

Master Planning - a Process of Refinement

The master planning process is a progression of refinement. Each step in the planning sequence, beginning with the determination of the park program, which is a statement of appropriate uses for the park, to the final master plan, refines and builds upon the last. Preliminary alternate concepts, final concept, alternate preliminary concept plans and the final master plan have been included in Appendix 'B' in an effort to document the progression of refinement that lead to this master plan.

The refinement and evolution of the “**plan**” does not end with the master plan. Further refinement in design will be needed to insure that the ideas expressed in this plan are carried out. In refining the design, each new detail plan should be tested against the same criteria and vision that were instrumental in the development of this plan.

Plan Goals

The primary plan goals listed below affected the planning approach and outcome of every element. Each goal has its genesis in the Committee’s vision and criteria for the plan.

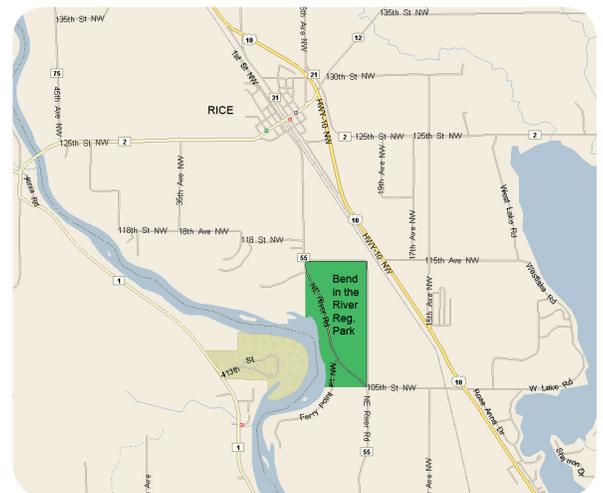
Goal 1 - Park Accessibility and Availability

Vehicular Access

Since this park is a unique regional facility it is expected that the amenities will draw users from greater Benton County, Stearns County and given the parks exceptional environmental and historical interpretive potential, perhaps state wide. Access to the park will be available from County Road 55 and its connections to State Highway 10 through the City of Rice to the north and from 105th Street N. W. on the south boundary of the park.

- **Parking**

Parking facilities are located at major amenities or at park entrances to accommodate the park visitors that arrive by



Map illustrating regional accessibility to the site

vehicle. The amount of parking for a regional park is best if not over estimated. The plan currently will accommodate approximately 130 automobiles in aggregate parking lots. For those occasions when large community events occur temporary parking may be established in the area of the farm operation. As the park is developed and use can be measured, it maybe found that additional structured parking is required to meet daily use.

Use of motorized vehicles and their storage should be limited to the periphery of the park and the County Road 55 corridor. No use of vehicles should be permitted within the park except for maintenance and emergency operations. The success of the restoration of the ecosystem and wildlife habitat relies on the limitation of vehicles within the park.

- **Improvements to County Road #55**

The master plan realignment of County Road #55 is proposed to enhance the goal of preservation and restoration of the parks natural resources. By rerouting County Road #55, a significant upland habitat will again be tied to the river corridor. This will allow the free movement of nesting species between the park, river and Michaelson Wildlife Area. The additional human benefit of this relocation is the removal of a physical and physiological barrier within a large portion of the park.

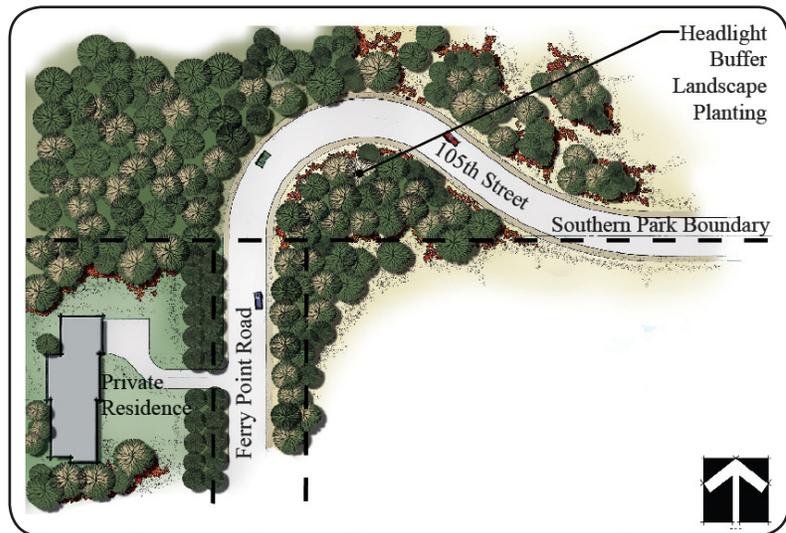
To aid the north / south movement of wildlife within the park a segment of the new County Road would be built as a parkway with a large median between directions of travel. This segment of the new road would, along with signage, signify to the driver that this section of the roadway and its surrounding land use requires special caution. The median will reduce the risk of crossing the roadway to slower moving wildlife species.

The speed limit for this roadway is currently 55 miles per hour. The Technical Advisory Committee has suggested that speed should be lowered through the park, given the potential for conflict between park users and traffic and degradation of the fragile nesting habitat. The Minnesota Department of Transportation governs speed limits and Benton County will need to petition the State for any change in the speed limit on this road.

A tangential benefit to the County of this realignment of the road would be the potential access for the developable land that lies to the east of the park.

- **Improvements to 105th Street Northwest**

Ferry Point road currently enters the park at the southwest corner and parallels the river edge until intersecting County Road #55 within the park. This alignment provides the only access to the growing residential neighborhood to the south of the park. The configuration of Ferry Point Road within the park is, historically



Plan graphic illustrating 105th Street re-alignment

speaking, relatively new. It can be assumed that this alignment was intended to provide the former owner of the park property the ability to subdivide the river frontage for residential lots. Since this use of the park land is no longer relevant, the removal of Ferry Point Road within the park is incorporated in the Master Plan. In the past, 105th Street Northwest extended west of its current intersection with County Road #55 along the southern property line of the park. By extending the now truncated 105th Street Northwest, again along this southern boundary to Ferry Point Road, access to the neighborhood can be maintained and a significant area of park land, now separated by this roadway, can be rejoined with the balance of the regional park. This realignment will also be of benefit to the access of developable property immediately south of the park. The plan does take into account a neighbors concern regarding intrusive headlights by sweeping the new 105th Street Northwest north into the park prior to connecting to Ferry Point Road. This alignment will allow the creation of a landscape buffer at the connection to reduce the direct headlight intrusion into the residential property.

“The Master Plan proposes to move Ferry Point Road/105th Street south to its original location at the south boundary of the Regional Park. In addition to returning the road to its original location, the re-alignment will achieve several ecological objectives that come when interior roads are removed from a park. First, it will remove a road from the interior of the park, reducing the chances for vehicle-animal collisions. White-tailed deer are most likely to benefit, but in addition animals that use savanna and prairie will also benefit. These include the uncommon Hognose Snake and Bullsnake, as well as other reptiles and small mammals that cross roads. Second, it will eliminate a barrier to migration for animals species which do not cross roads. These include certain species of small mammals, beetles, and other ground-dwelling small animals which form the base of the food chain for carnivorous mammals, hawks, owls, and other predators. Reconnecting discontinuous habitat blocks decreases the possibility of local extinctions among animals that do not cross roads, or cross them only rarely. Populations are re-united that otherwise might remain separate. This increases population sizes and reduces inbreeding effects, both of which contribute to local extinctions when catastrophes (e.g., disease) strike a habitat. A third reason to remove interior roads from the park is to reduce the likelihood of spreading disease and non-native aggressive species which can displace existing native species, or disrupt future restoration work. Roads, powerline and gas corridors, railroad lines and other man-made linear features provide continuous avenues for the spread of disease and non-native species into core native habitats. For example, European buckthorn and leafy spurge are two aggressive non-native plants that displace native species and disrupt ecological functions in grasslands, savannas, and woodland. Following WWII and the construction of the interstate highways system, these two species spread rapidly from cities and towns by leap-frog colonization along the interstate highway system throughout the Midwest. Without additional study, we do not know which specific animals will benefit by removing interior roads and re-connecting small habitat blocks. Nevertheless, removing interior roads from the park institutes a cautious approach to managing wildlife in the park. It is very appropriate that Benton County and its park staff and supporters adopt this precautionary approach for the long term ecological health of the Regional Park and its wildlife species.

The timing of these changes to the roadways within the park is anticipated by the master plan and is suggested in the implementation plan for the latter years of park development. Restoration of the farmstead, and ecological aspects of the park and development of most trails, may proceed, keeping in mind the proposed road realignments. The removal of Ferry Point Road within the park and construction of a new 105th Street Northwest along the south boundary of the park is anticipated in the second phase of development. The changes to County Road #55 are expected to take place in the last phase of development of the park.

Pedestrian Access

Access to the major facilities and the more remote areas of the park was a key desire of the Committee. To meet this goal the plan incorporates pedestrian trails of various types to allow the visitor to traverse the 289 acres.

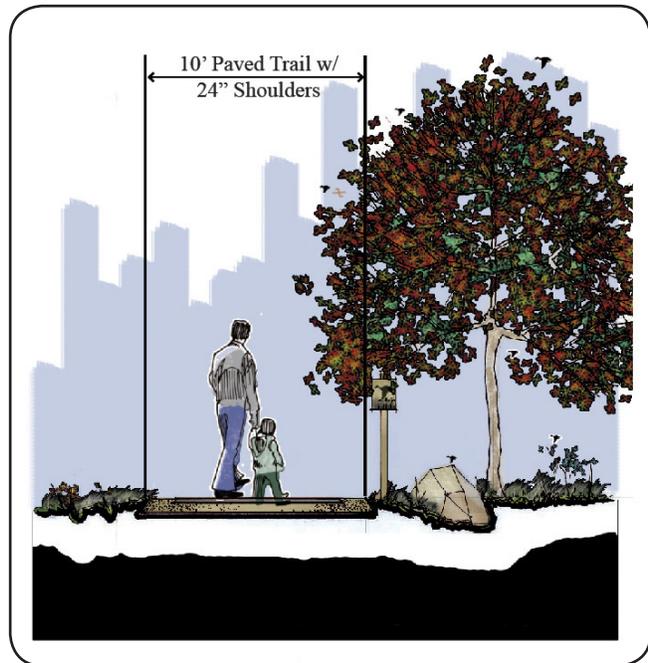
Trail types include an asphalt surfaced trail paralleling the County Road 55 corridor and in the future connecting to the communities located to the north, south and east of the park. This trail will be approximately 1.25 miles in length and have a paved width of 10 feet with 2 foot turf shoulders. Additional paved trail linkages have been proposed between parking lots and the farmstead and group picnic area. These trails are paved to reduce likely maintenance in high traffic areas. They also insure accessibility to major facilities.

For winter and summer use the majority of the trails throughout the park are to be aggregate surfaced with mown edges and shoulders. Given the nature of this park and its setting in a rural community the aggregate trails were felt to be more fitting. The aggregate surfacing is also more compatible with the proposed winter cross country ski use of the same corridor. These combination hike/ski trails would be used in the summer as a hiking trail and in the winter for cross country skiing.

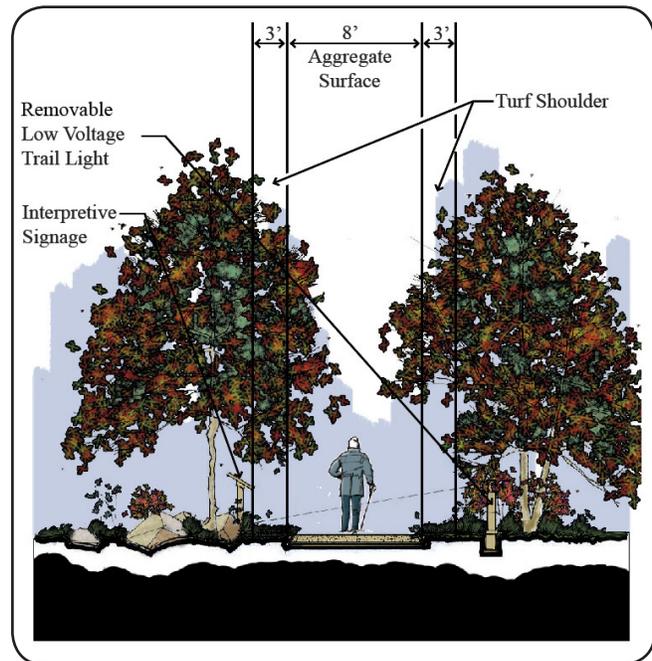
For hiking the aggregate surface should meet accessibility requirements when a finely crushed stone is properly compacted. Crushed granite is available locally and has been used in similar situations. Annual maintenance will be required to sustain the accessibility of these trails. The width of these trails will include an 8 feet aggregate surface with 3 foot wide turf edges. These edges should be flush with the aggregate trail surface.

The winter cross country ski trail width for dual track, that is traditional and skate/ski cross country skiing side by side, will be a minimum of 14 feet in width. Using the aggregate surface and the 3 foot mown edges the required width will be achieved. The 3 foot trail edges should be mown annually in the fall.

The total length of the ski trails proposed for the park is 4.5 miles. Multiple loops of varying lengths have been planned to allow the user an assortment of possible trip lengths.



Typical cross section of paved trail



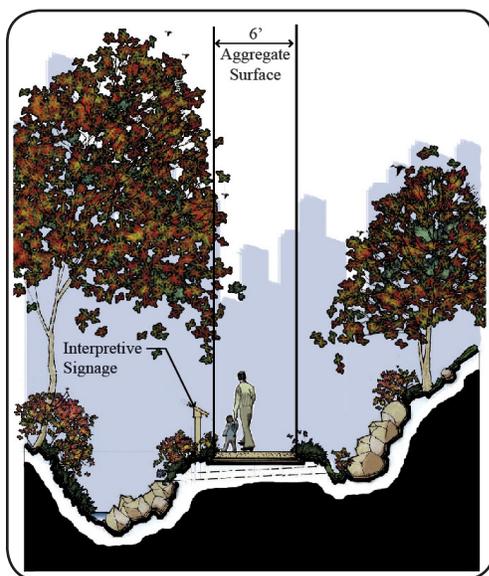
Typical cross section of hike/ski trail

In the river slope and bottom land area of the park, accessibility for less able individuals and cross country skiing is not practical. This trail transitions the river bank slope by use of an existing informal trail access on the northern end of the park and intermediate and southern end staircases.

The existing informal trail access far exceeds the allowable slope for disabled accessibility. This trail segment will need to be stabilized with pavement and careful management of storm water will be necessary to minimize erosion potential.



Section/elevation of stair case

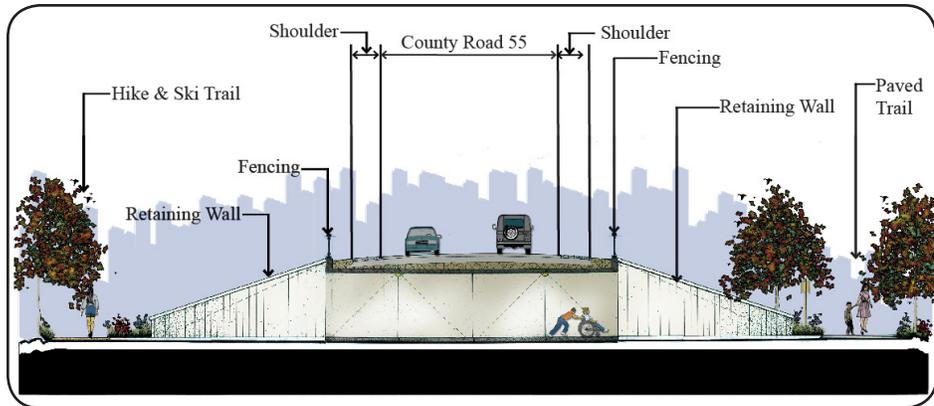


Typical section of "hike only" trail

The trail along the river bottom is to be constructed of the same aggregate material as the hike/ski trail although the width of this trail will be narrower.

The total hiking trail length, including hike only and hike/ski trails, is 6 miles. Numerous loops have been provided allowing the trail user to vary walking direction and trip length.

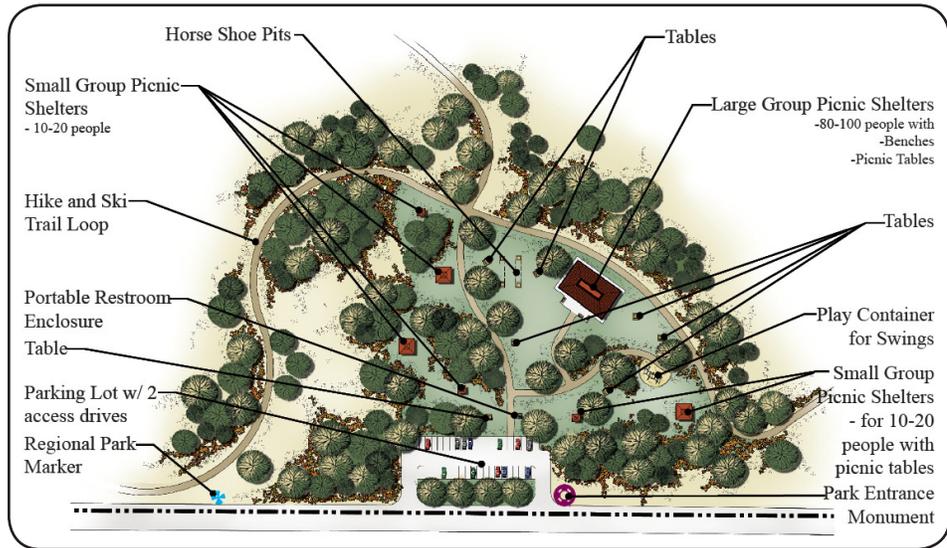
To provide safe use of the parks trails the master plan provides for a grade separated crossing of County Road #55. A pedestrian tunnel is suggested as the most user friendly manner of grade separation. All trails would lead to this crossing. The implementation of this pedestrian tunnel would coincide with the reconstruction of County Road #55.



Section of proposed pedestrian underpass beneath Co. Road 55

Traditional Picnic Grounds

In an effort to introduce the public to the resources available within the park, the Technical Advisory Committee included a traditional picnic area within the master plan. This facility will serve to initiate people to the park. The picnic area is planned to provide a wide range of opportunities for both individuals and groups. Planned to be constructed in phases the picnic area will first provide individual and small group amenities. Small picnic shelters, grills, tables and games



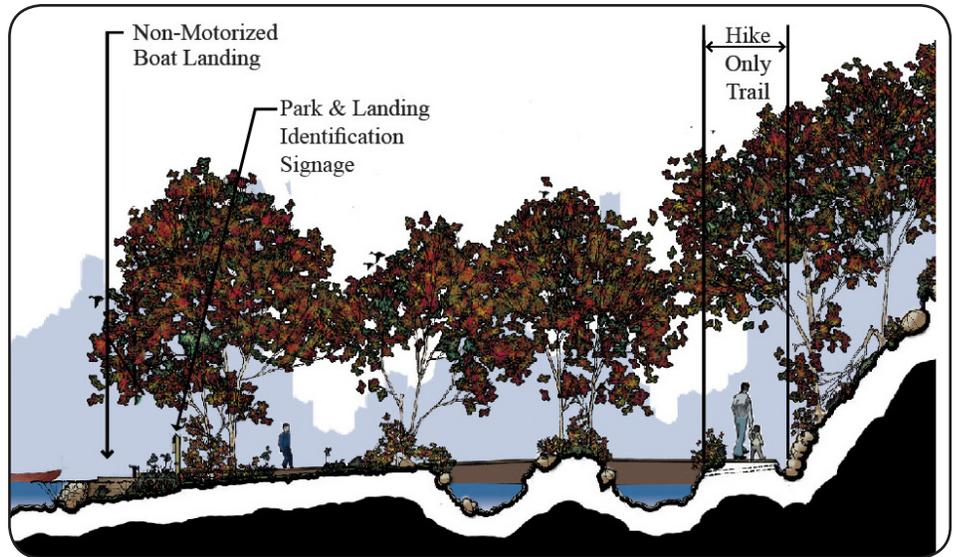
Plan graphic of proposed picnic area

area will be constructed in the second phase of park development, see the Implementation Section of this report for phasing. If demand for a larger group picnic shelter and amenities develops, space for a shelter accommodating 80 to 100 people has been reserved in the plan.

Infrastructure for the picnic grounds includes parking, portable restrooms, power and water. Trail connections from the picnic grounds to the greater park will invite people to explore larger areas of the park and introduce them to its many unique natural and historic features.

Non Motorized Boat Landing

The Mississippi River has been a historic transportation route for both settlers and Native Americans. Today this portion of the river is a recreational boating route with both motorized and non-motorized craft. Much of the over 3,000 feet of park river frontage contains valuable aquatic bird nesting and fish spawning habitat. To recognize the recreational benefit and historic context of the river without jeopardizing the sensitive ecological river edge, a non-motorized boat landing has been included in the master plan. This landing would be located on a spit of land that was originally part of earthwork constructed by the former landowner to combat bank erosion. The edge of the landing would be reinforced with minimal wood and stone cribbing and a sign placed at the landing identifying the park. Due to the location of this landing, meeting accessibility requirements would be impossible. Although some able bodied individuals may use this landing to launch non-motorized boats, no provisions are made to accommodate this use and it was not the intention of the Committee to do so.



Cross section of non motorized boat landing

Goal 2 - Preservation and Restoration of Natural Resources

Preservation and restoration of the natural resources of this park is evident in the plan. The plan indicates that of the 289 acres over 76 percent of the land would be preserved or restored to pre-settlement vegetation.



Cropland such as this wheat field provide cover for birds and other animals



Photo of restored prairie

The preservation and restoration of the natural resources contained in this park becomes more significant when considered a part of a greater whole. With the adjacent river valley, the Michaelson Wildlife Management Area and the Stearns County Mississippi River Park, these facilities contain approximately 700 acres of habitat. The larger the natural area, the more diverse the ecology can become, hopefully coming closer to pre-settlement conditions.

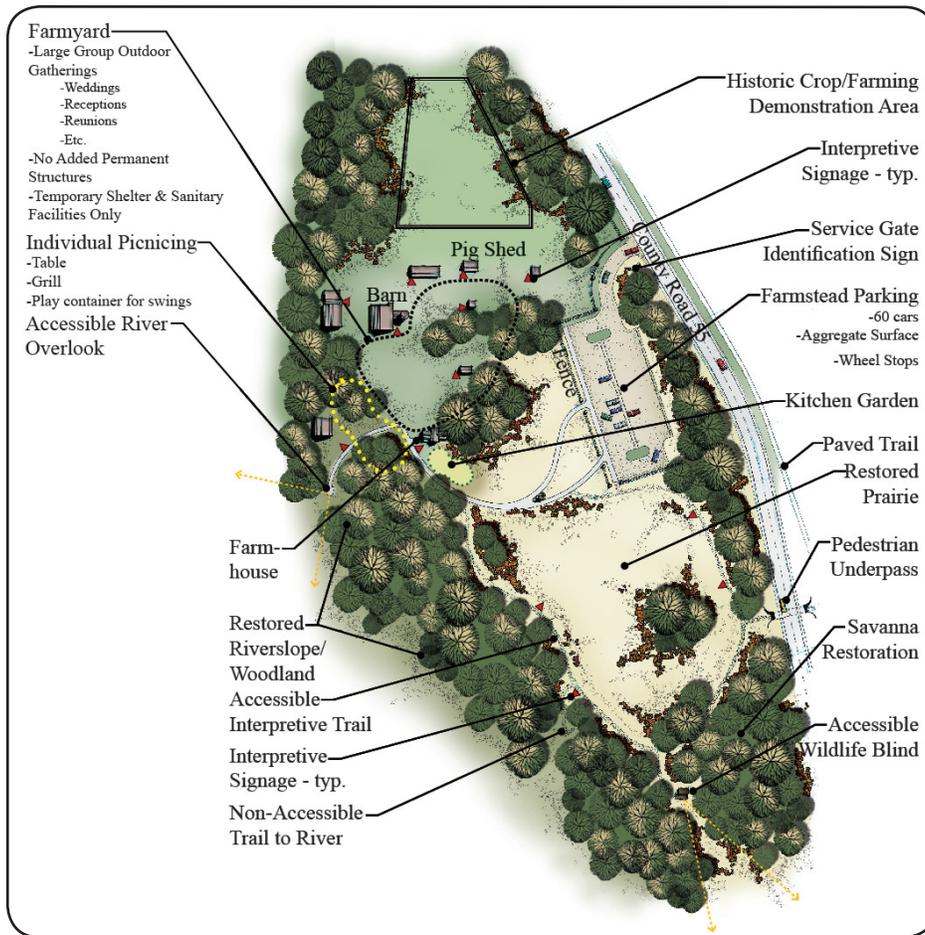
Almost 14 percent of the park would be devoted to agriculture that would not only recall a historic small grain, alfalfa and corn crop rotation, but also provide forage and nesting cover for many bird and animal species.

Goal 3 - Interpretation of the Historic Context of the Land and Inhabitants

Preservation and acknowledgement of the history of this land and its inhabitants was an issue of great interest and concern to all of the participants in this planning process. As described in Section

IV – Historic Preservation and Interpretation, the interpretive concepts can take a variety of themes. Each has merit, but the Technical Advisory Committee felt that the most appropriate themes were *Family Stories* and *Farm Practices*.

The examples given of similar interpretive facilities include a wide variety of levels of development and management required. The Re-use Study and Preservation Plan recommended as the next steps in the process will take into account economic realities, appropriate restoration and correspondingly the development of methods of historic interpretation for this park.



Plan graphic of historic farmstead

The Farmstead Buildings

The buildings that made up the core of farm life and operation are in varying states of structural stability. Attached in Appendix C is a summary of the structural status of the individual buildings. This inventory was prepared by the Sauk Rapids building inspector for the County. The recommendations contained in the inspection report do not take into account the intrinsic value of the history manifested by the buildings, a value that is difficult to describe in objective terms. Ultimately, the County will have to weigh these intrinsic values against the cost to stabilize and secure the buildings.

The Technical Advisory Committee listed uses that they felt could be made of the farm buildings.

- For a park caretaker residence
- For park maintenance equipment storage
- For storage for historic farm implements

- For a farm interpretive building – through a private / public partnership
- For a meeting facility for local government functions
- For park related picnic shelter
- For winter cross country ski shelter
- For park restrooms

The Committee felt that a number of these suggested uses could be accomplished simultaneously within the various buildings and that uses of the buildings would most likely transition over time in concert with increased park use and funds available.



The Graves Barn and Silo



The Graves House

Accessible Interpretive Trail

Although the intent of the plan is to make the majority the park trails accessible to all individuals regardless of ability, the plan does provide for a short introductory interpretive loop trail south of the farmstead buildings. This interpretive trail would be located in the field area recently restored to prairie vegetation and will offer a short course in the history and ecology of the park. Historic and ecological interpretive signs will be positioned to be accessible to people of all abilities. Included with this trail will be an accessible wildlife blind and river view observation deck.

Historic Farming

Along with the interpretation of the farm buildings, the Committee proposed that the master plan contain locations for the demonstration of historically appropriate farming methods.

- The plan contains a Historic Farming Demonstration Area north of the farm buildings and west of County Road 55. This area would be used for hands on demonstrations of farming techniques including the use of draft horses and old farm machinery. In addition to the demonstrations, temporary interpretive trails would wind their way through the crops with interpretive signage highlighting the historic crops grown and methods of farming.
- The Farm Operation Area illustrated on the master plan would serve two primary functions. The first function would be to maintain the landscape context of the farm. The recommendation of the plan is that this field be maintained in a rotation of small grains, corn and alfalfa. This rotation would be typical of pre-mechanized farming in this area. The second reason for suggesting

management of this field in this rotation is that these crops all offer wildlife nesting and forage. This will complement the objective of the plan to work with the established DNR's Michaelson Wildlife Management Area located immediately west of the park.

The Farm Operation Field maybe operated by the County, but will more than likely be leased to a local farmer. Any income generated by such a lease would be used to improve or maintain the park. Farming operations would be governed by the objectives of maintaining the historic context and management of wildlife. The crops grown and timing of operations such as mowing of alfalfa will be governed by nesting times for the various species of birds and mammals inhabiting the field.

Zoning Buffers

The Master Plan proposes that the county implement a zoning buffer to the Regional Park by using its zoning and ordinance authority, and during its review of project proposals from developers and landowners. A zoning buffer is critical to maintain the long term ecological health of the Regional Park, and to protect the capital investment made by the county when implementing the restoration and management program. It is certain that the land adjacent to the park boundary on the north, east and south sides will be developed. Residential, commercial, and perhaps industrial uses will occur next to the Regional Park. These developments will present a challenge to the Regional Park for several reasons. First, these developments will consist primarily of buildings, mowed turf, roads, and parking lots. This type of habitat cannot be used by some animals that will reside in the Regional Park. For example, such birds as Field Sparrow, Eastern Bluebird, Eastern Wood Pewee, and Eastern Phoebe will not use the adjacent developed land. In addition, developed land harbors large populations of English Sparrows, Common Grackles, European Starlings, House Finches, and American Crows, among others birds, which compete with or prey on the bird species that will reside in the Regional Park. Raccoons, house cats, and domestic dogs will also have larger populations in the developed lands compared to the Regional Park habitats. These mammals may prey on the small mammals, birds, and bird eggs found in adjacent natural areas and parkland. Another problem that will arise for the Regional Park when the adjacent lands are developed is the use that neighbors make of the park. Most neighbors will use trailheads and designated visitor entryways to access the park. Some neighbors, however, will treat the Regional Park as an extension of their back yards. They will enter it on wheeled vehicles, let their dogs run in it, dump lawn clippings and yard debris in it, and use it as a dump for household refuse. They may begin mowing and clearing the parkland adjacent to their lot in order to create additional recreational space for themselves. Monitoring the park boundary, stopping these activities, and repairing damage is a constant diversion from more important park management activities and increases costs, or reduces the effectiveness of park operations.

It is more cost-effective in the long term to create a zoning buffer that will provide an effective separation between the restored natural parkland and the surrounding developed land. This buffer can be native plant life, or horticultural plant life that will not invade the parkland. It may include trees and shrubs, as long as they are native and indigenous to the Regional Park and vicinity, or will not invade the Regional Park. The buffer should not be mowed. The width of a zoning buffer will vary depending on the availability of land in the development. With careful planning it will be possible to provide a reasonable width buffer. The widest possible buffer should be provided because the effect of the developed lands on the adjacent parkland decreases as the buffer width increases. A zoning buffer can be effectively expanded by placing a roadway between the developed lands and the buffer.

Development Description

The implementation of the master plan for Bend in the River Regional Park will require a substantial investment. In all likelihood, implementation will be phased over a number of years as funding and other resources become available and detailed plans are refined and made ready for execution.

Improvement Categories

The improvements have been grouped into six categories.

- Regional Park Boundary Markers
- Roadway and Pedestrian Underpass
- Group Picnicking
- Farmstead Improvements
- Trail Construction
- Ecological Restoration

Phases of Implementation

Improvements within each of the Improvement Categories have been spread across three phases of implementation. It is anticipated that each of the three phases will take three or more years to complete.

Phase One Implementation of Park Improvements:

Regional Park Boundary Markers

Key to establishing the identification of the park will be the posting of park boundaries. This will make the public aware of and enable the County to enforce any trespassing, hunting or other ordinances that may apply. Simple metal signs on wood or metal posts placed no more than five hundred feet on center in wooded areas and one thousand feet on center in open field areas will announce to the public the location of the park and its basic rules.

Roadway

In addition to the boundary signs, entrance monuments identifying the park vehicular entrances are also recommended for inclusion in this first phase of development. These major signs would be located at the north and south entrances of County Road #55 into the park. Since the locations of the entrances to the park will not change with the future relocation of the road, inclusion of these in the first phase is recommended. Establishment of the parks public identity will aid the County in generating interest in the parks development and encourage the public to conform to park rules.

Farmstead Improvements

Although the final disposition of the farm structures will depend on the recommendations of a future definitive Preservation Plan and further architectural and structural analysis, a small amount of money has been budgeted for security and stabilization of the buildings in the first phase of this master plan.

Trail Construction

To insure public value is immediately gained, half of the required monies for trail construction have been included in the first phase of the project. This would include half of the hike / ski trails, a portable restroom enclosure, parking lot entrance signage, aggregate parking lot at the north entrance of County Road #55, miscellaneous grading and utility improvements needed for the trail and parking construction and wildlife blinds.

Ecological Restoration

Restoration of the land and ecosystem is a high priority and long term process. It is important that the County begin this process as soon as possible. The first priority will be to remove invasive non-native plant materials from the park. This effort will include brushing, weed control and wind break thinning. Selective burning of portions of the park will aid in reducing the invasive species and encourage what remains of the soils native seed bank to re-establish its dominance. See Section IV Natural Resources, Management Recommendations for specific methods and park areas of restoration. Thirty percent of the estimated cost of this restoration has been included in phase one.

Phase Two Implementation of Park Improvements:

Roadway

Included in this phase of development are the removal and restoration of the Ferry Point Road within the park and the extension of 105th Street Northwest along the south boundary of the park. This is necessary to implement the Group Picnicking in this phase of development.

Group Picnicking

The first portion of the group picnicking, as described in Section V- Master Plan as individual and small group picnicking, will include 5 small, 10 to 20 person, shelter buildings, accompanying tables and grills, aggregate parking lot and drive, picnic area entrance signage, trails to link to the greater park trail network, miscellaneous site amenities, one portable restroom enclosure, general grading and removals, and site utilities such as electrical service, potable water and storm water management.

Farmstead Improvements

The farmstead improvements included in this phase of implementation are site related. Removal and restoration of the existing parking in the center of the farm yard, the creation of a new aggregate parking lot, installation of interpretive and directional signs for visitors, development of the accessible interpretive trail loop, a wildlife blind, farmstead entrance signage, a portable restroom enclosure, general removals, utilities and grading, pedestrian access trail to farm structures and miscellaneous site amenities are included in phase two construction.

Trail Construction

In addition to the installation of the balance of the hike / ski trails in this phase of construction, major recreational improvements include; the river trail loop and one staircase along with the canoe landing improvements, the balance of the wildlife blinds and one half of the cross country ski trail lighting. Accompanying this will be the requisite general grading, removals, miscellaneous site amenities and interpretive trail signage.

Ecological Restoration

Phase two of the ecological restoration work will include the beginning of the savanna ground layer seeding and native tree and shrub establishment. Continued non-native tree thinning and weed control will be necessary to affect the transition to prairie savanna and river wood land ecologies. Upon completion of this phase of the work seventy six percent of the ecological improvements will have been implemented.

Phase Three Implementation of Park Improvements:

Roadway and Pedestrian Underpass

The realignment of County Road #55 within the boundaries of the park is projected to be one of the last items of park development to be completed. The timing of this change will be dependent on both funding and pressure for development of the property to the east of the park. Included will be the transformation of the roadway to a parkway though much of the park and the installation of a grade separated pedestrian road crossing.

Group Picnicking

If the demand for larger group picnic facilities develops an additional shelter, accommodating 80 to 100 people would be added in this phase of development. Along with this shelter would be the necessary infrastructure, linking trails, miscellaneous amenities and an additional portable restroom enclosure.

Farmstead Improvements

The final improvement for the farmstead site, the accessible river overlook, would be constructed in this phase.

Trail Construction

In conjunction with the construction of the new County Road #55, the paved trail planned to parallel the roadway would be installed. The final trail amenities, interpretive signs and second river trail access staircase are planned for this phase. The balance of the cross country ski trail