Trend #1 – Growing Awareness Amongst General Public

- In popular media
- In news media
- Corporate sustainability marketing campaigns
- Increasing fuel costs
Trend #2 – Changing Land Use Patterns

- Increasing unease with long commutes
- Changing demographics
- Land is an increasingly scarce resource
- Major transit infrastructure in place or being created
Trend #3 – Changing Economic Patterns

- Increases in costly infrastructure projects
- Macro-economic shift
- Public and quasi-public subsidies for alternative energy
Trend #4 – Regulatory Environment Demands It

- Jurisdictions are adopting regulations or incentives
- Important part of developer and designer selection criteria
Renewable Portfolio Standard

Statewide LEED Policy in place

Municipal LEED Policy in place
Trend #5 – Increasing Demand from Tenants and Customers

- LEED as a brand has grown
- Important for customers’ public image and costs savings; companies have their own sustainability efforts
LEED - Market Demand

Occupancy Rates

100%
95%
90%
85%
80%

1Q06 1Q08

Difference = 280 bps
Difference = 410 bps

Data Source: CoStar Group
Joint effort of the US Green Building Council, the Congress for New Urbanism, and the Natural Resources Defense Council

LEED for Neighborhood Development (LEED-ND)
Why do we need LEED-ND?
Average American Office Building
Total Building Energy Assumes ASHRAE 90.1-2004 Code Compliance

Building v. Transportation Energy

Source: BuildingGreen.com
http://www.buildinggreen.com/auth/article.cfm?fileName=160901a.xml
Urban v Suburban Energy Use

Source: Jonathan Rose Companies, LLC
<table>
<thead>
<tr>
<th>Less Bad</th>
<th>More Good</th>
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<tbody>
<tr>
<td>Energy</td>
<td>Health and Wellness</td>
</tr>
<tr>
<td>Water</td>
<td>Fostering community</td>
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<tr>
<td>Resources</td>
<td>Economic growth</td>
</tr>
<tr>
<td>Health</td>
<td>Social Justice</td>
</tr>
<tr>
<td>Land Use</td>
<td>Connection with sources and disposal</td>
</tr>
<tr>
<td>Natural Systems</td>
<td>Connection with natural landscape and agriculture</td>
</tr>
<tr>
<td></td>
<td>Beauty, civic pride, etc.</td>
</tr>
</tbody>
</table>

What do we care about?
Nutrition Facts

Serving Size: 6 crackers (29g)
Servings Per Container About 2

Amount Per Serving

- Calories: 120
- Total Fat: 3.5g
- Saturated Fat: 1g
- Trans Fat: 0g
- Cholesterol: 0mg
- Sodium: 140mg
- Total Carbohydrate: 22g
- Dietary Fiber: Less than 1g
- Sugars: 7g
- Protein: 2g

% Daily Value:

- Total Fat: 5%
- Saturated Fat: 5%
- Dietary Fiber: Less than 1g

Vitamin A: 0% Vitamin C: 0%
Calcium: 10% Iron: 4%

CONTINUED ON OTHER SIDE
- New Construction and Major Renovations (NC)
- Existing Buildings Operations and Maintenance (EBOM)
- Commercial Interiors (CI)
- Core and Shell (CS)
- Homes (H)
- Neighborhood Development (ND)
- Retail
- Schools
- Health Care
- Volume / Portfolio Program
LEED-NCv2.2 Prerequisites and Credits

7 Prereqs, 69 Points Total

Sustainable Sites  (1 prerequisite / 14 points)
Water Efficiency  (0 prerequisite / 5 points)
Energy and Atmosphere  (3 prerequisites / 17 points)
Materials and Resources  (1 prerequisite / 13 points)
Indoor Environmental Quality  (2 prerequisites / 15 points)
Innovation in Design  (0 prerequisite / 5 points)
LEED-ND Prerequisites and Credits (current pilot)

13 Prereqs 110 Points Total

Smart Location and Linkage (6 prerequisite / 27 points)
Neighborhood Pattern and Design (3 prerequisite / 44 points)
Green Infrastructure and Buildings (4 prerequisites / 29 points)
Innovation in Design (0 prerequisite / 6 points)
Regional Priority Credit (0 prerequisites / 4 points)
LEED-ND Levels of Certification

Certified    (40-49 points)
Silver       (50-59 points)
Gold         (60-79 points)
Platinum     (80 + points)

Total Points = 110
- **Pre-Review** (optional): Intended to assist with entitlement approvals

- **Certification of Approved Plan:** Certification of what has been approved to build

- **Certification of a Completed Project:** As construction is complete or near complete

---

**Three Stages of Certification**
27 Points Possible

6 Prerequisites
- Location
- Water
- Imperiled Species
- Wetlands
- Ag. Land
- Floodplains

Major Credit Bundles
- Infill Redevelopment (10 pts)
- Transit (7 pts)
44 Points Possible

3 Prerequisites
- Urban Design
- Density
- Connectivity

Major Point Bundles
- Urban Design (12 pts)
- Density (6 pts)
- Mixed-Income AND/OR Diverse Housing Types (7 pts)

Neighborhood Pattern and Design (NPD)
29 Points Possible

4 Prerequisites
- Certified Green Building
- Energy Efficiency
- Water Efficiency
- Construction Pollution Plan

Major Bundles
- Green Buildings (5 pts)
- Stormwater Management (4pts)

Green Infrastructure and Building (GIB)
10 Points Possible

- Innovation
- Exemplary Performance
- Regional Priorities

Innovation in Design (ID) / Regional Priorities
• July 2007 - July 2009
• Early Adoption
• Program Development

ND Pilot Process

LEED ND
certified gold plan

YRG sustainability
- **Mode of Travel**
  - Residents 2.5X more likely to commute via transit
  - Twice as likely to bicycle

- **Size**
  - Median 30 acres
  - 0.17 acres – 12,800 acres

- **Density**
  - 4X denser than all areas
  - 2X denser than all urban areas

**LEED-ND Pilot Project Characteristics**
Challenges - Large Projects
Infill?

Challenges- Definitions & Methods
Challenges- Market Transformation vs. Market Leadership
“LEED-ND was designed to encourage project A and discourage project B, while most of the actual projects fall in the C-Z range”

-Liza Trafton, YRG
- 2.41 Acres
- 51 DUs/ Acre
- 7,301 SF of Non-residential
- MU-30 Zoning

Developer: Denver Housing Authority
Architect: Studio Completiva
LA: Studio Insite

Park Avenue Redevelopment Block 3, Denver (Five Points)
Block 3 Site Plan
Block 3 Walk-Through
Documentation
- Overall Score: Gold? (60 pts)
- Highlights
  - Transit
  - Infill
  - Urban Design
  - Affordability

Project Scorecard
- 3 acre lot
- 14 DUs/ acre
- Adaptive Reuse of Historic School
- Underground Parking
- Along Boulder’s Major Internal Arterial

**Developer:** Wonderland Hill Development Co.
**Architect:** Architecture Incorporated

Washington Village Cohousing Project, Boulder
Map depicts approved site plan, numbered origins indicating entry doors for residential units, and the shortest paths to the bus stop.

Legend:
- Streets
- Paths to Bus Stop
- Transit
- Overall Score: LEED Gold (67 pts)

- Highlights
  - Infill and Adaptive Reuse
  - Proximity to Transit
  - Cohousing
  - Urban Design
- 25 Acres
- 46 DUs/ Acre
- 1.05 FAR
- New Transit Center

**Developer:** Related WestPac  
**Architect:** Oz Architecture

Snowmass Base Village, Snowmass Village, CO
### SLLc4, Reduced Automobile Dependence- Snowmass Base Village

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<th>Total Entrances</th>
<th>Total One-Way Stops</th>
<th>Total Residential Entrance-Stops</th>
<th>Total % Residential Entrance-Stops within 1/4 mile</th>
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<th>Distance</th>
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</table>
- Wetlands
- Sidewalks
- Surrounding Connectivity

Design Challenges
- Overall Score: Certified (47 points)

- Highlights
  - Transit
  - Diverse Uses
  - LEED Buildings

Project Scorecard
- 1,415 Acres
- 2.5 Residential FAR
- 6.3 Commercial FAR
- 350 Buildings
- 15.35 miles of Bike Paths
- <25 miles of roads
- 65,000 residents; 300,000 jobs

New Songdo City, Korea

Developer: Gale International
Architect: KPF
- International Differences
- Intersecting Highways
- Walk Distances
- Project Scale

Design Challenges
- Overall Score: Certified (40 pts)

- Highlights
  - Density
  - Diverse Uses
  - LEED Buildings
  - Diverse Housing Types

Project Scorecard
Changes

- More requirements for vertical development
- Aligns with LEED2009
- More credit for urban design
- Better definition of infill

Status

- Over 20 certified projects
- 5000 comments received
- 2nd Public Comment Version to be Released in Spring

ND Process- 1st Public Comment
How to Apply ND- Public Sector

- Comprehensive Plans
- Area Plans
- Land Use Regulations
How to Apply ND – Private Sector

- Analysis
- Implementation
- Design Guidelines
Developer’s Perspective: The Upside of LEED-ND

- Assists with public/community relations
- Facilitates entitlement process
- Increases marketing attraction to home buyers
- Increases marketing attraction to commercial tenants
- Establishes land development standards for developers and jurisdictions
- Highlights benefits of and encourages mixed-use and infill development
Developer’s Perspective: The Downside of LEED-ND

- Cost associated with preparing and submitting application
- Some points are not practically feasible
- Can be cumbersome to document certain points
- Certification often not timed for maximum benefit
Thank You!

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