



ROANOKE PARK

Honoring the Past, Planting the Future

MASTER PLAN PROGRESS REPORT

AND ECOLOGICAL RESTORATION MASTER PLAN

July 23rd, 2013



ROANOKE PARK MASTER PLAN PROGRESS

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About this Master Plan Progress Report and Ecological Restoration Master Plan

This progress report includes by reference the 2011 Roanoke Park Master Plan approved by the Board of Parks and Recreation Commissioners of Kansas City on April 26th, 2011.

The goal of this Progress Report is to show the projects in accordance with the 2011 Master Plan that have been completed as of the date of this report and to detail upcoming project yet to receive funding or in some cases, yet to be planned.

Also included is an Ecological Restoration Master Plan for Roanoke Park. This adds a great deal of detail to the 2011 Master Plan which outlined the history of Roanoke Park as an urban nature park and preservation of nature, and reported on the community support for the park continuing that role.

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MASTER PLAN CONCEPT

The Master Plan Design Principles in the 2011 Master Plan are repeated below. The balance of this document will be organized into sections relating to those principles.

As indicated in the 2011 Master Plan, the conceptual nature of the Master Plan allows for design flexibility as projects are actually designed and developed.

As an example of this flexibility, the Hiking/Biking/Nature Trails constructed in the park by Earth Riders Trails Association (officially completed June 1, 2013) varied from the route shown in the Master Plan. The actual trails constructed are more extensive in some areas and less extensive in others. The same design flexibility has been applied to the sidewalks completed so far.

ROANOKE PARK MASTER PLAN DESIGN PRINCIPLES

Connectivity

Connectivity to the park from the surrounding neighborhoods

- ▶ *Vehicular Gateways*
- ▶ *Pedestrian Gateways*
- ▶ *Staircases*

Connectivity within the park

- ▶ *Sidewalks – closing the loops*
- ▶ *Hiking Path – connecting with nature – educational opportunities*
- ▶ *Crosswalks – safe and secure road crossings*

Roads

Karnes Boulevard

- ▶ *Various Methods for traffic slowing*
 - *Bike Paths*
 - *Road Narrowing*
 - *Road surface change at crosswalks (brick pavers)*

Roanoke Boulevard

- ▶ *Could be closed for community events*
- ▶ *Historic Street should be celebrated*

Lighting

- ▶ *Illuminate Bluffs in SW corner of Karnes and Roanoke*
- ▶ *Elegant street lighting along Karnes and Roanoke*
- ▶ *Path lighting (low level lighting – 42" and below)*

Sports District

- ▶ *Consolidation of "active" amenities to a central location*
- ▶ *Move tennis courts to allow for other uses (larger playground and rain garden)*
- ▶ *Utilize existing parking*
- ▶ *Develop organized activities with community center*

Playgrounds

- ▶ *Locations good – updates needed*
- ▶ *Water spray-mist/play area*

Rain Garden

- ▶ *Opportunity to showcase on-site water collection*
- ▶ *Water run-off control*

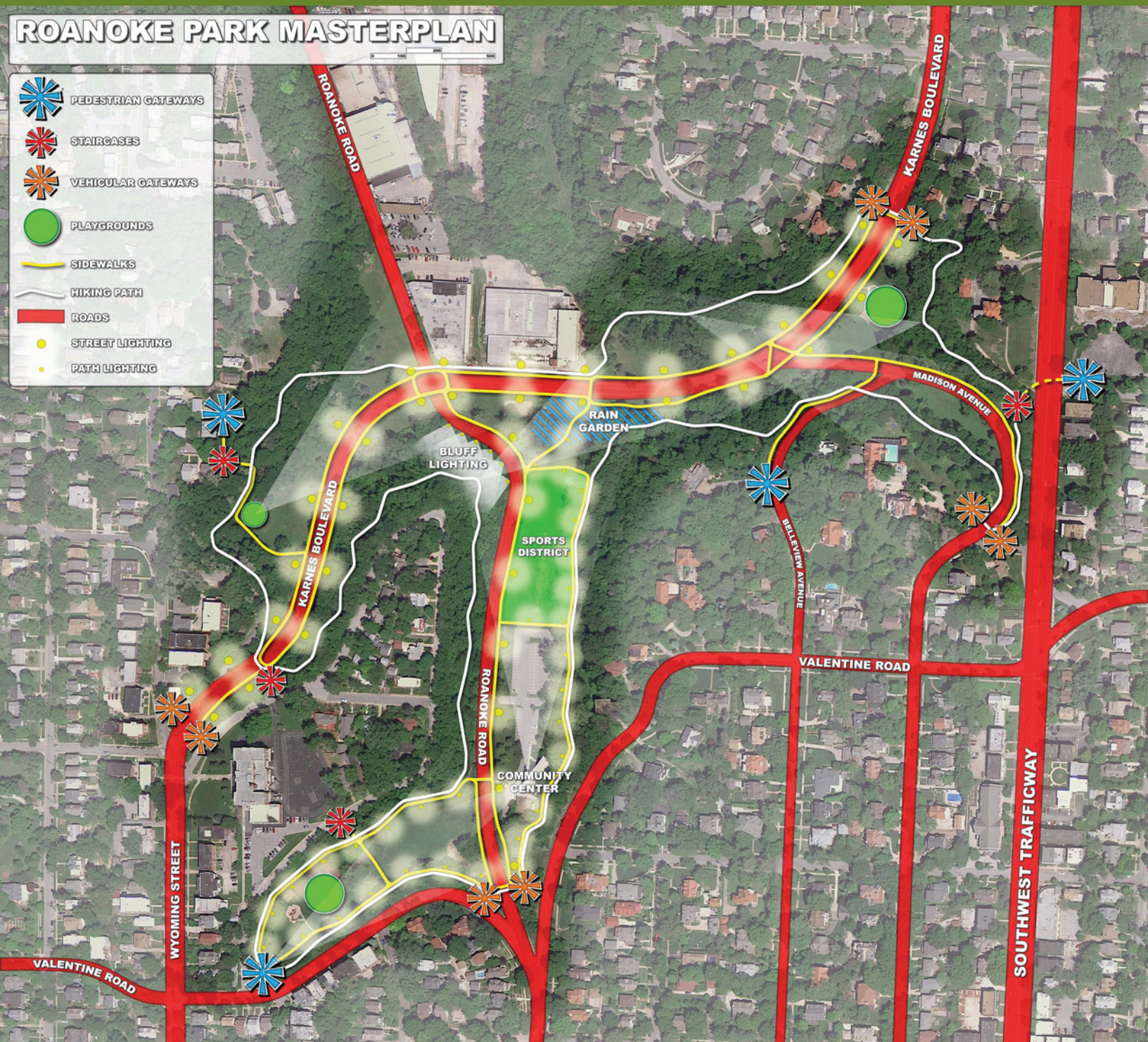
View Corridors

- ▶ *Quiet places to view the park from within the park*

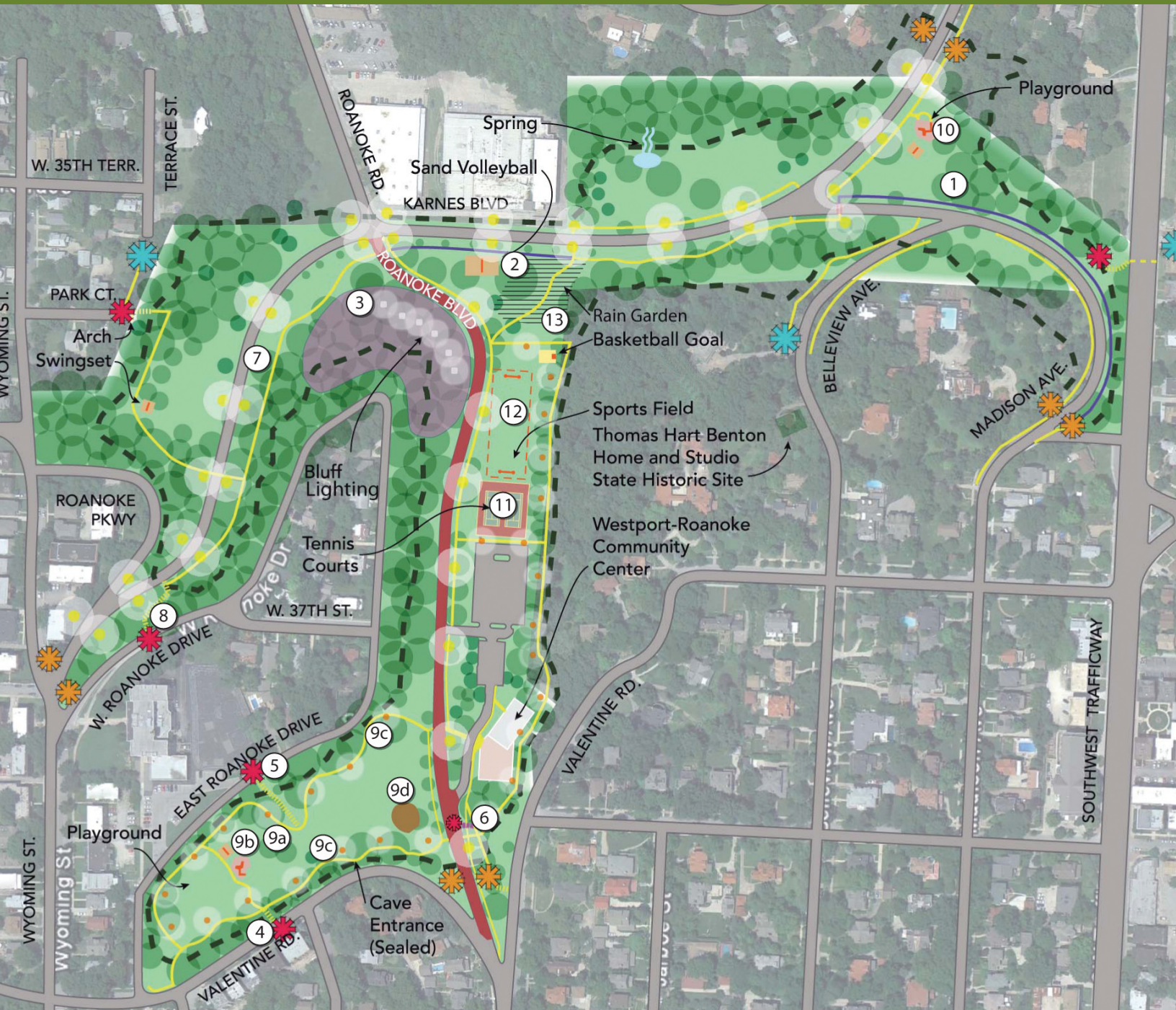
Signage

- ▶ *Location with view informative vista features (bluff age, natural springs, seepage areas, etc)*
- ▶ *Educational*
 - *Plants*
 - *History*

THE 2011 MASTER PLAN DRAWING

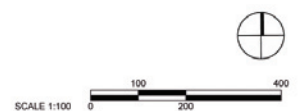


MASTER PLAN PROPOSED CAPITAL IMPROVEMENTS – 2013



LEGEND

- | | |
|---------------------------------|----------------------|
| PEDESTRIAN GATEWAYS | HIKING PATH |
| STAIRCASES | ROADS |
| VEHICULAR GATEWAYS | STREET LIGHT |
| SIDEWALKS | PATH LIGHTING |
| COMPLETED SIDEWALK IMPROVEMENTS | IN PROGRESS (STAIRS) |



CONNECTIVITY

Sidewalks and Staircases

①

Madison Avenue Sidewalk (COMPLETED)

- ▶ Construct new sidewalk from 36th and Madison, down around to Madison and Karnes (approx. 1,000 LF)



Additional sidewalk improvements proposed for the south end (NOT COMPLETED)

- ▶ At 36th and Madison, the existing grade may require a couple steps and a handrail
- ▶ Crosswalk at 36th Street
- ▶ Crosswalk across Madison at Karnes
- ▶ Construct curb ramp and sidewalk on south side of Madison to connect to the existing walk (approx. 100 LF)

②

Sidewalk in area of volleyball court (COMPLETED)

- ▶ Remove existing, deteriorated asphalt walk and install/construct new sidewalk (approx. 300 LF)
- ▶ Construct new sidewalk along Karnes north of volleyball court

④

Improve existing steps from Valentine Road (Volker) into South Meadow

- ▶ Construct concrete landing at top of steps and crosswalk to cross street
- ▶ Install decorative limestone columns at existing concrete steps (two at the bottom and two at the top)
- ▶ Remove existing handrails and install decorative wrought iron handrails
- ▶ Pedestrian lighting

⑤

Improve steps from East Roanoke Drive into South Meadow

- ▶ Install decorative limestone columns at existing concrete steps (two at the bottom and two at the top)
- ▶ Remove existing handrails and install decorative wrought iron handrails
- ▶ Pedestrian lighting



Needing new handrails, pedestrian lighting and decorative columns.

⑥

New steps from Valentine Road (Roanoke)
Access Steps into park (COMPLETE –
Current PIAC Funding)

- Construct new sidewalk and lookout above,
and new limestone steps down into park



Additional stairway improvements proposed
(NOT COMPLETED)

- Longer lasting and more aesthetic stonework
abutting stairs. Restoration plantings at landings.



⑦

Sidewalk on Karnes Blvd. south of
Roanoke Blvd.

- Remove existing deteriorated concrete walk
that is at the curb and construct new side-
walk away from street (approx. 400 LF)
- Ecological Restoration 15' both sides of sidewalk
where euonymus wintercreeper infestation is pres-
ent. Wooded area only. (approx. 13,000 SF)
- Crosswalk across Karnes near south terminus
of above sidewalk incorporating traffic calm-
ing (speed hump, flat top speed hump and/
or surface change with brick pavers)

⑧

Improve existing steps from Karnes Blvd.
to East Roanoke Drive

- Install new wrought iron handrail
- Lighting



⑨c

South Meadow Sidewalk

- Remove existing deteriorated asphalt walk and
construct new sidewalk loop around meadow

Hiking Trails

Singletrack hiking / biking / nature trails were constructed on Roanoke Park between April 2011 and June 2013 under the leadership of Earth Riders Trails Association trail steward Brett Shoffner.

This public amenity was added to Roanoke Park using an all volunteer work force, freeing up PIAC and other funds to be directed to other necessary Roanoke Park improvements.

In concert with volunteer shrub honeysuckle removal, the trails have increased the utility of

Roanoke Park, allowing visitors to enjoy the park's wooded acres (previously almost impenetrable) either on a nature hike, a dog walk or a mountain bike.

Roanoke Park's model of ecological restoration and trailbuilding is working to bring people together and get people out into underutilized parks. Similar efforts are underway in Kessler Park in Kansas City, MO and Rosedale Park in Kansas City, KS crediting Roanoke Park as inspiration.



"...Yesterday afternoon my family walked the trails for the better part of two hours. We had a blast. Here we sit minutes from downtown but also just a few hundred yards from an incredible nature escape. Thank you."
- Brandon Boulware, May 2013



LIGHTING

③

Feature/Bluff lighting at Karnes and Roanoke Blvd

- ▶ Install new feature/bluff lighting of rock outcroppings at SW corner of Karnes and Roanoke Blvd.



Path lighting on sidewalks (not numbered on map)

- ▶ Install new low path lighting along steps and selected stretches of sidewalks

PLAYGROUNDS

9b

South Meadow Playground

- ▶ Remove existing deteriorated playground equipment and install new playground area more in center of the new loop walk

10

North Karnes Playground

- ▶ Remove existing and install new playground

SPORTS DISTRICT

9a

South Meadow Tennis Court

- ▶ Remove existing tennis court and relocate to proposed location north of community center, see item 11

9d

Baseball Diamond - South Meadow

- ▶ Install new backstop and small bleacher
- ▶ Rework infield

11

New Tennis Court

- ▶ Construct tennis court in new location

12

New Sports Field

- ▶ Construct sports field in somewhat new location

13

Basketball Court

- ▶ Improve existing basketball court

ECOLOGICAL RESTORATION MASTER PLAN



ECOLOGICAL RESTORATION MASTER PLAN



Priorities and Descriptions *(Restoration and Maintenance occurring over ten years)*

- 1 - 2012 Seeded Areas
 - 1a - Valentine Slope
 - 1b - Volker Slope Glade
 - 1c - Roanoke Drive Point Glade
 - 1d - WRCC Bio Swale
- 2 - Expand and Add Glade Areas, Grading into Open Woodland
 - 2a - Expand Volker Slope Glade
 - 2b - Wyoming Point Glade
 - 2c - South Entrance Cliff, Pollinator Walk
- 3 - Coleman Spring and Wet Meadow
- 4 - West of the Bricks
- 5 - West Roanoke Drive to Karnes
- 6 - Volleyball Rain Garden
- 7 - Smaller Springs, Plus
 - 7a - Volker Spring, plus all wooded areas north and east of Park Court Arch and Staircase to park boundary.
 - 7b - Coleman Entrance Spring, plus all park property north and east of this spring.
- 8 - Coleman Slope and Devil's Dip Slope
 - 8a - Coleman Slope (excluding spring and wet meadow areas 7b and 3)
 - 8b - Devil's Dip Slope
- 9 - Roanoke Parkway Slope, all wooded areas south of Park Court Arch and Staircase and below Roanoke Parkway.
- 10 - Southwest Meadow Slopes
 - 10a - South of Southwest Meadow
 - 10b - North of Southwest Meadow, including areas adjacent north staircase.
- 11 - Community Center Slope

Roanoke Park's history and present as an urban nature park

At the doorsteps of the Volker, Coleman Highlands, Roanoke and Valentine neighborhoods exists the hidden jewel of Roanoke Park. This park has held a unique position since the early days of the Kansas City Missouri Parks & Boulevard System as a “beautiful preservation of wooded ravines lined with rugged cliffs”. The recently built hiking / biking / nature trails have allowed many more people to explore the “bit of wilderness” passed down to us on the slopes of Roanoke Park.

Unfortunately the “wilderness” park visitors are seeing is in many cases significantly degraded by invasive species. While volunteer efforts to remove shrub honeysuckle have been important and in many areas quite successful, efforts to replace non-native invasives with native alternatives have not kept pace. The winter-creeper blanketing many acres of Roanoke Park's slopes stubbornly remains. It inhibits natural forest regeneration and precludes the successful establishment of the native forest ground cover that existed in years past. Many pockets of extant native plant communities exist but in all cases they are under threat from encroaching non-native invasive species.

“Ecological Restoration” included in 2011 Master Plan

The above quotes were featured in the Master Plan as historical evidence of the natural character of Roanoke Park before it's creation (~1907) and after (1914/1920). The Master Plan also reported on the community support for the park continuing that role. The efforts to “reclaim the park” began in 2010 with volunteer efforts to cut back the non-native invasive shrub honeysuckle, a plant afflicting nearly all of Kansas City's parks and green spaces, and discussions of what native plants were present in the park before the honeysuckle took over. Therefore the goal of Ecological Restoration is intimately woven into the effort to “honor the past and plant the future” of Roanoke Park.

“This property should be held as a bit of wilderness, which is now its charm, and which would be entirely lost if attempts were made to finely finish any part of this valley... In the old quarry west of Roanoke Ave. and north of 38th St., the very fine spring there should be developed; a pool and a modest water garden.”

— Park Board report, 1907

“ROANOKE PARK. This park is a beautiful preservation of wooded ravines lined with rugged cliffs, in the western section of the City. It was entirely acquired by deeds of gift from the South Highlands Land and Improvement Company and others, who had caught the spirit of conserving nature's beauty before it became marred, and of the resulting enhancement in value of nearby property.”

— Souvenir guide to The Parks and Boulevard System of Kansas City, Missouri. Board of Park Commissioners. 1914, reprinted 1920



1911 postcard, soon after the park's creation.
Source: Kansas City Parks and Recreation Archives

Overall Ecological Restoration Strategy for Roanoke Park

In order to Honor the History of Roanoke Park we must Plant the Future to maximize the ecological richness of the slopes of Roanoke Park for the benefit of park neighbors and visitors. The benefits are realized each time a park visitor notices a native bloom, interesting leaf, chirping bird or animal in the woods. More tangibly, ecological restoration will contribute to a healthier urban forest within the park and real dollar benefits in terms of energy savings, CO₂ sequestration, air quality improvement, storm water abatement and enhanced property values. The i-Tree reports generated as part of the 2012 Tree Inventory assigned **\$153,061 in Annual Benefits** to the trees in the Inventory, and those weren't even all the trees in the park.

Ecological Restoration Zones are defined below, covering the wooded slopes of Roanoke Park (non-mowed areas). Kansas City Missouri native species shall be favored in all ecological restoration due to their historical appropriateness, ability to sustain local insects, birds and wildlife, and long term

sustainability once established. Missouri Native species not historically native to Kansas City may also be used sparingly. **The predominant natural community to which the slopes of Roanoke Park should be managed is an Open Woodland standard** as defined below. Areas of Glade, Spring and Wet Meadow natural communities also exist within the park. The topography of the park lends itself to a great diversity of plant and tree species being represented in the park. The slopes range from high and dry to low and wet, and from sunny south facing glades to shady north facing woods. This diversity is mirrored in the insect, bird and animal species found in the park. To preserve and enhance this diversity in a park within the urban core, accessible to so many park neighbors and visitors is a goal worth investing in. **City, state, corporate and private funding shall be sought to accomplish this goal with the help of ecological restoration contractors and volunteers.**



One of two known patches of trout lilies in Roanoke Park. This spring ephemeral relies on ants to carry its seeds into the ground. (Ecological Restoration Zone 1a)

Defining “Native” in Roanoke Park

Kansas City Missouri Native plants shall be defined as those existing historically within Jackson County Missouri or up to two adjacent counties away, including metro area counties in Kansas. The USDA plants database county level maps can be used to make this determination. Almost all plants and trees used in ecological restoration efforts should be Kansas City Missouri Native species. Seed and plant sources should be of ecotypes native to our region whenever commercially available (Missouri Yellow Tag for example).

Missouri Native plants shall be defined as those existing historically within the state of Missouri. The USDA plants database state level maps can be used to make this determination. If not historically native to Jackson County or Northwest Missouri, these species should be used very sparingly. Beautyberry is an example that may be included in Spring area plans, but should not be planted widely. Given the long term trends of climate change, selecting plants native to further than two counties away to the south is more acceptable than from a similar distance to the north.

Open Woodland in Roanoke Park

A Missouri Native Open Woodland standard is desired for most of the slopes of Roanoke Park, excluding Spring, Wet Meadow and Glade areas. This standard shall be defined within Roanoke Park as including from the ground up: a forest ground level free of non-native invasive weeds and rich in spring ephemerals, widespread juvenile native tree seedlings, native shrubs used strategically to hide unsightly features, provide screening or divide trails, and a healthy canopy of mature trees. Species growing under 3-4’ shall be favored for the forest ground level to maintain open sight lines within the wooded area. Open sight lines are favored to the extent

necessary to enhance feelings of personal safety and to allow viewing of cliffs and bluffs by pedestrians and trail users, but not to the extent that all cliffs and bluffs should be visible from extreme distances or to people in cars. Taller species may be allowed strategically as noted above or at the edge of the wooded areas where more sunlight will naturally make things grow taller but should not occupy more than 50% of the woodland edge. (An unbroken line of screening shrubs should not be allowed to develop except below Southwest Trafficway.)

To achieve the Open Woodland standard, ecological restoration contractors and volunteers shall work toward the removal of all wintercreeper, shrub honeysuckle, Japanese honeysuckle and sweet autumn clematis and all other non-native invasive plants. Control annual / biennial weeds in open and edge areas. Control garlic mustard throughout. Control smaller gauge male/female and larger female Ailanthus trees to reduce Ailanthus numbers over the long term. Foster growth of spring ephemerals already existing such as mayapples, trout lilies and Solomon seal. Seed/plant other spring ephemerals such as dutchman’s breeches, goldenseal and trillium sessile along with perennial shade wildflowers, sedges and grasses. Establish roundleaf ragwort in dry shade areas and wild ginger in wet shade areas.

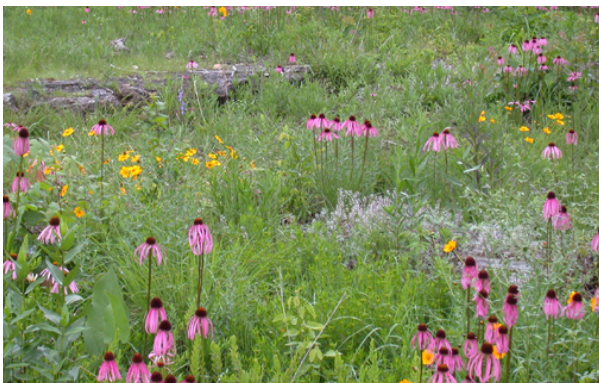
Based on the results of the 2012 Tree

Inventory, the Open Woodland areas should be managed toward the establishment of more oaks and fewer Ailanthus. Reduce numbers of Norway Maple and Siberian Elm. Maximize diversity of native trees to protect against future blights or borers. Plant understory species such as Flowering Dogwood, Serviceberry, Buckeye, Blackhaw and Paw Paw currently missing or uncommon in the park. Already dominant species need not be planted (Hackberry, Redbud, American Elm, Basswood and Hophornbeam).

Glades in Roanoke Park

Limestone Glades are areas of full sun and thin rocky soil overlaying limestone. A **Missouri Native Glade standard** is desired for a few small areas of Roanoke Park: zones 1b, 2a, 2b, and 2c detailed below. This standard shall be defined within Roanoke Park as including drought tolerant native grasses and wildflowers, favoring species growing under 3' in height. Species growing to 4' may be allowed 4' or more from trails or glade edges. The Kansas City Wildlands sites Rocky Point Glade and Blue River Glade are to be used as reference.

To achieve the Glade standard, ecological restoration contractors and volunteers shall work toward the removal of all wintercreeper, shrub honeysuckle, Japanese honeysuckle and sweet autumn clematis and all other non-native invasive plants. Control annual / biennial weeds such as mullein and prickly lettuce in open and edge areas. Seed/plant dry prairie/glade species of grasses and wildflowers. Do not exceed 50% grass seed in any seed mixes used.



Area glades under the care of Kansas City Wildlands such as Blue River Glade and Rocky Point Glade can serve as a model for the smaller glades in Roanoke Park. (photo © Missouri Botanical Garden, not taken in Roanoke Park)

Springs / Wet Meadows in Roanoke Park

Roanoke Park is unique in the Kansas City Missouri park system in containing a number of constantly flowing natural springs: within zones 1d, 7a, 7b, and 10a detailed below. Springs allow the planting of species not suitable elsewhere in the park. Plantings shall be used strategically to allow views of the spring sources from adjacent trails and to provide bird and wildlife habitat. Wet Meadows shall be fostered in soak in areas below the springs (excluding 10a). Wet Meadows can contain grasses and wildflowers growing to 4'. Tree saplings and shrubs should occur within Wet Meadows very sparingly in order to maintain open sight lines.

To achieve the Spring and Wet Meadow standard, ecological restoration contractors and volunteers shall work toward the removal of all non-native invasive plants. Control giant ragweed and hemlock in wet areas. Seed/plant in wet prairie / wetland species of grasses and wildflowers. Use shrubs such as buttonbush and an occasional beautyberry.



Roanoke Park's bluffs and cliffs are home to a variety of native ferns.

ECOLOGICAL RESTORATION ZONES, in priority order:

All slopes of Roanoke Park currently wooded and not mechanically mowed are to be considered Ecological Restoration Zones on their way to either the Open Woodland, Glade or Wet Meadow standard as detailed below. Rain Gardens may be added later within areas currently mowed (adjacent the sand volleyball court).

1

2012 Seeded Areas - Four Year Maintenance Bid.

Maintenance and Enhancement of areas seeded with native grasses and wildflowers in fall of 2012. Prevent weed seed production, fill in planting/seeding, prevent weed re-establishment.

1a

Valentine Slope. ‘Gro-Lo’ Sumac edging sidewalk adjacent Southwest Trafficway. Screening shrubs toward top of slope, shade grasses and wildflowers in middle slope, sunny prairie species at lower edge, adjacent old stairs. Reduce ailanthus and plant oaks. See separate plan. ~10,000 square feet.

1b

Volker Slope Glade. Across from Community Center. Dry rocky grasses & wildflowers. Taller species allowed away from trails. See separate plan. ~6,000 square feet.

1c

Roanoke Drive Point Glade. Dry rocky grasses & wildflowers. Control clover and black medic. Remove European Buckthorn and Ailanthus around perimeter and control seedlings. ~2,000 square feet.

1d

WRCC Bio Swale. Star of Bethlehem, annual rye, turf grass and other weed control. Fill In planting other species, attempting to have something blooming all growing season (swamp milkweed, butterfly milkweed, fall blooming asters, others). ~1,500 square feet.



2

Expand and Add Glade Areas, Grading into Open Woodland - Include Restoration and Five Year Maintenance Bid.

Eradicate all wintercreeper, shrub honeysuckle, Ailanthus, Norway maple and callery pear. Seed with sunny grasses and wildflowers, grading into shade species as shown.

2a

Expand Volker Slope Glade. From the lower of the two trails to the top of the slope. Include top of steps to chain link fence. Areas of Open Woodland in between. ~6,000 square feet.

2b

Wyoming Point Glade. Remove Ailanthus and Norway Maple. Control annual weed seed production for one year to reduce weed seed bank before native seeding. Glade standard in open area to the south, grading into Open Woodland standard toward the staircase on the north boundary of this area. From the Wyoming/W. Roanoke Drive intersection to the staircase. ~8,500 square feet

2c

South Entrance Cliff, Pollinator Walk. East of Roanoke Boulevard at the south end. Remove remaining shrub honeysuckle, mullein and annual weeds. Plant the cliff face with rose verbena, cliff goldenrod, Missouri primrose sp., purple poppy mallow and small grasses such as poverty oat grass. Allow Virginia creeper. ~150 linear feet, 6-12' tall. Along the base of the cliff create a bee and butterfly friendly Pollinator Walk, with milkweed and Monarda species and a variety of pollinator nectar and larval host plants. An easy access place for children to spy butterflies etc. ~2,000 square feet



Above: The very distinctive bark of the park's "Champion" Persimmon.

Right: The Coleman Spring as seen from above in winter.

3

Coleman Spring, Spring Pool and Wet Meadow

Finish removal of wintercreeper, shrub honeysuckle, European buckthorn, Japanese honeysuckle, sweet autumn clematis, and any other non-native invasives seen. Seed and plant Missouri natives adjacent spring water course. Open Woodland 50' either side of water course. Low ground below spring graded to allow narrow strip of constantly open water. Feature "Champion" Persimmon existing adjacent water course (84' tall, 21" trunk). Plans should include a bat box, bird houses, benches on the old road bed overlooking the Wet Meadow and large rocks for children to step along the edge or partially into the Wet Meadow. Wetland and wet meadow plants behind the spring pool to the west northwest 100 feet. Grading at bottom of hill donated by KC Parks department. Plant material may be donated by Missouri Department of Conservation through Stephen Van Rhein. ~10,000 square feet.



4

West of the Bricks

Remove all wintercreeper, shrub honeysuckle, Japanese honeysuckle and sweet autumn clematis. Control annual / biennial weeds between upper trail and East Roanoke Drive. Control garlic mustard throughout. Foster growth of Paw Paw grove and spring ephemerals already existing. Seed/plant other spring ephemerals such as dutchman's breeches, goldenseal, trillium sessile along with perennial shade wildflowers, sedges and grasses. ~76,000 square feet.

5

West Roanoke Drive to Karnes

Remove all wintercreeper, shrub honeysuckle, Japanese honeysuckle and sweet autumn clematis. Cut and treat smaller gauge Ailanthus. Identify female Ailanthus for possible later eradication. Control annual / biennial weeds between upper trail and West Roanoke Drive. Control garlic mustard throughout. Foster growth of various dogwood species and spring ephemerals already existing. Seed/plant other spring ephemerals such as dutchman's breeches, goldenseal, trillium sessile along with perennial shade wildflowers, sedges and grasses. Plant flowering dogwood. ~109,000 square feet.

6

Volleyball Rain Garden

Full sun rain garden needing an engineered approach coordinated with the city. Able to overflow into the storm sewer system if it fills. (Sewer system entry already exists but height of entry may need to change.) Boardwalk or low footbridge needed at intersection of new sidewalks to allow more water to flow underneath. (Current pipe under sidewalk silted in.)

7

Smaller Springs, Plus

Smaller versions of the Coleman Spring area using a similar mix of species, plus Open Woodland areas surrounding springs. Favor water-side species such as Amsonia, buttonbush and beautyberry along the spring water course, and wet meadow species of grasses, sedges and wildflowers in the depressions into which the springs soak.

7a

Park Court Staircase Spring, plus all wooded areas north and east of Park Court Arch and Staircase to park boundary. ~ 58,000 square feet. A small spring exits the ground northeast of the bottom of the staircase. It usually soaks into the ground before reaching the bottom of the hill. At the bottom of the hill however is a large depression with an entrance to the storm sewer system at the north end serving as a catchment for storm water. Engineering / repair of sewer entrance may be needed. Depression area approximately 6,000 square feet.

7b

Coleman Entrance Spring, plus all wooded areas north and east of this spring. Two small springs exit the hill about ten feet up from the base. Wet meadow area at the bottom. Wet area to be expanded by building a berm immediately adjacent Karnes to stop spring overflow onto Karnes and allow more soak in area. Catch basin for overflow restored to working condition (city). ~3,500 sq ft.

8

Coleman Slope and Devil's Dip Slope

Remove all wintercreeper and shrub honeysuckle. Foster growth of wild ginger and spring ephemerals already existing. Seed/plant in other spring ephemerals such as dutchman's breeches, goldenseal, trillium sessile along with perennial shade wildflowers, sedges and grasses. Plant flowering dogwood and common persimmon.

8a

Coleman Slope. (Excluding spring and wet meadow areas: all wooded areas not covered by Zone 3, or Zone 7b.) South facing. Favor sunnier species. ~ 84,000 square feet in total. May be divided into east and west halves.

8b

Devil's Dip Slope. All wooded areas south of Karnes, west of Belleview and east of Roanoke Blvd. North facing. Favor shadier species. Currently contains the park's only known patch of wild ginger. ~ 35,000 square feet in total. (The lower area north of Devil's Dip trail to be restored first. ~22,000 square feet.)



Park volunteers planting tree seedlings into the carpet of wintercreeper in area 8b, May, 2013

9

Roanoke Parkway Slope

All wooded areas south of Park Court Arch and Staircase and below Roanoke Parkway. Generally east and north facing. Favor shady species. Pile of dumped concrete and stone below Roanoke Parkway may need to be removed, or covered with dirt before planting. Remove extensive wintercreeper infestation, shrub honeysuckle and small gauge Ailanthus. ~ 50,000 square feet.

10

Southwest Meadow Slopes

Possibly the most social area of the park, the Southwest Meadow is the home of Dance in the Park, the Jazz Concert, Sunday morning Yoga, pickup baseball games, strollers, dog walkers, playground and tennis court users and daytime picnic table sitters. This is the lobe of the park to the southwest of the community center.

10a

South of Southwest Meadow. Remove wintercreeper and remaining shrub honeysuckle. Plant replacement native shrubs along Valentine in south half of area. Cliff brake ferns are growing in the cliffs and rock walls and the small ribbon of woods shading the path contains one of the park's two known patches of Trout Lilies. Solomon Seal and River Oats are growing amidst the Kentucky Coffee Trees and Mulberries. Shade tolerant tree species and shade ground covers should be dominant in this area. Besides the Trout Lilies, spring ephemerals are missing and need to be planted. A fern area may be planted in front of the cliff, keeping open the small spring pool at the base of the sealed cave entrance. Control Star of Bethlehem adjacent south staircase.

10b

10b - North of Southwest Meadow, including lower areas adjacent north staircase. Remove wintercreeper, shrub honeysuckle, Japanese honeysuckle and sweet autumn clematis and non-native pea vines growing on chain link fence. Open Woodland standard on most of the area, possible glade at the top of the cliff. Workers above cliff would need to be tied off for fall safety.

11

Community Center Slope

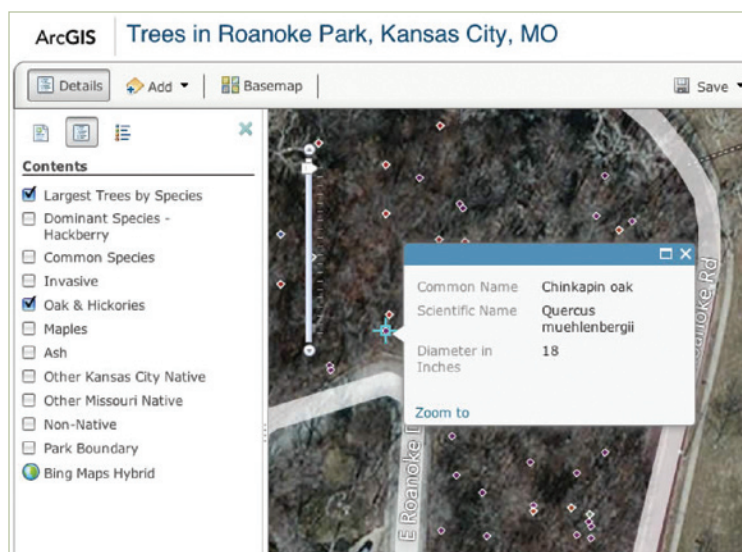
Remove all wintercreeper, shrub honeysuckle and smaller gauge Ailanthus. Also target larger female Ailanthus. Stabilize slope with restoration shrub, grass and wildflower plantings. Plant understory species as detailed in Open Woodland standard.

TREE INVENTORY - 2012 T.R.I.M. Grant

The Roanoke Park Conservancy received a major grant from the Missouri Department of Conservation to conduct a Tree Inventory in Roanoke Park in 2012. The MDC's T.R.I.M. (Tree Resource Improvement and Maintenance) grant program provided partial funding for the tree inventory with Roanoke Park volunteers and donors kicking in the balance.

Only 3" trunk diameter and larger trees were included in the inventory. The bid was for 2,000 trees and was not intended to be comprehensive or cover all areas of the park equally. A wide enough area was covered however for the inventory to be representative of the entire park.

The results of the Tree Inventory have been used to inform this Ecological Restoration Master Plan, making determinations about tree, shrub and ground cover species mix more accurate. Long term trends toward tree species whose seedlings are more shade tolerant are noted in the results.



Tree Inventory Results

A grand total of 2,100 trees in Roanoke Park were identified, assessed and mapped using the services of arborist Ivan Katzer and GIS map maker Molly Gosnell of Midwest GeoInfo.

Informational articles and links to all files relating to the Tree Inventory are accessible at www.roanokeparkkc.org/plans/tree-inventory including a link to the main interactive online Roanoke Park tree inventory map shown at left.

The main interactive Online Roanoke Park Tree Inventory Map is at <http://bit.ly/TE2nrt>

As a snapshot of the “little slice of nature” that is Roanoke Park, the table at right shows how many of each kind of tree is in the inventory. You can also look at expanded data by downloading an excel spreadsheet: [RoanokeTrees.xlsx](#) at the above link on [www.roanokeparkkc.org](#).

These results and the tree inventory GIS data were shared with local biologists and foresters with the Missouri Department of Conservation and the KCMO Parks Department. Many comments were generated about the results, how our forest came to be as it is, how to manage it in the future, and varying opinions about the value of certain species:

The good stuff...

A **surprising diversity of trees**, over 45 species, was identified by the tree inventory. Most of these are native to Kansas City, or at least elsewhere in Missouri.

Larry Rizzo commented, “This is actually quite an impressive variety. It ranges from dry-site species like Chinkapin Oak, to mesic (wetter) species like KY coffeetree & Basswood –I’m sure this is a reflection of the aspect of the slopes. You also have bottom species like Cottonwood, Boxelder, Silver Maple and Sycamore.”

The park’s most populous oak is Chinkapin Oak, loved for it’s gnarly branches full of character. The largest Chinkapin Oak in the metro area lies just east of the park in the Roanoke neighborhood at the southwest corner of 37th & Wyoming.

The tree inventory identified about a dozen “**critical maintenance trees.**” The parks department was alerted and these trees have been pruned, making the park safer.

Also on the maintenance front, the inventory identified the park’s Ash trees, allowing the city to decide how these will be incorporated into the city’s response to Emerald Ash Borer.

All the experts agreed that we were **on the right track to attack the shrub honeysuckle and other non-native invasives.** Without winning the battle there, discussions about the ideal balance of trees in the park are pointless.

Common Name	#Trees
Hackberry	691
Tree of Heaven	165
American Elm	128
Eastern redbud	115
American basswood	110
Eastern hophornbeam	101
Chinkapin oak	88
Red Mulberry	80
Green Ash	71
Black Walnut	64
Hickory	50
Siberian Elm	41
Norway maple	36
American sycamore	32
Black cherry	32
Red Oak	32
Honeylocust	28
Mulberry	23
Boxelder	22
Scotch pine	19
Hawthorn	18
Bur Oak	16
Eastern Cottonwood	16
Buckthorn	14
Austrian pine	13
Oak	10
Shagbark hickory	10
White oak	10
White ash	9
Black Locust	7
White mulberry	7
Broadleaf Deciduous Small	5
Kentucky coffeetree	5
Northern catalpa	5
Eastern white pine	4
Juniper	4
Pin oak	4
Broadleaf Deciduous Medium	2
Littleleaf linden	2
Red maple	2
Sugar maple	2
Swamp white oak	2
Black ash	1
Honeysuckle	1
Maple	1
Shingle oak	1
Silver maple	1
Non-Native Invasive	
Non-Native	

Tree Inventory Results - *Continued*

The bad stuff...

The park's second most populous tree is non-native invasive *Ailanthus*, "Tree of Heaven." All experts agreed that this Asian import should be weeded out over time. Wendy Sangster of the Missouri Department of Conservation agreed that targeting the seed producing (female) trees in the park first is a good idea to prevent new seedlings. MDC personnel were fairly adamant that the invasive buckthorn trees should also be removed. Arborist Ivan Katzer was more sanguine. Norway Maple was less of a concern to the experts, since it hasn't proven to be particularly aggressive here yet. On the other hand, the fact that the inventory found more non-native Norway Maples than all native maples combined seems to indicate a problem.

Most experts agreed that the park has an over-abundance of Hackberry, at 33% of the inventoried trees. Foresters generally try to manage toward no more than 10% of a given species although the area they're managing is much larger than one park. Early results from a not yet released i-Tree ECO random survey of the nine county area showed 17% hackberry in Jackson County, second to American Elm at 32%. 17% is more than the rule of thumb 10% but half of the percentage of hackberry dominant in Roanoke Park. It is speculated that the removal of fire from the ecosystem and the park's former condition of being overgrown with shrub honeysuckle favored the shade-tolerant hackberry seedlings at the expense of less shade-tolerant species such as oaks. All agreed that hackberry was a fine tree, helping to prevent erosion on our steep slopes, and providing good wildlife value and that managing against shrub honeysuckle and *Ailanthus* trees should provide room for more oaks.

The surprising stuff...

American Elm ranks as the park's #2 native tree, despite the general impression that these were all killed off by Dutch Elm Disease. Redbud and American Basswood (*Tilia americana*) are next, with the latter holding its own against all the masses of European Basswoods (*Tilia cordata*) planted as street trees in Kansas City. Only two *Tilia cordata* were identified within the park by the inventory.

Eastern Hophornbeam, a tree many people aren't familiar with (also called Ironwood), is the park's fifth most populous native tree, with 101 in the inventory. The largest Eastern Hophornbeam tree in the metro area lies just east of the park in the Roanoke neighborhood at 1008 Valentine Rd.

No ornamental pear trees were found in the inventory. *Pyrus calleryana* (commonly called chancicleer, bradford or callery pears are an emerging invasive problem with outbreaks along the Blue River in south Kansas City and in other wooded areas across the state. So far Roanoke Park has avoided this one although some smaller gauge trees and seedlings have been spotted.

It is surprising that there are not more Cottonwoods (only 16) despite the six largest trees in the inventory being Cottonwoods. Probably due to the limited areas of the park suited to Cottonwood. Besides Flowering Dogwood, many other understory trees appear to be missing from the park, or were at least below the 3" trunk diameter cutoff used in the Inventory: Serviceberry, Buckeye, Blackhaw, Paw Paw, others? There are smaller gauge Paw Paw trees above the brick road. These understory species are probably missing due to their being displaced by shrub honeysuckle.

2011 – 2013 Highlights

2013

- ▶ New stairway built south of community center with PIAC funds, providing better access from the Roanoke neighborhood and tying into the Roanoke Lookout landing area built with private donations at the top of the stairs
- ▶ Trails Grand Opening held June 1, on National Trail Day. Attendees, including Parks Department head Mark McHenry got personal trail tours with most sticking around for free lunch and socializing
- ▶ 131 trees donated by Missouri Department of Conservation are planted into the park woods April 27-May 5
- ▶ April 13 Spring Cleanup draws about 50 helpers to collect Many bags of trash and move Many piles of brush to the curb
- ▶ Trees and Trails Talk held at Prospero's Uptown Books March 26. About 80 people enjoyed donated beer and pizza and listened to Chris DeLong detail the results of the Tree Inventory and Brett Shoffner talk about the park's new Trails

2012

- ▶ November 10 work day draws about 50 volunteers to work in the park. Half worked on trailbuilding and half worked on seeding three cleared areas with native grasses and wildflowers, or moving piles of brush to the curb for parks department pickup.
- ▶ KCTV5's Emily Rittman interviews Chris DeLong and Molly Gosnell about the Tree Inventory with the piece airing Oct. 8
- ▶ Roanoke Park Conservancy is awarded a Missouri Department of Conservation T.R.I.M. Grant to pay for most of a Tree Inventory in the park. The Inventory is completed by fall with 2,100 trees identified, located, measured and assessed.
- ▶ Jazz Concert in the Park is held June 27th, with the UMKC Conservatory Jazz Band.
- ▶ Phase Two of Roanoke Park's hiking / biking / nature trail "The Layover" is completed and opened June 18th. Work begins on the "Bindle Byway" section of trail below Coleman Highlands.
- ▶ Roanoke Park effort receives accolades in a June 3 Kansas City Star Editorial "Public-private efforts build better parks in KC"
- ▶ May Day Walk in the Park brings neighbors together to learn about park improvement efforts and enjoy the park.
- ▶ 'Honeysuckle Warriors' article in The Kansas City Star April 11, 2012 detailing the comprehensive park effort.
- ▶ Roanoke Park Conservancy 501(c)3 status approved - donations are now TAX DEDUCTIBLE
- ▶ MARC matching grant awarded to create a vegetative bio swale in the vicinity of the Community Center parking lot to address storm water runoff and erosion concerns and to provide education about its purpose and design. The swale was planted June 16th and KCTV5 did a story about it June 21.
- ▶ Missouri Department of Conservation donates 237 native trees and shrubs to the park. Volunteers plant them March 24th through 31st.
- ▶ Generous neighbors donate tree seedlings from the Arbor Day Foundation.
- ▶ The Missouri Park and Recreation Association awards the Roanoke Park Conservancy a 2012 "Organizations Citation" thanks to a nomination from the Kansas City Parks Department.
- ▶ Phase one of Roanoke Park's hiking / biking / nature trail is completed and opened March 10th with the park's best attended volunteer day yet: over 80 volunteers!
- ▶ Continued eradication efforts directed at shrub honeysuckle, garlic mustard and euonymus wintercreeper. with well attended work days March 10th and April 21st.
- ▶ Lilac bushes replaced along E. Roanoke Drive.

2011

- ▶ *Two all-neighborhood clean up days. Results include less honeysuckle and being able to see not only into the woods but through the woods to man made environments and natural outcroppings.*
- ▶ *Nine weeks of focused efforts led by Scott Burnett, Randy Moore, Frank Messer, Manny Lopez and Curt Watkins cleared all along the wall/fence line from the Westport Roanoke Community Center east to 36th to prepare for repair of erosion damage and fall seeding led by the Parks Department's David Burke.*
- ▶ *Earth Riders Trails Association members led by Brett Shoffner and Brian Duff begin survey of park and marking of preliminary singletrack trail routes around the bluffs. Look for the red tape tied to trees back in the woods.*
- ▶ *Park Volunteers ask for benches to be installed in select areas. Parks and Rec acquires and installs benches in places to pause and, as many have commented, make the park begin to look like, well, "a park".*
- ▶ *Pitch magazine awards "Best Comeback" award to Roanoke Park, citing volunteers working together with the parks department to improve the park.*
- ▶ *A generous donation from Roanoke Homes Association matched by private giving gets funding off to a \$10,000 start to fund a landing/sitting area at the top of proposed stair steps: A new park amenity and better access to the park from "Lookout Point" along Valentine Road.*
- ▶ *Alice Kitchen's essay about park project to Historic Kansas City Foundation contest wins the "Community Catalyst" award for 2011 for all of the volunteers in Roanoke Park Conservancy project.*
- ▶ *Sunday family picnic in the Park with Live music from BluesberryJam sponsored by Roanoke Homes Association, Pete Browne and Kissick Construction Co.*
- ▶ *KCTV5's Bonyen Lee does second feature on the Park. This time focusing on Lookout Point plans and fundraising.*
- ▶ *Roanoke Park's volunteer naturalist and web designer Chris DeLong reseeds selected areas of the park with locally collected native grasses and wildflowers. More seeding and tree seedling plantings are envisioned.*
- ▶ *Year ends with filing of articles of incorporation to create the Roanoke Park Conservancy, as a 501(c) 3 corporation. First Board consists of Scott Burnett, Glenda Goodman, Pete Browne, Randy Moore, Kay Johnson and Curt Watkins.*
- ▶ *The Surrogate Volunteer's program proves to be a popular and easy holiday gift selection to honor friends and family with a donation to the Roanoke Park Conservancy.*



ROANOKE PARK CONSERVANCY

Honoring the Past, Planting the Future

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