

## OCTOBER 2010 STORMWATER SOLUTIONS TOUR - GREEN INFRASTRUCTURE PROJECTS

### JOHNSON COUNTY, KANSAS

#### Stop 1: Johnson County Extension Office

#### Stop 2: Southlake Technology Park

**Original Owner/Developer:** Zimmer Companies

**Current Owner:** Reit Management & Research LLC

**Date of Development:** 1988

**Unique Features/Tenants:** First major green infrastructure business park in Metro with 10 lakes, wetlands, native landscaping, and lake aeration systems; water quality has been monitored annually since 1988. Original office for Garmin; currently world headquarters for Applebee's, Deluxe Check, Sprint Cellular National Operations Center, EcoWorks, Shafer, Kline and Warren Engineers, etc. Applebee's is a LEED Silver building with native landscaping and various BMPs designed by BNIM. EcoWorks was the first speculative LEED certified building in Kansas.

**Consultants:** George Butler Associates, Inc.; Woodward-Clyde (URS); Patti Banks Associates; Tetra Tech EMI; and many others over the past 22 years.

#### Stop 3: Coon Creek Watershed Improvements (See brochures)

**Owner/Sponsor:** City of Lenexa, Kansas

**Date of Improvements:**

**Unique Features:** Several constructed wetlands with rock gravity dams and ACB shelves on the main stem and tributary to intercept sediment and nutrient loads; two are located upstream from Lake Lenexa. Two major stream restoration reaches; play field infiltration gallery; paved trail system; and pervious parking area. Trail system was designed to integrate wetlands and minimize environmental impact on stream.

**Consultants:** Black & Veatch; Patti Banks Associates, Intuition and Logic; Peridian Group; Geotechnology, Inc.; Tetra Tech EMI.

#### Stop 4: Lake Lenexa and Blackhoof Park (See Brochures)

**Owner/Sponsor:** City of Lenexa, Kansas

**Date of Improvements:** 2001 through 2009

**Unique Features:** Thirty-five acre lake with 2 story fisheries and wildlife habitats. Overall design approach was to create a functioning regional stormwater detention system, and provide desired park programming (including parking, restroom boat launch, trails, fishing piers, boardwalks, playground and shelter) while minimizing environmental impact on existing woodland habitats (including endangered animal habitat). Aesthetic features such as wetlands and waterfalls all serve a functional purpose of improving water quality and habitat.

**Consultants:** Black & Veatch; Patti Banks Associates; Tetra Tech EMI; Peridian Group; Geotechnology, Inc.; Arch E Texture; Gastinger Walker Harden Architects

**Stop 4: Monticello Road Bridge and Stormwater BMPs**

**Owner/Sponsor:** City of Lenexa, Kansas

**Date of Improvements:** 2006 through 2008

**Unique Features:** Curved bridge crossing over Coon Creek with concrete walls and art reliefs. Various BMPs for treating all road and bridge drainage including engineered swales; bioretention cells; hydrodynamic separators; constructed wetlands and drainage systems; and native landscaping.

**Consultants:** Wilson & Company; Tetra Tech EMI; Patti Banks Associates

**Stop 5: Manchester Park (See Brochures)**

**Owner/Sponsor:** City of Lenexa, Kansas

**Date of Improvements:** 2006 through 2008

**Unique Features:** Neighborhood/School Park with bioengineered stream restoration, constructed wetland, paved trails, and native plantings. This is a great example of how public involvement can increase success and create partnerships within the community to help do something unique and different. Native plantings were utilized to help reduce fertilizer run-off from the adjacent homeowners.

**Consultants:** Black & Veatch; Patti Banks Associates; Tetra Tech EMI; Bartlett & West Engineers

**Stop 6: Prairie Star Parkway**

**Owner/Sponsor:** City of Lenexa, Kansas

**Date of Improvements:** 2004 through 2007

**Unique Features:** Bridge over Mill Creek and railroad with divided roadway and roundabouts from Renner Road to K-7 Highway. Constructed wetland systems were installed to treat roadway runoff and medians/right-of-way were planted with native landscape plantings. Several bioretention cells, wetland mitigation systems, wood duck nesting structures and other wildlife habitat, and paved trails were installed. The wetlands were transferred to the Johnson County Park and Recreation District as part of the Mill Creek Regional Greenway System. Native plantings along the road become a great example of "how to" and "how not to" install native plant material, from a purely technical standpoint of seed mixes as well as how to design the stands to maximize public acceptance.

**Consultants:** TranSystems; HNTB; Patti Banks Associates; Tetra Tech EMI; URS

**Stop 7: Herman Laird Park**

**Owner/Sponsor:** City of Shawnee, Kansas

**Date of Improvements:** 2007 through 2009

**Unique Features:** This is a flood control project funded by the Johnson County Stormwater Management Fund that also provides a Neighborhood/School Park with bioengineered stream restoration, constructed wetlands, pedestrian bridge, and native plantings.

**Consultants:** Browning Environmental Solutions, Inc. ; The Watershed Institute, Inc.; Wild Horse River Works

**Stop 8: Antioch Park (See Brochure)**

**Owner/Sponsor:** Johnson County Park and Recreation District

**Date of Improvements:** 2006 through 2008

**Unique Features:** Antioch Park is the oldest county park within the District. Two lakes were restored to eliminate chlordane contamination; with new principal spillways, boardwalk, constructed wetlands, stream restoration, aquatic habitats, diffused lake aeration systems, and new playground facilities.

**Consultants:** Bowman Bowman Novick, Inc.; Tetra Tech EMI

**Stop 9: Johnson County Community College (See Brochures)**

**Owner/Sponsor:** Johnson County Community College

**Date of Improvements:** 2009 through 2010

**Unique Features:** As part of the American Reinvestment Act, JCCC received a grant to design and construct a natural storm water treatment system for approximately 22 acres of paved parking. Green infrastructure installed include: bioretention cell, rain garden, engineered swale, Storm Treat units, vegetated submerged wetland, detention basin, pervious sidewalks, tree/shrub screen, native plantings, and new experimental wick drains.

**Consultants:** Bowman Bowman Novick, Inc.; Burns & McDonnell