LEED for Neighborhood Development

What is it?
How is it different from NC?
Portland-area projects.

Terry Miller
Green Building Services
July 24, 2007

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<tr>
<th>LEED Programs</th>
<th>Application Guides</th>
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LEED for Neighborhood Development

- First national standard for neighborhood design
- Integrates Smart Growth, New Urbanism, and green building
- Pilot developed by:
  - U.S. Green Building Council
  - The Congress for the New Urbanism
  - The Natural Resources Defense Council

  - Pilot launched February, 2006
  - www.usgbc.org

LEED for Neighborhood Development

- 3 Categories of Concern
  - PLUS Design Process & Innovation

- LEED ND Rating System Contains:
  - 9 prerequisites
  - 47 credits that have 100 core points
  - 5 Innovation Design & Process points
  - 1 point for having a LEED Accredited Professional involved in the process
  - Total of 106 points available
LEED for Neighborhood Development

<table>
<thead>
<tr>
<th>LEED Credit Categories &amp; Points</th>
<th>Points</th>
</tr>
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<tr>
<td>Smart Location &amp; Linkage (SLL)</td>
<td>30</td>
</tr>
<tr>
<td>Neighborhood Pattern &amp; Design (NPD)</td>
<td>39</td>
</tr>
<tr>
<td>Green Construction &amp; Technology (GCT)</td>
<td>31</td>
</tr>
<tr>
<td>Innovation &amp; Design (ID)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total possible points</strong></td>
<td><strong>106</strong></td>
</tr>
</tbody>
</table>

**LEED ND Certification Levels**

<table>
<thead>
<tr>
<th>Level</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platinum</td>
<td>80-106</td>
</tr>
<tr>
<td>Gold</td>
<td>60-79</td>
</tr>
<tr>
<td>Silver</td>
<td>50-59</td>
</tr>
<tr>
<td>Certified</td>
<td>40-49</td>
</tr>
</tbody>
</table>

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• The Pilot
  – 300+ projects accepted
  – 18 months pilot period

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• Pilot Certification Fees:

<table>
<thead>
<tr>
<th>Project Size</th>
<th>Certification Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20 acres</td>
<td>$8,000</td>
</tr>
<tr>
<td>20 - 100 acres</td>
<td>$14,000</td>
</tr>
<tr>
<td>Greater than 100</td>
<td>$20,000</td>
</tr>
</tbody>
</table>

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Three-Stage Certification Process

LEED for Neighborhood Development has three stages of certification. In the following form, projects will be asked to indicate which stage best fits the project.

Optional Pre-Review (Stage 1)

This stage is available but not required at any point before the entitlement process begins. If pre-review approval of the plan is achieved, USGBC will issue a letter stating that if the project is built as proposed, it will be able to achieve LEED for Neighborhood Development certification. The purpose of this letter is to assist the developer in building a case for entitlement among land use planning authorities, as well as a case for financing and occupant commitments.

Certification of an Approved Plan (Stage 2)

This stage takes place after the developer has been granted any necessary entitlements to build the project to plan. Any changes to the pre-reviewed plan that could potentially affect prerequisite or credit achievement would be communicated to USGBC as part of this submission. If certification of the approved plan is achieved, USGBC will issue a certificate stating that the approved plan is LEED for Neighborhood Development certified and it will be listed as a LEED for Neighborhood Development Certified Plan.

Certification of a Completed Neighborhood Development (Stage 3)

This stage takes place when construction is complete or nearly complete. Any changes to the certified approved plan that could potentially affect prerequisite or credit achievement would be communicated to USGBC as part of this submission. If certification of the completed neighborhood development is achieved, USGBC will issue plaques or similar awards for public display at the project site and it will be listed as a LEED Certified Completed Neighborhood Development.

Submittals vary by stage
LEED for Neighborhood Development

LEED-ND Prerequisites

- All credit categories have prerequisites
- 9 total prerequisites
  - Start with the prerequisites!

<table>
<thead>
<tr>
<th>LEED-ND Prerequisites</th>
<th>30 Possible Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLL Prerequisite 1</td>
<td>Smart Location</td>
</tr>
<tr>
<td>SLL Prerequisite 2</td>
<td>Proximity to Water and Wastewater Infrastructure</td>
</tr>
<tr>
<td>SLL Prerequisite 3</td>
<td>Impeccable Species and Ecological Communities</td>
</tr>
<tr>
<td>SLL Prerequisite 4</td>
<td>Wetland and Water Body Conservation</td>
</tr>
<tr>
<td>SLL Prerequisite 5</td>
<td>Agricultural Land Conservation</td>
</tr>
<tr>
<td>SLL Prerequisite 6</td>
<td>Floodplain Avoidance</td>
</tr>
</tbody>
</table>

LEED Credits

Smart Location & Linkage

SLL Prerequisite 2: Proximity to Water and Wastewater Infrastructure

Required

Intent

Encourage new development within and near existing communities in order to reduce multiple environmental impacts caused by sprawl. Conserve natural and financial resources required for construction and maintenance of infrastructure.

Requirements

OPTION 1

Locate the project on a site served by existing water and wastewater infrastructure. Replacement or other on-location improvements to existing infrastructure are considered existing for the purpose of achieving this option.

OR

OPTION 2

Locate the project within a legally adopted, planned water and wastewater service area and provide new water and wastewater infrastructure for the project.

Submit

During the pilot program, project teams are encouraged to support replacement documentation that may be easier to access or produce than the items listed below, but still clearly verify that the requirements have been met. The verification reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case basis.
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Three Categories of Concern:
1) Smart Location & Linkage (SLL)
2) Neighborhood Pattern & Design (NPD)
3) Green Construction & Technology

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Smart Location & Linkage:
What conditions does the project inherit and create through its location?

LEED for Neighborhood Development
SLL - prerequisites

- Smart Location
- Proximity to Water and Wastewater Infrastructure
- Imperiled Species and Ecological Communities
- Wetland and Water Body Conservation
- Farmland Conservation
- Floodplain Avoidance
LEED for Neighborhood Development

SLL - prerequisites

Example:
SLL Prerequisite 1: “Smart Location”

Options:
1. Infill; OR,
2. 50% DU and business entrances within ¼ mile walk of existing/planned bus or streetcar or ½ mile of rapid transit, light/heavy passenger rail or ferry terminal; OR,
3. Boundary within ¼ or ½ mile walk of four or six existing diverse uses; OR,
4. In MPO research area where VMT < regional average.

Appendix A: List of Diverse Uses

- Bank
- Child care facility (licensed)
- Community/cons center
- Convenience store
- Day care
- Hardware store
- Health club or outdoor recreation facility
- Laundry/dry cleaner
- Library
- Medical/dental office
- Pharmacy (pharmacy)
- Place of worship
- Police/fire station
- Post office
- Restaurant
- School
- Senior care facility
- Supermarket
- Theater

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SLL- credits

- Contaminated Brownfields Redevelopment
- High Priority Brownfields Redevelopment
- Preferred Locations
- Reduced Auto Dependence
- Bicycle Network
- Housing and Jobs Proximity
- School Proximity
- Steep Slope Protection
- Site Design for Habitat or Wetland Conservation
- Restoration of Habitat or Wetlands
- Conservation Management of Habitat or Wetlands
LEED for Neighborhood Development

SLL - credits

Example:
SLL Credit 6: “Housing and Jobs Proximity” (3 points)
Options:
1. Residential equals at least 25% project building square footage; AND, project within ½ mile of a pre-project jobs equal to or greater than 50% of the number of dwelling units
OR
2. Non-residential component equal at least 25% project building square footage; AND, on infill site ½ mile to existing rail stop, and ¼ walk distance to number of existing dwelling units equal to or greater than 50% of newly created jobs.

Figure 1

Neighborhood Pattern & Design:

How can the project’s plan and program leverage and contribute to the neighborhood?
### LEED for Neighborhood Development

**NPD prerequisites and credits**

- Open Community
- Compact Development
- Diversity of Uses
- Diversity of Housing Types
- Affordable Rental Housing
- Affordable For-Sale Housing
- Reduced Parking Footprint
- Walkable Streets
- Street Network
- Transit Amenities
- Transportation Demand Management
- Access to Surrounding Vicinity
- Access to Public Spaces
- Access to Active Spaces
- Universal Accessibility
- Community Outreach and Involvement
- Local Food Production

### LEED for Neighborhood Development

**NPD prerequisites**

**Example:**

**NPD Prerequisite 2: “Compact Development”**

Requirements (all)

- Residential density 7 DU/acre
- Non-residential density .5 FAR
- If serviced by transit agency with specified density requirements, must meet minimum instead
- Must be achieved by 50% completion of residential components or within 5 years that the first building is occupied
LEED for Neighborhood Development

NPD Credits

Example:
NPD Credit 5: "Affordable For-Sale Housing"

Options:
• 10% of total for-sale units priced for households up to 80% of AMI (1 pt)
• 20% of total for-sale units priced for households up to 120% of AMI (1 pt)
• Both (2 pts)

Example:
NPD Credit 8: "Street Network"

Requirement
• Pedestrian or bicycle through-connections for 50% cul-de-sacs; AND,

Options:
1. PROJECTS < 7 ACRES- Street network grid density within ¼ mile radius from project center (or within the project) falls within one of the specified ranges
2. PROJECTS > 7 ACRES- Project street network grid density falls within one of the specified ranges

<table>
<thead>
<tr>
<th>Street grid density (centerline miles/sq.mi.)</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 – 29</td>
<td>1</td>
</tr>
<tr>
<td>&gt;30</td>
<td>2</td>
</tr>
</tbody>
</table>
LEED for Neighborhood Development

NPD Credits

Example:
NPD Credit 12: "Access to Public Spaces"

Requirements (all)
• Locate or design project so that a park, green plaza or square at least 1/6 acre in area, and at least 150’ in width, lies within walk distance of 90% of the dwelling units and non-residential building entrances in the project.
• Parks < 1 acre must have a proportion no narrower than 1 x 4.
• PROJECTS > 7 ACRES: taken together, all parks in the project average at least ½ acre in size.

Example:
NPD Credit 16: "Local Food Production"

Options
1. Neighborhood Farms and Gardens
2. Community Supported Agriculture (80% of households within 2 years)
3. ¼ mile to existing Farmer’s Market
How can the buildings and infrastructure maximize efficiency, minimize environmental impact and support the local community?

GCT prerequisite and credits

- Construction Activity Pollution Prevention
- LEED Certified Green Buildings
- Energy Efficiency in Buildings
- Reduced Water Use
- Building Reuse and Adaptive Reuse
- Reuse of Historic Buildings
- Minimize Site Disturbance Through Site Design
- Minimize Site Disturbance During Construction
- Contaminant Reduction in Brownfields Remediation
- Stormwater Management
- Heat Island Reduction
- Solar Orientation

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GCT credits (contd.)

- On-Site Power Generation
- On-Site Renewable Energy Sources
- District Heating & Cooling
- Infrastructure Energy Efficiency
- Wastewater Management
- Recycled Content in Infrastructure
- Construction Waste Management
- Comprehensive Waste Management
- Light Pollution Reduction

Example:

GCT Credit 11: “Solar Orientation”

Options

1. **BLOCK DESIGN**- For 75% or more of the project’s blocks, one axis of each block is within 15 degrees of east/west and the east/west length is at least as long or longer as the north/south length

2. **BUILDING DESIGN**- Design and orient 75% of buildings such that one axis is 1.5 times longer than the other and the longer axis is within 15 degrees of east/west axis; AND, south-facing vertical surfaces must not be more than 25% shaded
LEED for Neighborhood Development

GCT credits

Example:
GCT Credit 14: “District Heating and Cooling”

Requirements

- Design and incorporate into the project a district heating or cooling system for space conditioning such that at least 80% of the project total square footage is connected, and at least 80% of the project total heating or cooling load is connected.

LEED-ND
Strategy- Location

Location plays a strong role and sets the stage for LEED-ND performance

- Previously developed infill sites (6 prereqs, 8 credits, 10+ points)
- Proximity to existing public and alternative transportation
- Proximity to diverse uses
- Density

Location-influenced credits

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LEED-ND
Strategy - Planning and Design

Planning and design leverage and enhance location
to improve LEED performance

Planning and Design-Influenced credits

LEED-ND

• Green building intent at a bigger scale

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LEED-ND vs. LEED-NC

This could be a LEED project

LEED-ND vs. LEED-NC

Land Use Urban Planning and Design Environmental Management

Green Community Performance

LEED-NC

Green Building

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LEED-ND vs. LEED-NC

Remote Florida Site Eyed for New Green Town for the Environmentally Aware
May 31, 2007 — By David Royse, Associated Press

THE FUTURE SITE OF SKY, Florida — Homes here could be heated or cooled using the Earth’s natural underground temperature. Appliances would be run by solar powered batteries. Houses would be oriented to avoid the summer sun.

LEED-ND vs. LEED-NC

LEED for Neighborhood Development

Land Use
Urban Planning and Design
Environmental Management

Green Community Performance

LEED-NC

Green Building
LEED for Neighborhood Development

LEED-ND vs. LEED-NC

• Intended to complement
  • LEED-EB, NC, CS

Green Construction & Technology
GCT Credit 1: LEED Certified Green Buildings
1 to 3 Points

Encourage the design and construction of buildings to utilize green building practices.

LEED-ND vs. LEED-NC

• Similarities
  • Infill development and density
  • Energy
  • Water and Stormwater
  • C&D Waste Recycling
  • Renewable Energy
  • Light Pollution
  • Heat Island Reduction
  • Site development practices
  • Building reuse

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LEED-ND vs. LEED-NC

- Differences
  - Location matters…a lot
  - District scale
    - heating, cooling, wastewater, energy
    - infrastructure efficiency and content

Portland area projects

- Washougal Blocks
  - multi-block infill project
  - LEED-NC on at least one of four buildings
  - targeting Gold

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Portland area projects

• Eliot Tower
  • 230-unit, mixed use condo tower in cultural district
  • Targeting Silver, possibly Gold

Portland area projects

• Ladd Tower
  • 330-unit, mixed use apartment tower in cultural district
  • Targeting ND-Gold and NC-Silver
  • Preserves Ladd Carriage House
  • Rehabs Old Church

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Portland area projects

• Helensview
  • 52-unit, affordably-priced infill development (40 SFR, 12 condos)
  • LEED-H and LEED-ND, targeting at least Certified

Portland area projects

• Assessment & Tracking
  • Old Town/China Town
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Portland area projects

- Others
  - Orenco Station
  - Pearl District
  - SOWA

LEED-ND

Questions?

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