

# Housing Reserves Workshop

Office of Financing &  
Treasury Training

August 18, 2006



# Introductions to Speakers & Attendees

- Preston Allen – Director, SLO Housing  
pallen@calpoly.edu
- Jan Andreason – Director, SF Housing  
jana@sfsu.edu
- Mike Foraker – Asst. Vice Chancellor, UCLA Housing & Hospitality Services  
mforaker@ha.ucla.edu
- Susan Hansen – Director, SJ Housing  
shansen@housing.sjsu.edu
- Dan Les – Associate Director, Budget & Financial Planning, UCLA Housing & Hospitality Services  
dles@ha.ucla.edu

# Introductions to Speakers & Attendees

- Charlene Minnick, Risk Officer, Systemwide Risk Mgmt.  
cminnick@calstate.edu
- Colleen Nickles – Senior Director, Financing & Treasury  
cnickles@calstate.edu
- Jonathan Scheffler – Physical Plant Program Manager,  
CPDC  
jscheffler@calstate.edu
- Rosa Renaud – Senior Manager, Financing & Treasury  
rrenaud@calstate.edu
- Tony Valenzuela – Associate Vice President  
Facilities, Development, and Operations  
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# Agenda

- Introductions
- Goals & Objectives
- Housing Reserve Plan – An Outside Perspective
- Catastrophic Events Reserve:
  - Risk Management
  - A Campus Experience
- Maintenance & Repair/Capital Renovation Reserve:
  - Chancellor's Office CPDC – A System Approach
  - A Campus' Formal Evaluation of Facilities
  - A Campus Housing Program Director's Plan

# Agenda

- Housing Reserve Plan – An Inside Perspective
- Working Capital Reserve – Roundtable Discussion
- Capital Development Reserve
- Financing & Treasury Guidelines
- Campus Reserve Plan
- Housing Task Force

# Reserve Workshop Goals

- To provide an interactive forum for housing officers and Chancellor's Office staff to discuss ideas, tools, and resources available in developing a housing reserve plan.
- To discuss challenges faced in developing a housing reserve plan and possible solutions.
- To provide practical ideas for creating new housing reserve plans and/or improving existing housing reserve plans.

# Reserve Workshop Objectives

- These steps will be taken in order to meet our workshop goals:
- Have speakers with differing expertise share tools for developing housing reserve plans.
- Provide practical tools, lessons learned, and resource information to be used in the development of campus housing reserve plans.
- Provide housing directors guidelines to clarify expectations for compliance with Executive Order 876, Section 7, Reserves.

# Reserve Workshop Objectives

- Remind campuses of the requirements to:
  - Formally document campus housing reserve policies;
  - Conduct and document in-depth reviews of the adequacy of existing housing reserves at least every three years;
  - Adjust reserve plans and levels as appropriate.
- Create a housing task force that will evaluate Title 5 and SUAM policies and recommend updates to policies given today's student housing environment.

## Debt Capacity/Reserve Benchmark Presentation

- Mike Foraker- Asst Vice Chancellor
- Dan Les- Assoc Director, Budget & Financial Planning

# Frame of Reference

## *UC vs Cal State Housing*

**Page 174 MASTER PLAN FOR HIGHER EDUCATION IN CALIFORNIA  
RECOMMENDATIONS**

**For the state colleges and the University of California it is recommended  
That ...**

**The operation of all such ancillary services for students as Housing, feeding, and parking be self-supporting. Taxpayers' money should not be used to subsidize, openly or covertly, the operation of such services.**

# Frame of Reference

## *UC vs Cal State Housing*

### **FALL 2005 HOUSING OCCUPANCY- ALL CAMPUSES**

#### **University of California Housing System (UCHS) - 10 Campuses**

- 37,473 Single Students in Residence Halls
- 13,189 Single Students in Apartments
- 3,691 Student Families Apartments
- 490 Faculty Apartments

#### **Campus Housing System (CHS) - 4 Campuses ( D, LA, SF, SC)**

- 208 Single Students in Residence Halls
- 1,718 Single Students in Apartments
- 1,204 Student Families Apartments
- 189 Faculty Apartments

#### **Third Party Development - 3 Campuses (D, I, R)**

- Single Students in Residence Halls
- 3,129 Single Students in Apartments
- 304 Student Families Apartments
- Faculty Apartments

# Frame of Reference

## *UC vs Cal State Housing*

### **FALL 2005 HOUSING OCCUPANCY- UCLA**

#### **University of California Housing System (UCHS)**

- 8,411 Single Students in Residence Halls
- 1,316 Single Students in Apartments
  - Student Families Apartments
- 99 Faculty Apartments

#### **Campus Housing System (CHS)**

- 98 Single Students in Residence Halls
- 1,474 Single Students in Apartments
- 1,204 Student Families Apartments
- 127 Faculty Apartments

# Frame of Reference

## *UC vs Cal State Housing*

### **FALL 2005 HOUSING DEBT- UCLA**

#### **University of California Housing System (UCHS)**

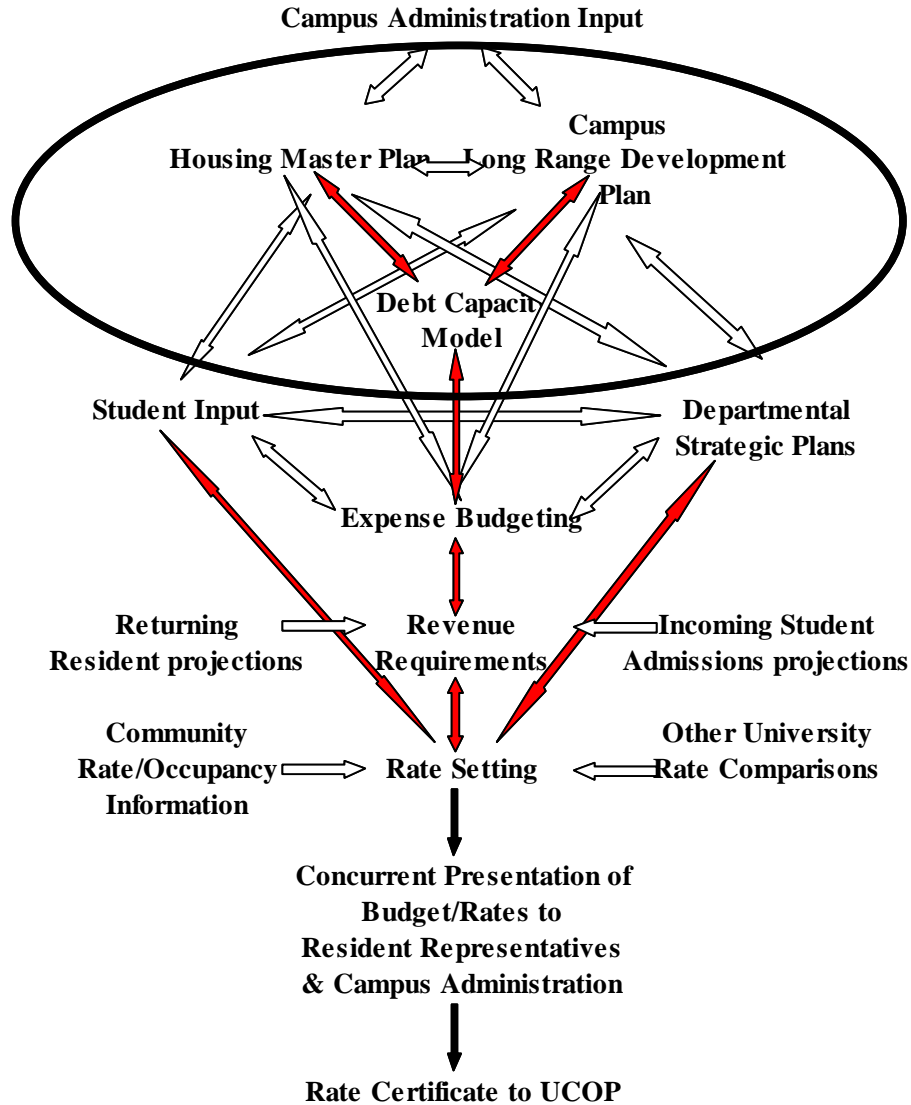
\$28.4 million Annual Debt Service Payments Fiscal year  
\$451.7 million Outstanding Principal

#### **Campus Housing System (CHS)**

\$12.9 million Annual Debt Service Payments Fiscal year  
\$157.2 million Outstanding Principal

# Rate Setting Flow Chart

## UCLA HOUSING



## Financial Performance Ratios/Debt Capacity Analysis



Established in 1994 for UCLA Auxiliary Enterprises

Purpose: -Ensure the Continued Quality of programs & services.

-Provide Objective Standards for assessing financial performance.

-Address questions regarding ability to absorb future debt.

### WHAT IS DEBT CAPACITY

The Two Definitions.

### WHAT PERFORMANCE RATIOS ARE

"Dashboard" instruments to measure performance of projections

### WHAT PERFORMANCE RATIOS ARE NOT

"Engines" that create projections

### ALL RATIOS ARE NOT CREATED EQUAL

"ETCHED IN STONE" Ratios

Financial Viability required Ratios are met or exceeded

"TARGET" Ratios

Something to shoot for, but may not be met in some years.

"DEFINER" Ratios

Describes Financial situation.



## Debt Capacity Analysis/Rate Ramping

**Rate Ramping.** Rate ramping is the process of implementing smaller rate increases over multiple years in advance of a project's opening (versus a larger one-time increase at project opening), and is a fundamental tool used in the UCLA models. Primary advantages to rate ramping include:

**Avoiding Sticker Shock.** A rudimentary sensibility embedded in the rent ramping concept is that it is more acceptable for the campus community to take 3-years of 5% increases instead of a one-year 15% increase.

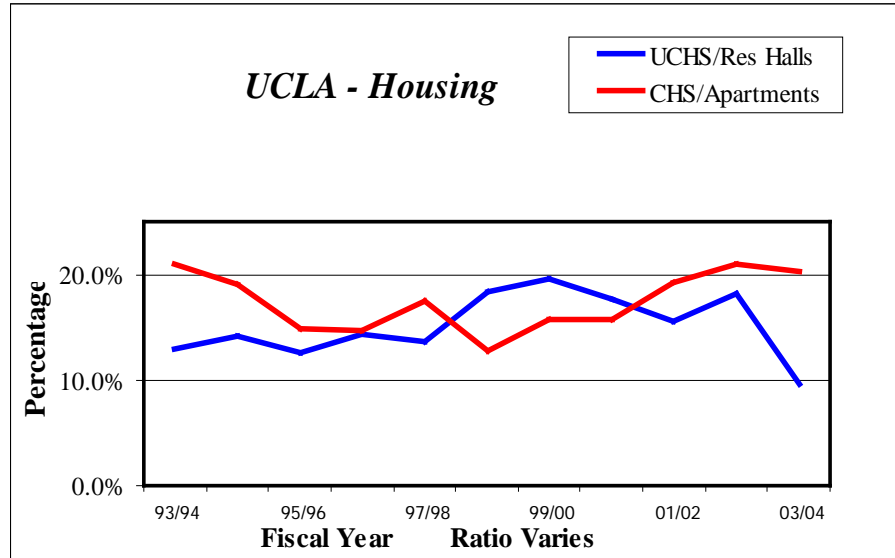
**Building Reserves.** By increasing revenue in advance of a project's opening, more is contributed to reserves. As such, more funds are available from reserves to reduce the amount of project costs that need to be debt financed. As this use of reserves ultimately will reduce annual debt service payments, rate ramping leads to lower overall rates once the project is complete versus the rates that would be required without rate ramping.

**Covering Initial Debt Service.** As firm project opening schedules and initial occupancy levels are often elusive at best, rate ramping provides some revenue stability from existing facilities to cover debt service payments of new facilities whose operating revenue may be tenuous during its first year of operations.

In our models, rate ramping is used looking at the higher aggregate levels of the model due to the structure of the model and the multiple project nature of our capital development plan being done in a compressed timeframe.

# Financial Performance Ratios

## BOTTOM LINE RATIO



**Net Operating Revenue After Debt + STIP**

**=**

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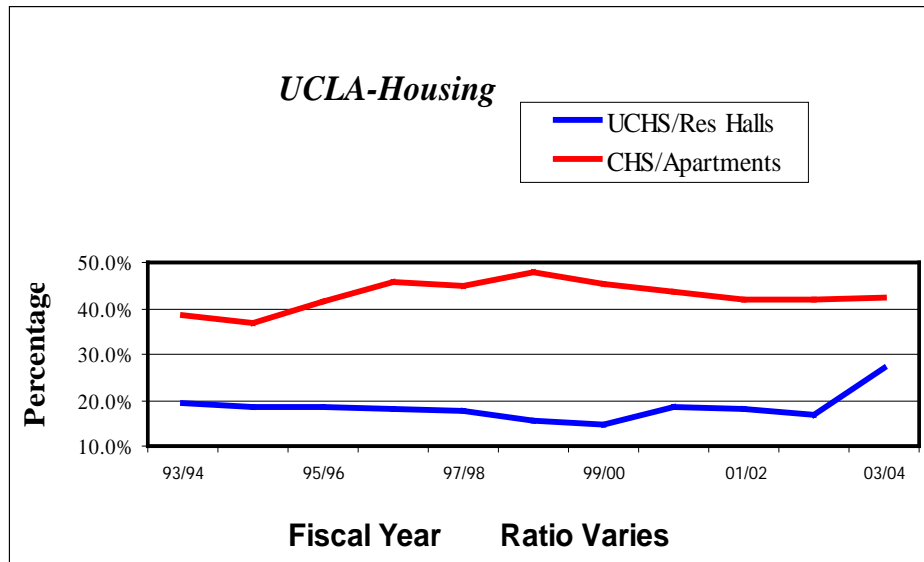
**Gross Revenues + STIP**

Measures ability of business to generate cash

# Financial Performance Ratios



## P&I / TOTAL REVENUE RATIO

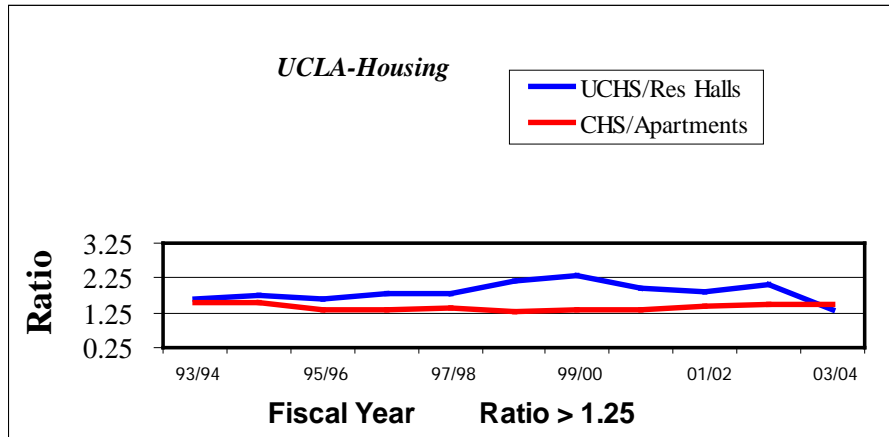


$$\text{Principal \& Interest} = \frac{\text{Gross Revenues + STIP}}{\text{Total Revenue}}$$

Measures extent revenues are committed to cover principal and interest (P&I) payments



# DEBT SERVICE COVERAGE RATIO



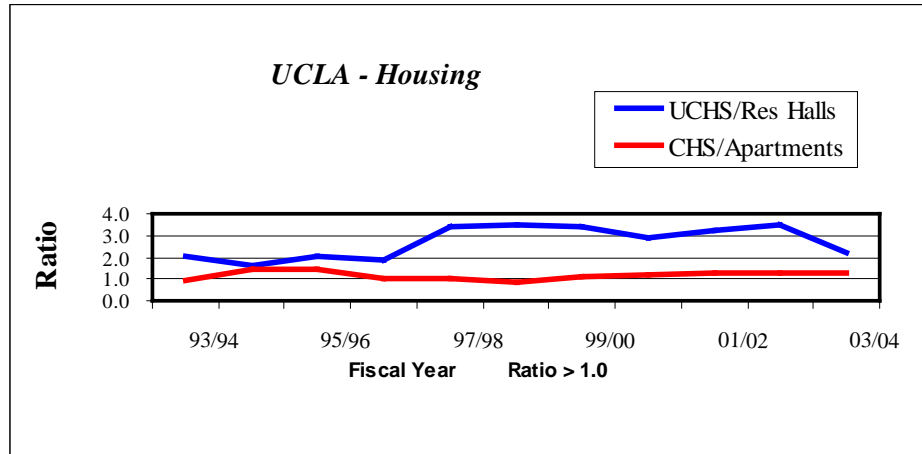
**Net Operating Revenues Before Debt & STIP**

=

**Principal + Interest**

Measures capacity to cover principal and interest (P&I) payments from current operations

# RESERVE BALANCE RATIO

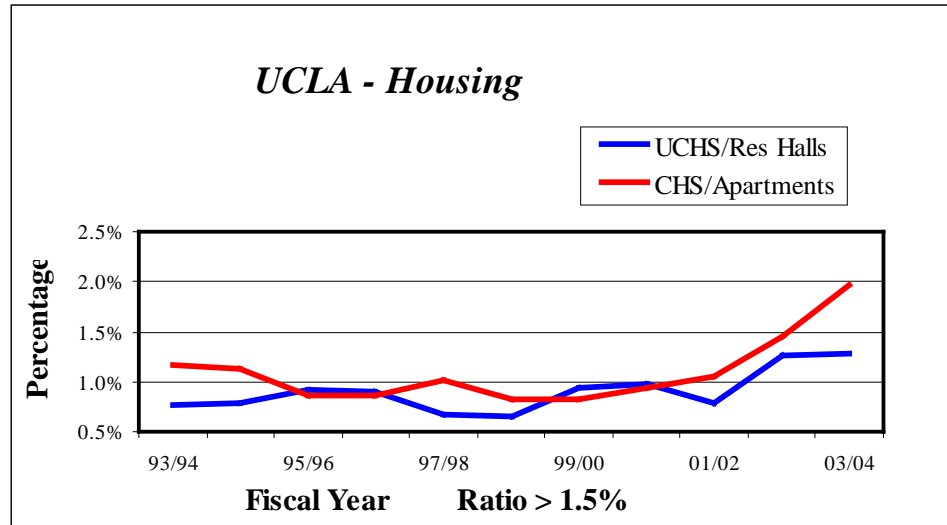


$$\text{Ratio} = \frac{\text{Total Unexpended Reserve Balance}}{\text{Principal + Interest + Major Maintenance Expenditures}}$$

Measures capacity to cover principal and interest (P&I) payments and annual major maintenance expenditures from existing reserves



# MAJOR MAINTENANCE CONTRIBUTION/ REPLACEMENT VALUE



**Annual Contribution to Major  
Maintenance Reserves**

=

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**Replacement Value**

Measures extent physical assets are being maintained  
in order to generate future revenues

# Question & Answer

# Catastrophic Events Reserves

- Systemwide Risk Management – Charlene Minnick
- A Campus Experience – Jan Andreason, San Francisco State University
- Financing & Treasury – Rosa Renaud

# Catastrophic Events Reserve

- Systemwide Risk Management - Charlene Minnick

# **Catastrophic Events - Are you Really Prepared?**

August 18, 2006

Housing Officers Workshop

# Today's Presentation

- Catastrophic? What Does that mean?
- Preparation and Planning
- Responding
- Mitigating
- Recovery
- And then there's Planning for a Pandemic!

# Catastrophic? What Does That Mean?

- Countless Examples: World Trade Center, Katrina, Indian Ocean Tsunami, Northridge Earthquake, Earthquakes in Turkey, Pakistan, volcanic eruptions (Hawaii, Mt St Helens)
- Those were highly publicized events, **HOWEVER**, consider these:
  - Murder/suicides
  - Stages collapsing
  - Civil disorder
  - Wildfires
  - Chickenpox outbreak
  - Mumps Outbreak

# Preparation and Planning

- The only way to MINIMIZE the impact of a catastrophe is to:
  - PREPARE
  - PREPARE and then
  - PREPARE

# So Where are you in the Process?

- A mistake often made in Emergency Planning is planning for the WORST CASE SCENARIO as the only plan and thinking you just scale down. In preparing for one's own family, you cannot assume the worst case scenario because the "worst case" would involve your family being vaporized or overrun by a panicked mob at the onset of the disaster.....so then why would you plan for this! The message is you cannot plan for every contingency, but you CAN plan for most and build in flexibility to adapt to changes as the events unfold.

# SO, WHAT KEEPS YOU UP AT NIGHT? (handouts in your binder)

- Table 1: Potential Types of Disasters
  - If you check off every one of these as high, you're in the wrong job!
- Chapter II Disaster Planning Checklist
  - This was developed by the Association of Public Treasurers. One you can check off your list is the maintenance of current insurance data with appraisals, the Office of Risk Management has done this one.
- Chapter III Understanding your Recovery Point Objective (RPO).
  - Information Technology questions

# RESPONDING

- Response will vary on the nature and size of the event. Unless you are a first responder, leave this to the trained personnel. However, if you come upon a small fire, and know how to operate a fire extinguisher and its nearby, **PUT THE FIRE OUT!!!**

# MITIGATION

- This means **DON'T MAKE IT WORSE** by not doing anything to preserve life and protect property.

# RECOVERY

- THIS IS WHAT IT'S ALL ABOUT! IF YOU CAN'T PREVENT THE DISASTER, MAKE PLANS SO YOU CAN RECOVER FROM IT!

# PRACTICE, PRACTICE, PRACTICE

- Having the best plan in the universe doesn't mean it works!
- How many of you are willing to get on an airplane and find out that the pilot has read the book and written a plan as to how to fly a plane! Your piano teacher was right:
- Practice, Practice, Practice!!!

# AND THEN'S THERE'S PLANNING FOR A PANDEMIC

- This is not traditional emergency/disaster planning. This is business survivability. The CSU is using a Business Continuity Planning model to prepare for a potential influenza outbreak, but this could be applied to any infectious disease outbreak (natural or man made). The question is not IF but WHEN.

# RESOURCES

- Your campus emergency management coordinator
- FEMA [www.fema.gov](http://www.fema.gov)
- State of California Office of Emergency Services  
[www.state.oes.gov](http://www.state.oes.gov)
- Avian Flu BCP  
[www.calstate.edu/risk\\_management/projects/avian\\_flu/index.shtml](http://www.calstate.edu/risk_management/projects/avian_flu/index.shtml)
- [www.cdc.gov](http://www.cdc.gov)
- [www.ready.gov](http://www.ready.gov) (US Department of Homeland Security)

# Catastrophic Events Reserve

- A Campus Experience – Jan Andreason, San Francisco Housing

# 1989 San Francisco Earthquake



**October 17**  
**5:04 PM**  
**7.1 Magnitude**  
**20 Aftershocks**

## 5:40 PM

- Entire residence community evacuated
- Thorough room by room check
- Campus phones down
- No functioning walkie-talkies

## 6:00 PM

- Major plumbing leaks on the 15<sup>th</sup> Floor of Verducci Hall
- Dining Center gas heater would not shut off

# 7:30 PM

- Sending runners to the EOC
- Maintenance workers are called back to work

## 9:00 PM

- Residential Life staff distribute blankets to residents
- Controlled fires are ignited inside trash cans located outside buildings for light
- Purcell is given a cell phone, but the network is down

## 10:00 PM

- Students are allowed back into Mary Ward and Mary Park Halls
- Verducci Hall is considered unsafe due to the disturbed asbestos
- Students from Verducci Hall are housed overnight in Mary Ward and Mary Park Halls, The Cantina, Study Lounges and Seven Hills Conference Center

## 11:30 PM

- Major mechanical and plumbing damages are determined
- Emergency generator is down
- Domestic hot water is down
- Evidence of asbestos is found on every floor of Verducci Hall

# During the Following Days...

- Students are offered masks and allowed to enter Verducci Hall for 1½ hours to collect their belongings
- Verducci Hall is turned over to an Asbestos Abatement Company



# During the Following Days...

- Emergency loans are established
- October 20<sup>th</sup>: The decision to close Verducci Hall for 1 month is made
- October 30<sup>th</sup>: Verducci Hall opens without hot water for 16 days

# During the Following Years...

- 1990/1991: One half of Verducci Hall is closed each semester for asbestos abatement
- 1991/1992: Verducci Hall is permanently closed

# Verducci Hall Imploded April 8, 1999



# The Village at Centennial Square



- Opened January 2001
- \$48 million

# Loss in Revenue

- Settled with FEMA in August 1998 for \$9,672,179
- Payment could not be used to retire debt
- 9 Years; 3 Appeals; \$17 million in lost gross revenue

# Initial Loss of Income

*(First 2 Weeks)*

Refunds	290	\$182,030
30-Day Refunds	410	\$97,771
Triple Room Adjustments	204	\$13,651
Loss of Hot Water (16 Days)	231	\$11,149
<b><i>Totals:</i></b>	<b><i>1,135</i></b>	<b><i>\$304,603</i></b>

# Initial Expenses for Verducci Hall

***15 Stories; 763 Beds; Built in 1970; \$4 Million***

Asbestos Abatement & Air Testing	\$303,376
Repair (Generator, Hot Water, Ceilings)	\$60,260
Temporary Labor (Maintenance, Custodial, Secretary)	\$21,770
Overtime	\$12,660
Emergency Equipment	\$17,800

# Initial Expenses Cont.

Replacement of Lost Goods (Blankets, China)	\$30,803
Architectural Contract for Damage Assessment	\$168,146
Lateral Analysis	\$93,000
CSU Project Authorization	\$723,000

***Total Initial Expenses: \$707,815***

# Long Term Expenses

Years	Expense	Principal	Interest	Total
92/93 to 07/08	Asbestos Abatement	\$625,000	\$280,009	\$939,994
97/98 to 06/07	1994/1995 Deficit Loan	\$384,445	\$127,992	\$512,437
Pay off in May 2008	Series B Revenue Bond	---	---	\$2,870,000 paid after building closure

# Deficit Reduction Plan Summary

Budget Year:	91/92	92/93	93/94
Deficit Amount:	(\$1,123,499)	(\$1,699,302)	(\$1,690,085)
Funds Received From:	BMER Loan: \$371,445	Debt was covered by System Wide Money	
	Reduction in Operating Expenses: \$278,264		
	Layoff Staff (5 layoffs in 91/92, 18 in the end) \$85,975		
	RAB Financing Savings: \$387,815		

# Deficit Reduction Plan Summary Cont.

## *Proposed CSU Adjustments*

Budget Year	94/95	95/96	96/97
Deficit Amt	(\$1,427,485)	(\$1,434,261)	(\$1,348,676)
Waive Transfer of Reserves	(\$513,526)	(\$513,526)	(\$513,526)
Waive M&R Loan Payments	(\$272,467)	(\$272,467)	(\$272,467)
Proposed Surplus/Deficit	(\$641,492)	(\$648,268)	(\$562,683)

# Deficit Reduction Plan Summary Cont.

## *Proposed CSU Adjustments*

Budget Year	97/98	98/99	99/00
Deficit Amt	(\$1,295,401)	(\$1,240,202)	(\$810,853)
Waive Transfer of Reserves	(\$513,526)	(\$513,526)	(\$513,526)
Waive M&R Loan Payments	(\$272,467)	(\$272,467)	(\$272,467)
Proposed Surplus/Deficit	(\$509,408)	(\$454,209)	(\$24,860)

# Deficit Reduction Plan Summary Cont.

## *Proposed CSU Adjustments*

Budget Year	00/01
Deficit Amt	(\$505,801)
Waive Transfer of Reserves	(\$513,526)
Waive M&R Loan Payments	\$0
Proposed Surplus/Deficit	\$7,725

# Catastrophic Events Reserves

- Financing & Treasury Information

# Catastrophic Events – F&T Guidelines

- E.O. 876 allows campuses to define their catastrophic event reserve.
- 1993 Student Housing Task Force recommended:
  - The reserve should be sufficient for the purpose of paying any self-insurance retention and for uninsured losses resulting from natural disasters such as earthquakes, floods, high winds, fire, or criminal activity such as bombings or arson.

# Catastrophic Events – F&T Guidelines

- A base amount should be established once a comprehensive risk assessment has been completed for the housing system and should be based upon findings of the risk assessment related to probable maximum annual losses together with self-insured retention requirements.

# Catastrophic Events – Handout

- Insert the example of different checklists that could be used in planning for catastrophic events as provided by the Association of Public Treasurers.
- There are numerous examples available from your campus' Risk Management department and the Systemwide Risk Management Office.

# Maintenance & Repair/Capital Renovation Reserves

- Chancellor's Office CPDC – Jonathan Scheffler
- A Campus' Formal Evaluation of Facilities – Tony Valenzuela, San Jose State University
- A Campus Housing Program Director's Plan – Susan Hansen, San Jose State University

# Chancellor Office CPDC Resources

Presentation by Jonathan Scheffler – Physical Plant Program Manager, Capital Planning, Design & Construction

# Capital Renewal Forecasting

- Capital Renewal Background Information
- Importance of Capital Renewal Forecasting
- Forecasting Methods
- Available Resources

# Capital Renewal Background Information

- CSU definition of Capital Renewal:
  - Capital Renewal is “The systematic replacement of building and utility systems to extend their useful life” <sup>1</sup>
- All systems, or parts of systems, are assumed to have useful life, after which they must be replaced completely
  - This is true even if they are maintained regularly.

<sup>1</sup> Executive Order 847 – Policy Statement on Facility Maintenance

# Capital Renewal Background- Cont.

- Examples of useful life of various building systems
  - Roofing – 25 years
  - HVAC Equipment/Controls – 30 years
  - Plumbing Fixtures – 30 years
- See subsystem life cycle handout for more information

# Capital Renewal Background- Cont.

- CSU buildings and building systems are aging
  - 68% of the total CSU building count is at least 20 years old
  - 37% of the total CSU building count was constructed prior to 1966.

# Capital Renewal Background- Cont.

- Other institutions have the same challenges as the CSU
- CPDC did a sampling of other public and private institutions for comparison
  - Every institution surveyed had numerous buildings and systems that were beyond their useful life
  - Each institution was struggling with funding their growing Capital Renewal backlog

# Importance of Capital Renewal Forecasting

- Budgeting
  - Construction and repair costs are going up
    - 12.5% cost increase applied to CPDC model for 2006
  - Rising energy costs
    - Geopolitical and weather related issues can cause price increases
    - Oil recently passed \$79 per barrel

# Forecasting Importance - Cont.

- Planning
  - Forecasting will assist with building a business case for system and building Capital Renewal projects
  - Building systems in need of renewal may be grouped together to lower the project costs
    - Examples: fire alarm systems and roofing

# Forecasting Methods

- Campuses and CPDC use 3 basic methods to assist with Capital Renewal forecasting
  1. Facilities Renewal Resource Model (FRRM)
  2. Facility Condition Analysis (FCA)
  3. Computerized Maintenance Management Systems (CMMS)

# Facilities Renewal Resource Model (FRRM)

- FRRM is a Capital Renewal and Deferred Maintenance backlog database
  - Maintained by each campus
  - Updated annually
  - FRRM Data reflects CPDC Space & Facilities Database (SFDB) information
- Campuses utilize FRRM information as another tool to assist with Capital Planning
- See the FRRM handout page for an example

# Facilities Condition Analysis (FCA)

- FCA is done by an outside vendor
- Provides a detailed analysis of a targeted building
- FCA costs are 10–12 cents/sq. ft. for a large facility
- CPDC is currently researching a systemwide Master Enabling Agreement (MEA) for campus Facility Condition Analysis.
- See the FCA handout page for an example

# Computerized Maintenance Management Systems (CMMS)

- Used by each campus to assign and track Preventative Maintenance (PM) for buildings and building subsystems
- Required by Executive Order 847
- Campuses utilize CMMS to target subsystems that are in need of renewal
  - CMMS identifies excessive parts and labor costs
  - CMMS data can be helpful with building a business case for subsystem Capital Renewal Projects

# Executive Order 847

- Issued in January 2003
- Refines the standards in which campuses maintain CSU facilities
- Provides clear definitions of the following:
  - Operations and Maintenance
  - Deferred Maintenance
  - Capital Renewal
- See Executive Order 847 handout for more information

# Available Resources

- Association of Physical Plant Administrators (APPA) [www.appa.org](http://www.appa.org)
  - Prime resource for FCA and CMMS information
- CPDC Contact Information
  - Jon Scheffler
  - Office: (562) 951-4634
  - [jscheffler@calstate.edu](mailto:jscheffler@calstate.edu)

## Building Sub-system Categories and Life Cycles (FRRM Model)

<u>Sub-system</u>	<u>Life Cycle</u>
Roofing (Tile)	80 years
Roofing (Mmbrn, Built-up, Shingle, Bitumin, Foam)	25 years
Building Exteriors, Doors, Windows (Hard)	30 years
Building Exteriors (Soft)	20 years
Elevators and Conveying Systems	25 years
HVAC – Equipment/Controls	30 years
HVAC – Distribution Systems	50 years
Electrical Equipment	25 years
Plumbing Fixtures	30 years
Plumbing (Rough-in)	70 years
Fire Protection Systems	40 years
Fire Detection Systems	20 years
Built-in Equipment and Specialties	25 years
Interior Finishes: Walls, Floors, Doors	15 years
Painting (Public Areas)	15 years



# Facility Condition Analysis Example

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# Vendor List

## CPDC Resource Examples

### Capital Planning Information

Association of Physical Plant Administrators (APPA)  
1643 Prince Street  
Alexandria, VA 22314-2818  
Phone: 703 684-1446  
[www.appa.org](http://www.appa.org)

- Pacific Partners Consulting Group  
Facilities Renewal Resource Model (FRRM)  
Phone: 408 374-9957  
[rickb@ppcg.com](mailto:rickb@ppcg.com)

### - Facility Condition Analysis (FCA)

3D/International  
1900 WEST LOOP SOUTH  
SUITE 400  
HOUSTON, TX 77027  
Phone: 713 871-7014  
Fax: 713 871-7181  
[www.3di.com](http://www.3di.com)

Adams Consulting Group  
4060 PEACHTREE ROAD  
SUITE D201  
ATLANTA, GA 30319  
Phone: 888 887-9995  
Fax: 404 636-4661  
[www.adams-grp.com](http://www.adams-grp.com)

Carter & Burgess Incorporated  
777 MAIN STREET  
FORT WORTH, TX 76102  
Phone: 817 735-6030  
Fax: 817 735-6064  
[www.c-b.com](http://www.c-b.com)

Facility Engineering Associates  
11001 LEE HIGHWAY  
SUITE D  
FAIRFAX, VA 22030  
Phone: 703 591-4855  
Fax: 703 591-4857  
[www.feapc.com](http://www.feapc.com)

ISES Corporation  
2165 WEST PARK COURT  
SUITE N  
STONE MOUNTAIN, GA 30087  
Phone: 770 879-7376  
Fax: 770 879-7825  
[www.isescorp.com](http://www.isescorp.com)

**Computerized Maintenance Management Systems  
(CMMS)**

Infor (Datastream)  
50 Datastream Plaza  
Greenville, SC 29605  
Phone: 864 422-5001  
Fax: 864 422-5000  
[www.datastream.net](http://www.datastream.net)

FAMIS Software Inc.

4 PARK PLAZA

SUITE 1000

IRVINE, CA 92614

Phone: 800 774-7622

Fax: 949 553-6559

[www.famis.com](http://www.famis.com)

Mainsaver Software

15150 Avenue of Science

San Diego, CA 92128

Phone: 800 467-2388

[www.mainsaver.com](http://www.mainsaver.com)

TMA Systems, LLC

5100 E. SKELLY DRIVE

SUITE 900

TULSA, OK 74135

Phone: 918 858-6600

Fax: 918 858-6655

[www.tmasystems.com](http://www.tmasystems.com)

VFA Incorporated

266 SUMMER STREET

BOSTON, MA 02210-1112

Phone: 800 693-3132

Fax: 617 350-7087

[www.vfa.com](http://www.vfa.com)

# **INSERT - E.O. 847 Handout**



# Maintenance & Repair/Capital Renovation Reserves

- A Campus' Formal Evaluation of Facilities – Tony Valenzuela, San Jose State University

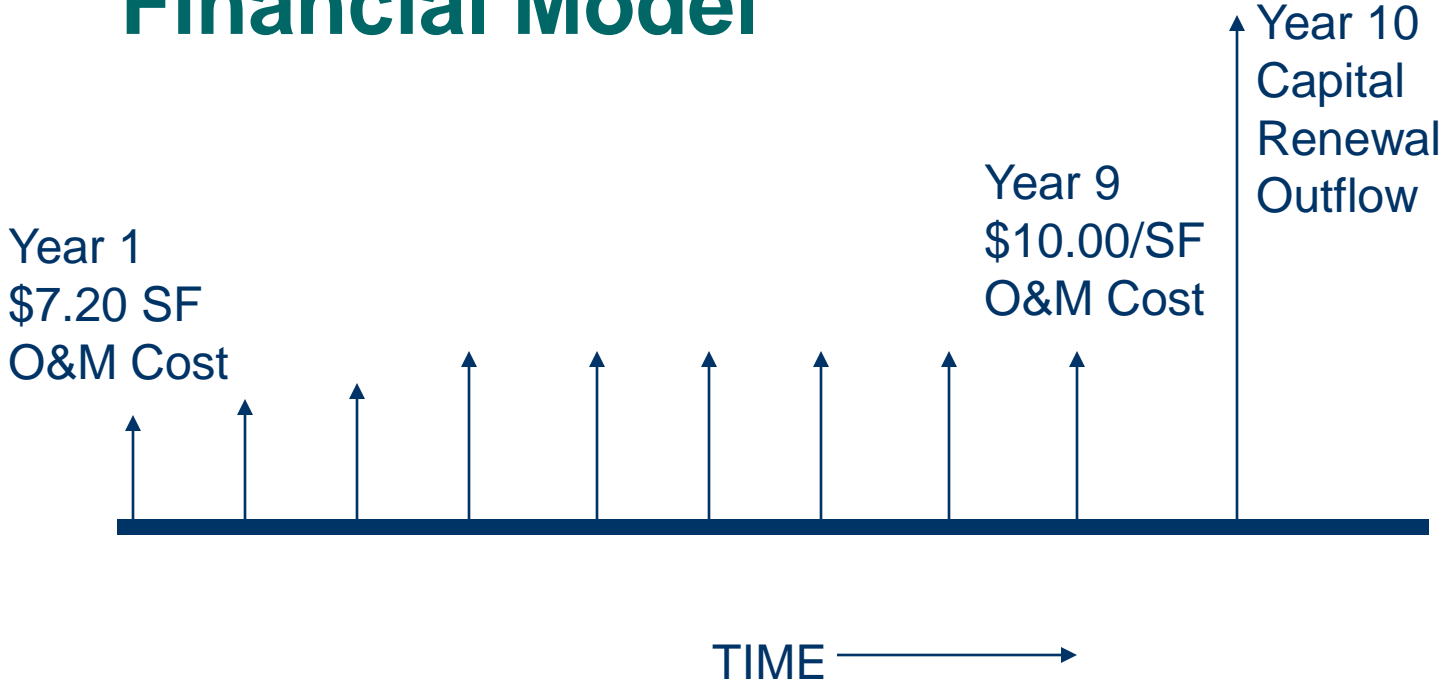
- FACILITIES LIFECYCLE COST:

MAINTENANCE, RETRO-COMMISSIONING AND CAPITAL RENEWAL (with emphasize on Capital Renewal Reserve Approach)

# The Lifecycle Cost Elements of Maintaining Your Physical Assets

- **Maintenance**
  - Planned
  - Preventive
- **BUILDING/SYSTEM OPTIMIZATION (AKA Retro-Commissioning – Case Study on How to minimize Maintenance and Capital Renewal)**
- **Capital Renewal and Replacement Program**
  - Building System Replacement
  - Deferred Maintenance

# Traditional Facilities Maintenance Financial Model



# Establishing Capital Renewal Reserve Needs

- New Construction
  - Take all major systems from Construction/As-Built Drawings and project lifecycle replacement
  - SJSU took this approach for the New Library (580,000 SF) and the new Campus Village Student and Faculty/Staff housing (980,000 SF) – See SJSU Excel Model
- Existing Buildings – The various Approaches
  - Condition Assessment – In depth Audit of the Facility
  - Lifecycle Model Approach (CSU runs a model developed by Pacific Partners) – Developed from parametric tools and campus knowledge
  - % of Cost Replacement Value
  - Depreciation Method

# Establishing Capital Renewal Reserve Needs

- Recommended Approach for Existing building is:
  - Lifecycle Model Approach (CSU runs a model developed by Pacific Partners)
    - Each CSU campus already has General Fund facilities model and should not be difficult to include Housing facilities (There may be campuses that already use the Pacific Partner model for Housing Facilities)
  - Plus:  
Model can be calibrated with specific building knowledge (Models are not perfect and need to be tested with the specific buildings)

# Capital Reserve Building Blocks

- **Major Building/Facilities Components**
  - Interior Finishes
  - Building Envelop
  - Hardscape
  - Landscape
  - Mechanical
  - Electrical
  - Plumbing
  - Telco-Data
  - Elevators
  - Building management and Safety Systems
  - Elevators
  - FF&E

# Elements That Can Increase Anticipated Capital Renewal Costs

- **Code Changes – Seismic or Life Safety**
- **Accessibility Needs**
- **Amenities that become outdated or need to be changed to accommodate new programs**
- **Campus change of Strategy on systems – (i.e. Central Feed utilities v. standalone chiller/boiler)**


# The SJSU Campus Village Capital Renewal Model – Insert Handout

- INSERT Summary Excel Sheet of Campus Village Model

# MITIGATING YOUR O&M AND CAPITAL RESERVE REQUIREMENTS

**Monitoring Based Commissioning  
Martin Luther King Jr. Library**

Large and Complex Building  
Diagnostic/Calibration After 2  
years of Operation



# Monitoring Based Commissioning (MBCx) - Goals

- A long-term process employing remote metering/monitoring capabilities and diagnostic protocols to achieve and continuously maintain a high level of system performance by:
  - Identifying and implementing low-capital cost operational and maintenance improvements
  - Training and otherwise leaving building staff with the tools to continuously monitor and optimize the King Library

# Commissioned Systems

- **Mechanical**
  - Primary Air Handling Units
  - Special Collections Air Handling Units
  - Atrium and Basement Air Handling Units
  - Terminal Air Units
  - Pumps and Heat Exchangers
- **Lighting**
  - Time of Day Controls
  - Occupancy Sensors
  - Daylighting Controls
- **Energy Management System**
  - Sequences of Operation
  - Network Communications

# Monitored Based Commissioning Process Overview

- **Planning Phase**
  - Initial Site Assessment
  - Catalog Known Issues
  - Define Monitoring Requirements
  - Develop M&V Plan
- **Pre-Investigation Phase**
  - Evaluate Monitoring System
  - Calibrate Sensors
- **Investigation Phase**
  - Setup Trends
  - Create Energy Baseline
  - Perform Pre-functional Testing
  - Correct Deficiencies
  - Perform Functional Testing
  - Evaluate/Recommend Improvement Opportunities

# Monitored Based Commissioning Process Overview (cont.)

- **Implementation Phase**
  - Implement Selected MBCx Improvements
  - Verify Improved Operation
  - Generate Systems Manual
  - MBCx Report submittal to Partnership
- **Handoff Phase**
  - Ongoing Diagnostic Tools
  - Training

# SJSU MLK Library Project Measures Identified

- Measures Implemented
  - Lighting Schedule Improvements
  - Occupancy Sensor Calibration (the struggle continues)
  - Correct Photocell Control
  - Terminal Box Airflow Calibration
  - Temperature and Humidity Sensor Calibration
  - Economizer Repair



# Interim Project Results Economic Summary Report to PG&E

	<i>Current</i>	<i>Resulting</i>	<i>Savings</i>
KWh	7,750,935	7,086,594	664,341
KW	843	843	0
Therms	14,779	14,779	0
Energy Cost	\$930,112	\$850,391	\$79,721
Gross Program Cost			\$333,456
Gross Paayback			4.18
PG&E Incentive			\$184,900
Net Program Cost			\$148,556
Net PB period			1.86

- The Data

# Energy Consumption Results

<b>Energy Consumption (kWh)</b>		
<b>Month/ Year</b>	<b>2003/2004</b>	<b>2004/2005</b>
<b>July</b>	528,550	640,856
<b>August</b>	878,666	595,748
<b>September</b>	579,271	617,394
<b>October</b>	651,749	634,908
<b>November</b>	328,266	595,925
<b>December</b>	570,597	630,389
<b>January</b>	573,115	571,841
<b>February</b>	565,510	564,567
<b>March</b>	615,680	232,349
<b>April</b>	627,934	508,182
<b>May</b>	943,712	594,900
<b>June</b>	944,000	595,030
<b>Total</b>	<b>7,807,050</b>	<b>6,782,089</b>
<b>Annual Reduction</b>		<b>1,024,961</b>
<b>Percentage Reduction</b>		<b>13%</b>

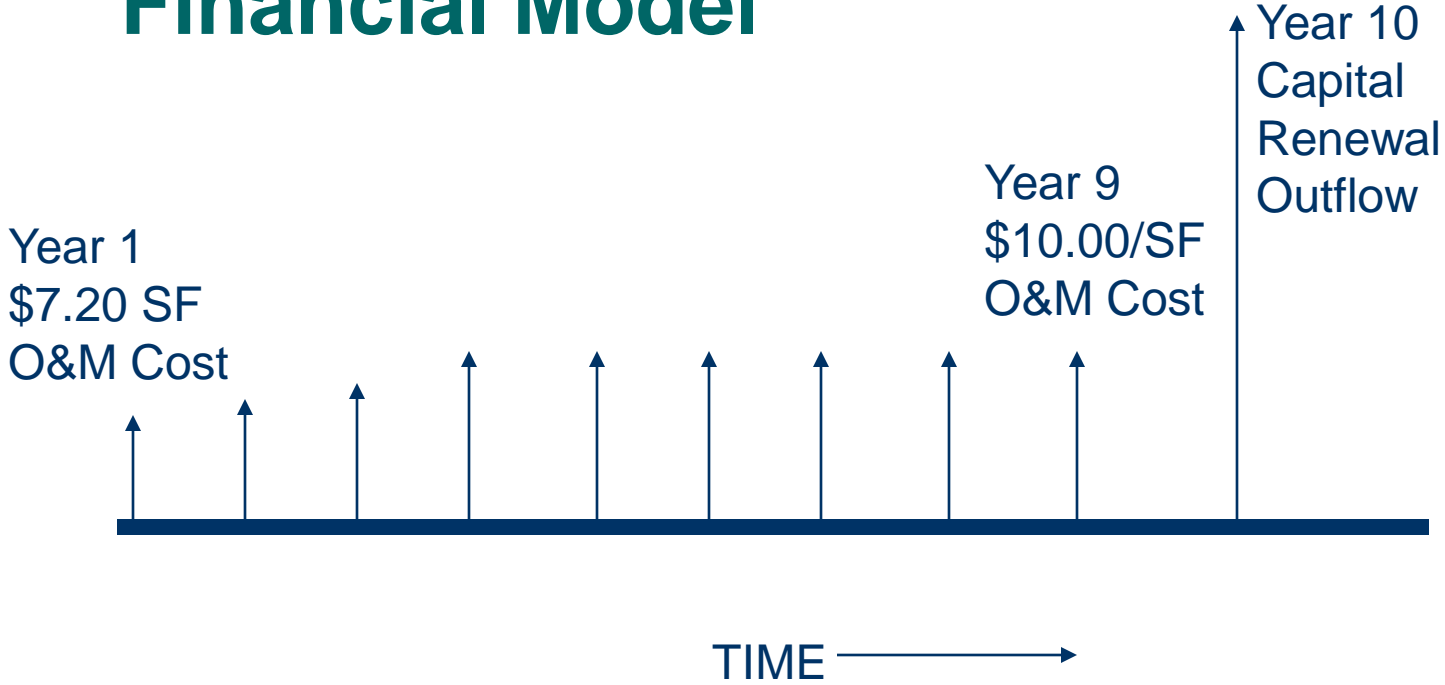
# Summary

- The MLK Library MBCx project has:
  - Reduced energy consumption of the facility by at least 7% for the initial MBCx project.
  - Obtained \$184,900 of Public Good Funds (PG&E incentive) to reduce project costs.
  - Identified many additional improvements in energy efficiency and facility operations that are currently being implemented.

# Suggestions

- Contact your Campus Energy Program Manager and inquire about the CSU Energy Partnership program – Funds can be available for retro-commissioning and to replace outdated energy conversion equipment

# Traditional Facilities Maintenance Financial Model



# Facilities Financial Model with Retro-Commissioning



# Contact Info:

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**Voice: (408) 924-1940**

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**[tony.valenzuela@sjsu.edu](mailto:tony.valenzuela@sjsu.edu)**

**<http://www.sjsu.edu>**

# Maintenance & Repair/Capital Renovation Reserves

- A Campus' Housing Program Director's Plan –  
Susan Hansen, San Jose Housing

INSERT - Handout

San José State University

University Housing Services

# **Reserve Strategies**

Susan Hansen, Director



# Executive Order 876

- **Section 7: Reserves**
- **7.1 Reserve Development:** The campus president and chief financial officer are responsible for developing and maintaining a campus policy to provide reserves from project revenues for projects funded by debt issued by the Board of Trustees. The campus reserve policies, at a minimum, should address the following needs:
  - **Major Maintenance and Repair/Capital Renovation and Upgrade**
  - **Working Capital**
  - **Capital Development for New Projects**
  - **Catastrophic Events**
- **7.2 Reserve Review:** At a minimum of once every three years, each campus shall conduct an in-depth review to assess the adequacy of the reserves and the campus reserve policies applicable to the projects funded by debt, and shall make necessary adjustments and changes to account for changing conditions. For Major Maintenance and Repair/Capital Renovation and Upgrade Reserves, the reviews should include formal studies of facility systems and necessary funding levels to cover all aspects of cost of replacement through the reserve funding plan.

# History

- **Housing Officers Proposal of four mandatory reserves (circa 1995):**
  - Capital Renovations and Repairs  
(Goal: based on projections)
  - Operating Reserve / Working Capital  
(Goal: 33% of operating)
  - Catastrophic Events  
(Goal: based on projections / research)
  - Capital Development  
(Goal: 10% of cost of new construction)

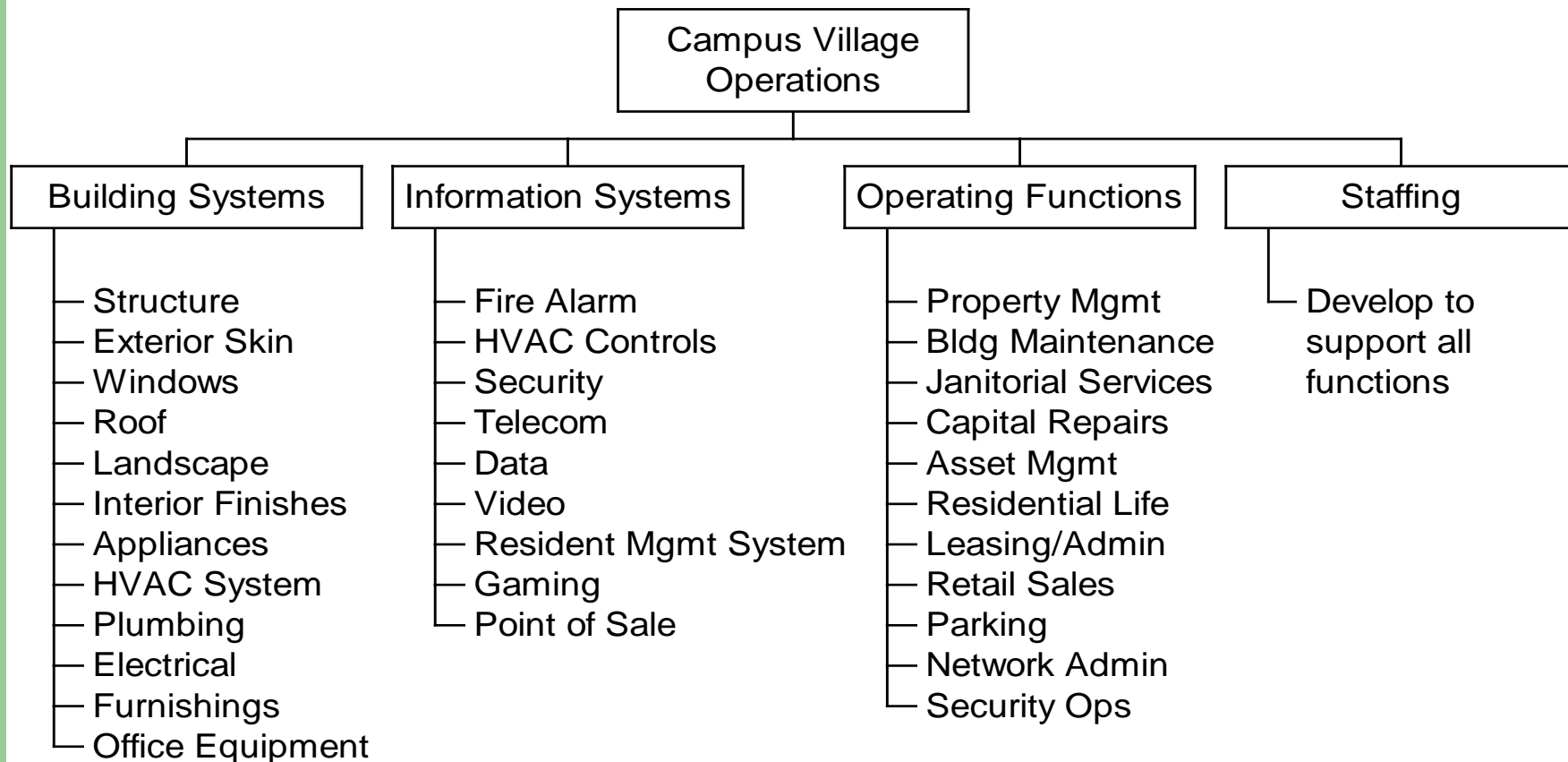
# Considerations

- Weighing Consultant Expertise / Housing Professional Expertise
- Keep complete and detailed records of your operations – historical data may prove more accurate and helpful than consultant “expertise”
  - Capital Renovations
  - Maintenance and Repair Replacement
  - Utilities usage

# Maintenance and Repair Consultant Support Possibilities

- Example: Comprehensive evaluation of the Operations Strategy for Campus Village.
- This evaluation addressed operations issues starting with major processes and migrated through specific functions and tasks to support systems and ultimately staffing and projected costs.

# Maintenance and Repair Consultant Support Possibilities



# Maintenance and Repair Consultant Support Possibilities

## Potential Report Areas

- **EXECUTIVE SUMMARY**
- **PART 1 – OVERVIEW**
  - Facility Profile
- **PART 2 – FINANCIAL REVIEW**
  - Financial Summaries
- **PART 3 – REPAIR & MAINTENANCE**
  - Overview
  - Service Contracts Versus Staffing
  - Work Orders
  - Preventive Maintenance
  - HVAC
  - Electrical
  - Elevator
  - Fire and Life Safety
  - Utilities & Energy Management
- **PART 4 – PROPERTY ADMINISTRATION**
  - Staffing
  - Budget Development and Tracking
- **PART 5 – CONTRACTED SERVICES**
  - Contracted Services Administrative Overview
  - Janitorial
  - Waste removal
  - Recycling
  - Roads & Grounds
  - Security
- **Appendices:**
- **PART 6 –PROPOSED BUDGET**
- Appendix A-Service request response times
- Appendix B-Example labor report
- Appendix C-Equipment Life Cycle Management Program
- Appendix D-HVAC Program
- Appendix E-Example IAQ Program
- Appendix F-Example Utility Tracking
- Appendix G-Sample Electrical PM
- Appendix H-Vertical Transportation
- Appendix I- Commissioning

# Maintenance and Repair Consultant Support Possibilities

- APPROACH: A team-oriented approach to first focus on facilities management issues
  - Housing staff should be prepared and willing to be part of a team that collects information
  - Consultant should lead the process and collect comparative data from ‘the outside’

# Maintenance and Repair Consultant Support Possibilities

- Jones Lang LaSalle Corporate Property Services group all expanded their work “on the operating budget and reserves model to advise on best practices in commercial, corporate and residential lease management which could be applicable in the student environment”
- This was not “apples to apples”

# Maintenance and Repair Consultant Support Possibilities

## Project Objectives:

1. Specific to the Facilities Management issues, the objective was for the team to perform an assessment of occupancy cost drivers and facilities operations to identify opportunities for operating the Campus Village project utilizing industry occupancy cost benchmarks and implementing best practices through improved processes, practices and procedures.

# FacilityView Assessment Process:

- *Assessment Scope*
- Jones Lang LaSalle professionals will perform a review and baseline evaluation of the planned facilities. Our team will consist of experienced facility management, technical support, project management and financial specialists.
- *On-Site Data Gathering (1 week)*
- Generally, the emphasis of these studies is to create an accurate baseline of the current facility management organization managing the existing properties, costs, contracted services, and processes. To adequately evaluate existing costs and procedures, it is usually necessary to conduct some limited interviews with existing facility personnel.

# FacilityView Assessment Process:

- Examples of information needed include:
- Historical operating budget information for services to be provided at the Campus Village
- Proposed Staffing plans
- Any service contracts
- Site descriptions, including floor plans, lists of major equipment, and headcount/Occupancy information, with this information derived from our project team.
- Maintenance and service level specifications for project

# FacilityView Assessment Process:

- *On-Site Operations Review (2-3 days)*
- A review will be made of existing mechanical areas, building files, work areas, building systems, and records covering the following general categories:
  - Emergency procedures
  - Fire protection and life safety systems
  - Work order volumes and procedures
  - Preventive/predictive maintenance administration
  - Maintenance inspection Technical documentation
  - Operations administration
  - Support (administrative) services
  - Energy management

# FacilityView Assessment Process:

- *Analysis Phase (2 weeks)*
- Evaluate Information
- Establish SJSU's cost position and budgets using standard Building Operators and Management Association (BOMA) categories; compare to industry and Jones Lang LaSalle data
- Comment on service standards
- Identify high-cost standards, building systems, and/or inefficient operations
- Create process flow diagrams for major service functions, linked to planned or available technology to facilitate efficient operations
- Comment on SJSU's organizational model for delivery of services
- Recommend staffing models to optimize operational efficiencies
- Evaluate existing contract services

# FacilityView Assessment Process:

- Document Findings
  - Identify opportunities to reduce real estate operating costs
  - Identify anticipated costs under existing models
  - Identify existing organizational model for the delivery of services and alternative models to optimize long term value Identify existing service contract structure(s) at each location and alternatives to increase efficiencies

# FacilityView Assessment Process:

- *Reporting Phase*
- The Jones Lang LaSalle team will assemble all findings and present a written report, executive presentation and implementation plan to SJSU.
- Jones Lang LaSalle will prepare a report to include:
- Proposed first year operating budgets
- Comments on planned technology and potential variations to enhance operating efficiencies
- Management Plan including:
  - Labor model
  - Contract Specification for services Draft Vendor RFP Document
  - Proposed Engineering and Operations maintenance manuals
    - Team Safety Handbook
    - Preventive Maintenance Program recommendations

# FacilityView Assessment Process:

Timing: The project will commence upon authorization to proceed. The first two weeks of the project will focus on documentation reviews and site visits. We will require active interaction between the Jones Lang LaSalle team and SJSU personnel intimately familiar with the project to provide access throughout existing facilities as required. We anticipate that the Facilities Assessment can be completed within six (6) weeks, during which time we will schedule 2 interim progress meetings to discuss preliminary results. Following the progress meetings and assessment period, we will complete our final report and submit to SJSU within two (2) weeks of the progress meeting.

**Estimates** based on non-university living situations are not always accurate or generalizable. Campus – specific historical data and local market comparisons have been helpful to our program in formulating cost projections.

### Other Estimating Measures

Multi-family housing (unit repairs only)	Reserve per unit	# of Units	Reserve per year	Reserve per year group
Years 1-3	\$150	530	\$79,500	\$238,500
Years 4-14	\$300	530	\$159,000	\$1,749,000
Year 15	\$600	530	\$318,000	\$318,000
Years 16-18	\$150	530	\$79,500	\$238,500
Years 19-29	\$300	530	\$159,000	\$1,749,000
Year 30	\$600	530	\$318,000	\$954,000
				\$5,247,000
Multi-family housing (grounds, structure, utilities)	Reserve per annum			
Years 1-3	1% of gross revenue			
Years 4-14	3% of gross revenue			
Year 15	5% of gross revenue			
Years 16-18	1% of gross revenue			
Years 19-29	3% of gross revenue			
Year 30	5% of gross revenue			
Hotel Industry	Reserve per annum			
All years	4-5% of gross revenue			

# Consultant Summary Projections (Example)

Detailed analysis by component

CATEGORY	TOTAL 2003 COST	2003 REQUIRED CAPITAL RESERVES	REQUIRED CAPITAL EXPENSE YEAR 1	REQUIRED CAPITAL EXPENSE YEAR 2	REQUIRED CAPITAL EXPENSE YEAR 3	REQUIRED CAPITAL EXPENSE YEAR 4	REQUIRED CAPITAL EXPENSE YEAR 5	REQUIRED CAPITAL EXPENSE YEAR 6	REQUIRED CAPITAL EXPENSE YEAR 7	REQUIRED CAPITAL EXPENSE YEAR 8	REQUIRED CAPITAL EXPENSE YEAR 9	REQUIRED CAPITAL EXPENSE YEAR 10
INTERIOR FINISHES	\$3,388,575	\$5,807,609	\$0	\$0	\$0	\$0	\$452,988	\$316,104	\$200,295	\$410,053	\$0	\$547,024
BUILDING ENVELOPE	\$1,480,937	\$1,239,801	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
HARDSCAPE	\$659,269	\$439,649	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
LANDSCAPE	\$396,800	\$393,137	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
GARAGE	\$388,625	\$1,320,231	\$0	\$0	\$0	\$0	\$392,559	\$0	\$0	\$0	\$0	\$455,084
MECHANICAL	\$816,386	\$548,999	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$53,407
ELECTRICAL	\$5,733,646	\$3,772,876	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
PLUMBING	\$4,697,195	\$9,079,007	\$0	\$0	\$0	\$0	\$1,153,481	\$0	\$836,253	\$0	\$0	\$2,984,576
TELCO_DATA	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
ELEVATORS	\$2,424,488	\$1,182,780	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
CAPITAL IMPROVEMENTS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Recommended 2003 Capital Reserves		<b>\$23,784,090</b>	\$0	\$0	\$0	\$0	\$1,999,028	\$316,104	\$1,036,548	\$410,053	\$0	\$4,040,091

Historical data would suggest that the first three years of operations would require more than \$0 of reserve expenditures from Capital Renovations & Repairs.

# Consultant Detail (Example)

COMPONENT			PRICE PER UNIT	NUMBER OF UNITS	2003 COST	EXPECTED USEFUL LIFE (YRS)	EXPENSE GROWTH	INVESTMENT RATE OF RETURN	CAPITAL SET ASIDE NEEDED IN 2003	YEAR 1
DESIGNATION		UNIT								
CARPETING (ROLL)	Units	sq.yd	\$13	46,074	\$598,962	11	3.00%	6.00%	\$755,247	
CARPETING (ROLL)	Common Area	sq.yd	\$17	10,301	\$175,117	5	3.00%	6.00%	\$655,009	
VCT	Units	sq.ft.	\$1	36,299	\$36,299	11	3.00%	6.00%	\$45,770	
VCT	Common Area	sq.ft.	\$1	22,884	\$22,884	7	3.00%	6.00%	\$56,793	
VINYL FLOORING	Units	sq. ft.	\$3	33,778	\$101,334	22	3.00%	6.00%	\$53,882	
VINYL FLOORING	Common Area	sq. ft.	\$3	1,642	\$4,926	7	3.00%	6.00%	\$12,225	
FINISH CARPENTRY AND MILLWORK	Units	LS	\$1,355,275	1	\$1,355,275	15	3.00%	6.00%	\$1,453,799	
ARCHITECTURAL WOODWORK	Common Area	LS	\$138,378	1	\$138,378	12	3.00%	6.00%	\$167,523	
OPERABLE PARTITIONS		EA	\$38	297	\$11,286	10	3.00%	6.00%	\$19,595	
PROJECTION SCREENS		LS	\$5,000	1	\$5,000	10	3.00%	6.00%	\$8,681	
MICROWAVE OVEN		EA	\$135	498	\$67,230	7	3.00%	6.00%	\$166,849	
NON-VENTED RANGE HOOD		EA	\$41	498	\$20,418	7	3.00%	6.00%	\$50,673	
ELECTRIC RANGE/OVEN		EA	\$433	498	\$215,634	5	3.00%	6.00%	\$806,560	
COMPACT REFRIGERATOR		EA	\$600	79	\$47,400	7	3.00%	6.00%	\$117,635	
FULL SIZE REFRIGERATOR		EA	\$650	498	\$323,700	8	3.00%	6.00%	\$624,265	
HORIZONTAL & VERTICAL BLINDS		sq.ft.	\$3	88,244	\$264,732	6	3.00%	6.00%	\$813,104	
<b>TOTAL 2003 COST</b>					<b>\$3,388,575</b>	<b>REQUIRED CAPITAL RESERVES</b>			<b>\$5,807,609</b>	<b>\$0</b>

# Consultant Detail (Example)

COMPONENT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14
DESIGNATION														
CARPETING (ROLL)											\$829,103			
CARPETING (ROLL)					\$203,009					\$235,343				
VCT											\$50,246			
VCT							\$28,144							\$34,614
VINYL FLOORING														
VINYL FLOORING							\$6,058							\$7,451
FINISH CARPENTRY AND MILLWORK														
ARCHITECTURAL WOODWORK												\$197,294		
OPERABLE PARTITIONS											\$15,167			
PROJECTION SCREENS											\$6,720			
MICROWAVE OVEN							\$82,684							\$101,691
NON-VENTED RANGE HOOD							\$25,112							\$30,884
ELECTRIC RANGE/OVEN					\$249,979						\$289,794			
COMPACT REFRIGERATOR							\$58,296							\$71,697
FULL SIZE REFRIGERATOR								\$410,053						
HORIZONTAL & VERTICAL BLINDS						\$316,104						\$377,445		
	\$0	\$0	\$0	\$0	\$452,988	\$316,104	\$200,295	\$410,053	\$0	\$547,024	\$879,350	\$574,738	\$0	\$246,337

# Maintenance & Repair Projections (Example)

Maintenance and Repair Projects	06/07	07/08	08/09	09/10	10/11	11/12
Project Name						
<b>SAMPLE DETAIL FOR PREVENTATIVE MAINTENANCE AND REPAIR CATEGORIES</b>						
Cashnet Printers		05000				
Copier (new one in RR; replace copier in conf. Rm.)			15000			
Facilities Database System (TMA)	15000					
Forklift	29200					
GE Capital - JWH Wiring project repay	152000					
Radio system upgrade						
10/100 Switch & Server for Computer Lab**					08000	
APC Universal Power Supplies for Desktops	00000					
APC Universal Power Supplies in Network Closets	00000	03500	03500	03500	03500	03500
Campus Village Audio/Visual Budget (05/06 budget)						
Computer Lab Computers %			47500			47500
Digital Cameras (Department)			02667			02667
Fax Machine		01500				01500
HIS Data Extraction						
Housing Backup Storage System				20000		
Housing Bulk Printers	00000		01800			01800
Housing Color Printers	00000	01917	01917	01917	01917	01917
Housing Computers %	00000	62500	62500	62500	62500	62500
Housing Firewall & Software		42800				
Housing Laptops	00000	19833	19833	19833	19833	19833
Housing Laser Printers		18400			18400	
Housing Server Farm Replacement %	00000			90000		
LCD Projectors				06000		
Network Testing Equipment	00000			20000		
Palm Pilots	02950	12000	12000	12000	12000	12000
Replace Housing Alcatel Equipment			135000	135000		
Replace ResNet Alcatel Equipment%			135000	135000		
ResNet firewall/IDS/VPN%		42800				
RMS 5.0 Upgrade						
Wireless Modems	00000	02000	02000	02000	02000	02000
Bulletin Boards (include installation)	13500					
Repair DC Lighting (interior)						
Replace refrigeration unit in DC	25000				25000	
Replace rooftop AC unit in DC	100000				100000	
8th St. Hall Roof Replacement (solar panels/asbestos)#	300000					

SJSU is currently melding our consultant plan with our “in-house” plan for renovations and repairs and working to follow the established percentages for each reserve sub-category.

# Beware of “Assumptions”

- **Assumptions:**

“Line items of \$10,000 minimum value and of known quantity are included in this projection.”

This omits many items that might add up when budgets are tight.

# Maintenance & Repair/Capital Renovation Reserves

- Financing & Treasury Information

# Maintenance & Repair/Capital Renovation – F&T Guidelines

- E.O. 876 allows campuses to define their specific reserve goals, however, both categories should be considered:
  - Maintenance & Repair – relating to systems & facilities required for ongoing, routine operations and maintenance of those buildings.
  - Capital Renovation – the systematic replacement of building and utility systems to extend their useful life.

# Deferred Maintenance - F&T Guidelines

- Work that has been deferred on a planned or unplanned basis due to lack of funds in the annual budget on building components that have not reached their expected life cycles.
- In an ideal situation, by addressing Maintenance & Repair/Capital Renovation, then there would be no deferred maintenance, however, it is recognized that it exists and needs to be planned for.

# Deferred Maintenance – F&T Guidelines

- When the housing program was decentralized in 1993, the Chancellor's Office required each campus housing program to set aside "at least 25% of the surplus revenue until the minimum reserve" was achieved.
- The minimum reserve was set by bond covenant requirements.
- However, the Systemwide Revenue Bond program Indenture replaced the old Housing System Bond Resolution. The CSU has more flexibility now. Thus, E.O. 876 incorporated this flexibility, allowing campuses to determine their own reserve goals.

# Housing Reserve Plan – An Inside Perspective

- Preston Allen, California Polytechnic State University, San Luis Obispo

**A CSU Example**  
**San Luis Obispo Housing**  
**DORMITORY REVENUE FUND - HOUSING (580-261)**  
**RESERVE POLICY**  
**Source: Preston Allen, Housing Director**

**BACKGROUND**

In January 1994, the Student Housing Task Force recommended decentralization of financial administration for the Dormitory Revenue Fund housing system and the CSU subsequently began plans to implement the Task Force model. Effective with the 1994/95 fiscal year, campuses were given responsibility for the financial viability of the housing program. Operational surpluses in the Dormitory Revenue Fund -Housing (DRF- Housing) were distributed as were system wide maintenance and repair reserves.

In 1995 in recognition of the decentralization of the DRF-Housing program and the need to insure fiscal viability the campus developed the DRF-Housing Reserve Policy. This policy complies with Executive Order 876, Financing and Debt Management Policy, dated July 18, 2003.

**CSU SYSTEM REQUIREMENTS**

Although financial administration of the Housing Program has been decentralized, some system wide financial obligations remain.

- The DRF-Housing is required to make debt service payments on bonds issued for the construction of housing facilities.
- DRF-Housing is required to contribute to the debt service pool until the year 2008, or until the remaining pooled bonds are retired, whichever comes first.
- DRF-Housing must make annual payments to repay any outstanding loans financed from pooled system wide reserves.
- DRF-Housing is required to pay its share of system wide expenses, including audit fee, property insurance, bond service fee, state pro-rata and the Chancellor's Office service fee.

## **CAMPUS REQUIREMENTS**

Financial decentralization of the Housing program allows for each campus to have greater flexibility in the management of their program, but places all responsibility for the solvency and liquidity of the fund with the campus. In order for the campus to manage effectively, a long term financial plan is necessary that will not only ensure the financial stability of the Housing Program but will provide reserves for the long term preservation of its capital assets.

### **• DEFINITIONS AND TERMINOLOGY**

An *enterprise fund* is a self-supporting legal and fiscal entity that exists for certain specified purposes. The Dormitory Revenue Fund-Housing is an enterprise fund that exists for the operation of student residence halls and is self-supporting primarily from room rental income.

The difference between the total assets and total liabilities of an enterprise fund is referred to as either *fund equity* or “retained earnings” (and sometimes, “fund balance”). Normally, changes in fund equity are the result of annual operations--namely, the difference between revenues and expenses.

*Disclosure:* During the annual operating budget development cycle, a *combined statement of revenues, expenses, and changes in retained earnings* (or fund equity) will be used as the primary format for purposes of planning and disclosures. Other general purpose financial statements (balance sheet, etc.) will also be prepared. These statements are prepared by staff in Fiscal Operations.

### **• RESERVES**

Reserves (sometimes also referred to as “reserved retained earnings”) are portions of the fund equity that have been committed by the appropriate administrative authority for specific purposes. These reserves may either be retained in the DRF-Housing fund equity or they may be transferred to another fund entity, depending on CSU regulations and policy. For example, fund equity reserved for the annual bond debt service is transferred each year from DRF to another CSU fund established for payment of interest and principal on outstanding bonds and for the redemption of bonds. Other reserves may remain classified as such within the DRF-Housing fund equity for indefinite periods of time.

Unless otherwise mandated, it is University policy to avoid the transfer of reserves out of the DRF-Housing fund equity. This will maximize interest income and optimize University fiscal flexibility.

Seven (7) reserves will be established in the Dormitory Revenue Fund - Housing (580-261). Each reserve will receive an annual contribution as determined during the budget development process each year. This contribution will be based on long term needs and will be reviewed annually to ensure progress toward meeting those needs. It is also recommended that as system wide requirements are reduced or eliminated, any savings realized be included in the budgeted reserves. A minimum of 5% of gross revenue will be budgeted for reserves. All surplus revenue at year end (over the amount budgeted) and/or unencumbered balances will be distributed to the reserves. If necessary, funds can be transferred between reserves with the approval of Vice President for Administration and Finance.

**Maintenance Reserve (50% of the annual reserve contribution)**

This reserve together with the funds transferred to DBMER will be used for the maintenance and repair of the residence halls.

**Capital Renovation Reserve (30% of the annual reserve contribution)**

This reserve will provide funding to renovate and improve current housing facilities. Projects funded from this reserve would include major structural alterations to address the programmatic needs of Housing and to maintain the viability of the program.

**Working Capital Reserve (5% of the annual reserve contribution)**

This reserve will be used for operational emergencies or problems that arise during the budget year.

**Capital Development Reserve (3% of the annual reserve contribution)**

This reserve will assist in the expansion of campus housing facilities either through construction or purchase of off-campus facilities. Capital investments will normally require a combination of DRF Housing reserve funds and borrowed funds.

**Catastrophic Events (2% of the annual reserve contribution)**

This reserve will be used to pay for minimal losses resulting from natural disasters. It is understood that funds from this reserve alone will not be adequate to pay for all losses should the housing facilities sustain major damage.

**Technology Reserve (10% of the annual reserve contribution)**

This reserve will be used to upgrade and add technology to the existing residence halls and apartments.

**Agriculture Housing Reserve (based on Ag Housing net income)**

This reserve will be used to upgrade and provide capital funds for the Ag Housing program on campus. This program operates within the DRF Housing fund to the benefit of the College of Agriculture.

- **APPROVAL PROCESS FOR RESERVE SPENDING**

The **Maintenance Reserve and the Capital Renovation Reserve** will utilize a committee structure to identify projects for the coming budget year. A formal facility assessment, funded from the Maintenance and Capital Renovation reserves will be conducted on a rotating basis by building as required by EO 876. This will balance the need for the assessment and the costs associated with procuring the service. The proposed project list will include projects shown in the facility audit and those assessed by the committee members as critical to housing. Coordination with other campus projects will be considered in the review process as well as the availability of funds. The committee will forward their recommendations, including prioritizations, by February 1 of each year to the Assoc. Director of Budget and Analytic Business Services for verification of available funding and review of the recommendations. The committee will be notified of any necessary adjustments and the final list will then be sent to the Vice President for Administration and Finance for approval. Once final approval is received, Budget and Analytic Business Services will establish expenditure accounts and budgets and communicate the necessary information to all parties. Maintenance projects will be given a completion period of two years after which projects will be canceled and funding returned to the funding source (DRF-Housing or DBMER).

The committee members will include the Director of Facility Services, Asst. Director of Housing and Business Services and members of their staffs as needed.

Expenditures from the **Capital Development Reserve** could include construction of new facilities or purchase of existing off campus facilities. Current campus practice has existing committee structures to address new construction on campus therefore projects of this nature should adhere to those practices. Consideration to purchase new facilities should require an analysis to determine financial impacts on the Housing program as well as on the University as a whole. Analysis should be performed by Housing Services, Fiscal Services and Budget and Analytic Business Services. All expenditures in this reserve will require the approval of the Vice President for Administration and Finance. Once final approval is received, Budget and Analytic Business Services will establish expenditure accounts and budgets and communicate the necessary information to all parties.

The **Catastrophic Events Reserve** will require the approval of the Vice President for Administration and Finance. Once final approval is received, Budget and Analytic Business Services will establish expenditure accounts and budgets and communicate the necessary information to all parties.

The **Working Capital Reserve**, as stated above, will be used for emergencies in the annual operations of the Housing program. All requests for use of these funds should be made to the Vice President for Administration and Finance. Once final approval is received, Budget and Analytic Business Services will establish expenditure accounts and budgets and communicate the necessary information to all parties.

The **Technology Reserve**, as stated above, will be used for the maintenance and upgrade of technological resources in the Housing facilities. The Director of Housing with input from the campus Information Technology Services (ITS) will forward recommendations on use of these funds to the Vice President of Administration and Finance for approval. Once final approval is received, Budget and Analytic Services will establish expenditures accounts and budgets and communicate the necessary information to all parties.

The **Ag Housing Reserve** will be used for maintenance and replacement of Ag Housing facilities. The Director of Housing, Asst. Director of Housing Services together with the College of Agriculture will forward recommendations on use of these funds to the Vice President of Administration and Finance for approval. Once final approval is received, Budget and Analytic Services will establish expenditures accounts and budgets and communicate the necessary information to all parties.

# **DORMITORY REVENUE FUND - HOUSING BUDGET TIMELINE**

## **July**

Vice President for Administration and Finance approved annual operating budget for the DRF-Housing is implemented. Expense and revenue budgets are recorded in the accounting system.

## **August**

Fiscal Services staff prepare and distribute fiscal year-end closing financial statements, including changes in fund equity and status of reserves.

## **September - October.**

Budget and Analytic Business Services in consultation with Housing Services reviews reserve levels and needs. If an adjustment in reserve distribution percentages is needed, a recommendation will be forwarded to the Vice President for Administration and Finance for approval.

## **November - January**

Develop and/or update the list of residence hall facility maintenance projects for the next fiscal year and forward recommendation to the Vice President for Administration and Finance for approval.

## **February**

A list of facility maintenance projects for the next fiscal year is submitted by Budget and Analytic Business Services to the Vice President for Administration and Finance for approval and implementation. Budget and Analytic Business Services establishes project accounts, records project budgets, and disseminates information to affected managers.

## **February - March.**

Operating budgets are developed for the next fiscal year including proposed license rates and occupancy projections. Proposed increases in the license rate are forwarded to the Campus Fee Advisory Committee for review and subsequent action by the President.

## **April**

Proposed DRF-Housing operating revenue, expense, and reserve budgets are assembled and submitted by Budget and Analytic Business Services to the Vice President for Administration and Finance for approval and implementation.

# Working Capital – Roundtable Discussion

- Rosa Renaud

# Working Capital – F&T Guidelines

- E.O. 876 allows campuses to define their working capital reserve goals.

# Working Capital – F&T Guidelines

- In the absence of a campus defined working capital goal, the campus **can** adopt the 1993 Student Housing Task Force recommendation:
  - The minimum recommended reserve level is equal to 1/3 of the annual operating budget.
  - This reserve should be used only in an instance whereby annual revenues fail to meet operating expenses in a fiscal year.
  - Should an annual budget deficit occur, immediate action should be required to restore the budget to balance as well as restore the fund to its minimum level.
  - If a deficit exceeds the balance available from the Working Capital Reserve, the campus should exhaust all available opportunities from other internal campus programs, including their auxiliaries, to obtain subsidies thru loans, grants, and sales of property.

# Capital Development for New Projects

- Rosa Renaud

# Capital Development for New Projects

- During the past year, the construction market has changed tremendously with rising costs in:
  - Concrete;
  - Steel;
  - Lumber.
- Factors affecting costs have been due to an increase in construction in China, Las Vegas, and states impacted by Hurricane Katrina.

# Capital Development for New Projects – F&T Guidelines

- E.O. 876 allows campuses to define their capital development reserve goals.
- While a housing program may have the financial strength to afford the future debt service associated with a new project, the program still needs to have reserves set aside to pay for the Preliminary Working Drawings (PW) costs. (This is needed even if the costs will later on be reimbursed thru the financing).

# Capital Development for New Projects

- PW costs on recent projects have ranged from \$1 million to \$4.5 million or 3.4% - 2.8% of total project costs. (These costs are covered initially by housing program reserves).
- Total project costs for the past year have been averaging \$269/square foot or \$85,000/bed space.
- A 400 bed facility recently reviewed by the HPRC was for \$29 million.

# Capital Development for New Projects

- An equity contribution to the project can substantially reduce the annual debt service of a new project, thereby making it more affordable.
- For example, Northridge:
  - Total Project Budget = \$28,976,000
  - Reserve Contribution = \$14,039,000
  - Aver. Annual Debt Service with Contribution = \$1,174,646 (with a total debt service of \$37.5 million)
  - Annual Debt Service if \$0 Contribution = \$2,229,944 (with a total debt service of \$71.2 million)
  - This has a big impact on the Debt Service Coverage Ratio and on rental rates.

# Capital Development for New Projects

- Reserves can provide the campus opportunities to act quickly on purchasing properties, for example
  - Chico: has been buying nearby homes as opportunities arise. The long run goal will be to demolish and create new housing facilities.
  - Sonoma: purchased nearby land that in the future will be used for student and faculty/staff housing facilities.

# Capital Development for New Projects

- The CSU has the authority to purchase land only:
  - By gift or bequest;
  - With revenues from a parking or housing program.
- See SUAM section 9019, Real Property Acquisition, under CPDC, Land Records section.

# Financing & Treasury Summary

- Rosa Renaud

# Elements of a Good Reserve Plan

- Reserve Plan is documented, approved, and benchmarks are justified.
- At minimum, each category and transfer goal is set for:
  - Maintenance & Repair/Capital Renovation and Upgrade;
  - Working Capital;
  - Capital Development for New Projects;
  - Catastrophic Events.
- While separate accounts are not required for each category, the reserve plan must have a spreadsheet that tracks designated funds for each category.
- Annual Timeline – evaluations of the reserve plan are made on a planned and consistent basis.
- Designees are formally approved and identified.

# Elements of a Good Reserve Plan

- Transfer Goals are realistic and achievable:
  - There is a method establishing transfer goals. This is documented.
  - A formal evaluation of facility needs are made by the campus CPDC department along with an outside consultant.
  - The Housing Program makes annual transfer goals. Goals are achievable and the program is demonstrating, on a consistent basis, its commitment to the goals by making the transfers.

# Elements of a Good Reserve Plan

- An annual evaluation of “actuals” versus benchmarks is made, documented, and approved.
- If you miss a benchmark, then document why that happened. What can be done to correct missing the benchmark? Is it unrealistic? Are rental rates too low? Are other reserves not adequate? Was this discussed with the Vice President?
- If there is a consistent pattern of missing benchmarks, then that would be a problem, both from an audit perspective but from a best practices perspective.

# Executive Order 876, Section 7

## Reserves

- **7.1 Reserve Development:** The campus president and chief financial officer are responsible for developing and maintaining a campus policy to provide reserves from project revenues for projects funded by debt issued by the Board of Trustees. The campus reserve policies, at a minimum, should address the following needs:
  - Major Maintenance and Repair/Capital Renovation and Upgrade  
Working Capital
  - Capital Development for New Projects
  - Catastrophic Events

# Executive Order 876, Section 7 Reserves

- **7.2 Reserve Review:** At a minimum of once every three years, each campus shall conduct an in-depth review to assess the adequacy of the reserves and the campus reserve policies applicable to the projects funded by debt, and shall make necessary adjustments and changes to account for changing conditions. For Major Maintenance and Repair/Capital Renovation and Upgrade Reserves, the reviews should include formal studies of facility systems and necessary funding levels to cover all aspects of cost of replacement through the reserve funding plan.

# Housing Task Force

- Purpose – To address audit findings to review and update as necessary Title 5 and SUAM pertaining to:
  - Guest and visitor policies;
  - License agreements;
  - Accounts receivables for past due notices;
  - Other.
- Formation – Volunteers needed. Who is interested to participate? To Chair? (Please sign the sign up sheet).
- Timeline – Goal is to have revisions made by Spring 2007. Meetings would be conducted via conference calls, approx. every two months, with two in person meetings.