LEED 101: The Launching Pad

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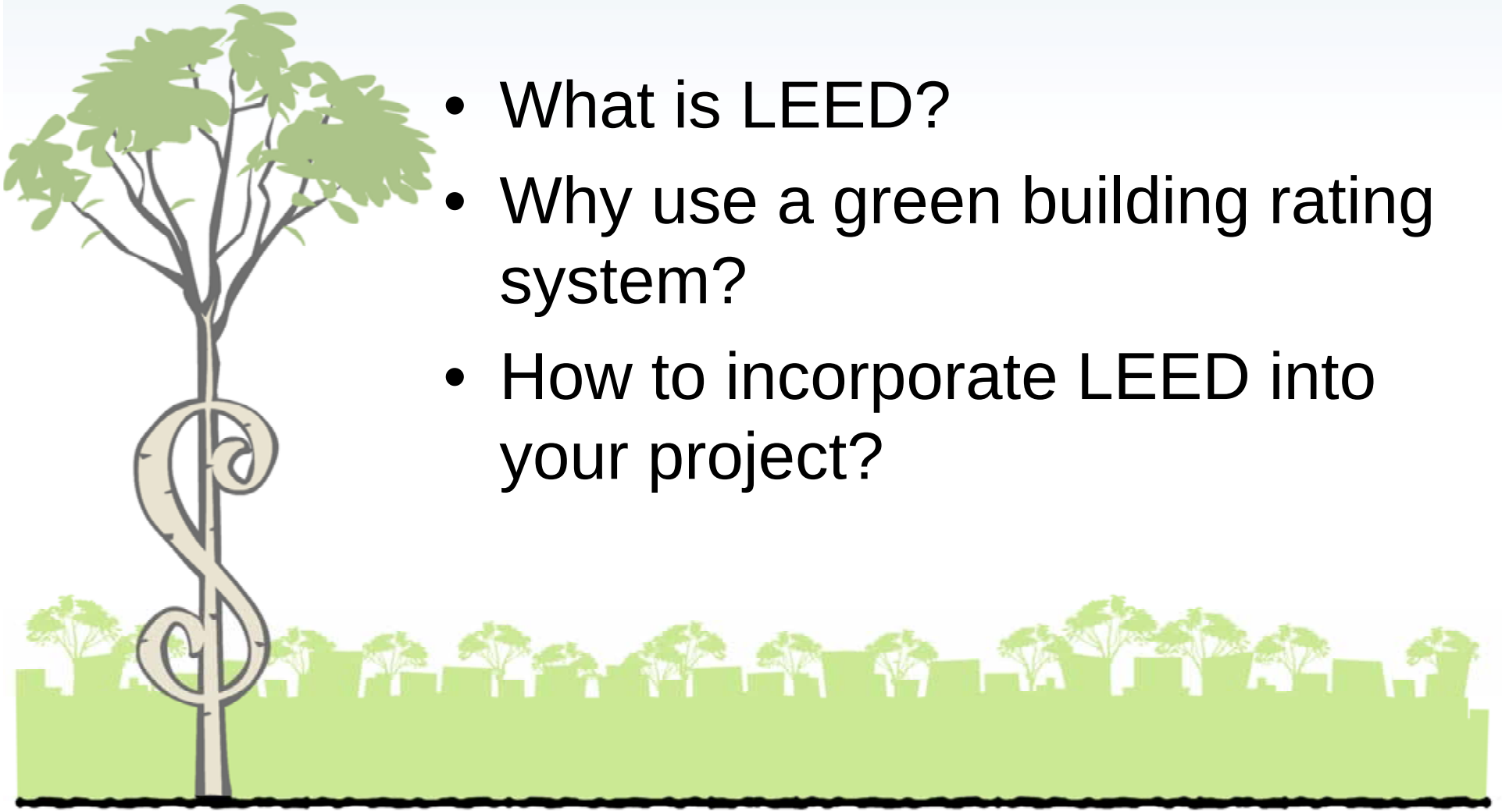
King County Building Summit:
Dollars and Sense Tools to Green Your Project

King County

LEED 101: Overview



- What is LEED?
- Why use a green building rating system?
- How to incorporate LEED into your project?

Overview

LEED: Leadership in Energy and Environmental Design

USGBC: US Green Building Council

LEED Checklist

33	20	7	Total Project Score	Possible Points 69

Certified: 26 to 32 points **Silver:** 33 to 38 points **Gold:** 39 to 51 points **Platinum:** 52 or more points

10		1	Sustainable Sites	Possible Points 14	
easy	mod.	diff.			
	Y		Prereq 1	Erosion & Sedimentation Control	
1			Credit 1	Site Selection	1
		N/A	Credit 2	Urban Redevelopment	1
		N/A	Credit 3	Brownfield Redevelopment	1
1			Credit 4.1	Alternative Transportation, Public Transportation Access	1
1			Credit 4.2	Alternative Transportation, Bicycle Storage & Changing Rooms	1
		1	Credit 4.3	Alternative Transportation, Alternative Fuel Refueling Stations	1
1			Credit 4.4	Alternative Transportation, Parking Capacity	1
1			Credit 5.1	Reduced Site Disturbance, Protect or Restore Open Space	1
1			Credit 5.2	Reduced Site Disturbance, Development Footprint	1
1			Credit 6.1	Stormwater Management, Rate or Quantity	1
1			Credit 6.2	Stormwater Management, Treatment	1
1			Credit 7.1	Landscape & Exterior Design to Reduce Heat Islands, Non-Roof Surfaces	1
		N/A	Credit 7.2	Landscape & Exterior Design to Reduce Heat Islands, Roof Surfaces	1
1			Credit 8	Light Pollution Reduction	1

4		1	Water Efficiency	Possible Points 5	
easy	mod.	diff.			
1			Credit 1.1	Water Efficient Landscaping, Reduce by 50%	1
		1	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	1
1			Credit 2	Innovative Wastewater Technologies	1
1			Credit 3.1	Water Use Reduction, 20% Reduction	1
1			Credit 3.2	Water Use Reduction, 30% Reduction	1

5	9	2	Energy & Atmosphere	Possible Points 17	
easy	mod.	diff.			
	Y		Prereq 1	Fundamental Building Systems Commissioning	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	CFC Reduction in HVAC&R Equipment	
2			Credit 1.1	Optimize Energy Performance, 20% New / 10% Existing	2
2			Credit 1.2	Optimize Energy Performance, 30% New / 20% Existing	2
	2		Credit 1.3	Optimize Energy Performance, 40% New / 30% Existing	2
	2		Credit 1.4	Optimize Energy Performance, 50% New / 40% Existing	2
		2	Credit 1.5	Optimize Energy Performance, 60% New / 50% Existing	2
	1		Credit 2.1	Renewable Energy, 5%	1
	1		Credit 2.2	Renewable Energy, 10%	1
	1		Credit 2.3	Renewable Energy, 20%	1
	1		Credit 3	Additional Commissioning	1
1			Credit 4	Ozone Depletion	1
	1		Credit 5	Measurement & Verification	1
		N/A	Credit 6	Green Power	1

4	3	3	Materials & Resources	Possible Points 13	
easy	mod.	diff.			
Y			Prereq 1	Storage & Collection of Recyclables	
		N/A	Credit 1.1	Building Reuse, Maintain 75% of Existing Shell	1
		N/A	Credit 1.2	Building Reuse, Maintain 100% of Existing Shell	1
		N/A	Credit 1.3	Building Reuse, Maintain 100% Shell & 50% Non-Shell	1
1			Credit 2.1	Construction Waste Management, Divert 50%	1
	1		Credit 2.2	Construction Waste Management, Divert 75%	1
		1	Credit 3.1	Resource Reuse, Specify 5%	1
		1	Credit 3.2	Resource Reuse, Specify 10%	1
1			Credit 4.1	Recycled Content, Specify 25%	1
1			Credit 4.2	Recycled Content, Specify 50%	1
1			Credit 5.1	Local/Regional Materials, 20% Manufactured Locally	1
	1		Credit 5.2	Local/Regional Materials, of 20% Above, 50% Harvested Locally	1
		1	Credit 6	Rapidly Renewable Materials	1
	1		Credit 7	Certified Wood	1

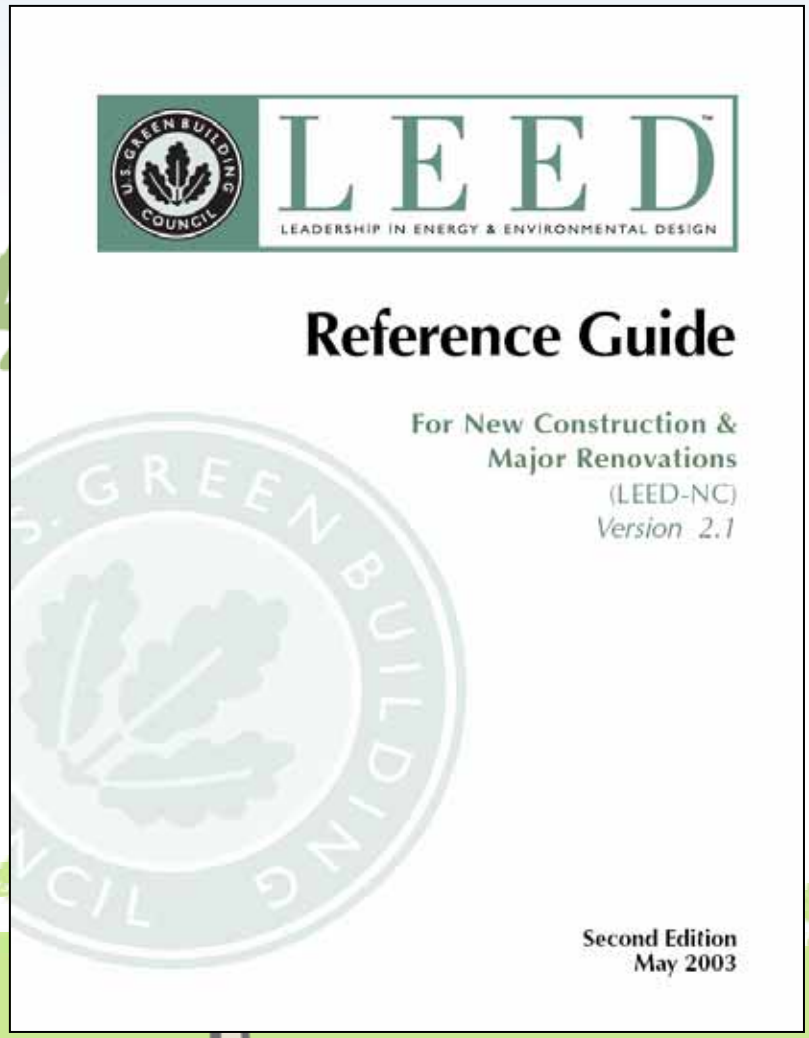
9	5		Indoor Environmental Quality	Possible Points 15	
easy	mod.	diff.			
Y			Prereq 1	Minimum IAQ Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Carbon Dioxide (CO_2) Monitoring	1
	1		Credit 2	Increase Ventilation Effectiveness	1
	1		Credit 3.1	Construction IAQ Management Plan, During Construction	1
1			Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials, Adhesives & Sealants	1
1			Credit 4.2	Low-Emitting Materials, Paints	1
1			Credit 4.3	Low-Emitting Materials, Carpet	1
	1		Credit 4.4	Low-Emitting Materials, Composite Wood	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
	1		Credit 6.1	Controllability of Systems, Perimeter	1
		N/A	Credit 6.2	Controllability of Systems, Non-Perimeter	1
	1		Credit 7.1	Thermal Comfort, Comply with ASHRAE 55-1992	1
1			Credit 7.2	Thermal Comfort, Permanent Monitoring System	1
1			Credit 8.1	Daylight & Views, Daylight 75% of Spaces	1
1			Credit 8.2	Daylight & Views, Views for 90% of Spaces	1

1	3		Innovation & Design Process	Possible Points 5	
easy	mod.	diff.			
	1		Credit 1.1	Treatment of Off-Ste Water	1
	1		Credit 1.2	Educational Benefits pf the Projects	1
	1		Credit 1.3	Exemplary Water Conservation	1
			Credit 1.4	Exemplary Performance	1
1			Credit 2	LEED™ Accredited Professional	1

Level

Certified	**26-32 points**
Silver	**33-38 points**
Gold	**39-51 points**
Platinum	**52-69 points**

LEED Rating System



- New Commercial Construction & Major Renovation (LEED-NC)
- Existing Buildings (LEED-EB)
- Commercial Interiors (LEED-CI)
- Core & Shell (LEED- CS)*
- Homes (LEED-H)*
- Neighborhood Development (LEED-ND)*

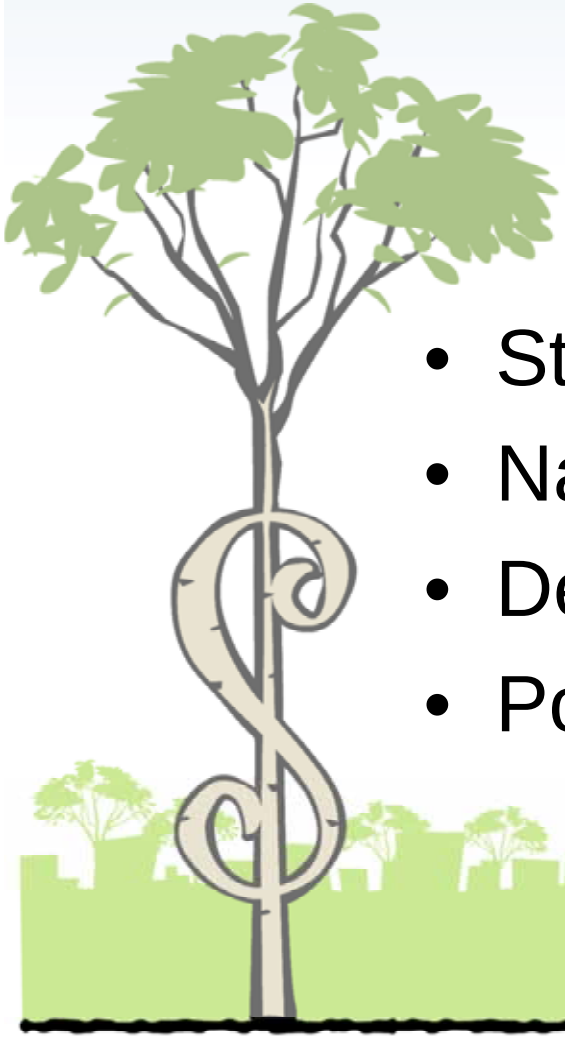
*under development

LEED Statistics

- 23 LEED certified projects in Western Washington
- 17 of those are in Seattle and King County
- Another 75+ projects in our region are currently registered for LEED certification

Issaquah Fire Station

Why a green building rating system?



LEED
LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN

- Standardized benchmark
- Nationally recognized
- Design → Construction → Operation
- Policies

Benefits

- Economic
- Environmental
- Social

LEED Initiatives in Governments

Federal

DOE
DOI
EPA
GSA
State
Air Force
Army
Navy

State

Arizona
Arkansas
California
Colorado
Connecticut
Illinois
Maine
Maryland
Massachusetts
Michigan
New Jersey
New York
Nevada
Oregon
Pennsylvania
Rhode Island
Washington

Local

Acton, MA
Alameda County, CA
Albuquerque, NM
Arlington, MA
Arlington, VA
Atlanta, GA
Austin, TX
Berkeley, CA
Boulder, CO
Boston, MA
Bowie, MD
Calabasas, CA
Calgary, AB
Chicago, IL
Cook County, IL
Cranford, NJ
Dallas, TX
Eugene, OR
Frisco, TX
Gainesville, FL
Houston, TX
Issaquah, WA
Kansas City, MO
King County, WA
Long Beach, CA
Los Angeles, CA
New York, NY
Normal, IL
Omaha, NE
Phoenix, AZ
Pleasanton, CA
Portland, OR
Princeton, NJ
Sacramento, CA
Salt Lake City, UT
San Diego, CA
San Francisco, CA
San Jose, CA
San Mateo County, CA
Santa Monica, CA
Sarasota County, FL
Scottsdale, AZ
Seattle, WA
Suffolk County, NY
Vancouver, BC
Washington, DC

King County LEED Buildings

King Street Center
LEED-EB Gold

Regional Communications and Emergency Coordination Center
LEED-NC Certified

LEED Certification

Project registration

↓

Documentation & application

design construction

↓ ↓

Credit interpretation rulings

↓

USGBC review

↓

Certification

LEED Costs

Direct LEED costs	***Estimated Costs***
➢ Project registration & review	$2,500 - $10,000+
➢ Application development & submittal	$10,000 - $50,000
➢ Energy modeling	$10,000 - $30,000
➢ Building commissioning	$0.30 - $2.00 /SF
Direct & indirect savings	
➢ Lower operating costs	
➢ Rebates & incentives	
➢ Increased building value	
➢ Higher workplace productivity	

Sustainable Sites

LEED-NC v2.2

Proximity to mass transit

Brownfield redevelopment

Stormwater design

Water Efficiency

LEED-NC v2.2

Efficient irrigation

Innovative wastewater design

Water saving fixtures

Reduced potable water use

Energy & Atmosphere

LEED-NC v2.2

Increased efficiency

Renewable energy

Lighting controls

Materials & Resources

LEED-NC v2.2

Minimize waste

Materials & Resources

LEED-NC v2.2

Salvaged/refurbished

Recycled content

Locally-sourced

Materials & Resources

LEED-NC v2.2

Certified wood

Indoor Environmental Quality **LEED-NC v2.2**

- Low emitting materials
- Construction IAQ management

- Ventilation
- Thermal comfort
- Daylighting

Innovation in Design

LEED-NC v2.2

- Up to 4 credits available
- Exemplary performance
- LEED accredited professional

LEED v2.2 Credit Tables

Credit	Significant Change from LEED-NC v2.1	Design Submittal	Construction Submittal	Owner Decision-Making	Design Team Decision-Making	Contractor Decision-Making
WEc1.1: Water Efficient Landscaping: Reduce by 50%	*	*			*	
WEc1.2: Water Efficient Landscaping: No Potable Water Use or No Irrigation		*		*	*	
WEc2: Innovative Wastewater Technologies		*			*	
WEc3.1: Water Use Reduction: 20%		*			*	
WEc3.2: Water Use Reduction: 30%		*			*	

Resources

- US Green Building Council
  www.usgbc.org

- King County
  Green Building Program
  www.metrokc.gov/dnrp/swd/greenbuilding