



UNIVERSITY OF CENTRAL FLORIDA

**Board of Trustees
Finance and Facilities Committee Meeting
March 21, 2019
10:45 a.m.
FAIRWINDS Alumni Center
Conference call in phone number 800-442-5794, passcode 463796**

REVISED AGENDA

- | | |
|---|---|
| I. CALL TO ORDER | Alex Martins
<i>Chair, Finance and Facilities Committee</i> |
| II. ROLL CALL | Tracy D. Slavik
<i>Coordinator for Administrative Services for
Administration and Finance Division</i> |
| III. MEETING MINUTES | |
| <ul style="list-style-type: none">• Approval of the January 24, 2019
Finance and Facilities Committee
meeting minutes | Chair Martins |
| IV. NEW BUSINESS | Chair Martins |
| <ul style="list-style-type: none">• Update Signature Authority for Checks
(FFC-1)• Autonomous Vehicle Shuttle Service
and Minor Amendment to Align
Campus Master Plan Update (FFC-2)• Investments Quarterly Report
Ended December 31, 2018 (INFO-1)• No Fee Increases for 2019-20
(INFO-2) | <div>Robert Caslen
<i>Senior Counsel to the President</i></div> <div>Misty Shepherd
Elizabeth Klonoff
<i>Vice President for Research and Dean of the College
of Graduate Studies</i></div> <div>Robert Caslen
Brad Hodum
<i>Associate Controller</i></div> <div>Robert Caslen</div> |

- Technology Fee Update ([INFO-3](#))
Elizabeth A. Dooley
Provost and Vice President for Academic Affairs
Professor, College of Community Involvement and Education
Joel Hartman
Vice President for Information Technologies and Resources and Chief Information Officer
- Campus Master Plan Public Comment Meeting Minutes ([INFO-4](#))
Misty Shepherd
Bill Martin
Director, Facilities Planning
- 2018 Capital Projects Summary ([INFO-5](#))
Misty Shepherd
Bill Martin

V. OTHER BUSINESS

Chair Martins

VI. CLOSING COMMENTS

Chair Martins



UNIVERSITY OF CENTRAL FLORIDA

Board of Trustees
Finance and Facilities Committee Meeting
UCF Rosen College of Hospitality Management
January 24, 2019

MINUTES

CALL TO ORDER

Trustee Alex Martins, chair of the Finance and Facilities Committee, called the meeting to order at 11:00 a.m. Committee members Joshua Boloña, Robert Garvy, John Lord, John Sprouls, and William Yeargin were present. Chairman Marcos Marchena was present. Trustees Ken Bradley, Joseph Conte, Beverly Seay, and William Self were present.

Chair Martins stated that he had previously requested that he be provided with a draft agenda, as committee chair, for approval before the committee's materials were posted. A draft agenda was not provided to him prior to the January 24, 2019 committee meeting. After conversations with President Whittaker and staff, the chair's approval is now required before the committee's materials can be posted. For this reason, there were several revisions to the original posted materials.

Martins alerted trustees that the Parking, Housing, and Health Auxiliary Facilities Operating Budgets item was changed to an information item, so the committee would have ample time to review the materials. The Subway contract also was removed from the agenda due to discussions with staff and his concern that the amendment did not sufficiently cover all aspects of the agreement. The contract will be brought to the committee at a later date.

MEETING MINUTES

The minutes of the December 12, 2018 Finance and Facilities Committee meeting were approved as submitted.

NEW BUSINESS

Concessions Services for UCF Convocation Corporation (FFC-1)

Kathy Mitchell, Interim Chief Financial Officer, and Greg Robinson, Assistant Vice President for Procurement Services, requested approval of the agreement with Spectra Food Services and Hospitality for concessions food services for the general admissions seating and areas at the CFE Arena and Venue facilities. The initial agreement will be for five years, four months: February 1, 2019 through June 30, 2024. The parties have the option to renew the agreement for one five-year term.

This agreement includes capital dollars (provided by the awarded contractor) to improve concession spaces at the CFE Arena and Venue while also offering substantial revenue sharing

through commission. No UCF funds will be used for the facility improvements. This agreement does not include servicing the premium seating areas, nor does it include catering services.

The Board of Trustees approved awarding this agreement to Spectra Food Services and Hospitality at the September 27, 2018, Board meeting. However, at the November 15, 2018 Finance and Facilities Committee meeting, the trustees requested further information on performance metrics and enhancing the fan experience with lower prices for food and beverages.

Robinson and the Procurement Services staff conducted further negotiations with Spectra and researched other stadiums and venues to compare Spectra's pricing. They found that the prices in the contract were already the same or lower than the peer facilities reviewed. Robinson also mentioned that Spectra already offers special pricing for students--\$2 hot dogs and \$2 bottled water, half of the regular price.

Spectra will now also offer a minimum of two new combo deals (where the price for the three items is \$2 less than if each item were purchased individually), and that number might increase to four total combo deals. Spectra also will offer a \$5 kids' meal. These items were added to the contract with no change to the commission structure. UCF can, at any time, discuss changing the price of items to enhance the fan experience with Spectra. However, Robinson noted that this would affect commissions. For example, if the price for an item were lowered by 25 percent, the commission received for that item would be lowered by 25 percent as well. If the price of bottled water were reduced to \$3 from its current \$4 price, the commission would be reduced from \$32,891 to \$24,668, an almost \$8,000 loss for the UCF Convocation Corporation.

Vice Chair Garvy said his concerns about pricing were alleviated because of the market research completed by Procurement Services, and that there is no need to be below market value. Spectra and Procurement Services made the requested changes and Spectra is allowing for flexibility.

Trustee Yeargin asked if the ability to renegotiate prices with Spectra had been added to the contract after the November 15, 2018 FFC meeting. Robinson answered yes. It had been in the contract previously but was vague. Now it is stipulated as a term of the contract.

Chair Martins asked for clarification about the five-year term with one five-year renewal, and if that five-year renewal had to be mutually agreed upon. Robinson said yes. Chair Martins thanked the staff for addressing the requests of the committee.

The committee unanimously approved the agreement with Spectra Food Services and Hospitality, with Trustee Sprouls recusing himself because of a potential conflict of interest.

Parking, Housing, and Health Auxiliary Facilities Operating Budgets (INFO-1)

Mitchell informed the trustees that the 2019-20 operating budgets for the university auxiliary facilities with outstanding revenue bonds were being provided for their review, and that their approval would be required prior to the Board of Governors' February 21, 2019 due date for these budgets.

Trustee Bradley asked why Parking's operating expenses from 2018-19 to 2019-20 had increased, and Mitchell answered that it was due to increased shuttle services for the UCF Downtown campus and two new apartment complexes around the main campus.

Trustee Bradley also asked why there was an increase in the salaries/benefits line for Health Services. Albert Francis, Assistant Controller, responded that this is because of market changes for the professional staff at the Student Health Center and the need to hire more employees.

Chair Martins asked for confirmation that next year's budget will cover the new garage at the UCF Downtown campus. Mitchell confirmed that it would.

Chair Martins also asked whether adding a new garage would increase revenue by more than \$52,000. Francis said that the Parking revenue increase is not based on student credit hour enrollment growth or increases in decal sales, as those have been held flat for the next fiscal year. Next year's costs related to construction transfers for new garages at the Rosen campus and the Lake Nona facility (which are included in the construction transfer budget for 2020) are for design fees only. The garages will not be operational by the end of fiscal year 2020.

Chairman Marchena clarified that the students attending UCF Downtown will have relocated from the main campus, so there will be no new revenue. The only change will be where students are using the facilities.

Chair Martins also asked for information on construction transfers. Francis said that since these budgets represent the operating funds for each of the auxiliaries, the projected transfers will be from the operating fund to the construction fund. The use of those construction funds could occur in later years, but the auxiliaries must budget for their use from the operating fund in the fiscal year in which they will be transferred.

Parking's current operating year for construction transfers includes the remaining \$3.6 million for the UCF Downtown garage and a payoff of an internal loan between Business Services and Parking for the expansion of Garage C. Next year's transfers include the transfer of interest earnings (which is routine for each auxiliary) to the central reserve of the university, a buildout in the UCF Downtown garage for a Parking Services office, \$750,000 in design fees for the Rosen garage, and \$834,000 in design fees for the garage at Lake Nona.

For Housing, the current year's estimated transfers include the transfer of interest earnings of \$400,000, a UCF Downtown student support space located in the new partnership housing facility at a cost of \$2.7 million, and \$1.2 million for additional infrastructure for the Res-Net internet systems project for Housing. Next year's transfers include an additional \$400,000 in interest transfers and an additional \$1.2 million for the Res-Net internet systems project.

Health's transfers for the current year and next year include interest earnings projections of \$137,000.

Mitchell added that part of the reason for the delay in providing the materials is that they wanted to present the information accurately. They received written confirmation from the Board of Governors that these construction transfers were allowed and are being shown properly.

Chair Martins asked whether, in light of having these questions answered, the committee wanted to move forward with a motion to approve. Vice Chair Garvy made the motion, and Trustee Yeargin seconded. The committee unanimously approved the 2019-20 Parking, Housing, and Health Auxiliary Facilities Operating Budgets as presented.

Chair Martins adjourned the Finance and Facilities Committee meeting at 11:25 a.m.

Reviewed by:

_____ Alex Martins Chair, Finance and Facilities Committee	_____ Date
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Respectfully submitted :

_____ Grant J. Heston Associate Corporate Secretary	_____ Date
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ITEM: FFC-1

UCF BOARD OF TRUSTEES
Finance and Facilities Committee
March 21, 2019

Title: Update Signature Authority for Checks

Background:

Following the personnel actions taken in response to the Bryan Cave investigation report, the board needs to update the list of university employees who are authorized to sign checks on the Bank of America account.

Issues to be Considered:

Three of the currently authorized check signers are not currently working for the university:

- William Merck II, Vice President for Administration and Finance (resigned September 14, 2018)
- Tracy Clark, Associate Provost for Budget, Planning, and Administration and Associate Vice President for Finance (resigned January 18, 2019)
- Christina Tant, Assistant Vice President and University Controller (suspended without pay January 18, 2019)

There are two other authorized check signers currently:

- Joel Levenson, Associate Controller
- Tera Alcala, Associate Controller

Alternatives to Decision:

Alternatives include designating different or additional employees as check signers.

Fiscal Impact and Source of Funding:

None, provided there is at least one authorized employee available to sign checks.

Recommended Actions:

1. Recommend to the BOT the removal of the following individuals from the list of designated personnel with signature authority for checks:
 - William Merck
 - Tracy Clark
 - Christina Tant
2. Recommend to the BOT the addition of the following individual to the list of designated personnel with signature authority for checks:
 - Phillip Henson, Director, Finance & Accounting

Authority for Board of Trustees Action:

Section 1011.42, Florida Statutes, requires the university board of trustees to designate university employees who are authorized to sign checks to pay legal obligations of the university.

Committee Chair or Chairman of the Board approval:

Approved by Chair Alex Martins on February 20, 2019.

Submitted by:

Robert Caslen, Senior Counsel to the President

Supporting Documentation:

Attachment A: Section 1011.42(7), Florida Statutes, *University depositories; deposits into and withdrawals from depositories*

Facilitators/Presenters:

Robert Caslen, Special Counsel to the President

Attachment A

Select Year:

The 2018 Florida Statutes

[Title XLVIII](#)
K-20 EDUCATION CODE

[Chapter 1011](#)
PLANNING AND BUDGETING

[View Entire Chapter](#)

1011.42 University depositories; deposits into and withdrawals from depositories.—

(1) The board of trustees of each university shall designate the depositories in which any university funds may be deposited. No bank shall be designated unless it is a qualified depository as provided by Florida Statutes.

(2) All funds received by a university, from whatever source and for whatever purpose, shall promptly be deposited in a board of trustees approved qualified depository.

(3) The board of trustees shall require an accurate and complete set of accounts to be maintained in the books and records for each fund on deposit in each university depository. Each account shall show the amount subject to withdrawal, the amount deposited, the amount expended, and the balance of the account.

(4) The university may maintain a separate checking account for each fund or may utilize a single checking account for the deposit and withdrawal of moneys from all funds and segregate the various funds on the books and records only. No check or withdrawal shall be drawn in excess of the balance to the credit of the appropriate fund.

(5) Funds awaiting clearing may be invested in investments earning interest in a qualified depository, in the State Treasury, and in the State Board of Administration. Investments of university funds shall comply with the requirements of Florida Statutes for the investment of public funds by local government. Due diligence shall be exercised to assure that the highest available amount of earnings is obtained on investments.

(6) The university president or his or her designee, after having been specifically authorized by the university board of trustees, may transfer funds from one depository to another, within a depository, to another institution, or from another institution to a depository for investment purposes and may transfer funds to pay expenses, expenditures, or other disbursements, evidenced by an invoice or other appropriate documentation.

(7) The university board of trustees shall specifically designate and spread upon the minutes of the board the legal name and position title of any university employee authorized to sign checks to pay legal obligations of the university.

History.—s. 638, ch. 2002-387; s. 3, ch. 2003-3; s. 155, ch. 2007-217.

ITEM: FFC-2

**UCF BOARD OF TRUSTEES
Finance and Facilities Committee
March 21, 2019**

Title: Autonomous Vehicle Shuttle Service and Minor Amendment to Align Campus Master Plan Update

Background:

In 2018, UCF partnered with the Florida Department of Transportation (FDOT) in vying for an Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant. FDOT was awarded \$11.9-million dollars, of which UCF will benefit from subsequent grant-funded projects, including one proposing to deploy and research an autonomous vehicle (AV) shuttle service on the UCF main campus.

- FDOT Memorandum: UCF Autonomous Vehicle (AV) Shuttle Service (Attachment B)
- UCF Matching Funds Commitment June 2, 2017 (Attachment C)

UCF Facilities Planning and Construction (FP&C), Transportation and Parking, the Police, and Environmental Health and Safety (EH&S) met to propose AV shuttle routes to the Primary Investigator, Dr Mohamed Abdel-Aty, Chair of Civil, Environmental, and Construction Engineering.

Three routes were proposed (Attachment D), subject to change as the specifics of the grant proposal develop. In order to align with the CMP with recommended routes would improve linkages between modes of travel and improve transit service within the campus core. Charging stations for the AV shuttles are proposed within the walled service yard of Health and Public Affairs I (Building 80).

At the University Master Planning Committee (UMPC) meeting on February 10, 2019, Dr Abdel-Aty presented the project; Renee Michel, Director of EH&S, voiced the support of the Office of Research and Commercialization; and FP&C presented and the Minor Amendment (Attachment A) and route recommendations (Attachment D). The UMPC unanimously approved.

Issues to be Considered:

“This investment in (AV) technology for the campus will separate UCF as one of the preeminent ‘smart’ campuses in the United States.” (FDOT)

The 2015-25 Campus Master Plan Update (CMP) is silent on the subject of the use of autonomous vehicles (AV) on campus. As detailed in the attached Memorandum (Attachment A), UCF proposes a minor amendment to the CMP to add language in support of AV shuttle service as part of the existing multi-modal transportation system that integrates services provided by the public transit system (LYNX) and the private UCF transit system, Pegasus Express (Veolia Transportation).

Alternatives to Decision:

UCF projects funded from the ATCMTD grant will be jeopardized without Board of Trustees support of deployment and research of AV shuttles on campus.

Fiscal Impact and Source of Funding:

The ATCMTD grant will fund the purchase of the AV Shuttles and infrastructure to support at least two and possibly three routes. Infrastructure would include charging stations, wheelchair boarding ramp/blocks, safety and security features, etc.

Most of UCF’s \$1.6-million matching funds commitment (See Attachment C) was targeted, not for the AV shuttle project, but for other UCF grant-funded projects that were part of the larger ATCMTD grant. The only undesignated UCF matching funds were \$100,000 from the Office of the Provost.

As the project moves forward, the University may find itself responsible for some related costs. The fiscal impact of related costs is difficult to quantify before the project is underway, but could include:

- Adding University-approved signage to change private roads to limited-access service roads.
- Adding an unmanned security gate, if the service road continues to be overused by private vehicles.
- Marking the shuttle paths on Apollo Circle and Memory Mall
- Relocating benches, bike racks etc. if they are too close to or in the path of the AV.

Any expenditures that require UCF Board of Trustees approval will come back before the Board once determined.

Recommended Action:

Authorize the deployment and research of AV shuttles on campus; allowing reasonable discretion to the Primary Investigator and advising UCF departments (ORC, FP&C, EH&S, Transportation, Police, etc.), with regard to safety, scheduling, routes, and other factors.

Approve a minor amendment to the 2015-25 Campus Master Plan Update (2015 CMP) to update the Transportation element to support the deployment of an autonomous vehicle (AV) shuttle service on campus as part of UCF's multi-modal transit system. The proposed changes to the element are detailed in "Memo – Minor Amendment AV Shuttle Service 3.21.19 (Attachment A).

Authority for Board of Trustees Action:

Florida Statute 1013.30 states that this amendment to the campus master plan is a minor amendment requiring only Board of Trustees approval. See "Memo – Minor Amendment AV Shuttle Service 3.21.19 (Attachment A).

BOG regulation 21.205, Transportation Element, also states: 2) REQUIREMENTS FOR TRANSPORTATION GOALS, OBJECTIVES AND POLICIES. (a) The element shall include one or more goals for the provision of future transit, auto circulation, parking, pedestrian and non- motorized vehicle facilities, including sustainable transportation approaches that address: 1. Travel options to reduce dependence on single-occupant vehicles; 2. Reduction of greenhouse gas emissions; and 3. Reduction of dependence on foreign oil.

Committee Chair or Chairman of the Board approval:

Approved by Chair Alex Martins on February 20, 2019.

Submitted by:

Misty Shepherd, Interim Vice President for Administration and Finance

Supporting Documentation:

- A - Minor CMP Amendment - AV Shuttle Service 3.21.19
- B - FDOT Memorandum - UCF AV Shuttle Service
- C - UCF AV Shuttle Matching Funds Commitment
- D - Proposed Shuttle Route Map

Facilitators/Presenters:

Dr. Elizabeth A. Klonoff, Vice President for Research
Misty Shepherd, Interim Vice President for Administration and Finance

Attachment A

MINOR AMENDMENT – AV Shuttle Service

The University of Central Florida proposes a Minor Amendment to the Transportation Element of the 2015-25 Campus Master Plan to add language in support of deploying and researching an autonomous vehicle (AV) shuttle service on the main campus as part of UCF's multi-modal transit system.

Proposed Changes to the 2015-25 Campus Master Plan:

2.11 TRANSPORTATION ELEMENT

GOAL 3: To develop a financially feasible multi-modal transportation system that integrates services provided by the public transit system (the Central Florida Regional Transit Authority, a.k.a. LYNX), and the private transit system, UCF Shuttle (Veolia Transportation), **and future autonomous vehicle (AV) shuttle service.**

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

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

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

POLICY 3.2.3: The University shall deploy and research an autonomous vehicle (AV) shuttle service as a linkage between shuttle stops and landmark campus destinations.

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

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

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

POLICY 3.4.3: The University shall continue to identify residential concentrations of students to provide convenient transit routes used most by campus patrons and increase transit service on these routes by decreasing bus headways, developing additional new routes, or modifying existing routes, as deemed appropriate by the University.

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

POLICY 3.4.5: The University shall survey students every five years through 2025 regarding transit, bicycle, and pedestrian services.

POLICY 3.4.6: By 2020, the University shall implement, as appropriate, an evaluation of the availability of bicycle commuter support facilities (such as showers, lockers, and covered and secured bicycle parking) on campus on an annual basis.

POLICY 3.4.7: The University shall deploy and research an autonomous vehicle (AV) shuttle service to provide a mode of wheelchair-accessible transit within the Academic Core.

Compliance with Florida Statute 1013.30:

Florida Statute 1013.30 states that this is a minor amendment requiring only Board of Trustees approval because AV Shuttle Service will not:

(a) Increase density or intensity of use of land on the campus by more than 10 percent;

- (b) Decrease the amount of natural areas, open space, or buffers on the campus by more than 10 percent;
 - (c) Rearrange land uses in a manner that will increase the impact of any proposed campus development by more than 10 percent on a road or on another public facility or service provided or maintained by the state, the county, the host local government, or any affected local government.
- provided or maintained by the state, the county, the host local government, or any affected local government.

Proposed Shuttle Routes:

Three routes are proposed, subject to change as the specifics of the grant proposal develop.

- Route 1 (See Attachment B) travels along Scorpius Street and Pegasus Drive/Circle from Pegasus Express Stop 4 to the Student Union near the Hitt Library.

These two private UCF streets will be converted into low-speed, limited-access, service roads for use *only* by emergency vehicles, service vehicles, commercial delivery vehicles, AV shuttles, and private vehicles bearing handicap placards or plates.

- Route 2 (See Attachment C) travels along Pegasus Circle and Memory Mall from Pegasus Express Stop 1 at the Student Union to Pegasus Express Stop 3 across Gemini Boulevard from Knights Plaza.

The AV shuttle will travel on the eastern walk of Memory Mall on a clearly marked path.

- Route 3 (See Attachment D) travels along Apollo Circle from the Lynx Transit Center near the Education Building to Pegasus Express Stop 5 near the Physical Sciences Building.

This route will pass between Millican Hall and the Reflecting Pond, where careful shuttle scheduling will be required to avoid crowded events.



Memorandum: UCF Autonomous Vehicle (AV) Shuttle Service

The idea of a car is on the move, literally. As the existence of connected and autonomous vehicles (CAVs) rapidly approaches from the horizon, the expectation for benefits are both exciting and tangible. Before these benefits can be truly realized, however, there is a significant need for growth of understanding, knowledge, and impacts from CAV deployments, specifically in the realm of research.

In 2018, the Florida Department of Transportation (FDOT) District Five was awarded the largest Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) grant ever awarded by FHWA, totaling \$11.9-million dollars. As partners with FDOT, the University of Central Florida (UCF) stands to benefit greatly from the subsequent grant-funded projects, including the deployment of connected vehicle (CV) technology and an autonomous vehicle (AV) shuttle service on the Orlando main campus. This opportunity provides UCF the ability to surface as one of the premier research institutions in the country related to CAVs, allowing for hands-on experience for students, faculty, and staff, while also affording access to raw data from which to draw upon in research efforts. Additionally, the investment in technology for the campus will separate UCF as one of the preeminent "smart" campuses in the US.

The opportunity to deliver an AV shuttle service on campus is exciting, yes, but there are also various concerns that arise with the evolution of new technology deployed in public spaces. In preparation for this deployment and in collaboration with LYNX, FDOT has polled the AV manufacturer industry to determine the current state of the practice and identify potential concerns. This information allowed the Department to define minimum requirements outlined in the Request for Proposal (RFP) document package to be advertised in the near future (fiscal year 2018/2019).

Due to the current state of policy related to self-driving vehicles determined by the National Highway Traffic Safety Administration (NHTSA), the ability to operate an AV shuttle service on the public roadways within the UCF campus is coupled with various concerns, namely procurement of permits and impacts to schedule. As such, the initial service proposal included routes that traversed pedestrian-access facilities, specifically large multi-use corridors on campus, such as Apollo Circle and the Memory Mall area. Typical vehicle dimensions range from 13.5' – 15.0' in length, 6.5' – 7.0' in width, and 8.5' – 9.5' in height, with gross vehicle weight (GVW) between 6,200 and 7,600 lbs., so there is little concern with the vehicle's ability to share the sidewalk with pedestrians, bicyclists, and even other motorized vehicles, such as maintenance carts.

UCF Autonomous Vehicle (AV) Shuttle Service Memorandum
Florida Department of Transportation – District Five
February 8, 2019

As part of the technical requirements, all proposed vehicles will be bi-directional and be required to incorporate redundant systems for braking, sensor/object and event detection, and navigation providing increased safety measures to protect pedestrians, bicyclists, and other motorists during operation. The vehicle will be required to provide a minimum of Level 3 automation, as defined by the Society of Automotive Engineers (SAE) Standard J3016, but will be limited to a top speed of 15 MPH while traversing pedestrian-access facilities. Additionally, vehicles will be required to demonstrate acceptable fallback procedures necessary to achieve minimal risk condition in the case of a system outage prior to operational deployment.

Each shuttle will be required to accommodate a minimum of twelve (12) passengers and will be compliant with all applicable regulations of the Americans with Disabilities Act (ADA) providing considerations for passengers with mobility, visual, and audio impairments. For further inclusion, all internal announcements in visual and audible formats will be provided in both English and Spanish. The interior of the shuttle will be climate controlled providing comfortable ranges of air conditioning or heat, as appropriate with the ambient temperature, and will include a two-way monitoring and communication system connecting each vehicle with the remote management center/trained vehicle operator. An emphasis on cybersecurity countermeasure implementation will be required to ensure the prevention of all outside access to vehicle controls, system operations, communications and all other data governing autonomous vehicle control systems.

The selected vendor will enter into a service-based contract with the Department to provide AV shuttle operation for a period not to exceed three (3) years. By procuring a service, the Department will enlist the selected vendor for a turn-key solution including, but not limited to, mobilization, procurement of vehicles necessary infrastructure, infrastructure installation, route mapping and vehicle commissioning, routine maintenance, emergency repairs, and operation, as well as all managerial activities, including fulfilling minimum insurance requirements.

Attachment C



UNIVERSITY OF CENTRAL FLORIDA

**Office of the Vice President for Research and
Dean of the College of Graduate Studies**

4365 Andromeda Loop N. Millican Hall 243
Orlando, FL 32816-0005

June 2, 2017

Ladies and Gentlemen:

The University of Central Florida (UCF) is proud to provide a match commitment of approximately \$1.6 million during the project period as part of Florida's Department of Transportation proposal to the U.S. Department of Transportation under the Advanced Transportation and Congestion Management Technologies Deployment Initiative. The match commitment from UCF is as follows:

- UCF's Provost Office - \$100,000
- Office of Research and Commercialization - \$100,000 and research personnel support for this project of two (2) Postdoctoral fellows and three (3) ORC Graduate Fellowships for an additional amount of \$232,000.
- UCF Police Department – License Plate Reader project of \$300,000.
- UCF Parking – Garage B Camera project of \$200,000.
- UCF Campus Development Agreement -
 - Signalization changes of \$100,000.
 - Installation of two (2) mid-block crossings, each controlled by a traffic signal.- \$517,000;
 - Installation of pedestrian-scale lighting along the UCF side of Alafaya Trail - \$75,000 for installation and \$25,000 per year for maintenance.

With this project we will make great headway and impact on the Smart Cities' initiative and UCF Campus would be a model for Smart Transportation. Thank you for your consideration.

A handwritten signature in blue ink, reading "William Merck", is positioned above the printed name.

William Merck
Vice President, Administration and Finance

A handwritten signature in blue ink, reading "Elizabeth A. Klonoff", is positioned above the printed name.
The official seal of the University of Central Florida is located to the right of the signature, partially overlapping the printed name.

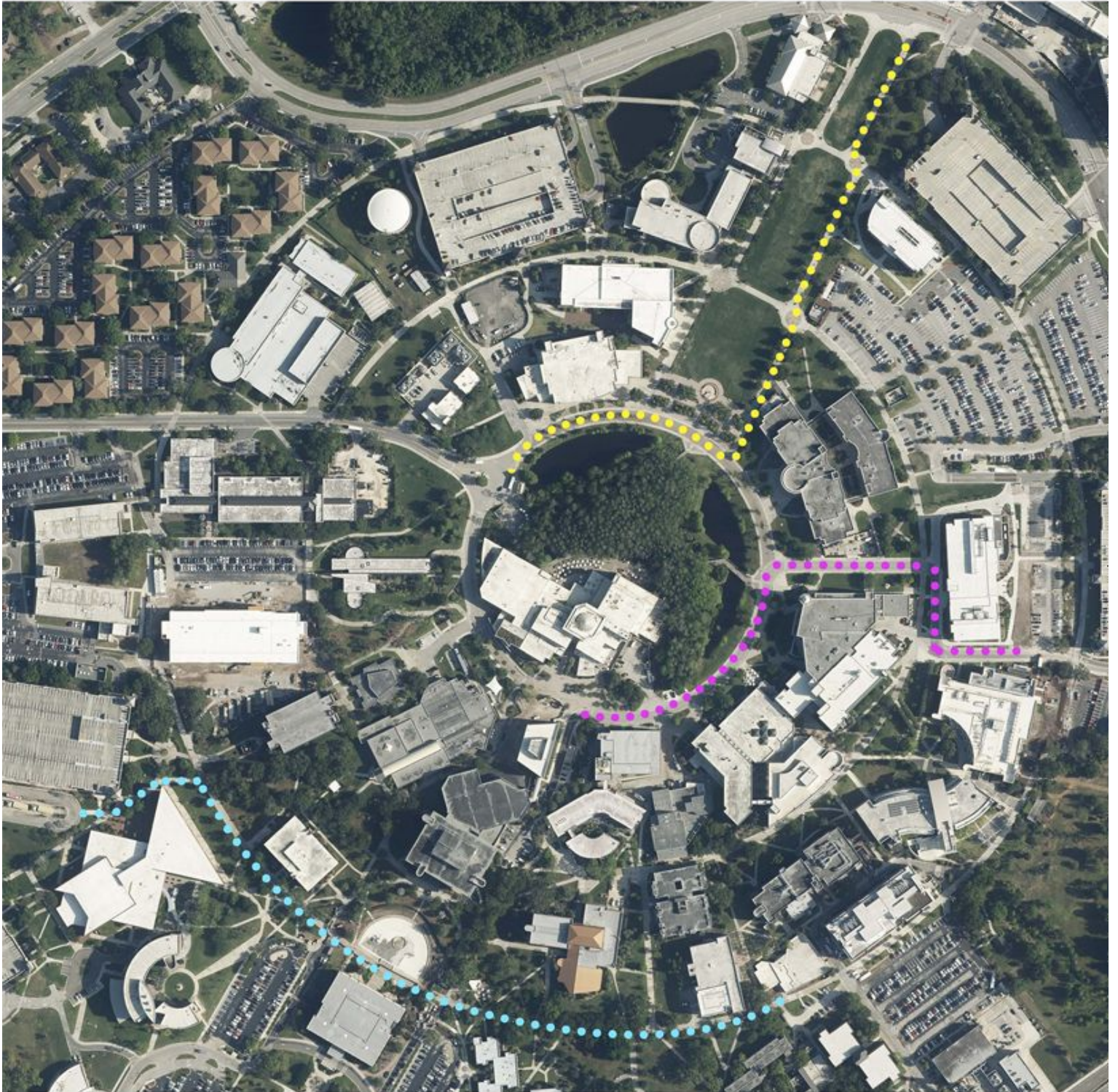
Elizabeth A. Klonoff
Vice President for Research and
Dean of the College of Graduate
Studies

Proposed Routes

Route 1

Route 2

Route 3



ITEM: INFO-1

**UCF BOARD OF TRUSTEES
Finance and Facilities Committee
March 21, 2019**

Title: Investments Quarterly Report Ended December 31, 2018

Background:

This item is provided to the trustees quarterly for information purposes only. The attached report provides an update on the university's investment portfolio for the quarter ended December 31, 2018 (Attachment A).

At December 31, 2018, the university had the following cash and investment balances:

Bank of America checking account	\$ 16,356,011
State of Florida Special Purpose Investment Account (SPIA)	\$ 300,004,223
Bank of New York Structured Investment Portfolio	<u>\$ 274,939,404</u>
Total Cash and Investments	<u>\$ 591,299,638</u>

Issues to be Considered:

N/A

Alternatives to Decision:

N/A

Fiscal Impact and Source of Funding:

N/A

Recommended Action:

For information only

Authority for Board of Trustees Action:

Specific trustee request

Committee Chair or Chairman of the Board approval:

Approved by Chair Alex Martins on February 20, 2019.

Submitted by:

Robert Caslen, Senior Counsel to the President

Supporting Documentation:

Attachment A: UCF Investments Quarterly Report as of December 31, 2018

Facilitators/Presenters:

Robert Caslen, Special Counsel to the President

Brad Hodum, Interim Controller

Cash & Non-Investment Portfolio	06/30/2018 Reported Value	09/30/2018 Reported Value	12/31/2018 Reported Value
Bank of America	\$11,237,245	\$7,477,459	\$16,356,011
SPIA	\$301,820,822	\$383,534,764	\$300,004,223
Total Cash & Non-Investment Portfolio	\$313,058,067	\$391,012,223	\$316,360,234

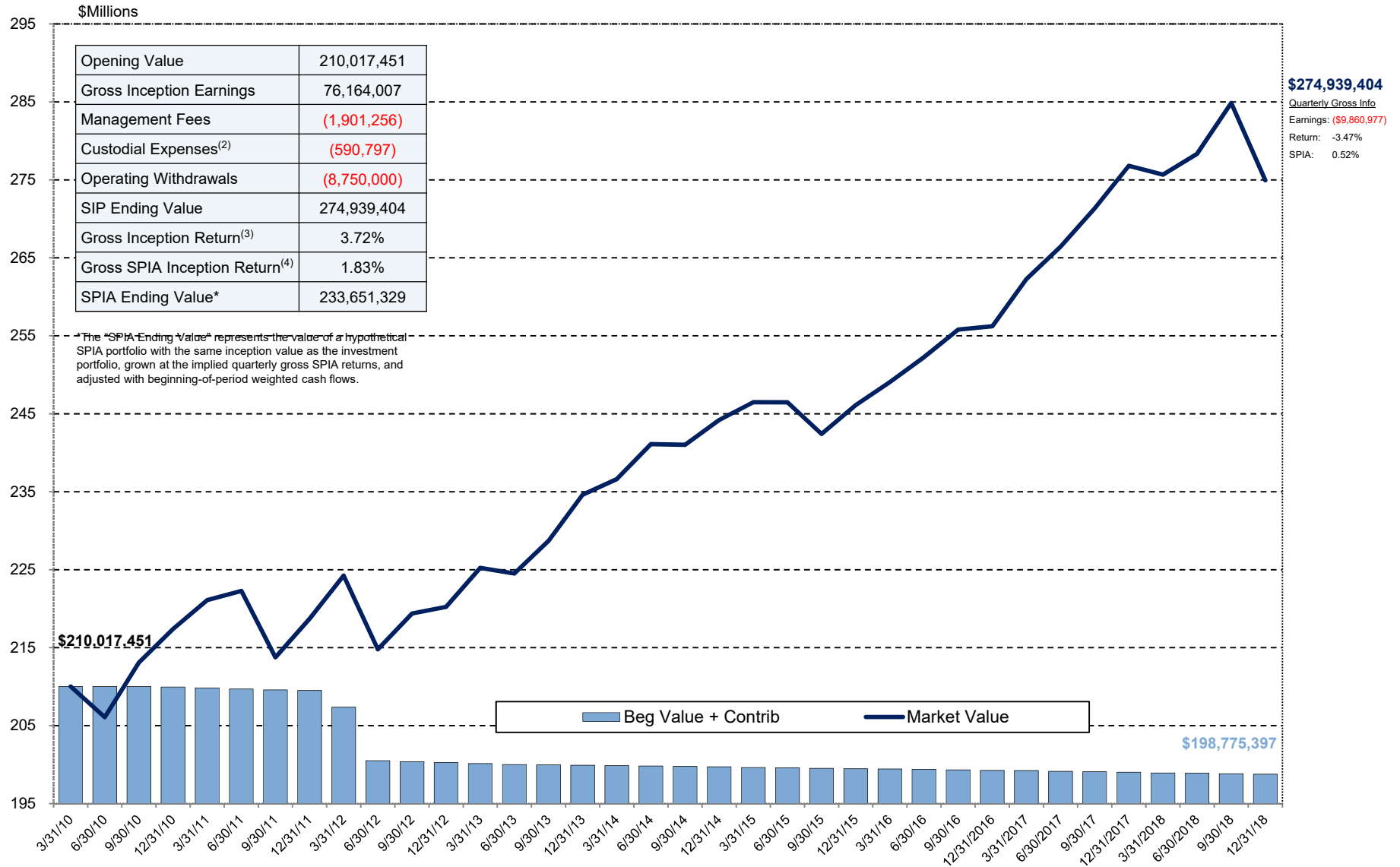
Structured Investment Portfolio (BNY)	06/30/2018 Reported Value	09/30/2018 Reported Value	3rd Quarter Gain/(Loss)	12/31/2018 Reported Value	4th Quarter Gain/(Loss)	Inception Gain/(Loss) ⁽²⁾
Pool I	\$0	\$0	\$0	\$0	\$0	\$85,786
Pool II	\$51,286,982	\$51,556,393	\$285,893	\$51,902,750	\$362,921	\$2,210,007
Fixed Income (Pool III) ⁽³⁾	\$106,270,129	\$106,651,037	\$414,622	\$115,109,198	\$1,481,676	\$14,563,383
Domestic Equity (Pool III)	\$26,623,331	\$28,673,750	\$2,050,419	\$18,424,276	(\$3,249,474)	\$17,026,513
Total Pool III	\$132,893,460	\$135,324,786	\$2,465,041	\$133,533,474	(\$1,767,797)	\$31,589,896
Fixed Income (Pool IV) ⁽⁴⁾	\$29,026,842	\$29,079,195	\$66,946	\$32,887,426	\$424,666	\$6,944,453
Domestic Equity (Pool IV)	\$50,487,272	\$54,375,593	\$3,888,321	\$43,924,531	(\$7,051,063)	\$32,302,336
International Equity (Pool IV)	\$14,643,963	\$14,520,927	(\$123,036)	\$12,691,223	(\$1,829,704)	\$3,031,526
Total Pool IV	\$94,158,077	\$97,975,716	\$3,832,232	\$89,503,180	(\$8,456,101)	\$42,278,316
Total Structured Investment Portfolio	\$278,338,519	\$284,856,895	\$6,583,166	\$274,939,404	(\$9,860,977)	\$76,164,007

Total Operating Portfolio	\$591,396,586	\$675,869,117	\$591,299,638	Total Equity Allocation	12.69%
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1. The portfolio gain/(loss) data is presented gross of management fees and portfolio expenses but net of physical cash flows.
2. The inception date for analysis is 3/31/10. The actual funding of the various portfolios occurred during March 2010.
3. Pool III's fixed Income market value includes the \$8,515 cash balance held in the Pool III mutual fund account.
4. Pool IV's fixed Income market value includes the \$23,814 cash balance held in the Pool IV mutual fund account.



University of Central Florida
Structured Investment Portfolio vs. Net Contributions⁽¹⁾
As of December 31, 2018



1. Net contributions include cash flows associated with management fees, portfolio expenses and physical cash flows
2. Custodial expense figure is reduced by commission recapture income received
3. Annualized performance number. Net of management fees inception earnings = \$74,262,751. Net inception return = 3.63%
4. The gross SPIA inception return corresponds with the 3/31/10 inception of UCF's investment portfolio. Net inception SPIA return = 1.71%



University of Central Florida
Structured Investment Portfolio Investment Policy Compliance Checklist⁽¹⁾
As of December 31, 2018

Pool I:	Yes	No	N/A
Investments limited to registered 2a-7 mutual funds, CDARS, and or/SPIA.			✓

Pool II:	Yes	No	N/A
All fixed income investments shall maintain a minimum rating of "A-" or higher by a major credit rating service.	✓		
The weighted average quality of the fixed income portfolio shall maintain a rating of "AA+" or higher.	✓		
Duration of the fixed income portfolio shall not exceed the effective duration of the Merrill Lynch 1-Year Treasury index by 25%.	✓		
The maximum average effective maturity of any single security shall not exceed 3 years.	✓		
Operating Pool II shall maintain a dollar-weighted average effective maturity of 1 years or less.	✓		

Pool III Equity:	Yes	No	N/A
Investments in equity securities shall not exceed twenty percent (20%) of the market value of Operating Pool III's assets.	✓		

Pool III Fixed:	Yes	No	N/A
All fixed income investments shall maintain a minimum rating of "A-" or higher by a major credit rating service.	✓		
The weighted average quality of the fixed income portfolio shall maintain a rating of "AA-" or higher.	✓		
The duration of the fixed income portfolio shall not exceed the effective duration of the benchmark by 50%.	✓		
Operating Pool III shall maintain a dollar-weighted average effective maturity of 7 years or less.	✓		

Pool IV Equity:	Yes	No	N/A
Investment in equity securities shall not exceed seventy-five percent (75%) of the market value of Operating Pool IV's assets.	✓		
Foreign securities shall not exceed twenty-percent (20%) of the market value of Operating Pool IV's assets.	✓		

Pool IV Fixed:	Yes	No	N/A
All fixed income investments shall maintain a minimum rating of "investment grade" or higher by a major credit rating service.	✓		
The weighted average quality of the fixed income portfolio shall maintain a rating of "A-" or higher.	✓		
Duration of the fixed income portfolio shall not exceed the effective duration of the benchmark by 50%.	✓		

1. Taken as an excerpt from the UCF quarterly performance evaluation report. Individual managers are also measured on an ongoing basis against a combination of 15 quantitative and qualitative criteria.



Target Policy Summary	
Pool I	100% 90 Day US T-Bills
Pool II	75% ML 1-Year Treasury + 25% 90 Day US T-bills
Pool III	85% ML 1-5 Year G/C A or Better + 15% S&P 500
Pool IV	35% Barclays Agg + 50% S&P 500 + 15% MSCI-ACWxUS

Pool I	\$0	Current Allocation
Cash & Equivalents	\$0	100.0%
Fidelity Money Market	\$0	

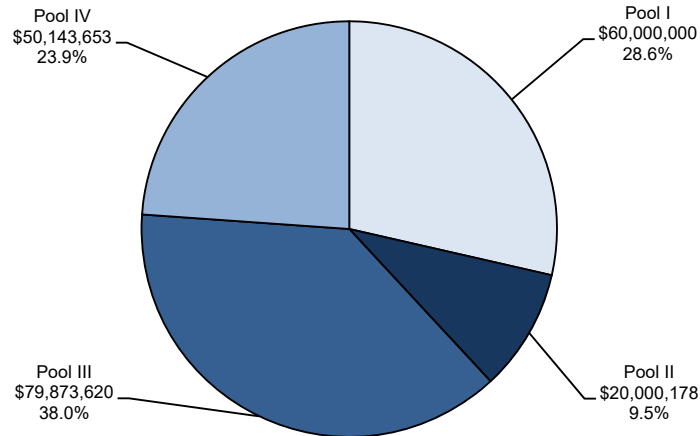
Pool II	\$51,902,750	Current Allocation
Short-Term Fixed Income	\$51,902,750	100.0%
Galliard Capital Management	\$51,902,750	

Pool III	\$133,533,474	Current Allocation
Intermediate Fixed Income (85%)	\$115,109,198	86.2%
Galliard Capital Management ⁽¹⁾	\$61,840,460	
Sawgrass Asset Management	\$53,268,738	
Domestic Equity (15%)	\$18,424,276	13.8%
Vanguard Institutional Index	\$18,424,276	

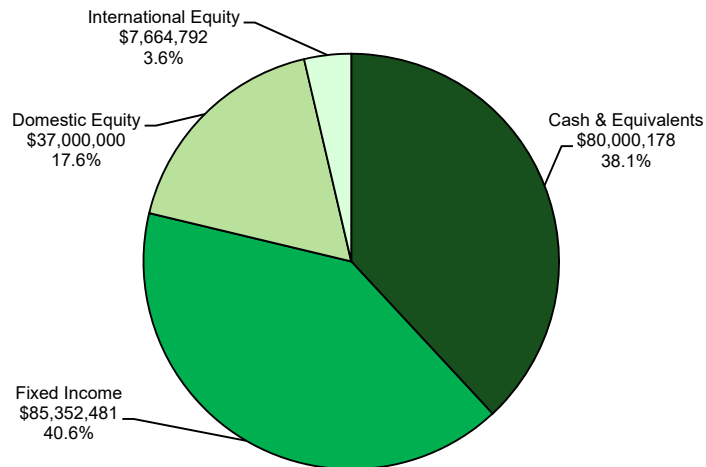
Pool IV	\$89,503,180	Current Allocation
Broad Market Fixed Income (35%)	\$32,887,426	36.7%
Galliard Capital Management ⁽²⁾	\$21,090,400	
Dodge & Cox Income	\$11,797,025	
Domestic Equity (50%)	\$43,924,531	49.1%
Vanguard Institutional Index	\$43,924,531	
International Equity (15%)	\$12,691,223	14.2%
Europacific Growth	\$12,691,223	

1. Pool III's Galliard Asset Management's market value includes the \$8,515.40 cash balance held in the Pool III mutual fund account.
 2. Pool IV's Galliard market value includes the \$23,813.70 cash balance held in the Pool IV mutual fund account.

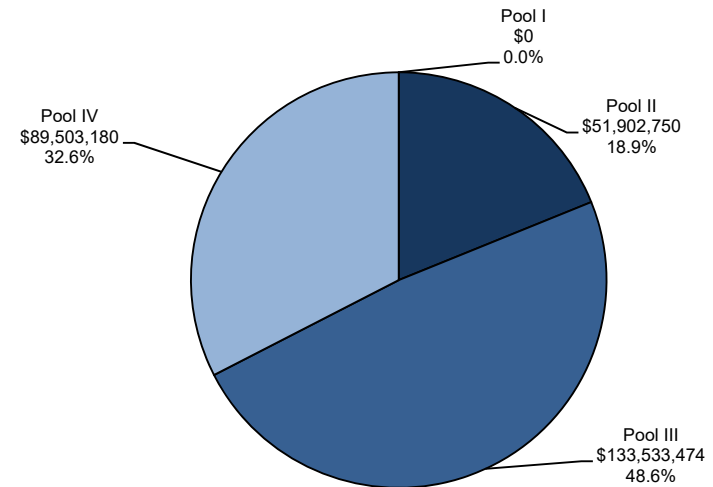
**3/31/2010: \$210,017,451
Pool Allocation**



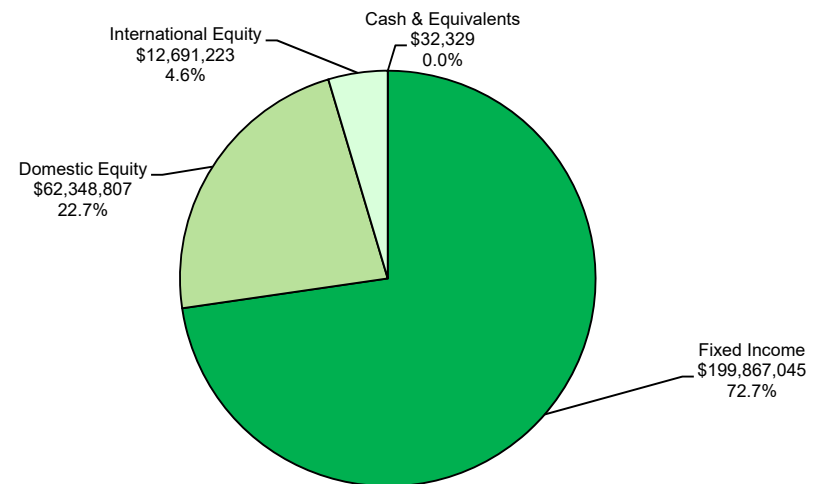
Asset Allocation



**12/31/2018: \$274,939,404
Pool Allocation**



Asset Allocation



ITEM: INFO-2

**UCF BOARD OF TRUSTEES
Finance and Facilities Committee
March 21, 2019**

Title: No Fee Increases for 2019-20

Background:

No increase in tuition or fees is being requested for 2019-20.

Issues to be Considered:

The university is committed to keeping costs as low as possible for students and their families, while maintaining a high-quality education. This allows students to complete their undergraduate education with as little debt as possible. When tuition and fees do not increase, students may not have to work as much while they are enrolled, allowing time to focus more on their education and graduate sooner.

Alternatives to Decision:

Increase fees, reduce waivers, or eliminate fee reductions.

- The College of Medicine requested a three percent increase in the medical school tuition rate.
- UCF Online requested:
 - to rescind the partial waiver of the non-resident fee for online students.
 - to raise the Distance Learning fee from \$18 per credit hour to \$30 per credit hour to match other State University System institutions.

The requests were denied by the President's Office.

Fiscal Impact and Source of Funding:

N/A

Recommended Action:

For information only

Authority for Board of Trustees Action:

Specific trustee request

Committee Chair or Chairman of the Board approval:

Approved by Chair Martins on February 20, 2019.

Submitted by:

Robert Caslen, Senior Counsel to the President

Supporting Documentation:

None

Facilitators/Presenters:

Robert Caslen, Special Counsel to the President

ITEM: **INFO-3**

UCF BOARD OF TRUSTEES
Finance and Facilities Committee
March 21, 2019

Title: Technology Fee Update

Background:

This item is brought to the trustees annually for information purposes only. The attached spreadsheet provides a breakdown of the proposals submitted and funded from Technology Fees for 2018-19 and prior years.

Issues to be Considered:

N/A

Alternatives to Decision:

N/A

Fiscal Impact and Source of Funding:

Total funding of \$18,755,019 was requested for 2018-19, of which \$7,248,742 was awarded to 16 colleges or units.

Recommended Action:

For information only

Authority for Board of Trustees Action:

Specific trustee request

Committee Chair or Chairman of the Board approval:

Approved by Chair Alex Martins, February 6, 2019

Submitted by:

Elizabeth Dooley, Provost and Vice President for Academic Affairs

Supporting Documentation:

Attachment A: Technology Fee Award Summary

Facilitators/Presenters:

Joel Hartman, Vice President for Information Technologies and Resources and Chief Information Officer

Attachment A

Technology Fee Award Summary

	2009-10 thru 2015-16	2016-17	2017-18	2018-19	Cumulative Total	Cumulative Total Awarded per College/Unit
Proposals submitted	504	63	74	94	735	
Proposal types requested:						
<i>Student-facing</i>	391	55	69	87	602	
<i>Faculty-facing</i>	18	0	0	2	20	
<i>Infrastructure</i>	95	8	5	5	113	
Total funding Requested	\$ 104,200,895	\$ 10,678,802	\$ 11,041,520	\$ 18,755,019	\$ 144,676,236	
Proposals funded	346	45	47	45	483	
Proposal types funded:						
<i>Student-facing</i>	259	38	42	41	380	
<i>Faculty-facing</i>	10	0			10	
<i>Infrastructure</i>	77	7	5	4	93	
Total funding awarded	\$ 57,331,820	\$ 8,034,572	\$ 7,017,951	\$ 7,248,742	\$ 79,633,085	
Colleges or Units: Awarded - Requested						
Academic Affairs	1 of 3	0 of 0	0 of 0	0 of 0	1 of 3	\$ 96,993
Burnett Honors College	6 of 8	1 of 1	0 of 0	0 of 1	7 of 10	\$ 692,130
College of Arts and Humanities	56 of 67	9 of 11	8 of 9	7 of 17	80 of 104	\$ 7,162,603
College of Business Administration	5 of 7	2 of 2	1 of 1	1 of 1	9 of 11	\$ 1,985,240
*College of Community Innovation and Education				2 of 9	2 of 9	\$ 403,512
College of Education and Human Performance	44 of 79	6 of 8	3 of 8	0 of 0	53 of 95	\$ 6,276,399
College of Electrical Engineering and Computer Science	26 of 43	3 of 3	6 of 6	5 of 8	40 of 60	\$ 6,450,085
College of Graduate Studies	4 of 5	0 of 0	0 of 1	2 of 3	6 of 9	\$ 307,516
College of Health and Public Affairs	13 of 23	0 of 0	1 of 2	0 of 0	14 of 25	\$ 3,547,353
*College of Health Professions and Sciences				2 of 2	2 of 2	\$ 463,976
College of Medicine	8 of 16	1 of 1	1 of 2	2 of 4	12 of 23	\$ 1,338,707
College of Nursing	8 of 9	1 of 2	2 of 2	2 of 2	13 of 15	\$ 1,535,835
College of Optics and Photonics	8 of 8	1 of 1	0 of 1	2 of 4	11 of 14	\$ 1,155,067
College of Sciences	50 of 66	8 of 18	9 of 20	4 of 12	71 of 116	\$ 11,926,044
Information Technologies and Resources	67 of 85	6 of 8	4 of 9	7 of 15	84 of 117	\$ 22,300,174
Division of Digital Learning			2 of 2	1 of 2	3 of 4	\$ 1,439,155
Office of Research and Commercialization	1 of 3	0 of 0	2 of 2	0 of 1	3 of 6	\$ 881,154
Office of the President	2 of 2	0 of 0	0 of 0	0 of 0	2 of 2	\$ 370,000
*Partnerships and Innovation				2 of 2	2 of 2	\$ 1,000,000
UCF Connect (formerly Regional Campus)	23 of 31	3 of 3	4 of 4	3 of 5	33 of 43	\$ 5,763,993
Rosen College of Hospitality Management	7 of 12	1 of 1	0 of 0	0 of 0	8 of 13	\$ 1,955,558
Student Development and Enrollment Services	16 of 34	2 of 3	4 of 5	2 of 4	24 of 46	\$ 1,366,459
Office of Undergraduate Studies	1 of 3	1 of 1	0 of 0	1 of 2	3 of 6	\$ 1,215,132
Cumulative Total						\$ 79,633,085

* New colleges and departments

ITEM: **INFO-4**

**UCF BOARD OF TRUSTEES
Finance and Facilities Committee
March 21, 2019**

Title: Campus Master Plan Public Comment Meeting Minutes

Background:

The trustees requested that the minutes from Campus Master Plan Public Comment meetings be provided to the committee for information purposes. The minutes for the December 19, 2018 meeting are attached.

Issues to be Considered:

N/A

Alternatives to Decision:

N/A

Fiscal Impact and Source of Funding:

N/A

Recommended Action:

For information only

Authority for Board of Trustees Action:

Specific trustee request

Committee Chair or Chairman of the Board approval:

Approved by Chair Alex Martins, February 6, 2019

Submitted by:

Misty Shepherd, Interim Vice President for Administration and Finance

Supporting Documentation:

Attachment A: December 19, 2018 Meeting Minutes

Facilitators/Presenters:

Bill Martin, Director, Facilities Planning

Attachment A



Facilities Planning and Construction

University of Central Florida
3528 North Perseus Loop – Building 16
Orlando, FL 32816-3020
<http://www.fp.ucf.edu/>

MEETING MINUTES

Project:	Neighborhood Meeting	Job Number:	N/A
Client:	Bill Martin	Meeting Location:	Facilities and Safety 106A/B
Bldg / Rm#:	N/A	Meeting Date & Time:	12/19/18 @ 6:00pm
Attendees:	Donna DeGregory, Lake Price * Ronald Brooke, University Estates * Bill Martin, UCF FP&C Kathy Gay, UCF QMI Maritza Martinez, UCF CR James Roop, UCF Police Dave Norvell, UCF Sustainability David Hansen, UCF Athletics Jennifer Spolyar, Ardmere Roderick * = neighborhood resident		
	Transcribed By:	Bill Martin, UCF FP&C	
	Copy To:	File	

OBJECTIVE:

The purpose of the meeting was to update the neighbors adjacent to UCF on current and upcoming construction projects.

MEETING MINUTES:

- 1) GENERAL - Bill Martin opened the meeting, each attendee introduced themselves and who they represent.
- 2) SOLAR FARM
 - a. Dave Norvell gave an update on the solar farm project – residents have expressed interest on this topic as it is located near their homes.
 - i. Dave Norvell provided a recap of the project scope and history – 50 acre site, consultant reports prepared and presented to the Board of Trustees.
 - ii. Project is on indefinite hold.
 - iii. Dave Norvell is trying to get on President Whittaker's calendar to discuss the project and gauge his interest in moving it forward (or not).
 - b. Ron Brooke expressed concerns from the neighborhood perspective:
 - i. Cutting down of trees – in the past this has reduced acoustic separation between the university and the neighbors, which they do not like for privacy reasons.
 - ii. Potential flooding – concern on increased neighborhood flooding of Regency Park, which has had flooding issues in the past – Dave Norvell clarified that the project will not add a significant amount of impervious area, and that a civil engineer would need to design the project so that all water is contained on UCF property.
 - iii. Power lines – neighbors do not want power lines for solar farm run next to their houses, they prefer that be run directly west to the UCF sub-station by Facilities and Safety – Dave Norvell agreed and expressed that this is UCF's preference as well, if the sub-station can handle the added power.

3) ATHLETICS

- a. David Hansen gave an overview of Athletic projects.
 - i. UCFAA is not planning to expand the stadium anytime soon.
 - ii. The Roth Athletic Center (between WD77 and NFH) is under construction, anticipate 10 months or so of construction in 2019. This project should have no impact (noise, etc.) on neighbors.
 - iii. UCFAA will continue to work on crowd management improvements during their events.
 - iv. Premium seating projects at the stadium are ongoing and planned – these increase revenue but decrease occupancy. Stadium capacity was initially at +/- 46,000, is now at 44,000, and is anticipated to drop to 42,500 due to these premium seat improvements. This should have a positive effect on neighbors, as this is less pedestrian and vehicular traffic.
 - v. The Recovery Cove (Lazy River) project is in design and is hoping to be constructed by Fall 2019. This is a strong recruiting tool for UCF. David stressed that this project should have minimal to no impact on the neighbors. It is not for the student body or general public; it will have fences, security, and lighting for proper safety.
- b. Ron Brooke expressed the following:
 - i. Ron Brooke must be personally notified of any future plan to expand the stadium, per the 2015-2025 Masterplan agreement.
 - ii. Ron Brooke stated that the last two games of the 2018 season were very loud. However, previous games were OK. David Hansen noted that UCFAA is working with Daktronics to get more directional control of sound coming from the stadium scoreboard, which will focus noise in the stadium and hopefully reduce it for the neighbors.
 - iii. Ron Brooke emphasized that he thinks the lazy river maintenance cost will be high, given his costs to maintain his residential pool. He stated that from what he has heard, residents are not concerned about the lazy river project.
 - iv. Ron Brooke expressed support of the recent baseball expansion project, and that there has been a significant reduction in sound from game-day speakers. This was a major concern of residents – even more than football games – because of the frequency of baseball games. But the noise levels have greatly improved since the new project has been constructed. David Hansen was glad to hear this and stated that UCFAA is looking at further sound system enhancements to make the sound even more distributed and less impactful to the neighbors.
 - v. Ron Brooke said that he is very proud of UCF accomplishments and happy for their success. “Win one more game!”

4) MASTERPLAN

- a. Bill Martin noted that the 2020-30 Campus Masterplan process will begin in 2019, and that neighbors will have opportunity to comment on the masterplan, as they did in 2014.
- b. Bill Martin noted that FP&C wants to make the 2020-30 Campus Masterplan more “visionary” than in the past, with graphic depictions of future buildings rather than just dots on a map.
- c. Ron Brooke noted that in the past the Campus Masterplan included a 200 foot buffer on UCF property between the neighbors, but over the years this has been significantly reduced – he would like to see this buffer dimension increased again. Ron also noted that he wants the “triangle of trees” near softball protected from development, as that provides an acoustic buffer between UCF and the neighbors.

5) NEXT MEETING

- a. The next meeting will be scheduled in May, 2019.
- b. Ron Brooke requested that even more advance notice be provided, and that the next fall meeting take place in November 2019 rather than December 2019.

End of Meeting Minutes

ITEM: INFO-5

UCF BOARD OF TRUSTEES
Finance and Facilities Committee
March 21, 2019

Title: 2018 Capital Projects Summary

Background:

At the November 15, 2018 FFC meeting, the trustees requested a summary of projects completed in 2018 including information on approved versus actual costs, projected time line versus actual completion timeline, the final square footage at completion, and any programmatic changes after board approval. The attached report contains the requested information.

Issues to be Considered:

N/A

Alternatives to Decision:

N/A

Fiscal Impact and Source of Funding:

N/A

Recommended Action:

For information only

Authority for Board of Trustees Action:

Specific trustee request

Committee Chair or Chairman of the Board approval:

Approved by Chair Alex Martins, February 6, 2019

Submitted by:

Misty Shepherd, Interim Vice President for Administration and Finance

Supporting Documentation:

Attachment A: 2018 Capital Projects Summary

Facilitators/Presenters:

Bill Martin, Director, Facilities Planning



Facilities Planning and Construction

University of Central Florida
3528 North Perseus Loop – Building 16
Orlando, FL 32816-3020
<http://www.fp.ucf.edu/>

CAPITAL PROJECT SUMMARY

This document has been prepared for the UCF Board of Trustees and provides budgets, timelines, square footage, and programming (including changes) of capital projects completed in 2018. Additionally, it provides a summary for UCF Global (2016).

Six capital projects were completed and began occupancy in 2018:

- Research I
- John C. Hitt Library, Phase 1
- District Energy Plant IV
- Trevor Colbourn Hall
- Student Union, Phase 2
- Baseball Stadium Expansion

A two-page summary is provided for each project, including pictures and additional information that may be of interest to the BOT.

For purposes of this document, the following definitions are used:

- **PLANNED COST** – the total project cost at the time of the Construction Manager's (CM's) Guaranteed Maximum Price (GMP) contract
- **ACTUAL COST** – the projected total project cost after all final payment applications and expenses are paid
- **PROJECTED TIMELINE** – the date of Substantial Completion in the CM's GMP contract
- **ACTUAL TIMELINE** – the actual date of occupancy
- **FINAL SQUARE FOOTAGE** – the total gross square footage of the building
- **PROGRAMMATIC CHANGES** – significant changes to the building that occurred after the CM's GMP

Facilities Planning and Construction (FP&C) is very proud to have delivered these projects and offers the Board of Trustees tours these projects!

Sincerely,

A handwritten signature in blue ink, which appears to read "William E. Martin", is positioned above the printed name.

Bill Martin
Director, Facilities Planning and Construction
Facilities & Safety

RESEARCH I

PLANNED COST:	\$53,504,853.00 (funded amount after all GMPs)
ACTUAL COST:	\$53,238,774.91 (\$266,078.09 under budget)
PROJECTED TIMELINE:	Phase 1 - January 2016 to July 2017; Phase 2 - September 2016 to November 2017
ACTUAL TIMELINE:	Phase 1 and 2 combined due to program changes - schedule extended to January 2018
BOT SUBMISSION:	Capital Improvement Plans, approved by the BOT on June 29, 2015 and July 28, 2016

PROJECT DESCRIPTION:

Research I, originally titled the Interdisciplinary Research and Incubator Facility (IRIF), is a 105,775gsf building containing 79 labs with a NFPA 45 rating, 84 offices, conference rooms, break rooms, and support rooms. When the project was originally started in October 2014, the project had two phases due to budget constraints: Phase 1 (roughly 2/3 of the building with a total project cost of \$30M, and Phase 2 (roughly 1/3 of the building with a total project cost of \$15M. The Architect/Engineer (AE) team designed both phases simultaneously, but provided two separate drawing packages so that they could be bid separately.

Phase 1 of construction started in January 2016 within its \$30M budget. The university then decided to increase the project budget by \$15M to include Phase 2, which started in September 2016. The project phases were started nine months apart and were run as two separate projects with different completion dates, schedules, and finances. The below picture depicts Phase 1 and 2 construction:



It is important to note that the project was originally designed as generic, flexible lab space. The intent was to build as large of a facility as possible, and as researchers were assigned to the building, their startup funds would be used to build-out their labs. The only known tenant during the design phase was the Materials Characterization Facility (MCF), slated for the first floor. All labs on the second and third floors were designed with a very basic buildout. Mid-construction, the university began assigning labs to specific users, which required significant re-design and re-work in the middle of the construction phase. FP&C worked closely with the AE and CM to accommodate these required changes, requesting additional funding and time to complete. As part of this request, the actual timelines of the two phases were merged into a single date of January 2018, which greatly simplified the commissioning and substantial completion of the project. Users began occupying the building in January 2018.

Project management efforts for Research I earned FP&C the top award in 2018 from the Construction Owners Association of America (COAA). UCF and Michigan State were the only universities to be awarded the COAA Gold Project Leadership Award, recognizing UCF's excellence in project delivery.

RESEARCH I Photos



LIBRARY PHASE I

PLANNED COST:	\$21,619,733.82 (funded amount after all GMPs)
ACTUAL COST:	\$21,383,408.27 (\$236,365.55 under budget, w/o PM Services)
PROJECTED TIMELINE:	Phase 1, ARC - May 2016 to November 2017
ACTUAL TIMELINE:	Phase 1, ARC - May 2016 to May 2018 (explanation follows)
BOT SUBMISSION:	Capital Improvement Plans, approved each year by the BOT starting July 26, 2012 to present

PROJECT DESCRIPTION:

The Library Expansion project has been in the works for nearly 10 years. The primary goal of the project was to free up “stack” space in the existing library for conversion into study space, multipurpose space, office space, intake space, and specialty collection space. Phase 1 of the project consisted of the construction of an Automatic Retrieval Center (ARC) and was completed in 2018. The ARC consolidates book storage into a much smaller footprint and provides a mechanism for quick material retrieval. Phase 1A and 1B (known as the “Connector”), connects the stand-alone ARC building to the main library. Future phases 2A, 2B, 2C, etc. will renovate the interior of the library one floor at a time. Due to construction and renovation complexities, the requirement to keep the library open during construction, and limited Capital Improvement Trust Funds (CITF) funding, the project is being constructed in multiple phases over multiple years:

- Phase 1 – Automatic Retrieval Center (completed 2018)
- Phase 1A, 1B – Connector (started construction 2018, with a projected timeline of December 2019)
- Phase 2A, 2B, 2C, etc. - Interior renovation of the library. Phase 2A will likely consist of a renovation of floors 1 and 2, and strategic building systems upgrades. Phase 2A is starting design in early 2019.

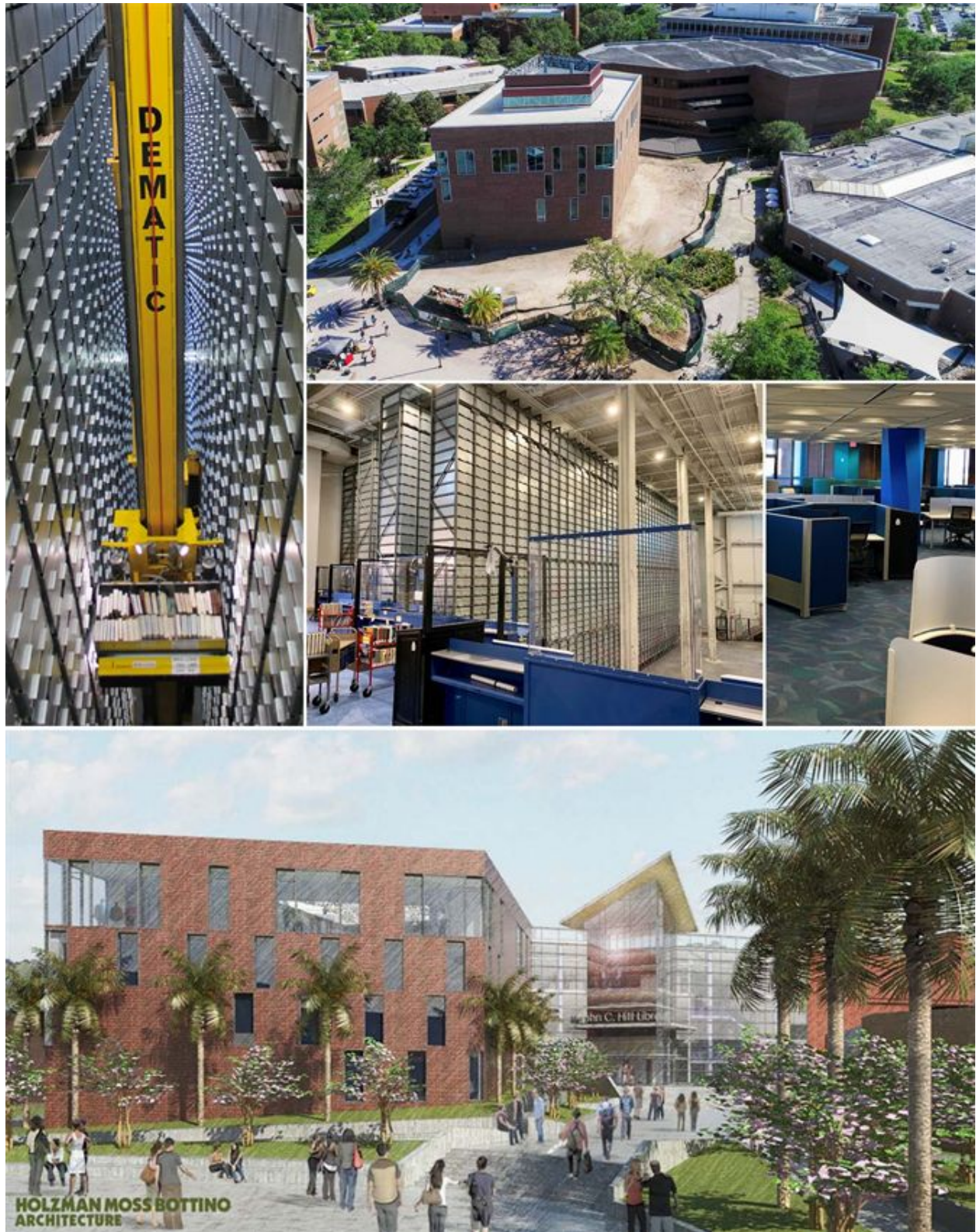
In addition to construction of the 20,609gsf ARC, Phase 1 included:

- Sprinklers added to floors two, three, four, and five of the library, eliminating a State Fire Marshall violation;
- Replacement of exit stair flooring (previously carpet, now vinyl);
- Replacement of exit stair handrails and guard rails to meet building code;
- Upgrade of several restrooms for ADA compliance;
- Upgrade of the fifth floor conference room Audio/Visual equipment;
- Upgrade of the building’s primary electrical equipment and switchgear, which required a 2-week shut-down of the entire library (over the winter holiday break 2017-18);
- Renovation of half of the fifth floor, converting stack space into student study space

While the projected timeline was November 2017, Hurricane Irma and other unforeseen circumstances delayed the actual timeline (the official opening date). One substantial issue had a large schedule impact - when the main ARC electrical switchgear energized for the first time, a piece of all-thread steel hanger was found in the switchgear, causing serious damage to this new equipment. While it remains unclear if this was an accident or sabotage, UCF required and demanded a full equipment replacement in lieu of repair. The Construction Manager replaced the equipment at no cost to UCF. However, the custom fabrication of the switchgear added approximately 14 weeks to the project schedule, and this delay affected the scheduling of other building systems and commissioning. Fortunately for UCF, a hard opening date was not required for this facility, as the structure is independent of the main library.

The ARC currently stores approximately 300,000 volumes of library material for quick automated retrieval. The use of the ARC has freed up shelving floor space in preparation for Phase 1A (Connector), which is currently under construction.

LIBRARY PHASE I Photos



DISTRICT ENERGY PLANT IV

PLANNED COST:	\$15,830,000.00 (funded amount after all GMPs)
ACTUAL COST:	\$15,460,145.41 (\$369,854.59 under budget, w/o PM Services)
PROJECTED TIMELINE:	January 2017 to November 2017
ACTUAL TIMELINE:	February 2017 to June 2018 (explanation follows)
BOT SUBMISSION:	Capital Improvement Plan, approved by the BOT on June 29, 2015

PROJECT DESCRIPTION:

The fourth energy plant on campus (District Energy Plant IV – DEP IV) is located near the Arboretum. This 9,830gsf building increases the centralized cooling capacity from 17,900 refrigerated tons (RT) to 21,900 RT, with the capability to expand up to 26,000 RT. DEP IV is connected to the chilled water distribution infrastructure that consists of approximately 15 miles of mains, connecting 58 buildings with environmentally-sensitive and general comfort cooling to 4.9M GSF of research, academic, student housing, CFE Arena, and Athletic space. The overall plant efficiency is .69 kW/ton, which is roughly 17% more efficient than the OUC Lake Nona Chilled Water Plant.

DEP IV also provides a flexible platform to integrate multiple resources, including heat recovery to produce heating-hot-water (used in the dehumidification process for the HVAC system in Research I); the ability to contribute generation capacity to the existing thermal energy storage tank for electrical peak shifting strategies to reduce purchased electric costs; and the future ability to use reclaimed water as a source make-up for heat transfer, in lieu of using potable water, to reduce water consumption and remain within the limits of our consumptive use permit with the St. John's River Water Management District.

In addition to increasing chilled water capacity, the plant provides greater operational flexibility and thermal resiliency by enabling the chilled water generation asset base to operate in a N+2 paradigm, where there is always redundancy and a backup, in case one chiller fails or needs to be decommissioned for service during peak cooling demand. The geographical location of the plant, with relation to the central campus core, was carefully considered during design, with the intent to accommodate future academic and research load growth. Furthermore, each of the campus chilled water generation facilities were separated onto one of the six primary Duke Energy feeders, in the event of a power outage or voltage anomaly, to reduce risk and negative impacts associated with environmentally-sensitive spaces during power interruptions.

As energy costs continue to rise, and the university continues to grow, reliably meeting the campus's energy needs with district energy is more efficient than using in-building equipment or a decentralized approach. Because district energy cooling and heating networks aggregate the thermal energy needs of multiple academic and research buildings, the building clusters create economies of scale from an environmental, economic, and operational perspective, facilitating investments in energy technologies not otherwise feasible on a single-building basis.

This project experienced delays during construction from Hurricane Irma, unforeseen design and construction challenges, and UCF added scope. All of these changes were within the approved cost budget, and the project opened prior to summer 2018, when cooling demand on campus is at its peak.

DEP IV was also designed as a teaching tool, and includes color-coded pipes to clearly display the building's functions to faculty and students, such as the evaporative cooling process. The project also demonstrates UCF's strong commitment to LEED and sustainability, with attributes such as an overall building-energy use reduction of 34% over a baseline building; a 33% reduction in building water use; 30% of the plant's building construction materials being composed of recycled content; 64% of the materials being regionally sourced, extracted, and manufactured within a 500-mile radius of campus; and overall plant efficiency of 8% greater than a baseline plant. The District Energy Plant IV is also the 1st industrial building at UCF to receive LEED Gold certification.

DISTRICT ENERGY PLANT IV Rendering and Photos



TREVOR COLBOURN HALL

PLANNED COST:	\$39,064,950.13 (funded amount after all GMPs, including \$518K for Colbourn Hall demo)
ACTUAL COST:	\$38,783,675.31 (\$281,274.82 under budget)
PROJECTED TIMELINE:	Site – May 2017 to August 2017; Building - August 2017 to August 2018
ACTUAL TIMELINE:	Site – May 2017 to August 2017; Building - August 2017 to August 2018
BOT SUBMISSION:	Capital Improvement Plans, approved by the BOT on June 29, 2015 and July 28, 2016

PROJECT DESCRIPTION:

Trevor Colbourn Hall (TCH) is a new 136,786gsf classroom/office building on the west side of campus, replacing Colbourn Hall (CH), which was demolished. Original project concepts considered renovating and expanding CH, but these solutions proved to be more expensive than building a new facility, and renovations would have been logistically impossible to perform, as the building would need to remain occupied. Instead, the university opted to build a larger 136,786 gsf stand-alone facility, with multiple classroom and office spaces for more than 20 departments, supporting approximately 350 faculty and staff. The primary tenants of TCH are the College of Arts and Humanities, Student Development and Enrollment Services, Undergraduate Studies, Graduate Studies, and the Burnett Honors College. There is also a significant amount of “shell space” that can be fit-out as future space needs arise.

The building was designed with a main central circulation spine on all three floors that provides access to various departments and classrooms. Individual suites were designed using a Gained Light Officing (GLO) layout concept, which provides access to daylight to and from all offices. GLO provides a healthier environment for building occupants, most of whom moved from Colbourn Hall where there was little or no access to daylight in most offices. The building is constructed using “chilled beams”, an energy-efficient HVAC system that provides radiant cooling to spaces rather than forced air. This is the second UCF building to employ this technology, after UCF Global, and makes TCH one of the most energy-efficient buildings on campus. The project is also designed for a future roof-top solar array.

The construction schedule of this project was extremely fast and aggressive for a building of this size. The project required both a site GMP and a building GMP in order to accelerate the projected timeline. The construction duration from construction start to substantial completion was 15 months. One factor that drove the ability to meet this aggressive schedule, and save both time and money, was to design the project using tilt-up construction.

The projected timeline of August 1, 2018 was met. The contractor has stayed on-site to address punch list items and additional end-user requests, and to manage the demolition of CH. Debris is currently being removed from the site, and site restoration, irrigation, and sod installation will continue through March 2019.

TREVOR COLBOURN HALL Photos



STUDENT UNION RENOVATION PHASE 2

PLANNED COST:	\$17,977,891.00 (funded amount for Phases 2, 3, and 4 after all GMPs)
ACTUAL COST:	TBD (currently on budget)
PROJECTED TIMELINE:	Phase 2 - August 2017 to April 2018
ACTUAL TIMELINE:	Phase 2 - August 2017 to September/January 2019 (explanation follows)
BOT SUBMISSION:	Capital Improvement Plan, approved by the BOT on July 28, 2016

PROJECT DESCRIPTION:

The Student Union Renovation and Expansion is a complex 4-phase project with an overall goal of improving the student experience at the heart of campus. The project encompasses the renovation of the existing food court area (7,545gsf) to introduce five new foodservice brands, building expansion to add 700 new food court seats, and building expansion for Student Government Association (SGA) space, which includes offices and a Senate chamber.

The project phases are:

- Phase 1: Relocation of the dishwasher to make way for Phase 2 construction and ensure that the remaining Student Union foodservice venues were functional (complete)
- Phase 2: Renovation of the food court to include all foodservice systems, equipment, MEP/FP systems, and interiors (complete - certificates of occupancy were issued September 2018 and December 2018)
- Phase 3 & 4: Expansion of the building, to include 700 additional food court seats on the first and second floor expansions, and a third floor for SGA (starting construction January 2019, phases will run concurrently)

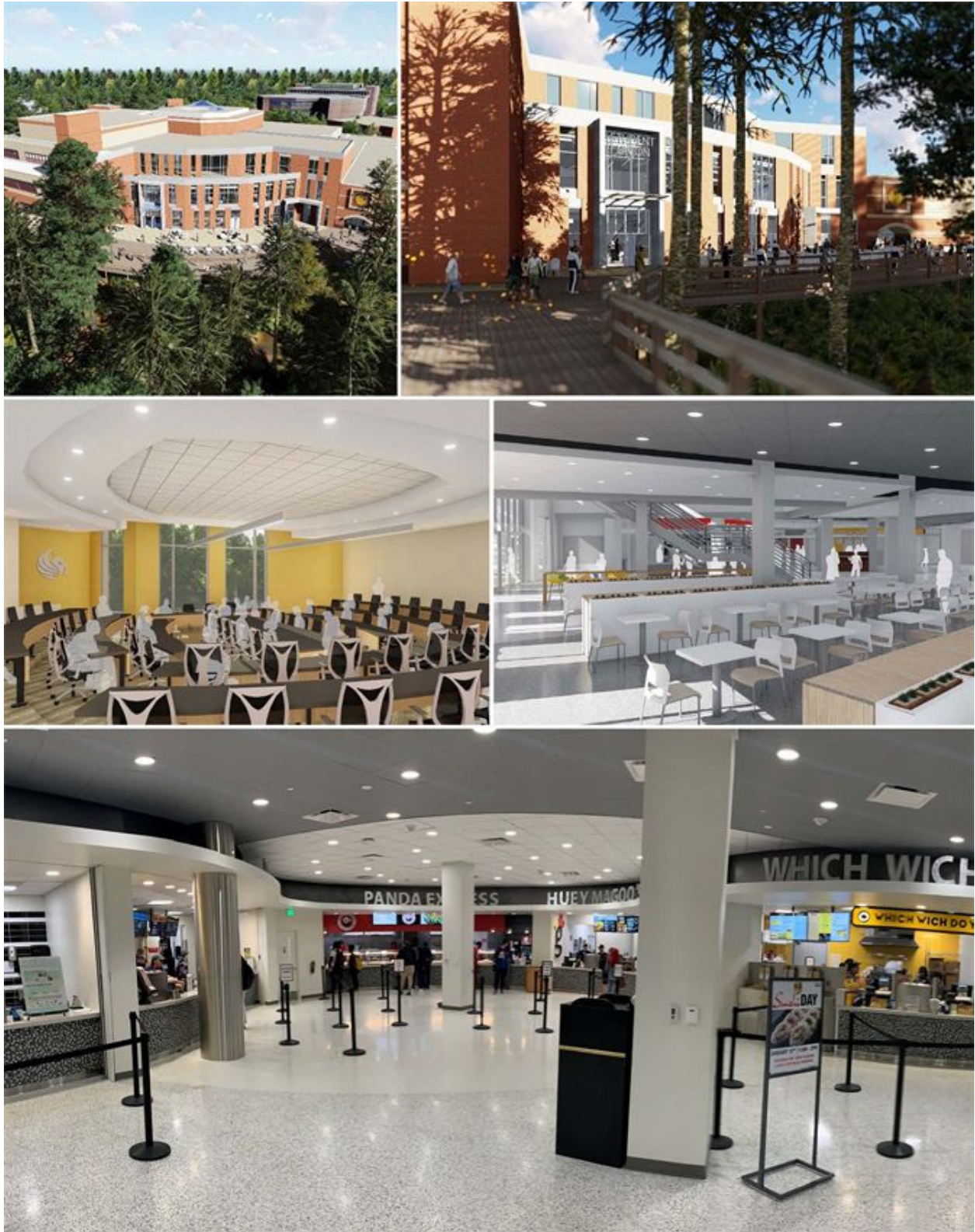
This project has been very logistically challenging, as this building is in the heart of campus and accommodates huge daily volumes of student, faculty, and staff traffic. The project also has several other related projects that are being executed as minor projects, including the Chili's renovation (completed), the relocation of the SGA Ticket Center (under construction), the renovation of the Express Print Shop into new restrooms (under construction, to displace the existing Pegasus restrooms which will be demolished in Phase 3 & 4 construction), and the relocation of ATMs and their support space (under construction).

Note that the project cost and schedule information above only includes information for Phases 2, 3, and 4. When Phase 1, the Chili's renovation, and Aramark equipment costs are included, the total project cost is approximately \$21.2M. The overall project budget is divided into multiple pieces, and as Phase 3 and 4 have just started construction, the final budget is not yet known and is listed as "TBD" above. As of January 2019, the project is on budget, though it is fair to say that the budget is extremely tight with little project contingency. FP&C is working with the entire project team to keep the project on budget and avoid the need for additional funding from Business Services.

The project has experienced delays during design and construction for various reasons, including navigating solutions to many unforeseen conditions discovered during the renovation, redesign of some building systems during construction, and additional time for enhanced commissioning activities. However, FP&C believes that the most difficult portion of the project—the renovation—is behind us.

The food court is now fully operational, in that three of the five brands opened in September 2018 and the remaining two opened in January 2019. Many minor punch list and commissioning items remain, and will be finished over the coming months as Phases 3 & 4 (the building expansion) starts. The new food court is a fantastic campus amenity, and FP&C is excited to start construction on Phases 3 and 4, which will expand square footage for use by students, faculty, and staff.

STUDENT UNION RENOVATION PHASE 2 Renderings and Photo



BASEBALL STADIUM EXPANSION

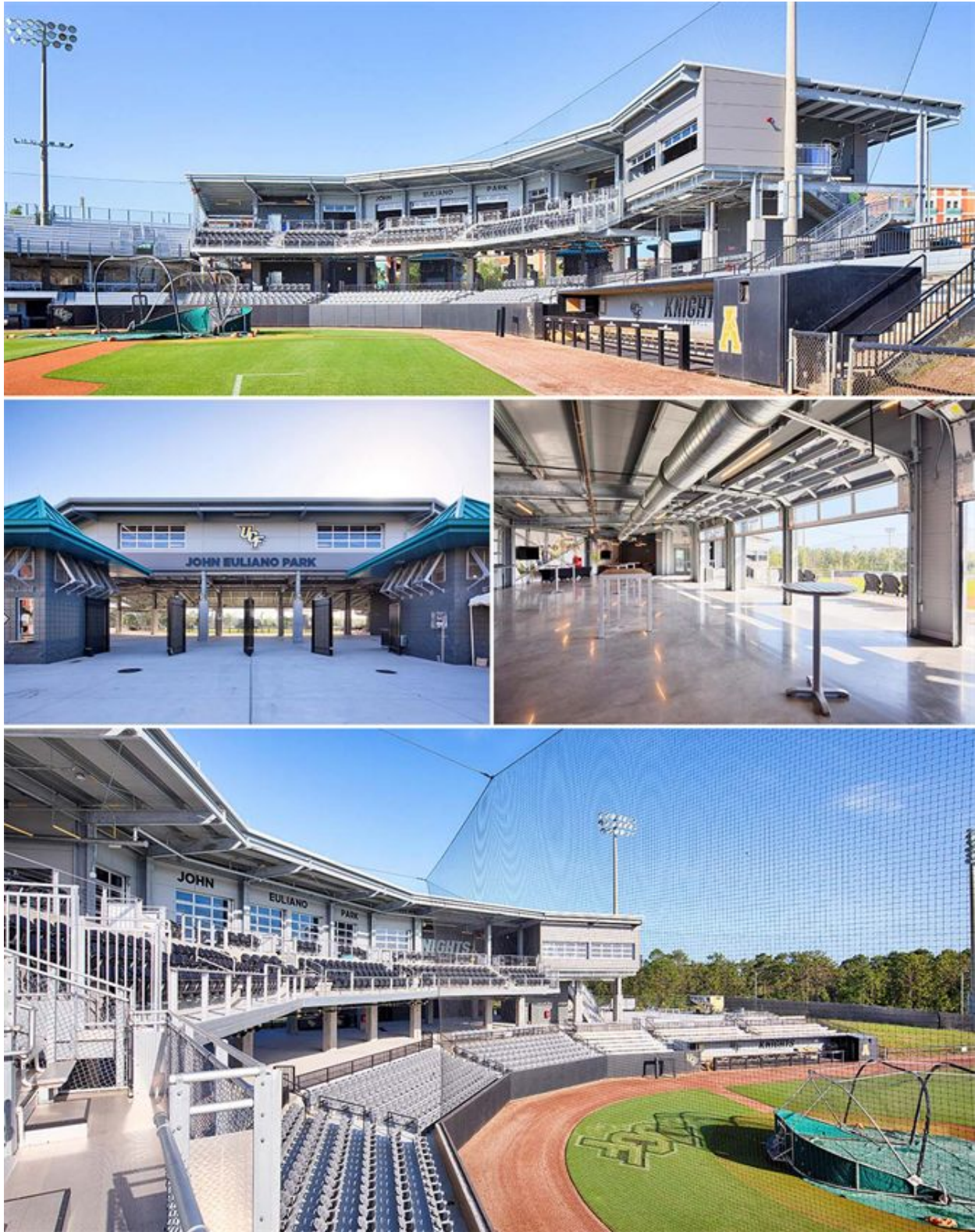
PLANNED COST:	\$3,588,355.56
ACTUAL COST:	\$3,562,804.15 (\$25,551.41 under budget)
PROJECTED TIMELINE:	November 2017 to March 2018
ACTUAL TIMELINE:	November 2017 to March 2018
BOT SUBMISSION:	Project specific approval request, approved by the BOT on October 26, 2017

PROJECT DESCRIPTION:

The Baseball Stadium Expansion was designed to greatly enhance the fan experience by adding a second story, which includes approximately 300 premium seats and an open-air reception space behind home plate. The project also relocated the press box to the new second floor, giving it a better view of the field and making room for additional ground floor seating.

The project began construction in November 2017, continued through the baseball season, and was completed in March 2018. The ability to continue to host baseball games throughout construction was critical, and required extra effort from all parties. As stakeholders, the Architect, Construction Manager, FP&C, and Athletics all recognized the importance of working together to overcome these challenging construction circumstances. For example, all parties worked closely with the Building Department to set criteria which would allow safe temporary occupancy of ground level seating, while construction took place on the second floor. This strategy allowed for stadium occupancy in February 2018, with construction completed in March 2018.

BASEBALL STADIUM EXPANSION Photos



UCF Global

PLANNED COST:	\$16,801,030.69
ACTUAL COST:	\$16,604,487.67 (\$196,543.02 under budget)
PROJECTED TIMELINE:	November 2014 to November 2015
ACTUAL TIMELINE:	November 2014 to April 2016 (explanation follows)
BOT SUBMISSION:	Project specific approval request, approved by the BOT on May 22, 2014

PROJECT DESCRIPTION:

UCF Global, a 54,780 gsf LEED Gold Certified project, serves as the primary campus hub for more than 2,000 international students, as well as faculty and staff. The building contains over 40 offices and over 20 classrooms. The building opened in 2016 and includes the English Language Institute, Travel Abroad programs, and Undergraduate and Graduate support programs.

The project's major milestones were:

- Schematic Design Documents, completed in July 2014
- Design Development Documents, completed in September 2014
- 50% Construction Documents, completed in October 2014
- 100% Construction Documents, completed in November 2014
- Early site GMP contract, approved in November 2014
- Full building GMP contract, approved in February 2015
- Certificate of Occupancy, issued in April 2016

UCF Global is the first project on campus to use a chilled beam HVAC system, circulating chilled water above the ceilings to individual chilled beams, which, in turn, function as radiators to heat or cool individual spaces. This system is more energy efficient than traditional Variable Air Volume (VAV) systems, which push hot or cold air into individual spaces. Due to the building's design and function, the use of chilled beams, and other sustainable features, UCF Global is 34.5% more energy efficient than a building designed and built to minimum code standards. These features provide significant long-term energy savings to the university.

The project experienced several design element changes during construction, including those to interior offices, common spaces, classrooms, a meditation room, and the addition of a catering kitchen. These design changes, along with contractor material delays and commissioning challenges, pushed the opening date to April 2016.

UCF Global earned several awards for its progressive and energy efficient design:

- Florida Educational Facilities Planners Association (FEFPA) First Place Design Award, 2017
- United States Green Building Council (USGBC) LEED New Construction Project of the Year (Florida Chapter), 2017
- Orange County Sustainable Project of the Year Award, 2017



UCF Global Photos

