

# Florida Museum of Natural History Earth Systems Addition

UF-396

Design Development November 2023

Keith Humphreys



#### **Project Overview**

- The project is located within the UF Cultural Plaza south of Hull Road.
- The new TESI Earth Systems Addition at the Florida Museum of Natural History will provide new and improved spaces for both public and administrative functions. It will expand the Museums footprint, and will provide a home for the Thompson Earth Science Institute.
- The project is split between two new additions, one at the front of the building (3,300 S.F.) and one at the northwest corner (7,400 S.F. over two levels for office and conference room space).
- The existing roadway location will not be moved.
   Utility and site work will be minimized, as will new mechanical equipment.
- Future Land Use Designation: Cultural





#### **Project Overview**

- The project previously came before the LVL committee in July 2023 for the Schematic Design phase. The project was approved as presented.
- The committee approved alternative native plantings not within the Landscape Master Plan plant list in order to incorporate more diversity and pollinator species. The committee also encouraged the design team to tie in the plants from the pollinator areas and LID areas throughout the landscape.





#### **Landscape Master Plan**

The project is located within the Cultural Plaza and at the terminus of the Arts Axis identified within the Landscape Master Plan.

PRINCIPLE T

### Greet Gainesville with a More Welcoming and Integrated **Urban Experience**

The 2016 Strategic Development Plan (SDP) outlines a path to preeminence for UF through the transformation of its relationship with its host city, Gainesville. A key finding of the SDP was that the University's growth should be concentrated within the eastern third of the campus where new development would spark Downtown collaboration and development and benefit adjoining neighborhoods. The Landscape Master Plan seeks to support this effort through the enhancement of the spaces and connections within the eastern third of the campus and its campus edges, as well as the improvement of all of the University's edges.

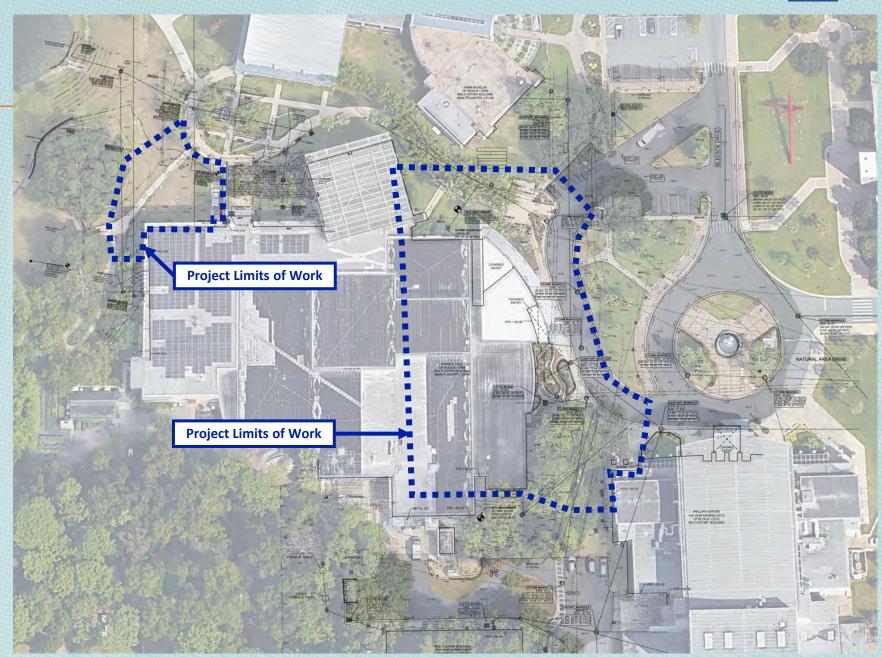
#### ARTS AXIS

Reinforce the connection between UF and the City with the celebration of the campus's art and cultural features through the creation of the Art Axis. (See Section 4, Principle 1) Look for opportunities to enhance the vehicular portion of the route as well as the walking portion in the campus core through the thoughtful addition of art to campus spaces and buildings.





# **Project Limits of Work**





# **Existing Conditions**

















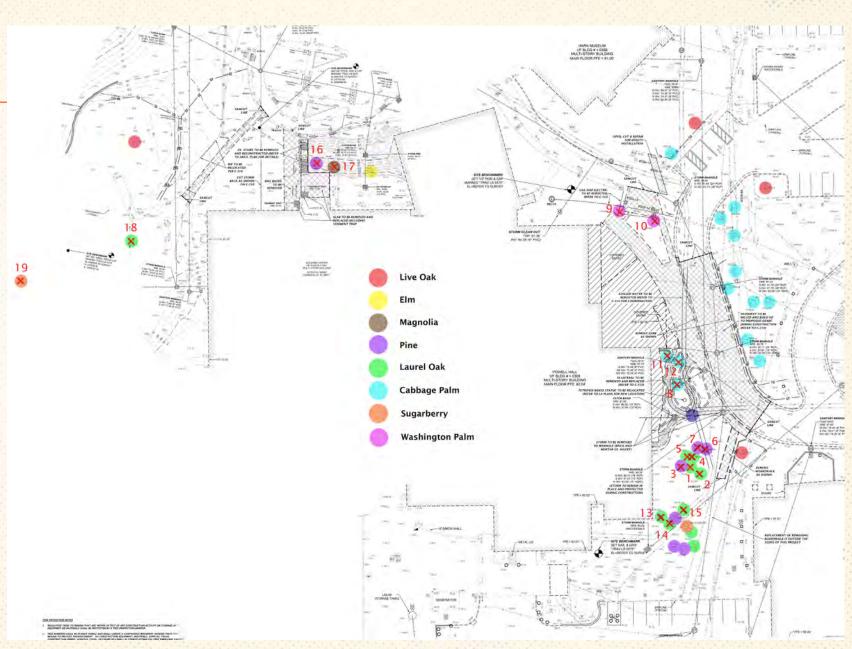


#### **Site Plan**





#	Size/Species	#	Size/Species
1	15" Laurel Oak	16	15" Loblolly Pine
2	22" Laurel Oak	17	4" Magnolia
3	22" Loblolly Pine	18	19" 28" Laurel Oak
4	26" Laurel Oak	19	10" Sugarberry
5	11" Laurel Oak		
6	19" Loblolly Pine		
7	17" Loblolly Pine		
8	10" Cabbage Palm		
9	14" Washington Palm		
10	14" Washington Palm		
11	9" Cabbage Palm		
12	9" Cabbage Palm		
13	18" Laurel Oak		
14	10" Laurel Oak		
15	15"10" Laurel Oak		



Size/Species

4" Magnolia

15" Loblolly Pine

19" 28" Laurel Oak

10" Sugarberry

TOTAL



#### **Tree Impact Summary**

#	Size/Species	Required Mitigation Trees/Fee	#
1	15" Laurel Oak	2 trees	16
2	22" Laurel Oak	2 trees	17
3	22" Loblolly Pine	2 trees	18
4	26" Laurel Oak	2 trees	19
5	11" Laurel Oak	2 trees	
6	19" Loblolly Pine	2 trees	
7	17" Loblolly Pine	2 trees	
8	10" Cabbage Palm	2 trees	
9	14" Washington Palm	2 trees	
10	14" Washington Palm	2 trees	
11	9" Cabbage Palm	2 trees	
12	9" Cabbage Palm	2 trees	
13	18" Laurel Oak	2 trees	
14	10" Laurel Oak	2 trees	
15	15"10" Laurel Oak	2 trees	

Mitigation required **38 Trees** 

Mitigation provided **9 Trees** 

Total mitigation deficit
29 trees @ \$250 each =\$7,250

**Required Mitigation** 

Trees/Fee

2 trees

0 trees

2 trees

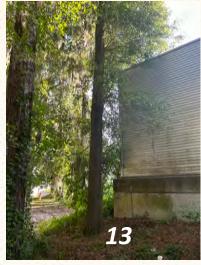
2 trees

38 Trees

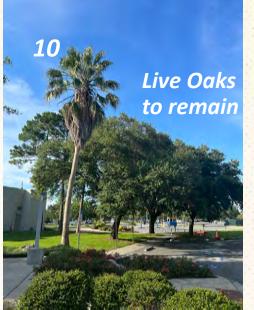
= \$ 7,250 Total Mitigation Fee









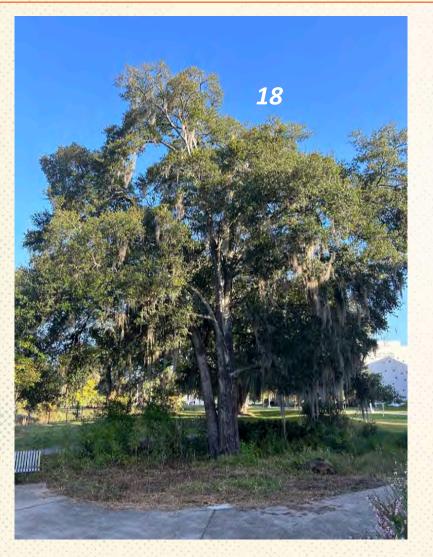


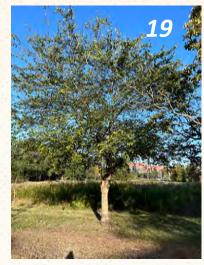




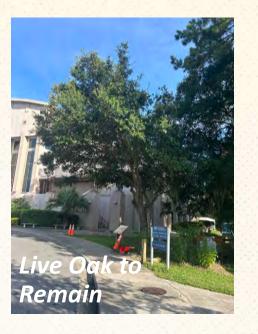




















- The project will require some pruning of some trees at the anticipated proposed 34<sup>th</sup> Street construction entrance. This will be required in order to provide access from the 34<sup>th</sup> Street driveway access to the rear addition construction / laydown area.
- Pruning will be performed by an ISA Certified Arborist.







#### **Sustainability and Site Impact Analysis**

- The project will pursue FGBC Gold certification.
- Our goal is to minimize site impact and improve existing site conditions.
- The project is in the Hogtown Creek Basin but is still within the UF Master Stormwater Permit. The
  intent is to utilize the existing stormwater pond (Northwest of the site) and will require modification
  to the existing control structure.
- We have also provided several L.I.D. areas for additional stormwater treatment.

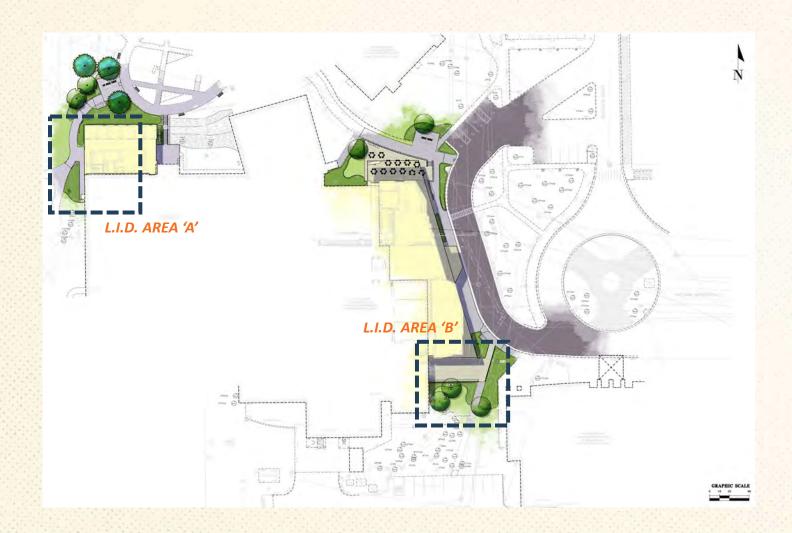




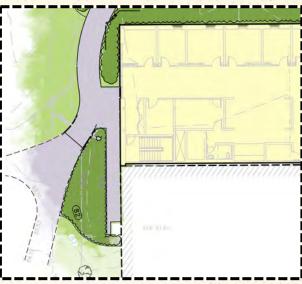




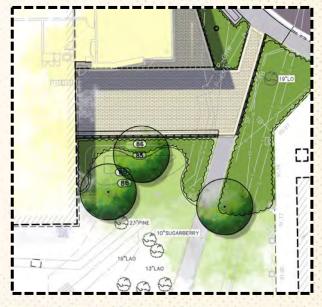
### **Sustainability and Site Impact Analysis**







L.I.D. AREA 'B'



PEAK RACKS



#### **Site Furnishings**



**BIKE RACK** 8-SLOT DOUBLE SIDED BIKE RACK



TRASH RECEPTACLE SELECT TRASH RECEPTACLE, SILVER LANDSCAPE FORMS



BENCH SIT BENCH, SILVER, LANDSCAPE FORMS



LIGHTPOLE PUREFORM LED POST TOP COMFORT PPT, 12' LIGHT GREY PHILLIPS LUMEC LIGHTING



**SKATE STOPS** "G" SERIES SURFACE MOUNT SKATE STOP SKATE STOPPERS



HEP-20



**RECYCLED AGGREGATE ECOPREMIER PAVERS** 



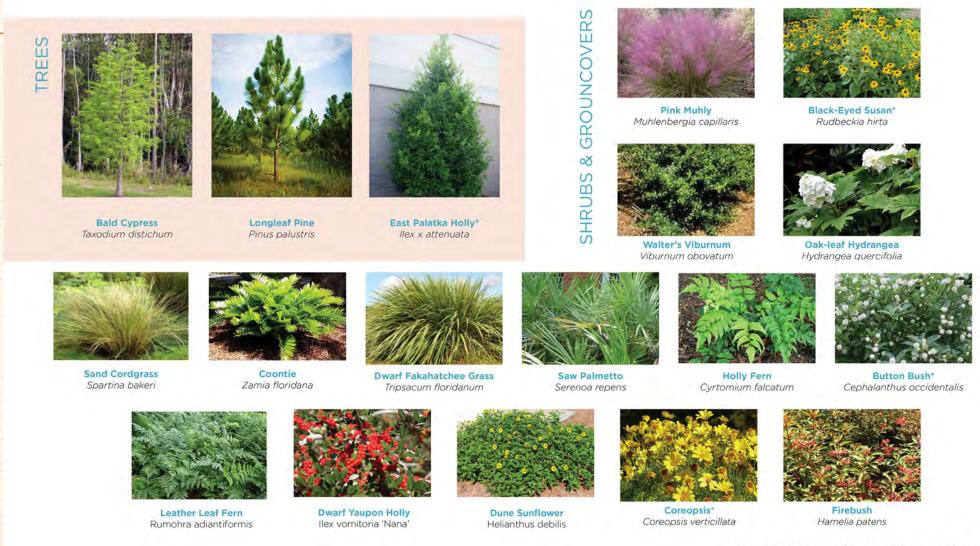
**GUARDRAILS** STAINLESS STEEL WITH METAL MESH INFILL



HEP-30



#### **Plant Palette**



\*Not in UF Landscape Master Plan

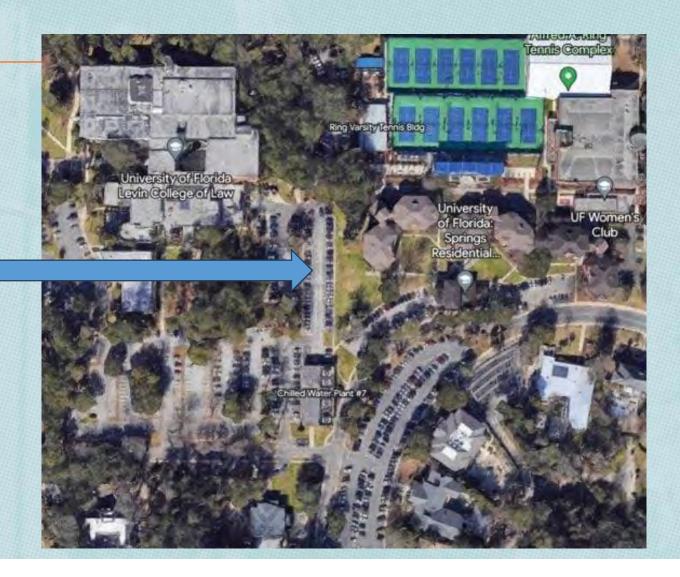






#### **Project Location**

The parking lot for the future solar PV parking canopy is located directly to the North of the Holland District chiller plant CWP-7 (Building # 0758)





#### **Project Overview**

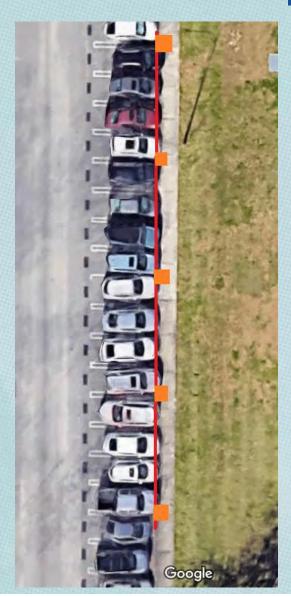
- Project UF-685 is multifaceted, the goal of this presentation is to provide information to the LVL Committee regarding the installation of (1) solar photo voltaic (PV) parking canopy
- The parking canopy being presented is associated with the hot water piping route presented to the LVL committee in July 2023
- The parking lot is currently used as a decal parking lot for law students and staff





#### **Landscape Plan & Compliance with the Landscape Master Plan**

- 5 or 6 vertical structural support columns will be placed along the left (West) edge of the sidewalk running North-South directly to the right (East) of the existing parking lot.
- Installation of the canopy support columns (orange squares) will require modifications to the sidewalk to maintain UF Standards and ADA compliance
- Column location, quantity and size on the image to the right is for reference only, exact location, quantity and size will be provided in the design documents. The columns will be roughly 30 inches in diameter
- Sidewalk modifications will likely encroach into the grass area to the right (East) of the sidewalk
- Review of Landscape Master Plan did not reveal compliance issues
- In addition to Federal, State and Local ADA requirements, modifications to the sidewalk will adhere to UF Design and Construction Standards and Section 7 of the Landscape Master Plan (Landscape Design Standards)





#### **Landscape Plan & Compliance with the Landscape Master Plan**



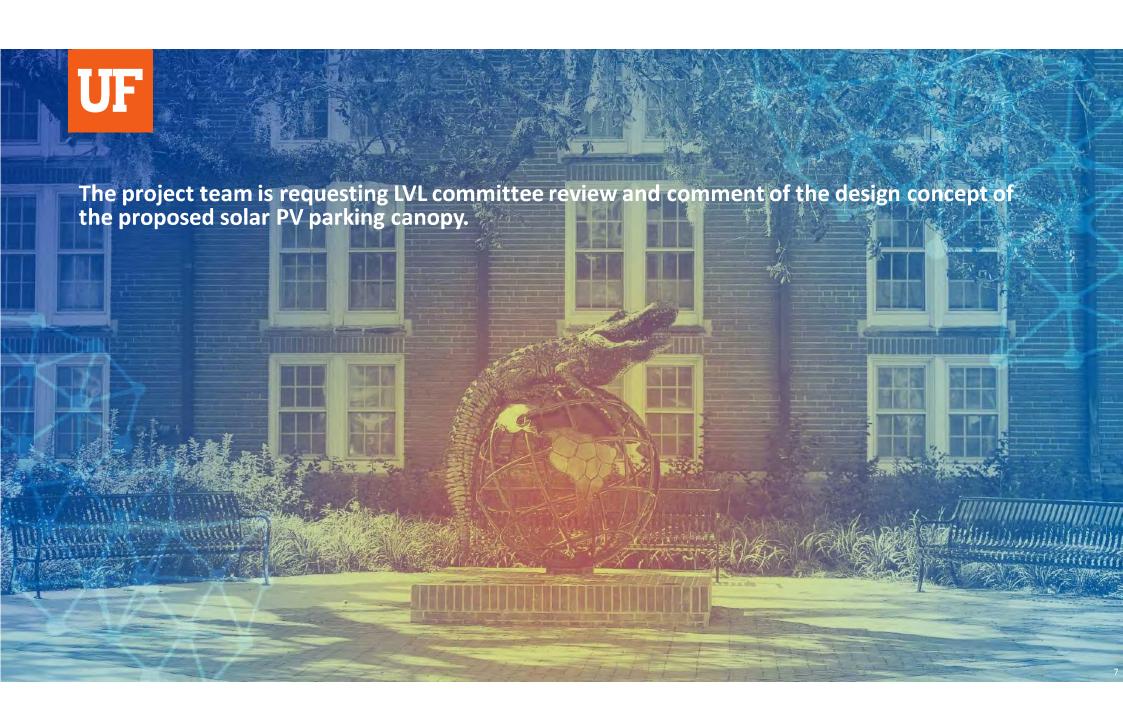


The vertical structural columns supporting the canopy will actually be installed along the left (West) edge of the sidewalk, not in the grass area as shown in these renderings.



### **Sustainability**

• Solar canopy will provide renewable energy to offset a portion of the electric use at the Holland Utility Plant





### Reitz Union Lawn Inner Road Improvements / UF-644, 644A and 644B



### **Project Overview - Location**





#### **Project Overview – Area of Modification**





# **Project Overview – Existing Conditions**



Walk and Drain Inlet at Reid Hall



**Broken Planter Wall** 

2 Sabal palmetto (est. 30' c.t.) and European Fan Palm



#### **Project Overview**

#### SITE MEETING

Discussion regarding construction impacts on drainage, planters, two Sabal Palms and a European Fan Palm.

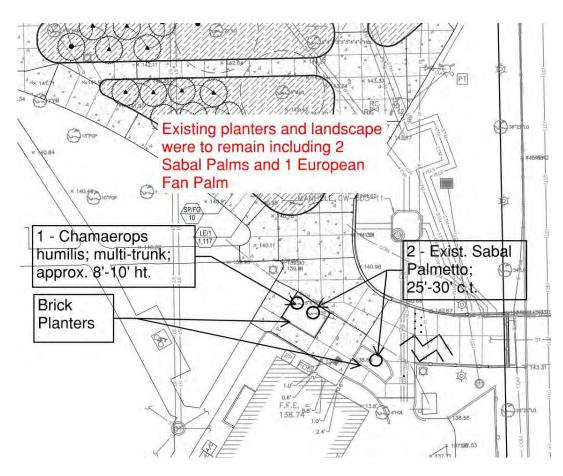
#### CONCLUSION

Construct utilities as planned. Reconstruct sidewalk, drainage and planters in their original configuration. Turn Sabal Palms and European Fan Palm over to UF Grounds for planting elsewhere on campus. Plant 2 new Sabal Palms after reconstruction is complete.

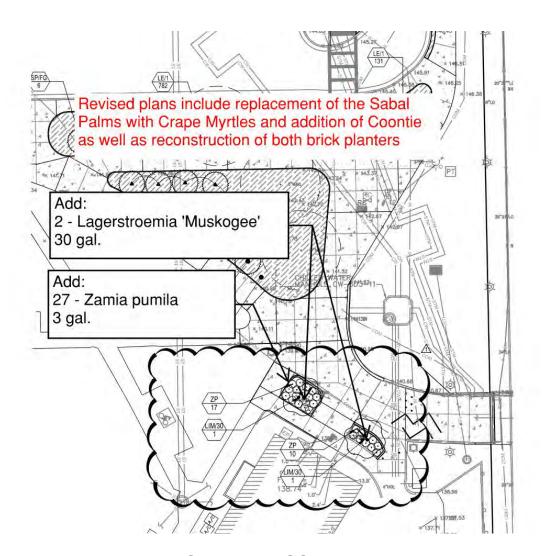


#### Reitz Union Lawn Inner Road Improvements / UF-644, 644A and 644B





**ORIGINAL LANDSCAPE PLAN** 



**REVISED LANDSCAPE PLAN** 



#### Landscape Plan & Compliance with the Landscape Master Plan

The proposed approach to mitigating the impacts of the utility construction:

- 1. Replaces the two Sabal Palms impacted by the constructed with two new Crape Myrtles.
- 2. Provides for the addition of the two relocated Sabal Palms elsewhere on campus.
- 3. Provides for the addition of the European Fan Palm elsewhere on campus.
- 4. Fixes the damage to the bricks of one planter.

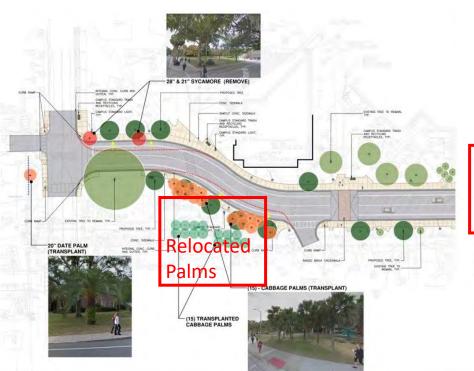
All plants and brick materials proposed meet the Landscape Master Plan requirements.

#### Reitz Union Lawn Inner Road Improvements / UF-644, 644A and 644B



#### **Landscape Discussion**

Previously approved landscape plan had 15 sabal palms scheduled for relocation and 18 new sabal palms to be installed.



Due to prevalence of lethal bronzing on campus, should the design be changed to replace them with another tree species?

PI ANT S	CHED	ULE BASE					
TREES	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	SIZE		REMARKS
LIM/30	7	Lagerstroemia indica `Muskogee`	Crape Myrtle Multi-Trunk	30 GAL.	MULTI-TRUNK		
PM/EX 1 Phoenix dactylifera `Medjool`		Phoenix dactylifera `Medjool`	Date Palm	Existing			Relocate existing
QV/65	65 18 Quercus virginiana		Southern Live Oak	65 gal	3.5"Cal		
SP/EX	SP/EX 15 Sabal palmetto		Cabbage Palmetto	Existing			Relocate existing
SP/FG	18	Sabal palmetto	Cabbage Palmetto	FG.			See Plan for CT HT
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	SIZE		REMARKS
IP/3	30	Illicium floridanum	Florida Anise	3 GAL.	18"-24" OA		
MC/3	44	Muhlenbergia capillaris	Pink Muhly Grass	3 GAL.			
ZP	27	Zamia pumila	Coontie	3 GAL.	18"-24" OA		Full & Thick
				l.			*
SHRUB AREAS	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	SIZE	SPACING	REMARKS
LE/1	3,360	Liriope muscari 'Emerald Goddess'	Liriope	1 GAL.	10"-14" HT. X 5-7 PPP	18" o.c.	
ТМ	73	Trachelospermum asiaticum 'Minima'	Minima Jasmine	1 GAL.	4"-6" HT. X 12"-18" SPRD.	18" o.c.	
SOD		Zoysia japonica	Zoysia Grass				







# Landscaping and Natural Resource Projects

Maintaining the aesthetics and functions of our natural areas

# **Tree Mitigation Fund**

Month	Balance	Revenue	Expense	Description
July 2022	\$160,170			Beginning Balance
October 2022		\$29,250		UF-656 Tree Mitigation Payment
October 2022			\$270	Purchase of two Holly trees (Tensaw and Eagleston)
November 2022			\$125	Purchase of one Crape Myrtle
May 2023			\$3,885	Purchase and delivery of 15 Crape Myrtle, six Chickasaw Plum, five Chinese Fringe, five White Oak, and 75 Taiwan Cherry
June 2023			\$4,155	Purchase and delivery of 13 Magnolia
July 2023			\$1,300	Purchase of four Live Oaks
October 2023		\$1,250		UF-670 Tree Mitigation Payment
October 2023			\$325	Tree Risk Assessment
October 2023	\$180,610			Current Balance

#### **Tree Removals**

### **Graham/Flavet Parking Lot**

 Tree removal necessary to address drainage issues contributing to flooding of nearby areas. Tree removal resulted in successful remediation of the issue.

#### O'Connell Center

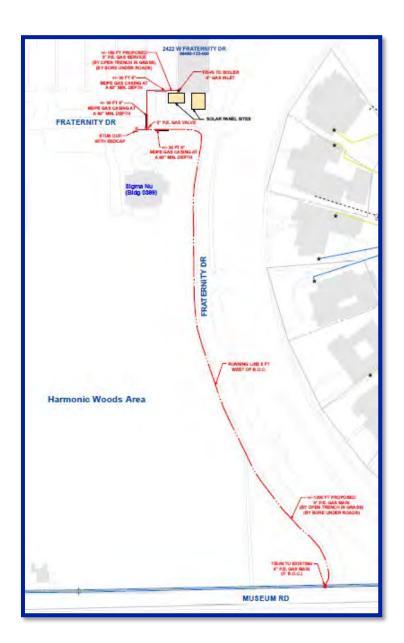
 Tree removal necessary to address impediments to utility maintenance and drainage issues contributing to erosion in the area. Tree removal resulted in successful remediation of the issues.



#### **UF-685**

#### **Holland Law Heating Hot Water Conversion**

- A hot water conversion strategy is being implemented within the Holland Law Chilled Water Plant (CWP #7) and associated buildings, which include the Holland Law area, Springs Residence buildings, and the Basketball Practice Facility.
- This conversion consists of new condensing hot water boilers and distribution piping to provide heating hot water to the connected buildings.
- As part of this initiative, a new gas line will be installed along Fraternity Drive adjacent to the Harmonic Woods



#### **UF-685**

#### **Holland Law Heating Hot Water Conversion**

- A 10-foot setback will be pursued along this corridor.
- Setback will:
  - Ensure ability to service the utility lines
  - Provide increased safety for pedestrians utilizing the sidewalk along that stretch of Fraternity Drive
- This work is paramount to ensuring the reliable provision of utilities to the area buildings.



#### **Current and Upcoming Work**

#### **Project list**

- Tigert Circle Beautification Project
  - Phase Two to commence week of 10/30
- Ficke and IFAS Meadow Fencing Additions
- Addition of bollards and chain to DSIT
- Tree work and canopy thinning near Physics, Benton Hall and Larsen Hall to address drainage issues leading to flooding within buildings
- Address issues with live oak at southwest corner of Garage Four