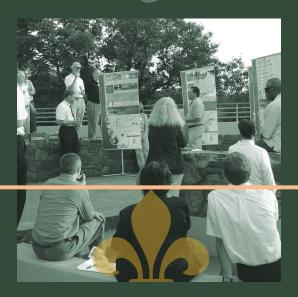
TWO

Project Process

"What artist so noble...as he who, with far-reaching conception of beauty and designing power, sketches the outlines, writes the colors, and directs the shadows of a picture so great that Nature shall be employed upon it for generations"

- Frederick Law Olmsted





he design team used a comprehensive and methodical design process to work through the intricacies of the existing conditions and identify the opportunities and constraints associated with conditions along the parkways. The design process analyzed existing conditions and utilized public input to develop preliminary design concepts that responded to community needs along the parkways. The design process consisted of:

- Review of historic research, tree inventory, and background material (Chapter 3)
- Analysis of existing conditions (Chapter 4)
- Solicitation of stakeholder and community input
- Development of opportunities and constraints (Chapter 4)
- Identification of critical project issues
- Research of case studies
- Development of preliminary design alternatives
- Development of a preferred alternative
- Development of a magnitude of costs (Chapter 6)
- Development of a phasing plan (Chapter 6)

The design team performed an existing conditions analysis on each segment of the parkway and in the hub area. Combined with community and CAG input, this allowed the design team to identify opportunities and constraints associated with each segment. Critical project issues were identified, and the design team researched and provided national case study examples of how other communities have dealt with similar issues. These activities also provided insights into the development of guiding principles for the project.

Based on this series of analyses and following the guiding principles, the design team was able to identify preliminary routes and design solutions that were then presented to the community,

The design process analyzed existing conditions and utilized community input to develop preliminary design concepts that responded to community needs along the parkways.







Figure 2-1: Images showing the CAG meeting, public meeting and design team charette workshops.

ultimately resulting in the development of a preferred alternative for each parkway and the hub area. Based on the preferred alternative, an order of magnitude cost estimate and a phasing plan were developed for the preferred alignment.

This chapter contains additional information about the community input process, case study development and the guiding principles developed for the project. Cost and phasing information is included in chapter 6.

Community Input Process

hile the main objective to this project was to identify a clear and definitive set of routes to provide pedestrian and bicycle connectivity, an underlying goal was to consistently engage the public and key stakeholders in the design process. An open process was used to generate meaningful discussion and feedback between the design team and the local residents. By utilizing an open forum throughout the design process, the design team was able to craft a series of final design recommendations that were generated by the citizens and neighbors who are connected to these parkways.

The design team worked with representatives from both Louisville Metro and Metro Parks in crafting the public input process. The creation of the community advisory group (CAG) was key to the process, because those individuals have a vested interest in the success of the parkway system. Nearly 50 representatives of local neighborhood associations, key businesses, local utilities and bicycle organizations were invited to participate throughout the project. Through a series of organized meetings, the design team carefully gathered and analyzed the CAG's feedback and used the information to craft the design recommendations found in Chapter Four.

The CAG's work began in May 2007 with a parkway tour. The parkway tour allowed the participants the chance to become acquainted with the design team members and the project as a whole. As they traveled each parkway corridor, CAG members completed a series of exercises to provide insight on the perception of parkway amenities and character. Presentation materials and comments from the parkway tour can be found in Appendix A of this report. The tour stopped at several key destinations: Cherokee Park, Stansbury Park, Shawnee Park, Chickasaw Park and Iroquois Park. Each segment of the tour had a different theme that was used to address features such as encroachment, bicycle connectivity, and adjacent land uses. Several key issues emerged from the tour activity, as well as generating overall excitement for the project as a whole.

The community advisory group met three additional times to discuss opportunities and constraints, preliminary alignment alternatives, and final design recommendations for each project area. Figure 2-1 depicts images that were taken from the CAG tour, the first public meeting, and the associated design charrettes.

In addition to the information gathered from the community advisory group, the design team interviewed a series of key stakeholders for the project. These individuals, identified by Metro Parks and Louisville Metro, had a vested interest in the development and maintenance of the parkway corridors. Stakeholder interview notes can be found in Appendix C of this report.

Seeing that the parkway system has the potential to connect the city as a whole, public participation was of great value to the design process. Public meetings were held at two points in the project to inform the larger public on the project, its process, and final outcomes. Two public meetings, held in June and July, were used as project introductions. Design team members discussed the broad goals and objectives of the project as well as the history associated with these parkways. Additional comments were taken from the public and used in crafting the final design recommendations. A third public meeting was held in October to present the preliminary design recommendations. Public meeting materials and feedback can be found in Appendix B of this report.

The information gained from public participation not only aided in developing the final design recommendations, but also guided the formation of the overall vision and objectives for the project. After hearing the input from the first community advisory group meeting, a series of guiding principles were developed to direct the design of the project. These guiding principles, discussed in greater detail in this chapter, provided broad goals for the project, while also incorporating the fine details needed to design an efficient and safe pedestrian and bicycle system.

Case Studies

hrough the existing conditions analysis and the early stages of the public input process, several key issues emerged from the project. A series of case studies were developed to investigate how these critical issues have been dealt with on other projects and their outcomes. The purpose was to identify lessons learned from these other projects in order to use the best practices in dealing with these issues on the parkways. The full text of the case study research can be found in Appendix E. The case studies relate to five issues:

- Multi-use trails in historic landscapes
- Multi-use trail connectivity to neighborhoods
- Tree preservation, planting, and selection
- Parkway encroachment issues
- Urban storm water management

The design team identified projects throughout the country that dealt with similar sets of opportunities and challenges. The following lessons learned were incorporated into the findings of the inventory and analysis exercises and were used to craft a set of unique guiding principles for the project as a whole.

The purpose of the case studies was to identify lessons learned from similar projects in order to use the best practices in dealing with these issues on the parkways

SIMILAR ISSUE: MULTI-USE TRAILS IN HISTORIC LANDSCAPES

The Brooklyn Parkway System, Brooklyn, NY

In 1866 Frederick Law Olmsted and Calvert Vaux devised the parkway system that would connect across the Brooklyn Grid. The two parkways were built alongside the Olmsted designed Prospect Park. Ocean Parkway connected Prospect Park to Coney Island, and Eastern Parkway ran from Prospect Park to Crown Heights.

Key Points of the System:

- Ocean Parkway is one of the oldest of the Olmsted Parkways and one of only a few that was built as originally designed.
- Ocean Parkway was built between 1874 and 1876. The Parkway became the home to the country's first bicycle path.
- The original plans for the parkway included a 55foot wide carriage drive centered between two pedestrian malls with four rows of trees extending 2.2 miles.



Source: Journal of Planning History 2005; 4; 295, "Suburban Vision to Urban Reality",

Lessons Learned:

- Historic Parkways can be adapted to accommodate the needs of pedestrians and bicyclists today.
- Parkway design should preserve and enhance the existing and historic character of the landscape.
- Bicycle facilities should be developed/ constructed so that they eliminate gaps in the existing system.
- A combination of bicycle facility types should be utilized throughout the parkway system.
- Points of conflict between motor vehicles and non-motorized users should be addressed in system improvements.
- Successful bicycle planning should allow for accessibility, connectivity, directness, continuity, safety, and feasibility.
- Signage throughout the parkway system should be uniform and conform to community needs.



"The New Bicycle Path", Ocean Parkway 1894



Eastern Parkway at Utica Ave.

Photo Sources: Top, Ezliabeth McDonald; Middle, www.nycgovparks.org; Bottom, www.nymtc.org

SIMILAR ISSUE: MULTI-USE TRAILS IN HISTORIC LANDSCAPES

The Buffalo Parkway System, Buffalo, NY

In 1868, in the midst of their planning for New York City, Frederick Law Olmsted and Calvert Vaux were approached by the City of Buffalo to assist in the design of its park system. The architects developed a series of seven parkways and seven circles at their junctions that were to expand upon the existing city plan created in 1804 by Joseph Ellicott. The Buffalo parkway system rested on the development of three parks in the northern part of the city which were the focal point of the system.

Key Points of the System:

- Roadways were approximately 200 feet in width.
- Parkways connected various parts of the city.
- Some city streets were expanded to 100 feet in width to work in conjunction with the parkways.
- Recently, additional tree plantings have been placed within Cazenovia Park and an extensive pathway system was extended into areas where Olmsted's paths were never completed.

Buffalo Olmsted Parks



Lincoln Parkway View of Cycle Path, circa 1905

Lessons Learned:

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- Parkway design should preserve and enhance the existing and historic character of the landscape.
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Cazenovia Park Path System, 1999

Photo Sources: Top, Ublib.buffalo.edu/library; Middle, Stanton M. Broderick; Bottom, Stanton M. Broderick

SIMILAR ISSUE: MULTI-USE TRAIL CONNECTIVITY TO NEIGHBORHOODS

Oak Leaf Trail, Milwaukee, WI

The Oak Leaf Trail (formerly 76 Bike Trail) is a paved 108-mile multi-use recreational trail which encircles Milwaukee County, Wisconsin including both on-street and off-street trails. Clearly marked trail segments connect all of the major parks in the Milwaukee County Park System with a "ribbon of green." Scenery along the Oak Leaf Trail varies from woodland parks, nature reserves, and a wildlife corridor along the lakefront, to urban industrial settings in Milwaukee's downtown area.

Key Points of the System:

- Early bicycling advocate Harold "Zip" Morgan first conceived and laid out a 64-mile trail in 1939.
- The route made its way around the edge of the county and through natural resource corridors found along the rivers and lakefront.



Oak Leaf Trail Map

Lessons Learned:

- Community involvement is a key component of addressing bicycle facility needs.
- Links to local and regional destinations should be considered.
- Facilities can be built in phases to allow for linkages between existing and proposed improvements.
- Bicycle systems can be designed to make use of existing facilities and materials.
- Bicycle facilities within a community should link major activity centers with safe routes for bicycling.
- Bicycle systems should consist of lanes, routes, and shared paths.
- Traffic calming can be an essential tool to providing comfortable facilities for non-motorized transportation users.



Oak Leaf Trail, Milwaukee



Oaks Leaf Trail sign in Lake Park

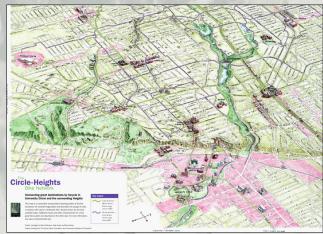
Photo Sources: Top, www.ecocitycleveland.org; Middle, www.county.milwaukee.gov; Bottom, Copyright 2006 Sulfur

SIMILAR ISSUE: MULTI-USE TRAIL CONNECTIVITY TO NEIGHBORHOODS

Circle Heights Bicycle Network, Cleveland, OH

The goal was to create a network of bike lanes, trafficcalmed streets, designated bike routes, and other facilities that link major activity centers with safe routes for bicycling. The "Circle-Heights" district covers a compact, four-by-four mile area. It was largely built during the streetcar era and features a fine-grain mix of residential neighborhoods and commercial districts. It has public places in which people actually like to walk around, and thus, the district is ideally laid out for alternative transportation—biking, walking, and transit.

- The plan was designed to have two main kinds of routes, fast and slow, which included bicycle boulevards and bike paths.
- By seeking community input, the group was able to assemble a list of major destinations for which the bicycle network was intended to connect.
- It was designed to allow for different phases to be built at different times. The first steps were to include the inexpensive improvements such as signage and pavement markings.



Circle Heights Plan



Bike Lanes

Lessons Learned:

- Community involvement is a key component of addressing bicycle facility needs.
- Links to local and regional destinations should be considered.
- Facilities can be built in phases to allow for linkages between existing and proposed improvements.
- Bicycle systems can be designed to make use of existing facilities and materials.
- Traffic calming can be an essential tool to providing comfortable facilities for non-motorized transportation users.
- Bicycle facilities within a community should link major activity centers with safe routes for bicycling.



Photo Source: www.ecocitycleveland.org

SIMILAR ISSUE: TREE PRESERVATION, PLANTING AND SELECTION

Independance Square, Philadelphia, PA

Independence Square is a major tourist attraction which receives millions of visitors each year. Due to its heavy use and high traffic volume, the square had fallen into moderate disrepair and was in need of rehabilitation. The location of many of the repairs were close to many mature trees. Instead of simple hand digging or trench digging, a new process called air spading was used. Air spading is a tool that can excavate the soil surrounding a tree without damaging the bark or the roots.

Key Points of the System:

- Major project components were brick retaining walls that enclose the park, and the entire 30,000 square feet of bluestone paving and curbing.
- Key challenges included protection of the many old canopy trees and their extensive root systems, and meticulous cataloging of historic bluestone paving patterns for reconstruction in kind.



Independence Hall & Independence Square

Air spading safely removes soil from tree roots

Lessons Learned:

- Small trees may be used in place of large trees to ensure proper growth, even though they will take longer to achieve the desired effect.
- Plants should be stored properly during construction.
- Maintenance programs should be created at the start of the tree-planting process in order to ensure their survival.
- Diversity of tree species allows for an ecologically sustainable tree planting process.
- New technology should be utilized to assist the growth of new trees.



Air spading behind historic retaining wall

Photo Source: WRT



SIMILAR ISSUE: TREE PRESERVATION, PLANTING AND SELECTION

Ben Franklin Parkway, Philadelphia, PA

The Benjamin Franklin Parkway is a grand boulevard in the City of Philadelphia linking the Art Museum to City Hall. Jacques Gréber's design can also be seen in a national context as one urban parkway in a broader context of similar pleasure drives laid out with generous green medians, tree allées, and a palette of streetscape furnishings. The site is owned by the Fairmount Park Commission, City of Philadelphia and was listed on the National Register of Historic Places in 1985.

- Decline of the parkway's formal planting scheme led to poor conditions.
- Only 22 out of the original 219 trees were in fair to good health.
- Rehabilitation project focused on the preservation treatment of the tree plantings.
- Public education was an integral part of the plan.
- New trees of mixed species were planted in a specially formulated soil that promoted health and vigor and increased longevity.



Existing Conditions - Late 1980s



Two Years After Planting (early 1990s)

Lessons Learned:

- Diversity of tree species allows for an ecologically sustainable tree planting process.
- New technology should be utilized to assist the growth of new trees – air spading, structural soil, continuous trenches, etc.
- Small trees may be used in place of large trees to ensure proper growth, even though they will take longer to achieve the desired effect.
- Public education is an important part of any landscape preservation project where replacement is an issue.
- Maintenance programs should be created at the start of the tree-planting process in order to ensure their survival.



Planting Conditions Today

Photo Sources: Top, www.cr.nps.gov/HPS/hli/currents/franklinpark/exconditions.htm; Middle, www.cr.nps.gov/HPS/hli/currents/franklinpark/manage.htm; Bottom, WRT

SIMILAR ISSUE: PARKWAYS & BOULEVARD ENCROACHMENT

Cheasty Boulevard, Seattle, WA

Cheasty Boulevard is part of the Olmsted Boulevard system in Seattle. In 2002, Seattle Department of Parks and Recreation hired J.A. Brennan Associates Landscape Architects to assist them in working with the project advisory team and community to develop a plan for Cheasty Boulevard. The intent of the plan is to develop a concept and implementation plan for improvements that will enhance and preserve Cheasty Boulevard.

Key Points:

- A key concern for the Parks and Recreation Department at the start of the project was the issue of encroachment.
- They have found that encroachment issues are more successfully resolved when there is a driving force such as a capital improvement project for the park.
- To help diffuse such issues, the Parks and Recreation Department has set up a website called "Be a good neighbor to your neighborhood parks."

Lessons Learned:

- Parkway and boulevard encroachment can be alleviated through extensive public involvement efforts and education programs. Amicable solutions can be achieved in order to preserve a cultural landscape.
- Property boundaries and responsibilities of involved parties should be identified clearly at the start of any building/ development project.
- Public education should include numerous formats for delivering necessary information, such as a website and printed material.
- The public should be informed of all projects and changes to the properties in question.
- Survey crews should be utilized when specific encroachment issues need to be addressed.
- Residents should be encouraged to assist in finding solutions that can be enacted voluntarily.



Southeast Quadrant of the Olmsted Bike Tour Map



Pedestrian Path & Signage Illustrating the Limits of Park-owned Property



Pedestrian Path

Photo Sources: Top, www.seattle.gov/friendsofolmstedparks/; Middle and Bottom, www.seattle.gov/parks

SIMILAR ISSUE: URBAN STORMWATER MANAGEMENT

NE Siskiyou Street, Portland, OR

The NE Siskiyou Green Street project designed by Kevin Robert Perry is unique to Portland and the United States in the way this quiet, 80 year-old residential street has been transformed to sustainably manage its stormwater runoff. As part of the City of Portland's commitment to promote a more natural approach to urban stormwater management, this "green street" project carves out a portion of the street's parking zone and converts it into two landscaped curb extensions.

- The curb extensions at NE Siskiyou Street share many of the same benefits of conventional curb extensions, however they are different in that they are also designed to elegantly capture, slow, cleanse, and infiltrate street runoff.
- The aesthetic appeal and intrigue of the new and improved NE Siskiyou Street has the design community, developers, policy makers, and local citizens excited about green street design opportunities.



Aesthetically pleasing bio-swale



Interpretive Signage

Lessons Learned:

- Stormwater management is a key component to the durability and sustainability of motorized and non-motorized facilities. Natural approaches to storm water management have been implemented successfully throughout the country.
- Stormwater runoff can be treated and managed on site to restore lost hydrologic functions within urbanized areas.
- Bio-retention can be used to disconnect the streets stormwater runoff from municipal sewer systems.
- Bio-retention strategies should be simple, costeffective, and aesthetically appealing.
- Bioswales and vegetated filters allow for the removal of sediments, salts, pollution, and debris in non-intrusive manners.
- Public involvement can lead to appropriate design solutions for community needs.



Retaining stormwater runoff

Photo Source: Kevin Robert Perry

Guiding Principles

o begin, the design team reviewed the previous guiding principles developed as part of the Master Plan for Louisville's Olmsted Parks and Parkways. While these principles are all valid when dealing with the unique, historical fabric exhibited in the Olmsted Parkways, it was also determined that these statements served as broad principles for the project. Specific goals and objectives were needed to address the needs of each neighborhood and stakeholder involved in the project. The process began by looking at the health, safety and welfare needs of existing and future parkway users and expanding this thinking to include the future plans for Louisville, existing and future metro-wide initiatives, and the integration of contemporary and historical design. The design team benefited from the fact that Frederick Law Olmsted designed ahead of his time and set precedents for several modern design ideas. Sustainable design and materials, traffic calming and safe pedestrian traffic patterns were all incorporated into Olmsted's designs in some fashion. The following guiding principles incorporate the modern needs of the Louisville while respecting the historic traditions of Olmsted's design and plans. The final design recommendations further reinforce and validate not only the guiding principles, but each objective and action item.

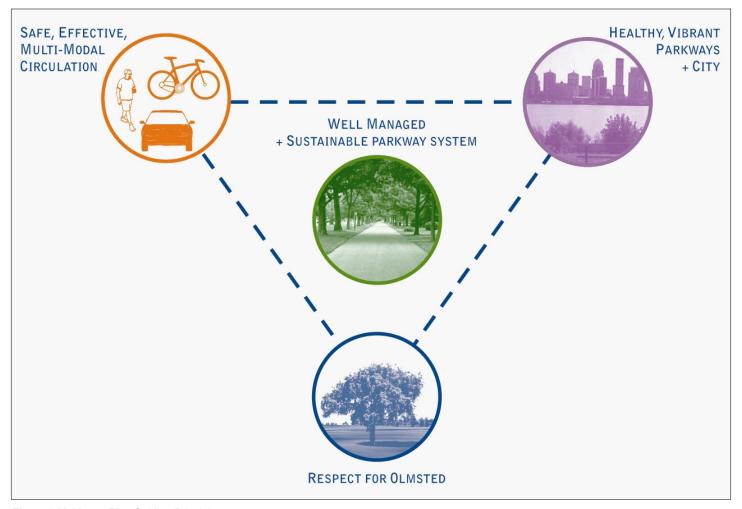


Figure 2-X: Master Plan Guiding Principles.



GUIDING PRINCIPLE 1:

Ensure that the Parkway system provides for safe, effective multi-modal circulation within the larger transportation and land use context.

Provide continuous connections between the three parkways

- Use local parks to make connections where possible. This includes but is not limited to Stansbury Park and Wayside Park.
- Use local institutions to make connections where appropriate. This includes but is not limited to the University of Louisville, Churchill Downs and the Kentucky Fair and Exposition Center.

Provide secondary connections from the Parkways to adjacent and nearby neighborhoods, institutional, and commercial uses.

 Engage primary stakeholders such as University of Louisville, Park DuValle, Louisville Zoo, the Bardstown Road business corridor and local schools in the design process of parkway enhancements.

Provide connections from the Parkways to adjacent and nearby bicycle and shared-use trails.

Provide direct connections to the established Louisville Riverwalk, Ohio River Levee Trail, Louisville Loop and existing downtown on-street bike routes.

Modify and manage vehicular traffic so as to meet circulation needs in a manner consistent with a traditional parkway experience.

- Reduce roadway and lane widths where feasible.
- Implement speed controls and traffic calming devices where appropriate.
- Improve signalization to move all modes of traffic efficiently and safely.

Provide for different levels of bicycle users along the parkway system.

- Incorporate the use of bike lanes for Type 'A' and 'B' cyclists.
- Design shared-use paths for Type 'C' cyclists.

Apply all regulatory standards to achieve ADA compliance.

- Design shared-use paths and sidewalks to provide for pedestrian circulation depending on the design context.
- Incorporate appropriate pedestrian signal and crosswalks at intersections.
- Design accessible curbs along the entire parkway system.
- Design all paths less than 5% slopes where feasible.



GUIDING PRINCIPLE 2:

Ensure that the Olmsted Parkways make a significant contribution to the health and vitality of Louisville, and serve as a key element in the Mayor's Healthy Hometown Movement.

Provide for the health of the people by increasing active and passive recreational opportunities.

- Incorporate the principles of Bike Louisville; creating a bicycling environment that is safe, efficient, and enjoyable for riders of all ages and levels of experience.
- Incorporate the principles of ACTIVE Louisville; creating more vibrant neighborhoods where residents incorporate healthy habits into their daily routine.

Provide for the health of the economy by linking the parkway system to commercial/ institutional entities while supporting economic viability.

 Incorporate the principles of COOL (Corridors of Opportunity in Louisville); enhancing the quality of life in neighborhoods by developing quality shopping and service opportunities along Louisville's commercial corridors.

Promote the health of the environment by adapting sustainable design practices to improve air and water quality.

- Reduce auto emissions by promoting bicycling.
- Encourage the planting of trees to filter fine particles in the air, reduce urban heat island affect, and absorb carbon dioxide.
- Use pervious pavements, where appropriate, to increase on-site infiltration, reduce storm water runoff, and water pollution.
- Use buffer strips and vegetated filters and swales to remove sediments, salts, pollution, and debris, and to reduce, slow, and evenly distribute storm water where appropriate.
- Use recycled materials
- Consider using low-grow meadow mix or no-mow grasses instead of turf grass which requires frequent mowing.
- Choose materials that have long life cycles.



GUIDING PRINCIPLE 3:

Ensure that improvements to the Parkways are respectful of the historic Olmsted design and the role they play in the larger City of Parks initiative.

Provide a continuous "Green Ribbon" by reestablishing the original cross section along each of the parkways.

- Plant trees to provide a continuous tree canopy, cross section definition, and sequential rhythm of the parkways.
- Plant a continuous ground surface to reinforce the concept of the planted verge.

Provide for an appropriate pedestrian experience along the parkways.

- Incorporate methods of traffic control to slow the speed of vehicular traffic, creating safer use of the parkways for all users.
- Plant trees in missing gaps to provide shade and reduce the temperature to make a more comfortable environment for the parkway users.
- Design pedestrian and bicycle amenities appropriate to the potential uses of the parkways.

Provide a continuity of design for the parkway system.

- Extend the parkway character through the mixed-use nodes and intersections.
- Design consistent furnishings and pedestrian/ bicycle amenities.
- Design a system of consistent visual clues for signage and wayfinding. Reduce excessive amounts of signs and other visual clutter along the parkways.
- Design the lighting system to provide even, consistent light levels for all paths and roadways.
- Provide a distinct, yet linked, identity for each parkway which highlights the unique characteristic of the area.



GUIDING PRINCIPLE 4:

Promote effective management and maintenance strategies to preserve the quality and character of the Parkways and the new design initiatives outlined in this plan.

Define a Capital Improvements Program to identify phasing and financing approaches allowing for implementation of the Olmsted Parkways Multi-Use Path System Master Plan.

- Develop a process to prioritize and revise critical Capital Improvements Programs.
- Research and identify funding sources.
- Develop partnerships with other institutions to develop funding sources.
- Ensure that the prioritization of projects is well distributed.

Develop an operations and maintenance program to support quality maintenance of the parkway system.

- Develop a sustainable maintenance program unique to the parkway system.
- Develop communication between maintenance, cultural, and natural resource personnel to ensure design intentions and operational quality are maintained following any design construction.

Develop an education program to instruct those who are managing and using the parkway system.

- Promote the development of a design manual for adjacent homeowners and business owners to educate them on acceptable design standards and individual responsibilities of the parkway system.
- Promote a "community based partnership" ethic of stewardship for the parkways.
- Provide a regulatory structure for parkway and adjacent land development.
- Encourage the City of Louisville to develop an enforcement program to regulate land use issues and encroachments.

The aforementioned guiding principles, objectives and action items were essential in creating a set of design criteria for the project. Although each parkway is unique in itself, the contemporary design enhancements needed to be standardized so that they could easily be implemented over a period of time. By creating a standard set of design criteria, the shared-use path and pedestrian amenities will create a cohesive language whether the construction is done all at once, or as a series of stages. This project not only provides recommendations on standard pedestrian amenities such as benches, water fountains and light fixtures, but also provides standard definitions to enhancements such as the shared-use paths and service drives.

