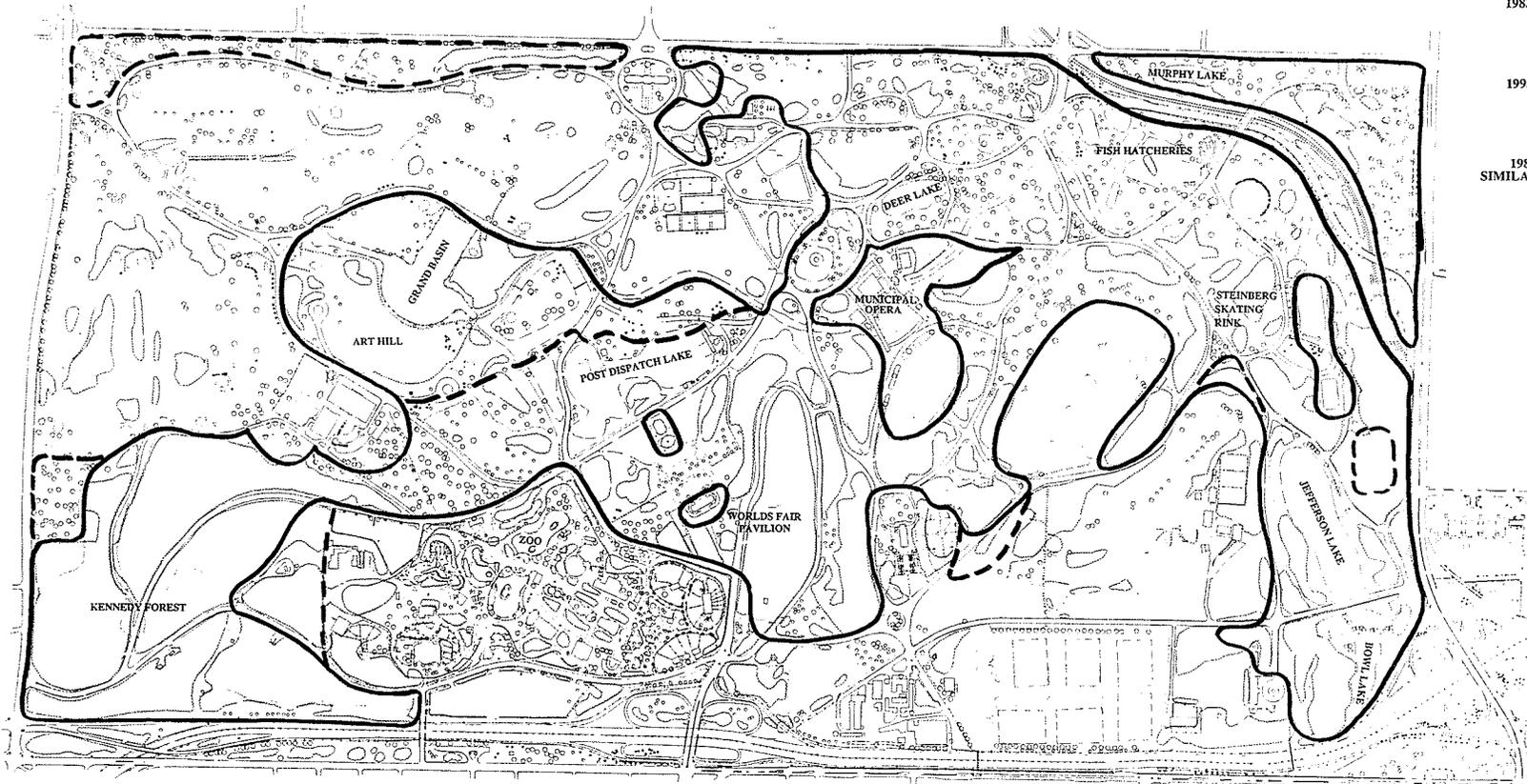


6. *Comparison of the 1983 and 1993 Master Plans*

A comparison between the 1983 and 1993 plans reveal different approaches to the park. The most significant differences included: different attitudes regarding Grand Basin/Art Hill and Post Dispatch Lake area in terms of active recreation and access, circulation and parking; the 1993 Plan incorporating a more extensive lake and lagoon system; different resolutions for the cultural institutions expansion needs; and some differences in roads and paths.



LEGEND

1983 ONLY 

1993 ONLY 

1983 / 1993 SIMILARITIES 

PASSIVE - UNSTRUCTURED RECREATION 1983 / 1993



FOREST PARK MASTER PLAN

ST. LOUIS,

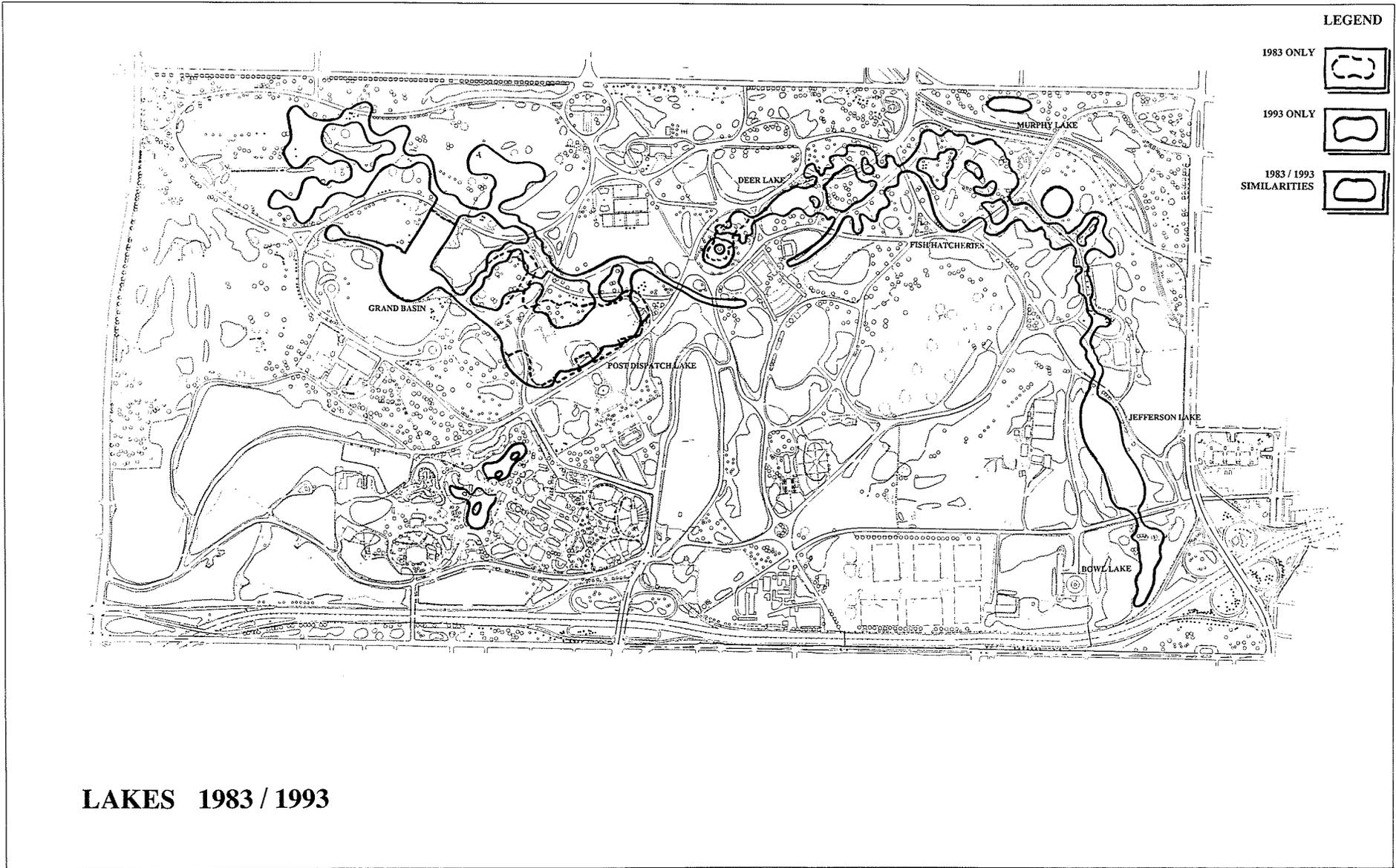
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SCALE: 1" = 400'




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 DEPARTMENT OF PARKS,
 RECREATION AND FORESTRY
 ST. LOUIS DEVELOPMENT CORPORATION
 URBAN DESIGN

FOREST
 PARK
 MASTER
 PLAN



LAKES 1983 / 1993



FOREST PARK MASTER PLAN

ST. LOUIS, MO



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 URBAN DESIGN

FOREST
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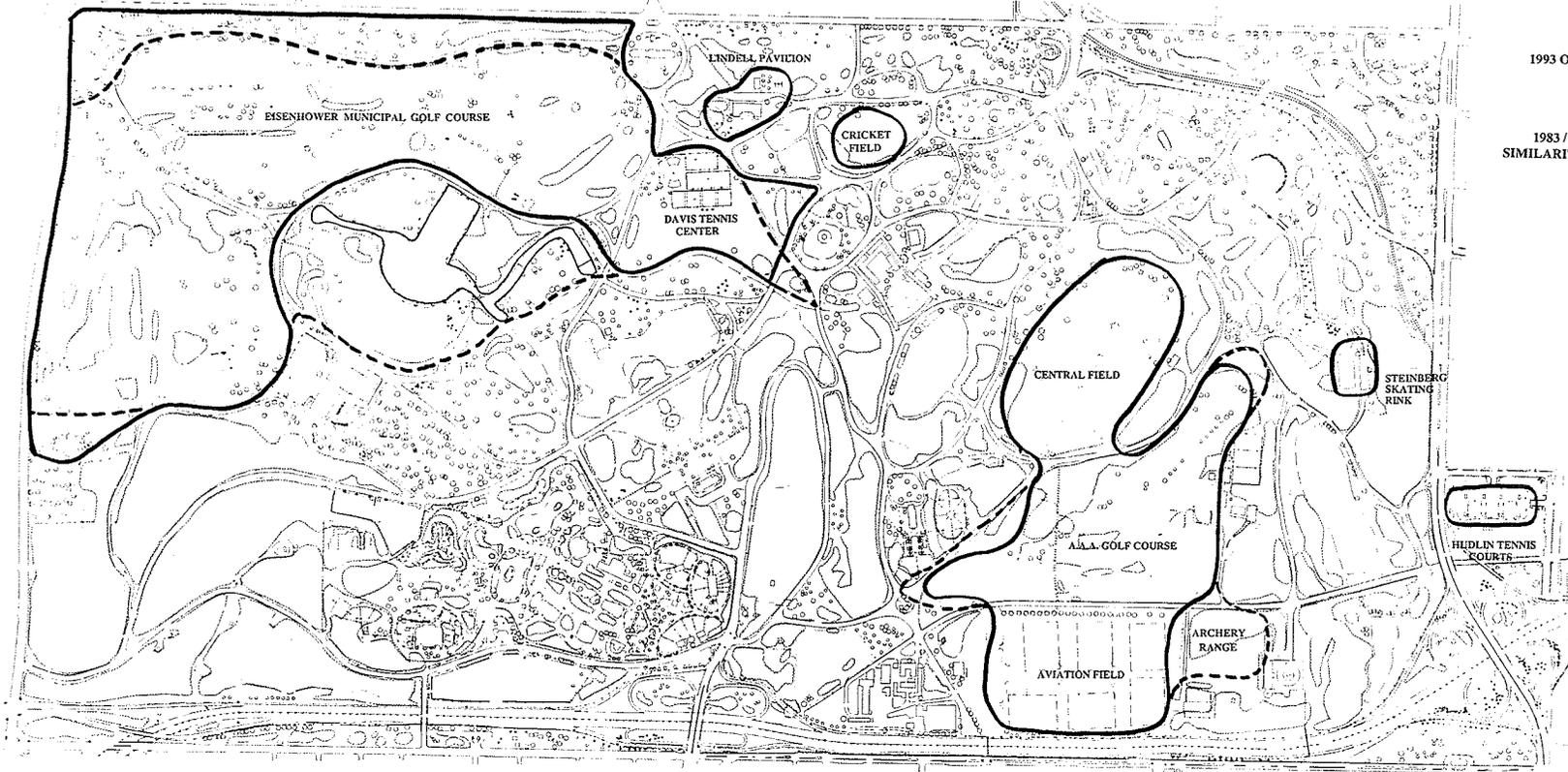
1983 ONLY



1993 ONLY



1983 / 1993
SIMILARITIES



ACTIVE RECREATION 1983 / 1993



FOREST PARK MASTER PLAN

ST. LOUIS,

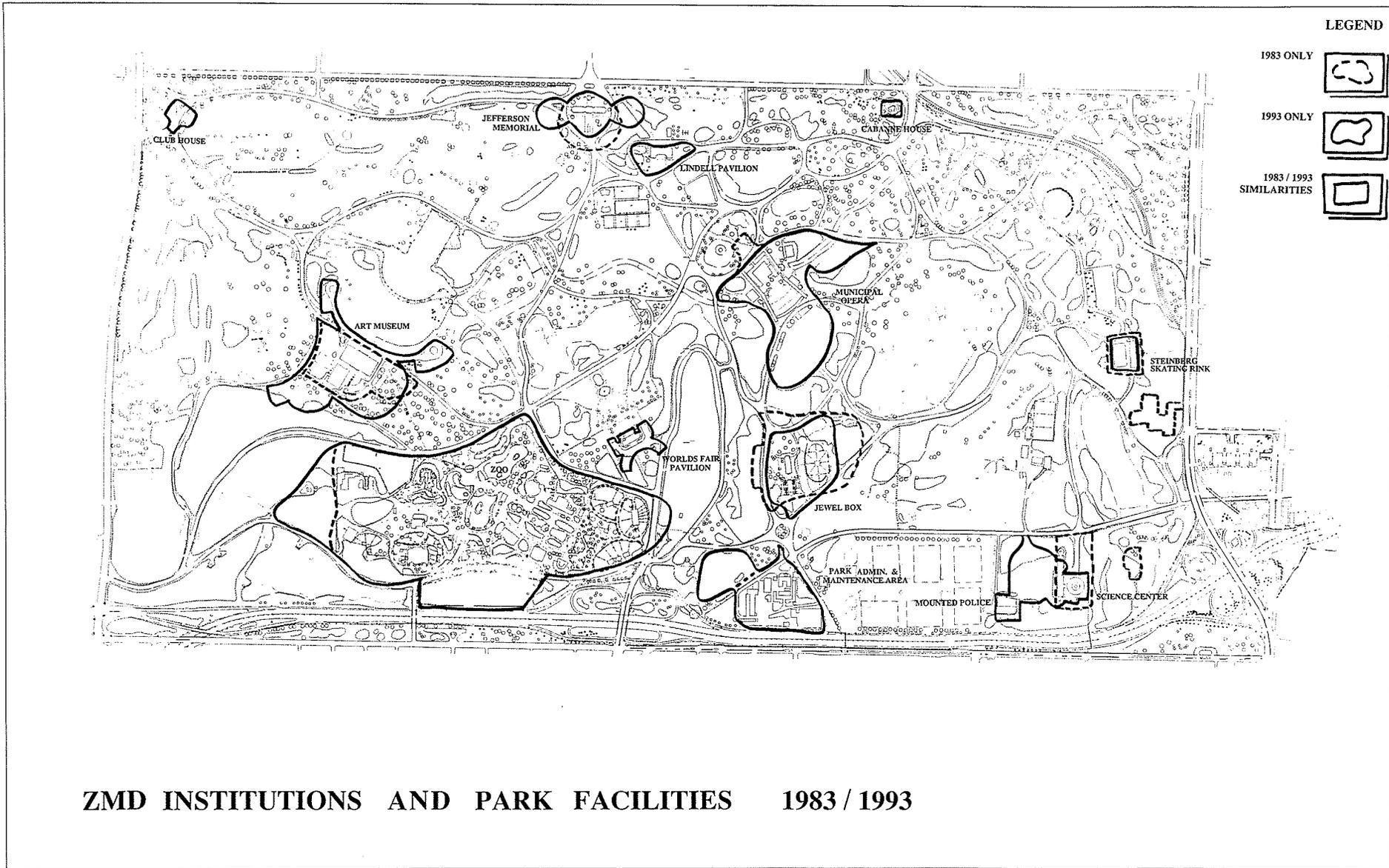
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FOREST
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FOREST PARK MASTER PLAN

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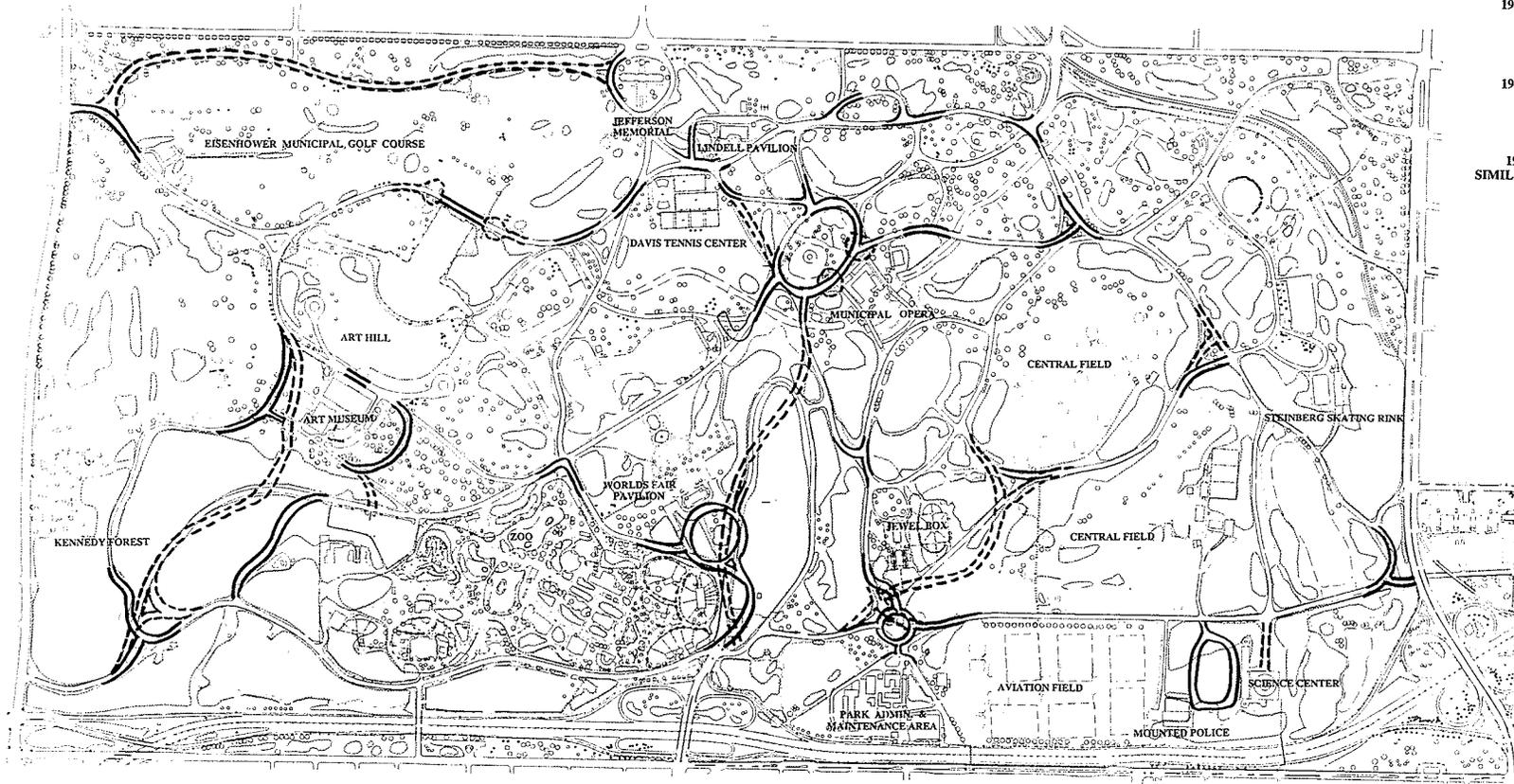
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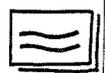
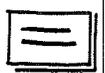


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 PARK
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 PLAN



LEGEND

- 1983 ONLY 
- 1993 ONLY 
- 1983 / 1993 SIMILARITIES 

ROADS 1983 / 1993



FOREST PARK MASTER PLAN

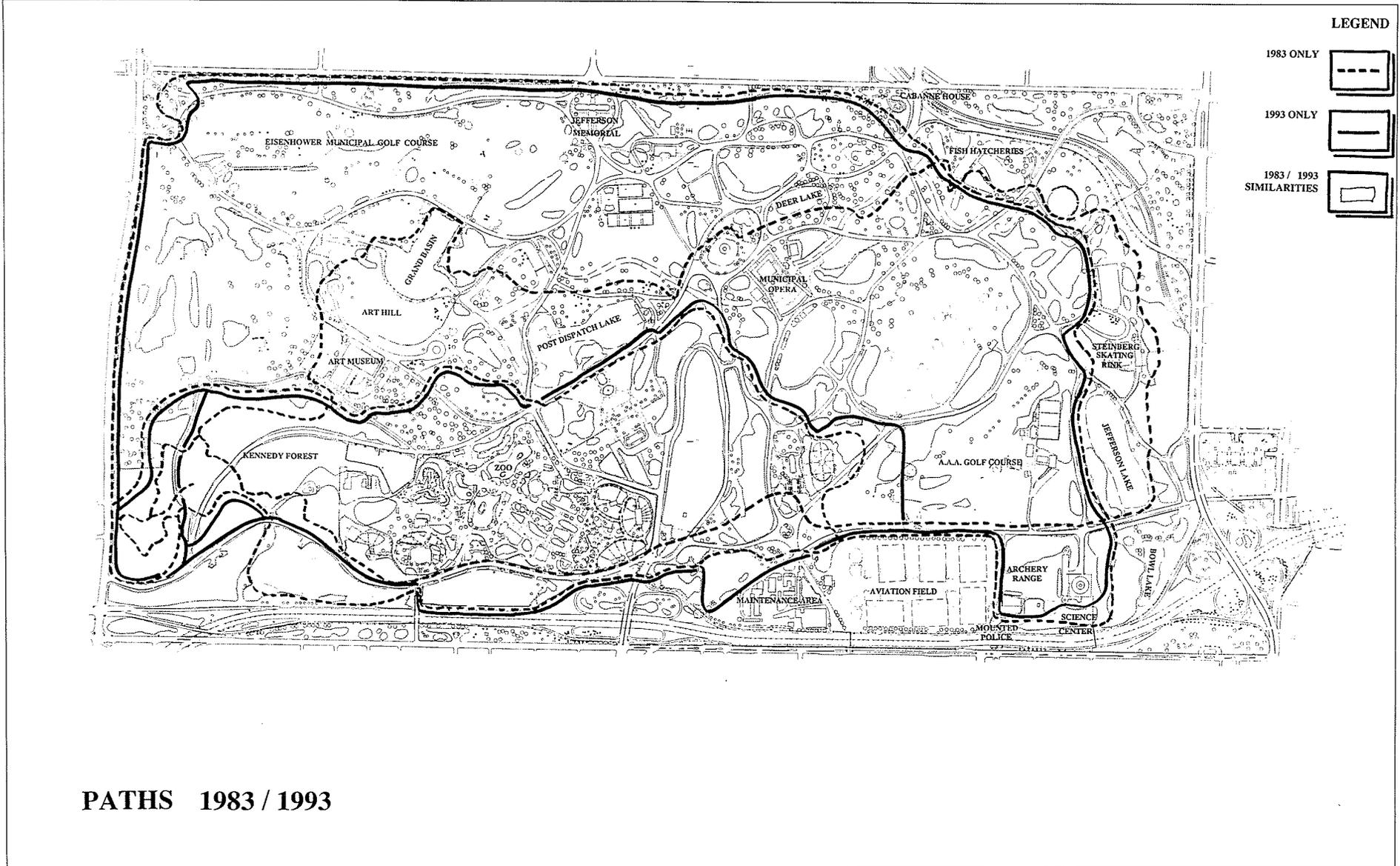
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LEGEND

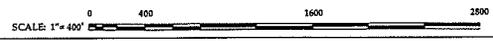
- 1983 ONLY 
- 1993 ONLY 
- 1983 / 1993 SIMILARITIES 

PATHS 1983 / 1993



FOREST PARK MASTER PLAN

ST. LOUIS, MO



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7. *History Composite*

Forest Park today is the result of these various plans as they were overlaid on each other over time. The enclosed map - History Composite - shows what features of the different eras of park planning remain today. What is clearly apparent is that the park is essentially split down the middle, with the eastern section being more reminiscent of the pre-World's Fair design approach and the western section reflecting the post-World's Fair design approaches.

B. Forest Park Profile Today

Forest Park is unique in the way that it serves and is served by the neighborhoods and region that surrounds it.

The following are key facts:

- The park is approximately one mile long and two miles wide, with a total of 1,293 acres.
- As a neighborhood park, it is surrounded by more than 70,000 residents in neighborhoods within one mile of the park.
- As a city park, it serves the nearly 400,000 residents of the City of St. Louis.
- As a regional park, it provides attractions and facilities for the nearly 2.4 million residents of the seven-county metropolitan area.
- Forest Park attracts approximately 10-12 million visitors annually.
- Located within the park are the region's leading cultural institutions, including the Zoo, Art Museum, History Museum, Science Center, and the Muny.
- The park is part of the region's natural systems, which include water, vegetation, wildlife, topography, and air quality, among others.
- The park is located entirely within the 28th aldermanic ward, lies adjacent to two others (17th and 24th) and within one mile of the 8th, 18th and 26th wards.
- The park is an important anchor of the surrounding area, providing a vitality and appearance that spreads into existing neighborhoods and serves as a catalyst for continued growth, development, and revitalization of those areas.

C. Summary of Existing Conditions

As part of the master planning process, an analysis was performed of all of the park's natural and built systems to determine their current condition and their ability to survive and prosper under existing conditions. The results of those studies can be found in each of the relevant sections throughout this plan and in the appendix.

In general, Forest Park does not currently have an ecologically sound and sustainable natural system. Many opportunities do exist, however, to improve the functioning of the natural system, using sound ecological design principles. The natural system is seen as the base infrastructure of the park. Without it, there is no park. There are areas of the park that will always be less sustainable from a natural ecological point of view and will require high maintenance (i.e., ball fields). However, the opportunity does exist to ensure that maintenance practices are also environmentally sound.

Forest Park's built system was equally distressed due to years of declining maintenance budgets and resulting deferred maintenance. Its roads, curbs, sidewalks, and underground utilities are all in need of extensive repair or, in many cases, complete replacement.

This plan seeks both to improve the environmental health of the Park's natural systems and extensively repair its built systems. The plan's design guidelines are divided into six "systems," which are summarized below:

1. Passive Open Space

- Not all open spaces are equally maintained and utilized.
- Existing fragmentation and barriers degrade the health of Forest Park's vital natural systems.

2. Water System

- The existing water system lacks visual as well as physical connection.
- The existing combination of surface drainage and subsurface infrastructure cannot adequately handle the park's drainage needs.
- The inadequate drainage system not only restricts usage but also damages the vegetation.
- Due to the gradual removal of vegetation over time, the park faces serious water run-off and erosion problems.
- The water and surface drainage system is presently connected to the public sewer system.
- Water quality does not meet the standards outlined in the Federal Clean Water Act.

3. Landscape

- There is no predominant landscape “theme” in Forest Park.
- Many of the spaces envisioned in the original 1876 plan and 1904 World’s Fair plan remain in some capacity, with a range of modified/contemporary uses.
- The park’s topography is largely the result of the original configuration of River Des Peres prior to its burial into concrete sewer tubes.
- Forest Park’s landscape is aesthetically diverse.
- Much of the park lacks spatial definition and all-season visual drama.
- Most of the current tree planting occurs in an ad-hoc manner with no coordinated plan.
- Some of the park’s plantings are located in inappropriate locations in terms of site moisture, orientation, and use.
- Generally, the park is void of ornamental trees, shrubs and diverse ground cover plantings.

4. Active Space

- There are few areas available for active recreational pursuits without a permit.
- Many permit areas go unused during significant portions of the week and year.

5. Facilities, Art, Architecture, and Infrastructure

- Existing park facilities, especially the cultural institutions, are heavily used and all need major improvements to meet current standards.
- Generally, park support facilities and amenities are inadequate to meet the needs of park users.

6. Access, Circulation, and Parking

- Forest Park does not have an overall system plan for its roads and paths
- The current road and path system is often redundant and confusing.
- The current road system is part of a regional transportation system.
- There is adequate parking throughout the park. However, it is inefficient and inappropriately located to meet typical and peak summer demands.
- The path system in the park is plagued by multiple, often conflicting uses and by frequent intersections with roadways where path users are at a distinct disadvantage.

The analysis of Forest Park's existing conditions also looked at the critical issues of governance, management, and funding, which are summarized below:

7. Governance

- Forest Park is owned and operated by the City of St. Louis.
- There is no formal method for citizen input on the future of Forest Park.

8. Management

- The Department of Parks, Recreation, and Forestry administers Forest Park.
- The existing management and operational model assigns no specific status to Forest Park as a separate and distinct program or budget unit.

9. Funding

- Funding sources include the city's general fund, the city's capital fund, the Forest Park Improvement Fund, private donations, grants and supplemental city departmental contributions.
- The annual operating budget is approximately \$2.9 million.
- The Forest Park Capital Improvement Fund currently receives funding from a 1/2 cent sales tax that was passed by voters in 1993.

SECTION C — GUIDING DOCUMENTS

I. A VISION OF FOREST PARK'S FUTURE

II. GOALS AND POLICIES

III. DESIGN APPROACH

- A. A Total Park Experience
- B. Human Ecosystem Design Methods
- C. Sustainability
- D. Park-wide Systems
- E. Balance

IV. DESIGN CONCEPT

V. DESIGN PRINCIPLES

VI. CONTEXTUAL RELATIONSHIPS

- A. Overview
- B. Summary of Existing Conditions
- C. Design Principle
- D. Design Recommendations

VII. LAND USE

- A. Overview
- B. Summary of Existing Conditions
- C. Design Principle
- D. Design Recommendations
- E. 1983 No-Net-Loss-of-Open-Space Calculation
- F. Master Plan No-Net-Loss-of-Open-Space Calculation

I. A VISION OF FOREST PARK'S FUTURE

As part of the planning process, Forest Park planners developed the following vision statement for the park, which was endorsed by the St. Louis Board of Aldermen in January 1995. It describes how the planners and citizens envision the park in the future.

Forest Park is a gathering place for St. Louisans and our guests, an urban park that is the home for attractions, events and activities that reflect our interests, culture, and history. It is a place to experience wonders great and small, natural and man made: an inspiring vista, an endangered species, an Old World masterpiece, real world technology, or a shady glen that offers a moment of tranquillity. It is a place we share, and a place for which we share responsibility.

Forest Park provides us with settings to appreciate the world around us, and within ourselves. It is easily accessible, yet free of the constant intrusions of daily life. Here we may walk barefoot in the grass, hear the sweet song of a migratory bird, watch young children catching their first fish or neighbors enjoying a summer's day. We may contemplate a piece of art or architecture, float on the lakes amidst falling autumn leaves, walk silently through a forest on freshly fallen snow, or lie in the fields of wildflowers as Spring arrives.

As home to many of our finest cultural institutions, Forest Park is a place to come face-to-face with a baby chimpanzee, take a journey through the heavens or back in time, hear the stars sing at night, or uncover the secrets of a pharaoh's tomb. It is a place of learning and discovery, of unique experiences that bring us back again and again.

As a center of recreational activity, Forest Park teems with athletes and sports enthusiasts at all levels, ages, and skills. Its paths, fields, courses, and courts allow those involved in each activity the freedom to enjoy the park without limiting the enjoyment of others.

As a focal point for special events, Forest Park gives us reasons to celebrate our heritage, our hopes, and our happiness. Our gatherings here help define our community and demonstrate the warmth, wonder, and friendship that we share.

No where else can we share the variety and totality of experiences that Forest Park provides. The strength of the park flows from that sharing, from our willingness and ability to protect the park for all of us in all of our uses. Forest Park is more than a symbol of the beauty and tradition of St. Louis; it is a place where we define our community and celebrate our pluralism every day.

II. GOALS AND POLICIES

A. Master Plan Goals

B. Management and Implementation General Policies

C. Land Use General Policies

D. Landscape General Policies

E. Art, Architecture, and Infrastructure General Policies

F. Access, Circulation, and Parking General Policies

II. GOALS AND POLICIES

A. MASTER PLAN GOALS

- Forest Park should be ...
 - An attraction for visitors to St. Louis and the citizens of the region.
 - A place where the St. Louis region celebrates its pluralism.
 - The home of many of the region's special events, including multi-cultural events.
 - Well-maintained and safe for all park users.
 - An environmentally safe recreation area, posing no hazard to the health and safety of current and future park users.

- Forest Park should provide ...
 - For many of the diverse open space, cultural, and recreational needs and activities of the region.
 - For the preservation and maintenance of its natural resources, environment and wildlife habitat to ensure a sustainable, ecologically sound natural system.
 - Safe and enjoyable access for all park users.
 - Educational and volunteer programs, events, visitor services, and outreach activities.
 - A diversity of activities, including multi-cultural events.
 - City-run and promoted youth programs.
 - Access and attractions that are in full compliance with the Americans with Disabilities Act (ADA).

- Forest Park's existing cultural institutions (Art Museum, Zoo, Science Center, History Museum and the MUNY) are valued and should remain in Forest Park.

- Forest Park's natural beauty, scenic value, and historic and cultural institutions should be the basis for the enjoyment of the park, regardless of future changes in types and levels of park activities and park users.

- Forest Park should be well-managed, governed, and financed, based upon an open and inclusive, public/private, participatory process.

- Forest Park should be preserved as an affordable experience for all park users.

- The principles of stewardship, partnership and shared responsibility among all Forest Park entities are strongly encouraged.

- Available sites along the park's edge outside of its current boundaries, including the Arena site, should be pursued for future park needs.

B. MANAGEMENT AND IMPLEMENTATION GENERAL POLICIES

Maintaining the quality, uniqueness, and attractiveness of Forest Park requires that it be well-managed, governed, and adequately financed. Effective management of the park must be based on an open and inclusive, public/private, participatory process that involves elected officials, city departments, citizens, park interest groups, neighborhood associations, and other appropriate groups. Specifically, this plan calls for:

- The creation of a Forest Park Board, appointed by the Mayor of St. Louis, to monitor the implementation of the master plan and provide ongoing community input on Forest Park. Representation on this Board should follow a prescribed formula that ensures a broad, well-balanced base, including elected officials, city departments, citizens, park interest groups, neighborhood associations, and other appropriate groups.
- The establishment of a clear and logical process for addressing changes to Forest Park.
- The encouragement of partnerships between government, institutional, and private entities to benefit the park's daily operation and management.
- The development of a long-term comprehensive management and maintenance plan.
- The encouragement of the principles of stewardship, partnership, and shared responsibility among all Forest Park entities.
- The continuation of leases or otherwise contracting for the operation of public facilities by non-city agencies/ organizations to supply needed services and/or produce revenue for Forest Park.

C. LAND USE GENERAL POLICIES

Forest Park is a place for people to enjoy recreation, leisure, athletics, culture, and nature in an urban park setting. As such, this plan is responsive to a wide range of uses and users, while seeking to preserve the character of the park's lakes, landscapes, institutions, and park facilities, active and passive recreational areas, and historic structures. Land use in Forest Park should be guided by the following:

- The balance between Forest Park's existing uses is appropriate and should be maintained.
- All park institutions, attractions and facilities should recognize the principles of co-existence and interdependency, and develop plans which result in mutually beneficial solutions for these entities and the park itself.
- All park institutions, attractions and facilities must share stewardship and responsibility for the future of the park.

- Forest Park's existing cultural institutions (Art Museum, Zoo, Science Center, Missouri History Museum, and the MUNY) are highly valued and should be encouraged to remain in the park and the City of St. Louis.
- The quality and quantity of open space in Forest Park should be preserved, based on a general concept of no-net-loss-of-open-space.
- Multiple use of all Forest Park facilities should be encouraged wherever possible and appropriate.
- Expansion, modification, replacement, relocation, and/or adaptive re-use of existing ZMD institutions, park facilities, and service and support facilities should be permitted only if such proposals meet all criteria adopted herein, and after completing a carefully prescribed process. Any proposed expansion of existing facilities is desirable in areas adjacent to, rather than within, Forest Park, where appropriate.
- New buildings in Forest Park, for new uses unrelated to existing ZMD institutions, park, athletic, or service and support facilities, should be prohibited. This does not prohibit expansion, modification, replacement, relocation, and/or adaptive re-use of existing buildings.
- The continuation of leases or otherwise contracting for the operation of public facilities by non-city agencies/ organizations to supply needed services and/or produce revenue for Forest Park should be encouraged.

D. LANDSCAPE GENERAL POLICIES

The beauty of the Forest Park landscape and its unique, interconnected spaces are critical components of the park's history and its ongoing attractiveness. As an important part of the region's open space system, Forest Park should have a diverse, well-maintained, naturally sustaining, and ecologically sound landscape system that draws on the park's existing diversity of design and maintains standards of excellence for any additions or modifications. Landscape design and maintenance standards specific to Forest Park should be created to ensure that a cohesive overall design is achieved and maintained.

- Utilize landscaping to complement, accentuate, and reinforce Forest Park's woodland areas, open meadows, gardens, water edge plantings, and other natural features, public art, architecture, and infrastructure.
- Implement a comprehensive planting/reforestation plan.
- Respect and enhance existing views and vistas throughout the park and from adjacent neighborhoods, land uses, roads, and highways.
- Maintain passive areas for appropriate wildlife habitats.
- Modify existing maintenance practices to promote a well-managed, diverse, naturally sustaining, and ecologically sound landscape system that reduces long-term maintenance requirements.

E. ART, ARCHITECTURE AND INFRASTRUCTURE GENERAL POLICIES

Forest Park displays a wide and diverse range of public art, architecture, and infrastructure which add to the unique nature of the park and its ambiance. The Master Plan acknowledges the value of these cultural amenities and seeks to maintain and enhance existing styles through the establishment of design and maintenance standards which are specific to the park. Emphasis will be placed on repairing and maintaining existing art and structures, ensuring that new park elements are consistent with neighboring styles and landscaping, and creating clear and comprehensive signage to ensure that visitors have the ability to enjoy fully the Park's many attractions.

General policies concerning public art, architecture, and infrastructure include:

- Acknowledge and maintain Forest Park's existing diversity of design through guidelines which consider each element and site on its own merits and apply an appropriate style or approach to ensure proper integration into park surroundings.
- Create design and maintenance standards for art, architecture, and infrastructure which are specific to Forest Park.
- Ensure that new park elements respect their architectural and landscape context.
- Design new park elements which are near, or additions to, historically significant public art, architecture, archeological interest, and infrastructure to be compatible and harmonious with the existing style and landscape setting.
- Develop a comprehensive signage plan that includes directional, informational, and entry signage and maps which are visually sensitive and unobtrusive.
- Repair, reconstruct, or remove Forest Park's infrastructure as needed and ensure the availability of funds for adequate future maintenance.
- Maintain the aesthetic integrity of architecture, where possible, in making modifications to meet ADA requirements.
- Review Forest Park's public art collection to ensure that it reflects the diverse culture of the St. Louis community.
- Modify existing park elements, as appropriate and when possible, to assure compliance with the master plan.

F. ACCESS, CIRCULATION AND PARKING GENERAL POLICIES

Development of a plan that balances the need for adequate access to Forest Park for all users with the goal of maintaining and enhancing the park's open space, natural systems, and charm is critical to the future of the park. The Master Plan seeks to:

- Make Forest Park attractions and destinations accessible to all users.
- Balance the need for adequate parking and access to Forest Park's attractions and destinations with the preservation of the park setting.
- Promote environmentally sound transportation policies that protect Forest Park's valuable open space, its natural systems, and the charm of its adjacent neighborhoods.
- Recognize that driving through the park is also a recreational experience.
- Require motorized vehicles to yield the right-of-way to other Forest Park users.
- Develop parking solutions that are as unobtrusive as possible, with careful investigation of solutions outside Forest Park, including the Arena site.
- Address the circulation needs of Forest Park's users first, prior to the needs of commuters.
- Assess the existing parking in Forest Park. Consider moving any under-utilized parking spaces to locations that best serve the public need for convenience and accessibility.

III.DESIGN APPROACH

- A. A Total Park Experience**
- B. Human Ecosystem Design Method**
- C. Sustainability**
- D. Park Wide Systems**
- E. Balance**

III. DESIGN APPROACH

Following the period of community input and the development of a vision, goals and policies to guide the park's future, the Master Plan Committee turned its attention to the future design of the park and the changes necessary to achieve the stated goals. The design approach used in the development of the Master Plan was to **“create a total park experience using the human-ecosystem design method to develop sustainable park-wide systems that balance and integrate the diversity of activities, uses, users, and environments”**.

Each component of the design approach is discussed below:

A. A total park experience

The overriding ideal used throughout the design effort to guide decision-making was **“to create a total park experience.”** This is described in the following way:

- A total park experience allows park users to stimulate the mind, the body or the spirit as they see fit, through a variety of cultural, educational and recreational facilities, opportunities and amenities.
- Park patrons should be able to access and conveniently circulate between any park attractions they wish to experience.
- Park attractions should span a broad spectrum of activities, providing a balanced mix of indoor and outdoor cultural and educational amenities, outdoor active recreation and unstructured outdoor passive recreation.
- The park should be a place of education, where visitors can learn from and about our natural systems and where park facilities and institutions facilitate the delivery of educational program tied to the park experience itself.

Forest Park has the potential to serve as a classroom where current area residents and future generations can learn about the region's culture and natural systems and the importance of their existence. The park contains a diverse mix of cultural, educational, and active recreation facilities which contribute to a total park experience. However, it lacks the outdoor, natural system component with its cultural and educational potential. Park patrons currently go to quality indoor facilities to learn about the outdoor natural systems and park history, but do not go to the park's outdoor spaces to learn. For example:

- They learn about World's Fair history at the Missouri History Museum, even though they are surrounded by many of the fair's landmarks, landscapes, and site relationships.
- They learn about natural sciences across Oakland Avenue at the Science Center, when the real thing is across Highway 64/40.
- They learn about the priceless pieces of international art at the Art Museum, but are not connected to the legacy of outdoor public art around the museum and throughout the rest of the park.

- They go indoors to view the plantings of the Jewel Box, but don't as easily embrace the diverse landscapes and plant communities around it and throughout the rest of the park.
- They go to the Zoo's Living World to view regional and international wildlife in naturalistic settings, but aren't able to view local urban wildlife that would naturally inhabit the park if the ecosystem were a healthy one.

The existing cultural and educational facilities could be enhanced by having an outdoor component. For every existing cultural or educational facility, there is a logical, if not obvious, outdoor partner which is not being realized:

- The Zoo and urban wildlife in Forest Park.
- The Art Museum and outdoor public art in Forest Park.
- The History Museum and the historic legacy of Forest Park.
- The Science Center and the natural sciences of Forest Park.
- The Jewel Box and the natural vegetation and plant communities of Forest Park.

B. Human Ecosystem Design Method

Parallel to the total park experience, the planners stressed a design method known as the **human ecosystem design method**, developed and promoted by, amongst others, John Lyle. To understand this approach, one must understand the principle of an ecosystem. Ecosystems describe the interaction of living (biotic) components, such as plants, animals and fungi, with non-living (abiotic) components, such as soil, temperature and moisture. Functionally, two main processes occur within an ecosystem: 1) energy flows from the sun to green plants and then to animals, and 2) matter such as nitrogen, carbon, oxygen, and water continually recycles.

Ecosystems consist of food chains that interact with other food chains to form food webs. Organisms eating/using other organisms for a source of food, and competition for food, are essential components of food chains. However, in nature, as some plants out-compete other plants, habitat conditions change and may favor one species over another species. This change is referred to as ecological succession or, simply, succession.

Humans have tremendous impact on the succession of ecosystems. Humans have the ability to temporarily freeze succession at inefficient immature stages to serve various needs. The problem is that these immature stages are not efficient at utilizing energy and recycling of matter.

For instance, a large mowed expanse of one or two species of grass is referred to as a monoculture, as opposed to an area with multiple plant species (a higher biodiversity) which could be called a multiculture. Monocultures fit into the category of an immature ecosystem. They are not efficient at using energy and recycling matter/nutrients. In fact, many grass species planted on a golf course or park lawn are not even adapted to the abiotic components such as local temperature and rainfall. Therefore, to help the grass thrive/survive, humans must intervene and supply it with water, food/fertilizer, and treat it with pesticides if it gets attacked by a fungus or insects. Monocultures also require fossil fuel energy to keep them mowed, which increases labor costs. Mowing further stresses the grass, causing it to send up new shoots and requiring more energy and nutrients. Furthermore, grasses do not recycle oxygen back into the atmosphere like multi-layered forests.

On the other hand, a diverse, mature forest is more self-sustaining. Because it contains many diverse species, if a plant species is attacked by a pest fungus or insect, chances are higher that somewhere in one of the food chains, a bird or predaceous insect will help keep the pest species in check. Because of the low species diversity in the grassland, pest populations typically mushroom. In addition to pesticide and fertilizer runoff, which pollutes the creeks and lakes, grasses offer little erosion control, thereby increasing soil loss and adding sediments to water bodies. Most grass species typically planted in parks (not native warm-season grasses) do not absorb much stormwater runoff to help the recharge of groundwater (which naturally supplies water to plants as part of the water cycle). Diverse mature ecosystems are more efficient as sponging up stormwater runoff.

The design approach, therefore, was to create environmentally healthy, sustainable ecosystems which have a native base of green plants that can efficiently capture solar energy and transfer that energy into many different food chains. We should strive to select plants that are more self-sustaining, to cut down on expenses, require fewer resources (fuels, water, etc.) to sustain them, help reduce water pollution and soil erosion, enhance the recycling of water and nutrients, create fertile soils, and even provide habitat for more songbirds and butterflies.

In addition, all ecosystems are open and connected by flows of energy and materials. In drawing the boundaries of an ecosystem, therefore, we need to consider the flows that link it with its neighbors. Every ecosystem is a part — or subsystem — of a larger system and, in turn, includes a number of even smaller subsystems.

Humans are integral, interacting components of ecosystems at every level. A human ecosystem is an intentionally designed and managed ecosystem representing a symbiosis of human and natural processes. In a human ecosystem, human and natural processes will merge indistinguishably into an organic whole.

For the planning team, one of the most useful tools for sorting out the competing patterns, function and structure of the human ecosystem was a series of suitability maps which formed the basis for integrating the complex analysis maps and determining the relative suitabilities of various activities and uses for specific geographical areas in the park.

C. Sustainability

The third component of the design approach was **sustainability**. It is generally accepted that the St. Louis region should embrace the concept of sustainability to remain competitive and on the cutting edge of the latest business and environmental practices. The concept of sustainability is continually being developed to ensure the continued well-being, in the most holistic sense, of our region, nation and world.

Sustainability first emerged during the 1980's and rose to international prominence during the 1992 Earth Summit in Rio de Janeiro. There is great debate as to what this concept entails and means specifically. The World Commission on Environment and Development has offered the following definition: "Meeting the needs of the present without compromising the ability of future generations to meet their own needs". In general, sustainability refers to our long-term economic, environmental, cultural, and social health and vitality, and the notion that we have to understand and design for these factors in an integrated and holistic manner.

Our city park system is an important component in this drive toward a sustainable region. With Forest Park representing approximately 50% of our park system, it is critical that it be the first of our parks to fulfill this ideal. Not only should Forest Park and its facilities embrace and be designed on sustainable principles, but they should be catalysts and educational classrooms for the entire region. Importantly, sustainability should not be narrowly defined and applied only to the natural systems but, where feasible, to all park facilities, operations, maintenance, economic and governance systems. Although the Master Plan design is based upon the general principles of sustainability, detailed operational and indexes should be developed for the ongoing development and maintenance of Forest Park.

D. Park-wide Systems

Critical to the success of the Master Plan was the creation of cohesive **park-wide systems**. This design approach focuses on understanding the park as a series of systems which must remain connected in order to function in an efficient and healthy manner. Systems are integrated wholes whose properties cannot be reduced to those of smaller units. Every organism, from the smallest bacterium to the wide range of plants and humans, is an integrated whole and thus a living system. Systems exhibit dynamic, adaptive, goal-seeking, self-preserving, and evolutionary behavior. The principle of systems states that their whole is always greater than the sum of their parts, implying that the health and full development of any part is determined by the characteristics of wholeness, interrelationships, and connectivity. Therefore, the study of the interconnectedness of the parts is critical. Systems are destroyed when they are dissected or fragmented into isolated parts, as Forest Park is today.

Some of the benefits of connected systems include:

- Improved water flow and health
- Improved landscape biodiversity
- Improved vehicular and pedestrian flow and function
- Improved wildlife habitat and migration corridors

- Improved function and efficiency of underground utilities
- Improved connections between the existing park facilities
- Improved connections to the neighborhoods, City and region
- Improved and integrated educational opportunities
- Improved public realm and heart of our community

For planning purposes, Forest Park was categorized into six systems, classified as either natural or built systems. They are:

Natural Systems

- Passive open space
- Water
- Landscape

Built Systems

- Active space
- Park facilities, art, architecture and infrastructure
- Access, circulation and parking.

An example of this approach is the water system. When designing the lakes and lagoons, the entire park water system was carefully analyzed to determine the most appropriate configuration and function of each water body. The design solution created a connected ribbon of lagoons and lakes which flow from one end of Forest Park to the other to improve environmental health and water quality while addressing the park's flooding problems. This approach was utilized on all six park systems.

In the end, the six systems were overlaid and designed at even greater detail on a site specific basis to create the Forest Park Master Plan.

E. Balance

The final component of the design approach that integrates all the above is the notion of **balance**. This component stresses the fact the Forest Park is an urban park which is heavily used by humans. It also acknowledges that Forest Park is an urban oasis for local and migrating wildlife and one of the few large, continuous areas of open green space within the St. Louis Metropolitan Area. It is, therefore, critical to the area's environment. As a result, Forest Park's design must balance, connect and integrate the functional needs of humans, as well as the needs of the entire biological community, that make up the area's ecosystem.

IV. DESIGN CONCEPT

IV. DESIGN CONCEPT

In developing the major concepts for the park, the designers integrated the above mentioned design approach and principles with Forest Park's existing **sense of place**. The park's sense of place is a complex phenomenon founded upon people's perceptions and emotional attachments, the history and culture of the park, its physical characteristics and facilities, and their use. Thus, the park designers wanted improvements to Forest Park to re-create the beauty of the park, retain its beloved familiarity and restore its place as the crown jewel of parks in the area. Great sensitivity was used in improving the function of the park systems by providing links between park features and areas as well as in restoring the heart of the park. By taking this approach, the designers were able to enrich the park's tradition as an important social and community gathering place, while allowing for the ecological and natural systems of the park to be self-sustaining.

One major concept was to provide an **open space spine** connecting and integrating the park's natural infrastructure and the civic infrastructure (the cultural institutions, park facilities, and features). The open space spine links the Cascades in the north-west section to Kennedy Forest in the south-west section and to Bowl Lake, adjacent to the Science Center and Kingshighway Boulevard in the south-east section of the park. The open space spine is based upon the park's natural and man-made features and follows the old River Des Peres' water course and line of bluffs in the park. It is essentially passive in nature although the design, the quality and the experience of the park change along its length. Functionally and visually, this spine connects all the major cultural institutions, park facilities, and active recreation areas. It is also the means by which people move between these major park facilities. From a natural systems point of view, it connects the natural communities and wildlife.

A second important design concept was to provide a major civic space or gathering place. This was achieved by restoring the **heart of the park** — the Grand Basin, Art Hill and Post-Dispatch Lake area. This area was the historic center of the park during the 1904 World's Fair and the site of many major community gatherings, such as the celebration in 1927 for Charles Lindbergh's flight from New York to Paris. Today it is the symbolic center of the park, which has the potential to be restored to its former prominence and become a major center of activity along the open space spine.

To compliment the open space spine and the major civic space - the heart of the park - the design provides, on a more intimate scale, a sequence of **landmarks, places, streets and paths**. Landmarks help visually orient users of the park by providing a wayfinding system. In addition, landmarks are often significant destinations and/or are often in prominent locations. Forest Park has a combination of both. Examples include the Art Museum, History Museum, a number of the bridges, and the significant tree with spectacular fall colors at the northern end of Grand Basin.

The design provides for a variety of places with different forms, identities, and spatial and experiential qualities that correspond to the different uses in the park. Places provide intimate spaces for people to interact, enjoy nature and wildlife, or just to be alone. In these places, the sense of human scale and relationship to nature and/or the architecture and public art is an important design element. People will feel comfortable in the landscaped spaces. In addition, Forest Park has major streets and pathways that are aesthetically and functionally designed to be significant experiences for both the pedestrian and the driver of an automobile.

Forest Park is designed on a detailed scale with an understanding of the following issues: human scale and how people relate to and move in the landscape; the proportions, texture and seasonal rhythm of the landscape; the implications of the juxtaposition of uses; and the sense of the passage of time.

V. DESIGN PRINCIPLES

LIST OF DRAWINGS AND DIAGRAMS

- Design Principle - Integrate and Connect Forest Park to the Region, City and Adjacent Neighborhoods
- Design Principle - Integrate Historically Significant Landmarks, Landscapes, and Site Relationships
- Design Principle - Land Forms Define Park Experience
- Design Principle - Create a Passive Open Space System
- Design Principle - Connected, Linear Water System
- Design Principle - Active Space System
- Design Principle - Emphasize Site Relationships
- Design Principle - Multi-Functional Zones with Shared Facilities
- Design Principle - Multi-Modal, Distributed Access System
- Design Principle - Coordinated Infrastructure Replacement and Underground Utility Corridors

V. DESIGN PRINCIPLES

Based upon the design approach and concepts, as well as the analysis of the existing conditions of Forest Park, the planners developed 10 design principles:

1. Integrate and connect Forest Park to the region, city, and adjacent neighborhoods.
2. Integrate historically significant landmarks, landscape, and site relationships.
3. Emphasize land forms to define park experience.
4. Create a linear connected water system.
5. Create a passive open space system.
6. Create active space systems.
7. Emphasize site relationships.
8. Create multi-functional zones with shared facilities.
9. Create multi-modal, distributed access system.
10. Create underground utility corridors.

30 Mile Regional Service Area*

St. Louis City
1990 Pop.: 396,685

Madison County
1990 Pop.: 249,238

St. Charles County
1990 Pop.: 212,907

5 Mile Metropolitan Service Area*

St. Louis County
1990 Pop.: 993,529

1 Mile Neighborhood Service Area*

Franklin County
1990 Pop.: 80,603

St. Clair County
1990 Pop.: 262,852

Jefferson County
1990 Pop.: 171,380

Monroe County
1990 Pop.: 22,422

*Service area based on St. Louis County Parks Dept. criteria for regional parks.
 †Figures Courtesy of East West Gateway Council.
 *This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.
 *Service area radius measured from World's Fair Pavilion.

DESIGN PRINCIPLE

Integrate and Connect Forest Park to the Region, City and Adjacent Neighborhoods

DESCRIPTION

- A mutually beneficial, balanced relationship must be maintained between Forest Park and its surroundings -- at all scales. This relationship should be observed in all planning decisions in the park and outside of it. This will improve the existing relationship and avoid potential problems which result when this balanced relationship is disturbed.
- There are areas along the park's perimeter which, by location and amenities contained, could cater to adjacent neighborhoods and provide activities not otherwise available there.



FOREST PARK MASTER PLAN

ST. LOUIS,

MO

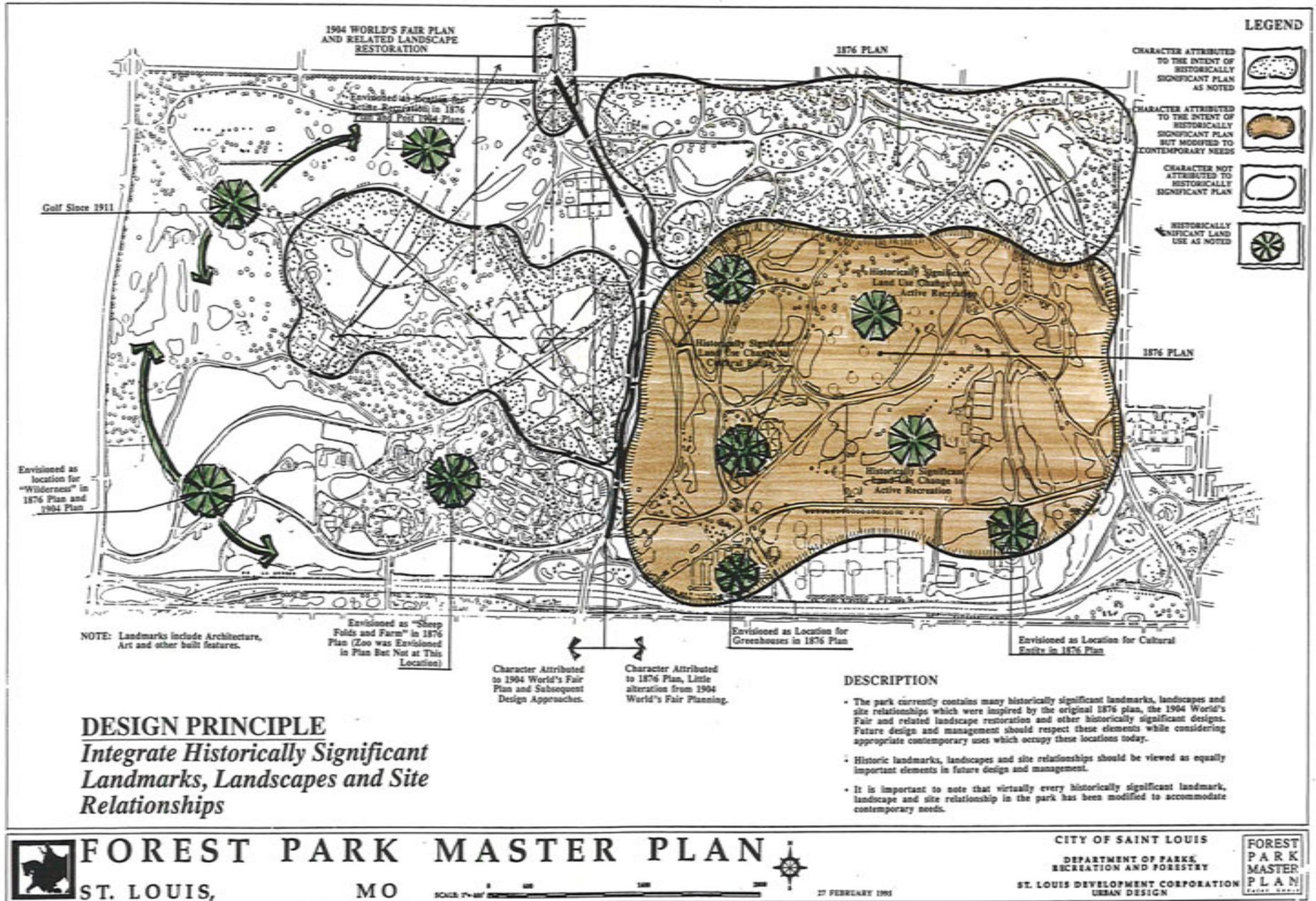
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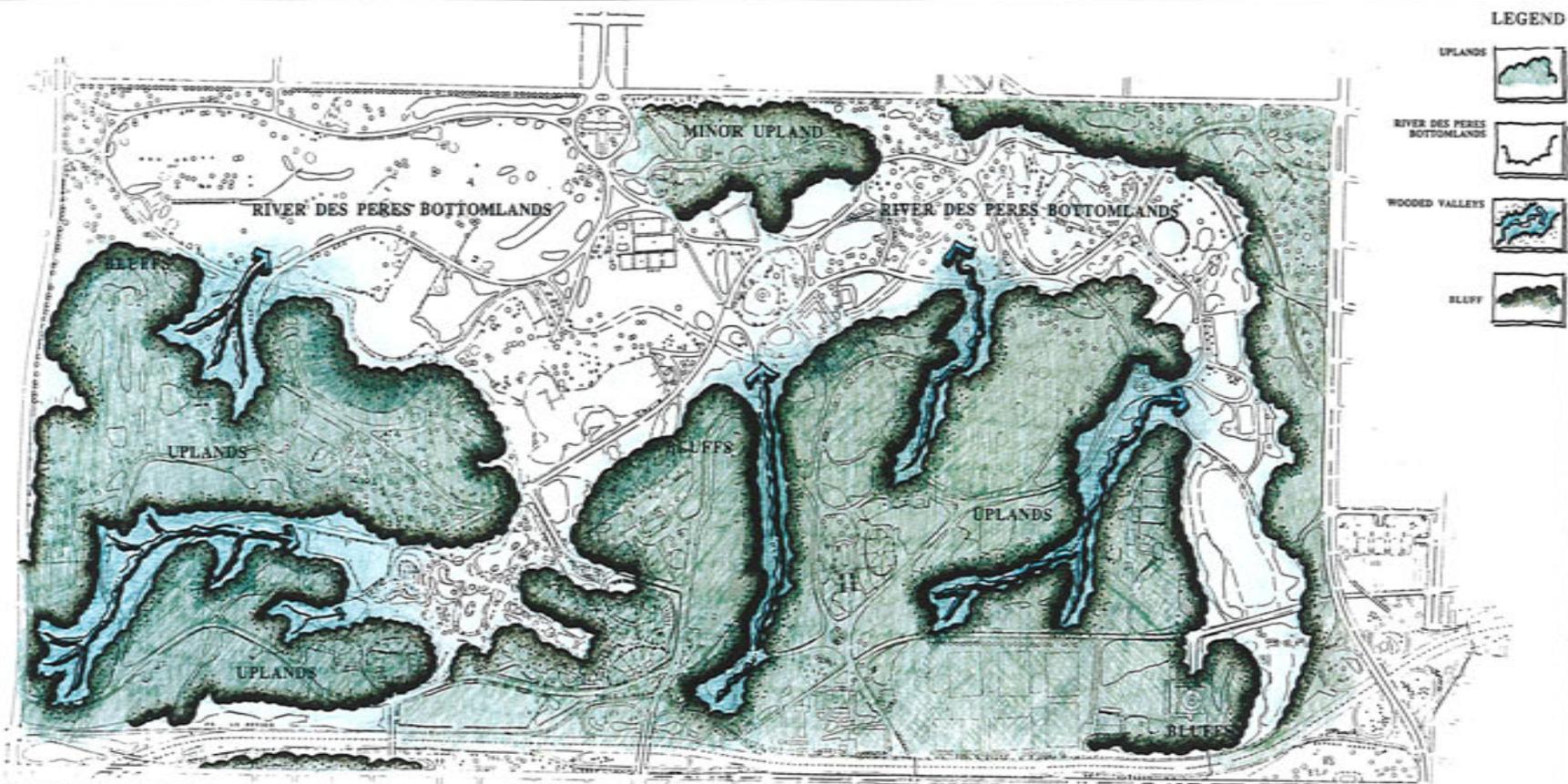


11 MARCH 1995

CITY OF SAINT LOUIS
 DEPARTMENT OF PARKS,
 RECREATION AND FORESTRY
 ST. LOUIS DEVELOPMENT CORPORATION
 URBAN DESIGN

FOREST
 PARK
 MASTER
 PLAN





LEGEND

- UPLANDS
- RIVER DES PERES BOTTOMLANDS
- WOODED VALLEYS
- BLUFF

*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

DESCRIPTION

- Site planning should respect and accentuate the character of the River Des Peres Bottomlands, Uplands, Bluffs and Wooded Valleys.
- Site planning should utilize design approaches which are most suitable for each particular landform.
- The park's original River Des Peres corridor created a series of land forms which define the spatial character of the park. They are defined as follows:
 - River Des Peres** River Des Peres was buried underground but its historic floodplain Bottomlands still remains as the low flat areas in the northern and eastern sections of the park.
 - Uplands** Higher elevations which once drained into the River Des Peres Bottomlands.
 - Bluffs** Transitional, sloping hill faces between the Bottomlands and Uplands above.
 - Wooded Valleys** Some of the original intermittent tributaries of River Des Peres which direct runoff water flow down from the Uplands to the River Des Peres Bottomlands below.
- Where possible, steep slopes in excess of 10% should be left as natural areas and as passive recreation areas due to erosion hazards and development limitations.

DESIGN PRINCIPLE
Land Forms Define Park Experience



FOREST PARK MASTER PLAN

ST. LOUIS,

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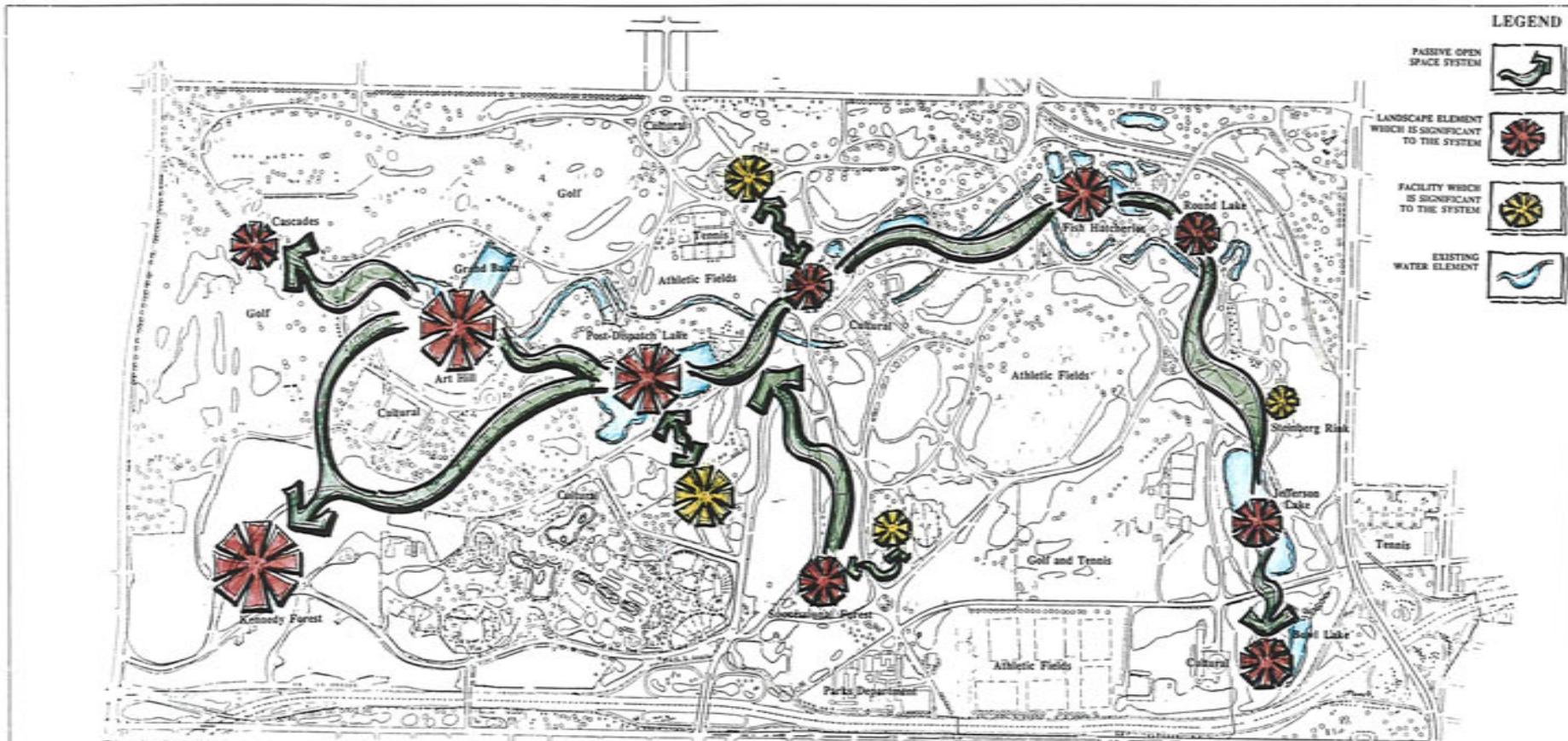
SCALE 1"=400'



27 FEBRUARY 1965

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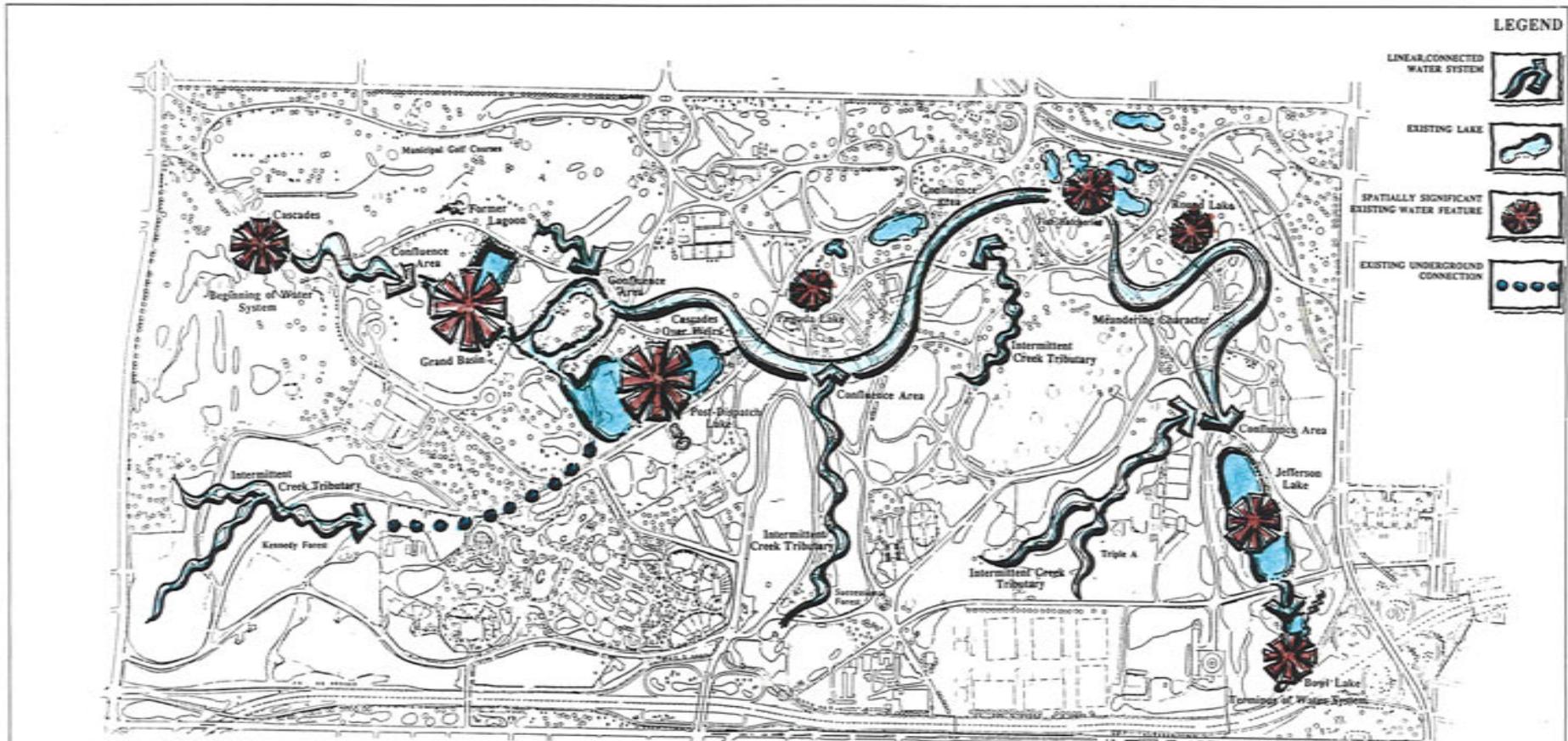


*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

DESCRIPTION

- Creates actual and perceptual connections which unite Kennedy Forest with Art Hill, Grand Basin, Post Dispatch Lake and ultimately Bowl Lake via passive open space corridors which link existing green spaces with natural, tree lined passageways, water elements, view corridors and linking pathways/trails.
- Provides an internal connection for perimeter active and cultural land uses and unifies diverse and fragmented open spaces along its path.
- Could provide passive green spaces and connecting paths for structured educational, interpretive and recreational programming and unique natural and cultural resources which would allow park users to better understand and appreciate the park's natural resources.
- Could provide the locations for outdoor activities such as bird watching, hiking and nature photography which are popular with St. Louis area residents.
- Would improve air and water quality by reducing carbon dioxide levels, erosion and surface water runoff while increasing oxygen levels and filtering airborne pollution.

DESIGN PRINCIPLE
Create a Passive Open Space System



LEGEND

- LINEAR, CONNECTED WATER SYSTEM 
- EXISTING LAKE 
- SPATIALLY SIGNIFICANT EXISTING WATER FEATURE 
- EXISTING UNDERGROUND CONNECTION 

WATER QUALITY NOTE:

- Water movement, aeration, depth and nutrient filtration all must be increased to improve water quality. Upland erosion must also be controlled at the source to limit the amount of siltation.

- Runoff should be managed to maximize water use and reuse.

DESCRIPTION

- The park's water system should be redesigned to resemble its original linear river character which reconnects the existing, diverse water features.
- The linear water system should form a link from the Cascades to Bowl lake.
- The linear water system should be the unifying element which connects the park's diverse water features.
- The linear water system is fed by a series of intermittent creek tributaries which have unique characters of their own.
- The linear water system contains a series of unique confluence areas which act as transitional elements where diverse water features unite.
- The linear water system should increase the use of appropriate naturalistic edges which are compatible with adjacent land uses while maintaining important formal elements.

DESIGN PRINCIPLE
Connected, Linear Water System



FOREST PARK MASTER PLAN
ST. LOUIS, MO

SCALE: 1" = 60'

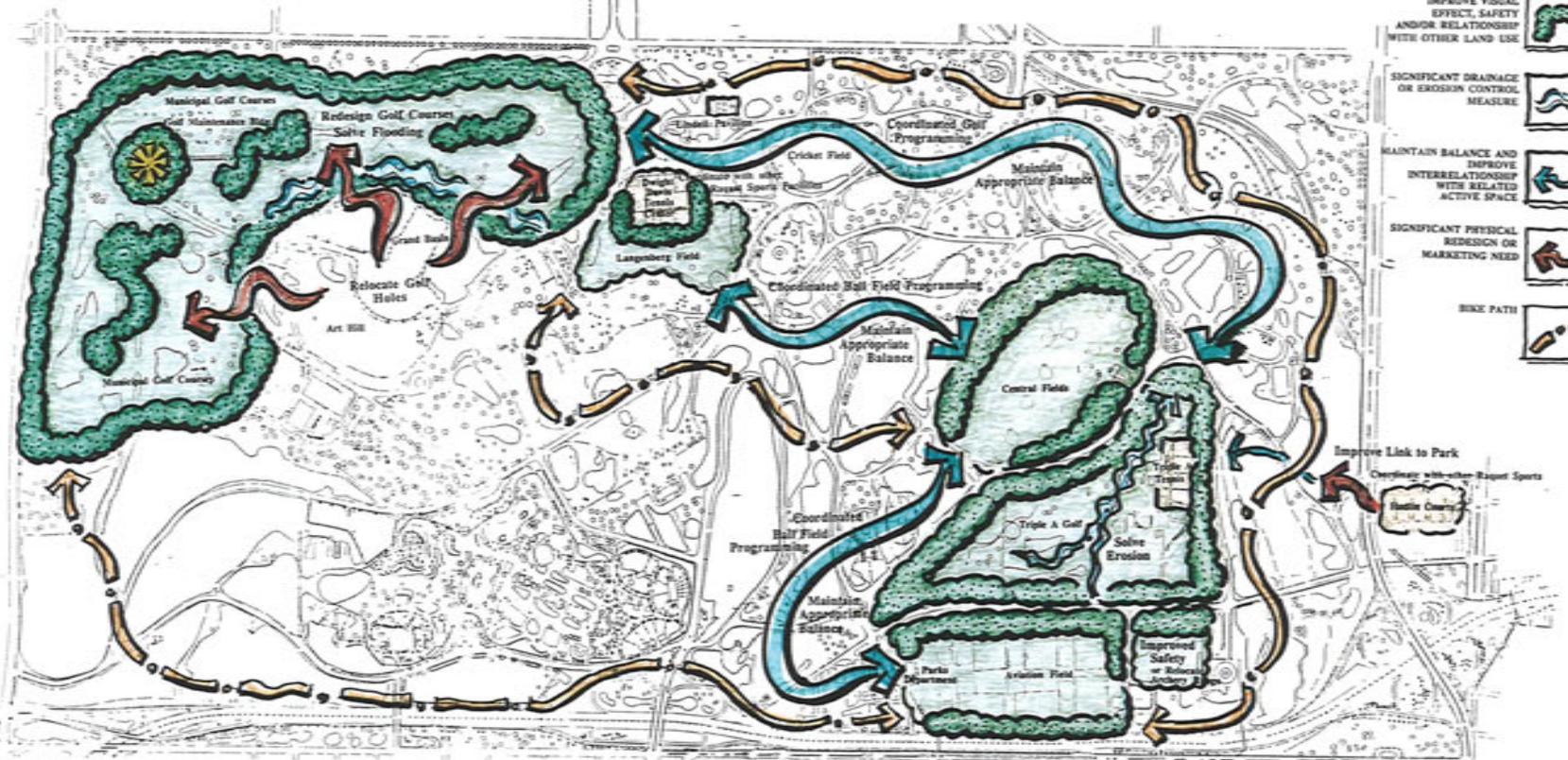


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LEGEND

- IMPROVE VISUAL EFFECT, SAFETY AND/OR RELATIONSHIP WITH OTHER LAND USE 
- SIGNIFICANT DRAINAGE OR EROSION CONTROL MEASURE 
- MAINTAIN BALANCE AND IMPROVE INTERRELATIONSHIP WITH RELATED ACTIVE SPACE 
- SIGNIFICANT PHYSICAL REDESIGN OR MARKETING NEED 
- BIKE PATH 



*This map is not intended to describe the precise location and boundaries of features but rather to highlight the general characteristics of the system.

DESCRIPTION

- Forest Park's active spaces which have common programming (i.e. Aviation and Central Fields) should be designed and managed as systems which maintain the current balance of activities while locating and designing them to best serve park users and respect the park's natural systems.
- The park's active space systems should maintain existing, appropriate multiple use spaces and support facilities while encouraging new ones where appropriate. Oversubscribed spaces should be redesigned and programmed to reduce physical damage from over use.
- Some active spaces should be redesigned to achieve the best land use mix and interrelationship. The visual effect of all active use spaces should be improved to better relate to surrounding park character.
- The bike path should be designed to best serve and interact without conflict with other park uses including pedestrian paths and roads.
- Solutions which correct major drainage and erosion problems should be compatible with water and passive open space system principles.

DESIGN PRINCIPLE
Create Active Space Systems



FOREST PARK MASTER PLAN
ST. LOUIS, MO

SCALE 1"=400'

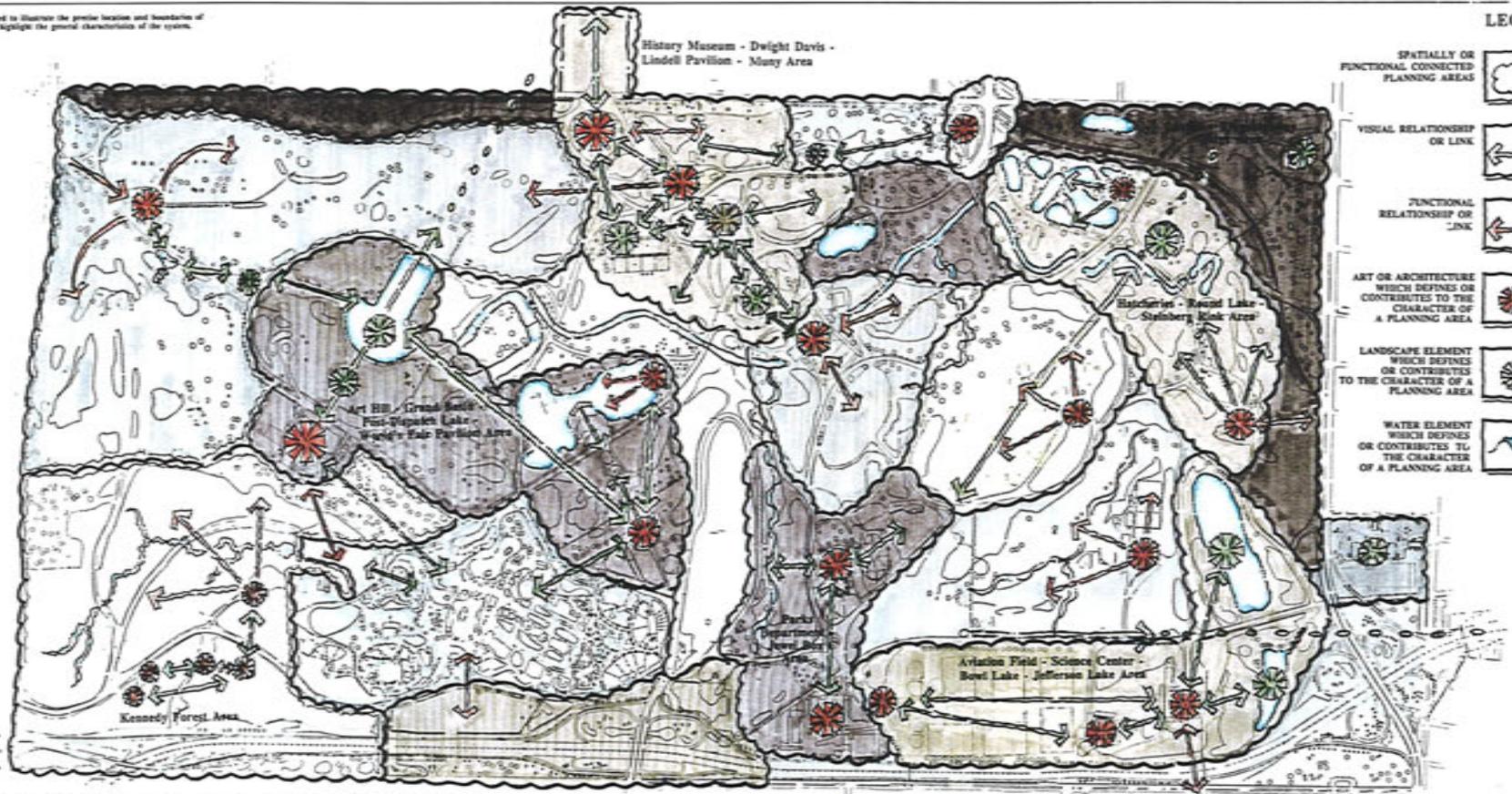


12 MARCH 1995

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**FOREST
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*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

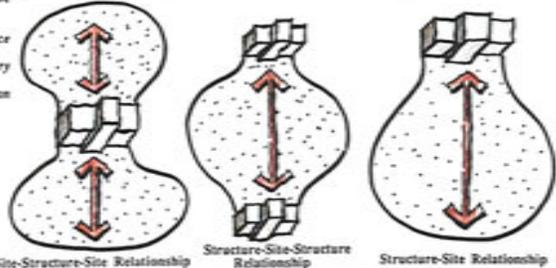


LEGEND

- SPATIALLY OR FUNCTIONALLY CONNECTED PLANNING AREAS
- VISUAL RELATIONSHIP OR LINK
- FUNCTIONAL RELATIONSHIP OR LINK
- ART OR ARCHITECTURE WHICH DEFINES OR CONTRIBUTES TO THE CHARACTER OF A PLANNING AREA
- LANDSCAPE ELEMENT WHICH DEFINES OR CONTRIBUTES TO THE CHARACTER OF A PLANNING AREA
- WATER ELEMENT WHICH DEFINES OR CONTRIBUTES TO THE CHARACTER OF A PLANNING AREA

The relationship between the park's art, architecture and landscapes can be classified as follows (see diagrams)

- Site-Structure-Site A central structure unites adjacent sites (i.e. Science Center-Bowl Lake-Archery Range relationship).
- Structure-Site-Structure A central site unites adjacent structures (i.e. History Museum-Lindell Pavilion relationship).
- Structure-Site A single structure and associated site function as an independent unit (Art Hill-Art Museum)



Site-Structure-Site Relationship Structure-Site-Structure Relationship Structure-Site Relationship

DESCRIPTION

- Sites containing art, architecture and landscapes should be linked together through a series of spatial and functional relationships. Clusters of individual sites often have spatial and/or functional relationships as well.
- Sites with spatial or functional connections should be treated as continuous, composite planning areas.
- Site design within planning areas should enhance their spatial and functional connections.

DESIGN PRINCIPLE
Emphasize Site Relationships



FOREST PARK
ST. LOUIS, MO

MASTER PLAN

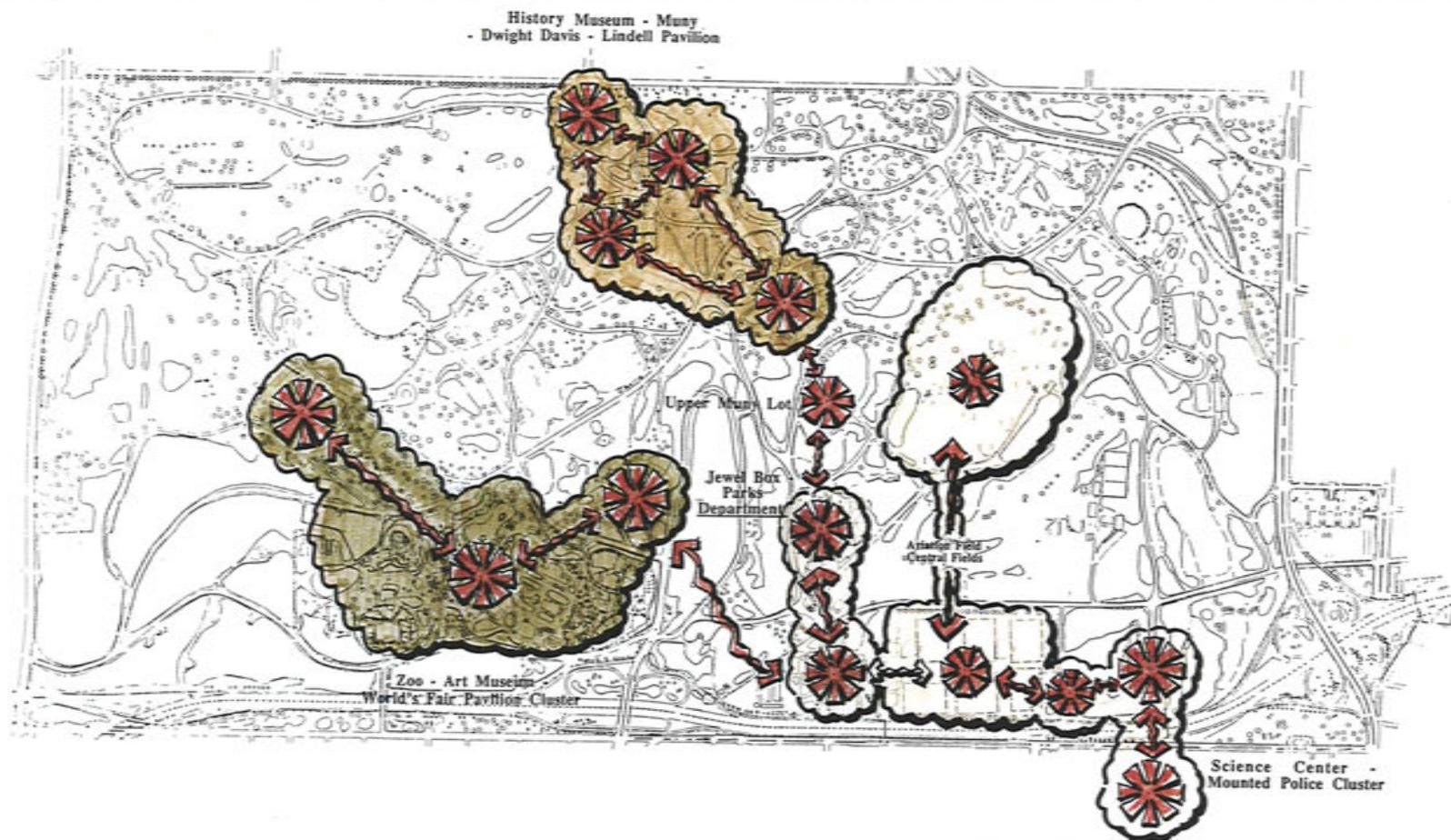
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12 MARCH 1965

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DESIGN PRINCIPLE
*Multi-Functional Zones with
 Shared Facilities*

DESCRIPTION

- Many park entities have functional relationships which require cooperation and coordination to best meet their functional requirements. If these requirements are addressed individually, rather than in groups, the park will suffer from piecemeal development.
- Many park facilities and infrastructure elements are located between park entities with similar needs and could be programmed to serve multiple purposes and users.
- The impact of meeting all the needs of each park entity can be reduced if all entities work together and share common facilities and infrastructure.



FOREST PARK MASTER PLAN

ST. LOUIS,

MO

SCALE 1" = 400'

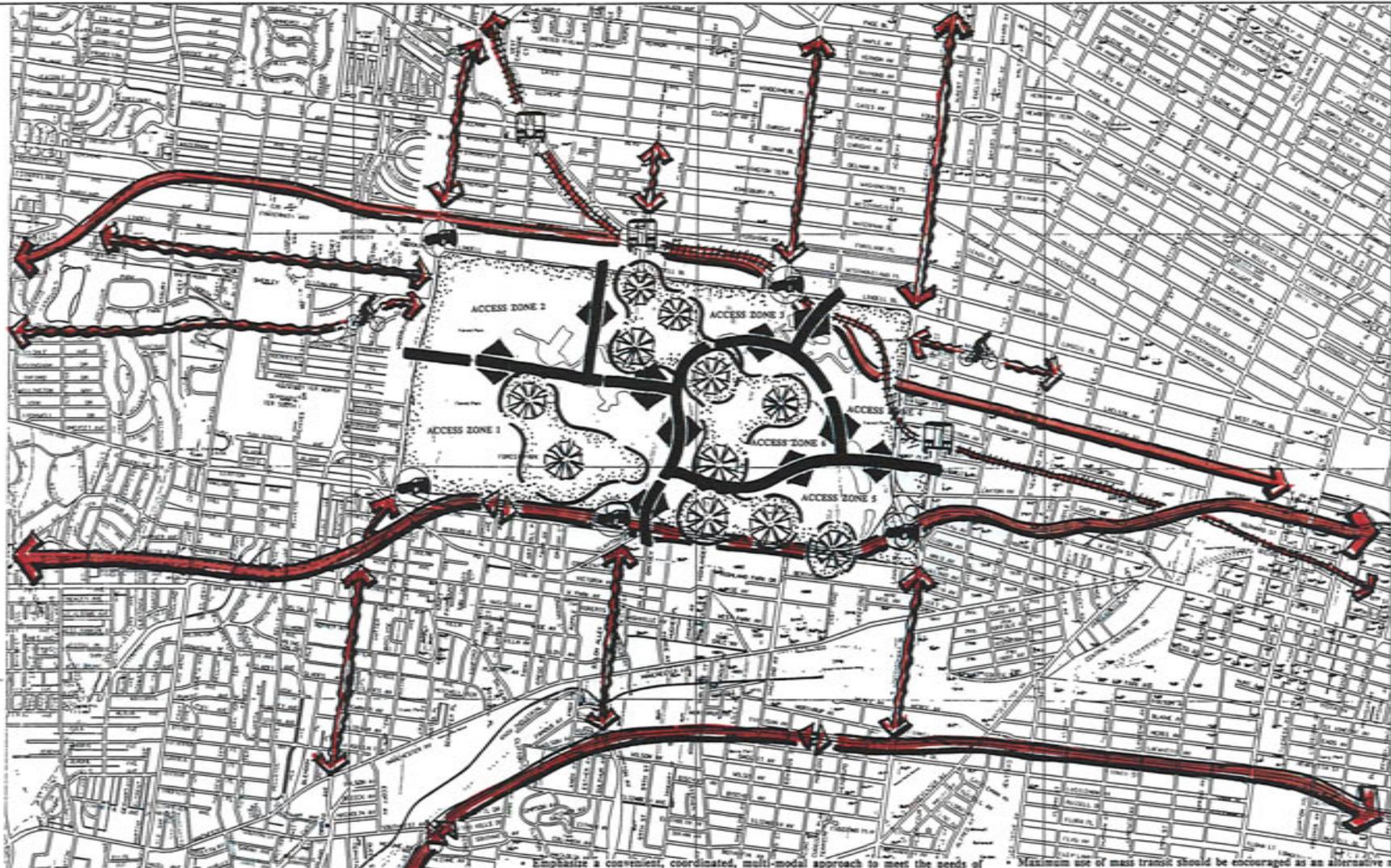


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This map is not intended to illustrate the specific location and boundaries of
 individual parcels and should not be used to determine the general character and boundaries of
 individual parcels.



DESIGN PRINCIPLE
*Multi-Modal, Distributed
 Access System*

DESCRIPTION

- Emphasize a convenient, coordinated, multi-modal approach to meet the needs of Forest Park patrons who wish to go to and between park destinations.
- Emphasize a balanced use of appropriate park entrances rather than the currently overburdened Hampton Avenue entrance.
- Some major destinations which are in close proximity to each other should be handled as "Access Zones" which share facilities and infrastructure. Access zones are more easily accommodated than are all destinations independently.
- Use of the park as a rush hour flow commuter system should be minimized to reduce congestion, improve air quality and maximize activity in the park by the park user.
- Maximum use of mass transit should be encouraged as an alternative means of travel to an within the park to reduce automobile dependence, traffic volumes and to improve air quality.
- Surface traffic flow, transit and parking sites should be integrated spatially and functionally as a system with park activities.
- Realistic speed limits in the park should be set, in consultation with enforcement officials and based on study data.
- Dialogue should be established with the Missouri State Highway and Transportation Department regarding the forthcoming alternatives analysis of I-64-69.



FOREST PARK MASTER PLAN

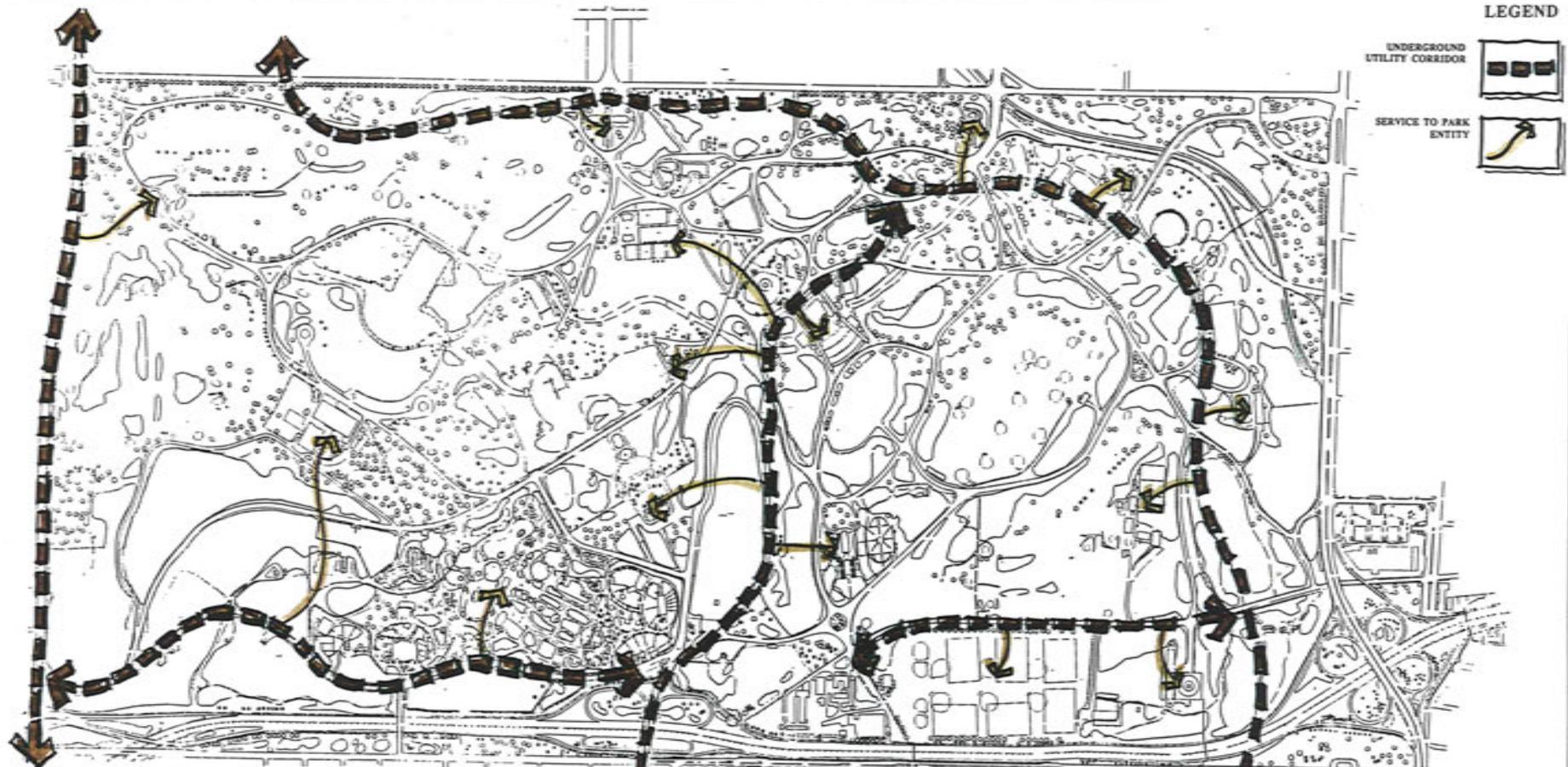
ST. LOUIS, MO

SCALE 1" = 1/4 MILE 11 MARCH 1995



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LEGEND

- UNDERGROUND UTILITY CORRIDOR 
- SERVICE TO PARK ENTRY 

*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

DESCRIPTION

- Establish utility corridors as practically as possible to maintain some order of location.
- Inventory and determine the exact location, condition and capacity of all existing infrastructure to determine long term needs.
- Transfer responsibility of park-maintained sewers to MSD.
- Eliminate combined sanitary sewer flow to existing water bodies.
- Coordinate planned infrastructure repairs and construction with proposed landscape and other park repairs to minimize disruption and redundant construction.
- Reconstruct roadways, parking lots and paths to current city design standards.
- Repair or replace bridges in poor condition.
- Provide appropriate lighting along roads, parking lots, interior walkways and bicycle paths.

DESIGN PRINCIPLE
*Coordinated Infrastructure
 Replacement and Underground
 Utility Corridors*



FOREST PARK MASTER PLAN
 ST. LOUIS, MO



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VI. CONTEXTUAL RELATIONSHIPS

A. Overview

B. Summary of Existing Conditions

C. Design Principle

D. Design Recommendations

LIST OF DRAWINGS AND DIAGRAMS

Regional Context

Metropolitan Context

Neighborhood Context

Regional Access and Circulation

Regional Access Implications

1995 Transit

Design Principle - Integrate and Connect Forest Park to the Region, City
and Adjacent Neighborhoods

Neighborhood Connections

Boulevard Connections

VI. CONTEXTUAL RELATIONSHIPS

A. Overview

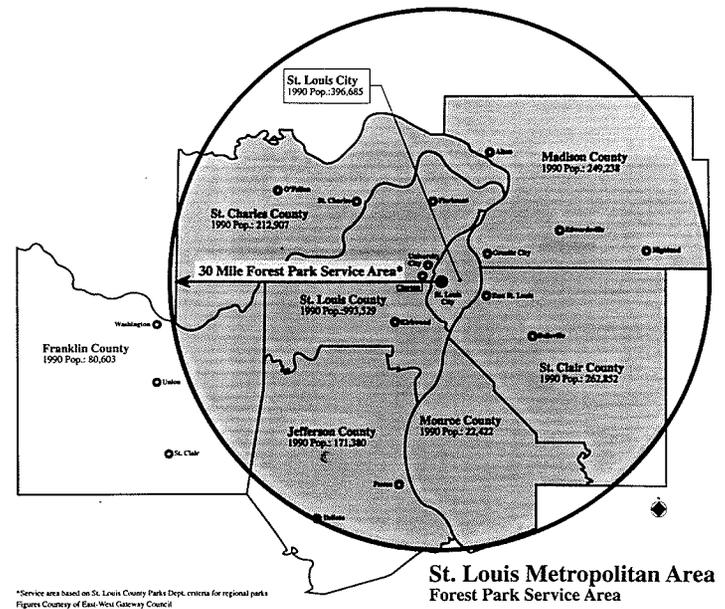
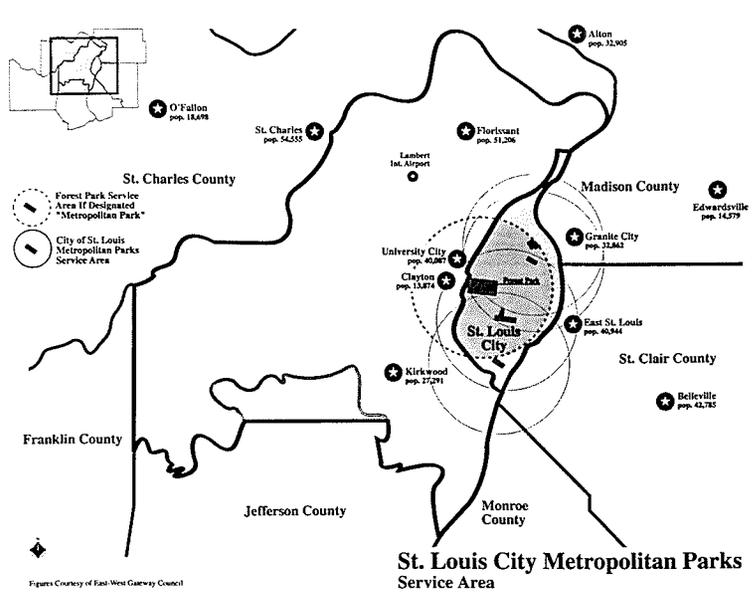
Forest Park is unique in the way it serves and is patronized by the neighborhoods and region that surround it. It is surrounded by over 70,000 residents in neighborhoods within one mile of the park, nearly 400,000 residents from the city and nearly 2.4 million residents from its surrounding seven county metropolitan area. It serves as a major tourist attraction for the area with over 10 million visitors per year.

Forest Park accommodates neighborhood, city and regional recreation, circulation systems, facilities, and utilities. It is also part of the local and regional natural systems, which include water, vegetation, wildlife, topography, and air quality. Forest Park has excellent accessibility via its transportation connections to the neighborhoods, city and region. The city's major arterial system borders the park on three sides, with Forest Park Parkway on the north, Highway 64/40 on the south, and Kingshighway on the east. Bi-State serves Forest Park with buses and MetroLink.

Forest Park is also a major asset for the economic redevelopment of the surrounding neighborhoods and business districts. It plays a significant cultural and educational role in the region, since it houses our major cultural institutions. As such, Forest Park relies on its local, city, and regional neighbors and they rely on it.

B. Summary of Existing Conditions

- Forest Park is a major regional tourist attraction with over 10 million visitors per year.
- As a metropolitan park, Forest Park serves a population of almost 2.4 million within a 30 mile radius and a surrounding seven county area. Population in most of the metropolitan area counties increased or remained constant between 1980 and 1990, except St. Clair County and the City of St. Louis, which experienced decreases of three percent and twelve percent respectively. The western county of St. Charles experienced the largest increase at 48 percent.
- As a city park, Forest Park represents approximately 50% of the park system. It serves the nearly 400,000 residents of the City of St. Louis who live within a five mile radius. Forest Park is located one block east of the western boundary of the City of St. Louis or within one block of the cities of Clayton and University City, which have populations of 13,874 and 40,087 respectively. This location adds another dimension when determining the park's users, their needs, and the role the park should play in accommodating them.
- Recreation density (population per acre of recreation space) of 113 individuals per acre for the City of St. Louis is over three times the metropolitan area average.



• As a metropolitan park, Forest Park serves most of the City of St. Louis and its nearly 400,000 residents within a five mile radius. It also serves Clayton, University City and other near-west St. Louis County cities.

• As a regional park, Forest Park serves a population of almost 2.4 million within a 30 mile radius.

REGIONAL CONTEXT MAP

Note: All statistics from 1990 Census

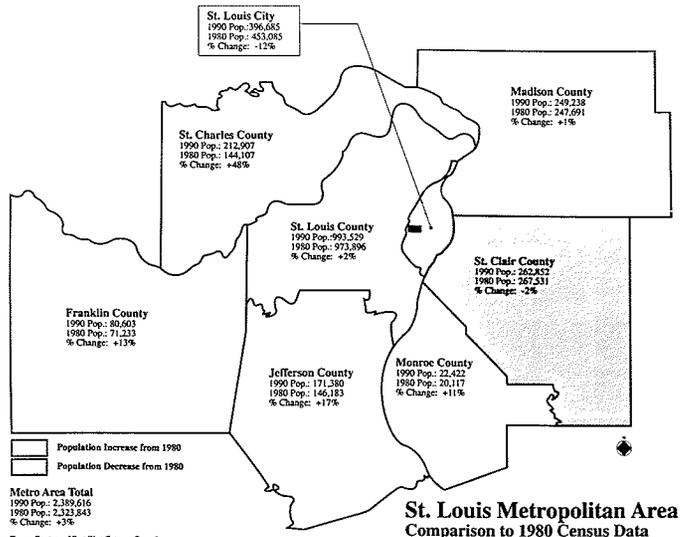
FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1" = 400'

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**St. Louis Metropolitan Area
Comparison to 1980 Census Data**



**St. Louis Metropolitan Area
1990 Census and Recreational Data**

- Population in most of the metropolitan area counties increased or remained constant between 1980 and 1990 except St. Clair County and the City of St. Louis which experienced decreases of 3% and 12% respectively. The west county of St. Charles experienced the largest increase at 48%.

- Urban density (population per acre) in the City of St. Louis is over 10 times the average for the metropolitan area at 10 individuals per acre. Other than the City of St. Louis, only St. Louis County is above one individual per acre with over 3 individuals per acre.
- Recreation density (population per acre of recreation space) of 113 individuals per acre for the City of St. Louis is over 3 times the metropolitan area average.

METROPOLITAN CONTEXT MAP

Note: All statistics from 1990 Census

*Analysis by Design Team 1995



FOREST PARK MASTER PLAN

ST. LOUIS,

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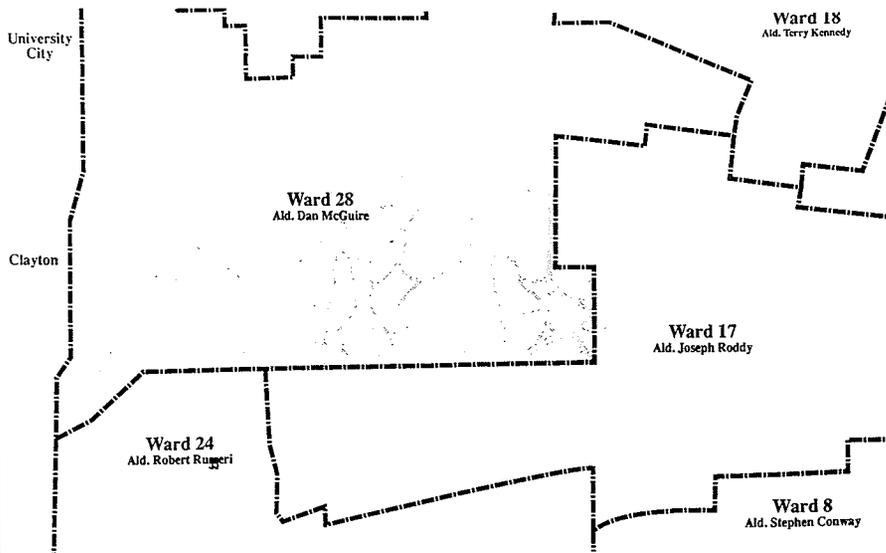
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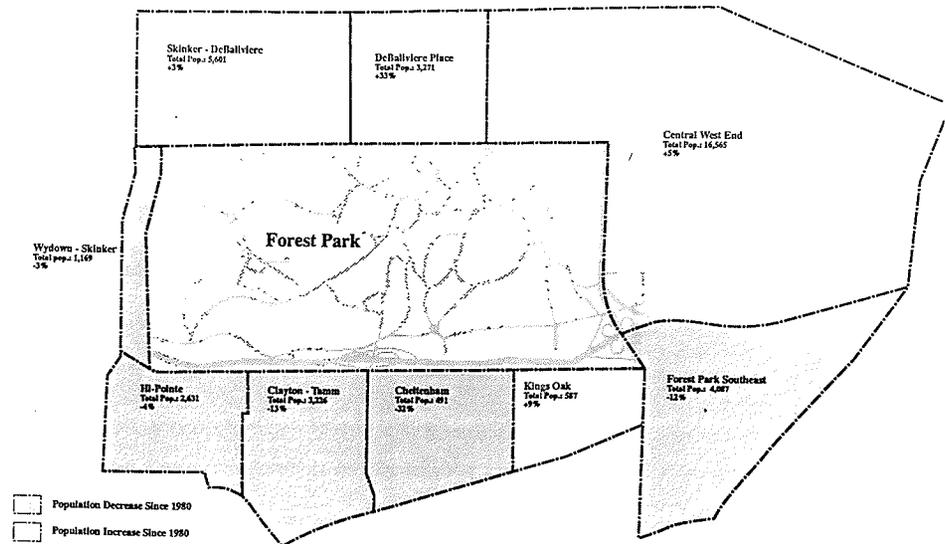


- Forest Park is well served by a regional and city-wide access system. It is well connected to the City by its surrounding major boulevards — Kingshighway, Skinker, Oakland, Union, Hampton and Lindell. These boulevards also provide links to the surrounding neighborhoods, which are enhanced by the local street system. The regional access system is Highway 64/40 and Forest Park Parkway. Bi-State provides comprehensive public access with a combination of bus and ShuttleBug system and the MetroLink.
- Forest Park is surrounded by over 70,000 residents in neighborhoods within one mile of the park. The population in five of the neighborhoods to the south and west of Forest Park decreased between 1980 and 1990, while three neighborhoods to the north, east and south increased over the past decade.
- As a political entity, Forest Park is contained entirely within the 28th Aldermanic Ward. It is also adjacent to the 17th and 24th Wards, and within one mile of three other three wards: 8th, 18th, and 26th.
- Forest Park acts as a major stabilizing element for the surrounding neighborhoods and businesses. For instance, the Washington University and BJC Medical complex, the City's largest employer, is located adjacent the park. The surrounding neighborhoods of the Central West End, Forest Park South East, Skinker DeBaliviere, and Dog Town have seen slow but continual redevelopment. Thus, the park is a major factor in the economic revitalization of the adjacent areas.
- Forest Park functions as a major civic space and community gathering place.
- Forest Park is the home to the region's cultural institutions. There is an emerging educational and institutional corridor on the southern edge of the park.
- There is currently a mutually beneficial, balanced relationship between Forest Park and its surroundings at each scale.
- From a natural perspective, Forest Park functions as a regional, city and neighborhood oasis.
- There are areas along the park's perimeter which, by location and the amenities contained, could cater to adjacent neighborhoods and provide activities not otherwise available there. An awareness of these relationships should be observed in all planning decisions inside and outside of the park. This will improve the existing relationship and avoid potential problems that result when the balanced relationships are disturbed.



Adjacent Wards

- Forest Park is contained entirely within the 28th Aldermanic Ward but lies adjacent to two others, the 17th and 24th and within one mile of another three, the 8th, 18th and 26th Wards.



1980-1990 Population Changes

- Forest Park is unique in the way it serves and is served by the neighborhoods and region that surrounds it. It is surrounded by over 70,000 residents in neighborhoods within one mile of the park, nearly 400,000 residents of the City of St. Louis and nearly 2.4 million residents of the seven county metropolitan area.
- Forest Park relies on its local and regional neighbors and they rely on it. Forest Park accommodates neighborhood and regional recreation, circulation systems and utilities. It is also part of the local and regional natural systems which include water, vegetation, wildlife, topography, air quality, etc.
- Forest Park is located one block east of the City of St. Louis' western boundary or within one block of the cities of Clayton and University City with populations of 13,874 and 40,087 respectively. This location adds another dimension when determining the park's users, their needs and the role the park should play in accommodating them.
- The population in five of the neighborhoods south and west of Forest Park decreased between 1980 and 1990 while three neighborhoods north and east and one south increased in that period.

NEIGHBORHOOD CONTEXT MAP

Note: All statistics from 1990 Census

*Analysis by Design Team 1995



FOREST PARK MASTER PLAN

ST. LOUIS,

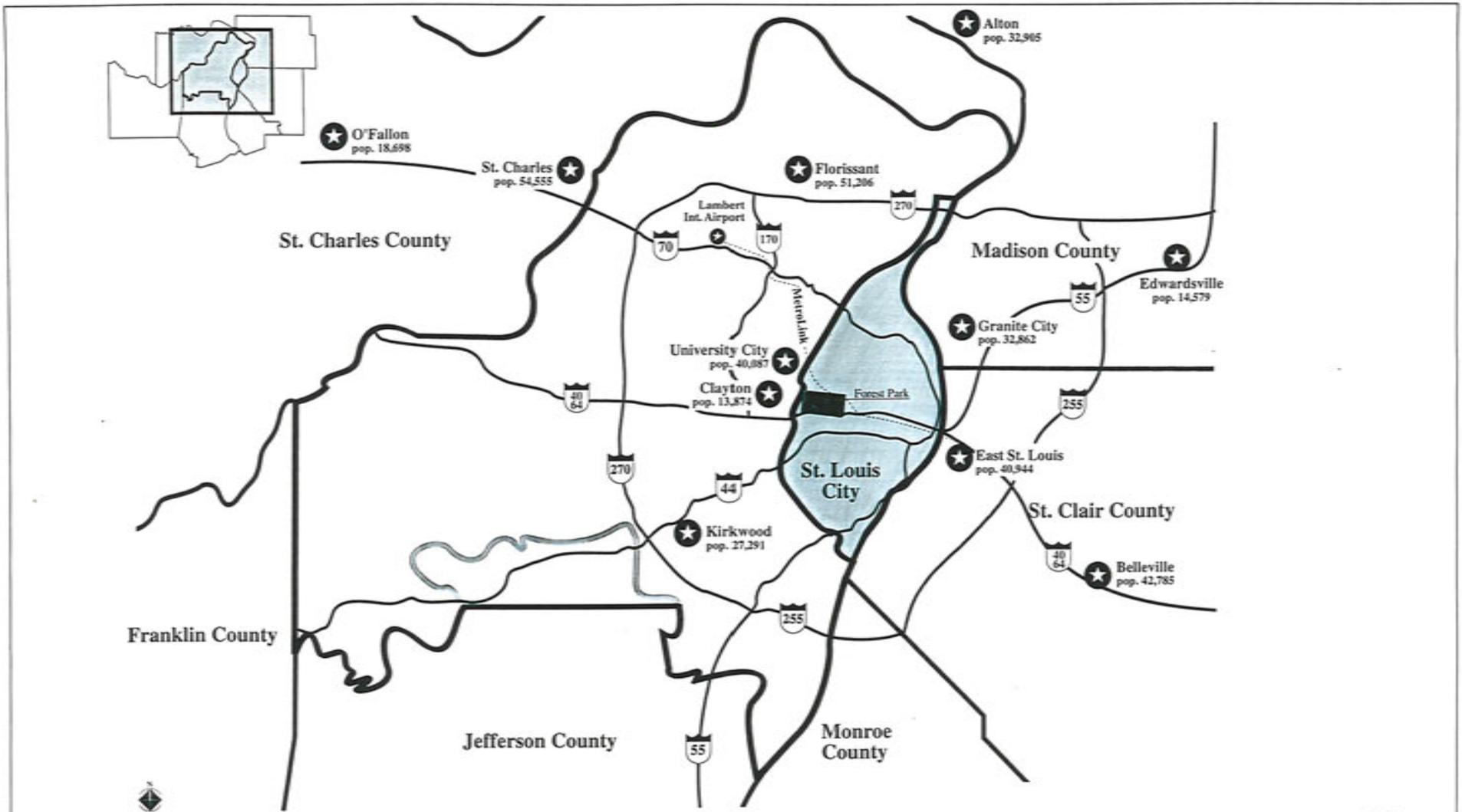
MO

SCALE: 1" = 400'



CITY OF SAINT LOUIS
DEPARTMENT OF PARKS,
RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

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PARK
MASTER
PLAN



Figures Courtesy of East-West Gateway Council

• Forest Park is served by the region's interstate highway and transit system. Within its boundaries it accommodates Interstate Highway 40/64 and Metrolink, the region's light rail system. This allows easy access to most of the 2.4 million residents of the metropolitan area but also places a physical burden on the park.

*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.

REGIONAL ACCESS AND CIRCULATION MAP



FOREST PARK MASTER PLAN

ST. LOUIS,

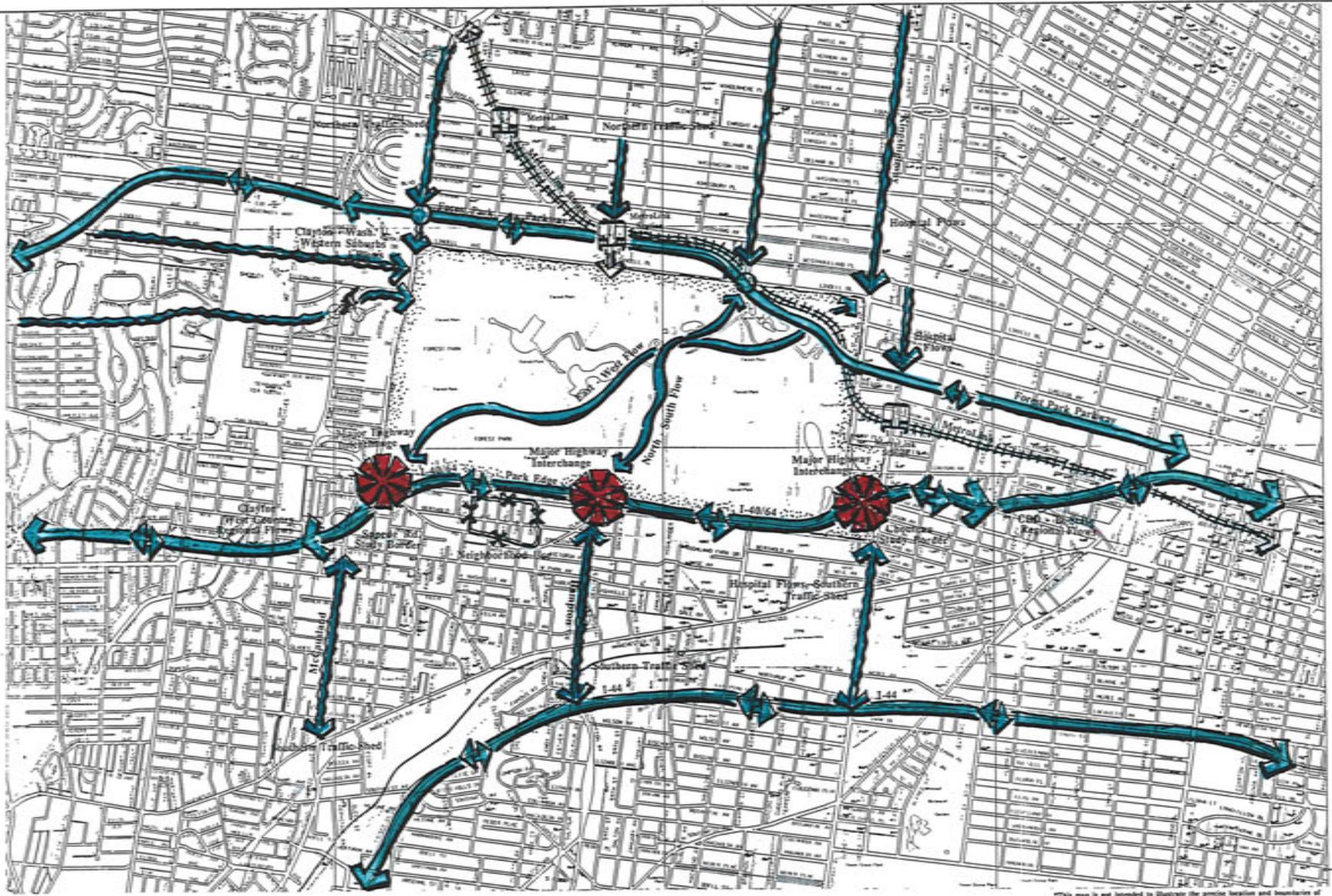
MO



27 FEBRUARY 1995

CITY OF SAINT LOUIS
DEPARTMENT OF PARKS,
RECREATION AND FORESTRY
ST. LOUIS DEVELOPMENT CORPORATION
URBAN DESIGN

FOREST
P A R K
M A S T E R
P L A N



*This map is not intended to illustrate the precise location and boundaries of features but rather to highlight the general characteristics of the system.
 *Analysis by Design Team 1995

REGIONAL ACCESS IMPLICATIONS MAP



FOREST PARK MASTER PLAN

ST. LOUIS, MO

SCALE: 1" = 1/4" MILE

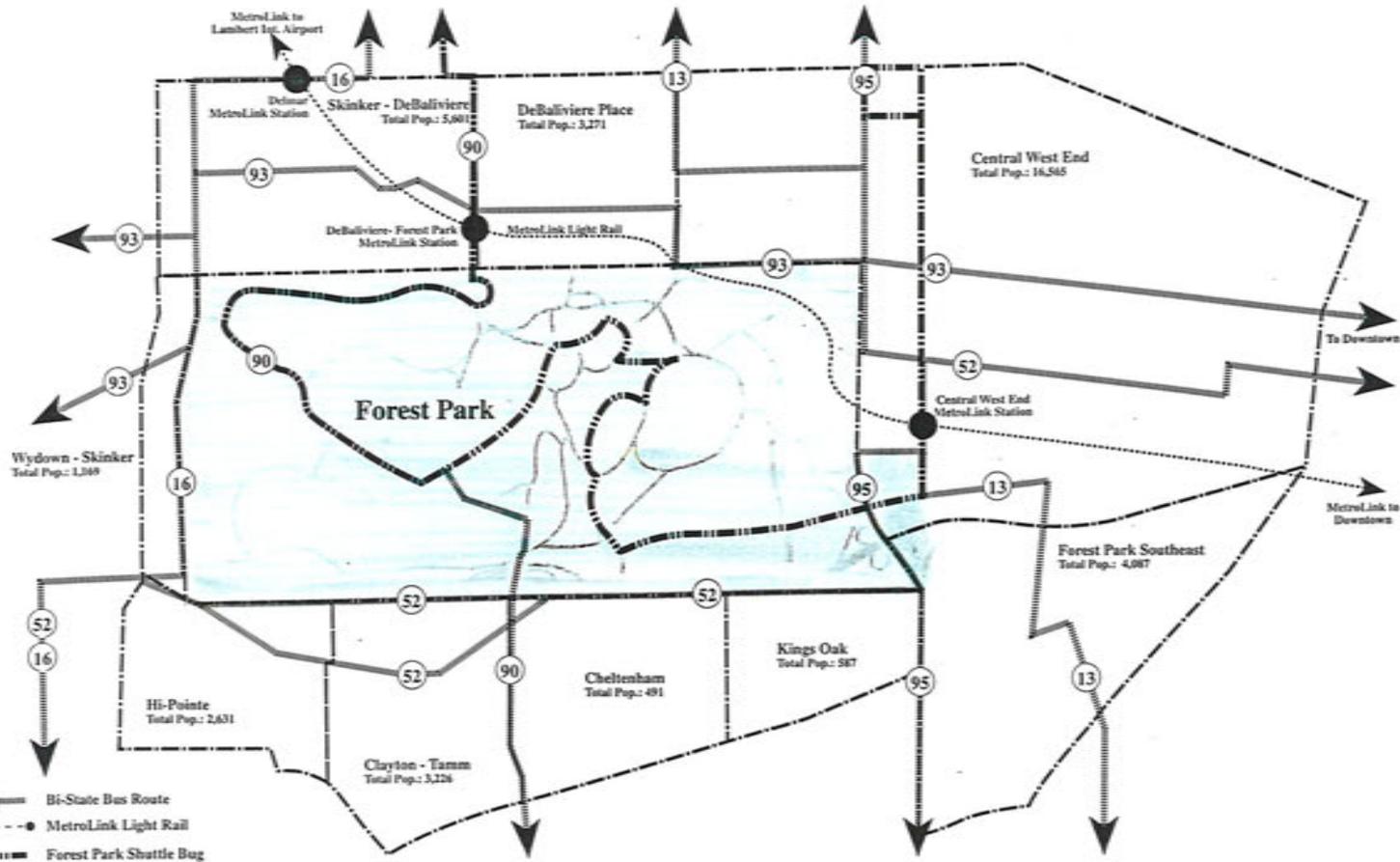


11 MARCH 1995

CITY OF SAINT LOUIS
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*This map is not intended to illustrate the precise location and boundaries of
 various bus routes to highlight the general characteristics of the system.
 *Analysis by Design Team 1995



1995 TRANSIT MAP

GENERAL OBSERVATIONS

- Forest Park is served by Bi-State bus and light rail service which links the park to many of the City's neighborhoods as well as cities throughout the St. Louis metropolitan area.
- The park is served by the ShuttleBus which provides internal transit between most of the park's major attractions and provides links to the immediately adjacent neighborhoods and land uses northwest of the park.



FOREST PARK MASTER PLAN

ST. LOUIS, MO



21 MARCH 1995

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C. Design Principle

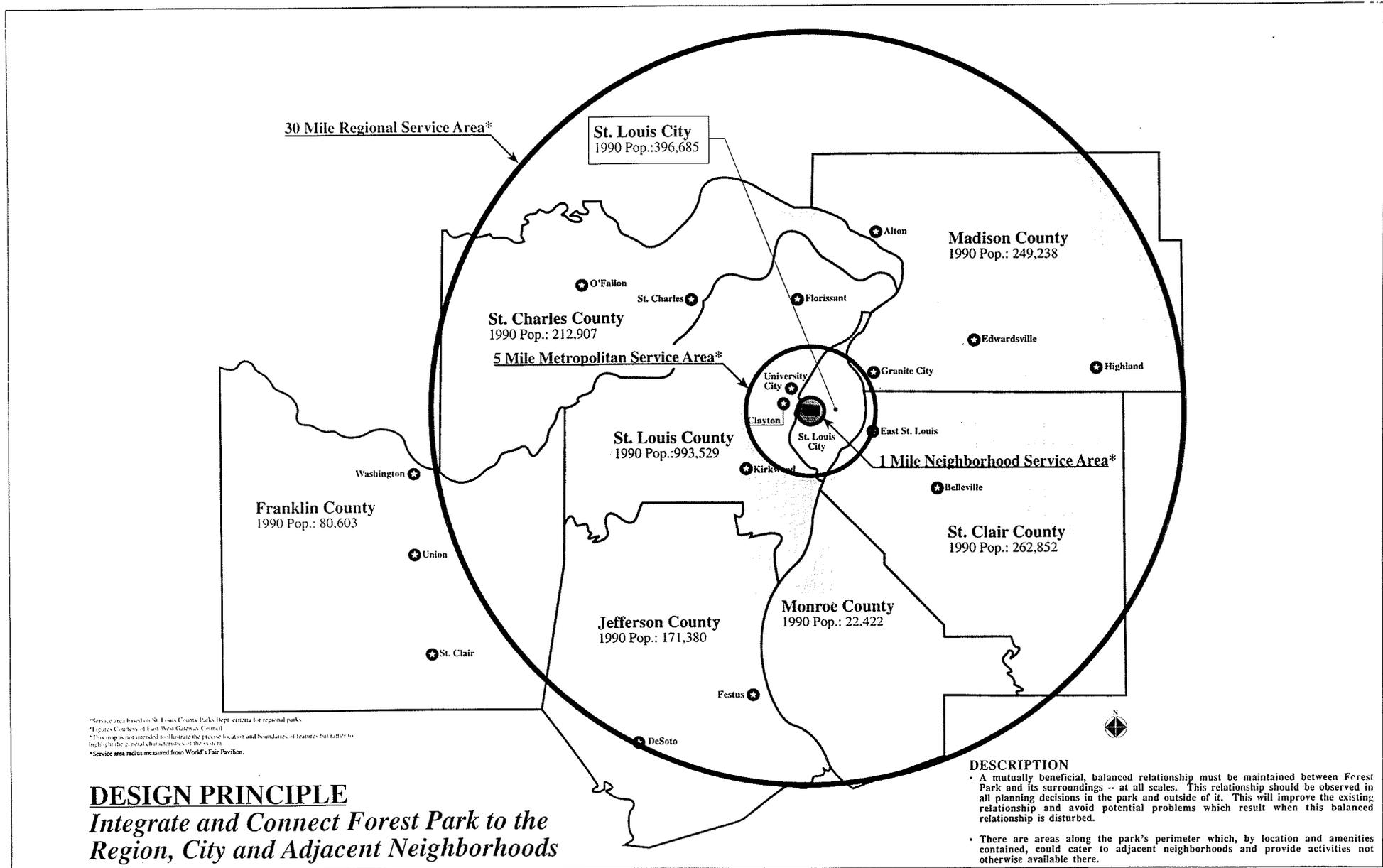
- Integrate and connect Forest Park to the region, city and neighborhoods

D. Design Recommendations

Forest Park must continue to play a major role in the continued redevelopment of the City of St. Louis and environs. Programmatically, the major park facilities and cultural institutions must continue the tradition of outreach into the community and act as a catalyst for bringing together people, education, and public debate on current issues.

As the improvements occur in Forest Park it will continue to stabilize the adjacent redevelopment. This new development surrounding the park should take into account its impact on the park. In addition, it will attract more visitors so the addition of another MetroLink line to the south of the park is important to the long-term viability of the park.

Finally, the park must extend its influence beyond its boundaries and become part of a **“park system”** for the City of St. Louis. By extending the landscape treatment of the streets internal to the park into the city, the historic boulevard system will be revitalized. Similarly, by linking to neighborhood open spaces and parks, Forest Park will not only anchor and support the adjacent neighborhoods, but will be an important component of the overall city park system.

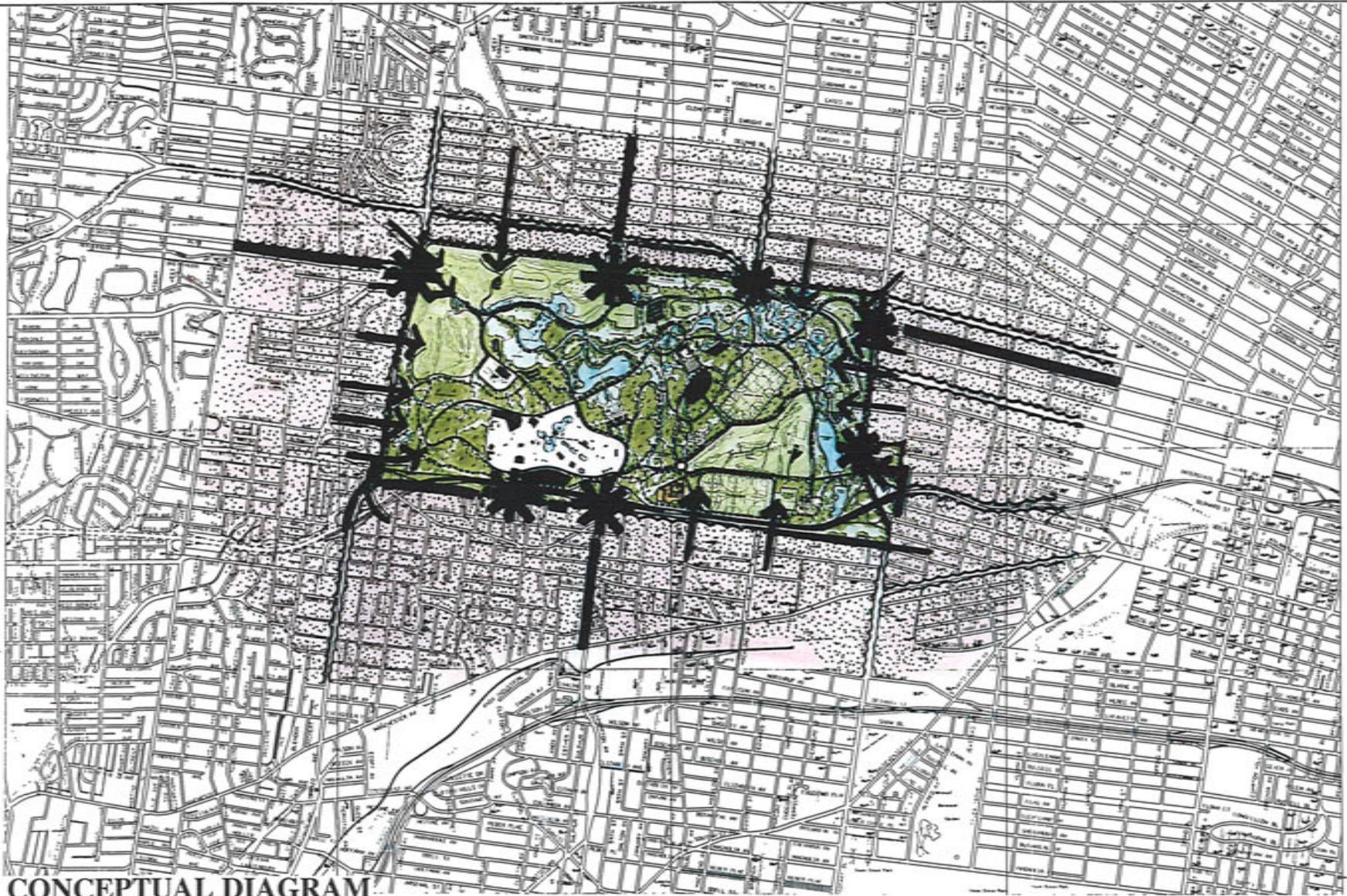


*Service area based on St. Louis County Parks Dept. criteria for regional parks.
 *Figures Courtesy of East West Gateway Council.
 *This map is not intended to illustrate the precise location and boundaries of counties but rather to illustrate the general relationship of the region.
 *Service area radius measured from World's Fair Pavilion.

DESIGN PRINCIPLE
Integrate and Connect Forest Park to the Region, City and Adjacent Neighborhoods

DESCRIPTION

- A mutually beneficial, balanced relationship must be maintained between Forest Park and its surroundings -- at all scales. This relationship should be observed in all planning decisions in the park and outside of it. This will improve the existing relationship and avoid potential problems which result when this balanced relationship is disturbed.
- There are areas along the park's perimeter which, by location and amenities contained, could cater to adjacent neighborhoods and provide activities not otherwise available there.



CONCEPTUAL DIAGRAM
Neighborhood Connections



FOREST PARK MASTER PLAN
 ST. LOUIS, MO

SCALE: 1" = 1/4 MILE



29 AUGUST 1995

CITY OF SAINT LOUIS
 DEPARTMENT OF PARKS,
 RECREATION AND FORESTRY
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FOREST PARK MASTER PLAN

ST. LOUIS,

MO

SCALE 1" = 1/4 MILE



CITY OF SAINT LOUIS
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VII.LAND USE

A. Overview

B. Summary of Existing Conditions

C. Design Principle

D. Design Recommendations

E. 1983 No-Net-Loss-of-Open-Space Calculations

F. Master Plan No-Net-Loss-of-Open-Space Calculations

LIST OF DRAWINGS AND DIAGRAMS

Design Principle - Multi-Functional Zones with Shared Facilities
Forest Park Area Calculations - Existing Built and Open Areas
Forest Park Area Calculations - Existing Built Areas (1983)
Forest Park Area Calculations - Existing Roads and Parking (1983)
Forest Park Area Calculations - Existing Buildings and Structures (1983)
Forest Park Area Calculations - Existing Paths and Sidewalks (1983)
Forest Park Area Calculations - Existing Service Yards (1983)
Forest Park Area Calculations - Existing Paved Recreational (1983)
Forest Park Area Calculations - Existing Open Areas (1983)
Forest Park Area Calculations - Existing Active Green (1983)
Forest Park Area Calculations - Existing Water (1983)
Forest Park Area Calculations - Existing Swales and Tributaries (1983)
Forest Park Area Calculations - Existing Outboundary (1983)
Forest Park Area Calculations - Proposed Built and Open Areas
Forest Park Area Calculations - Proposed Built Areas
Forest Park Area Calculations - Proposed Roads and Parking
Forest Park Area Calculations - Proposed Buildings and Structures
Forest Park Area Calculations - Proposed Paths and Sidewalks
Forest Park Area Calculations - Proposed Service Yards
Forest Park Area Calculations - Proposed Open Areas
Forest Park Area Calculations - Proposed Water

VII. LAND USE

A. Overview

Forest Park has a great diversity of land uses, ranging from active and passive recreational facilities to cultural institutions and areas of nature, such as Kennedy Woods. Of the 1,293 acres of park land, approximately 411 acres or 32% of Forest Park is classified as active space; 579 acres or 45% as passive space; and 303 acres or 23% is dedicated to cultural institutions and other park facilities.

Two of the major issues facing the park from a land-use perspective are 1) the major conflicts between adjacent land-uses, and 2) the demand for expanded exhibit space and visitor amenities by the cultural institutions and park facilities on a limited supply of park land.

The objective is to retain Forest Park as a place for people to enjoy a diversity of activities — passive and active recreation, leisure, culture, and nature in an urban park setting. Moreover, the existing balance of uses is deemed to be appropriate, providing the conflicts between the land uses can be resolved. Hence, in some cases the actual uses will be moved or modified in order to improve the actual conditions and to provide an amenable interface between uses. Furthermore, the adopted guiding principle is that the quality and quantity of open space in Forest Park should be preserved, based on a general concept of no-net-loss-of-open-space.

This is reinforced by the policy that the expansion, modification, replacement, relocation, and/or adaptive re-use of existing ZMD institutions (includes the St. Louis Zoo, St. Louis Art Museum, St. Louis Science Center, and History Museum), park facilities, and service and support facilities should be permitted only if such proposals meet all designated criteria in the Goals and Policies, and after completing a carefully prescribed process. Furthermore, where appropriate any proposed expansion of existing facilities is desirable in areas adjacent to, rather than within, Forest Park. Similarly, new buildings in Forest Park, for new uses unrelated to existing ZMD institutions, park, athletic, or service and support facilities are prohibited.

As such, from a land use perspective this Master Plan is responsive to a wide range of uses and users, and seeks to preserve the character of the Park's lakes, landscapes, institutions and park facilities, active and passive recreational areas, and historic structures.

B. Summary of Existing Conditions

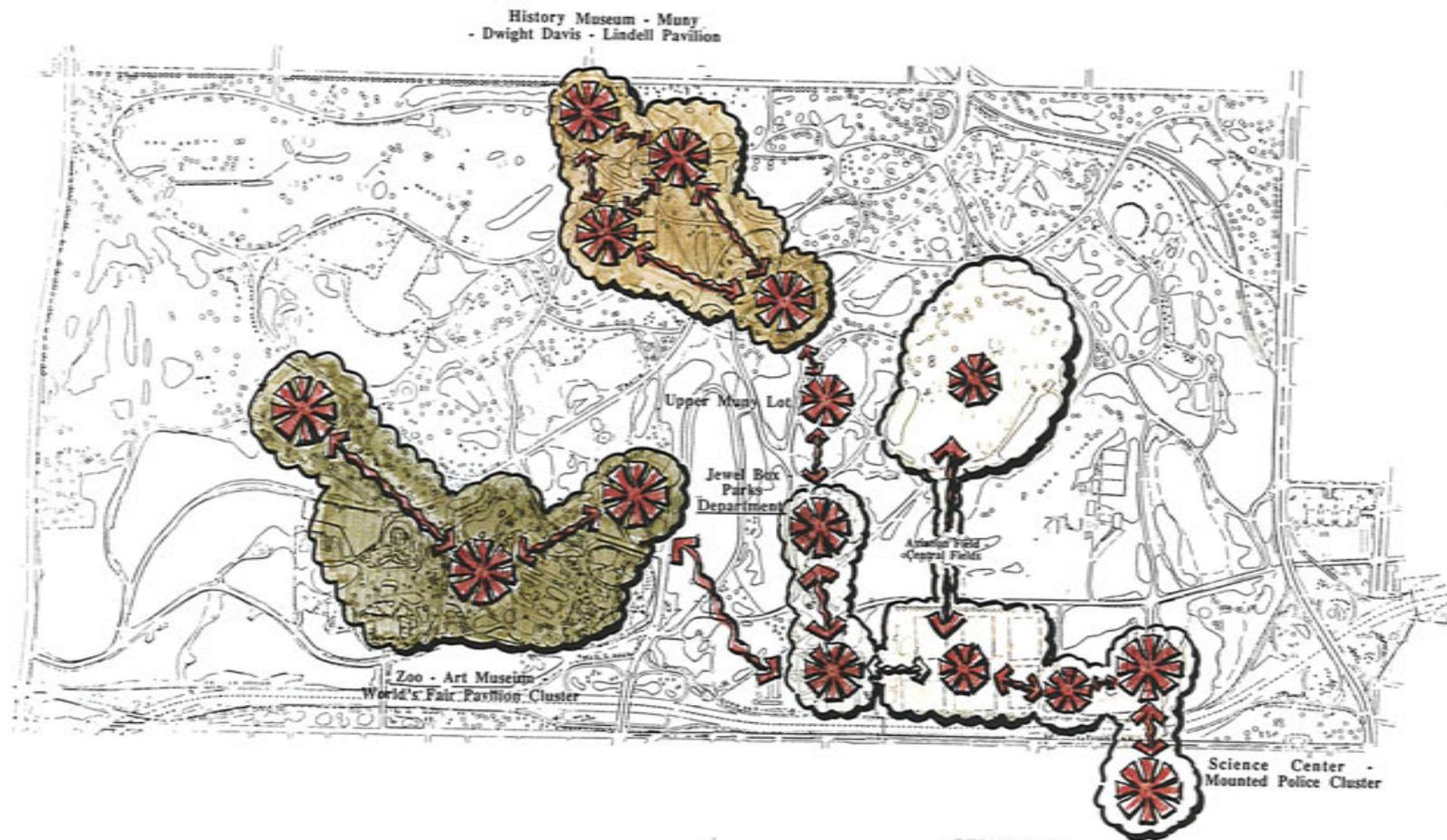
The major land-use issues facing Forest Park include the following:

- There are conflicts between adjacent land uses in the park.
- One of the major land use conflicts is between golf on Art Hill and around Grand Basin and the utilization of this area as a passive recreation area and a location for public boating.
- There is a major conflict between pedestrian path users and vehicles in the park.
- There are conflicting demands for a limited supply of park land.

- The major cultural institutions would like to expand their programs and facilities.
- The park has over-utilized and under-utilized areas.
- There is not an even distribution of activities and people throughout the park, and resulting in congested geographical zones.
- There is little coordination of all park facilities program schedules, which often results in event congestion.
- The special events are distributed appropriately through the park relative to the major park facilities and are generally well coordinated.
- The park experience includes as a series of unconnected and isolated land uses.
- There are user groups that are underserved by the park's facilities and programming
- The park's support and service facilities are not well integrated into the overall use and function of the park.
- A monitoring system for existing and future land uses needs to be developed.

C. Design Principle

- Create multi-functional zones with shared facilities.



DESIGN PRINCIPLE
*Multi-Functional Zones with
 Shared Facilities*

DESCRIPTION

- Many park entities have functional relationships which require cooperation and coordination to best meet their functional requirements. If these requirements are addressed individually, rather than in groups, the park will suffer from piecemeal development.
- Many park facilities and infrastructure elements are located between park entities with similar needs and could be programmed to serve multiple purposes and users.
- The impact of meeting all the needs of each park entity can be reduced if all entities work together and share common facilities and infrastructure.



FOREST PARK MASTER PLAN

ST. LOUIS,

MO

SCALE 1"=40'



11 MARCH 1965

CITY OF SAINT LOUIS
 DEPARTMENT OF PARKS,
 RECREATION AND FORESTRY
 ST. LOUIS DEVELOPMENT CORPORATION
 URBAN DESIGN

FOREST
 PARK
 MASTER
 PLAN

D. Design Recommendations

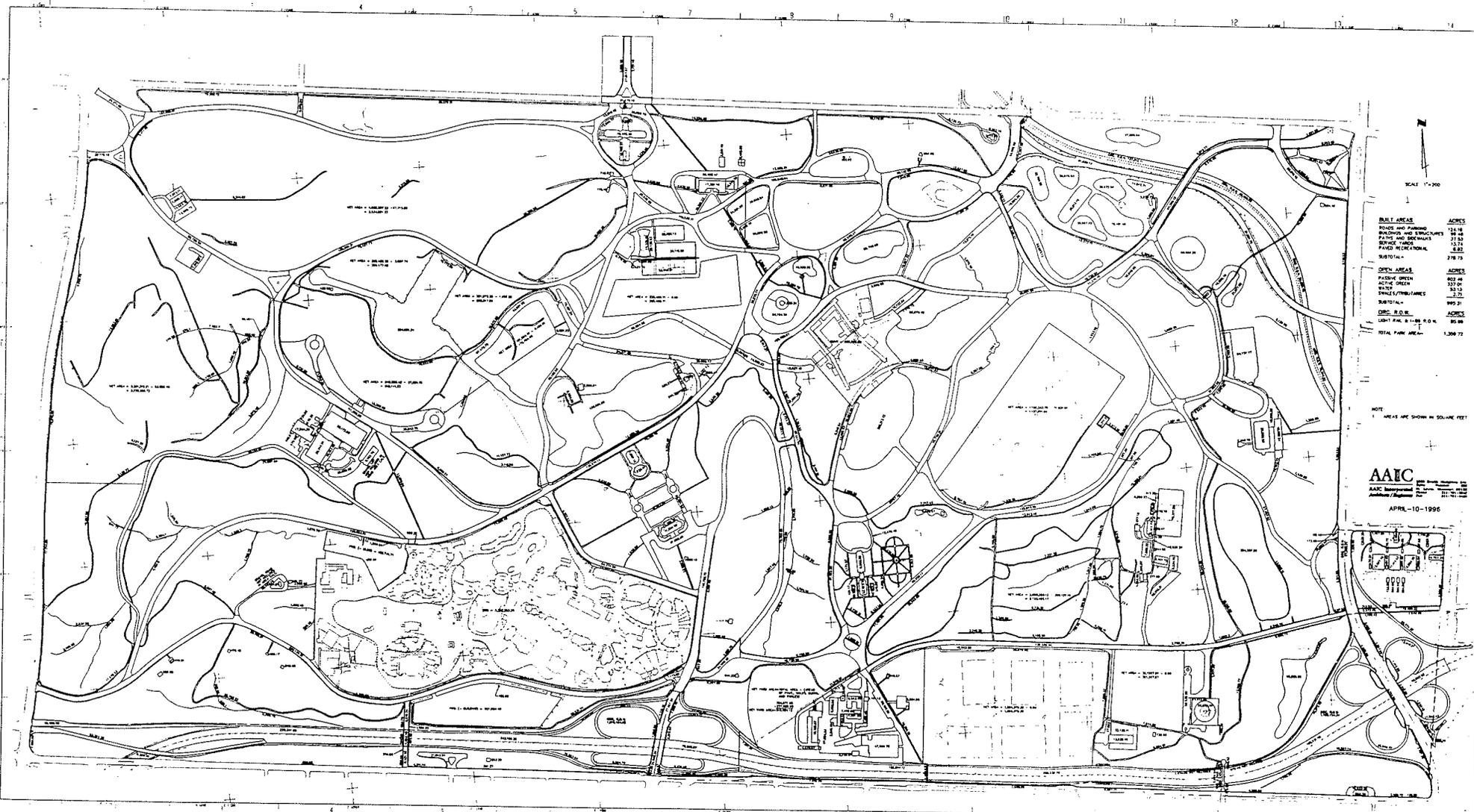
Forest Park is a place for people to enjoy recreation, leisure, athletics, culture, and nature in an urban park setting. As such, this plan is responsive to a wide range of uses and users, while seeking to preserve the character of the Park's lakes, landscapes, institutions, and park facilities, active and passive recreational areas, and historic structures. Land use in Forest Park is based upon by the following:

- Overall, although the balance between Forest Park's existing uses is maintained, the geographical area of some activities are modified to reduce or eliminate the conflicts.
- Forest Park's existing cultural institutions (Art Museum, Zoo, Science Center, Missouri History Museum, and the MUNY) remain in the park and are allowed modest expansions per the proposals incorporated into this Master Plan (see appendix), providing the appropriate approval process is adhered to. These plans, together with the road, pathway, and parking system changes in the Master Plan, results in the maintenance of the quality and quantity of open space in Forest Park based on a general concept of no-net-loss-of-open-space.
- Multiple use areas have been designated for Forest Park facilities that are in the same geographical areas and/or operational effect one another.
- New buildings in Forest Park, for new uses unrelated to existing ZMD institutions, park, athletic, or service and support facilities, are prohibited. This does not prohibit expansion, modification, replacement, relocation, and/or adaptive re-use of existing buildings.
- The principle of no-net-loss-of-open--space is fulfilled per the goals and policies.

E. 1983 No-net-Loss-of-Open-Space Calculation

Forest Park 1983 Area Calculations: Existing Built and Open Space Areas

<u>Built Areas</u>	<u>Acres</u>
Roads and Parking	124.18
Buildings and Structures	96.48
Paths and Sidewalks	37.53
Service Yards	13.74
Paved Recreational	<u>6.82</u>
Sub-Total	278.75
<u>Open Areas</u>	<u>Acres</u>
Passive Green	602.46
Active Green	337.01
Water	53.13
Swales/Tributaries	<u>2.71</u>
Sub-Total	995.31
<u>Circ. R.O.W.</u>	<u>Acres</u>
Light Rail & I-64 R.O.W.	85.66
TOTAL	1,359.72



SCALE 1"=200'

BUILT AREAS	ACRES
ROADS AND PARKING	124.18
BUILDINGS AND STRUCTURES	86.18
PAVES AND DRIVEWAYS	37.83
SERVICE YARDS	13.74
PAVED RECREATIONAL	6.82
SUBTOTAL	278.75
OPEN AREAS	ACRES
PASSIVE GREEN	602.48
ACTIVE GREEN	337.09
WATER	52.12
TRAILS/TERRACES	2.72
SUBTOTAL	1094.41
DRP. R.O.W.	ACRES
LOCAL R.A.L. & I.R.R. R.O.W.	85.89
TOTAL PARK AREA	1,358.72

NOTE:
1. AREAS ARE SHOWN IN SQUARE FEET

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1000 ...
APRIL - 10 - 1996

FOREST PARK AREA CALCULATIONS - EXISTING BUILT AND OPEN AREAS (1983)



FOREST PARK AREA CALCULATIONS - EXISTING BUILT AREAS (1983)

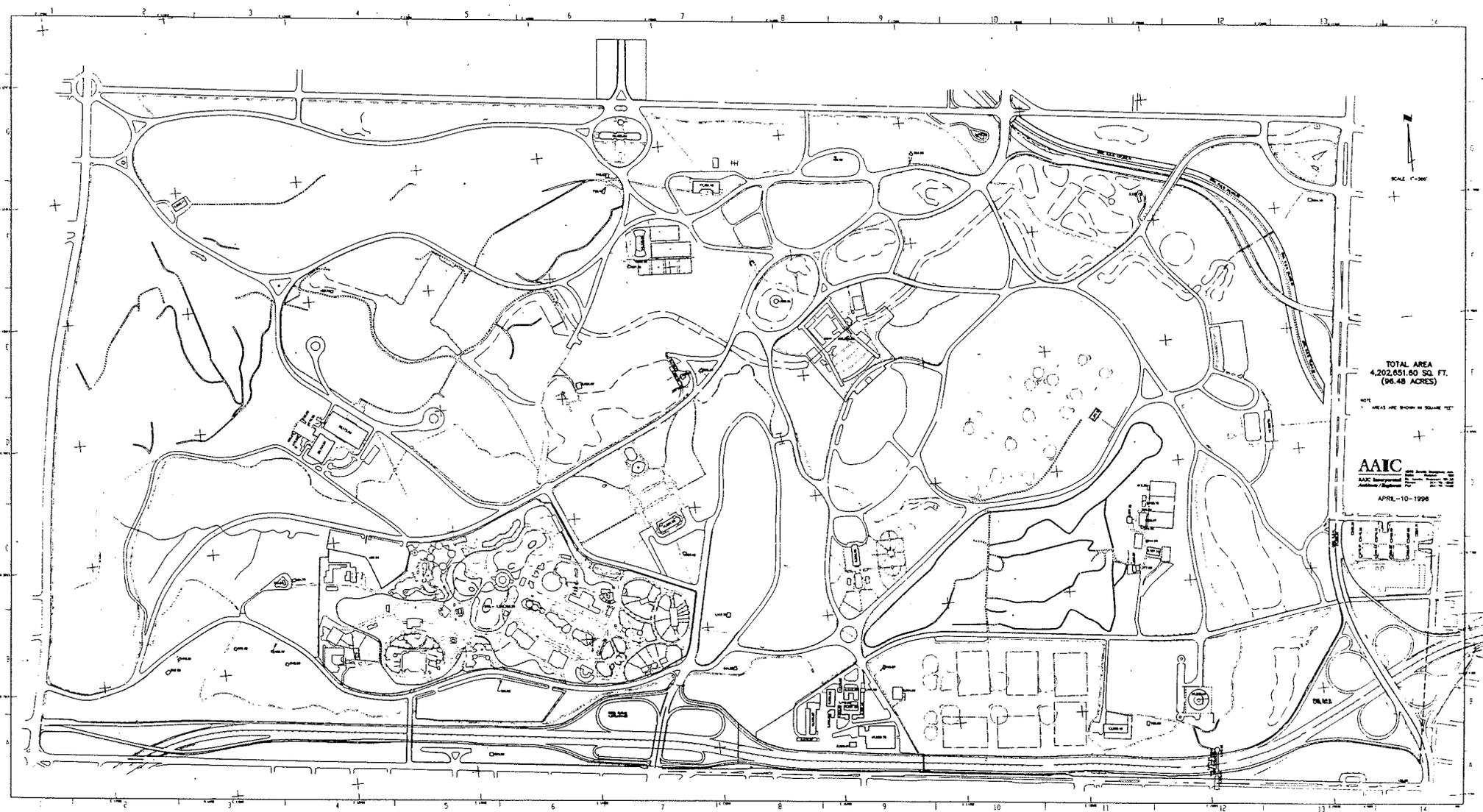


TOTAL AREA
5,408,456.75 SQ. FT.
(124.18 ACRES)

NOTE
1. AREAS ARE SHOWN IN SQUARE FEET
2. PARKING AREAS WITHIN 1/4" ARE 2/4" NOT HOLLOW

AAIC
ARCHITECTURAL ASSOCIATES, INC.
1000 N. GARDEN ST.
ANN ARBOR, MI 48106
APRIL-10-1988

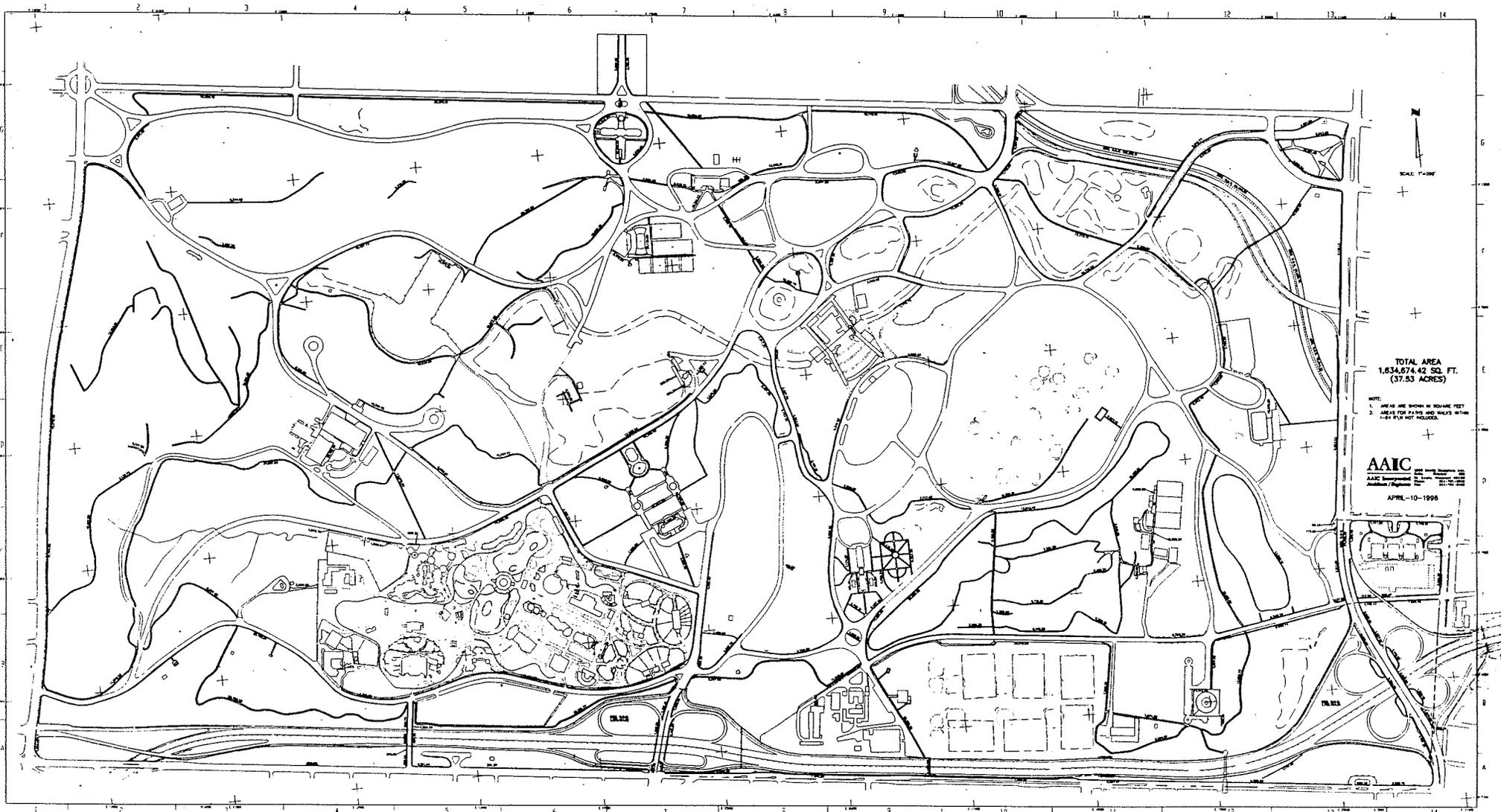
FOREST PARK AREA CALCULATIONS - EXISTING ROADS AND PARKING (1983)



TOTAL AREA
4,202,851.80 SQ. FT.
(96.48 ACRES)

AAIC
AAIC
APRIL-10-1996

FOREST PARK AREA CALCULATIONS - EXISTING BUILDINGS AND STRUCTURES (1983)



TOTAL AREA
1,834,874.42 SQ. FT.
(37.53 ACRES)

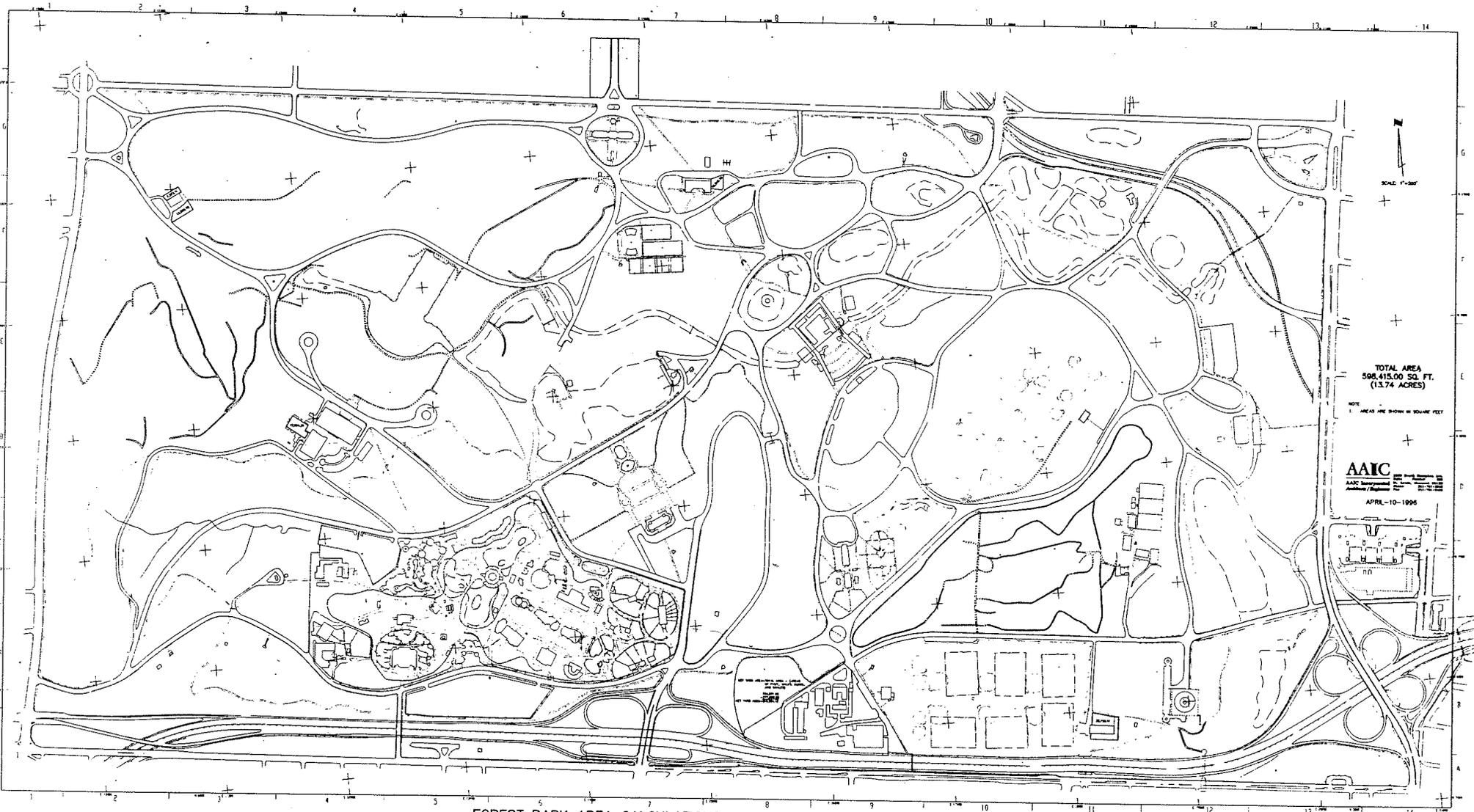
- NOTE:
1. AREAS ARE SHOWN IN SOLID FEET
 2. AREAS FOR PAVS AND WALKS WITH CURB & V NOT INCLUDED.

AAIC

AAIC
ARCHITECTS AND ENGINEERS

APRIL - 10 - 1998

FOREST PARK AREA CALCULATIONS - EXISTING PATHS AND SIDEWALKS (1983)

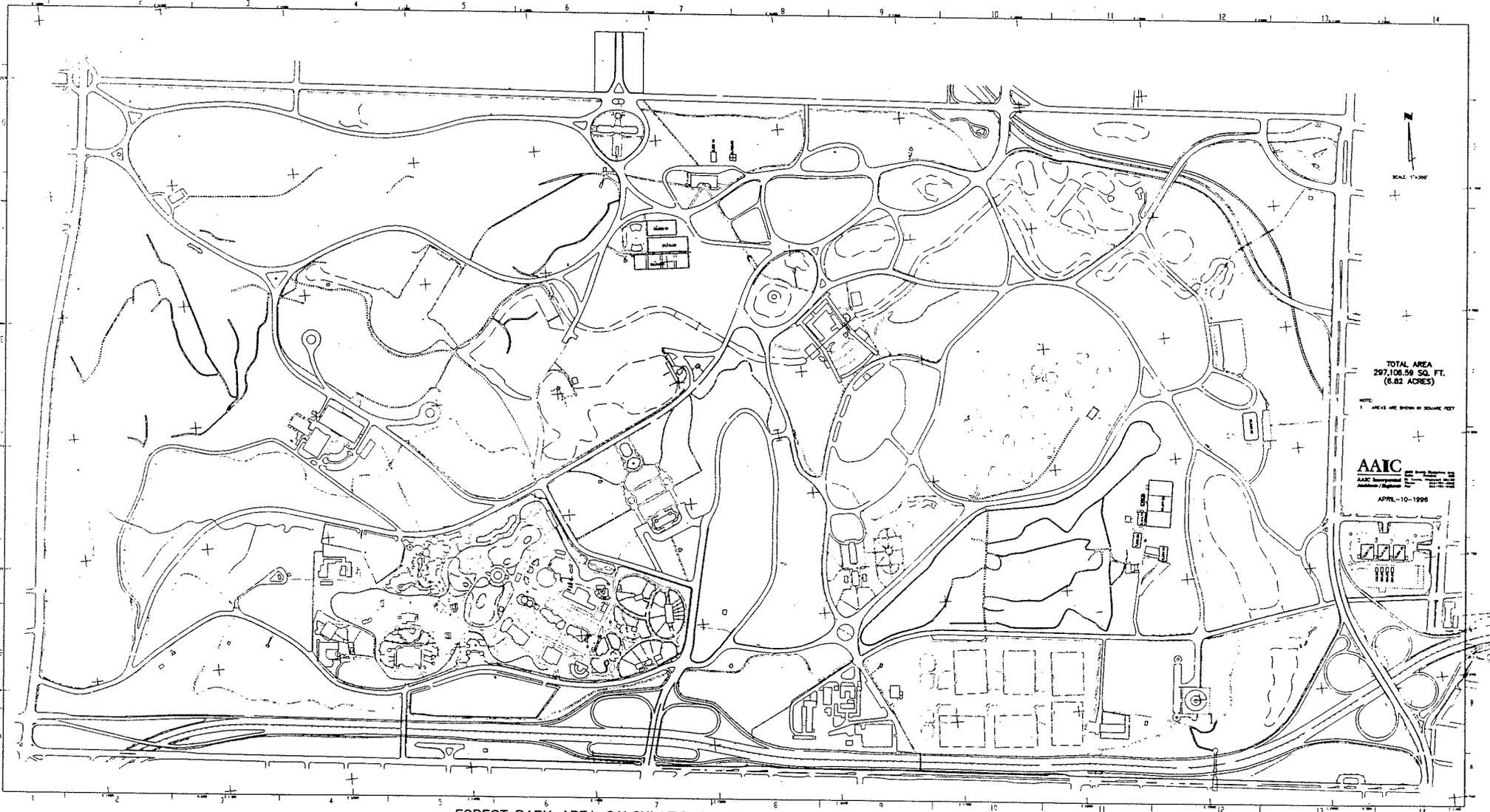


TOTAL AREA
598,415.00 SQ. FT.
(13.74 ACRES)

NOTE
AREAS ARE SHOWN IN SQUARE FEET

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APRIL-10-1996

FOREST PARK AREA CALCULATIONS - EXISTING SERVICE YARDS (1983)

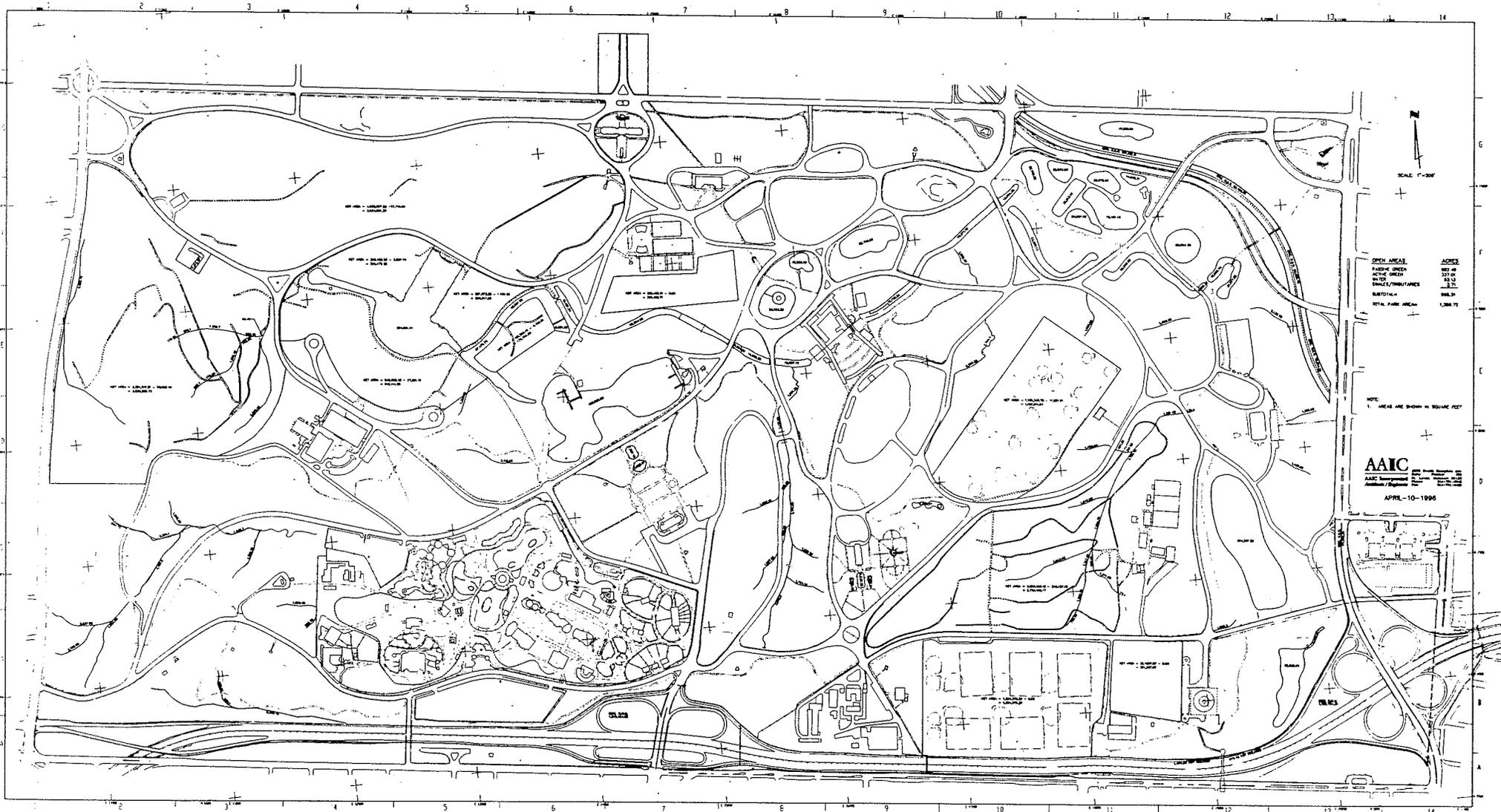


TOTAL AREA
297,108.59 SQ. FT.
(6.82 ACRES)

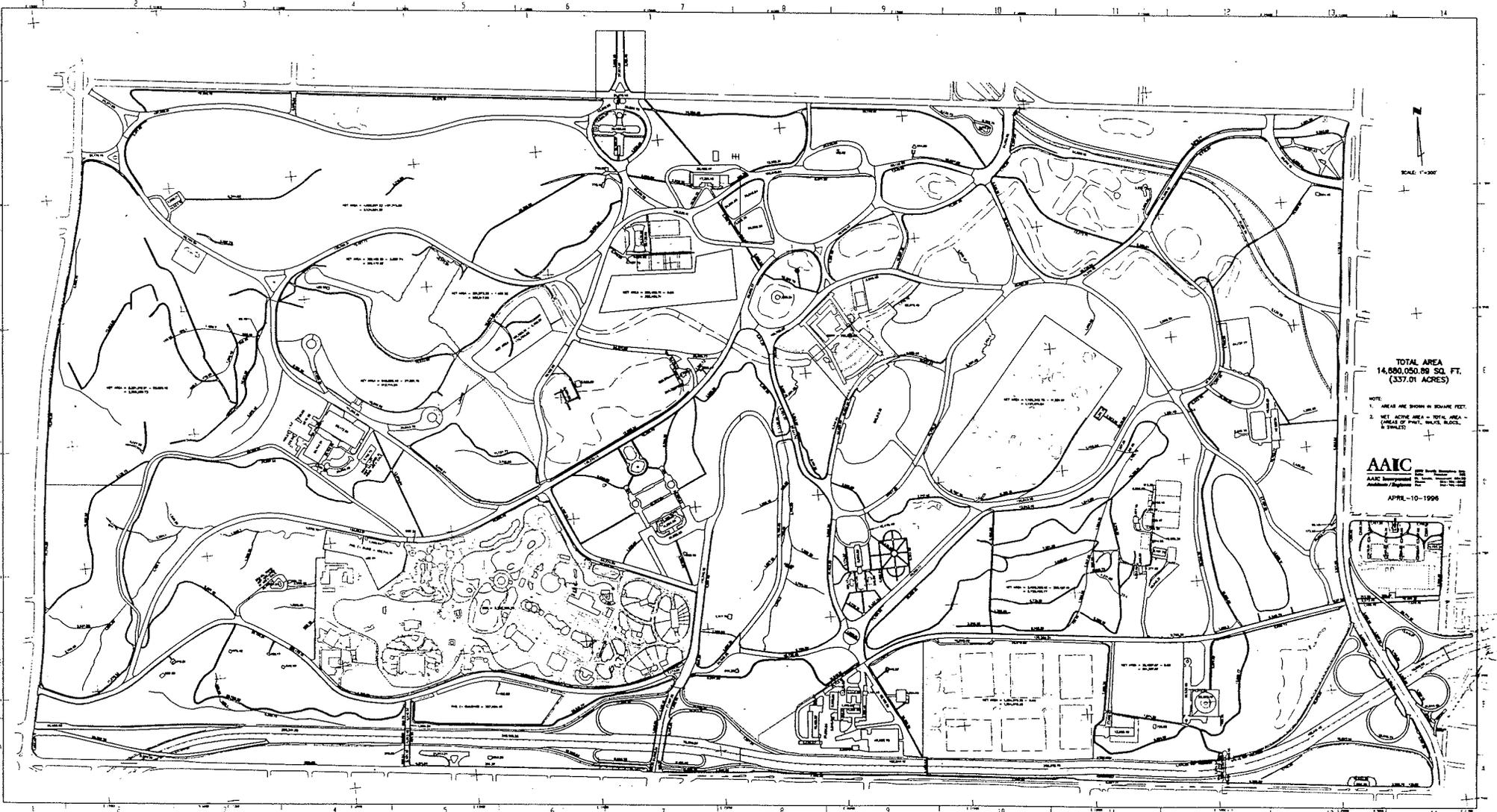
NOTE:
" " AREAS ARE SHOWN IN SOLID LINE

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ARCHITECTURAL ASSOCIATION OF ILLINOIS
100 N. LAUREL ST. CHICAGO, ILL. 60610
APRIL - 10 - 1986

FOREST PARK AREA CALCULATIONS - EXISTING PAVED RECREATIONAL (1983)



FOREST PARK AREA CALCULATIONS - EXISTING OPEN AREAS (1983)

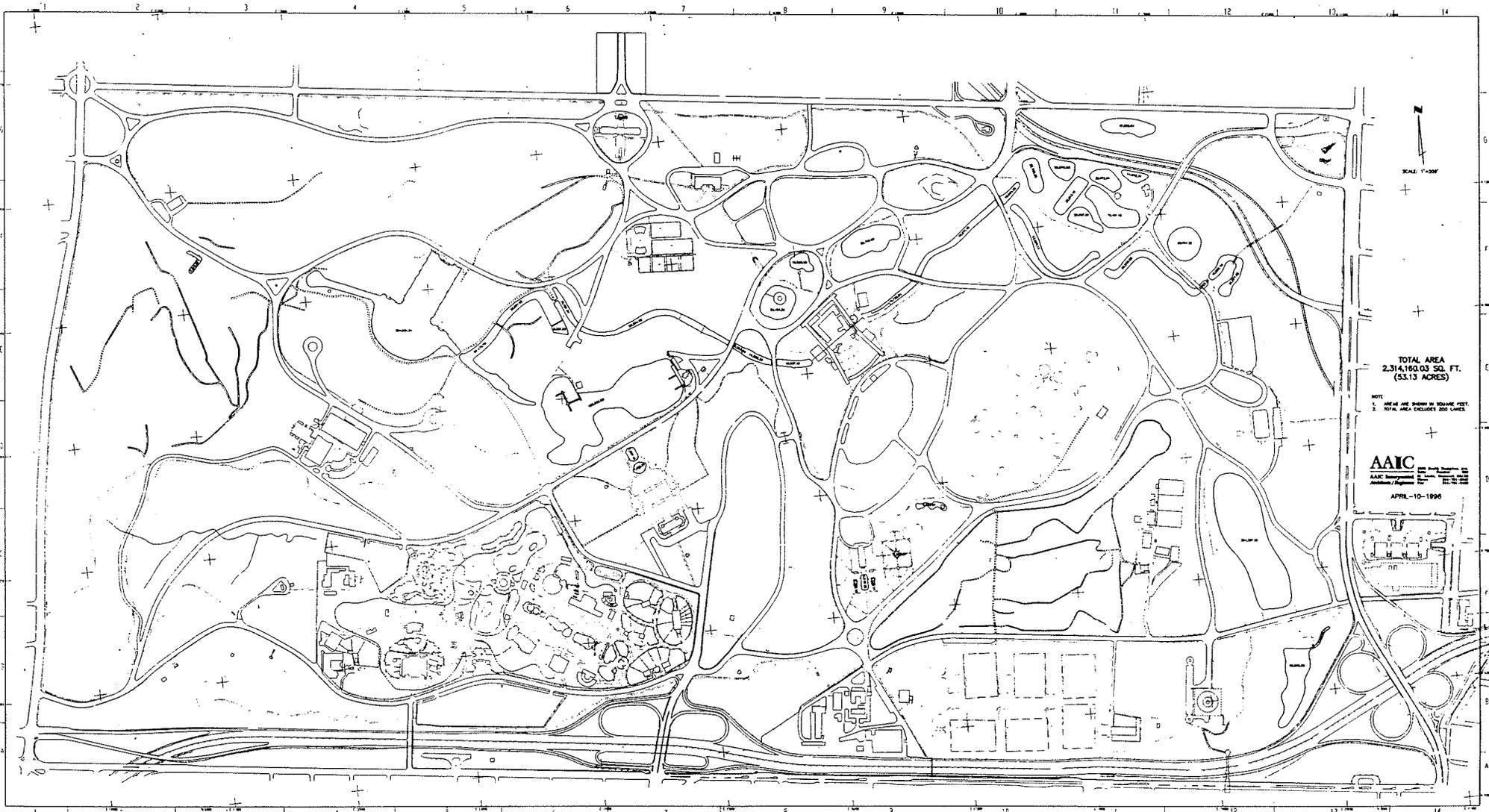


TOTAL AREA
14,880,050.88 SQ. FT.
(337.01 ACRES)

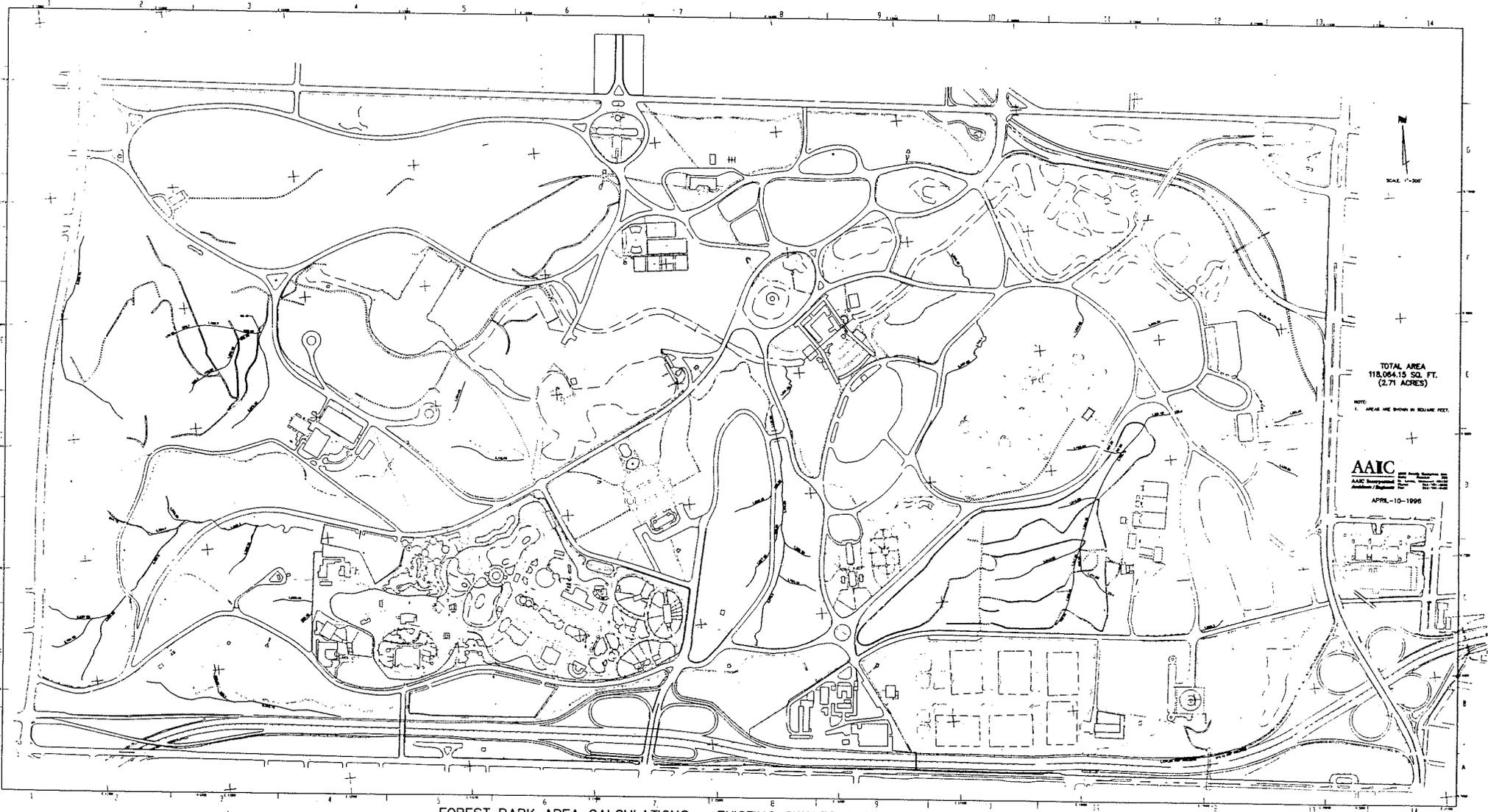
- NOTE:
1. AREAS ARE SHOWN IN SQUARE FEET.
 2. NET ACTIVE AREA = TOTAL AREA - FOOTPRINTS, WALKWAYS, DRIVEWAYS, & SWALES.

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ARCHITECTS/ENGINEERS
APRIL - 10 - 1996

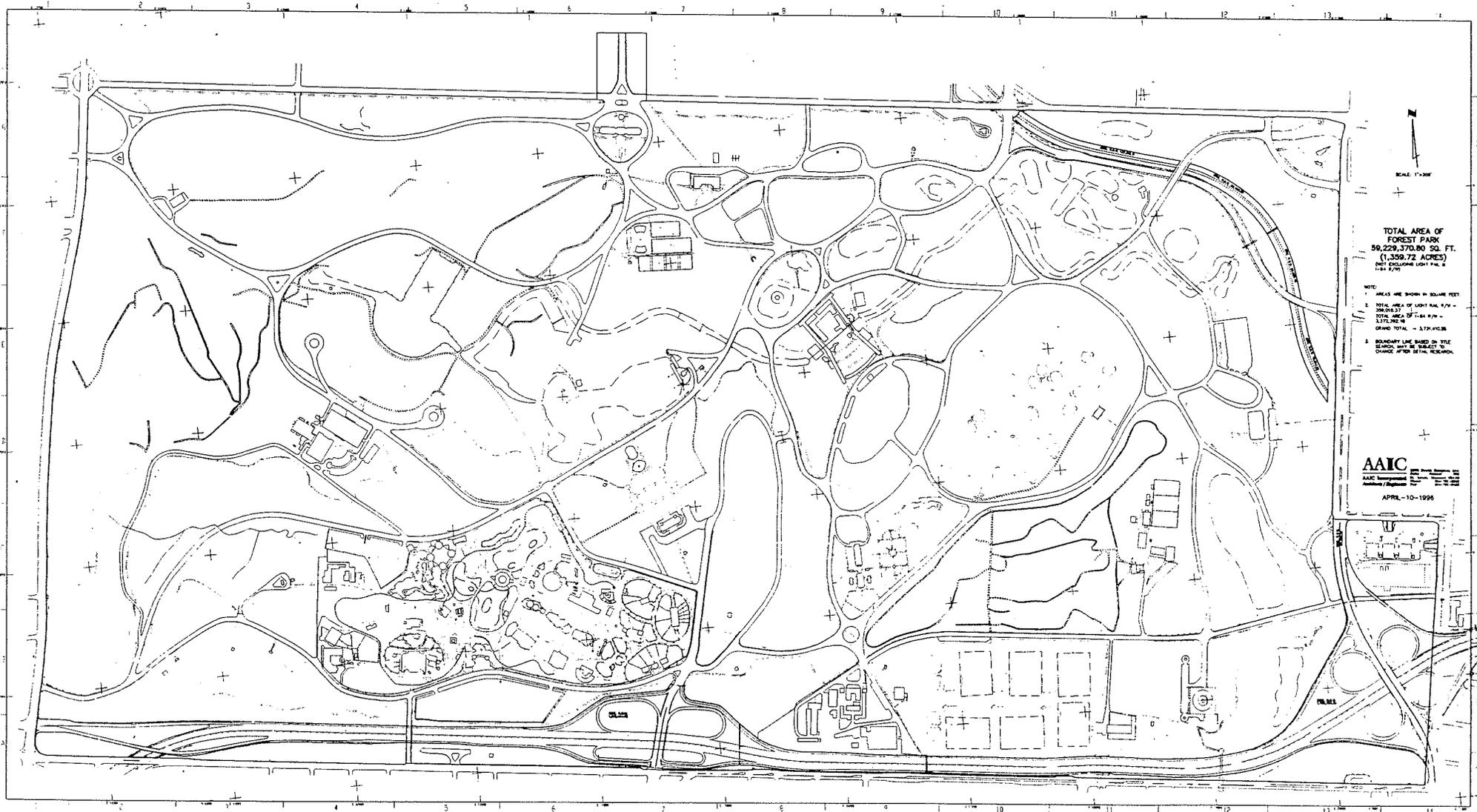
FOREST PARK AREA CALCULATIONS - EXISTING ACTIVE GREEN (1983)



FOREST PARK AREA CALCULATIONS - EXISTING WATER (1983)



FOREST PARK AREA CALCULATIONS - EXISTING SWALES AND TRIBUTARIES (1983)



TOTAL AREA OF
FOREST PARK
59,229,370.80 SQ. FT.
(1,359.72 ACRES)
(NOT INCLUDING LIGHT P.M. &
L.A.S. P.M.)

- NOTE:
1. AREAS ARE SHOWN IN SOLID KEY
 2. TOTAL AREA OF LIGHT P.M. - 200,000.00
TOTAL AREA OF L.A.S. P.M. - 1,378,720.00
GRAND TOTAL - 1,578,720.00
 3. BOUNDARY LINE BASED ON THE
SEARCH MAPS BE SUBJECT TO THE
CHANGE AFTER DETAIL REVISION.

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ARCHITECTURAL ASSOCIATION OF
INDIANA
APRIL-10-1996

FOREST PARK AREA CALCULATIONS - EXISTING OUT BOUNDARY (1983)

F. Master Plan No-net-Loss-of-Open-Space Calculation

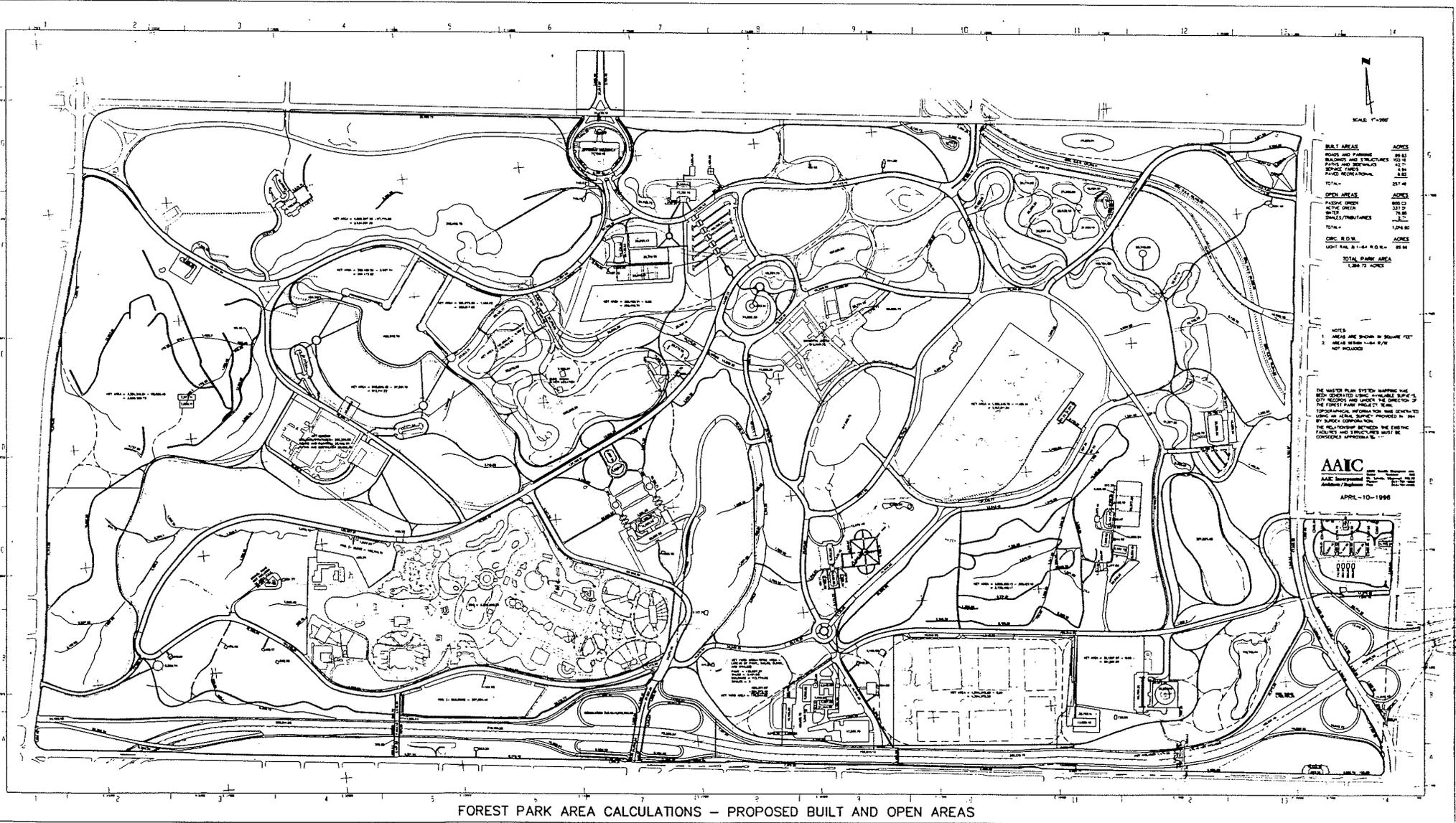
Forest Park Master Plan Area Calculations: Proposed Built and Open Space Areas

<u>Built Areas</u>	<u>Acres</u>
Roads and Parking	99.83
Buildings and Structures	103.16
Paths and Sidewalks	42.71
Service Yards	4.94
Paved Recreational	<u>6.82</u>
Sub-Total	257.46

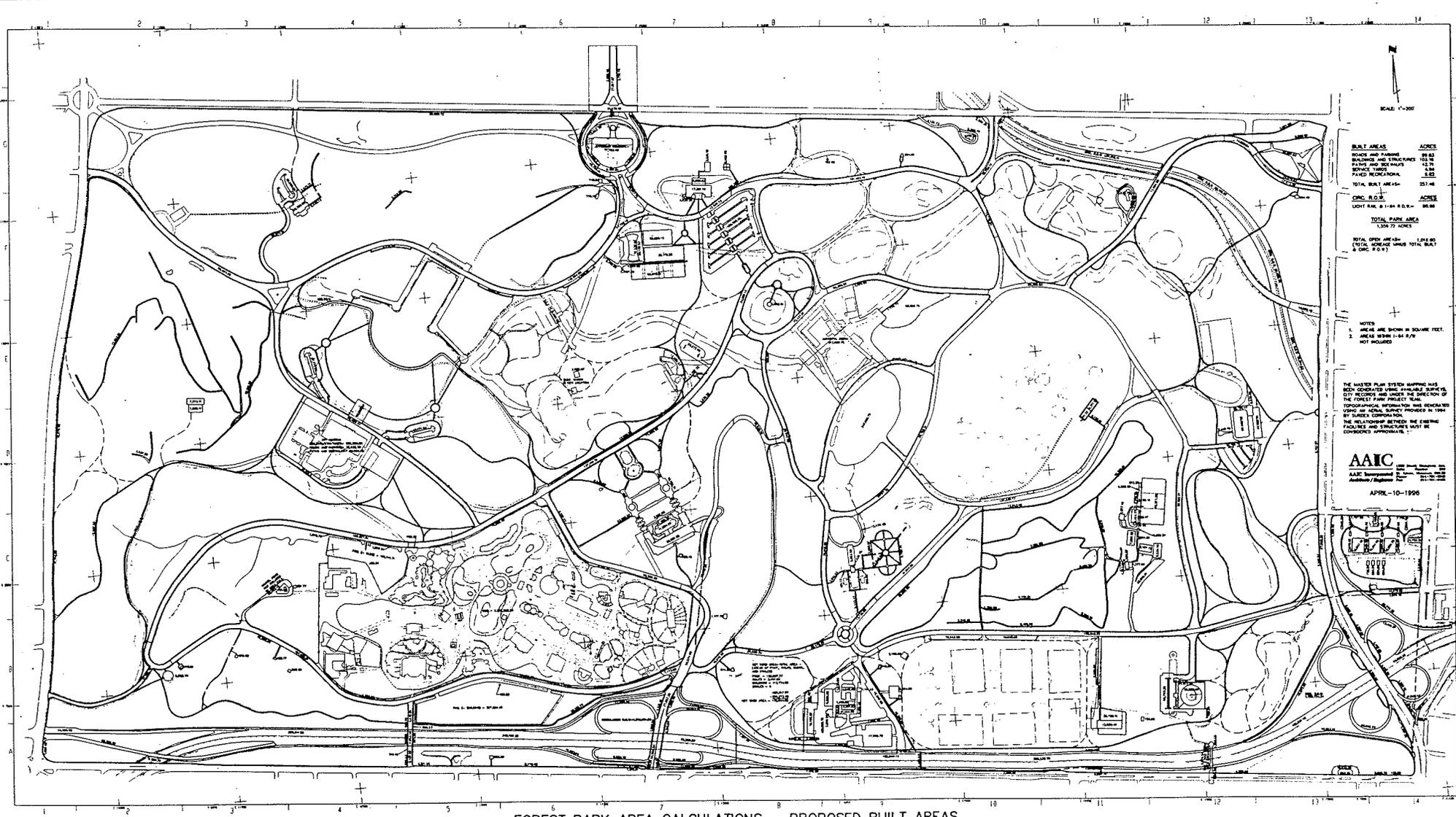
<u>Open Areas</u>	<u>Acres</u>
Passive Green	600.03
Active Green	337.01
Water	76.85
Swales/Tributaries	<u>2.71</u>
Sub-Total	1,016.60

<u>Circ. R.O.W.</u>	<u>Acres</u>
Light Rail & I-64 R.O.W.	84.66

TOTAL 1,359.72



FOREST PARK AREA CALCULATIONS - PROPOSED BUILT AND OPEN AREAS



BUILT AREAS	ACRES
ROADS AND PARKING	88.82
LANDSCAPE AND STRUCTURES	12.18
PARKS AND RECREATION	4.34
SERVICE YARDS	1.34
PAVED RECREATION	1.82
TOTAL BUILT AREAS	237.48
OPEN SPACE	ACRES
LIGHT SPACE @ 1:84 R.O.S.	86.88
TOTAL PARK AREA	1,309.72 ACRES
TOTAL OPEN AREA	1,072.24
TOTAL ACRES UNDER TOTAL BUILT & OPEN SPACE	1,309.72

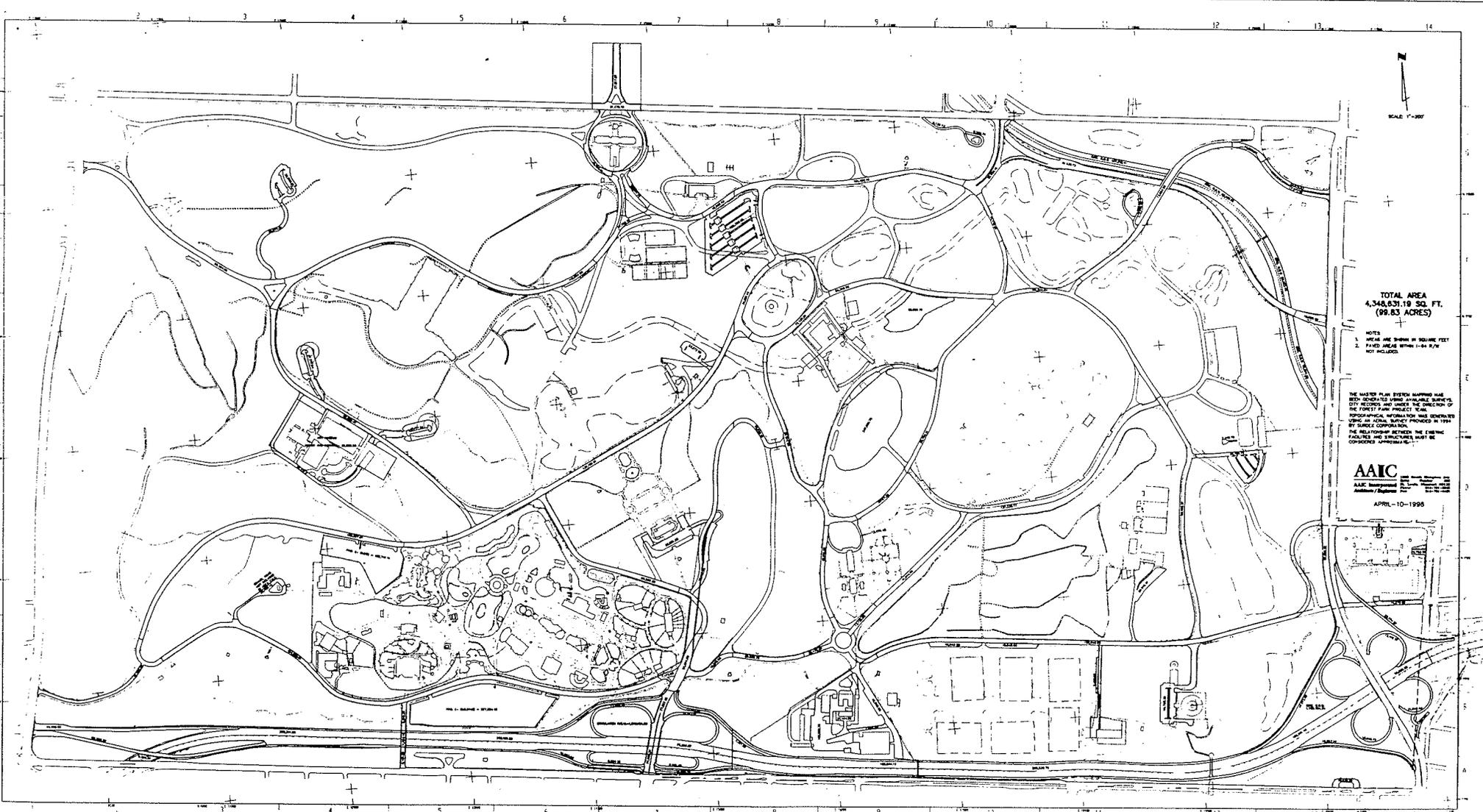
- NOTES
1. AREAS ARE SHOWN IN SQUARE FEET.
 2. AREAS SHOWN IN ACRES ARE NOT INCLUDED.

THE MASTER PLAN SYSTEM GRAPHICALLY SETS FORTH THE AVAILABLE SPACE, CITY RECORDS AND UNDER THE DIRECTION OF THE FOREST PARK PROJECT TEAM. TOPOGRAPHICAL INFORMATION HAS BEEN OBTAINED USING AN Aerial Survey PROVIDED IN 1984 BY BUREAU OF CONSTRUCTION. THE RELATIONSHIP BETWEEN THE EXISTING FACILITIES AND STRUCTURES MUST BE CONSIDERED APPROXIMATE.

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APRIL - 10 - 1996

FOREST PARK AREA CALCULATIONS - PROPOSED BUILT AREAS



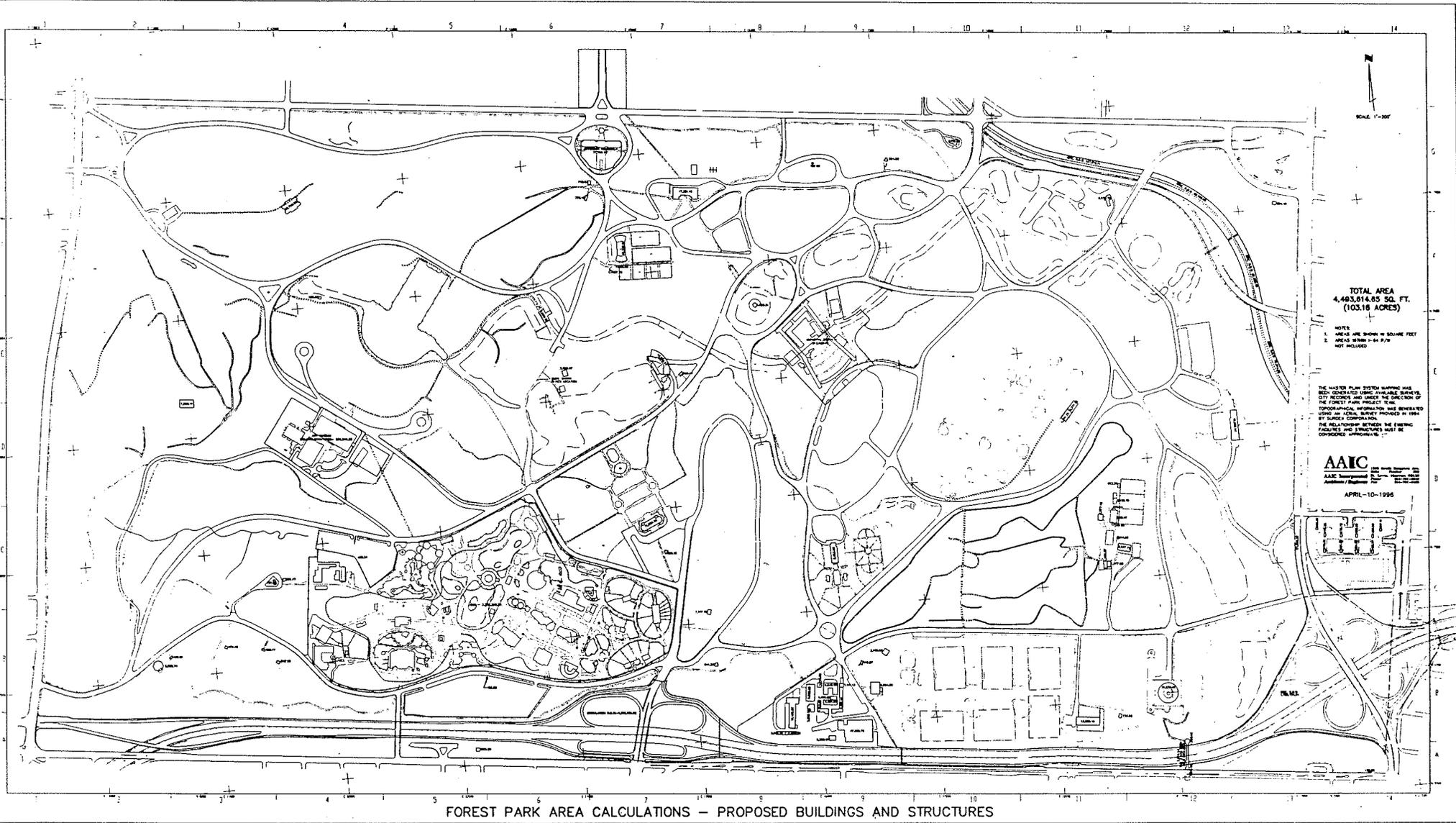
TOTAL AREA
4,344,831.19 SQ. FT.
(99.83 ACRES)

- NOTES
1. AREAS ARE SHOWN IN SOLID LINE
 2. PAVED AREAS WITHIN 1'-6" R/W NOT INCLUDED

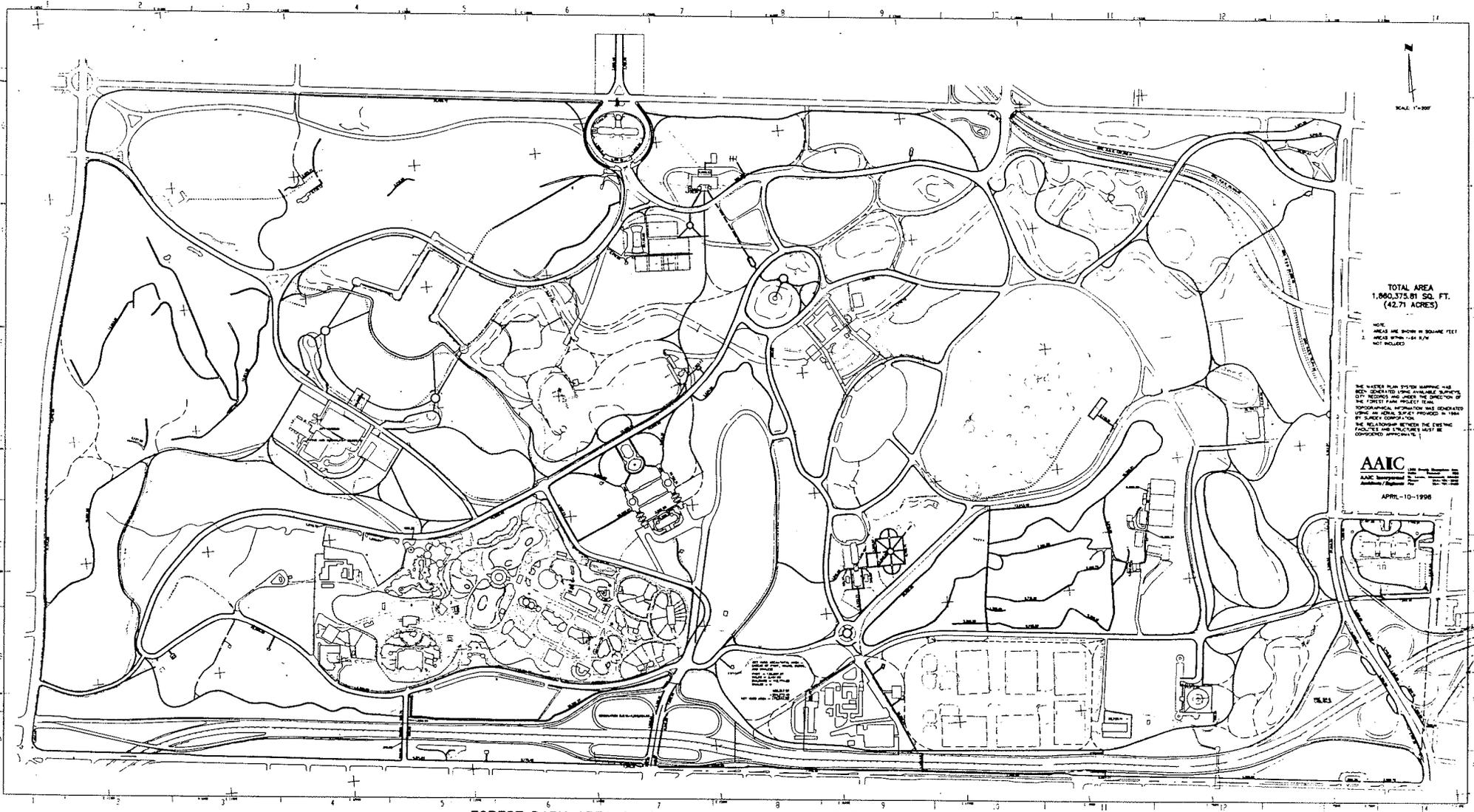
THE MASTER PLAN SYSTEM SHOWN HAS BEEN DEVELOPED UNDER AVAILABLE SURVEY CITY RECORDS AND UNDER THE DIRECTION OF THE FOREST PARK PROJECT TEAM. HISTORICAL INFORMATION WAS DEVELOPED BY SURVEY CORPORATION. THE RELATIONSHIP BETWEEN THE EXISTING FACILITIES AND STRUCTURES MUST BE CONSIDERED SEPARATELY.

AAIC
 A.A. Ingalls & Co., Inc.
 Architects/Engineers
 1000 Peachtree Street, N.E.
 Atlanta, Georgia 30309
 APRIL-10-1998

FOREST PARK AREA CALCULATIONS - PROPOSED ROADS AND PARKING



FOREST PARK AREA CALCULATIONS - PROPOSED BUILDINGS AND STRUCTURES



TOTAL AREA
1,860,375.81 SQ. FT.
(42.71 ACRES)

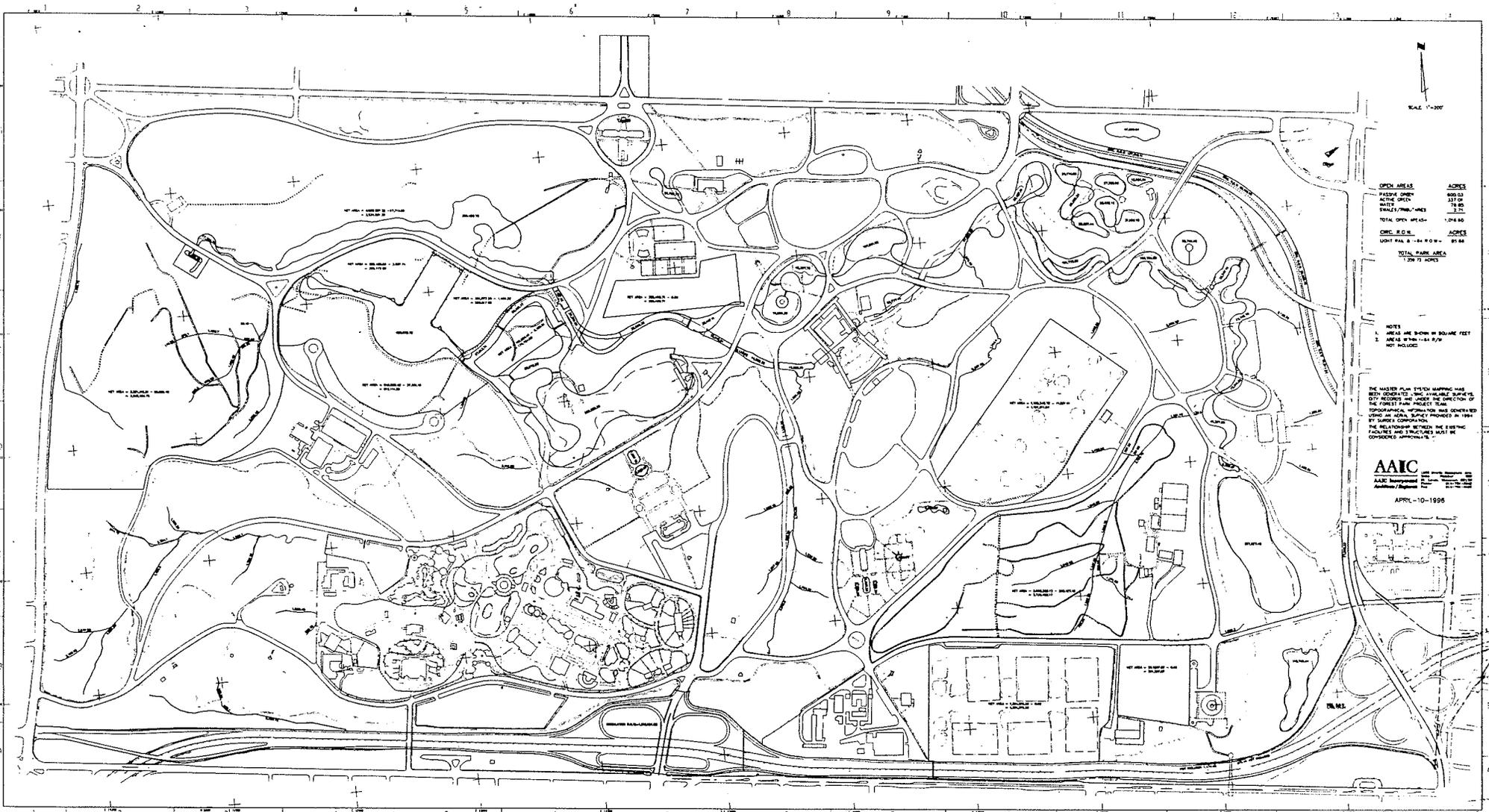
NOTE:
1. AREAS ARE SHOWN IN SQUARE FEET
2. AREAS WITHIN AREA PLAN
NOT BOLDED

THE WATER PLAN SYSTEM SHOWN HAS
BEEN GENERATED USING AVAILABLE SURVEY
DATA RECEIVED AND UNDER THE DIRECTION OF
THE FOREST PARK PROJECT TEAM.
TOPOGRAPHICAL INFORMATION HAS BEEN OBTAINED
USING THE Aerial Survey Provided in 1984
BY SURVEY CORPORATION.
THE RELATIONSHIP BETWEEN THE EXISTING
FACILITIES AND STRUCTURES MUST BE
CONSIDERED APPROXIMATE.

AAIC
AAIC International, Inc.
10000 Woodloch Forest Drive
Atlanta, Georgia 30338
Phone: 404/251-1000
Fax: 404/251-1001

APRIL-10-1998

FOREST PARK AREA CALCULATIONS - PROPOSED PATHS AND SIDEWALKS



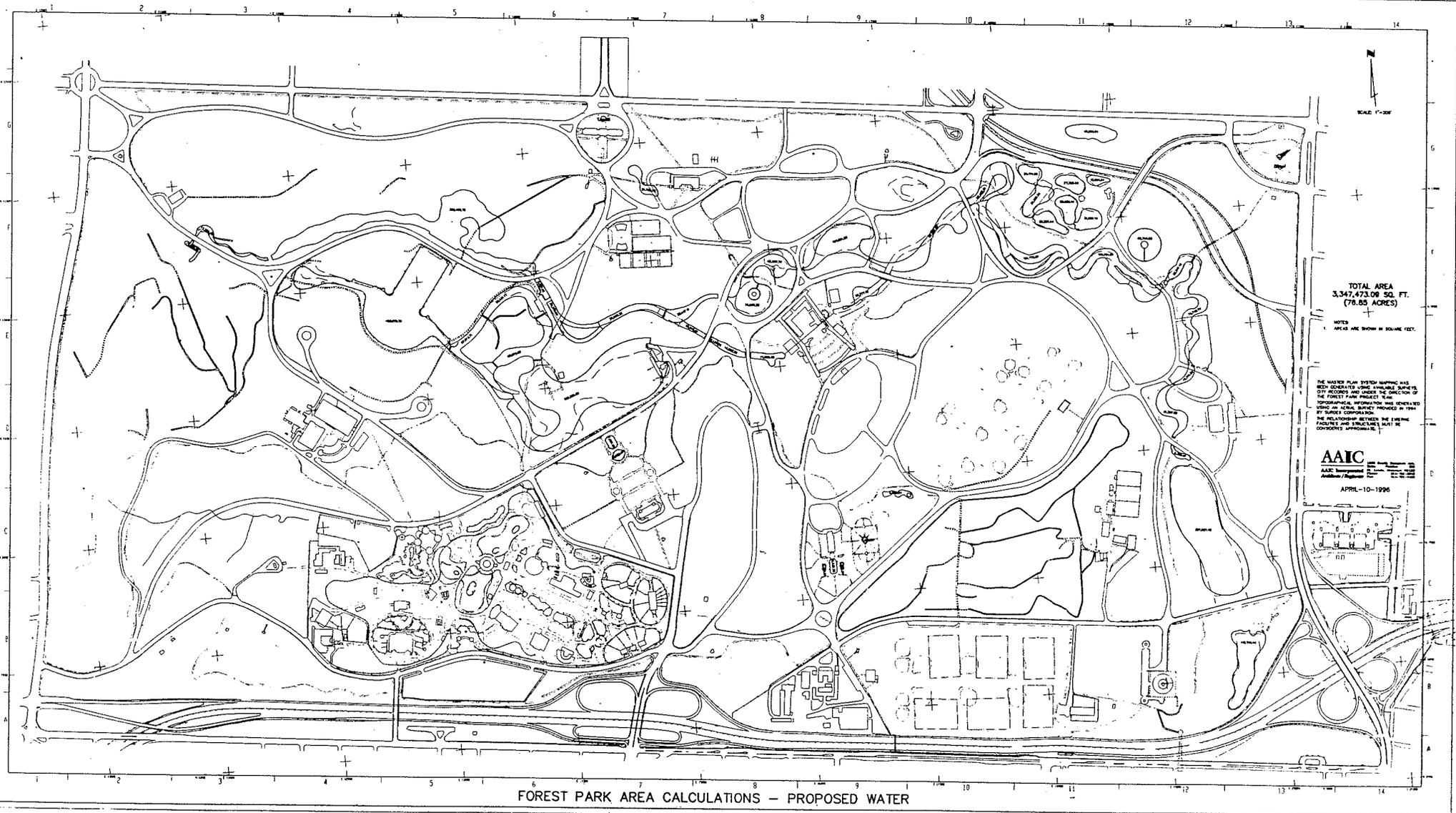
OPEN AREAS	ACRES
PASPER OPEN	605.02
ACTIVE OPEN	337.07
WALKWAY/BIKEWAY	2.31
TOTAL OPEN AREAS	1,044.40
OPEN P.C.S.	ACRES
LOFT PAB. & 14-10-01	81.84
TOTAL PARK AREA	1,326.24 ACRES

- NOTES
1. AREAS ARE SHOWN IN SQUARE FEET
 2. AREAS IN THE 14-10-01 P/P NOT INCLUDED

THE MASTER PLAN DESIGN MAPS HAVE BEEN GENERATED USING AVAILABLE SURVEY DATA RECORDS AND UNDER THE DIRECTION OF THE FOREST PARK PROJECT TEAM. TOPOGRAPHICAL INFORMATION HAS BEEN OBTAINED USING AN AERIAL SURVEY PROVIDED IN 1995 BY AERIAL CORPORATION. THE RELATIONSHIP BETWEEN THE EXISTING FACILITIES AND STRUCTURES MUST BE CONSIDERED APPROXIMATE.

A A I C
 Aerial Aerial Inc.
 1400 14th St. N.
 Grand Rapids, MI 49503
 (616) 233-1111
 APRIL-10-1998

FOREST PARK AREA CALCULATIONS - PROPOSED OPEN AREAS



TOTAL AREA
3,347,473.08 SQ. FT.
(76.85 ACRES)

NOTES
1. AREAS ARE SHOWN IN SOLID LINE FEET.

THE MASTER PLAN SYSTEM MAPPING HAS BEEN CONDUCTED USING AVAILABLE SURVEY CITY RECORDS AND UNDER THE DIRECTION OF THE FOREST PARK PROJECT TEAM. TOPOGRAPHICAL INFORMATION HAS BEEN OBTAINED USING AN AERIAL PHOTOGRAPHY PROVIDED BY SUTHER CORPORATION. THE RELATIONSHIP BETWEEN THE EXISTING FACILITIES AND STRUCTURES SHALL BE CONSIDERED APPROXIMATE.

AAIC
AAIC Engineering & Construction
Atlanta, Georgia

APRIL-10-1996

FOREST PARK AREA CALCULATIONS - PROPOSED WATER