



Introduction to Green Building & LEED

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Presented By:

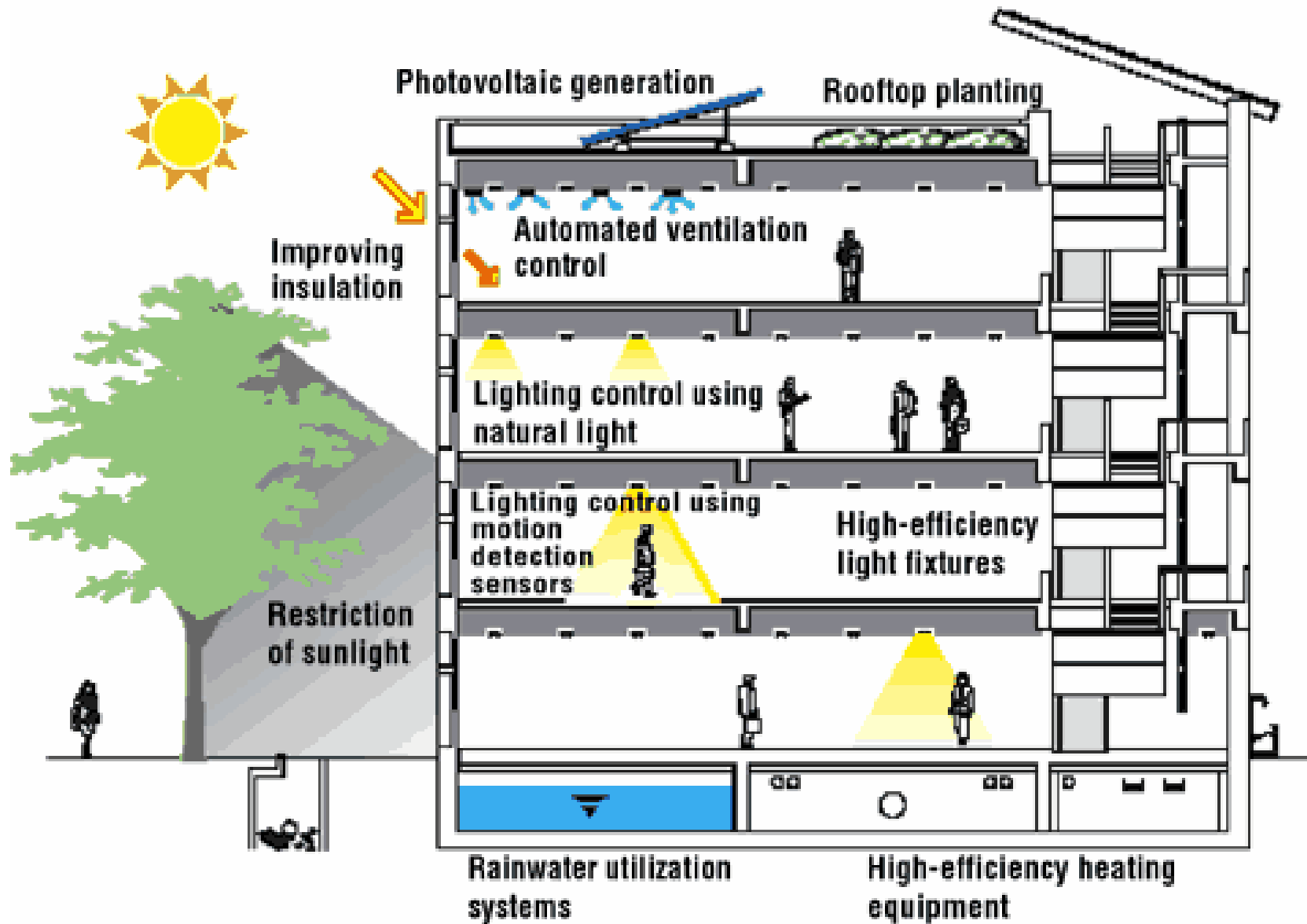
Brian Rippy, LEED AP

American Samoa Environmental Protection Agency

What is a green building?



Common Sense



Conceptual Drawing of Green Building



Why go green?

Environmental Benefits

- Enhance and protect biodiversity and ecosystems
- Conservation of natural resources
- Reduce waste streams

Economic Benefits

- Reduction in operational cost
- Higher future capital value
- Incentive Programs

Social Benefits

- Enhance occupant health
- Improvement in quality of life
- Minimum strain on Social infrastructure



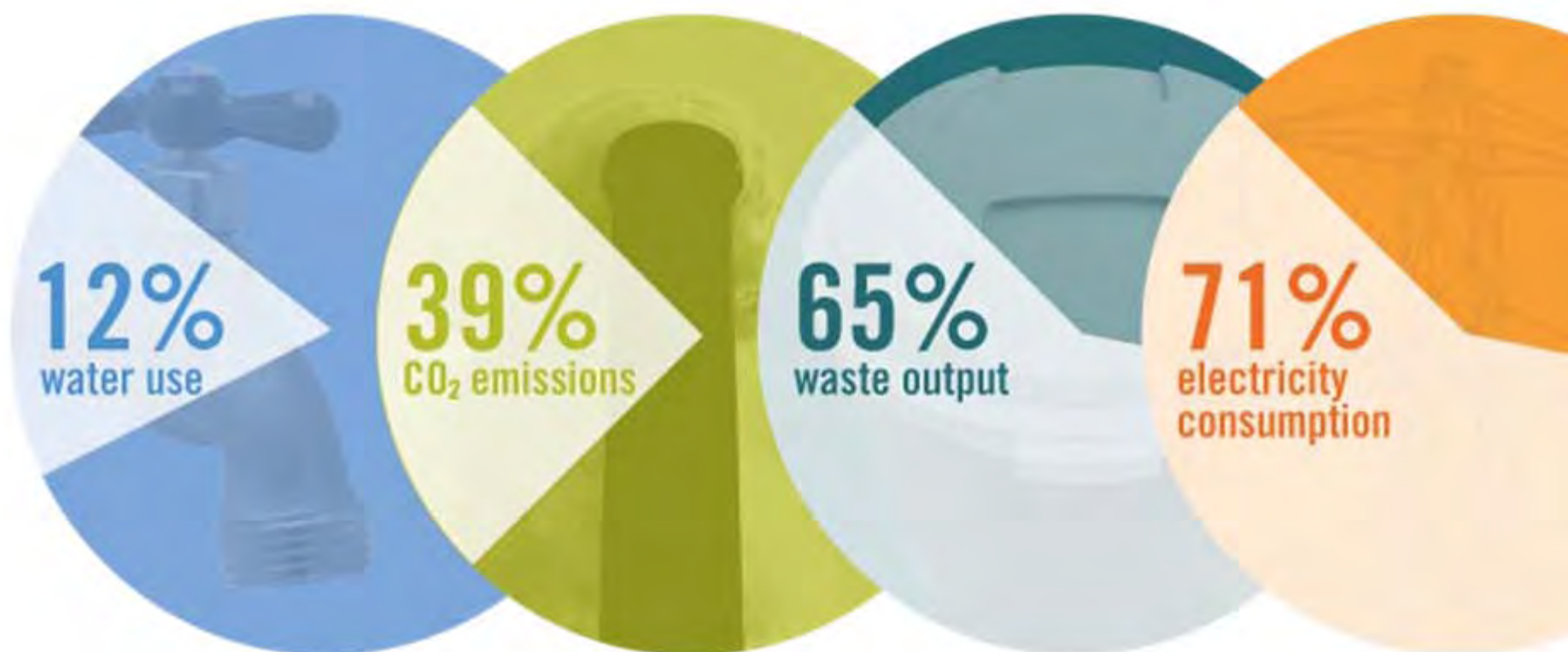
Global CO₂ Emissions by Sector

#1. Buildings

#2. Transportation

#3. Industry

U.S. Building Impacts:



**Average
Savings of
Green
Buildings**



The infographic consists of four vertical panels, each with a background image and a large white arrow pointing downwards. The first panel (orange) features a wind turbine. The second (blue) features a cloudy sky. The third (blue) features a glass of water. The fourth (blue) features a recycling symbol. Each panel contains text about savings percentages.

**ENERGY
SAVINGS**
30%

**CARBON
SAVINGS**
35%

**WATER
USE
SAVINGS**
30-50%

**WASTE
COST
SAVINGS**
50-90%



Leadership in Energy & Environmental Design

A leading-edge system for designing, constructing, operating and certifying the world's greenest buildings.





LEED was created to accomplish:

- Define “green building” common standard
- Promote integrated, whole building design practices
- Recognize environmental leadership
- Raise awareness of benefits
- Transform the building market



LEED rating system addresses seven categories:

• Sustainable Sites	26 Possible Points
• Water Efficiency	10 Possible Points
• Energy and Atmosphere	35 Possible Points
• Materials and Resources	14 Possible Points
• Indoor Environmental Quality	15 Possible Points
• Innovation in Design	6 Possible Points
• Regional Priority	4 Possible Points

Consensus-Based Standards

USGBC has four levels of LEED:



Platinum

80+ Points



Gold

60-79 Points



Silver

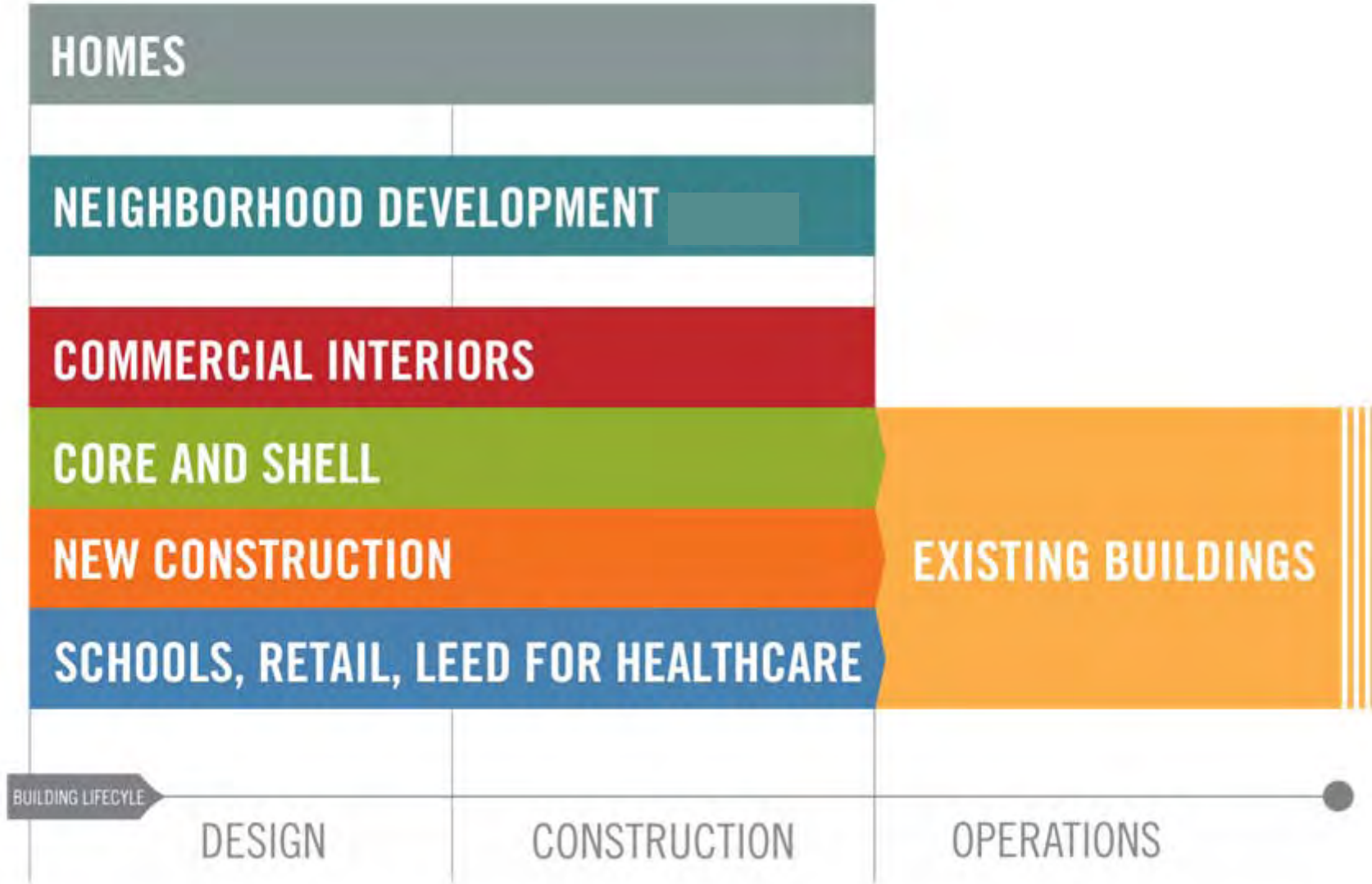
50-59 Points



Certified

40-49 Points

**LEED addresses the
complete lifecycle
of buildings:**



National Tropical Botanical Garden Kauai, Hawaii

LEED Gold-Certified

Show Cases:

- Solar Panels
- Rain Catchment System
- Native Plants
- Electric Car Charging Stations

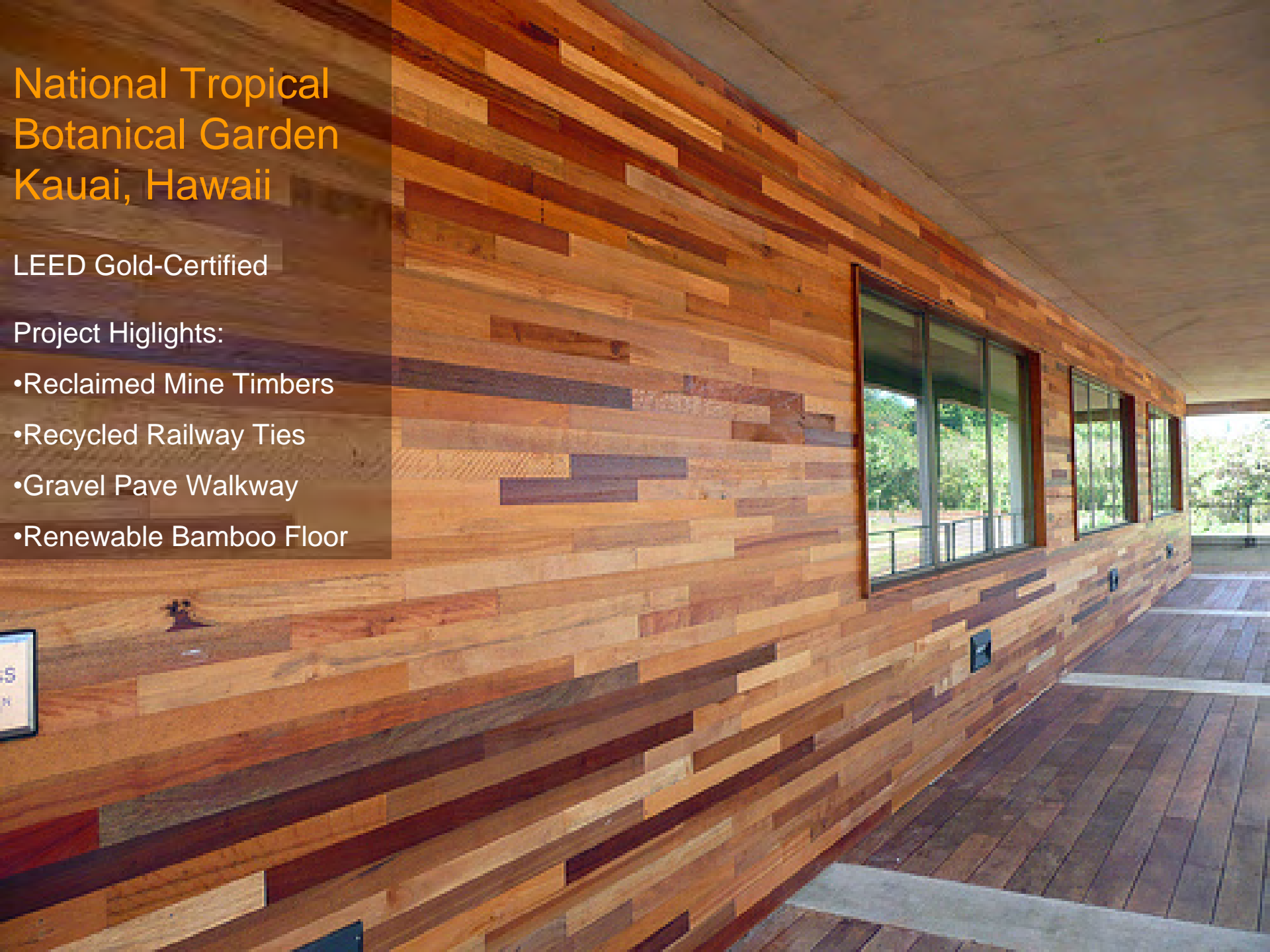


National Tropical Botanical Garden Kauai, Hawaii

LEED Gold-Certified

Project Highlights:

- Reclaimed Mine Timbers
- Recycled Railway Ties
- Gravel Pave Walkway
- Renewable Bamboo Floor



Hawaii Baptist Middle School

LEED Gold-Certified

Project Highlights:

- Light Pipes & Shelves
- Low VOC Carpets
- 20,000 Gal Water Catchment System
- Construction Waste Diversion = 89%



Hilton Waikoloa Dolphin Quest Village Kohala Coast, HI

LEED Certified

Project Highlights:

- Energy Efficient HVAC
- Natural Ventilation
- Water Conserving Fixtures
- Day Lighting



Santa Clarita Transit Center

LEED Gold-Certified Straw
Bale Building

Project Highlights:

- CNG Fueling Station
- Night Cooling
- High Performance Glazing



Santa Clarita Transit Center

LEED Gold-Certified Straw
Bale Building

Project Highlights:

- Highly Insulated Building
- Recycled Content Wood
- Cool Roof



Hawaii Gateway Energy Center Kailua-Kona, HI

LEED Platinum-Certified

Show Cases:

- Zero Energy Building
- Thermal Chimney
- Seawater Cooling Coils
- Condensation Collection
- Day Lighting w/ Sensors



