edge along Women’s Park as a passive major edge.

## **Policy 1.5.10**

Continue to develop the north edge of the Engineering Center along the residential neighborhood as a minor passive edge.

## **Policy 1.5.11**

### **BISCAYNE BAY CAMPUS**

Develop an edge along Bay Vista Boulevard as a passive major edge.



## Objective 1.6

**Preserve and enhance Campus Landmarks throughout the university as branded, wayfinding and ceremonial elements on campus.**

### Policy 1.6.1

#### UNIVERSITY-WIDE

Locate public and environmental art throughout the campus as landmarks within campus spaces. Site art installations focal points within a Campus Spaces. The location of art is directed by the Public Art Advisory Task Force.

### Policy 1.6.2

#### MODESTO A. MAIDIQUE CAMPUS

Redevelop the Bridge at the Central Quad as a significant landmark element that represents the University. The Bridge has special symbolic meaning to the students, faculty, staff and alumni of the campus. The stature of the Bridge should reflect that significance.

## Objective 1.7

**Maintain and enhance functional Campus Linkages between major campus activity centers.**

### Policy 1.7.1

#### UNIVERSITY-WIDE

Create effective and continuous pedestrian and visual linkages with strong axial orientations. Enhance these linkages with canopy trees, building placement and articulation, varying landscape features and strategically located art pieces.

### Policy 1.7.2

Create a system of interconnected covered walkways, both architectural and landscape, where appropriate to link facilities. There are four types of covered walkways. [Figure 3.4]

**Type A** – Arcade: The covered walkway is integrated into the massing of the building.

**Type B** – Attached Architectural Walkway: The Covered walkway is attached to the building.

**Type C** – Detached Architectural Walkway: The covered walkway is a free standing architectural structure.

**Type D** – Landscape: Shade trees and/or palms provide concentrated shade. Funding will be allocated from building construction budget for the creation of covered walkways.

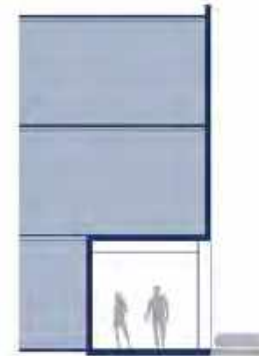


Figure 3.4 - Walkability Type A

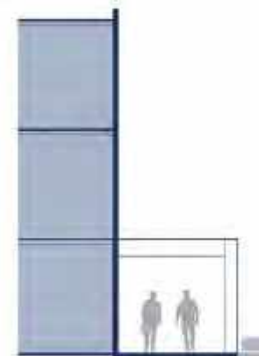


Figure 3.5 - Walkability Type B



Figure 3.6 - Walkability Type C

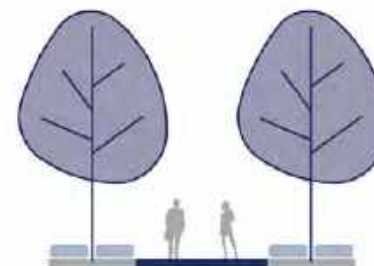


Figure 3.7 - Walkability Type D

**Policy 1.7.3**

Continue to invest in the internal campus transit system.

**Policy 1.7.4**

Cluster academic and support functions with buildings and academic neighborhoods that are characterized by compactness, compatibility of use, continuous pedestrian corridors and covered walkways.

**Policy 1.7.5****MODESTO A. MAIDIQUE CAMPUS**

Distribute campus parking outside the academic core to minimize pedestrian-vehicular conflicts, walking distances, and promote a pedestrian-oriented campus.

**Policy 1.7.6**

Prioritize the improvement of the pedestrian elements of Regulating Axes to establish a hierarchy of pedestrian movement, wayfinding, and institutional significance on campus.

**Policy 1.7.7**

Prioritize the improvements of the pedestrian elements of the Campus GreenWay and GreenBelt to provide a consistency in function and appearance.

**Policy 1.7.8**

Develop a pedestrian connection in the form of a boardwalk or promenade through the Preserve from the Recreation Center to the baseball and track stadiums to safely connect the central campus to the athletic areas of campus.

**Policy 1.7.9****ENGINEERING CENTER**

Enhance pedestrian connection from the western building entrance of Engineering Center to NW 107th Avenue to allow quicker access for pedestrians to the adjacent commercial corridor and proposed transit station plaza. A signaled and tabled intersection should be considered to allow pedestrian safe mid-block crossing on NW 107th Avenue between the Engineering Center and the retail plaza to the west.

## **Policy 1.7.10**

### **BISCAYNE BAY CAMPUS**

Develop a new primary campus entry drive with enhanced landscape materials, bike lanes and minimal parking lot access points to create a heightened campus entry experience.

## **Policy 1.7.11**

Construct an enhanced drop-off adjacent to the Academic Two building with the proposed quad expansion to enhance the sense of arrival. Improve with additional landscape, signage, furnishings and lighting to provide a quality formalized urban space.

## **Policy 1.7.12**

Reconfigure parking lots as needed for greater ease of travel while developing covered pedestrian corridors to the academic core of the campus.

## **Policy 1.7.13**

Reconfigure the existing entry drive as a secondary access to the campus with enhanced landscaping, signage and lighting to promote better wayfinding and a sense of arrival to the campus.

## **Policy 1.7.14**

Improve the entry drive at the Kovens Conference Center with additional planting, lighting and sidewalks.

## **Objective 1.8**

**Organize and place service and loading functions to avoid pedestrian conflicts and minimize visibility from the campus open space system.**

### **UNIVERSITY WIDE**

#### **Policy 1.8.1**

Cluster service and loading areas to minimize service drives and geographic dispersion of service functions.

#### **Policy 1.8.2**

Place service functions in areas screened from major open spaces, with minimum crossing of open spaces by service drives.

#### **Policy 1.8.3**

Screen Service and loading areas with visual and acoustical structures or landscape enclosures that incorporate critical elements for crime prevention based on Environmental Design Principles.

## **Objective 1.9**

**Monitor conformance of future developments with the urban design guidelines referenced herein.**

### **UNIVERSITY WIDE**

#### **Policy 1.9.1**

Review future development compliance with urban design criteria, integrated with the review of architectural and landscape design characteristics.

## **Objective 1.10**

**Develop the campus spatial environment in coordination with the development and phasing of future buildings and landscape improvements.**

### **Policy 1.10.1**

#### **UNIVERSITY WIDE:**

Timing and priorities for development of the spatial environment of the University shall reflect the timing and priorities for future buildings landscape and open space development.

### **Policy 1.10.2**

“Landscaping improvements” as described in Section 16.1 shall create secure, environmentally sound campus settings of rich visual quality that seamlessly integrates new development sites with mature campus landscapes, enhance and define open spaces, reinforce primary campus axes and entryways, and establish a sense of campus character.

## **Objective 1.11**

**Development of the campus spatial environment in coordination with the development and phasing of future buildings and landscape improvements.**

## **UNIVERSITY-WIDE**

### **Policy 1.11.1**

Timing and priorities for development of the spatial environment of the University shall reflect the timing and priorities for future buildings, landscape and open space development.

### **Policy 1.11.2**

“Landscaping improvements” as described in Section 16.1 shall create secure, environmentally sound campus settings of rich visual quality that seamlessly integrates new development sites with mature campus landscapes, enhance and define open spaces, reinforce primary campus axes and entryways, and establish a sense of campus character.

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**FUTURE LAND USE**

## 4.0 FUTURE LAND USE

To accommodate future expansion needs and meet the challenge of shrinking land resources, strategic infill, and renovation, and development is needed to enhance existing campus precincts while supporting growing academic, student life and outreach programs. Future growth should respond to the urban context of the campuses, and avoid competing interests with surrounding host communities while strategically addressing rising sea levels, storm surges, and preservation of environmental resources.

Multi-purpose land-use accommodates the campus' traditional development pattern as a urban campuses with mid to high-rise density to enable vertical zoning of uses as well as university partnerships.

Existing and proposed land use and development patterns within the campus boundaries should be compatible and coordinated with adjacent areas planned by Miami-Dade County, the City of Sweetwater and the City of North Miami.

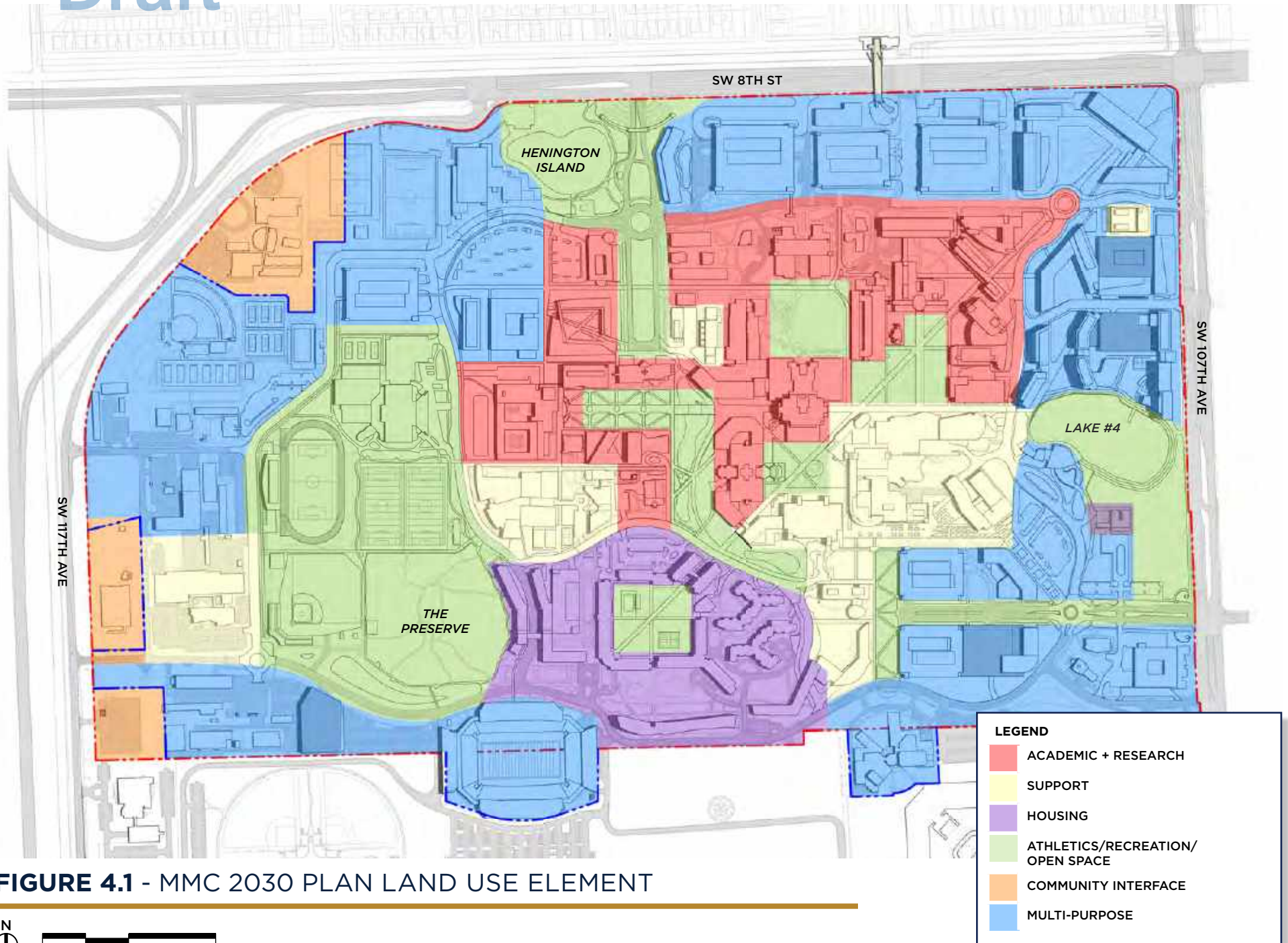
### **Modesto A. Maidique Campus**

At Modesto A. Maidique Campus, the primary goal is to move toward a more pedestrian friendly, connected, and denser campus. [ Figure 4.1]. This can be accomplished through project planning,

programming, design that can fund construction of taller buildings for academic, support and student housing facilities. Highest and best use of the campus core will enable academic programs to co-locate or function within close proximity to one another and maintain critical existing adjacencies that encourage spontaneous encounter and discovery.

Surface parking will be redistributed to multi-story, multi-purpose structures at the campus periphery, reducing vehicular and pedestrian conflicts and creating a safer, more fluid environment in the campus core.

Compact development that promotes compatible adjacencies is encouraged to preserve and strengthen open space and pedestrian corridors. With limited undeveloped land suitable for facility expansion, the University is planning to develop programs that promote joint use and partnerships.



## GOAL 1

Manage land use on the campuses of Florida International University in a manner which facilitates the academic mission, conserves land for future needs, protects valuable natural resources, coordinates with land use policies of the host communities, and addresses the exigencies of global climate change and impacts in this region.

## OBJECTIVES AND POLICIES

### Objective 1.1

#### **Protect Natural Resources:**

**Ensure that future campus development conserves valuable marine, wetlands, surface waters and upland natural resources consistent with Federal, State and Miami-Dade County regulations. Ensure that future campus development projects identified within historic and archeological resources, if any, are consistent with federal, state and local requirements.**

### Policy 1.1.1

Maintain information documenting key development limitations including but not limited to jurisdictional wetlands and habitats of threatened or endangered species.

### Policy 1.1.2

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

### Objective 1.2

**Maintain Land Use Compatibility with the Host Communities: Coordinate with Miami-Dade County, the City of Sweetwater, the City of North Miami, the City of Miami Beach and other entities within the context area to eliminate or minimize present land use conflicts, avoid future land use compatibility problems and ensure that future construction is consistent with height limits established in respective comprehensive plans.**

### Policy 1.2.1

Monitor land use planning activity, development regulations, and proposed developments by Miami-Dade County, Sweetwater, the City of North Miami and other entities within the context area of Modesto A. Maidique and Biscayne Bay Campus.

### Policy 1.2.2

Evaluate the impact of off-campus land use on all on-campus University development activity and document findings as part of the land management review process.

### Policy 1.2.3

Evaluate the impact of on-campus land use on neighboring facilities to minimize conflicts.

### Policy 1.2.4

Evaluate the impact of on-campus building heights on neighboring land uses to minimize conflicts. Although the University is located on State of Florida land and is not required to comply with city regulations, FIU will adhere to city regulations to the greatest extent possible. The University will ensure that all future land uses and structure heights comply with all applicable Federal, State and local aviation regulations.

### Objective 1.3

**Optimize Land Use and Promote Compatible Adjacencies: Develop Modesto A. Maidique, Engineering Campus and Biscayne Bay Campus to ensure compatibility of academic, support and service functions.**

## **Policy 1.3.1**

### **MODESTO A. MAIDIQUE CAMPUS**

As depicted in future land use map, Figure 4.1, implement the following land use patterns:

- Concentrate partnership opportunities along 8th Street that supports corresponding development in Sweetwater.
- Concentrate future academic and directly related support functions inside the loop road to reinforce the planned sequence of major and minor axes, quadrangles and malls.
- Concentrate future academic health science, research and clinical facilities to the northeast corner of the campus, adjacent to similar existing facilities.
- Concentrate the future replacement of University Apartments to south of SW 11th St and within E Campus Circle, Lake #4 and SW 107th Ave. Locate additional housing to the south of campus adjacent to the the Stadium and Performing Arts Center.
- Redistribute surface parking within multi-purpose garages at the campus perimeter to accommodate critical academic facility development within the campus loop road.
- Expand student support facilities adjacent to Graham Center to create a student support core at the main entrance from 107th Street.
- Provide major support, service and outdoor recreational activities along the west and

southwest perimeter of the campus outside of the loop road.

- Develop the southern campus edge with programs that promote joint use and partnerships with the Miami-Dade Youth Fair and Exposition property and Tamiami Park.

## **Policy 1.3.2**

### **ENGINEERING CENTER**

As depicted in the future land use map, Figure 4.2, implement the following land use patterns:

- Provide adequate space along SW 107th Avenue to create an identifiable “public realm” and enhanced transit stop that will not interfere with internal campus roads and traffic.
- Provide adequate open space along Flagler Street to create an identifiable “public realm” and connectivity to the adjacent Women’s Park.
- Create an identifiable pedestrian corridor from Flagler Street to interior facilities.
- Concentrate new facility construction in a manner that reinforces the pedestrian corridor.
- Maintain fenced open space around the Wall of Wind to protect adjacent facilities from damage.
- Maintain support facilities in the northwest corner of the property, screened from public view and under controlled access.

## **Policy 1.3.3**

### **BISCAYNE BAY CAMPUS**

As depicted on the Future Land Use Map, Figure 4.3, implement the following land use patterns:

- Site future facilities to strengthen and protect key open space quadrangles.
- Locate high density, multi-purpose and partnership facilities to the south of the academic core.
- Locate low density, multi-purpose and partnership facilities, such as RCCL and the Wildlife Center, to the north of the academic core.
- Maintain a waterfront park along Biscayne Bay, with unobstructed bay views where possible. Enhance with landscaping.
- Provide sports / recreation open space south of the MAST Academy
- Provide all parking to the west of the academic core to eliminate pedestrian vehicular conflicts.
- Maintain all support and service uses at the northwest corner of campus.
- Maintain conservation zones bordering Oleta State Park to the north, canals and plantings west of the Kovens Center and wetlands / native plant habitats at the southwest corner of the campus.
- Any future installation of facilities, open space or infrastructure, should avoid adverse impacts to the surrounding natural resources.

## **Policy 1.3.4**

As part of the “land management review process” address unanticipated development requirements with the following siting criteria.

- Confirm that all proposed developments within the academic core are directly related to the



academic programs of the University and/or otherwise necessitate a central location. Seek alternative sites outside the academic core for facilities that do not meet this criterion.

- Confirm that all proposed developments outside the academic core meet land use plan guidelines and are directly supportive of the mission of the University. Seek alternative off-campus sites for facilities that do not meet this criterion.

#### **Objective 1.4**

##### **Coordinate with Topographical and Soil**

**Conditions: Ensure that future development on Modesto A. Maidique and Biscayne Bay Campus is consistent with the limitations imposed by topographic and soil conditions.**

##### **Policy 1.4.1**

Maintain information of existing topographic and soil conditions, updated with as-built and survey data developed for future construction projects.

##### **Policy 1.4.2**

Ground level uses of new development should be planned with sea level rise in mind. Uses that will suffer critical damage due to flooding should not be placed on ground level.

##### **Policy 1.4.3**

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

- Phasing and limiting the removal of vegetation

- Minimizing amount of land area that is cleared.

- Limiting the amount of time bare land is exposed to rainfall

- Use of temporary ground cover on cleared areas if construction is not imminent

- Maintaining vegetative cover on areas of high soil erosion (e.g., banks of streams, steep or long slopes, conveyances, etc.).

#### **Objective 1.5**

**Coordinate future development with the availability of Facilities and Services: Maintain coordination with off-campus utility and service providers to ensure adequacy of services and facilities.**

##### **Policy 1.5.1**

FIU shall continue to participate with Miami-Dade County, the City of Sweetwater, the City of Miami Beach and the City of North Miami in the reciprocal review of plans and development proposals, consistent with policies supporting Intergovernmental Coordination Element.

#### **Objective 1.6**

**Provide for the long-term growth of Modesto A. Maidique enrollment by anticipating and planning for the expansion of the campus after 2020.**

##### **Policy 1.6.1**

FIU will continue to pursue an agreement with Miami-Dade County for joint use and development of student recreational and sports activities, parking and other joint uses.

#### **Objective 1.7**

**Minimize Off Campus Constraints/Context Area Conflicts:**

Off-campus constraints and impacts of campus development are anticipated and ameliorated.

##### **Policy 1.7.1**

FIU shall monitor traffic and utility volumes and levels of service, in coordination with Miami-Dade County, the City of Sweetwater, the City of North Miami, other entities within the context area and applicable utility providers. By interlocal agreement with each entity, FIU shall request to be notified of any planned or proposed improvement which may materially affect traffic or utility level of service in the context area. FIU shall request to review and comment upon any off-campus development, which may create conflicts with campus development, prior to the issuance of development approvals or permits.

#### **Objective 1.8**

**Promote compact, efficient and environmentally sensitive land use planning.**

##### **Policy 1.8.1**

Develop campus land uses to maximum densities and intensities applying building height recommendations and gross Floor Area Ratio (total building area divided by total (gross) land area) standards, to the extent possible, in order to maximize campus density while balancing cost considerations.

##### **Policy 1.8.2**

As part of the “land management review process”

ensure adequate provision of stormwater management, open space, safe and convenient on-campus traffic flow and emergency vehicle access.

## **Objective 1.9**

**Coordination of On-Campus Utility Requirements: Ensure the adequate provision of long range infrastructure improvements are consistent with development of a climate action plan and the university-driven direction that all new facilities meet United States Green Building Council (USGBC) standards and be LEED certified.**

### **Policy 1.9.1**

As part of the land management review process, review and evaluate all construction projects to ensure adequate provisions for long range infrastructure needs by documenting:

- Maintenance and protection of planned utility corridors, easements and points of connection

- Provision of adequate utility capacities to accommodate future development and facility expansion

### **Policy 1.9.2**

Maintain an up-to-date file of campus utility systems, updated with as-built survey data from future construction projects.

### **Policy 1.9.3**

Specify in future Five Year Capital Improvement Plans infrastructure improvements and associated costs necessary to support long-range facility needs.

### **Policy 1.9.4**

Encourage and assist the State University System and State Legislative funding procedures to ensure efficient and timely construction and expansion of utility improvements.

### **Policy 1.9.5**

Install instrumentation to record actual utility levels of service to permit optimum utilization of available resources.

### **Policy 1.9.6**

#### **BISCAYNE BAY CAMPUS**

Conduct a survey for all infrastructure, especially chilled water, to ascertain if it remains adequate for future FIU development. All partnership facilities will be developed with their own stand-alone MEP systems.

- Any future installation of facilities or infrastructure should avoid adverse impacts to natural resources

## **Objective 1.10**

### **Develop Consistent and Transparent**

**Administration Procedures to Amend Master Plan: Ensure that master plan amendments undergo appropriate intergovernmental and public review appropriate to the degree of proposed plan modification.**

### **Policy 1.10.1**

All proposed “major” plan modifications which exceed the threshold contained in 1013.30 Florida Statutes must be reviewed and approved in accordance with 1013.30155 Florida Statutes.

### **Policy 1.10.2**

Plan amendments which alone, or in conjunction with other plan amendments, do not exceed the thresholds established in s.1013.30F.S., shall be submitted to the FIU Board of Trustees for review and approval. Prior to and as a part of minor plan modification requests the following review procedures shall be followed.

- Florida International University shall apply criteria for site location suitability.

- Florida International University shall assess the impact of proposed plan modifications on surface waters, wetlands, upland natural resources and historic resources.

- Florida International University shall determine impacts upon utilities, campus pedestrian and vehicular circulation patterns and confirm the ability to meet land needs for planned academic and support structures.

- FIU is encouraged to include submerged vegetation in their planned assessment to determine adverse impacts of proposed plan modifications.

### **Policy 1.10.3**

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

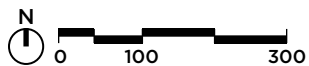


## Engineering Center

The Engineering Center (EC) will remain a preferred location for expansion opportunities of specific academic and research programs in engineering and applied science programs, technology development and industry partnerships. [Figure 4.2] While maintaining an academic core, the EC campus has proximity to adjacent neighborhood mixed uses and has the potential to develop into a research park and innovation hub.

Future development should resemble the patterns found at Modesto A. Maidique Campus, supporting a central open space. Open land should be utilized for the creation of partnerships placemaking, branding, and passive outdoor use.

**FIGURE 4.2 - EC 2030 PLAN LAND USE PLAN**



### LEGEND

- ACADEMIC + RESEARCH
- SUPPORT
- HOUSING
- ATHLETICS/RECREATION/  
OPEN SPACE
- COMMUNITY INTERFACE
- MULTI-PURPOSE



**FIGURE 4.3 - BBC LAND USE PLAN**

## Biscayne Bay Campus

Development at Biscayne Bay Campus should emphasize the unique value of the bayfront while consolidating development patterns implemented prior to this plan, strengthening opportunities for partners to locate facilities near key FIU programs. Partnership facilities should be organized along the perimeter of the campus. [Figure 4.3]

To take advantage of land values and bay views, land on the southern edge of the campus near the wetland restoration area, has been reserved for future development to include a range of uses such as campus workforce housing, academic instruction, research and multi-purpose facilities.

Future installation of facilities, open space or infrastructure should avoid adverse impacts to the surrounding natural resources and maintain unobstructed bay views. Wetland restoration should be carefully integrated with research facilities, board walks and mangroves.

### LEGEND

- ACADEMIC + RESEARCH
- SUPPORT
- HOUSING
- ATHLETICS/RECREATION/  
OPEN SPACE
- COMMUNITY INTERFACE
- MULTI-PURPOSE

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**ACADEMIC &  
RESEARCH FACILITIES**

## 5.0 ACADEMIC & RESEARCH FACILITIES

Strategic expansion of academic and research facilities are required to support FIU's academic mission, meet the needs of projected research, and eliminate facility deficits. To ensure optimum departmental adjacencies, interdisciplinary research, and space utilization, and to conserve precious and declining reserves of buildable land, guidelines call for increasing density within the "academic core" and the designation of flexible development areas. This will strengthen departmental synergies and promote cross-disciplinary activity across colleges. To realize this potential, future facilities should create and reinforce "precincts" to cluster related programs within a compact academic core.

### **Modesto A. Maidique Campus**

Academic and research infill sites are located within close proximity to similar facilities that reinforce each other in use. The northeast corner of the campus is reserved for facilities that house laboratory, research and clinical facilities. These future building sites form a "precinct" defined primarily by academic science and engineering facilities. Additional building sites, for primarily classroom use, surround the Avenue of the Professions. These support Social Science and Arts and Science expansion sites and strengthen the edge of the quadrangle anchored by the Rafael Diaz-Balart Hall on the west and the Green Library on the east.

Building sites for the Colleges of Business, Law, Education and other professional programs are located north of Rafael Diaz-Balart Hall. They reinforce the edge of a pedestrian corridor that runs parallel to the Avenue of the Professions, terminates at Owa Ehan and extends the Main Street created by Parkview Housing Phases I and II.

## GOAL

Provide academic and research facilities adequate to support the academic mission, meet needs of projected student enrollment and eliminate facility deficits by the end of the planning period.

## OBJECTIVES AND POLICIES

### Objective 1.1

#### Timing and Phasing:

**By 2030, FIU will initiate planning, programming, design or construction of future academic and research facility development in the following increments by location:**

	Existing GSF	2030 GSF	Total GSF
<b>MMC</b>	2,106,000	1,086,000	3,192,000
<b>EC</b>	290,000	8,530	298,530
<b>BBC</b>	375,000	130,000	505,000
<b>Total</b>	<b>2,771,000</b>	<b>1,224,530</b>	<b>3,995,530</b>

Includes classrooms, teaching labs, study areas, and research labs. Accounts for new facilities and renovation and expansion of existing structures.

Based on projects included in the 2015-2030 Capital Improvement Plan.

### Policy 1.1.1

Apply space use standards in Chapter 6A-2 in determining future academic building programs and in planning the adaptive reuse of existing facilities to ensure optimum utilization of academic facilities.

### Policy 1.1.2

Define building and facility use priorities strictly on the basis of academic need. Specific priorities for development of future facilities, including academic facilities, are described in Capital Improvements Element Table 14.1. Additional academic and research facility priorities shall be established strictly on the basis of academic and research space need.

### Policy 1.1.3

Eliminate facility deficits by modifying facility programming and funding request procedures as follows:

Submit facility requests 3-4 years prior to projected need, rather than current need, to accommodate lag time in facility planning, funding, design and construction.

- When planning funds become available, architects prepare a detailed program and use programs to coincide with facility requests and real space needs.

### Policy 1.1.4

Unanticipated academic facility development opportunities which are determined to be consistent with the academic mission and current/planned programs shall be accommodated in planned but unassigned future academic buildings.

To encourage more efficient development, all new academic and research facilities should be multi-disciplinary, a minimum of six stories, and adhere to a minimum square footage of approximately one hundred thousand (100,000) gross square feet. The Campus Master Plan will be amended as necessary to incorporate any new and unforeseen academic facilities.

## Policy 1.1.5

Apply building design and construction criteria to encourage energy efficiency including cost containment guidelines, active and passive solar design features and life cycle (capital and operating) cost analysis.

## Policy 1.1.6

Apply building design and construction criteria that supports the Research I status of the University, addressing fully all the special needs associated with research and scientific buildings.

Planning modules, based on programmatic function, are incorporated into the master plan to accommodate flexibility for future uses while maintaining an efficient building footprint. In addition to site-specific considerations, buildings should be oriented with their longest sides facing north-south to optimize solar control. The following building module widths are incorporated into the master plan:

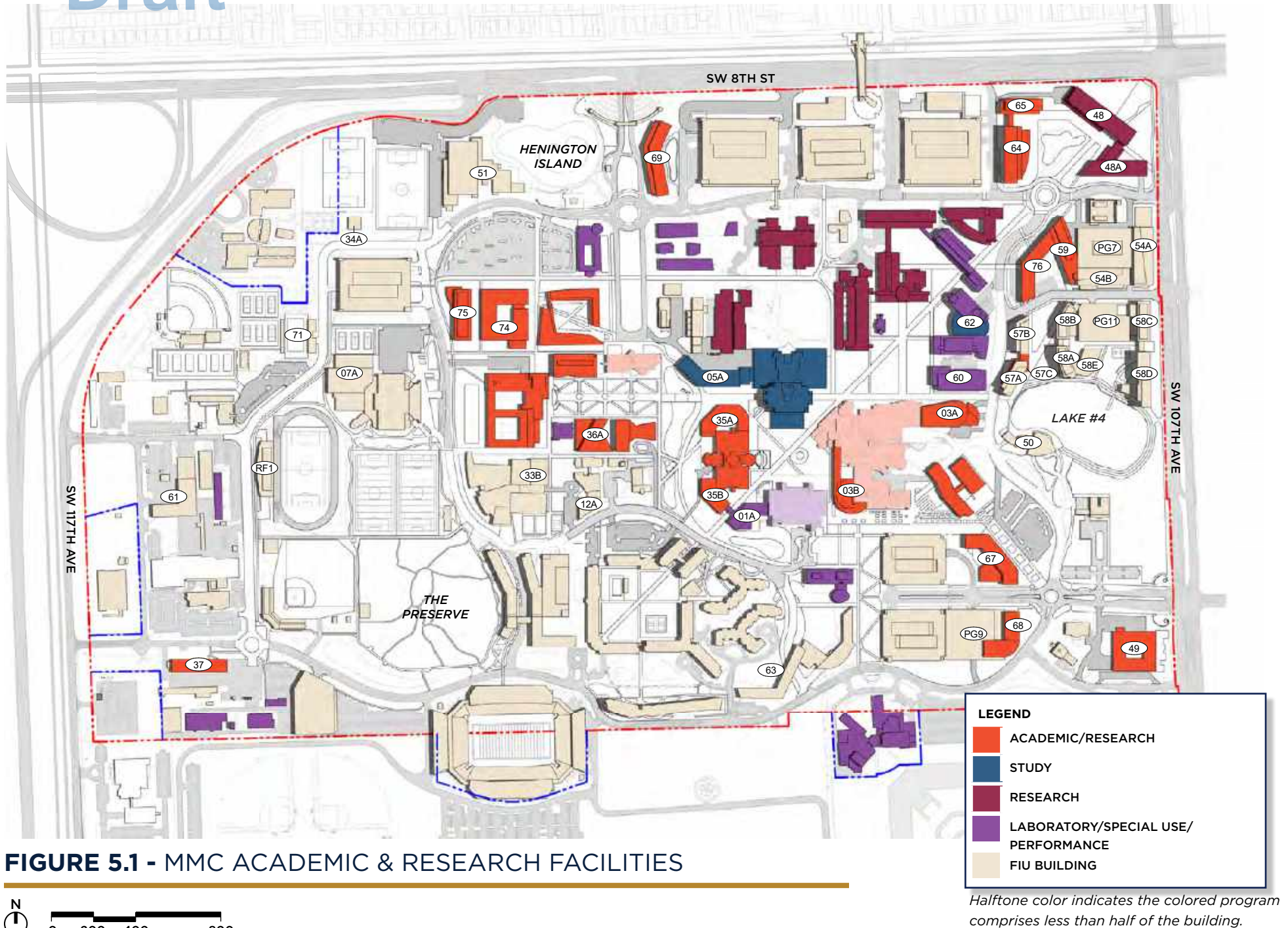
	Building Module Width	Min. Floor-to-Floor Height
<b>Housing</b>	55'-0" - 75'-0"	10'-0"
<b>General Academic, Office</b>	70'-0" - 75'-0"	14'-0"
<b>Research Laboratory, Healthcare</b>	85'-0" - 100'-0"	16'-0"
<b>Athletics and Recreation (Indoor)</b>	varies	25'-0"

## Projects Summary

ACADEMIC PH2			FLOORS
05A	LIBRARY/STUDY EXPANSION	81,346 SF	5
35A	ACADEMIC 2	40,901 SF	2
35B	SCIENCE & HUMANITIES CENTER (DM ADDITION)	35,961 SF	2
37	ACADEMIC 1	31,200 SF	1
48A	ENGINEERING PH2	94,154 SF	4
57C	HONORS COLLEGE	36,984 SF	2
59	AHC/INTERDISCIPLINARY 3	106,388 SF	5
60	SCIENCE LABORATORY COMPLEX	125,616 SF	5
62	AHC STUDY COMPLEX	62,568 SF	5
64	AHC/INTERDISCIPLINARY 1	195,631 SF	9
65	AHC/INTERDISCIPLINARY 2	71,091 SF	6
67	ACADEMIC 6	112,496 SF	4
68	ACADEMIC 7	73,382 SF	5
69	ACADEMIC 8	112,008 SF	4

OPTIONAL MULTI-PURPOSE			
74	ACADEMIC	138,600 SF	4
75	ACADEMIC	83,308 SF	4
76	ACADEMIC	93,963 SF	5

*Project square footage and height are shown for preliminary planning purposes and should be confirmed with FIU.*





## **Objective 1.2**

Locations:

Locate future academic and research facilities to create and reinforce precincts, college identity and to cluster related programs within a compact “academic core”.

### **Policy 1.2.1**

Implement the four open space types (quad, courtyard, promenade, plaza) as outlined in Element 3.0 Urban Design to give identity to academic clusters or create pedestrian connections between them.

## **MODESTO A. MAIDIQUE CAMPUS**

Academic and research infill sites are located within close proximity to similar facilities that reinforce each other in use. [Figure 5.1 – MMC Academic & Research Facilities]

The northeast corner of campus is reserved for facilities that house laboratory, research and clinical facilities. These future building sites form an academic neighborhood defined primarily by academic science and engineering facilities.

Additional building sites, for primarily classroom use, surround the Avenue of the Professions. These support Social Science and Arts. The construction of Engineering 1 at the northeast corner of campus is the first project

in establishing an academic sciences complex, with Engineering 2.

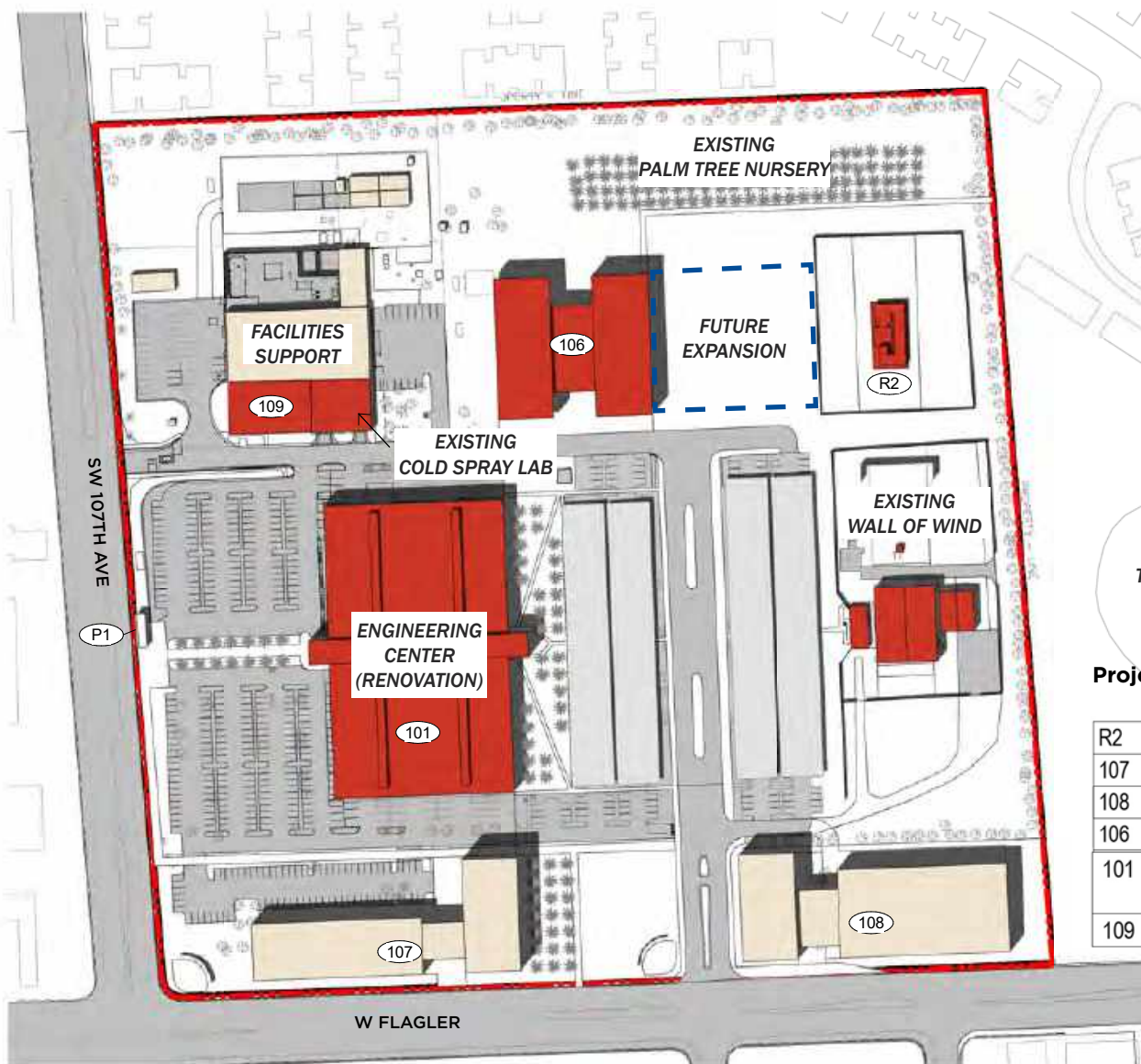
Building sites for the Colleges of Business, Law, Education and other professional programs are located north of Rafael Diaz-Balart Hall. They reinforce the edge of a pedestrian corridor that runs parallel to the Avenue of the Professions, terminates at Owa Ehan and extends the Main Street created by Parkview Housing Phases I and II.

## **ENGINEERING CENTER**

A future academic and research facility is located adjacent to the existing building, defining a central quadrangle. [Figure 5.2A and Figure 5.2B]

## **BISCAYNE BAY CAMPUS**

Two future laboratory/research facilities are proposed to the south of Academic Two. Aligned with the existing Marine Biology building, the future facilities enclose an academic quadrangle focused around the existing pond. [Figure 5.3A and Figure 5.3B]



## Engineering Center

Planning for the 10-year projected Academic and Research space need is accommodated at MMC. With no programs anticipated to relocate to EC, this plan envisions EC as a research park with purpose-built facilities. A high-bay research facility should be sited at the north end of the central greenspace with adequate space that can function as a buffer from noise at the Wall of Wind expansion.

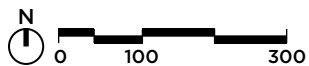
## Projects Summary

			FLOORS
R2	WALL OF WIND EXPANSION		1
107	PARTNERSHIP 1	TBD	5
108	PARTNERSHIP 2 (HIGH-BAY FLEX)	TBD	3
106	HIGH-BAY RESEARCH	TBD	3
101	ENGINEERING CENTER RENOVATION & INFILL	TBD	1 (EXIST.)
109	COLD SPRAY LAB	8,530 SF	1

## LEGEND

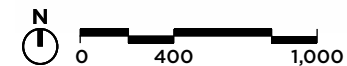
- RESEARCH
- FIU BUILDING

**FIGURE 5.2 - EC ACADEMIC & RESEARCH FACILITIES**





**FIGURE 5.3 - BBC ACADEMIC & RESEARCH FACILITIES**



## Biscayne Bay Campus

Future facility expansions anticipated in the 2030 Plan include an academic expansion for Hospitality Management, and an expansion to the School of Environment, Arts and Society (SEAS) at the core of campus. The SEAS expansion is intended to enclose and complete a central quad framed by Wolfe University Center, Academic One, Two and the Marine Sciences Building. In addition, this expansion will activate the north-south central pedestrian spine and define its eastern edge.

## Projects Summary

			FLOORS
N01B	GRADUATE HOSPITALITY	32,000 SF	3
N13A	SEAS EXPANSION	42,000 SF	3
N14	ENVIRONMENTAL COMMUNICATIONS	34,000 SF	2
N15	MEDIA INNOVATION CENTER	22,000 SF	3
N20	MULTI-PURPOSE A	TBD	4
N21	MULTI-PURPOSE B	TBD	5
N22	MULTI-PURPOSE C	TBD	4
N23	MULTI-PURPOSE D	TBD	4

## LEGEND

- ACADEMIC/RESEARCH
- STUDY
- RESEARCH
- MULTI-PURPOSE
- FIU BUILDING

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**SUPPORT FACILITIES**

## 6.0 SUPPORT FACILITIES

The pre-existing unmet need for academic and non-academic space from the University's rapid growth over the last two decades will also drive additional need for campus support facilities. The majority of these projected needs are found in office space, much of which is accounted for within academic facilities. Funding mechanisms instituted at the SUS level will continue to play an integral role in the fulfillment of FIU's goals, objectives and policies as related to the continued adequate provision of on-campus support facilities [Figure 6.1: Modesto A. Maidique Campus, Figure 6.2: Engineering Center and Figure 6.3: Biscayne Bay Campus for locations of support facilities].

In addition to academic, student life and physical support space need, Florida International University (FIU) must become more aware of its limited land availability for athletics and recreation at Modesto A. Maidique. FIU is considering a new Athletic and Recreation Master Plan, which will be carefully evaluated and studied with Miami/Dade County. FIU will continue its practice of careful and constant planning as it continuously re-evaluates the support facility needs of the University at Modesto A. Maidique Campus, Engineering Center and Biscayne Bay Campus.

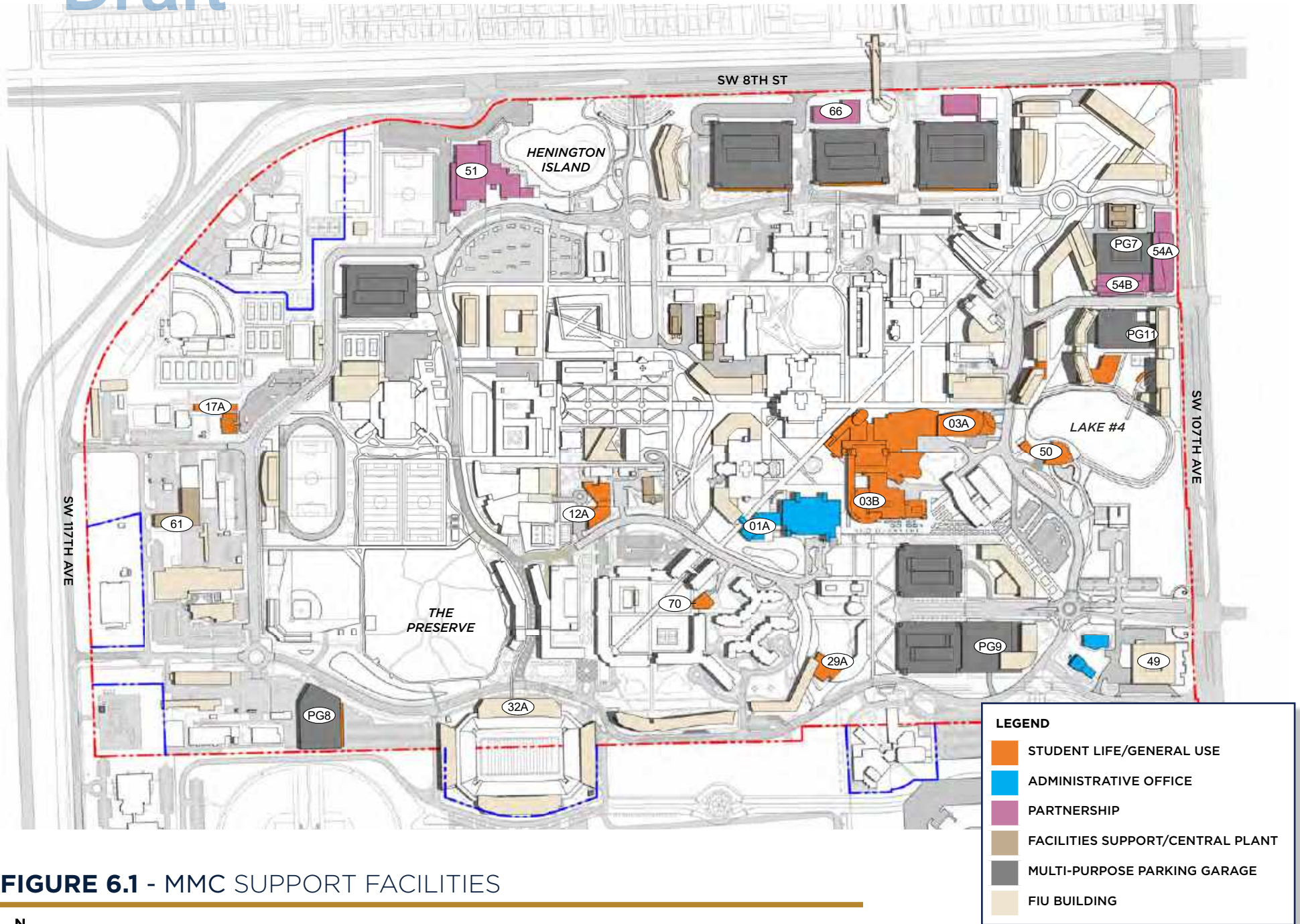
*Project square footage and height are shown for preliminary planning purposes and should be confirmed with FIU.*

### Modesto A. Maidique Campus

Future maintenance and facility operations functions should be concentrated on the western edge of campus, with additional physical plant support spaces located in all new parking garages. General use and student auxiliary support space should be located adjacent to the Graham Center. Throughout campus, student support services should be integrated within all new student housing development by designating the first floor of each building as multi-purpose space. Retail dining hubs with study space hubs should be incorporated at new and existing academic buildings in accordance with the FIU auxiliary services business plan to create profitable and consistent nodes of service.

#### Projects Summary

PARTNERSHIP PH2			FLOORS
51	PARTNERSHIP	TBD	4
54A	PARTNERSHIP	120,000 SF	4
54B	PARTNERSHIP	100,000 SF	4
66	PARTNERSHIP	38,292 SF	2
STUDENT SERVICES PH2			FLOORS
01A	CENTRAL HUB (PRIMERA CASA ADDITION)	TBD	3
03A	GRAHAM CENTER ADDITION	102,272 SF	1
03B	GRAHAM CENTER ADDITION	36,200 SF	1
12A	STUDENT HEALTH EXPANSION	9,525 SF	1
17A	CHILDREN'S CREATIVE LEARNING CENTER	TBD	1
29A	MUSEUM EXPANSION	TBD	6
70	HOUSING DINING FACILITY	4,885 SF	1
STUDENT SERVICES PH1			
49	CASACUBA	57,876 SF	2
SUPPORT			FLOORS
61	FACILITIES 1	44,358 SF	2



**FIGURE 6.1 - MMC SUPPORT FACILITIES**



## Engineering Center

The Engineering Center should maintain campus support and maintenance functions in the northwest portion of the campus.

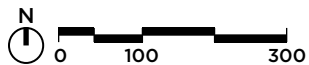
## Projects Summary

			FLOORS
107	PARTNERSHIP 1	TBD	1
108	PARTNERSHIP 2	TBD	1

## LEGEND

- FACILITIES SUPPORT
- PARTNERSHIP
- FIU BUILDING

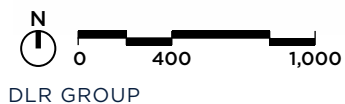
**FIGURE 6.2 - EC 2030 PLAN SUPPORT FACILITIES**







**FIGURE 6.3 - BBC 2030 PLAN SUPPORT FACILITIES**



## Biscayne Bay Campus

Support space should be incorporated into the first floor of new facilities, similar to Modesto A. Maidique Campus. This also supports a strategic response to resiliency requirements in a coastal location. Flexible, informal, office and meeting space is the most appropriate facility investment on sites that are subject to storm surges and sea-level rise. Existing physical plant facilities should be expanded to serve projected campus growth and provide adequate chilled water for FIU facilities. Campus facility support should continue to be located in the northwest corner of campus.

## Projects Summary

			FLOORS
S05	FACILITIES SUPPORT	11,000 SF	1

## LEGEND

- STUDENT LIFE
- FACILITIES/CAMPUS SUPPORT
- PARTNERSHIP SITES
- FIU BUILDING



## GOAL

Provide support facilities necessary to correct present deficits and meet the needs of projected student enrollments through the planning period.

## OBJECTIVES AND POLICIES

### Objective 1.1

#### Identify Critical Facility Needs and Required Locations:

**Develop future support facilities including office, administrative, maintenance and related support services. Phase and located facilities to correct prioritized deficiencies and meet projected needs.**

#### Policy 1.1.1

##### MODESTO A. MAIDIQUE CAMPUS

Concentrate maintenance and facility operations functions on the western edge of campus. Locate additional physical plant support spaces in all new parking garages.

#### Policy 1.1.2

Locate general use/campus support space adjacent to Graham Center.

#### Policy 1.1.3

Locate general use/campus support space adjacent to Graham Center.

#### Policy 1.1.4

Integrate student support services within student housing and all new facility development by designating the first floor of each building as multi-purpose space.

#### Policy 1.1.5

Incorporate retail dining hubs with study space hubs at new and existing academic buildings in accordance with the FIU auxiliary services business plan to create profitable and consistent nodes of service.

#### Policy 1.1.6

##### ENGINEERING CENTER

Maintain campus support and maintenance functions in the northwest portion of the campus.

#### Policy 1.1.7

##### BISCAYNE BAY CAMPUS

Maintain campus support and maintenance functions in the northwest quadrant of the campus.

#### Policy 1.1.8

Incorporate retail dining hubs with study space hubs at new and existing academic buildings in accordance with the FIU auxiliary services business plan to create profitable and consistent nodes of service.

#### Policy 1.1.9

Provide multi-purpose support spaces within all new facilities, reserving the first floor for flexible office, study and meeting space as well as student oriented retail.

#### Objective 1.2

Integrate Phasing and Funding:

Develop support facilities to reflect prioritized needs. Take advantage of partnerships and non-traditional opportunities to secure funding necessary to address projected needs.

## Policy 1.2.1

Integrate Phasing and Funding:

Develop support facilities to reflect prioritized needs. Take advantage of partnerships and non-traditional opportunities to secure funding necessary to address projected needs.

	Existing (Fall 2019)	2030	Total GSF
MMC	1,301,000	375,000	1,676,000
EC	36,000	11,000	36,000
BBC	638,000	36,000	649,000
TOTAL GSF	1,975,000	386,000	2,361,000

Includes food service, student lounge, merchandising, athletics, recreation and health care. Based on 2015-2030 CIP (see 14.0 Capital Improvements).

## Policy 1.2.2

Accommodate support facility development opportunities which are determined to be consistent with the academic mission and current/planned programs in:

-Planned but unassigned future support buildings

-Designate building sites depicted in the Future Land Use Plan.

Amend the Campus Master Plan as necessary to incorporate any new and unforeseen support facilities.

## Objective 1.3

### Funding:

**Secure funding necessary to develop support facilities projected to be needed through the planning period.**

## Policy 1.3.1

Supplement normal CIP funding requests with resources, which may be available from pursuing joint development agreements with Miami- Dade County Parks and Recreation Department, and the Miami- Dade County Fair and Exposition.

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HOUSING

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## 7.0 HOUSING ELEMENT

As FIU matures in its stature as a leading educational institution, the need for appropriate affordable on-campus housing continues to grow. On-campus housing must adapt to both changing student needs and preferences, as well as the proximity of new off-campus, developer-provided housing that targets FIU faculty, staff and students. FIU is committed to providing a variety of housing types and styles to support student success and the amenities that a 24/7 resident population brings to all students (both commuting and virtual).

To promote housing availability and supply, FIU will actively plan with local community and development partners for the availability of an adequate supply of affordable housing units and support facilities both on-campus and off-campus. Furthermore, FIU will provide a variety of high quality alternatives to traditional dormitories to reflect user preferences and particular student classifications such as honors students, graduate students, international students, researchers, married students and members of sororities and fraternities.

Housing facilities at FIU should promote sustainable site standards, living learning communities, and walkability. New facility design should be multi-purpose and multi-story, incorporating student support and parking facilities. The completion of Parkview Housing provides a precedent on how new facilities can be designed to achieve this level of integration and flexibility.

### Modesto A. Maidique Campus

Student housing is located in east campus and south central campus. Future housing is proposed to increase in height, to promote increased density and open space. It should be located consistent with the housing business plan, providing 2,000 new beds for undergraduate students (including the Honors College) and replacing the University Apartments with facilities to house this new capacity. The recently constructed promenade adjacent to Tamiami hall will be extended east to connect with PG1 & PG2 via the proposed bridge over Lake #6 terminating between MARC and the Frost Museum. The Honors College Residence Hall should be explored with a stand-alone presence on campus, with potential to increase recruitment and retention of students.

### Projects Summary

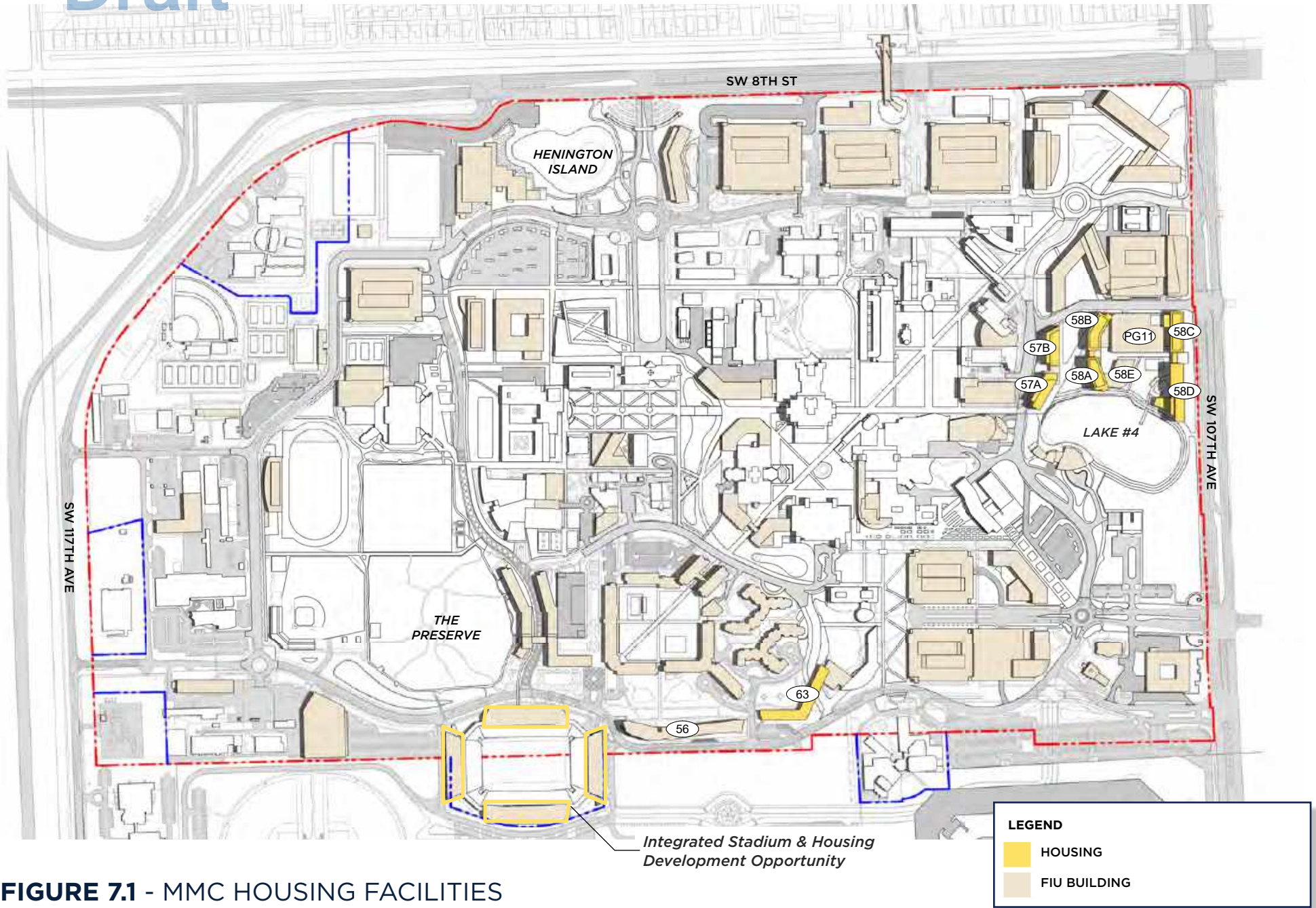
HOUSING PH2			FLOORS	450 GSF/BED
57A	HONORS COLLEGE RES HALL	91,944 SF	12	~228 BEDS <sup>1</sup>
57B	EAST RESIDENCE HALL A	115,604 SF	12	~235 BEDS
58A	EAST RESIDENCE HALL B	146,984 SF	16	~328 BEDS
58B	EAST RESIDENCE HALL C	136,348 SF	12	~305 BEDS
58C	EAST RESIDENCE HALL D	147,300 SF	12	~330 BEDS
58D	EAST RESIDENCE HALL E	273,046 SF	16	~574 BEDS
63*	MAINSTREET HOUSING	TBD	TBD	TBD

APPROX. 2,000 BEDS

*Project square footage and height are shown for preliminary planning purposes and should be confirmed with FIU. Excludes projects in the 5-year plan that are funded, likely funded or under construction.*

<sup>1</sup> *Specific size of academic space and number of beds for the new Honors College to be confirmed by FIU.*





**FIGURE 7.1 - MMC HOUSING FACILITIES**



**FIGURE 7.2 - BBC HOUSING FACILITIES**

## Biscayne Bay Campus

Student housing at Biscayne Bay Campus is located along the north-south central spine, adjacent to the academic quadrangles.

Current development for 1,000 beds is underway at SW 8th and SW 109th Ave, for the expansion of student housing to serve FIU students, faculty and staff in Sweetwater.

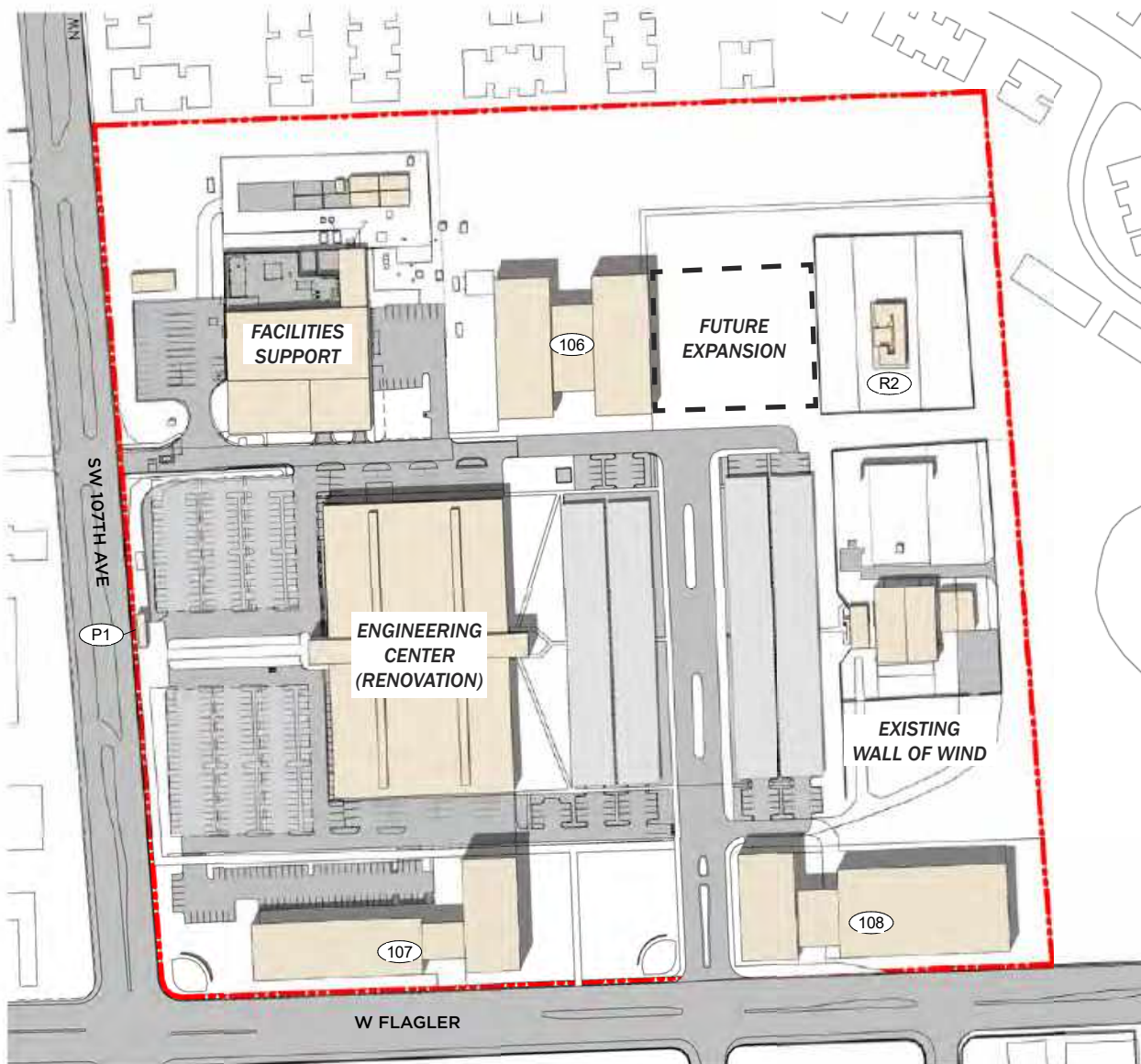
No additional housing at BBC is being considered in this master planning period.

	Bed Count
Existing (Fall 2019)	680

### LEGEND

- UNDERGRADUATE HOUSING
- PARTNERSHIP HOUSING
- FIU BUILDING





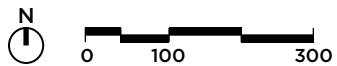
## Engineering Center

Student housing is not currently located at the Engineering Center.

Current development for 1,000 beds is underway at SW 8th and SW 109th Ave, for the expansion of student housing to serve FIU students, faculty and staff in Sweetwater.

No future student housing is anticipated at EC.

**FIGURE 7.3 - EC 2030 PLAN**



## GOAL

Florida International University shall assist all students in securing adequate, affordable on- and off-campus housing through the planning period.

## OBJECTIVES AND POLICIES

### Objective 1.1

**Promote Housing Availability and Supply: Actively plan with local community and development partners for the availability of an adequate supply of affordable housing units and support facilities both on campus and off-campus.**

#### Policy 1.1.1

##### UNIVERSITY-WIDE

Provide a variety of residential unit types to reflect user preferences and particular student classifications (undergraduate, honors, and graduate housing)

#### Policy 1.1.2

Provide support services and facilities within a 5 minute walking distance of each housing development to include:

- Dining facilities
- Recreation and open space commons
- Meeting and study space
- Offices for Student Services and Student Organizations

#### Policy 1.1.3

Construct new housing as multi-purpose facilities and incorporate amenities that improve pedestrian and bicycle-oriented transportation.

#### Policy 1.1.4

To ensure an adequate supply of housing as the phased demolition of University Village Apartments occurs, FIU will provide a surplus of student housing to accommodate displaced beds.

#### Policy 1.1.5

Provide handicapped accessible units, in compliance with Americans with Disabilities Act for no less than five percent of on-campus housing.

#### Policy 1.1.6

##### MODESTO A. MAIDIQUE

Provide a total of 5,739 on-campus housing beds by the end of the planning period, contingent on demand. Develop a strategy to accommodate the unmet need for additional beds and the phased demolition of University Village Apartments in the first half of the next planning period or through partners. The beds will be distributed generally as follows:

	Bed Count
<b>Existing (Fall 2019)</b>	3,645
<b>Planned (under construction + CIP)</b>	676
<b>Planned Demolition (UA)</b>	582
<b>Future Housing Development</b>	1,772
<b>Honors College Residence Hall</b>	228

#### Policy 1.1.7

Locate housing consistent with the housing business plan as follows:

In total, FIU will provide 2,000 new beds for undergraduate students, including the Honors College. Replace the University Apartments

with facilities to house this new capacity. This would create a significantly higher density of student housing, and would increase parking demand by approximately 1000 spaces , using a 2:1 ratio of beds to stalls.

Extend the recently constructed promenade (adjacent to Tamiami hall) east to connect with PG1 & PG2 via the proposed bridge terminating between MARC and the Frost Museum.

Plan for future housing adjacent to the Frost Museum and Lakeview South.

The Honors College Residence Hall should be explored as a living-learning experience with a stand-alone presence on campus, with potential to increase recruitment and retention of students.

#### **Policy 1.1.8**

Prioritize funding and phase housing development, consistent with the campus housing business plan and the Capital Improvement Plan.

#### **Policy 1.1.9**

Evaluate the demand and financial feasibility of a future privately developed hotel to serve the

Modesto A. Maidique Campus and expanded partnerships.

#### **Policy 1.1.10**

##### **BISCAYNE BAY CAMPUS**

Maintain existing on-campus housing beds, contingent on demand. No additional housing is proposed at this time. BBC includes a total of 680 existing beds (Fall 2019).

#### **Policy 1.1.11**

##### **OFF-CAMPUS HOUSING**

Monitor the anticipated adequacy and affordability of off-campus housing to serve the needs of students, faculty and staff through a bi-annual campus survey.

#### **Policy 1.1.12**

Work with the City of North Miami, Sweetwater, and Miami Dade Planning Department to state current trends and forecast supply and availability.

#### **Objective 1.2**

##### **Remove or Improve Substandard Housing:**

**Monitor and evaluate housing deficiencies and ensure the timely elimination of substandard student housing and the infrastructure (electrical, mechanical, plumbing, etc.) and aesthetic improvement of existing student housing.**

#### **Policy 1.2.1**

##### **UNIVERSITY-WIDE**

Provide handicapped accessible units, in compliance with Americans with Disabilities Act for no less than five percent of on-campus housing.

#### **Policy 1.2.2**

Annually monitor the condition, deficiencies and repair needs of existing housing at both campuses consistent with the policies and procedures established by the Facilities Maintenance Element.

#### **Policy 1.2.3**

Monitor housing demands and develop a business plan to support housing needs in a timely fashion at both campuses.



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**RECREATION & OPEN  
SPACE**

80

## 8.0 RECREATION & OPEN SPACE

Six categories of open space have been identified in the master plan including: multi-purpose open space, athletics, special purpose landscape, recreational open space, courtyard/plaza, and campus gateways. Each one of these categories is integral to the overall urban design campus plan open space framework for each campus, and remain an important aspect of campus design as student enrollment increases. Encroachment by development on these areas is discouraged in order that the natural resources of each campus are conserved.

The 2030 Master Plan Update identifies the need for additional on-campus recreation facilities and the development and preservation of open space to support these uses. Due to increased pressure at Modesto A. Maidique to utilize its available land for academic facilities, active recreational activities are limited to the western edge of campus, which is experiencing yet further constraints due to the construction of additional support facilities. Space and recreational facilities are limited in supporting FIU's goals for student engagement, success and wellness. The University has had to limit its long-range growth in on-campus recreation and look for off-campus joint use facilities. Whether for intercollegiate or intramural activities, students need these amenities to remain connected to the University.

### Modesto A. Maidique Campus

Currently, the majority of recreational facilities are located at the western edge of campus. In response to increased pressure, negotiations with Miami-Dade County for possible joint use of Tamiami Park should remain as a constant tool to use for additional recreational facilities – which it already relies upon for student use.

These properties are key for satisfying demand for both recreational and academic/research facilities. In addition to active recreation,

improved open space that promotes easy access and campus movement is critical. FIU will continue to work with with the Miami-Dade County Park and Recreation Department (MDPR) regarding the recreation and open space needs for both the University and Miami-Dade County.

Proposed new event and food-truck plazas, upgrades to historic heritage open spaces and quadrangles as well as the protection of specimen trees is anticipated to significantly enhance campus outdoor space.

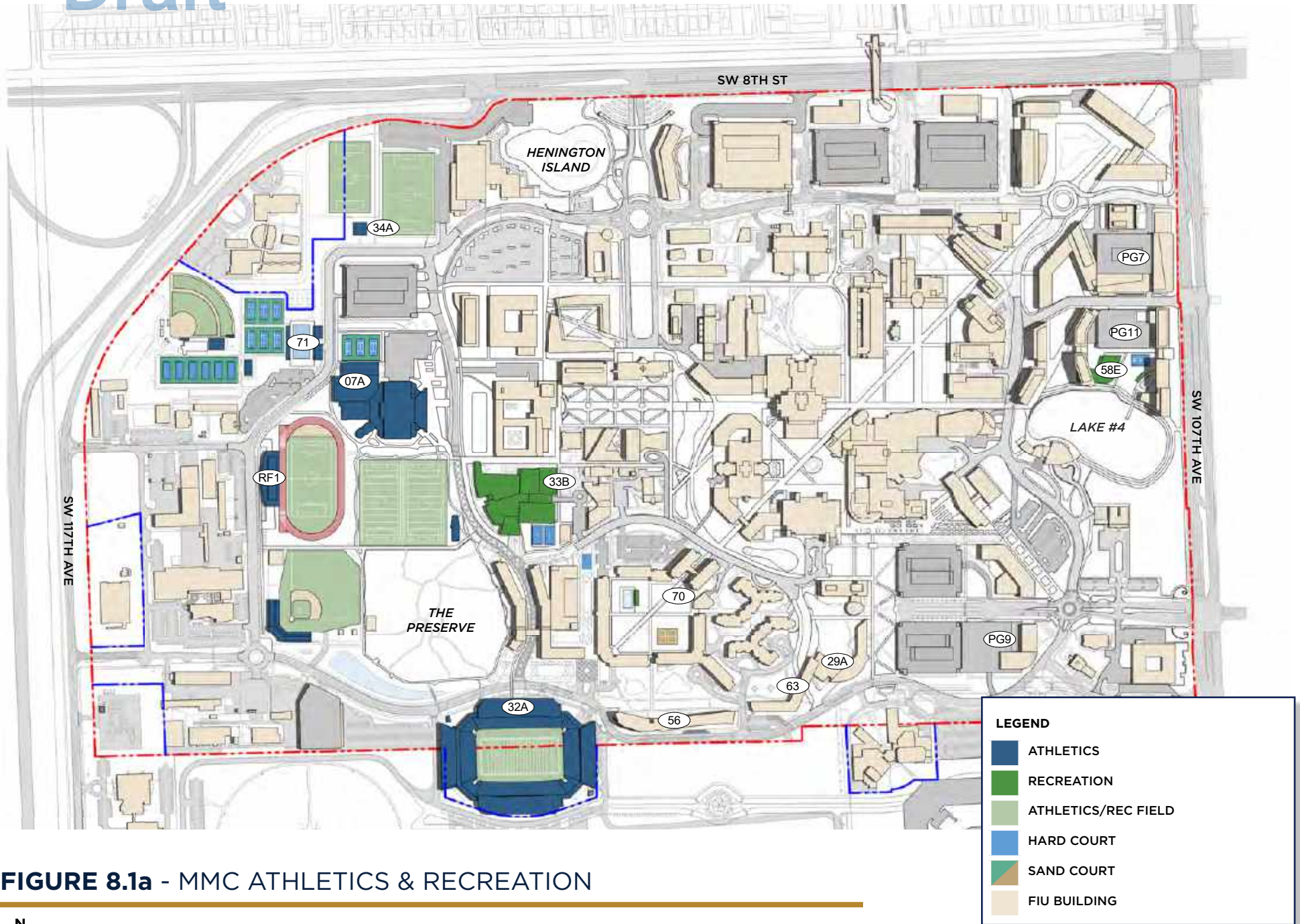
### Projects Summary

ATHLETICS			FLOORS
07A	INDOOR TRAINING FACILITY	47,666 SF	1
32A	STADIUM UPPER BOWL EXPANSION	103,600 SF	1
34A	NORTH FIELD REC SUPPORT BUILDING	3,600 SF	1
71	ACQUATIC COMPLEX	16,242 SF	1
RF1*	TRACK & FIELD BUILDING*	43,448 SF	1

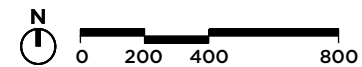
RECREATION			FLOORS
33B	REC CENTER EXPANSION EAST	29,973 SF	2
58E	EAST VILLAGE REC CENTER	26,370 SF	2
72	EAST VILLAGE POOL HOUSE	885 SF	1
73	UNIVERSITY PARK POOL HOUSE	1,400 SF	1

*Project square footage and height are shown for preliminary planning purposes and should be confirmed with FIU. Excludes projects in the 5-year plan that are funded, likely funded or under construction.*

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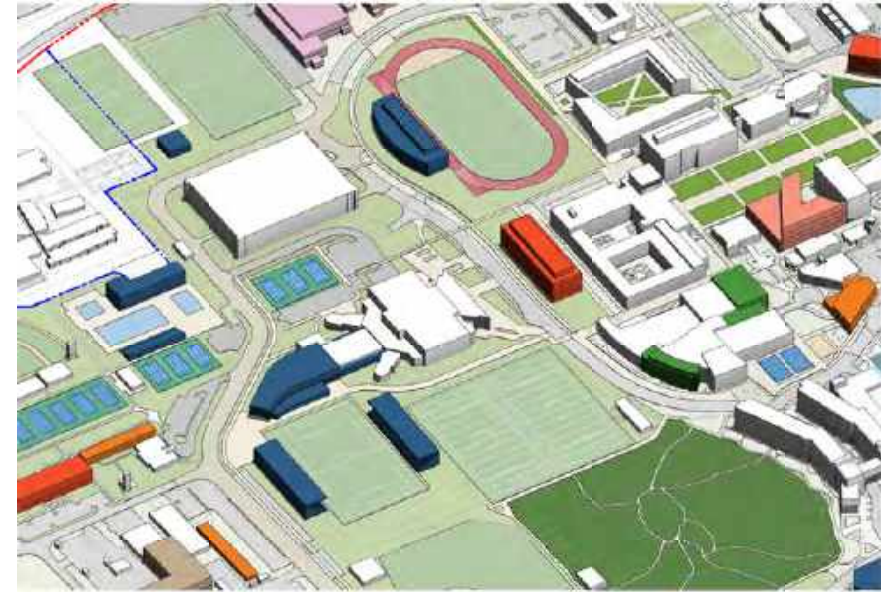
**FIGURE 8.1a - MMC ATHLETICS & RECREATION**







**BASELINE (CURRENT MASTER PLAN)  
COMBINED SOCCER FIELD & TRACK**

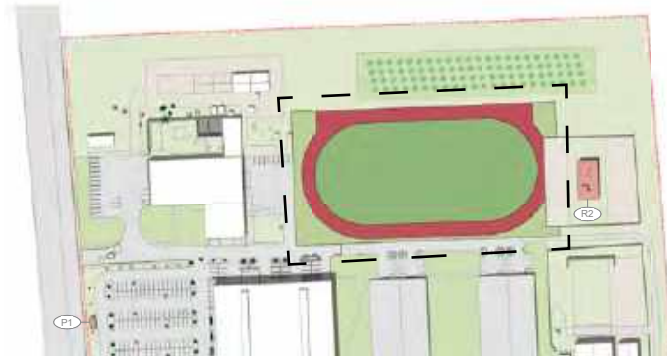


**STUDY 1  
NEW SOCCER STADIUM  
NEW TRACK & FIELD AT LOT 9**

Alternatives to the current FIU Master Plan for MMC 2015-2030 were studied, including Lot #9 and the Engineering Center.

Option 1 tests a soccer stadium as a separate facility from the track and field site. The track located north of the FIU Ocean Bank Arena provides capacity for the existing soccer field site to integrate a new indoor training facility and accommodates separate scheduling for track and field and soccer.

Option 2 at the Engineering Center is considered not viable given the only site that requires no demolition conflicts with the future Wall of Wind expansion area and would require removal of the Palm Tree Nursery to allow for seating.

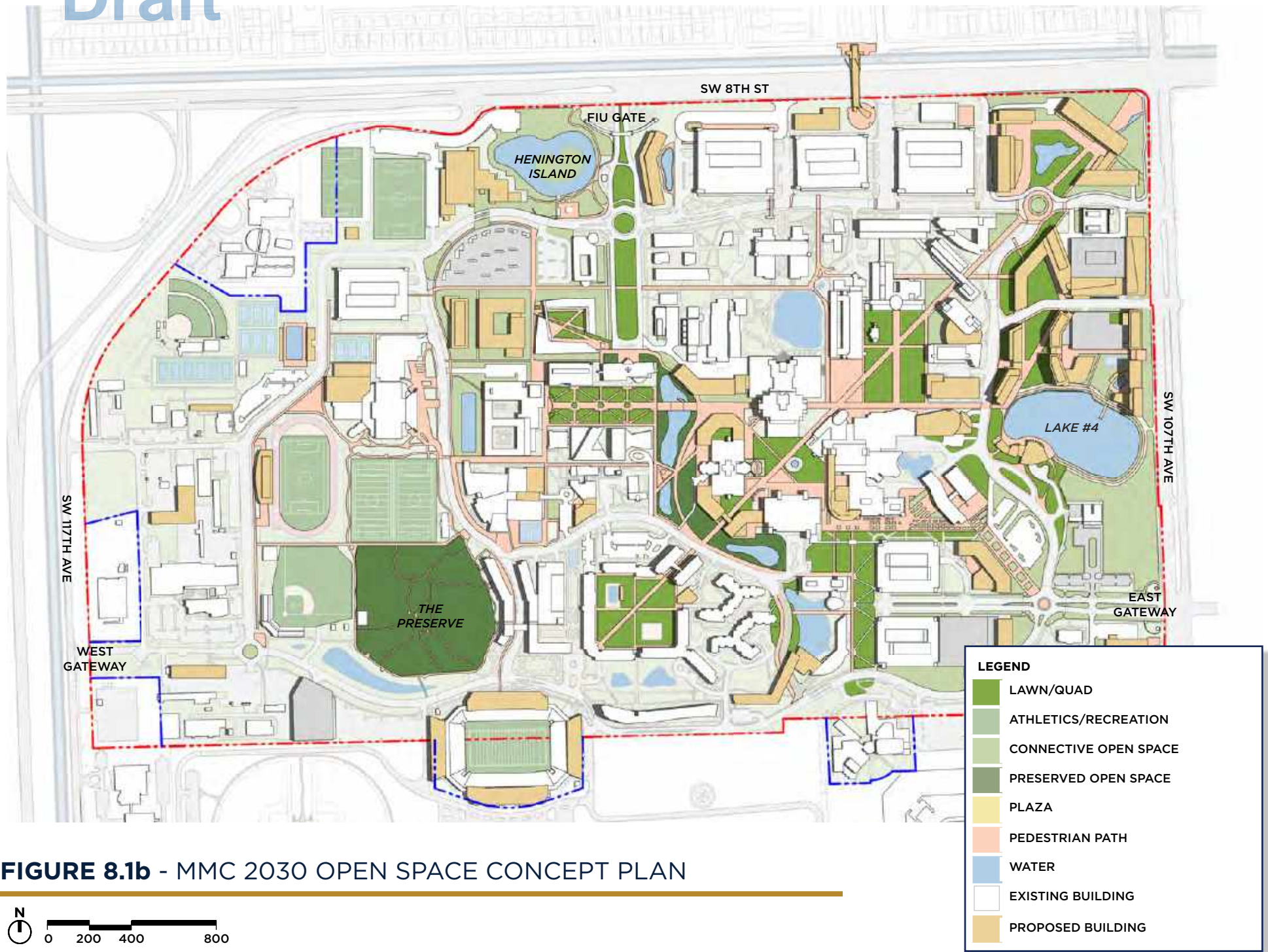


**STUDY 2  
NEW TRACK & FIELD AT ENGINEERING CENTER**

**FIGURE 8.1c - MMC 2030 PLAN TRACK & FIELD SITE TEST FITS**

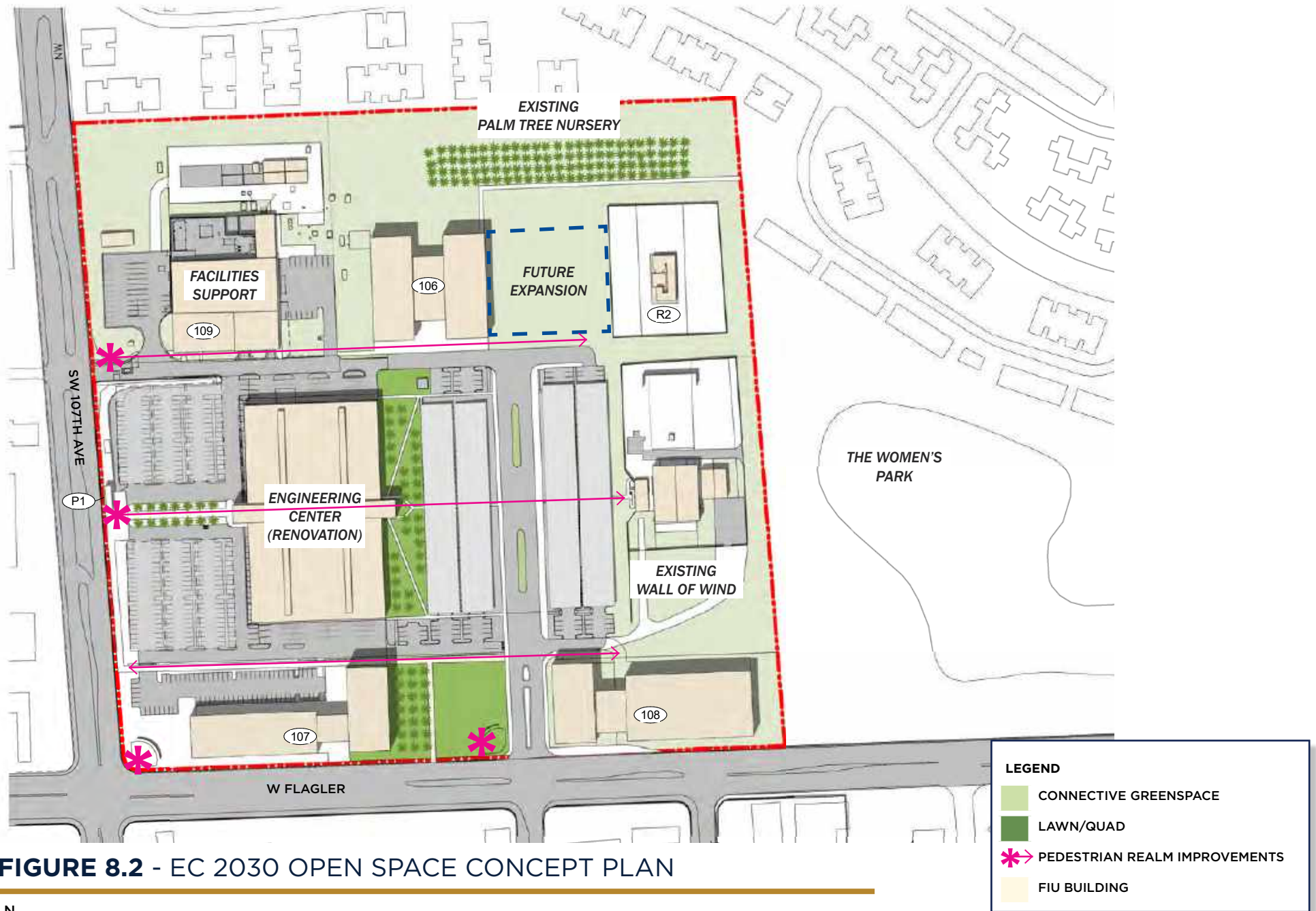


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**FIGURE 8.1b** - MMC 2030 OPEN SPACE CONCEPT PLAN









**FIGURE 8.3 - BBC 2030 OPEN SPACE CONCEPT PLAN**



## Biscayne Bay Campus

New and relocated athletic fields and facilities should be clustered in the southern portion of the campus, with additional multi-purpose fields, tennis courts and basketball courts located south of the MAST Academy. To connect to the surrounding community, pedestrian and bicycle paths along Biscayne Bay should be preserved and expanded. Easements for connecting to the waterfront trail and views with campus partners should also be considered to strengthen the character and quality of informal open space. Lastly, developing a park along the central waterfront near the dock will strengthen public access to the waterfront.

### LEGEND

- ATHLETICS
- ATHLETICS/REC FIELD
- HARD COURT
- ROPES COURSE
- WATER
- CONNECTIVE GREENSPACE
- NATURAL OPEN SPACE
- LAWN/QUAD
- FIU BUILDING

## GOAL

Protect, enhance and develop adequate recreation facilities and open space amenities necessary to serve projected student enrollments.

## OBJECTIVES AND POLICIES

### Objective 1.1

**Meet Demand for Quality and Quantity of Recreation Facilities:**

**Coordinate public and private resources as necessary to ensure the timely and efficient provision of recreation facilities to meet projected needs.**

#### Policy 1.1.1

##### UNIVERSITY-WIDE

Assess the needs of the students for on-campus recreational fields and facilities. Recreational fields displaced by new construction will be replaced either on FIU property or in partnership with the community.

#### Policy 1.1.2

Ensure that adequate open and recreation space is provided beyond Miami-Dade County

standards. Utilize guidelines and criteria set forth by either FIU peers or NIRSA Standards for large urban universities.

#### Policy 1.1.3

Phase and time development of open space improvements consistent with 14.0 Capital Improvement.

#### Policy 1.1.4

Renovate and improve roadways to incorporate Florida's DOT standards for bike lanes and lane dimensions. Connect to bicycle and pedestrian routes developed by host communities. Promote bicycle, pedestrian and mass transit connectivity between the university community and recreational facilities.

#### Policy 1.1.5

##### MODESTO A. MAIDIQUE

Strengthen public venues in special purpose landscape and near water.

#### Policy 1.1.6

To address the needs of the projected student growth and lack of developable land on campus, investigate FIU expansion to Miami-

Dade Youth Fair and Exposition property to house needed recreation facilities.

#### Policy 1.1.7

##### ENGINEERING CENTER

No recreation or support facilities are planned on this campus.

#### Policy 1.1.8

##### BISCAYNE BAY CAMPUS

Cluster new and relocated athletic fields and facilities in the southern portion of the campus. Additional multi-purpose fields, tennis courts and basketball courts should be located south of the MAST Academy.

#### Policy 1.1.9

Preserve multi-purpose, pedestrian, open space and bike paths along Biscayne Bay. Strengthen the character and quality of informal open space, and consider easements for connecting to the waterfront trail and views with campus partners.

#### Policy 1.1.10

Strengthen public access to the bay, develop a park along the central waterfront, near the dock.

## **Objective 1.2**

### **Develop Signature and Sustainable Open Space:**

#### **Protect and/or enhance present open space resources.**

##### **Policy 1.2.1**

###### **UNIVERSITY-WIDE**

Select sites for infrastructure and academic and support facilities, which are designed to strengthen the viability and character of campus open space.

##### **Policy 1.2.2**

Maintain densities and intensities for the development of the campus which maximize the retention of open space. These densities and intensities are established in 4.0 Land Use Element.

##### **Policy 1.2.3**

Maintain the Campus Master Plan figure/ground relationships and urban design framework for the purpose of designating and creating high quality and diverse landscaped open space.

##### **Policy 1.2.4**

Protect designated landscaped open spaces from development and create an interconnected framework of malls, quadrangles, courtyards, plazas and open space.

##### **Policy 1.2.5**

Create, enhance and maintain new and existing primary entry points into campus with identifiable, signature campus gateways (see 16.0 Landscape Design Guidelines Element).

##### **Policy 1.2.6**

###### **MODESTO A. MAIDIQUE**

Coordinate any development within the Preserve, as indicated by Table 14.2: Capital Improvement Plan, with the most recent development study of the Preserve. Protected areas will be integrated within the existing wooded areas, with sensitively placed buildings, paths, seating areas, interpretative displays and amenities. Wooded areas will be retained for the benefit of existing species, to provide shelter, and for their natural characteristics.

The Preserve will continue to be used for teaching and outdoor recreation purposes. Past design charrettes conducted by FIU, along with recent additions and alterations to those recommendations, provide a plan for utilizing the Preserve for these and other uses.

##### **Policy 1.2.7**

Maintain and enhance streetscapes along SW 8th Street and SW 107th Street to brand the campus perimeter and to provide additional pedestrian and vehicular separation (see 16.0 Landscape Design Guidelines Element).

##### **Policy 1.2.8**

Develop distinctive and branded entrances from SW 8th Street, SW 107th Avenue and SW 117th Avenue into campus. Provide a heightened level of detail according to their hierarchy. Follow recommendations in 16.0 Landscape Design Guidelines Element.

##### **Policy 1.2.9**

Create a GreenWay that links the small ponds within the academic core and to the campus boundaries. Landscape Design Guidelines Element.



## **Policy 1.2.10**

Enhance and preserve the Reagan House site landscape. Improve pedestrian access as roadways are developed in the southeast quadrant of campus. Coordinate a high quality landscape setting with the proposed chapel and park pavilion.

## **Policy 1.2.11**

Coordinate with Miami-Dade County Parks Recreation and Open Spaces for the joint utilization of open space to meet recreation and open space needs.

## **Policy 1.2.12**

### ENGINEERING CENTER

Enhance existing open space along SW 107th Avenue with additional streetscaping and the creation of a campus gateway.

## **Policy 1.2.13**

Enhance open space bordering West Flagler Street with the creation of a campus gateway and streetscape.

## **Policy 1.2.14**

Create an enhanced transit stop with one

articulated and one regular bus stop with covered seating and landscape along SW 107th Avenue to allow for enhanced connectivity to public transportation.

## **Policy 1.2.15**

Utilize existing open space to form an interior quadrangle around which to organize future academic and research facilities.

## **Policy 1.2.16**

Establish north/south pedestrian spine to connect Flagler, existing buildings and potential development to the north.

## **Policy 1.2.17**

Preserve setbacks and open space around the Wall of Wind to provide protection from research activities.

## **Policy 1.2.18**

### BISCAYNE BAY CENTER

Protect environmentally sensitive and Bayfront open spaces from development encroachment. Strictly enforce future placement of buildings, parking, infrastructure and other man-made improvements consistent with the land use

plan. Coordinate with Campus Development Agreements.

## **Policy 1.2.19**

Renovate the original campus quad and develop new quads, courtyards and plazas throughout campus that enhance adjacent campus buildings.

## **Policy 1.2.20**

Enhance key symbolic campus open spaces to the north and south of Academic One and Two/Wolfe University Center and to the east of the Conference Center (see 16.0 Landscape Design Guidelines Element).

## **Policy 1.2.21**

Highlight the GreenSpine with sensitively constructed walkways and appropriate plant materials (see 16.0 Landscape Design Guidelines Element).

## **Policy 1.2.22**

Create courtyards, outdoor rooms and gathering spaces in all new development adjacent to the BayWalk as transition points to public open space along the bay.

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9.0

**GENERAL  
INFRASTRUCTURE**

## 9.0 GENERAL INFRASTRUCTURE

The purpose of this element is to ensure coordinated provision of public facilities and services required to meet the future needs of the University, consistent with current efforts to address sustainability issues on campus including the development of a Climate Action Plan (a responsibility as a signatory of the American College and University Presidents Climate Commitment) and the university-driven direction that all new facilities meet United States Green Building Council (USGBC) standards and be LEED certified. This includes the following:

1. Solid waste handling and disposal capacity
2. Stormwater management capacity to protect the welfare of both the University's and host community's residents.
3. Potable water and water reuse for irrigation purposes.
4. Sanitary sewer and treatment capacity to meet anticipated University needs.

**STORMWATER MANAGEMENT:** FIU addresses stormwater management issues in the design and review process for each building project. Each project shall meet the County's criteria and will be submitted to the County for review. The stormwater management plan for Modesto A. Maidique Campus is a combination of percolation, overland flow, exfiltration systems and positive drainage systems with outfalls into existing onsite

lakes. No offsite discharge connections exist, as all stormwater runoff is contained onsite (see Figure 9.1a: Drainage System Map).

The Engineering Center drainage system is designed to handle on-site stormwater runoff with a combination of exfiltration trenches, dry and wet retention areas, drainage swales, overland flow, and positive drainage pipe systems (see Figure 9.2 a: Drainage System Map).

The stormwater management plan for the Biscayne Bay Campus is a combination of percolation, overland flow and exfiltration systems. The Biscayne Bay Campus stormwater management plan also utilizes positive drainage systems with outfalls both to onsite lakes and adjacent off-site water bodies. Currently, there are two outfalls to offsite surface water bodies located on the north and east sides of the site. The north outfall system consists of a 42-inch culvert and the east outfall consists of an 8" x 12" culvert (see Figure 9.3a: Drainage System Map).

**WATER:** Potable water for Modesto A. Maidique Campus is provided by the Miami-Dade Water and Sewer Department (MDWASD). MDWASD owns and maintains all existing watermains inside the campus. It is important to note most water mains on campus do not have easements over them. However, easements have been required for recent development and all future development will need to consider easements as required from

MDWASD. MDWASD easements along water mains will include restrictions on development within the easements. The internal water distribution system is fed via existing water mains located within the right-of-way of SW 8th Street, SW 107th Ave and SW 117th Avenue (see Figure 9.1b: Water Distribution System Map).

The Engineering Center is serviced from a MDWASD owned water distribution system with points of connection on SW 107th Avenue and West Flagler Street (see Figure 9.2b: Water Distribution System Map).

Potable water service to the Biscayne Bay Campus is provided by the City of North Miami. Connections are made to the City owned off-site system located along NW 151st Street and NW 135th Street (see Figure 9.3b: Water Distribution System Map.)

**SEWER:** The Modesto A. Maidique Campus sanitary sewer system consists of gravity sewer lines, force mains, a series of privately owned sanitary sewer lift stations.

Sewage flows from the campus are transmitted off-site to the MDWASD owned system via two connection points located within the right-of-way of SW 8th Street and SW 117th Avenue. [Figure 9.1c: Sanitary Sewer Map]

The Engineering Center sanitary sewer collection system is comprised of a series of gravity sewer



lines which flow into a single privately owned lift station. The sanitary sewer flow generated by the Engineering Campus is transmitted off-site into the MDWASD owned system via a connection point located on West Flagler Street. [Figure 9.2c: Sanitary Sewer System].

The Biscayne Bay Campus sanitary sewer system consists of a combination of gravity sewer lines, a force main and a master pump station with connections to multiple on-site secondary pump stations. The sanitary sewer system for the Biscayne Bay Campus is transmitted to the City of North Miami's collection system and ultimately to the MDWASD system for treatment and disposal of the of the wastewater flows. [Figure 9.3c: Sanitary Sewer Map].

**SOLID WASTE:** Solid waste collection and disposal is accomplished at Modesto A. Maidique Campus, Engineering Campus and Biscayne Bay Campus by utilizing a combination of University staff, private contractors and public entities. Upon collection, the solid waste material is either recycled or sent to the landfill for disposal.

## GOAL 1

**Florida International University shall provide a stormwater management system which incorporates sustainable practices, protects real property, and ensures maintenance of ground water quality. Ensure that adequate solid waste disposal services are available and that these services are provided in an environmentally sound and economically efficient manner.**

## OBJECTIVES AND POLICIES

### **Objective 1.1 Adequacy of Campus Drainage:**

**Florida International University shall ensure that future development is coordinated with current drainage infrastructure and on-going site improvement projects in order to meet campus drainage system requirements in an efficient manner and protect University property.**

### **Policy 1.1.1**

Engineering surveys shall be provided to obtain detailed data for implementation of accurate records, and to identify condition of facilities.

### **Policy 1.1.2**

Maintain, update, and keep current, accurate as-builts of stormwater facilities.

### **Policy 1.1.3**

FIU shall maintain, update and keep current records of any existing swales, dry retention areas, lakes, wetlands, preservation areas, and any other areas within the campus properties that provide stormwater storage and retention capacities, as well as any areas contributing to those retention areas. FIU shall reserve these stormwater storage and retention areas or incorporate into future development.

### **Policy 1.1.4**

FIU shall design and construct or improve stormwater management facilities as identified

in Figures 9.1a, 9.2a and 9.3a. To ensure appropriate flood control, the timing and phasing of these stormwater management improvements should be ahead of the associated developments.

### **Policy 1.1.5**

Any development proposing connection to an existing drainage system shall evaluate the impacts of the proposed development on the affected stormwater management system as part of the project's design phase. Otherwise, sufficient stormwater management improvements must be provided to handle all of the runoff from the new developments on a stand-alone basis.

### **Policy 1.1.6**

Campus water bodies and onsite stormwater management systems shall be interconnected whenever possible to maximize the capacity of sub-basins.

### **Objective 1.2**

#### **Flood Protections / Water Quantity:**

**Florida International University shall ensure that all planned and future developments provide sufficient stormwater management capacity to protect buildings from being flooded during a storm event of at least 100-year capacity.**

### **Policy 1.2.1**

New construction and substantial

improvements in areas subject to special flood hazards shall be constructed by methods and practices that minimize flood damage.

Residential construction: Residential buildings (such as University Housing) shall have the lowest floor elevated no lower than 1 foot above the base flood elevation. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movement of flood waters shall be provided. Structures will be anchored to prevent flotation, collapse, or lateral movement of the structure.

Non-residential construction: Non-residential buildings shall have the lowest floor elevated no lower than 1 foot above the base flood elevation. Buildings located in a Velocity Zone, will be constructed to adhere to the requirements for this zone. Walls and roof structures will be sufficiently anchored to prevent loss from high winds. FIU will work with the Miami-Dade County Division of Environmental Resources Management (DERM) to determine the proper criteria for construction within this zone.

Elevated buildings: Elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of flood waters to automatically equalize hydrostatic flood forces on exterior walls. Structures will be anchored

to prevent flotation, collapse, or lateral movement of the structure.

### **Policy 1.2.2**

All vehicular paved surfaces and landscaped islands shall utilize curbing or curb and gutter when necessary for stormwater runoff control and conveyance.

### **Policy 1.2.3**

Drainage systems for all new development shall be designed in accordance with the campus master development plan, the Miami-Dade County Transportation and Public Works (MDTPW) - Public Works Manual Section D4 Water Control, Miami-Dade County Division of Environmental Resources Management guidelines, and the South Florida Water Management District Permit Information Manual Volume IV guidelines. In addition, stormwater management facilities at Modesto A. Maidique Campus and the Engineering Center shall also be designed in conformance with Florida Department of Transportation drainage requirements.

### **Policy 1.2.4**

Florida International University shall adopt the following stormwater quantity level of service standards for Modesto A. Maidique Campus, the Engineering Center, and Biscayne Bay Campus, and shall use these standards as the

basis for drainage system design.

Road Crown/Ground Surface LOS: The minimum acceptable flood protection/drainage level of service (LOS) standards for Modesto A. Maidique Campus roadways, parking areas, and ground surfaces shall be protection from the degree of flooding that would result from a storm duration of one day that statistically occurs once in five years. A current elevation required per the Miami-Dade County Flood Criteria Map, as amended is:

- 7.0 ft. NGVD for Modesto A. Maidique Campus and the Engineering Center
- 5.0 ft. NGVD for Biscayne Bay Campus

Minimum Floor Elevations LOS: The minimum acceptable flood protection/drainage level of service (LOS) standards for minimum floor elevation shall be the elevations as specified in the Federal Flood Insurance Rate Maps for Dade County or the protection from the degree of flooding that would result from a storm duration of three days that statistically occurs once in one hundred years or elevation of:

- 10.0 ft NGVD, whichever is greater, for Modesto A. Maidique Campus and the Engineering Center.
- 11.0 ft. NGVD, whichever is greater, for Biscayne Bay Campus, with the exception of buildings along the southern edge of

the campus which should be set at 12.0 ft. NGVD (whichever is greater).

### **Policy 1.2.5**

The minimum acceptable Flood Protection Level of Service standards for University stormwater management system facilities shall provide protection for the degree of flooding that would result for a duration of one day from a ten-year storm.

### **Policy 1.2.6**

To ensure that the LOS standards are continuously met, all new developments must prepare a pre-post development analysis of the entire development-affected site to evaluate the 100-year flood stages.

### **Policy 1.2.7**

All new construction shall adhere to the Disaster Resistant University - FEMA Hazard Mitigation standards.

### **Objective 1.3**

#### **Water Quality:**

**Florida International University shall ensure that all existing and proposed developments have drainage systems that provide water quality enhancement to stormwater runoff.**

### **Policy 1.3.1**

Best Management Practices shall be

incorporated into the drainage system design to minimize the impacts from development to the ground water and surface water quality. These practices shall include, but not be limited to:

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

1. leaching to groundwater.
2. Use of pervious paving such as turf blocks to minimize impervious surface area
3. Incorporating features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent/minimize spillage.
4. Use of downturned elbows in catch basins. All new construction shall adhere to the Disaster Resistant University - FEMA Hazard Mitigation standards.

#### **Policy 1.3.2**

Florida International University shall adopt the following water quality level of service standard and shall use these standards as the basis for drainage system design:

The minimum acceptable water quality/drainage level of service (LOS) standards for FIU shall be the treatment of the first inch of stormwater runoff or 2.5 inches times the percentage of imperviousness of the development-affected site, whichever is greater, in accordance with Miami-Dade County Division of Environmental Resources Management and South Florida Water Management District criteria.

#### **Policy 1.3.3**

All stormwater runoff shall be contained within a project site utilizing exfiltration

trench, with overflow to an on-site water body when available and shall not adversely affect adjacent campus property.

#### **Policy 1.3.4**

Exfiltration trench systems with overflow into a water body shall be designed to retain on site all the volume of runoff generated by the contributing drainage area. Sea level rise may impact the effectiveness of exfiltration trench. Future exfiltration trench designs need to consider current design standards. Existing exfiltration trenches should be monitored for ongoing effectiveness.

#### **Policy 1.3.5**

Design of new facilities as well as retrofitting of existing drainage systems and areas having drainage deficiencies shall be undertaken in accordance with Element 14.0 Capital Improvements.

#### **Policy 1.3.6**

All drainage inlets receiving runoff directly from potentially contaminated surfaces shall have pollution retardant baffles installed.

#### **Policy 1.3.7**

All drainage inlets with an outfall to an exfiltration trench or water body shall have pollution retardant baffles installed.

#### **Policy 1.3.8**

All future developments constructed after the implementation of Florida Department of Environmental Protection Statewide Stormwater Criteria shall be designed and constructed to comply with the stormwater treatment requirements outlined by the regulation.

#### **Objective 1.4**

##### **Maintenance of Campus Drainage:**

**Florida International University shall properly maintain the stormwater management system and ensure that all deficiencies are corrected.**

#### **Policy 1.4.1**

An inspection, cleaning, maintenance and repair program for all facilities shall be developed and implemented. The maintenance program shall be implemented on a continuing, regularly scheduled basis with major repairs prioritized and scheduled based on the availability of funding.

#### **Policy 1.5**

##### **Maintenance of Campus Drainage:**

Florida International University shall consider in all future planning, the protection of natural stormwater management and hydrologic areas, and the protection of the quality of these receiving waters.

## Policy 1.5.1

Use environmentally friendly designs such as detention systems, ground storage (percolation), littoral treatment in wet detention ponds (including the use of wetland vegetation along the shoreline within the pond's littoral zone), metered-release devices, porous or vegetative liners, and minimize impervious surfaces etc. as appropriate and as called for by state design guidelines, to protect natural stormwater management and hydrological areas from erosion and contamination and to mitigate the impacts of campus generated stormwater.

## Policy 1.5.2

It shall be the policy of FIU that no stormwater discharges shall cause or contribute to a violation of water quality standards in waters of the State. All discharge of stormwater shall be consistent with the standards of the water quality of South Florida Water Management District (SFWMD) and Miami-Dade County Division of Environmental Resources Management (DERM).

## Policy 1.5.3

All applicable new developments shall include sustainable site elements required to meet USGBC standards and LEED Silver certification criteria.

## GOAL 2

**Florida International University shall ensure that potable water is available for existing and future campus development.**

## Objective 2.1

### **Adequacy of Potable Water Supply & Distribution:**

**Florida International University shall ensure that prior to development activities adequate potable water supply, treatment, distribution facilities and adequate fire flow protection are available at the adopted level of service standards in accordance with Element 14.0 Capital Improvements.**

### **Policy 2.1.1**

The level of service water pressure standard shall be a minimum of 20 psi. and no greater than 100 psi. A minimum flow of 2,000 gallons per minute should be added to this level of service standard to comply with the required minimum fire flow levels for schools.

### **Policy 2.1.2**

The minimum level of service water main size for primary and secondary distribution systems shall be twelve (12) inches in diameter, per M-D WASD, to provide sufficient capacity for potable water and fire protection demands.

### **Policy 2.1.3**

All potable water plans for the Modesto A. Maidique Campus and the Engineering Campus shall be reviewed and approved by the State of Florida Department of Environmental Protection, Miami-Dade County Division of Environmental Resources Management, Miami-Dade County Water and Sewer Department, and the State Fire Marshall as applicable. Plans

for the Biscayne Bay Campus will require the review and approval of the City of North Miami, as well as the Florida Department of Environmental Protection as applicable.

### **Policy 2.1.4**

All potable water mains in primary distribution and secondary distribution systems shall be looped.

### **Policy 2.1.5**

All existing dead-end potable water primary and secondary distribution systems shall be minimized by constructing links to complete a loop where possible.

### **Policy 2.1.6**

All primary and secondary potable water distribution systems shall incorporate fire system demands.

### **Policy 2.1.7**

All fire protection services to new developments shall be in accordance with the National Fire Protection Association (NFPA 24 Private Water Distribution System).

### **Policy 2.1.8**

The priorities for potable water improvements shall be:

1. Elimination of dead-end water distribution systems
2. Expansion of potable water infrastructure.



## **Policy 2.1.9**

New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system and shall be according to Miami-Dade County Water and Sewer Department standard and specification.

## **Policy 2.1.10**

FIU shall design and construct or improve potable water facilities as identified in Figures 9.1b, 9.2b and 9.3b as needed to serve future development. The timing and phasing requirements for these improvements are established in Element 14.0 Capital Improvements.

## **Policy 2.1.11**

All looped water main systems shall be designed with sufficient valving to allow isolation of each building within the loop. Existing water main loops shall be retrofitted to allow for this condition.

## **Policy 2.1.12**

FIU shall annually review future construction programs and priorities to remediate deficiencies, ensure capacity and provide the capital improvements required to meet the University needs, when needed, based on needs identified in other master plan elements.

## **Objective 2.2**

### **Water Conservation Program:**

**Florida International University shall develop and implement a comprehensive water conservation program.**

### **Policy 2.2.1**

Promote an educational program geared toward students, faculty, staff and visitors, which will discourage waste and conserve water.

### **Policy 2.2.2**

Enforce requirements, and establish new requirements and procedures as needed, to assure that high efficiency plumbing fixtures are used in all new facilities and in conjunction with renovations to existing facilities.

### **Policy 2.2.3**

The use of "Florida Friendly Landscaping," including the maintenance and installation of selected vegetative species, low volume irrigation and compact hydrazone concepts, shall be required for all new buildings and ancillary facility construction.

### **Policy 2.2.4**

Ensure that all existing and future irrigation systems within the Biscayne Bay Campus tie in to the existing reclaimed water system (where

possible).

### **Policy 2.2.5**

Miami-Dade County Water and Sewer Department is responsible for maintenance of water mains. FIU maintains building service lines, irrigation lines, and general service lines on the building side of the meter.

### **Policy 2.2.6**

University-wide development will comply with water use efficiency techniques for indoor water use in accordance with Sections 8-31, 32-84 and 8A-381 of the Code of Miami-Dade County.

### **Policy 2.2.7**

University-wide development shall comply with the landscape standards in Chapter 18A and 18B of the Miami-Dade County Code, in order to conserve the use of potable and non-potable water supplies for irrigation purposes.

## **GOAL 3**

**Florida International University shall ensure that sanitary sewer is available for existing and future campus development.**

### **Objective 3.1**

**Florida International University shall provide**

**an efficient and adequate pump station and force main system to convey sewage to offsite mains.**

**Policy 3.1.1**

No new developments shall be permitted to connect onto the existing on-site pump stations and force mains unless it can first be shown that sufficient capacity exists within the pump station and associated force main to convey the wastewater generated by the project's proposed use.

**Policy 3.1.2**

Existing pump stations shall be designed to accommodate the minimum additional flow.

**Policy 3.1.3**

In addition to upgrades to existing pump stations, the proposed 2030 build out shall include construction of new pump stations where required to collect sanitary sewer flow generated by the proposed developments.

1. leaching to groundwater.
2. Use of pervious paving such as turf blocks to minimize impervious surface area
3. Incorporating features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent/minimize spillage.

4. Use of downturned elbows in catch basins. All new construction shall adhere to the Disaster Resistant University - FEMA Hazard Mitigation standards.

**Policy 1.3.2**

Florida International University shall adopt the following water quality level of service standard and shall use these standards as the basis for drainage system design:

The minimum acceptable water quality/ drainage level of service (LOS) standards for FIU shall be the treatment of the first inch of stormwater runoff or 2.5 inches times the percentage of imperviousness of the development-affected site, whichever is greater, in accordance with Miami-Dade County Division of Environmental Resources Management and South Florida Water Management District criteria.

**Policy 1.3.3**

All stormwater runoff shall be contained within a project site utilizing exfiltration trench, with overflow to an on-site water body when available and shall not adversely affect adjacent campus property.

**Policy 1.3.4**

Exfiltration trench systems with overflow into a water body shall be designed to retain on site all the volume of runoff generated by the

contributing drainage area. Sea level rise may impact the effectiveness of exfiltration trench. Future exfiltration trench designs need to consider current design standards. Existing exfiltration trenches should be monitored for ongoing effectiveness.

**Policy 1.3.5**

Design of new facilities as well as retrofitting of existing drainage systems and areas having drainage deficiencies shall be undertaken in accordance with Element 14.0 Capital Improvements.

**Policy 1.3.6**

All drainage inlets receiving runoff directly from potentially contaminated surfaces shall have pollution retardant baffles installed.

**Policy 1.3.7**

All drainage inlets with an outfall to an exfiltration trench or water body shall have pollution retardant baffles installed.

**Policy 1.3.8**

All future developments constructed after the implementation of Florida Department of Environmental Protection Statewide Stormwater Criteria shall be designed and constructed to comply with the stormwater treatment requirements outlined by the regulation.

## **Objective 1.4**

### **Maintenance of Campus Drainage:**

**Florida International University shall properly maintain the stormwater management system and ensure that all deficiencies are corrected.**

#### **Policy 1.4.1**

An inspection, cleaning, maintenance and repair program for all facilities shall be developed and implemented. The maintenance program shall be implemented on a continuing, regularly scheduled basis with major repairs prioritized and scheduled based on the availability of funding.

## **Policy 1.5**

### **Maintenance of Campus Drainage:**

**Florida International University shall consider in all future planning, the protection of natural stormwater management and hydrologic areas, and the protection of the quality of these receiving waters.**

#### **Policy 1.5.1**

Use environmentally friendly designs such as detention systems, ground storage (percolation), littoral treatment in wet detention ponds (including the use of wetland vegetation

along the shoreline within the pond's littoral zone), metered-release devices, porous or vegetative liners, and minimize impervious surfaces etc. as appropriate and as called for by state design guidelines, to protect natural stormwater management and hydrological areas from erosion and contamination and to mitigate the impacts of campus generated stormwater.

#### **Policy 1.5.2**

It shall be the policy of FIU that no stormwater discharges shall cause or contribute to a violation of water quality standards in waters of the State. All discharge of stormwater shall be consistent with the standards of the water quality of South Florida Water Management District (SFWMD) and Miami-Dade County Division of Environmental Resources Management (DERM).

#### **Policy 1.5.3**

All applicable new developments shall include sustainable site elements required to meet USGBC standards and LEED Silver certification criteria.

## **GOAL 4**

**Florida International University shall ensure that adequate solid waste disposal services are available and that these services are provided in an environmentally sound and economically efficient manner.**

## **Objective 4.1**

### **Solid Waste Collection and Disposal:**

**Florida International University shall ensure that adequate solid waste collection and disposal capacity is available within the University in order to meet the current and future demands generated by the University.**

#### **Policy 4.1.1**

Florida International University shall adopt the following levels of service standards:

Level of Service Standard:  
0.60 pounds per full time equivalent (FTE) student per day.

#### **Policy 4.1.2**

Florida International University Purchasing Services Department shall ensure that the bid solicitation and contractor selection process for campus wide solid waste collection services

shall be completed and reviewed on an annual or multi-year basis.

#### **Policy 4.1.3**

Florida International University Purchasing Services Department shall ensure that the bid solicitation and contractor selection process for campus wide compacting and recycling services shall be completed and reviewed on annual or multi-year basis.

#### **Policy 4.1.4**

Florida International University Environmental Health and Safety Department shall ensure that any hazardous, biohazardous and radioactive waste, generated by the University shall be collected and disposed of by firms licensed and regulated in accordance with applicable Chapter (s) of the Florida Administrative Code.

#### **Policy 4.1.5**

Florida International University Environmental Health and Safety Department shall solicit bids for the disposal of hazardous wastes by utilizing a single licensed contractor on an annual or multiyear basis.

#### **Policy 4.1.6**

On-campus waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.

#### **Policy 4.1.7**

The University shall establish timing and phasing requirements for solid waste collection and disposal facility improvements to meet future University needs.

#### **Policy 4.1.8**

All new developments shall include the provision of a solid waste disposal system capable of handling the solid waste generated by its proposed use. No new development may share solid waste disposal facilities with another structure unless it is shown that the existing solid waste disposal facility has sufficient capacity to serve both uses.

#### **Policy 4.1.9**

All on-campus dumpsters shall be housed within an enclosed structure with 6-ft high concrete walls and upon a 10 ft deep by 15 ft wide concrete pad. A chain link fence gate shall

be provided for access.

#### **Objective 4.2**

##### **Solid Waste Recycling:**

**Florida International University shall increase the amount of solid waste recycled above the estimated 5% of total material generated (see 13.0 Conservation Element).**

#### **Policy 4.2.1**

Florida International University will determine the University's eligibility for participation in the State of Florida Department of Environmental Protection, Solid Waste Management Trust Fund Program.

#### **Policy 4.2.2**

Recycling containers shall be located at numerous convenient locations across the Modesto A. Maidique Campus, Engineering Center and Biscayne Bay Campus.

#### **Policy 4.2.3**

Florida International University shall promote recycling through periodic educational campaigns for the student body, faculty, and staff.

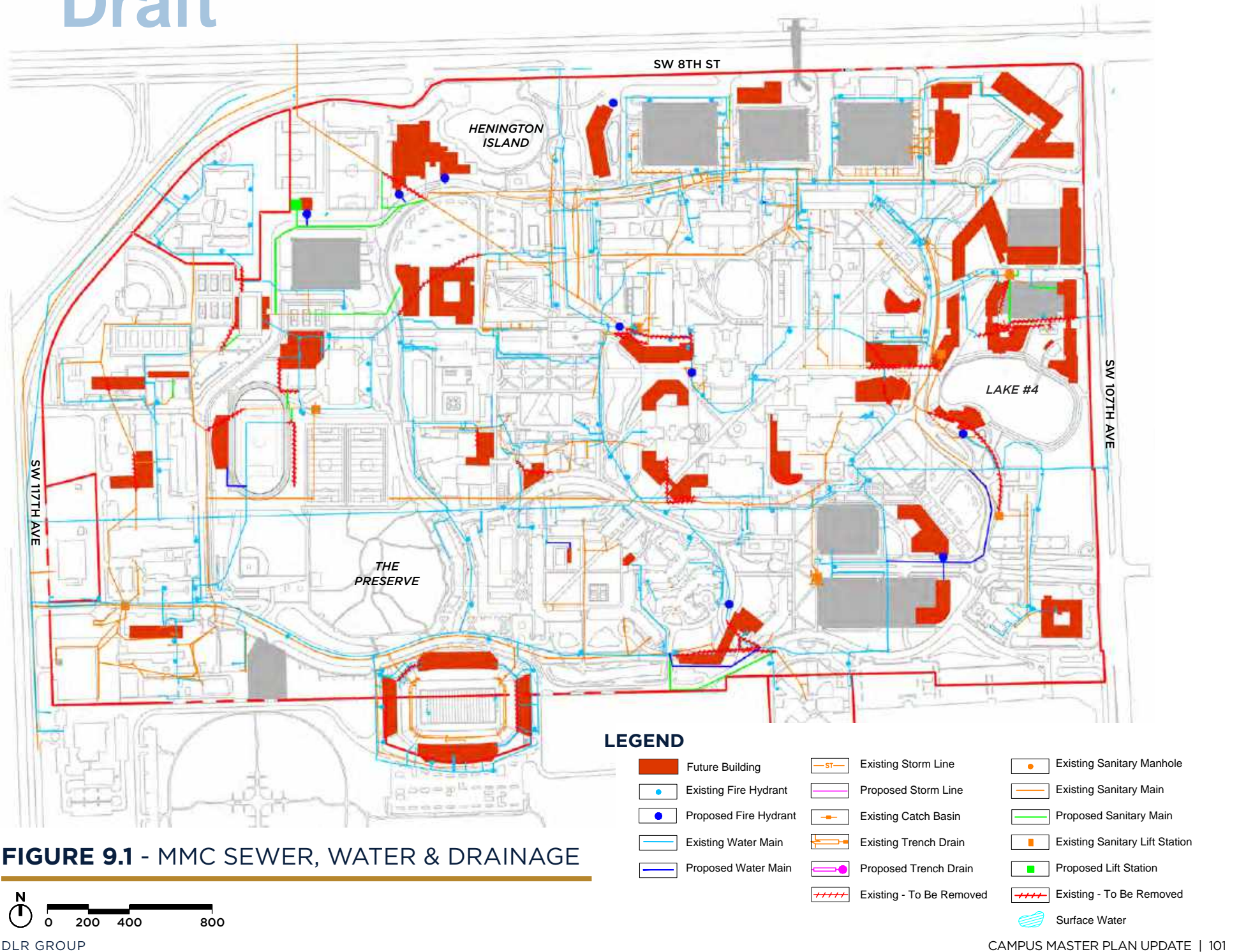
**Policy 4.2.4**

Florida International University shall implement a mandatory recycling program targeted towards faculty and staff. This includes mandatory recycling at all student housing buildings, to include (but not limited to) recycling of items such as newspaper, glass, aluminum cans, steel cans and plastics.

**Policy 4.2.5**

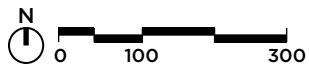
FIU shall evaluate the techniques and benefits of composting of vegetation and landscape refuse for future implementation at the University. See also policy 2.2.1 in Element 13.0.

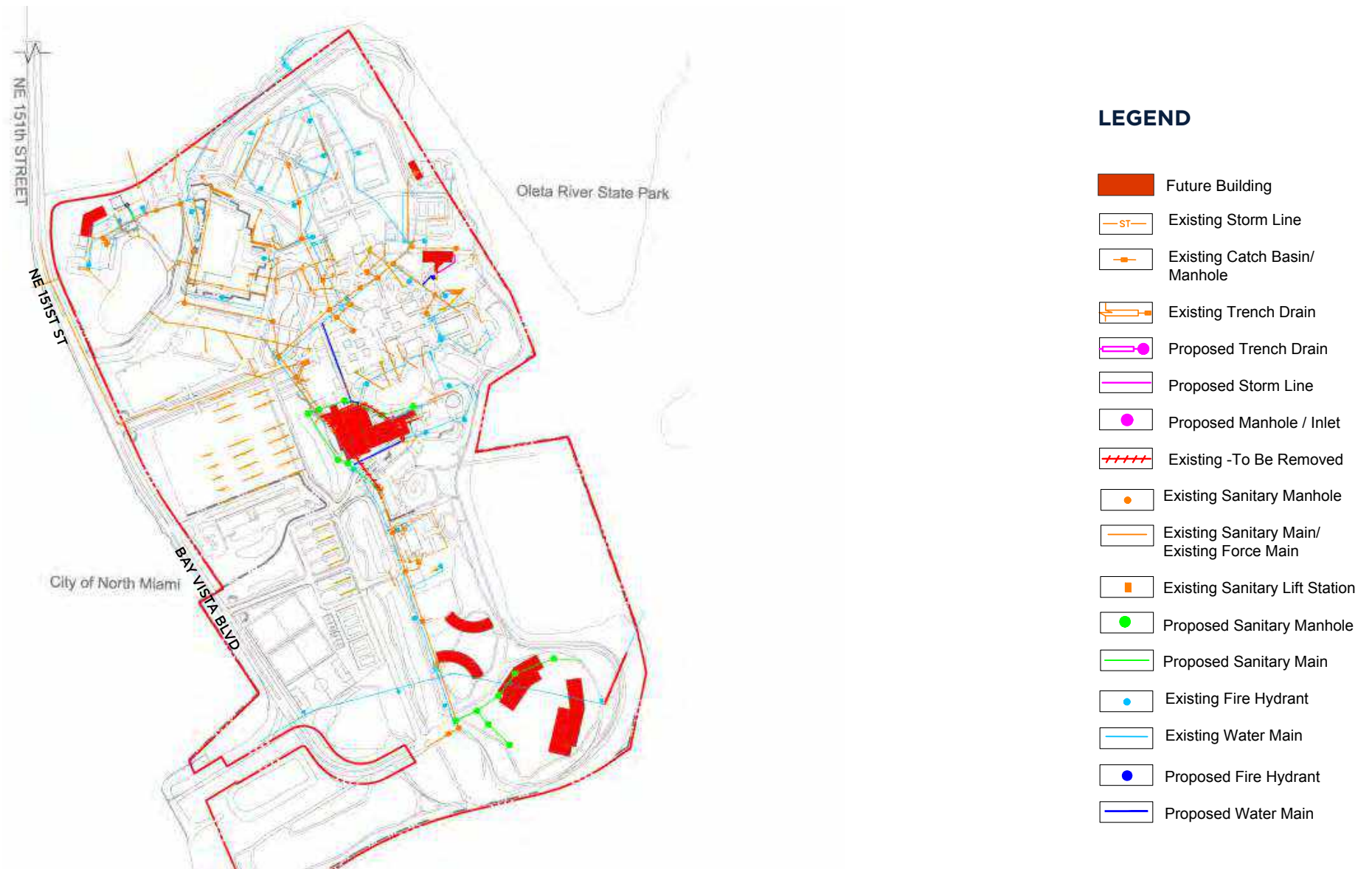




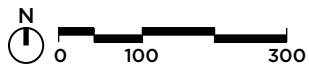


**FIGURE 9.2 - EC SEWER, WATER & DRAINAGE**





**FIGURE 9.3 - BBC SEWER, WATER & DRAINAGE**



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UTILITIES



## 10.0 UTILITIES ELEMENT

The purpose of this element is to ensure coordinated provision of utility services required to meet the future needs of the University, consistent with current efforts to address sustainability on campus such as the development of a Climate Action Plan (a responsibility as a signatory of the American College and University Presidents Climate Commitment) and the university-driven direction that all new facilities meet United States Green Building Council (USGBC) standards and be LEED certified. This includes the following:

1. Provision of a chilled water supply
2. Provision of electric power supply and other fuels

**CHILLED WATER:** The requirements imposed by Florida International University Expansion of Facilities on the chilled water generation and distribution are three-fold. First is the upgrade of the Plant's ability to pump the chilled water to all the growth areas, coupled with the energy efficiency optimization of the generating and pumping equipment. Third is the increment in capacity of the plant to satisfy the higher chilled water demands imposed by new buildings.

**ELECTRICAL POWER:** Electrical energy is furnished to Florida International University by Florida Power and Light (FP&L). They master plan their facilities to satisfy all campus expansion. Close coordination must be maintained with them so the needs of new buildings are provided for. Additionally, FP&L offers various incentive programs that may be used by the University to improve the energy consumption of their lighting and chiller systems.

**TELECOMMUNICATIONS:** The existing telecommunications grid has been heavily used in some areas of Modesto A. Maidique Campus. The planning priorities are to expand the grid to serve new buildings and to reinforce the existing grid by adding new duct banks. Another area of development is the creation of a second feed at Modesto A. Maidique Campus so the grid has the reliability of two sources of off-Campus communication.

For all updated information pertaining to utilities and infrastructure, a copy of the *Utility Infrastructure Survey Update* is on file in the offices of FIU Facilities Planning and Construction.

### GOAL 1

**Ensure the existing underground chilled water distribution system is not in conflict with future development indicated in the updated master plan.**

### OBJECTIVES AND POLICIES

#### MODESTO A. MAIDIQUE CAMPUS

##### Objective 1.1

**Coordinate proposed new development with existing and future underground chilled water distribution and locate proposed buildings to avoid existing underground chilled water piping or include chilled water piping relocation in the program requirements for each development.**

##### Policy 1.1.1

Address potential conflicts of underground chilled water piping locations with proposed buildings established in the 14.0 Capital Improvement Element and as indicated in Figure 10.1 as follows:

MMC - Chilled Water Piping Conflicts - Present to 2030	
Building Tag	Building Description
01A	Central HUB (Primera Casa Addition)
05A	Library/Study Expansion
12A	Student Health Expansion
29A	Museum Expansion
33B	Rec Center Expansion East
35B	Science & Humanities Center (DM Addition)
57C	Honors College
59	AHC/Interdisciplinary 3
63	Mainstreet Housing

## Policy 1.1.2

In order to facilitate future maintenance, emergency repairs, facilities upgrades and additions, begin implementation of Building Information Modeling for all campus buildings and other applicable improvements. This investment in BIM, 3D Civil and GIS would (ultimately) reduce maintenance costs, reduce design costs, reduce need for utility relocation, serve as an aid for emergency services, provide better electronic wayfinding, etc.

## GOAL 2

**Upgrade the chilled water generation and distribution system to serve efficiently Modesto A. Maidique Campus's present and future needs.**

## Objective 2.1

Extend the existing chilled water piping loop to maintain the current level of service standard for existing facilities and to serve the new areas of projected growth. Refer to Figure 10.1. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capitol Improvement Element.

### Policy 2.1.1

Establish defined utility corridors for underground chilled water distribution piping coordinated with future roadway improvements, new buildings and building additions. Refer to Figure 10.1 for proposed chilled water distribution routing.

### Policy 2.1.2

Establish chilled water flow required at each expansion segment so piping sizes may be established. Cumulative flow requirements will be instrumental in determining the parameters for the Chiller Plant capacity upgrade and pumping ability.

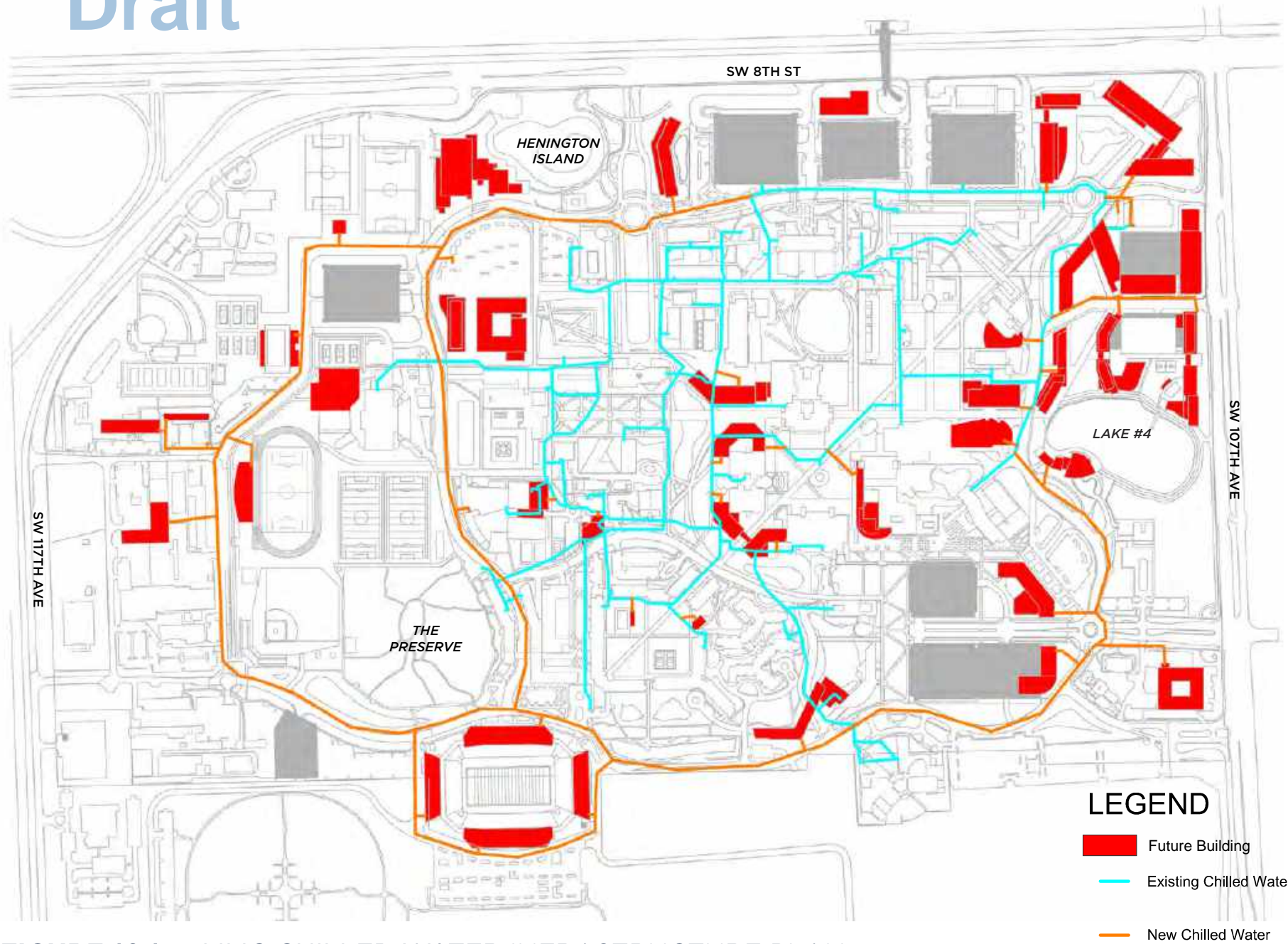
### Policy 2.1.3

Update the University Building Standards to clearly establish piping loop materials and

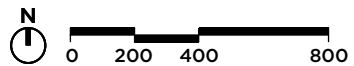
methods of installation. Similarly establish parameters for the piping, controls, and pumping arrangements for the connection of new buildings to the piping loop.

## Objective 2.2

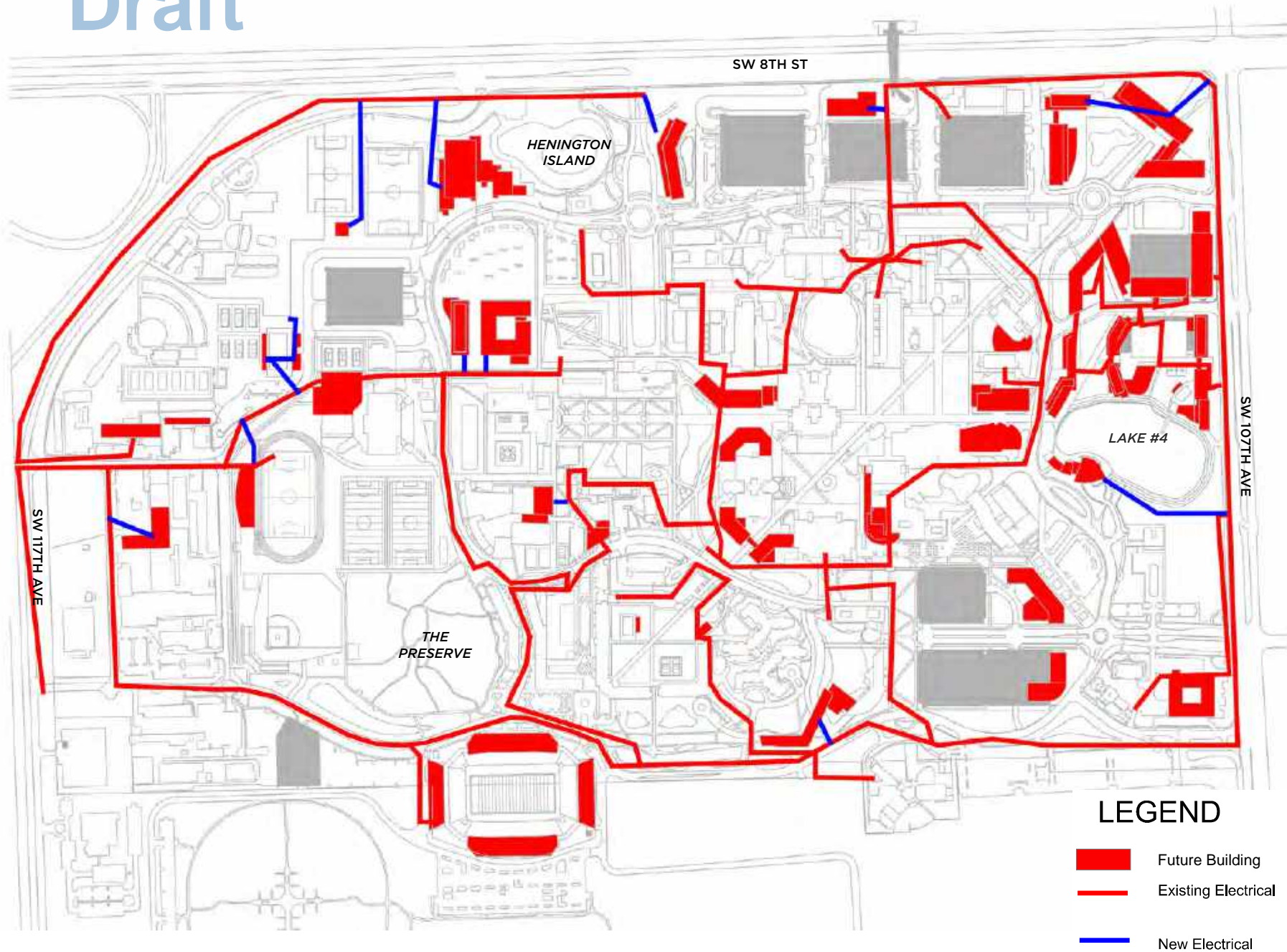
**Chiller Water Production and Pumping System Upgrade:**  
**Increase chilled water production capacity and chilled water pumping capacity to accommodate additional demands associated with the capital improvements identified under Element 14.0 for both the campus main chiller plant and the satellite chiller plant.**



**FIGURE 10.1a - MMC CHILLED WATER INFRASTRUCTURE PLAN**







**FIGURE 10.1b - MMC ELECTRICAL INFRASTRUCTURE PLAN**



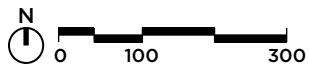
**FIGURE 10.2a - EC CHILLED WATER INFRASTRUCTURE PLAN**



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**FIGURE 10.2b - EC 2030 ELECTRICAL INFRASTRUCTURE PLAN**

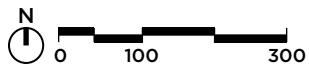




**FIGURE 10.3a - BBC CHILLED WATER INFRASTRUCTURE PLAN**



**FIGURE 10.3b - BBC ELECTRICAL INFRASTRUCTURE PLAN**



## Policy 2.2.1

Increase chilled water production capacity using the available space planned for future chillers within the existing plants to serve new building demands. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capital Improvements Element. The estimated chilled water production capacity requirements are indicated below:

Present to 2030		
Building Tag	Building Description	Estimated Tonnage
01A	Central HUB (Primera Casa Addition)	95
03B	University Center Addition	80
05A	Library/Study Expansion	200
07A	Indoor Training Facility	105
12A	Student Health Expansion	25
17A	Children's Creative Learning Experience	15
29A	Museum Expansion	50
32A	Stadium Upper Bowl Expansion	55
33A	Rec Center Expansion West	40
33B	Rec Center Expansion East	70
34A	North Field Rec Support Building	10
35B	Science & Humanities Center (DM Addition)	110
37	Art Studios	100
48A	Engineering PH2	750
54	AHC/Interdisciplinary 1	1200
547	Honors College Residential Hall	225
57C	Honors College	80
58A	East Residence Hall A	285
58B	East Residence Hall B	360
58C	East Residence Hall C	335
58D	East Residence Hall D	360
58E	East Residence Hall E	675
58F	East Village Rec Center	60
59	AHC/Interdisciplinary 3	980

60	Science Laboratory Complex	910
61	Facilities 1	100
62	AHS Study Complex	140
63	Mainstreet Housing	470
65	AHC/Interdisciplinary 2	505
67A	Academic 6	345
68	Academic 7	225
69	Academic 8	255
70	Café	5
71	Aquatic Complex	35
72	Pool House	2
73	University Park Pool House	3
RF1	Track & Field Building	95
RF3A	Soccer Stadium	60
PG7	Garage and Multi-Purpose	80
PG8	Garage and Multi-Purpose	65
PG9	Garage and Multi-Purpose	80
PG11	Garage and Multi-Purpose	75
Total Design Tonnage (Present to 2030)		9715

## Policy 2.2.2

Upgrade and modify pumping system to operate with the existing and expanded piping loop. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capital Improvements Element.

New developments identified as Partnership buildings shown on Figure 10.1 shall be stand alone facilities. Each building shall have dedicated cooling production equipment. These buildings will not connect to the campus chilled water loop. The new Partnership buildings indicated in the 14.0 Capital Improvement Elements and shown on Figure 10.1 for the Present to 2030 planning period with their respective expected capacities are:

Partnership Buildings		
Building Tag	Building Description	Estimated Tonnage
64	Partnership	120
66	Partnership	80
Total Design Tonnage (Present to 2030)		200

water consumption. Consideration shall be given to installation of water meters for makeup water supply and cooling tower blown down to monitor consumption and avoid sewer fees associated with the water that is evaporated from the cooling tower. Sewage is metered at the Central Pumping Station.

## GOAL 3

In the process of upgrading the chilled water generation and distribution system, optimize the control sequences and temperature differentials to reduce energy costs by increasing operational efficiency.

### Objective 3.1

**Convert Direct Expansion Systems to Chilled Water:**  
**Convert existing direct expansion systems to chilled water operation.**

#### Policy 3.1.1

Ensure that the chilled water production capacity, pumping capacity and piping distribution can accommodate the additional demand of the existing buildings currently served by direct expansion systems.

#### Policy 3.1.2

Extend the existing main chilled water loop to serve the existing Campus Support buildings on the west end of campus as well as additional academic and student life buildings on the Southeast end of campus.

### Objective 3.2

Provide means to measure and verify the efficiency of the HVAC systems serving the campus.

#### Policy 3.2.1

#### MODESTO A. MAIDIQUE CAMPUS

Install chilled water BTU meters and Chiller power consumption meters to determine overall kW/ton performance .

#### Policy 3.2.2

Install chilled water meters for each building on campus served by the campus chilled water system to monitor chilled water consumption and demand at the building level.

## GOAL 4

Ensure the existing underground chilled water distribution system is not in conflict with future development indicated in the updated master plan.

### Objective 4.1

Coordinate proposed new development with existing underground chilled water distribution and locate proposed buildings to avoid existing underground chilled water piping or include chilled water piping relocation in the program requirements for each development.



## ENGINEERING CENTER

### Policy 4.1.1

The proposed buildings in the updated campus master plan do not conflict with existing underground chilled water distribution. Confirm underground chilled water piping does not conflict with new development of the campus.

### Policy 4.1.2

In order to facilitate future maintenance, emergency repairs, facilities upgrades and additions, begin implementation of Building Information Modeling for all campus buildings and other applicable improvements. This investment in BIM, 3D Civil and GIS would (ultimately) reduce maintenance costs, reduce design costs, reduce need for utility relocation, serve as an aid for emergency services, provide better electronic wayfinding, etc.

## GOAL 5

Upgrade the chilled water generation and distribution system to serve efficiently Engineer Center Campus’s present and future needs.

### Objective 5.1

**Extend the existing chilled water piping loop to maintain the current level of service standard for existing facilities and to serve the new areas of projected growth. Refer to Figure 10.2. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capitol Improvement Element.**

#### Policy 5.1.1

Establish defined utility corridors for underground chilled water distribution piping coordinated with future roadway improvements, new buildings and building additions. Refer to Figure 10.2 for proposed chilled water distribution routing.

#### Policy 5.1.2

Establish chilled water flow required for the expansion segment so piping sizes may be established. Cumulative flow requirements will be instrumental in determining the parameters for the Chiller Plant capacity upgrade and pumping ability.

#### Policy 5.1.3

Update the University Building Standards to

establish clearly piping loop materials and methods of installation. Similarly establish parameters for the piping, controls, and pumping arrangements for the connection of new buildings to the piping loop.

### Objective 5.2

**Chilled Water Production and Distribution System Upgrade:**

**Increase chilled water production capacity to accommodate additional demands associated with the capital improvements identified under Element 14.0.**

#### Policy 5.2.1

Increase chilled water production capacity using the available space planned for future chillers within the existing plants to serve new building demands. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capital Improvements Element. The estimated chilled water production capacity requirements are indicated below:

Present to 2030		
Building Tag	Building Description	Estimated Tonnage
R2	Wall of Wind Expansion	0
106	High-bay Research	560
Total Design Tonnage (Present to)		560

## ENGINEERING CENTER

### Policy 5.2.2

Extend the chilled water piping to serve the High-bay Research Building as shown in Figure 10.2 for the current to 2030 planning period. The estimated chilled water requirements to serve the new High-bay Research building is 960 GPM.

### Policy 5.2.3

New developments identified as Partnership buildings shown on Figure 10.2 shall be served by chilled water production equipment dedicated for each building. The new Partnership buildings indicated in the 14.0 Capital Improvement Elements and shown on Figure 10.2 for the Present to 2030 planning period with their respective expected capacities are:

Partnership Buildings		
Building Tag	Building Description	Estimated Tonnage
107	Partnership 1	850
108	Partnership 2	230
PG	Multi-purpose Garage	65
Total Design Tonnage (Present to)		<b>1145</b>

## GOAL 6

Optimize the control sequences and temperature differentials to reduce energy costs by increasing operational efficiency.

### Objective 6.1

**Provide means to measure and verify the efficiency of the HVAC systems serving the campus.**

#### Policy 6.1.1

Install chilled water BTU meters and Chiller power consumption meters to determine overall kW/ton performance.

#### Policy 6.1.2

Install chilled water meters for each building on campus served by the campus chilled water system to monitor chilled water consumption and demand at the building level.

## GOAL 7

Ensure the existing underground chilled water distribution system is not in conflict with future development indicated in the updated master plan.

### Objective 7.1

**Coordinate proposed new development with existing underground chilled water distribution and locate proposed buildings to avoid existing underground chilled water piping or include chilled water piping relocation in the program requirements for each development.**

## BISCAYNE BAY CAMPUS

### Policy 7.1.1

Address underground chilled water piping conflicts with proposed buildings established in the 14.0 Capital Improvement Element and as indicated in Figure 10.3 as follows:

BBC - Chilled Water Piping Conflicts - Present to 2030	
Building Tag	Building Description
N14	Environmental Communications
N15	Media Innovation Center

## Policy 7.1.2

In order to facilitate future maintenance, emergency repairs, facilities upgrades and additions, begin implementation of Building Information Modeling for all campus buildings and other applicable improvements. This investment in BIM, 3D Civil and GIS would (ultimately) reduce maintenance costs, reduce design costs, reduce need for utility relocation, serve as an aid for emergency services, provide better electronic wayfinding, etc.

## GOAL 8

Upgrade the chilled water generation and distribution system to efficiently serve Biscayne Bay Campus’s present and future needs.

### Objective 8.1

**Extend the existing chilled water piping loop to maintain the current level of service standard for existing facilities and to serve the new areas of projected growth. Refer to Figure 10.3. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capitol Improvement Element.**

## BISCAYNE BAY CAMPUS

### Policy 8.1.1

Establish chilled water flow required at each expansion segment so piping sizes may be established. Cumulative flow requirements will be instrumental in determining the parameters for the Chiller Plant capacity upgrade and pumping ability.

### Policy 8.1.2

Establish chilled water flow required at each expansion segment so piping sizes may be established. Cumulative flow requirements will be instrumental in determining the parameters for the Chiller Plant capacity upgrade and pumping ability.

### Objective 8.2

#### Chilled Water Production and Pumping System Upgrade:

**Increase chilled water production capacity and chilled water pumping capacity to accommodate additional demands associated with the capital improvements identified under Element 14.0.**

## Policy 8.2.1

Increase chilled water production capacity to serve new building demands. Additional chiller capacity must be added to the system to maintain the N+1 redundancy for any expansion during the Present to the 2030 planning period. This may be accomplished by the replacement of the existing chiller that is currently out of service. All alternatives will require an upgrade of the condenser water (cooling towers and pumps) system. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capital Improvements Element. The estimated chilled water production capacity requirements are indicated below:

Present to 2030		
Building Tag	Building Description	Estimated Tonnage
N01B	Graduate Hospitality	75
N13A	Seas Expansion	190
N14	Environmental Communications	140
N15	Media Innovation Center	100
N20A	Facility Housing	460
N20B	Facility Housing Garage	15
N21A	Facility Housing	85
N21B	Facility Housing Garage	15
N22A	Facility Housing	300
N22B	Facility Housing Garage	15
S05	Facilities Support	20
Total Design Tonnage (Present to)		1415

## Policy 8.2.2

Upgrade and modify pumping system to operate with the existing and expanded piping loop. The timing and phasing requirements and priorities for the improvements identified in the following policies are established in the 14.0 Capital Improvements Element.

## Policy 8.2.3

Cooling towers are a significant source of water consumption. Consideration shall be given to installation of water meters for makeup water supply and cooling tower blown down to monitor consumption and avoid sewer fees associated with the water that is evaporated from the cooling tower.

## GOAL 9

In the process of upgrading the chilled water generation and distribution system, optimize the control sequences and temperature differentials to reduce energy costs by increasing operational efficiency.

### Objective 9.1

#### Convert Direct Expansion Systems to Chilled Water:

Convert existing general use (not including special systems such as IT room emergency systems) direct expansion systems to chilled water operation.

## BISCAYNE BAY CAMPUS

### Policy 9.1.1

Ensure that the chilled water production capacity, pumping capacity and piping distribution can accommodate the additional demand of the existing buildings currently served by direct expansion systems.

### Policy 9.1.2

Install chilled water BTU meters and Chiller power consumption meters to determine overall kW/ton performance.

Electrical Power and Other Fuels (Energy) Sub-Element

## GOAL 10

Ensure the existing underground electrical distribution system is not in conflict with future development indicated in the updated master plan.

### Objective 10.1

Coordinate proposed new development with existing electrical distribution and locate proposed buildings to avoid existing underground electrical distribution or include underground electrical distribution relocation in the program requirements for each development.

## MODESTO A. MAIDIQUE CAMPUS

### Policy 10.1.1

Address underground electrical distribution conflicts with proposed buildings established in the 14.0 Capital Improvement Element and as indicated in Figure 10.01b as follows:

01A	Primera Casa Addition
03A/B	Graham Center Addition
05	Library/Study Expansion
35A	Academic 2
35B	DM Addition
49	CasaCuba
58A	East Residence Hall A
58B	East Residence Hall B
58C	East Residence Hall C
58D	East Residence Hall D
58E	East Residence Hall D
59	AHC/Interdisciplinary 3
63	Mainstreet Housing
54A/B	Partnership
66	Partnership
PG7	Garage and Multi-Purpose
PG11	Garage and Multi-Purpose

## Policy 10.1.2

In order to facilitate future maintenance, emergency repairs, facilities upgrades and additions, begin implementation of Building Information Modeling for all campus buildings and other applicable improvements. This investment in BIM, 3D Civil and GIS would (ultimately) reduce maintenance costs, reduce design costs, reduce need for utility relocation, serve as an aid for emergency services, provide better electronic wayfinding, etc.

## GOAL 11

Extend the utility power primary voltage network to efficiently serve the campus in its present and future configurations.

### Objective 11.1

**Extend the existing electrical power grid coordinated with Florida Power and Light to maintain the current level of service standard to the existing as well as the new buildings.**

### MODESTO A. MAIDIQUE CAMPUS

#### Policy 11.1.1

Extend electrical feeders to planned building expansion at Modesto A. Maidique Campus with increased service capacity. [Figure 10.01b]. The planned expansions from Present to 2030 are:

Present to 2030		
Building Tag	Building Description	Estimated Demand
01A	Primera Casa Addition	588 KW
03B	University Center Addition	507 KW
05A	Library/Study Expansion	1269 KW
07A	Indoor Training Facility	667 KW
12A	Student Health Expansion	163 KW
17A	Children's Creative Learning Experience	84 KW
29A	Museum Expansion	268 KW
32A	Stadium Upper Bowl Expansion	290 KW
33A	Rec Center Expansion West	239 KW
33B	Rec Center Expansion East	420 KW
34A	North Field Rec Support Building	50 KW
35B	DM Addition	503 KW
37	Art Studios	437 KW
48A	Engineering PH2	1318 KW
54A/B	Partnership	2739 KW
547	Honors College Residential Hall	1287 KW
57C	Honors College	518 KW
58A	East Residence Hall A	1156 KW
58B	East Residence Hall B	1470 KW
58C	East Residence Hall C	1363 KW
58D	East Residence Hall D	1473 KW
58E	East Residence Hall E	2730 KW
58F	East Village Rec Center	369 KW
59	AHC/Interdisciplinary 3	1887 KW
60	Science Laboratory Complex	1729 KW
61	Facilities 1	621 KW
62	AHS Study Complex	876 KW
64	AHC/Interdisciplinary 1	2739 KW
65	AHC/Interdisciplinary 2	995 KW
67A	Academic 6	1575 KW
68	Academic 7	1027 KW
69	Academic 8	1568 KW
70	Dining Support	34 KW
71	Aquatic Complex	227 KW
72	Pool House	12 KW
73	University Park Pool House	20 KW
RF1	Track & Field Building	608 KW
RF3A	Soccer Stadium	403 KW
PG7	Garage and Multi-Purpose	860 KW
PG8	Garage and Multi-Purpose	700 KW
PG9	Garage and Multi-Purpose	863 KW
PG11	Garage and Multi-Purpose	809 KW
Total Estimated Demand (Present to 2030)		<b>34726 KW</b>

## Policy 11.1.2

The primary service capacity for the partnership buildings shall be coordinated with FP&L and the campus master plan. The partnership buildings may be developed at any time within the campus master planning time period. (see Figure 10.01b) The planned partnership buildings are:

Partnership Buildings		
Building Tag	Building Description	Estimated Tonnage
54A/B	Partnership	784 KW
66	Partnership	536 KW
Total Estimated Demand (Present to 2030)		<b>1320 KW</b>

## Policy 11.1.3

Maintain close coordination with the local utility, Florida Power & Light (FP&L), so they may tailor their facilities to the projected campus growth. FP&L is responsible for extending their facilities on campus to serve all new buildings. Therefore, Master Plan information must be accessible to FP&L and the University must act as coordinator to guarantee that FP&L planning is in step with Master Plan requirements.



## GOAL 12

Improve the efficiency of electrically powered equipment aimed at reducing operating costs.

### Objective 12.1

**Install energy efficient equipment in planned buildings and retrofit existing facilities with energy efficient components.**

Policy 12.1.1 MODESTO A. MAIDIQUE CAMPUS

Purchase Energy Star rated equipment.

GOAL 13: Ensure the existing underground electrical distribution system is not in conflict with future development indicated in the updated master plan.

### Objective 13.1

**Coordinate proposed new development with existing underground electrical distribution and locate proposed buildings to avoid existing underground electrical distribution or include underground electrical distribution relocation in the program requirements for each development.**

## ENGINEERING CENTER

### Policy 13.1.1

Address underground electrical distribution conflicts with proposed buildings established in the 14.0 Capital Improvement Element and as indicated in Figure 10.02b as follows:

**PG Multi-purpose Garage**

### Policy 13.1.2

In order to facilitate future maintenance, emergency repairs, facilities upgrades and additions, begin implementation of Building Information Modeling for all campus buildings and other applicable improvements. This investment in BIM, 3D Civil and GIS would (ultimately) reduce maintenance costs, reduce design costs, reduce need for utility relocation, serve as an aid for emergency services, provide better electronic wayfinding, etc.

## GOAL 14

Extend the utility power primary voltage network to efficiently serve the campus in its present and future configurations.

### Objective 14.1

**Extend the existing electrical power grid coordinated with Florida Power and Light to maintain the current level of service standard to the existing as well as the new buildings.**

## ENGINEERING CENTER

### Policy 14.1.1

Extend electrical feeders to planned building expansion at Engineering Center with increased service capacity. [Figure 10.02b]. The planned expansions from Present to 2030 are:

Present to 2030		
Building Tag	Building Description	Estimated Demand
R2	Wall of Wind Expansion	
106	High-bay Research	1571 KW
Total Estimated Demand (Present to 2030)		<b>1571 KW</b>

### Policy 14.1.2

The primary service capacity for the partnership buildings shall be coordinated with FP&L and the campus master plan. The partnership buildings may be developed at any time within the campus master planning time period. (see Figure 10.01b) The planned partnership buildings are:

Partnership Buildings		
Building Tag	Building Description	Estimated Demand
107	Partnership 1	2260 KW
108	Partnership 2	1986 KW
PG	Multi-purpose Garage	646 KW
Total Estimated Demand (Present to 2030)		<b>2632 KW</b>

### Policy 14.1.3

Maintain close coordination with the local utility, Florida Power & Light (FP&L), so they may tailor their facilities to the projected campus growth. FP&L is responsible for extending their facilities on campus to serve all new buildings. Therefore, Master Plan information must be accessible to FP&L and the University must act as coordinator to guarantee that FP&L planning is in step with Master Plan requirements.

## GOAL 15

Improve the efficiency of electrically powered equipment aimed at reducing operating costs.

### Objective 15.1

**Install energy efficient equipment in planned buildings and retrofit existing facilities with energy efficient components.**

### ENGINEERING CENTER

#### Policy 15.1.1

Purchase Energy Star rated equipment.

## GOAL 16

Ensure the existing underground electrical distribution system is not in conflict with future development indicated in the updated master plan.

### Objective 16.1

**Coordinate proposed new development with existing electrical distribution and locate proposed buildings to avoid existing underground electrical distribution or include underground electrical distribution relocation in the program requirements for each development.**

## BISCAYNE BAY CAMPUS

### Policy 16.1.1

Address underground electrical distribution conflicts with proposed buildings established in the 14.0 Capital Improvement Element and as indicated in Figure 10.03b as follows:

#### N13A

#### Seas Expansion

### Policy 16.1.2

In order to facilitate future maintenance, emergency repairs, facilities upgrades and additions, begin implementation of Building Information Modeling for all campus buildings and other applicable improvements. This investment in BIM, 3D Civil and GIS would (ultimately) reduce maintenance costs, reduce design costs, reduce need for utility relocation, serve as an aid for emergency services, provide better electronic wayfinding, etc.

## GOAL 17

Extend the utility power primary voltage network to efficiently serve the campus in its present and future configurations.

### Objective 17.1

Extend the existing electrical power grid coordinated with Florida Power and Light to

maintain the current level of service standard to the existing as well as the new buildings

## BISCAYNE BAY CAMPUS

### Policy 17.1.1

Extend electrical feeders to planned building expansion at Biscayne Bay Campus with increased service capacity. (see Figure 10.03b). The planned expansions from Present to 2030 are:

Present to 2030		
Building Tag	Building Description	Estimated Demand
N01B	Graduate Hospitality	446 KW
N13A	SEAS Expansion	1130 KW
N14	Environmental Communications	831 KW
N15	Media Innovation Center	590 KW
N20A	Facility Housing	2478 KW
N20B	Facility Housing Garage	916 KW
N21A	Facility Housing	2245 KW
N21B	Facility Housing Garage	233 KW
N22A	Facility Housing	1650 KW
N22B	Facility Housing Garage	173 KW
S05	Facilities Support	166 KW
Total Estimated Demand (Present to 2030)		<b>10858 KW</b>

### Policy 17.1.2

Maintain close coordination with the local utility, Florida Power & Light (FP&L), so they may tailor their facilities to the projected campus growth. FP&L is responsible for extending their facilities on campus to

serve all new buildings. Therefore, Master Plan information must be accessible to FP&L and the University must act as coordinator to guarantee that FP&L planning is in step with Master Plan requirements.

## GOAL 18

Improve the efficiency of electrically powered equipment aimed at reducing operating costs.

### Objective 18.1

**Install energy efficient equipment in planned buildings and retrofit existing facilities with energy efficient components.**

### BISCAYNE BAY CAMPUS

#### Policy 18.1.1

Purchase Energy Star rated equipment.

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TRANSPORTATION



## 11.0 TRANSPORTATION

For all campuses, FIU's goal is to increase multi-modal access. FIU will continue to place planning emphasis on providing safe, sustainable and adequate access to students, faculty, staff and visitors alike. Utilizing a variety of strategies, FIU aims to increase accessibility, mobility, and carbon reduction to accommodate future growth on each campus.

### Transit

Florida International University will continue to coordinate with its respective host communities and Miami-Dade Transit to create additional opportunities for improved and frequent public transportation, additional bus stops near campus, and enhanced bus stops with amenities such as covered shelters and landscaping. Both Modesto A. Maidique Campus and the Engineering Center will provide major transit hubs and bus stops for evolving bus rapid transit programs to serve the university and local community.

### Traffic Circulation

Improvements to existing infrastructure are needed to alleviate the demand placed on roadways with the current university population as well as accommodate future growth. Intersections and lane improvements adjacent to each campus have been identified. Coordination

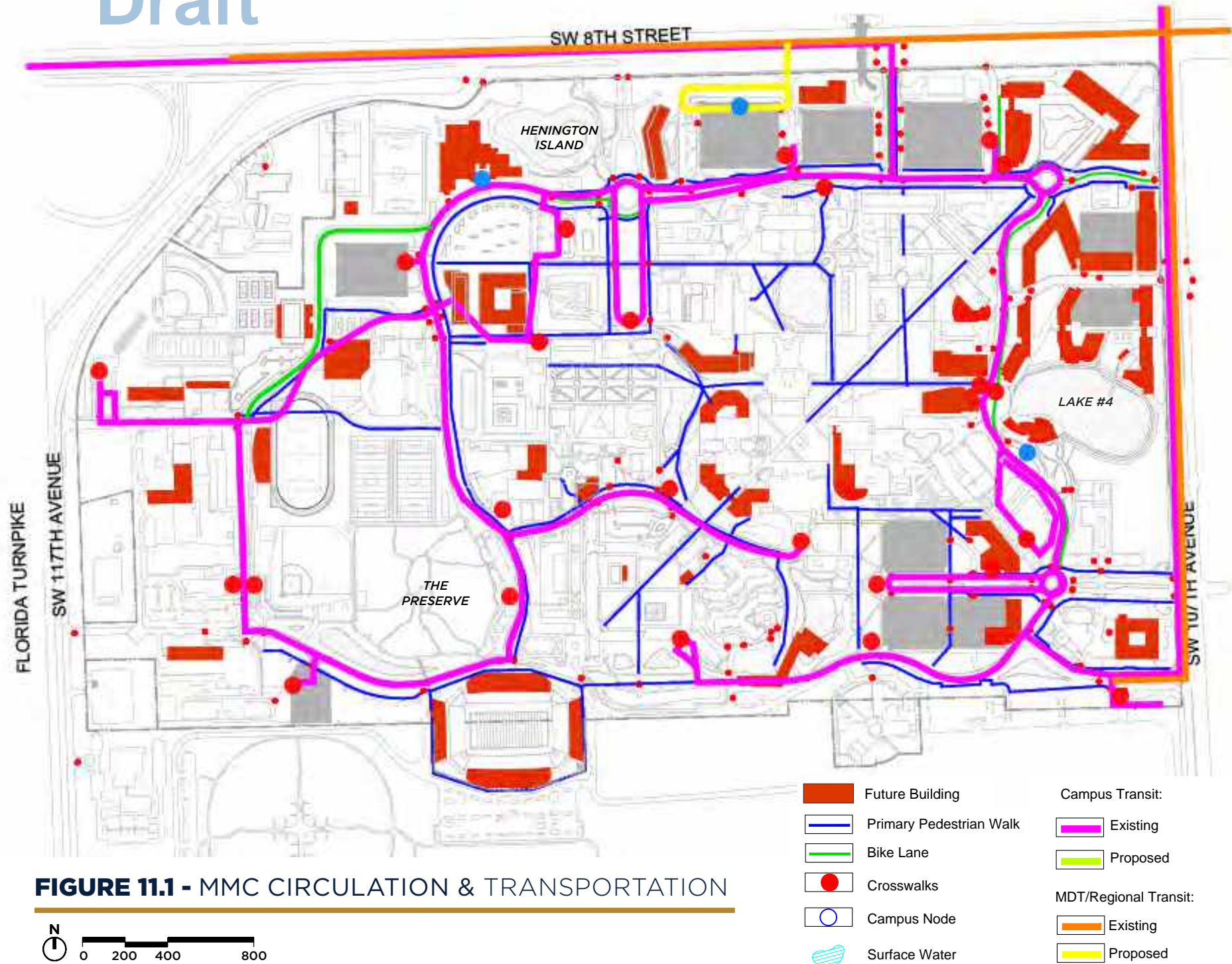
with Miami-Dade County and FDOT is needed to ensure proper and successful execution of these recommended improvements. In addition, the incorporation of safe and efficient bicycle lanes for commuting students is required both off and on campus. Realignment of streetscape improvements to perimeter streets, access drives and campus roads are required to promote a safe, secure and comfortable pedestrian oriented environment to complement the street network.

### Parking

Parking demand and availability continues to be a challenge for FIU. While both Engineering Center and Biscayne Bay Campus have adequate available land for additional parking facilities, Modesto A. Maidique Campus has limited available land and road capacity. This lack of capacity has led to the creation of multi-purpose parking structures at the campus edge to reserve land within the academic core. In order to manage parking demand and reduce the need for additional parking facilities, FIU will continue to promote alternatives to traditional commuting such as improved transit, carpooling, additional on-campus student housing, new off-campus housing with campus connectivity, eLearning and hybrid class modules, and flexible work schedules.

### Pedestrian and Non-Vehicular Circulation

Pedestrian circulation remains a major planning concern. FIU should expand its network of safe pedestrian walkways – with adequate widths for the volume – from the perimeter of campus to core academic and student life facilities. In tandem, it should expand and strengthen identifiable crosswalks at strategic locations where students move from parking garages and surface lots into the campus core. Signage and lighting will be key supporting components for these improvements. Safe movement for all users should be a paramount concern when locating and designing new facilities and their supporting pedestrian corridors. Vistas, cover from sun and rain, seating areas, and public art should be coordinated along pedestrian axes making way-finding easier, enjoyable and more intuitive. The proposed 8th Street TIGER Grant Pedestrian Bridge will provide a new landmark in safety, connectivity and campus/community branding.



**FIGURE 11.1 - MMC CIRCULATION & TRANSPORTATION**

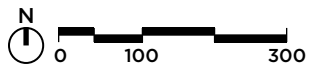




## LEGEND

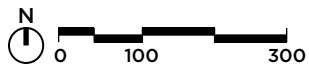
- Future Building
- Existing Transit Stop
- Existing Transit Route
- Campus Transit:
  - Existing
  - Proposed
- MDT/Regional Transit:
  - Existing

**FIGURE 11.2 - EC CIRCULATION & TRANSPORTATION**





**FIGURE 11.3 - BBC CIRCULATION & TRANSPORTATION**





## GOAL 1

Florida International University shall continue to develop, operate, and maintain a safe and efficient multi-modal circulation system that provides ease of mobility; leading to decreases in number of single occupant vehicles (SOV); reduction in fuel consumption and dependence on foreign oil, reduction in greenhouse gas emissions, promoting energy conservation and protecting the natural environment.

### Transit Objective 1.1

**The University shall allocate funds for capital expansion and improvements of multi-modal systems that relieve on-campus traffic congestion and reduce the demand for additional parking. Coordinate with Miami-Dade Transit (MDT) and local/host communities to determine the best and highest use for the transit proposed to serve the campus properties.**

### UNIVERSITY-WIDE Policy 1.1.1

Continue to improve quality and frequency of the inter-campus University transit services/routes.

### MODESTO A. MAIDIQUE CAMPUS:

#### Policy 1.1.2

Maintain existing transit hub at its current

location at the southwest corner of SW 107th Avenue and SW 108th Avenue intersection. However, continue to evaluate its relocation to Parking Garage 6 (PG6), pending support from MDT.

#### Policy 1.1.3

Enhance on-campus transit along loop road to improve connections between housing, parking garages and key education/support locations. Provide new transit stops along realigned loop road.

#### Policy 1.1.4

Encourage MDT to continue increased frequency of service (including Sweetwater Circulator), provide express bus service (confirmation from MDT pending), maintain clean and comfortable vehicles, and provide weather-proof shelters (the University shall provide weather-proof access to transit terminals).

### ENGINEERING CENTER

#### Policy 1.1.5

Provide transit hub at the entrance to ECC along NW 107th Avenue and adequate transit circulation routes within campus to support transit hub.

### BISCAYNE BAY CAMPUS

#### Policy 1.1.6

Continue to strengthen coordination efforts with

the City of North Miami in order to promote the use of the City's Free Nomi Bus Shuttle service as an alternative transportation option available to both students and faculty of the University. As the traffic conditions on NE 151st Street at the intersection with Biscayne Blvd are expected to deteriorate, amenities should be considered near the intersection to facilitate bus transfers. Coordination with Miami Dade Transit should take place to ensure the new Enhanced Bus Service provides a stop near the intersection.

### Traffic Circulation

## GOAL 2

The University shall promote roadway designs to improve traffic circulation, ease congestion, promote safety, and provide sufficient capacity to serve on future campus roadways at the vadopted level of service (LOS) standard. The University shall also coordinate with FDOT and Miami Dade County to improve capacity and level of service on deficient roadways adjacent to the campuses.

### Traffic Objective 2.1

**On a case-by-case basis, the University may consider allocation of funds for roadway improvements to improve traffic circulation, relieve traffic congestion, decrease delay and fuel consumption.**

### UNIVERSITY-WIDE Policy 2.1.1



Enhance pedestrian and bicycle facilities that improve connectivity to host communities and local/regional transit facilities.

## **Policy 2.1.2**

Future proposed campus roadways will use 11' wide travel lanes, 4' bike lane (except 5' wide for key holes), type "F" curb and gutter, 6' minimum sidewalk with 11' landscape buffer in between back of curb and front of sidewalk. FIU shall maintain a suitable roadway network in compliance with State, local and the National Fire Protection Association (NFPA) standards in order to provide emergency response vehicles with adequate and safe access to emergencies and fires within each campus. Roadway design should also consider potential future raised bike lanes as funded by FDOT grants.

## **MODESTO A. MAIDIQUE CAMPUS**

### **Policy 2.1.3**

Re-align current campus loop road to traverse between Panther Garage and Carlos Finlay Elementary School and connect to the improved SW 115 Avenue. Re-route campus loop road to limit vehicular access to the campus core. Provide for pedestrian safety by constructing separate traffic and pedestrian facilities.

### **Policy 2.1.4**

For campus loop roadway improvements, provide three lanes of roadway capacity, turn lanes, bike lanes, curb and gutter and sidewalks. The lane geometry shall include one through lane in each direction and a center left turn lane or two way left

turn lane. Proposed roadway geometry design shall include provisions to accommodate an Intermediate Semitrailer (45.5' long). SW 8 Street/SW 112 Avenue and University Drive/SW 112 Avenue intersections' design revisions shall accommodate an Articulated Bus (60' long).

### **Policy 2.1.5**

Maintain the following existing entrances per current standards:

- SW 109th Ave and SW 8th St
- SW 112th Ave and SW 8th St
- SW 107th Ave and SW 16th St
- SW 107th Ave and SW 12th St (connect to University Dr.)
- 107 and 10th St
- 107 and 17th St

### **Policy 2.1.6**

Provide a roundabout at the following location to improve capacity, traffic flow and enhance safety:  
• SW 17 St.& SW 115th Ave.

### **Policy 2.1.7**

Coordinate with Miami Dade County on the future widening of SW 24 Street (Coral Way) from four to six lanes, between SW 117 Avenue and SW 107 Avenue. All improvements and/or work in the right-of-way are subject to further traffic/design evaluation, review, approval, and permitting by the County. This includes but is not limited to, landscaping, signage, new or modified driveway connections, and roadway modifications.

### **Policy 2.1.8**

Coordinate with Miami Dade County on the future widening of SW 117 Avenue from two to four lanes, between SW 8 Street and SW 24 Street (Coral Way). All improvements and/or work in the right-of-way are subject to further traffic/design evaluation, review, approval, and permitting by FDOT. This includes but is not limited to, landscaping, signage, new or modified driveway connections, and roadway modifications.

### **Policy 2.1.9**

Coordinate with Miami Dade County on the future widening of NE 151 Street (Bay Vista Blvd) from four to six lanes, between Biscayne Boulevard to east of Biscayne Landing Entrance. All improvements and/or work in the right-of-way are subject to further traffic/design evaluation, review, approval, and permitting by the County and FDOT. This includes but is not limited to, landscaping, signage, new or modified driveway connections, and roadway modifications.

### **Policy 2.1.10**

At the main access to the campus (US 1 (Biscayne Blvd)/NE 151 Street intersection), there is substantial delay to campus traffic and will likely worsen with the completion of Biscayne Landings development. Major capacity improvements are necessary to enhance safety and operation. In addition, along NE 151 Street near Biscayne Landing entrance, consider widening from 4 to 6 lanes to alleviate potential 2030 demand. Coordinate with Florida Department of Transportation and Miami Dade County Roadway Department on these

intersection and roadway improvements. All improvements and/or work in the right-of-way are subject to further traffic/design evaluation, review, approval, and permitting by the County and FDOT. This includes but is not limited to, landscaping, signage, new or modified driveway connections, and roadway modifications.

## **BISCAYNE BAY CAMPUS**

### **Policy 2.1.11**

Due to traffic congestion at the main access to the campus (US 1 (Biscayne Blvd.)/NE 151 Street intersection), a second vehicular access point is necessary to ease congestion and serve as an emergency evacuation route due to the nature of the developments (School, University, Housing, Health Center, etc.). Per Figure 11.3a, one of the two options shown should be considered for providing this critical vehicular access. FIU will coordinate with the State, Regional, Municipal and private partners to secure this additional access to the campus.

### **Policy 2.1.12**

The Bay Vista Blvd. (NE 151 Street) and NE 145th Street (main campus entrance) intersection's level of service (LOS) will likely approach failure by 2030. To mitigate this potential issue, provide new signal at Bay Vista Blvd. and Golden Panther Drive, and convert it to the main campus entrance. Modify the current main entrance at NE 145th Street to a secondary entrance.

### **Policy 2.1.13**

Coordinate with the City of North Miami, Miami Dade County on the widening of NE 151 Street from four to six lanes, between Biscayne Blvd to east of Biscayne Landing Entrance.

## **GOAL 3**

### **Parking**

The University will evaluate the future parking needs of the campuses and shall provide parking facilities as necessary. It will also encourage the implementation of transportation demand strategies to reduce parking demand.

### **Objective 3.1**

**To accommodate future parking requirements on-campus, University shall evaluate and construct as necessary additional multi-purpose parking structures or surface parking lots, and establish programs or administrative procedures.**

### **Policy 3.1.1**

Maintain a ratio for parking spaces and future student housing beds to limit impact to daily commuter traffic and parking. Enhance pedestrian connectivity to bus transit and campus shuttle areas to encourage carless or multi-modal transit use.

### **Policy 3.1.2**

Replace surface parking lots with multi-purpose parking garages adjacent to the facilities they serve.

### **Policy 3.1.3**

Handicap accessible parking should be reserved in the vicinity of each academic, support and residential facility. Stall counts should range from 2 to 10 spaces depending on facility size occupancy and assigned use.

## **UNIVERSITY-WIDE**

### **Policy 3.1.4**

Parking structures and surface lots shall be designed with internal walkways to be fully integrated with the campus pedestrian and traffic circulation system.

## **MODESTO A. MAIDIQUE CAMPUS:**

### **Policy 3.1.5**

Evaluate the accommodation, routing and design impacts of the potential express bus stop at PG6, pending support from MDT. Evaluate the potential parking impact due to riders using the express bus service at PG6.

### **Policy 3.1.6**

Multi-purpose parking structures shall be built concurrently with proposed private partnership projects to meet partnering needs.

### **Objective 3.2**

**University-Wide Implementation of Transportation Demand Management (TDM) strategies:**

**The University shall implement Transportation Demand Management (TDM) techniques (e.g. increase the number of students living**

on campus, improved transit, modify academic scheduling, carpooling etc.,) in order to reduce the parking demand by the end of the planning period. TDM strategies are intended to reduce or shift the number of single occupant vehicle (SOV) trips to non-SOV modes or to nonpeak periods. These TDM strategies can be achieved at all FIU campuses by continuing to encourage and facilitate pedestrian and bicycle modes, transit use, ridesharing and other alternatives. TDM Strategies that are in place and/or could be improved at FIU's campuses include the following:

## UNIVERSITY-WIDE Policy 3.2.1

Local Connectors – Continue to encourage the use of local connector public transportation. This can be achieved by continuing to improve the relationships with each campus host community and improving local commuter bus facilities within the FIU campuses. Partnering with the host communities to allow their residents to enjoy activities on campus at reduced rates may encourage these communities to further enhance the quality/ frequency of these connector routes.

## Policy 3.2.2

Reduced Transit Rates – Continue to work with Miami Dade Transit (MDT) to provide reduced student transit rider rates. This could also be extended to FIU employees to encourage their use of this service. MDT offers discounts for college students and encourages Corporate Discount Program – FIU should coordinate with MDT to provide corporate discount transit passes to FIU faculty and staff.

## Policy 3.2.3

Transit in Lieu of Parking – Provide an annual or semester passes for public transit to students rather than a parking pass would be another alternative strategy.

## Policy 3.2.4

Improving Transit Facilities - Provide user-friendly transit stop locations on campus that are inclement weather protected and encourage usage.

## Policy 3.2.5

Carpool and Ridesharing - Continue to promote the carpool program that is being coordinated with the Florida Department of Transportation's South Florida Commuter Services. This program encourages carpool usage by allowing users to search for other carpool members by selecting the location and schedules they need to meet. Continue to encourage ride sharing and carpooling by providing more easily accessible parking spaces for these types of vehicles.

## Policy 3.2.6

Flexible Working Schedule – Provide flexible schedules for the FIU administration, staff and faculty. This would allow for telecommuting and benefit the volume of traffic generated by these personnel. This will also help reduce traffic flows at peak times.

## Policy 3.2.7

On-Campus Housing - Increase the amount of on-campus housing to reduce the need for those residents to have a vehicle for regular educational accessibility. This would significantly reduce the number of SOV trips required by nonresident commuters.

## Policy 3.2.8

Distance-Learning Programs – Increase distance learning programs offered by the University to enable students to take classes without traveling to the campuses. More courses and programs through distance learning reduce trips to the University Campuses significantly.

## Policy 3.2.9

Transit Oriented Development (TOD) - Introduce transit oriented development in the planning study areas. Transit oriented development refers to residential and commercial centers designed to maximize access by transit and nonmotorized transportation, with features to encourage transit ridership. Providing a transit station at Modesto A. Maidique Campus and/or the Engineering Center would provide transit access to the surrounding area.

## Policy 3.2.10

Transit Information - Provide a system whereby commuters can access and monitor real-time public transportation route schedules and times on their wireless devices.

## **Policy 3.2.11**

Parking Permit Buyback - Implement a buyback program for parking permit holders that would reimburse commuters who give back their parking permit and choose to use public transportation or ridesharing activities.

## **Policy 3.2.12**

Parking Information - Introduce a real time parking area availability status via information boards at key transportation decision points on campus to allow for more efficient commuting from the point of campus entry to available campus parking facilities. This would help minimize traffic on the campuses by commuters driving through heavy pedestrian areas to find parking. This information could also be linked to a wireless network and made available to commuters' wireless or smart phone devices.

## **Objective 3.3**

**Signage:**  
**The University shall create a hierarchy of internal signage.**

## **UNIVERSITY-WIDE Policy 3.3.1**

Assess current signage system and better way-finding through the establishment of a hierarchy of signage which includes varying sizes and designs for way-finding. Include signage for directing traffic to nearby parking.

## **Policy 3.3.2**

Establish wayfinding signage system that clearly distinguishes size and spacing between vehicular and non-vehicular oriented information.

## **GOAL 4**

Develop, operate and maintain a safe, efficient and economical pedestrian and non-vehicular circulation system on-campus that, in conjunction with systems to be developed off-campus by the host communities, will provide ease of mobility for all people, is consistent with planned land use patterns, promotes energy conservation, and protects the natural environment.

## **Objective 4.1**

**Walkways:**  
**Create a campus wide system of interconnected walkways.**

## **UNIVERSITY-WIDE Policy 4.1.1**

Provide a continuous system of covered walkways with appropriate width between existing and new academic and student service facilities.

## **Policy 4.1.2**

Construct uncovered walkways of appropriate width alongside the roadways, between major buildings, from the parking facilities and within parking lots following "natural" walking routes, by the end of the 2030 planning period. Prioritize and coordinate improvements with; Figures 11.1b, 11.2b and 11.3b; Urban Design, Landscape Architectural and Architectural Elements.

## **Policy 4.1.3**

Roadways on campus and entrances to the campus should be designed with clearly designated bicycle lanes to encourage and promote safe bicycle access to the campus. Bike lanes shall be 4' wide, except at key holes (area between through and right turn lane) where it shall be 5' wide. Bicycle parking should be provided at all major buildings and recreational facilities on campus.

## **MODESTO A. MAIDIQUE CAMPUS Policy 4.1.4**

The 'Avenue of the Arts', extending from the Wertheim Performing Arts Center north through the Graham Center, and the 'Avenue of the Professions', running west from the Graham Center to the Graduate School of Business and School of Law will serve as primary pedestrian linkages through campus. See Element 3.0 Urban Design.

## **Policy 4.1.5**

Provide pedestrian corridors throughout the campus, particularly those extending from parking structures at the campus perimeter. Improve pedestrian routes/safety from garages/parking to campus core.

## **Policy 4.1.6**

Enhance pedestrian safety, keep pedestrian paths away from intersections. Separate pedestrian and vehicular flows to minimize conflict. Provide appropriate warning signs and striping at pedestrian crossing (mid-block) away from intersections.

## **Policy 4.1.7**

Coordinate and construct pedestrian walkways with the new multipurpose parking structures to provide a linkage to the existing campus and adjacent facilities.

## **Policy 4.1.8**

Strengthen direct pedestrian route along “Avenue of the Professions”. Route to be more axial that its existing circuitous condition to encourage efficient pedestrian use.

## **Policy 4.1.9**

Integrate the adjacent City of Sweetwater community with the FIU campus by providing a pedestrian bridge across SW 8th Street at SW 109th Avenue, as a part of the FIU UniversityCity Project, funded by the USDOT Tiger Grant.

## **BISCAYNE BAY CAMPUS**

### **Policy 4.1.10**

Provide pedestrian walkways to safely link parking, academic, transit and recreation facilities.

### **Policy 4.1.11**

Bicycle lanes and sidewalks are not continuous along both sides of NE 151 Street and Bay Vista Blvd. to Biscayne Boulevard. Provide continuous bicycle lanes and sidewalks and extend these facilities to the campus per Figure 11.3b.

### **Policy 4.1.12**

Provide adequate bicycle lane links within the Campus to the 135th Street / Arch Creek Preserve bicycle / pedestrian route. Coordinate with Miami Dade County to provide improved bicycle lanes and sidewalks on both sides of the street on Bay Vista Blvd and 151st Street. Ensure safe pedestrian and bicycle access from the local schools nearby.

### **Policy 4.1.13**

FIU will coordinate with the City of North Miami to maintain connections to the existing Arch Creek bike path on the 135th Street constructed by FDOT.

## **Objective 4.2**

**Campus Safety:**  
**The University shall modify vehicular circulation patterns and parking locations to create existing and future pedestrian/vehicular safety at crossings.**

## **UNIVERSITY-WIDE**

### **Policy 4.2.1**

Provide safe crossings for pedestrians across all roadways. Crosswalks shall be of the high emphasis type with appropriate signage (including flashing beacons) and striping. Locations shall consider visibility of pedestrians, length of crosswalks, pedestrian crossing times, connectivity to adjacent sidewalks, pedestrian density, pedestrian signal control, crossing distance, ADA ramps, reduction of posted speed limits, speed bumps, etc.

## **MODESTO A. MAIDIQUE CAMPUS**

### **Policy 4.2.2**

Campus Loop Road: Provide crosswalks on the existing and re-aligned road to provide adequate warning and visibility.

## **BISCAYNE BAY CAMPUS**

### **Policy 4.2.3**

Provide crosswalks on the existing and re-aligned roads to provide adequate warning and visibility.

## **Objective 4.3**

### **Campus Safety Plan:**

**Future pedestrian and non-vehicular facilities should be planned in accordance with the Campus Safety Plan and Crime Prevention through Environmental Design (CPTED) standards.**



## **UNIVERSITY-WIDE Policy 4.3.1**

Continue to provide daily escort service after dusk for students between University buildings and parking lots.

### **Objective 4.4 Context Area:**

**The University shall create pedestrian and non-vehicular connections to the host communities in the immediate surrounding area.**

## **UNIVERSITY-WIDE Policy 4.4.1**

Maintain a standing committee between University staff and host community representatives to provide coordination and resolve issues related to pedestrian and non-vehicular circulation.

## **MODESTO A. MAIDIQUE CAMPUS Policy 4.4.2**

Encourage Miami-Dade County to construct bike paths along SW 117 Avenue and Coral Way (SW 24 Street). Encourage FDOT to construct bike paths along SW 8th Street (SR 90) and SW 107th Avenue (SR 985). Provide bikeways on-campus for any new roadway construction and provide capital improvement budget for adding bikeways along existing roadways.

## **ENGINEERING CENTER Policy 4.4.3**

Coordinate with the City of Sweetwater to provide a pedestrian connection and bike path at the Women's Park and the Engineering Center recreation facilities.

### **Objective 4.5 Lighting**

The University shall provide appropriate lighting for new roadways, all major pedestrian and non-vehicular facilities on-campus (i.e. parking, public areas, and walkways) to enhance safety.

## **UNIVERSITY-WIDE Policy 4.5.1**

Provide new roadways and new pedestrian walkways, with lighting that meets lighting design standards for local roadways and public spaces respectively.

### **Policy 4.5.2**

Provide appropriate lighting on the exterior of any new parking garages and new surface parking lots. Any lighting deficiencies on existing facilities shall be addressed to enhance safety.

## **Future Land Use Objective 4.6**

**The University shall provide right-of-way necessary for roadway/transit improvements.**

## **UNIVERSITY-WIDE Policy 4.6.1**

Determine right-of-way necessary (including clear zone) necessary for all of the recommended roadway improvements in the 2020-2030 Master Plan. This will also include new entries at MMC and BBC.

### **Policy 4.6.2**

Monitor the comprehensive plan of host communities to ensure that roadway/transit improvements in the FIU Master Plan do not conflict with future land uses in the context area.

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**INTERGOVERNMENTAL  
COORDINATION**

## 12.0 INTERGOVERNMENTAL COORDINATION

Florida International University's comprehensive planning process reflects and responds to the interaction between its people, programs, and amenities and vital elements of its surrounding host communities, concerned jurisdictions, and governmental agencies. The most important factors in successful comprehensive planning are cooperation, consideration, and coordination. The Campus Master Plan supports lasting and collaborative relationships with Miami-Dade County, the City of North Miami and the City of Sweetwater.

### **Cooperation**

The Campus Master Plan recognizes the importance of the existing regulatory structure at the local, state and federal levels of government. Throughout the Campus Master Plan, FIU states its intention to cooperate with the permitting, concurrency and other applicable code requirements of overseeing regulatory agencies and departments of local and state government. The University has dedicated itself to being a responsive and responsible member of both the Miami-Dade County business and educational communities. Existing programs, new areas of study, work-based learning opportunities for area businesses, and evolving student life amenities all

rely on cooperation and communication between FIU, Sweetwater, and Miami-Dade business and economic development agencies. The current Sweetwater "University" Initiative and successful TIGER Grant application are important examples of this potential. These partnership opportunities and relationships have been structured into relevant elements of the Campus Master Plan. The Campus Master Plan supports the highest and best use of FIU property and development in consideration of its impact on the quality of life for neighboring businesses, residents, and land holders.

### **Consideration**

FIU recognizes that it is a large economic and development force within each host community. University projects have the potential to affect planning, resources, development patterns, and surrounding land uses. Similarly, community land use and development around each campus have the potential to enhance or detract from the FIU's unique academic environment.

### **Coordination**

The goal of intergovernmental coordination is the joint process for collaborative planning, decision making, and development review by governmental agencies. The Campus Master Plan identifies issues which, because of their unique circumstances, require intergovernmental coordination above and beyond that which routinely occurs in day-to-day university operations. FIU's planning goals, objectives and policies facilitate coordination and communication with local government and service providers. If there are conflicts that arise, these mechanisms will be used to resolve the conflicts while working toward achievement of FIU's planning implementation.



## GOAL 1

**To implement and achieve the goals, objectives and policies established in this master plan that require the interaction of the University, the host communities and other governmental entities.**

## OBJECTIVES AND POLICIES

### Objective 1.1

**Establish a process, which maintains the land use compatibility between the University and the host community through the reciprocal review of local government comprehensive plans and campus master plans.**

#### Policy 1.1.1

The Florida International University (FIU) Director of Facilities Management or designee; shall meet with planning officials from the Miami-Dade County, the City of North Miami, the City of Miami Beach and the City of Sweetwater to determine an appropriate process for reciprocal review and comment of appropriate elements of the FIU campus master plan by local government officials, and of appropriate

elements of local government comprehensive plans by the University. FIU master plan elements to be reviewed by local governments shall be limited to the Future Land Use

Element, Housing Element, Recreation and Open Space Element, General Infrastructure Element, Capital Improvements Element, Transportation Element, Intergovernmental Coordination Element, and the Conservation Element.

#### Policy 1.1.2

Proposed amendments to the adopted campus master plan which exceed the thresholds established in Chapter 1013.30 (9), F.S., shall be transmitted to the Miami-Dade County, City of North Miami, City of Miami Beach, City of Sweetwater, South Florida Regional Planning Council, South Florida Water Management District, Florida Game and Fresh Water Fish Commission, Florida Department of Transportation, Florida Department of State, Florida Department of Environmental Protection, Florida Land Management Advisory Council, and the State of Florida Department of Community Affairs for review in accordance with the procedures established in Chapter 6C-21, Part 1, Florida Administration Code.

#### Policy 1.1.3

Proposed amendments to the campus master plan which do not exceed the thresholds established in Chapter 1013.30 (9), F.S., and which have the effect of changing the manner in which development on campus may occur or impacting off-campus facilities, services or natural resources, shall be transmitted to the

Miami-Dade County, City of North Miami, City of Miami Beach and City of Sweetwater for a courtesy review.

#### Policy 1.1.4

It shall be the policy of FIU that proposed amendments to the comprehensive plans of the Miami-Dade County, City of North Miami, City of Miami Beach and the City of Sweetwater which have the effect(s) of changing land uses or policies that guide the development of land within the context area, affect the provision of local services, or which otherwise impact university facilities or resources shall be submitted to the University Director of Planning in Facilities Management for review and comment.

#### Policy 1.1.5

Any development proposing connection to an existing drainage system shall evaluate the impacts of the proposed development on the affected stormwater management system as part of the project's design phase. Otherwise, sufficient stormwater management improvements must be provided to handle all of the runoff from the new developments on a stand-alone basis.

#### Policy 1.1.6

FIU shall make every effort to formalize this reciprocal review process through the execution of an interlocal agreement or memorandum of understanding.

## Objective 1.2

**In order to allow for orderly expansion of the Modesto A. Maidique Campus, through and beyond the projected buildout date of, 2010-2015 Florida International University will assess the feasibility of utilization of properties, adjacent and to the south on the present campus, for recreation, open space and support (including parking).**

### Policy 1.2.1

In order to conserve the limited land resources at Modesto A. Maidique, FIU shall discourage development of use not in conformance with the policies of the University's Master Plan with the exception of planned joint use facilities with the Miami-Dade County Fair and Exposition and Tamiami Park, which considers surrounding uses when developing uses for the Park.

*Miami-Dade County Fair and Exposition and Tamiami Park are the primary location identified in the Radiological, Emergency Preparedness Plan for the Emergency Reception Center. The purpose of this coordinated site includes registration, monitoring and decontamination of people; temporary sheltering and potassium iodide distribution in the event of a radiological event. In the event of a category 3 or higher hurricane, the County's Department of Animal Services plans to move all of its operations to this facility.*

## Policy 1.2.2

In the event additional lands are conveyed to Florida International University and any of the thresholds established in Chapter 1013.30

(8) F.S. are reached, the campus master plan shall be amended and reviewed in accordance with the criteria established under Chapter 1013.30 (6), (7) and (8) F.S.

## Objective 1.3

**Obtain a wetland jurisdictional determination for BBC if required for development adjacent to existing wetlands.**

### Policy 1.3.1

While there is no work anticipated currently, FIU should follow required protocols and determine whether a campus wide or phased dredge and fill permit process is required.

### Policy 1.3.2

FIU shall undertake wetland mitigation in a manner that maximizes the efficiency of the mitigation activities in terms of dredge and fill permit credit received, affordability and maintenance.

## Objective 1.4

**Obtain an allocation of sanitary sewer treatment capacity from the Water and Sewer Department sufficient to handle the sanitary**

**sewer generated by the University.**

### Policy 1.4.1

In order to expedite University development activities and in particular the installation of potable water and sanitary sewer infrastructure, FIU shall formally request that DERM assign a single contact person to review the University's activities for the Modesto A. Maidique Campus, and that the City of North Miami assign a single contact person to review the University's activities for Biscayne Bay Campus.

### Policy 1.4.2

FIU shall request WASD and the City of North Miami to indicate what the specific sanitary sewer treatment allocation is assigned to government and what proportion of that allocation is presently utilized for Modesto A. Maidique Campus and Biscayne Bay Campus.

### Policy 1.4.3

FIU shall request a letter of sanitary sewer allocation from Miami-Dade Department of Regulatory and Economic Resources and from the City of North Miami, this allocation confirming the capacity reserved for governmental activities and in a quantity sufficient to handle the sanitary sewer projected in the campus master plan to be generated at campus build out.

## Policy 1.4.4

The provisions of the sanitary sewer treatment allocation shall be incorporated into the FIU development agreement and adopted pursuant to Chapter 1013.30 F.S.

## Objective 1.5

**Assess the impacts generated by FIU on host communities and service providers and provide mitigation measures for FIU's impacts for those services found to be deficient.**

## Policy 1.5.1

A draft development agreement update shall be forwarded to the local and county government for review and comment. This agreement shall contain the following components:

- Identify the geographic area covered by the agreement;
- Establish the duration of the agreement;
- Identify the level of service standards for public services and facilities, the entity to provide these services, and any financial arrangements between the Board of Trustees and the service provider;
- Determine the impact of the proposed campus development on public service providers and facilities, and any deficiencies projected to occur as a result of this development;

- Identify what facility improvements are necessary to correct deficiencies caused by the University's development activities;
- Identify the Board of Trustees "fair share" of the cost associated with the required improvements; and
- Be consistent with adopted campus master plan and host local government adopted comprehensive plan.
- Identify remedies that will minimize off-site impacts and include a schedule of funding for capital projects.

## Policy 1.5.2

Florida Board of Trustees and the host governments shall execute the campus development agreement within 180 days after receipt of the draft agreement.

## Policy 1.5.3

Upon execution of the campus development agreement, all development may proceed without further review by the host government if it is consistent with the campus development agreement and the adopted campus master plan.

## Policy 1.5.4

Upon payment of the "fair share" by the Florida Board of Trustees for the capital improvements established in the campus development agreement, all concurrency management requirements of the University

shall be fulfilled.

## Policy 1.5.5

Any disputes between the University and the host local government which arise concerning the provisions of the campus development agreement and result in the failure to execute the agreement within 180 days after receipt of the draft agreement shall be resolved in accordance with Chapter 1013.30 (16), F.S.

## Policy 1.5.6

Any disputes between the University and the host local government which arise from the implementation of the campus development agreement shall be resolved in accordance with the provisions established in Chapter 1013.30 (17), F.S.

## Objective 1.6

**University and local officials shall establish a development review process to assess the impacts of proposed development on significant local, regional and state resources and facilities. This shall be a reciprocal process whereby local officials are given an opportunity to review proposed campus development in order to assess its potential impacts on local, regional and state resources and facilities, and whereby university officials are given an opportunity to review proposed development within the context area in which to assess its potential impacts on university resources and facilities.**

## **Policy 1.6.1**

Except when otherwise stated in Chapter 1013.30, F.S., the provisions of the campus master plan and associated campus development agreement superseded the requirements of Part II of Chapter 163, F.S..

## **Policy 1.6.2**

It shall be the policy of FIU that proposed development within the context area which has the potential to impact or affect University facilities or resources shall be submitted to the University's Director of Planning and Facilities Management or designee for review.

## **Policy 1.6.3**

The FIU Director of Planning in Facilities Management or designee shall meet with local officials to establish the criteria and thresholds for development proposals, which would be subject to review by the University. The construction or renovation of single-family homes, and other small scale developments are to be excluded from review by the University.

## **Policy 1.6.4**

University officials shall participate and cooperate with local officials in the review of proposed campus development to assess potential impacts on local, regional and state

resources and facilities until execution of the campus development agreement.

## **Policy 1.6.5**

Once the campus development agreement is executed, all campus development may proceed without further review by the host local government if it is consistent with the adopted campus master plan and associated campus development agreement.

## **Policy 1.6.6**

University officials shall participate and cooperate with local officials in the review of proposed development within the context area to assess potential impacts on university resources and facilities.

## **Policy 1.6.7**

University officials shall participate and cooperate with local officials in the identification of appropriate strategies to mitigate the impacts of campus development on local, regional and state resources and facilities, and to mitigate the impacts of proposed development within the context area on university resources and facilities.

## **Policy 1.6.8**

Any dispute between the university and a

host or affected local government regarding the assessment or mitigation of impacts shall be resolved in accordance with the process established in Subsection 1013.30(8), F.S.

## **Policy 1.6.9**

FIU shall coordinate with the City of North Miami, the City of Sweetwater, FDOT and Miami-Dade Transit staff reviews for the development and expansion of pedestrian, bicycle and transit facilities on a regular basis.

## **Policy 1.6.10**

FIU shall partner with FDOT, Miami-Dade County and Miami-Dade Metropolitan Planning Organization in order to develop a Transportation Management Initiative (TMI) for the University as one means to mitigate peak hour traffic impacts through transportation demand management (TDM) programs such as carpooling, ridesharing, flex hours, etc.

## **Objective 1.7**

**The level of service standards established in this campus master plan shall be reviewed by the entity having operational and maintenance responsibility for said facility.**

## **Policy 1.7.1**

In addition to the entities, set forth in Chapter

1013.30 (6), receiving the campus master plan for review and comment, the plan shall also be transmitted to the following service providers; FDOT; Miami-Dade Water and Sewer Department; Miami-Dade Metropolitan Planning Organization; Miami-Dade Public Works Department; Miami-Dade Transit; and North Miami Public Works and Utilities Department.

## Policy 1.7.2

FIU shall request that the service providers provide comments to the FIU Board of Trustees, in particular with reference to the levels of service established in the plan, within 90 days to coincide with the timeframes established in Chapter 1013.30 (6) for plan review and adoption.

## Objective 1.7.3

Any disputes concerning levels of service established in the Campus Master Plan arising between the FIU Board of Trustees and the service providers shall be resolved in accordance with Chapter 1013.30 (8).

**Table 12.1 Intergovernmental Coordination Element**

Governmental Entity	Nature of Relationship	Coordinating Entity	Coordinating Mechanism
City of North Miami	Non-regulatory	FIU Facilities Management	Coordination in accordance with the provisions of the campus development agreement and adopted goals, objectives and policies.
City of Sweetwater	Non-regulatory	FIU Facilities Management	Coordination in accordance with the provisions of the campus development agreement and adopted goals, objectives and policies.
City of North Miami Beach	Non-regulatory	FIU Facilities Management	Coordination in accordance with the provisions of the campus development agreement and adopted goals, objectives and policies.
Miami-Dade County Commission	Non-regulatory	FIU Facilities Management	Coordination in accordance with the provisions of the campus development agreement and adopted goals, objectives and policies.
Miami-Dade Transit (MDT)	Agency responsible for Miami-Dade County public transit	FIU Facilities Management FIU Liaison (proposed)	No coordination mechanism  FIU staff will be assigned to monitor EWMCS
Miami-Dade County Parks Recreation and Open Spaces	Non-regulatory	FIU Facilities Management	Campus master plan Policy 4.1.1.2 and 12.1.2.1 recommends that a joint use agreement be in place by 1996 for Tamiami Park.
Miami-Dade County Department of Regulatory and Economic Resources-Division of Planning	Regulatory	FIU Facilities Management FIU Urban Design Liaison	Regulates land development activities in accordance with the Chapter 163 Comprehensive Plan and Land Development Regulations



South Florida Water Management District (SFWMD)	Regulatory	FIU Facilities Management FIU Natural Resource Protection Management Committee	Reviews stormwater and dredge and fill permits
South Florida Regional Planning Council (SFRPC)	Reviewing agency	FIU Facilities Management	Reviews and comments on campus master plan in accordance with 1013.30 F.S.
U.S. Army Corps of Engineers (ACOE)	Regulatory	FIU Facilities Management FIU Natural Resource Protection Management Committee	Regulates dredge and fill permits in accordance with S.404 of the Clean Water Act.
U.S. Environmental Protection Agency (USEPA)	Regulatory	FIU Facilities Management FIU Natural Resource Protection Management Committee	Meetings as necessary
Federal Highway Administration (FHA)	Regulatory	FIU Facilities Management Board of Governors	Reviews and comments on campus master plan in accordance with 1013.30 F.S.
Miami-Dade Metropolitan Planning Organization	Agency oversees and plans for state and county roads	FIU Facilities Management MPO Liaison (proposed)	No coordinating mechanism.  FIU staff will be assigned to monitor EWMCS
Miami-Dade Water and Sewer Department (WASD)	Utility Provider	FIU Facilities Management	Responsible for water distribution and sewer collection and treatment.
North Miami Public Works Department	Utility Provider	FIU Facilities Management	Responsible for water distribution and sewer collection and treatment.

Miami-Dade County Department of Regulatory and Economic Resources- Division of Environmental Resource Management	Regulatory	FIU Facilities Management	Monitors and regulates operation of water facilities under Chapter 24 of County Code.
Florida Board of Education, Board of Governors	Reviewing agency	FIU Facilities Management Board of Regents	Reviews and comments on campus master plans in accordance with the provisions of s.1013.30 F.S.
Florida Department of Economic Opportunity (DEO)	Reviewing Agency	FIU Facilities Management Board of Regents	Reviews and comments on campus master plans in accordance with the provisions of s.1013.30 F.S.
Florida Department of Environmental Protection (DEP)	Environmental protection, jurisdictional wetlands, dredge and fill permitting  Regulatory	FIU Facilities Management FIU Natural Resources Protection Management Committee	Meetings as necessary
Florida Department of State	Reviewing agency	FIU Facilities Management	Reviews and comments on campus master plan in accordance with.1013.30 F.S.
Florida Department of Transportation (DOT)	Reviewing Agency Regulatory authority over construction and maintenance of state roads	FIU Facilities Management Board of Governors	Reviews and comments on campus master plan in accordance with 1013.30 F.S.  Campus master plan Policy 401.9.1 requires that FIU enters into an interlocal agreement requiring notification of FDOT improvements.
Florida Fish and Wildlife Conservation Commission	Reviewing agency	FIU Facilities Management	Review and comments on campus master plan in accordance with 1013.30 F.S.

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13.0

CONSERVATION

## 13.0 CONSERVATION

In order to appropriately manage native vegetative communities and wildlife habitats, campus expansion must be in accordance with local, state and federal regulations and when practicable, conform with various agency guidelines and policies. Landscape efforts will utilize native vegetation. Avoidance or minimization of wetland impacts and the establishment of upland buffers adjacent to wetlands will be implemented where feasible. Unavoidable wetland impacts will be mitigated. The undeveloped upland habitat will be left in its natural state when possible. Adverse impacts to protected wildlife species will be mitigated in accordance with local, state and federal guidelines.

Natural resources occur at Modesto A. Maidique Campus, Engineering Center and Biscayne Bay Campus of Florida International University [Figures 13.1 for Modesto A. Maidique Campus, Figure 13.2 for Engineering Campus, and Figure 13.3 for Biscayne Bay Campus]. Many of these resources are protected and will remain so throughout the future of each campus and site. There are parcels, however, which need to be assessed as to its viability for native species and vegetation as well as for its suitability for protection versus development. Therefore, a principal challenge of the master planning process is to allow sensitively planned development of these campuses while protecting and enhancing natural resources.

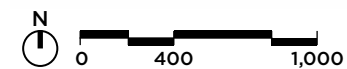
To minimize adverse impacts to local air quality and maintain existing good air quality conditions, FIU will manage its stationary sources of air discharges through an organized preventative maintenance and inspection program. Points of discharges such as boilers and laboratory flues will be inspected regularly to ensure their operations are within applicable regulatory standards. Implementation of preventative maintenance of stationary sources will reduce the probability of unexpected releases of air pollutants as well as establish a reliable management tool.

Where possible, less hazardous materials will be substituted for more hazardous materials. The purpose of such replacement will reduce the potential for more serious accidents affecting the environment, reduce the generation rate of hazardous waste on campus, and reduce the volume of hazardous wastes contributed by the University to landfills elsewhere. It is an objective of the University to minimize hazardous waste accumulation points on campus and implement a system of Best Management Practices to safely manage these locations.





**FIGURE 13.1 - BBC CONSERVATION ELEMENTS**



## Biscayne Bay Campus

Wetland and mangrove restoration must be carefully planned to accommodate future research facilities and boardwalks before excavating land for wetlands and planting mangroves.

### LEGEND

- EXISTING MANGROVES
- MANGROVE RESTORATION\*
- WETLAND RESTORATION\*
- SHORELINE VEGETATION
- SURFACE WATER
- EXISTING TREE
- BEACH RIP RAP SHORELINE
- PARTNERSHIP SITE
- EXISTING BUILDING
- FUTURE PROJECT

## GOAL 1

**Conserve and enhance existing natural resources and natural ecosystems at Modesto A. Maidique Campus and Biscayne Bay Campus.**

## OBJECTIVES AND POLICIES

**Objective 1.1**  
**Implementation and Management of Natural Resource Policies: Implement and manage natural resource policies through use of appropriate University faculty and staff.**

### Policy 1.1.1

The University shall endeavor to develop a resource of knowledgeable FIU experts to oversee issues relating to development and conservation of University natural resources. It shall be the task of the individuals to oversee the implementation of the coastal resource management policies defined in the Conservation Element of this Master Plan. It shall also be the task of those individuals to review these policies and, prepare any necessary additional policies, guidelines, procedures and implementation schedules within one year of the adoption of the Master Plan. The adopted Master Plan shall be amended as necessary to incorporate those guidelines, procedures and implementation schedules.

The University shall provide an administrative staff person of the Environmental Health and Safety Division to serve as Environmental Coordinator to manage these activities. The Environmental Coordinator shall periodically review proposed University improvements and activities to ensure University compliance with the policies defined in the Conservation and Coastal Management Elements of this Master Plan. The Environmental Coordinator shall also periodically review host community, state and federal conservation and coastal management policies to ensure University compliance with these policies.

### Objective 1.2

**Maintain, Protect and Enhance Natural Resources:**

**Maintain and enhance existing values for natural resources on Modesto A. Maidique Campus and Biscayne Bay Campus.**

### Policy 1.2.1

UNIVERSITY-WIDE:

The University shall review, on an annual basis, the state, regional and Federal regulations and guidelines governing the designation and delineation of environmentally sensitive lands. These regulations and guidelines include, but are not limited to, the Florida Natural Areas

Inventory. Should changes in regulations or guidelines result in the designation of portions of the Modesto A. Maidique Campus and/or Biscayne Bay Campus as environmentally sensitive lands, the University shall modify existing policies or develop new policies to protect these sensitive lands and incorporate those policies into the Master Plan within three months of the identification of the environmentally sensitive land.

### Policy 1.2.2

UNIVERSITY-WIDE:

The University shall survey the precise locations of native vegetative associations prior to the construction of any buildings, roadways, pathways or other developments that may impact these vegetative associations. Prior to final site planning, the University shall identify those areas to be impacted and determine if minor changes in the proposed locations of roads or buildings can minimize impacts on these areas.

### Policy 1.2.3

UNIVERSITY-WIDE:

In order to protect native vegetative communities, the University shall endeavor to provide for a development buffer of at least 25 feet between native vegetative communities (Figure 13.1, 13.2 and 13.3) and construction projects, including but not limited, to buildings,

roadways, pathways and recreation facilities.

## **Policy 1.2.4**

UNIVERSITY-WIDE:

The University shall remove invasive exotic plant species from natural vegetation associations and from landscaped areas. Priority shall be given to removing exotic species from those native vegetation associations indicated in Figures 13.1 and 13.3. Removal of exotic species shall be carried out in a manner that minimizes impacts to native vegetation associations. Where necessary, areas from which exotic plants have been removed shall be replanted with appropriate native plant species. Removal of exotic species from natural vegetation associations and from landscaped areas shall be carried out quarterly during the first year and yearly thereafter, unless monitoring activities indicate that more frequent removal is.

## **Policy 1.2.5**

BISCAYNE BAY CAMPUS:

To help curtail their further spread into mangrove areas and other natural vegetation associations on campus, the University shall continue a program of removing large stands of Australian pines. Removal of Australian pines shall be carried out in a manner that minimizes impacts to native vegetation associations. Areas from which Australian pines have been

removed shall be re-vegetated in a manner consistent with the 16.0 Landscape Design Guidelines Element of this Master Plan. The use of native plant species in the landscaping of these areas shall be encouraged. The choice of native plant species shall be consistent with those recommended by FIU Facilities Planning and Construction and Landscape Architect staff. In no case shall those plant species identified in Section 6.8 of the Miami-Dade County Comprehensive Development Master Plan as potentially invasive be in any University landscaping or enhancement planting.

Because the removal of Australian pines may result in soil disturbance and provide colonization opportunities for other invasive exotic plants, replanting of landscape vegetation shall immediately follow the removal of Australian pines. A timetable for removal of Australian pines shall be determined by Facilities Management .

## **Policy 1.2.6**

UNIVERSITY-WIDE:

An administrative staff person of the Environmental Health and Safety Division shall establish a protocol for monitoring the establishment and spread of invasive exotic plant species. Monitoring activities shall be carried out quarterly. If monitoring activities indicate that invasive exotic species are becoming re-established, exotic plants shall be

removed using the methods outlined in Policy 1301.2.4 and 16.0 Landscape Design Guidelines Element Policy 1.2.3.

## **Policy 1.2.7**

UNIVERSITY-WIDE:

The University shall use native plant species in restoration/enhancement planting of native vegetative communities. The use of native plant species in general campus landscaping shall be encouraged. The choice of native plant species shall be consistent with those recommended by the University's Environmental Studies staff, Fairchild Tropical Gardens staff, or other individuals or agencies competent in the selection, use and maintenance of vegetation native to south Florida. Where restoration or enhancement planting is instituted, the species chosen shall be those that are naturally found in the particular vegetative community being restored or enhanced.

## **Policy 1.2.8**

UNIVERSITY-WIDE:

The University shall use native plant species in the 25-foot wide landscape buffer areas that border native vegetative communities.

## **Objective 1.3**

### **Maintain and Enhance Existing Wetland and Aquatic Natural Resource Values:**

**Maintain and enhance existing values for current wetland, littoral zone and aquatic natural resources. For Biscayne Bay Campus, also see Goals, Objectives and Policies in the Coastal Management Element.**

#### **Policy 1.3.1**

UNIVERSITY-WIDE:

The University shall prepare and implement a plan to enhance the ecological and aesthetic values of lakes on campus by grading lake shores to provide littoral zones, by enhancement planting of native littoral vegetation, and by minimizing or eliminating the use of fertilizers on campus to reduce eutrophication.

#### **Policy 1.3.2**

BISCAYNE BAY CAMPUS:

Maintain at least a 25-foot buffer zone between future planned buildings, ancillary structures, and access roads and mangrove areas and other natural areas slated for preservation (see Figure 13.3).

#### **Policy 1.3.3**

BISCAYNE BAY CAMPUS:

Protect and enhance existing shallow-water communities and seagrass beds in the waters of Biscayne Bay fronting Biscayne Bay Campus by reducing the impacts of stormwater runoff to these areas.

#### **Policy 1.3.4**

BISCAYNE BAY CAMPUS:

Protect the shoreline stabilization project carried out by Dade County Department of Environmental Resources Management (DERM) in 1989 and 1991.

#### **Policy 1.3.5**

BISCAYNE BAY CAMPUS:

Complete ongoing mitigation programs and protect new and ongoing mitigation programs.

## **Objective 1.4**

### **Campus Setting and the Natural Environment:**

**Create an aesthetically pleasing, tropical educational setting through planting of xerophytic vegetation, using native species where possible, which will link natural areas on campus and provide for a harmonious transition from developed to natural areas.**

## **Policy 1.4.1**

MODESTO A. MAIDIQUE CAMPUS:

Use native vegetation to link natural areas on campus. This should be made consistent with objectives of the 3.0 Urban Design Element.

## **Policy 1.4.2**

UNIVERSITY-WIDE:

Strongly encourage the use of native xerophytic plant species for use in general landscaping and in the creation and enhancement of wildlife habitat. Limit the use of exotic species in general campus landscaping. Use of native species will reduce landscape water demands, will reduce seed sources of potentially invasive exotic species, and provide a natural setting that is indicative of a tropical environment.

## **Policy 1.4.3**

The University shall endeavor to prevent any harm to its natural campus environment from construction activities. Any damage occurring will be repaired to its former state by those responsible parties.

## **Policy 1.4.4**

BISCAYNE BAY CAMPUS:

The Environmental Coordinator shall, in cooperation with Oleta River State Recreation Area personnel, develop a plan to link mangrove areas in the northeast portion of campus with the Oleta River State Recreation Area by means of littoral zone vegetation (along the shoreline) or by plantings of strand vegetation immediately behind shoreline stabilization structures (see Figure 13.3). The Environmental Coordinator shall also encourage Oleta River State Recreation Area personnel to develop a plan for removal of Australian pines from the portion of the Oleta River State Recreation Area adjacent to Biscayne Bay Campus.

## **Objective 1.5**

### **Protection of Listed Species:**

**Protect federal, state, and local listed species and their habitat from negative impacts of University activities.**

## **Policy 1.5.1**

UNIVERSITY-WIDE:

During the initial planning phase of any physical changes to either campus, the University shall perform a census of wildlife and plants in the area to be affected. Plants or animals identified in the “Official Lists of

Endangered & 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 local, state and federal agencies, shall be noted. Protection plans for listed species shall be formulated consistent with those of the host communities and appropriate local, state and federal agencies.

## **Policy 1.5.2**

UNIVERSITY-WIDE:

University personnel shall, when encountering listed species, follow procedures and seek consultation with the appropriate agencies as identified in the Florida Fish and Wildlife Conservation Commission’s Wildlife Methodology Guidelines (1999).

## **Objective 1.6**

**Minimize Impacts of Campus Operational and Maintenance Activities:**

**Establish campus-wide policies to minimize the impacts of campus operational and maintenance activities on the water quality, and to identify hazardous material sources and reduce their negative impacts.**

## **Policy 1.6.1**

UNIVERSITY-WIDE:

To limit negative impacts of campus activities

on soils, wetlands, hydrology and hydroperiod, the University staff coordinator shall, on an annual basis, review existing and proposed University activities for compliance with the surface water policies of the South Florida Water Management District.

## **Policy 1.6.2**

UNIVERSITY-WIDE:

The University shall continue to test stormwater runoff and groundwater quarterly for compliance with standards set by the State of Florida Department of Environmental Protection, the South Florida Water Management District, and the U.S. Environmental Protection Agency. Failure to meet relevant standards for stormwater runoff shall result in an assessment of probable causes and the production and implementation of a plan to improve the quality of runoff or groundwater.

## **Policy 1.6.3**

BISCAYNE BAY CAMPUS:

The University shall continue monitoring and logging of results of sampling and analysis of petroleum tanks and their associated wells that are housed in the Central Utilities compound.

## **Policy 1.6.4**

UNIVERSITY-WIDE:

The University shall continue to monitor water quality in the lakes, canals and mangrove areas on each campus on a quarterly basis. Should the water quality fall below the standards set by the

State of Florida Department of Environmental Protection, the South Florida Water Management District, and the U.S. Environmental Protection Agency, an assessment of probable causes of pollution shall be performed and a plan developed and implemented to limit the point and non-point sources of pollution.

## **Policy 1.6.5**

UNIVERSITY-WIDE:

The University shall maintain a record of types and amounts of hazardous, toxic and medical wastes that are generated within the University and a record of hazardous, toxic and medical waste that are collected by the Environmental Health and Safety Staff. The University shall also maintain a record of the types and amounts of hazardous, toxic and medical waste that waste disposal companies collect. Records shall be kept of the name of the waste disposal companies and the name of the driver for each pick-up.



## **Policy 1.6.6**

UNIVERSITY-WIDE:

Handling, data records, storage and disposal requirements for radioactive waste generated at Modesto A. Maidique Campus and Biscayne Bay Campus and the Engineer Center shall be in compliance with local, regional, state and federal regulations.

## **Policy 1.6.7**

UNIVERSITY-WIDE:

At present, all hazardous materials for both campuses are handled under four EPA-Hazardous Waste Generator numbers. The University should investigate the possibility of operating under more than one number to ensure compliance with requirements associated with satellite collection areas.

## **Policy 1.6.8**

UNIVERSITY-WIDE:

The University shall inventory herbicide, pesticide and fertilizer use and evaluate their impacts on water quality. Modify or reduce herbicide, pesticide and fertilizer usage to minimize or eliminate negative impacts on water quality.

## **Objective 1.7**

### **Maintain and Enhance Air Quality:**

**Establish a program to maintain high air quality standards on campus, both within and outside of buildings and parking structures.**

#### **Policy 1.7.1**

UNIVERSITY-WIDE:

The University shall monitor both indoor and outdoor air quality, as necessary. Outdoor sites to be sampled should include parking lots and congested intersections. Failure to meet air quality standards accepted by the State of Florida shall result in an assessment of probable causes and the production and implementation of a plan to improve and maintain air quality.

#### **Policy 1.7.2**

UNIVERSITY-WIDE:

Minimize emissions of air pollutants from and within buildings on campus through the installation of appropriate filtering devices on fume hoods and by minimizing the storage and use of volatile and hazardous materials in campus buildings.

## **Policy 1.7.3**

UNIVERSITY-WIDE:

Determine potential impacts on air quality before construction of parking structures. Design parking structures to facilitate rapid ingress and egress of vehicles to minimize idling time, and design such structures to maximize air flow through them and eliminate pockets of stagnation where levels of pollutants can build up.

## **Policy 1.7.4**

UNIVERSITY-WIDE:

Encourage and facilitate non-polluting transportation alternatives on campus including pedestrian and bicycle access. Sidewalks and pedestrian malls should be designed to facilitate and encourage foot traffic between buildings, and to maximize handicap accessibility.

## GOAL 2

**Minimize resource utilization to conserve and appropriately use energy while prohibiting campus procedures that have adverse environmental effects.**

## OBJECTIVES AND POLICIES

### Objective 2.1

#### Water Conservation:

**Establish measures that reduce water utilization.**

#### Policy 2.1.1

UNIVERSITY-WIDE:

FIU shall conserve water and reduce chemical use through the use of xeriscape design principles, which include but are not limited to:

- Use of drought tolerant and native plant materials;
- Use of low volume delivery fixtures;
- Zoned irrigation systems;
- Moisture sensors and rain switches;
- Use of drought tolerant ground cover;
- Use of canopy trees; and
- Use of soil amendments and mulch to enable soils to retain moisture.

#### Policy 2.1.2

UNIVERSITY-WIDE:

Retrofit existing campus buildings with water-saving devices. Require that water-efficient (high efficient) fixtures and other water-saving devices be installed in all future buildings.

#### Policy 2.1.3

UNIVERSITY-WIDE:

If feasible, expand the use of filtered wastewater (“reclaimed water”) for landscape irrigation.

#### Policy 2.1.4

UNIVERSITY-WIDE:

FIU will promote Florida Friendly principles through the use of drought-tolerant landscape species, the use of irrigation systems that conserve the use of potable and non potable water supplies, and restrictions on the amount of lawn areas.

## **Objective 2.2**

**Solid Waste Recycling and Resource Conservation: Establish measures that encourage solid waste recycling.**

### **Policy 2.2.1**

UNIVERSITY-WIDE:

A general recycling program for paper, aluminum, glass, etc. shall be instituted and recycling goals for proportions of materials recycled established. All entities on campus (including food vendors/cafeterias, etc.) should be required to subscribe to this program and compliance with the program should be monitored on a regular basis. Work toward establishing this policy at Modesto A. Maidique Campus has been initiated by the Environmental Studies Program, and further efforts in this regard should be coordinated with it.

### **Policy 2.2.2**

UNIVERSITY-WIDE:

State, regional and local standards for waste management shall be reviewed at least annually. Solid waste management on all campuses shall be in compliance with state, regional and local standards.

### **Policy 2.2.3**

UNIVERSITY-WIDE:

The University shall contract with a licensed recycling contractor to provide for the collection for recycling, at minimum, of paper, aluminum, plastic, glass and newspapers. Separate refuse containers, as called for by the recycling contractor, shall be made available in all buildings, courtyards, in open space areas, etc. on both campuses. This program should be made compulsory on a campus-wide basis.

### **Policy 2.2.4**

UNIVERSITY-WIDE:

Where feasible, recycled paper products shall be purchased for University use, including those used in food service.

## **Objective 2.3**

**Energy Conservation and Efficiency:**

**Develop a program to conserve and appropriately use energy that includes development of a Climate Action Plan (a responsibility as a signatory of the American College and University Presidents Climate Commitment) and strategies to meet USGBC standards for LEED Silver certification.**

### **Policy 2.3.1**

UNIVERSITY-WIDE:

Retrofit existing buildings with energy-conserving lighting fixtures. Require all new buildings to be equipped with energy efficient lighting devices. Design new buildings to take maximum advantage of available natural lighting.

### **Policy 2.3.2**

UNIVERSITY-WIDE:

Where feasible, buildings on campus shall be fitted with devices to automatically reduce energy use in rooms and buildings not in use, including programmable thermostats for air conditioners and sensors that automatically turn off lights.

### **Policy 2.3.3**

UNIVERSITY-WIDE:

Investigate the possibility of using “non-traditional” energy sources on campus. Such alternatives could include the use of solar power for lighting parking lots, etc.

### **Policy 2.3.4**

UNIVERSITY-WIDE:

Provide energy conservation design in new and renovated buildings per USGBC LEED Silver criteria as minimum level of performance.

# Draft

Draft

14.0

**CAPITAL  
IMPROVEMENTS**

## 14.0 CAPITAL IMPROVEMENTS

Given the anticipated renovation, repurposing, new construction, and redevelopment needed to accommodate projected future growth at FIU, identifying and supporting funding mechanisms required for program and enrollment expansion is one of the most critical outcomes of the Campus Master Plan (CMP) process. Implementation of the CMP is contingent upon the application and efficient use of State University System (SUS) funds, FIU funds, collected revenues from public partnerships and private investments, and alumni and donor support. To supplement these sources of funding, the University will consider multiple sources including but not limited to private gifts, grants, revenue generation and partnerships to support campus improvements.

The CMP outlines both current projects as well as those that are scheduled for completion later in the 2020 planning period. While more immediate future projects have funding allocated to them, projects further down the timeline may not. Unforeseen funding and phasing complexities may evolve. As a result, the Master Plan serves as a flexible framework that can adapt to changes in the discreet timing of individual projects. Its effectiveness can be enhanced by continually monitoring and updating implementation as it proceeds. These updates should occur on an annual basis. The goals, objectives and policies of the Capital Improvements Element identify procedures and strategies to implement the CMP in the most efficient and fiscally sound manner.

### GOAL 1

**Plan, program and develop capital facilities necessary to accomplish the academic mission at projected enrollment levels, applying sound fiscal policies.**

### OBJECTIVES AND POLICIES

**Objective 1.1  
Maintain a Prioritized Schedule of Capital Improvements:**

Implement a schedule of capital improvements that coordinates land use and development decisions with fiscal resources to meet projected facility needs while maintaining level of service standards herein identified.

#### **Policy 1.1.1**

Coordinate with Miami-Dade County, the City of Sweetwater, the City of North Miami, and utility providers to monitor and project the availability of off-campus services and facilities at adopted levels of service concurrent with the impacts of campus development prior to the programming of each development project. The Master Plan clearly documents the ability to accommodate all projected



campus development requirements through 2020, consistent with the maintenance of host community levels of service.

## **Policy 1.1.2**

Prior to programming each development project, verify that development impacts can be accommodated while maintaining on campus level of service standards herein established.

## **Policy 1.1.3**

Ensure that the Capital Improvement Program 5-year project priority list remains consistent with the Master Plan. Integrate subsequent plan revisions with applicable campus development and joint use agreements.

## **Policy 1.1.4**

Limit Capital Improvement Program modifications to those that improve the efficiency, timeliness and cost effectiveness of improvements to infrastructure, parking, site development and landscaping. Amend the Campus Master Plan to incorporate any revisions to the Capital Improvement Program that meet established projections and criteria.

## **Policy 1.1.5**

Apply and prioritize Capital Improvement Program procedures to make full use of “infill” areas where utility, parking and related

infrastructure services are in place.

## **Policy 1.1.6**

Include provisions for the adoption of a capital budget in the annual budgeting process. Review budgets to ensure consistency with campus development agreements.

New construction shall produce “human scale” buildings by providing articulation of the different floor levels and adequate window and door openings. Architectural elements such as arcades and connectors should be utilized to encourage comfortable pedestrian movement within and between buildings. Building heights shall to the extent feasible by area and program be the same for all “fabric” buildings.

## **Objective 1.2**

### **Adequate Resources:**

**Secure resources sufficient to manage the expansion and improvement process. Balance funding strategies so that facility needs do not exceed university resources. Avoid additional deficits.**

## **Policy 1.2.1**

Prepare CIP-3 Forms and CIP line item funding requests targeted to improvements to infrastructure, parking and site (landscape) development necessary to support existing, expanded and new facilities, separate and discrete from budgets for individual buildings.

## **Policy 1.2.2**

Seek local ancillary funding sources to supplement PECO appropriations including the following:

- Revenues from joint use facilities (arts center, football stadium, etc.)
- User fees for upgraded parking and student/faculty services.

## **Policy 1.2.3**

Accelerate facility development programming and feasibility studies to occur 3-4 years prior to the expected availability of PECO funds and auxiliary revenues such as student capital improvement fees for academic support and necessary infrastructure and service facilities.

## **Objective 1.3**

### **Deficiencies, Deficits and Future Growth:**

**Construct capital facilities to correct existing facility deficiencies; accommodate desired future growth; and replace worn-out or obsolete facilities by the end of 2030.**

## **Policy 1.3.1**

Apply the following criteria for evaluating and prioritizing capital improvements:

- Relative program performance and value to achievement of the Academic Mission.

## TABLE 14.2 - CAPITAL IMPROVEMENTS

Table 14.2 Florida International University Capital Improvement Plan (2020-2030)

Key	Program Element Description	Use	Area NASF	Total Area GSF	Est. Construction Cost	Projected Year of Completion	# Floors
<b>MODESTO A. MAIDIQUE CAMPUS</b>							
<i>Facilities Infrastructure / Capital Renewal</i>							
50	Trish and Dan Bell Chapel	Student Life/General Use	-	12,659	\$6,789,149	2020-2025	1
34A	Rec. Field Support Building	Athletics/Recreation	3,000	3,600	\$1,818,674	2020-2025	1
54A/B	Academic Health Sciences Clinical Facility	Partnership	-	120,000	\$150,000,000	2025-2030	4
PG7	Multi-Purpose Parking Garage (435 spaces)	Multi-Purpose/Parking	-	152,250	TBD	2025-2030	4
-	UCPP Pedestrian Bridge	Circulation/Open Space	-	-	TBD	2020-2025	-
48A	Engineering II	Academic/Research	58,557	94,154	\$47,374,622	2020-2025	4
12A	Student Health Center Expansion	Student Life/General Use	-	9,525	TBD	2025-2030	1
57C	Honors College	Academic/Research	28,250	45,200	\$25,111,550	2025-2030	2
57A	Honors College Residence Hall (228 Beds)	Student Housing	-	91,944	TBD	2025-2030	9
03A/03B	Graham Center Expansion	Student Life/General Use	-	138,472	TBD	2025-2030	2
49	CasaCuba	Student Life/General Use	36,173	57,876	\$25,578,299	2025-2030	1
71	Aquatics Complex	Athletics/Recreation	-	17,354	TBD	2025-2030	1
RF3A	Soccer Stadium	Athletics/Recreation	-	43,450	TBD	2025-2030	1
60	Science Laboratory Complex	Academic/Research	77,184	123,495	\$59,633,638	2025-2030	5
62	AHC Study Complex	Academic/Research	39,086	62,538	\$27,995,235	2020-2025	5
02	Deuxieme-Maison Renovation	Academic/Research	-	140,807	\$12,672,630	2025-2030	4
33B	Wellness and Recreation Expansion	Athletics/Recreation	-	30,000	TBD	2025-2030	2
-	BRT Hub (under study)	Circulation/Open Space	-	-	TBD	2025-2030	-

Continued on following page

## TABLE 14.2 - CAPITAL IMPROVEMENTS (CONT'D)

Table 14.2 Florida International University Capital Improvement Plan (2020-2030) Continued

Key	Program Element Description	Use	Area NASF	Total Area GSF	Est. Construction Cost	Projected Year of Completion	# Floors
<b>MODESTO A. MAIDIQUE CAMPUS</b>							
05A	Library/Study Expansion	Study	-	64,000	TBD	2030+	5
35A	Academic 2	Academic/Research	-	42,000	TBD	2030+	2
35B	Science & Humanities Center (DM Addition)	Academic/Research	-	32,000	TBD	2030+	2
37	Academic 1	Academic/Research	-	31,200	TBD	2030+	1
59	AHC/Interdisciplinary 3	Academic/Research	-	134,750	TBD	2030+	5
51	Partnership	Partnership	-	TBD	TBD	2030+	4
61	Facilities 1	Support	-	TBD	TBD	2030+	2
66	Partnership	Partnership	-	TBD	TBD	2030+	2
64	AHC/Interdisciplinary 1	Academic/Research	-	191,000	TBD	2030+	9
65	AHC/Interdisciplinary 2	Academic/Research	-	64,000	TBD	2030+	6
67	Academic 6	Academic/Research	-	112,000	TBD	2030+	4
68	Academic 7	Academic/Research	-	72,000	TBD	2030+	5
69	Academic 8	Academic/Research	-	112,000	TBD	2030+	4
07A	Indoor Training Facility	Athletics/Recreation	-	48,000	TBD	2030+	1
17A	Children's Creative Learning Center	General Use/Student Life	-	TBD	TBD	2030+	1
29A	Museum Expansion	General Use/Student Life	-	TBD	TBD	2030+	6
PG8	Multi-Purpose Parking Garage	Multi-Purpose/Parking	-	TBD	TBD	2030+	5
32A	Stadium Upper Bowl Expansion	Athletics/Recreation	-	103,600	TBD	2030+	-
33B	Rec Center Expansion	Athletics/Recreation	-	TBD	TBD	2030+	2
58E	East Village Recreation Center	Athletics/Recreation	-	26,370	TBD	2025-2030	2
70	Housing Dining Facility	General Use/Student Life	-	4,885	TBD	2025-2030	1
72	East Village Pool House	Athletics/Recreation	-	885	TBD	2025-2030	1
73	University Park Pool House	Athletics/Recreation	-	1,400	TBD	2025-2030	1
57B	East Residence Hall A (235 Beds)	Student Housing	-	114,000	TBD	2025-2030	12
58A	East Residence Hall B (328 Beds)	Student Housing	-	147,000	TBD	2025-2030	16
58B	East Residence Hall C (205 Beds)	Student Housing	-	136,000	TBD	2025-2030	12
58C	East Residence Hall D (330 Beds)	Student Housing	-	146,000	TBD	2025-2030	12
58D	East Residence Hall E (574 Beds)	Student Housing	-	272,000	TBD	2025-2030	16
63	Mainstreet Housing (Beds TBD)	Student Housing	-	TBD	TBD	2025-2030	TBD
74	Academic 9	Academic/Research	-	138,000	TBD	2025-2030	4-6
75	Academic 10	Academic/Research	-	84,000	TBD	2025-2030	4-6
76	Academic 10	Academic/Research	-	105,250	TBD	2025-2030	4-6

- Degree of impact on the elimination of facility or service deficits.
- Cost effectiveness and development efficiency.
- Availability of supplementary matching funds or operating revenue opportunities.

### **Policy 1.3.2**

Apply the following criteria for prioritizing facility renewal and upgrading projects.

- Projects necessary to maintain level of service standards; achieve code compliance and provide handicapped access.
- Projects which reduce operating costs and improve energy efficiency.
- Projects which expand facility capacities and utilization, reducing demand for new facilities.

### **Policy 1.3.3**

By the end of the planning period replace all inadequate obsolete and potentially unsafe structures including:

- Trailers and portable classrooms.
- Pre-university airport support structures (except the control tower).

### **Policy 1.3.4**

Include estimates of proportional costs for all related ancillary site improvements which will be necessitated by specific buildings or aggregations of facilities to ensure that future capital budgeting accurately reflects anticipated total development costs, future facility cost estimates, including:

- Utility extensions
- Site modifications (including mitigation costs)
- Parking
- Pedestrian and vehicular circulation landscaping.
- Facilities shall be sized sufficiently to support anticipated future capacity requirements.

**FIGURE 14.1a - MMC & EC SPACE NEED PROJECTION**

Improvement Plans

	Previous Guideline (State of Florida)		Recommended Guideline		Existing FIU Inventory		↓ PLANNED PROJECTS	Surplus/Deficit (from recommended)	
	NASF per FTE	Total ASF	NASF per FTE	Total ASF	NASF per FTE	Total ASF	ASSIGNABLE SQUARE FEET	ASSIGNABLE SQUARE FEET	GROSS SQUARE FEET
<i>Space Use Category</i>									
Classrooms	9.00 ASF per In-Person FTES	250,587	10.00 ASF per In-Person FTES	278,430	6.82 ASF per In-Person FTES	190,017	78,253	(10,160)	(16,256)
Teaching Labs	11.25 ASF per Total FTES	480,555	11.25 ASF per In-Person FTES	313,234	6.02 ASF per In-Person FTES	167,618	56,533	(89,083)	(142,533)
Open Labs			3.70 ASF per Total FTES	158,049	2.79 ASF per Total FTES	118,994		(39,055)	(62,488)
Research Labs	18.75 ASF per Total FTES	800,925	18.75 ASF per In-Person FTES	522,056	9.47 ASF per In-Person FTES	263,767	60,592	(197,697)	(316,315)
Office (E&G Funded)	22.50 ASF per Total FTES	961,110	14.80 ASF per FTE Staff*	862,748	104.14 ASF per FTE Staff*	629,225	147,851	(85,672)	(137,075)
Study	13.50 ASF per Total FTES	576,666	13.50 ASF per Total FTES	576,664	4.40 ASF per Total FTES	188,046	131,559	(257,059)	(441,499)
<b>Subtotal ASF</b>	71.87 ASF per Total FTES	3,069,843	63.47 ASF per Total FTES	2,711,180	36.47 ASF per Total FTES	1,557,667	474,788	(678,725)	
Offices (Non E & G Funded)			14.80 ASF per FTE Staff*	309,486	105.66 ASF per FTE Staff*	228,966	16,087	(64,433)	(103,093)
Athletics	4.50 ASF per Total FTES	192,222	16.90 ASF per Total FTES	278,208	8.40 ASF per Total FTES	138,208	0	(140,000)	(224,000)
Instructional media	3.00 ASF per Total FTES	128,148	7.78 ASF per Total FTES	128,148	0.85 ASF per Total FTES	14,022	0	(114,126)	(182,602)
Clinic			1.04 ASF per Total FTES	17,086	0.46 ASF per Total FTES	7,560	0	(9,526)	(15,242)
Special use			6.28 ASF per Total FTES	103,343	2.11 ASF per Total FTES	34,782	41,412	(27,149)	(43,438)
Assembly and Exhibition	2.25 ASF per Total FTES	96,111	5.84 ASF per Total FTES	96,111	4.28 ASF per Total FTES	70,524	26,678	1,091	1,746
Food Service			5.61 ASF per Total FTES	92,326	3.36 ASF per Total FTES	55,243	0	(37,083)	(59,333)
General Use			13.70 ASF per Total FTES	225,484	9.03 ASF per Total FTES	148,731		(76,753)	(122,805)
Recreation			19.18 ASF per In-Person FTES	496,936*	4.94 ASF per Total FTES	81,286	0	(415,650)	(665,040)
Support	4.40 ASF per Total FTES	187,950	11.00 ASF per Total FTES	181,115	4.37 ASF per Total FTES	71,997	37,702	(71,416)	(114,266)
Health Care			0.83 ASF per Total FTES	13,689	1.00 ASF per Total FTES	16,513	0	2,824	4,518
<b>Total ASF</b>	86.02 ASF per Total FTES	3,674,274	108.93 ASF per Total FTES	4,653,112	56.78 ASF per Total FTES	2,425,499	596,667	(1,630,946)	2,639,721

**Total: 2,639,000 Gross Square Feet\***

State of Florida guidelines, supplemented with national space standards, used to determine space needs based on research from 20 higher education state systems in addition to space needs studies conducted at 52 regional universities.

*\*Rounded to the nearest 1,000*

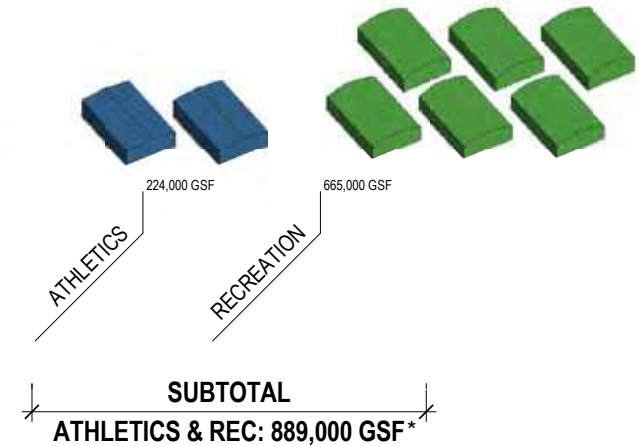
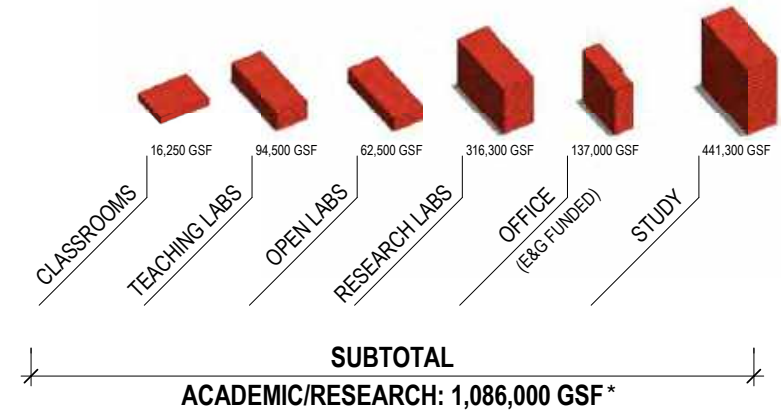
**FIGURE 14.1b** - MMC & EC SPACE NEED BLOCKING

The Projected Space Need for MMC and EC provides a guide for future space migration, space allocation and capital planning projects for renovation and new construction.

Total Projected Space Need excludes projects currently funded, partially funded or likely funded as part of the Five Year Plan.

With input from focus group sessions, the following assumptions for the 2030 Plan include:

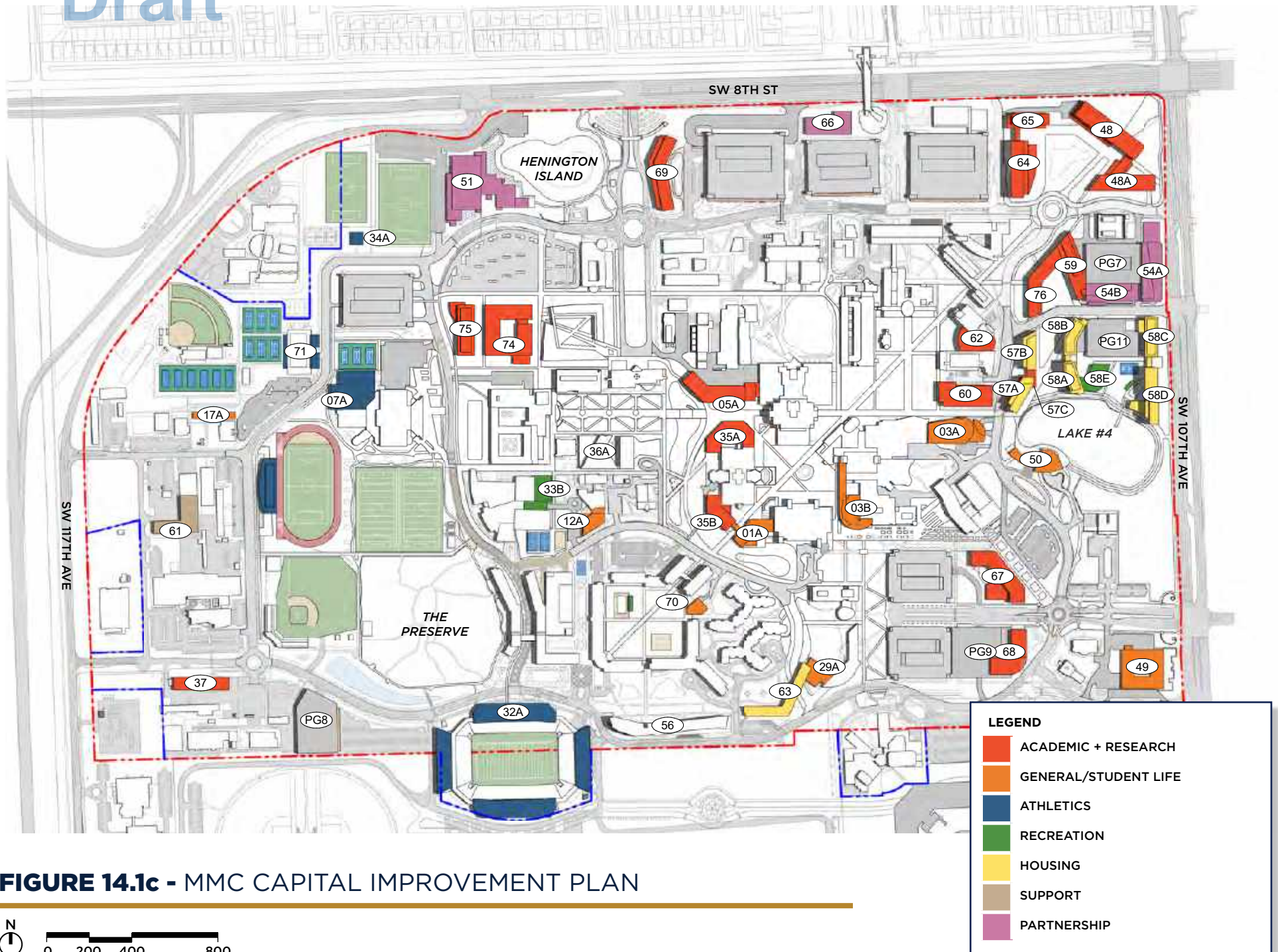
- Purpose-built facilities should stay at EC, which is more suitable as a research park with high-bay and flexible research space.
- No academic programs are planned to move to EC and the 2030 Plan will assume higher density at MMC
- Primary academic needs include more labs, technology space for cyber and computer science programs (office/dry lab) and facilities for research-funded projects in Biomedical Engineering and other broader research programs
- Interdisciplinary expansions, not necessarily of individual programs, aligns with FIU's strategic plan



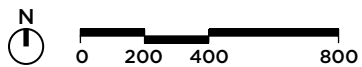
\* Rounded to the nearest 1,000



# Draft



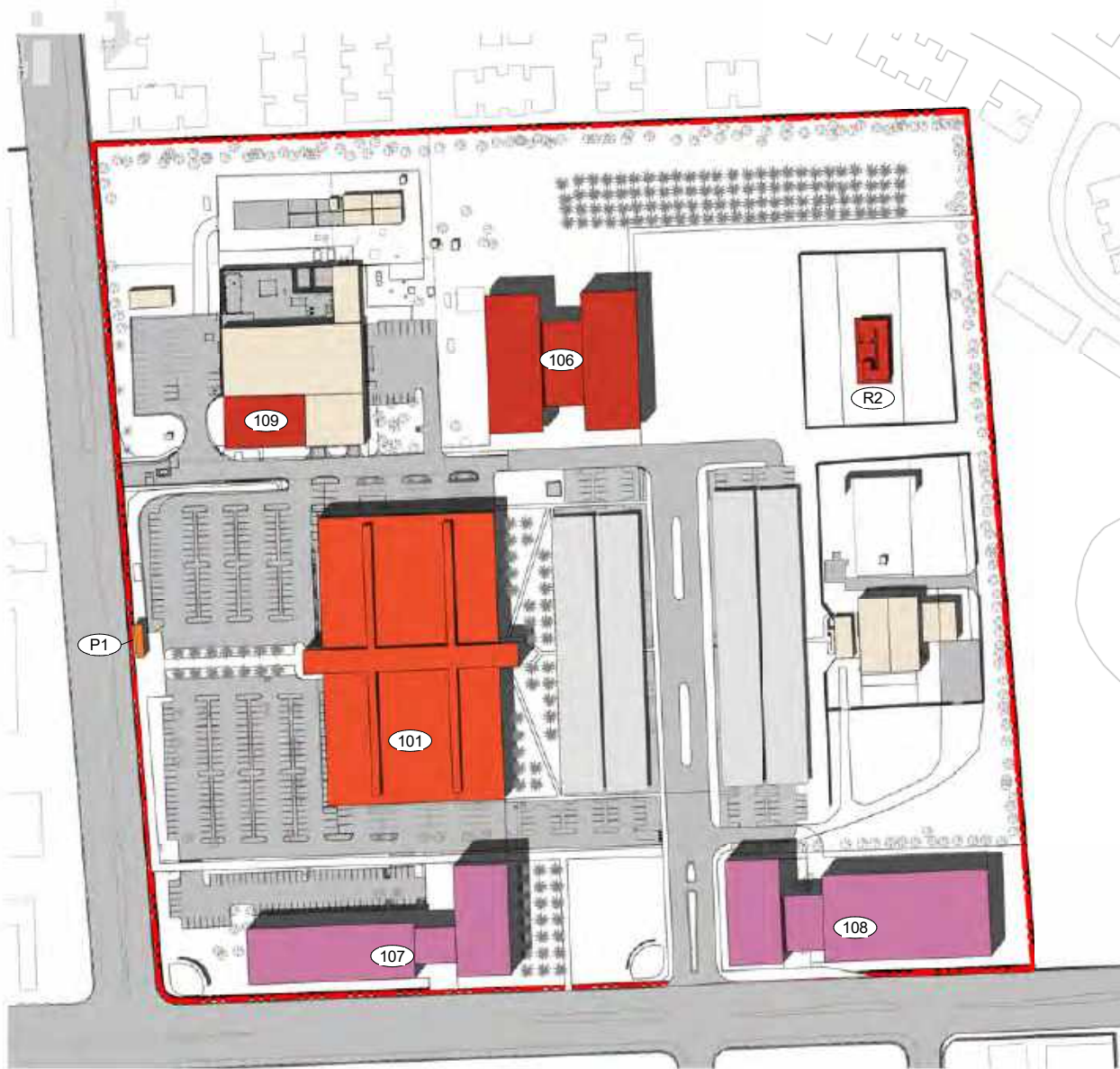
**FIGURE 14.1c - MMC CAPITAL IMPROVEMENT PLAN**



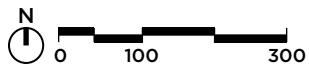
**TABLE 14.2 - CAPITAL IMPROVEMENTS (CONT'D)**

**Table 14.2 Florida International University Capital Improvement Plan (2020-2030)** Continued

Key	Program Element Description	Use	Area NASF	Total Area GSF	Est. Construction Cost	Projected Year of Completion	# Floors
<b>THE ENGINEERING CENTER</b>							
<i>Facilities Infrastructure / Capital Renewal</i>							
109	Cold Spray Lab	Academic/Research	-	8,530	TBD	2025-2030	1
R1	Wall of Wind Expansion	Academic/Research	-	-	TBD	2025-2030	-
101	Engineering Center Renovation & Infill	Academic/Research	-	TBD	TBD	2030+	2
106	High-Bay Research Facility	Academic/Research	-	TBD	TBD	2030+	3
107	Partnership 1	Partnership	-	TBD	TBD	2030+	4
108	Partnership 2 (High Bay Research)	Partnership	-	TBD	TBD	2030+	3
<b>THE ENGINEERING CENTER</b>			<b>TOTAL</b>	<b>8,530</b>	<b>TBD</b>		



**FIGURE 14.2 - EC CAPITAL IMPROVEMENT PLAN**



DLR GROUP

**LEGEND**

- ACADEMIC + RESEARCH
- GENERAL/STUDENT LIFE
- PARTNERSHIP
- FIU BUILDING



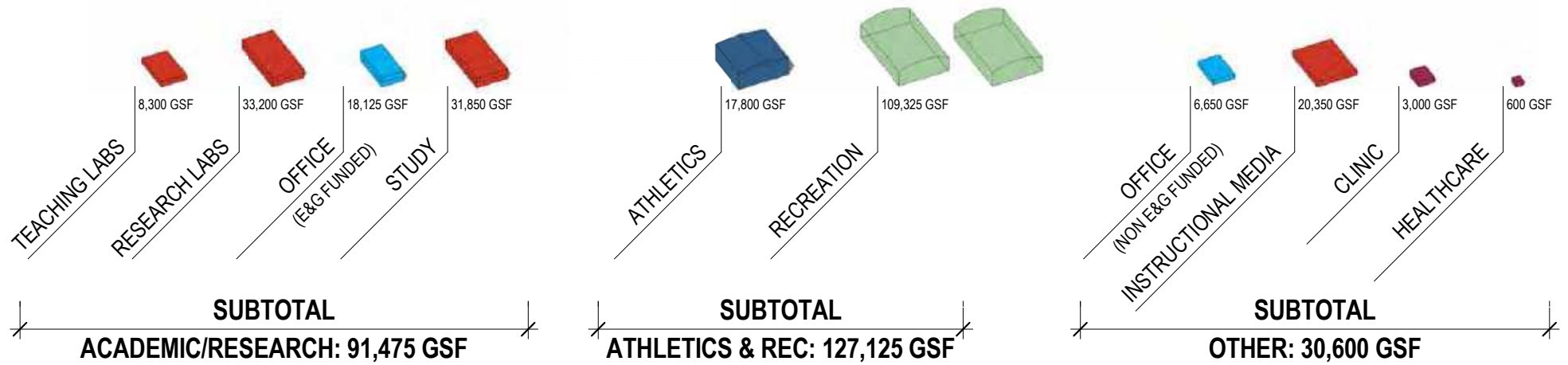
**FIGURE 14.2a - BBC SPACE NEEDS**

Improvement Plans										
		Previous Guideline (State of Florida)		Recommended Guideline		Existing Inventory		PLANNED PROJECTS	Surplus/Deficit (from recommended)	
		NASF per FTE	Total ASF	NASF per FTE	Total ASF	NASF per FTE	Total ASF	ASSIGNABLE SQUARE FEET	ASSIGNABLE SQUARE FEET	ESTIMATED GROSS SQUARE FOOTAGE
Space Use Category	Room Use Codes (FICM)									
Classrooms	110,115	9.00 ASF per In-Person FTES	26,775	10.00 ASF per In-Person FTES	29,750	10.37 ASF per In-Person FTES	30,859	900	2,009	3,348
Teaching Labs	210,215	11.25 ASF per Total FTES	51,345	11.25 ASF per In-Person FTES	33,469	9.17 ASF per In-Person FTES	27,278	1,200	(4,991)	(8,318)
Open Labs	220,225			3.70 ASF per Total FTES	16,887	5.61 ASF per Total FTES	25,597		8,710	14,516
Research Labs	250,255,257	18.75 ASF per Total FTES	85,575	18.75 ASF per In-Person FTES	55,781	12.05 ASF per In-Person FTES	35,862		(19,919)	(33,198)
Office (E&G Funded)	310,312,315,317,318,350,355	22.50 ASF per Total FTES	102,690	142.80 ASF per FTE Staff*	93,936	64.50 ASF per FTE Staff*	82,911	150	(10,875)	(18,125)
Study	410,412,415,420,430,440,455	13.50 ASF per Total FTES	61,614	13.50 ASF per Total FTES	61,616	9.31 ASF per Total FTES	42,504		(19,112)	(31,853)
Subtotal ASF		71.87 ASF per Total FTES	327,999	63.86 ASF per Total FTES	291,439	53.68 ASF per Total FTES	245,011	2,250	(44,178)	(73,630)
Offices (Non E & G Funded)	310,312,315,317,318,350,355			142.80 ASF per FTE Staff*	31,312	124.70 ASF per FTE Staff*	27,320		(3,992)	(6,653)
Athletics	520,523,525	4.50 ASF per Total FTES	20,538	4.50 ASF per Total FTES	20,539	2.16 ASF per Total FTES	9,861		(10,678)	(17,797)
Instructional media	530	3.00 ASF per Total FTES	13,692	3.00 ASF per Total FTES	13,692	0.32 ASF per Total FTES	1,479		(12,213)	(20,356)
Clinic	542,547			0.40 ASF per Total FTES	1,826	0.01 ASF per Total FTES	25		(1,801)	(3,001)
Special use	550,555,570,575,580,585,590			0.00 ASF per Total FTES	0	0.01 ASF per Total FTES	49		49	82
Assembly and Exhibition	610,611,615,620,625,694	2.25 ASF per Total FTES	10,269	2.25 ASF per Total FTES	10,269	4.22 ASF per Total FTES	19,282		9,013	15,021
Food Service	630,631,635			1.82 ASF per Total FTES	8,305	3.24 ASF per Total FTES	14,773		6,468	10,779
General Use	650,655,660,665,680,682,685			8.01 ASF per Total FTES	36,550	15.02 ASF per Total FTES	68,532		31,982	53,304
Recreation	670,675			2.60 ASF per In-Person FTES	67,262	0.37 ASF per Total FTES	1,667		(65,595)	(109,325)
Support	710,715,720,725,730,735,750,760,765	4.40 ASF per Total FTES	20,082	4.24 ASF per Total FTES	19,352	5.53 ASF per Total FTES	25,251	620	6,519	10,865
Health Care	810,815,830,835,840,845,850,855,870,880			0.34 ASF per Total FTES	1,571	0.27 ASF per Total FTES	1,211		(360)	(600)
Total ASF		86.02 ASF per Total FTES	392,580	110.02 ASF per Total FTES	502,117	90.81 ASF per Total FTES	414,461	2,870	(84,786)	(141,310)

**Total: 141,000 Gross Square Feet**

State of Florida guidelines, supplemented with national space standards, used to determine space needs based on research from 20 higher education state systems in addition to space needs studies conducted at 52 regional universities.

**FIGURE 14.2b** - BBC SPACE NEED BLOCKING



**TABLE 14.2 - CAPITAL IMPROVEMENTS (CONT'D)**

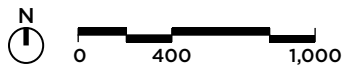
**Table 14.2 Florida International University Capital Improvement Plan (2020-2030) Continued**

Key	Program Element Description	Use	Area NASF	Total Area GSF	Est. Construction Cost	Projected Year of Completion	# Floors
<b>BISCAYNE BAY CAMPUS</b>							
<i>Facilities Infrastructure / Capital Renewal</i>							
N08E	NIST	Academic/Research	-	TBD	TBD	2025-2030	1
N01B	Graduate Hospitality	Academic/Research	-	32,000	TBD	2025-2030	2
N13A	SEAS Expansion	Academic/Research	-	42,000	TBD	2025-2030	3
N14	Environmental Communications	Academic/Research	-	34,000	TBD	2025-2030	2
N15	Media Innovation Center	Academic/Research	-	22,000	TBD	2025-2030	2
S05	Facilities Support	Support	-	11,000	TBD	2025-2030	1
N20	Multi-Purpose	Multi-Purpose	-	TBD	TBD	2030+	4
N21	Multi-Purpose	Multi-Purpose	-	TBD	TBD	2030+	5
N22	Multi-Purpose	Multi-Purpose	-	TBD	TBD	2030+	4
N23	Multi-Purpose	Multi-Purpose	-	TBD	TBD	2030+	4
<b>BISCAYNE BAY CAMPUS</b>			<b>TOTAL</b>	<b>141,000</b>	<b>TBD</b>		





**FIGURE 14.3 - BBC CAPITAL IMPROVEMENT PLAN**



DLR GROUP

#### LEGEND

- ACADEMIC + RESEARCH
- SUPPORT
- MULTI-PURPOSE
- FIU BUILDING

Draft

Draft

15.0

**ARCHITECTURAL  
DESIGN GUIDELINES**

## 15.0 ARCHITECTURAL DESIGN GUIDELINES

The Architectural Design Guidelines outline protocol and procedures for the development and design of university-based facilities that consider more than just the exterior walls, but strive to meet both programmatic and aesthetic benchmarks. Emphasis is placed on creating facilities that are sensitive to their local environment and context, while utilizing sustainable construction materials and construction techniques.

Five comprehensive goals, outlined below, have been developed to inform the Architectural Design Element at FIU. These goals are used to develop buildings that preserve and enhance the image of higher education. They have been the base concept for past design and should serve as the foundation for future development of FIU facilities that stem from the Comprehensive Master Plan. The urban design guidelines, landscape design, and architectural design guidelines must work in conjunction to assure that future development supports the overall mission and vision of FIU and creates a cohesive campus fabric. established within the FIU Master Plan document are followed and achieved.

Given increasingly limited land for development, density in the form of mid to high-rise development will enable vertical zoning of uses within the campus core and accommodate the capacity needed for university partnerships.

Highlights of Architectural Design Guidelines include the following:

- Incorporating a Project Responsibility Checklist, to assist in the process of following all necessary guidelines during the design and development of projects.
- Establishing Sustainable Design Guidelines and goals to help elevate the standards of energy efficiency and performance for all new buildings, as well as specifying principles and design drivers that will enhance pedestrian and outdoor environments.
- Outline the frame work for an Integrated Design Process, to assure successful implementation of all campus master plan guidelines.
- Establish the FIU Design Review Process, that will provide reviews and approvals of all designs within existing Campuses. This will ensure that all guidelines and goals.
- Establish Architectural Guidelines and Components to reinforce and work in partnership with the Urban and Landscape Design guidelines, the FIU Building Standards, and the Office of Sustainability Guidelines.

## GOAL 1

**Incorporate a Project Responsibility Checklist, to assist in the process of following all necessary guidelines during the design and development of projects.**

## OBJECTIVES AND POLICIES

### Objective 1.1

#### Defining Characteristics for each Campus:

**Respond to the similarities and differences in the two campuses of Florida International University in order to establish a defining overall character for each. Each location shall develop an architectural language and vocabulary that takes advantage of its natural and manmade setting.**

#### Policy 1.1.1

##### UNIVERSITY-WIDE:

Respond to the hot and humid climate of South Florida with architecture that addresses the need for weather protection and shade. Architectural elements such as pedestrian covered walkways, shaded courtyards, covered connections between buildings; protection at building entrances etc. shall be required where feasible, and be an integral part of the architectural design. Placement of vegetation shall also be encouraged to provide outdoor

shade and to screen solar gain at buildings.

#### Policy 1.1.2

##### UNIVERSITY-WIDE:

Scale Proportion and Massing: New construction shall encourage the use of space-defining buildings to reinforce the open space networks of malls, quads and courtyards. Buildings that define spaces shall be of similar scale and massing to the extent feasible by program. Buildings that together compose an open space shall consistently utilize the same architectural elements and shall be described herein as “fabric” buildings whereby each contributes to the whole.

Other buildings will by definition be more notable or monumental and shall be carefully planned and sparingly built. Monumental buildings shall be justified by program as those that are utilized campus wide and contribute to the importance or prestige of the University, such as the library or administration building. Monumental buildings shall be located at the end of axes, or other prominent locations. Monumental buildings may have a larger scale and mass than “fabric” buildings but they shall be attentive to the issues of human scale and proportion.

New construction shall produce “human scale” buildings by providing articulation of the

different floor levels and adequate window and door openings. Architectural elements such as arcades and connectors should be utilized to encourage comfortable pedestrian movement within and between buildings. Building heights shall to the extent feasible by area and program be the same for all “fabric” buildings.

#### Policy 1.1.3

##### MODESTO A. MAIDIQUE CAMPUS:

Character definition at this campus shall be provided by the creation of space-defining buildings that reinforce the open network of malls, quadrangles and courtyards. New construction shall reinforce principles that support development and strengthening of campus image, identity and community, including the university-wide goal of enhancing campus buildings to serve as models of healthy and sustainable practices for our students and community neighbors.

#### Policy 1.1.4

##### ENGINEERING CENTER:

All new or improved architecture will be consistent with Modesto A. Maidique Campus through the use of similar textures and colors for buildings, archways where applicable, and overall architectural character including signage, light fixtures and landscape features.

## Policy 1.1.5

### BISCAYNE BAY CAMPUS:

The adjacency of Biscayne Bay and Oleta River State Recreation Area establishes a strong sense of natural setting to this campus. Character definition at this site should be created by maintaining open view corridors toward the Bay and circulation elements that encourage pedestrian appreciation of the site's features. New construction should create space-defining buildings that emphasize the natural setting and reinforce the native ecology. Modern proportions and fenestration should characterize the design of the new buildings.

## Objective 2.1

### Standards for Materials and Systems:

**Design buildings that promote quality standards of durability and reliability in the selection of materials. Materials shall be consistent with the architectural character defined for each campus, be consistent with the regional context, be energy efficient and require no more than minimal maintenance.**

## Policy 2.1.1

### Quality:

New construction shall reinforce principles that support development and strengthening of campus image, identity and community,

including the university-wide goal of enhancing campus buildings to serve as models of healthy and sustainable practices for our students and community neighbors.

### MODESTO A. MAIDIQUE CAMPUS/ ENGINEERING CENTER:

Materials shall convey a sense of permanence on the campus. Florida key stone shall be utilized whenever stone is desired as a cladding. Poured in place concrete or precast concrete may also be used provided the scale and fenestration are compatible with the scale and proportions required. Aluminum and glass window openings are encouraged to allow natural light into the building. Storefront assemblies of consisting of uninterrupted bays are generally discouraged except where uninterrupted transparency is justified by the building program. Building elements such as window frames, door openings, arches etc. shall be maintained in stone or concrete so as to discourage uninterrupted use of stucco.

BISCAYNE BAY CAMPUS: Materials selected shall be natural in appearance and shall be compatible with the existing campus materials. Buildings shall utilize either precast concrete panels or poured in place concrete for their structural skin. Glass and aluminum systems shall be utilized for admitting natural light into the buildings.

## Policy 2.1.2

### UNIVERSITY-WIDE:

Energy efficiency: All materials shall efficiently utilize natural resources in their production. New buildings shall utilize energy efficient materials and systems. Building locations shall take advantage of the cooling and shading effects of natural elements such as lakes or naturally vegetated areas. Buildings shall be designed to provide shade to mitigate solar gain and to generate passive cooling wherever possible. Insulating materials shall be generously used to reduce energy consumption.

## Policy 2.1.3

### UNIVERSITY-WIDE:

Life Cycle Costs: Architects shall take into consideration the life expectancy of materials and systems proposed for use. The life expectancy shall be compared with the replacement and operating costs of each building component alternative under consideration. The Architect shall provide to Florida International University the results of the life cycle cost investigations for review.



## **Policy 2.1.4**

Color and Texture:

UNIVERSITYPARK/ENGINEERINGCENTER:

New buildings shall be in natural keystone and/or natural gray poured in place concrete or precast. Color shall be consistent with the building standards. Aluminum shall be in a medium bronze color and glass shall be bronze tinted. Color schemes shall be provided by each Architect indicating all visible building elements and details proposed to the University for review and compliance.

BISCAYNE BAY CAMPUS:

Color schemes shall be provided by each Architect indicating all visible building elements and details proposed to the University for review and compliance.

## **Policy 2.1.5**

UNIVERSITY-WIDE:

Graphics and Signage: Florida International University shall create site maps that break down each campus into a series of districts or zones. These zones shall be identified with unique names and colors on the site maps. Site signage shall be located at each entry point to the campus, whether vehicular or transit, with color identified directional signage designed

to guide pedestrians to their destination. The design and usage of all graphics and signage shall be consistent throughout the campus. All signs shall be illuminated to promote easy orientation during evening hours of operation.

## **Policy 2.1.6**

UNIVERSITY-WIDE:

Safety: Florida International University shall provide for the health, welfare and safety of all students, faculty and staff as well as visitors. The design of buildings shall take into account the visibility to passersby of interior and exterior spaces, so as to minimize the potential for harm that arises when spaces are hidden from view. Crime Prevention Through Environmental Design (CPTED) policies will be adhered to as a guide for design. All applicable State and Federal Codes regarding accessibility and safety during construction shall be strictly adhered to. All parking areas and walkways shall be well lit and secure. Residential dormitories shall have security systems and be closely monitored by University Police.

## **Policy 2.1.7**

UNIVERSITY-WIDE

Lighting: Florida International University shall provide appropriate lighting for all pedestrian and non-vehicular facilities on-campus (i.e.

parking, public areas and walkways) for the safety of all students, faculty and staff as well as visitors to each campus.

## **Objective 3.1**

**Districts:**

**Florida International University should organize and develop contextual standards where applicable for the design of buildings specific to certain areas of Campus or Districts.**

## **Policy 3.1.1**

MODESTO A. MAIDIQUE CAMPUS:

Central Core District (1): The buildings and spaces within this district are the original campus structures built in the 1970's. New buildings, additions and alterations shall be consistent with the existing building patterns, materials and colors of the district. The buildings include the following:

- Charles E Perry Primera Casa (administration building)
- Deuxieme Maison
- Green Library
- Ernest R. Graham University Center
- Ernest R. Graham University Center Addition

## Policy 3.1.2

### MODESTO A. MAIDIQUE CAMPUS:

Lake District (2): The buildings in this district are organized around the picturesque lake setting. New buildings, additions and alterations shall be consistent with the existing building patterns, materials and colors of the district. The buildings in this area include the following:

- Green Library
- Viertes Haus
- Engineering & Computer Science
- Owa Ehan

## Policy 3.1.3

### MODESTO A. MAIDIQUE CAMPUS:

Tamiami Mall (3): This district is located at the entry off of SW 8th St. The buildings are organized around a symmetrical vehicular mall. All future buildings in this area shall be “fabric” buildings and share a common fenestration design, building base, building height and arcade treatment. Buildings in this area will include the following:

- Education Building
- Ryder Business Administration
- School of Architecture
- Satellite chiller plant

- Graduate School of Business

## Policy 3.1.4

### MODESTO A. MAIDIQUE CAMPUS:

Avenue of the Arts (4): Buildings in this mall are located immediately south of the Charles E Perry Primera Casa.

Buildings in this area shall be arcaded at the base level and shall be 3 stories in height. All of the buildings shall be space defining buildings and shall look out over the pedestrian mall. Entries shall be off the mall. Materials shall be keystone at the base and color integral stucco for the fields. The color shall be selected from the chart appended and shall contain only one color throughout the mall.

- Charles E Perry Primera Casa (administration building)
- Management and Advanced Research Center (MARC)
- Frost Art Museum

## Policy 3.1.5

### MODESTO A. MAIDIQUE CAMPUS:

Avenue of the Professions (5): Buildings in this mall include:

- Law School
- Labor Center

- Ryder Business Building
- Social Science Complex
- Green Library
- North Graham Center

## Policy 3.1.6

### UNIVERSITY-WIDE:

Housing Quads (6): New construction of student’s housing shall be composed of multi story apartments creating in the case of Modesto A. Maidique Campus, a dedicated quadrangle space for residents. Buildings at Biscayne Bay Campus shall be oriented toward the bay view. The buildings shall utilize to the extent possible an arcaded base, which will give access to the resident’s common areas such as lounges, laundries etc. Apartment levels shall be integral stucco exterior surfaces and shall have the appearance of housing and not academic buildings. A residential appearance shall be achieved by creating buildings of small massing and footprints, fenestration with balconies and more informal arrangement of building volumes.

## Policy 3.1.7

### UNIVERSITY-WIDE:

Housing Quads (6): New construction of student’s housing shall be composed of multi story apartments creating in the case of

Modesto A. Maidique Campus, a dedicated quadrangle space for residents. Buildings at Biscayne Bay Campus shall be oriented toward the bay view. The buildings shall utilize to the extent possible an arcaded base, which will give access to the resident's common areas such as lounges, laundries etc. Apartment levels shall be integral stucco exterior surfaces and shall have the appearance of housing and not academic buildings. A residential appearance shall be achieved by creating buildings of small massing and footprints, fenestration with balconies and more informal arrangement of building volumes.

### **Policy 3.1.8**

#### **MODESTO A. MAIDIQUE CAMPUS:**

Within the next planning period, the University will add or eliminate districts, including but not limited to:

- Science Quad District
- Medical School District
- Stadium District
- Campus Support District
- University House District

### **Objective 4.1**

#### **Guidelines for Architectural Building Types**

### **Establish a vocabulary and set the parameters for building types and elements that will reinforce the visual unity within the campus and districts.**

#### **Policy 4.1.1**

##### **UNIVERSITY-WIDE:**

Pedestrian covered walkways: New construction shall incorporate arcades wherever possible within the exterior face of the building volume so as to provide protection from the elements. Arcades may be designed with pedestrian covered walkways. Arcades may be used in conjunction with connecting walkways for weather protection.

#### **Policy 4.1.2**

##### **Fenestration:**

##### **MODESTO A. MAIDIQUE CAMPUS:**

Building fenestration should be designed in a manner that is consistent with the surrounding context and meets USGBC standards for LEED Silver certification.

##### **ENGINEERING CENTER:**

Existing facility renovations and new construction will incorporate those elements approved for the Modesto A. Maidique Campus facilities to maintain design consistency.

##### **BISCAYNE BAY CAMPUS:**

Building fenestration should be designed in a manner that is consistent with the surrounding context and meets USGBC standards for LEED Silver certification.

#### **Policy 4.1.3**

##### **UNIVERSITY-WIDE:**

Building Forms: Florida International University should strive to create buildings that are simple and direct and may use building forms that are compatible with classical principles. Buildings should be thought of as either contributing to the form of the open space they create “fabric” space defining buildings, or they shall be considered as special buildings that are “monumental” or objects in space.

- **Monumental buildings** should be planned and coordinated so that their sitting and building design are appropriate to the distinguished purpose they are to provide.

Fabric buildings should be sited and designed to be harmonious and contributing to a greater whole. Fabric buildings should be considered as deriving from classical types. Fabric buildings can be “bar” buildings, courtyard buildings, “L” shaped or “H” shaped but shall have forms that are easily discernible and contribute a space defining character.

## **Policy 4.1.4**

UNIVERSITY-WIDE:

Service Yards: New construction at Florida International University shall include screening from view of all service yards. Screening shall be achieved with walls and landscaping. Combining service yards to minimize their spread is desirable providing the yard does not get so large as to become obtrusive.

## **Objective 5.1**

### **Weather Protection (UNIVERSITY-WIDE)**

**Florida International University should create circulation elements that provide for weather protection and reinforce the linkages between quads, courtyards and buildings.**

## **Policy 5.1.1**

Covered Connections

Florida International University should provide adequate parking to support the needs of students, faculty and visitors

## **Policy 5.1.2**

Parking Structures:

Required for parking shall be located so as to minimize the impact of building bulk wherever possible. The structures should be articulated into smaller volumes so that long uninterrupted faces are avoided. Structures shall be designed so that only level slabs occur at the exterior, sloping ramps may only occur at interior bays of the buildings. An incorporating first level campus support facility such as convenience stores or bookstores as buffers to create pedestrian character is strongly encouraged. Parking shall be screened by the design of the structure's skin and landscaping.

## **Policy 5.1.3**

UNIVERSITY-WIDE:

Surface Parking: Florida International University shall screen all surface parking areas by means of adequate landscaping. Signage and graphics shall be provided to orient people to their relative location on campus.

## **Objective 6.1**

### **Design Review (UNIVERSITY-WIDE)**

**Create and monitor conformance of future design projects with referenced standards through University design review procedures.**

## Policy 6.1.1

Design Review Procedures:

Design of future projects shall be receive a formal review for compliance with standards for new construction. Review shall occur after University facilities staff has assessed the project for programmatic and design compliance.

The architect for each project shall present the design including all proposed finishes so that comments and approvals can be obtained. The formal review should consider the sitting, landscape improvements and signage as well as the architecture and interior improvements proposed. The University facilities staff should have the ability to overrule certain guidelines if the proposed change in the guidelines creates a better result or in case that the review is a special or monumental project.

## GOAL 2

**Establish a Sustainable Design Guidelines and goals to help elevate the standards of energy efficiency and performance for all new buildings, as well as specifying principles and design drivers that will enhance pedestrian and outdoor environments.**

## GOAL 3

**Outline the frame work for an Integrated Design Process, to assure successful implementation of all campus master plan guidelines.**

## GOAL 4

**Establish the FIU Design Review Process, that will provide reviews and approvals all designs within existing Campuses. This will ensure that all guidelines and goals established within the FIU Master Plan document are followed and achieved.**

## GOAL 5

**Establish Architectural Guidelines and Components to reinforce and work in partnership with the Urban and Landscape Design guidelines, the FIU Building Standards and the Office of Sustainability Guidelines.**

Draft



Draft

16.0

**LANDSCAPE DESIGN  
GUIDELINES**

## 16.0 LANDSCAPE DESIGN GUIDELINES

Landscape is an essential component of the educational experience at FIU. It provides opportunities for education, demonstration, inspiration and recreation. The purpose of the Landscape Design Guidelines is to provide the campuses of Florida International University with a framework for landscape and hardscape treatments in order to maintain a high level of quality to the design of new spaces and to the enhancement of existing landscaped areas. It is the intent of the Landscape Design Guideline Element to provide an overall landscape framework that unifies each campus with its built environment and its unique natural environment, and to reinforce sustainable design practices as outlined by both USGBC standards for LEED Silver certification and American Society of Landscape Architects Sustainable Sites Initiative (SSI).

Hierarchy of spaces have been identified and main circulation routes will be reinforced with identifiable landscape treatments. Significant pedestrian corridors will continue to be identified, linking unique academic cores within the campus. As the overall character of the FIU campus continues to mature, various spaces will be defined following these guiding principles:

- Integrate architectural and site design in conjunction with landscape architectural design in the planning process to ensure that attractive settings and ample open spaces are provided in conjunction with new facilities.
- Seek to develop new significant landscape features in association with campus growth, including campus spaces such as quads, plazas, campus streets and campus edges while enhancing the concept of the “Avenue of the Arts” and “Avenue of the Professions”, “the Avenue of the Sciences”, and the “Avenue of the Students”.
- Blend new development sites with the character of the mature campus landscapes and other natural areas by retaining islands of natural vegetation in new development areas and creating new and similar vegetative areas that integrate the buildings and site facilities into the landscape.
- Continue the initial style and character of the original campus plantings with emphasis on transitioning and reflecting the natural formation of plantings.
- Maintain a selective palette of indigenous and site-adaptive plant species that express the subtropical environment, as well as those plants that promote Xeriscape principles.

## GOAL 1

**Create high quality, environmentally sound campus landscape settings which afford outdoor comfort, security, and a rich visual quality, exemplifying the uniqueness and diversity of South Florida's subtropical environments while creating a unifying character that binds the campuses together (Figure 16.1).**

## OBJECTIVES AND POLICIES

### Objective 1.1

**Landscape Framework: Implement the Landscape Framework for the Modesto A. Maidique Campus, Engineering Center and Biscayne Bay Campus (16.0 Data and Gathering, Figures 16.0 A, 16.0 B, 16.0 C).**

In the event that provisions contained in the Landscape Framework conflicts with provisions contained in the adopted Campus Master Plan then the Master Plan shall prevail and control.

### Policy 1.1.1

#### UNIVERSITY-WIDE

Reinforce the critical elements of the spatial organization defined in the Master Plan for a consistent landscape character as outlined in the Landscape Framework. The framework is developed as a guide to further define the character of spaces, streets, and edges within the campuses. The Landscape Framework is not intended to be a typical design solution for each area, but a set of standard principles of how a space shall be developed, enhanced and maintained so that it remains in context with the overall campus.

### Policy 1.1.2

Locate and orient all future buildings to define the open spaces depicted in the adopted Urban Design Plan.

### Policy 1.1.3

Continue to incorporate Art exhibits throughout the three campuses as an element unique to FIU. Create an inventory of all installations on-campus and define the parameters for future locations of new art projects on-campus.

### Policy 1.1.4

Provide a continuous tree canopy (as appropriate) in all remaining surface parking lots and sufficiently screen all surface parking areas without compromising security.

### Policy 1.1.5

Prior to construction, relocate and incorporate existing valuable plant material in the areas of future construction and development.

### Policy 1.1.6

Emergency access facilities shall be kept clear of any impeding landscape elements.

### Policy 1.1.7

Screen all trash collection facilities from pedestrian or vehicular traffic view with either a fence or wall consistent with architectural guidelines or evergreen plant material.

### Policy 1.1.8

Screen maintenance facilities from pedestrian and vehicular traffic with a fence, wall, or evergreen plant material.

### Policy 1.1.9

Incorporate within the general campus landscape area, gardens and natural habitats as an opportunity for botanical and environmental education and as campus amenities.

### Policy 1.1.10

Improve the integration of existing and new storm water retention areas as landscape enhancement elements.

## **Objective 1.2**

**Enhance the existing and proposed Campus Spaces to better define the open spaces as a consistent unifying element throughout the three campuses Axes**

### **Policy 1.2.1**

MODESTO A. MAIDIQUE CAMPUS (Fig 16.1):

Avenue of the Sciences - Continue to develop and reinforce the diagonal axis from Panther Village to the intersection of SW 8th St and SW 107th Ave at the future Academic Health Sciences gateway.

1. Enhance the sidewalk path between Panther Village and the Graham Center/Library Plaza with additional canopy plantings for shade and a defined pedestrian crossing at the existing service street.
2. Redevelop the existing Graham Center Plaza/Library plaza to allow for a uninterrupted visual and functional pedestrian path through the space from the southwest corner to the northeast corner of the space. Provide canopy trees for shade.
3. Remove the existing curvilinear path from the northeast corner of the Graham Center and replace with a formal linear path that connects to the existing Health & Sciences Building 2 path.

### **Policy 1.2.2**

Avenue of Professions - Enhance the pedestrian experience of the axis west of the library to the proposed loop road realignment. The space should demonstrate the significance of the axis through the use of canopy trees or palms evenly spaced to create a formal and linear connection. The pedestrian path should be wider than typical sidewalks on campus. Include benches and additional site furnishings to create a repeating pattern along the space.

### **Policy 1.2.3**

Ave of the Students - Develop this axis to a level distinctive from typical pedestrian circulation while clearly defining the linearity of the space. Increase the existing sidewalk width and develop segments of formal plantings at building entrances. Canopy trees should be placed adjacent to the path between formal sections to provide shade.

### **Policy 1.2.4**

Ave of the Arts - Maintain the already well developed and spatially defined axis.

## **Quadrangles**

### **Policy 1.2.5**

MODESTO A. MAIDIQUE CAMPUS:

Particular attention should be paid to the scale of the quadrangles. Continue to develop the Graham Center, Green Library, Owa Ehan and Chemistry & Physics Buildings Quad with defined hardscape and landscape edges to clearly define the space. New sidewalks should delineate the edges of the eastern edge of the quad adjacent to the Health & Science buildings connecting north to south. Groupings of canopy trees should be placed within the quad and along existing pedestrian paths to provide shade with the ground plane predominantly lawn. Shade structure or small pavilions should be placed within the quad to increase habitation.

### **Policy 1.2.6**

With the incorporation of the traffic roundabout at the intersection of the loop road and 112 Ave entrance, develop the Ryder Business Building quad as a pedestrian focused space. Remove the existing drive and replace with sidewalk material so the drive is visually similar in type to a sidewalk but allows for service and ADA accessibility. Provide crossing pedestrian paths centered on the existing building entrances for Architecture, Education, and Business Complex.

Maintain the current palm tree configuration to allow for the visual corridors into the space from the loop road to continue.

## **Policy 1.2.7**

ENGINEERING CENTER (Fig 16.2):

Develop a quad east of the existing Engineering Center building with canopy trees and minimal hardscape. The ground plane should be predominately lawn to allow for informal gatherings and create a picturesque quality to the space similar to the proposed park edge along West Flagler Street.

## **Policy 1.2.8**

BISCAYNE BAY CAMPUS (Fig 16.3):

Continue to develop the quad south of Academic One & Two (referred to as South Quad). Influenced by the shape of the existing lake, the quads, plantings, and pedestrian circulation should be informal in design, responding to the lake's configuration. Informal groupings of hardwood canopy trees should be placed within the quad to provide shade for gatherings and reflection.

## **Policy 1.2.9**

Expand the quad north of Academic One & Two (referred to as North Quad). Canopy trees should be placed in small gatherings

within the expanded portion of the quad. Sidewalks should cross the space creating direct links between building entrances (See Figure 16.4A & 4B). The ground plane should be predominately lawn with some understory plantings at the building edges. The formal arrangement of the hardscape and palms that exists north of Academic One should be extended west to edge of the quad. Additional canopy planting should be used to provide shade.

## **Plazas**

### **Policy 1.2.10**

MODESTO A. MAIDIQUE CAMPUS:

Redevelop the Graham Center/Green Library Plaza to allow for the Avenue of the Sciences to be developed as an aligned pedestrian spine. The space should be designed as a single space to insure continuity between buildings. Preserve of the existing canopy trees where possible to allow the space to be appear more mature upon completion.

## **Promenades**

### **Policy 1.2.11**

ENGINEERING CENTER:

Develop a pedestrian promenade from the park edge and to the northern parking lot

(See Fig 16.5 A & B). The promenade should be formal in character, primarily hardscape with canopy trees evenly spaced and minimal ground plane vegetation. Site furnishings should include a series of benches for congregation opportunities

## **Policy 1.2.12**

BISCAYNE BAY CAMPUS:

Develop a pedestrian promenade from the northern edge of the campus core south to the Kovens Center. The promenade should be formal in character with a unique hardscape material. Provide canopy trees evenly spaced on both sides of the walk to provide shade. Lawn should be the predominate ground plane.

## **Special Purpose Landscapes**

### **Policy 1.2.13**

MODESTO A. MAIDIQUE CAMPUS:

Maintain and protect from encroachment the teaching and research landscapes including Henington Island adjacent to SW 8th Street.

## Policy 1.2.14

Maintain and protect from encroachment the teaching and research landscapes including the area south of the FIU Arena. The space is defined by three distinctly different plant communities that offer opportunities for teaching and research. Develop a series of interpretive signage to enhance the educational and passive activity elements within the landscape. Directly south of the arena, develop an outdoor space with opportunities for gathering as well as pedestrian circulation. Enhance the space with canopy trees for shading and picnic tables. Provide a defined pedestrian circulation path between the existing Recreation Center within the academic core to the existing soccer and baseball stadiums. The path should minimize the amount of disturbance on existing vegetation while providing adequate width for pedestrian movement and addressing safety issues with view corridors along the path. The establishment of view corridors, pedestrian scale lighting and interpretive signage is crucial in developing a safe and useable space.

## Policy 1.2.15

Develop the area around the President's house as a formal garden that will allow for outdoor gatherings as well as a reflective space that buffers the adjacent commercial street corridor.

## Objective 1.3

### Develop a hierarchy of landscape treatment for Campus Streets

#### Policy 1.3.1

##### UNIVERSITY WIDE:

Reinforce and improve circulation hierarchy by developing distinct, identifiable landscape treatments for each road type, campus entrances and pedestrian/vehicular intersections.

#### Streets

#### Policy 1.3.2

##### MODESTO A. MAIDIQUE CAMPUS:

Greenbelt (Primary loop road): Establish a 'boulevard' treatment with Live Oaks as the dominate canopy tree. Canopy trees should be located on both sides of the road within a planting strip with lawn as the ground plane. Other hardwoods and palms are permissible at significant pedestrian and/or vehicular intersections. Existing hardwoods deemed in good condition should not be replaced. There are various land use characteristics that will define the design of the loop road. More urban development shall have a different character than areas reserved for open space. There are four different types of character proposed for the loop road:

1. Typical – Minimum 8 ft sidewalk to each side of the street, which is separated from the street with planting strip. Predominantly lawn as the ground plane with canopy trees (See Figure 16.6 A & B, 16.7 A & B).
2. Urban – Located within the Academic Health Sciences District and similar to a city streetscape (See Figure 16.8 A & B).
3. Main Street – Located at the proposed mixed-use student housing south of Panther Village, similar in character to an urban street with canopy trees on regular spacing, with hardscape and limited groundcovers. A proposed widened northern sidewalk with decorative hardscape materials, benches, and lightning to create a gathering area for markets, tailgating opportunities and other outdoor activities (See Figure 16.9 A & B).
4. Major Intersections – A consistent landscape treatment at all internal intersections will provide traffic calming, pedestrian crossings, and visual reference within the campus. The landscape material will be characterized with palms, limited understory planting and a ground plane, that incorporates lawn and ornamental groundcovers. Concrete pavers may be utilized to identify to pedestrian crossings. Pedestrian crosswalk markings will be in place to identify to vehicles that pedestrian crossing is primary.



5. Secondary – Located south of the recreation center and north of Panther Village and similar in structure to the Greenbelt. Canopy trees shall be spaced evenly with pedestrian walkways on both sides. It is anticipated this road will become a pedestrian oriented corridor between the existing parking garages and the residential district. It is vital that it remains operable for service vehicles.

### **Policy 1.3.3**

#### **BISCAYNE BAY CAMPUS:**

As part of the Green Spine that creates a connection between the existing academic campus and the existing conference center, the development of the street element component of the space will have a large impact on the perception of the campus (see Fig 16.10 A&B). The character of the street is similar to that of a main street with formal planting arrangements, large canopy trees at regular spacing, wide sidewalks and limited ground plane plantings. Crosswalks should be articulated with concrete pavers at the sidewalk level and striping's across the vehicle lanes. The eastern edge of the street is similar to that of a park with informal tree groupings and open lawn areas.

#### **Entrances**

### **Policy 1.3.4**

#### **MODESTO A. MAIDIQUE CAMPUS:**

Primary Entrance: Similar to that of the SW 16th St at SW 107th Ave entrance and in a formal arrangement, the SW 17th St at SW 117th Ave shall be developed to the level of detail and plant palette (Fig 16.11 A&B). With the growth of the school, an increase in athletic activity associated with the expanded FIU stadium, and exiting access to the Florida Turnpike, this entrance will take on a more significant role as a functionally and visual representation for the school. The use of palms shall visually define the space while understory plantings will screen the existing uses. Sidewalks should be placed on both sides of the entry drive. This treatment will maintain the SW 112th Ave as the symbolic main entrance to the campus

### **Policy 1.3.5**

Secondary Entrances: Develop the SW 13th St at SW 117th Ave Entrance with a similar plant palette to the SW 17th St entrance. The use of palms in a formal arrangement as the primary canopy tree. The need for significant monument signage is not necessary. Understory plantings should be used to screen the adjacent uses. Sidewalks should be provided on both sides of the entrance.

### **Policy 1.3.6**

Secondary Entrances: Develop SW 109th Ave at SW 8th St entrance as an urban street with evenly spaced canopy trees, wide sidewalks and minimal ground plane vegetation.

### **Policy 1.3.7**

#### **ENGINEERING CENTER:**

Primary Entrance: Continue to develop an entry feature at West Flagler Street for vehicular and pedestrian access that is similar in plant palette, formal structure, with a similar visual hierarchy to that of Modesto A. Maidique Campus's SW 16th Street entry. The sidewalks should be relocated to allow for a planting strip between the existing drive lanes and sidewalks. The entrance should use palms within the median and on both sides of the entry drive. Understory plantings and ground plane vegetation shall be minimal to allow for sightlines to and from the park edge.

### **Policy 1.3.8**

Secondary Entrance: As the campus grows, the NW 107th Ave entrance will serve as the primary vehicular entrance to the campus. The existing fence line should be removed and placed closer to the exiting parking lot to allow for a more significant and inviting entrance to be developed. Sidewalks should be located on either side of the entrance but separated from the drive lanes by a planting strip. The use of palms, understory plantings and ground plane vegetation similar to Modesto A. Maidique Campus's SW 16th Street entry shall create consistency between the campuses.

## **Objective 1.4**

### **Develop an enhanced and consistent quality for the Campus Edges.**

#### **Policy 1.4.1**

##### MODESTO A. MAIDIQUE CAMPUS:

Develop an urban edge to the campus along SW 107th Avenue. As identified in the Academic Health Sciences Master Plan, SW 107th Ave is an urbanizing commercial corridor. Future building placement will position buildings closer to the street creating an urban edge similar to downtown cityscapes. Provide hardwood canopy trees and limited/low growing ground plane vegetation located within a defined planting strip between the vehicular drive lanes and sidewalk. Canopy trees should be spaced to allow for a continuous shaded walk.

#### **Policy 1.4.2**

Develop an urban edge along SW 8th street 600 ft west of the SW 107th St intersection. Future building placement will position buildings closer to the street creating an urban edge similar to downtown cityscapes. Provide hardwood canopy trees and limited/low growing ground plane vegetation located within defined a planting strip between the vehicular drive lanes and sidewalk. Canopy trees should be spaced to allow for a continuous shaded walk.

#### **Policy 1.4.3**

Reinforce the existing park edge along SW 8th St to SW 117th Ave. A park edge is similar to that of a public park. While edges are often defined by street trees and sidewalks, the remaining space has groupings of canopy trees, minimal hardscape and predominately lawn as the ground plane.

#### **Policy 1.4.4**

Develop a landscape edge along SW 8th St west from the park edge. The planting should be informal in arrangement. Most consistently viewed from the community and along major traffic corridors, canopy trees along with palms and flowering trees will define the landscape edge. Understory plantings are encouraged to visually screen adjacent uses both into and from the campus. Groupings of palms and flowering trees are encouraged to break the pattern of canopy trees. A decorative perimeter fence integrated within the vegetation massing will further define the limits of the campus

#### **Policy 1.4.5**

##### ENGINEERING CENTER:

Develop a park edge along West Flagler street. Plantings should be limited to random groupings of canopy trees and some flowering trees located near proposed walks in order to provide shade. Hardscape should be minimal with pedestrian walks creating connections

between the campus and the external uses. The ground plane should be predominately lawn (Fig 16.12 A&B).

#### **Policy 1.4.6**

Develop a landscape edge along NW 107th Ave that enhances the visual quality of the campus while screening the parking from view. The planting should be informal in arrangement. Canopy trees along with palms and flowering trees will define the landscape edge. Understory plantings are encouraged to visually screen adjacent uses both into and from the campus. Groupings of palms and flowering trees are encouraged to break the pattern of canopy trees. A decorative perimeter fence integrated within the vegetation massing will further define the limits of the campus. Use sidewalks to create pedestrian connections and further enhance the aesthetic quality of the campus.

#### **Policy 1.4.7**

##### BISCAYNE BAY CAMPUS:

Develop a landscape edge along Bay Vista Blvd that enhances the visual quality of the campus while screening the parking from view. The planting should be informal in arrangement. Understory plantings are encouraged to visually screen the adjacent existing surface parking. Groupings of palms and flowering trees are encouraged to break the pattern of canopy trees. A decorative perimeter fence

integrated within the vegetation massing will further define the limits of the campus. A bike path should be incorporated to allow for both pedestrian and bicycle circulation.

#### **Policy 1.4.8**

Continue to develop, preserve, and enhance views to Biscayne Bay along the Baywalk. Additional groupings of appropriate coastal plants should be located to further define view corridors from the campus and conference center. Groupings located adjacent to the existing bike loop shall incorporate additional site furnishings of benches and picnic tables.

#### **Objective 1.5**

##### **Plant Materials:**

**Modify and adopt a revised plant materials list upon Master Plan adoption, eliminating use of invasive exotic species and those which necessitate excessive maintenance; and adding species appropriate to traditional college campus settings.**

#### **Policy 1.5.1**

UNIVERSITY-WIDE:

To the degree possible, landscape plans shall include the use of plant species that are indigenous to the native plant communities of the South Florida area. The appropriate selection of native plant species shall be based on their desired size, form, texture and color in the landscape and their positive response to

localized environmental conditions including available light levels, soil type and plant community context. In addition, selection of native species should be based on tolerance of existing site conditions, compatibility with other indigenous species and sustainability of the landscape to promote water conservation, to reduce maintenance considerations and to ensure a sustainable landscape or for educational purposes. In cases where non-invasive exotic plants are to be 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 pesticides. Prohibited plants as identified by Miami-Dade as well as the Exotic Pest Plant Council's "Florida's Most Invasive Species List" shall not be permitted in any future plantings.

#### **Policy 1.5.2**

As established in the Landscape Framework (16.0 Data and Gathering, Figures 16 A, B & C, Design Elements Matrix), the baseline plant list for FIU shall guide all future projects and renovations. Deviations from the approved plant list shall garner permission from FIU planning department prior to a release for construction approval. Prohibited plants as identified by Miami-Dade as well as the Exotic Pest Plant Council's "Florida's Most Invasive Species List" shall not be permitted in any future plantings.

#### **Policy 1.5.3**

Monitor conformance of future construction projects with revised plant lists through University design review procedures.

#### **Policy 1.5.4**

It is the intent of FIU to remove all non-native plants (whether grasses, shrubs or trees) which are identified in the Exotic Pest Plant Council's

"Florida's Most Invasive Species List" from the campus grounds. FIU shall coordinate with the Florida Department of Environmental Protection (FDEP) and other appropriate governmental entities to ensure the proper removal and disposal of these exotic species on campus.

#### **Objective 1.6**

**Furnishings, Lighting and Graphics: Adopt standards for furnishings, lighting fixtures and signage depicted (16.0 Fig 16.0 B)**

#### **Policy 1.6.1**

UNIVERSITY-WIDE:

FIU Facilities Management shall identify projects which may enhance campus safety and handicapped accessibility. Prioritize projects according to the following elements: 1) removal of barriers, 2) visibility, 3) enhanced lighting, 4) pedestrian/vehicular conflict.

## Policy 1.6.2

As identified in the Landscape Framework, coordinate site furnishings, lighting fixtures, campus signage and graphic system with the identified manufacture and model numbers from selected materials used on campus and other acceptable products. As existing furnishings and lighting becomes unusable or deteriorated implement replacement furnishings according to approved University standards.

## Policy 1.6.3

Follow the design review procedures established in 15.0 Architectural Design Guidelines Element to ensure that coordination of the landscape, furnishings and graphics on the campus are in accordance with the guidelines.

## Policy 1.6.4

Future bicycle facilities shall use one selected type of bicycle rack with adequate adjacent pavement to accommodate bicycle traffic and under cover if possible. Plantings shall be kept away from area a sufficient distance to allow for bicycle maneuverability.

## Policy 1.6.5

Public transportation facilities shall be consistent with Architectural Guidelines. They should be sited to allow visibility and ease

of access for both vehicular and pedestrian traffic. Landscape treatment of facilities should provide shade if not provided by shelter.

## Objective 1.7

**Retention/Storm water Elements: Adopt standards for landscape edge treatments surrounding ponds, lakes and storm water features.**

### Policy 1.7.1

UNIVERSITY-WIDE:

Consistent with regulatory requirements, plant native wetland littoral vegetation along gradually sloping banks of lakes and water features located wherever appropriate.

### Policy 1.7.2

Consistent with regulatory requirements, provide where necessary “hard edge” pedestrian treatments of water bodies in intensely developed areas.

### Policy 1.7.3

FIU shall follow the design review procedures established in 15.0 Architectural Design Guidelines Element to ensure conformance of future construction projects with referenced standards.

## Objective 1.8

**Phasing: Implement landscape improvements in three phases, consistent with the scheduling of new academic, housing, recreation and support buildings to which landscape improvement components will be allocated.**

### Policy 1.8.1

UNIVERSITY-WIDE:

FIU Facilities Management should establish administrative and budgeting procedures to insure the inclusion of landscape features identified in the objectives in the project budgets developed for future campus construction.

### Policy 1.8.2

Implement the landscape concept plan by allocating each future and existing building a proportional share of overall planned landscape improvement cost.

### Policy 1.8.3

Apply the following priorities for implementing components of the Landscape Concept Plan.

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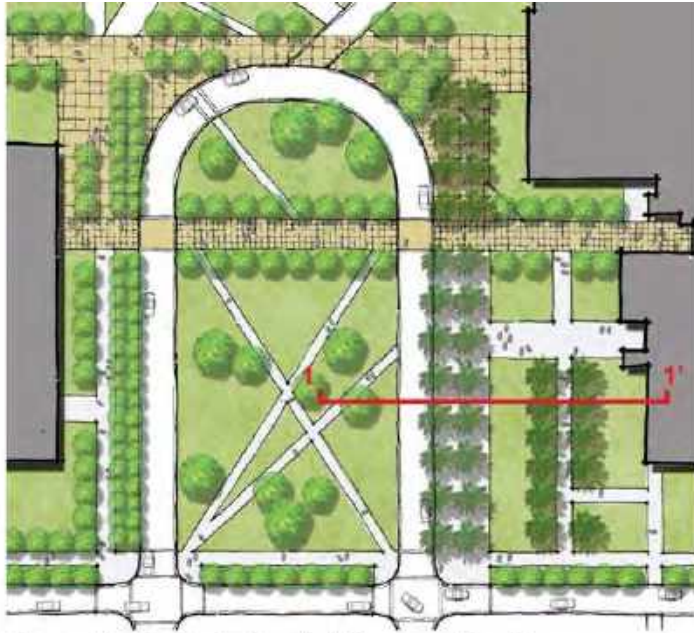


Figure 16.4A North Quad at Biscayne Bay Campus



Figure 16.4B North Quad Section 1-1'





Figure 16.5A Promenade at Engineering Center



Key Map



Figure 16.5B Promenade Section 1-1'



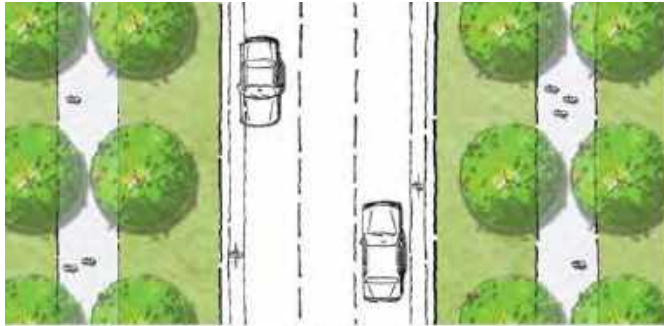


Figure 16.6A Plan of typical three-lane Campus Greenbelt



Figure 16.6B Section of typical three-lane Campus Greenbelt

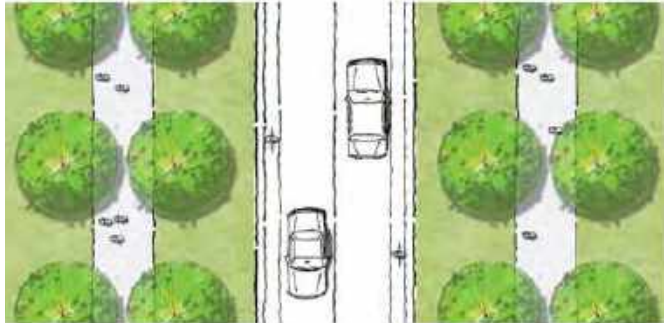


Figure 16.7A Plan of typical two-lane Campus Greenbelt at Northwest of FIU Arena



Figure 16.7B Section of typical two-lane Campus Greenbelt



Key Map



Key Map

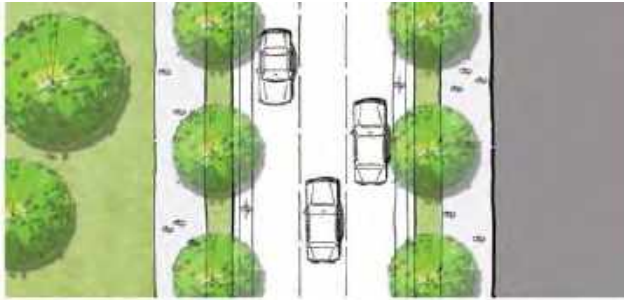


Figure 16.8A Plan of Campus Greenbelt at AHSC quad



Figure 16.8B Section of Campus Greenbelt at AHSC quad

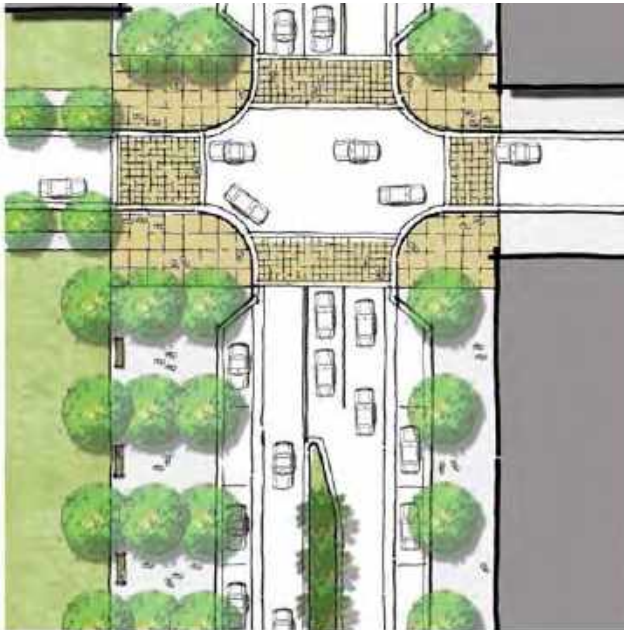


Figure 16.9A Plan of intersection at Main Street



Key Map



Key Map





Figure 16.10A Green Spine at Biscayne Bay Campus



Figure 16.10B Green Spine Section 1-1'

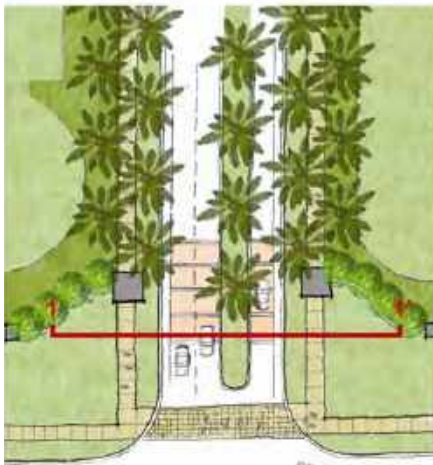


Figure 16.11A Plan of Proposed Entry Drive at Modesto A. Maidique Campus



Figure 16.11B Entry Drive Section 1-1'

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17.0

**FACILITIES  
MAINTENANCE**

## 17.0 FACILITIES MAINTENANCE

The Florida International University campuses boast a variety of original buildings – some dating back to its origins as the original Miami-Dade airport. For the first time in its history, each of the FIU campuses boast both an historic core of buildings and new “signature” buildings. The core facilities stem from the founding concrete facilities of the 1970’s; recent construction has included an era of innovative new buildings that are based on very different materials and design vocabulary.

These architecturally significant components of the physical fabric of the FIU campuses should receive equal attention for maintenance and special review for any modifications including repainting, window and door replacements and infrastructure changes.

This wide array of buildings from different eras and with different architectural components displays the dynamic evolution of FIU. While finding ways to appropriately harmonize building systems, components and materials, equal attention should be given to all facilities to ensure proper maintenance and infrastructure changes.

FIU currently utilizes an Integrated Facility Maintenance Program. Priorities are assigned to address facility deficiencies based on explicit criteria and standards, with implementation limited

by funding availability. The goals, objectives and policy outlined in the Campus Master Plan advocate for an expansion of the facilities maintenance program. A schedule for routine, preventative and deferred maintenance – along with strategic renovations and repurposing – will ensure that current and future facility needs are met.



## GOAL 1

**Provide for the timely and cost effective maintenance of campus facilities and plan future facilities having high levels of efficiency and limited maintenance requirements.**

## OBJECTIVES AND POLICIES

### Objective 1.1

#### Optimize Building Performance:

**Utilize building materials, finishes and systems which are durable, reliable and which require limited maintenance in accordance with Association of Physical Plant Administrators Guidelines.**

#### Policy 1.1.1

Apply the following guidelines for exterior building elements.

**Ground Level** - Utilize durable, weather-resistant, climate-appropriate materials including unpainted concrete masonry, natural stone (keystone) and like materials which require only periodic pressure cleaning. Use of stucco, wood and other materials in active pedestrian areas which require high levels of maintenance, frequent painting or which are subject to deterioration is discouraged.

**Upper Levels** - Exposed concrete masonry, masonry panels are preferred. Smooth finish stucco requiring painting no more often than every five years is acceptable.

#### Policy 1.1.2

Provide interior building materials which have a level of durability, security and sound attenuation appropriate to projected levels of use and wear, using commonly accepted maintenance practices as follows:

#### High Use Areas

Utilize hard surface, impervious surfaces such as ceramic tile and pavers on floors and base walls.

#### Low-Moderate Use Areas

Utilize vinyl tile coupled with appropriate acoustical ceiling treatments in moderate use areas such as classrooms, labs and hallways. Limit use of durable commercial grade carpet to low use areas such as offices, faculty lounges and conference rooms.

**Walls** should be high grade durable semi-gloss paint on drywall or plaster partitions. All trim should be color-integrated materials.

#### Policy 1.1.3

Provide durable, easily accessible, low maintenance and high energy efficiency mechanical and electrical systems, appropriate to local climatic (high humidity) conditions. Special standards shall apply to the control of moisture related facility deterioration problems. Provide high output, low energy lighting systems with appropriate color renditions. Maximize system and component standardization to facilitate ease of operations, maintenance and replacement.

#### Policy 1.1.3

Provide durable, easily accessible, low maintenance and high energy efficiency mechanical and electrical systems, appropriate to local climatic (high humidity) conditions. Special standards shall apply to the control of moisture related facility deterioration problems. Provide high output, low energy lighting systems with appropriate color renditions. Maximize system and component standardization to facilitate ease of operations, maintenance and replacement.

#### Policy 1.1.4

The University shall make every effort to incorporate sustainable/green elements in the planning and systematic upgrade of its facilities to conserve energy and reduce overall operation costs.

## **Objective 1.2**

### **Optimize Building Performance:**

#### **Optimize Facility Use and Capacity:**

**Manage facility utilization efficiency so as to minimize use conflicts, overcrowding and retrofit costs.**

#### **Policy 1.2.1**

Apply SREF Guideline 6A-2 to all proposed facility use modifications to ensure optimum facility utilization.

#### **Policy 1.2.2**

Limit facility use changes which involve uses with significantly different operational, spatial or mechanical requirements (e.g. conversion of classrooms to laboratories, etc.)

## **Objective 1.3**

### **Enhance the Facility Maintenance Program:**

**Strengthen the Comprehensive Facility Maintenance Program, building on the current Facility Deficiency Report and related surveys of facility conditions, capacities and code compliance.**

#### **Policy 1.3.1**

Continue present facility maintenance procedures consisting of annual application of criteria for prioritization contained in this document to the deficiencies identified in the data sources identified below for annual inclusion in the five year CIP based on available resources.

- Building Deficiency Survey
- Housing Deficiency Survey
- Life Safety (Fire Marshall) Reports
- Handicapped Accessibility (ADA) Reports
- Hazardous Materials Reports (Law Engineering)
- Roof Management Reports (Garland)

#### **Policy 1.3.2**

Expand and annually update the facility deficiency reporting system, including the data sources to include:

- ADA Compliance
- Conformance with Guideline 6A-2
- Potential for adaptive re-use
- Hazardous materials inventory
- Auxiliary and student services buildings
- Grounds maintenance needs (based on xeriscape principles)
- Short and long range cost projections.

#### **Policy 1.3.3**

Priorities for the remediation of facility deficiencies shall be assigned based on the following criteria in descending order of importance.

- Emergency life-safety or plant-safety items
- Previously initiated uncompleted projects
- Threatening life-safety items.
- Handicapped access corrections required by state law or ADA
- Threatening plant-safety items
- Critical needs for maintaining operations
- Expansion needs critical to University objectives
- New program or operations improvements

## **Policy 1.3.4**

Utilize and expand upon the facility deficiency reporting system database composed of the following elements:

- Standards for the assessment of facility utilization and conditions.
- Priorities for maintenance and improvement projects which emphasize factors of safety, handicapped accessibility, operational efficiency and long term cost effectiveness.
- Process for the periodic review of facility utilization capacity and the identification of re-use potentials.
- Schedule and budget for routine and deferred maintenance and elimination of deficiencies among all facilities with annual maintenance cost projections.

## **Policy 1.3.5**

Establish a deferred preventative and maintenance schedule, consistent with projected funding, incorporated in the Facility Maintenance Program.

## **Policy 1.3.6**

The review process for the use and capacity of buildings shall consist of the following elements:

1. Classroom-Laboratory utilization reports shall be prepared annually for use by Institutional Research and Space and Scheduling units of Academic Affairs in preparing class assignments.
2. The FIU Space Committee shall meet, at minimum, monthly to review and act upon space and change in use requests submitted by department heads.

## **Objective 1.4**

### **Monitor Maintenance Funding:**

**Ensure the availability of sufficient funding and other resources to support projected facility maintenance requirements. Funding calculations for building maintenance should include the necessary levels of support for achieving LEED Silver certification for Existing Buildings.**

### **Policy 1.4.1**

Incorporate within building construction programs and funding requests projected life cycle maintenance expenses to be held in a maintenance endowment account.

### **Policy 1.4.2**

Establish a maintenance endowment account for existing buildings through an amount to be determined as part of the Facilities Maintenance Program.

## **Policy 1.4.3**

Based on the Facilities Maintenance Program analysis and application of the Texas Higher Education Coordinating Board Model, re-evaluate and revise maintenance cost formulas to reflect actual resources necessary to prevent building condition deterioration.

## **Objective 1.5**

**Provide campus buildings and facilities which are energy efficient.**

### **Policy 1.5.1**

#### **UNIVERSITY-WIDE**

Establish the following design criteria as part of the architectural design and siting criteria for all future buildings:

1. High efficiency lighting fixtures and control systems.
2. Minimum use of glass on west exposures and use of shading devices particularly on east and south facing windows.
3. Placement of landscaping to provide maximum solar protection and direct optimum cooling breezes.
4. Apply upgraded standards for building thermal insulation and high efficiency air conditioning systems.

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18.0

**COASTAL  
MANAGEMENT**

## 18.0 COASTAL MANAGEMENT ELEMENT

Few university campuses nationwide are located in the type of sub-tropical, coastal setting in which Biscayne Bay Campus of Florida International University is found. The coastal environment, however, offers many challenges to the Master Planning process. The challenges include determining how one may take advantage of the amenities offered by the coastal setting, while limiting the vulnerability of the campus to hurricanes, tropical storms and flooding, and at the same time protecting and enhancing important natural resources. [Figures 13.1, 13.2 and 13.3]

Legislative changes, however, require the State University System to assess existing facilities to identify the extent to which each campus has public shelter space adequate to house those students, faculty, and employees expected to seek public shelter prior to or during a disaster and those persons for which the campus has agreed with the local emergency management agency or other voluntary organization to provide shelter space. The State University System is also required to survey existing University facilities to determine those that are appropriately designed and located to serve as shelters. The goals, objectives and policies contained in this element are designed to establish the framework for meeting these

requirements.

Coordination with DERM is recommended for all aspects of this element. At the Biscayne Bay Campus this coordination is highly recommended, in particular to shoreline and coastal wetlands existing on site. A DERM Class II permit is necessary to construct any outfall that will discharge to any surface in Miami-Dade County and a DERM Class I permit is required for any work in, on, over or upon tidal waters or coastal wetland in Miami-Dade County.





**FIGURE 18.1 - BBC COASTAL MANAGEMENT PLAN**



## GOAL 1

**Manage FIU development activities to protect, conserve and maintain coastal and estuarine resources on the University property at Biscayne Bay Campus.**

## OBJECTIVES AND POLICIES

### Objective 1.1

**Implement and manage coastal and estuarine resource policies through the use of appropriate University faculty and staff.**

#### Policy 1.1.1

Utilize knowledgeable FIU experts to oversee the implementation of the coastal resource management policies defined in the Conservation and Coastal Management Elements of this Campus Master Plan. These individuals shall prepare any necessary additional policies, guidelines, procedures and implementation schedules within one year of the adoption of the Master Plan. The adopted Campus Master Plan shall be amended as necessary to incorporate those guidelines, procedures and implementation schedules. The FIU Office of Sustainability Faculty Senate Environment and Planning subcommittee shall provide a staff person

to serve as Environmental Coordinator to manage the activities. The Environmental Coordinator shall periodically review proposed University improvements and activities to ensure University compliance with the policies defined in the Conservation and Coastal Management Elements of this Master Plan. The Environmental Coordinator shall also periodically review host community, state and federal conservation and coastal management policies to ensure University compliance with these policies.

### Objective 1.2

**Protect and maintain coastal and estuarine resources on the University property.**

#### Policy 1.2.1

The University shall undertake a binding jurisdictional determination of those areas identified as potentially jurisdictional wetlands in the Inventory and Analysis Document. Determination of jurisdictional wetlands status should be done prior to the commencement of any clearing or building activities in these areas. FIU will endeavor to obtain and comply with all required local, state and federal permits prior to any work in wetlands or tidal waters, or prior to trimming or altering mangroves where feasible.

## **Policy 1.2.2**

Protect and enhance shallow-water communities and sea grass beds in the waters of Biscayne Bay fronting Biscayne Bay Campus by reducing the impacts of contaminated and nutrient rich stormwater runoff to these areas.

## **Policy 1.2.3**

The Environmental Coordinator shall evaluate any proposed changes to the siting of buildings or other University improvements to determine whether such changes are in compliance with regulations governing jurisdictional wetlands. The adopted Master Plan shall be amended as necessary to incorporate the findings and recommendations of the Environmental Coordinator. Piers and docks for recreation and research boats and vessels that require water access may be developed in accordance with local guidelines. FIU shall not site or plan any non-water dependent fixed or floating structures in coastal wetlands or tidal waters, such facilities will be located on upland areas.

## **Policy 1.2.4**

Monitor the water quality of the lakes, canals and mangrove areas on each campus on a quarterly basis. Should the water quality of the water in the water bodies fall below the standards set by the State of Florida Department of Environmental Protection,

the Miami-Dade County Department of Environmental Resources Management, the South Florida Water Management District, and the U.S. Environmental Protection Agency, an assessment of probable causes of pollution shall be performed and a plan developed and implemented to eliminate the point and non-point sources of pollution.

## **Policy 1.2.5**

Perform engineering and design analyses prior to construction of facilities that border the coastal and estuarine habitats to ensure that facilities will not contribute polluted run-off into those habitats.

## **Policy 1.2.6**

Designate and post the mangrove-lined canals in the northern and southern portions of campus as restricted-access or no-access areas. FIU will avoid and minimize trimming or alteration of any mangroves and obtain required local, state and federal permits prior to trimming or altering mangroves where feasible.

## **Policy 1.2.7**

Future development activity, except for pathways, landscape improvements and water-access-dependent facilities shall occur no closer than 100 feet from any Biscayne Bay shoreline.

## **Policy 1.2.8**

Do not engage in water management practices that result in significant or permanent draw-down of the water table.

## **Policy 1.2.9**

Design buildings, roadways and paths to facilitate and support proper drainage of water to estuarine and coastal habitats. Use culverts under crossroads to maintain drainage into estuarine and coastal habitats.

## **Policy 1.2.10**

Where feasible, comply with recommendations in the state-approved Miami-Dade County Protection Plan regarding mangroves.

## **Objective 1.3**

**Protect beaches, beach strand and dune systems and restore them from the impacts of development.**

## **Policy 1.3.1**

Ensure that the placement of buildings and infrastructure does not encroach on shoreline areas, beach strand or mangrove restoration areas. No future buildings or infrastructure should be located within 100 feet of shoreline areas or beach strand vegetation.

## **Policy 1.3.2**

Post signs instructing beach visitors not to remove or destroy the beach strand or other native vegetation.

## **Policy 1.3.3**

Establish designated areas for boat docking, and prohibit such use from the areas with beach strand vegetation.

## **Policy 1.3.4**

Encourage managed access to the shoreline that is compatible with protection of wetland and aquatic vegetation and sensitive marine resources.

## **Policy 1.3.5**

Ensure that new construction and operation on campus facilities does not alter the hydrologic regime needed to maintain beaches, beach strand or dunes.

## **Policy 1.3.6**

As an element of landscape and pedestrian access improvements to open spaces along the Biscayne Bay shoreline, protect and enhance existing native beach strand vegetation. Use native beach strand vegetation in enhancement plantings in these areas.strand or dunes.

## **Policy 1.3.7**

Monitor existing shoreline stability. Take the appropriate steps to accomplish needed stabilization. Use native vegetation to stabilize beaches and dunes.

## **Policy 1.3.8**

Protect the shoreline stabilization project carried out by Miami-Dade County Department of Environmental Resources Management (DERM) in 1989-1991.

## **Objective 1.4**

**Limit specific and cumulative impacts of development on natural resources.**

### **Policy 1.4.1**

In order to protect native vegetative communities, provide a development buffer of at least 25 feet between native vegetative and any future construction projects, including, but not limited to, the siting of buildings, roadways, pathways and recreation facilities. Use visible barriers during construction or maintenance operations to delineate the boundaries of native plant communities and wetlands, where feasible.

### **Policy 1.4.2**

Maintain a 25-foot minimum buffer zone between future buildings, ancillary facilities and infrastructure and those areas determined to be jurisdictional wetlands (including, but not limited to, mangrove areas).

### **Policy 1.4.3**

Monitor the surface water hydrology of on-campus areas determined to be jurisdictional wetlands on a seasonal basis. Use resultant hydrologic data to produce a plan to maintain or improve surface water flow into and out of jurisdictional wetlands. Design structures, including roadways and walkways, to maintain the surface water flow to wetland areas. Use visible barriers during construction and maintenance operations to delineate the boundaries of native plant communities and wetlands.

### **Objective 1.5**

**Restore and enhance the coastal natural resources on Biscayne Bay Campus property.**

### **Policy 1.5.1**

Remove invasive exotic plant species from natural vegetation associations. Give priority to removing exotic species from those native vegetation associations indicated in Element 13.3. Focus efforts on the removal of Brazilian pepper (*Schinus terebinthifolius*), melaleuca (*Melaleuca quinquenervia*) and Australian pine (*Casuarina equisetifolia*). Remove exotic species in a manner that minimizes impacts to native vegetation associations. Replant areas where exotic plants have been removed with appropriate native plant species. Removal of exotic species from natural vegetation associations shall be carried out quarterly during the first year and yearly thereafter,

unless monitoring activities indicate that more frequent removal is warranted. Refer to Element 13.0, Conservation, for additional guidelines for the treatment of natural resources. Encourage removal of invasive species in mangrove areas near campus that are controlled by North Miami and Oleta State Park to reduce the re-infestation potential on campus.

### **Objective 1.6**

**Maintain and enhance water quality in estuarine and aquatic areas on Biscayne Bay Campus. Also see 13.0 Conservation Element policies limiting the impacts of campus operational and maintenance activities on the natural environment.**

### **Policy 1.6.1**

Review existing and proposed development activities for compliance with the surface water policies of the South Florida Water Management District. Limit negative impacts of campus activities on soils, wetlands, hydrology and hydroperiod.

### **Policy 1.6.2**

Test storm water runoff for compliance with standards set by the State of Florida Department of Environmental Protection, the Miami-Dade County Department of Environmental Resources Management, the South Florida Water Management District, and the U.S. Environmental Protection

Agency. Failure to meet relevant standards for stormwater runoff shall result in an assessment of probable causes and the production and implementation of a plan to improve the quality of runoff.

### **Policy 1.6.3**

Inventory herbicide, pesticide and fertilizer use and evaluate their impacts on campus water quality. Modify or reduce herbicide, pesticide and fertilizer usage to minimize or eliminate negative impacts on water quality.

### **Objective 1.7**

**Maintain Consistencies with Host Communities' Coastal Policies:**

**The University's development activities and environmental protection and enhancement policies shall be consistent with the policies of the City of North Miami and Miami-Dade County and with all applicable regional, state and federal policies regarding development in the coastal zone.**

### **Policy 1.7.1**

On a regular basis, review the host communities' natural resources management plans. If necessary, amend the Campus Master Plan to be consistent.

## **Policy 1.7.2**

On a regular basis, review all applicable rules, regulations and policies governing coastal zone development in the host communities during the planning and development of protection, conservation, restoration, enhancement and management activities. Confirm compliance with the host communities' rules, regulations and policies governing coastal zone development.

## **Policy 1.7.3**

All applicable rules, regulations and policies governing coastal zone development in the host communities shall be adhered to in University development activities.

## **Policy 1.7.4**

Plant and animal species and habitats protected by the host communities or regional, state or federal agencies shall be protected on Biscayne Bay Campus (see policies in the 13.0 Conservation Element of this Master Plan).

## **Policy 1.7.5**

Enhancement and restoration activities of coastal resources shall, at a minimum, be consistent with those activities found in the host communities.

## **Objective 1.8**

**Enhance pedestrian and visual access to beach and shoreline areas for FIU students, faculty and staff.**

## **Policy 1.8.1**

Improve pedestrian connections along the Biscayne Bay shoreline. Construct a continuous waterfront bike path and pedestrian promenade. Preserve and enhance the bayfront edge as open space. Locate the waterfront pedestrian promenade primarily on upland. Avoid and minimize impacts to coastal wetlands, tidal waters and mangroves.

## **GOAL 2**

**Provide adequate hurricane evacuation procedures and facilities for both Modesto A. Maidique Campus and Biscayne Bay Campus.**

## **OBJECTIVES AND POLICIES**

### **Objective 2.1**

#### **Hurricane Evacuation:**

**Coordinate with Miami-Dade County, the NOAA National Hurricane Center and regional emergency management authorities to ensure that adequate hurricane evacuation times for residents of Biscayne Bay Campus are maintained or reduced.**



## **Policy 2.1.1**

Order the evacuation of students and other residents of Biscayne Bay Campus upon issuance of a Category 1 or greater hurricane warning, or 24 hours prior to potential landfall whichever is greater. Provide transit vehicles as necessary to ensure that all residents are safely evacuated to Modesto A. Maidique Campus no less than 12 hours prior to expected landfall.

## **Policy 2.1.2**

Relocate residential students who cannot go home at BBC + MMC campuses to on-campus shelters upon issuance of a Category 2 or greater hurricane warning. Provide transit vehicles as necessary to ensure that all residents are safely relocated to on-campus shelters no less than 12-18 hours prior to projected landfall.

## **Objective 2.2**

### **Hurricane Shelter Space:**

**Maintain Special Needs shelter requirements as necessary to maintain agreement with Monroe County and accommodate all students, faculty and staff needing evacuation. No public sheltering to be expanded.**

## **Policy 2.2.1**

Continue to follow construction standards for the construction of University facilities to serve as hurricane shelters.

## **Policy 2.2.2**

Should emergency helicopter landing be needed at Biscayne Bay Campus, existing surface parking lots shall be utilized.

## **Policy 2.2.3**

In conjunction with its host communities, FIU will continue to update a post-disaster plan to recover from the disruption of University activities.

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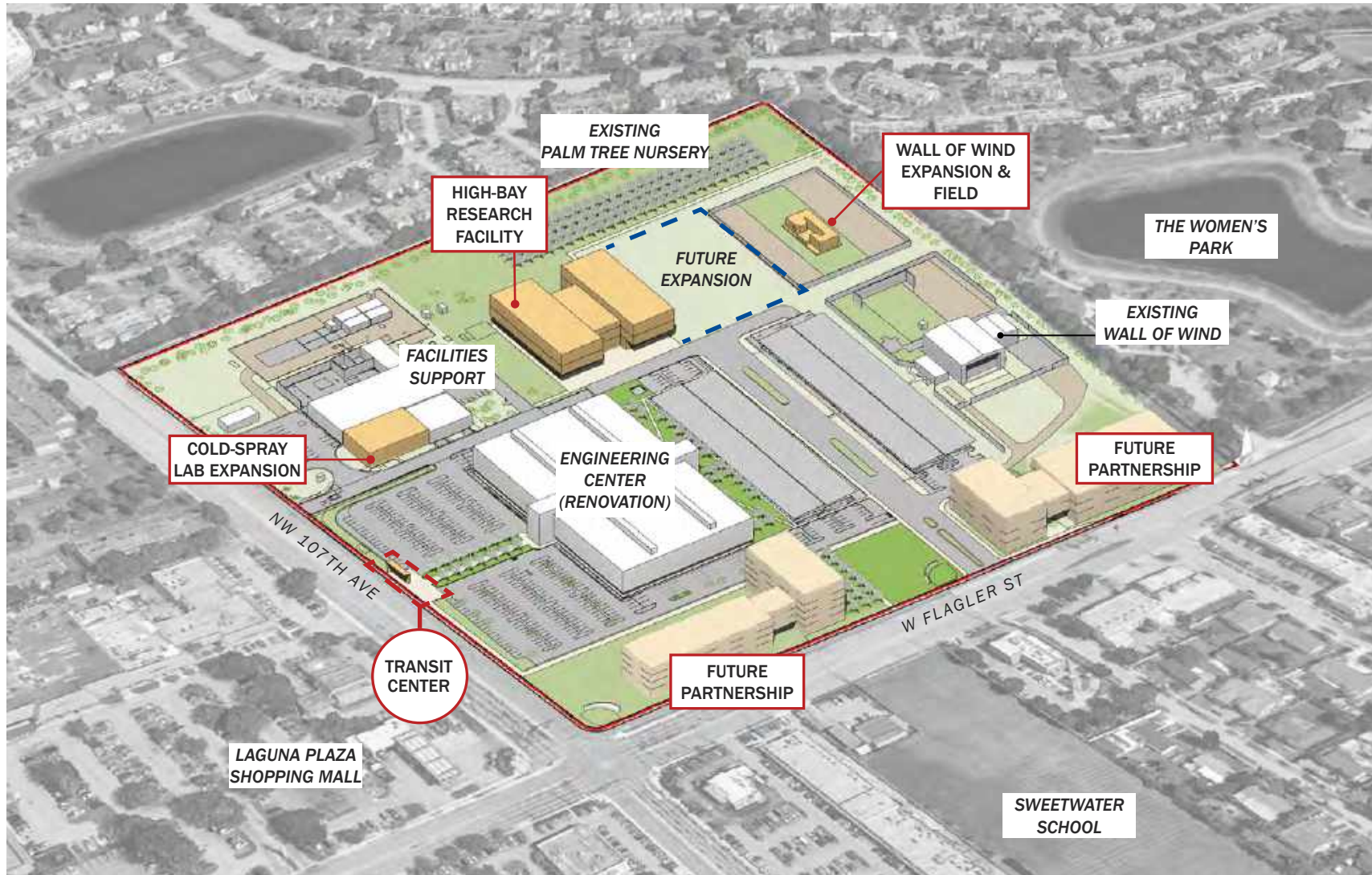
## APPENDIX

# 2015-2030 DRAFT CAMPUS MASTER PLAN UPDATE

SEPTEMBER 2023





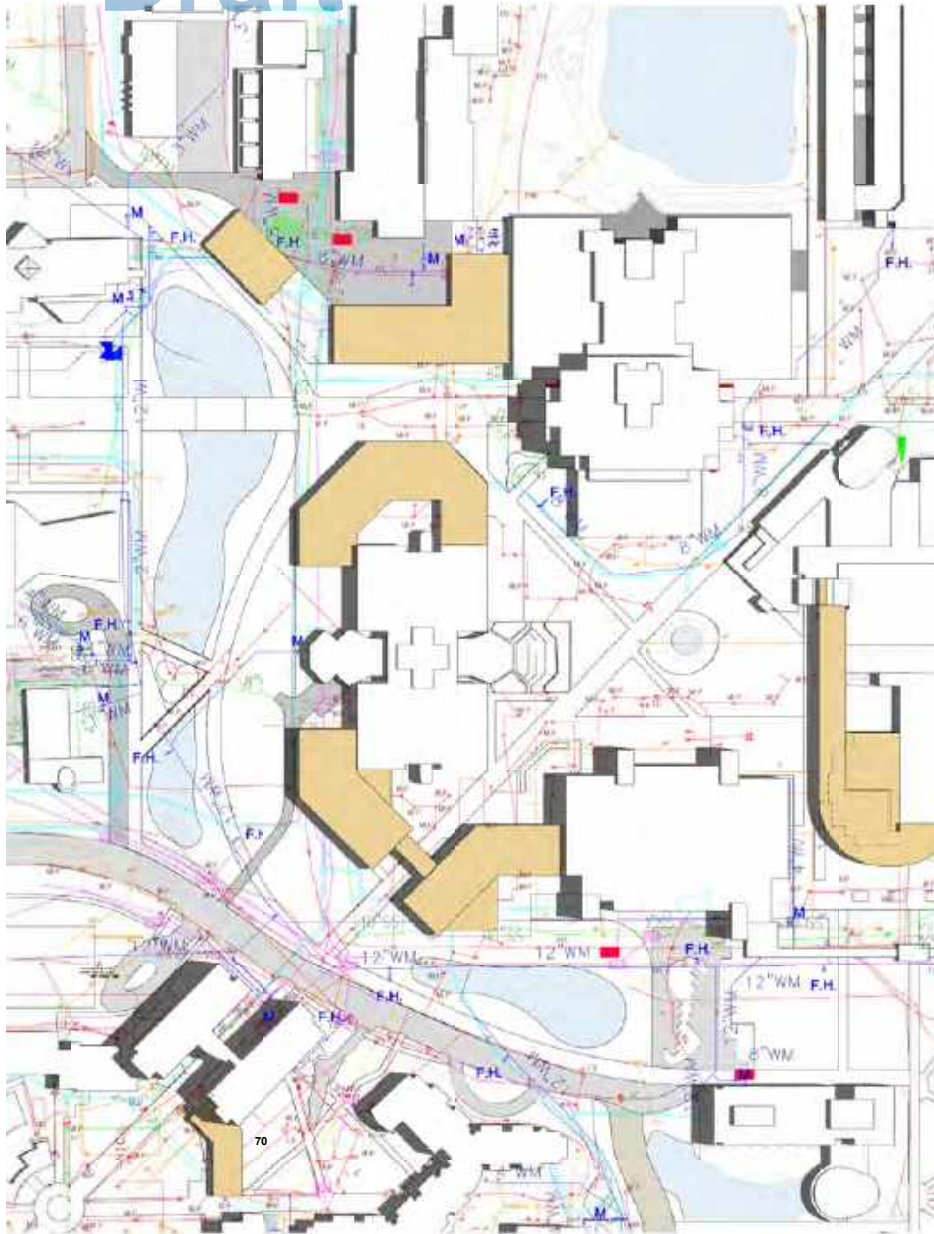


**FIGURE 0.2b** - EC 3D DIAGRAM - 2030 PLAN

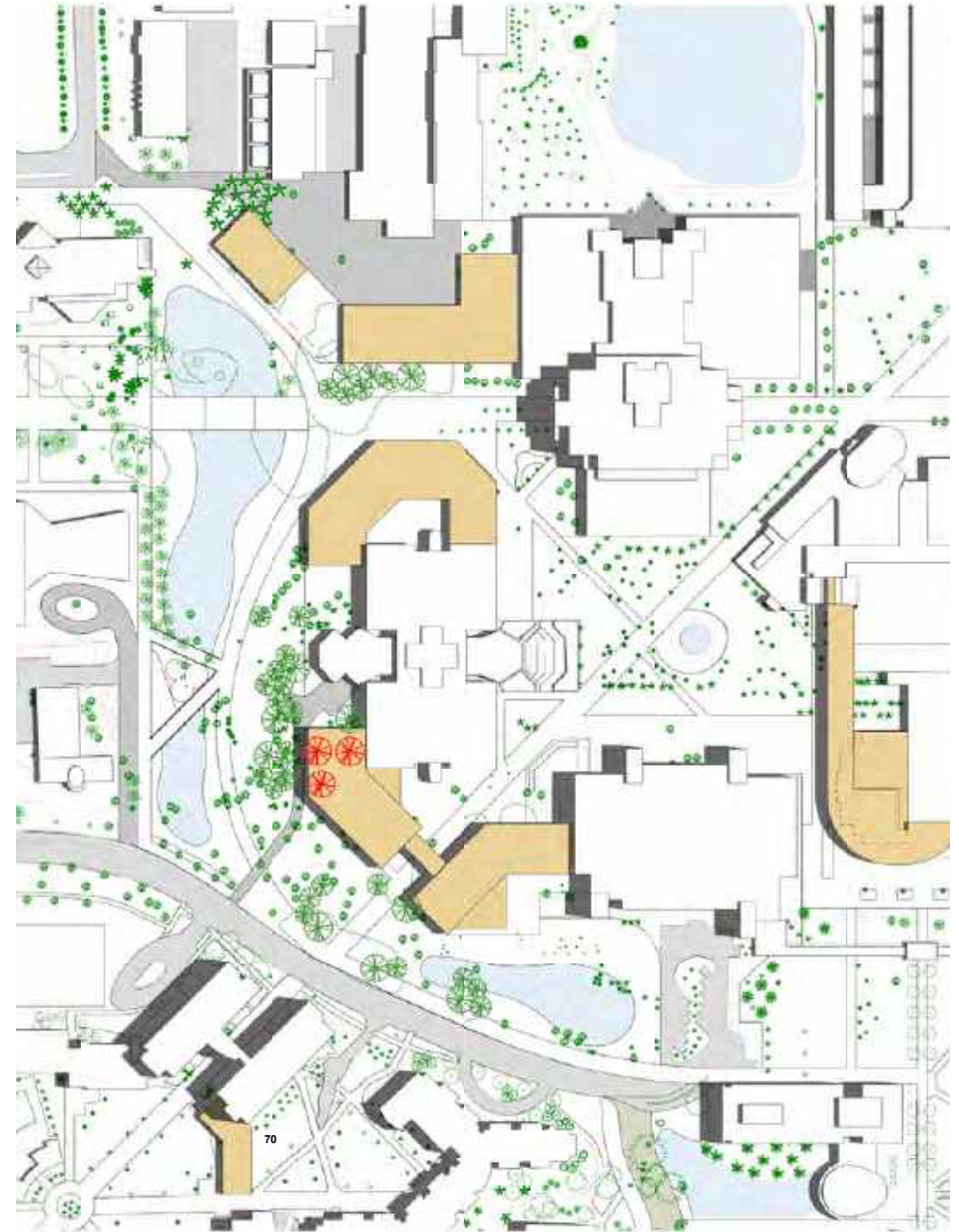




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**PRECINCT 1 - UTILITIES OVERLAY DIAGRAM**



**PRECINCT 1 - TREE CANOPY OVERLAY  
DIAGRAM**

*Diagrams above are representational only -  
the latest site survey should be referenced for further planning.*





PRECINCT 3 - EXISTING VIEW



INITIAL STUDY - HOUSING NORTH OF SW 11TH ST



PROGRESS STUDY - HOUSING SOUTH OF SW 11TH ST, 1,000 BEDS  
HOUSING OVER PARKING STRUCTURE



ALTERNATE STUDY - HOUSING SOUTH OF SW 11TH ST, 2,000 BEDS  
ADDITIONAL RECREATION AND OUTDOOR AMENITIES

Throughout the planning process, East Campus Housing (future University Apartments replacement with additional capacity to meet growth) has been studied and refined in response to feedback from Focus Groups with Housing and Residential Life.

## MMC 2030 PLAN EAST CAMPUS HOUSING ALTERNATE STUDIES



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**MMC DETAILED  
PRECINCT PLANS**

# Draft

## 3.0 URBAN DESIGN

### MMC **PRECINCT 1**

#### DESCRIPTION

Precinct 1 is roughly bounded by SW 14th Street along the south, academic buildings to the west, the Central Utility Plant to the north and the Graham University Center at the east. Situated in the heart of campus, Precinct 1 contains MMC's original buildings and courtyard and is the historic core of campus.

A plaza to commemorate the Groundbreaking site is currently under construction along the pedestrian path that crosses between Lakes #10 and 11. An existing plaque describing the founders and groundbreaking is located nearby outside the Duplicating Center building. The Alexa M. Duran memorial, dedicated in 2022, provides a shaded plaza space at the west end of Greene Library.

In contrast to the linear organization of buildings and formal outdoor space in later development, Precinct 1 is informal and picturesque in character with large heritage trees near Green Library and Deuxieme Maison and meandering paths around Lakes #10 and #11. As the second tallest building on campus at 9 floors, Green Library is a visible landmark from various views around campus.

The Kissing Bridge, crossing Lake #11 in the east-west direction, is a landmark on campus notable as a location to spot painted box turtles.

As a natural open space with small scale spaces for respite, Precinct 1 remains an important asset to the campus' open space framework and its informal character an important quality to retain in future development.



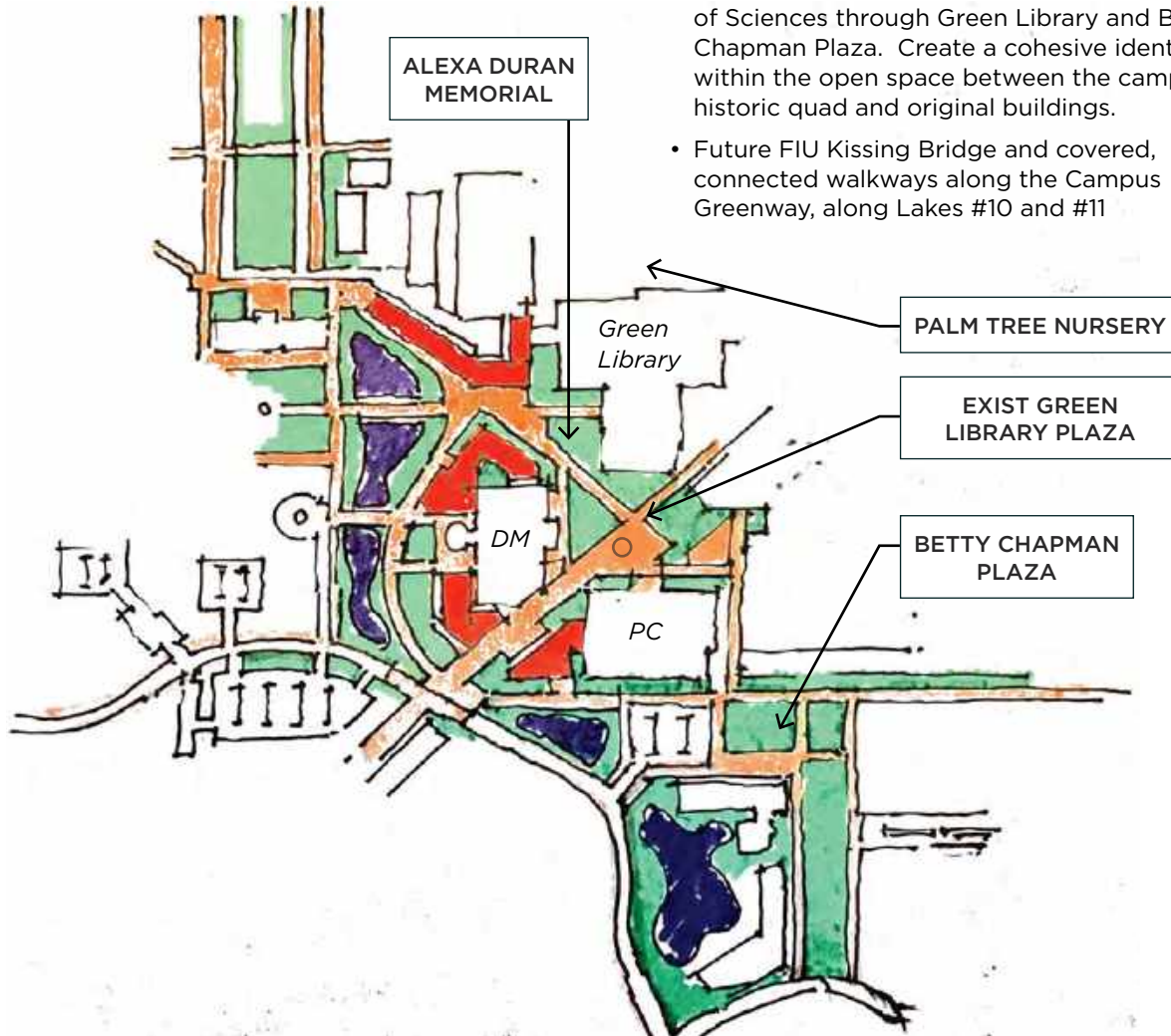
*FIU Groundbreaking Ceremony, 1971*



*Kissing Bridge at Lake #11, looking southwest towards SIPA*

## OPPORTUNITIES

- Reconfigure service yard to Central Utilities Plant and Green Library loading dock
- Design a linear pedestrian path at the Avenue of Sciences through Green Library and Betty Chapman Plaza. Create a cohesive identity within the open space between the campus's historic quad and original buildings.
- Future FIU Kissing Bridge and covered, connected walkways along the Campus Greenway, along Lakes #10 and #11



*Precinct 1 - Initial concept sketch*

## CHALLENGES

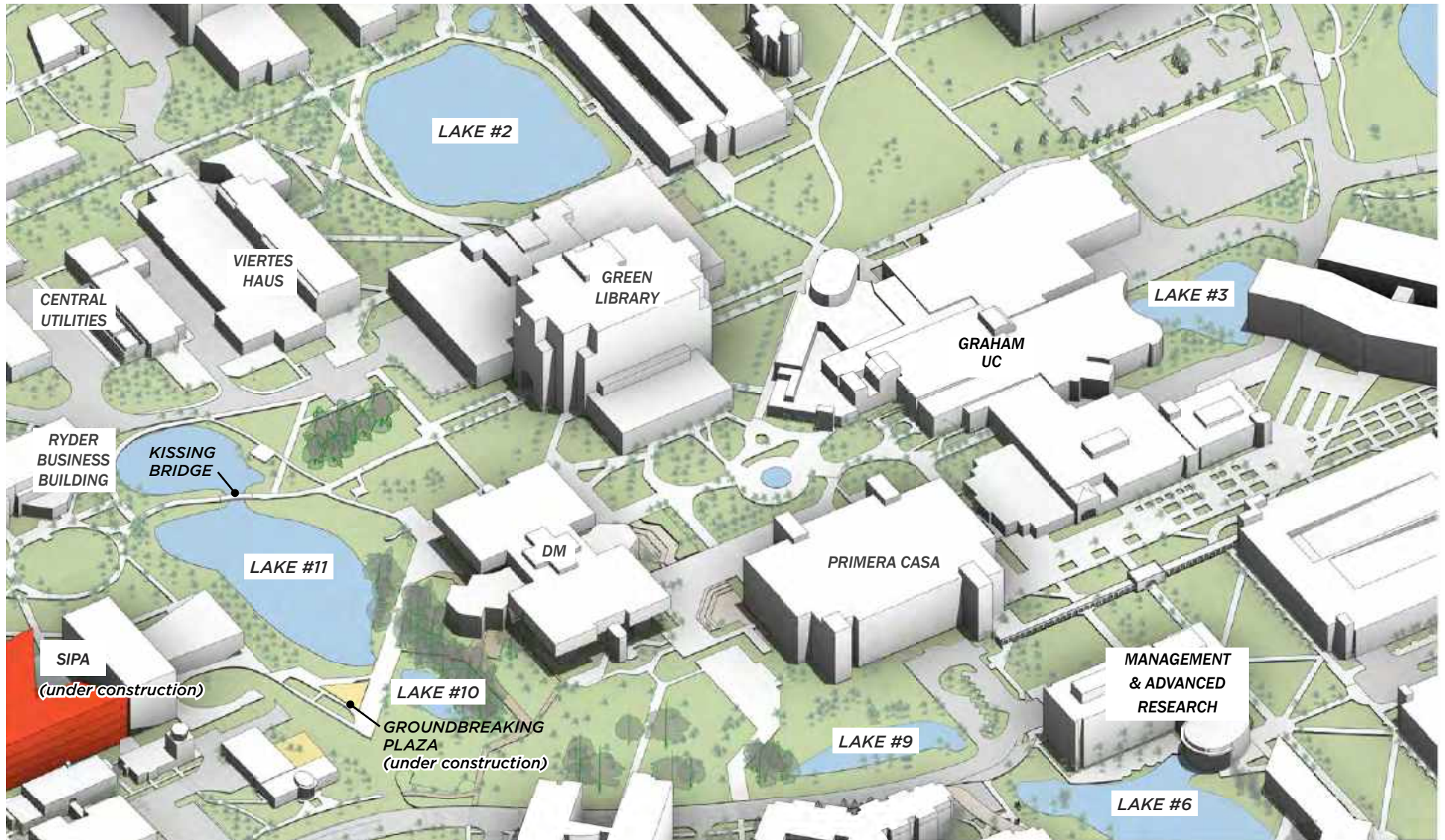
- Minimizing disruption to existing utilities
- Protecting existing mature specimen trees to maintain arboretum quality within the heart of campus

## PLANNING CONCEPT

The proposed pedestrian network creates enhanced, connected waterways and a serpentine pedestrian parkway that enhances the Avenues of Professions and Sciences, enhancing the connectivity in the east-west direction as well as between the historic core and the Health Sciences Complex and Future Engineering Quad.

An enhanced Kissing Bridge, pavilion and seating area between Lake #11 and Deuxieme Maison will be named "Founder's Park" commemorating the first buildings of FIU and celebrates the campus history and heritage.

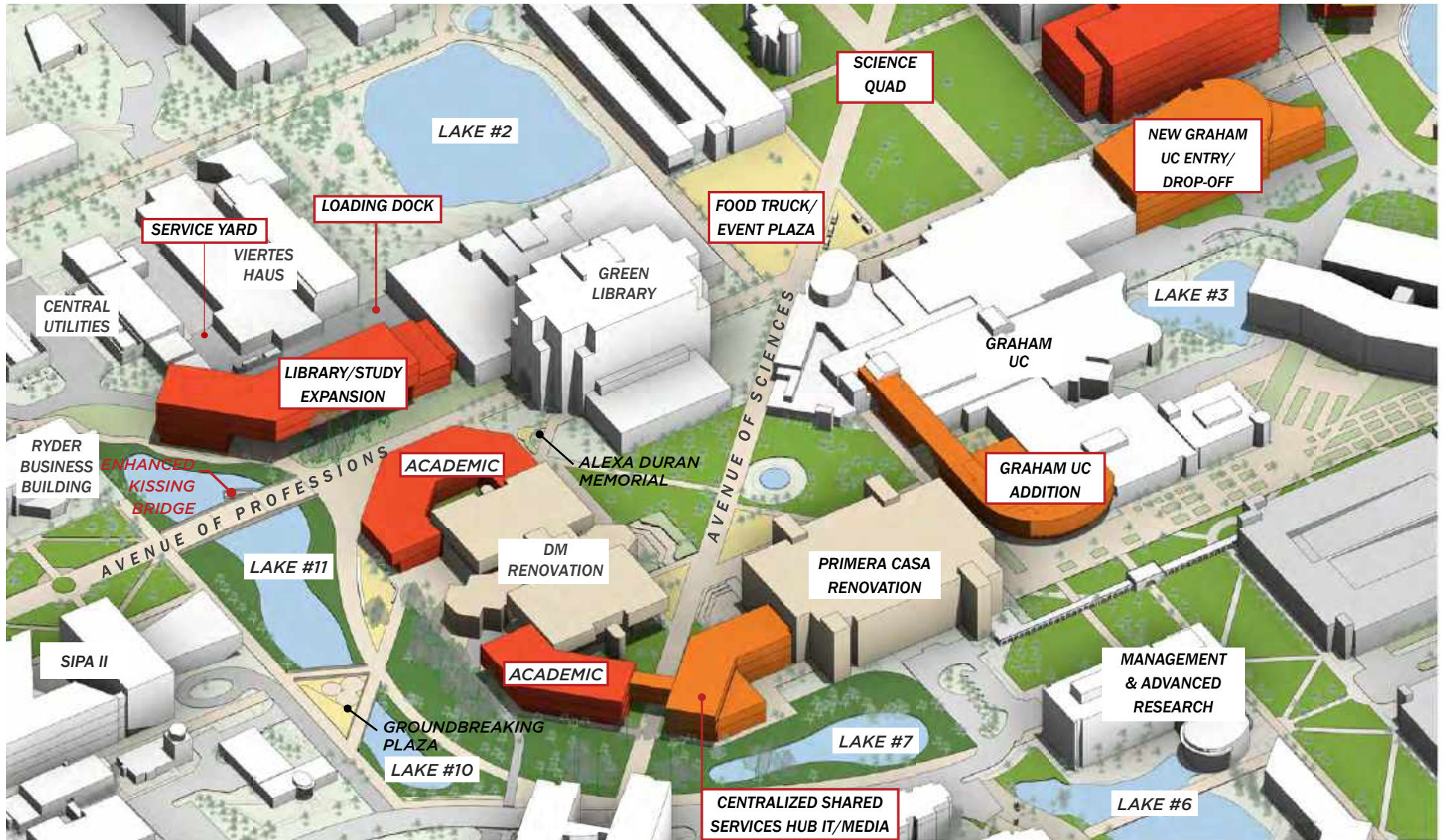




## MMC PRECINCT 1 - EXISTING







**FIGURE 3.1b** - MMC 2030 PLAN: PRECINCT 1 – CAMPUS CORE



## DESCRIPTION

Precinct 2 has been identified as the southeast corner of campus, between the Miami-Dade County Fair Exp to the south, 107th Ave along the east, the Lakeview Housing complex to the west and the Avenue of Professions along the north edge.

An existing campus entry at SW 16th St is a prominent gateway entry into the southwest part of campus. The Student Academic Success Center (SASC) is a primary focal point at this entry, and its view and axial relationship to the East Gateway entry should be maintained. The central axis through SASC will be extended to SW 16th St with the construction of a bus drop-off area at Lot #3.

With parking lots #3 and #4, Precinct 2 is one of the last remaining large landbanks available for development at MMC.

The Wertheim Performing Arts Center is a facility shared between FIU and the Dade County Youth Fair. It creates a terminus to the Avenue of the Arts on the south side of Precinct 2 and pedestrian connectivity should be maintained and enhanced with future expansion of the Frost Museum and future student housing.

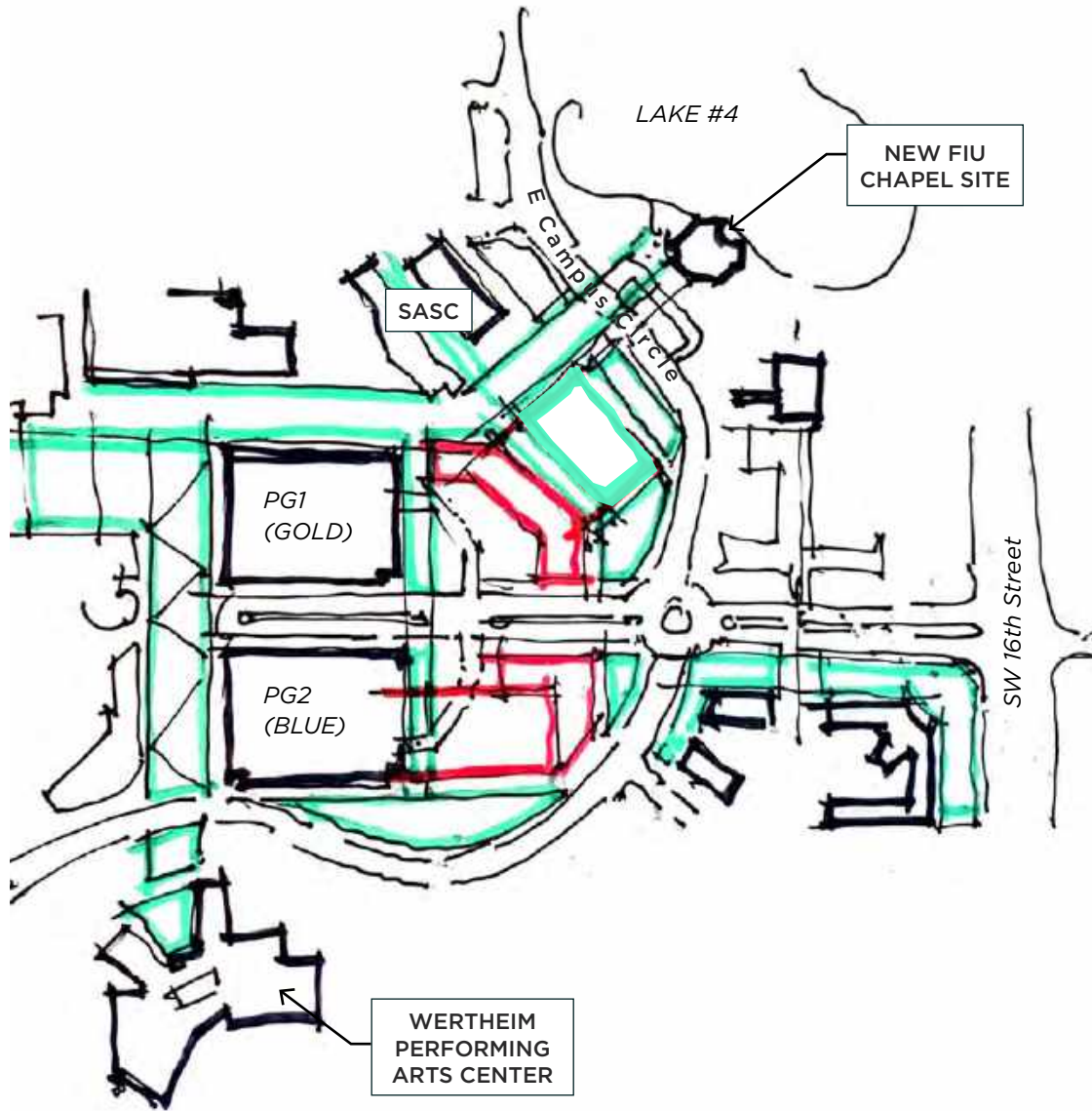


*Trish and Dan Bell Chapel Rendering, courtesy of Gurrimatute/FIU*



*FIU Student Academic Success Center (SASC), southeast view*





*Precinct 2 - Initial concept sketch*

## OPPORTUNITIES

- Enhance the front door experience for new students and families or visitors along E Campus Circle with the realignment of the roadway and construction of the new chapel on Lake #4.

## CHALLENGES

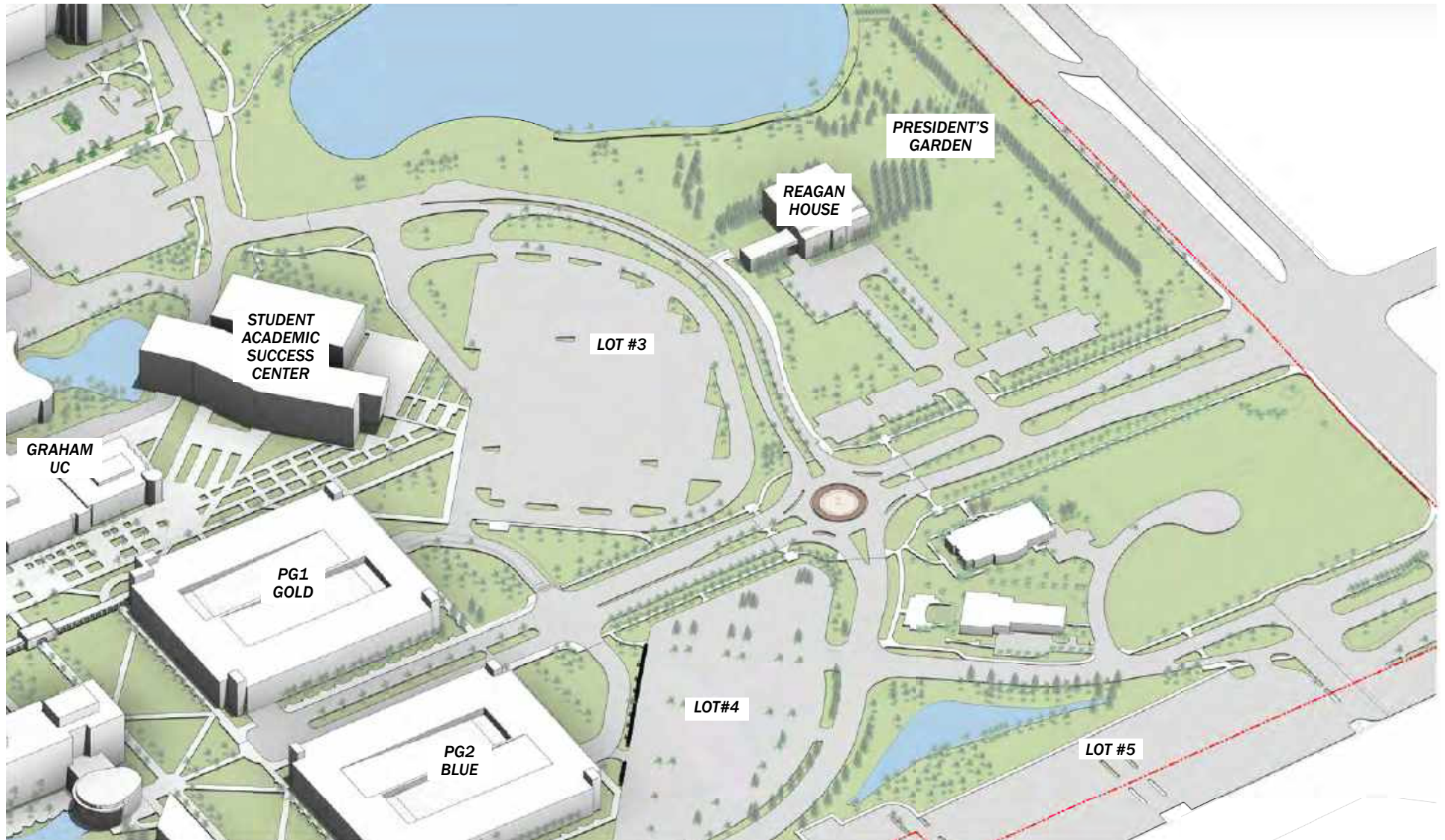
- Perceived distance to existing academic core for expanded academic programs
- Fire separation between existing parking garage and future expansion

## PLANNING CONCEPT

In addition to the SASC and new bus transit stop, the new FIU Chapel will create a focal point and additional drop-off area along E Campus Circle. Construction of the new chapel will include a project to realign the street and modify the shoreline of Lake #4.

Maintaining views of the new chapel is a primary organizing element of Precinct 3 to the north.

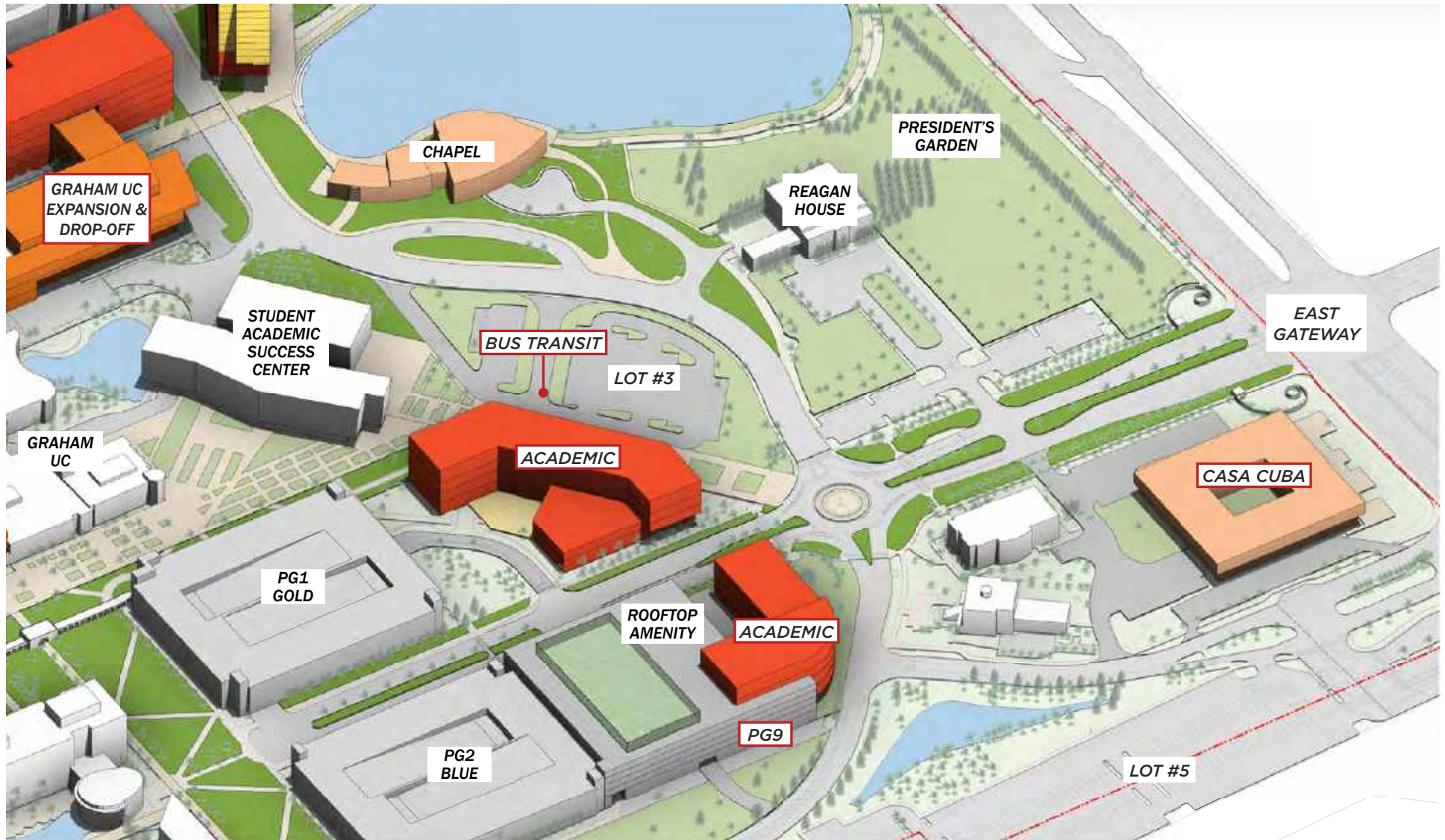
The southwest parcel of Precinct 2 is planned for the construction of CasaCuba, adjacent to existing Greek Life houses and is currently under design.



## MMC PRECINCT 2 - EXISTING







**FIGURE 3.1c** - MMC 2030 PLAN: PRECINCT 2 - EAST GATEWAY





*Engineering Phase 1 looking southwest. Image courtesy of Perkins+Will*

## DESCRIPTION

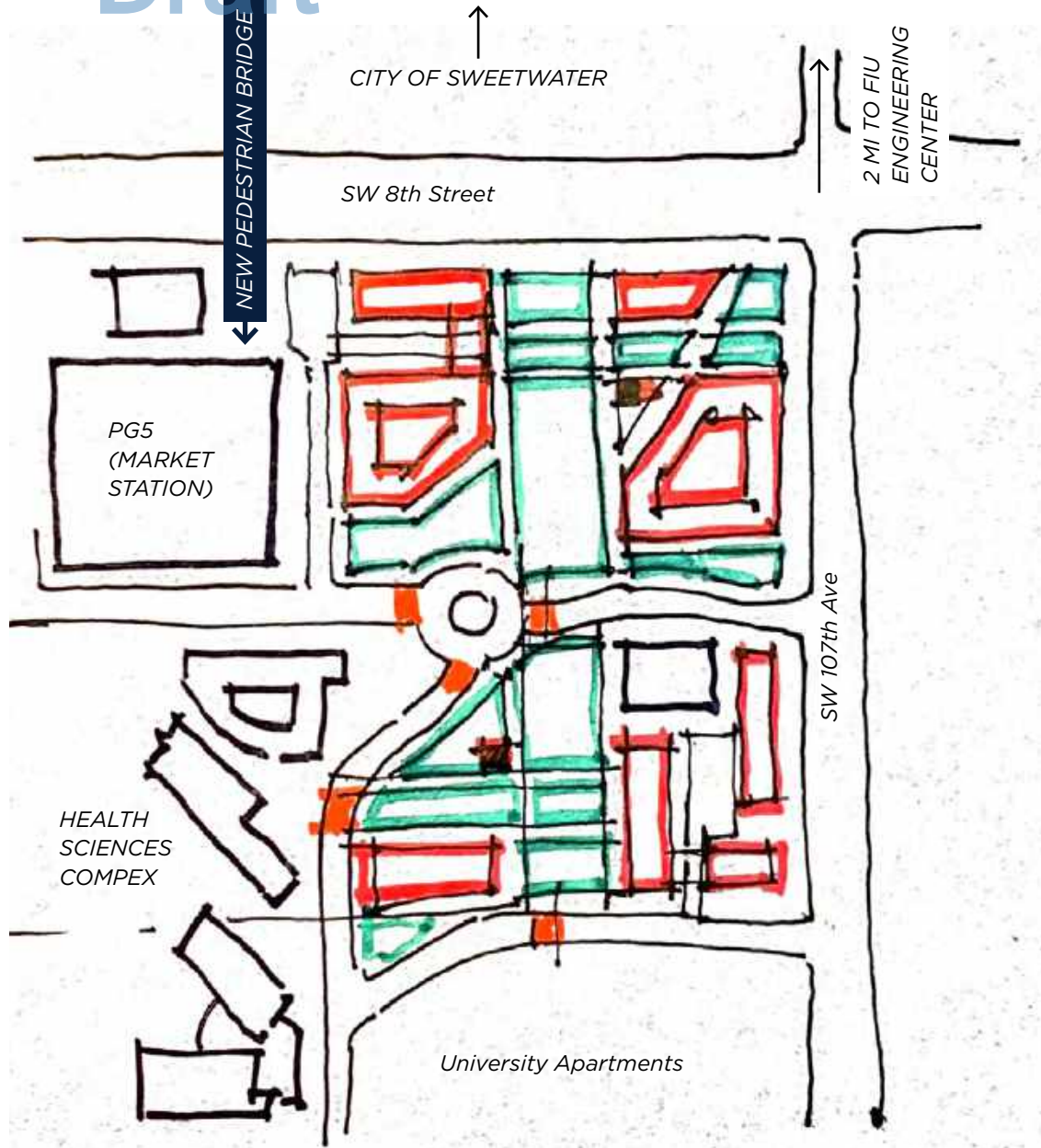
Precinct 3 is situated at the northeast corner of campus at SW 8th and SW 16th Streets, and includes the Academic Health Center Complex south of University Drive and west of E Campus Circle, and the University Apartments along SW 107th Ave with surface parking and garages north of University Dr.

In fall of 2022, the College of Engineering and Computing broke ground on a 120,921 GSF building, the first of four planned phases for an expanded STEM and AHC complex in Precinct 3.

Located at the terminus of the Avenue of Professions, Phase 1 of the expanded STEM Complex features a pedestrian portal into campus and will increase MMC's identity and prominence at the intersection of SW 8th and SW 16th Streets.



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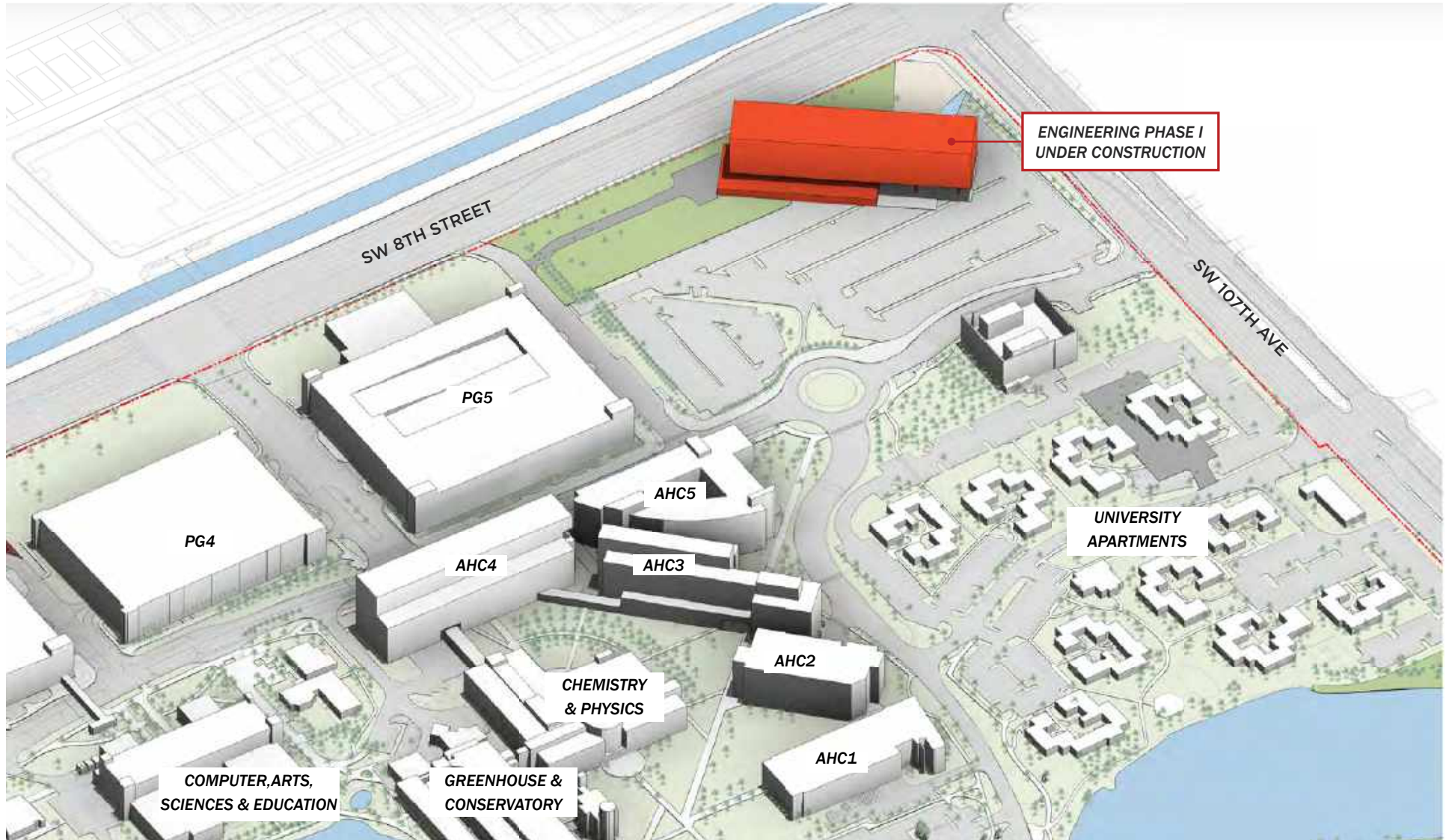
## OPPORTUNITIES

- New residential village at Science and Research Complex
- New FIU identity and presence at SW 8th and SW 107th
- Addition of mid-rise and high-rise development in the future construction to brand and compete with the Sweetwater development north of SW 8th Street
- Flexible multi-purpose building sites for logical development of partnerships
- Terminus for Avenue of Professions as well as north-side lake development to connect with the Chapel lakeside improvements
- Extending and connecting with Avenue of the Sciences

## CHALLENGES

- Residential parking needs compete with demand for parking at adjacent academic complex.

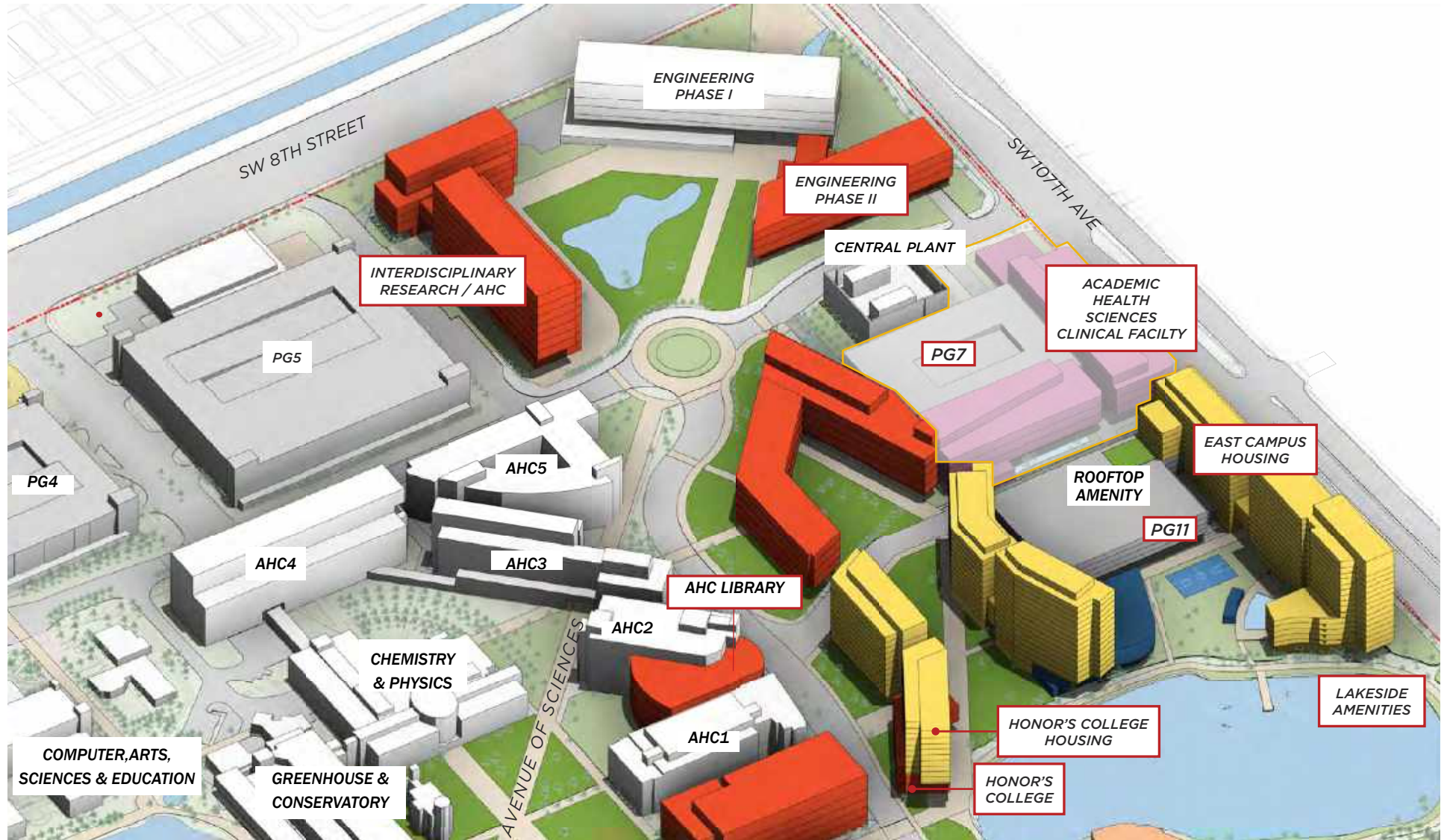
*Precinct 3 - Initial concept sketch - prior to current design of Engineering Phase 2*



## MMC PRECINCT 3 - EXISTING







**FIGURE 3.1d** - MMC (2030) PLAN: PRECINCT 3 - SCIENCE & ENGINEERING COMPLEX



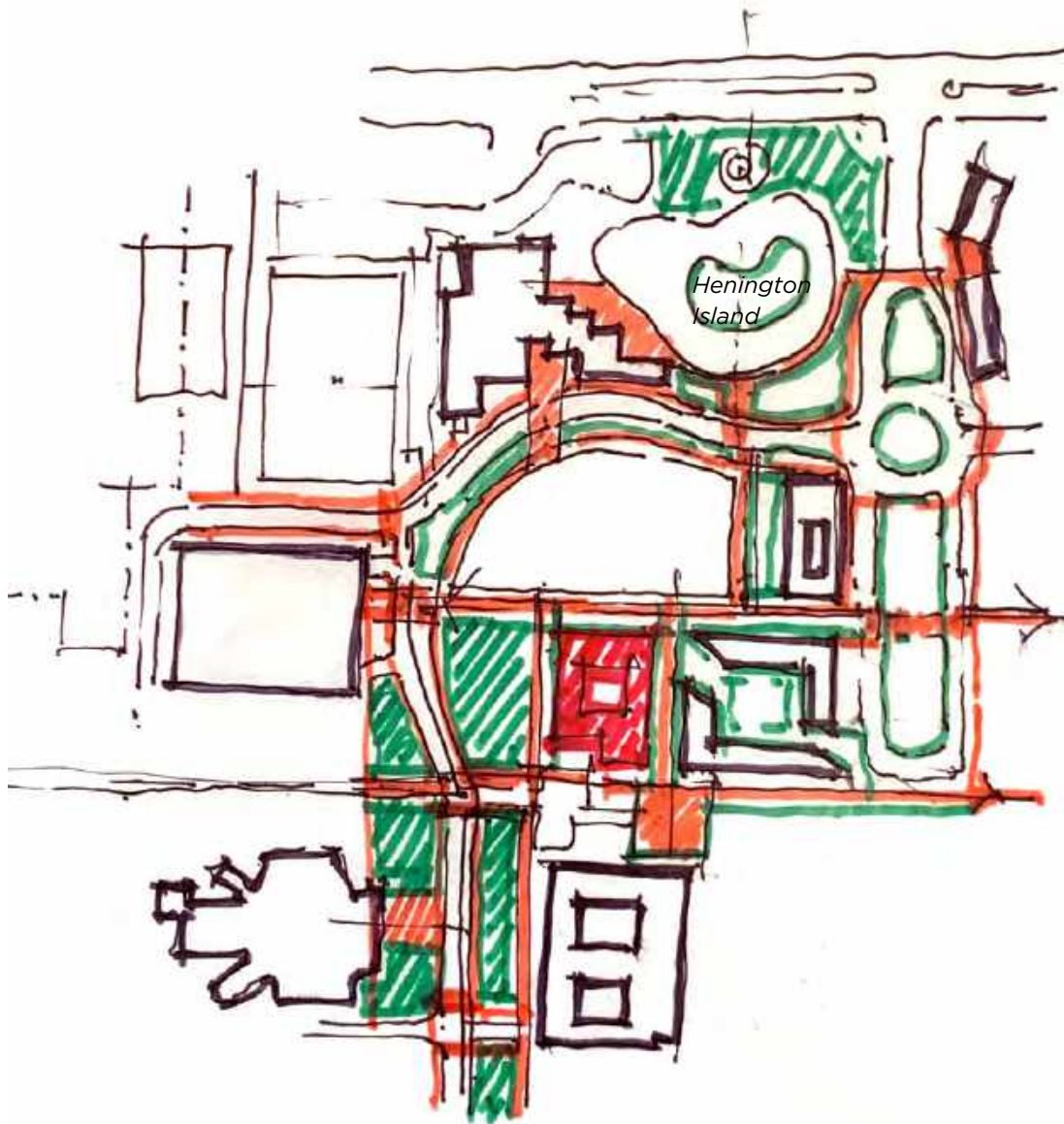


*FIU Gate*

## DESCRIPTION

Precinct 4 is located at the primary entry into MMC, with the FIU Gate at SW 8th St, roundabout, and entry drive and lawn. As an area of campus that primarily serves vehicular circulation, missing pedestrian connections and links make pedestrian circulation challenging for accessing sports and recreation fields or future development adjacent to Henington Island.

With a unique mix of interdisciplinary professions, Precinct 4 also remains one of the last remaining large development opportunities for expanding academic facilities or athletics/recreation space.



*Precinct 4 - Initial concept sketch*

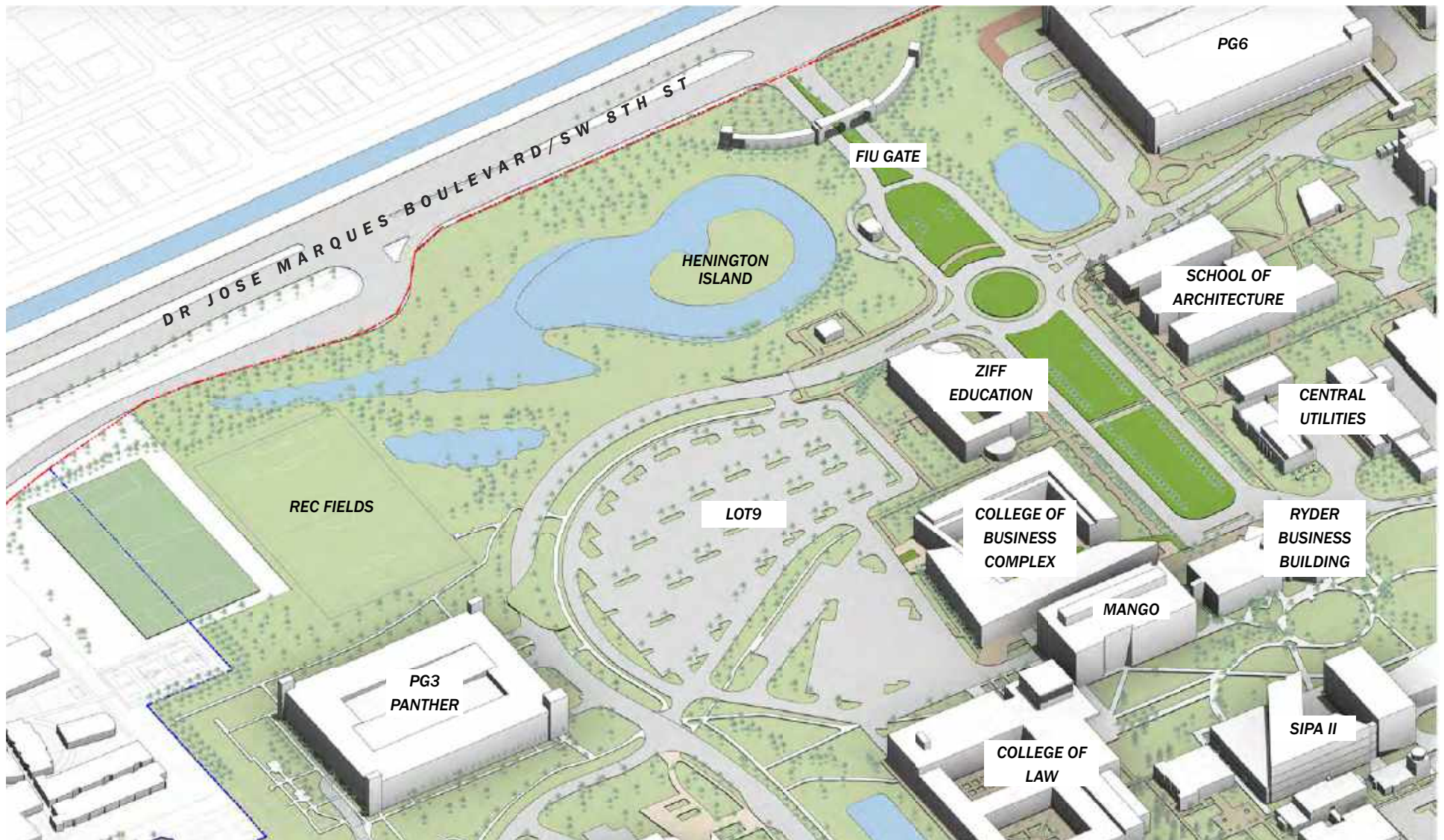
## OPPORTUNITIES

- Extend and strengthen east-west pedestrian connections including the Avenue of Students
- Visibiltiy and identity for future academic program space near FIU Gate and bus transit center
- Opportunity to more highly utilize perimeter parking garages

## CHALLENGES

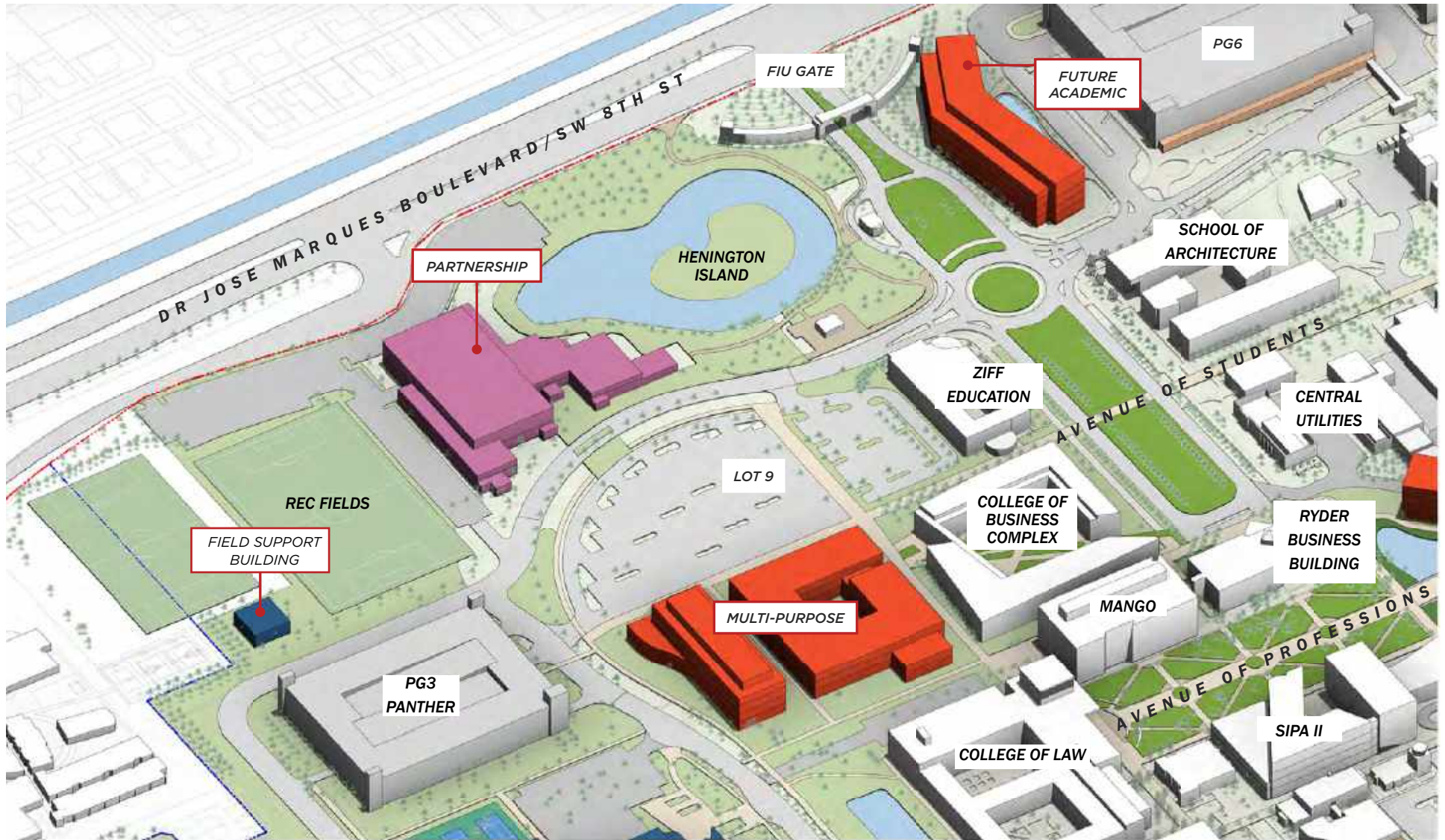
- Reduced parking capacity at Lot #9
- Limited infill sites increases the need for mid and high rise development
- Create safe pedestrian links from perimeter parking garages to enable multi-modal circulation





## MMC PRECINCT 4 - EXISTING

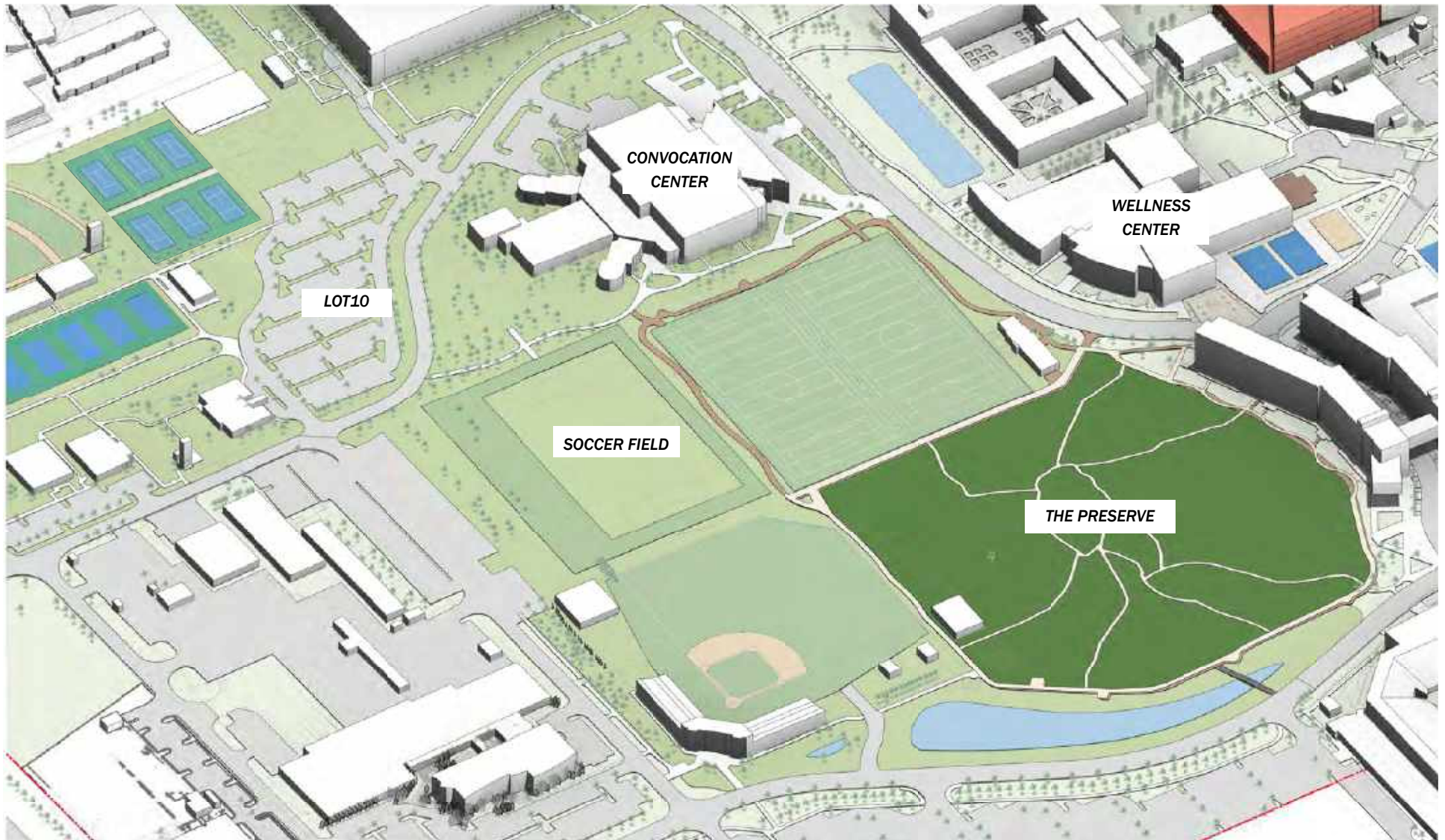




**FIGURE 3.1e** - MMC 2030 PLAN - PRECINCT 4 - NORTH GATEWAY

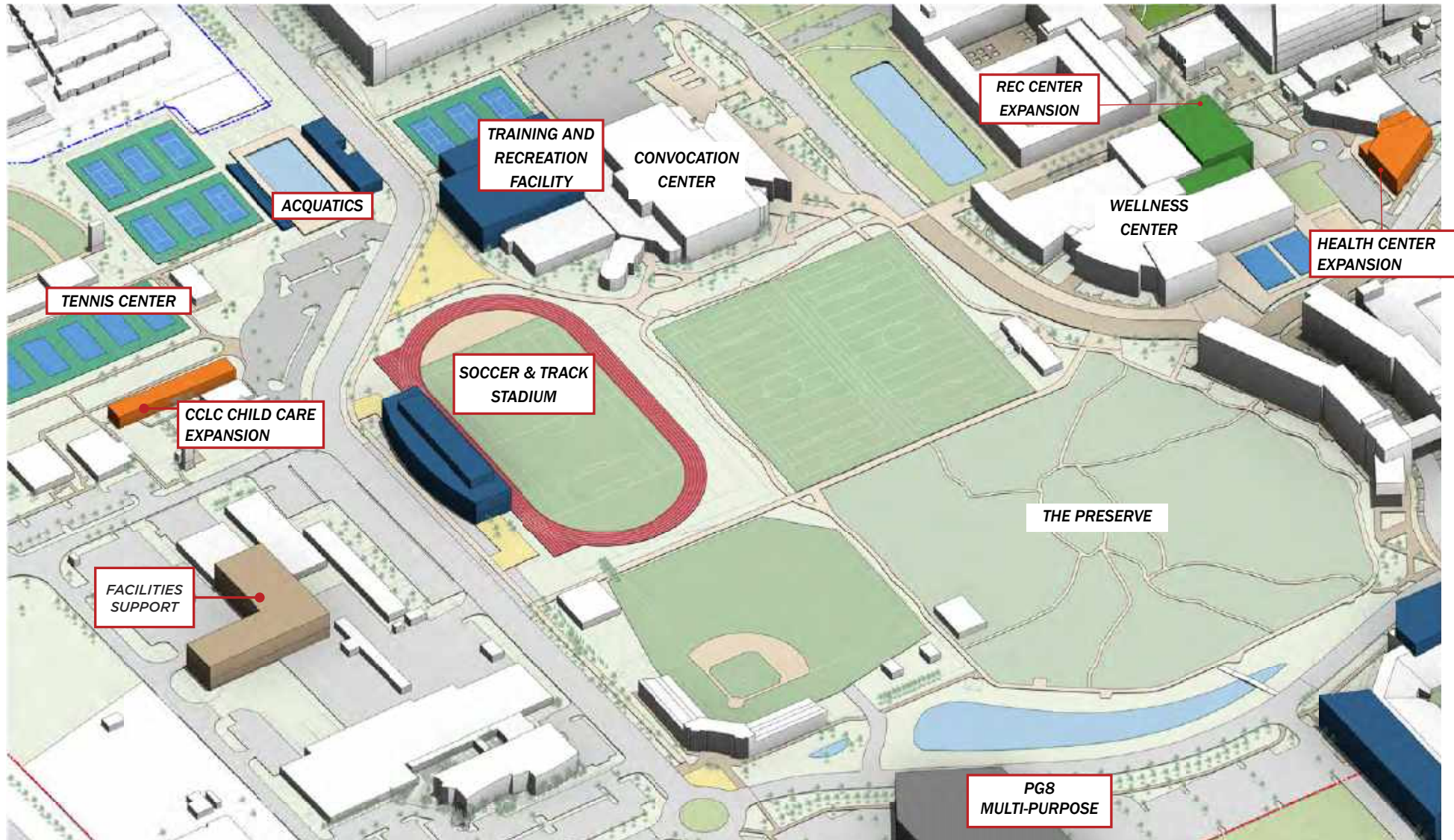






## MMC PRECINCT 5 - EXISTING





**FIGURE 3.1f** - MMC 2030 PLAN - SOCCER/TRACK & FIELD SITE

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