

Sustainable Design Implementation Program (SDIP)

City of Los Angeles

US Green Building Council - LEED

- A national nonprofit organization
- A diverse membership of organizations
- Consensus-driven
- Committee-based product development
- Developer and administrator of the LEED® (Leadership in Energy and Environmental Design) Green Building Rating System

USGBC's MISSION:

to promote the design and construction of buildings that are environmentally responsible, as well as healthy places to live and work.

The organization's activities...

- *Integrate* building industry sectors
- *Lead* market transformation
- *Educate* owners and practitioners

LEED Products

- LEED – NC: LEED for New Construction and Major Renovations/Additions
- LEED – EB: LEED for Existing Buildings
- LEED – CI: LEED for Commercial Interiors
- LEED – CS: LEED for Core and Shell
- LEED – H: LEED for Homes

Four Levels of LEED-NC Certification

- Certified Level 26-32 points
- Silver Level 33-38 points
- Gold Level 39-48 points
- Platinum Level 52+ points
- (69 possible)

- *2001: Board of Public Works Adopts the “Sustainable Building Initiative” and Mandates LEED Certified for City Funded New Construction 7,500 Sq. Ft. or Larger July 1, 2002 for Public Works Projects*
- *April 30, 2002: City Council Unanimously Adopts the “Sustainable Building Initiative” and “LEED Certified” level for All City Funded New Construction 7,500 Sq. Ft. or Larger July 1, 2003*

What is “Green” 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
- water efficiency
- Energy and atmosphere
- Materials and resources
- Indoor environmental quality

sustainable sites goals

- develop only appropriate sites
- reuse existing buildings and/or sites
- protect natural and agricultural areas
- reduce need for automobiles
- protect and restore sites



water efficiency goals

- reduce the quantity of water consumption for the building
- reduce municipal water supply and treatment burden



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energy and atmosphere goals

- Establish energy efficiency and system performance
- Optimize energy efficiency
- Encourage renewable and alternative energy sources
- Supply ozone protection protocols



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materials and resources goals

- reduce the amount of materials needed
- use materials with less adverse environmental impact
- reduce and manage waste



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indoor environmental quality goals

- establish good indoor air quality
- eliminate, reduce and manage the sources of indoor pollutants
- ensure thermal comfort and system controllability
- provide for occupant connection to the outdoor environment



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LEED Registered Project Checklist

LEED
LEED-NC Version 2.1 Registered Project Checklist

<< enter project name >>
<< enter city, state, other details >>

Yes No

Sustainable Sites		14 Points
<input checked="" type="checkbox"/>	Prereq 1 Erosion & Sedimentation Control	Required
<input type="checkbox"/>	Credit 1 Site Selection	1
<input type="checkbox"/>	Credit 2 Development Density	1
<input type="checkbox"/>	Credit 3 Brownfield Redevelopment	1
<input type="checkbox"/>	Credit 4.1 Alternative Transportation, Public Transportation Access	1
<input type="checkbox"/>	Credit 4.2 Alternative Transportation, Bicycle Storage & Changing Rooms	1
<input type="checkbox"/>	Credit 4.3 Alternative Transportation, Alternative Fuel Vehicles	1
<input type="checkbox"/>	Credit 4.4 Alternative Transportation, Parking Capacity and Carpooling	1
<input type="checkbox"/>	Credit 5.1 Reduced Site Disturbance, Protect or Restore Open Space	1
<input type="checkbox"/>	Credit 5.2 Reduced Site Disturbance, Development Footprint	1
<input type="checkbox"/>	Credit 6.1 Stormwater Management, Rate and Quantity	1
<input type="checkbox"/>	Credit 6.2 Stormwater Management, Treatment	1
<input type="checkbox"/>	Credit 7.1 Landscape & Exterior Design to Reduce Heat Islands, Non-Roof	1
<input type="checkbox"/>	Credit 7.2 Landscape & Exterior Design to Reduce Heat Islands, Roof	1
<input type="checkbox"/>	Credit 8 Light Pollution Reduction	1

Yes No

Water Efficiency		5 Points
<input type="checkbox"/>	Credit 1.1 Water Efficient Landscaping, Reduce by 50%	1
<input type="checkbox"/>	Credit 1.2 Water Efficient Landscaping, No Potable Use or No Irrigation	1
<input type="checkbox"/>	Credit 2 Innovative Wastewater Technologies	1
<input type="checkbox"/>	Credit 3.1 Water Use Reduction, 20% Reduction	1
<input type="checkbox"/>	Credit 3.2 Water Use Reduction, 30% Reduction	1

Yes No

Energy & Atmosphere		17 Points
<input checked="" type="checkbox"/>	Prereq 1 Fundamental Building Systems Commissioning	Required
<input checked="" type="checkbox"/>	Prereq 2 Minimum Energy Performance	Required
<input checked="" type="checkbox"/>	Prereq 3 CFC Reduction in HVAC&R Equipment	Required
<input type="checkbox"/>	Credit 1 Optimize Energy Performance	1 to 10
<input type="checkbox"/>	Credit 2.1 Renewable Energy, 5%	1
<input type="checkbox"/>	Credit 2.2 Renewable Energy, 10%	1
<input type="checkbox"/>	Credit 2.3 Renewable Energy, 20%	1
<input type="checkbox"/>	Credit 3 Additional Commissioning	1
<input type="checkbox"/>	Credit 4 Ozone Depletion	1
<input type="checkbox"/>	Credit 5 Measurement & Verification	1
<input type="checkbox"/>	Credit 6 Green Power	1

continued...

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Yes No

Materials & Resources		13 Points
<input checked="" type="checkbox"/>	Prereq 1 Storage & Collection of Recyclables	Required
<input type="checkbox"/>	Credit 1.1 Building Reuse, Maintain 75% of Existing Shell	1
<input type="checkbox"/>	Credit 1.2 Building Reuse, Maintain 100% of Shell	1
<input type="checkbox"/>	Credit 1.3 Building Reuse, Maintain 100% Shell & 50% Non-Shell	1
<input type="checkbox"/>	Credit 2.1 Construction Waste Management, Divert 50%	1
<input type="checkbox"/>	Credit 2.2 Construction Waste Management, Divert 75%	1
<input type="checkbox"/>	Credit 3.1 Resource Reuse, Specify 5%	1
<input type="checkbox"/>	Credit 3.2 Resource Reuse, Specify 10%	1
<input type="checkbox"/>	Credit 4.1 Recycled Content, Specify 5% (post-consumer + 1/2 post-industrial)	1
<input type="checkbox"/>	Credit 4.2 Recycled Content, Specify 10% (post-consumer + 1/2 post-industrial)	1
<input type="checkbox"/>	Credit 5.1 Local/Regional Materials, 20% Manufactured Locally	1
<input type="checkbox"/>	Credit 5.2 Local/Regional Materials, of 20% Above, 50% Harvested Locally	1
<input type="checkbox"/>	Credit 6 Rapidly Renewable Materials	1
<input type="checkbox"/>	Credit 7 Certified Wood	1

Yes No

Indoor Environmental Quality		15 Points
<input checked="" type="checkbox"/>	Prereq 1 Minimum IAQ Performance	Required
<input checked="" type="checkbox"/>	Prereq 2 Environmental Tobacco Smoke (ETS) Control	Required
<input type="checkbox"/>	Credit 1 Carbon Dioxide (CO ₂) Monitoring	1
<input type="checkbox"/>	Credit 2 Ventilation Effectiveness	1
<input type="checkbox"/>	Credit 3.1 Construction IAQ Management Plan, During Construction	1
<input type="checkbox"/>	Credit 3.2 Construction IAQ Management Plan, Before Occupancy	1
<input type="checkbox"/>	Credit 4.1 Low-Emitting Materials, Adhesives & Sealants	1
<input type="checkbox"/>	Credit 4.2 Low-Emitting Materials, Paints	1
<input type="checkbox"/>	Credit 4.3 Low-Emitting Materials, Carpet	1
<input type="checkbox"/>	Credit 4.4 Low-Emitting Materials, Composite Wood & Agrifiber	1
<input type="checkbox"/>	Credit 5 Indoor Chemical & Pollutant Source Control	1
<input type="checkbox"/>	Credit 6.1 Controllability of Systems, Perimeter	1
<input type="checkbox"/>	Credit 6.2 Controllability of Systems, Non-Perimeter	1
<input type="checkbox"/>	Credit 7.1 Thermal Comfort, Comply with ASHRAE 55-1992	1
<input type="checkbox"/>	Credit 7.2 Thermal Comfort, Permanent Monitoring System	1
<input type="checkbox"/>	Credit 8.1 Daylight & Views, Daylight 75% of Spaces	1
<input type="checkbox"/>	Credit 8.2 Daylight & Views, Views for 90% of Spaces	1

Yes No

Innovation & Design Process		5 Points
<input type="checkbox"/>	Credit 1.1 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	Credit 1.2 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	Credit 1.3 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	Credit 1.4 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	Credit 2 LEED™ Accredited Professional	1

Yes No

Project Totals (pre-certification estimates)		69 Points
Certified 20-32 points Silver 33-38 points Gold 39-51 points Platinum 52-69 points		

environmental benefits

- reduce the impacts of natural resource consumption
- buildings represent:
 - 39% of U.S. primary energy use
 - 70% of electricity consumption
 - 40% of raw materials use globally
 - 12% of potable water consumption

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economic benefits

- increase building valuation and ROI
- optimize life-cycle economic performance
- qualify for state and local incentives
- reduce operating costs
 - according to U.S. EPA research, tenants can save about 50 cents per square foot each year through strategies that cut energy use by 30%. This can represent a savings of \$50,000 or more in a five-year lease on 20,000 square feet

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occupant benefits

- Less absenteeism, improved retention
- reduced liability
- high worker productivity
 - a study by Carnegie Mellon University measuring the relationship between increased lighting control and productivity showed an average increase of 7.1% in productivity

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Resources

- USGBC web site: www.usgbc.org
- LEED information: www.leadbuilding.org
- California Integrated Waste Management Board: www.ciwmb.ca.gov
- Sustain LA, and City of Los Angeles, Sustainable Building Initiative: www.sustainla.org/sustain346.htm
- United States Department of Energy, Center of Excellence for Sustainable Development: www.sustainable.doe.gov