

STAFF REPORT

CONCERNING APPLICATION FOR A CERTIFICATE OF APPROPRIATENESS

Date: 15 January 2019

Application Number: 2019-0109

Property Location: Leeper Park

Architectural Style/Date/Architect or Builder: Planned landscape/1897/City superintendent Herman Beyer;
Landscape Architect George Kessler

Property Owner: City of South Bend, Venues Parks & Arts

Landmark or District Designation: Local Landscape Landmark, Ordinance #8734-96 and National Register of
Historic Places, 6/15/2000

Rating: N/A

DESCRIPTION OF STRUCTURE/ SITE: Leeper Park is the first planned public park in South Bend located north of downtown and the medical district. Leeper Park is oriented east/west at the St. Joseph River, divided into three sections, East, Central, and West, by Michigan Street and Lafayette Boulevard. The Eastern section was originally established for the Water Works with the first construction on site being a network of thirty, six-inch artesian wells.¹ “The first land condemned for the future Leeper Park, in June of 1895, was meant to provide a second artesian well field and pumping facility for the lively industries and town population which was growing along the south bend of the St. Joseph River.”² City superintendent Herman Beyer first influenced the design including curvilinear paths, plantings, and water features. The 1911-1915 Parks and Boulevard system and the Leeper Park Plan, designed by celebrated planner and landscape architect George Kessler, embodied early twentieth century ideals grounded in the City Beautiful movement, connecting parks and boulevards as planned elements of a coordinated city plan. Kessler’s Plan for Leeper Park included both formal and informal design elements, adopting existing park features of the Beyer era through a skillful remodel. The association of the park sections with different uses was a result of Kessler’s planning; the West section was deemed for active recreation, the Central section as passive recreation, and the Eastern Section was adopted for its function as a Water Works but also boasts a number of recreation-related features. While the Kessler Plan guided Leeper Park development for the next decade, documentary evidence appears that only some elements of the Kessler design were actually installed.³ Sensitive extensions of Kessler’s Plan continued into the 1920s and 1930s and included Works Progress Administration funded labor for several projects.⁴

Leeper Park East features include: the North Pumping Station, the water reservoir, multiple water well pumps, Ziegler Performing Center with fixed bench seating, signage for the former Garden of Fragrance, the Navarre Cabin, the foundation of the former Powell House, a non-functioning Comfort Station, a swing set/slide, the Sunken (Rose) Garden, the island, and the Works Progress Administration retaining wall and a bridge to the island.

Leeper Park Central features include: West Lagoon (Duck Pond), concrete stairs on embankment, a well house, the Edward B. Reynolds fountain, Lavender Labyrinth, memorials including trees, stones, and plaques.

Leeper Park West features include: backdrop of the former baseball diamond, tennis courts, a recreation building, a parking lot, an odor garden, and raised vegetable gardens with adjoining paths.

¹ Leeper Park Cultural Landscape Report, prepared by Westerly Group for the Historic Preservation Commission of South Bend and St. Joseph County, May 1998.

² Ibid.

³ Ibid.

⁴ Malcolm Cairns, ASLA. “Leeper Park Historic District.” National Register of Historic Places Inventory/Nomination Form, NR-1411. South Bend, St. Joseph County, Indiana, June 15, 2000.

ALTERATIONS:

Throughout

RMEs and COAs for tree trimming, removal, and installation have been approved under the guidance of the City Forester.

RMEs and COAs for sidewalks have been approved.

Leeper Park East

RME 2017-0410 approved "This permit covers only Phase I of the project - drilling a pilot well. Phase II (drilling the actual well and trenching in the piping) will require a separate COA."

COA 2017-0306 approved installation of new stage and new audience seating, landscape beautification and lighting for stage, new benches with concrete pad closer to stage.

RME 2016-1013 approved removal of brush and planting of willow tree near Rose Garden.

The Sunken (Rose) Garden with reflecting pool and statues were removed in the 1960s. RME 2017-1012 approved installation of two small concrete pads with two benches adjacent to Rose Garden. Benches to match those approved through COA 2015-0302A. COA 2017-0228 approved installation of 8' wide crushed limestone walkway connecting the Michigan Street sidewalk with the Sunken Garden, bounded by two, 42" wide flower beds, and irrigation system for entire garden. COA 2015-1002 approved "Within an existing concrete curb (that will remain), the landscaping bed will be enhanced to mimic the reflecting pool formerly within its boundary. New flower beds will be defined using new soil, compost and plantings. A walkway of crushed limestone will pass through the beds. Additional half circle beds will be added to the north and south of the concrete curb. The "three-fates" statues will be repaired pro-bono by a local artist, and then placed into the center of the "pool" bed, where they were originally, in the same back-to-back-to-back style; and the one remaining "cherub" will be nearby, on a footing. That "cherub" will be duplicated from the original, and the new statue also placed nearby in the "pool" bed." COA 2015-0504A approved restoration of Rose Garden and gravel path system by volunteers.

COA 2015-0908 approved "Bartlett Street Roundabout Project Description (114-032b). Project to construct a roundabout at Bartlett and Michigan Street approved per all diagrams and documents submitted. Encroachment to Leeper Park East will be limited to 0.57 acres and all trees removed will be replaced within the park."

The Garden of Fragrance no longer exists, but the signage remains. RME 2015-0422 approved "Rebuild/restack low retaining wall currently located in Leeper Park next to Garden for the Blind. Matching flagstone has been donated by Knepp Sand and Stone and Old Fort Building Supply; and follows material estimate made by a representative of the SB Parks Department. The restacking of the flagstone wall will also require digging away the dirt around loose blocks and backfilling afterwards."

COA 2011-1103A approved "Replace the existing lift station on the south side of the North Pumping Station driveway and relocate it to the north side of the driveway. Screen the new location with landscaping and plantings. Rehabilitate the Garden of Fragrance Braille marker and boulder monument and install new sidewalks and decorative paving. All per diagrams, plans and plant palette submitted and approved."

Wading Pool was filled in and the pergola removed, 1970s.

Circa 1862 vernacular Powell House

Navarre Cabin moved to Leeper Park, 1904; relocated, 1916; relocated again to present site, 1954.

Zoo closed, and structures used for animals were demolished, 1913.

Leeper Park Central

COA 2017-0213B approved "Addition to Leeper Park of a garden labyrinth, 40'-0" diameter center, 80'-0" diameter outer circle per submitted plans. Includes removal and replacement of existing trees specified in plans; removal of DAR memorial tree NOT PERMITTED."

COA 2013-0519 approved "Install a climber and merry-go-round at Leeper Park playground. (Replaces old pieces which were removed.)"

The Mall/Formal Garden, an elongated adaptation of the Kessler design survived well into the 1960s. The Garden and pedestrian walks became grown over, 1980s.

Tennis courts moved from Central to Eastern section, 1916.

1905 Bugbee Fountain removed, unknown date.

1907-08 East Lagoon (Lily Pond) became stagnant and was removed along with the rustic wooden bridge, unknown date.

1907-08 West Lagoon (Duck Pond) was extensively remodeled including a change in configuration from a naturalized shape to a near oval, 1980s and 1990s. The covered shelter and chain link fence are not original. Only remnants of a path system were recorded by WPA, 1938.
1910 Reynold's horse watering trough, relocated from downtown South Bend, 1937.
Fill added and installation of double flight of concrete steps along west bank of West Lagoon, 1916.
Carriage drives redesigned, unknown date.

Leeper Park West

COA 2015-0302A approved "Create a Garden in four sections totaling about 3000 sf including all plants; include an 8 foot wide ADA standard concrete sidewalk-initially 500 feet long; one monument circle and 2 flanking garden observation/education pads to be added per diagram submitted. Install 8 +/- historic lights of the style of Leeper Park East to be installed along the 8 foot wide walk: 1 on each side of the 3 bump outs along the walk, 1 close to Lafayette and 1 close to the northwest corner end of the current phase of the walkway. 8 +/- durable quality public benches; 4+/- umbrella tables near tennis court; opportunities for public art along the garden walk. Subject to approval by the Parks Board. All the garden plant and vegetable plant options to be agreed upon by Parks Department/Board, Madison School and HPC Staff to conform to the Standards and Guidelines adopted for Leeper Park. Abstain from planting fruit trees at this time."

COA 2008-0306 approved installation of an "Odor Garden" with blower piping and underground odor control bed to treat sewer gas. Surface odor control bed planted as flower garden. Area will be restored to grass if and when the system is taken out of service.

COA 2007-0605B approved "Renovation of Tennis Courts, Pavement and Fence replacement, expansion of Court pavement approximately 20' to South; removal of 17 trees in the South per Brent Thompson and replace with 12 Cypress per Brent Thompson. Plant to the north of the fence 5 deciduous trees."

A parking lot south of the Tennis Center was added during the Madison School renovation along with lighting without COA, 1998.

The 1936 WPA shelter house was replaced with the present recreation building, 1970.

Fill added for installation of Riverside Drive, 1910 and 1938.

APPLICATION ITEMS: *"Various improvements to Leeper Park. See Attachment A for a detailed list of improvements."*

DESCRIPTION OF PROPOSED PROJECT: Under the direction of Venues, Parks and Arts, the work proposed to Leeper Park has been designed by Jonathon Mooney, RLA, LEED AP, Senior Landscape Architect with Lochmueller Group, having expertise with historic landscapes and specific to George Kessler's historic landscapes.

The Leeper Park Concept Plan presented in this application incorporates concepts from the 1998 Leeper Park Cultural Landscape Report and draws heavily from George Kessler's 1915 Plan, itself an overlay of the 1905 Beyer Plan, to create a public space that celebrates Leeper Park's historic integrity and functions for contemporary needs. The 1996 Leeper Park Standards and Criteria have also been consulted. See Attachment A, Project Description for additional context.

1. Improvements to internal pedestrian circulation
 - a. The proposed new paths will adaptively recreate the designed path system throughout Leeper Park, reinstating connectivity between the three park sections, nearby neighborhoods, and to various features within. New paths will be 5-feet to 8-feet wide, of standard concrete with no color additives, medium broom finish. The final path layout may change slightly to avoid removal of large trees.
 - b. The intersection at Lafayette Boulevard and Riverside Drive will be reconfigured to eliminate excess pavement, help calm traffic and shorten pedestrian crossing distance.
 - c. The existing historic steps need repaired or further study regarding replacement. The work proposed is to replace in-kind using exact proportions/dimensions, using the following process to determine the replacement specifications:
 1. Take detailed field measurements, photos

2. Coordinate with concrete expert
 3. Create detailed construction drawings
 4. Contractor to gently clean existing steps to expose true surface conditions/colors
 5. Take cores to preserve existing concrete properties
 6. Require contractor to provide mock-ups of color, aggregate and finish to compare with original
2. Installation of a new playground
 - a. Relocating the playground consolidates active park uses to the Western Section allowing for restoration of the historic passive nature of the Central Section. In the proposed location, south of the tennis courts, the playground will be situated closer to parking and restrooms. See description and renderings for additional detail.
 - b. An existing ball field backdrop will be removed.
 - c. Remove existing playground equipment in Central Section. Site will be re-seeded.
 3. Installation of the Studebaker Electric Fountain and associated gathering space
 - a. Kessler's Plan built upon Beyer's original central formal garden design in the Central Section. An elongated adaptation of Kessler's design was installed during the WPA era and existed into the 1980s; there do not appear to be any aspects existing today. This proposal will re-introduce the strong central axis with a formal garden, with design influences such as the rectilinear layout with semi-circular edges north and south.
 - b. The Studebaker Fountain will be the centerpiece to the reinstated formal garden. The former Bugbee Fountain once existed in a nearby location. The concrete plaza is 75' in diameter. The Studebaker Fountain is 42' in diameter. See description and renderings for additional detail. Approximately 110-150 linear foot of existing brick storm sewer will be replaced with new ductile iron, encased in concrete. Exact locations of two new manhole structures are to be determined.
 4. Removal of the existing duck pond
 - a. The West Lagoon (Duck Pond) is a popular feature of Leeper Park that has existed for 112 years in the same location. It has been extensively remodeled throughout those years and is unlikely to feature any original materials (fence, concrete, covered shelter).
 - b. Natural habitats are more humane over unnatural spaces. Concerns for animal and environmental welfare include malnutrition, dependency, disease, environmental degradation, water pollution, increased hybridization, delayed migration, overcrowding, costly management efforts, and devaluation. "The existence of duck ponds can no longer be considered a best practice for the environment or wildlife."⁵ See White Paper on Leeper Park Duck Pond.
 - c. Re-seed newly realized open lawn area. Soil borings and geotechnical engineering will determine the most appropriate type of fill material to ensure the seamless integration of the topography and lawn type.
 5. Creation of a formal river overlook (concept)
 - a. The Overlook to the St. Joseph River will create a place for observing wildlife in its natural habitat.
 6. Items to be presented at a future meeting include:
 - a. Overlook detail design

⁵ City of South Bend Venues Parks & Arts. White Paper on Leeper Park Duck Pond. 2018.

- b. Planting design and trees
- c. Site furnishings
- d. Sign locations/design
- e. Lighting
- f. Future art nodes
- g. Tabletop intersections
- h. Future river viewing nodes
- i. Future phases

STANDARDS AND GUIDELINES:

9.0 LANDSCAPES – STANDARDS AND CRITERIA FOR LEEPER PARK

9.1 Introduction

1. In these guidelines the verb **Should** indicates a recommended course of action; the verb **Shall** indicates those actions which are specifically required to preserve and protect significant architectural elements.
2. The intent of these standards and criteria is to preserve the overall character and appearance of Leeper Park including its spatial organization, topography, vegetation, circulation and features.
3. The standards and criteria acknowledge that there will be changes to the landscape and are intended to make the change sensitive to the historic character of the landscape.
4. Each property will be separately studied to determine if a later addition(s) and/or alteration(s) can, or should, be removed.
5. Since it is not possible to provide one general guideline, the following factors that will be considered in determining whether a later addition(s) and/or alteration(s) can, or should, be removed include:
 - a. Compatibility with the original property's integrity in scale, materials, and character.
 - b. Historic association with the property.
 - c. Quality in design and execution of the addition/alteration.
 - d. Functional usefulness.
6. Recreational facilities which exist should be allowed to remain as long as they serve substantial community functions. In some cases these features can be redesigned to be more compatible with the overall landscape.
7. Additions to existing recreational facilities shall not be allowed unless such additions make the facilities more compatible with the overall landscape.
8. The development of additional facilities for active recreation or single purpose uses for limited user groups shall not be allowed.
9. Proposals for special activities and events which cause significant impacts or require permanent or even semi-permanent (seasonal) structures or facilities shall not be permitted.
10. The Historic Preservation Commission of South Bend and St. Joseph County recommends that the work proposed to the landscape be executed with the guidance of landscape professional with expertise with historic landscapes.
11. The land, streets, island(s), street lighting, park lighting, topography, vistas, vegetation, architectural elements, structures, spatial organization, street furniture, sewer covers, electrical and water vault and/or manholes covers, parking areas are subject to the terms of the landscape guidelines herein stated.
12. Items under Historic Preservation review include but are not limited to the following:

9.2 Spatial Organization (includes, Views, Vistas, Landscape Spaces, etc.)

Refer to Sections 9.3, 9.4, 9.5, 9.6, 9.7 and 9.8 for additional Standards and Criteria that may apply.

1. Views and vistas are among the most important aspects of a landscape, therefore, they should be maintained and preserved.
2. All views, vistas, landscape spaces located in the eastern section and central section of Leeper Park shall be preserved. All views, vistas, landscape spaces located north and east and west of a line designated as the northern fence of the tennis courts located in the western section of Leeper Park shall also be preserved. This shall include the island(s) located in the St. Joseph River and the slough which lies between the island(s) and the mainland. All views, vistas, and landscape spaces shall also include the entirety of the riverbank as well as the area lying between the roadway of Riverside Drive up to and including the riverbank and cut stone wall along the riverbank.
3. Original or later contributing special organizational features shall be retained in their existing configuration and shall be maintained through proper drainage, access and erosion control, pruning and removal of invasive vegetation or otherwise using recognized horticultural and soil management practices.
4. Alteration of existing or addition of new spatial organizational features will be considered if they do not alter the basic concept of the historic landscape design.
5. Deteriorated or missing spatial organizational features shall be replaced with features that match the original in form, shape, color and texture.
6. When replacement of features is necessary, it should be based on physical or documentary evidence.
7. If using the same material is not technically or economically feasible, then compatible substitute materials may be considered.
8. Important visual connections between spaces within the landscape shall be retained by maintaining vegetation, circulation and topographic features which contribute to those visual relationships.

9. **The historic spatial and functional relationship of circulation systems, water features and structures shall be preserved by maintaining the massing of adjacent vegetation, vistas, or other associated features.**
10. **Maintenance of removal or, and additions of vegetation materials and elements should consider maintaining existing or intended vistas and spaces, screening intrusions, creating new spaces where appropriate and maintaining defined areas of shade and sun.**
11. **The form and shape of individual spaces and their associated vertical element shall be retained in order to preserve the historic relationships of the landscape. Examples include the relationship between open fields and hedgerows or the width and length of an alley.**
12. **Moving or demolishing historic structures that would alter spatial and visual relationships in the landscape shall not be allowed.**
13. **Construction of new structures that would alter historic spatial and visual relationships in the landscape shall not be allowed.**
14. **Intrusive views or new construction may be screened with compatible fencing or plant material so long as the screening would not detract from the historic character of the landscape.**

9.3 Topography (includes the Shape, Slope, Elevation, Contour of landforms and Ground Plane, etc.) Refer to Sections 9.2, 9.4, 9.5, 9.8, 9.9 and 9.10 for additional Standard and Criteria that may apply.

1. All locations and items listed in 9.2.2 shall also apply to this section and shall be preserved.
2. Original or later contributing topographical features shall be retained in their existing configuration and shall be maintained through proper drainage, access and erosion control, and recognized soil management practices.
3. Alteration of existing or addition to new topographical features will be considered if they do not later the basic concept of the historic landscape design.
4. Natural features (e.g. rock outcroppings) which are integrated into the landscape shall be treated as part of the overall design and shall be retained.
5. Deteriorated or missing materials or features shall be replaced with materials that match the original in form, shape, color and texture.
6. When replacement of materials or features is necessary, it should be based on physical or documentary evidence.
7. If using the same material is not technically or economically feasible, then compatible substitute materials may be considered.
8. Whenever appropriate, plant materials, rather than structural materials should be used to solve erosion problems. Repair of WPA island and slough stone construction projects is strongly encouraged.

9.4 Vegetation (includes Trees, Shrubs, Ground Covers, Hedges, Allees, Fields, Forests, Planting Beds, etc.)

Refer to Sections 9.2, 9.3, 9.5, 9.7, 9.8, 9.9, and 9.10 for additional Standards and Criteria that may apply.

1. Refer to Section 9.2.2 for items within this section which shall be preserved. Also included in this section shall be the diverse variety of trees, shrubs, bushes and other vegetation which may or may not be indigenous to this region. List of such types of vegetation can be in lists and inventories which were published in the annual reports of both the City of South Bend and the South Bend Park Commissions from the years 1910 to 1940.
2. Original or later contributing vegetation materials and features shall be retained in their existing configuration and shall be maintained through proper horticultural management practices.
3. **Alteration of existing or addition of new vegetation materials and features will be considered if they do not alter the basic concept of the historic landscape design.**
4. **Deteriorated or missing materials or features shall be replaced with materials that match the original in form, shape, color and texture.**
5. **When replacement of vegetation materials or features is necessary, it should be based on physical or documentary evidence.**
6. **If using the same vegetation material is not technically or economically feasible, then compatible substitute vegetation materials may be considered if they convey the same growth habit, form, foliage and bloom characteristics as the historic plant.**
7. **Existing vegetation material shall be retained unless it is part of a later non-compatible design or is volunteer vegetation inconsistent with the original design.**
8. **Consideration for removal of existing healthy vegetation materials and features will be given when it is in conflict with the original design intent of the landscape, such as when an important vista has become overgrown or when plants have grown out of scale with their intended purpose.**
9. **Maintenance of, removal of, and additions of vegetation materials and features should consider maintaining existing or intended vistas and spaces, screening intrusions, creating new spaces where appropriate and maintaining defined areas of shade and sun.**
10. **Invasive vegetation shall be removed whenever technically feasible and shall be replaced with appropriate vegetation consistent with the original design of the park and with current factors such as security, ecological conditions, and wildlife management practices.**
11. Hazardous plants or portions of plants should be removed promptly.
12. Plants with diseases that are difficult or not practical to control or cure should be removed promptly to prevent their infection of other plants.
13. Mutilated or distorted plants should be removed.
14. **Plant replacements should be added on a schedule that will insure a continuity in the landscape design.**
15. **Existing vegetation shall be protected adjacent construction activities by fencing the root system prior to the start of construction.**

16. **Future plantings of the main floral garden in the central section of the park shall be guided by the design of the main floral garden as laid out by George Kessler in 1912.**

9.5 Circulation (includes Roads, Paths, Parkways, Drives, Trails, Walks, etc.)

Refer to Sections 9.2, 9.5, 9.6, 9.8, 9.9 and 9.10 for additional Standards and Criteria that may apply.

1. **The following shall be preserved: Riverside Drive, Lafayette Boulevard, Park Lane (Foote Street), Bartlett Street, the Alleyway east of Michigan Street running north from Bartlett Street, all sidewalks, curbs, pathways around the duck pond (west lagoon), stairways, pathways in and around the Sunken Garden, and the footbridge from the mainland to the island. Alteration or addition of Roads, Paths, Parkways, Trails, Walks, etc. shall be based upon physical or historical documentation of these items as they existed from 1910 to 1940.**
2. **Original or later contributing layouts of walks, roads, and paved areas shall be maintained.**
3. **Alteration of existing or addition of new circulation layouts will be considered if it can be shown that better site circulation is necessary, and that the alteration does not alter the basic concept of the historic landscape design.**
4. **When replacement of circulation layouts is necessary, it should be based on physical or documentary evidence.**
5. **Original or later contributing circulation materials and features shall be retained and, if necessary, repaired by patching, piecing-in or reinforcing the material or feature using recognized preservation methods.**
6. **Deteriorated or missing circulation materials and features shall be replaced with materials that match the original in size, shape, color, profile, form, texture, and detail of installation.**
7. **If using the same material is not technically or economically feasible, then compatible substitute materials may be considered.**
8. **Alteration of existing or addition of new circulation materials and features will be considered if they do not alter the basic concept of the historic landscape design.**
9. **Consideration will be given to an alternate paving material if it can be shown that its properties will improve the original or later contributing design concept.**
10. **When replacement of circulation materials or features is necessary, it should be based on physical or documentary evidence.**
11. **Consideration for removal of existing circulation systems and features will be given when it is in conflict with the original design intent of the landscape or when they are no longer appropriate to their intended purposes.**
12. **No vehicles unless of or approved by the South Bend Parks Department shall be permitted on any part of the park surface at any time. Vehicles of American Electric Power and/or other vehicles of the City of South Bend, shall use predetermined routes to and from their destination, when said travel would cause them to cross any area of the park which is not paved and designed for vehicular traffic. Any damage caused by any vehicle, shall be repaired immediately to look as it did prior to said damage.**
13. **Encroachment of vehicles off the paved roadway of any area of the park shall not be permitted. Areas now used for vehicular parking which are not part of the historical design of that park shall be removed.**
14. **Construction of any type within the park shall be done so as not to disturb any feature of the park. Sheets of plywood or other approved material may need to be laid upon the surface of the park prior to construction equipment. Repairs which must match the original historic design concept shall be made in any and all circumstances of damage.**

9.6 Water Features (includes Fountains, Pools, Irrigation Systems, Ponds, Rivers, etc.)

Refer to Sections 9.11 B, C, and D regarding treatment of materials and features; and Sections 9.2, 9.3, 9.4, 9.5, 9.7, 9.8 and 9.10 for additional Standards and Criteria that may apply.

1. **Features which shall be preserved include: the duck pond (West Lagoon), the water pond in the Sunken Garden, the slough between the island and the mainland, all drinking fountains, pump houses, manhole covers, drainage grates, horse and dog fountain and path of the St. Joseph River in relation to the park.**
2. **Original or later contributing water features shall be retained and maintained.**
3. **Existing water courses or bodies should not be altered. Consideration will be given to proposals that improve site drainage, improve water quality, enhance the landscape design or improve wildlife habitat.**
4. **Alteration of existing or addition of new water features will be considered if they do not alter the basic concept of the historic landscape design.**
5. **When placement of water features and their materials are necessary, it should be based on physical or documentary evidence.**
6. **Original or later contributing water feature materials shall be retained and, if necessary, repaired by patching, piecing in, consolidating or reinforcing the material using recognized preservation methods.**
7. **Deteriorated or missing water feature materials shall be replaced with materials that match the original in size, shape, color, profile, form, texture, and detail of installation.**
8. **If using the same material is not technically or economically feasible, then compatible substitute materials may be considered.**
9. **Alteration of existing or addition of new water features will be considered if they do not alter the basic concept of the historic landscape design.**
10. **When appropriate from an ecological perspective, dredging of waterways shall be permitted as a means of retaining historic waterways.**
11. **All wetlands shall be preserved.**
12. **All shorelines of water courses or bodies shall be protected from erosion in a manner in keeping with the basic concept of the landscape design.**

13. **Consideration for removal of existing water features will be given when it is in conflict with the original design intent of the landscape or when they are no longer appropriate to their intended purposes.**
14. Some areas of Leeper Park are utilized for the pumping of water for the City of South Bend, and there exists both within the park and the St. Joseph River and on the island(s) wells, well-houses and other water supply entities. Repairs that may be necessary to existing services, or additions to existing services, or the sinking or additional new wells; all such work, installations and/or repairs shall return the disturbed areas(s) of the park, island(s) and the St. Joseph River to conditions of the park as in that time period 1912 to 1940. Any new installations of any type may be considered if the alteration does not alter the basic concept of the historic landscape design.

9.7 Furnishings and Objects (includes Benches, Lights, Signs, Drinking Fountains, Trash Receptacles, Fences, Tree Grates, Flagpoles, Sculpture, Monuments, Memorials, Planters, Urns, etc.)

Refer to Sections 9.11 B, C and D regarding treatment of materials and features; and Sections 9.2, 9.3, 9.4, 9.5, 9.6, 9.8, 9.9 and 9.10 for additional Standards and Criteria that may apply.

1. **All items listed herein shall be preserved:**
 - a. **The Duck Pond (West Lagoon), including the Island in the lagoon, the Walls, Curbing, Fence, and Shelter House.**
 - b. **The Stone and Plaque of the DAR, with related Tulip and Gingko Trees.**
 - c. **The Concrete Stairway leading west southwesterly from the Duck Pond (West Lagoon).**
 - d. **The High Embankment on the west-southwest side of the Duck Pond (West Lagoon).**
 - e. **The Pump Houses, number 2 and 3.**
 - f. **The Edward B. Reynolds Horse and Dog Watering Fountain.**
 - g. **The Drinking Fountain in the south east portion of the central section of the park.**
 - h. **The central section of the park, the area of the large Floral Garden and Pathways as designed by George Kessler in 1912.**
 - i. **All Sidewalks on Lafayette Boulevard, Riverside Drive, Park Lane (Foote Street), Bartlett Street and Michigan Street.**
 - j. **The Retaining Wall on the western boundary of the western section of the park.**
 - k. The Wall comprised of Cut Stone, which extended west-northwest and east-southeast from the southern approach of the Leeper Park Bridge.
 - l. The Log Cabin known as the Navarre House, and the footings of the cabin/house which was burned down.
 - m. All Drinking Fountains located in the eastern section of the park and/or on the island(s).
 - n. The Sunken Garden on the eastern section of the park, along with all the Vegetation, Pathways, Stairs and the Fountain and Statues.
 - o. The WPA walls and Sloughs(s) in the eastern section of the park and the adjoining St. Joseph River.
 - p. All Park Benches.
 - q. All Manhole Covers, Sewer Covers and Grates, and all Electrical Underground Vault and/or Raceway Covers.
 - r. The north/south alleyway east of Michigan Street, running north from Bartlett Street which used to run between Lot 'A' and Lots 13, 14, 15, 16, 17, 18, 19 and part of 20 of the Rockstroh Addition.
 - s. **All Plaques, Monuments, Sculptures, Memorials, Planters, Urns, Curbing, Roadways, Marker Stones, Sundials, Well-Head Covers, Fences, Trellises, Pergolas, Pathways, and Trees.**
2. **Original or later contributing furnishings and objects, shall be retained and, if necessary, repaired by patching, piecing in, consolidating or reinforcing the material using recognized preservation methods.**
3. **Deteriorated or missing furnishings and objects, materials, elements, features and details shall be replaced with materials that match the original in material, size, shape, color, profiles, form, texture, configuration and detail of installation.**
4. **Alteration of existing or addition of new furnishings and objects will be considered if they do not alter the basic concept of the historic landscape design.**
5. **When replacement of furnishings and objects and their materials is necessary, it should be based on physical or documentary evidence.**
6. **If using the same material is not technically or economically feasible, then compatible substitute materials may be considered.**
7. **Existing memorials, statues, monuments and fountains shall be carefully preserved and restored where necessary, maintaining the integrity of the original material and design. The work shall be coordinated with the Historic Preservation Commission of South Bend and St. Joseph County.**
8. New furnishings and object should be designed using vandal resistant standards.
9. Location of signs shall be guided by a master plan.
10. Signs shall conform to a simple sign system.
11. Existing non-conforming signs should be removed.
12. **All new monuments and fountains shall be placed so that they conform to and with the original historic landscape design of the park and park system.**

9.8 Structures (includes Walls, Terraces, Arbors, Gazebos, Follies, Playground Equipment, Picnic Shelters, Plazas, Greenhouse, Steps, Bridges, Dams, Buildings, etc.)

Refer to Sections 9.11 B and D regarding treatment of materials and features; and sections 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.9 and 9.10 for additional Standards and Criteria that may apply.

1. **The general intent is to preserve the original or later contributing structures that enhance the historic landscape.**

2. Refer to Sections 9.2.2 and 9.7.1 of structures, elements and materials that need to be preserved such as wall, terraces, arbors, gazebos, follies, playground equipment, picnic shelters, plazas, greenhouses, steps, bridges, dams, building, etc. which shall be preserved.
3. Original or later contributing structures, shall be retained and, if necessary, repaired by patching, piecing in, consolidating or reinforcing the material using recognized preservation methods.
4. Deteriorated or missing structures, materials, elements, features and details shall be replaced with materials that match the original in material, size, shape, color, profiles, form, texture, configuration and detail of installation.
5. When replacement of structures is necessary, it should be based on physical or documentary evidence.
6. If using the same material is not technically or economically feasible, then compatible substitute materials may be considered.
7. New addition/alterations to the landscape (such as: parking lots, comfort stations, buildings, etc.) shall be as unobtrusive as possible and preserve and original or later contributing landscape features.
8. Removal of non-historic structures from the existing landscape is encouraged.
9. Structures shall be protected from arson and other acts of vandalism through proper monitoring procedures and methods such as; permanent installation of smoke detectors, alarms, or other security systems, or temporarily boarding up windows and openings.
10. No building(s) shall be erected in the central section of the park; the western section of the park, north of the northern fence to the tennis courts; the eastern section of the park, west of the rear set-back of the north Pumping Station, or in the area north and east of the Log Cabin.

9.9 Archeology

Refer to Section 9.11 B and C, and D regarding treatment and materials. Refer to Sections 9.3, 9.4, 9.5, 9.6, 9.7 and 9.8 for additional Standards and Criteria that may apply.

1. The landscape should be surveyed for potential archeological sites prior to the beginning of any construction project.
2. Known Archeological site(s) shall be protected during any construction project.
3. Disturbance of the terrain within the landscape shall be kept to a minimum so as not to disturb any unknown archeological materials.
4. All planning, any necessary site investigation, or data recovery shall be conducted by professional archeologist.

9.10 Accessibility

Refer to Sections 9.11 B, C and D regarding treatment of materials. Refer to Sections 9.3, 9.4, 9.5, 9.6, 9.7, and 9.8 for additional Standards and Criteria that may apply.

1. **A three-step approach is recommended to identify and implement accessibility modification that will protect the integrity and historic character of the property.**
 - a. Review the historical significance of the property and identify character-defining features;
 - b. Assess the property's existing and required level of accessibility;
 - c. Evaluate accessibility options within a preservation context.
2. **Because of the complex nature of accessibility, the Historic Preservation Commission will review proposals on a case by case basis. The Commission recommend consulting with the following document which is available from the Commission office: U.S. Department of the Interior, National Park Service, Cultural Resources, Preservation Assistance Division; Preservation Brief 32, "Making Historic Properties Accessible" by Thomas C. Jester and Sharon C. Park, AIA.**

9.11 Architectural Materials

A. General

The Historic Preservation Commission of South Bend and St. Joseph County recommend that work proposed to the materials outlined in Sections B, C, and D be executed with the guidance of a professional building material conservator.

1. Removal of the speakers atop Pump House Number 3 is encouraged.

B. Masonry (Brick, Stone, Terra Cotta, Concrete, Stucco, and Mortar)

1. [intentionally left blank]
2. Original or later contributing masonry materials, feature, details, surfaces and ornamentation shall be retained and, if necessary, repaired by patching, piecing-in, or consolidating the masonry using recognize preservation methods.
3. Deteriorated or missing masonry materials, features, details, surfaces and ornamentation shall be replaced with material and elements which match the original in material, color, texture, size, shape, profile and detail of installation.
4. When replacement of materials or elements is necessary, it should be based on physical or documentary evidence.
5. If using the same material is not technically or economically feasible, then compatible substitute materials may be considered.
6. Original mortar shall be retained.
7. Deteriorating mortar shall be carefully removed by hand-raking the joints.
8. Use of mechanical saws and hammers shall not be allowed.

9. Repointing mortar shall duplicate the original mortar in strength, composition, color, texture, joint size, joint profile and method of application.
10. Sample panels of raking the joints and repointing shall be reviewed and approved by the staff of the Historic Preservation Commission of South Bend and St. Joseph County.
11. Cleaning of masonry is discouraged and should be performed only when necessary to halt deterioration.
12. If the building is to be cleaned, the mildest method possible shall be used.
13. A test patch of the cleaning method(s) shall be reviewed and approved on site by staff of the Historic Preservation Commission of South Bend and St. Joseph County. Test patches should always be carried out well in advance of cleaning (including exposure to all seasons if possible.)
14. Sandblasting (wet or dry), wire brushing, or similar abrasive cleaning methods shall not be permitted. Doing so changes the visual quality of the material and accelerates deterioration.
15. Waterproofing or water repellent are strongly discouraged. These treatments are generally not effective in preserving masonry and can cause permanent damage. The Commission does recognize that in extraordinary circumstances their use may be required to solve a specific problem. Samples of any proposed treatment shall be reviewed by the Commission before application.
16. In general, painting masonry surfaces shall not be allowed. Painting masonry surfaces will be considered only when there is documentary evidence that this treatment was used at some point in the history of the property.

C. Wood

1. [intentionally left blank]
2. Original or later contributing wood surfaces, features, details and ornamentation shall be retained and, if necessary, repaired by patching, piecing-in, consolidating or reinforcing the wood using recognized preservation methods.
3. Deteriorated or missing wood surfaces, features, details and ornamentation shall be replaced with material and elements which match the original in material, color, texture, size, shape, profile and detail of installation.
4. When replacement of materials or elements is necessary, it should be based on physical or documentary evidence.
5. If using the same materials or elements is necessary, it should be based on physical or documentary evidence.
6. Cleaning of wooden elements shall use the mildest method possible.
7. Paint removal should be considered only where there is a paint surface deterioration and as part of an overall maintenance appropriate protective coatings. Coatings such as paints help protect the wood from moisture and ultraviolet light and stripping the wood bare will expose the surface to the effects of weathering.
8. Damage or deteriorated paint should be removed to the next sound layer using the mildest method possible.
9. Propane or butane torches, sandblasting, water blasting, or other abrasive cleaning and/or paint removal methods shall not be permitted. Doing so changes the visual quality of the wood and accelerates deterioration.
10. Repainting should be based on paint seriation studies. If an adequate record does not exist repainting shall be done with the colors that are appropriate to the style and period of the building.

D. Architectural Metals (Cast Iron, Steel, Pressed Tin, Copper, Aluminum, and Zinc)

1. All metal materials, features, details and ornamentation of the buildings in the park shall be preserved. This also includes all metal parts of all fountains, monuments, memorials, plaques, street lights, drinking fountains, etc.
2. Original or later contributing metal materials, features, details, and ornamentation shall be retained and, if necessary repaired by patching, splicing or reinforcing the metal using recognized preservation methods.
3. Deteriorated or missing metal materials, features, details and ornamentation shall be replaced with material and elements which match the original in material, color, texture, size, shape, profile and detail of installation.
4. When replacement of materials or elements is necessary, it should be based on physical evidence or documentary evidence.
5. If using the same material is not technically or economically feasible then compatible substitute materials may be considered.
6. Cleaning of metal elements either to remove corrosion or deteriorated paint shall use the mildest method possible.
7. Abrasive cleaning methods, such as low pressure dry grit blasting, may be allowed as long as it does not abrade or damage the surface.
8. A test patch of the cleaning method(s) shall be reviewed and approved on site by staff of the Historic Preservation Commission of South Bend and St. Joseph County. Test patches should always be carried out well in advance of cleaning (including exposure to all seasons if possible.)
9. Cleaning to remove corrosion and paint removal should be considered only where there is deterioration and as part of an overall maintenance program which involved repainting or applying other appropriate protective coatings. Paint or other coatings help retard the corrosion rate of the metal. Leaving the metal base will expose the surface to accelerated corrosion.
10. Repainting should be based on paint seriation studies. If an adequate record does not exist repainting shall be done with colors that are appropriate to the style and period of the building.

The Landscapes- Specific Standard and Criteria was financed in part with funds from the National Park Service, U.S. Department of the Interior, through the Massachusetts Historical Commission, Secretary of State, Michael Joseph Connolly, Chairman, and adopted for use by the Historic Preservation Commission of South Bend and St. Joseph County, Indiana, by permission of the Environment Department, City of Boston, Massachusetts, by Michael A. Cannizzo, Staff Architect, 1996.

SITE VISIT REPORT:

January 15, 2019

RE: Leeper Park Site Visit (Central Section)

Observations made during visit

- Embankment area near steps has eroded
 - Washed out embankment causing tree roots to become exposed along hill
 - The poured concrete curbs along steps have washed out underneath and cracked as a result
 - Steps themselves appeared to be intact but have are starting to pitch northwesterly
- Trees
 - Along Riverside Drive
 - Near duck pond, two canopy trees are uprooting and have broken up the path between the pond and the street. These trees have lost limbs either naturally or have been cut.
 - Two other canopy trees along riverside are now gone and have been replaced with recently planted trees
 - At least five larger trees have come down either through storms or disease
 - New trees were installed after those original trees came down
- Horse trough appears to be in stable condition with base intact
- Small well house appears to be in stable condition with some minor cracks in foundation.

Please see photographs in digital file for reference.

Steve Szaday
Preservation Inspector

STAFF RECOMMENDATION: Staff recommends approval of the overall project and concepts with conditions that:

- (1a) the final path layout makes considerations for any memorial dedications (trees, stones, plaques, etc.).

final path layout, including any memorials determined to require an adjustment to the location or replacement otherwise, be submitted to Staff for final Administrative Approval.
- (1b) the final intersection design makes considerations for any memorial dedications (trees, stones, plaques, etc.).

final intersection design, including any memorials determined to require an adjustment to the location or replacement otherwise, be submitted to Staff for final Administrative Approval.
- (1c) final specifications, pending results of process 1 through 6, be submitted to Staff for final Administrative Approval.
- (3) final design/construction documents for Studebaker Electric Fountain and associated gathering space be submitted to Staff for final Administrative Approval.
- (4c) final design for former Duck Pond, pending results of soil boring and geotechnical engineering, be submitted to Staff for Administrative Approval.
- (5) detailed specifications for the Overlook be submitted for Commission review.

Elicia Feasel
Historic Preservation Administrator

Satellite Imagery

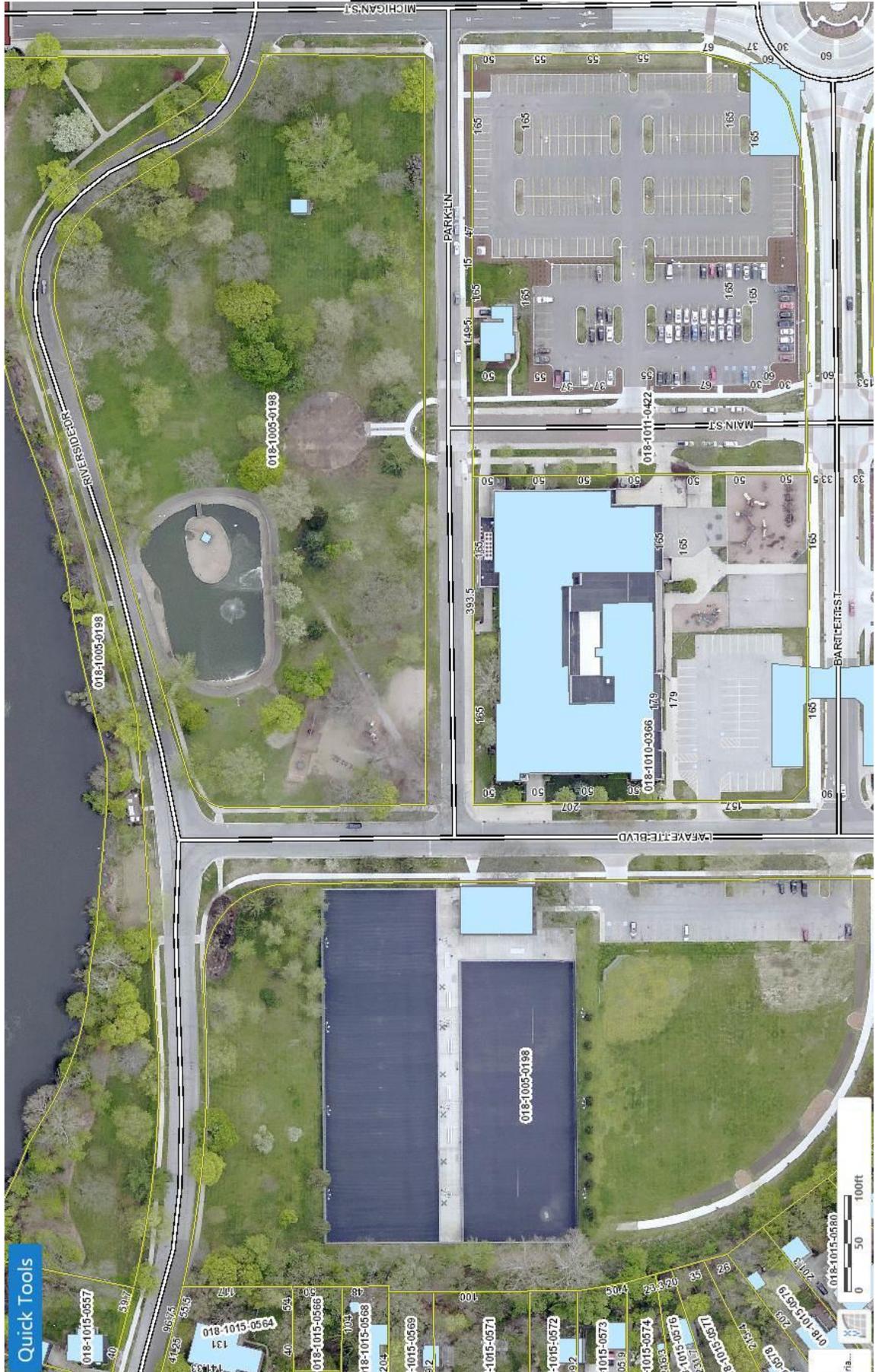


Diagram 1 – Satellite imagery from 2017

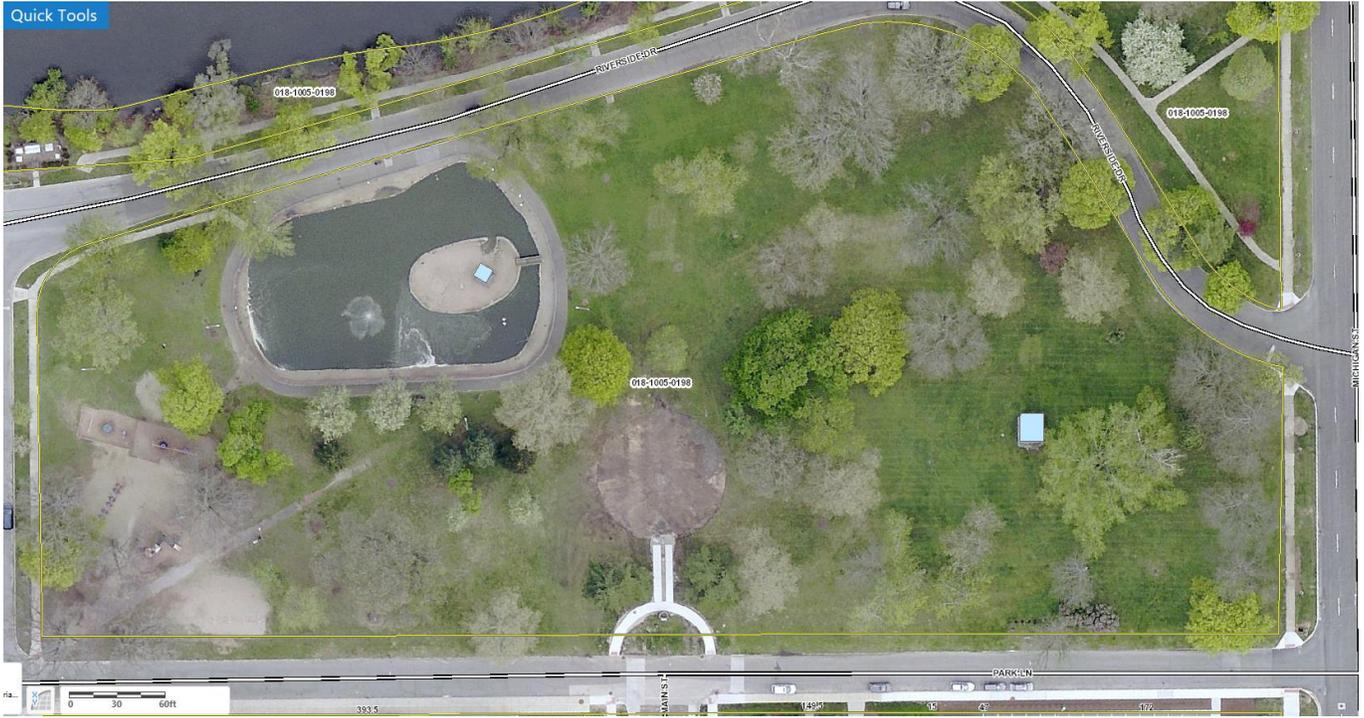


Diagram 2 – Satellite imagery from 2017



Diagram 3 – Satellite imagery from 2006

Photos

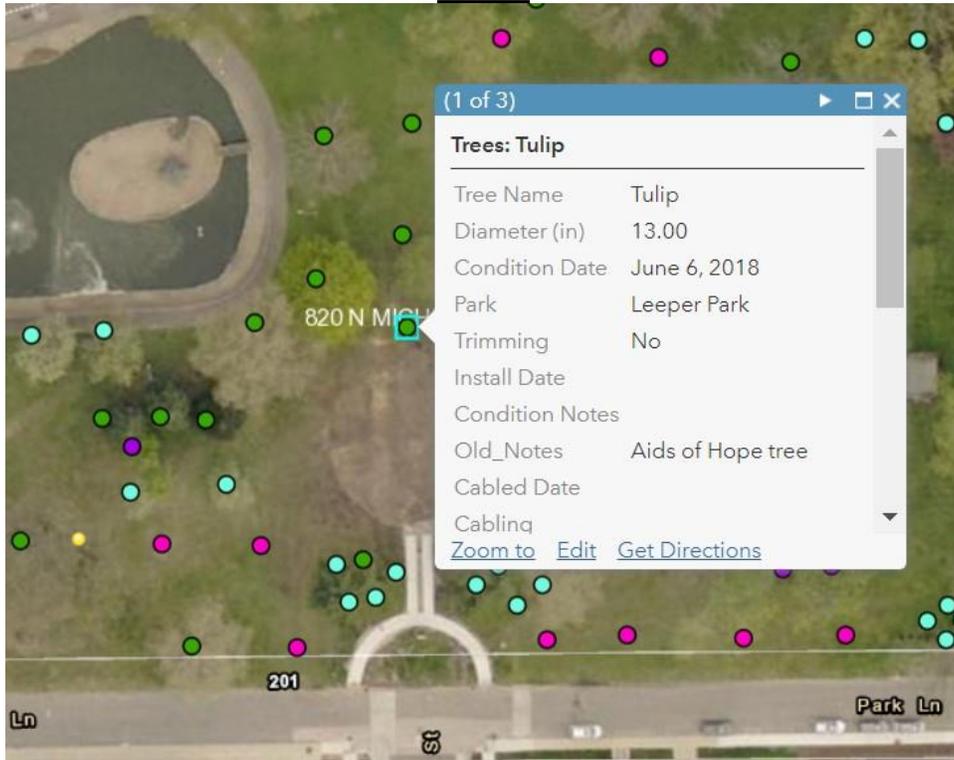


Photo 1 - (1a) memorial tree in vicinity of formal garden/fountain



Photo 2 - (1a) memorial tree in vicinity of formal garden/fountain



Photo 3 - (1a) memorial tree in vicinity of formal garden/fountain



Photo 4 - (1b) memorial tree in vicinity of intersection adjustment



Photo 5 - (1b) memorial tree in vicinity of intersection adjustment

**TO ENSURE YOUR APPLICATION CAN BE PROCESSED IN A TIMELY MATTER WITHOUT DELAY,
PLEASE INCLUDE THE FOLLOWING DOCUMENTATION WHEN APPROPRIATE:**

- Certificate of Appropriateness application**
- Written description** of the project (materials to be used, scale, dimensions, construction methods, alterations, etc.)
- Materials to be used** (Supplemented with manufactures' brochures and specifications)
- Site Plan** showing existing buildings & structures and proposed project (for new construction, additions, paths, terraces, patios, fences)
- Photographs**
- Blueprints/Drawings**
- Application fee - \$20.00**

PROJECT DESCRIPTION

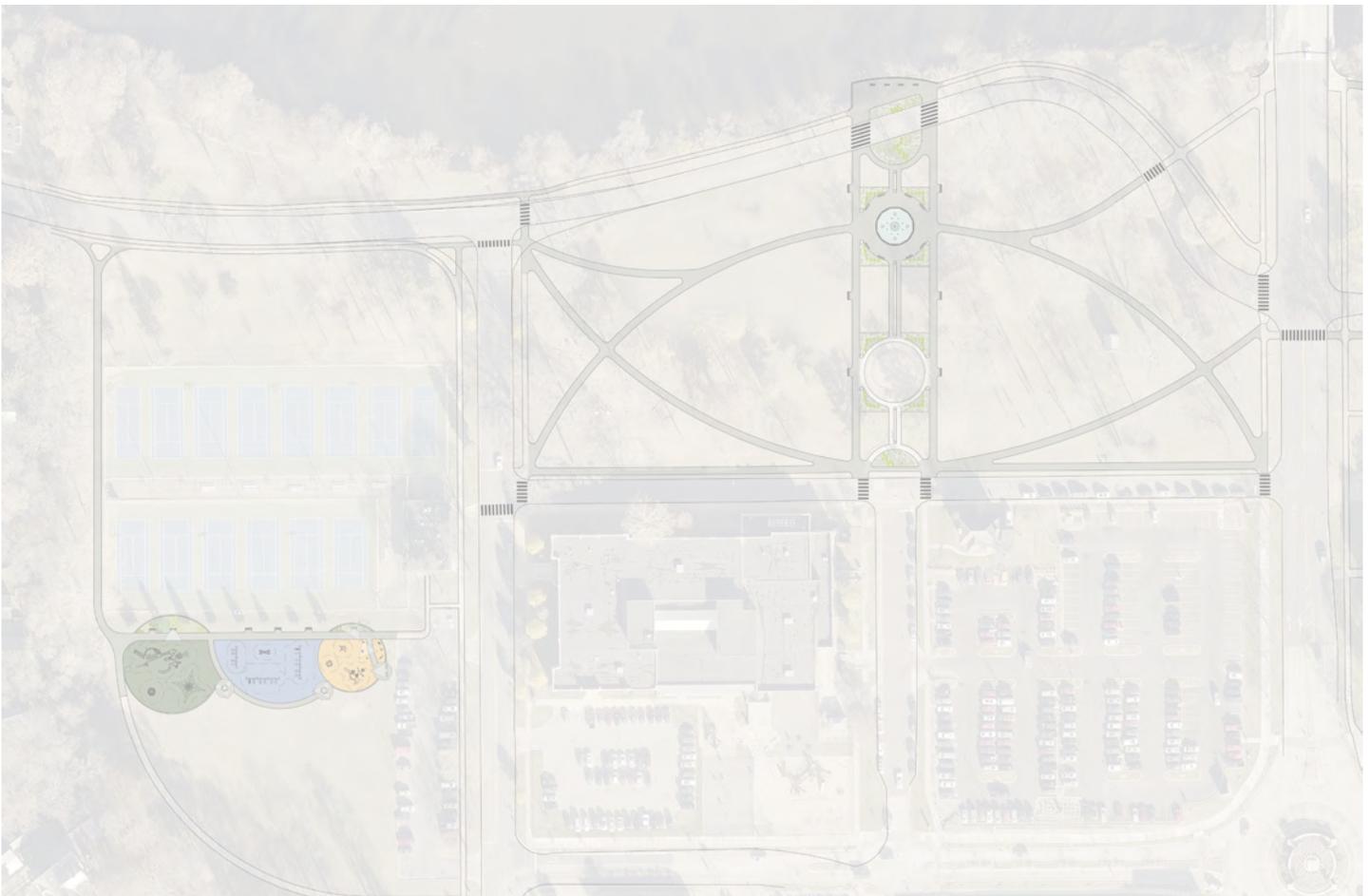
Leeper Park reflects the characteristics of an early 20th century urban park combining the concepts of a rural retreat, preservation and enhancement of natural scenery, opportunities for public gathering, and space for active recreation. Parks of this era frequently combined formal elements such as public gardens and promenades with more informal and pastoral spaces. From the 1998 Leeper Park National Register of Historic Places (NRHP) nomination, “. . . early 20th century parks were not static elements of the urban landscape; they were often overlays of sequential designs.” This concept is proven by the history of the Leeper Park and, looking forward, by the proposed improvements included in this application.

The modern visioning process for Leeper Park began in 1996 with the extensive research published by J. Edward Talley, followed by the 1998 Cultural Landscape Report, the 1998 NRHP nomination, development of site specific preservation guidelines, and the 2017 riverfront and trail framework plan. The 2018 Leeper Park Concept Plan presented in this application incorporates concepts from the above documents and draws heavily from George Kessler’s 1915 plan, itself an overlay of the 1905 Beyer Plan, to create a public space that celebrates Leeper Park’s historic integrity and functions for contemporary needs.

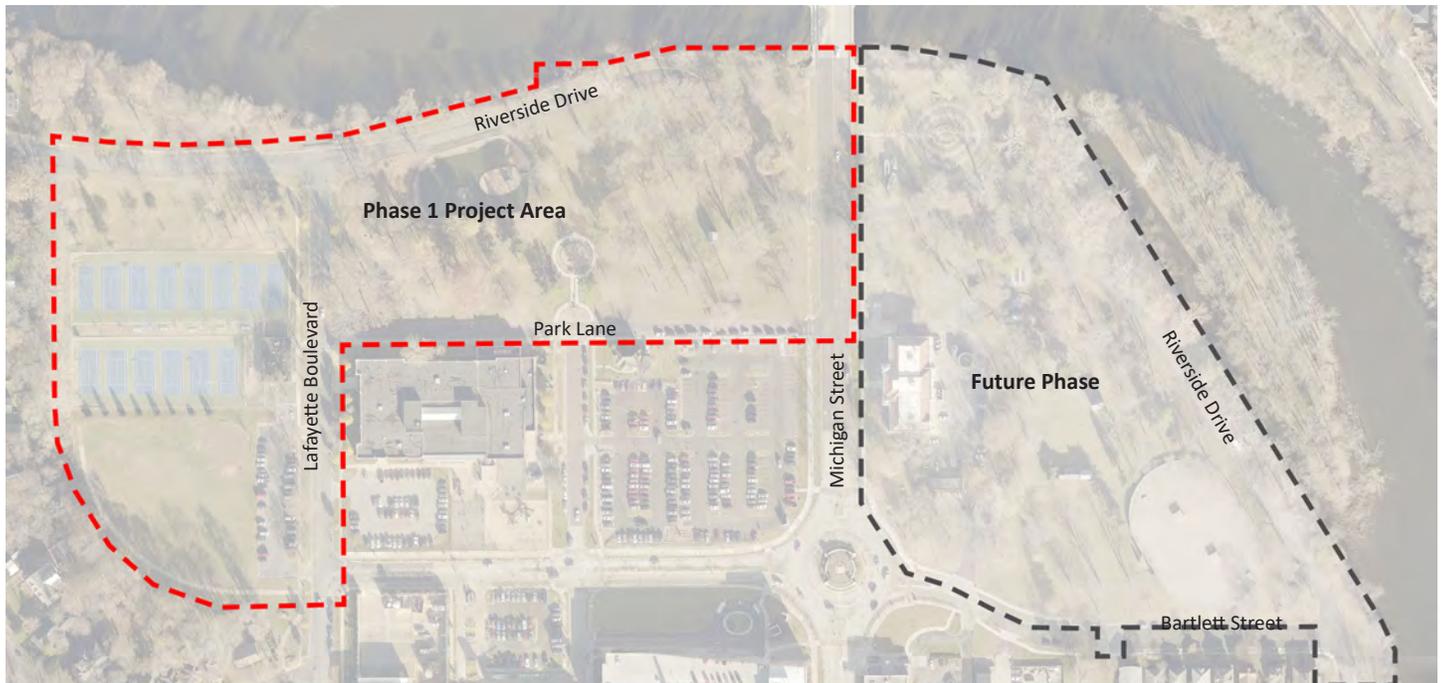
This application for a Certificate of Appropriateness centers around five critical design components, currently funded and intended to be part of the first phase of construction (see map on next page for the Phase 1 project area):

1. Improvements to internal pedestrian circulation
2. Installation of a new playground
3. Installation of the Studebaker Electric Fountain and associated gathering space
4. Removal of the existing duck pond
5. Creation of a formal river overlook (concept)

These elements are discussed in detail on the following pages and are supported by a combination of plans, photographs, narrative and additional imagery.



Leeper Park is bounded by the park's property line on the west, the St. Joseph River on the north and east, and Park Avenue and Bartlett Street on the south.



This application requests a Certificate of Appropriateness for the following Phase 1 elements:

1. Improvements to internal pedestrian circulation

The proposed internal pedestrian includes broad, sweeping paths in combination with the creation of a formal central garden element. In the western section, the existing concrete path at the southern end of the property will remain in place. Additions include an east/west walk, south of the tennis courts, providing access to the proposed playground, parking and existing community center, and a north extension to Riverside Drive providing more direct access to the park from the Chapin Park neighborhood. In the central section the broadly arced paths are adapted from the character defining path network of the 1915 Kessler plan and, combined the re-creation of the central formal garden, restores this area of the park as Leeper's "front yard".

Proposed Design

- Concrete paths, 5-feet to 8-feet in width depending on location
- Standard concrete will be used with no color additives, medium broom finish on all surfaces
- Historic concrete steps in the center section will be placed using exact measurements and proportions. See attached imagery and narrative for further detail

Reference

- 1905 Beyer Plan: included a strong central axis
- 1915 Kessler plan: significantly enhanced the design of the 1905 central axis
- Leeper Park Cultural Landscape Report
 - Pages 46, 53, 54: recommendation for the restoration of the formal garden
 - Formal garden configuration apparent in 1938, 1951 and 1965 aerial photography
- NRHP Nomination
 - Section 7, Page 2: "An additional formal garden was developed in 1919, extending the axis of Main

- Street into the park.”
 - Section 7, Page 3: “The park was designed to provide views of the river from a number of locations. Vistas include the views approaching the park from Main Street, where there is a view of the central garden . . .”
 - Section 8, Page 9, Kessler Design Principles: “Path alignments feature sweeping, complex radial curves . . .”
 - Section 8, Page 10, Statement of Significance: “The Kessler and earlier Beyer designs for Leeper Park provided the quintessential components of the City Park: . . . a system of curvilinear paths for strolling, . . . and formal landscape features such as gardens and broad terraces for gatherings.”
- Standards and Guidelines for Leeper Park
 - Item 9.2.5: “Deteriorated or missing spatial organization features shall be replaced with features that match the original in form, shape, color and texture.”
 - Item 9.5.3: “Alteration of existing or addition of new circulation layouts will be considered if it can be shown that better circulation is necessary and that the alteration does not alter the basic concept of the historic landscape design.”

2. Installation of a new playground

A new playground will be installed south of the existing tennis courts. The existing play area in the central section will be removed. The relocation of the playground will consolidate active uses in the western section of the park allowing for the restoration of the historic passive nature of the central section. The new play area will be adjacent to existing parking, the community center and restrooms.

Proposed Design

- Equipment: multi-component structures, climbing apparatus, bouncing/spinning equipment, and swings
- Materials: powder coated metal, molded plastic, poured-in-place rubber surfacing
- Color scheme: to be determined and presented at a later meeting
- Open, multipurpose play lawn located south of the playground

Reference

- 1915 Kessler Plan: located play in the western section, consolidating active park uses in the area with tennis
- Leeper Park Cultural Landscape Report
 - Page 48: “. . . we strongly recommend that the playground which is presently in the central sector be moved to the western part of the park. This will restore George Kessler’s original land use intent to the central and western sections.”
- NRHP Nomination
 - Section 7, Page 4, Intrusions into the District: “Playground in . . . central section [is] not located where this type of facility was historically located.”

3. Installation of the Studebaker Electric Fountain and associated gathering space

A commitment has been made by the City of South Bend to locate the restored Studebaker Electric Fountain in Leeper Park. Restoration of the fountain is being spearheaded by The Studebaker Fountain Committee, a committee of the South Bend Parks Foundation. Improvements include installation of the historic Studebaker Electric Fountain, a fountain mechanical vault located beneath the fountain, and a concrete plaza surrounding the fountain. The fountain will become the centerpiece of the restored formal garden.

Proposed Design

- Restored fountain components: cast metals with a verdigris finish
- Plaza material: concrete, no color additives, medium broom finish

Studebaker fountain details:

- Surviving elements of the Studebaker Electric Fountain:
 - Upper seven foot diameter basin with recessed locations for light bulb sockets to be attached
 - Cast iron stand that sits in the basin
 - Topmost figure with opening beneath the bowl in her hands and remnants of a light bulb socket remain
 - Support column for upper basin with three female figures surrounding it
 - Three of four cast zinc dolphins with riders
 - One of the eight turtles
- Re-created elements:
 - Lower ten foot diameter basin and the column supporting the basin
 - Box shaped element with four large curled corners surmounted by the figures of four boys and two swans
 - One dolphins with rider
 - Seven turtles.
 - Twelve cast iron wall sections each involving a wall element, a top rail along the upper edge of the wall element, a corner element and a cap for each corner element that from the fountain pool.
- Fountain lighting will be restored in locations per the original design. New lighting will be computer software controlled LED and fiber optic fixtures capable of both white or color lighting. Locations:
 - One round globe hanging under the bowl held by the topmost figure
 - Beneath the rim of the seven foot diameter upper basin
 - Near the top of the column supporting the upper basin
 - Each of the twelve pool wall corners on the inside of the wall

Precedent

- Photographic Documents: historic imagery and postcards show the now removed Bugbee Fountain located in the central section of the park
- Leeper Park Cultural Landscape Report
 - Page 8: “ 1905. “Bugbee Fountain was installed in the central section of the park.”

4. Removal of the existing duck pond

The discussions and outreach associated with the removal of the duck pond have been numerous and a separate white paper has been developed outlining the basis for the removal of the duck pond. This park upgrade solves a major issue that cities across the country are struggling with. Numerous studies show that duck ponds aren't healthy for the wildlife nor the environment. This isn't a case of maintenance neglect nor a need for a cleaning regiment. Overcrowding, disease, landscape degradation, hybridization, water pollution, and other issues prevail. Organizations such as zoos and aquariums have had to adjust how they think and treat animals through the years; parks systems are no different. The 2018 Leeper Park Plan includes the creation of a river overlook (see item 5 below) which will continue to allow people to view and connect with water fowl in a safer, healthier, more natural environment for the community and the birds.

The proposed plan will fill in the existing duck pond. The project includes soil borings and geotechnical engineering to determine the most appropriate type of fill material. Fill will be placed to blend seamlessly into the existing park topography and the area will be planted with lawn, becoming additional open and flexible space for passive park activity and special events such as the Leeper Park Art Fair.

Reference

- White Paper on Leeper Duck Pond
 - Waterfowl at artificial feeding sites are often found to suffer from poor nutrition due to lack of natural food sources and feeding competition
 - Hand feeding can cause birds to become concentrated in small urban areas that are incapable of

supporting large numbers of birds making birds dependent upon humans for food. Some birds can become aggressive and may need to be removed. An aggressive adult goose can easily knock down a child or senior citizen, and geese can fly up to 50 mph

- Lowered nutrition and overpopulation allow disease to spread more quickly
- Concentration of birds contributes significantly to water pollution in the form of fecal coliform bacteria
- Feeding alters normal migration patterns of waterfowl affecting bird mortality
- Overcrowding results in damage to the surrounding park landscape due to overgrazing and creates unsanitary conditions for park users and birds
- Standards and Guidelines for Leeper Park
 - Item 9.6.3: “Consideration for the removal of existing water features will be given when it is in conflict with the original design intent of the landscape or when they are no longer appropriate to their intended purposes.”

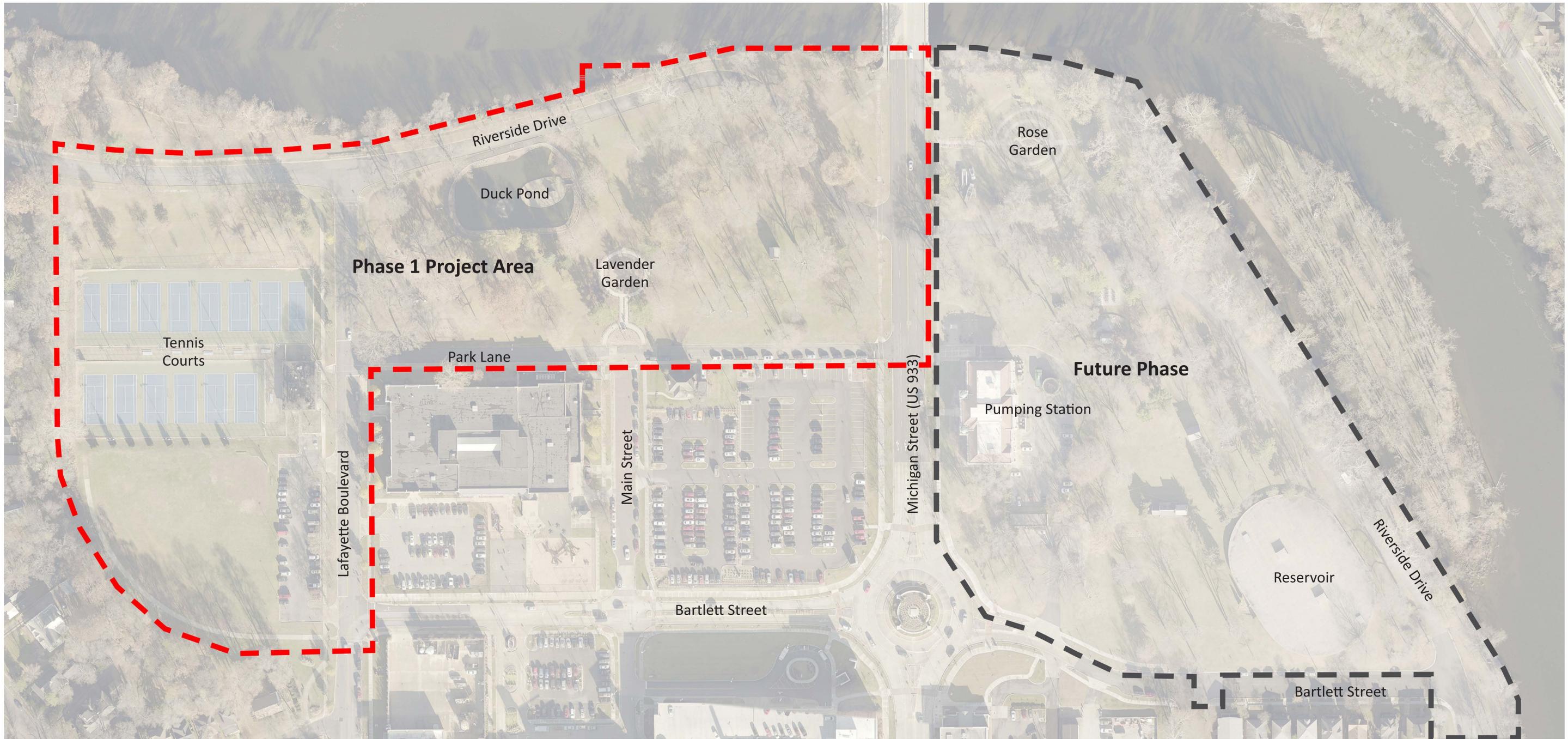
5. Creation of a formal river overlook (concept approval)

The creation of a river viewing overlook will provide park users with unobstructed views of the St. Joseph River and will continue to allow people to view and connect with water fowl in a safer, healthier, more natural environment for the community and the birds.

The request at this time is for approval of the overlook concept. The specific design of the overlook including structural details, elevations, and final materials will be presented at a later meeting.

Proposed Design

- Location: north end of the formal garden providing views north to the historic Northshore Triangle neighborhood, east to the Michigan Street Bridge and west along the river
- Curved northern edge to reflect curved details found in the formal garden elements (fountain plaza, lavender garden) and the proposed path system



Leeper Park Concept Development *Project Area*



Leeper Park Concept Development

Photo Location Map



1

Looking north from existing path toward parking, tennis courts



2

Area of proposed new playground



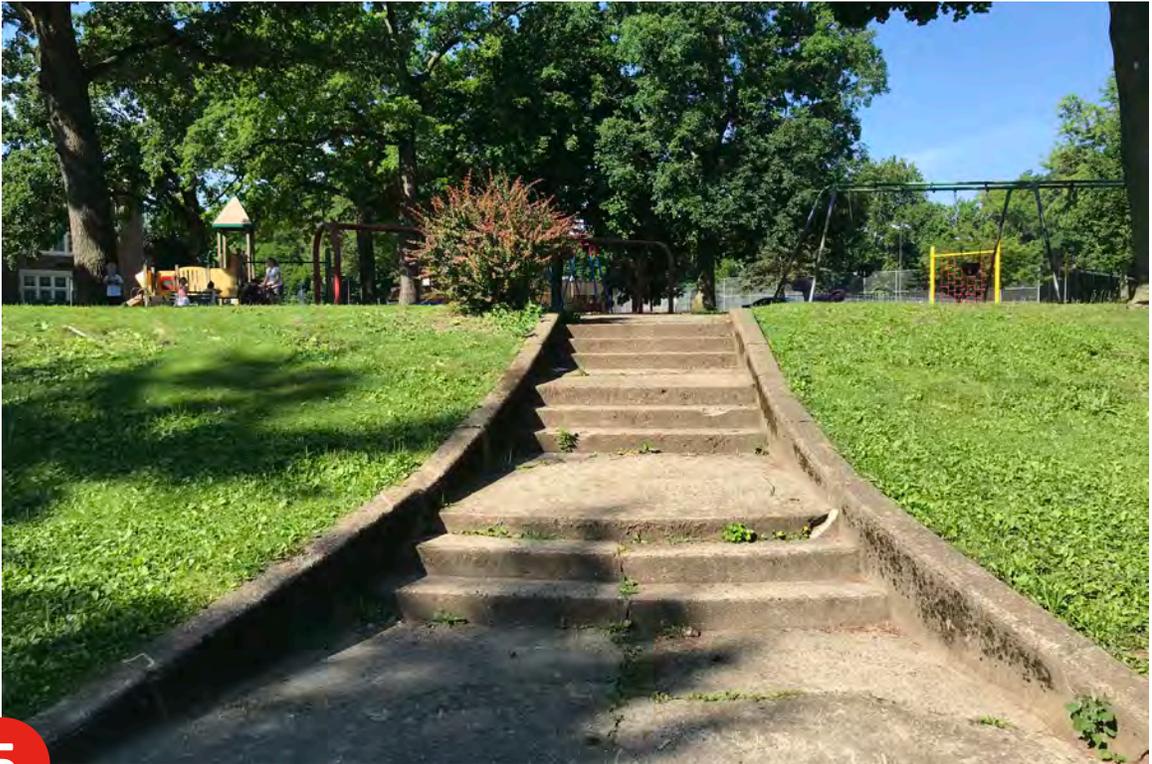
3

Existing playground



4

Existing playground



5

Existing steps



6

Labyrinth and lavender garden



7

West edge of labyrinth, historic slope in the background



8

Existing pump house, lawn area



9

Existing path along river



10

Existing park entrance at southwest corner of the Michigan Street bridge



11

West side of Michigan Street, looking south



12

View along west side of tennis courts



13

View from northwest corner of tennis courts



14

Duck Pond



15

Duck Pond



16

Duck Pond



17

View toward bridge

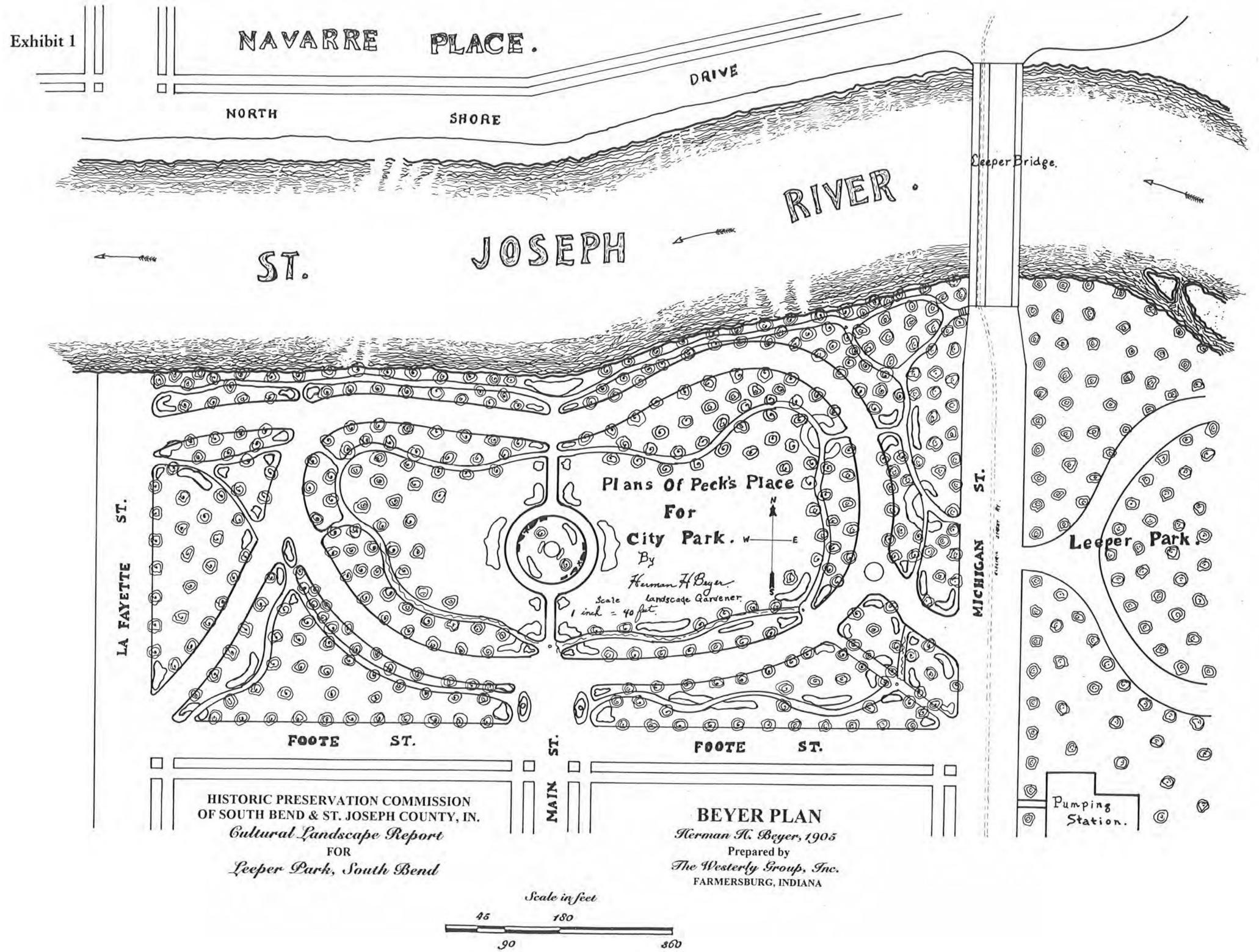


18

View west

NOTES:

- Curvilinear paths
- Strong north/south central axis



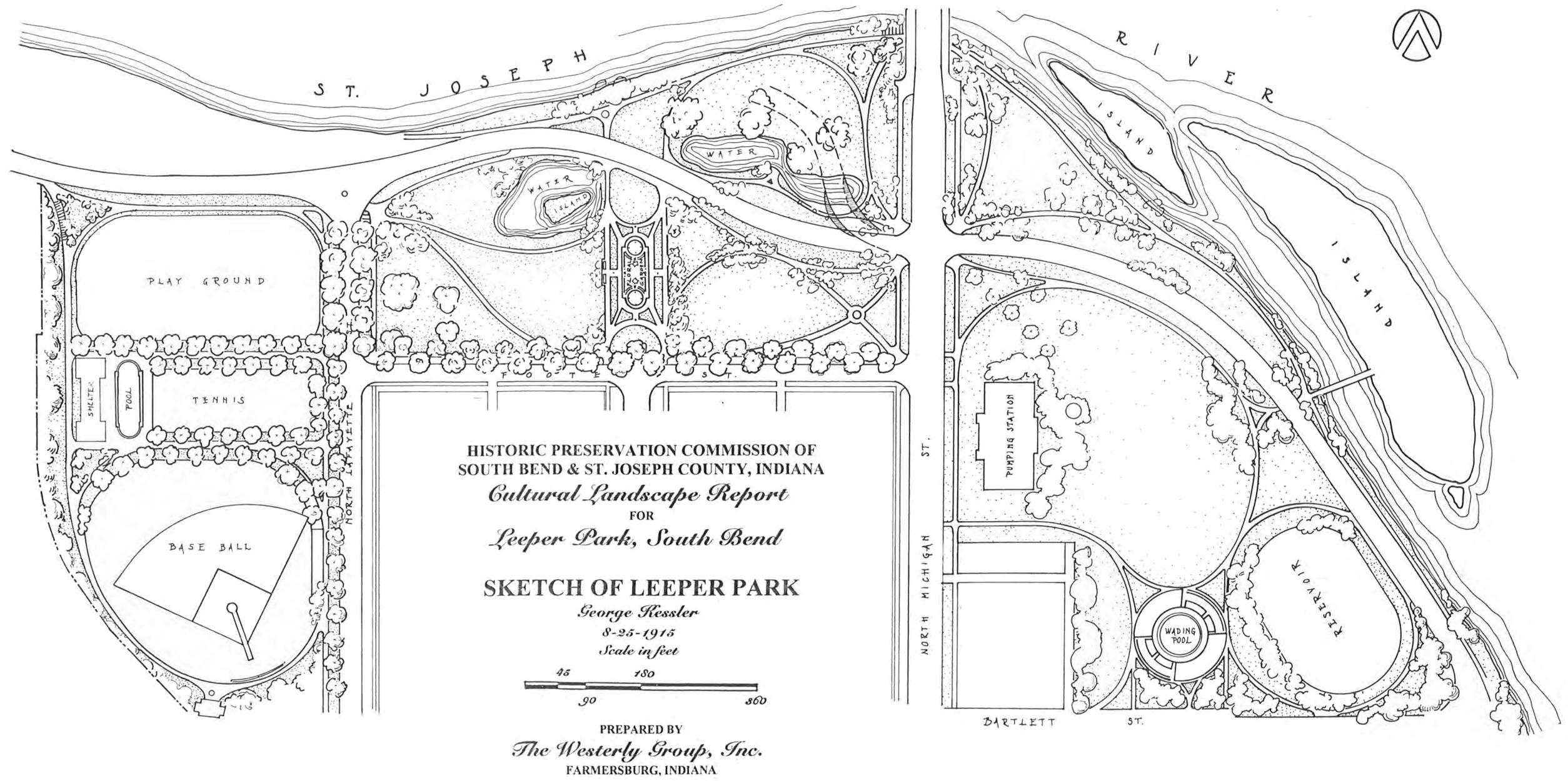
Beyer Plan, 1905



Leeper Park Concept Development

Historic Context





Kessler Plan, 1915

NOTES:

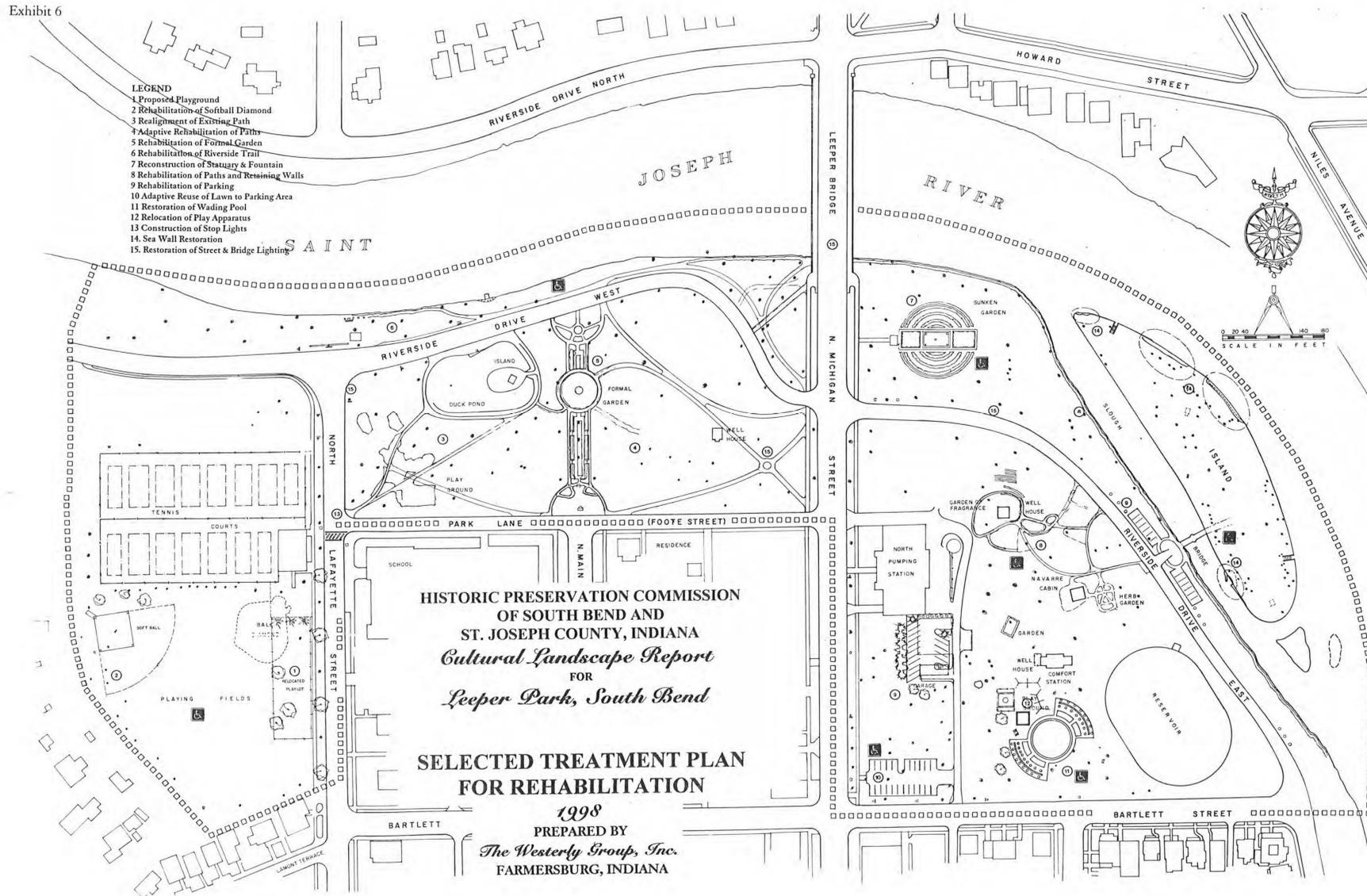
- Active uses including play and tennis located in the west section
- Sweeping, arced path network
- Formal garden and strong north/south central axis
- Use of tree lines to accentuate paths
- Informal planting throughout park



Leeper Park Concept Development

Historic Context





Leeper Park Cultural Landscape Report, 1998

NOTES:

- Play relocated to west section
- Recreation of a strong central axis
- Adaptive recreation of Kessler-esque path system in center section



Leeper Park
CULTURAL LANDSCAPE REPORT

Prepared by
The Westerly Group, Inc.

For:
The Historic Preservation Commission
of South Bend & St. Joseph County

May, 1998

APR-18-98 11:28 PM 1001 RIVERSIDE DRIVE 219 288 8314 P.02

9.0 LANDSCAPES - STANDARDS AND CRITERIA FOR LEEPER PARK

9.1 Introduction

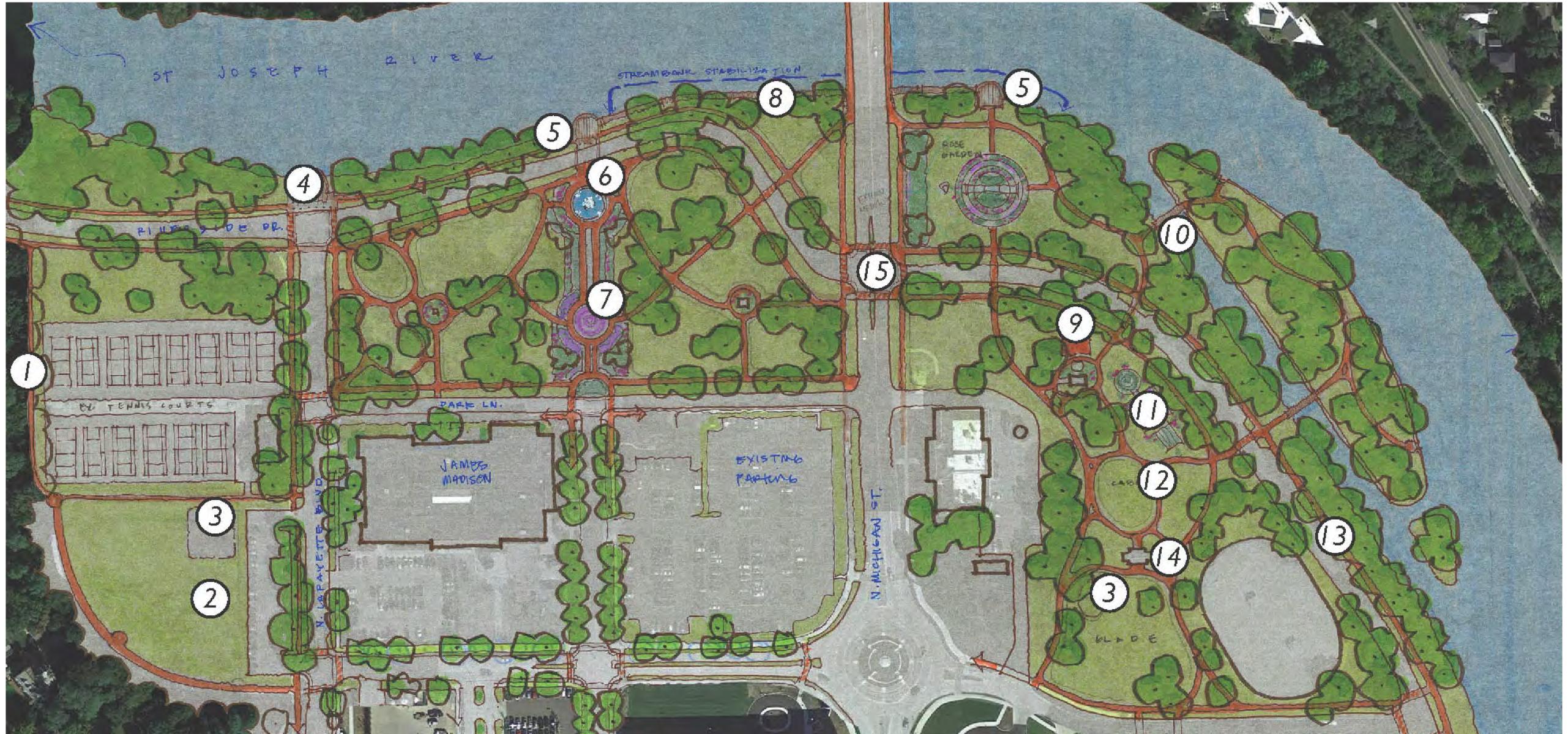
1. In these guidelines the verb *Should* indicates a recommended course of action; the verb *Shall* indicates those actions which are specifically required to preserve and protect significant architectural elements.
2. The intent of these standards and criteria is to preserve the overall character and appearance of Leeper Park including its spatial organization, topography, vegetation, circulation and features.
3. The standards and criteria acknowledge that there will be changes to the landscape and are intended to make the changes sensitive to the historic character of the landscape.
4. Each property will be separately studied to determine if a later addition(s) and/or alteration(s) can, or should, be removed.
5. Since it is not possible to provide one general guideline, the following factors that will be considered in determining whether a later addition(s) and/or alteration(s) can, or should, be removed include:
 - a. Compatibility with the original property's integrity in scale, materials and character.
 - b. Historic association with the property.
 - c. Quality in design and execution of the addition/alteration.
 - d. Functional usefulness.
6. Recreational facilities which exist should be allowed to remain as long as they serve substantial community functions. In some cases these features can be redesigned to be more compatible with the overall landscape.
7. Additions to existing recreational facilities shall not be allowed unless such additions make the facilities more compatible with the overall landscape.
8. The development of additional facilities for active recreation or single purpose uses for limited user groups shall not be allowed.
9. Proposals for special activities and events which cause significant impacts or require permanent or even semi-permanent (seasonal) structures or facilities shall not be

Standards and Criteria for Leeper Park



Leeper Park Concept Development
Historic Context





Leeper Park Framework Plan, 2016

NOTES:

- Play relocated to west section
- Recreation of a strong central axis
- Adaptive recreation of Kessler-esque path system

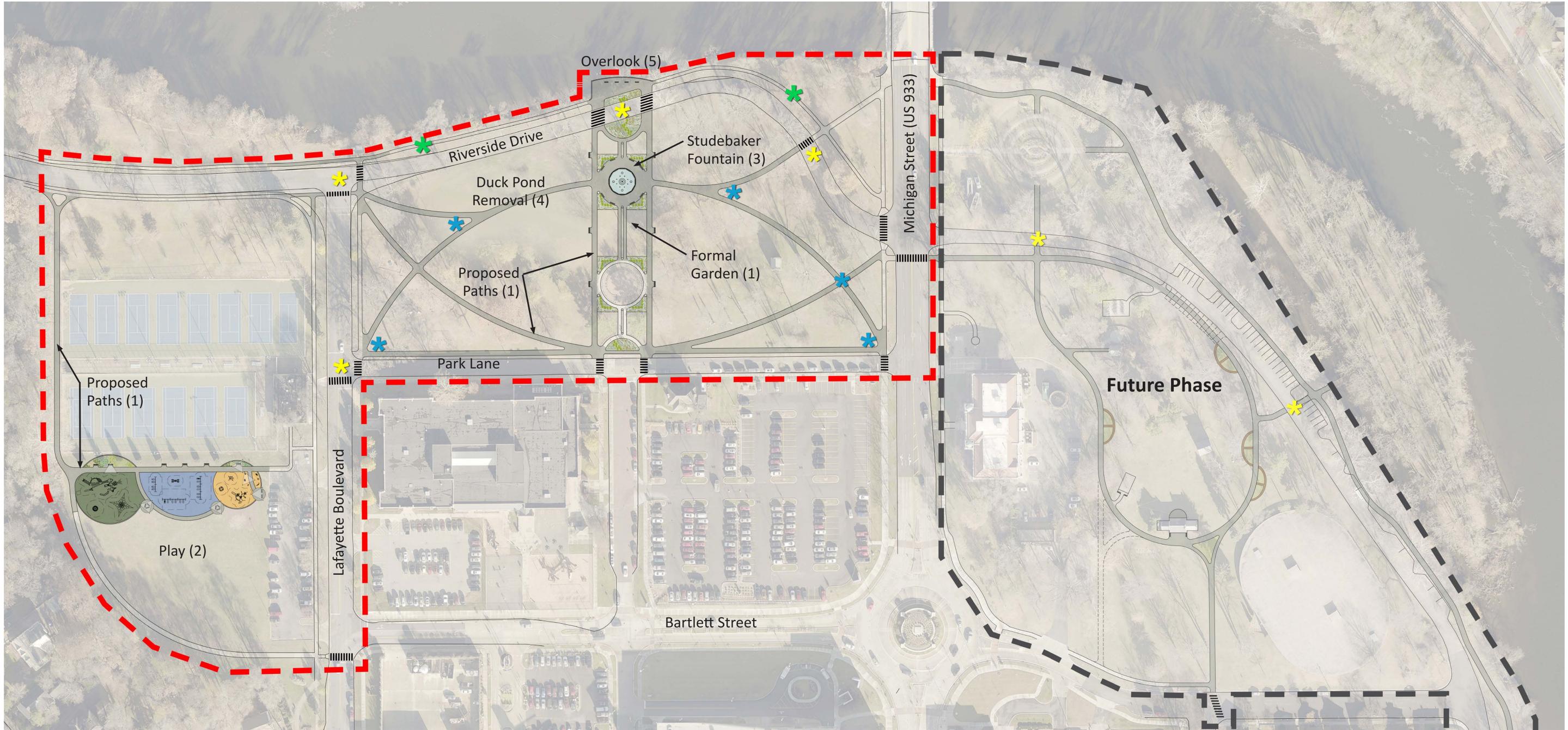
LEEPER PARK - CONCEPT LEGEND					
① CONNECTION TRAIL	④ OVERLOOK PLAZA	⑦ LAVENDER GARDEN	⑩ PROPOSED BRIDGE	⑬ PARALLEL PARKING	
② MULTI-PURPOSE FIELD	⑤ OVERLOOK AND BOARDWALK ACCESS	⑧ BOARDWALK CONNECTION	⑪ DISPLAY GARDENS	⑭ COMFORT STATION	
③ PLAY AREA	⑥ STUDEBAKER FOUNTAIN AND PLAZA	⑨ AMPHITHEATRE	⑫ NAVARRE CABIN	⑮ PEDESTRIAN REFUGE ISLAND	



Leeper Park Concept Development

Historic Context





NOTE: Numbers correspond to the COA application items listed in the project description



Future Art Node



Proposed Tabletop Intersection



Future River Viewing Node



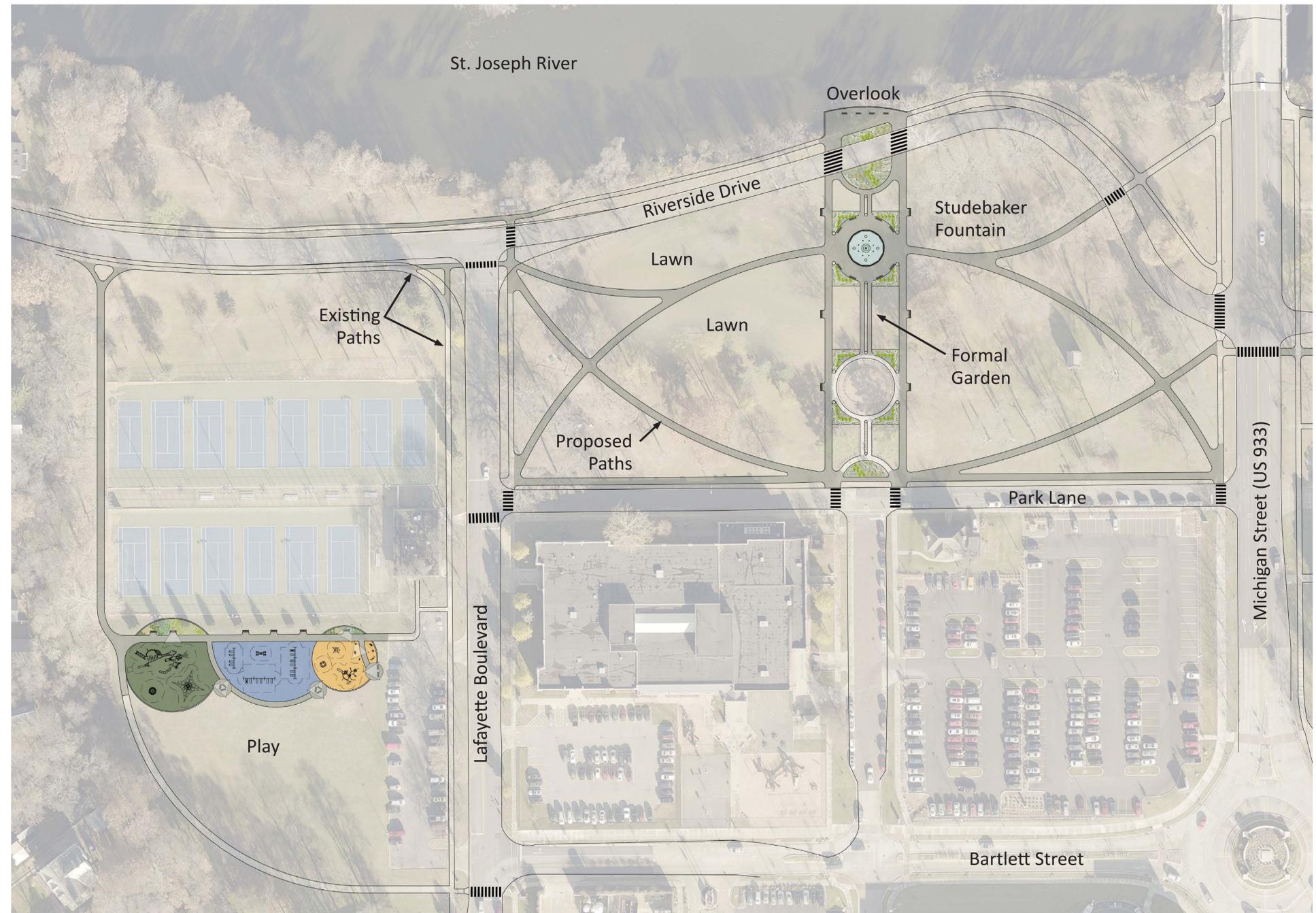
Leeper Park Concept Development

Overall Park Concept



NOTES:

- New pedestrian circulation
- Relocate playground south of tennis courts
- Re-introduce strong central axis, formal garden in center of park
- Remove Duck Pond
- Install Studebaker Fountain and plaza
- Create large river overlook



Leeper Park - Proposed Phase 1

Plan

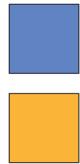


NOTES:

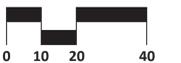
- Relocated playground south of tennis courts - closer to parking and restrooms
- Consolidates active park uses to the west end
- Pods of age related equipment

PHASE 1 ELEMENTS:

- All walks
- Planting and trees- final design to be presented at future meeting
- Lighting - final design to be presented at future meeting
- Site amenities (seating, shade sails) - final design to be presented at future meeting
- Play areas:



Leeper Park - Proposed Phase 1 Playground Concept





Rendered in Custom Atlantic Palette

Light Green - Accents

Blue - Arch Swing Frame

Intellectual property of GameTime, a PlayCore Company. The site shown in rendering is an interpretation and may not reflect exact site conditions.

South Bend Parks Leeper Park South Bend, Indiana



www.gametime.com



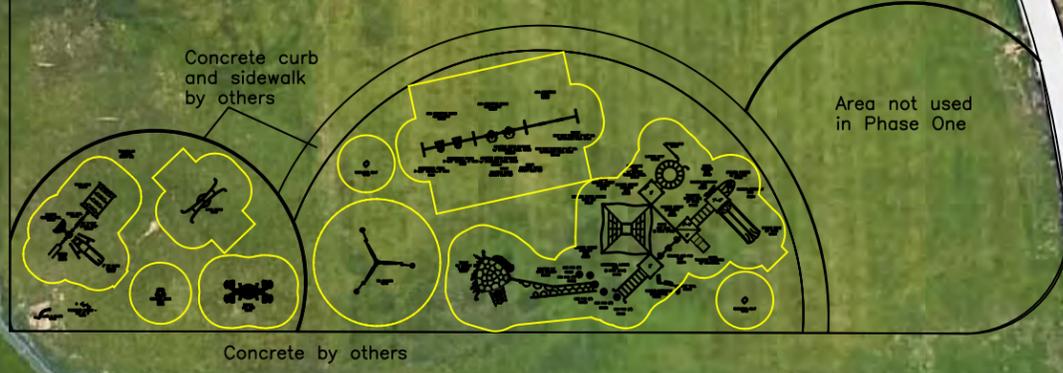
www.sinclair-rec.com

Leeper Park

South Bend, IN

Legend

 Leeper Park Tennis Center



Google Earth

© 2018 Google

200 ft

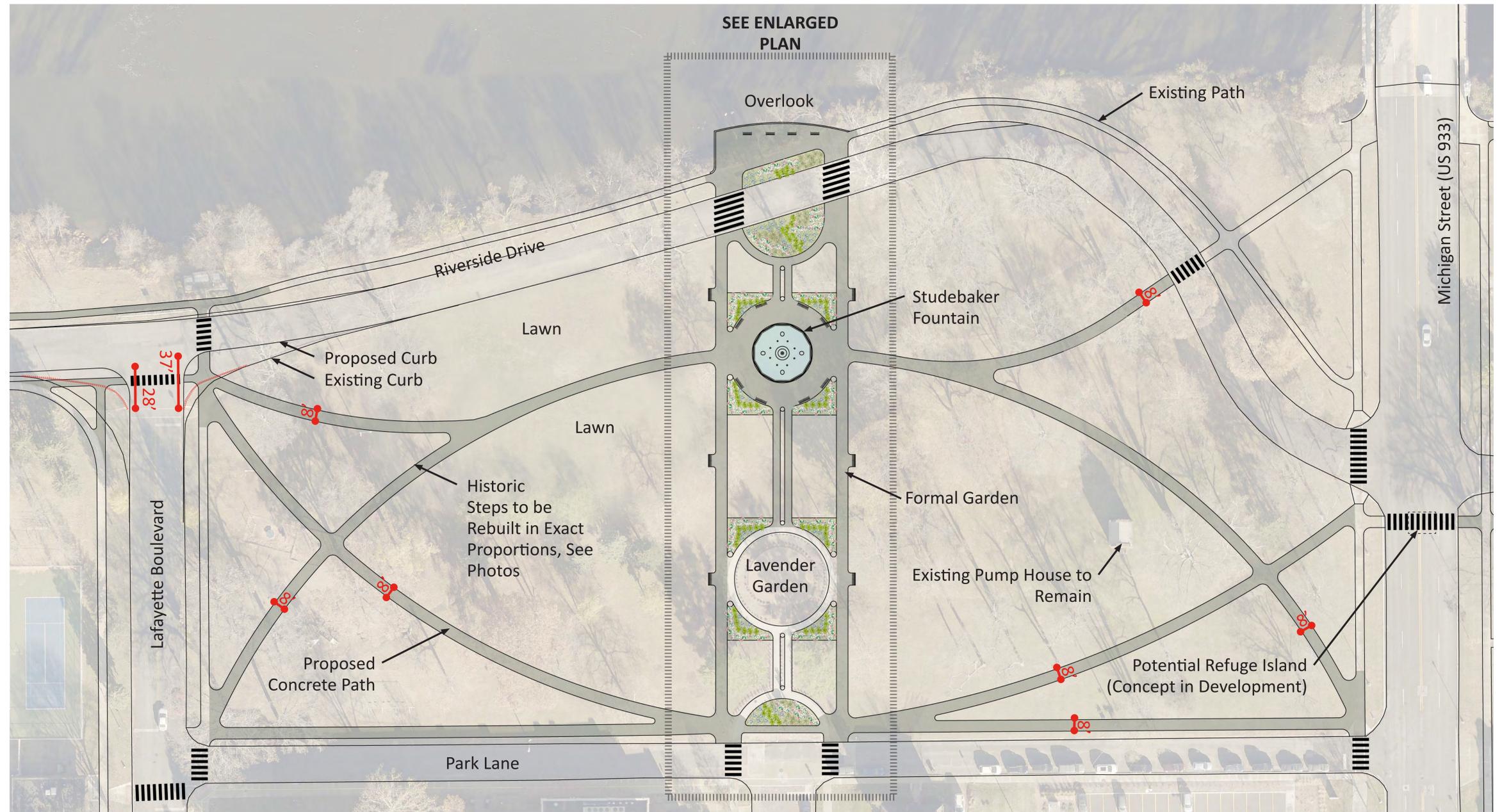


NOTES:

- Removal of duck pond, now open lawn area
- Re-introduce strong central axis and formal garden in center of park
- Final path layout may change slightly to avoid removal of large trees
- The intersection of Riverside Drive and Lafayette Boulevard will be reconfigured to eliminate excess pavement, help calm traffic and shorten pedestrian crossing distance

ITEMS TO BE PRESENTED AT FUTURE MEETING:

- Planting design
- Site furnishings
- Sign locations/design
- Lighting



Leeper Park - Proposed Phase 1

Central Section



NOTES:

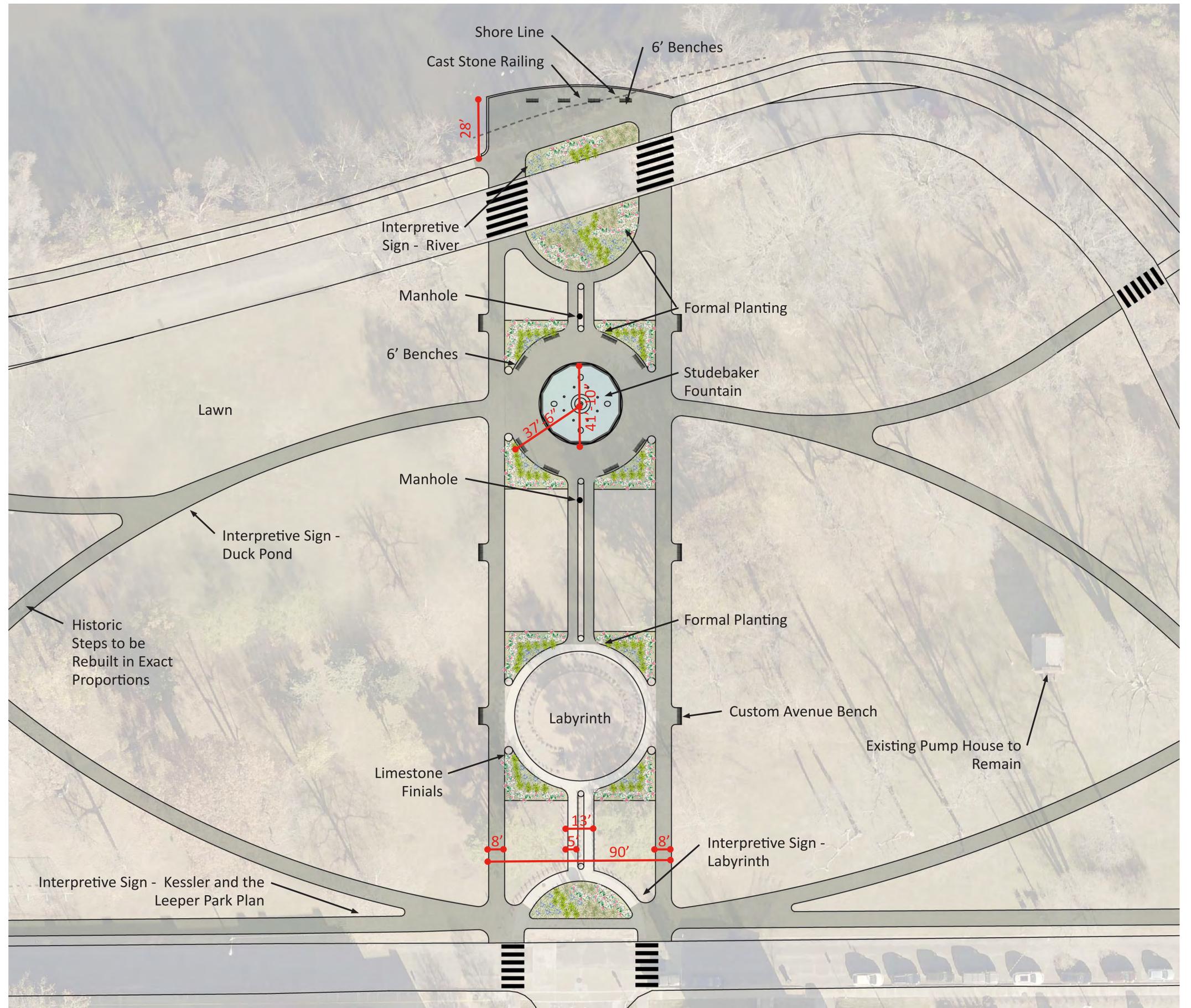
- Removal of duck pond
- Fountain location requires replacement of approximately 100-150 linear feet of existing brick storm sewer with ductile iron, encased in concrete
- Requires two new manhole structures, exact locations to be determined

ITEMS TO BE PRESENTED AT FUTURE MEETING:

- Planting design
- Site furnishings
- Sign locations/design
- Lighting
- Overlook design

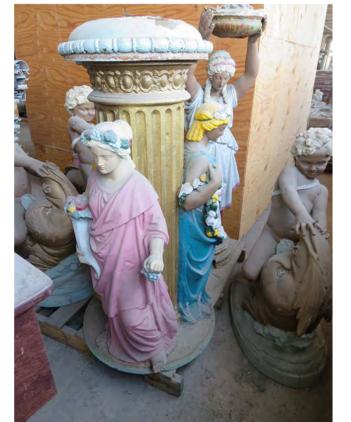


Historic steps to be rebuilt using exact proportions/dimensions, see additional information



Leeper Park - Proposed Phase 1
Formal Garden





Proposed Finish

Historic images of the Studebaker Fountain

Leeper Park - Proposed Phase 1 Studebaker Fountain





Top tier- good condition, consistent rise and run



First landing - air condition, significant crack through landing and walls



Top tier- cracking



Top tier- good condition, consistent rise and run



Middle tier- fair condition, consistent rise and run



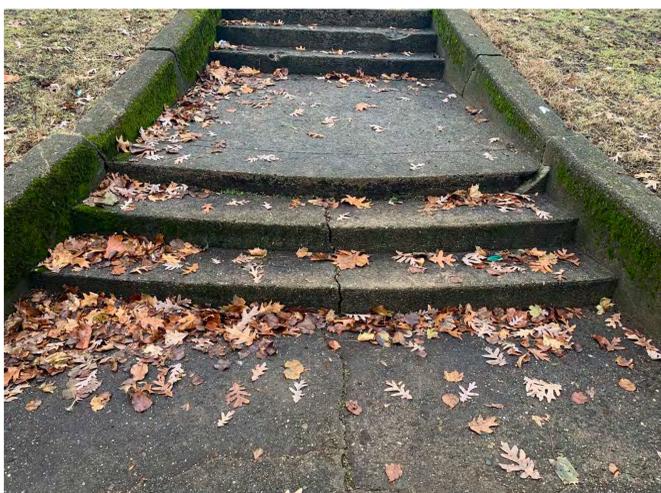
Middle tier - spalled area 1



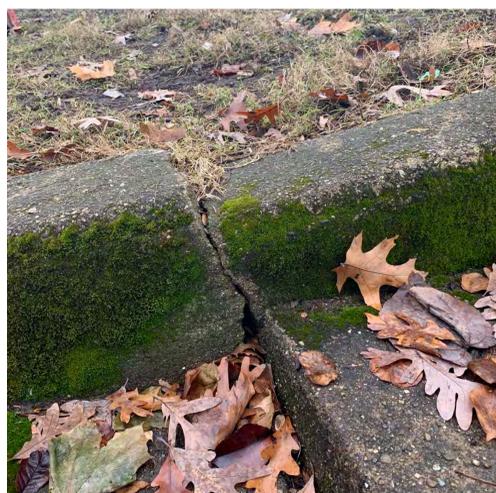
Middle tier - spalled area 2



Middle landing - crack in wall, both sides



Bottom tier - fair crack through steps continuing into landing, top step 1" lower rise



Bottom tier - crack at base of top step continues through wall, entire landing and step has sunk 1"



Bottom landing - multiple cracks, unevenness, ADA issue

RECOMMENDATION:

- Replace steps using historic dimensions

PROCESS:

- Take detailed field measurements, photos
- Coordinate with concrete expert
- Create detailed construction details
- Contractor to gently clean existing steps to expose true surface conditions/colors
- Take cores to preserve existing concrete properties
- Require contractor to provide mock-ups of color, aggregate and finish to compare with original



Leeper Park - Proposed Phase 1 *Historic Steps*



Looking north from Park Lane



Looking north from the labyrinth



Looking east



Looking south



Leeper Park - Proposed Phase 1

Studebaker Fountain Location



Entering the park from Michigan



Walk along the top of the historic slope



Looking southeast



Area of historic steps



Leeper Park - Proposed Phase 1

Studebaker Fountain Location



Proposed benches to be used throughout park (outer Avenue paths excepted), powder coated black finish



Tabletop intersections raise the entire intersection or crossing area to provide barrier free access (no ramps required). Use of this type of intersection will provide traffic calming by reducing vehicular speed around the park.



Cast stone railing style at overlook, standard light gray limestone finish to be used



Historic images of Leeper Park's central "avenue" including high backed benches. These benches will be recreated along the outer Avenue paths



Existing pole lights (Left - Riverside Drive in Chapin Park, Right - Riverside Drive near Island. Proposed path lighting in park to consist of concrete pole and pole top fixture similar in color and style to existing lights



Images of potential limestone accents in the formal avenue and the existing horse trough at the lavender garden entrance



Leeper Park - Proposed Phase 1 Amenities to be Presented at Future Meeting

A NOTE FROM VENUES PARKS & ARTS ON LEEPER PARK DUCK POND

As you're likely aware, the City of South Bend's Venues Parks & Arts Department has been leading a several month process to reimagine and upgrade our riverfront parks and trails, alongside an aggressive plan to upgrade many neighborhood parks and community centers. This will set a new standard in excellence and accessibility for some of our city's most valuable resources. It's an exciting time for the park system and the community is showing extremely broad support for these long-overdue upgrades.

Despite the overwhelming enthusiasm to invest in our city's natural spaces, the conversation has recently shifted to focus on one very specific topic, the Leeper Park Duck Pond. A recently released

concept for Leeper Park involves transforming the duck pond into an area that will house the historic Studebaker Fountain once it's restored.

These decisions are not mutually exclusive of one another, but they do seem to complement one another. This latest concept also involves

installing three decks along an enhanced Leeper Riverwalk to overlook the river, creating space for observing wildlife in its natural habitat. No ducks or geese are harmed, but returned to their native areas. Additionally, a regional waterfowl rehabilitator will be on hand to ensure successful transitions, which may also include adoption of some the domesticated animals.

This latest concept also involves installing three decks along an enhanced Leeper Riverwalk to overlook the river, creating space for observing wildlife in its natural habitat. No ducks or geese are harmed, but returned to their native areas.

This park upgrade solves a major issue that cities across the country are struggling with. Numerous studies show that duck ponds aren't healthy for the wildlife nor the environment. This isn't a case of maintenance neglect nor a need for a cleaning regiment. Overcrowding, disease, landscape degradation, hybridization, water pollution, and other issues prevail. Organizations such as zoos and aquariums have had to adjust how they think and treat animals through the years; parks systems are no different.

As a community, we must do better in our responsibility of stewardship for the local wildlife.

We recognize that residents love the duck pond because of the experiences they have created there. We understand the value of having a place where families make memories and share rituals with children and grandchildren over the years. We appreciate how people enjoy watching the changing seasons and sharing in the growing of the ducklings and goslings. We don't want to take any of that away. We are striving to create upgraded place-making for those kinds of experiences. Our plans endeavor to allow people to experience all those connections to nature and more - in a safer, healthier, more natural environment for the community and for the birds.

Additionally, we'll continue to be in consultation with the DNR, water and soil experts, zoologists, our Ecological Advocacy Committee, the Audubon society, the Historic Preservation Committee, environmentalists, and waterfowl experts. We are still several months away from a decision point in this matter and would like to stress that there is no urgency here.

We look forward to working together as a community to take care of our native animals, our natural resources, our shared spaces and shared history.

HISTORIC VALUE OF THE PARK

One of the things we've been most concerned with throughout the planning process is maintaining true to the spirit of historic plans. Some of this work is unfolding even now. As approved by Historic Preservation Commission and in conjunction with a STEAM partnership involving Memorial Hospital and Madison School, a host of historic upgrades have been completed at Leeper Park. This includes the following:

- The introduction of paths and significant landscaping features that were envisioned in early 20th century Leeper plans.
- A soon-to-open lavender labyrinth.
- Restoration of the Ziegler outdoor performing arts center just north of the Leeper rose garden.
- Support of efforts to "Resurrect the Roses", investing in the volunteer-led initiative to return the historic rose garden to its former glory.
- Refurbishing of the widely popular tennis courts, with plans to further upgrade the facility.
- Support of a community-led initiative to restore the historic Studebaker Fountain and propose to place it in Leeper Park, not far from where the Bugbee Fountain stood in the early 1900's.

There is a deep sense of history in Leeper Park and the surrounding neighborhoods that nurtures a significant amount of civic pride. This is something we never want to see fade.

*Conceptual plan for review and discussion



ANIMAL WELFARE & ENVIRONMENTAL STEWARDSHIP

Over the past several decades, society's understanding of and compassion for animals has evolved. What was once acceptable in zoos and aquariums is no longer thought to be humane. This is the same in our parks system. Across the country, cities are forgoing unnatural spaces in favor of more organic habitats. Our research on the topic of duck ponds specifically as it relates to animal and environmental welfare includes:

Malnutrition¹

Through evolution, wildlife species have developed skills to obtain food that contains the essential nutrients needed to survive, reproduce and live a healthy life. These skills help maintain a balance between animals and their natural habitat. This balance is compromised by hand feeding, which is physically harmful to birds and is one of the primary causes of malnutrition.

It would seem that providing food for ducks and geese would make them healthier. However, this is not the case. Waterfowl at artificial feeding sites are often found to suffer from poor nutrition. In natural settings,

waterfowl seek and feed on a variety of nutritious foods such as aquatic plants, natural grains, and invertebrates. Many of the items commonly used to feed waterfowl (bread, corn, popcorn, etc.) are low in protein and are very poor substitutes for natural foods.⁵

Visible symptoms of poor nutrition and advanced stages of starvation are often seen at artificial feeding sites. For example, waterfowl may have drooping wings or may lose their ability to fly.

Natural foods are also widely scattered. Ducks and geese are able to find these foods and eat them in relative seclusion. At artificial feeding sites, competition for each scrap or kernel is high. Some ducks and geese (usually the youngest) are unable to compete for handouts.

Visible symptoms of poor nutrition and advanced stages of starvation are often seen at artificial feeding sites. For example, waterfowl may have drooping wings or may lose their ability to fly.

Malnutrition leads to:

- Low energy and muscle deterioration.
- Development of deformed wings in young birds.
- Loss of flight later in life.
- Lowered ability to avoid predation.
- Decrease in successful reproduction.
- Lowered life expectancy.

Dependency³

Waterfowl, particularly mallards and Canada geese will congregate in areas with abundant food and space. Unfortunately, hand feeding can cause birds to become concentrated in small urban areas that are incapable of supporting large numbers of birds. The birds then become dependent upon humans for food and can become nuisance animals. Some birds can become aggressive and may need to be removed.

Geese are territorial birds and will not hesitate to protect their nest and eggs from a human or house pet they see as a threat. An aggressive adult goose can easily knock down a child or senior citizen, and geese can fly up to 50 mph. An aggressive goose will hiss at you and rear its head and then perhaps charge.

Geese will fly up and hit a human, cat or dog in the face. This is especially likely if the goose has nested in a place near human traffic, including a parking lot or shrubbery near a building.

Artificial feeding often attracts birds to human habitats, parking lots, fast-food restaurants, and retention ponds, where they are more subject to accidental death. Natural cover, which can provide protection from bad weather and predators (even dogs and cats), is often lacking at these feeding sites.

Waterfowl can rapidly become conditioned to, and dependent on, handouts. Fed ducks and geese behave differently. They become more aggressive and eventually lose their wariness of humans. Some will not survive because they can't compete. Many will lose the quality which endears them to most of us, their wildness.

Fed ducks and geese behave differently. They become more aggressive and eventually lose their wariness of humans. Some will not survive because they can't compete.

Dependence upon humans for food causes:

- Loss of their natural fear of humans, which creates aggressive behavior.
- Concentration of birds near highways and airports, potentially causing motor vehicle and airplane accidents.
- Overpopulation of small wetlands and ponds.
- Delay or halting of migration to natural wintering or nesting sites.

Disease²

Lowered nutrition and overpopulation allow disease to spread more quickly, potentially infecting thousand of birds with fatal diseases such as Avian Cholera, Duck Plague, Avian Influenza and Avian Botulism. Although these diseases have always existed in waterfowl populations, the risks from the diseases increase when populations become concentrated at feeding sites.

When ducks and geese feed on scattered corn or bread, they eat in the same place where they defecate. Not healthy. In addition, large concentrations of waterfowl would facilitate the spread of disease. Also not healthy. Diseases generally not transmissible in a wild setting find overcrowded and unsanitary conditions very favorable.

An infected bird may spread the disease to many other birds by infecting the water supply. When the birds are scattered over a large area this does not pose a serious problem. However, when the birds are bunched close together, their chances of contracting disease increase and the result may be disastrous.

Diseases generally not transmissible in a wild setting find overcrowded and unsanitary conditions very favorable.

Canada goose feces contain disease-causing organisms which include salmonella, giardia and cryptosporidium. While there are no proven links of human illness from exposure to the droppings from Canada Geese, some dogs seem to be particularly susceptible to giardia. You should keep your dog from snacking on goose droppings while out on walks.

Most waterfowl die-offs in the past 10 years have involved artificial feeding:

- 2,000 mallards and black ducks were killed in an outbreak of Duck Virus Enteritis in Central New York.
- Another fatal disease, Aspergillus, occurs when food is scattered too liberally. It piles up and becomes moldy.
- In Cheektowaga, New York, hundreds of ducks were killed in an outbreak of Avian Botulism at a feeding site.

Environmental Degradation ²

Waterfowl naturally congregate in wetlands, when and where natural foods are plentiful. However, when hand feeding occurs, the over-concentration of birds may ultimately cause overgrazing and degradation to the landscape.

Feeding attracts birds in unnatural numbers, beyond natural food and water supplies, and frequently in numbers beyond what people will tolerate. Over-grazed and badly-eroded lawns, golf

Over-grazed and badly-eroded lawns, golf courses, and school playing fields are often the result of overcrowding. Grassy areas such as ball fields and golf courses can become unsanitary and unusable.

courses, and school playing fields are often the result of overcrowding. Grassy areas such as ball fields and golf courses can become unsanitary and unusable. Some parks have been forced to close down until goose droppings could be cleaned up, which can be quite costly.

High concentration of birds cause:

- Overgrazing of vegetation, leading to soil erosion.
- Degradation of the landscape, making it undesirable for other species and unsightly for humans.
- Unsanitary conditions due to large quantities of bird feces.

Water Pollution¹

People will often feed Canada geese or ducks at the local pond or lakeside beach. This not only causes a nuisance situation with birds begging for and stealing food, but also contributes significantly to water pollution in the form of fecal coliform bacteria.

In areas where waterfowl congregate to feed, E-coli counts can swell to levels that make the water unsuitable for recreation or other activities.

As a direct consequence of the concentration of this organic matter,

water quality suffers from the excess nitrogen that subsequently runs off the land during the usual storm events. Too many nutrients in the water then leads to an overgrowth of algae, called an “algae bloom,” which blocks sunlight from entering the water and, thereby, adversely affects fish and other organisms in the aquatic environment.

Vegetation around the immediate feeding site is also impacted, because the overabundant waterfowl pull up the grass, trample the banks and otherwise damage the plants in adjacent habitat. In areas where waterfowl congregate to feed, E-coli counts can swell to levels that make the water unsuitable for recreation or other activities.

As a direct consequence of the concentration of this organic matter, water quality suffers from the excess nitrogen that subsequently runs off the land during the usual storm events.

Feeding the ducks and Canada geese can:

- Cause them to become a nuisance by begging and stealing food and garbage.
- Can cause unnatural amount of water contamination, leading to algal blooms, and the death of fish.

Increased Hybridization¹

At many feeding sites, domestic geese have interbred with Canada geese, further compromising the wild population. Locally at the Leeper Park Duck Pond, it is evident that residents have abandoned domestic ducks at the site. This furthers the hybridization issue and creates an unnatural scenario where the animals are no longer able to survive in natural environments.

Delayed Migration²

Feeding alters normal migration patterns of waterfowl by shortening or even eliminating them. Ducks, reluctant to leave in the winter, may not survive sudden cold. If the artificial feeding is stopped in time, ducks and geese can quickly adapt to finding natural foods and will follow their companions north. In West Haven, Connecticut, 30 swans died from starvation at an artificial feeding site during the harsh winter of 93-94. Meanwhile, over 800 swans survived nearby on natural food.

If the artificial feeding is stopped in time, ducks and geese can quickly adapt to finding natural foods and will follow their companions north.

Overcrowding in Unnatural Sites¹

Feeding attracts birds in unnatural numbers, beyond natural food and water supplies, and frequently in numbers beyond what people will tolerate. Over-grazed and badly-eroded lawns and parks. Grassy areas such as ball fields and golf courses can become unsanitary and unusable. Maintenance costs for cleaning and keeping these popular gathering areas aesthetically pleasing become high.

Artificial feeding often attracts birds to human habitats near roads and public areas where they are more subject to accidental death or disfigurement. Natural cover, which can provide protection from bad weather and predators is often lacking at these feeding sites.

Costly Management Efforts¹

Many damage-avoidance techniques such as chemical repellents, fencing, or noise makers are costly and may even be useless once animals lose their fear of humans. At times, it is necessary to destroy nuisance waterfowl because of the damage they cause.

Artificial feeding often attracts birds to human habitats near roads and public areas where they are more subject to accidental death or disfigurement.

Devaluation¹

From treasure to nuisance... wildlife managers recognize that the public's perception of the value of wildlife is often reduced when numbers swell. When any wildlife population exceeds the number that can be naturally supported by available habitat, this can polarize the public and exaggerate conflicts between landowners who suffer damage and those who visit the site to feed the geese and ducks.

The existence of duck ponds can no longer be considered a best practice for the environment or wildlife.

This isn't a conversation about maintenance standards or even what to feed the ducks. In places like the Leeper Park duck pond, the evolved situation is only partially solved by enhanced landscaping, additional upkeep, and new public policies. The only scenario we can condone the creation of artificial spaces to house and feed wildlife is one that is under constant supervision of trained professionals such as a zoo, aquarium, or farm. Even so, these environments must be created in a way that promotes the health and well-being of the animals in the most natural environments possible. Unless it's done in a very controlled manner, the pastime of feeding wildlife for amusement is one that must come to a stop. Despite the nutritional value of a particular feed or food product, dependency on human feeding causes migratory issues, overpopulation, overfeeding and a suite of health-related problems. Keeping the pond, in any improved or existing condition, troubles involving overcrowding, malnutrition, inbreeding, migratory patterns, and animal welfare ethics would continue to exist. This would result in the department having to implement additional, and presumably unpopular activities. These include strict enforcement of no-feeding policies, a reallocation of departmental resources away from other priorities, a reduction of the park's greenspace, and wildlife management techniques such as relocation, egg depredation, or controlled animal killings.

Keeping the pond, in any improved or existing condition, troubles involving overcrowding, malnutrition, inbreeding, migratory patterns, and animal welfare ethics would continue to exist.

FEEDBACK AND MORE INFORMATION

The concept is now available for review and commentary. We remain committed to opportunities for residents to become educated and weigh in on this topic.

One way to do so is on the website at www.riverfrontparksandtrails.com or at a public community meeting at the NNN Community Center on June 14th at 6:00 p.m. located at 109 Portage Ave.

We have already gathered a significant amount of information from these sources and would encourage people to become educated on this topic.

1. "Stop Feeding Waterfowl." Stop Feeding Waterfowl - NYS Dept. of Environmental Conservation. New York State, n.d. Web. 07 June 2017. <<http://www.dec.ny.gov/animals/7001.html>>.
2. McRuer, Dave, MSc, DVM, Dipl. ACVPM. Consequences of Feeding Waterfowl in Public Parks (n.d.): n. pag. [Www.wildlifecenter.org](http://www.wildlifecenter.org). Wildlife Center. Web. <<http://wildlifecenter.org/sites/default/files/Consequences-of-feeding-wild-ducks-in-public-parks.pdf>>.
3. Palus, Shannon. "Don't Feed the Waterfowl." Audubon. Audubon, 14 July 2016. Web. 07 June 2017. <<http://www.audubon.org/news/dont-feed-waterfowl>>.
4. "Indiana Department of Natural Resources." DNR: Solutions. DNR, n.d. Web. 07 June 2017. <<http://www.in.gov/dnr/fishwild/3002.htm>>.
5. "Please Don't Feed Waterfowl." Please Don't Feed Waterfowl — Audubon Society of Portland. Audubon Society of Portland, n.d. Web. 07 June 2017. <<http://audubonportland.org/wcc/urban/waterfowl>>.
6. "Don't Feed the Ducks." Mass Audubon. Mass Audubon, n.d. Web. 07 June 2017.
7. <<http://www.massaudubon.org/learn/nature-wildlife/birds/don-t-feed-the-ducks>>

See **Appendix A** for additional information on water quality at Leeper Park Duck Pond.



Soil Test Report

Reported To	Sample Information		Customer Information
CITY OF SOUTH BEND 321 E WALTER ST SOUTH BEND, IN 46614	Report Number	F17160-0127	LEEPER DUCK POND
	Report Date	6/13/2017	
	Lab Number	33621	
	Sample ID	OUTSIDE	
	To Be Grown	TREES	

Analysis Results

Analysis	Result	Soil Test Rating				
		Very Low	Low	Medium	High	Very High
Organic Matter, %	4.7	████████████████████				
Phosphorus, ppm P (Bray-1 Equiv.)	51	████████████████████				
Potassium, ppm K	61	████████████████				
Magnesium, ppm Mg	250	████████████████				
Calcium, ppm Ca	2400	████████████████				
Sodium, ppm Na	12	██████				
Cation Exchange Capacity, meq/100g	14.3	████████████████				
pH	7.5	████████████████				
Soluble Salts (1:2), mmho/cm	0.1	██████				
Sulfur, ppm S	9	████████████████				
Zinc, ppm Zn	34.2	████████████████				
Iron, ppm Fe	48	████████████████				
Manganese, ppm Mn	49	████████████████				
Copper, ppm Cu	4.4	████████████████				
Boron, ppm B	1.8	████████████████				

Annual Nutrient Requirement

Pounds per 100 Square Feet						Pounds per 1,000 Square Feet					
Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)	Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)
0	0.3	0.0	0.3	0.0	0.0	0	3	0	3	0	0

Suggested Fertilizer Application

Product	NPK Fertilizer Grade	Description	Annual Application Rate	
			lbs per 100 sq. ft.	lbs per 1,000 sq. ft.
	12-0-12	Phosphorus Free Fertilizer	2.5	OR 25.0
			0.0	OR 0.0

Comments

Use the fertilizer listed above or another of similar NPK analysis. Broadcast the recommended amount evenly around the drip line of the trees in the late fall or early spring. Avoid application after July 1st since late growth is more susceptible to winter injury.

The soil pH is high (alkaline). Some species such as oaks and maples may show chlorosis (yellowing) of the



Soil Test Report

Reported To	Sample Information		Customer Information
CITY OF SOUTH BEND 321 E WALTER ST SOUTH BEND, IN 46614	Report Number	F17160-0127	LEEPER DUCK POND
	Report Date	6/13/2017	
	Lab Number	33621	
	Sample ID	OUTSIDE	
	To Be Grown	TREES	

leaves. This condition is difficult to correct in established trees. If trees are chlorotic, application of iron or manganese may improve color.



Soil Test Report

Reported To	Sample Information		Customer Information
CITY OF SOUTH BEND 321 E WALTER ST SOUTH BEND, IN 46614	Report Number	F17160-0127	LEEPER DUCK POND
	Report Date	6/13/2017	
	Lab Number	33622	
	Sample ID	ISLAND	
	To Be Grown	TREES	

Analysis Results

Analysis	Result	Soil Test Rating				
		Very Low	Low	Medium	High	Very High
Organic Matter, %	1.2	██████████				
Phosphorus, ppm P (Bray-1 Equiv.)	314	██████████	██████████	██████████	██████████	██████████
Potassium, ppm K	124	██████████	██████████	██████████		
Magnesium, ppm Mg	140	██████████	██████████			
Calcium, ppm Ca	2650	██████████	██████████	██████████	██████████	██████████
Sodium, ppm Na	22	██████████				
Cation Exchange Capacity, meq/100g	14.8	██████████	██████████	██████████		
pH	7.5	██████████	██████████	██████████	██████████	██████████
Soluble Salts (1:2), mmho/cm	0.2	██████████				
Sulfur, ppm S	12	██████████	██████████	██████████		
Zinc, ppm Zn	38.0	██████████	██████████	██████████	██████████	██████████
Iron, ppm Fe	81	██████████	██████████	██████████	██████████	██████████
Manganese, ppm Mn	51	██████████	██████████	██████████	██████████	██████████
Copper, ppm Cu	3.5	██████████	██████████	██████████	██████████	██████████
Boron, ppm B	0.7	██████████	██████████	██████████		

Annual Nutrient Requirement

Pounds per 100 Square Feet						Pounds per 1,000 Square Feet					
Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)	Lime	Nitrogen (N)	Phosphorus (P2O5)	Potassium (K2O)	Magnesium (Mg)	Sulfur (S)
0	0.3	0.0	0.0	0.0	0.0	0	3	0	0	0	0

Suggested Fertilizer Application

Product	NPK Fertilizer Grade	Description	Annual Application Rate	
			lbs per 100 sq. ft.	lbs per 1,000 sq. ft.
	20-0-0	Ammonium Sulfate	1.5	OR 15.0
			0.0	OR 0.0

Comments

Use the fertilizer listed above or another of similar NPK analysis. Broadcast the recommended amount evenly around the drip line of the trees in the late fall or early spring. Avoid application after July 1st since late growth is more susceptible to winter injury.

The soil pH is high (alkaline). Some species such as oaks and maples may show chlorosis (yellowing) of the



Soil Test Report

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leaves. This condition is difficult to correct in established trees. If trees are chlorotic, application of iron or manganese may improve color.