



Greening of the 'Hood: An Introduction of the LEED for Neighborhood Development Rating System®

New Mexico Infrastructure Finance Conference
October 24, 2007





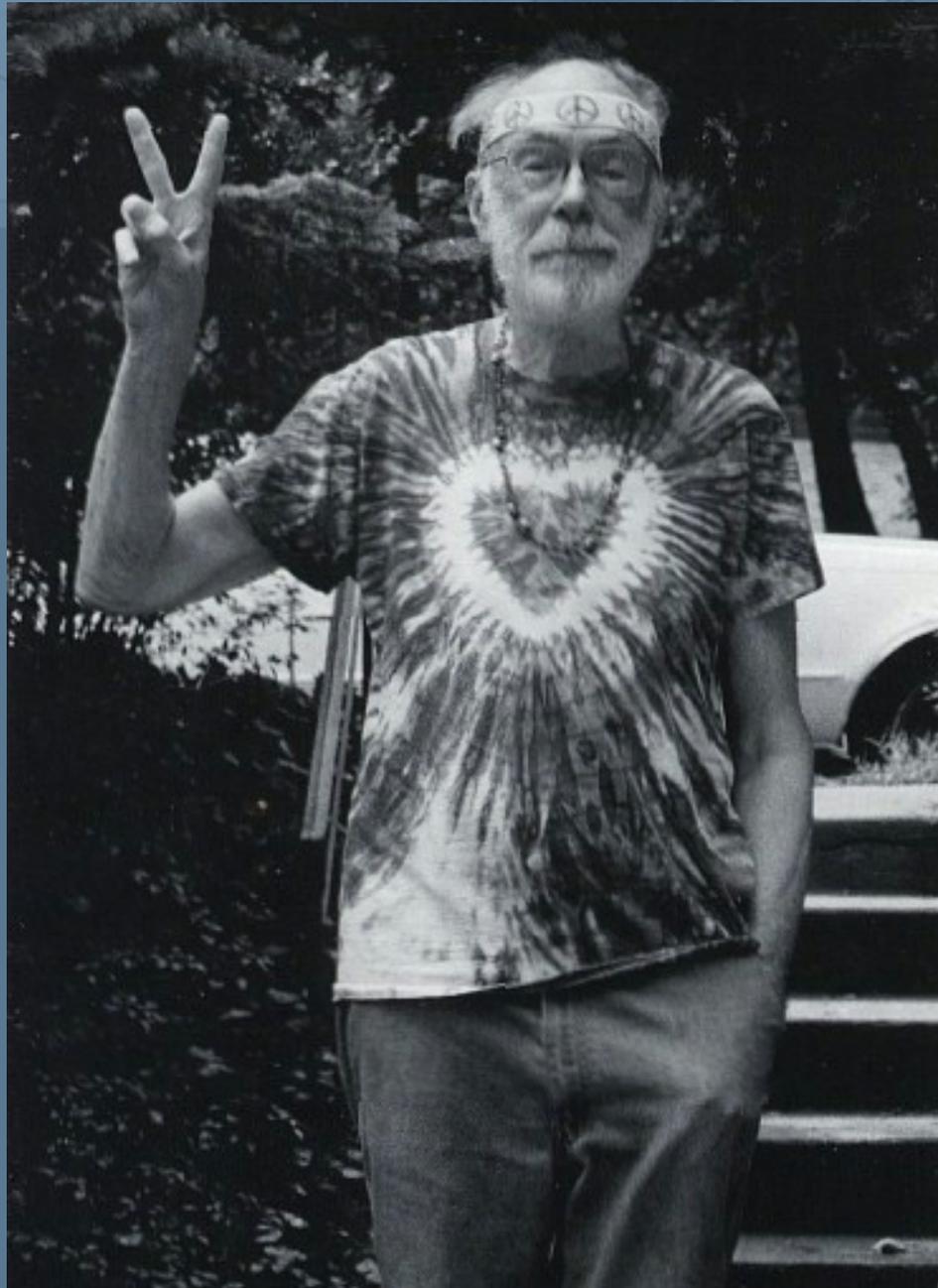
**Phyllis H. Taylor, AICP – Moderator
Sites Southwest**

**Ajith "AJ" Thomas, AIA, LEED® AP
HDR Architecture, Inc.**

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Greater Albuquerque Housing Partnership**

**Ted Harrison, President
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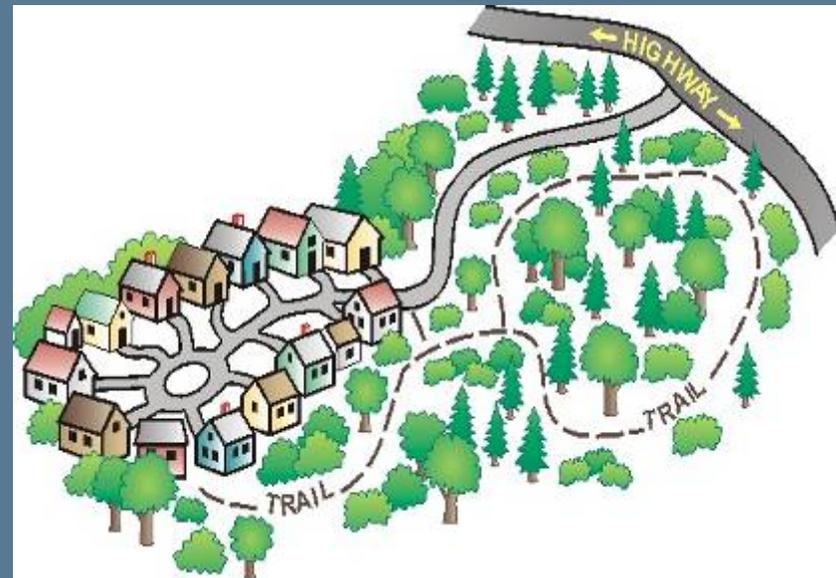
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Sustainable "*Green*" Design is...

Dedicated to conserving resources and improving quality of life

- High Performance (measurable)
- Efficient
- Cost-effective (proven)
- Durable
- Simple
- Synergistic



USGBC is...

- A national nonprofit organization
- A diverse membership of organizations
- Consensus-driven
- Committee-based product development
- Developer and administrator of the LEED® Green Building Rating System

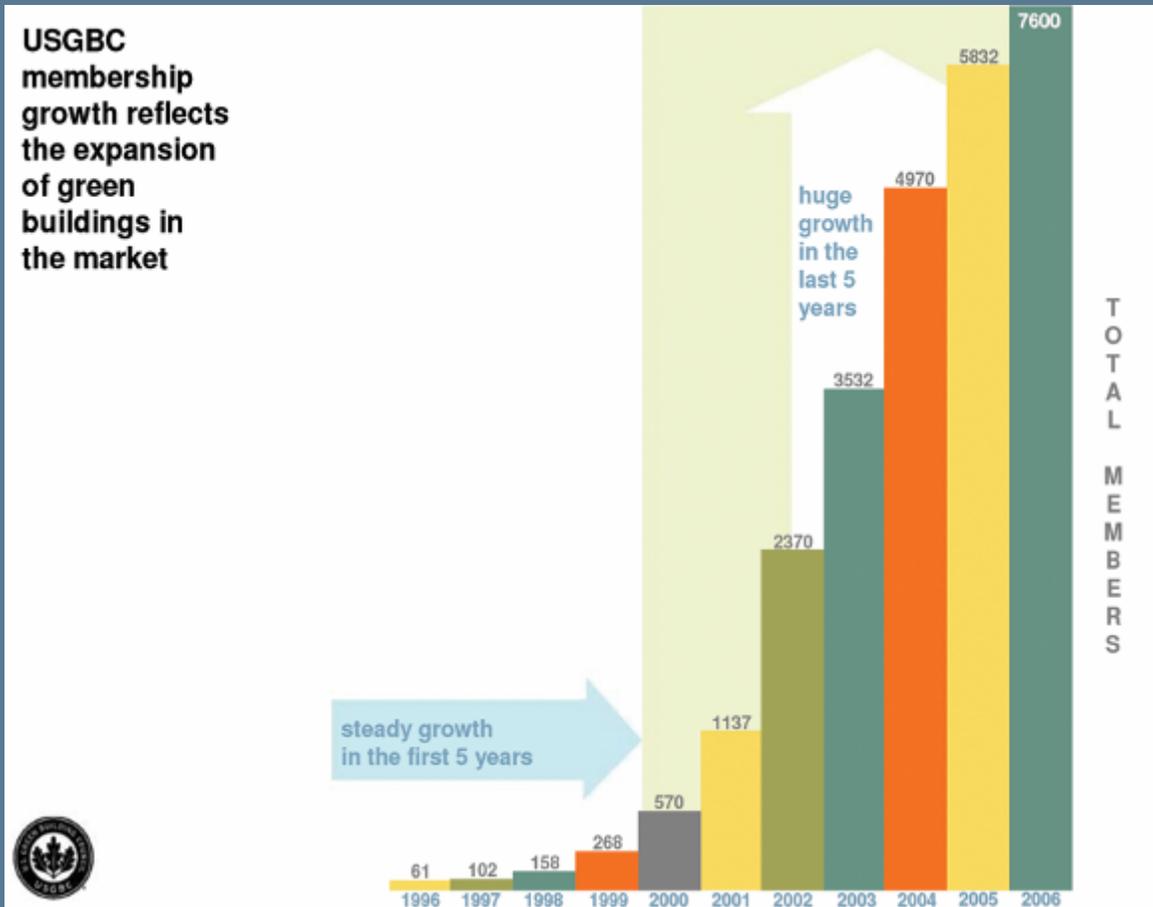


USGBC's Mission:

- to promote the design and construction of buildings that are **environmentally responsible, profitable, and healthy places to live and work.**
- The organization's activities...
 - Integrate building industry sectors
 - Lead market transformation
 - Educate owners and practitioners

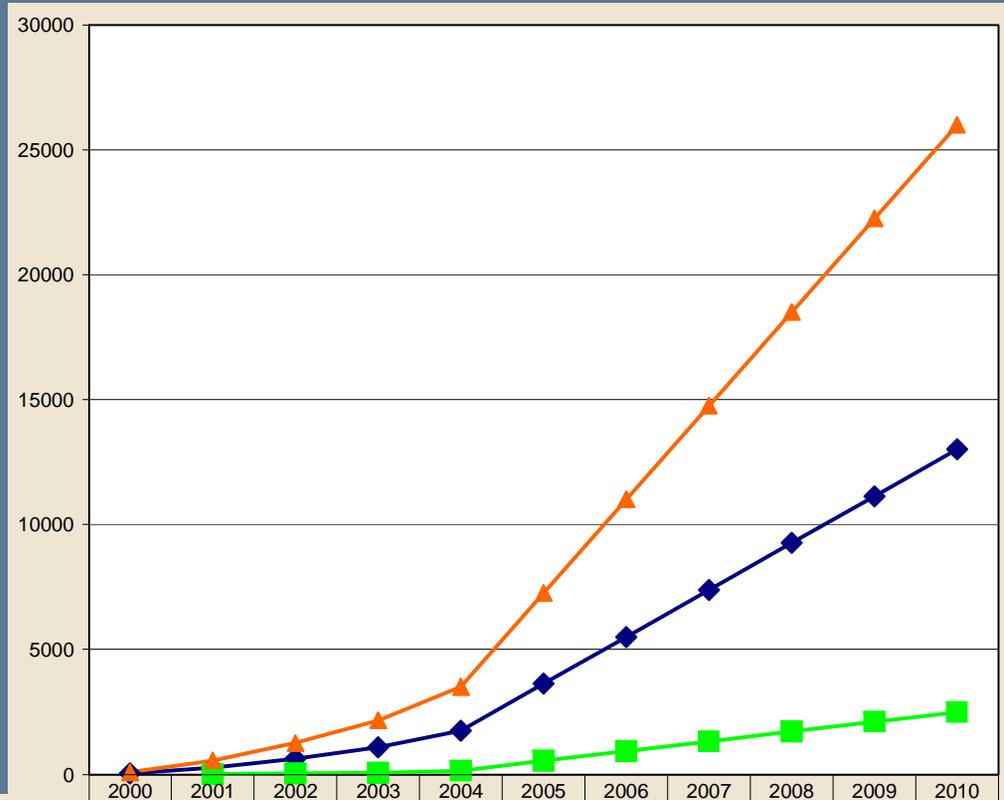
USGBC Background

- Established in 1993
- Recently reached 10,000 members – up nearly 1000% in last 5 years
- More than 25,000 LEED-Accredited Professionals



Growth in LEED and Green Projects

*These future projections are based on Yudelson's rule of thumb that indicates the **overall green building market** is 2 to 3 times the number of formally registered LEED projects.*



| | | | | | | | | | | | |
|--|----|-----|------|------|------|------|-------|-------|-------|-------|-------|
| LEED Project Registrations | 45 | 275 | 625 | 1081 | 1753 | 3628 | 5502 | 7377 | 9251 | 11126 | 13000 |
| LEED Project Certifications (Cumulative) | | 5 | 26 | 68 | 148 | 540 | 932 | 1324 | 1716 | 2108 | 2500 |
| Est. Total Green Projects | 90 | 550 | 1250 | 2162 | 3506 | 7255 | 11004 | 14753 | 18502 | 22251 | 26000 |

Leadership in Energy & Environmental Design[®]

LEED

Environmentally responsible, profitable, and healthy places to live and work.



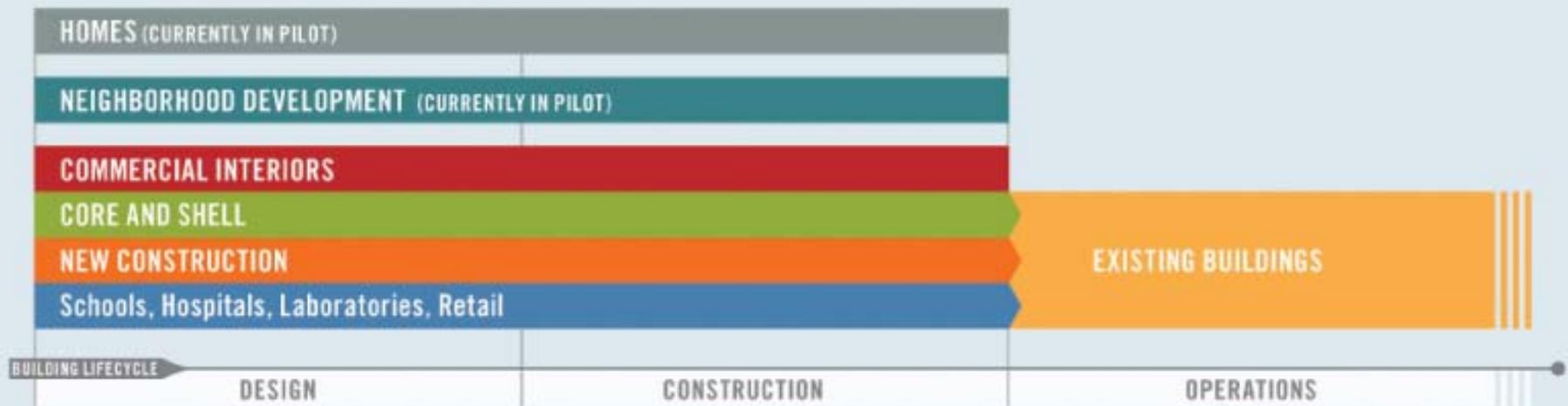
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Why Was LEED® Created?

- Define “green” by providing a standard for measurement
- Prevent “green-washing” (false or exaggerated claims)
- Promote whole-building, integrated design processes
- Establish market value with recognizable national “brand”
- Raise consumer awareness

Categories of LEED

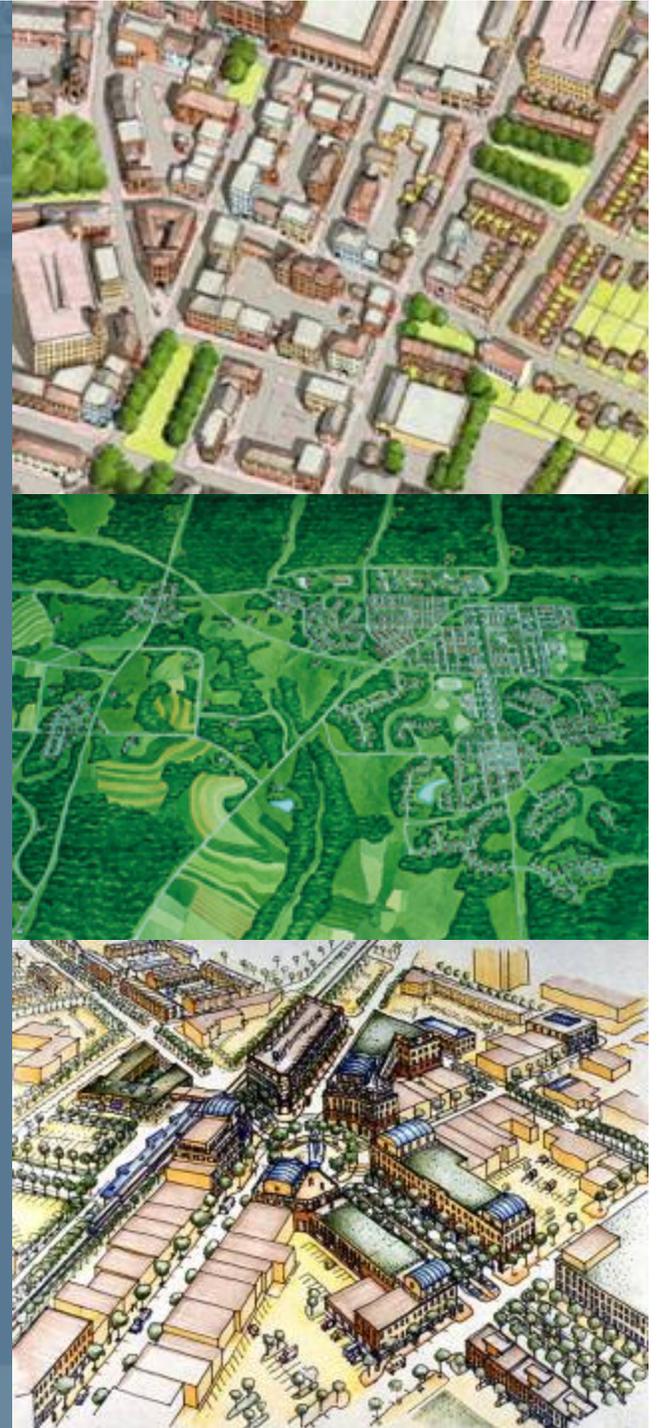
LEED addresses the complete lifecycle of commercial buildings.
Programs are in pilot for Homes and Neighborhoods.



New Standards for Neighborhood Development

LEED-ND

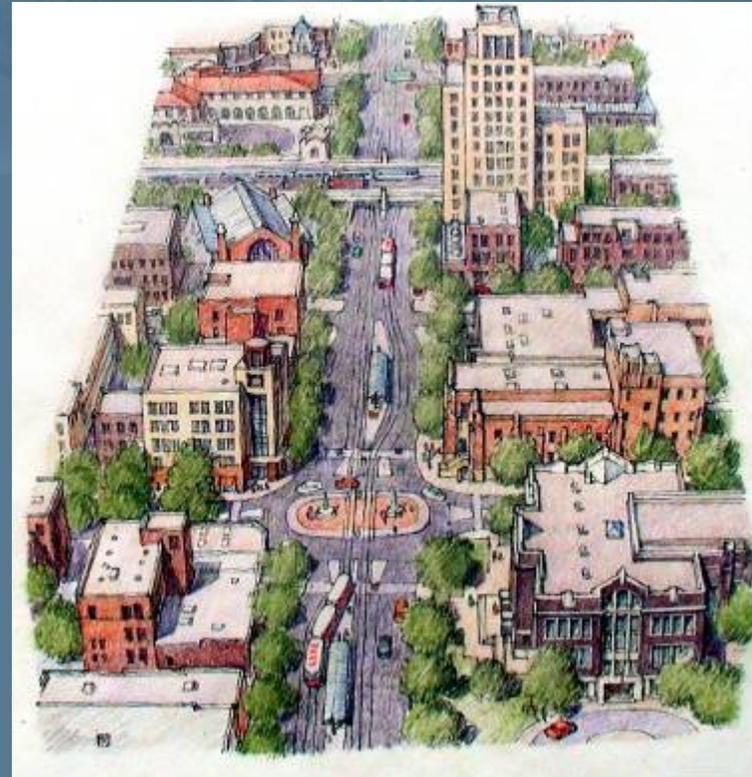
Integrates the principles of smart growth, urbanism, and green building into the first national standard for neighborhood design.



Why do we need LEED-ND?



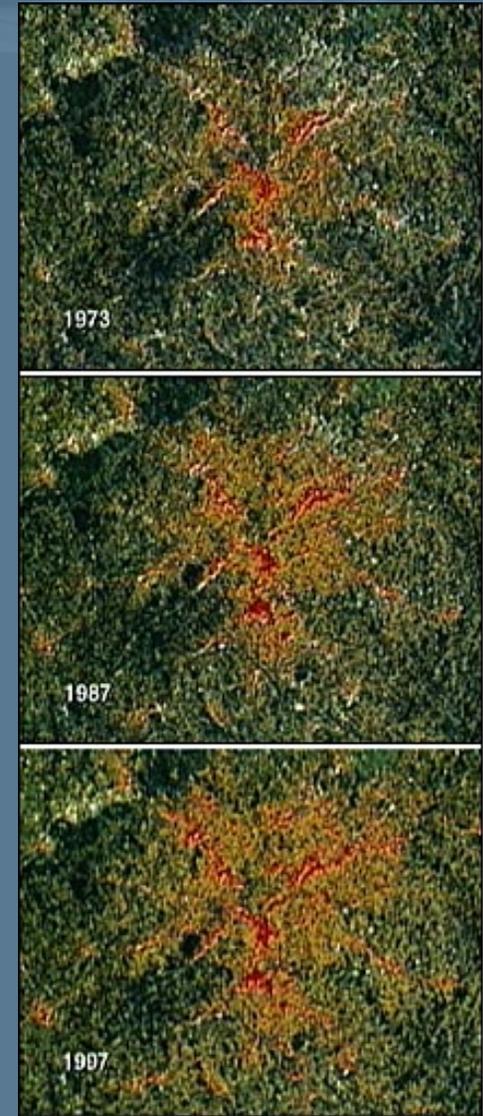
This?



Or This?

Why do we need LEED-ND?

- Land development occurring twice as fast as population growth
- Vehicle use in America has more than doubled since 1970
- Most development does not happen one building at a time
- Single family homes have increased over 50% in size since the first post-war subdivisions



Where to apply LEED-ND

- Whole, fractions, or multiple neighborhoods
- Small and large
- Infill and Brownfield development
- Residential, commercial, and mixed use
- TOD



Category 1: Smart Location & Linkage

- 30 Possible Points

| | | |
|-----------|---|----------|
| Prereq 1 | Smart Location | Required |
| Prereq 2 | Proximity to Water and Wastewater Infrastructure | Required |
| Prereq 3 | Imperiled Species and Ecological Communities | Required |
| Prereq 4 | Wetland and Water Body Conservation | Required |
| Prereq 5 | Agricultural Land Conservation | Required |
| Prereq 6 | Floodplain Avoidance | Required |
| Credit 1 | Brownfield Redevelopment | 2 |
| Credit 2 | High Priority Brownfields Redevelopment | 1 |
| Credit 3 | Preferred Locations | 2-10 |
| Credit 4 | Reduced Automobile Dependence | 1-8 |
| Credit 5 | Bicycle Network | 1 |
| Credit 6 | Housing and Jobs Proximity | 3 |
| Credit 7 | School Proximity | 1 |
| Credit 8 | Steep Slope Protection | 1 |
| Credit 9 | Site Design for Habitat or Wetlands Conservation | 1 |
| Credit 10 | Restoration of Habitat or Wetlands | 1 |
| Credit 11 | Conservation Management of Habitat or Wetlands | 1 |



Category 2: Neighborhood Pattern & Design

- 39 Possible Points

| | | |
|-----------|---|----------|
| Prereq 1 | Open Community | Required |
| Prereq 2 | Compact Development | Required |
| Credit 1 | Compact Development | 1-7 |
| Credit 2 | Diversity of Uses | 1-4 |
| Credit 3 | Diversity of Housing Types | 1-3 |
| Credit 4 | Affordable Rental Housing | 1-2 |
| Credit 5 | Affordable For-Sale Housing | 1-2 |
| Credit 6 | Reduced Parking Footprint | 2 |
| Credit 7 | Walkable Streets | 4-8 |
| Credit 8 | Street Network | 1-2 |
| Credit 9 | Transit Facilities | 1 |
| Credit 10 | Transportation Demand Management | 2 |
| Credit 11 | Access to Surrounding Vicinity | 1 |
| Credit 12 | Access to Public Spaces | 1 |
| Credit 13 | Access to Active Public Spaces | 1 |
| Credit 14 | Universal Accessibility | 1 |
| Credit 15 | Community Outreach and Involvement | 1 |
| Credit 16 | Local Food Production | 1 |



Category 3: Green Construction & Technology

- 31 Possible Points

| Prereq 1 | Construction Activity Pollution Prevention | Require |
|-----------|---|---------|
| Credit 1 | Certified Green Buildings | 1-3 |
| Credit 2 | Energy Efficiency in Buildings | 1-3 |
| Credit 3 | Reduced Water Use | 1-3 |
| Credit 4 | Building Reuse and Adaptive Reuse | 1-2 |
| Credit 5 | Reuse of Historic Buildings | 1 |
| Credit 6 | Minimize Site Disturbance through Site Design | 1 |
| Credit 7 | Minimize Site Disturbance during Construction | 1 |
| Credit 8 | Contaminant Reduction in Brownfields Remediation | 1 |
| Credit 9 | Stormwater Management | 1-5 |
| Credit 10 | Heat Island Reduction | 1 |
| Credit 11 | Solar Orientation | 1 |
| Credit 12 | On-Site Energy Generation | 1 |
| Credit 13 | On-Site Renewable Energy Sources | 1 |
| Credit 14 | District Heating and Cooling | 1 |
| Credit 15 | Infrastructure Energy Efficiency | 1 |
| Credit 16 | Wastewater Management | 1 |
| Credit 17 | Recycled Content in Infrastructure | 1 |
| Credit 18 | Construction Waste Management | 1 |
| Credit 19 | Comprehensive Waste Management | 1 |
| Credit 20 | Light Pollution Reduction | 1 |



Category 4: Innovation & Design Process

- 6 Possible Points



| | | |
|----------|-------------------------------------|-----|
| Credit 1 | Innovation in Design | 1-5 |
| Credit 2 | LEED Accredited Professional | 1 |

Total Possible Points = 106



- LEED-ND Certification Levels
 - Certified: 40-49 Points
 - Silver: 50-59 Points
 - Gold: 60-79 Points
 - Platinum: 80-106 Points

LEED-NC[®] Certification Process

A three step process:

- Step 1: Project Registration
 - LEED Letter Templates, CIR access, and on-line project listing
- Step 2: Technical Support
 - Reference Package
 - Credit Inquiries and Rulings (CIR)
- Step 3: Building Certification
 - Upon documentation submittal and USGBC review

LEED-ND Guidelines

Smart Location & Linkage

SLL Prerequisite 1: Smart Location Required

Intent

Encourage development within and near existing communities or public transportation infrastructure.
Reduce vehicle trips and miles traveled and support walking as a transportation choice.

Requirements

OPTION 1

Locate the project on an **infill site**;

OR

OPTION 2

Locate the project near existing or planned **adequate transit service** so that at least 50% of dwelling units and business entrances within the project are within ¼ mile walk distance of bus or streetcar stops or within ½ mile walk distance of bus rapid transit stops, light or heavy passenger rail stations and ferry terminals. In the case of planned service, show that the relevant transit agency has committed in a legally binding warrant that **adequate transit service** will be provided at or before the beginning of the transit agency's first service year after 50% of the dwelling units and/or businesses within the project are occupied and has identified all funding necessary to do so.

OR

OPTION 3

Locate the project near existing neighborhood shops, services, and facilities so that the project boundary is within ¼ mile walk distance of at least four, or within ½ mile walk distance of at least 6, of the diverse uses defined in Appendix A (p. 152). Uses may not be counted in two categories, e.g. an office building may be counted only once even if it is also a major employment center. A mixed use building containing several uses as distinct enterprises would count each as a separate use, but no more than half of the minimum number of diverse uses can be situated in a single building. A single retail store of any type (such as a big box retail store that sells both clothing and household goods) may only be counted once even if it sells products associated with multiple use types.

OR

OPTION 4

Locate the project within a region served by a Metropolitan Planning Organization (MPO) and within a transportation analysis zone for which MPO research demonstrates that the average annual home-based and/or non-home-based rate of **Vehicle Miles Traveled (VMT)** per capita is lower than the average annual rate of the metropolitan region as a whole. The research must be derived from transportation

Pilot Version: LEED for Neighborhood Development Rating System

is

... pilot program, project teams are encouraged to suggest replacement documentation that may be easier to provide that the items listed below, but still clearly verifies that the requirements have been met. The reviewers will evaluate the adequacy of the potential replacement documentation on a case-by-case

... the LEED submittal template, signed by the responsible party, declaring that the requirements have been met, and the following:

Submissions (Pre-review)

... is optional. If it is skipped, these items will be required at Stage 2.

...

... of the vicinity demonstrating that the project is located on an infill site.

... plan and/or map of the vicinity showing all relevant building entrances, transit stops, and walking routes to those stops.

... of walk distances between each dwelling unit or business entrance and the closest transit stop, and a calculation of the percentage of dwelling units and business entrances within the specified distances.

... or a brief narrative indicating the frequency and type of transit available.

... transit routes, provide documents from the relevant transit authority demonstrating that service will be instituted and the source of funding.

... A site plan and/or map of the vicinity showing the project's boundary and walking routes to any uses listed in Appendix A.

Pilot Version: LEED for Neighborhood Development Rating System
February 2007

7

LEED ND Development Timeline

- 2007: LEED for Neighborhood Development pilot program launches
- 2008: Public comment periods begin for post-pilot version of LEED for Neighborhood Development
- 2009: LEED for Neighborhood Development ballot and launch



LEED ND Pilot Program Guidelines

- Three tiers of program fees (pilot)
 - \$8,000 for 20 acres or fewer,
 - \$14,000 for 20 to 100 acres,
 - \$20,000 for projects larger than 100 acres.
- No minimum or maximum acreage set
- Projects outside of the US are welcome to apply
- April 6, 2007 was deadline to submit for pilot study

LEED-ND Pilot Projects

- 238 projects selected for pilot program in the US, Canada and Bahamas
- Smallest project: 0.17 acres; 912 Avarado, Los Angeles, CA
- Largest project: 12,800 acres; The Village at Galisteo Basin Preserve, Santa Fe, NM

LEED for Neighborhood Development Registered Pilot Project List

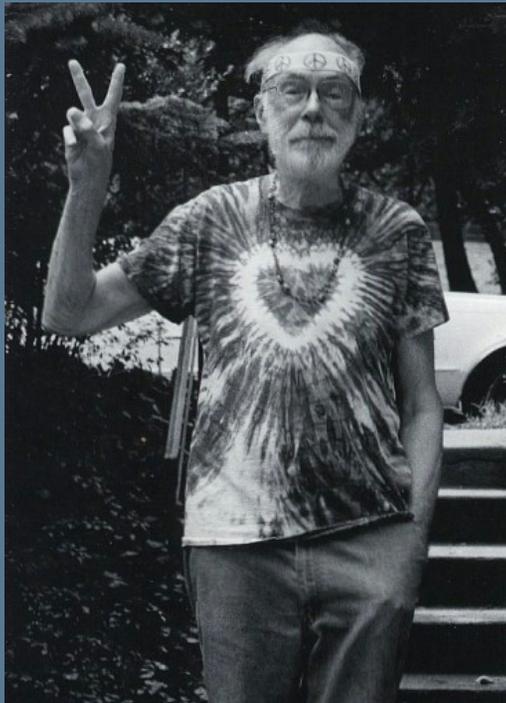
Total Number of Registered Pilot Projects: 238
 18 projects that have requested that they be kept confidential are not included on this list.
 *Includes financial and recipient pilot registration fees for those projects were partially or wholly covered by a grant from the Kresge Foundation.

| Project Name | City | State | Country | Acreage |
|--|---------------|-------|---------|----------|
| 100 North Eco-Park | Griggs | IL | US | 55.00 |
| 108 North State Street | Chicago | VA | US | 7.00 |
| 1812 N Moore Street | Roslyn | FL | US | 3.60 |
| 331 North Fashion Street | Plantation | CA | US | 35.00 |
| 55 Laguna | San Francisco | CA | US | 5.38 |
| 745 Chapel Street | New Haven | CA | US | 1.55 |
| 912 Alvarado | Los Angeles | CA | US | 0.17 |
| Alameda Landing | Alameda | TX | US | 84.00 |
| Aleida at Waters Edge | Alameda | RI | US | 68.50 |
| Alliance Town Center | Alameda | CA | US | 450.00 |
| Ampwin Locomotive Works | Alameda | DC | US | 33.00 |
| Arcostrum Place | Alameda | NY | US | 82.70 |
| Arts, Technology & Design Quarter | Alameda | CO | US | 4.98 |
| Aspen Club Redevelopment | Alameda | ID | US | 200.00 |
| Aspen Hollow | Alameda | NY | US | 4.90 |
| Atlantic Yards Development | Alameda | MD | US | 9.75 |
| Aventura (Formerly Crown Farm) | Alameda | CA | US | 22.00 |
| B Street West | Alameda | CA | US | 150.00 |
| Borealis Homes* | Alameda | MA | US | 1.87 |
| Barnett Place | Alameda | CA | US | 2.00 |
| Salawa Community | Alameda | VA | US | 8.55 |
| Belmar Seaport Village | Alameda | FL | US | 1,600.00 |
| Belvoir | Alameda | IL | US | 70.00 |
| Belvoir New Vision | Alameda | IL | US | 207.00 |
| Biscayne Landing | Alameda | FL | US | 9,555.00 |
| Breakfast Point | Alameda | FL | US | 157.00 |
| Brian | Alameda | CA | US | 18.05 |
| Canary Park | Alameda | CA | US | 505.00 |
| Canadon | Alameda | NJ | US | 148.00 |
| Canadon | Alameda | NC | US | 98.40 |
| CPB Rockcliff Redevelopment | Alameda | UT | US | 30.00 |
| City Creek Center | Alameda | CA | US | 1.34 |
| City of Six Grove Civic Center | Alameda | GA | US | 320.00 |
| Clifton Road Mixed Use | Alameda | NY | US | 20.00 |
| Columbia University Proposed Expansion | Alameda | CA | US | 57.00 |
| Comfields/Arroyo Seco Specific Plan | Alameda | CA | US | 49.75 |
| Criterion at Bedford | Alameda | MA | US | 17.00 |
| Croyal City Plan | Alameda | VA | US | 432.00 |
| Cumie Barracks | Alameda | AB | US | 15.50 |
| Cypress Village Station | Alameda | TX | US | 200.00 |
| Daybreak's Village Center | Alameda | UT | US | 195.00 |
| Decker Walk and WillowHOMES* | Alameda | MD | US | 21.68 |
| Delaware Addition | Alameda | CA | US | 47.00 |
| Deport Walk | Alameda | IL | US | 0.35 |
| Discover Business Park | Alameda | BC | US | 18.00 |
| Dockside Green | Alameda | CA | US | 1.82 |
| Doz Lagos | Alameda | CA | US | 4,000.00 |
| | | | | 15.00 |
| | | | | 644.50 |

“Do you want to build the last buildings of the 20th century, or the first buildings of the 21st ?”

Jonathan Rose

*President Jonathan Rose Companies LLC
and Rose Smart Growth Acquisition Fund*



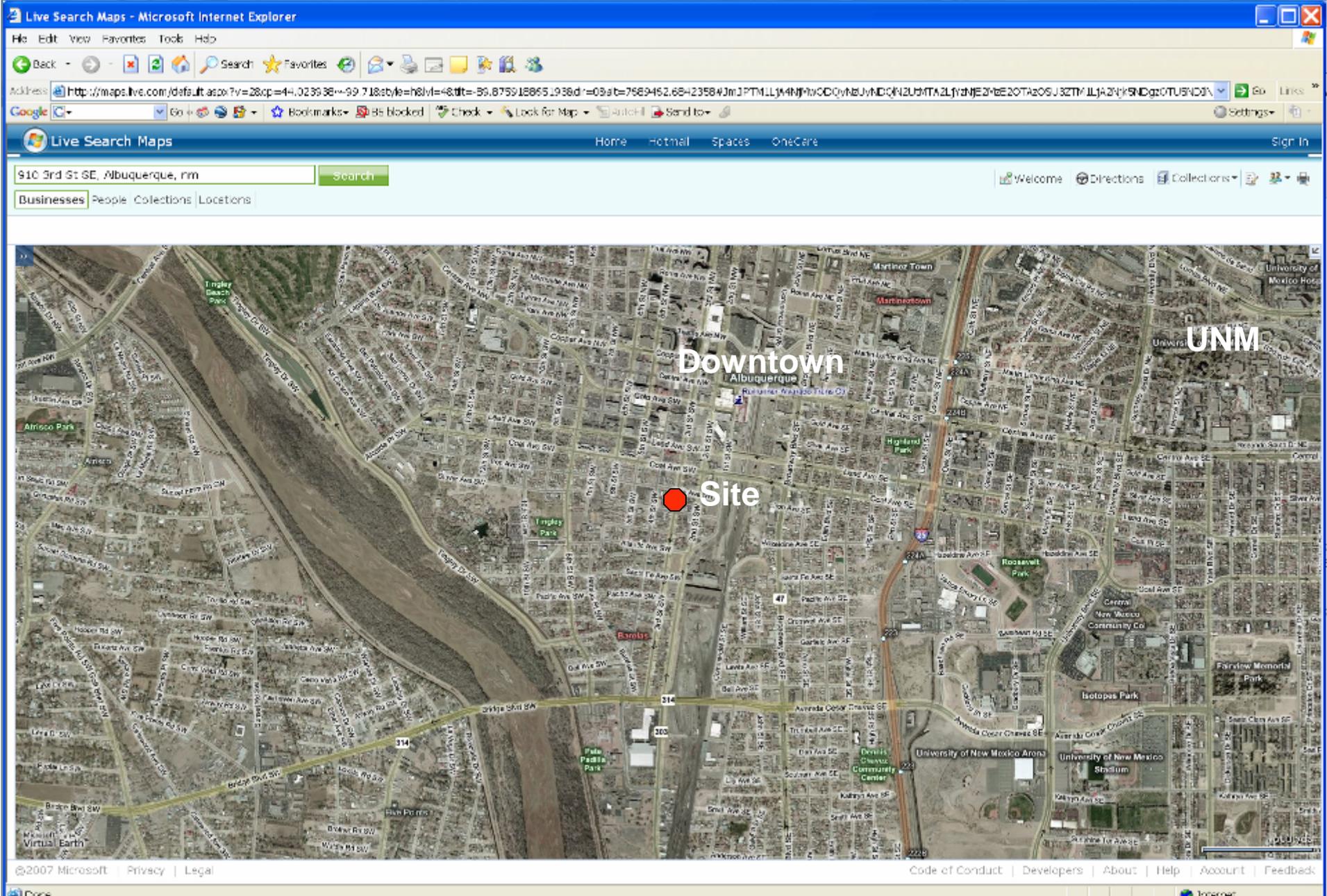


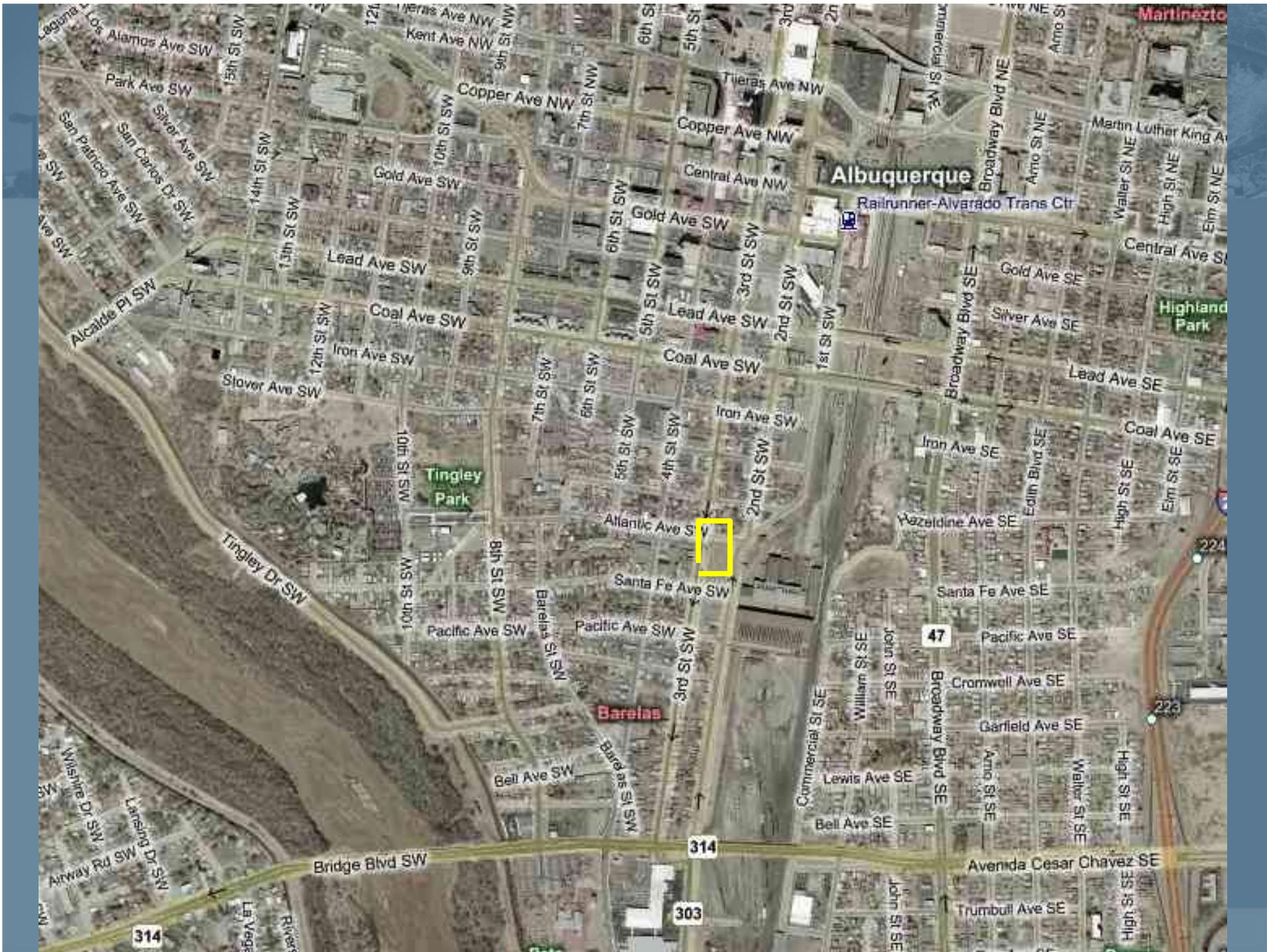
Barelas Homes

2007 New Mexico Infrastructure Finance
Conference

Louis Kolker, Greater Albuquerque Housing
Partnership

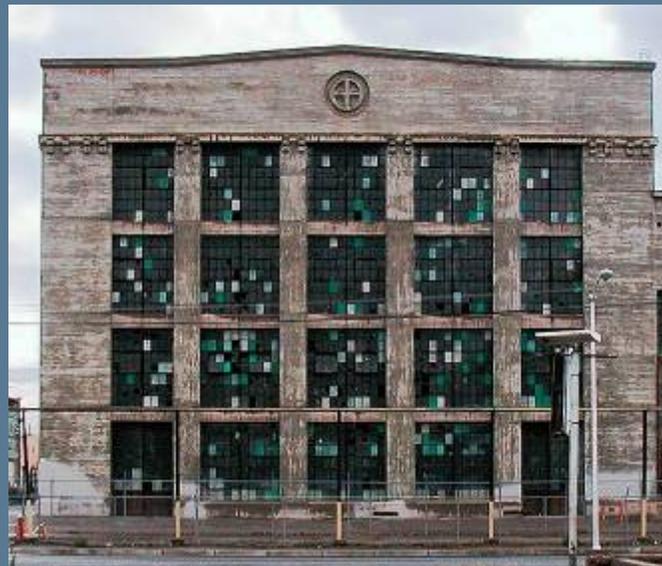
Site Location



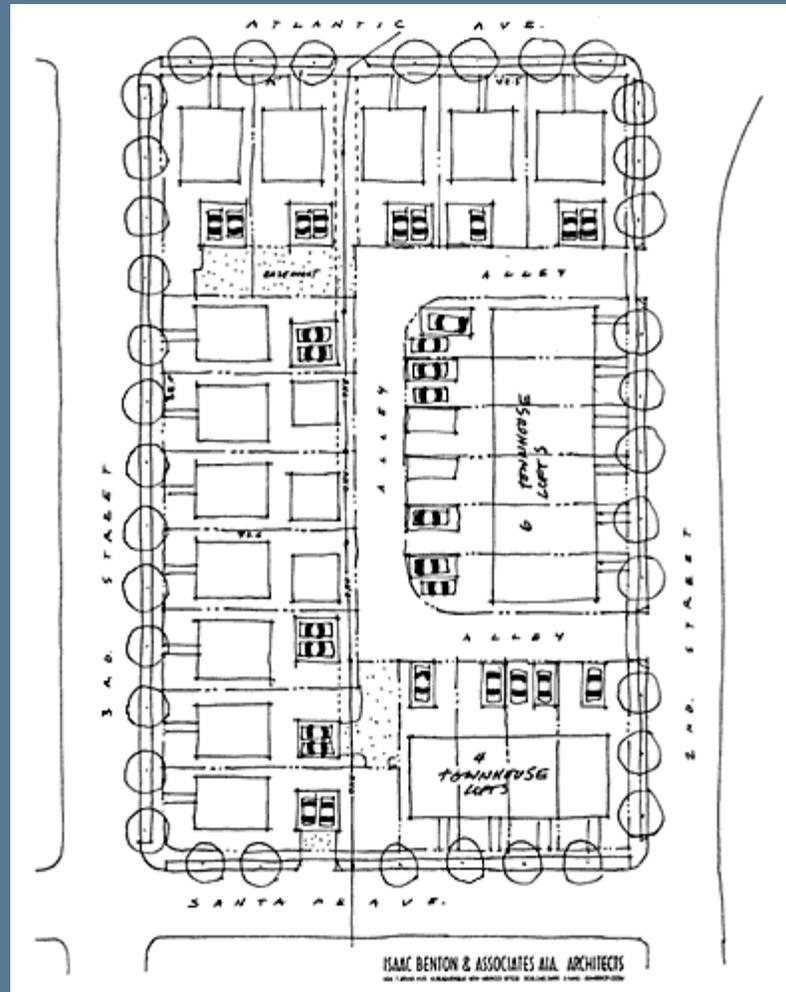




Barelas Community



Community Site Plan



Single Family Homes



1 STORY
2 BEDROOMS



1-1/2 STORY
3 BEDROOM



2 STORY - "A"
3 BEDROOM



2 STORY - "B"
3 BEDROOM

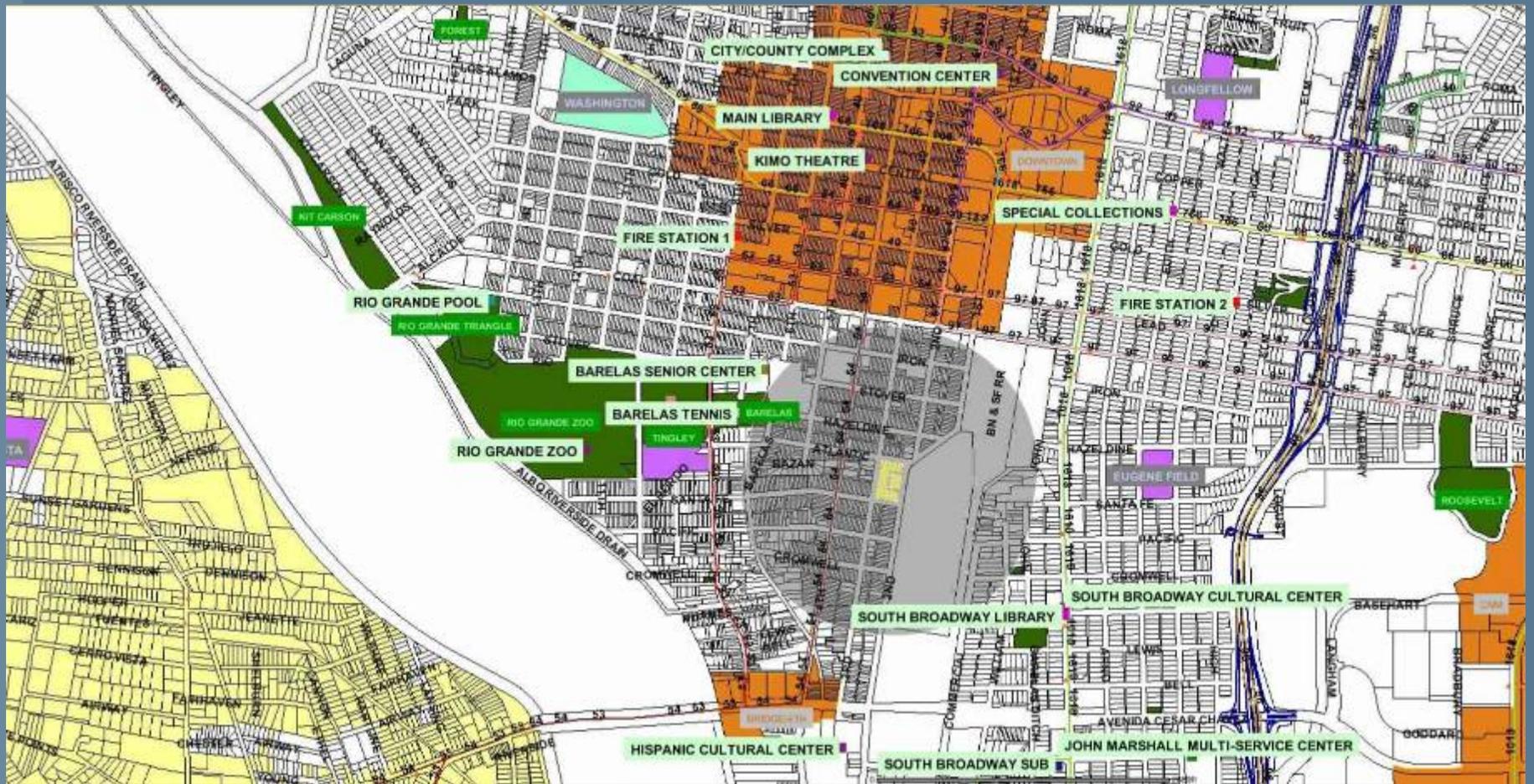
Townhomes



2ND EAST ELEVATION

BARELAS TOWNHOMES

Barelas Community



LEED for Neighborhood Development Pilot Project Checklist

Project Name:
Primary Contact:

Instructions: In the Points Earned column, enter "Yes," "No," or "Maybe" for prerequisites and the expected number of points earned for credits. For prerequisites with more than one compliance path, enter the compliance path option # in column E, in the row under the prerequisite's name.

| Points Earned | | | |
|---------------|---|---------------------------|--|
| 0 | Smart Location & Linkage | 30 Points Possible | |
| | Prereq 1 Smart Location | Required | |
| | Option #: | | |
| | Prereq 2 Proximity to Water and Wastewater Infrastructure | Required | |
| | Option #: | | |
| | Prereq 3 Imperiled Species and Ecological Communities | Required | |
| | Option #: | | |
| | Prereq 4 Wetland and Water Body Conservation | Required | |
| | Option #: | | |
| | Prereq 5 Farmland Conservation | Required | |
| | Option #: | | |
| | Prereq 6 Floodplain Avoidance | Required | |
| | Option #: | | |
| | Credit 1 Brownfield Redevelopment | 2 | |
| | Credit 2 High Priority Brownfields Redevelopment | 1 | |
| | Credit 3 Preferred Location | 10 | |
| | Credit 4 Reduced Automobile Dependence | 8 | |
| | Credit 5 Bicycle Network | 1 | |
| | Credit 6 Housing and Jobs Proximity | 3 | |
| | Credit 7 School Proximity | 1 | |
| | Credit 8 Steep Slope Protection | 1 | |
| | Credit 9 Site Design for Habitat or Wetlands Conservation | 1 | |
| | Credit 10 Restoration of Habitat or Wetlands | 1 | |
| | Credit 11 Conservation Management of Habitat or Wetlands | 1 | |
| | Neighborhood Pattern & Design | 39 Points Possible | |
| | Prereq 1 Open Community | Required | |
| | Prereq 2 Compact Development | Required | |
| | Credit 1 Compact Development | 7 | |
| | Credit 2 Diversity of Uses | 4 | |
| | Credit 3 Diversity of Housing Types | 3 | |
| | Credit 4 Affordable Rental Housing | 2 | |
| | Credit 5 Affordable For-Sale Housing | 2 | |
| | Credit 6 Reduced Parking Footprint | 2 | |
| | Credit 7 Walkable Streets | 8 | |
| | Credit 8 Street Network | 2 | |
| | Credit 9 Transit Facilities | 1 | |
| | Credit 10 Transportation Demand Management | 2 | |
| | Credit 11 Access to Surrounding Vicinity | 1 | |
| | Credit 12 Access to Public Spaces | 1 | |
| | Credit 13 Access to Active Public Spaces | 1 | |
| | Credit 14 Universal Accessibility | 1 | |
| | Credit 15 Community Outreach and Involvement | 1 | |
| | Credit 16 Local Food Production | 1 | |
| | Green Construction & Technology | 31 Points Possible | |
| | Prereq 1 Construction Activity Pollution Prevention | Required | |
| | Credit 1 LEED Certified Green Buildings | 3 | |
| | Credit 2 Energy Efficiency in Buildings | 3 | |
| | Credit 3 Reduced Water Use | 3 | |
| | Credit 4 Building Reuse and Adaptive Reuse | 2 | |
| | Credit 5 Reuse of Historic Buildings | 1 | |
| | Credit 6 Minimize Site Disturbance through Site Design | 1 | |
| | Credit 7 Minimize Site Disturbance during Construction | 1 | |
| | Credit 8 Contaminant Reduction in Brownfields Remediation | 1 | |
| | Credit 9 Stormwater Management | 5 | |
| | Credit 10 Heat Island Reduction | 1 | |
| | Credit 11 Solar Orientation | 1 | |
| | Credit 12 On-Site Energy Generation | 1 | |
| | Credit 13 On-Site Renewable Energy Sources | 1 | |
| | Credit 14 District Heating & Cooling | 1 | |
| | Credit 15 Infrastructure Energy Efficiency | 1 | |
| | Credit 16 Wastewater Management | 1 | |
| | Credit 17 Recycled Content for Infrastructure | 1 | |
| | Credit 18 Construction Waste Management | 1 | |
| | Credit 19 Comprehensive Waste Management | 1 | |
| | Credit 20 Light Pollution Reduction | 1 | |
| | Innovation & Design Process | 6 Points | |
| | Credit 1.1 Innovation in Design: Provide Specific Title | 1 | |
| | Credit 1.2 Innovation in Design: Provide Specific Title | 1 | |
| | Credit 1.3 Innovation in Design: Provide Specific Title | 1 | |
| | Credit 1.4 Innovation in Design: Provide Specific Title | 1 | |
| | Credit 1.5 Innovation in Design: Provide Specific Title | 1 | |
| | Credit 2 LEED® Accredited Professional | 1 | |
| | Project Totals (pre-certification estimates) | 106 Points | |
| | Certified: 40-49 points, Silver: 50-59 points, Gold: 60-79 points, Platinum: 80-106 points | | |



Questions?

HDR

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