

Facilities Planning & Construction



March 11, 2011

UNIVERSITY of **HOUSTON**

PLANT OPERATIONS

Facilities Planning & Construction Department

Health and Biomed

- Design Start 6/21/10
- Design Complete 4/4/11
- Construction Start 1/17/2010
- Substantial Completion Fall 2012
- Commissioning/Activation Fall 2012
- Occupancy Fall 2012

Status/Issues:

- Developing summary of electrical and redundant power to the facility developed with our consultants and Facility Management
 - 1.5kw Generators
 - Center Point
 - UH Electrical Substation Feed - possibilities

Classroom and Business

- Design Start 8/1/2010
- Design Complete 1/2011
- Construction Start 1/2011
- Substantial Completion – Ph I February 2012
- Substantial Completion – Ph II August 2012
- Activation Spring 2012
- Occupancy - Ph I June 2012
- Occupancy - Ph II January 2013

Status/Issues:

- Meeting completed for review of space program on level 3, and sign off of levels 4 and 5.
- Landscape design focused on landscape standards
- Change Orders attached for review

Potential Change Orders for CBB

- Upgrade elevators from machine room less units to regular traction units with a machine room and an elevator penthouse. \$403,079 → \$250,000
- New Elevator Controls \$80,000
- Storm water detention system. \$225,865
- Revise Electrical Feeders 11 & 12 to Feeders 15 & 16 to ensure UH required 20% safety factor for a 5-story building \$377,902
- Vacuum breakers at transformers in lieu of fuses for better protection to feeders. \$ 46,397
- Add a loading dock and trash enclosure with access to fire land on the west side of the building. \$ 89,030
- Add 12 ADA accessible parking spaces in existing Melcher Hall northeast lot. \$ 62,462
- Rooftop HVAC condensate reclamation to Power Plant cooling Tower. \$ 57,225

TOTAL \$1,188,881

UNIVERSITY of HOUSTON

PLANT OPERATIONS

Facilities Planning & Construction Department

Classroom and Business Elevator Breakdown

UH Classroom and Business Building

ASR #1

Item 1: Change to traction elevators

Change to full traction elevators with machine rooms	\$68,488
Penthouses and other work required for machine room elevators	
Concrete machine slabs at roof level	\$6,850
Structural steel framing	\$14,245
Changes to pits and shafts	\$4,400
Ladders to machine slabs	\$2,500
Additional Shaft wall	\$7,568
PH Exterior wall framing	\$7,490
6" batt insulation	\$1,894
Dampproofing	\$1,696
Exterior wall siding	\$65,181
Exterior HM doors (2 PR)	\$3,578
PH Ventilation	\$3,200
PH Lighting	\$4,950
Roof edge	\$2,145
Base flashing	\$2,145
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Subtotal	\$196,330
GCs & Fee	\$21,793
Contingency: 15%	\$32,718
Total	<hr/> \$250,841

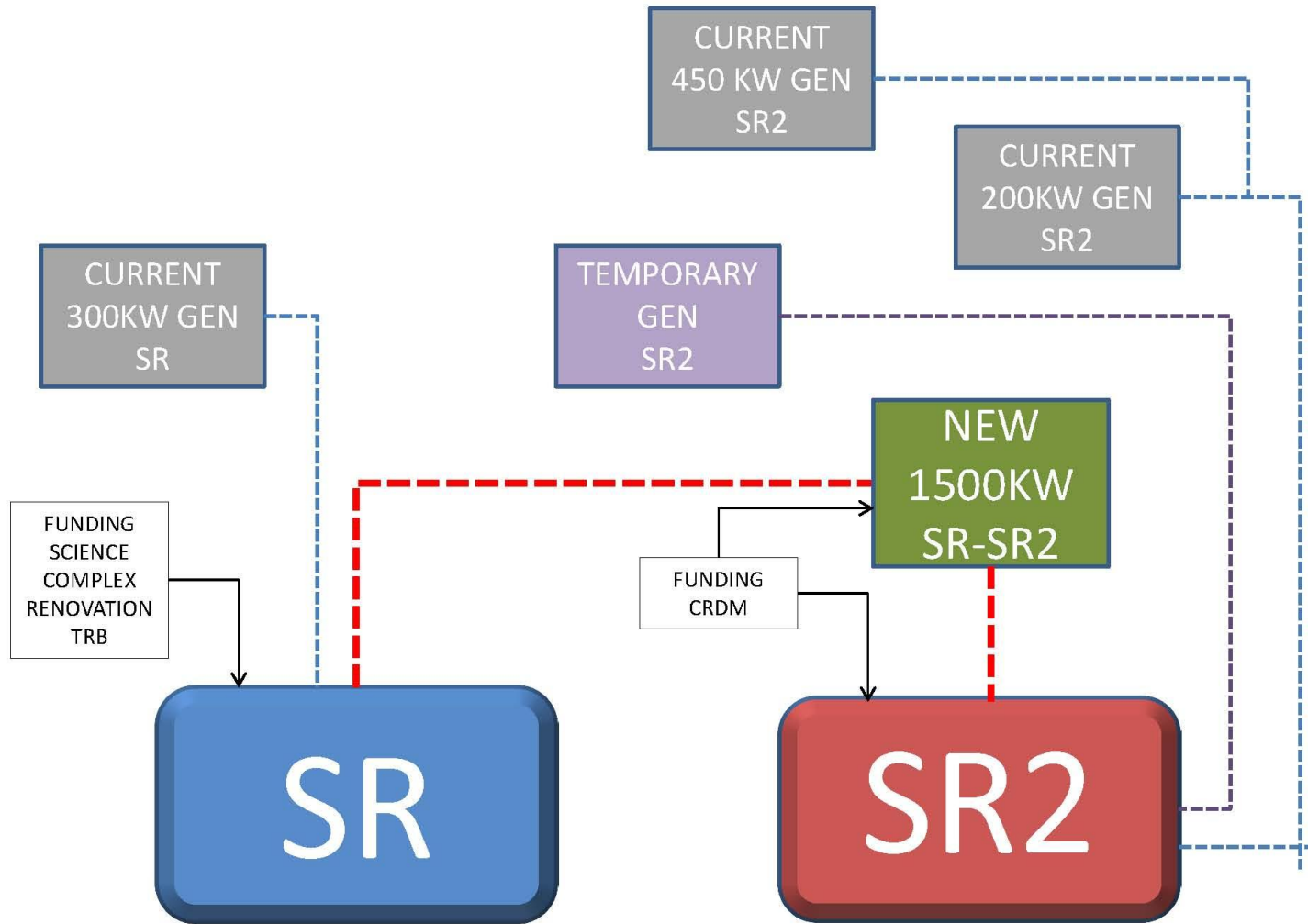
Fleming Addition

- Design Start 1/1/10
- Design Complete 8/1/10
- Construction Start 7/6/10
- Substantial Completion 8/1/11
- Commissioning/Activation 10/2011
- Occupancy 11/11-12/11

Issues:

- Reviewing level 4 scope and budget with the Provost office for build-out of Chemistry labs.
- DPS has requested we review options of placing fence down Cullen in front of Fleming to restrict pedestrian jaywalking.
- Faculty have requested upgraded finishes for breakrooms, monumental stairs, elevators,

SR – SR2



INSTALLATION OF GENERATOR FOR SR1 & SR2

Funding:

- SR-1 Project Budget
- CRDM approved as a funding source at last executive leadership meeting on February 25
 - UHBOR and THECB Re-approval required due to new funding sources
- Opportunity to fund more for deferred maintenance activities with CRDM funds.
- Shutdown of corridor between SR and SR2 is being developed for approval. Late spring/summer timeframe.

SERC Phase IV (Level 4)

- Scope Approved April 8, 2011
- Design Complete July 15, 2011
- Construction NTP September 2011
- Construction Complete May 2012

Issues:

- Need programming representatives for 7-8 different occupants
 - Received three representatives yesterday
- On hold for level two at this time
- Engineering program confirmed for level one
 - Projected construction completion for Fall 2011
- Assessing issues, causes of recent vacuum breaker water leak.

SR-I Infrastructure Improvements

- Design Start 10/01/09
- Design Complete 05/03/10
- Construction Start 01/17/10
- Substantial Completion Spring 2012
- Commissioning/Activation Spring 2012
- Occupancy N/A

Issues:

- Concern from Bob Schneller regarding Radiation Safety with the renovation. Contractors accessing restricted areas.
- Chemical storage study complete by March 18, 2011
- Ground floor phasing, user requesting no more than 4 weeks of displacement. Schedule and General Conditions impact
- Significant Deferred Maintenance issues impacting contingency
 - Existing Electrical Breakers on ground floor
 - Hot water valves and hot water return valves not closing

SR-1 Offices (Dr. Casey)

- Design Start 07/20/10
- Design Complete 01/20/11
- Construction Start N/A
- Substantial Completion Summer 2011
- Commissioning/Activation Spring 2012
- Occupancy Summer 2011

Issues:

- Bids have been received and Construction Manager is developing their Guaranteed Maximum Price
- GMP is over budget and working on value engineering items and other options.

Science Complex - \$57m

Status:

- Fleming Renovation
-\$7.9m
- Fleming Addition
-\$31.1
- \$1.8m remaining in contingency
- SR1 Code and Life Safety
-\$14.9m
- **Significant budget concerns**
- Old Science Renovation
-\$3.3m
- Spectrometer
-\$188k

Jack J. Valenti School of Communications

- Design Start 1/1/2010
- Design Complete 7/6/2010
- Construction Start 1/17/2010
- Substantial Completion 4/29/2011
- Activation 5/2011
- Occupancy 6/12011

Status/Issues:

- \$80k remaining in contingency
- Developing Landscaping Concept for Courtyard – \$5k from contingency.
- Water proofing issue with detail on front screening
- Change request to incorporate additional millwork and lobby finishes resulting in claim by contractor for additional time.

CEMO Hall – Water Issues

Status:

- Interview Rooms – Acoustical Issues
 - Project transferred to Facility Management – Minor Projects
- Auditorium
 - Sump Pump being installed
- Tunnel
 - Evaluating residual water issue and developing a corrective action plan.
 - Corrosive engineer will be required to be hired as the pipe supports are corroding.

Wind Core Testing Facility

- Design Start 12/2010
- Design Complete 01/2011
- Construction Start 02/2011
- Substantial Completion Summer 2011

Scope

- Project cancelled
- FPC negotiated reduction in A/E fees
- Final project control budget sent to Provost for funding

Selva Lab

- Design Start ?
- Design Complete ?
- Construction Start ?
- Substantial Completion ?

Status/Issues:

- Superconnectivity equipment is arriving May 5, 2011
 - Interim plans being developed to accommodate equipment
 - 6-9 months to plan, program, design, construct laboratory
 - Programming complete (30 hours)
 - Budget and Schedule are being developed
 - \$2.1m budget could grow to \$7.1m pending grant award
- Separate production to assist Selva to complete the grant application

Energy Research Park -Bldg #4

Funding Sources

\$1,710,938.00 – Using Commercial Paper

\$? ?

\$1,200,000.00 – Using Wind Energy

\$3,710,938.00 – Total Project Budget

Status/Issues:

- Work in progress
- Multi Phased project
 - Phase I Demolition/Roof complete
 - Phase II Base building to standard
 - Phase III Vending/Conference Center/Classrooms – level one
 - Phase IV Research Space level two – 7500sf

Energy Research Bldg 1

- Design Start ?
- Design Complete ?
- Construction Start ?
- Substantial Completion ?

Status:

- 1 yr duration for design and construction
- Finalizing Project Control Budget (PCB) for approval
 - CM is finalizing construction estimate
 - A/E team is finalizing proposal

Energy Research Bldg 9

Status:

- Pushing Linbeck to complete remaining punch list items
- Coordinating signage approvals/installation with Real Estate

Hilton Hotel

Status/Issues:

- Addressing final punch list items including warranty work of water closet issues. Projected completion end of Spring Break.
- Life Safety upgrades scope of work and budget sent for review and approval prior to commencing design work.

Hilton Hotel

LIFE-SAFETY UPGRADES PROJECT SUMMARY

The project scope of the Conrad Hilton School of Restaurant and Hotel Management life-safety upgrades is summarized as follows:

- Replacement of the existing fire pump.
 - The scope above requires modification to the fire alarm system.
 - The scope requires increasing the sizes of the discharge and suction pipes from the existing water storage tank to the new fire pump.
 - Inspection of water storage tank for wall integrity (code requirement).
- Installation of fire suppression sprinkler systems on the first continued education wing and on the second floor faculty and administrative office for the Hilton School of Hotel Management.
 - The scope above requires asbestos removal and modification to the existing ceilings and wall penetrations.
- Installation of emergency lights on the south wing.
- Upgrade of the electrical system by separating the feeders for the fire pump and other emergency equipment (lights, elevators, etc.) from standby equipment (cooler, sump pumps, etc.) either by providing isolation from the rest of the switch board or installing a new feeder directly for the fire pump and emergency equipment.

Blaffer Gallery

- Design Start January 2011
- Design Complete July 2011
- Construction Start August 2011
- Substantial Completion January 2012
- Occupancy Spring 2012

Status:

- Schematic Design has been revised and is being priced
- Project team confirming revised scope is within budget prior to moving to design development.

Stadium Garage

- Procurement Fall 2010
- Design Complete April 2011
- Construction Start July 2011
- Construction Complete May 2012

Issues/Status:

- GMP received on March 11, 2011.
- Design Build which is a plus.
- FPC evaluating

UHCL – Student Services Re-Cladding

- Project is progressing with significant change orders
- Each new demolition has revealed new issues
- Occupant disruption is an ongoing situation to be managed
- THECB re-approval required per conversation with THECB management

UHV – Jaguar Hall

- \$101,000 budget disparity between UHV and FPC System.
- Final Completion notification from contractor has not been achieved.
- General Contractor to notify architectural firm and UH-DPS of a request for a final inspection

UHV – Sophomore Housing

- RFQ scheduled to be released on Monday March 14, 2011
- Significant site restrictions with relation to parking requirements and siting of the structure

Auxiliaries

UNIVERSITY of **HOUSTON**

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Facilities Planning & Construction Department

West Side Dinning Facility

- Design Start N/A
- Design Complete N/A
- Construction Start N/A
- Substantial Completion 7/2012
- Occupancy 8/2012

Issues/Status:

- RFQ review and ranking in progress
- Project Control Budget developed
 - Request to spend down funds first from Commercial Paper
 - Follow up and transfer auxiliary reserve later in the project when commercial paper has been depleted

Quads and Moody Upgrades

- Design Start February 2011
- Design Complete May 2011
- Construction Start May 2011
- Substantial Completion August 2011
- Occupancy August 2011

Accomplishments

- Contracts issued to architects for design
- Field investigations are complete

30 – day look ahead

- Development of Competitive Sealed Proposals
- Logistical plans – phasing to be developed

Cougar Village

Accomplishments

- Finalized audit
- Currently holding \$1.0m of Hardins retainage due to audit findings
- Hardin failed to provide proper back up to support their claims

Green Build & Energy Conservation

ASHRAE 90.1 - 2010

- The stated purpose of ASHRAE 90.1 is to establish minimum energy efficiency requirements (not suggestions) for design, construction, and operation and maintenance planning for buildings. Also included is utilization of on-site renewable energy resources. So a building designed in accordance with the standard would represent the worst building that could be built from an energy perspective.
- Regarding the building envelope, **with adoption of the new standard, the insulation requirements for all of the exterior components are more stringent. Exterior glass requirements not only have increased U-factor and solar heat gain coefficient, but also have limited the amount of glass from 40% of the exterior wall to 30%.** Use of automated lighting controls and “day lighting” can allow up to 40% glass. “Cool roofs” with increased solar reflectance or R-33 insulation (above the roof deck) are required in our climate zone.
- Regarding the building lighting there are new requirements such as: proper placement of windows and skylights for envelope /lighting interaction (day lighting), lighting control with bi-level switching (level between on and off), **parking garage lighting controls, receptacle controls (50% off at night), and a renovation threshold of 10% at which replacement lighting and controls must apply.**
- Regarding building mechanical equipment (HVAC, service water heating, electrical power, and lighting), the bottom line is, **for almost every piece of equipment referenced in ASHRAE 90.1 , efficiency requirements will become more stringent.** In addition to increased efficiencies for equipment, there are also **significant changes to system design requirements including controls strategies.**
- While ASHRAE 90.1 does not address all sustainable building issues, such as site selection, water efficiency/conservation, and materials/resources selection, it does address the majority of the sustainable building issues including energy conservation and indoor air quality. **There should be a significant added cost to our projects associated with the new requirements.**

Projects in Planning and Programming

Pharmacy Building Space Program

- Program questionnaires completed 11/1/2010
- Interviews with Dept Heads 11/12/2010
- FPC Program Draft 11/26/2010
- Final Program Completed 2/2011

Issues:

- Program has been reduced to the approved 132,000sf
- FPC planning will schedule meeting with Provost office to review

Back-Up

Fleming Physics Labs

- Design Start 6/21/10
- Design Complete 8/12/10
- Construction Start 10/8/10
- Substantial Completion 12/13/10
- Commissioning/Activation 12/20/10
- Occupancy 1/3/2011

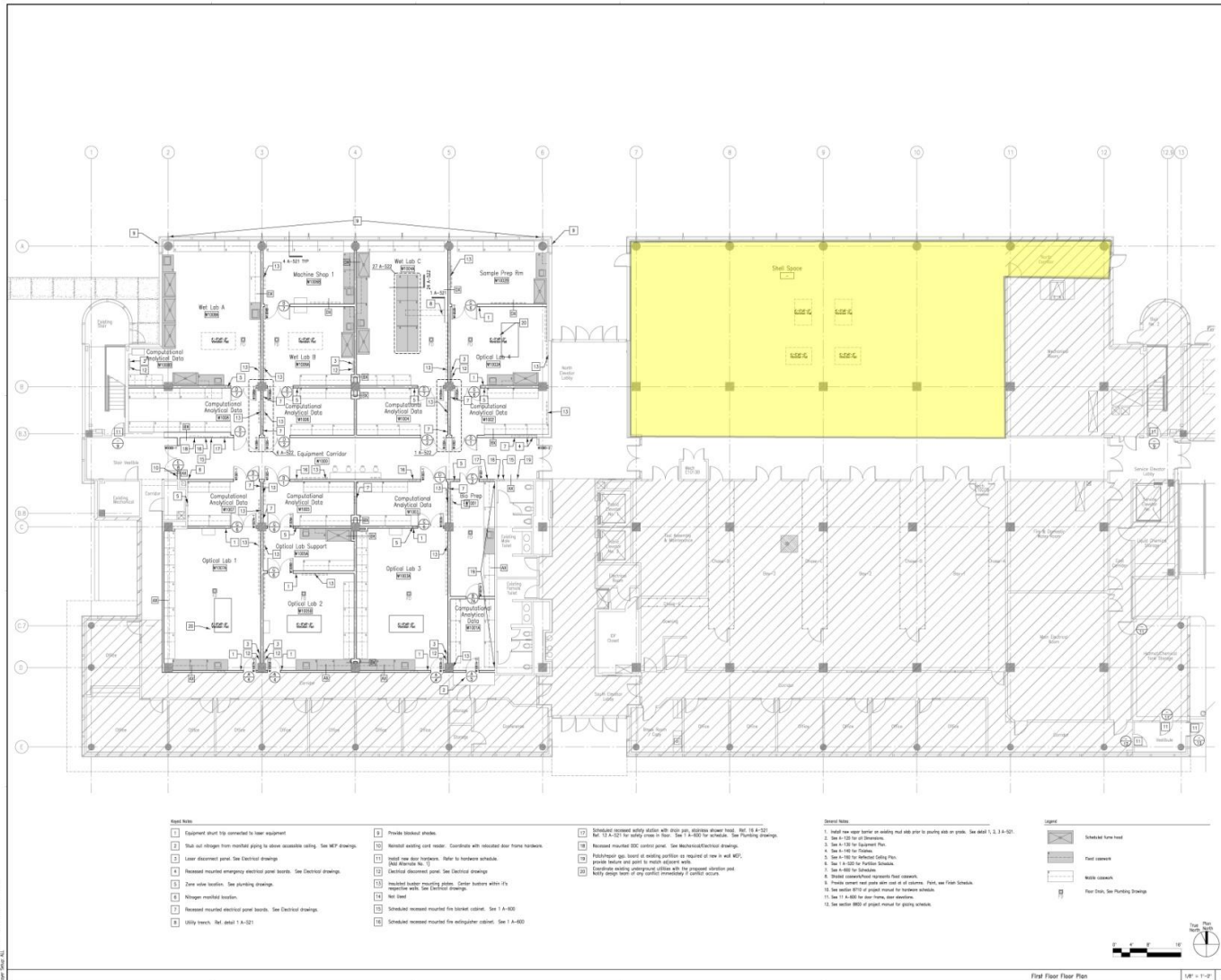
Issues:

- None at this time

UHV – New Housing

- RFQ in process to be released on Monday
- Addendum issue pending any changes by General Counsel
- Site restrictions and program confirmation to be completed prior to release of RFP

SERC 01 – First Floor Plan



P&W
Architects,LLP
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Suite 200
Houston, Texas 77031
(832) 554-1130 www.pwarch.com

Record Document
Not for regulatory approval, permit, or construction.
By: Shawn C. Schuler
Title: Architect
Date: 02/09/11

Contract:
MEP Engineer:
EAC Engineers & Consultants, Inc.
1810 Lamar, Suite 500
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Tel: (713) 590-9833
Fax: (713) 590-9888
Structural Engineer:
Waller P. Moore
1331 McKinney, Suite 100
Houston, Texas 77010
Tel: (713) 662-7300
Fax: (713) 662-7344

No.	Date	Description
1	04/14/08	Issue for Construction



UH SERC
First Floor West Buildout
Nano Tech Ctr/Optical Labs/
Device Construction

First Floor Plan

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MEP Construction Number: 207-022R Sheet Number: A-102

Machine Room less Elevators (MRL)

- Equipment is harder to service and maintain. (Motor and brake are attached to the wall or ceiling of the hoist way – with no access).
- With insufficient space for maintenance activities Safety becomes a factor.
- Need special tools and platform to work on equipment.
- Rescues of Entrapment are more difficult and longer. (If elevator is stuck in between floors)
- Only proprietary controls are currently available with MRLs – training is not available to our shop staff would force outsourcing.

Machine Room less Elevators (MRL)

- Current RFI exercise shows annual operating cost campus wide would increase by **up to** \$1.2M per year if elevator maintenance were outsourced (@ current market rates – this does not account for future market escalation).
 - This would include the operating cost and billable work for all 134 elevators on campus including auxiliaries.
- Based on RFI responses there are also concerns about service and response gaps that some (RFI) outside companies said they cannot maintain, including entrapment and business response times.

Machine Room less Elevators (MRL)

Mitigations for future consideration of MRLs

- Provision of Non-proprietary controls would need to be available to the university.
- Small platform near machine for maintenance access should be designed.
- Overhead beam with a 8000 lb hoist (or based on capacity).
- Access and work area on the building floor to get to the machine.

UH Building # 571 (“Y” Building)



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UH Building # 571 (“Y” Building)

Background information:

Facilities Management is currently contracting to have a study to properly plan the deconstruction /demolition of 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 Walter P. Moore has been selected to perform the study and provide construction documents to demolish the “Y” Building.

UH Building # 571 (“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

UH Building # 571 (“Y” Building)



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