



*"If you want the refreshment that is to be had in the contemplation of superb umbrageous trees, standing singly and in open groups distributed naturally upon a gracefully undulating green sward, to procure such scenery in higher perfection than, with large outlays to obtain it, yet to be found in any public park in America, all that is needed is the removal of fences and a little judicious use of the ax on your Cherokee Park site."—Excerpts from First Annual Report, Louisville Board of Park Commissioners, July 1891, prepared by F. L. Olmsted & Co., Landscape Architects*

**ADOPT AN IDEAL.**

*"The important matter in the treatment of each of these properties of the city is to adopt an ideal suited to the local conditions, and pursue that ideal as consistently as public convenience in its use will allow... avoiding roads, walks, buildings, fences, monuments, constructions of any kinds that are not necessary to the main and only justifying purpose of these great suburban reservations, that of quickly giving people a chance to cheaply, conveniently and pleasantly escape at times from the town and come under the influence of one or another form of agreeable scenery."—Excerpts from First Annual Report, Louisville Board of Park Commissioners, July 1891, prepared by F. L. Olmsted & Co., Landscape Architects*

*"There are certain portions of the bridle trails in Cherokee Park that could be very properly used as walks, but we thought that they could be built first as bridle trails and if the demand for walks in Cherokee Park was great enough, they could be developed as walks later on. These bridle trails could be built wide enough for two horses abreast, which would be about six feet."—Excerpts from Olmsted Brothers [James F. Dawson] to Helm Bruce, Jr., March 29, 1935*

*"Interior Drives: There are two main divisions in the scenery of the park, namely, that of the valley of Beargrass Creek and that of the rolling hills south of it. To impress this upon the visitor, to make each as complete as possible and to avoid a confusion of impressions, it is our design to have the circuit drive in one part rising and falling and winding in and out and over the hills one after the other with plunging views into the valleys and by way of contrast to keep the other part of the circuit drive as low down and as close to the creek as possible."—Excerpts from Olmsted, Olmsted & Eliot to John B. Castleman, May 6, 1896*

*"Please keep the pastoral quality of the park—the poetry of the park."—Comments from public forum, April 1992*

*"Parks are the place where personal, cultural and community rejuvenation occur."—Monica Orr*

*"If roads in Cherokee were one-way, it would be more user-friendly for walkers, runners and bikers. There's enough traffic outside the parks; you go to the park to slow down your life."—Comments from public forum, April 1992*

## Chapter 5 Cherokee Park

Prepared by Andropogon Associates, Philadelphia PA

### Renewal Strategy

Rehabilitating the great Olmstedian vista, from Barringer Hill across Beargrass Creek to Cochran Hill, is the key to renewing the character of Cherokee Park as it was before the 1974 tornado. Invasive, smothering alien plants will be removed from the choked woodlands, which will be revegetated with native Kentucky plants. This effort will be ongoing as the skills are developed to implement the landscape management program for the park. This will help to open views into the woodland, closer in spirit to the pre-tornado landscape, while improving surveillance and safety. The park's classic bluegrass character of long vistas through the stream valley will return, with meandering path loops that invite visitors to explore and enjoy. To recreate the drama and scale of the most crucial missing elements of the original Olmsted design, this project includes several "Great Groves of Kentucky," consisting of groves of large native trees. These will be placed to modulate the open spaces and layer the vista, while providing shady picnic spots for visitors.

Site reviews of the parks and parkways were undertaken by the master planning team, with (from left to right) Arleyn Levee, Patricia O'Donnell, Charles Beveridge, and Susan Rademacher. (Andropogon Associates, 1992)

## Key Master Plan Recommendations for Cherokee Park

### Willow Pond

Enrich landscape habitats around pond, including meadow perimeter on downslopes from golf course, draining to new wetland retention area before flowing into pond. Install aquatic and shoreline vegetation, with paths and fishing spots.

### Barringer Hill Trail & Vista

Construct one-mile path loop around Barringer Hill, with bridges over Barringer Springs and connections to bridle trails and walking paths. Reestablish the park's native woodlands, plant Great Groves of Kentucky and open vista from Barringer Hill.

### Barringer Hill Overlook

Construct open-air shelter around existing restrooms.

### Barringer Springs to Beargrass Creek

Restore stonework at head of Barringer Springs and stabilize spring banks and drainage outfalls along stream to Beargrass Creek.

### Central Woodlands Management & Trails

Conduct landscape management to reestablish native woodlands. Prioritize work areas and renovate bridle trails and walking paths. Close rogue trails and stabilize eroded areas.

### Golf Course

Reorganize parking area and provide landscaped buffers along Barringer Hill, Willow Pond and Cherokee Parkway. Manage perimeter woodlands, with drainage swale improvements, and convert lawn to meadow where there is no conflict with playability.

### Maintenance Facility

Renovate parking and yard areas, with landscape screening.

### Bonnycastle Hill Recreation Area

Renovate and enlarge parking area, with landscaped buffer along Park Boundary Road. On a phased basis, relocate tennis courts and basketball courts from elsewhere in park and improve baseball field. Improve passive areas.

### Scenic Loop

Stabilize road edge pavement and adjacent drainage swales, with inlet and culvert improvements and new parking layby areas. Renovate four bridges.

### Two-Way Park Drives

Stabilize road edge pavement and adjacent drainage swales, with inlet and culvert improvements and new parking layby areas. Renovate five bridges.

### Perimeter Woodlands Management & Trails

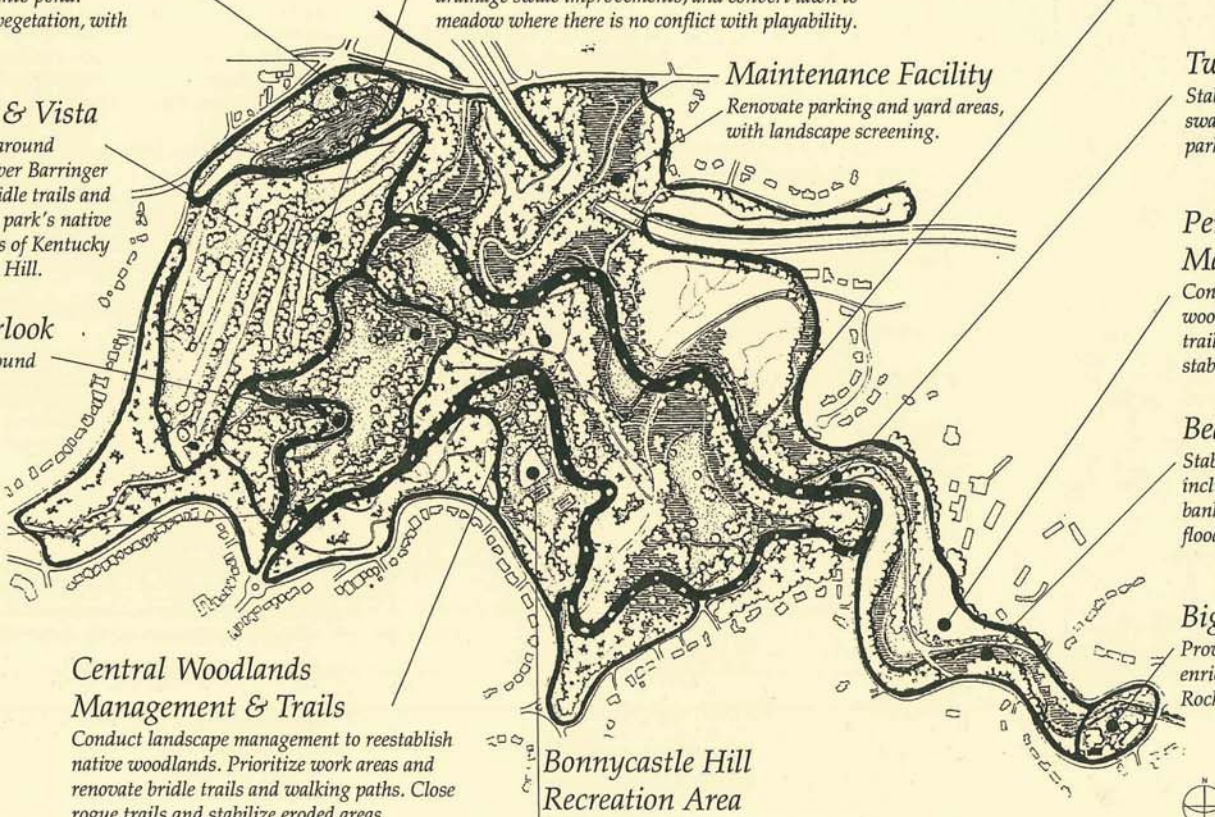
Conduct landscape management to reestablish native woodlands. Prioritize work areas and renovate bridle trails and walking paths. Close rogue trails and stabilize eroded areas.

### Beargrass Creek Floodplain

Stabilize channel and banks and enrich habitat, including pool riffles within channel, vegetated creek banks and cut-back banks to accommodate terraced, floodplain wet meadow areas.

### Big Rock

Provide parking and path improvements. Stabilize and enrich floodplain habitats along Beargrass Creek to Big Rock.





## Landscape Management

"These bottomland communities are very important for many species of wildlife that persist in this urban environment. Since they are connected by water during flood events, bottomland forests are not as isolated as the upland forest fragments."—from "Natural Communities & Disturbance Analysis," prepared by Eco-Tech, Inc.

### Forest Management Issues

The fertile soil and gently rolling terrain of Beargrass Creek provided ideal conditions for farming, and, long before Olmsted, the forests of Cherokee Park had been reduced to narrow corridors along streams and patches on steep slopes.

The once continuous forest is severely fragmented and has continued to decline as the surrounding open lands have been increasingly developed. Extensive paving, building and forest clearance have greatly increased the volume and velocity of stream flood flows, with scoured streambanks and toppled riparian vegetation. The tornado of 1974 dealt an extraordinary blow to the forest of Cherokee Park, the effects of which are still noticeable today. Much of the forest was instantly converted to open woodland, and exotic species, some of which were planted after the tornado, spread vigorously through the open landscape.

### Forest Management Priorities

- 'Edge' management, including exotic invasive control, stormwater runoff control and replanting native understory species.
- Native canopy replacement in the tornado-damaged areas and control of rampant exotics.
- Realization of the goal to display the "Woody Plants of Kentucky," using ecological siting guidelines and the original planting plans to merge the display with the landscape rather than appearing as a scientific collection. Some species excluded due to soil pH.
- Appropriate protection of valuable forest habitat that is the least disturbed.
- Stormwater management by eliminating steep downslope trails.

### Woodland Management Issues

The open woodlands of Cherokee Park represent some of the most important management issues facing the park system today. These areas once created the setting for this pastoral landscape but now are rapidly deteriorating as both habitat and scenery. The reestablishment of native plant communities is crucial to the recreation of the historic landscape character.



(Top) Exotic invasive shrubs and vines now cloak the woodlands and wall off views through the park. (Andropogon Associates, 1993)

(Bottom) Historic vista across Beargrass Creek and park meadows, c. 1921. (University of Louisville, Photographic Archives, Caulfield & Shook Collection)

### Woodland Management Priorities

- Reduce stormwater impacts by modifying turf management practices and establishing a margin of meadow along woodland downslope edges.
- Develop a program to reduce damage from trampling and mountain bicycles off park paths.
- Initiate an aggressive program to control exotic invasive species, especially shrubs. Start where the native communities are most intact to ensure they remain protected. Any other activity such as path modification should also be used as an opportunity to remove exotics, restabilize the soil and replant, if necessary.
- Replant oak saplings and native understory species at the outset to reestablish the major structure. This effort should be coordinated with the Woody Plants of Kentucky.

### Savannah/Meadow Management Issues

It is unlikely that savannah occurred in the area of Cherokee Park in pre-settlement; however, like Shawnee, much of the landscape must have been lightly grazed at some time giving it a savannah-like character, at least briefly until more intensive agriculture took over.

### Savannah/Meadow Management Priorities

- A margin of savannah is recommended to buffer downslope movement of stormwater adjacent to forests and woodlands as well as in any situation where erosion and sedimentation are a problem.
- In several areas where exotic vine and shrub growth is rampant, a rigorous mowing program to establish savannah is appropriate.

### Greensward Management Issues

The rolling greensward of Cherokee Park, dotted with groves of trees and enclosed by wooded steep slopes and valleys, epitomized the landscape that Olmsted is most remembered for. It is the restoration of this landscape character that is sought in this current effort, to recapture the vision in an environmentally sustainable way.

### Greensward Management Priorities

- Reduce the extent of greensward by establishing savannah along environmentally sensitive margins.
- Initiate management modifications to use only organic fertilizer and eliminate the use of pesticides.
- Modify the mowing regimen to reduce the frequency of mowing by cutting to maintain grass blades between 4-7 inches in height.
- Replant groves of canopy trees, including the Woody Plants of Kentucky, in ecologically appropriate habitats.
- Hand mow under major tree canopy to reduce level of mower damage as well as compaction over roots.

# Landscape Management Areas for Cherokee Park

## Willow Pond

Savannah/meadow management and pond and wetland habitat enrichment.

## Golf Course

Greensward, savannah/meadow, forest and woodland management.

## Scenic Loop

Forest and woodland management, with stabilized greensward and savannah/meadow.

## Barringer Hill Trail & Vista

Greensward, savannah/meadow, forest and woodland management.

## Barringer Hill Overlook

Greensward, forest and woodland management.

## Barringer Springs to Beargrass Creek

Greensward, savannah/meadow, forest and woodland management, with streambank stabilization.

## Central Woodlands

Forest and woodland management.

## Maintenance Facility

Forest and woodland management, with landscape screening.

## Two-Way Park Drives

Forest and woodland management, with stabilized greensward and savannah/meadow.

## Perimeter Woodlands

Forest and woodland management, with enriched floodplain habitats.

## Beargrass Creek Floodplain

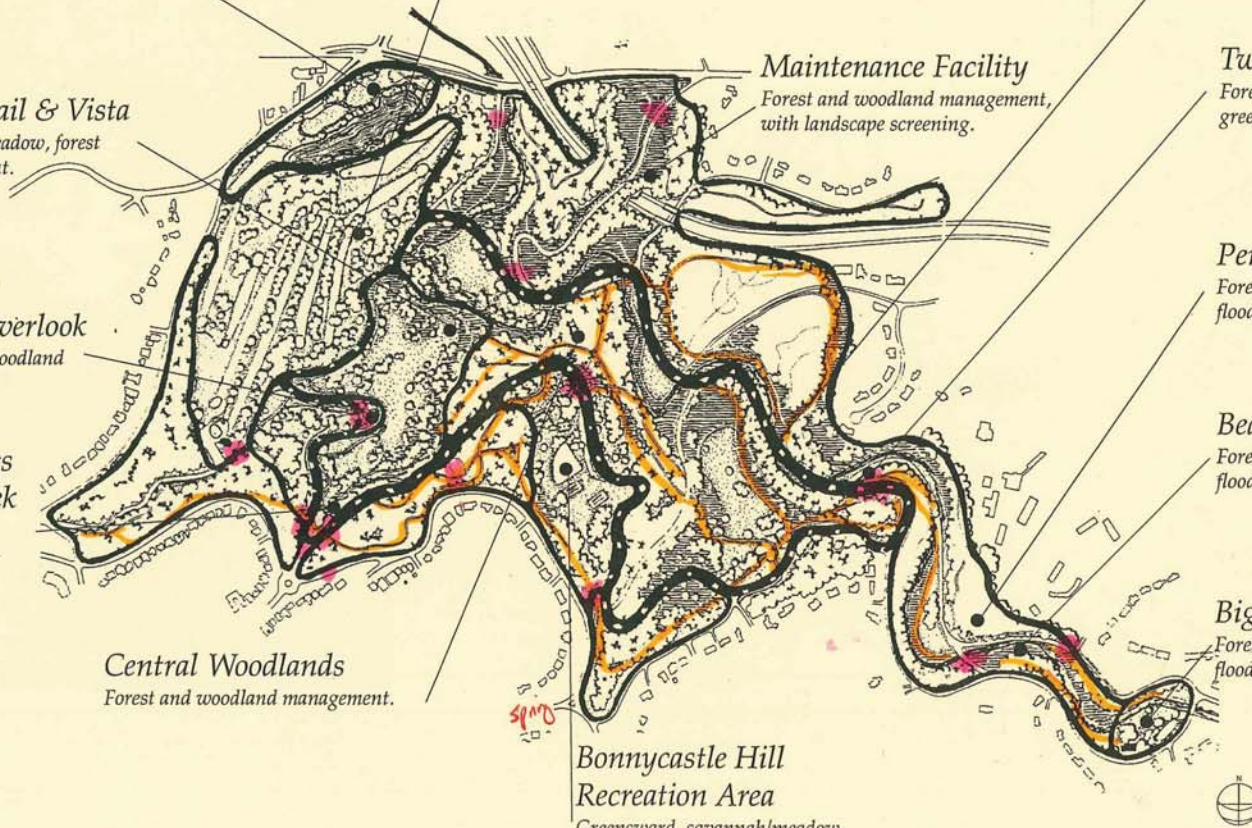
Forest and woodland management, with enriched floodplain habitats.

## Big Rock

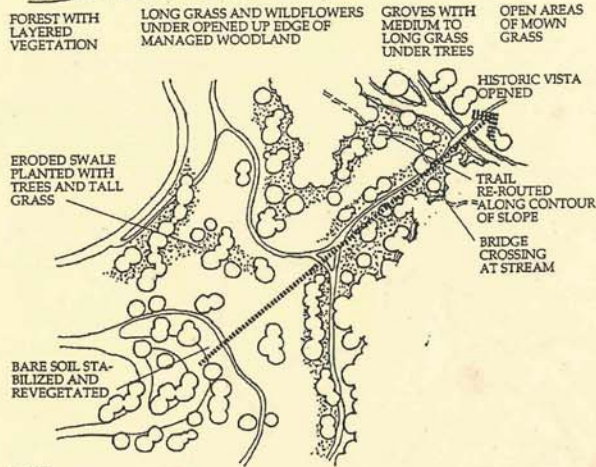
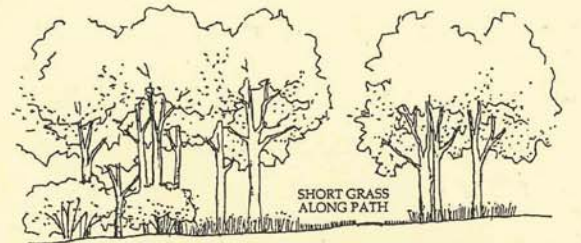
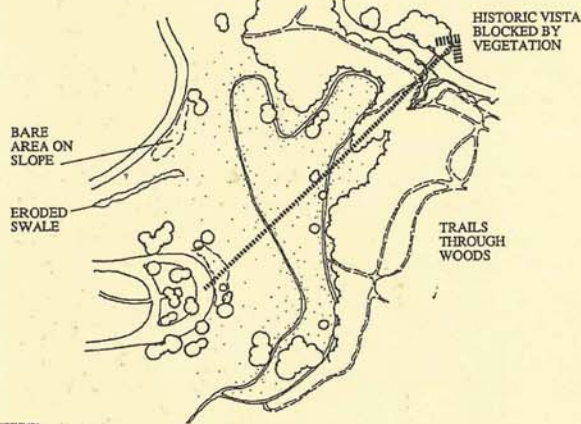
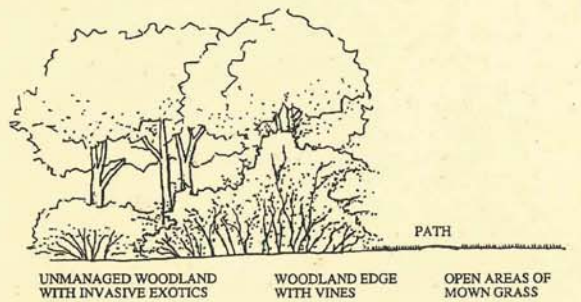
Forest and woodland management, with enriched floodplain habitats.

## Bonnycastle Hill Recreation Area

Greensward, savannah/meadow, forest and woodland management.



5. Cherokee Park



Barringer Hill, Cherokee Park, existing conditions.

Barringer Hill, Cherokee Park, proposed landscape management.



(Top) Park drives in Central Park, New York City, were made one-way, with a multi-use lane for walkers, runners and bicyclists. This became so popular that entire park drives were closed to traffic on weekends. (Central Park Conservancy, Photo by Sarah Cedar Miller)

(Bottom) The unsightly gravel areas for parking in Cherokee Park would be eliminated in the proposed plan, with paved lay-by parking bays occurring at destination areas and smaller wayside stops. (Andropogon Associates, 1993)

## Infrastructure & Features

### Circulation and Parking

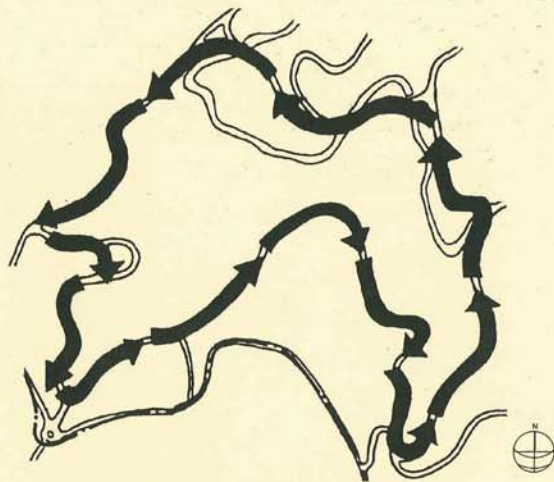
In Cherokee Park, a one-way Scenic Loop for vehicles began as a test project in October 1993 and became a permanent feature of the park in May 1994. Paved lay-by areas for 6 to 7 cars along wayside stopping points and small destination parking areas at special features are proposed. The current policy of "two wheels on—two wheels off" should be changed to "parking on pavement only in designated areas." For special performances, Barringer Hill could serve as a natural amphitheater, with a temporary stage set up on the lower meadow and parallel parking allowed on the multi-use lane of the Scenic Loop.

### Drainage and Utility Systems

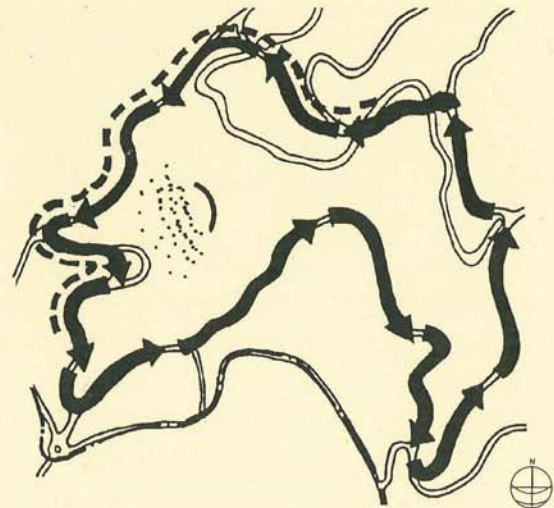
The layers of asphalt on park drives from repeated repaving projects is now out of character with the original design intentions of these scenic drives. The original crowned roadway section, with flush grass swales, giving the appearance of roads imprinted in the landscape, has been significantly altered, with widened areas of roadway and pavement edges up to 10 inches above grade, causing gullies and unsafe conditions for park users and drivers alike. Given that most of the inlets and culverts are nonfunctional, due to settlement and siltation, the resulting deterioration of road edges and adjacent woodlands is becoming a serious erosion problem. The historic bridges along the scenic Beargrass Creek drive are also in need of repair. The layers of asphalt on the drive, coupled with the frequent flooding of the creek, have seriously eroded the banks adjacent to bridge abutments.

### Facilities and Features

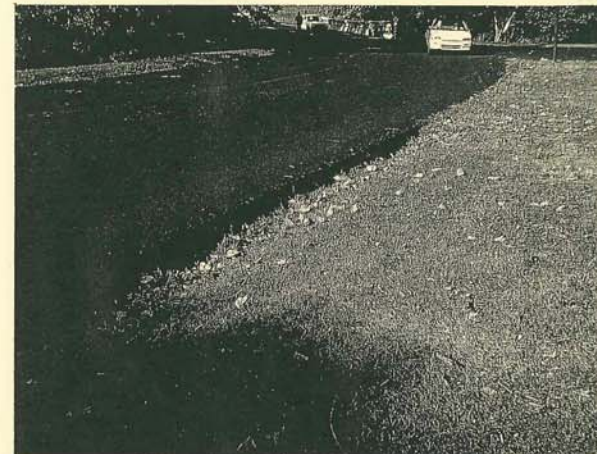
As described in the Renewal Strategy for Cherokee Park, introducing a multi-use path at Barringer Hill would allow the public to experience the pastoral landscapes of the park. A new pavilion atop Barringer Hill would renovate the existing restroom and recall the historic shelter that was destroyed by the 1974 tornado. An active recreational complex on Bonnycastle Hill, where a restroom facility, parking area, basketball court and baseball field currently exist, would also accommodate the phased relocation of facilities within historic Olmsted landscapes, such as the tennis courts at Chauffeur's Rest and the basketball courts at Big Rock and Willow Park. This entire complex, including the Teepee picnic area and Hogan's Fountain, requires improvements to provide a parkland setting, particularly as experienced from the park drive. Other historic features to be addressed, beyond the historic bridges, include the Christensen Fountain, Daniel Boone and the park entrance circle on Eastern Parkway, Hogan's Fountain and related paving and the re-opening of interior woodland views. Big Rock's natural setting requires stabilization, paths, planting and reorganized parking.



The Scenic Loop is a one-way loop, counterclockwise, from the Eastern Parkway entrance to Hogan's Fountain, down the Dingle and along Beargrass Creek, and up to Barringer Hill.



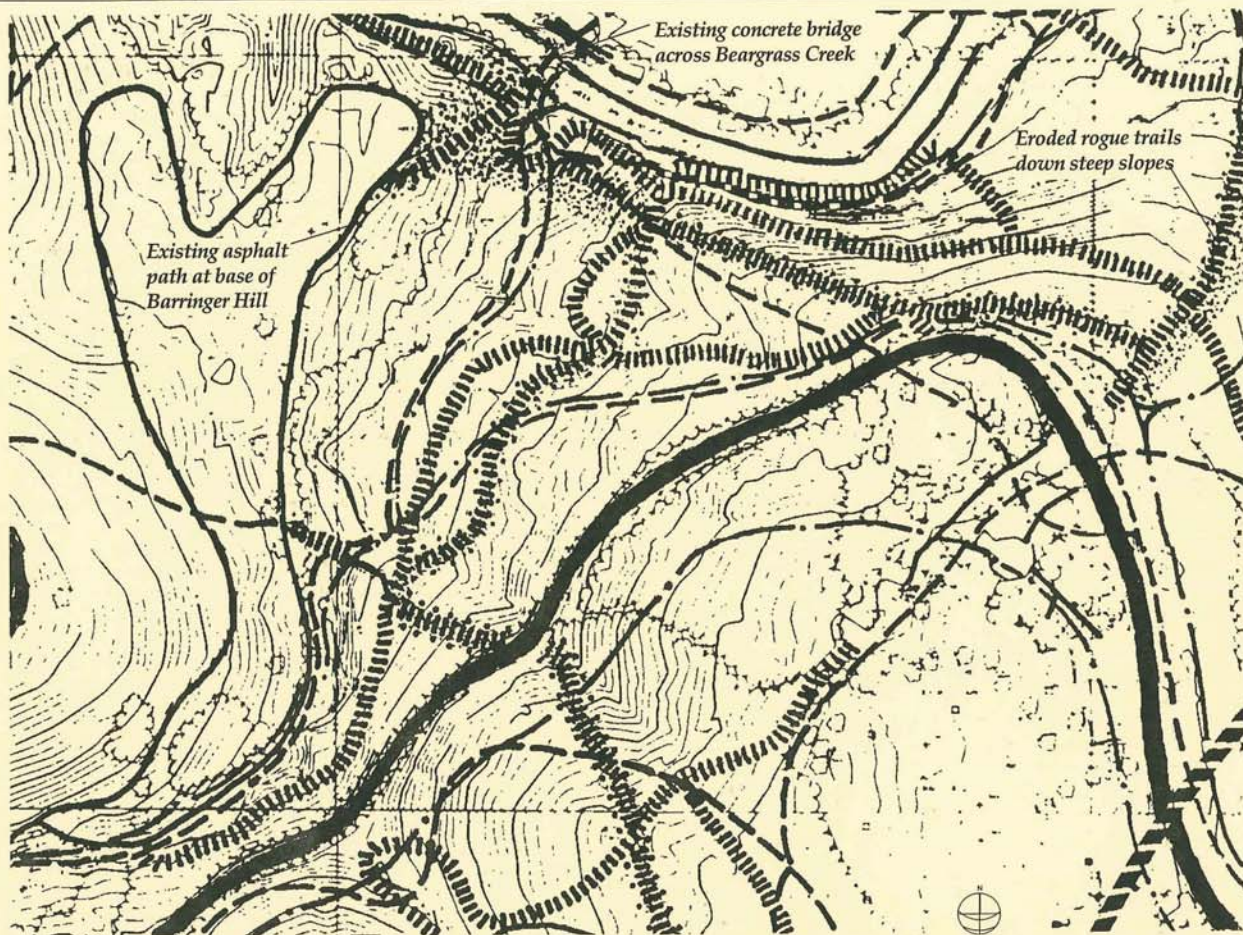
For special performances at Barringer Hill, the multi-use lane on the Scenic Loop could accommodate parallel parking so that spectators could walk to the hill, which would serve as a natural amphitheater for events staged in the lower meadow.








(Top) The repeated repaving of Cherokee Park's drives has resulted in a raised, unsafe roadway edge. These drive edges require stabilization and reconstruction of drainage infrastructure, so that they will be safe and functional. (Andropogon Associates, 1993)

(Bottom) The raised pavement near bridges has contributed to stormwater runoff damaging the bridge abutments and bridge railings. (Andropogon Associates, 1993)

5. Cherokee Park



-  Existing roads
-  Existing asphalt paths
-  Existing dirt paths and eroded areas

-  Bridle paths proposed on Study Plan, prepared by Olmsted Brothers, 26 March 1935
-  Path system proposed on General Plan, prepared by F.L. & J.C. Olmsted, 1 December 1897

A Composite Mapping of Existing Paths and Paths Proposed by F.L. & J.C. Olmsted in 1897 and Bridle Paths Proposed by Olmsted Brothers in 1935 for Barringer Hill and Central Woodlands of Cherokee Park

Note: Site review of existing paths should include reference to existing topographic plans, along with the 1897 and 1935 Olmsted proposals.

(Top) Existing woodland paths in Cherokee Park are in need of stabilization and drainage improvements. (Andropogon Associates, 1993)

(Bottom) Existing asphalt paths are also deteriorating and were sited in locations that conflict with historic views and settings. (Andropogon Associates, 1993)

## Resolving Cherokee Park's Woodland Trails

There is a longstanding controversy among park users regarding the use of Cherokee Park's woodland trails. A 1992 interim agreement temporarily allows the use of the north side of the park's woodlands for mountain bicycling, while the south side, where paths are more frequently used by walkers, is off-limits to mountain bicycling.

The 1897 and 1935 Olmsted trail system proposals for Cherokee Park show an extensive system that follows the lay of the land—that is, the trails parallel the contour lines of the topography. Most of these paths were not installed and many that were have disappeared. Some of the existing paths that were blazed or reopened are at odds with the Olmsted trail proposals.

As new forms of recreation evolve, they put new and unanticipated demands on the park. New recreational demands have been accommodated throughout the development of the parks, with F. L. Olmsted and later the Olmsted Brothers recommending sites and design standards for baseball, tennis, golf, bicycle and equestrian paths, etc. This does not imply that every new form of recreation automatically belongs in the park. Indeed, over the last few decades, new facilities have often been sited in conflict with historic and natural resources, and without design standards, resulting in a fragmented park landscape.

The major problem with Cherokee Park, in terms of accommodating trails, is the narrowness of its woodland fragments and steep slopes. Many "rogue" trails run perpendicular to the contours, up and down slopes, and it is not surprising to see that these trails are eroding. Once someone takes the initiative to make a new path, others follow. And since many of these paths are on hills, a controversy is stirred by the difference in user speeds—mountain bicyclists can go fast down hills and often startle walkers and equestrians, much to their annoyance and mutual endangerment. Since the widths of these paths are also narrow (some are only 12 inches wide), passing is a constant problem and erosion is difficult to control.

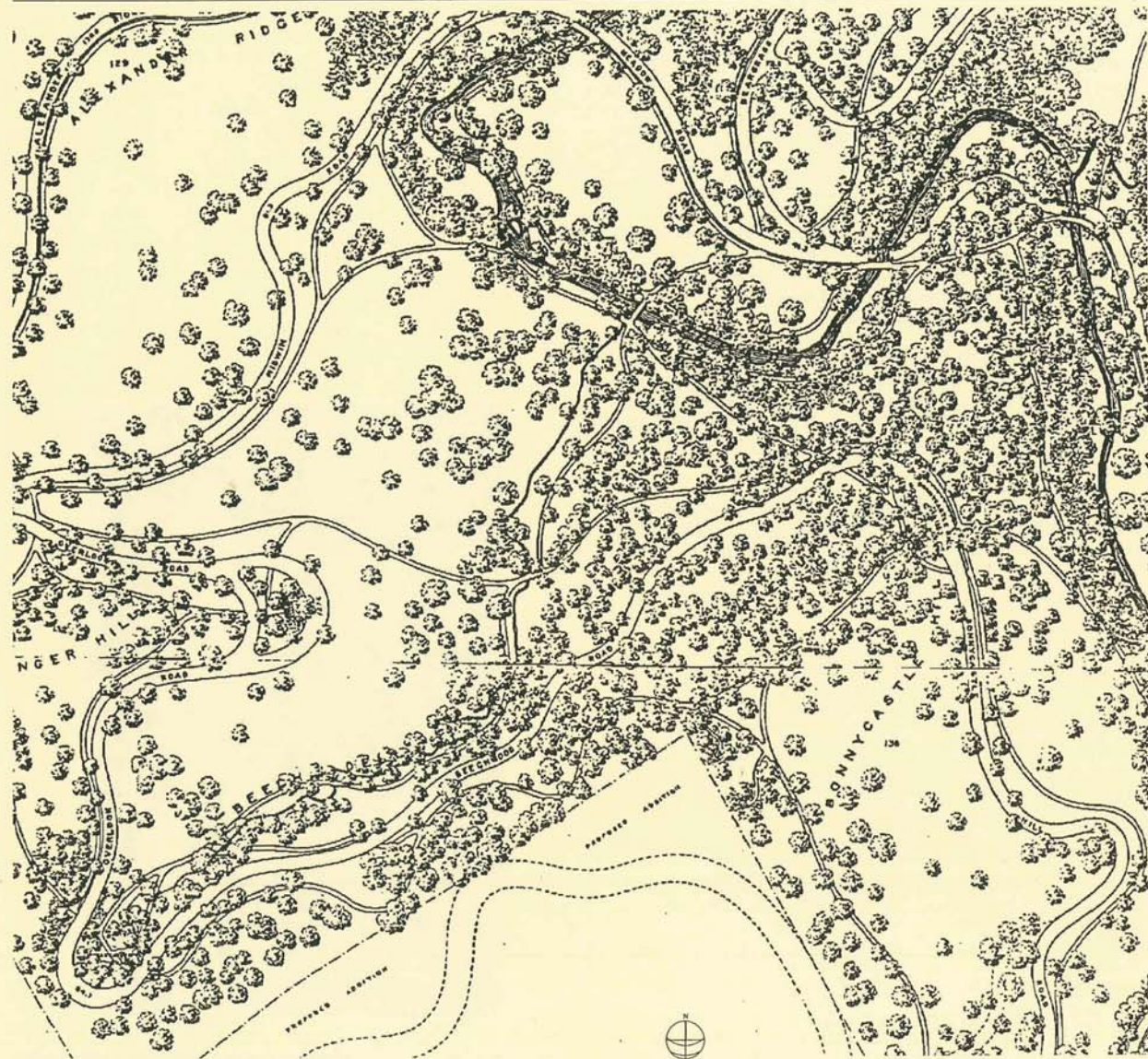
The current trail system, which combines bridle, mountain bike, and walking trails, poses increasingly negative impacts to the woodlands if left unattended. Trail issues are integral to the landscape management of the woodlands and include the following recommendations:

- Initiate effective control of those activities which currently damage the woodlands, including rogue trails, trampling and stormwater management.
- Immediate landscape management is recommended to close rogue trails and to stabilize trampled and eroded sites.
- It is the intention of this Master Plan to incorporate the original Olmstedian path system, insofar as is feasible. Except where use patterns have changed, due to new features, the goal should be to retain the character and intent of the original design. However, this is a balancing act which requires a measure of judgment. While the ultimate decision will be made by the Parks Department, the planning and review process for the trail system should involve all interested parties through the Stewardship Council and Advisory Committee, as described in Chapter 9, "Implementation."
- Develop an ongoing program to gradually control exotic invasive vegetation with the establishment of a landscape management crew, in concert with crews to repair woodland trails. These projects are long-term, labor intensive and specialized. Specific areas of damage need to be addressed in the short term.
- Develop volunteer efforts with the landscape management and trail repair crews to close rogue trails, stabilize the ground layer, repair gullies and remove exotic vegetation. It is hoped that these volunteer projects would bring together all the park users of the woodlands, so that a true stewardship ethic of managing this unique urban resource could be cultivated and conveyed to the public at large.
- Develop a landscape management and trails monitoring process to assess the effectiveness of landscape management and trail repair techniques, which are described in Chapter 7, The Living Landscape and the Appendix: Trail Maintenance Guidelines.



A path for walkers only is signed at Valley Forge National Historical Park, Valley Forge PA, where there is also a paved multi-use lane, separate walking and bridle trails, and striped bicycle lanes on one-way roadways. (Andropogon Associates, 1992)





General Plan for Cherokee Park, Louisville, Kentucky, December 1897, by F.L. & J.C. Olmsted, Landscape Architects. (FLONHS)

## Renewal Projects

### *Barringer Hill Trail & Vista*

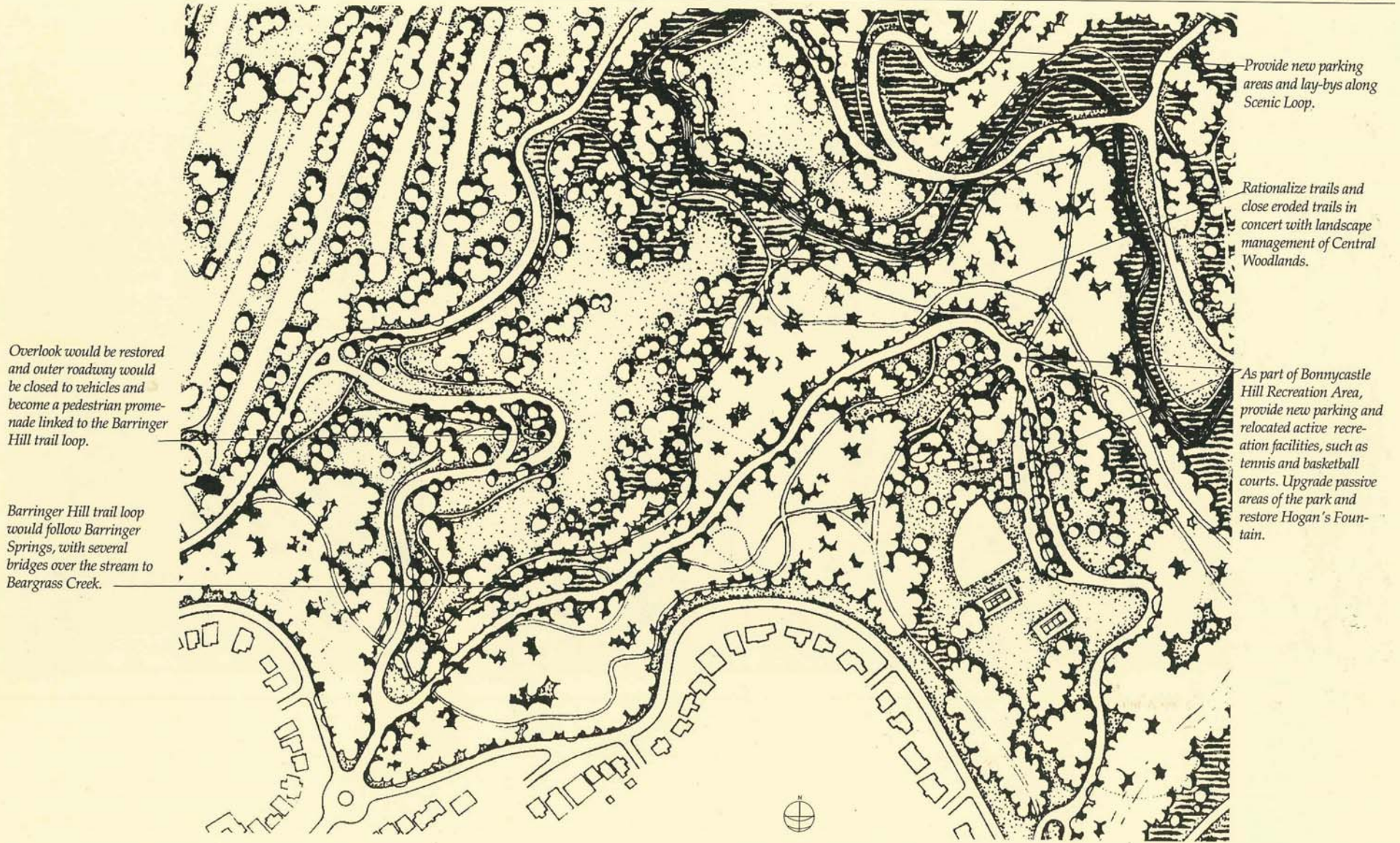
Rehabilitation of a great Olmstedian vista and a maltreated creek are the focus of this demonstration project. In a sense, this project picks up the threads of Olmsted's extensive but unbuilt pathway system to allow people to get out of their cars and into the meadows and woodlands. A subtly aligned, paved path will provide access for all, meeting the standards of the Americans with Disabilities Act. The multi-use path will accommodate strollers, wheelchairs, pedestrians, touring bicyclists, and maintenance and security vehicles. Elsewhere, woodland paths will be soft-surfaced appropriate to their uses. Visitors will enjoy a one-mile loop from the Barringer Hill Overlook to Beargrass Creek. The project includes associated signage to tell the stories of Cherokee Park, along with drainage and landscape management along the corridor. Additional trees will be planted to create a more gradual and open woodland edge and to enhance views. A new bridge, perhaps in the traditional rustic wood style, will cross Beargrass Creek. The creek itself will be improved with gentler, vegetated banks and pools and riffles to support the fish and the globally unique Louisville crayfish. A wetland area will be created to accept intermediate stage flood waters, while providing rich bird habitat. Across the creek, the meadow will be regraded for more pleasing topography and will continue to serve for field sports and casual use. Seating and signage will enhance visitor comfort and learning.

### *Barringer Hill Overlook*

To frame the views atop the hill, existing restroom facilities will become the core of a new open-air shelter with a large fireplace for winter sledding and a first-aid/ranger station. Architectural design will reintroduce the traditional rustic character of the original Overlook which stood in this location before the 1974 tornado. A portion of the park drive at the Overlook, along the outer edge of the hillside, would be rededicated as people space.

### *Great Groves & Woodlands Renewal*

To recreate the drama and scale of the most crucial missing elements of the original Olmsted design, several groves consisting of three to five large native trees would be planted in areas of cleared woodlands and open vistas. Additional areas of woodlands, now covered in invasive exotic vegetation, would be managed under a demonstration and training program for further landscape management work. Trail repairs would also be integrated into this program.

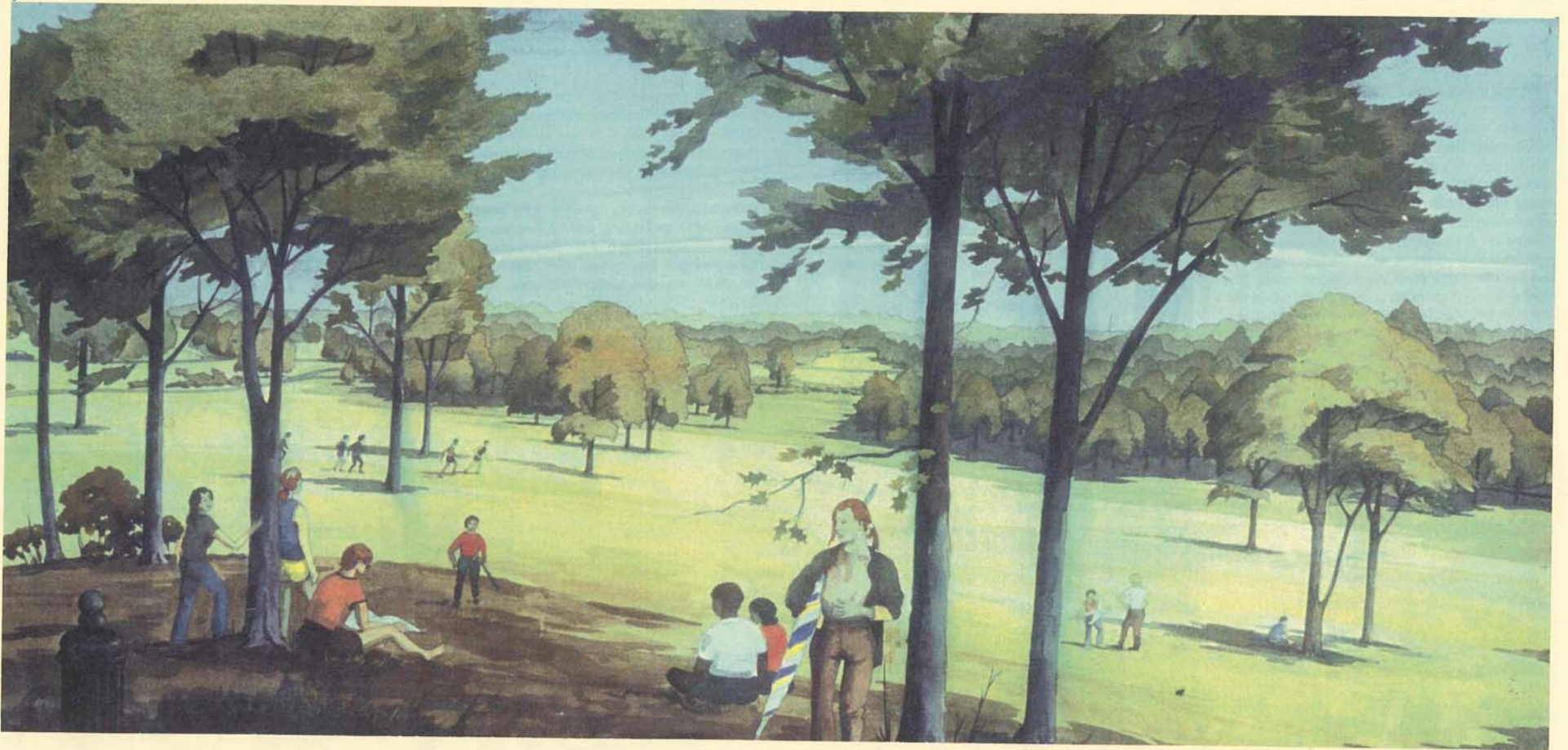


Illustrative Master Plan for Cherokee Park, showing renewal of Barringer Hill, Central Woodlands and Bonnycastle Hill.

5. Cherokee Park



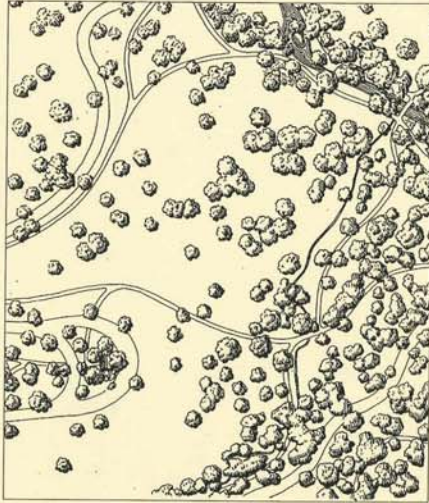
*Panorama of existing vista from Barringer Hill and views of closed woodlands, turf expanse and deteriorated paths. (Andropogon Associates, 1993)*



*View of proposed renewal of Barringer Hill vista, including the installation of the Great Groves of Kentucky, woodland paths and woodland clearance and removal of exotic invasive shrubs, trees and vines. (Rendering by Colin Franklin, Andropogon Associates, 1993)*

### Vista and Landscape Management for Barringer Hill, Historic Design Intent

Original conditions of the site, from an 1891 survey, show a mature beech woods, with black walnut, sycamore and elm, and a largely open understory. Barringer Hill was in pasture, with a few hedgerows of black locust, cherry and ash. Olmsted's proposed park plan of 1897 shows the design intent of a vista through the woods from the overlook to the creek and hillside beyond. Groves of mature trees overlap the edges of the vista, with views under and through the groves as well as over the tops of tree canopies. Many trees had enormous canopies and were underlain with carpets of wildflowers and a rich woodland groundcover.



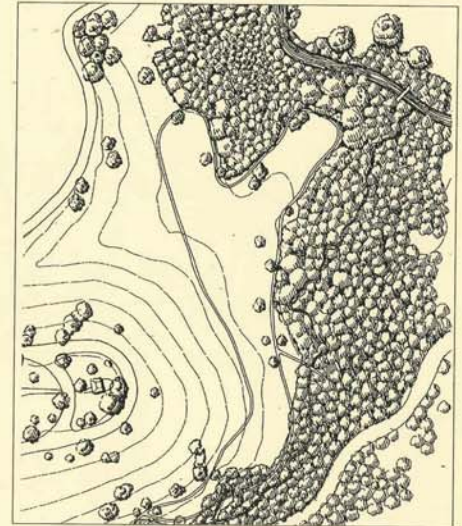
Historic Design Intent: Plan of Barringer Hill, as proposed in F.L. & J.C. Olmsted's General Plan of 1897



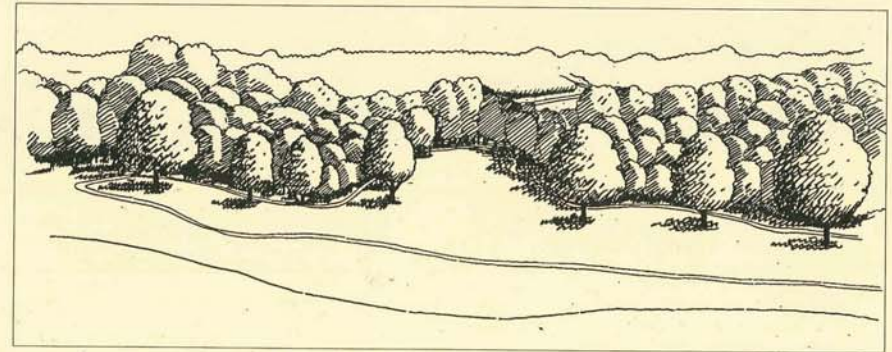
Historic Design Intent: Barringer Hill Vista, as proposed in F.L. & J.C. Olmsted's General Plan of 1897

### Vista and Landscape Management for Barringer Hill, Current Conditions

The 1974 tornado felled over two thousand trees in Cherokee Park. Barringer Hill in particular was devastated—the tornado cleared a swath on both sides of Beargrass Creek. Many of the mature trees were completely uprooted. The sudden loss of canopy reduced the forest cover substantially and fostered the spread of invasive, non-native species. The twenty years of unmanaged understory growth has resulted in a dense thicket of vegetation that blocks the historic vista from the hill above. The mature trees have been replaced by stands of younger, relatively even-aged trees, with an understory clogged with invasive shrubs and vines.



Current Conditions: Plan of Barringer Hill, 1994

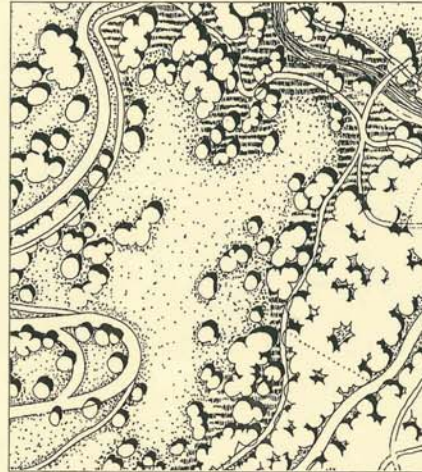


Current Conditions: 1994 Barringer Hill Vista, with vista blocked by trees, shrubs and vines

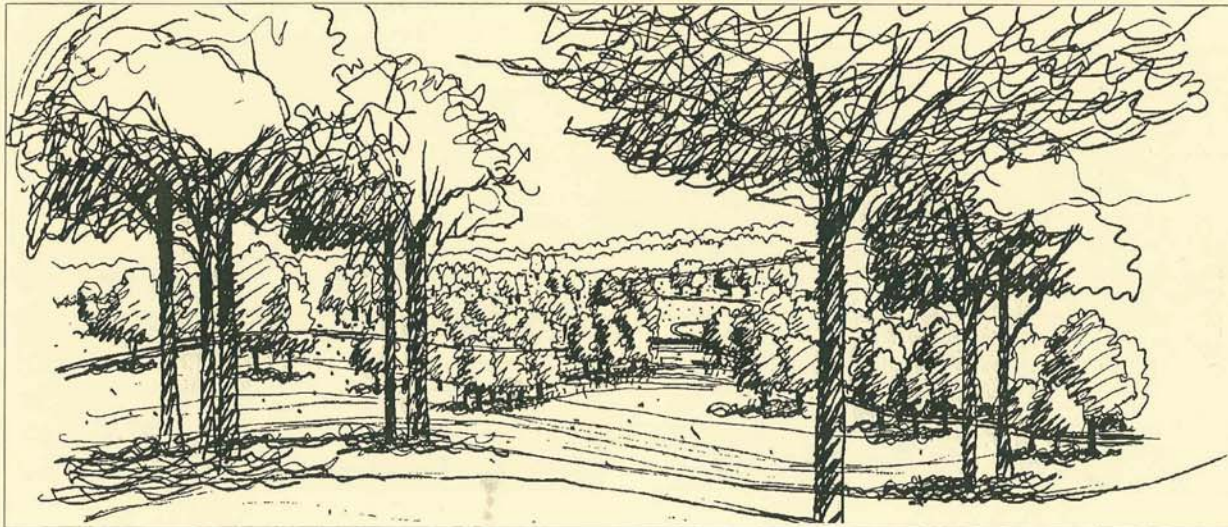
### Vista and Landscape Management for Barringer Hill, Proposed Renewal

The plan shows the proposed scenario of landscape cover types that is the overall goal of landscape management at Barringer Hill. An open woodland cover type is proposed for the present dense woodland thickets; a savannah of long grasses and tree groves is proposed for the central historic vista; and a greensward of mixed forbs and grasses is proposed for the open hillside.

The primary objective is to restore the spatial character of the open woodlands that Olmsted retained as part of the 1897 General Plan. The chief task is the removal of invasive shrubs, vines and trees that presently form a dense green wall between the forest and the meadow. Removals will be done incrementally and by hand, beginning with vines and shrubs and progressing to young trees, with follow-up work to favor wildflower and woodland groundcover development.



Proposed Renewal: Plan of Barringer Hill



Proposed Renewal: The historic vista and woodland renewal for Barringer Hill, 1994 conceptual sketch



To foster an appreciation of the beauty and fragility of the woodlands, a wildflower walk in the woodlands near Beargrass Creek could exhibit the rich herbaceous layers of the forest floor and teach people respect for fragile natural environments. These are views of the wildflower walk in the North Woods in Central Park. (Central Park Conservancy. Photos by Sarah Cedar Miller, 1993)

5. Cherokee Park



Paved multi-use path through open parkland groves of Prospect Park has become a popular route for families and walkers. (Central Park Conservancy. Photo by Sarah Cedar Miller)



Woodland path restoration in Central Park's North Woods included drainage infrastructure and stabilization of adjacent woodland slopes which had been badly eroded and trampled. (Andropogon Associates, 1993)



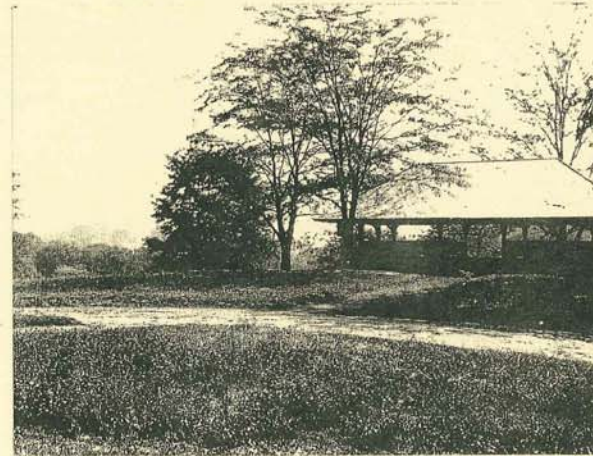
Restored rustic pavilion at Prospect Park, Brooklyn, New York, is evocative of the architectural style that could occur on Barringer Hill. (Central Park Conservancy. Photo by Sarah Cedar Miller)



A paved multi-use path at Valley Forge National Historical Park was initially constructed with an 8-foot width, but then became so popular that striping and warning signs had to be installed. (Andropogon Associates, 1993)



Temporary fencing was installed along several woodland paths in Central Park's North Woods, to notify park users of closed-off "rogue" trails and to allow the woodland stabilization plantings to establish themselves. (Andropogon Associates, 1993)



Historic view of pavilion at Barringer Hill, c. 1895. (LOPC Archives)

5. Cherokee Park



Paved multi-use path through open parkland groves of Prospect Park has become a popular route for families and walkers. (Central Park Conservancy. Photo by Sarah Cedar Miller)



Woodland path restoration in Central Park's North Woods included drainage infrastructure and stabilization of adjacent woodland slopes which had been badly eroded and trampled. (Andropogon Associates, 1993)



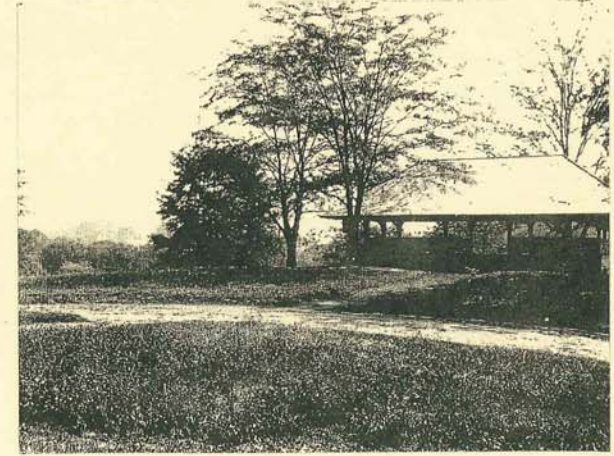
Restored rustic pavilion at Prospect Park, Brooklyn, New York, is evocative of the architectural style that could occur on Barringer Hill. (Central Park Conservancy. Photo by Sarah Cedar Miller)



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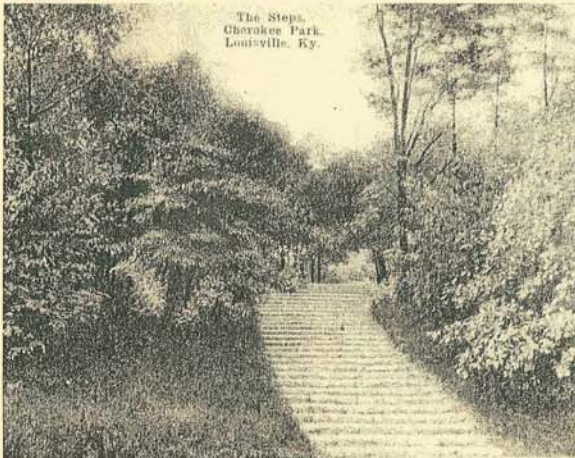


Historic view of pavilion at Barringer Hill, c. 1895. (LOPC Archives)





In several areas of Central Park's North Woods, stone steps in the woodlands were reconstructed. (Andropogon Associates, 1993)



Historic view of stone steps in Cherokee Park, c. 1920. (University of Louisville, Photographic Archives, Potter Postcard Collection)



Executive Director of the Louisville Olmsted Parks Conservancy Susan Rademacher and former Master Planning Committee Cochair Mike Rudd toured the restoration of the North Woods in Central Park, New York City, with the park's Chief of Planning Marianne Cramer. This view also shows the stabilized woodland paths and rustic bridges that were recently installed in the park. (Andropogon Associates, 1993)



Historic view of Beargrass Creek, Cherokee Park. (University of Louisville, Photographic Archives)



Historic greenward, Cherokee Park, July 15, 1930. (University of Louisville, Photographic Archives, MSD Collection)



### *Habitat Enhancement Projects*

Installation of a wildflower trail along Beargrass Creek, with woodland restoration and interpretation, would bring back the rich herbaceous layers of wildflowers that the park was known for in the past. This project would also exhibit trail closures and new trails, which would demonstrate to park users the importance of staying on the paths and protecting the woodlands.

The Beargrass Creek section at the base of Barringer Hill would be enhanced, including regrading and stabilizing of the banks, shoreline and wet meadow landscape establishment, and monitoring of baseline conditions and ongoing conditions and changes. Once established through effective landscape management, these stream enrichment projects could be extended along other sections of Beargrass Creek. Creekside, bank slope and trail renewal could also be extended to the Big Rock area to recapture its natural setting.

The installation of a wetland retention basin at Willow Pond, to filter stormwater runoff from the golf course, along with new meadow margins around the lake and golf fairways, could allow the eventual renewal of lakeshore aquatic plantings around the lake. The small grass areas along the new walking path could also be developed as a demonstration project for wildflower meadow establishment, with areas of greensward for sitting and picnicking.



*Above, Willow Pond in 1993. (Andropogon Associates, 1993)*

*On left, historic view of Willow Pond (Cherokee Lake), showing pond edge aquatic plantings and meadows, c. 1931. (University of Louisville, Photographic Archives, Caufield & Shook Collection)*



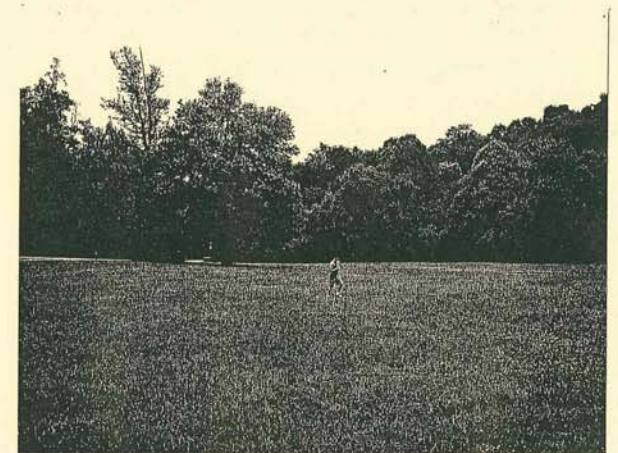
Historic view of Beargrass Creek, showing greenward edge and pools and riffles in the stream course, which have now largely disappeared. (University of Louisville, Photographic Archives, R. G. Potter Collection)



(Top) View of existing Beargrass Creek, with collapsing streambanks and turf edges which do little to stabilize banks. (Andropogon Associates, 1993)



(Bottom) View of Big Rock, which could also benefit from repair of eroded and trampled areas, streambank stabilization and new stabilized paths. (Andropogon Associates, 1993)



(Top) Expanses of turf in Cherokee Park can be converted to meadows, with mown grass paths. (Andropogon Associates, 1993)



(Bottom) View of wildflower meadow and oldfield along a scenic parkway in Philadelphia PA designed by Andropogon Associates, 1992.

## 5. Cherokee Park

The demonstration projects for the parks and parkways strike at the heart and soul of each park's original vision and design intent, while responding to contemporary needs.

For Cherokee Park, the renewal of one of the park's most dramatic pastoral vistas will once again allow people to experience the open woodlands, with a paved multi-use path loop. Invasive shrubs and vines will be removed in these woodlands, and new plantings of Great Groves of Kentucky will provide a spatial organization which evokes the mature beeches and open woods that graced Cherokee Park before it was destroyed by the 1974 tornado. Thus, the proposed demonstration projects for Cherokee Park include project areas 1 through 4.

## Project Areas for Cherokee Park

### 1. Barringer Hill Trail & Vista

- Construct one-mile path loop around Barringer Hill, with bridges over Barringer Springs and connections to bridle trails and walking paths.
- Close eroded rogue trails and conduct landscape management to re-establish the park's native woodlands, Great Groves of Kentucky and the vista from Barringer Hill.

### 2. Barringer Hill Overlook

- Construct open-air shelter around existing restrooms, with large fireplace for picnics and winter sledding and a ranger station.
- Reconstruct paths at Barringer Hill and restore hilltop woodlands.
- Overlook roadway closed to automobiles with bollards and linked to Barringer Hill trail loop.

### 3. Central Woodlands Management & Trails

- Manage to re-establish native woodlands and meadows.
- Prioritize work areas, close more than 1.3 miles of rogue trails, stabilize eroded areas, and renovate one mile of bridle trails and two miles of walking paths.

### 4. Scenic Loop

- Stripe roadway for multi-use path and provide signage and safety improvements at intersections.
- Stabilize road edge pavement and adjacent drainage swales, with inlet and culvert improvements and new parking areas and laybys.
- Renovate four bridges along Beargrass Creek on Scenic Loop: Alexander Bridge (#1); Cochran Bridge (#2); Ahrens Howard Memorial Bridge

- (#3); and Hart Memorial Bridge (#4), with bridge abutment repairs, creek bank stabilization and flood-overflow swales.
- Renovate Hogan's and Christensen Fountains, with sitework and landscaping improvements.

### 5. Perimeter Woodlands Management & Trails

- Manage to re-establish native woodlands and meadows.
- Prioritize work areas, close more than 1.5 miles of rogue trails, stabilize eroded areas and renovate 1.2 miles of bridle trails and 7.7 miles of walking paths.

### 6. Barringer Springs to Beargrass Creek

- Restore stonework, steps and terrace at head of Barringer Springs, with drainage improvements and path connections to Barringer Hill trail.
- Stabilize streambanks and drainage outfalls along Barringer Springs to Beargrass Creek, with wet meadow retention basins, stabilized slopes at footbridge abutments, and woodlands and floodplain habitat enrichment.
- Relocate and redesign footbridge across Beargrass Creek at base of Barringer Hill.

### 7. Bonnycastle Hill Recreation Area

- Renovate and enlarge parking area at Bonnycastle Hill, with landscaped buffer along Park Boundary Road.
- On phased basis, relocate tennis courts from Chauffeur's Rest and basketball courts from Big Rock to Bonnycastle Hill. Improve baseball field.
- Provide picnic area and parkland landscaping improvements to passive areas, including Teepee, playground, and path connections to bridle trails and walking paths.

### 8. Willow Pond

- Reconcile golf course conflicts with public use of Willow Pond area.
- Enrich landscape habitats around pond, including meadow perimeter on downslopes from golf course, which would drain to new wetland retention area before flowing into lake. Install aquatic and shoreline vegetation.
- Re-establish park trees and hedgerows along Grinstead Drive.

### 9. Big Rock

- Improve parking off Park Boundary Road and provide path connections to Big Rock area and pavilion; remove gravel parking area on floodplain and restore as lawn and meadow.

- Relocate basketball courts to Bonnycastle Hill Recreation Area.
- Stabilize and enrich floodplain habitats along Beargrass Creek to Big Rock and reconstruct paths and overlooks to limit trampling and erosion.

### 10. Two-Way Park Drives

- Stabilize road edge pavement and adjacent drainage swales, with inlet and culvert improvements and new parking layby areas.
- Renovate five bridges along Beargrass Creek: Grenoweth Bridge (#5); Sackett-Speed Bridge (#6); Bridge #7; Bernheim Memorial Bridge (#8); Belknap Bridge (#9), with bridge abutment repairs, creek bank stabilization and flood-overflow swales.
- Renovate Daniel Boone Statue and circle at Eastern Parkway terminus, stonework at Grinstead Drive entrance, and stone retaining wall along Park Boundary Road.

### 11. Beargrass Creek Floodplain

- Stabilize channel and banks and enrich habitat including pool riffles within channel, vegetated creek banks and cut-back banks to accommodate terraced, floodplain wet meadow areas.
- Conduct landscape management to re-establish native woodlands and meadows.
- Monitor water quality and work with MSD on floodway management and floodplain habitat enrichment.

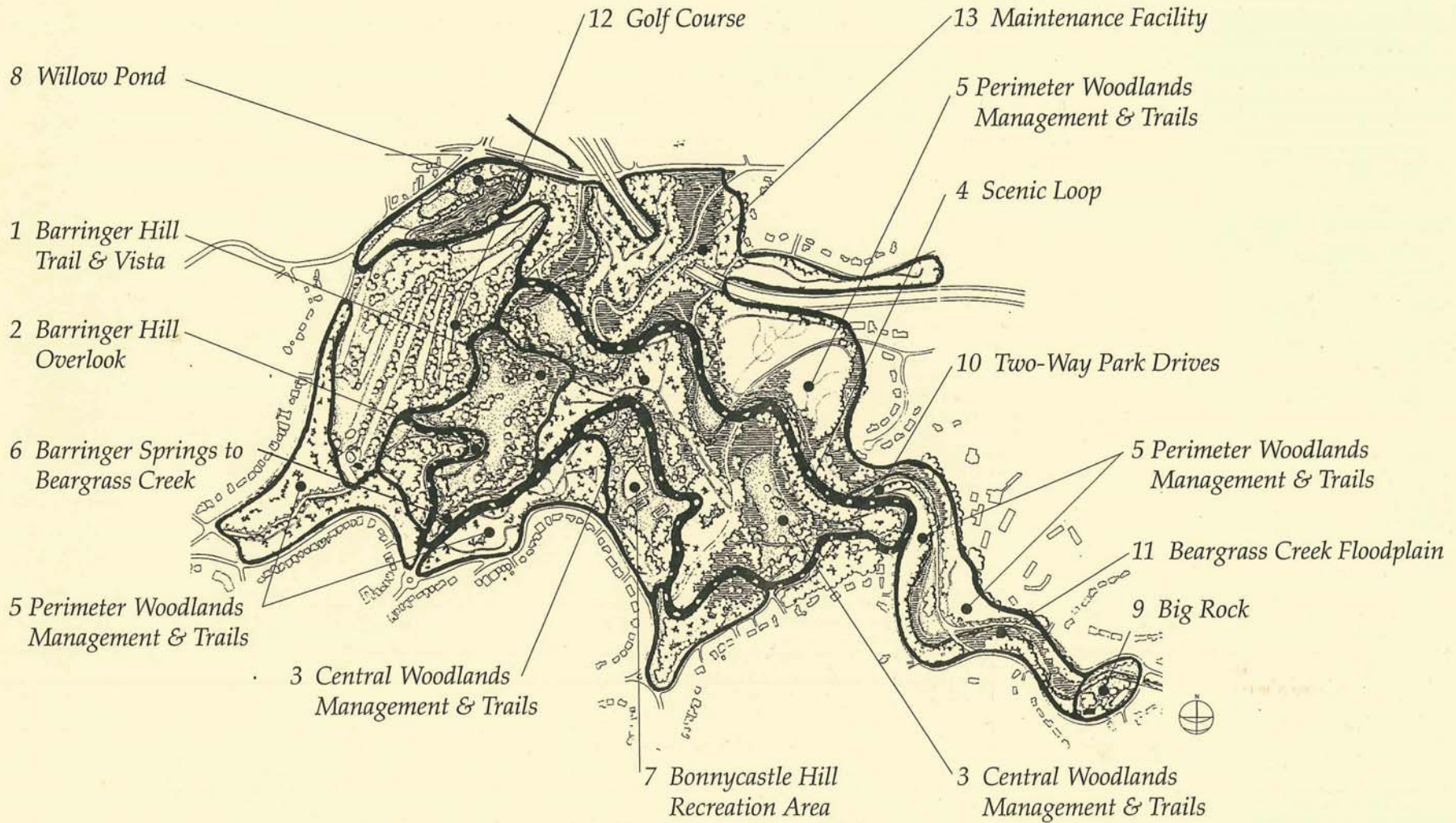
### 12. Golf Course

- Enhance golf course on a phased basis including reorganized parking area and landscaped buffers, particularly along Barringer Hill, Willow Pond, and Cherokee Parkway boundaries.
- Manage perimeter woodlands, with drainage swale improvements, and convert lawn to meadows where there is no conflict with playability.

### 13. Maintenance Facility

- Improve maintenance facility area, with landscaped screening and yard areas to accommodate equipment and storage needs.

# Project Areas for Cherokee Park



## *Inventory and Analysis Summary*

The following areas of concern were inventoried and analyzed by the Andropogon Associates master planning team in the fall of 1992:

### *Natural Resources*

- Poor water quality in Beargrass Creek from combined sewer overflows.
- Stormwater and erosion of Beargrass Creek, gullies and paths.
- Habitat deterioration—fragmented structure of woodland areas; disturbance in tornado damage area; invasion by exotic species; only two to three areas of the park where native reproduction and wildflower habitats still occur; endangered wildlife.

### *Infrastructure and User Conflicts*

- No path hierarchy exists—conflicts between mountain bicyclists, pedestrians and equestrians, as well as conflicts between people and habitat.
- Bridges threatened by deterioration and stormwater damage around abutments.
- Haphazard parking and traffic conflicts between cars shortcutting through park and park road users, such as bicyclists, runners and pedestrians.
- Mountain bicycle path blazing has led to controversy of use, since path widths do not relate to appropriate park use by different park users.
- No formal review process with MSD regarding Beargrass Creek management and upper watershed management.

### *Historic Resources*

- Loss of vistas and sequence of open space and woodlands—park landscape no longer readable and is confusing to park users.
- Path system as originally proposed is lost or absent: a path hierarchy of 5-foot-wide walking paths and 10-foot-wide multi-use paths, in continuous loops along the contours and through the sequence of open greensward and woodlands; random access on foot or bicycle is degrading park.
- Tornado damage and replanting have altered spatial organization.
- No formal review process with Public Works regarding parking, signage, traffic, paving and road striping standards as these relate to the historic landscape character of the park.
- Replanting and landscape management not related to historic landscape structure.

## *Park Survey*

From the interviews and public forums held in 1991 and 1992, by Susan Rademacher, Executive Director of the Louisville Olmsted Parks Conservancy, and The Halvorson Company, the following issues were identified and ranked by participants—representing both users and non-users.

### *Major Features of the Park as the Public Sees Them*

Many people see the major feature of this park as the scenic drive it affords them as they take a few extra minutes to include it in their route. The scenic routes also attract a considerable number of runners and bicyclists for individual work-outs as well as competitive racing. People who come to the park to be in it seem most attracted by the large open spaces for field sports, dog walking and casual hanging-out. A smaller group is attracted by the woodlands, although frustrated in use by the condition of the trails and the difficulty of understanding the trail system itself. Beargrass Creek is the focal point of open spaces and woodlands, as it winds through them. The Big Rock area is a place of great nostalgia and a scenic focal point.

Winter use is an echo of summer time, in that warm days in winter brings hordes of people to sun themselves in the spaces of Cherokee. During snowfall the hillsides are magnets for sledders, while ice skating occurs in those rare winters of extended freezing weather.

Cherokee's unique identity is as a scenic stream valley drive, a place of relative safety that accommodates a wide range of uses and almost unlimited access. It is also seen as a place of loss and confusion, due to the destruction of the 1974 tornado and the resulting dark walls of vegetation that create the image of an impenetrable, dark forest.

### *Projects Suggested by the Public*

- Improve trail system by restoring degraded portions, repairing bridges, marking with signs as at Bernheim Forest. Clear vines and other plants that obstruct views.
- Reduce automobile traffic; discourage cut-through traffic; close roads at certain times or make one-way; enforce speed limit.
- Provide adequate, controlled parking.
- Maintain bridges; add rumble strips to slow down approaching cars.
- Install sign system for direction, information and education.
- Add benches and picnic tables.
- Restore, highlight and maintain historic remnants, such as stairs; conserve open spaces without recreational clutter.
- Clean up Beargrass Creek.
- Restore Grist Mill.
- Replace open-air pavilion lost in tornado atop Barringer Hill.

### *Programs Suggested by the Public*

- Get volunteers to clean up and adopt areas.
- Control perimeter encroachments, e.g., land use and stormwater management.
- Develop interpretive program on native plants.

## Historic Landscape Analysis

Prepared by Landscapes, Westport CT

Shortly after the parks authorization bill of 1890, Andrew Cowan, member of the Parks Board, secured options on some 260 acres of land in the Bear Grass Creek valley and surrounding hillsides. These lands were used as pasture prior to park development and contained a significant collection of native trees, as indicated on the topographic survey of 1891. From the outset the issue of park boundaries and the need for a park boundary drive was problematic. The General Plan for Cherokee Park, by F.L. & J.C. Olmsted, Landscape Architects, dated December, 1897, shows the hills, ridges and creek valley accessed by a system of interior drives and paths. The western edge of the park is bounded by and extended in Cherokee Parkway, and the northern edge is fronted by Workhouse Road, while the balance of the boundary is shown with proposed additions and boundary roads. As Cherokee Park was developed some abutting property owners aided in securing improved park boundaries, while other areas remained unresolved for lack of land additions. The Olmsted firm designed a richly planted, valley and hillside landscape to contain a collection of Kentucky woody plants in their planting plans of 1894 and 1897.

### Cherokee Park Historic Landscape Types

Cherokee Park is a public landscape that captured the Beargrass Creek Valley with the rolling topography of primarily open pasture lands rising up from the creek bottom. The Olmsted General Plan, colored to highlight the intended landscape types, dramatically illustrates the open park landscape that was planned. This Cherokee Park Historic Landscape Types Plan [1] shows the categories of landscape as applied to these park lands (see Chapter 2, Olmsted's Vision for Louisville). The Olmsted design provided for augmenting park plantings with additional shade trees, areas of shrub and tree planting on steep slopes and varied open, dense planting along Beargrass Creek and augmenting of woodlands. A botanical collection of native Kentucky woody plants was integrated into the park scenery as a unique regional expression and educational aspect of the landscape [2].

The topography and vegetation of the park created a spatial organization that provided visual access throughout most of the landscape from the drives that often followed higher ground. The vegetation of Cherokee Park has been altered considerably, especially by the 1974 tornado. There are very definite changes in vegetation character today; whether open mown lawn or distinct masses of trees/vines/shrubs, the indefinite qualities of the more open landscape have been lost. Some areas of the topography have been flattened to accommodate sports facilities. Due to these and other changes the landscape of Cherokee Park has experienced a greater shift from its historic origins than either Shawnee or Iroquois Parks.

Cherokee Parkway created a formal edge along the west side, while a boundary drive was proposed on the south. The park is still handicapped by the lack of a complete frontage drive that was hoped for but never achieved. The internal circulation provided varied experiences of the park from drives and paths that included movement through shaded valleys, open greensward and hillside overlooks. Willow Pond was developed as a larger water feature while the meandering of Beargrass Creek and its valley was the heart of the park [6]. The design intent was to enclose views of the Beargrass Creek Valley within the park boundaries so that the experience of the unique, regional topography and park features would be the primary focus.

### Cherokee Park Spatial Organization

The Cherokee Park Spatial Organization Plan [4] indicates the breadth of the internal views from drives and paths and the areas of enclosure created by vegetation. Unlike Iroquois and Shawnee Parks, broad vistas of land or water beyond the park do not exist in Cherokee Park. For Cherokee Park, views are internalized ones from hilltops to valleys or along valleys. These five broad internal views of rolling topography were punctuated by large, native trees. For example, the view from Barringer Hill consisted of an open grass foreground with a few shade trees, and a mid-ground of dappled light and shade with views to the creek, and light behind the groves hinting of the greensward beyond. The vegetation of the park was intended to frame spaces with indefinite edges allowing views through—a play of light and shade.

### Historic Zones & Character of Cherokee Park

The essential character of Cherokee Park is organized by topographic features forming a more fluid zone pattern within the park landscape. These four zones are shown on the Cherokee Park Historic Zones Plan [5] and include: (1.) the valley of the Beargrass Creek is the centerpiece of the park, the related plantings, either dense or more open and the necessary bridges are a part of the visual and tactile experience of the creek; (2.) the gently rolling slopes extending uphill from the creek provide a middle ground of formerly open pasture land; (3.) the tops of Barringer, Bonnycastle, Cochran (Oak) and Alexander Hills and the Alexander Ridge all position the park user above the park landscape with broad views of the park interior; (4.) the area of the park from Alexander Ridge to the Cherokee Parkway was developed early in the life of the park as a golf course and has a different character than the balance of the park as a shaped turf organized for the golf game, with mature shade trees and the open water of Willow Pond. The character of Cherokee Park is the landscape of hill, rolling slope and creek valley. In discussions among the project team the essential character of this park was seen as the complete experience of this topographic variation with views through the landscape.

### Cherokee Park As-Built Condition

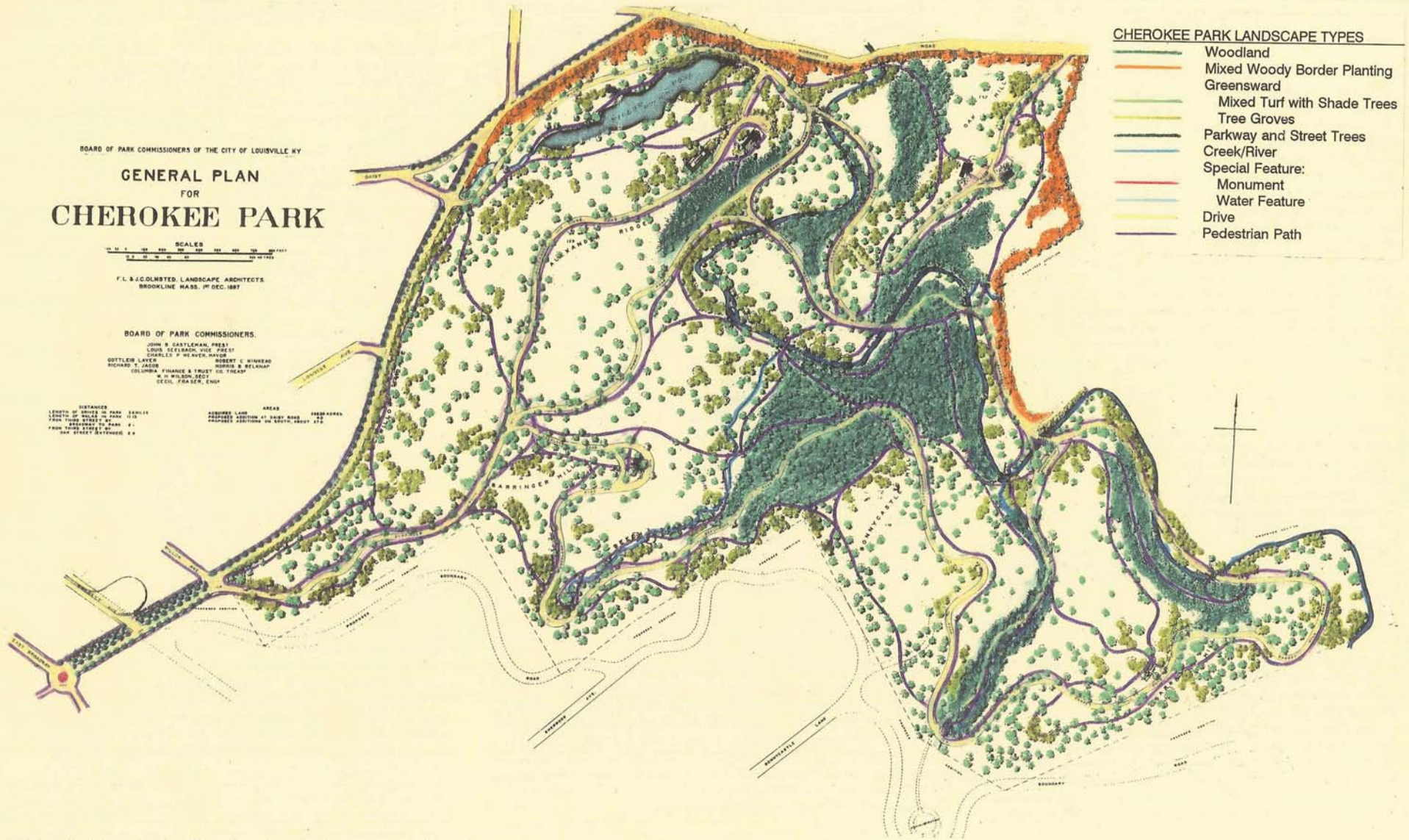
The area of the park is noted as 390.9 acres in the 1913 Park Board report. In this section early views and 1928 aerial views are used to understand the nature of the park as-built and in use during the early part of the twentieth century [3]. The discussion is organized under the five zones of the park landscape.

Beargrass Creek valley is the centerpiece of the park. Several historic views of Beargrass Creek show different areas at varied points in time. These views show the historic form of the creek banks, gently sloping to the water, generally with trees and turf along the margins and occasionally some shrubs or herbaceous plants. The many creek crossings were spanned by ornamental bridges. These decorative bridges, often donated to the park, were developed primarily in the 1920s to replace earlier less elaborate bridges. Olmsted office plans also show the planting of the bridges with plant materials that blended with those already present on the creek banks.

The gently rolling slopes extending uphill from the creek and flood plain were shaped from pasture lands to contain individual shade trees and tree groves. The 1928 aerial photo shows the open landscape dotted informally with trees that comprised this rolling landscape. Woodland areas also remained, possibly with a grazed understory, and were incorporated into the design by adding edge plantings. Barringer, Cochran (Oak), Alexander Hill and Ridge, Barret and Bonnycastle Hills form the high ground of the park. Portions of the drive system aligned with the slopes and ridge tops to afford pleasant passage along sinuous routes and to view the sloping landscape and creek bottom from above. Alexander Ridge also served to separate the open park landscape from the golf course landscape from Alexander Ridge Road to the eastern park boundary. The as-built park used the hills and ridges to advantage providing commanding prospects from various points along the drive and at hilltop overlooks. Cherokee Park borrowed the open landscapes and grand houses of the neighboring estates, which are also evident in the 1928 aerial photo. Five tennis courts are plainly visible in the area below Barringer Hill. The development of these courts, within the overlook view, required some flattening of the topography.

The area of the park from Alexander Ridge to the Cherokee Parkway became a separate golf course landscape that included rolling topography and Willow Pond. Views of the margins of Willow Pond indicate emergent aquatic plants were planted. This area of the park was open to view from the adjacent street frontage. The park entrances were developed as formal composition with broad drives and flanking pedestrian paths. The 1928 aerial photo shows the development of some portions of the pedestrian path system, most notably on Barringer Hill. The extension of Cherokee Parkway along the western edge of the park provides a formal entry from the neighborhood, especially the segment with a median from the Castleman statue to Willow Park triangle.

5. Cherokee Park



1. Cherokee Park Historic Landscape Types Plan, color coding of vegetation types and circulation, prepared by Landscapes, 1993, overlaid on General Plan for Cherokee Park, Louisville, Kentucky, December 1897, by F.L. & J.C. Olmsted, Landscape Architects. (FLONHS)



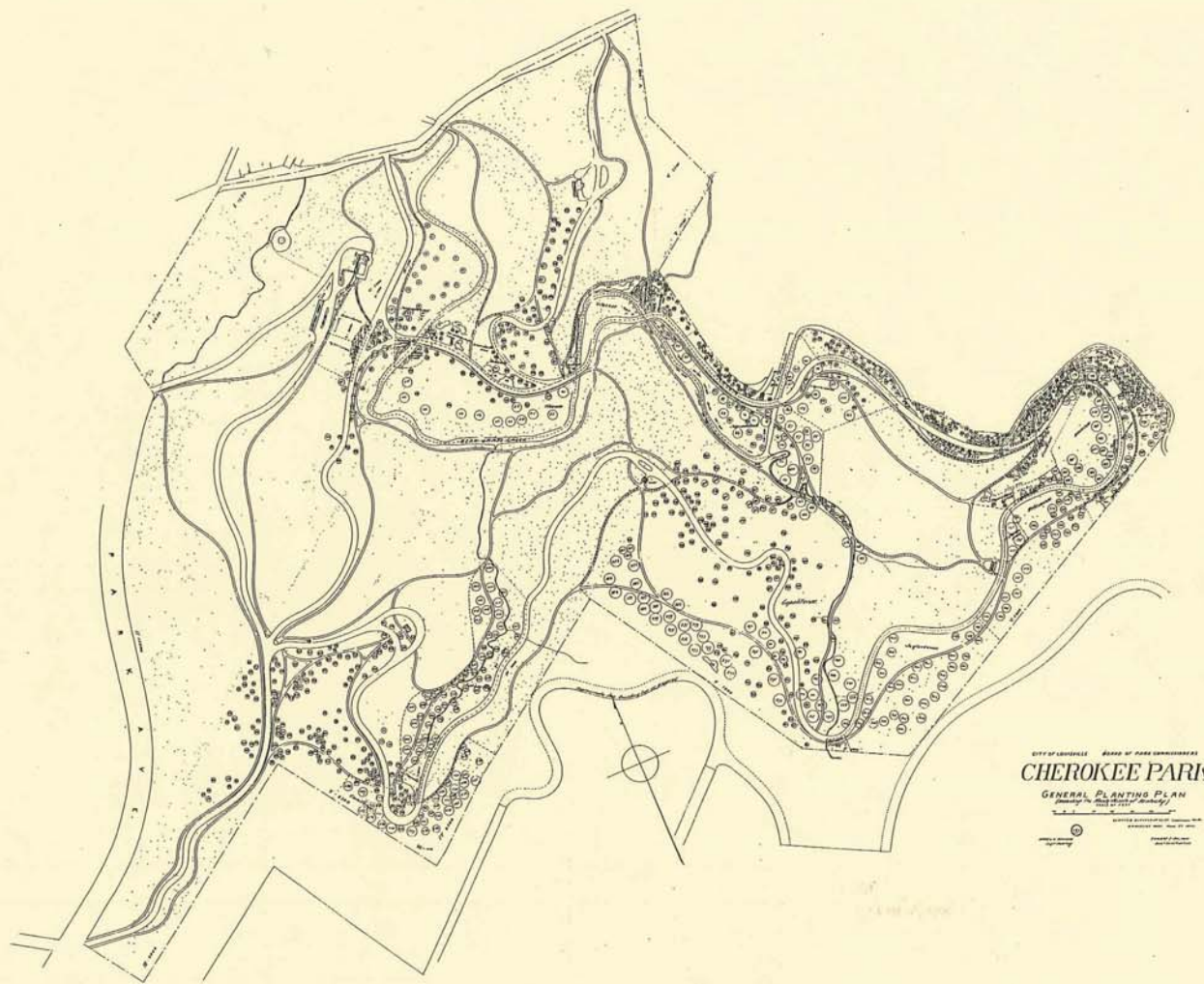
The park drives bordering Beargrass Creek were flooded in the 1937 storm and flood event. Considerable debris was removed from the drives and surrounding area following the flood.

Against considerable citizen opposition over a period of two decades the Interstate 64 route was cut through Cochran Hill and partially recovered. This construction took portions of park land and isolated park areas north of the thruway.

#### *Cherokee Park 1974 Tornado Damage and Recovery*

A tornado crossed Cherokee Park from the northeast boundary over Cochran Hill to the southwest over Barringer Hill on April 4, 1974. Crossing the park in twenty minutes, the storm left a trail of destruction with over two thousand trees tumbled to the ground like matchsticks. An aerial photograph of the damage is very descriptive of the tornado path and extent of damage. A mayoral appointed citizens committee was formed to guide a rehabilitation effort. This committee contacted the Olmsted Associates office who were retained to develop an historic chronology of park development. Johnson, Johnson & Roy (JJR) of Ann Arbor, Michigan was hired to develop a "restoration plan" for the park. JJR conducted a field review of the damage and the remaining park vegetation. Remaining vegetation species were compared to an 1890s listing of plants growing and planted in the park under the Olmsted plan. Issues of vehicular circulation, especially road closings to thwart commuter traffic and closing of the road along the golf course, were considered. The citizens committee suggested that a test be carried out and the resulting traffic problems at the Willow Avenue Cherokee Parkway intersection assessed. The results of this recommendation are not known although the road is open at present.

Replacement plantings of 2" to 2 1/2" caliper or larger were sought for replanting the park. Federal Disaster Assistance funding was obtained to address storm damage using the pre-tornado condition of the park as the baseline. The plan to revegetate the park followed an approach of dense forest plantings in sharply defined areas which was in contrast to the more open historic landscape. It also focused on the provision of buffer plantings to screen the intrusion of Interstate 64. For example, the road closing recommendation was coupled with a dense planting on the golf course slopes along the drive, to separate the golf activities from the passive uses of the adjacent park lands. The citizens committee sought to defer this planting until the road closing decision was finalized. JJR sought a formal treatment of the entrances and overlooks planting in an arboretum style with trees and shrub family groupings. While JJR espoused an objective to "restore Cherokee Park to its original quality and character guided by the original plan," the practice of landscape preservation was in its infancy and the firm interpreted the original plan broadly as "restoration planning" proceeded.

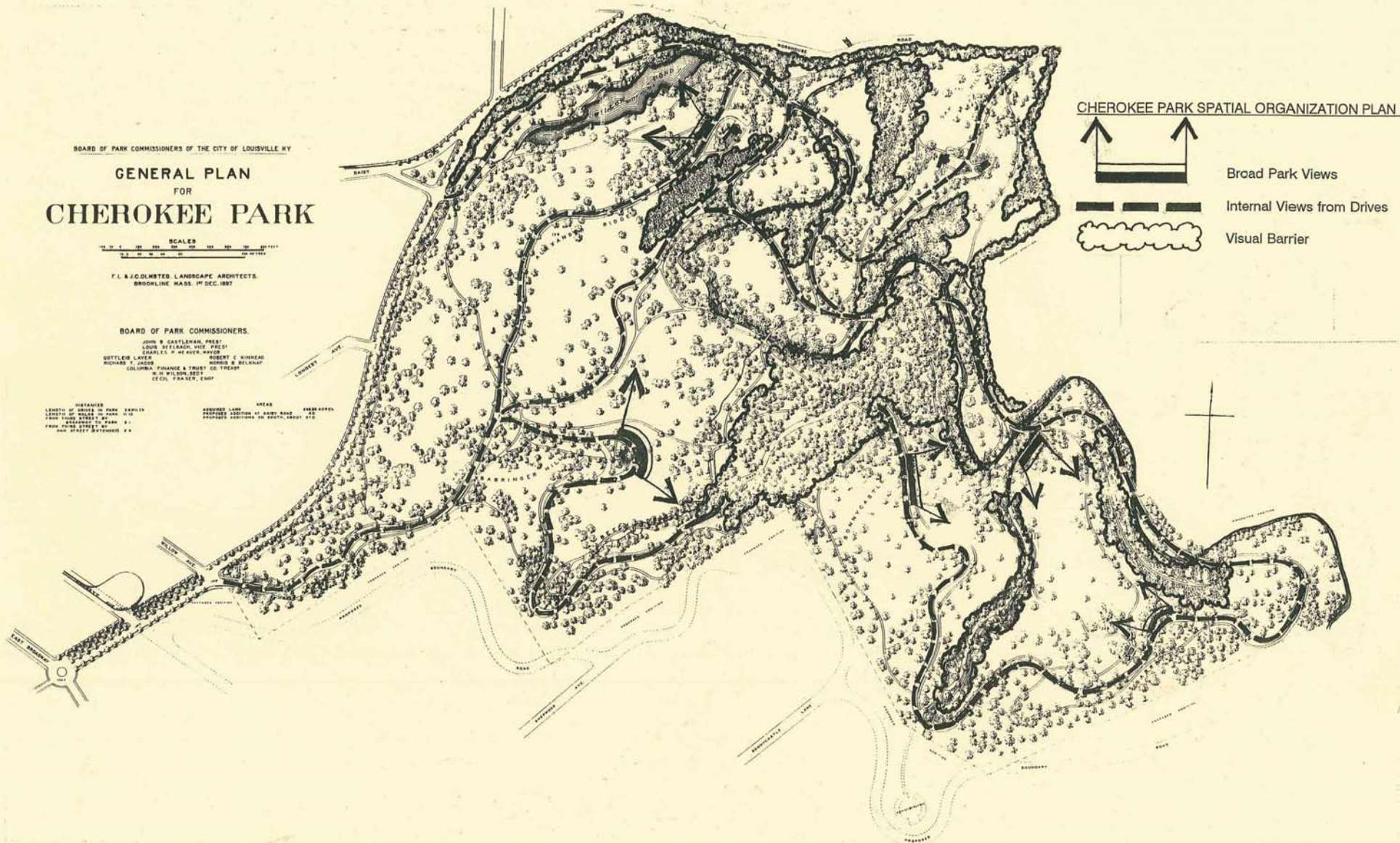


2. General Planting Plan for Cherokee Park, Louisville, Kentucky, Olmsted, Olmsted & Eliot, Landscape Architects, March 3, 1896, includes the Woody Plants of Kentucky. (FLOHNS)

5. Cherokee Park

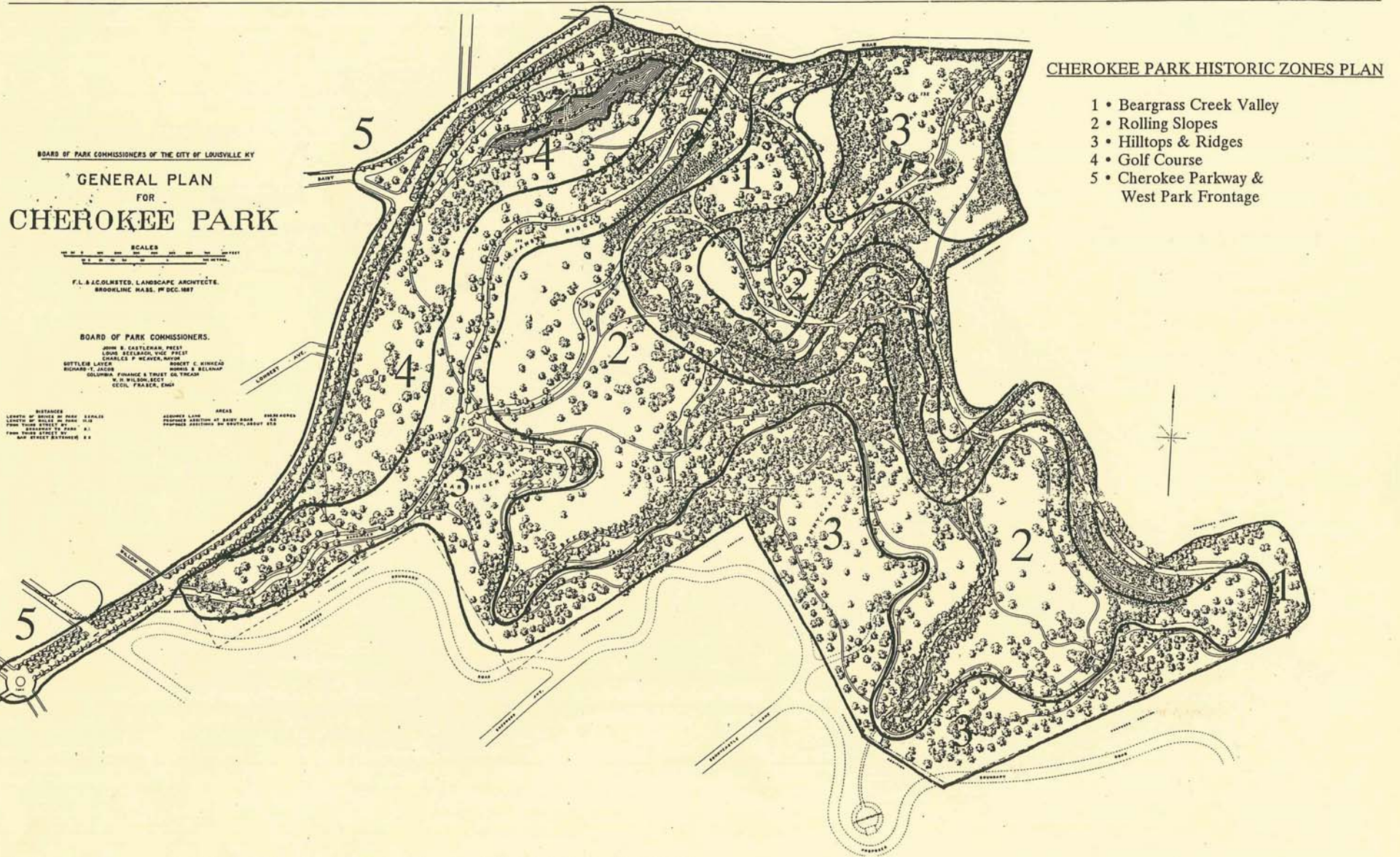


3. 1928 Aerial view of Cherokee Park. (Bowman Park Aero Co. Incorporated)



4. Spatial Organization Plan, prepared by Landscapes, 1993, overlaid on 1897 General Plan of Cherokee Park, Louisville, Kentucky. (FLONHS)

5. Cherokee Park



5. Historic Zone Plan, prepared by Landscapes, 1993, overlaid on 1897 General Plan of Cherokee Park, Louisville, Kentucky. (FLONHS)

The record of the actual work that was a product of the planning effort and the Federal funds is not entirely clear. Papers detailing the replanting include:

- A plant list with quantities dated February, 1976 for 1,100 major trees 2 1/2 to 3" caliper, 917 trees at 1 1/2", 100 evergreens 8-10', 100 evergreens 6-8', 171 flowering trees 2 1/2' to 3", 102 flowering trees, 2' to 2 1/2', 68 flowering trees 1 1/2" and 4,636 shrubs.
- Final Inspection Report dated April 2, 1976, two years after the tornado, indicating \$325,476.32 of contracted work performed matching above list amounts for estimated costs.
- An October 29, 1976 listing of trees to be replaced in Cherokee Park addressed to Robert Foreman, Doug Wearren Nurseries, Inc., Jefferson KY.

These documents were not accompanied by any layout or planting plans. It is possible that the plants were field located by JJR staff working with the contractor. It is also possible that more definitive documentation of exactly what plants were located where may come to light in the future. Information uncovered to date clarifies: the Tornado path and extent of damage; the JJR approach to the park recovery; the actual plant list and sizes; the cost of the replanting effort; the name and location of at least one of the contractors. The appearance of the park today within this storm path is the result of the replantings undertaken. These seventeen-year-old plantings represent the JJR design approach rather than a reinstatement of the Olmsted park design.

### *Cherokee Park Existing Conditions*

The condition and appearance of Cherokee Park today is the cumulative result of the original design and construction, the construction of Interstate 64 through Cochran Hill, the increasing storm water flows through Beargrass Creek from surrounding development, the tornado of 1974 and related replanting effort, a number of modest changes over time and the less than optimal level of maintenance over the past 25 years. Cherokee Park has been influenced by more dramatic events and undertakings than the other Louisville parks. The current condition of the park is an aggregate of these forces.

The Beargrass Creek valley today is a landscape of steep, unstable creek banks, cut away over time and held in place by the partially exposed root systems of mature trees. In many areas the creek banks support only meager vegetation. The bridges are showing signs of structural deterioration and undercutting. Storm events bring increasingly large water flows through the Beargrass Creek water system.

In the early days of the park the rolling slopes remained relatively open with a few informal shade trees. The invasion of vines and tree

saplings has obscured the former open landscape by covering trees and filling in the ground plane. Where vegetation was formerly distinct, it exists today in dense masses. A current view from Cochran Hill shows bands of vegetation, while a view from Chauffeur's Rest to a tennis court shows the dense masses of vegetation covering trees as well as a barren ground plane.

Barringer, Cochran (Oak) and Alexander Hill and the Alexander Ridge are the interesting landforms of Cherokee Park. These hill and ridges provided prospects over the parkland that vegetation has since obscured. Views of Barringer Hill reveal the loss of subtlety in the landscape and the replacement of the former overlook shelter with a basic restroom facility. The view from the hill down shows a distinct vegetation edge and gives no sense of the Beargrass Creek within the trees. The view up is of an open hillside, without the subtle play of light and shade intended and a centerpiece of a service structure.

The golf course area has become simplified over time through the loss of trees, the development of a functional golf course path system, and other golf course based changes that are insensitive to the historic spaces. It is basically an open area with many interior and edge plantings removed. Willow Pond lacks edge vegetation. Open soils and erosion is evident on the pond margins.

Other aspects of the existing conditions within Cherokee Park include: the deterioration of the pedestrian and bridle path systems; the overlay of these systems in part with mountain bicycle trails; the repaving of drives to a depth of asphalt that leaves a steep edge; the degradation of drive edges and their extension with loose gravel to provide parking; the deterioration of individual historic elements like the Christensen Fountain and other memorials, statuary and entry ensembles; the separation of Willow Park from the whole of Cherokee Park through features and furnishings that change the character of this entry landscape.

### *Cherokee Park Preservation Planning Issues*

The condition of Cherokee Park today raises a number of preservation planning issues. Changes to the park over time have altered it considerably. The character-defining features of the landscape, most notably Beargrass Creek and the park vegetation, have altered dramatically over time. The infrastructure of the park is required to absorb the impact of large volumes of storm water which scour the creek and undercut the bridges. The former open landscape of trees over lawn has become a tangle of vines and sapling trees that enclose views and limit the ability to understand the landscape and wayfind. The pedestrian path system is derelict and dysfunctional forcing people to use beaten paths which further degrade the landscape. The park drive system is confusing and vehicular parking is degrading the drive margins.

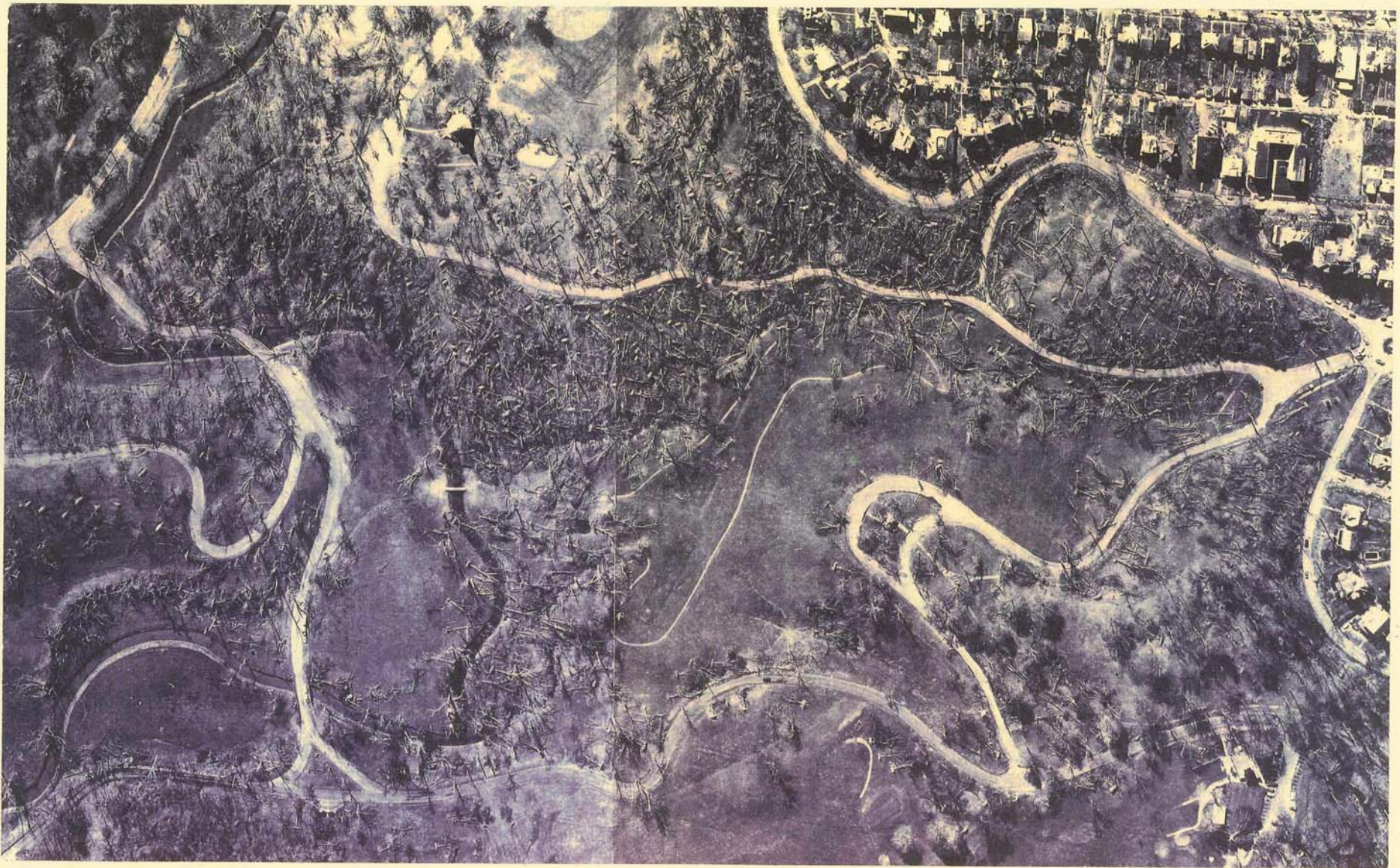
The vehicular movements, parking and understanding of the park as a driving experience require planning and resolution. The pedestrian, bridle and mountain bicycle path use needs to be made compatible or separate. The Beargrass Creek banks require stabilization and enrichment planting. The vegetation of the park slopes needs to be reopened, with mature trees cared for and new planting carried out to reshape the landscape applying the Olmsted design intent. The remains of the Woody Plants of Kentucky collection need to be discovered and an approach to the recapture of this regional resource developed. The extensive Olmsted planting plans for Cherokee Park provide a detailed basis for the reinstatement of the Cherokee Park landscape.

One seminal space of the Cherokee Park experience is the Barringer Hill overlook, slope and creek. As in Shawnee Park this area is a cross section of the topography from hilltop to water feature. Rehabilitation of this landscape experience would address the vegetation, circulation and creek banks to recapture the qualities of the space, and potentially address the stabilization of the creek, including mitigating high water flows.



6. Beargrass Creek flowing through creekside meadow and picnic area near Belknap Bridge, c. 1900/20 (University of Louisville, Photographic Archives, Caulfield & Shook Collection)

5. Cherokee Park



7. Post Tornado aerial view of Cherokee Park, 5 April 1974 (Park Aerial Surveys, FLONHS)

## Natural Communities & Disturbance Analysis

Prepared by Eco-Tech, Inc., Frankfort KY

### Introduction

What is now Cherokee Park was once a large, continuous, unglaciated woodland in central Jefferson County, Kentucky. The Middle Fork of Beargrass Creek, a direct tributary of the Ohio River, bisects the park and once provided habitat for a diverse, warm-water fishery of sun-fishes and small-mouth bass. Cherokee Park exists over Devonian Sellersburg and Jeffersonville limestones, and Louisville limestone, a karst strata of Silurian Age. Caves are reported near the park, but none were located within the boundaries. However, sinkholes are common on the lowlands and some are marked on the community map. Soils are predominantly basic and native pine trees do not occur. The forested areas were probably once refuges for a wide variety of showy, spring wildflowers as are many of the limestone woodlands of central Kentucky. Today, Cherokee Park is primarily a series of discrete patches of mesophytic, mostly upland, forest islands isolated by roads, maintained meadows, and meandering Beargrass Creek and its tributaries. Dominant species in the overstory are similar among the many forest patches of the same approximate age, but differ in tree density, shrub strata and herbaceous species. Most of these sloping, mesophytic communities are uneven-aged, and the oldest trees are estimated at over one hundred years. Trees on steep slopes seldom reach great size. The oldest and largest trees are usually American beech, which occur in the coves or lower slope forests. American beeches are among the slowest growing trees in the forest canopy and were usually uncut when more valuable species were logged. The bottomland forests in the park are usually even-aged, much younger communities. Even-aged upland communities exist only where a tornado eliminated a significant section of the forest overstory in 1974.

### Plant Communities

*Midslope Mesophytic Forest* — Hackberry, Sugar Maple, Chinquapin Oak, Blue Ash, American Beech

This is the most common habitat at Cherokee Park. It occurs on slopes of all aspects with some of the dominant species above in different abundance, but they are almost always present. Other species that are often present include black cherry (*Prunus serotina*), white ash (*Fraxinus americana*) and both red and American elms. These communities are uneven-aged and diameters of the overstory average from twenty to thirty inches dbh. Basal area (a measure of tree density) varies from about 60 square feet of basal area per acre to a fully stocked stand of about 100 square feet of basal area per acre. However, almost all are

not reproducing. Sub-dominant species are rare, and sugar maple is the only species replacing itself in most of these mid-slope forests. On the vegetation map, the dominant species in each woodland are listed in their order of approximate relative importance. The shrub strata in most of these communities are dominated by exotic species. The shrub honeysuckle (*Lonicera* sp.) is the most abundant, but privet (*Ligustrum* sp.) and winged euonymus (*Euonymus alatus*) are also common. The native woodland species such as dogwoods, viburnums, plums and redbud are very rare in Cherokee Park. They have been displaced by the alien shrubs mentioned above. The introduced vines, Japanese honeysuckle, Oriental bittersweet (*Celastrus orbiculata*) and periwinkle (*Vinca minor*), English ivy (*Hedera helix*) and (*Akebia quinata*) are often dominant ground covers. In only a couple of the woodlots do native herbaceous species dominate.

*Lower Slope Mesophytic Forest* — Sugar Maple, American Beech, Yellow Poplar, Sycamore, Hackberry

This community occurs on the lower slopes and coves and is usually contiguous with the mid-slope forest described above. The lower slope forest grades almost imperceptibly into the mid-slope community. More mesic (wet) species become the dominant species on the lower slopes and the palm of the slope often holds deeper litter. Sugar maple is dominant in the overstory and often in the understory. However, the largest trees are usually American beech and sometimes sycamores where the community meets the creek. Yellow poplar is an important species in the cove sites, usually above an intermittent stream. Other important species in some locations are hackberry, elms and black walnut (*Juglans nigra*). The exotic shrubs, honeysuckle and privet are just as abundant here as on the mid-slopes. Pawpaw (*Asimina triloba*) is the most common native shrub species, but even this understory shrub is confined to small patches in the least disturbed woodlands. The most common native herb seen during fall surveys was waterleaf. Brief investigations made in the spring indicated that some of these more gentle slopes harbored good wildflower populations where exotic species were not too abundant.

*Even-aged Bottomland Forest* — Box Elder, Sycamore, Hackberry, Elms

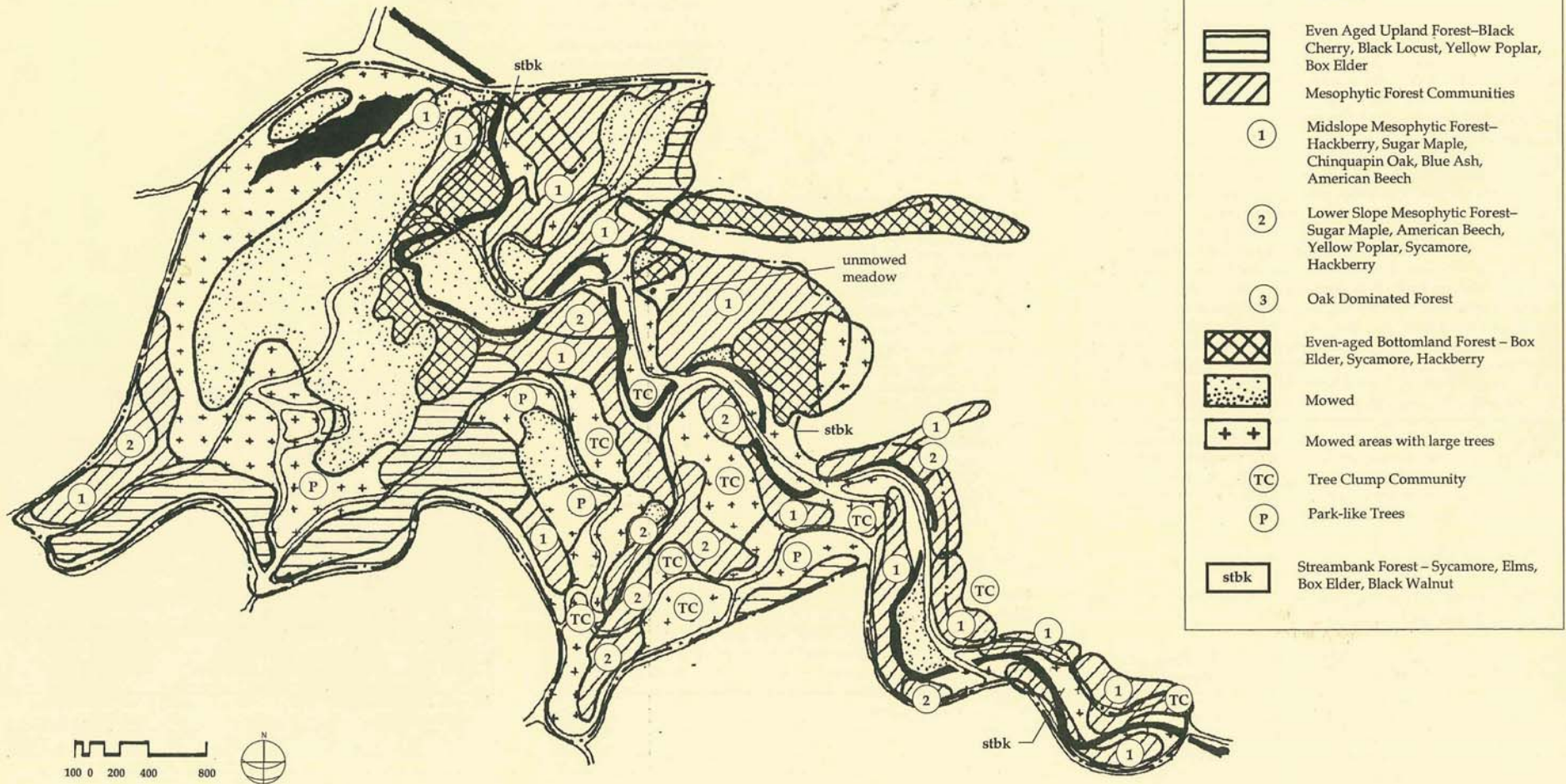
These even-aged, bottomland forests lie along tributaries and usually extend to their confluence with Beargrass Creek. Box elder is a dominant species, but sycamore, hackberry, and both red and American elms are usually well represented. A few black or sandbar willows and green ash (*Fraxinus pennsylvanica*) also occur in small numbers. The overstory trees are fifteen to twenty five inches dbh, and are estimated at fifteen to thirty years of age. Since the dominants are intolerant species, it is apparent that most of these sites were once cleared. The exotic shrubs, honeysuckle and privet still occur, but are more common on the lower slopes than on these bottomlands. Native shrubs are very rare, but the overstory is represented in the shrub strata by saplings. Herbaceous species visible in late fall include white snakeroot,














The Louisville crayfish (*Orconectes jeffersoni*), which is known only from Beargrass Creek, was found in the park. Because of its limited world-wide range, it is under consideration for listing as a federally protected species by the U.S. Fish and Wildlife Service. (Eco-Tech, Inc. Photo by John MacGregor, 1992)

### Cherokee Park: Plant Communities

Prepared by Eco-Tech, Inc., Frankfort KY



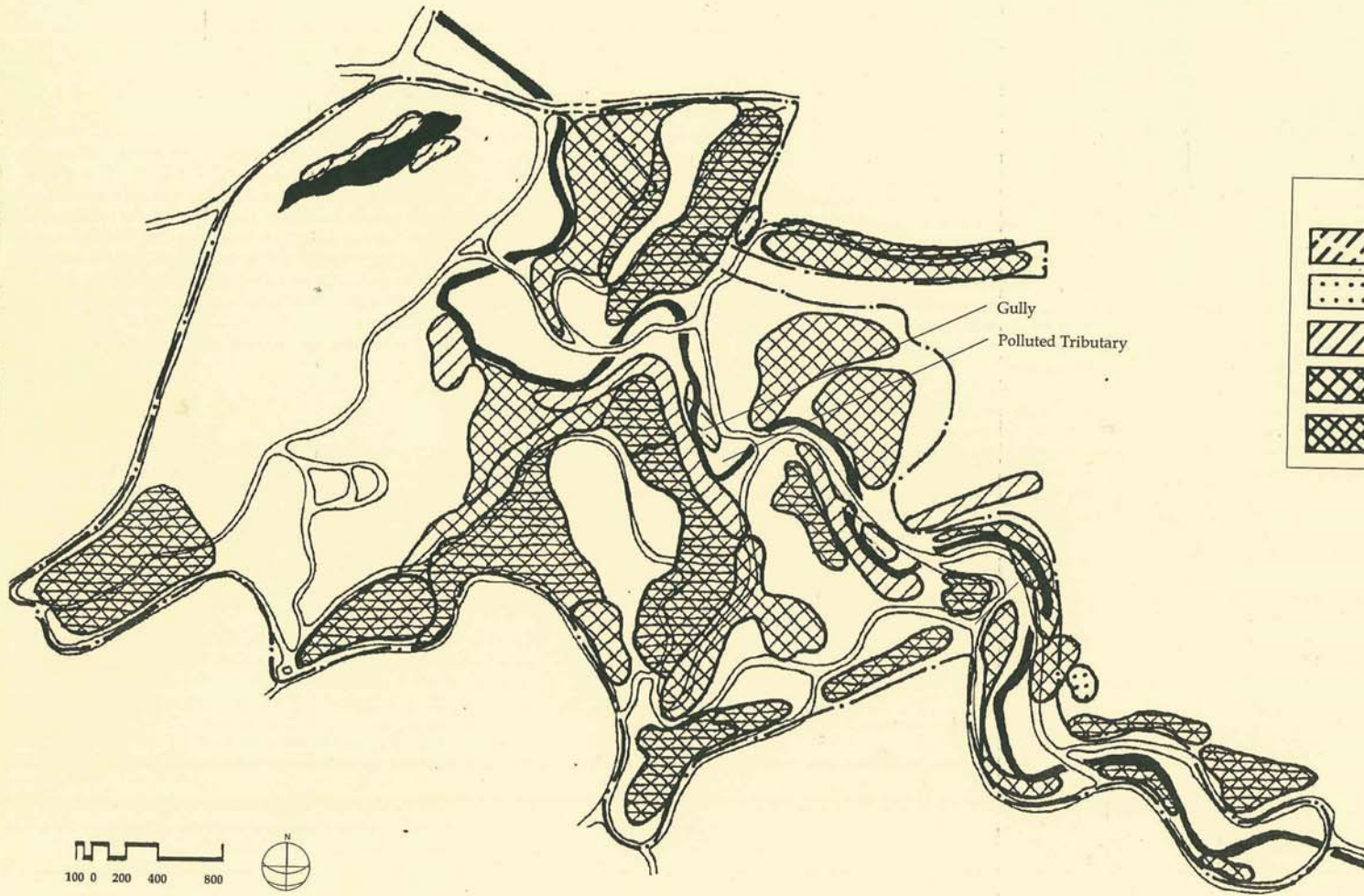
**LEGEND**

-  Even Aged Upland Forest—Black Cherry, Black Locust, Yellow Poplar, Box Elder
-  Mesophytic Forest Communities
  -  Midslope Mesophytic Forest—Hackberry, Sugar Maple, Chinquapin Oak, Blue Ash, American Beech
  -  Lower Slope Mesophytic Forest—Sugar Maple, American Beech, Yellow Poplar, Sycamore, Hackberry
  -  Oak Dominated Forest
-  Even-aged Bottomland Forest – Box Elder, Sycamore, Hackberry
-  Mowed
-  Mowed areas with large trees
-  Tree Clump Community
-  Park-like Trees
-  Streambank Forest – Sycamore, Elms, Box Elder, Black Walnut








### Cherokee Park: Disturbance

Prepared by Eco-Tech, Inc., Frankfort KY



LEGEND

-  Erosion
-  Trash debris and litter
-  Low level of exotics
-  Medium level of exotics
-  High level of exotics

## 5. Cherokee Park

white avens, asters and ground ivy. These bottomland communities are important for many species of wildlife that persist in this urban environment. Since they are connected by water during flood events, bottomland forests are not as isolated as the upland forest fragments. Additionally, because water is not a limiting factor, they are more naturally productive than the adjacent upland forest. The Indiana bat (*Myotis sodalis*) is a federally endangered species that is known from two sites in Jefferson County. Its preferred foraging habitat in the summer is bottomland hardwood forest.

### *Even-aged Upland Forest — Black Cherry, Black Locust, Yellow Poplar, Box Elder*

This early successional forest community occurs in several locations near the park's southern boundary. Some of these communities may have developed since the overstory of the previous forest was impacted by the tornado of 1974. Dominant species include yellow poplar, black locust and black cherry. Box elder occurs more infrequently. Most trees are from six to twelve inches dbh, but some individuals of the faster growing yellow poplar are almost fifteen inches in diameter. These are very thicket-like woodlands and the shrub strata is also very brushy. The understory is dominated by almost totally exotic species. Shrub honeysuckle, Oriental bittersweet and periwinkle are especially abundant here, but Japanese honeysuckle, English ivy and privet are also abundant in some of these woodlands along park drives and it is possible that they are the result of flocks of starlings and grackles.

### *Oak Dominated Forest*

This small section of mesophytic forest lies along Beargrass Creek and an unnamed tributary. Overstory species average between twenty and thirty inches dbh and include chinquapin oak, northern red oak (*Q. rubra*), shingle oak (*Q. imbricaria*), shumard oak (*Q. shumardii*) and a few individual red elms and black cherry. Smaller sugar maples also occur and are common in the sapling strata. The honeysuckle shrub is present, but the oaks are represented in the shrub strata as saplings. This is the only place in the park where flowering dogwood (*Cornus florida*) is a significant part of the shrub community.

### *Tree Clump Community*

This term is applied to those open stands of trees that exist in mowed meadows. Mowing has not been close to the trunks and has allowed a peripheral community of shrub honeysuckle, privet, hackberry and sugar maple saplings, and blackberries to encircle large trees. Large trees at the nucleus of the clump include most of the dominants of the mid and lower slope forest, but the most common are hackberry, sugar maple, ash, elms, chinquapin oak and American beech. Mowing is done between the clumps and leaves a circular brushy edge around the large trees. Although this edge encourages several exotic plants, it also provides more habitat for birds and small mammals than does a park-like stand of trees in a meadow.

### *Park-like Trees*

Where large trees exist in an open, recreational field, they are maintained by mowing close to the trunk. Species include those mentioned above. They have little ecological value, but are more pleasing to the eye than an open meadow.

### *Streambank Forest — Sycamore, Elms, Box Elder, Black Walnut*

The streambank forest is a narrow strip of trees that grows along Beargrass Creek. Species include sycamore, elms, box elder and black walnut. Smaller hackberry and black willow are also present. Where this strip adjoins a larger woodland, it is included in the mid or lower slope forest. Ecologically this is one of the most significant habitats of the park. This row of trees provide roosting and nesting habitat for many terrestrial wildlife species, but is also important to the aquatic community. These trees hold the banks, shade the stream's shallow sections from searing summer heat and furnish detrital material which support aquatic invertebrates.

### *Mowed Meadows*

These regularly mowed fields, one of the primary plant communities of the park, are the least significant habitat. However, one area that is an open habitat supports the only federally endangered species that has been verified in Cherokee Park. Running buffalo clover (*Trifolium stoloniferum*) is known from a very small population near the basketball courts as shown on the plant communities map.

### *Unmowed Meadow and Brushland*

Only one small area of this habitat exists in the park and it is dominated by goldenrod, Queen Anne's lace, clumps of smooth sumac (*Rhus glabra*) and blackberries.

### *Aquatic communities — Willow Pond and Beargrass Creek*

These aquatic communities are especially important to Cherokee Park. They provide habitats and opportunities for recreation not available at any other Louisville Park. The Kentucky Department of Fish and Wildlife Resources provided considerable help in field investigations and input into this overview of aquatic resources.

### *Willow Pond*

Locally known as Cherokee Lake, Willow Pond is a typical, small impoundment of north central Kentucky. It is fed by groundwater and an intermittent stream that drains the parkland golf course. The pond overflows after heavy rains into a sinkhole at its eastern edge. Depth is typically four to seven feet, but its deepest point is nearly ten feet. The pond was stocked last year with channel catfish and has been for

several years. It contains a good population of two age classes of small, large-mouth bass, but several bass collected by electro shocking were over fifteen inches long. The pond also supports many small sunfishes, both bluegill and shellcrackers, as well as a few less desirable carp, bullheads and white crappie. Several snapping turtles were also collected during seining operations.

### *Middle Fork, Beargrass Creek*

Beargrass Creek is a natural, free-flowing stream throughout its meandering path in Cherokee Park. Although intermittently polluted by overflowing storm sewers during rain events, the stream supports a fair fish population of sunfishes, minnows, two species of darters, and spotted and small-mouth bass. The Louisville crayfish (*Orconectes jeffersoni*), which is known only from Beargrass Creek, was found in the park. Because of its limited world-wide range, it is under consideration for listing as a federally protected species by the U.S. Fish and Wildlife Service. The creek suffers from a lack of in-stream habitat diversity. There are few riffles, only very shallow pools and an inhospitable silt-laden substrate that inhibits insect reproduction in the stream.

### *Disturbance*

The two most critical areas of disturbance at Cherokee Park are the poor water quality of Beargrass Creek and its impact on the surrounding habitats, and the dominance of exotic plant species in the forests of the park. Trail and streambank erosion and trash deposition are additional disturbances that compound the two main problems of water quality and exotics.

### *Water Quality*

According to periodic measurements of water quality by the Louisville and Jefferson County Metropolitan Sewer District, there are acute violations of water quality standards for the metals cadmium and copper, and chronic violations of iron, lead, mercury and zinc. Pesticides are also sometimes detected in these samples. Recent testing for fecal coliforms indicate that violations of primary contact standards occur 69% of the time and secondary standards are exceeded in 31% of the samples. Overflow from storm sewers appear to be the main source of these pollutants. At least one main tributary to Beargrass results from sewage discharges. Numerous pipes of unknown origin also discharge directly into Beargrass Creek.

### *Exotic Plants*

Numerous species of exotic plants are the primary threat to the remnant natural communities of Cherokee Park. The most abundant and most aggressive is the shrub honeysuckle. It invades from along roads and trails, and anywhere the canopy to the forest is opened by natural

disturbances such as tree fall. This alien shrub, along with privet and snakerwinged euonymus, has almost completely displaced the native understory shrubs of the park. In only two or three woodland islands are the overstory trees replacing themselves. The only native tree that appears to be sufficiently reproducing is sugar maple. Since most of the woodlands are narrow strips between meadows and roads, the shrubs invading from the top and the bottom have met and are effectively excluding native species. The exotic vines, Japanese honeysuckle, periwinkle, Oriental bittersweet, English ivy and Akebia combine to eliminate the native vines, grape (*Vitis* spp.), Virginia creeper (*Parthenocissus quinquefolia*) and even the usually ubiquitous poison ivy (*Toxicodendron radicans*). The exotic vines also prevent significant native woody and wildflower regeneration. It appears the abundance of exotics and the isolation of the upland woodland patches also have an adverse effect upon the terrestrial invertebrate community that breaks down the leaf litter to form the important humic layer of the topsoil. For example, only five or six species of terrestrial snails are found in the park, while comparable woodlands on limestone of central Kentucky support thirty to forty species. Snails feed extensively on mycorrhizal fungi that are essential for the successful establishment of many forest trees. An estimated relative abundance of exotic species in the various woodlands is marked on the disturbance map. Those areas marked "low" offer the best opportunities for effective control of the aggressive aliens.

*Trail erosion is not yet a major problem in Cherokee Park.*

Although some of the soils on the forested slopes are considered highly erodible, trails are usually only rutted where they proceed directly upslope. Trail bike paths have not caused severe problems, except where they go directly uphill. A few gullies have begun where development or trash piles have increased runoff. Gullies and trail erosion points are marked on the disturbance map. Trails cause more of a problem as an invasion opportunity for the exotics described above.

#### Trash

A few areas are marked on the disturbance map where dumping has occurred within or very near park boundaries. Although unsightly, they also present a more severe problem as an infection point where exotic species can invade into the adjacent forest. Presently, the only place where the exotic biennial herb, garlic mustard (*Alliaria officinalis*) was found in the park is in a dump near the seminary. Garlic mustard can be a very aggressive weed in deciduous woodlands and excludes native wildflowers. A gully also issues from this trash location.

#### Summary and Recommendations

- The forest that remains at Cherokee Park persists in discrete islands separated by roads, meadows and creeks.
- Willow Pond (Cherokee Lake) is an important urban fishery that receives considerable fishing pressure. It supports an excellent large mouth bass population that are only one or two years old.
- Beargrass Creek has a limited population of sunfishes and small-mouth bass.
- Beargrass Creek harbors the Louisville crayfish which is under consideration for federal protection by the U. S. Fish and Wildlife Service. Recent field investigations found it in the park.
- A federally endangered plant, running buffalo clover, is found in Cherokee Park.
- The primary problem at Cherokee Park is the poor water quality of Beargrass Creek. At least one major tributary in the park issues solely from a sewer during low flow conditions.
- Beargrass Creek has little in-stream fish habitat and suffers from continued maintenance which have denuded the banks in several locations. Recommendations include placing such structures as riffles, boulders and deflectors at strategic locations. The Kentucky Department of Fish and Wildlife Resources will work closely with the parks in this endeavor.
- The trails that parallel contour lines are not especially eroded, but the short-cuts that run directly from ridge to bottom are deeply gouged.
- Exotic species are the worst terrestrial ecosystem problem in the park. Introduced shrubs and vines invade from both the top and the bottom of slopes where there is only a narrow band of sloping forest; all native shrubs and most tree regeneration have been eliminated.
- As a result of the exotic species, the only native tree reproducing in much of the park is sugar maple. Although they are represented in the overstory, there are very few oak, ash, hickory, etc. replacing themselves. Such native shrubs as dogwoods, redbuds, plums and viburnums have been almost extirpated.
- In only two or three places is the woodland sufficiently wide to resist alien invasion and harbor a wildflower flora. These areas should serve as starting points for exotic removals.
- Trail bikes do not appear to have caused a significant problem as yet, except where they go directly up the slope.
- The banks at Willow Pond should be planted in shrubs and places provided for fishermen that will not cause erosion. Shrub plantings will provide shade, hold the banks, and provide the feeling of privacy that fishermen prefer.
- The inflow stream of the lake is a flat area that offers an excellent location for a wetland creation or restoration of 0.5 to 1.0 acre. This wetland will also reduce nutrient influx to the lake and prevent algae blooms.
- Because of the rarity of good wildlife habitat in the area, every effort should be made to retain all cavity and sloughing bark trees in the park.

- Fallen trees in the forest should not be removed, but should be left to provide habitat for ground dwelling animals.
- Recommendations for further inventory include some work on locating other populations of running buffalo clover and an effort to restore and protect the existing population.
- Some field inventory for foraging bats is also suggested. This is near where both federally endangered Indiana and gray bats have been found and the stream corridor is probably important to both species. An especially attractive habitat is the bottomland woodland along Beargrass Creek which supports a sinking stream in the karst landscape.



*In an open habitat, Running buffalo clover (*Trifolium stoloniferum*) occurs, which is the only federally endangered species that has been verified in Cherokee Park. (Eco-Tech, Inc., Photo by John MacGregor, 1992)*

## Infrastructure & Facilities Inventory

Prepared by PDR Engineers, Inc., Louisville KY

### Key Issues

#### *Beargrass Creek Flooding*

There is frequent flooding of the Middle Fork of Beargrass Creek that runs through the park. At this time, the 10 year flood elevation for the creek is approximately 451' to 453', which is above the elevation of the historic bridges in the parks. PDR conducted an approximate "order of magnitude" analysis and estimated that the 10 year flood elevation has risen approximately three to four feet from the early 1900s, primarily due to upstream development. If a more accurate elevation increase is judged to be important, more detailed hydrology studies should be undertaken. The Corps of Engineers is currently conducting a hydrologic study to update flood elevations. They feel the flood elevations may rise approximately one foot.

The channel width has widened along the total length of the creek due to increased flows and the lack of vegetation along the banks. Exposed tree roots are common along the creek, and, in fact, are the only thing that slow the erosion of the bank. There is no cultivated vegetation along the banks that would slow the erosion process.

#### *Combined Sewer Outfalls*

There are a total of seven combined sewer outfalls (CSO) into Beargrass Creek (possibly only three are active), either within the park or upstream from the park, which adversely affect water quality and increase the volume of flow.

MSD is currently studying the water quality of Beargrass Creek. CSO studies and potential mitigation measures are not intended to reduce stormwater volume contribution, but are intended to reduce the "first flush" pollutant load.

#### *Historic Bridges*

There are nine historic bridges along the creek that are adversely affected by frequent flooding. Most of the bridges exhibit some form of deterioration that should be addressed before it becomes unmanageable. Stonework has deteriorated at several of the bridges, especially at Bridge #8.

Three of the nine bridges have been rated substandard by the Department of Transportation and have reduced load ratings. There is strong evidence of scouring under portions of the foundation at Bridge #3, which should be repaired soon. Typically, there is erosion at wingwalls. Most of the bridges appear to bear directly upon rock, and therefore,

are not in immediate danger of collapse. Bridge construction drawings should be obtained to verify foundation conditions when renovations are undertaken.

#### *Traffic Flow and Parking*

There is significant commuter traffic through the park from Lexington Road around Barringer Hill (Hill No. 1) to Willow Avenue or Eastern Parkway, and from Lexington Road toward Seneca Park at Bridge #9.

There are parking problems throughout the park. Because of an inadequate number of off-road parking spaces, cars park along roadsides, rutting the shoulder and creating drainage problems. The existing parking lot at Hogan's Fountain is inadequate and the existing parking lot at Bonnycastle Hill is undersized. The parking area at Big Rock Pavilion is dangerous because cars are required to back into heavy traffic.

#### *Cherokee Lake (Willow Pond)*

The land surrounding Cherokee Lake (Willow Pond) contains unsuitable fill with construction debris. The rubble does not have a topsoil cap, making vegetation difficult to maintain. Drainage is poor and the area is accidentally becoming a wetland.

Any planned improvements should allow for the fact that a major, aging water line runs under the area. If and when the water main breaks, major excavation will take place.

# Cherokee Park: Facilities Matrix

Prepared by PDR Engineers, Inc., Louisville KY

Structures

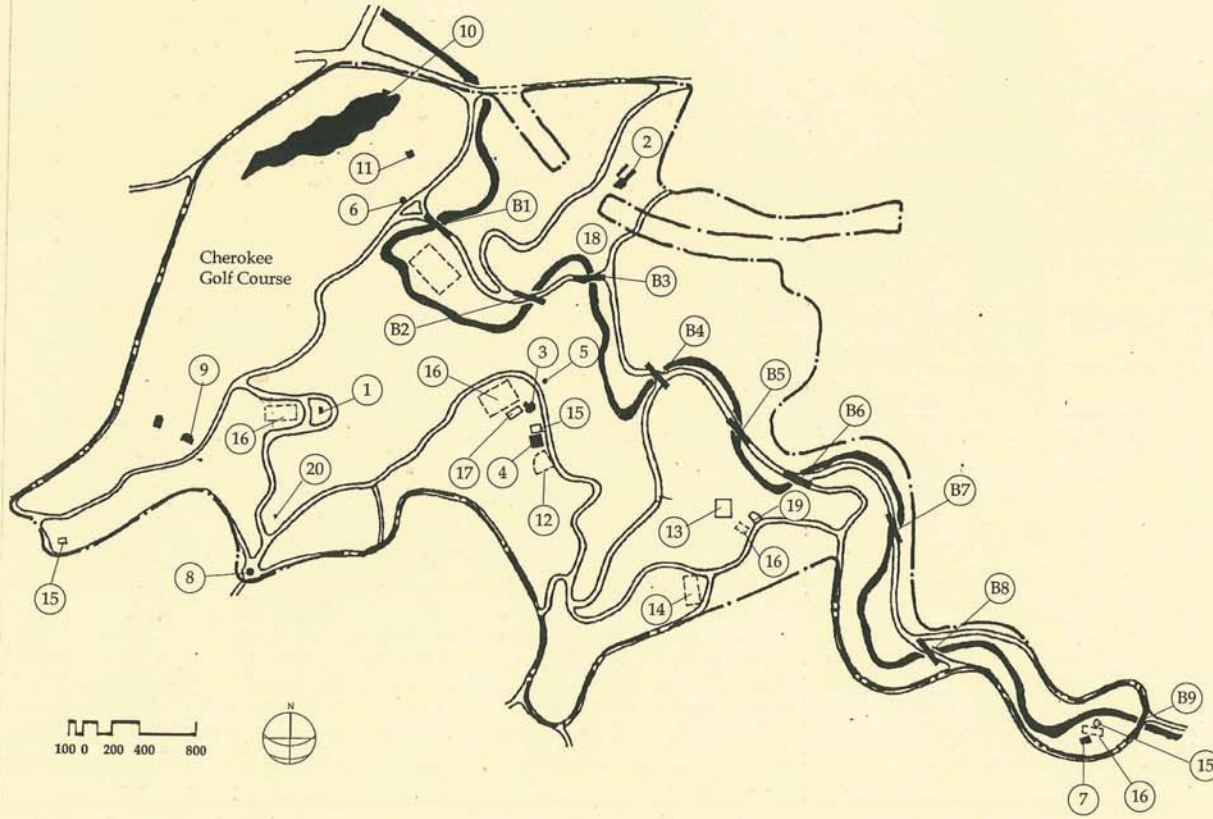
Struct	Type or Name	Usage/ Time Period	Purpose	Condition						Restrooms			Remarks
				Roof	Walls	Ceiling	Drainage	Electric	Plumbing	Present	Hdcp	Condition	
#1	Restroom Building	Heavy during warm weather	restroom	OK	OK	OK	OK	service OK dark inside	OK	Yes	No	vandalism problems	Building is not heated
#2	Maint. Facility	Daily	storage, office, caretaker ap	leaks, overhang rotted	OK	N/A	OK	OK but occasional outages	OK	Yes	No	OK	Asphalt pavement needs resurfacing
#3	Hogan's Fountain Teepee	Heavy - weekends can be reserved	picnic pavilion	OK	N/A	N/A	OK	OK	N/A	No	N/A	N/A	Shelter recently renovated. Stone buttress vandalized
#4	Restroom	Heavy	restroom	OK	OK	OK	OK	OK need more FC inside	OK	Yes	Yes	OK	could use better ventilation
#5	Hogan's Fountain	Passive Area	Fountain	N/A	N/A	N/A	OK 2 drain lines plugged	N/A	N/A	No	N/A	N/A	Graffiti problem, some vandalism
#6	Christenson Fountain	Passive Area	Fountain	N/A	N/A	N/A	OK	N/A	OK	No	N/A	N/A	Rain water source
#7	Big Rock Pavilion	Heavy - weekends can be reserved	picnic pavilion, restroom	OK	OK graffiti problem	OK	OK	OK	OK	Yes	Yes	OK	recently renovated parking dangerous back into traffic

Playgrounds/ Athletic Fields

Item	Use	Franchised Use	Amount of Usage	Condition	Lights?	Remarks
Tennis Court @ Chauffeur's Rest	Tennis (2 courts)	None	Moderate	good	No	
Baseball Diamond	Softball, baseball	Metro Parks Softball League in the summer.	estimate 13,600 players, spectators annually	some minor repairs needed holes in outfield	Yes	outfield poor
Basketball Court @ Hogan's Pin	Casual Basketball	None	Heavily used daily	OK	Yes	Parking is inadequate and disorganized.
Basketball Court @ Willow	Casual Basketball	None	Moderate use - Approx 20% of the time	OK	No	Half Court
Basketball Court @ Big Rock Pavil	Casual Basketball	None	Moderate usage	Court needs resurfacing	No	Half Court
Playground @ Hill #1	1 multiply unit, 1 swing set, 1 slide	None	Heavy - weekends	good	No	
Playground @ Hogan's Fountain	1 multiply unit, 1 lg & sm swing, 1 slide 1 climber, 1 buckabout	None	Moderate - 30% to 40% of the time	good	No	
Playground @ Big Rock	2 swing sets 1 multiply unit	None	Moderate - 50% of the time	good - could use new play base	No	
Playground @ Chauffeur's Rest	1 multiply unit	None	seldom	good	No	
Spray Pool @ Hogan's Fountain	children wading pool	None	Moderate	good	No	
Horseshoe pits @ Hogan's Fountain	casual horseshoes	None	unknown	OK	No	
Archery Range	Target Shooting	None	Moderate	OK	No	
Volleyball Area @ Chauffeur's Rest	Informal Volleyball	None	Moderate	OK	No	No permanent facilities, user must bring own net. Pressure for permanent facilities.

### Cherokee Park: Facilities

Prepared by PDR Engineers, Inc., Louisville KY



LEGEND	
① Restroom Building	⑭ Volleyball Courts
② Maintenance Facility	⑮ Basketball Court
③ Hogan's Fountain Teepee	⑯ Playground
④ Restroom	⑰ Spray Pool
⑤ Hogan's Fountain	⑱ Archery Range
⑥ Christensen Fountain	⑲ Chauffeur's Rest
⑦ Big Rock Pavilion	⑳ Barringer Spring
⑧ Daniel Boone Statue	ⓑ Bridge #1
⑨ Club House	ⓒ Bridge #2
⑩ Handicapped Fishing Dock	ⓓ Bridge #3
⑪ Shelter	ⓔ Bridge #4
⑫ Baseball Field	ⓖ Bridge #5
⑬ Tennis Courts	ⓗ Bridge #6
	ⓓ Bridge #7
	ⓖ Bridge #8
	ⓗ Bridge #9

## Cherokee Park: Drainage &amp; Bridges Matrix

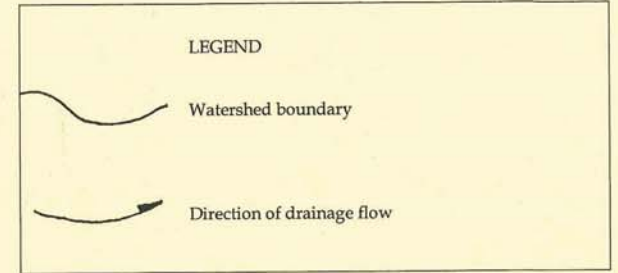
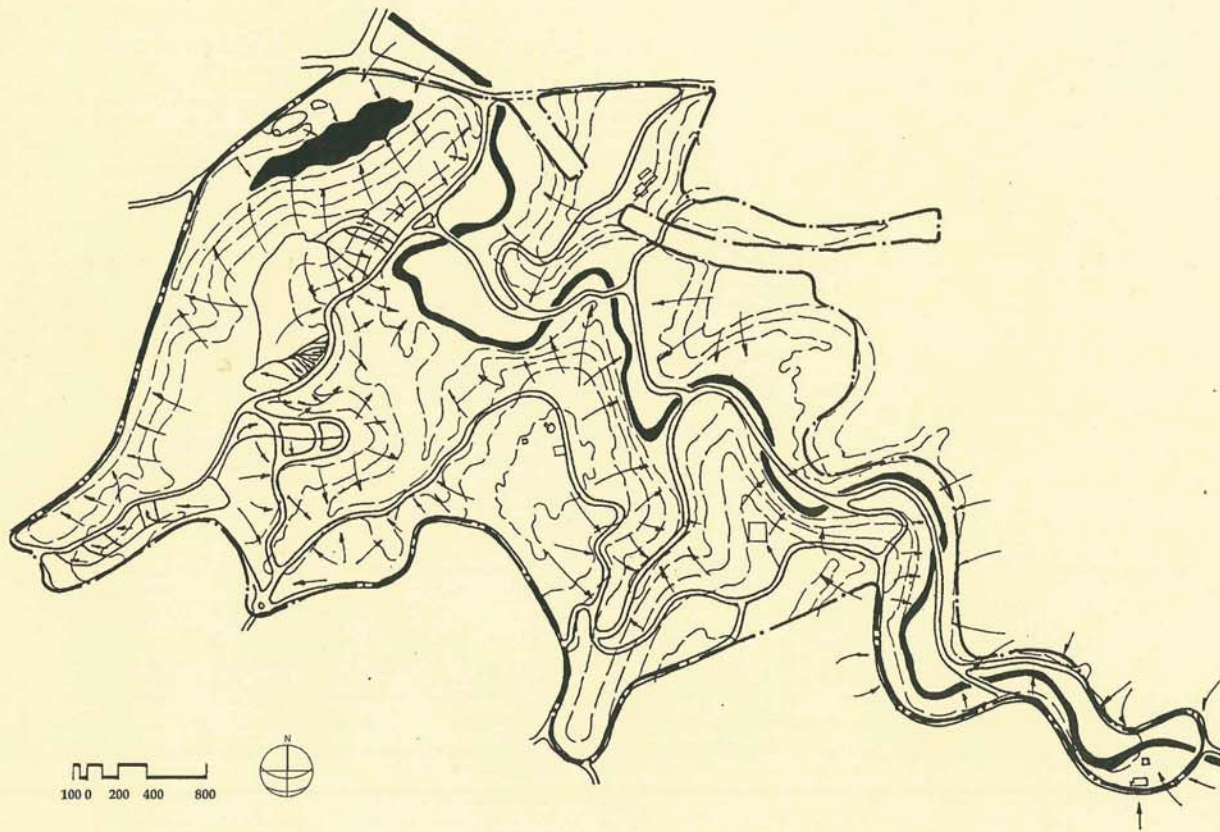
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REF. NO.	STRUCTURE	INLET CONDITION	OUTLET CONDITION	COMMENTS
C-20	stone and concrete ret wall	washout and sinkage near the wall	sidewalls are collapsing drains to golf course	slight erosion at the bottom deep ravine below
C-21	catch basin	side opening with steel cover, catches runoff from gutter line in road	12 inch clay pipe, mostly blocked with broken pipe and debris	slightly eroded path below
C-22	catch basin	no known inlet	side opening with steel cover, clear of debris	no outlet down the hill
C-23	2 catch basins	side opening, steel cover very overgrown	no cover, clear opening concrete base	no erosion uphill or downhill, very overgrown, no outlet visible
C-24	2 catch basins	depression at the inlet no erosion uphill, clear except for growth	concrete CB w/a steel top no opening, pipe separated from CB, top eroded	no outlet to pipe, sinkhole near pipe at CB, creek on downhill side
C-25	2 catch basins	concrete w/metal top is moveable, filled w/debris outlet pipe clear (12")	same as inlet, growth is blocking opening, no erosion	Between Alexandria Ridge and Hill 1 large drainage area, CB's seem to catch flow in road only
C-26-36	catch basins	all the same, side opening, metal top,	no outlets seen,	must all be connected and drain to the stream below
C-37	catch basin	same structure but has sunk into ground	no outlet visible	
C-38		no inlet located, slight erosion on hillside	no outlet structure, area is caved in, overgrown	outlet seems to drain directly to the stream below
C-39-40	catch basins			typical structures, no erosion
C-41	catch basin and pipe	clear, located in gravel pulloff	no pipe visible, erosion on hillside below, wash outs visible	erosion on hill #1
Park Entrance C-42	valley 3 pipes	catch basin in road clear of debris but not all of inlet is visible	3 pipes outlet, broken stone above pipes, some washed out, one clear, others are half filled with broken pipes and debris	sides of valley are beginning to erode but are held due to growth concrete staircase is falling apart washouts at retaining wall by stair case, no real channelized flow, pipes that are visible probably collapsed and should not be visible
C-13	foot bridge	Concrete pad, not part of walking path (?)	crosses drainage stream leading to Beargrass Creek	somewhat eroded around base, should be looked at for purpose
C-43	concrete pipe	24" w/concrete headwall deep channel heavily eroded & blocked w/debris	24" plastic pipe, concrete and rock lined channel drains freely, high erosion	old footbridge used to cross channel not usable, headwall @ outlet made of concrete in burlap, falling down
C-44	pipe	no pipe visible, washed out channel above w/rocks	18" clay pipe, clear of debris, heavily eroded underneath pipe	tree roots are visible in outlet channel, along with rocks and broken pipe, heavily eroded, well defined

REF. NO.	STRUCTURE	INLET CONDITION	OUTLET CONDITION	COMMENTS
C-45	pipe	36" cnp w/stone/concrete headwall, debris pileup in front rest of pipe clear	42" cnp (new?) channel is well defined, rock lined no debris in pipe	rock out cropping is visible (?) new pavement in road, washouts in inlet and outlet channels
C-46	pipe	48" corr. cip, corroded on side and collapsed, stone headwall falling down	40x50" oval cip, stone headwall, debris in bottom, drainage channel eroded	in both channels, there is a lot of debris, rocks, tree roots, branches pipe is filled about 4" deep
C-48	sink hole	huge, but no inlet seen no cause visible	no outlet visible	outlet side is heavily overgrown but no outlet is seen, no stream channel below
#1	BRIDGE	concrete structure, sidewall is somewhat eroded from the bank; slight cracks in structure road is repaved; outlet side is in worse condition, debris and tree stump in stream bed erosion in sides, tree roots exposed; eroded side channel; sinkholes in bank		
#2	BRIDGE	concrete structure, washout along sidewall, normal erosion on stream bed sides, in good condition, debris pileup at footing wall, erosion at one of the retaining walls near a tree and roots are exposed		
#3	BRIDGE	stone structure in good shape, not much deterioration, not many washouts visible, culvert C49 empties upstream of the bridge		
C-49	culvert	inlet is a stream, tree roots are exposed, eroded banks, culvert 34" high	concrete channel 36" high clear of debris	pavement has been replaced above culvert, headwall falling down a bit
#4	BRIDGE	stone structure (concrete?), high erosion on inlet side tree roots visible-about to fall evidence of being hit, a lot of cracking and repair, erosion on both sides		
C-47	culvert	square culvert with concrete headwall, pipe near is covered with plastic "door", may be a CSO culvert is 48x22" opening clear of debris, some erosion is visible	36" concrete opening free of debris, Also-5'x9' semi circular archway opening inlet location unknown stone structure in good shape	outlet channel is stone and concrete lined and has 8" clay pipes also emptying into it, the channel leads to Beargrass Creek and is in good condition, free of debris
#5	BRIDGE	concrete structure, a lot of pileup and debris on outside turn of creek at outlet, silt deposits have weeds growing in the channel, part of hillside is eroded away, stone lines the pavement but there is a lot of erosion and the asphalt is broken, part of the bridge has been chunked away by the stream and there are deep channels leading to the stream that have eroded the sides of the bridges footings		
#6	BRIDGE	stone structure, heavily washed out, silt beds in the stream channel causing the stream to flow faster around it, water is seeping through stones in bridge may be from road runoff being trapped, pipe outlet is visible near bridge, bridge in good shape otherwise		
#7	BRIDGE	concrete structure highly washout on both sides of wall that has been partially fixed wall is getting washed out underneath, erosion on outside of bend, drainage channel to bridge on outlet side, erosion on walls		
#8	BRIDGE	concrete structure, very ornate, heavy erosion and washout, parts falling off structure underneath, cracking and erosion on bridge and at outlet, inlet highly eroded also, and drainage channel that leads to inlet is also highly eroded		
#10	Foot Bridge	Between Bridge 7 and 8, washed out on downhill side from creek, a lot of debris pileup around eroded area, support pipes visible, silt pileups in stream with weeds growing, at outlet side there is a concrete pipe outlet, and tree limbs and parts in the stream bed		
#9	BRIDGE	concrete structure, much higher than stream bed, good shape except for left side of outlet-sort of sinking into ground, not much erosion, culvert outlet past bridge outlet heavily blocked with debris		
#12	Foot Bridge	good condition, stone rip-rap on both sides to prevent scarring of stream bed sides, where there is no stone there is high erosion on the stream bed sides		

### Cherokee Park: Watersheds

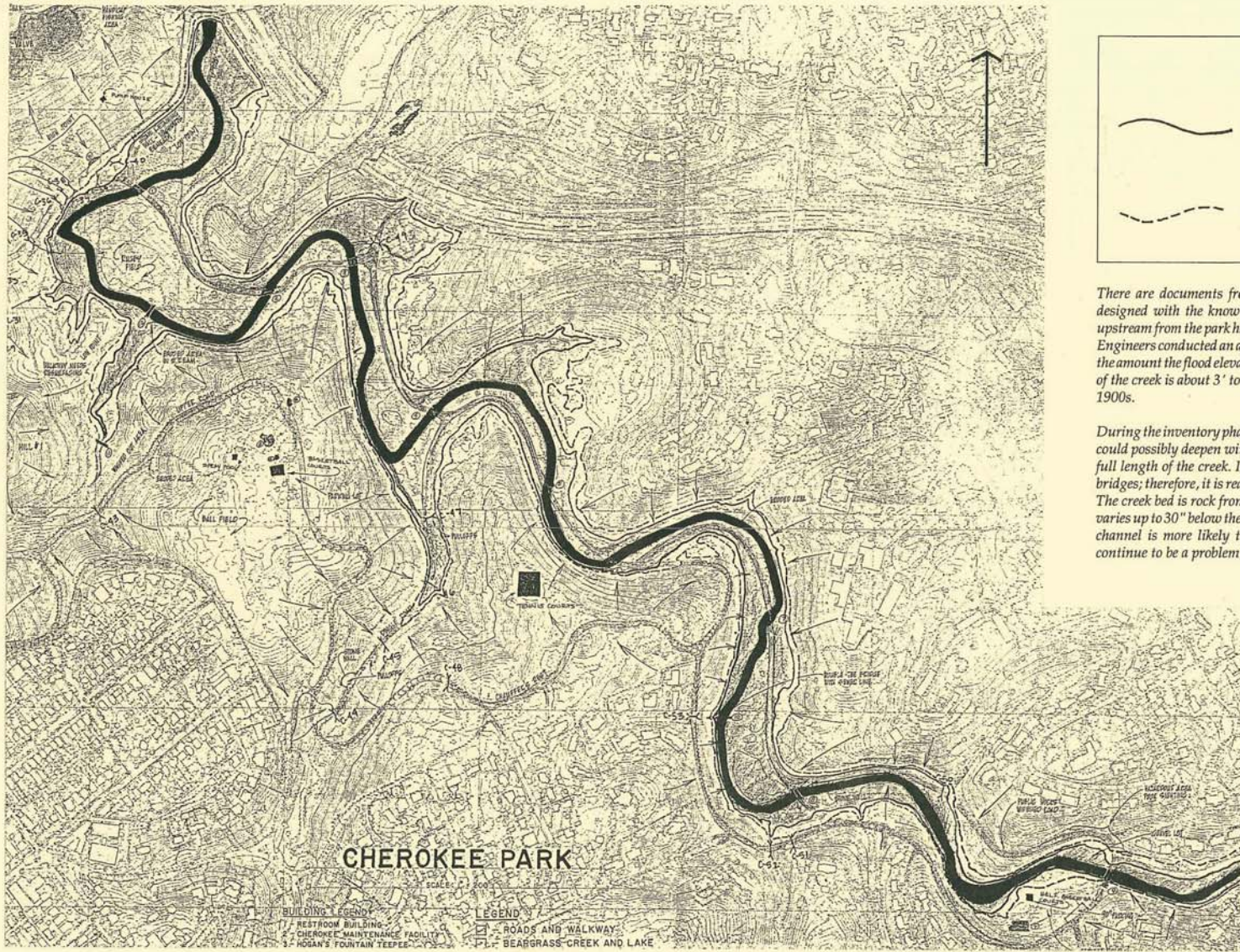
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# Cherokee Park: Beargrass Creek Floodplain

Prepared by PDR Engineers, Inc., Louisville KY



**LEGEND**

— 10-year floodplain (approx. 453' elevation)

- - - 100-year floodplain (approx. 458' elevation)

There are documents from the early 1900s which state that the park bridges were designed with the knowledge that they would be periodically flooded. Development upstream from the park has increased the stormwater runoff into Beargrass Creek. PDR Engineers conducted an approximate, order of magnitude analysis to roughly determine the amount the flood elevations have increased. The analysis concluded that the elevation of the creek is about 3' to 4' higher today after a 10-year storm than it was in the early 1900s.

During the inventory phase of the Master Plan, the question arose as to whether the creek could possibly deepen with these increased flows. Rock soundings were made along the full length of the creek. In all cases, it appeared that the rock is close to the surface at the bridges; therefore, it is reasonable to assume that the bridge foundations bear upon rock. The creek bed is rock from Bridge #9 to Bridge #7. From Bridge #7 to Bridge #1, rock varies up to 30" below the creek bed. It appears that due to the proximity of rock, the creek channel is more likely to widen and erosion around the wingwalls of bridges will continue to be a problem.