Campus Facilities Planning Board Presentation

Thursday, September 1, 2011
General Project Goals

• Site Development & Landscape Design
  – Approx. 14,124 s.f.
  – On-site parking not included

• Dance Studio Contains approx. 2,567 s.f.

• Five Office spaces Contain approx. 1,260 s.f.

• Classroom Area

• Storage Room

• Restrooms and Shower Rooms

• Exterior Lanais and Covered Walkways

• “Modular” Building System

• LEED Silver Certification
Architectural Requirements

• Dance Studio
  – Minimum Clear Height of 14’-0”
  – Harlequin® Floor System
  – Windows for Natural Ventilation

• Classroom
  – One Classroom
  – Air Conditioned

• Offices
  – Five Offices
  – Air Conditioned
Architectural Requirements cont’d

- Men’s Shower/ Locker Facilities
- Women’s Shower/ Locker Facilities
- Electrical Room
- Telecommunication Room
- Janitor Closet
- Storage Rooms
- Covered Corridor with Lanai Breakout Area
Civil Requirements

• Meet HFD Requirements
  – Waterline from Maile Way to service a proposed fire hydrant along driveway

• Driveway makai side of Dance Studio was widened 20 ft. for emergency vehicle access

• Repavement of driveway leading to Maile Way and driveway makai side of Dance Studio

• New concrete walkways and curb ramps to meet ADA requirements around Dance Studio

• Site will be graded and new drainage system constructed to limit runoff into adj. drainage ditch
Mechanical Requirements

- Low-Flow Plumbing Fixtures and Faucets
- Solar Water Heating
  - Nine (9) Solar Panels
  - Four (4) 119 Gallon Hot Water Tanks
- Air Conditioning
- Dance Studio will have Multiple Ceiling Suspended Fan Coil Units
- Each Classroom and Office will have Ceiling Suspended Fan Coil Unit and CO$_2$ Sensor/Controller/Alarm
- Direct Digital Control Systems Provided for HVAC System
  - Web-based Controls using Wireless Network
Electrical Requirements

- Photovoltaic (AC) System
- Exterior Lighting Systems with High Pressure Sodium (HPS) Wall- and Pole-mounted Lights
- Fluorescent Luminaries with Energy Efficient 32-watt, Super T-8 Lamps
- Occupancy Sensors
- Day Lighting Controls
- Photocell for Corridor Light Control
- Time Switch for Area and Perimeter Lights
- Emergency Battery Pack for Selected Egress Fixtures
- Addressable Voice Fire Alarm System
Landscape Requirements

- Irrigation Water Reduction to meet LEED Guidelines
  - Reducing Lawn
  - Increasing Use of Drought Tolerant Ground Covers

- Irrigation system
  - Low Volume, High Efficiency Rotator Heads (Larger Areas)
  - Low Volume Drip Systems (Smaller, Confined Areas)

- Plant Materials
  - Native Hawaiian
  - Maintainable

- Planting Design
  - Fragrant, Used in Lei
  - Native Hawaiian, Culturally Significant Plants
New Modular Building for Dance Studio
University of Hawaii at Manoa
Project No. UHM 11-33-010
Exterior Elevations

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Sustainability / LEED Requirements

• Sustainability Goal: LEED Silver Certification
• Credits Required for Silver: 50-59 Points
• Currently Targeted: 55 Points
• Next Milestone: Design Review by Green Building Certification Institute (GBCI)
Building Oriented to Maximize Opportunity for Natural Ventilation

Maximize Native/Adapted Landscaping Reduces Irrigation Water by 50%

High Solar Reflectance of Roof and Hardscape to Minimize Heat Island Effect

Water Usage Reduced by 47% through High Efficiency Plumbing Fixtures

Stormwater Quality Improved Prior to Discharge through Filtration System
Sustainability / LEED Requirements cont’d

• Energy Performance Optimized by 30% vs. Baseline Building
• Renewable Energy Sources
  – Solar Hot Water Panels
  – Photovoltaics (PV)
• 50% of Construction Waste to be Diverted from Landfill and Recycled
• Low Volatile Organic Compound (VOC) Emitting Materials
• 10% of Construction Materials to have Recycled Materials