UCSF HOSPITAL REPLACEMENT COMMUNITY ADVISORY GROUP (CAG) ACTION TEAM MEETING

May 19, 2008
Agenda Overview
UCSF Commitment to the Community

• Will listen
• Will be honest and forthcoming
• Will be prepared with as much information as is available
• Will continue to commit to being a good neighbor to the Dogpatch and Potrero Hill neighborhoods
Let’s all commit to respectful discussion

• One conversation at a time
• Share “air time”
Project Orientation
View from Southwest

UCSF Medical Center

Helipad
Cancer Outpatient Building
Outpatient Building
Energy Center
Women’s & Cancer Hospitals (106 beds)
Children’s Hospital (183 beds)

UCSF Campus
Women’s and Cancer Hospital (West Side)
Third Street Plaza Entrance
Sustainable Design
Target: LEED Gold

ENERGY PERFORMANCE
The Medical Center will use 30% less power than the average US hospital, making it among the top performers in California.

NATURAL LIGHT AND FRESH AIR
Outdoor balconies and terraces bring fresh air and sunlight to every patient care unit. The percentage of workstations with accessible daylight and views should be among the best among US hospitals, and the interior will be made up of 100% fresh air.

HEALTHY PATIENT ROOM
This is the first hospital to incorporate Cradle-to-Cradle principles to promote human and ecological health through materials and products. At a minimum, all patient room finishes will be rigorously assessed by those standards, which exceed LEED.

GREEN ROOFS
The terraces will be planted roosed, which will improve energy efficiency through better insulation, allow water conservation, provide habitats, and offer a visual amenity for patients.

LANDSCAPE
The amount of landscaping among the highest of any urban hospital in the U.S. The green space on the upper floors is particularly abundant.

WATER CONSERVATION
Water efficiency measures will save 2.4 million gallons of drinkable water every year. Cooling tower startups will be employed to reduce water use.
What is Sustainable Building Design?

- Design and construction practices that significantly reduce or eliminate the negative impact of buildings on the environment and occupants in five broad areas:
  - Sustainable site planning
  - Safeguarding water and water efficiency
  - Energy efficiency and renewable energy
  - Conservation of materials and resources
  - Indoor environmental quality
  - Operations

Source: USGBC
Summary: *goals and targets*

Ultimate Goal: 100% Good

- Eco-efficient (minimize)
- Eco-effective (optimize)

**BEST PRACTICE**

**INNOVATION**
Healing people
Healing the planet
UC Policy on Sustainable Practices

- Adopted March 2007
- Exceed CA Energy Code by 20% *
- Minimum LEED “Certified” equivalent *
- Reduce Green House Gas Emissions
- Environmentally Preferable Purchasing

* Acute Care Facilities Exempt, currently
Green Hospitals are Ambitious

- Regulatory Requirements
- High Energy and Water Use Intensity
- 24/7 Operations
- Uninterruptible Power Requirements
- Infection Control Issues
- Patient Vulnerability
• United States Green Building Council
• Leadership in Energy & Environmental Design
• LEED is a performance-oriented rating system where points are earned for satisfying performance criteria.
• NOT a building code - Voluntary

Source: USGBC
• Awards are point based
  – Certified
  – Silver
  – Gold
  – Platinum
• Worldwide:
  – 0 Certified Hospitals
  – 4 Silver Hospitals
  – 1 Gold Hospital
  – 1 Platinum Hospital

• California:
  – 0 LEED Hospitals

Source: USGBC
Transportation

- 3rd Street Light Rail Plaza
- Shuttle System
- Bike Racks, Lockers, Showers
- Preferred Parking for Low-Emissions Vehicles
- Ridesharing
- City Car Share Partnership
Transportation
Green Space

- 60,000 sf of therapeutic gardens on roof terraces of patient rooms
- Extent of roof gardens is among the most of urban hospitals
- Design and use of gardens to be coordinated with specific interior program
- Distinctly different gardens identified
- Public spaces and ground level landscaping designed as shared public amenity
Green Space
Water Conservation
• Save 2-4 million gallons of drinkable water every year
• Using efficient plumbing fixtures
• Reusing cooling water “blow down” water for irrigation
• Goal of storm Water design to retain 75% on-site creating smaller storm drains
• Target: 50% less energy use than the average US hospital
• Direct impact on lowering Green House Gas emissions
• High performance ventilation system design (VAV throughout) and incorporating heat recovery strategies
• Dashboard of consumption and performance
Energy Performance
Healthy Materials

WATER = FOOD. In nature, waste does not exist; for one organism’s waste is another’s food. Cradle to Cradle design emulates this principle through two metabolisms within which materials flow as healthy nutrients:

**BIOLOGICAL METABOLISM**
A biodegradable material that poses no hazard to living systems and can safely return to the environment. Products conceived as biological nutrients are called products of consumption. They are designed for safe return to the environment as nutrients for healthy living systems.

**TECHNICAL METABOLISM**
A material, frequently synthetic or mineral, that remains safely in a closed-loop system of manufacture, recovery, and reuse, maintaining its highest value through many life cycles. Technical nutrients are used in products of service, durable goods that render a service to customers.
Human Health Criteria

Priority Criteria
• Carcinogenicity*
• Disruption of Endocrine System*
• Mutagenicity*
• Reproductive Toxicity*
• Teratogenicity*

Additional Criteria
• Acute Toxicity
• Chronic Toxicity
• Irritation of Skin/Mucous Membranes
• Sensitization
• Other (e.g., skin penetration potential, flammability, etc.)

* Known or suspected in humans and/or animals
Environmental Health Criteria

- Aquatic toxicity
- Bioaccumulation (BCF, log Kow)
- Climatic Relevance/Ozone Depletion Potential
- Content of Halogenated Organic Compounds
- Persistence/Biodegradation
- Toxic Heavy Metal Content
- Other (e.g., Water Danger Score, Toxicity to Soil Organisms, etc.)
LEED Criteria

- Low VOC emitting
- locally sourced
- recycled content
- certified materials
Abundant Daylight and Fresh Air
Abundant Daylight and Fresh Air

- 100% outdoor air system design
- 75% of patient rooms have north or south orientation
- Most of the patient floor work stations have access to daylight and views
- Most patient units have outdoor balconies
Anticipatory Design Approach

- Solar Energy Strategies
- Irrigation Strategies
- Building Systems
End of Show