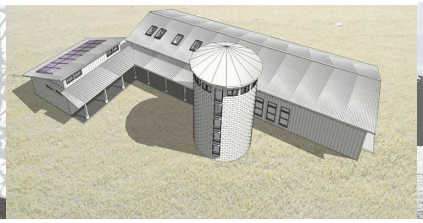
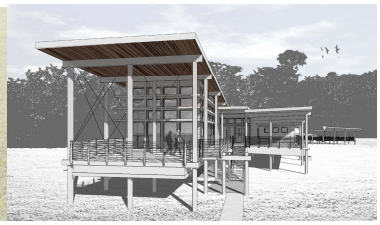
metro parks

Sustainable Features of the Three Nature Centers

Beaman Park Nature Center



Bells Bend Outdoor Center



Shelby Bottoms Nature Center

All Three Nature Centers

- Registered to be EarthCraft Certified upon completion
  - Site planning
  - Energy efficient building envelope and systems
  - Energy Star Certified
  - Water conservation
  - Indoor air quality
  - Resource efficient design and building materials
  - Waste management practices during construction
- Small footprint of buildings (3175 square feet and less) with maximum use of porches & outdoor space
- Designed to minimize site impact - location of each center on the edge of the Park to minimize disturbance to the natural areas
- Interpretive Plan developed before the buildings were designed to connect the centers, exhibits and programming to the land and the individual Park
- 20-25% fly ash in concrete mix
- Natural bio-Swales for rainwater run-off
- Low flow water closets with automatic flush sensors
- Water-less urinals in public restrooms (each saves approximately 40,000 gallons of water per year)
- Limited grass areas, no irrigation and use of only native (to the site) plant materials for landscaping
- Energy star appliances and equipment – refrigerator, dishwasher, copier, etc.
- Designing building envelopes, HVAC, lighting and other systems to maximize energy performance
- Low V.O.C. paints and sealants
- Long-lasting metal roof
- Light colored roof - to keep building cooler in the summer and reduces the “heat island effect”
- Minimal site lighting with multiple controls
- Natural day lighting for all public spaces
- Ceiling fans and operable windows for natural ventilation
- Fiber Cement Siding Material
- Passive solar design
- Erosion control site plan
- Tree preservation plan
- Low E double insulation glass for all windows
- Indoor fluorescent fixtures
- Demonstration site with the Cumberland River Compact’s Building Outside the Box (BOB) Program
- Buildings designed to be exhibits themselves – showcasing examples of sustainable design

Shelby Bottoms Nature Center

- Green Roof (extensive, shallow four inch growth media with drought resistant sedums)
    - Absorbs, retains, filters and stores precipitation
    - Storm water reduction (roof runoff eliminated or reduced)
    - Longer roof life (moderates temperature swings and protects roof from UV rays)
    - Energy savings (lower cooling costs in summer, lower heating costs in winter)
    - Insulating qualities will also help quiet the facility – sound insulation
    - Reduction of heat island effect
    - Improved air quality
    - Sequesters carbon dioxide
- Roof-rain water collection (Rain Chains) into rain-basins leading to bio-swale for rain treatment.
- Solar shade screens
- Center located next to existing entrance, parking lot, utilities and Shelby Park

Bells Bend Outdoor Center

- Photovoltaic cells on roof to supplement electric power
    - Energy generated will be approximately 4,400 kwh a year, which will pay for an additional 4,400 kwh a year through the NES Generation Partners program.
    - Over 25 years, 185,035 lbs of CO2, the leading greenhouse gas will be avoided.
- Center located on old home site
- Pervious concrete walks

Beaman Park Nature Center

- Geothermal Heat Pump for HVAC
    - Energy-efficient
    - Environmentally clean
    - Cost effective
- Pervious concrete walks
- Parking designed to minimize disturbance of existing trees through staggered parking between trees
- Center located on previously logged site near a state highway and on the edge of the Park
- Logs collected from the site to be used for mantle, lumber, bowls and more

Finishes at all Three Nature Centers

Plastic Laminate by Nevamar:

- Post Industrial recycle content – 1-2%
- Regional Materials – manufacturing plant within 500 mi range

Toilet Partitions by Comtec/Capitol:

- Pre-consumer recycled HDPE solid plastic goods – 100%; post-industrial recycled HDPE – 25%-70%.

Quarry Tile by American Olean:

- Recycled Content – 8.6%
- Regional Materials – two manufacturing plants for quarry tile within 500 mi range

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For more information about the new nature centers contact Sandy Bivens with Metro Parks at the Warner Park Nature Center, 352-6299 or visit the Parks website at www.nashville.gov/parks

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