LEED-ND Zoning to Accelerate Sustainable Development

Makeover Montgomery
April 15, 2011
Silver Spring, MD

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Criterion Planners
Portland, Oregon
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<table>
<thead>
<tr>
<th>Neighborhood Features</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient location &amp; resource protection</td>
<td>27</td>
</tr>
<tr>
<td>Compact &amp; complete land-use</td>
<td>22</td>
</tr>
<tr>
<td>Multi-modal travel system</td>
<td>22</td>
</tr>
<tr>
<td>Green infrastructure &amp; buildings</td>
<td>29</td>
</tr>
</tbody>
</table>

100 = Platinum
Why Are Local Governments Critical?

- Land-use control.
- Transportation responsibilities.
- Building code implementation.
- Major consumers of energy/water/materials.
- Quicker to act and innovate.
ND Policy Scope

- Location-efficient growth.
- Sensitive resource protection.
- Compact and complete land-use and multi-modal travel.
- Social equity and public health.
- Energy efficiency and climate protection.
- Water efficiency and resource protection.
Scoring Depends on Vicinity

ND Project Points

Vicinity Points

Total Points

Developer + Local Govt.

Shared Sustainability Gains

Source: Norman, ASCE, 2006
Why do Neighborhoods Matter?

CO$_2$ savings available during neighborhood planning

Source: Norman, ASCE, 2006
ND Neighborhoods = Jobs

**Stores**
- Retail/services
- Food production

**Buildings**
- Green construction
- Recycled materials

**Transportation**
- Bicycle sales/service
- Transit operations

**Energy**
- Renewable power
- District energy

**Infrastructure**
- Stormwater mgmt.
- Wastewater reuse

**Natural Resources**
- Biology/botany
- Hydrology
Job Creation by Transportation Mode

Employment per $1 million expenditures

Garrett, University of Mass., 2010.
ND Neighborhoods & Tax Revenues

Asheville, N.C. Land-Use Revenues - $/acre

Approaches to ND Coding

- **Leverage As Is.**
  
  Use of the national ND rating system largely as is. Fastest and least-cost approach, will be regularly updated with USGBC expertise and funding.

- **Adapt ND.**
  
  Locality selects a subset of ND standards and modifies them for local use. Expense and effort of creating/maintaining unique local criteria.

- **Hybrid.**
  
  Mix of leveraging and adaptation, portions of ND combined with local measures.
Coding ND Geography

- **An overlay zone.**

  Maps and describes uses and standards at the outset of ND leveraging; calls attention to opportunity sites.

- **A floating zone.**

  Describes, but does not map, uses and standards. ND-eligible areas only become known if and when a project is proposed.
Inventory Eligible Locations

- Infill
-Adjacent & Connected
-Transit Served
-Walkable Amenities
The NDO map only has authority for this ordinance, and inclusion or exclusion of a parcel on the map is not a warranty by the [city/county] that a parcel is or is not eligible for ND certification.
An “Ideal” ND Zone

- Mixed-use: minimum 7 DU/acre and/or 0.5 FAR.
- Block length under 300 ft., long axis solar-oriented.
- Minimal building set-backs.
- Minimum 1:3 BH-SW ratio on main streets.
- Off-street surface parking at side or rear.
- Sidewalks both sides of streets.
- All transit stops: shelter/bench/lighting/route info.
- Bike parking on multi-family & non-residential sites.
- Renewable power generation allowed.
- “Dark skies” exterior lighting design.
Model ND Ordinance Contents

- Purpose.
- Definitions.
- Responsible official.
- Creation of the ND map and local code alignment.
- NDO administration and incentives.
- Updating and expansion of the NDO.
- Relationship to other regulations.
- Exemptions.
- Compliance and enforcement.
- Appeals.
ND Ordinance Features

- **Stipulated processes.**
  Ordinance establishment and maintenance codified.

- **Variable requirements.**
  What projects are covered? What are their obligations?

- **Variable incentives.**
  Increase with higher certification levels; target geographically.

- **Accommodations of ND stages.**
  Gauge requirements according to ND stage.

- **Long-term goal of NDO expansion.**
  Grow eligible areas and vicinity attributes.

- **Local autonomy.**
  Opt out or modify ND requirements.
Define Covered Projects on Eligible Parcels

- Minimum acreage of land development.
- Minimum dwellings and/or non-residential sq.ft. of construction.
- General planning action, e.g. zone change.
## Covered Project Requirements

<table>
<thead>
<tr>
<th>Documentation</th>
<th>1. Pre-Entitlement</th>
<th>2. Post-Entitlement</th>
<th>3. Constructed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consideration memo</td>
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<tr>
<td>GBCI equivalent documents</td>
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<tr>
<td>GBCI official forms</td>
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<td>AP preparation</td>
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<tr>
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<tbody>
<tr>
<td>No minimum</td>
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<tr>
<td>Minimum level</td>
<td></td>
<td>✔</td>
<td>✔</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Credits/Points</th>
<th>1. Pre-Entitlement</th>
<th>2. Post-Entitlement</th>
<th>3. Constructed</th>
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<tbody>
<tr>
<td>No minimum or credits or points</td>
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<tr>
<td>Specific credits</td>
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<td>✔</td>
<td>✔</td>
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<tr>
<td>Minimum points</td>
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<td>✔</td>
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</table>
# Matching Local Priorities With Credits

<table>
<thead>
<tr>
<th>Applicable LEED-ND Credits</th>
<th>Location Efficiency</th>
<th>Sensitive Lands Protection</th>
<th>Compact/Complete Land-Use &amp; Transp.</th>
<th>Design for Public Health &amp; Social Equity</th>
<th>Energy Efficiency &amp; Climate Protection</th>
<th>Water Efficiency &amp; Protection</th>
<th>Infrastructure Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SMART LOCATION &amp; LINKAGE</strong></td>
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<tr>
<td>c1: Preferred Locations</td>
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<td>c2: Brownfield Redevelopment</td>
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<tr>
<td>c3: Locations With Reduced Automobile Dependence</td>
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<tr>
<td>c4: Bicycle Network and Storage</td>
<td>✔</td>
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<tr>
<td>c5: Housing and Jobs Proximity</td>
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<tr>
<td>c6: Steep Slope Protection</td>
<td>✔</td>
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<tr>
<td>c7: Site Design for Habitat or Wetland and Water Body Conservation</td>
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<tr>
<td>c8: Restoration of Habitat or Wetlands and Water Bodies</td>
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<tr>
<td>c9: Long-Term Conservation Management of Habitat or Wetlands and Water Bodies</td>
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</tbody>
</table>
Align Local Code With ND

- Land-use.
- Transportation.
- Public works.
## Local Code Alignment

<table>
<thead>
<tr>
<th>SLL Section</th>
<th>Affected Local Agencies</th>
<th>Local Land-Use Type &amp; Density Standards</th>
<th>Local Development Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLLp1: Smart Location</td>
<td>Water; wastewater; transit; transportation (ped network)</td>
<td>NA</td>
<td>Water and wastewater service extension; commitment procedures for planned transit; sidewalk widths and surfacing.</td>
</tr>
<tr>
<td>SLLp2: Imperiled Species and Ecological Communities Conservation</td>
<td>State fish &amp; wildlife; state natural heritage program</td>
<td>NA</td>
<td>Fish &amp; wildlife protective measures.</td>
</tr>
<tr>
<td>SLLp3: Wetland and Water Body Conservation</td>
<td>Corps of Engineers; state and local water resource agencies</td>
<td>N/A</td>
<td>Wetland/water body protection standards</td>
</tr>
<tr>
<td>SLLp4: Agricultural Land Conservation</td>
<td>Agricultural preservation district (independent service district, not a zoning classification); NRCS; agency administering TDR program</td>
<td>Ag pres district regs, if any</td>
<td>Ag pres district regs, if any; ag land loss mitigation stds</td>
</tr>
</tbody>
</table>
## Local Code Alignment *continued*

<table>
<thead>
<tr>
<th>NPD Section</th>
<th>Affected Local Agencies</th>
<th>Local Land-Use Type &amp; Density Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPDc1: Walkable Streets</td>
<td></td>
<td>Bldg setbacks, bldg entry locations, bldg facades, on-street parking, sidewalks, dwelling at ground elevation, BH-SW ratio, traffic speeds, driveways across sidewalks</td>
</tr>
<tr>
<td>NPDc2: Compact Development</td>
<td>NA</td>
<td>10+ DU/acre &amp; 0.75+ FAR</td>
</tr>
<tr>
<td>NPDc3: Mixed-Use Neighborhood Centers</td>
<td>Transit</td>
<td>Requires mixed-uses among parcels if not bldgs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Local commitment procedures for planned transit.</td>
</tr>
<tr>
<td>NPD Section</td>
<td>Affected Local Agencies</td>
<td>Local Land-Use Type &amp; Density Standards</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>-------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>NPDc4: Mixed-Income Diverse Communities</td>
<td>Housing authority</td>
<td>NA</td>
</tr>
<tr>
<td>NPDc5: Reduced Parking Footprint</td>
<td>NA</td>
<td>NA</td>
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References


**Tools**

**Criterion Planners**

**USGBC**
- *A Local Govt. Guide to LEED-ND*: [usgbc.org/neighborhood](http://usgbc.org/neighborhood)
1. Completion of a jurisdiction-wide eligible lands inventory.

2. Aligning/leveraging, become known as an “ND-ready” jurisdiction, where ND certification happens with:

- More certainty.
- At a faster speed.
- With less work and expense.
- Producing higher certification levels.

3. A goal for growing ND-eligible areas and increasing vicinity-based scores; and a blueprint for reaching that goal.