U.S. Department of Transportation
Federal Transit Administration

“Going Green”
Public Transit and Sustainability

Elizabeth Martin, Community Planner
“Going Green”
Public Transit and Sustainability

• Climate Change & Vehicle Emissions
  
  *Alan Powell, Diesel and Mobile Source, US Environmental Protection Agency*

• Transit Supportive Land-Use
  
  *Thomas E. Low, AIA CNU LEED, Director and Guy Pearlman, RLA CNU, Project Manager, Duany Plater-Zyberk & Company*

• U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) Green Building Rating System
U.S. Green Building Council

- Member organization that includes corporations, governmental agencies, nonprofits and other organizations.
- Certifies sustainable facilities, homes, hospitals, schools, and neighborhoods.
LEED

- LEED is the USGBC’s Green Building Rating System for certifying green buildings
- Become the Industry standard for green building in the U.S.
- Method of scoring buildings to evaluate their level of “greenness”
LEED

- LEED has been adopted by 9 Federal agencies, 20 states, and 49 U.S. city and County governments as the “green standard”
- Over 30,000 LEED Accredited Professionals trained in the rating system and nearly 3,000 buildings on their way to certification/represents 8-10% of U.S. new construction
USGBC has 4 levels of the LEED Based Standard

- LEED Certified-lowest level of certification
- LEED Silver
- LEED Gold
- LEED Platinum-highest level of certification
LEED Address the Complete Lifecycle of Buildings

- Existing Buildings- Operations and Maintenance
- New Construction
- Homes
- Commercial Interiors
- Core and Shell
- Schools, Healthcare, Retail
- Neighborhood Development (in pilot)
Why Buildings?

• Buildings are one of the heaviest consumers of natural resources and account for a significant portion of the greenhouse gas emissions that affect climate change.
U.S. ENERGY CONSUMPTION

BUILDINGS 39%

INDUSTRY 29%

TRANSPORTATION 32%
U.S. Building Impacts

12% water use
39% CO₂ emissions
65% waste output
71% electricity consumption
Environmental Benefits:

• Enhance and protect ecosystems and biodiversity
• Improve air and water quality
• Reduce solid waste
• Conserve natural resources
Economic benefits:

- Reduce operating costs
- Enhance asset value and profits
- Improve employee productivity and satisfaction
- Optimize life-cycle economic performance
Average Savings of Green Buildings

- Energy Use: 30-50%
- Carbon Emissions: 35%
- Water Use: 40%
- Solid Waste: 70%
LEED-Neighborhood Development Pilot Projects - Transit

- Tucson Modern Streetcar
- McArthur BART Transit Village
LEED CERTIFIED TRANSIT PROJECTS

- GOLD: Santa Clarita, CA Transit Maintenance Facility
- GOLD: Charlottesville, VA Transit Station
- CERTIFIED: Corona Maintenance Shop and Car Washer-New York City Transit
- GOLD: Chicago Transit Authority Headquarters
- CERTIFIED: Interurban Transit Partnership- Grand Rapids, MI
- GOLD: CSU Transit Center- Ft. Collins, CO
GREEN FEATURES of 2 “GOLD” LEED CERTIFIED TRANSIT PROJECTS

• **Santa Clarita Transit Maintenance Facility** - use alternative fuels (CNG); straw bale exterior walls for the admin building; under-floor HVAC system; daylighting; recycled building materials

• **Charlottesville, VA Transit Facility** - “cool roof”; using materials that have high reflectance, and emittance reducing the need for using “cooling energy”; reduced operating costs by using a geothermal heat pump system
LEED CERTIFICATION STEPS

• Register Your Project
• Track Progress and Document Achievement
• Apply For Certification
Resources

• Visit www.usgbc.org