

Josh Radoff Conor Merrigan YRG sustainability

Dan Cohen Catellus Development

Trend #1 – Growing Awareness Amongst General Public

- In popular media
- In news media
- Corporate sustainability marketing campaigns
- Increasing fuel costs

Alameda Landing – Alameda, CA



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

Mission Bay – San Francisco, CA



Trend #3 – Changing Economic Patterns

- Increases in costly infrastructure projects
- Macro-economic shift
- Public and quasi-public subsidies for alternative energy

Robert Mueller Municipal Airport – Austin, TX

Trend #4 – Regulatory Environment Demands It

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

Prairie Glen – Gleview, IL



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

CirclePoint – Westminster, CO

LEED - Market Demand



Data Source: CoStar Group





Joint effort of the US Green Building Council, the Congress for New Urbanism, and the Natural Resources Defense Council



Congress for the New Urbanism



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

Less Bad

- Energy
- Water
- Resources
- Health
- Land Use
- Natural Systems

More Good

- Health and Wellness
- Fostering community
- Economic growth
- Social Justice
- Connection with sources and disposal
- Connection with natural landscape and agriculture
- Beauty, civic pride, etc.

What do we care about?



- 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

Water Efficiency

- **Energy and Atmosphere**
- Materials and Resources
- **Indoor Environmental Quality**
- Innovation in Design

(1 prerequisite / 14 points)
(0 prerequisite / 5 points)
(3 prerequisites / 17 points)
(1 prerequisite / 13 points)
(2 prerequisites / 15 points)
(0 prerequisite / 5 points)



LEED-ND Prerequisites and Credits (current pilot)

13 Prereqs 110 Points Total

Smart Location and Linkage Neighborhood Pattern and Design Green Infrastructure and Buildings Innovation in Design Regional Priority Credit (6 prerequisite / 27 points)

(3 prerequisite / 44 points)

- (4 prerequisites / 29 points)
- (0 prerequisite / 6 points)
- (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

ALL VIE TO

- 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

6 Prerequisites

- Location
- Water
- Imperiled Species
- Wetlands
- Ag. Land
- Floodplains
- Major Credit Bundles
- Infill Redevelopment (10 pts)
- Transit (7 pts)

Credit: DenverInfill.com

Smart Locations and Linkages (SLL)

- 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)

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)

- Innovation
- Exemplary Performance
- Regional Priorities



Innovation in Design (ID) / Regional Priorities

- July 2007 July 2009
- Early Adoption
- Program Development



ND Pilot Process

EverVail, Vail

LEED for Neighborhood Development

Pilot Projects Registered in the U.S.

Washington Village, Boulder

Aspen Club Redevelopment Snowmass Base Village

Park Avenue Block 3, Denver Metropolitan Gardens, Denver Stapleton, Denver Horizon Uptown, Aurora

- 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 C LA: Studio Insite

Park Avenue Redevelopment Block 3, Denver (Five Points)

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Block 3 Site Plan



Block 3 Walk-Through







Documentation

Park Avenue Redevelopment Block 3, NPD Credit 13



- Overall Score: Gold?
 (60 pts)
- Highlights
 - Transit
 - Infill
 - Urban Design
 - Affordability

COURTYARD



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



Site Plan & Paths to Bus



Washington Village Flood Map



Diverse Uses & Bicycle Network





Documentation

- Overall Score: LEED Gold (67 pts)
- Highlights
 - Infill and Adaptive Reuse
 - Proximity to Transit
 - Cohousing
 - Urban Design





Project Scorecard

- 25 Acres
- 46 DUs/ Acre
- 1.05 FAR
- New Transit
 Center



Developer: Related WestPac Architect: Oz Architecture



Snowmass Base Village, Snowmass Village, CO

BASE VILLAGE SITE +

11

EEP SLOPES

Snowmass Village, Snov iss Village, CO

GOLF COURSE

14

CONSERVATION LAND

BASE VILLAGE

10

WATER

SKI TRAILS

lage Ci2008 DigitalGlobe

© 2008 Tele Atlas

39°12'32.53" N 106°56'46.90" W elev 8393 (t

5279 ft

Streaming |||||||| 100%



Pitkin

Eye a

SLLc4, Reduced Automobile Dependence- Snowmass Base Village



for Related Westpac

10/17/2008

YRG SUSTAINABILITY CONSULTANTS

YRG sustainability

SLLc4, Reduced Automobile Dependence- Snowmass Base Village

Total Entrances	Total One-Way Stops	Total Residential Entrance-Stops	Total % Residential Entrance-Stops within 1/4 mile
19	3	50	90%
		Total Business Entrance- Stops	Total % Business Entrance-Stops within 1/4 mile
		42	100%

OriginID	Bus Stop	Distance	1/4 mile?	Residential Status
1	2	367.89	YES	Mixed
1	1	833.60	YES	Mixed
1	3	635.88	YES	Mixed
2	2	589.90	YES	Mixed
2	1	838.92	YES	Mixed
2	3	416.70	YES	Mixed
3	2	627.93	YES	Mixed
3	1	742.23	YES	Mixed
3	3	246.36	YES	Mixed
4		040.40		

Documentation

Wetlands

Sidewalks

SurroundingConnectivity





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</p>
- 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 HousingTypes



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



- Comprehensive PlansArea Plans
- Land Use Regulations



How to Apply ND- Public Sector



PHASE 1 (AREA 1 & 2) ARABIAN CANAL DUBAI, UAE

> DEVELOPMENT CODE NOVEMBER 2008



AnalysisImplementationDesign Guidelines

How to Apply ND – Private Sector

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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