

Washington State Construction Workforce Conference

March 1, 2006

Green Building
Residential and Capital Projects

**Dept. of General
Administration
Energy Services Section**

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Sustainable Design and Construction or Green Building

- Why Sustainable Design and Construction
- Benefits of Green Building
- Green Building Related RCWs
- LEED

Why Sustainable Design and Construction?

- Reduce Environmental Impact
- Energy and Other Utility Savings
- Human Health and Productivity

Sustainable Design and Construction
is Good Design and
Smart Construction

Why Sustainable Design and Construction?

Local Environ./Social/Economic Impacts

- **Salmon Listed as an Endangered Species**
- **Water shortages (municipal and agricultural)**
- **Flooding**
- **Global warming evidence**
- **Loss of wildlife and habitat**
- **Energy Shortages & Dependence on Foreign Sources (Contributing to the Trade Deficit)**
- **Municipal Waste Treatment Plants**
- **Landfill Closures**
- **Sand and Gravel Pit Closures (Materials are Limited)**

Why Sustainable Design and Construction?

Impact of Buildings

- **33% of Our Total Energy and 66% of Our Electrical Energy**
- **Consume 50% of the CFC's and Produce 33% of the CO2 (directly or indirectly)**
- **25% of all harvested wood and 3 Billion Tons of Raw Materials, worldwide**
- **Demo, Land clearing and Construction Waste Account for 40% of Landfill Waste**
- **Use 17% of the water**
- **Sick Building Syndrome - Increased Asthma Rates**

Green Building Benefits

Energy and Other Utility Savings

- Energy Savings of 20% to 50%+
- Water and Sewer Savings of 25% to 90%
- Lower Maintenance

Green Building Benefits

Human Health and Productivity

- A Focus on Good IAQ
 - Reduced Liability
 - Less Disruption Due to Sick Building
- Natural Light
 - Increased Productivity

Green Building Related RCWs

- RCW 39.35.30 - ELCCA, LEED Silver
- RCW 39.04.133 - Recycled Content Materials
- RCW 39.04.135 - Demolition Recycling
- RCW 39.35D – State Funded Buildings must be Design, Built and Certified to LEED Silver

RCW 39.35D – LEED Silver

- Affects State Funded Projects over 5,000 SF
- New and Major Renovation Projects > 50% of Assessed Value
- Non-Occupied Buildings Exempt
- Hospitals and Lab Buildings Exempt
- Agencies Required to Monitor and Document Costs and Operating Savings
- Agencies Required to Report Costs and Savings to GA Annually until 2016

RCW 39.35D Affected Projects Per Biennium

- K-12 Schools Approx. 100 or 5.0 million SF or \$700 million
 - State Facilities Approx. 70 or 3.5 million SF or \$700 million
 - Non-Profit Facilities Approx. 50 or 1.0 million SF \$130 million
 - Low-Income Housing by July 2008
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- **Totals: 220 facilities, almost 10 million SF, equaling over \$1.5 billion EVERY 2 YEARS**

US Green Building Council's **LEED** Rating System

- Sponsored by the US DOE and EPA
- And Members - Architects, Engineers, Developers, Product Manufacturers, and
- Federal, State and Local Governments
- **LEED** is the Recognized Green Building Standard

LEED Green Building Rating System

■ Sustainable Sites	14
■ Water Efficiency	5
■ Energy and Atmosphere	17
■ Materials and Resources	13
■ Indoor Environmental Quality	15
■ Innovation and Design Process	5

Support for Green Building

- US Green Building Council's LEED Rating System Becomes the Standard for Green Building (LEED leads the way)
- An Infrastructure to Support Green Building has Evolved (ASHRAE, AIA, CSI, Etc.)
- Architects & Engineers, and Manufacturers are Responding to the Demand
- Contractors are a Critical Component

Market Transformation

- The Environmental Problems Require a Change in How We Design and Construct Buildings
- Using the Power of the Dollar to Effect Change (The State is a Big Player)
- Make Environmental and Social Values Part of Design Decision Making Process
- Make School and College Buildings Teaching Tools
- Washington State Population expected to double in 50 years (OFM)

Green Building - It's the Right Thing to Do.....

- **And it saves money too!**
- **Be part of the Solution**

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