

## CRDM Committee Meeting

Monday, February 14, 2011 / 2:00 pm – 3:00 pm / GSB 183E

### Meeting Notes

#### Attended:

Melissa Rockwell	Sameer Kapileshwari
Laura Dhirani	Malcolm Davis
Dr. Randall T. Lee	David Johnson
Lillian Wanjagi	Mike Yancey
George Rea	Anne Sherman (proxy for Dr. Fletcher)

#### Not in attendance:

Spencer Moore  
Diane Murphy  
Craig Ness  
Dr. Liz Fletcher

#### Guests/Funding Requests:

1. Jim Norcom, Sr. Project Mgr. – fund request for “Y” Building Demolition Design project
2. Keith Ivy, Sr. Project Mgr. – fund request for Infrastructure Subcomponent Plan
  - a. Water / Sanitary / Storm
  - b. Transportation
3. Sameer Kapileshwari, Director Utilities & Energy – fund request for SR1 & SR2 generators

#### New Team Introductions

- George Rea was introduced as new CRDM Program Coordinator.
- David Johnson was new member for IT representation.

#### New Project Log:

- Committee went over projects funded as of 10/11/10 (reference CRDM Projects Approved)

#### CRDM as of 02/03/2011

Melissa provided a brief summary of CRDM budget reports. There is approximately \$3.7M in funds available for CRDM requests for remaining fiscal year. Approximately \$10M in CRDM funds was received for 2011 fiscal year, but \$4.9M has been encumbered for to Central Plant Expansion project.

#### Funding Request

Jim Norcom presented funding request to complete study and creation of construction documents to demolish Engineering Building, (#571) also referred to as “Y” Building. Planning for coordination of study is currently underway and Facilities Management has selected Walter P. Moore to complete investigation and study. Funding request of \$207K was unanimously approved by the committee.

#### Infrastructure Master Plan

Keith Ivy presented presentation of the Infrastructure Plan for the University including all relative components. Funding request specific to only analysis of the following component plans:

1. Water / Sanitary / Storm – due to aging systems, analysis will be based on demand vs. capacity to indicate where improvements are needed. Committee unanimously approved funding request of \$170K.
2. Transportation – due to aging city roadways, plan will investigate if new roads, or adjustments to roads are needed and/or ability to remove roads is feasible. Committee unanimously approved funding request of \$140K.
3. Facilities Condition Assessment – Jim Norcom provided brief update to this analysis (which is currently underway). Due to added scope, there is additional funding for this project in the amount of \$65K requested. Committee unanimously approved funding request of \$65K.

### **Installation of SR1 & SR2 Generators**

Sameer Kapileshwari provided presentation for this request. A 1500kW generator purchased for a past FCP project was never utilized. An FPC/FM team has used a consultant to review and research the best application of this unit and recommends that the generator will be the best fit for SR1 and SR2 buildings and provided justification and benefits. Funding request **up to** \$240K is for installation of this generator. The committee voted unanimously for this funding request. Additional work needs to be done by the review/project team to determine best bid/value for the installation and project completion.

### **Schedule:**

Melissa proposed bi-monthly meetings instead of monthly meetings due to limited agenda items and funding requests. The committee agreed to bi-monthly meetings with the understanding that if funding requests came through, additional meetings may be required. Cynthia will send out updated calendar appointments.

### **NEXT MEETING:**

Thursday, April 28, 2011 / 2:00 pm – 3:00 pm / GSB 203A

### **ACTION ITEMS:**

1. Current Melissa Rockwell to set up meeting w/David Johnson (new member) regarding planning.
  2. PM's with approvals from today's meeting will need to submit their CRDM forms to George Rea for processing.
  3. Updated reports to be provided at the April 28, 2011 meeting.
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## **“Y “ Building #571 - Demolition Planning**

### **Notes**

2/10/2011

#### **Project Point of Contacts:**

Craig Ness                      Asst. VP. , Academic Operations  
James Norcom                Lead Sr. Project Manager, Minor Planned Projects Group

#### **Background information:**

Capital Renewal and Deferred Maintenance request is to support of study and creation of construction documents to demolish Building #571, the “Y” building. This project has many components consisting of relocation of existing labs, student services, removal of underground tanks and interior metal buildings.

A study of environmental and asbestos removal includes the building and site. Proper disposal of hazardous materials plus in house recycle/salvage operations can be coordinated. The structural and civil engineering is critical. The demolition scope consists of approximately 42,196SF.

The University has selected Walter P. Moore to perform the study and provide construction services to demolish the “Y” Building.

#### **Key Relocations:**

Dr. Wolf’s Nano Tech Lab (approx. 2500 SF)  
Dr. Vipu’s Civil Engineering Lab ( approx. 2380SF)  
Dr. Wine’s lab – Wave tank ( approx. 2397SF)  
Other shops  
    ✚ Machine shop (approx. 3600SF)  
    ✚ Carpenter shop ( approx. 1500SF)

#### **Schedule :**

Estimated relocation phase= 30 to 42 days

Phase I and II Study = 6 weeks or 30 days.

RFP procurement of construction services = 40 days

Demolition Phase = 60 days.

Initial Budget = \$ 206,485.39

2/10/2011

UNIVERSITY OF **HOUSTON**  
PLANT OPERATIONS – FACILITIES MANAGEMENT

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FM Infrastructure and FCI Plan

CRDM

February 14, 2011





## *Overall Infrastructure Need*

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- Much of campus infrastructure is aging and in disrepair
- FM has generally handled infrastructure maintenance reactively as problems arise
- A strong infrastructure plan will allow FM to act proactively and efficiently as well as provide clear direction to FPC when planning new projects
- With academics reaching Tier 1 status, the look and functionality of campus needs to raise it's standards



## *FM Infrastructure and FCI Projects Overview*

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1. Chilled Water, Condensate and Steam CIP
2. Electrical CIP
3. Landscape , Sidewalk, & Irrigation CIP
4. Water, Sanitary, Storm, Natural Gas, Fiber Optic Survey
5. Water, Sanitary, Storm CIP
6. Transportation CIP
7. Infrastructure CIP Integration
8. Facilities Conditions Assessment Plan



## *1. Chilled Water, Condensate and Steam CIP*

## *2. Electrical CIP*

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- Investigated ability of central plant and power supply to support existing and future development
- Both are fully funded and substantially complete
- Managed by Sameer Kapileshwari



### *3. Landscape, Sidewalk & Irrigation CIP*

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- Landscaping throughout campus is dated. Many sidewalks in disrepair, presenting safety hazards. Irrigation system has been generally piece-milled together
- Major paths through campus can be emphasized
- Landscaping and irrigation can be updated to reduce maintenance demand and water consumption



## *4. Water, Sanitary, Storm, Natural Gas, Fiber Optic Survey*

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- Fully funded
- Work is 75% complete
- First major effort by UH to document these utilities on campus
- Managed by Keith Ivy



## 5. *Water, Sanitary, Storm CIP*

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- Many areas of the systems are aging
- Will perform analysis of demand vs. capacity and indicate where improvements are most needed for current and future development
- UH has not previously performed this type of official study for these systems
- Study results may provide support for City improvements to City utilities



## 6. *Transportation CIP*

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- Campus is surrounded by aging City roadways. Results of plan can be used when discussing need for improvements to with City
- Plan will investigate if there are needs for new UH roads, adjustment of existing roads, or ability to remove existing roads
- Will coordinate with Landscape, Sidewalk, & Irrigation CIP to improve pedestrian safety across roadways



## 7. *Infrastructure CIP Integration*

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- Effort to “mesh” all known planning initiatives into one comprehensive plan
- Allows FM to better understand infrastructure funding needs and timing for next 10-15 years
- Allows plans to be compared against non-infrastructure campus needs



## 8. *Facilities Conditions Assessment Plan*

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- Work to begin soon
- Managed by Jim Norcom
- 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

**FM Infrastructure and FCI Plan Financial Overview**

	<b>Study</b>	<b>Project Number</b>	<b>Projected Need</b>	<b>Amount Funded</b>	<b>Need/Funding Variance</b>
1	Chilled Water, Condensate and Steam Capital Improvement Plan	P779441	\$ 51,500.00	\$ 51,500.00	\$ -
2	Electrical Capital Improvement Plan	P779392	\$ 145,950.00	\$ 145,950.00	\$ -
3	Landscape, Sidewalk & Irrigation Capital Improvement Plan	P770835	\$ 250,000.00	\$ 221,853.84	\$ 28,146.16
4	Utility Survey	P779486	\$ 335,280.00	\$ 335,280.00	\$ -
5	Water, Sanitary, Storm Capital Improvement Plan		\$ 170,000.00	\$ -	\$ 170,000.00
6	Transportation Capital Improvement Plan		\$ 140,000.00	\$ -	\$ 140,000.00
7	Infrastructure Integration Plan	P770837	\$ 115,000.00	\$ 115,000.00	\$ -
		<b>Totals</b>	<b>\$ 1,207,730.00</b>	<b>\$ 869,583.84</b>	<b>\$ 338,146.16</b>
8	Facilities Conditions Assessment Plan	P779421	\$ 316,413.00	\$ 250,000.00	\$ 66,413.00
		<b>Totals</b>	<b>\$ 316,413.00</b>	<b>\$ 250,000.00</b>	<b>\$ 66,413.00</b>



# Project Schedules

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1. Chilled Water, Condensate and Steam CIP  
**Complete**
2. Electrical CIP  
**Complete**
3. Landscape , Sidewalk, & Irrigation CIP  
**Begin March 2011, Complete July 2011**
4. Water, Sanitary, Storm, Natural Gas, Fiber Optic Survey  
**Began October 2010, Complete March 2011**
5. Water, Sanitary, Storm CIP  
**Begin April 2011, Complete September 2011**
6. Transportation CIP  
**Begin March 2011, Complete October 2011**
7. Infrastructure CIP Integration  
**Begin August 2011, Complete February 2012**
8. Facilities Conditions Assessment Plan  
**Begin February 2011, Complete October 2011**

# INSTALLATION OF GENERATOR FOR SR1 AND SR2

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CRDM Meeting

Sameer Kapileshwari  
Director – Utilities, Energy & Technical Systems

DATE: FEBRUARY 14, 2011





## ***INSTALLATION OF GENERATOR FOR SR1 AND SR2***

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### **PROJECT HISTORY**

- DEC 2008: 1500 kW generator was purchased for SERC.
- MAY 2009: Generator was ready to be shipped to UH.
- MAY 2009: Decision was made to not use this unit at SERC.
- NOV 2010: UH took delivery of the generator

### **GENERATOR SPECIFICATION**

Manufacturer Stewart and Stevenson

GENERATOR: 1500 kW, 1875 kVA

VOLTAGE: 277/480 ACV 3-Phase

ENGINE: Detroit Diesel 12V-4000-2327HP,  
60 Hz Diesel, 1800 RPM



## ***INSTALLATION OF GENERATOR FOR SR1 AND SR2***

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### **LOCATIONS CONSIDERED FOR THIS UNIT INCLUDE**

- ENERGY RESEARCH PARK (Unit too large for the electrical demand)
- COMPUTING CENTER (No funding for installation)
- E. CULLEN (Unit too large for the electrical demand)
- SR1 and SR2 (Best fit)

### **DESCRIPTION OF EXISTING GENERATORS AT SR1 and SR2**

- SR1 - 300 kW generator installed in 2000
- SR2 - Generator 1: 400kW installed in 2003
- SR2 – Generator 2: 175kW Animal Care unit installed in 1988



## ***INSTALLATION OF GENERATOR FOR SR1 AND SR2***

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### **JUSTIFICATION OF PROJECT NEED**

- Existing SR1 300kW generator will be too small to incorporate additional emergency loads from life safety project like the fire pump, exhaust systems, etc.  
Design requirement for generator = 750KW
- Existing SR2 175kW Animal Care generator is 22 years old and needs replacement – currently a business continuity risk.

### **PROPOSED SOLUTION AND BENEFITS**

- Utilize purchased 1500kW generator to serve the needs of SR1 and SR2 emergency electrical loads.
- Reuse existing 400KW SR1 generator at New Fleming building and 300kW SR2 generator at possibly (Hilton?)



## ***INSTALLATION OF GENERATOR FOR SR1 AND SR2***

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### **FUNDING**

- SR1 project will get a credit back for material and labor of the designed 750KW generator (\$263K)
- Installation cost (\$740K less \$263K for SR1 credit = \$477K) for the new 1500kW generator will be split between Project and CRDM (\$240K each)