Florida International University
Board of Trustees

Florida Board of Governors
2018-2019 FIXED CAPITAL OUTLAY BUDGET REQUEST

FIVE – YEAR CAPITAL IMPROVEMENT PLAN

BOT - APPROVED

June 2, 2017

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FLORIDA INTERNATIONAL UNIVERSITY
AGENCY CAPITAL IMPROVEMENTS PROGRAM
2018-2019 through 2022-2023

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STATE UNIVERSITY SYSTEM
Five-Year Capital Improvement Plan (CIP-2) and Legislative Budget Request
Fiscal Years 2018-19 through 2022-23

Florida International University

PECO-ELIGIBLE PROJECT REQUESTS

Priority No.	Project Title	2018-19	2019-20	2020-21	2021-22	2022-23	Academic or Other Programs to Benefit from Projects	Net Assignable Square Feet (NASF)	Gross Square Feet (GSF)	Project Cost	Project Cost Per GSF (Proj. Cost/ GSF)	Educational Plant Survey Recommended Date/Rec No.	BOT Approval 6/2/2017 Approved by Law - Include GAA reference
1	* FACILITIES INFRASTRUCTURE /CAPITAL RENEWAL - UW (P,C,E)	$11,100,000	$16,900,000	$10,500,000	$10,500,000	$10,500,000	All	n/a	n/a	$127,994,982	n/a	01/20/16	n/a
2	** ENGINEERING BUILDING, Phase I & II - MMC (P)(C,E)(C,E)	$53,000,000	$42,000,000				Engineering	171,500	274,400	$150,000,000	$546.65	01/20/16	n/a
3	SCIENCE LABORATORY COMPLEX - MMC (P,C)(C)(C,E)	$15,000,000	$20,000,000	$42,000,000			Sciences	79,500	127,200	$77,000,000	$605.35	01/20/16	n/a
4	STRATEGIC LAND ACQUISITION - UW (A)	$20,000,000	$20,000,000				All	n/a	n/a	n/a	n/a	01/20/16	n/a
5	***ACADEMIC HEALTH CENTER STUDY COMPLEX - MMC (P,C)(C,E)		$5,000,000	$12,500,000			Academic Health	39,086	62,538	$35,000,000	$559.66	01/20/16	n/a
6	REMODEL./RENOV. OF DM BUILDING - MMC (P,C,E)(P,C,E)		$7,000,000	$6,800,000			All	140,807	140,807	$13,800,000	$98.01	01/20/16	n/a
7	***HONORS COLLEGE - MMC (P,C)(C,E)		$2,000,000				Honors	8,231	10,371	$4,000,000	$385.71	01/20/16	n/a
8	GREEN LIBRARY ADDITION FOR STUDY, HUB AND STUDENT SUCCESS SPACE- MMC (P)(C)(E)			$15,000,000	$25,000,000	$25,000,000	All	88,000	123,200	$65,000,000	$527.60	01/20/16	n/a
9	SCIENCE & HUMANITIES CTR., (SCIENCE, TECH., ENG., ARTS & MATH.) - MMC (P,C)(C,E)				$24,500,000	$22,500,000	Sciences	50,000	80,000	$47,000,000	$587.50	01/20/16	n/a
10	REMODEL./RENOV. OF ACADEMIC DATA CENTER - MMC (P,C,E)(P,C,E)				$12,775,000	$6,725,000	All	24,000	24,000	$19,500,000	$812.50	01/20/16	n/a
11	REMODEL./RENOV. OF OE BUILDING - MMC (P,C,E)(P,C,E)				$10,500,000	$10,000,000	All	117,306	117,306	$20,500,000	$174.76	01/20/16	n/a
	TOTAL	**$99,100,000**	**$112,900,001**	**$86,800,000**	**$83,275,000**	**$74,725,000**							

CITF PROJECT REQUESTS

Priority No.	Project Title	2018-19	2019-20	2020-21	2021-22	2022-23	Academic or to Benefit from Projects	Net Square Feet (NASF)	Gross Feet (GSF)	Project Cost	Project Cost (Proj. Cost/ GSF)	Committee Date
1	GRAHAM UNIVERSITY CENTER - MMC (P,C,E)	$12,000,000	$12,000,000				All					
2	WOLFE UNIVERSITY CENTER RENOVATIONS - BBC (P,C,E)	$3,000,000	$3,000,000				All					
3	RECREATION CENTER EXPANSION - BBC (P,C,E)	$1,000,000	$1,000,000				All					
4	RECREATION CENTER REMODELING - MMC (P,C,E)	$1,000,000					All					
	TOTAL	**$17,000,000**	**$ 16,000,000**	**0**	**0**	**0**						

REQUESTS FROM OTHER STATE SOURCES

Priority No.	Project Title	2018-19	2019-20	2020-21	2021-22	2022-23	Academic or to Benefit from Projects	Net Square Feet (NASF)	Gross Feet (GSF)	Project Cost	Project Cost (Proj. Cost/ GSF)
1	RESEARCH 1 - MMC, (P,C,E)						Research				
	TOTAL	**0**	**0**	**0**	**0**	**0**					

REQUESTS FROM NON-STATE SOURCES, INCLUDING DEBT

Priority No.	Project Title	2018-19	2019-20	2020-21	2021-22	2022-23	Academic or to Benefit from Projects	Net Square Feet (NASF)	Gross Feet (GSF)	Project Cost	Project Cost (Proj. Cost/ GSF)	Expected Funding (if known)	Master Plan Date
1	MEDICAL ARTS PAVILION - MMC, (P,C E)						COM					M-Dade/Private	03/27/14
	TOTAL	**0**	**0**	**0**	**0**	**0**							

* Includes BBC Lift Station and Sewer Line Repair of $4 million and Engineering And Computer Science Building Envelope of $3 million.
** Amount reflects 70 percent PECO; remaining 30 percent ($45 million) private funding.
*** Amount reflects 50 percent PECO; remaining 50 percent private funding.

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CIP-3 SHORT-TERM PROJECT EXPLANATION

CIP-3, A – NARRATIVE DESCRIPTION

AGENCY: Florida International University
BUDGET ENTITY: State University System
PROJECT TITLE: Facilities IFS/Capital Renewal
University Wide

AGENCY PRIORITY 1
DATE BUILDING PROGRAM APPROVED N/A

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

The purpose of this program is to provide funding for the renovation and replacement of critical infrastructure needs and to support capital renewal programs of the educational plant. A broad range of projects encompassing all campuses of the University and all program areas is planned.

In order to continue to support the University's rapid growth, roadway infrastructure is needed to meet the requirements of the University's Master Plan. Funding is needed for new roadways, curb and gutter, signage, catch basins and traffic controls. Also planned are the renovation of existing and the construction of new pedestrian pathways and sidewalks. Funding is also requested for lighting to ensure public safety and appropriate landscape and irrigation.

The existing plumbing systems in some of our older buildings continue to deteriorate. Funding is needed to renovate and replace these aging systems. Renovation and replacement of restroom fixtures with ADA accessible and environmentally appropriate new water saving units is planned.

Infrastructure is needed for a number of buildings on campus that require upgrades to multiple systems. These improvements include fire alarm panels, air handlers, electrical and mechanical systems. ADA retrofits and renovations continue to be a top priority. Replacement and renovation of aging elevators is also planned.

The University also plans to continue the renovation and retrofit of classroom, laboratory and learning areas. These retrofits and renovations will address ADA issues, replace aging infrastructure and support current curriculum needs.

Stormwater flood management also continues to be a priority issue. As pervious land is consumed with new development, existing pedestrian sidewalks and roadways are often impacted adding to costs beyond estimated project constructed costs. Infrastructure funds are needed to increase drainage capacity throughout campus for the safety of both pedestrian and vehicular traffic.

In recognition of the University's commitment to sustainability practices infrastructure projects will be designed and built with the goal of meeting the USGBC's LEED "Silver" certification rating level at a minimum when applicable. All projects shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 1).

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Universitywide, Miami, North Miami, and Miami Beach** COUNTY: **Miami-Dade County**

1. FACILITIES INFRASTRUCTURE/CAPITAL RENEWAL PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Chiller							
Potable Water							
Sewer							
Electrical							
HVAC							
Telecommunications							
Roadways							
Reroofing/Envelope							
Totals	**n/a**	**n/a**		**See Below**			

*Apply Unit Cost to total GSF based on primary space type

Remodeling/Renovation

Total Construction - New & Rem./Renov.

Space Detail for Remodeling Projects

BEFORE Space Type	BEFORE Net Area (NASF)	AFTER Space Type	AFTER Net Area (NASF)
Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)		**$8,400,000**	**$13,900,000**	**$8,400,000**	**$8,400,000**	**$8,400,000**	**$47,500,000**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation							
d.Landscape/Irrigaiton							
e.Plaza/Walks							
f.Roadway Improvements							
g.Parking ___ spaces							
h.Telecommunication							
i.Electrical Service							
j.Water Distribution							
k.Sanitary Sewer System							
l.Chilled Water System							
m.Storm Water System							
n.Energy Efficient Equipment							
Total Construction Costs		**$8,400,000**	**$13,900,000**	**$8,400,000**	**$8,400,000**	**$8,400,000**	**$47,500,000**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees		**$1,340,000**	**$1,390,000**	**$840,000**	**$840,000**	**$840,000**	**$5,250,000**
c.Fire Marshall Fees		**$21,000**	**$34,750**	**$21,000**	**$21,000**	**$21,000**	**$118,750**
d.Inspection Services		**$126,000**	**$208,500**	**$126,000**	**$126,000**	**$126,000**	**$712,500**
e.Insurance Consultant							
f.Surveys & Tests		**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$50,000**	**$250,000**
g.Permit/Impact/Environmental Fees							
h.Artwork (not applicable)			**$59,750**				
i.Moveable Furnishings & Equipment		**$275,000**	**$417,000**	**$223,000**	**$223,000**	**$223,000**	**$1,361,000**
j.Project Contingency		**$555,000**	**$525,000**	**$525,000**	**$525,000**	**$525,000**	**$2,655,000**
k.Construction Service Reimbursement		**$333,000**	**$315,000**	**$315,000**	**$315,000**	**$315,000**	**$1,593,000**
Total - Other Project Costs		**$2,700,000**	**$3,000,000**	**$2,100,000**	**$2,100,000**	**$2,100,000**	**$12,000,000**
ALL COSTS 1+2	**$68,494,982**	**$11,100,000**	**$16,900,000**	**$10,500,000**	**$10,500,000**	**$10,500,000**	**$59,500,000**

Appropriations to Date Source	Fiscal Year	Amount	Appropriations to Date Source	Fiscal Year	Amount	Total Project In CIP & Beyond
PECO	**1997-1998**	**$6,727,713**	**PECO**	**2009-2010**	**$5,142,603**	
	1999-2000	**$1,000,000**		**2010-2011**	**$6,221,914**	
	2000-2001	**$2,152,752**		**2011-2012**	**$0**	
	2001-2002	**$7,750,000**		**2012-2013**	**$0**	
	2003-2004	**$5,000,000**		**2013-2014**	**$0**	
	2004-2005	**$5,000,000**		**2014-2015**	**$0**	
	2005-2006	**$5,000,000**		**2015-2016**	**$0**	
	2006-2007	**$7,000,000**		**2016-2017**	**$0**	
	2007-2008	**$7,000,000**		**2017-2018**	**$0**	
	2008-2009	**$10,500,000**				
TOTAL		**$57,130,465**	TOTAL		**$11,364,517**	**$127,994,982**

CIP-3, D
Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: Florida International University
Project: Facilities Infrastructure/Capital Renewal
Total Project Cost: $ 128.0 M
Previous Funding (State): $ 68.5 M
Current Request: $ 11.1 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email): John M. Cal, AVP, Facilities Management, O: 305-348-4001, C: 305-323-1488, e-mail: John.Cal@fiu.edu

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Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☐ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)

   Explanation: N/A

2. ☐ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)

   Explanation: N/A

3. ☐ Amount of Additional Research Funding to be Obtained; Patents Awarded

   Explanation: N/A

4. ☐ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

   Explanation: N/A

5. ☐ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

   Explanation: N/A

6. ☐ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

Explanation: N/A

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space

   Explanation: The project includes capital renewal of existing facilities which in turn will improve the learning environment with safer more efficient and better control of the indoor teaching environment.

8. ☐ Contribution of Local Funds Through Matching Grants, Property Donations, etc.

   Explanation: N/A

9. ☒ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)

   Explanation: Infrastructure and capital renewal investments are essential to continue to reduce energy costs by maintaining aging infrastructure with more efficient replacement systems.

Other Pertinent Information not included above:

CIP-3 SHORT-TERM PROJECT EXPLANATION

AGENCY: Florida International University AGENCY PRIORITY 2
BUDGET ENTITY: State University System DATE BUILDING PROGRAM
PROJECT TITLE: Engineering Building – Phase I & Phase II APPROVED N/A
Modesto Maidique Campus

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

This new building will house classrooms, instructional and research laboratories and collaboration space for approximately 75 faculty and 1400 engineering majors as well as other students taking relevant engineering courses. The building will be designed for active learning classrooms and teaching laboratories through which FIU will continue its very successful STEM curricular reforms.

The building will be located on the Modesto A. Maidique campus to facilitate and enhance ongoing and future collaborations between the College of Engineering and Computing and the health sciences colleges of medicine, nursing, and public health. Many of the most significant breakthroughs in health sciences will increasingly be at the interface between these disciplines and engineering and computer science.

The building is needed for at least three reasons: (1) to accommodate the growth in the College of Engineering and Computing in response to the FIU 2020 Strategic Plan, the Department of Defense identified decadal growth needs in engineering disciplines, and the President's Jobs and Competitiveness Council call for an additional 10,000 engineers annually; (2) to allow FIU to fully capitalize on the available research funding and job opportunities for graduates that are occurring at the interface between engineering and health science disciplines; and (3) to allow engineering units with major national funding through NSF Engineering Research Centers and NSF Natural Hazards Engineering Research Infrastructure programs to expand at the Engineering Center.

The project budget includes costs of upgrading and extending existing central campus infrastructure to the project site. Private donation funding will comprise $45 million of $150 million total project cost, 30% of the total budget.

In recognition of the University's commitment to sustainability practices this project will be designed and built with the goal of meeting the USGBC's LEED-NC "Silver" certification rating level at a minimum. The Project shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is partially included in the approved 2015-2020 Educational Plant Survey dated 1/20/2016, recommendation 12).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

2. ENGINEERING BUILDING PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION		Net to						
Facility/Space Type	Net Area (NASF)	Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date	
Classroom	**28,000**	**1.6**	**44,800**	**$354.72**	**$15,891,263**	1/1/2020	6/1/2021	(Phase I)
Teaching Lab	**10,000**	**1.6**	**16,000**	**$436.31**	**$6,980,914**	1/1/2021	6/1/2022	(Phase II)
Study	**18,000**	**1.6**	**28,800**	**$345.86**	**$9,960,852**			
Research Lab	**80,000**	**1.6**	**128,000**	**$448.39**	**$57,394,436**			
Office/Computer	**28,000**	**1.6**	**44,800**	**$384.10**	**$17,207,520**			
Instructional Media	**7,500**	**1.6**	**12,000**	**$257.81**	**$3,093,678**			

Space Detail for Remodeling Projects

					BEFORE		AFTER	
					Space Type	Net Area (NASF)	Space Type	Net Area (NASF)
Totals	**171,500**		**274,400**		**$110,528,664**			
*Apply Unit Cost to total GSF based on primary space type								
Remodeling/Renovation								
Total Construction - New & Rem./Renov.					**$110,528,664**	Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS	ESTIMATED COSTS						
Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)	**$5,000,000**	**$73,000,000**	**$32,528,664**				**$110,528,664**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation		**$50,000**					
c.Site Preparation		**$300,000**					**$50,000**
d.Landscape/Irrigaiton		**$400,000**					**$300,000**
e.Plaza/Walks		**$300,000**					**$400,000**
f.Roadway Improvements		**$500,000**					**$300,000**
g.Parking ___ spaces		**$450,000**					**$500,000**
h.Telecommunication		**$300,000**					**$450,000**
i.Electrical Service		**$200,000**					**$300,000**
j.Water Distribution		**$300,000**					**$200,000**
k.Sanitary Sewer System		**$350,000**					**$300,000**
l.Chilled Water System		**$700,000**					**$350,000**
m.Storm Water System		**$200,000**					**$700,000**
n.Energy Efficient Equipment							**$0**
Total Construction Costs	**$5,000,000**	**$77,050,000**	**$32,528,664**	**$0**	**$0**	**$0**	**$114,578,664**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees	**$2,000,000**	**$1,000,000**	**$6,166,293**				**$9,166,293**
CM Fees	**$1,145,787**						**$1,145,787**
c.Fire Marshall Fees	**$286,447**						**$286,447**
d.Inspection Services			**$300,000**				**$300,000**
e.Insurance Consultant		**$57,289**	**$57,289**				**$114,579**
f.Surveys & Tests	**$10,000**		**$70,000**				**$80,000**
g.Permit/Impact/Environmental Fees			**$300,000**				**$300,000**
h.Artwork			**$572,893**				**$572,893**
i.Moveable Furnishings & Equipment			**$11,479,824**				**$11,479,824**
j.Project Contingency	**$1,057,767**	**$1,392,711**	**$5,025,036**				**$7,475,514**
k.Construction Service Reimbursement	**$500,000**	**$500,000**	**$3,500,000**				**$4,500,000**
Total - Other Project Costs	**$5,000,000**	**$2,950,000**	**$27,471,336**	**$0**	**$0**	**$0**	**$35,421,336**
ALL COSTS 1+2	**$10,000,000**	**$80,000,000**	**$60,000,000**	**$0**	**$0**	**$0**	**$150,000,000**

Appropriations to Date			Project Costs Beyond CIP Period			Total Project In
Source	Fiscal Year	Amount	Source	Fiscal Year	Amount	CIP & Beyond
PECO 2017-18		$10,000,000	PECO 2018-19		$53,000,000	
Private 2017-18		$0	Private 2018-19		$27,000,000	
			PECO 2019-20		$42,000,000	
			Private 2019-20		$18,000,000	
TOTAL		$10,000,000	TOTAL		$140,000,000	
						$150,000,000

CIP-3, D

Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: Florida International University
Project: Engineering Building – Phase I & Phase II
Total Project Cost: $ 150.0 M
Previous Funding (State): N/A
Current Request: $53.0 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email): Ranu Jung, PhD, Interim Dean, College of Engineering and Computing O: 305-348-3722 C: 602-327-7567, rjung@fiu.edu

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Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)

   Explanation:

   a. How many degrees is this request currently serving?

   The College of Engineering and Computing (CEC) offers 10 bachelor's, 12 master's, 3 professional master's and 6 research doctorate degrees.

   In the Academic Year 2015-16, CEC awarded 1,201 degrees (842 bachelor's, 314 master's, and 45 research doctorates). CEC's degree production accounted for 9% of the bachelor's, 10% of the master's and 30% of the research doctorates awarded by FIU during that academic year. CEC awarded 51% of FIU's STEM degrees in 2015-16 (49% of bachelor's STEM, 56% of master's STEM, and 57% of research doctorate STEM degrees).

2015-16 Degrees Awarded in CEC Programs

DEGREE CIP DESCRIPTION	DEGREE CIP	BACHELORS DEGREES	MASTERS DEGREES	RESEARCH DOCTORATES
Biomedical Engineering	14.0501	78	7	4
Civil Engineering	14.0801	77	21	11
Computer Engineering	14.0901	63	24	N/A
Computer Science	11.0101	101	42	8
Construction Management	15.1001	33	35	N/A
Engineering Management	14.3501	N/A	97	N/A
Electrical Engineering	14.1001	135	31	15
Environmental Engineering	14.1401	10	4	N/A
Information Technology	11.0103	220	34	N/A
Materials Science Engineering	14.1801	N/A	7	3
Mechanical Engineering	14.1901	125	9	4
Telecommunications	14.1090	N/A	13	N/A
Grand Total		842	324	44

*N/A indicates that degree is not offered.

b. How are these degrees meeting the needs of the State of Florida?

Based on what employers are willing to pay FIU CEC graduates, these graduates are meeting critical needs in Florida business and industry. The average wage for full-time employed 2013-14 CEC bachelor's degree graduates (FETPIP data) was $50,789. This compares with an overall SUS average bachelor's degree recipient wage of $38,632 and an overall FIU average bachelor's degree recipient wage of $41,112 (FETPIP 2013-14 data).

Florida and the US need an increased number of STEM graduates overall but in particular they need an increase in the number of STEM graduates from traditionally underrepresented minorities. African-Americans, American Indians, and Hispanics between 18 and 24 years account for 34% of the total U.S. population but earn only 12% of all undergraduate degrees in engineering. CEC is number 2 in the nation in graduating Hispanic engineering and computer science bachelor's degree recipients (second only to University of Puerto Rico) and is number 5 for graduating African American engineering and computer science bachelor's degree recipients.

2. ☒ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)

Explanation:

a. Additional students served

Although the question is based on students served, our response will be based on degree awarded. FIU is not focused on enrollment numbers but rather on degrees awarded. The Federal Administration's Jobs and Competitiveness Council has called for graduating an additional 10,000 engineers per year. The Department of Defense, with cooperation from the Departments of Commerce, Education, and Labor projected the percentage increase in demand for specific engineering majors in the decade 2012 to 2022. These numbers were: Biomedical Engineering 27%, Civil Engineering 20%, Computer Engineering 7%, Computer Science 15%, Electrical

Engineering 4%, Environmental Engineering 15%, Information Technology 22%, Mechanical Engineering 5%, Materials Science and Engineering 4.1%.

The FIUBeyondPossible2020 strategic plan calls for a 20% increase. In determining the growth of CEC and the demand for additional space, we looked to 2025 to achieve both the 20% overall strategic plan growth and the additional Department of Defense degree-specific percentage growth. These calculations lead to an overall growth in degrees of 353 (38%) with the growth by department of: Biomedical Engineering 41 (53%), Civil Engineering 52 (44%), Computer Engineering 25 (28%), Computer Science 43 (39%), Electrical Engineering 42 (25%), Environmental Engineering 4 (36%), Information Technology 114 (47%), and Mechanical Engineering 32 (26%).

Overall 78% of the projected growth in degrees awarded will occur in the disciplines expanding into the new building.

b. Benefits and efficiencies created

Engineering and other STEM fields are undergoing a radical pedagogical change in the way students interact in the classroom and in particular in the laboratory. The new design incorporates active learning and inverts the teaching sequence from acquiring information during a lecture to acquiring the information online prior to the lecture and using the face-to-face time with the instructor and classmates to applying that information to structured problems thereby turning information into knowledge and preparing the student for the collaborative problem solving they will be expected to demonstrate to future employers. This approach increases student engagement, enhances retention and reduces time to degree.

This new learning paradigm is conducted in entirely redesigned classrooms and laboratories. FIU has redesigned current space to create such classrooms and laboratories, but for redesigned classrooms and laboratories on the scale we need, it will be much less expensive to design and build in the new space required for the production of the new degrees.

CEC is planning an additional engineering curricular change by creating a Continuum of Design and Problem-based Education. Currently all engineering programs require a senior design project. Our new approach is to incorporate design and problem solving from the beginning of the student's career in engineering. The students will have greater engagement with engineering through learning how it can address real problems and will be better prepared to enter the workforce. Team projects that utilize problem-based learning offer advantages that go beyond pedagogy, to learning organizational skills, time management, and most importantly communication skills. This curricular change will require more laboratory space on a per degree produced basis than we currently have available.

The complexities of such an engineering curriculum will require greater mentoring. Some of the most effective mentoring occurs when postdoctoral fellows mentor graduate students who in turn mentor upper division undergraduate students who then mentor lower division undergraduate students. This chain of mentorship leads to greater understanding of engineering principles for those doing the mentoring and enhances learning for those being mentored. The design of the new building incorporates collaborative learning spaces where interaction between postdoctoral fellows, graduate students, and undergraduates is enhanced.

FIU is also one of 120 universities nationwide and one of four in Florida to commit to implementing an educational program responsive to the National Academy of Engineering Grand

Challenges for Engineering in the 21st Century. The pedagogical changes required to implement the National Academy of Engineering's educational plan will require the redesigned classrooms and laboratories envisioned for the new building.

c. Graduation outcomes

Engineering typically has a lower 6-yr graduation rate than non-STEM disciplines. The current 6-yr graduation rate is 42%. With the new facilities and the new pedagogical approaches these facilities provide, it is expected that the graduation rate will surpass 70% by 2025. The first year retention is currently 88% and this will surpass 90% by 2020.

3. ☒ Amount of Additional Research Funding to be Obtained; Patents Awarded

Explanation:

a. Additional research funding

Based on SUS colleges of engineering data, the growth in degrees will required the addition of 109 faculty members. FIU has committed to this number by 2025. This represents a continuing additional investment of $17 million and one-time start-up costs of $42 million by 2025. These faculty along with current faculty will be expected, based on SUS average research expenditures per full-time, tenured/tenure-earning engineering faculty member, to have total annual research expenditures of $48 million, an increase of $30 million annually.

b. Additional jobs created

Each additional million dollars in research expenditures generates 18.2 jobs thus creating 550 high quality jobs in South Florida.

c. Additional patents and start-up companies

Based on national data, the projected increase in research expenditures will generate 27 additional patent applications per year and result in the establishment of one new company based on university intellectual property every other year.

4. ☒ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

Explanation:

All CEC degree programs are identified in the STEM area of Strategic Emphasis

5. ☒ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

Explanation:

Performance Funding Metrics:
Percent bachelor's in graduate school or employed (>$25,000) will increase. For CEC graduates this value currently is 81% compared to FIU's overall 75%.

Median bachelor's wages 1 yr after graduation will increase. For CEC graduates the average wage is $9,677 greater than the FIU average hence increases in CEC graduates will increase this university metric.
Six-year graduation rate full- and part-time FTIC will increase. CEC is currently (42%) below the FIU overall rate. Hence as CEC improves this metric it will have a major enhancement for the university rate.
Bachelor's in areas of Strategic Emphasis (includes STEM) will increase because all CEC degrees are STEM degrees.
Graduates in areas of Strategic Emphasis (includes STEM) will increase because all CEC degrees are STEM degrees.
Bachelor's to minorities will increase. CEC is a major producer of engineering degrees to underrepresented minorities in the US. The ethnic distribution of future degrees will match the diversity of Florida.

Preeminence Funding Metrics:
Total annual research expenditures, including federal research expenditures, of $200 million or more, as reported annually by the National Science Foundation (NSF) will be reached sooner with the increase in external research funding though engineering expansion.
Total annual research expenditures in diversified nonmedical sciences of $150 million or more, based on data reported annually by the NSF will be reached sooner with the increase in external research funding though engineering expansion.
A top-100 university national ranking for research expenditures in five or more science, technology, engineering, or mathematics fields of study, as reported annually by the NSF is already achieved, but will be easily sustained with the increase in external research through engineering expansion.
One hundred or more total patents awarded by the United States Patent and Trademark Office for the most recent 3-year period will be achieved with engineering expansion which in and of itself is projected to result in 27 additional patent applications per year.
Four hundred or more doctoral degrees awarded annually, including professional doctoral degrees awarded in medical and health care disciplines, as reported in the Board of Governors Annual Accountability Report will be easily surpassed with the addition of 109 more engineering faculty.
Two hundred or more postdoctoral appointees annually, as reported in the TARU annual report will be easily surpassed with the addition of 109 more engineering faculty.

6. ☒ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

Explanation:

Additional space within the College of Engineering and Computing will unequivocally increase business partnerships and lead to guaranteed internships and jobs for students.

Here are three case studies:

1) Senior design sponsorship by industry impacts job placement. Additional space within the Department of Biomedical Engineering (BME) will exponentially help grow our senior design program beyond the existing participation. BME actively engages corporate sponsorships for the Senior Design capstone projects. Students solicit partnerships with industry leaders to work with them in collaboration on a year-long project. Since the fall of 2012, 31 different companies, and some multiple times, have sponsored projects through our senior design course. These relationships have resulted in more than 31 students receiving internships or job placement after the completion of their undergraduate degree. In order to maintain our current level of success and expand our reach to even more companies, additional design space is needed. Many of the local

biomedical device start-up companies lack the space resources on-site that are required to accommodate our senior design teams. The space would also allow us to expand the design based curriculum to sophomore and junior years thereby preparing more students for industry internships.

2) New design and innovation spaces will allow for academic-industry collaboration with student participation, and also give students a place to showcase their work and host design challenges. This fall, Fiat Chrysler Automobiles (FCA) will visit the Engineering Center for an on-campus recruitment event. FCA has requested to conduct a design challenge that will serve as a working interview for the 150 participating students. Due to our limited space, we are unable to house the design challenge in one room. Instead, we are forced to break up the students into three classrooms, making it difficult for recruiters to evaluate student performance.

3) Expanded space within the college will allow corporations to conduct on-site interviews and hold focused presentations, therefore, extending recruitment opportunities for our students. For example, The School of Computing and Information Sciences at the MMC maximizes their current space in PG6 Tech Station (acquired in part by Performance funding from the State) to foster relationships with corporate partners while providing their students with an array of internship and job opportunities. Each semester six companies come on campus to provide information sessions that serves as a recruitment tool for the companies, and at the same time, exposes our students to new possibilities in planning for their future careers. Big companies such as Ultimate Software, IBM, and UBER draw large crowds of students looking to learn more about the industry. Companies utilize the space to conduct on-campus interviews for internships and full-time positions. This service caters to the companies and helps to streamline their interview process, making it easier for them to hire SCIS students.

Space for student design and innovation is of utmost importance to our college. Added space will strengthen our partnerships with industry leaders and will better enable us to serve our students in their search for career opportunities.

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space

Explanation:

The new building will be built on the Modesto A. Maidique Campus (MMC). Education and research in Biomedical Engineering and areas of Electrical and Computer Engineering, Environmental Engineering and Mechanical and Materials Engineering that have strong ongoing and future collaborations with the colleges of Medicine, Nursing and Health Sciences, Public Health and Social Work, Arts and Sciences, and School of International and Public Affairs will occupy the new building. The Engineering Center is two miles north of the MMC. Greater propinquity will lead to operational and academic efficiencies, cross-fertilization and collaboration.

Program growth at the Engineering Center means that lack of space inhibits capitalizing on exciting areas of research that have received national recognition. These include: Accelerated Bridge Construction University Transportation Center (FIU lead; University of Nevada, Reno and Iowa State University, partners); NSF Engineering Research Center for Advanced Self-Powered Systems of Integrated Sensors and Technologies (ASSIST) (North Carolina State University, lead; FIU and three other universities, partners); and the Wall of Wind Facility designated as one of the nation's major "Experimental Facilities" under the NSF Natural Hazards Engineering Research Infrastructure

program. These programs and others at the Engineering Center will grow in the space freed up by the relocation of some research and education to the new building.

8. ☒ Contribution of Local Funds Through Matching Grants, Property Donations, etc.

   Explanation:

   30% ($45 million) of the building cost will contributed through local funds.

9. ☐ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)
   Explanation:

Other Pertinent Information not included above:

CIP-3 SHORT-TERM PROJECT EXPLANATION

AGENCY: Florida International University
BUDGET ENTITY: State University System
PROJECT TITLE: Science Laboratory Complex
Modesto Maidique Campus

AGENCY PRIORITY 3
DATE BUILDING PROGRAM APPROVED N/A

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

To support current and expanding science programs, Florida International University is in need of considerable science specific classrooms, teaching laboratories and offices. Existing facilities are severely inadequate to meet University needs.

This facility will provide critically needed classrooms, laboratories and offices to address existing shortfalls and to meet educational and research needs of the University. The Science Laboratory Complex is an essential element in the FIU/State University System Strategic Plan to meet statewide professional and workforce needs in the science area.

The project budget includes extraordinary costs of upgrading and extending existing central campus infrastructure to the project site.

In recognition of the University's commitment to sustainability practices this project will be designed and built with the goal of meeting the USGBC's LEED-NC "Silver" certification rating level at a minimum. The Project shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 9).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

3. SCIENCE LABORATORY COMPLEX

PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classrooms	**7,500**	**1.6**	**12,000**	**$363.97**	**$4,367,630**	1/1/2021	6/1/2022
Teaching Lab	**4,000**	**1.6**	**6,400**	**$447.69**	**$2,865,210**		
Study	**18,000**	**1.6**	**28,800**	**$354.89**	**$10,220,701**		
Office/ Computer	**20,000**	**1.6**	**32,000**	**$394.12**	**$12,611,723**		
Instructional Media	**2,000**	**1.6**	**3,200**	**$264.53**	**$846,502**		
Research Lab	**28,000**	**1.6**	**44,800**	**$460.09**	**$20,612,089**		
Totals	**79,500**		**127,200**		**$51,523,854**		

*Apply Unit Cost to total GSF based on primary space type

Space Detail for Remodeling Projects

	BEFORE Space Type	BEFORE Net Area (NASF)	AFTER Space Type	AFTER Net Area (NASF)
Remodeling/Renovation				
Total Construction - New & Rem./Renov. **$51,523,855**	Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)		**$11,000,000**	**$14,000,000**	**$26,523,855**			**$51,523,855**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation			**$300,000**				**$300,000**
d.Landscape/Irrigaiton			**$500,000**				**$500,000**
e.Plaza/Walks			**$250,000**				**$250,000**
f.Roadway Improvements			**$250,000**				**$250,000**
g.Parking ___ spaces			**$300,000**				**$300,000**
h.Telecommunication			**$450,000**				**$450,000**
i.Electrical Service			**$100,000**				**$100,000**
j.Water Distribution			**$100,000**				**$100,000**
k.Sanitary Sewer System			**$200,000**				**$200,000**
l.Chilled Water System			**$350,000**				**$350,000**
m.Storm Water System			**$100,000**				**$100,000**
n.Energy Efficient Equipment			**$25,000**				**$25,000**
Total Construction Costs	**$0**	**$11,000,000**	**$16,925,000**	**$26,523,855**	**$0**	**$0**	**$54,448,855**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees		**$2,000,000**	**$750,000**	**$1,605,908**			**$4,355,908**
CM Fees		**$544,489**		**$0**			**$544,489**
c.Fire Marshall Fees		**$136,122**		**$0**			**$136,122**
d.Inspection Services			**$125,000**	**$275,000**			**$400,000**
e.Insurance Consultant			**$27,224**	**$27,224**			**$54,449**
f.Surveys & Tests		**$50,000**	**$50,000**	**$175,000**			**$275,000**
g.Permit/Impact/Environmental Fees		**$40,000**	**$40,000**	**$0**			**$80,000**
h.Artwork				**$136,122**			**$136,122**
i.Moveable Furnishings & Equipment				**$10,328,441**			**$10,328,441**
j.Project Contingency		**$617,680**	**$1,471,067**	**$1,841,867**			**$3,930,614**
k.Construction Service Reimbursement		**$611,709**	**$611,709**	**$1,086,582**			**$2,310,000**
Total - Other Project Costs	**$0**	**$4,000,000**	**$3,075,000**	**$15,476,145**	**$0**	**$0**	**$22,551,145**
ALL COSTS 1+2	**$0**	**$15,000,000**	**$20,000,000**	**$42,000,000**	**$0**	**$0**	**$77,000,000**

Appropriations to Date Source	Fiscal Year	Amount	Project Costs Beyond CIP Period Source	Fiscal Year	Amount	Total Project In CIP & Beyond
TOTAL		$0	TOTAL			**$77,000,000**

Higher Educational Facilities
Return on Investment

Institution: Florida International University
Project: Science Laboratory Complex
Total Funding: $77.0 M
Previous Funding (State and Local): N/A
STEM (Yes or No): Yes
Contact Person (Name, Position, Phone No.): _____

Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☒ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)

   Explanation:

   In 2015-16 FIU awarded 2079 degrees in Board of Governors identified STEM programs. This represents an increase of 749 or 56% from 2011-12. A number of factors have contributed to these gains: (1) FIU has placed more science teachers in South Florida high schools thereby improving preparation for STEM degrees; (2) FIU science departments have enhanced their outreach programs attracting more students to STEM disciplines; (3) FIU has developed Math Mastery Labs with adaptive learning to help students succeed in mathematics, a necessary common language for STEM disciplines; (4) FIU has initiated a complete redesign of the way many science courses are taught; and (5) a national dialogue has emphasized the importance for individuals and the nation to excel in STEM disciplines. This national dialogue is reflected in the Board of Governor's Strategic Plan that calls for expanding the number of STEM degrees awarded in the SUS.

   According to the National Association of Colleges and Employers, 2017 STEM graduates are expected to continue commanding higher salaries than their non-STEM counterparts. The starting salary differential is expected to be 17.4% in favor of STEM graduates ($61,342 cf. $52,230).

   FIU is addressing another state and national need though enhancing the diversity of the STEM workforce. African-Americans, American Indians, and Hispanics between 18 and 24 years account for 34% of the total U.S. population but earn only 18.3% of all undergraduate degrees in STEM (latest NSF data). At FIU these underrepresented minorities are awarded 78.8% of the baccalaureates in STEM. A similar contribution of FIU is shown at the Master's level with 44% of the recipients being underrepresented minorities (cf. 13.4% nationally) and at the doctoral level with 13.9% of recipients at FIU compared to 6.6% nationally.

2. ☒ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)

   Explanation:

STEM fields are undergoing a radical pedagogical change in the way students interact in the classroom and in particular in the laboratory. The new design incorporates active learning and inverts the teaching sequence from acquiring information during a lecture to acquiring the information online prior to the lecture and using the face-to-face time with the instructor and classmates to applying that information to structured problems thereby turning information into knowledge and preparing the student for the collaborative problem solving they will be expected to demonstrate to future employers. This approach increases student engagement, enhances retention and reduces time to degree as evidenced from the 56% increase in STEM degrees awarded over the past four years at FIU.

This new learning paradigm is conducted in entirely redesigned classrooms and laboratories. FIU has redesigned current space to create such classrooms and laboratories, but for redesigned classrooms and laboratories on the scale we need, it will be much less expensive to design and build in the new space required for the production of the new degrees.

STEM majors have shown improved first-year retention from 82.2% in 2011 to 88.1% in 2015. Similarly 4-yr graduation rates have increased from 17.0% for the 2010 cohort to 25.3% for the 2013 cohort (6-yr graduation increased from 45.5% for the 2007 cohort to 52.0 for the 2011 cohort). With these new facilities and the new pedagogical approaches these facilities allow, it is expected that the 4-yr graduation rate will surpass 40% by 2025.

3. ☒ Amount of Additional Research Funding to be Obtained; Patents Awarded

   Explanation:

   Based on SUS data, the 28,000 sq. ft. of research laboratory space in this building will provide laboratory space for 26 Tenured/Tenure-track faculty. Again using SUS data, these faculty would be expected to generate $7 M annually in additional research funding. Based on national data, each additional million dollars in research expenditures generates 18.2 jobs thus creating 127 high quality jobs in South Florida. Based on national data, the projected increase in research expenditures will generate 6 additional patent applications per year and result in the establishment of one new company based on university intellectual property every eight years.

4. ☒ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

   Explanation:

   All degree programs centered in this building will be in the STEM area of Strategic Emphasis.

5. ☐ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

   Explanation:

6. ☒ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

Explanation:
FIU has long recognized the importance of internships in preparing students for the workforce. The number of students obtaining internships has increased significantly in the last few years to reach 5,565 in 2015-16, an 11.6% increase over the prior year. The new STEM pedagogy that will be emphasized in this facility incorporates teamwork for STEM problem solving. This is exactly the type of experience corporations are interested in and hence more willing to provide internships to our students who have experienced multiple courses taught with the new pedagogy. A few STEM examples are: Maytal Maor who interned at Google and now has a clear career path when she graduates; David Vallejo who interned for Raytheon Missile Systems in Arizona and was offered a full-time job with the company; Alexis Smoot who worked for the Office of Environmental Management in the Department of Energy in Washington, D.C.; Annette Dominguez who interned at blueEnergy, an international organization dedicated to sustainable solutions to complex challenges in Bluefields, Nicaragua, where she helped local residents become energy independent; and Lilian Marrero who interned with NASA's Water Science of Coupled Aquatic Processes and Ecosystems from Space (WaterSCAPES) and with Sullivan International Group, Inc., an applied science, environmental and technology firm, and is now a Department of Energy Fellow in environmental engineering at FIU.

7. ☐ Project Improves the Use, either Operationally or Academically, of Existing Space
   Explanation:

8. ☐ Contribution of Local Funds Through Matching Grants, Property Donations, etc.
   Explanation:

9. ☐ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)
   Explanation:

Other Pertinent Information not included above:

10. ☒ Projected Facility Utilization Rate
    Explanation:
    Approximately 700 STEM majors will be taking classes in the new building and approximately 26 faculty will have their offices and research labs in the building. Given the current space needs as defined in the Net Assignable Square Feet Eligible for Fixed Capital Outlay Budgeting (Form B), as described under item 10 below, all aspects of the building will be 100% utilized. The latest Fall classroom utilization percentage available shows FIU at 124%. See Section 10 for how the projected building will address some of the identified space needs.

11. ☒ Current/Projected Campus Utilization Rate
    Explanation:
    Values in table below are in net assignable square feet from the Net Assignable Square Feet Eligible for Fixed Capital Outlay Budgeting (Form B).

Category	% Need Currently Met	Net Need	Proposed in Projected Facility	Net Need with Projected Facility	% Need Met with Projected Facility
Classrooms	71%	88,552	7,500	81,052	73%
Teaching Labs	69%	165,148	4,000	161,148	70%
Study Space	34%	432,324	18,000	414,324	37%
Offices	88%	119,392	20,000	99,392	90%
Research Labs	48%	375,439	28,000	347,439	52%
Instructional Media	23%	55,308	2,000	53,308	26%

CIP-3 SHORT-TERM PROJECT EXPLANATION

CIP-3, A – NARRATIVE DESCRIPTION

AGENCY: Florida International University
AGENCY PRIORITY 4
BUDGET ENTITY: State University System
DATE BUILDING PROGRAM APPROVED N/A
PROJECT TITLE: STRATEGIC LAND ACQUISITION
University Wide

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

Over the past 15 years, the Campus Master Plan has anticipated the need to expand the boundaries of the Modesto A. Maidique Campus as evidenced by various plans for joint use facilities shared with Miami-Dade county and the county fair. Additional land is necessary to accommodate space to house planned growth in student enrollment with additional academic programs, to create vibrant student life activities, and expand utility/infrastructure needs. Achievement of educational goals are expected to expand jobs and increase economic development in our communities,

Available land for development in Miami-Dade County has become scarce as the population continues to grow. Local comprehensive planning policies have constrained growth due to limited natural resources and major transportation challenges. This request to fund land acquisition has been given top priority for capital improvement needs.

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 2).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Universitywide, Miami, North Miami, and Miami Beach**

COUNTY: **Miami-Dade County**

4. STRATEGIC LAND ACQUISITION

PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Totals	**0**		**0**		**$0**		

*Apply Unit Cost to total GSF based on primary space type

Space Detail for Remodeling Projects

	BEFORE		AFTER	
	Space Type	Net Area (NASF)	Space Type	Net Area (NASF)
Remodeling/Renovation				
Total Construction - New & Rem./Renov.	Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS

ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)			**$0**				**$0**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation							
d.Landscape/Irrigaiton							
e.Plaza/Walks							
f.Roadway Improvements							
g.Parking ___ spaces							
h.Telecommunication							
i.Electrical Service							
j.Water Distribution							
k.Sanitary Sewer System							
l.Chilled Water System							
m.Storm Water System							
n.Energy Efficient Equipment							
Total Construction Costs	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
2. Other Project Costs							
a.Land/existing facility acquisition	**$9,200,000**	**$18,400,000**	**$18,400,000**				**$36,800,000**
b.Professional Fees							**$0**
CM Fees							**$0**
c.Fire Marshall Fees							**$0**
d.Inspection Services							**$0**
e.Insurance Consultant							**$0**
f.Surveys & Tests							**$0**
g.Permit/Impact/Environmental Fees							**$0**
h.Artwork (not applicable)							**$0**
i.Moveable Furnishings & Equipment							**$0**
j.Project Contingency	**$500,000**	**$1,000,000**	**$1,000,000**	**$0**	**$0**	**$0**	**$100,000**
k.Project Administration	**$300,000**	**$600,000**	**$600,000**	**$0**	**$0**	**$0**	**$60,000**
Total - Other Project Costs	**$10,000,000**	**$20,000,000**	**$20,000,000**	**$0**	**$0**	**$0**	**$50,000,000**
ALL COSTS 1+2	**$10,000,000**	**$20,000,000**	**$20,000,000**	**$0**	**$0**	**$0**	**$50,000,000**

Appropriations to Date			Project Costs Beyond CIP Period			Total Project In
Source	Fiscal Year	Amount	Source	Fiscal Year	Amount	CIP & Beyond
PECO	**2014-2015**	**$10,000,000**				
	2015-2016	**$0**				
	2016-2017	**$0**				
	2017-2018	**$0**				
TOTAL		**$10,000,000**	TOTAL			**$50,000,000**

CIP-3, D
Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: Florida International University
Project: Strategic Land Acquisition
Total Project Cost: $ 50.0 M
Previous Funding (State): $ 10.0 M
Current Request: $ 20.0 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email): Sandra Gonzalez-Levy, VP, University & Community Relations, O: 305-348-7235, C: 786-423-5805, e-mail: Sandra.Gonzalez-Levy@fiu.edu

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Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☐ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc)

   Explanation: N/A

2. ☒ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc)

   Explanation:

   a. FIU's Main Campus is the second smallest in size and has the highest FTE and headcount per acre in the SUS, at 104 headcount/acre, and 59 FTE/acre, as compared to the SUS averages of 37 headcount/acre and 22 FTE/acre.

   b. Land acquisition would support the enrollment of approximately 11,000 additional students.

3. ☒ Amount of Additional Research Funding to be Obtained; Patents Awarded

   Explanation: FIU estimates that within 5-10 years of the land acquisition (i.e. allowing time for construction, etc.), FIU will increase research funding by $50-60 million annually.

4. ☐ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

   Explanation: N/A

5. ☒ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

Explanation: *U.S. News & World Report* ranks FIU first among public universities in Florida for graduating students with the lowest debt, and ranks FIU 13th in the entire nation. This strategic land acquisition would enable FIU to further magnify its impact.

6. ☒ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

   Explanation:

   a. FIU, Miami Dade County and Miami Dade County Fair and Expo have been working together since 2010 to develop FIU expansion and Fair relocation plans. An independent economic impact study indicates that FIU acquisition would contribute $900M in construction and a recurring economic benefit of $541M per year to the local economy.

   b. Academic space built on this land would support instruction, research, service, and community engagement. FIU has educated more than 200,000 graduates in its 50 year history, 115,000 of whom continue to live and work in south Florida. Increasing enrollment has a direct impact on the local economy.

   c. Emphasis placed on jobs and ties to the business community, working with local businesses, such as utilities, design/engineering and construction firms in addition to industry and government to promote the development and commercialization of research. The land acquisition would result in an expansion of an estimated 500 permanent new jobs within 5 years.

7. ☐ Project Improves the Use, either Operationally or Academically, of Existing Space

   Explanation: N/A

8. ☐ Contribution of Local Funds Through Matching Grants, Property Donations, etc.

   Explanation: N/A

9. ☐ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)

   Explanation: N/A

Other Pertinent Information not included above:

This initiative was approved in 2014 by Miami-Dade residents in a county-wide referendum by 65% vote

CIP-3 SHORT-TERM PROJECT EXPLANATION

AGENCY: Florida International University AGENCY PRIORITY 5
BUDGET ENTITY: State University System DATE BUILDING PROGRAM
PROJECT TITLE: Academic Health Center Study Complex APPROVED N/A
Modesto Maidique Campus

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

The purpose of this project is to consolidate study environments for three colleges, the Herbert Wertheim College of Medicine, the Nicole Wertheim College of Nursing and Health Sciences and the Robert Stempel College of Public Health & Social Work into one facility - consistent with the spirit of an Academic Health Center.

A variety of learning spaces are necessary to provide casual, small group learning and quiet individual study environments. The proposed program anticipates informal gathering environments, open collaborative spaces, quiet reading rooms, small group study rooms, a student lounge with vending area, as well as other support functions. It is anticipated that the facility will have the capacity to serve a population of 560 upper division students from the three colleges. In addition, the program calls for administrative offices for the Academic Health Center.

A beneficial byproduct of this project will be to support the growth in undergraduate enrollment in the university as a whole. Upon its completion, the third floor dedicated HWCOM Library spaces (approximately 6,500 net square feet) will be released back to the Green Library.

The project budget includes extraordinary costs required to integrate new structure and building systems with the two adjacent existing buildings, AHC1 & AHC2.

In recognition of the University's commitment to sustainability practices this project will be designed and built with the goal of meeting the USGBC's LEED-NC "Silver" certification rating level at a minimum. The Project shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 16).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

5. ACADEMIC HEALTH CENTER STUDY COMPLEX PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classroom	**4,500**	**1.6**	**7,200**	**$363.97**	**$2,620,578**	1/1/2021	6/1/2022
Teaching Lab	**5,250**	**1.6**	**8,400**	**$447.69**	**$3,760,588**		
Study	**12,390**	**1.6**	**19,824**	**$354.89**	**$7,035,249**	Space Detail for Remodeling Projects	
Office /Computers	**15,866**	**1.6**	**25,386**	**$394.12**	**$10,004,880**		
Instructional Media	**480**	**1.6**	**768**	**$264.53**	**$203,161**	BEFORE	AFTER
Campus Support Services	**600**	**1.6**	**960**	**$336.10**	**$322,656**	Space Type / Net Area (NASF)	Space Type / Net Area (NASF)
Totals	**39,086**		**62,538**		**$23,947,111**		
*Apply Unit Cost to total GSF based on primary space type							
Remodeling/Renovation							
Total Construction - New & Rem./Renov.					**$23,947,111**	Total 0	Total 0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)			**$7,500,000**	**$16,447,111**			**$23,947,111**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation (integration with existing AHC1 & AHC2)			**$215,000**				**$215,000**
d.Landscape/Irrigaiton				**$65,000**			**$65,000**
e.Plaza/Walks (covered walkway reconfiguation of AHC1 & AHC2)				**$650,000**			**$650,000**
f.Roadway Improvements							**$0**
g.Parking ___ spaces							**$0**
h.Telecommunication				**$110,000**			**$110,000**
i.Electrical Service				**$100,000**			**$100,000**
j.Water Distribution				**$75,000**			**$75,000**
k.Sanitary Sewer System				**$100,000**			**$100,000**
l.Chilled Water System				**$150,000**			**$150,000**
m.Storm Water System				**$120,000**			**$120,000**
n.Energy Efficient Equipment							**$0**
Total Construction Costs	**$0**	**$0**	**$7,715,000**	**$17,817,111**	**$0**	**$0**	**$25,532,111**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees			**$960,310**	**$1,592,901**			**$2,553,211**
CM Fees			**$255,321**				**$255,321**
c.Fire Marshall Fees			**$63,830**				**$63,830**
d.Inspection Services			**$100,000**	**$200,000**			**$300,000**
e.Insurance Consultant			**$12,766**	**$12,766**			**$25,532**
f.Surveys & Tests			**$80,000**	**$40,000**			**$120,000**
g.Permit/Impact/Environmental Fees			**$50,000**	**$70,000**			**$120,000**
h.Artwork				**$127,661**			**$127,661**
i.Moveable Furnishings & Equipment				**$3,102,334**			**$3,102,334**
j.Project Contingency			**$615,038**	**$1,134,962**			**$1,750,000**
k.Construction Service Reimbursement			**$147,735**	**$902,265**			**$1,050,000**
Total - Other Project Costs	**$0**	**$0**	**$2,285,000**	**$7,182,889**			**$9,467,889**
ALL COSTS 1+2	**$0**	**$0**	**$10,000,000**	**$25,000,000**	**$0**	**$0**	**$35,000,000**

Appropriations to Date

Source	Fiscal Year	Amount
TOTAL		

Project Costs Beyond CIP Period

Source	Fiscal Year	Amount
Private	2018-19	**$5,000,000**
PECO	**2018-19**	**$5,000,000**
Private	2018-19	**$12,500,000**
PECO	**2018-19**	**$12,500,000**
TOTAL		**$35,000,000**

Total Project In CIP & Beyond: **$35,000,000**

CIP-3 SHORT-TERM PROJECT EXPLANATION

AGENCY: Florida International University AGENCY PRIORITY 6
BUDGET ENTITY: State University System DATE BUILDING PROGRAM
PROJECT TITLE: Remodeling/Renovation of the Deuxieme Maison (DM) Building APPROVED N/A
Modesto Maidique Campus

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

This request will accommodate renovations to space vacated in conjunction with construction of new facilities that require no significant changes in space categories. In addition, it will provide much needed renovation to existing classroom space in the DM building, the second oldest building on campus.

Academic reorganizations and university strategic initiatives such as classroom, class lab and open lab refurbishments, media upgrades, renovations and/or remodeling will take place throughout the building. Large scale renovations will include upgrades to life safety systems and replacements of HVAC, electrical and conveying systems that are not possible in smaller room-by-room-type renovations.

Comprehensive renovation is crucial to compliance with Florida Statute 255.251 Energy Conservation and Sustainable Building Act including Sections 255.252 (3) and (4) regarding retrofitting buildings. FIU is a signatory to the ACUP Climate Commitment with a goal of meeting a minimum rating of USGBC LEED Silver.

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 5).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

6. REMODEL./RENOV. OF DM BUILDING PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classroom		1.6	0	$336.21	$0	1/1/2020	6/1/2022
Teaching Lab		1.6	0	$413.54	$0		
Study		1.6	0	$327.82	$0		
Office/Computer		1.6	0	$364.06	$0		
Other Assignable		1.6	0	$310.46	$0		
Totals	0		0		$0		

*Apply Unit Cost to total GSF based on primary space type

Space Detail for Remodeling Projects

	BEFORE		AFTER	
	Space Type	Net Area (NASF)	Space Type	Net Area (NASF)
Total		0	Total	0

	NSF		
Remodeling/Renovation	**140,807**	**$75.00**	**$10,560,525**
Total Construction - New & Rem./Renov.			**$10,560,525**

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
			ESTIMATED COSTS				
1. a.Construction Cost (from above)			**$5,400,000**	**$5,160,525**			**$10,560,525**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation							**$0**
d.Landscape/Irrigaiton							**$0**
e.Plaza/Walks							**$0**
f.Roadway Improvements							**$0**
g.Parking ___ spaces							**$0**
h.Telecommunication							**$0**
i.Electrical Service							**$0**
j.Water Distribution							**$0**
k.Sanitary Sewer System							**$0**
l.Chilled Water System							**$0**
m.Storm Water System							**$0**
n.Energy Efficient Equipment							**$0**
Total Construction Costs	**$0**	**$0**	**$5,400,000**	**$5,160,525**	**$0**	**$0**	**$10,560,525**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees			**$510,000**	**$546,053**			**$1,056,053**
CM Fees			**$55,000**	**$50,605**			**$105,605**
c.Fire Marshall Fees			**$15,000**	**$11,401**			**$26,401**
d.Inspection Services			**$100,000**	**$100,000**			**$200,000**
e.Insurance Consultant							
f.Surveys & Tests			**$130,000**	**$120,000**			**$250,000**
g.Permit/Impact/Environmental Fees			**$80,000**	**$70,000**			**$150,000**
h.Artwork (not applicable)							
i.Moveable Furnishings & Equipment			**$150,000**	**$197,416**			**$347,416**
j.Project Contingency			**$350,000**	**$340,000**			**$690,000**
j.Construction Service Reimbursement			**$210,000**	**$204,000**			**$414,000**
Total - Other Project Costs	**$0**	**$0**	**$1,600,000**	**$1,639,475**	**$0**	**$0**	**$3,239,475**
ALL COSTS 1+2	**$0**	**$0**	**$7,000,000**	**$6,800,000**	**$0**	**$0**	**$13,800,000**

Appropriations to Date			Project Costs Beyond CIP Period			Total Project In
Source	Fiscal Year	Amount	Source	Fiscal Year	Amount	CIP & Beyond
TOTAL			TOTAL			**$13,800,000**

CIP-3, D
Higher Educational Facilities
Return on Investment

This is a tool developed by a collaborative group of stakeholders designed to facilitate the identification of return on investment metrics for higher education facilities. Check any box(es) that apply, provide a quantitative explanation, and identify the term or years in which ROI information is provided.

Institution: Florida International University
Project: Remodel./Renov. of the Deuxieme Maison (DM) building - MMC
Total Project Cost: $ 13.8 M
Previous Funding (State): n/a
Current Request: $ 0 M
STEM (Yes or No): YES
Contact Person (Name, Position, Office and Cell Phone No., Email): John M. Cal, AVP, Facilities Management, O: 305-348-4001, C: 305-323-1488, e-mail: jcal@fiu.edu

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Check any box(es) that apply and provide a quantitative explanation. Identify the term or years in which ROI information is projected.

1. ☐ Number of Additional Degrees and Certificates Produced and How Those Degrees are Meeting the Needs of our State (Job Openings, Average Wages of those Job Openings, etc.)

   Explanation:

2. ☐ Number of Additional Students Served and the Benefits/Efficiencies Created (increase graduation rate, alleviate waitlist, increase academic support, etc.)

   Explanation:

3. ☐ Amount of Additional Research Funding to be Obtained; Patents Awarded

   Explanation:

4. ☐ Project is in an Area of Strategic Emphasis as Determined by the Board of Governors' Gap Analysis or the Department of Economic Opportunity's National Occupational Forecast

   Explanation:

5. ☐ Improves the Ranking of a Preeminent Program or Improves on a Performance Funding Model Metric

   Explanation:

6. ☐ Increase Business Partnerships Which Will Lead to Guaranteed Internships and Jobs for Students

   Explanation:

7. ☒ Project Improves the Use, either Operationally or Academically, of Existing Space

   Explanation: These projects include multiple renovation and remodeling needed to adapt classrooms, laboratories, support spaces and office areas to meet current and projected requirements.

8. ☐ Contribution of Local Funds Through Matching Grants, Property Donations, etc.

   Explanation:

9. ☒ Reduces Future Deferred Maintenance Cost and Extends the Life of the Facility by Bringing the Project up to Existing Standards (cost-benefit analysis of renovation or new facility vs. maintenance)

   Explanation: These projects include major renovations of various buildings at the main campus including 5 that are more than 40-years old. The renovations will result in significantly better indoor environments, lower energy usage and reduced maintenance costs.

Other Pertinent Information not included above:

CIP-3 SHORT-TERM PROJECT EXPLANATION

CIP-3, A – NARRATIVE DESCRIPTION

AGENCY: Florida International University
BUDGET ENTITY: State University System
PROJECT TITLE: Honors College
Modesto Maidique Campus

AGENCY PRIORITY 7
DATE BUILDING PROGRAM APPROVED N/A

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

This project is meant both to satisfy university space needs and to facilitate the enrollment growth and programmatic development of Honors consistent with our mandate to become “the centerpiece of undergraduate educational excellence” at Florida International University.

The main components of the facility will include space for: a reception area/visitor’s lounge, an auditorium for occupancy of 375, an Information Technology Center, student support services, private study rooms, a student communal area, offices for faculty and administration, conference room to accommodate 25 users, and archives. Space dedicated to instruction will include 8 seminar rooms that each can accommodate 25 students. Architecturally, the building will be distinguished as a place of educational excellence and achievement by recognition of some of the great contributors to different civilizations and to the acquisition of knowledge.

The project budget includes extraordinary costs of upgrading and extending existing central campus infrastructure to the project site.

In recognition of the University's commitment to sustainability practices remodeling/renovation projects will be designed and built with the goal of meeting the USGBC's LEED-NC "Silver" certification rating level at a minimum. All projects shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 14).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

7. HONORS COLLEGE PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classroom	**0**	**1.5**	**0**	**$277.60**	**$0**	1/1/2022	6/1/2023
Auditorium	**0**	**1.6**	**0**	**$332.36**	**$0**		
Teaching Lab	**965**	**1.6**	**1,544**	**$379.40**	**$585,790**		
Office	**3,121**	**1.5**	**4,682**	**$300.60**	**$1,407,246**		
Other Assignable	**4,145**	**1**	**4,145**	**$256.35**	**$1,062,559**		
Totals	**8,231**		**10,371**		**$3,055,594**		

*Apply Unit Cost to total GSF based on primary space type

Remodeling/Renovation

Total Construction - New & Rem./Renov. **$3,055,594**

Space Detail for Remodeling Projects

BEFORE Space Type	BEFORE Net Area (NASF)	AFTER Space Type	AFTER Net Area (NASF)
Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
			ESTIMATED COSTS				
1. a.Construction Cost (from above)			**$3,055,594**				**$3,055,594**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation			**$25,000**				**$25,000**
d.Landscape/Irrigaiton			**$10,000**				**$10,000**
e.Plaza/Walks			**$20,000**				**$20,000**
f.Roadway Improvements							**$0**
g.Parking ___ spaces							**$0**
h.Telecommunication			**$10,000**				**$10,000**
i.Electrical Service			**$10,000**				**$10,000**
j.Water Distribution			**$5,000**				**$5,000**
k.Sanitary Sewer System			**$10,000**				**$10,000**
l.Chilled Water System							**$0**
m.Storm Water System			**$5,000**				**$5,000**
n.Energy Efficient Equipment							**$0**
Total Construction Costs	**$0**	**$0**	**$3,150,594**	**$0**	**$0**	**$0**	**$3,150,594**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees			**$252,048**				**$252,048**
CM Fees			**$31,506**				**$31,506**
c.Fire Marshall Fees			**$7,876**				**$7,876**
d.Inspection Services			**$20,000**				**$20,000**
e.Insurance Consultant							
f.Surveys & Tests			**$5,000**				**$5,000**
g.Permit/Impact/Environmental Fees			**$10,000**				**$10,000**
h.Artwork			**$7,876**				**$7,876**
i.Moveable Furnishings & Equipment			**$195,100**				**$195,100**
j.Project Contingency			**$200,000**				**$200,000**
k.Construction Service Reimbursement			**$120,000**				**$120,000**
Total - Other Project Costs	**$0**	**$0**	**$849,406**	**$0**	**$0**		**$849,406**
ALL COSTS 1+2	**$0**	**$0**	**$4,000,000**	**$0**	**$0**		**$4,000,000**

Appropriations to Date Source	Fiscal Year	Amount
TOTAL		

Project Costs Beyond CIP Period Source	Fiscal Year	Amount
Private	2018-19	**$2,000,000**
PECO	**2018-19**	**$2,000,000**
TOTAL		**$4,000,000**

Total Project In CIP & Beyond: **$4,000,000**

CIP-3 SHORT-TERM PROJECT EXPLANATION

AGENCY: Florida International University
BUDGET ENTITY: State University System
PROJECT TITLE: Green Library Addition
Modesto Maidique Campus

AGENCY PRIORITY 8
DATE BUILDING PROGRAM APPROVED N/A

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

This project includes expansion of the Green Library, by building an addition to the existing structure. The addition will provide 88,000 square feet of space to be allocated for student study spaces, open group collaborative spaces, group study rooms, and designated graduate student study areas.

Standards of the Association for College and Research Libraries recommend allocating seating for 20% of FTE enrollment. Currently we have seating for approximately 1300 students, roughly 4% of the recommended allocation. This addition will add much needed study space.

The project budget includes extraordinary costs of upgrading and extending existing central campus infrastructure to the project site.

In recognition of the University's commitment to sustainability practices this project will be designed and built with the goal of meeting the USGBC's LEED-NC "Silver" certification rating level at a minimum. The Project shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 6).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

8. GREEN LIBRARY ADDITION PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classrooms		**1.4**	**0**	**$363.97**	**$0**	1/1/2021	6/1/2022
Teaching Lab		**1.4**	**0**	**$447.69**	**$0**		
Study	**88,000**	**1.4**	**123,200**	**$354.89**	**$43,721,887**		
Office/ Computer		**1.4**	**0**	**$394.12**	**$0**		
Instructional Media		**1.4**	**0**	**$264.53**	**$0**		
Campus Support Services		**1.4**	**0**	**$336.10**	**$0**		
Research Lab		**1.4**	**0**	**$460.09**	**$0**		
Totals	**88,000**		**123,200**		**$43,721,887**		

*Apply Unit Cost to total GSF based on primary space type

Space Detail for Remodeling Projects

	BEFORE Space Type	BEFORE Net Area (NASF)	AFTER Space Type	AFTER Net Area (NASF)
Demolition/Remodeling/Renovation				
8800 / 12320 / $4,140,746				
Total Construction - New + Rem./Renov. **$47,862,633**	Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)				**$7,000,000**	**$23,000,000**	**$17,862,633**	**$47,862,633**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation				**$300,000**			**$300,000**
d.Landscape/Irrigaiton				**$100,000**			**$500,000**
e.Plaza/Walks				**$250,000**			**$250,000**
f.Roadway Improvements				**$250,000**			**$250,000**
g.Parking ___ spaces							**$300,000**
h.Telecommunication				**$250,000**			**$450,000**
i.Electrical Service				**$100,000**			**$100,000**
j.Water Distribution				**$100,000**			**$100,000**
k.Sanitary Sewer System				**$200,000**			**$200,000**
l.Chilled Water System				**$350,000**			**$350,000**
m.Storm Water System				**$100,000**			**$100,000**
n.Energy Efficient Equipment				**$25,000**			**$25,000**
Total Construction Costs	**$0**	**$0**	**$0**	**$9,025,000**	**$23,000,000**	**$17,862,633**	**$49,887,633**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees				**$3,991,011**			**$3,991,011**
CM Fees				**$498,876**			**$498,876**
c.Fire Marshall Fees				**$124,719**			**$124,719**
d.Inspection Services				**$125,000**	**$225,000**	**$50,000**	**$400,000**
e.Insurance Consultant							
f.Surveys & Tests				**$175,000**	**$50,000**	**$50,000**	**$275,000**
g.Permit/Impact/Environmental Fees				**$49,061**	**$32,598**		**$81,659**
h.Artwork						**$176,450**	**$176,450**
i.Moveable Furnishings & Equipment					**$34,870**	**$4,329,782**	**$4,364,652**
j.Project Contingency				**$510,235**	**$1,207,532**	**$1,532,234**	**$3,250,000**
k.Construction Service Reimbursement				**$501,098**	**$450,000**	**$998,902**	**$1,950,000**
Total - Other Project Costs	**$0**	**$0**	**$0**	**$5,975,000**	**$2,000,000**	**$7,137,367**	**$15,112,367**
ALL COSTS 1+2	**$0**	**$0**	**$0**	**$15,000,000**	**$25,000,000**	**$25,000,000**	**$65,000,000**

Appropriations to Date Source	Fiscal Year	Amount	Project Costs Beyond CIP Period Source	Fiscal Year	Amount	Total Project In CIP & Beyond
TOTAL		$0	TOTAL			**$65,000,000**

CIP-3 SHORT-TERM PROJECT EXPLANATION

AGENCY: Florida International University AGENCY PRIORITY 9
BUDGET ENTITY: State University System DATE BUILDING PROGRAM
PROJECT TITLE: Science & Humanities Center (S.T.E.A.M) APPROVED N/A
Modesto Maidique Campus

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

This project includes a new Humanities Center for the College of Arts and Sciences. The College of Arts and Sciences is experiencing continued growth and current facilities are not adequate to meet current or projected needs. The College of Arts and Sciences embraces nearly half the student body at FIU and awards close to 40% of all degrees. Arts & Sciences touches almost every student at some point in their education and offers 72 degree programs.

The Humanities Center will be an integral part of the College. The provision of adequate facilities for these core classes is integral to meeting current needs and is an essential element of the University's strategy to retain students and increase graduation rates. The Center will house a range of programs including English, Modern Languages, History, Linguistics, Asian Studies and Philosophy and will work in concert with other programs in the College.

The project budget includes extraordinary costs of upgrading and extending existing central campus infrastructure to the project site.

In recognition of the University's commitment to sustainability practices remodeling/renovation projects will be designed and built with the goal of meeting the USGBC's LEED-NC "Silver" certification rating level at a minimum. All projects shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 15).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

9. SCIENCE & HUMANITIES CENTER (S.T.E.A.M.) PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classroom	**5,500**	**1.6**	**8,800**	**$354.72**	**$3,121,498**	1/1/2022	6/1/2023
Teaching Lab	**15,000**	**1.6**	**24,000**	**$436.31**	**$10,471,371**		
Study	**4,000**	**1.6**	**6,400**	**$345.86**	**$2,213,523**		
Research Lab	**5,000**	**1.6**	**8,000**	**$448.39**	**$3,587,152**		
Office/Computer	**15,500**	**1.6**	**24,800**	**$384.10**	**$9,525,592**		
Other Assignable	**5,000**	**1.6**	**8,000**	**$327.55**	**$2,620,437**		

Space Detail for Remodeling Projects

					BEFORE		AFTER	
					Space Type	Net Area (NASF)	Space Type	Net Area (NASF)
Totals	**50,000**		**80,000**		**$31,539,572**			
*Apply Unit Cost to total GSF based on primary space type								
Remodeling/Renovation								
Total Construction - New & Rem./Renov.					**$31,539,572**	Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)					**$17,499,115**	**$14,040,457**	**$31,539,572**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							**$0**
c.Site Preparation					**$500,000**		**$500,000**
d.Landscape/Irrigaiton						**$200,000**	**$200,000**
e.Plaza/Walks					**$150,000**		**$150,000**
f.Roadway Improvements							**$0**
g.Parking ___ spaces					**$500,000**		**$500,000**
h.Telecommunication					**$100,000**		**$100,000**
i.Electrical Service					**$300,000**		**$300,000**
j.Water Distribution					**$200,000**		**$200,000**
k.Sanitary Sewer System					**$350,000**		**$350,000**
l.Chilled Water System					**$100,000**		**$100,000**
m.Storm Water System					**$300,000**		**$300,000**
n.Energy Efficient Equipment							**$0**
Total Construction Costs	**$0**	**$0**	**$0**	**$0**	**$19,999,115**	**$14,240,457**	**$34,239,572**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees					**$2,783,700**	**$126,664**	**$2,910,364**
CM Fees					**$342,396**		**$342,396**
c.Fire Marshall Fees					**$85,599**		**$85,599**
d.Inspection Services					**$250,000**		**$250,000**
e.Insurance Consultant					**$17,120**	**$17,120**	**$34,240**
f.Surveys & Tests					**$50,000**	**$50,000**	**$0**
g.Permit/Impact/Environmental Fees					**$120,000**		**$120,000**
h.Artwork						**$171,198**	**$171,198**
i.Moveable Furnishings & Equipment						**$4,986,631**	**$4,986,631**
j.Project Contingency					**$443,002**	**$1,906,998**	**$2,350,000**
k.Construction Service Reimbursement					**$409,068**	**$1,000,933**	**$1,410,000**
Total - Other Project Costs	**$0**	**$0**	**$0**	**$0**	**$4,500,885**	**$8,259,543**	**$12,760,428**
ALL COSTS 1+2	**$0**	**$0**	**$0**	**$0**	**$24,500,000**	**$22,500,000**	**$47,000,000**

Appropriations to Date Source	Fiscal Year	Amount	Project Costs Beyond CIP Period Source	Fiscal Year	Amount	Total Project In CIP & Beyond
TOTAL			TOTAL			**$47,000,000**

CIP-3 SHORT-TERM PROJECT EXPLANATION

CIP-3, A – NARRATIVE DESCRIPTION

AGENCY: Florida International University
BUDGET ENTITY: State University System
PROJECT TITLE: Remodeling/Renovation of Academic Data Center
Modesto Maidique Campus

AGENCY PRIORITY 10
DATE BUILDING PROGRAM APPROVED N/A

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

This request will accommodate renovation and remodeling of space vacated in conjunction with construction of new facilities that require no significant changes in space categories. In addition, it will provide much needed renovation to existing data room spaces in various buildings university wide.

The current Data Center is outdated and at capacity. This proposal for a new Data Center will offer several key benefits which include increased data center space to implement new technologies that will improve efficiencies. This project will also allow the University to save money on cooling by having an area to consolidate University servers in one location.

The project budget includes extraordinary costs of upgrading and extending existing central campus fiber optic backbone infrastructure to the project site.

In recognition of the University's commitment to sustainability practices remodeling/renovation projects will be designed and built with the goal of meeting the USGBC's LEED "Silver" certification rating level at a minimum. All projects shall comply with Florida Statutes 255.251 Energy Conservation and Sustainable Buildings Act including 255.252 (3) and (4).

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 11).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Modesto Maidique Campus** COUNTY: **Miami-Dade County**

10. REMODEL./RENOV. ACADEMIC DATA CENTER PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classroom		1.6	0	$354.72	$0	1/1/2021	6/1/2022
Teaching Lab		1.6	0	$436.31	$0		
Study		1.6	0	$345.86	$0		
Office/Computer		1.6	0	$384.10	$0		

Space Detail for Remodeling Projects

						BEFORE		AFTER	
						Space Type	Net Area (NASF)	Space Type	Net Area (NASF)
Totals	0		0		$0				
*Apply Unit Cost to total GSF based on primary space type									
Remodeling/Renovation			**24,000**	**$475.00**	**$11,400,000**				
Total Construction - New & Rem./Renov.					**$11,400,000**	Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)					**$8,970,800**	**$2,429,200**	**$11,400,000**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation							**$0**
d.Landscape/Irrigaiton							**$0**
e.Plaza/Walks							**$0**
f.Roadway Improvements							**$0**
g.Parking ___ spaces							**$0**
h.Telecommunication					**$1,500,000**		**$1,500,000**
i.Electrical Service							**$0**
j.Water Distribution							**$0**
k.Sanitary Sewer System							**$0**
l.Chilled Water System							**$0**
m.Storm Water System							**$0**
n.Energy Efficient Equipment					**$500,000**		**$500,000**
Total Construction Costs	**$0**	**$0**	**$0**	**$0**	**$10,970,800**	**$2,429,200**	**$13,400,000**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees					**$1,000,000**	**$340,000**	**$1,340,000**
CM Fees					**$114,000**	**$20,000**	**$134,000**
c.Fire Marshall Fees					**$28,500**	**$5,000**	**$33,500**
d.Inspection Services					**$30,000**	**$120,000**	**$150,000**
e.Insurance Consultant					**$6,700**	**$6,700**	**$13,400**
f.Surveys & Tests					**$50,000**	**$30,000**	**$80,000**
g.Permit/Impact/Environmental Fees					**$25,000**	**$25,000**	**$50,000**
h.Artwork (not applicable)						**$0**	**$0**
i.Moveable Furnishings & Equipment						**$2,739,100**	**$2,739,100**
j.Project Contingency					**$250,000**	**$725,000**	**$975,000**
k.Construction Service Reimbursement					**$300,000**	**$285,000**	**$585,000**
Total - Other Project Costs	**$0**		**$0**	**$0**	**$1,804,200**	**$4,295,800**	**$6,100,000**
ALL COSTS 1+2	**$0**	**$0**	**$0**	**$0**	**$12,775,000**	**$6,725,000**	**$19,500,000**

Appropriations to Date Source	Fiscal Year	Amount	Project Costs Beyond CIP Period Source	Fiscal Year	Amount	Total Project In CIP & Beyond
TOTAL			TOTAL			**$19,500,000**

CIP-3 SHORT-TERM PROJECT EXPLANATION

AGENCY: Florida International University AGENCY PRIORITY 11
BUDGET ENTITY: State University System DATE BUILDING PROGRAM
PROJECT TITLE: Remodeling/Renovation of the Owa Ehan (OE) Building APPROVED N/A
Modesto Maidique Campus

PURPOSE, NEED, SCOPE, RELATIONSHIP OF PROJECT TO AGENCY OBJECTIVES

This request will accommodate renovations to space vacated in conjunction with construction of new facilities that require no significant changes in space categories. In addition, it will provide much needed renovation to existing classroom space in the DM building, the second oldest building on campus.

Academic reorganizations and university strategic initiatives such as classroom, class lab and open lab refurbishments, media upgrades, renovations and/or remodeling will take place throughout the building. Large scale renovations will includeupgrades to life safety systems and replacements of HVAC, electrical and conveying systems that are not possible in smaller room-by-room-type renovations.

Comprehensive renovation is crucial to compliance with Florida Statute 255.251 Energy Conservation and Sustainable Building Act including Sections 255.252 (3) and (4) regarding retrofitting buildings. FIU is a signatory to the ACUP Climate Commitment with a goal of meeting a minimum rating of USGBC LEED Silver.

This project is included in the "2015-2020 Educational Plant Survey" dated 1/20/2016, recommendation 5).

STATISTICAL JUSTIFICATION

The Statistical Justification portion of the CIP-3 is not required this year.

STATE UNIVERSITY SYSTEM

CIP-3 SHORT TERM PROJECT EXPLANATION

GEOGRAPHIC LOCATION: **Biscayne Bay Campus, North Miami** COUNTY: **Miami-Dade County**

11 REMODEL./RENOV OF OE BUILDING PROJECT BT No.:

CIP-3, B - PROJECT DESCRIPTION

Facility/Space Type	Net Area (NASF)	Net to Gross Conversion	Gross Area (GSF)	Unit Cost (Cost/GSF)*	Construction Cost	Assumed Bid Date	Occupancy Date
Classroom		1.6	0	$336.21	$0	1/1/2020	6/1/2022
Teaching Lab		1.6	0	$413.54	$0		
Study		1.6	0	$327.82	$0		
Office/Computer		1.6	0	$364.06	$0		
Totals	0		0		$0		
*Apply Unit Cost to total GSF based on primary space type							
Remodeling/Renovation			ACC II /2 117,306	$140.00	$16,422,840		
Total Construction - New & Rem./Renov.					$16,422,840		

Space Detail for Remodeling Projects

BEFORE Space Type	BEFORE Net Area (NASF)	AFTER Space Type	AFTER Net Area (NASF)
Total	0	Total	0

CIP-3, C - SCHEDULE OF PROJECT COMPONENTS ESTIMATED COSTS

Basic Construction Cost	Funded to Date	2018-19	2019-20	2020-21	2021-22	2022-23	Funded & In CIP
1. a.Construction Cost (from above)					**$8,250,000**	**$8,172,840**	**$16,422,840**
Add'l/Extraordinary Const. Costs							
b.Environmental Impacts/Mitigation							
c.Site Preparation							**$0**
d.Landscape/Irrigaiton							**$0**
e.Plaza/Walks							**$0**
f.Roadway Improvements							**$0**
g.Parking ___ spaces							**$0**
h.Telecommunication							**$0**
i.Electrical Service							**$0**
j.Water Distribution							**$0**
k.Sanitary Sewer System							**$0**
l.Chilled Water System							**$0**
m.Storm Water System							**$0**
n.Energy Efficient Equipment							**$0**
Total Construction Costs	**$0**	**$0**	**$0**	**$0**	**$8,250,000**	**$8,172,840**	**$16,422,840**
2. Other Project Costs							
a.Land/existing facility acquisition							
b.Professional Fees					**$750,000**	**$728,056**	**$1,478,056**
CM Fees					**$108,310**	**$55,918**	**$164,228**
c.Fire Marshall Fees					**$27,077**	**$13,980**	**$41,057**
d.Inspection Services					**$77,498**	**$154,995**	**$232,493**
e.Insurance Consultant							
f.Surveys & Tests					**$83,333**	**$166,667**	**$250,000**
g.Permit/Impact/Environmental Fees					**$50,000**	**$100,000**	**$150,000**
h.Artwork (not applicable)							**$0**
i.Moveable Furnishings & Equipment					**$250,000**	**$75,184**	**$325,184**
j.Project Contingency					**$483,782**	**$337,360**	**$821,142**
k.Construction Service Reimbursement					**$420,000**	**$195,000**	**$615,000**
Total - Other Project Costs	**$0**	**$0**	**$0**	**$0**	**$2,250,000**	**$1,827,160**	**$4,077,160**
ALL COSTS 1+2	**$0**	**$0**	**$0**	**$0**	**$10,500,000**	**$10,000,000**	**$20,500,000**

Appropriations to Date Source	Fiscal Year	Amount	Project Costs Beyond CIP Period Source	Fiscal Year	Amount	Total Project In CIP & Beyond
TOTAL			TOTAL			**$20,500,000**