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FACILITIES MANAGEMENT

Planning & Priorities Update

April 27, 2011

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Campus Physical Plant

- 550 acres
- 9.4M GSF growing to 14.2M+ GSF by early 2013
- 130+ Facilities
- By Fall 2013 targeted 8556 students living on campus (owned and partnership housing)
  - Goal is to house 25% of student body by 2018
- Predominate growth is in Research & Housing

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Centralization Efforts

- Facilities Condition Assessment Plan
  - Capital Plan Development
  - Service Level Minimum Standards and Supporting Financial Recommendations (phased)
- Infrastructure Planning
- FM Project Delivery Process
- Facilities Centralization Project
  - Overview & Immediate Priorities
  - A Quick Look @ Current State
  - Dining/Food Services
  - Facilities Service Center
  - FAMIS Implementation
  - Procurement Opportunities
- Building Coordinator Program

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Facilities Conditions Assessment Project Plan Development

- Assess exterior, roof systems, and mechanical aspects of buildings
- Assess dining facilities and associated kitchen equipment
- Partnering with IT and Public Safety to assess and integrate their needs into FCA and Infrastructure plans.
- Phase 1:
  - SR1, SR2, Engineering 1, Engineering 2, Health Science Center, Settegast Hall, Bates Hall, Taub Hall, Oberholtzer Hall, Moody Towers
- Phase 2:
  - All other buildings on UH Main Campus
- Expected Completion: April 2012

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FCA Results – How will they be delivered?

Prioritization

1. Priority 1 – Currently Critical (Immediate)
2. Priority 2 – Potentially Critical (One year)
3. Priority 3 – Not yet Critical (2-5 years)
4. Priority 4 – Recommended (6-10+ years)

Findings Categories

- The findings from the FCA project will provide the findings by priority as well as category. The categories will align with the CB reporting requirements and include (1) Facility Adaptation, (2) Deferred Maintenance, and (3) Planned Maintenance & Renewal.

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Infrastructure Plan Development

	Study	Projected Budget	Estimated Completion Date
1	**Chilled Water, Condensate and Steam Capital Improvement Plan**	$51,500	Substantially Complete
2	**Electrical Capital Improvement Plan**	$145,950	Substantially Complete
3	**Landscape, Sidewalk & Irrigation Capital Improvement Plan**	$255,000	September 2011
4	**Utility Survey** Location documentation of water, sanitary, storm, natural gas, and fiber optics	$335,280	July 2011
5	**Water, Sanitary & Storm Capital Improvement Plan** Will include drainage and detention plan	$170,000	October 2011
6	**Transportation Capital Improvement Plan**	$140,000	November 2011
7	**Infrastructure Improvements Integration Plan** Will integrate all CIP's and IT needs into one overall CIP	$115,000	March 2012
8	**Facilities Conditions Assessment Plan** Broad overview of conditions of every building on campus	$316,413	April 2012

Note: FCA & Infrastructure Recommendations to be merged into one Capital Plan with 20+ Year Recommendations once complete – Update every 3-5 Years for Rolling Plan

Audit Issues Addressed or being addressed

- Establish New JOC Program, guidelines, policies and training – *Complete*
- Policy revisions to SAM 01.B.07 and SAM 03.C.03 related to construction rules and processing through project groups – *in route through review process – Drafted*
- Establish PM roles and responsibilities – *Complete*
- Establish Project Delivery Process
  - *FM to be complete by 5/31/11*
  - *FPC by 8/31/11*
- Renewal and Maintenance Funding Recommendations and supporting funding and renewal recommendations – *Pending FCA and Centralization Efforts*
- Centralize all Facilities management organizations – *Underway; plan to be developed by 8/31/11*

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FM Project Delivery Improvements

- Enforcement of University policy
- Developed and will implement a project delivery process to serve as roadmap for successful cost, schedule, and quality performance on projects. Process being documented and supporting tools created to:

❖ Support FM in the delivery of 200-300 Minor Projects per Year

- Enable Plant Operations to provide high quality service to it's customers, stakeholders, and the university.
- Provide a balanced, systematic approach to planning and delivering construction/renovation projects.
- Incorporate project management best practices

  ❖ FM Complete by 5/31/11

  ❖ FPC by 8/31/11

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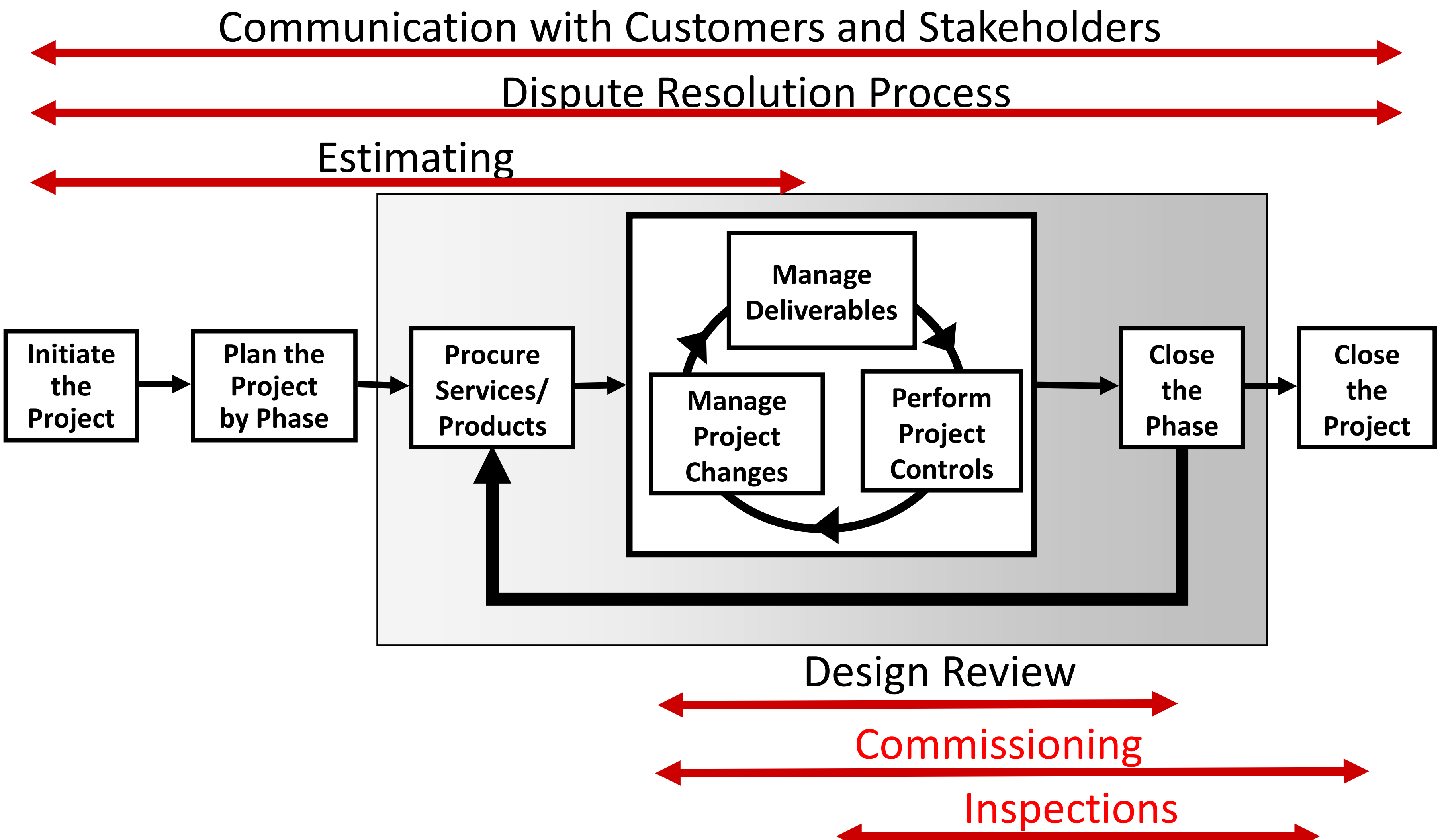
Develop Standardized Project Process



Centralization & Support Project

Integration of Organizations and Support Services

- Tier One Objectives
  - Residential Campus
  - Research
  - Sustainability
  - Financial and Resource Challenges
  - Service Focused

- S-STAR
  - Collaborative Committee with Mutual Objectives
  - Academic (Agnes DeFranco & Steve Soutullo)
  - Programmatic (Keith Kowalka, Emily Messa and Floyd Robinson)
  - Facilities (Melissa Rockwell, TJ Meagher & Javier Hidalgo)
  - Business/Financial (Emily Messa & Pat Sayles)
    - Plan by 8/31/2011
    - Implementation now – FY 2012/2013

FM Integration Planning Committee

- Develop Strategy
- Organization Structure & Staffing
  - Space & Resourcing
- Contracts
- Service level and maintenance standards
  - POM Model
- Facilities Service Center
- Procurement and Asset Management
- Business Plan
- Implementation phasing plan

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FM Integration Planning Committee

- Planning Members
  - Melissa Rockwell, Planning Chair
  - Sameer Kapileshwari, Technical Services
  - Daniel Cleaves, Facilities Service Center
  - Javier Hidalgo, Service & POM Model
  - Carlos Villarreal, Labor Services
  - TJ Meagher, Auxiliary Representation
  - Cheryl Grew-Gillen, Event & Program *(new member)*
  - Cynthia Ramos, Facilities Support Services Planning
  - Supporting Participation as Task Plan Requires

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Facilities Centralization

- Facilities Centralization
  - Areas
    - Student Affairs
    - Athletics
    - Plant Ops
      - *Staff Reports Changed week of 4/9
      - *Town Hall Meetings held to date with:
        - FM Integrated Management Team
        - RLH Staff
        - Others to follow
  - Initial Focus is on Safety & Operational Issues
    - Develop a Risk Mitigation Plan for Critical Life/Safety Issues (All)
    - Integrated After Hours Response Plan (Short/Long Term)
    - Facilities Service Center Integration (by 7/1)
    - Policy, Process & Contractual issues cleanup (audit/non-audit)
    - Day to day issues (significant)
    - Bayou Oaks/Calhoun Lofts Support Plan

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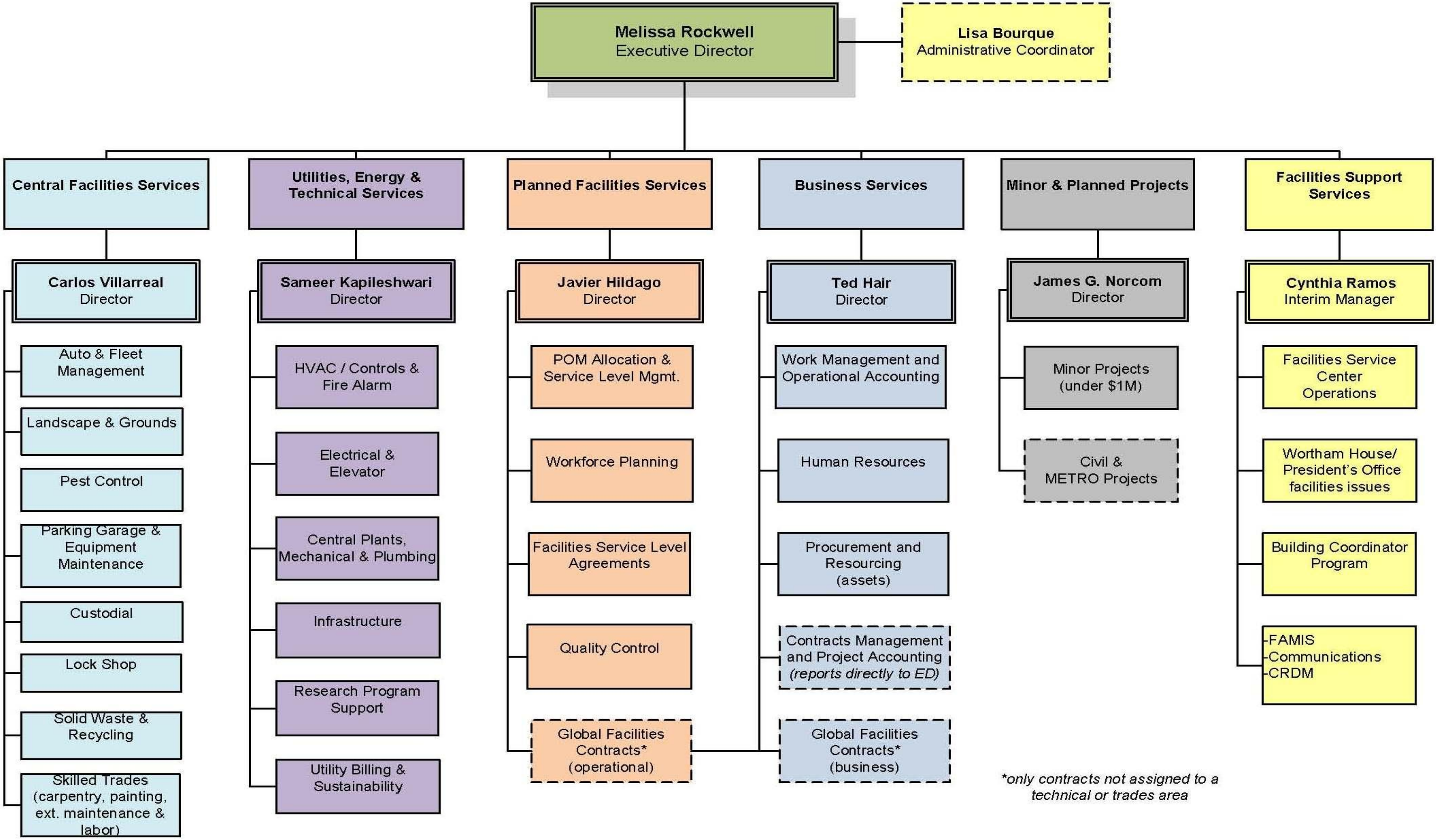
Organizational Plan



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Strategic Planning & Change Management

- Focusing on the Unified & Centralized Facilities Organization
  - Long range planning (Service level, Capital and Infrastructure plan)
  - Quality/integration of processes and services (POM Model)
  - Service Based Organization "We are UH"
  - Accountability and performance management, including outcomes
  - Financial and resource management (Business Plan to include Procurement/Resource Components)
  - Communication (Daily & Strategic)
  - Cultural & Organizational Changes (Critical)
  - Supportive of Tier One Objectives
- Change Management Process
  - Address Immediate Safety & Operational Issues
  - Set Strategy
  - Structure
  - Task Plan & Support Components
  - Programmatic Linkage
  - Initial priorities
  - Communication & Implementation Plan

Current Challenges Identified

- Past culture
- Financial Constraints
- Limited Resources
- Disconnect within and between auxiliary units
  - Reactive approach
  - Lack of long range/integrated plans
  - Inadequate resource levels due to decentralization of resources
  - Support services not evenly distributed/funded
- Duplication in all areas – resources (not Athletics)
- Safety, compliance & risk issues
- Process & policy issues

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Immediate Integration Efforts Underway

- POM Model & SLA Target Development
- FCA & Infrastructure Plans
- CRWC/Athletic Support Services Peer Review
- Facilities Service Center (24/7)
- FAMIS Work Management Implementation
- Lock Shop & Key Operations
- Staff Reporting
- Maintenance vs. Construction
  - Redefinition
  - Construction back to FM/Skilled Trades/JOC
- Contracting, Resourcing & Procurement Analysis
- Emergency Planning & Response Efforts
  - Tiered response expectations
- Risk Mitigation Plan Development
  - Remaining plan to be developed by 9/1/11
- Building Coordinator Program

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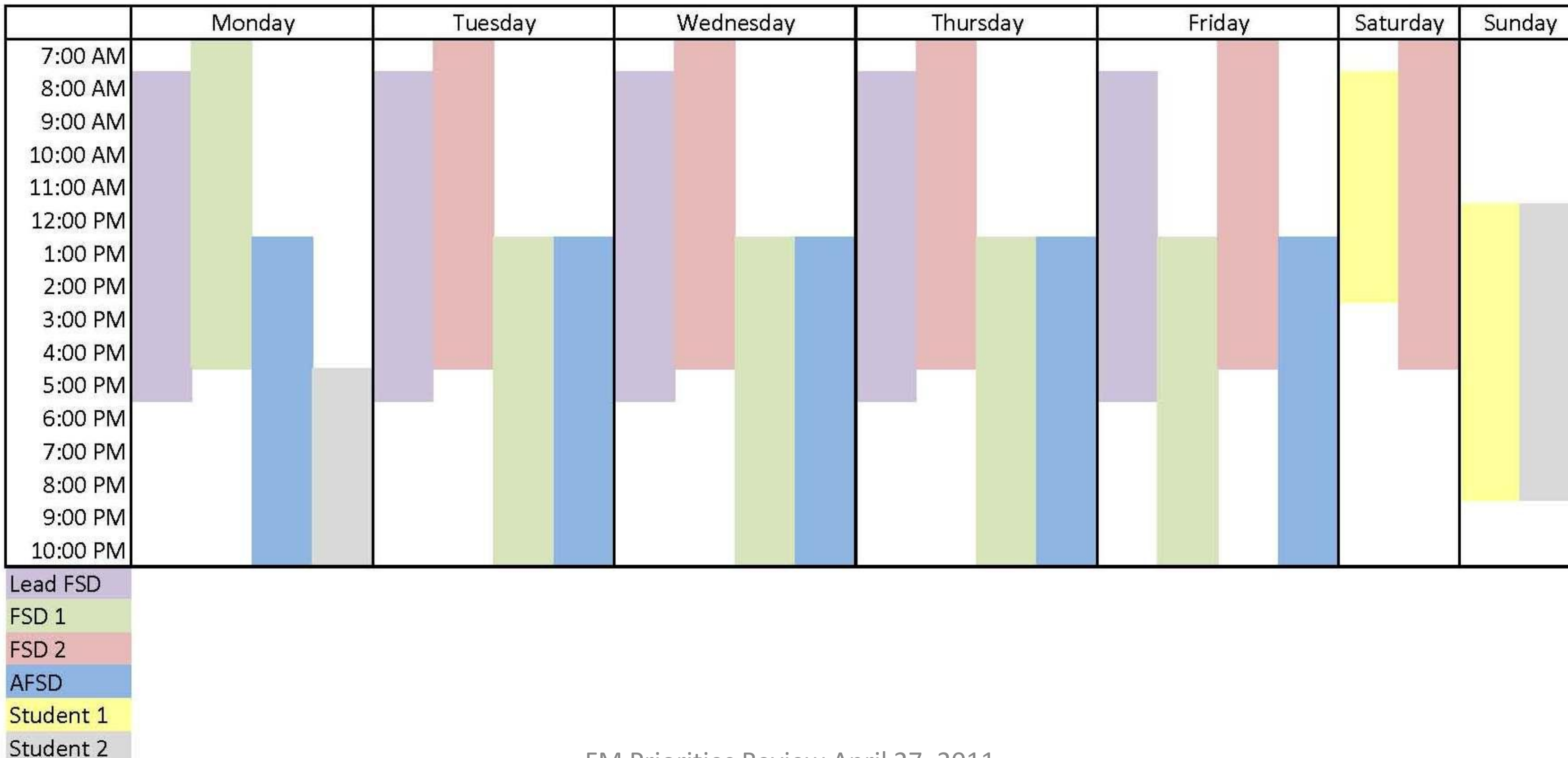
FACILITIES SERVICES CENTER
HOURS OF OPERATION
MONDAY THRU FRIDAY - 7:00pm - 10:00pm
SATURDAY - 7:00am - 4:00pm
SUNDAY- 12:00pm - 8:00pm



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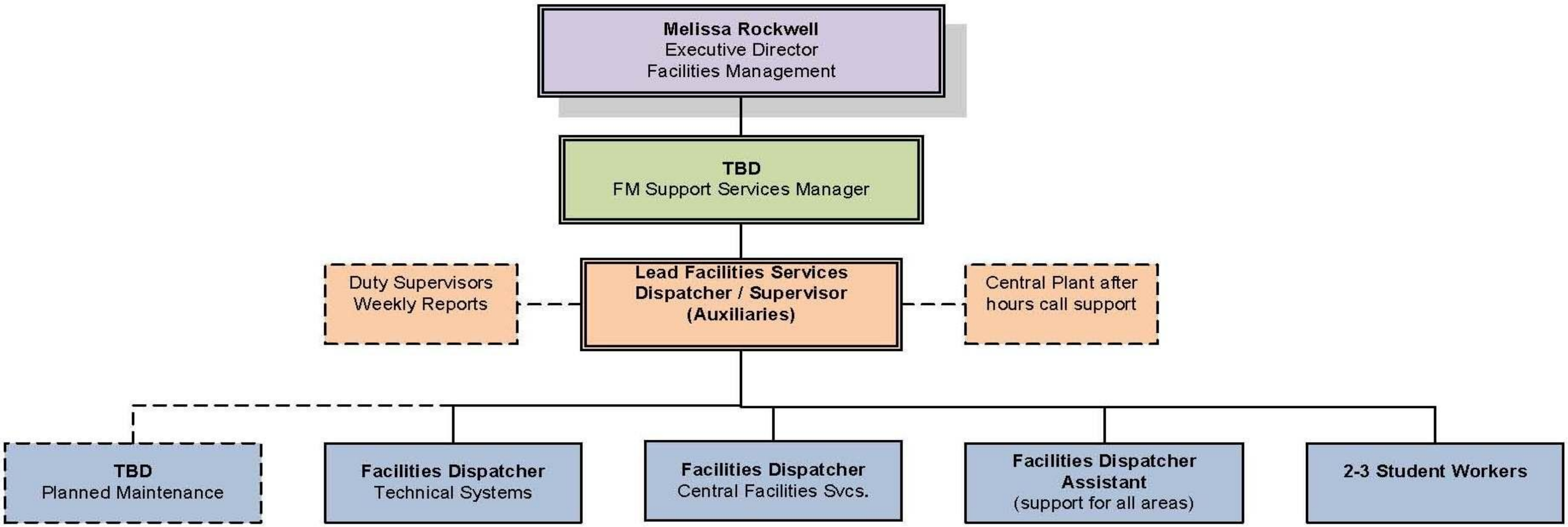
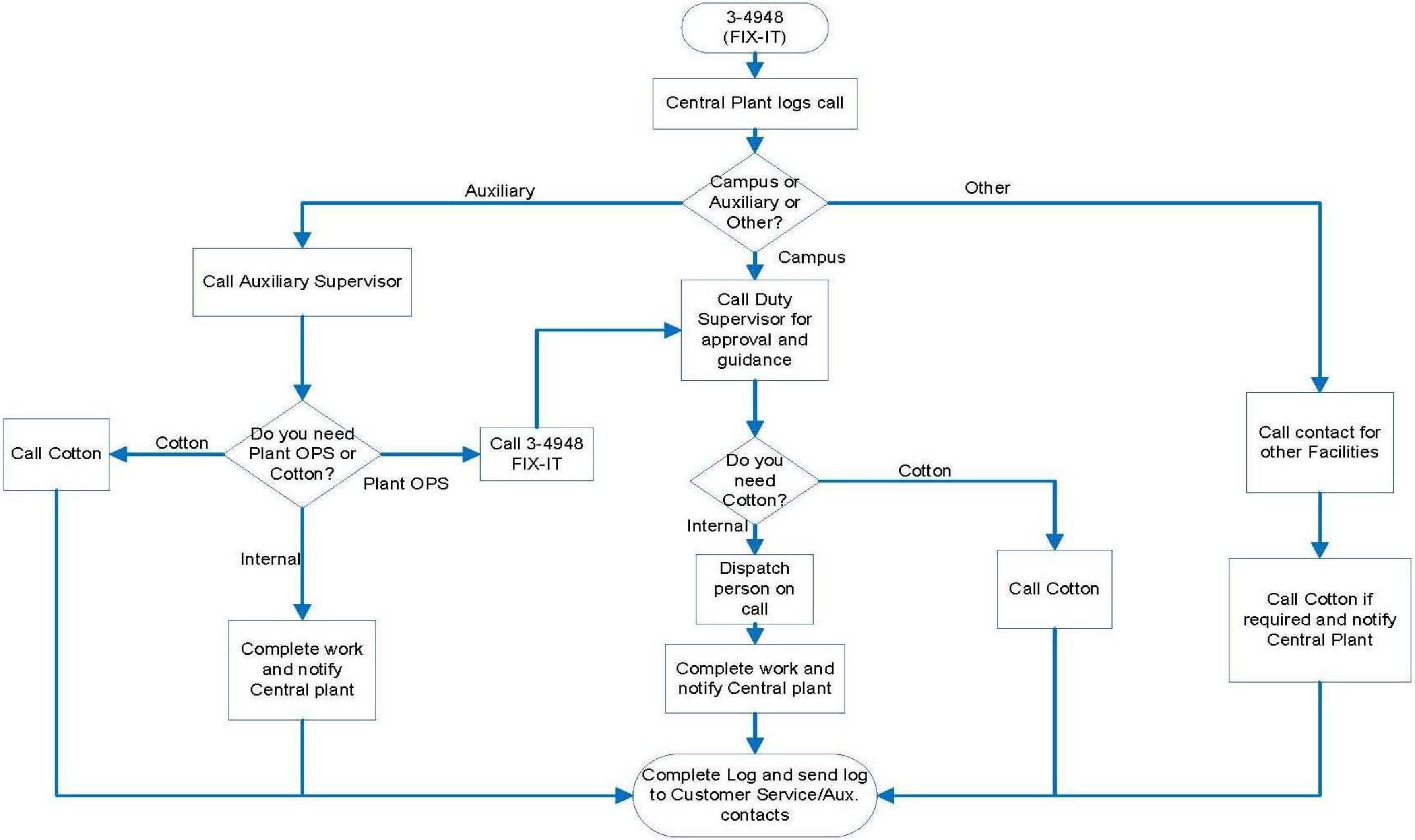
Facilities Services Center



Hours of Operation
Monday thru Friday 7AM – 10PM
Saturday 7AM – 4PM
Sunday 12PM – 8PM
After Hours - Central Plant

Work Flow Process for After Hours Response



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Tiered Response

Tier 1- Response Locally	Tier 2- Campus Support/Contractor	Tier 3- Emergency Responders
Minor leaks and spills	Continued System Issues	Life Safety
Daily Maintenance	Fire & Security alarms	Supporting Services
	Elevators	Fire/Flood/Death
	HVAC & Controls	Structural Failure
	Building Access	Natural Disasters
	Security (doors and windows)	Terrorism
	Outages	Hazmat Incidents
	Water event	

FAMIS

FAMIS: Supporting the Centralized Facilities Organization

- A web-enabled work-order system that will allow a more efficient process of reporting and follow-up of work-orders.
  - Tied to Space Management System
- Information for facilities managers to become more proactive instead of reactive to facilities requirements and enable better decision making.
  - Tracking and management of planned work
  - Backlog
  - Reports and Productivity Tracking by Service Area
  - Joint system with Residential Life Work Management
  - Programmed Maintenance program development for warranty management

FAMIS

Other Business Benefits of Updated and Efficient Work Order System

- Efficient and streamlined processes - using standardized data that is shared across the university.
- Key resource for Building Coordinator Program and Facility Wide Reporting
- Improve safety and environmental planning capabilities, reducing risk from accident and regulatory compliance violations.
- Data standardization across the university and the elimination of redundant information held by multiple organizations in various degrees of quality and accuracy.
- Fast and accurate reporting on critical facilities information.
- EHS will be utilizing system and phasing and sharing of work orders will benefit customers and improve services including research support

FAMIS

The FACILITY MANAGEMENT Modules include

- Physical Plant work order management
- Preventive maintenance
- Maintenance projects
- Resource scheduling/labor tracking
- Inventory control
- Purchasing
- Self-service request management
- Key control
- Asset Inventory

Call Technology will also be a key component of the Facilities Service Center

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AUXILIARIES – PHYSICAL PLANT

- A Quick Look..........
  - What we know before FCA
  - Risk Mitigation Planning
  - Integration with Master Planning and Capital Planning Efforts
  - CB Reporting Implications/Discussion/Direction
  - Other

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Moody Towers – a quick look
Capital Renewal & Deferred Maintenance

- Moody Towers
  - Chilled water piping replacement
  - Hot water piping replacement
  - Air handlers coil replacement
  - Electrical panels replacement (Partial)
  - Trash chute liner repairs
  - Commons roof replacement

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Moody Towers
Capital Renewal & Deferred Maintenance

- Main Entry Doors Replacement
- Sewage vent pipes repairs/replacement
- Commons heating coils replacement
- Elevator controls upgrade/replacement (partial)
- Exit doors monitoring upgrade
- Bathroom upgrades
- Foundation repairs

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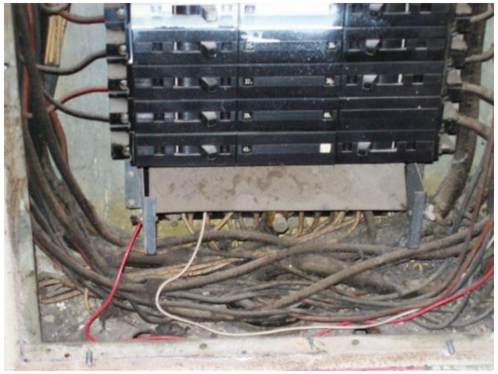
Quadrangle
Capital Renewal & Deferred Maintenance

- Electrical Panel replacement - partial
- Electrical wiring replacement
- HVAC upgrades
- Windows replacement
- Corridors carpet replacement
- Furniture refurbishing



Quadrangle
Capital Renewal & Deferred Maintenance

- Exterior walls seal & water proofing
- Foundation repairs
- Bathroom upgrades
- Sanitary sewage infrastructure issues
- HVAC coils replacement
- Air ducts cleaning
- Electrical issues

UC & Affiliates

- **Children's Learning Center**
  - Emergency Lighting
  - Carpet & Ceramic Tile replacement
- **University Center Satellite**
  - Video wall
- **University Center**
  - Video wall
  - Bike racks
  - Chili's Too (temporary space renovation).
  - ARAMARK Cash Room renovation
  - Houston Room A/V Booth digital projector upgrades

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Religion Center
Capital Renewal & Deferred Maintenance

- Curtain wall replacement (1/3 of building)
- HVAC upgrades
- Mechanical room water pipes replacement
- Air ducts cleaning/repairs

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Campus Recreation & Wellness

- Structural issues
- Southwest corner roof leak
- Chiller gearbox repairs
- West side external lights repairs
- Wooden floor repairs
- Racquetball court floor repairs
- Contractual & PM Issues

Athletics

- Stadium Structural issues (Must have plan by 2013 – replace or phase repair by 2015)
- Hoffheinz Asbestos/Scoreboard
- Significant life/safety/fire compliance issues throughout facilities
- Maintenance staffing and plan non-existent
- METRO Mitigation Projects

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Supporting Evaluation Efforts
PLAN INTEGRATION IS CRITICAL

- Facilities Condition Assessment
- Infrastructure Plan
- METRO
- S-STAR
  - Organizational and support services realignment
  - Business and Service Plan Development
  - Units to focus on Core Services
  - Non-Core to be redirected
- University Master Plan
- Academic Plan
- Tier One Objectives, including Research & Residential

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Space Breakdown
2 Year Look

Standard POM Allocation Model Development		
	FY 2010	FY 2012
Support Space	1,914,731	1,914,731
E&G Space	3,401,052	3,541,347
Auxiliary Space	2,665,654	2,665,654
Research Space	1,038,363	1,038,363
Total GSF	9,019,800	9,160,095
Total Acres	550	550

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Allocation Model Development
Initial Draft Assumptions

Standard Facilities Allocation (all formula's are divided by GSF)	Formula
Support Space	CRV*1.0%*80%
E&G Space	CRV*2%*80%
Auxiliary Space	CRV*2.5%*80%
Research Space	CRV*3.0%*80%

Standard Facilities Allocation by Type of Space	$ Value
Support Space	$1.98
E&G Space	$5.19
Auxiliary Space	$5.55
Research Space	$7.72
Average	$5.11

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Sample Allocation Model

Complete Allocation Model Components	Allocation/GSF
Grounds	$0.15
Facilities	$5.11
Utilities	$2.44
Capital Renewal Escrow	$0.55
Capital Plan	$1.79
	$10.04

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APPA Managed Target Level

Level	Three
Description	Managed Care
Costumer Service & Response Time	Services available only by reducing maintenance, with response time of one month or less
Customer Satisfaction	Accustomed to basic level of facilities care. Generally able to perform mission duties. Lack of pride of physical environment.
Preventive Maintenance vs. Corrective Maintenance	50 - 75%
Maintenance Mix	Reactive maintenance predominate due to systems failing to perform, specially during harsh seasonal peaks. An effort is still made at PM: priority to schedule as time & staff permits. High number of emergencies (e.g., pumps failures, heating & cooling systems failures) causes reports to upper administration
Aesthetics, Interior	Average finishes
Aesthetics, Exterior	Minor leaks and blemishes, average exterior appearance
Aesthetics, Lighting	Small percentage of lights out, generally well lit and clean
Service Efficiency	Maintenance activities appear somewhat organized but remains people dependent. Equipment & building components are mostly functional but suffer occasional breakdowns. Service & maintenance call response times are variable & sporadic, without apparent cause. Buildings & equipment are periodically upgraded to current standards & use, but not enough to control the effects of normal usage and deterioration.
Building Systems' Reliability	Building & system components periodically fail
Facility Maintenance Operating Budget as % of CRV	3.0 - 3.5
Campus Average FCI	1.5 - 2.9

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5-Year Facilities Management Expenditure Comparison

Category	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Total Expenses	$11,900,430	$11,087,366	$12,259,025	$12,071,363	$11,814,944
Campus E&G - GSF	5,249,639	5249,639	5,483,228	5,405,985	5,576,458
Cost/GSF	$2.27	$2.11	$2.24	$2.23	$2.12
CRDM Allowance *	$10,000,000	$10,000,000	$10,000,000	$3,000,000	$2,539,397
CRDM/GSF	$1.90	$1.90	$1.82	$0.55	$0.46
Total/GSF	$4.17	$4.01	$4.06	$2.78	$2.58

* Only FY 2010 is verified

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Maintenance & Operations Allocation Model Next Steps

- Finalize Service Levels & Delivery Model
- Organizational Structure
- Resourcing Plan & Data Validation
- Programmatic Linkage
- Reinvestment Plan
- Funding Model
- Implementation Phasing Plan
- FCA & Capital Plan
- Total Reinvestment Plan Recommendation
  - Short term
  - Long term

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More work to do….
Supporting & Auxiliary Efforts

- METRO Planning & Zone Mitigation
- Integration of Emergency Planning
- Dining Services Contract Assumption based on improved service level – 9/1/11
- Stewardship 101 “We Are UH” training to begin June 2011 – through Implementation of Centralized Facilities Program
  - Quarterly service meetings with key customers
  - Development of Computer Literacy Program (CLICK)
  - Staff Recognition Program
  - Professional Image and Uniform Improvements
- Development of 5 year FM Business Plan

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Ongoing Challenges

- Growing Need
  - Block obsolescence (increasing number of buildings 50 years old)
  - Academic expectations and amount of space to maintain continue to rise
  - Escalation of replacement and renewal costs
  - CRDM funding limitations (review reports of current account status)
  - System wide support for major projects
- Strained Resources
  - Maintenance operations underfunded, Space Growing
  - Staffing, funding and expectations misaligned
  - Reduced state support
  - Debt limits
  - Complexity of administrative processes (contracts)
  - HEAF Recapitalization?

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What's Next

- **Development of Integrated Facilities Plan (all areas)**
- **Academic Plan Tie-In including** exploration of non-traditional approaches (integration and collaboration)
- **Visioning & Resourcing**
  1. Create an organizational purpose & vision ("We are UH")
  2. Remove all duplication & create reinvestment strategy
  3. HEAF recapitalization
  4. Develop 20+ Year Capital Renewal and Infrastructure Plan
  5. Create a maintenance POM Model with minimum standards for "managed care"
  6. Look at policies like "No Net New Space",

     - Space Management Program should be evaluated

     - Before building new ensure space can be properly funded at the desired level.