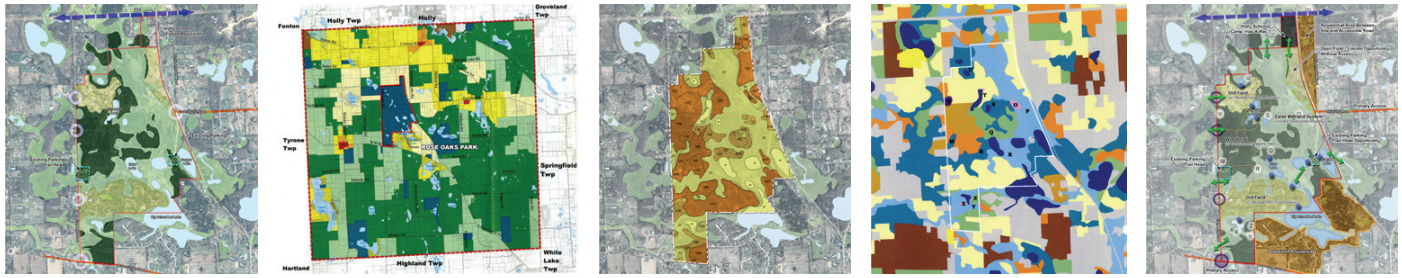
II DATA ANALYSIS

This section of the report documents the relevant data used to fully understand the opportunities and constraints of the site. Under this phase, existing documents were collected and analyzed, natural features were inventoried, and a Framework Plan was prepared that will guide the development of the Master Plan.

A PARK HISTORY AND EXISTING LAND USE

Prior to its acquisition in 1996, Rose Oaks County Park was divided into several smaller parcels. The site contained a tree farm and at least three single-family homesteads. Big School Lot Lake was once mined for marl, and materials were transported to Fenton for processing. The site had long been known for its recreational opportunities, with hunting and fishing as the primary forms. Pike was abundant along the north shore of Big School Lot Lake, and in the 1970s, German brown trout were reported to have been stocked in the lake.

Situated in the central portion of Rose Township, the park lies within sections 9 and 16. The site is bounded by Fish Lake Road (west); Buckhorn Lake Road and Chesapeake Railroad (east); Rose Center Road and the Big School Lot Lake residential subdivision (south); and private residences and Holly Area Schools property (north). The site contains an abundance of natural features including numerous small ponds and lakes, extensive wetlands, small stream channels, rolling topography, and a mixture of forest and old field vegetation (figure 4).



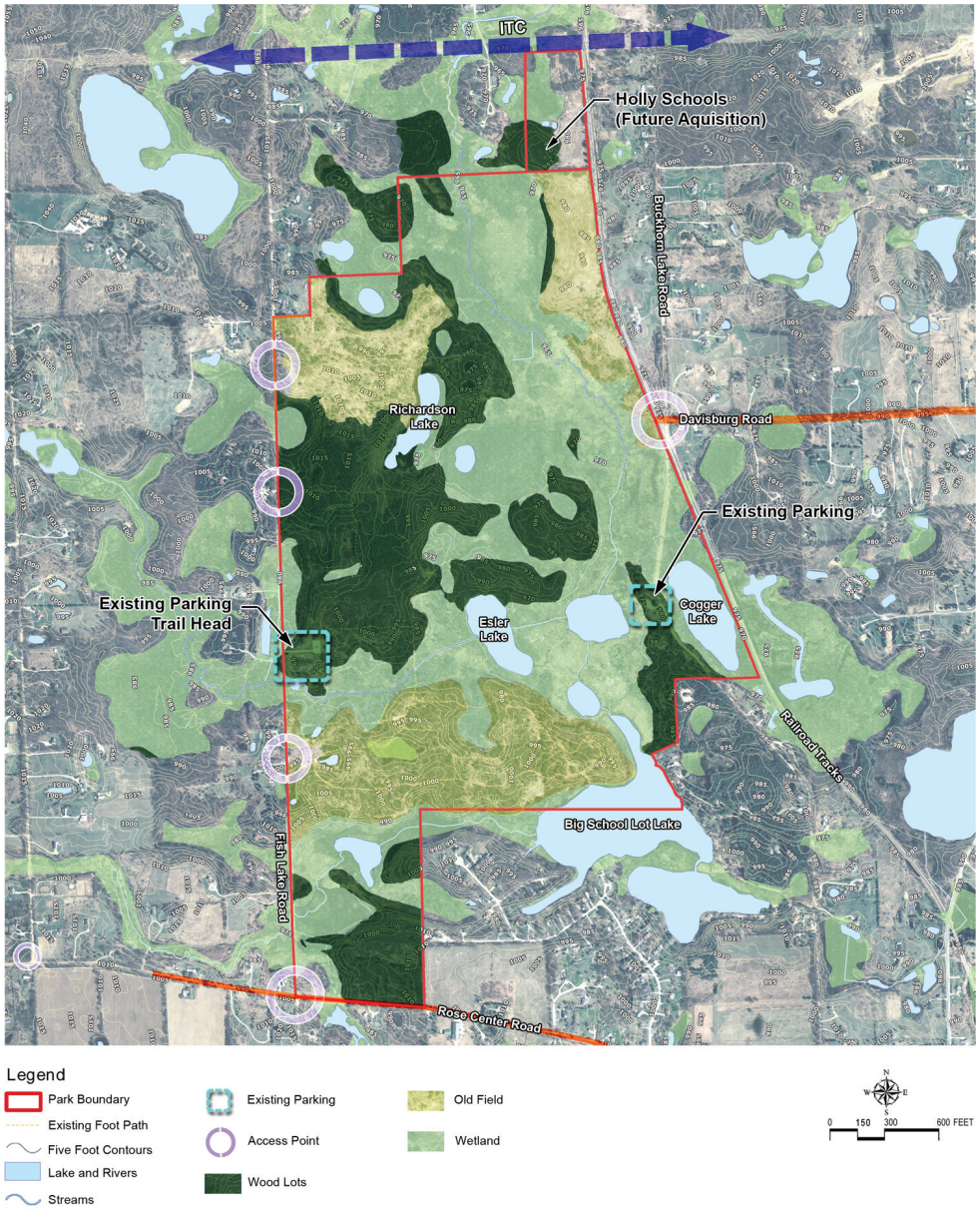


Figure 4 – Existing Conditions

With the exception of the MNFI *Natural Features Inventory and Management Recommendations* (discussed in this section under Vegetation Analysis), no formal master planning has occurred to date, and limited park amenities exist at the site. Under Oakland County ownership, the original residences and related site structures have been removed; a trail head parking area has been installed; and an informal trail system was established with directional maps and signs posted at major trail intersections. The park is open year-round except for the seasonal Buckhorn Lake Road parking area, which is currently only open during the winter to provide ice fishing access. The hours of use are restricted between dawn and dusk and are monitored by OCPR rangers and Oakland County Sheriff Office (OCSO) park deputies. The park is currently closed to hunting and boating, and equestrian uses have been limited to special events. Trails are existing mowed lanes that followed original “two-tracks” with some minor expansion. There are approximately 3.7 miles of trails in the form of loop trails that originate at the existing Fish Lake Road parking area and trail head. Passive recreation opportunities are limited to hiking (non-ADA accessible), fishing (walk-in only), wildlife/nature viewing and geocaching. The perimeter is fenced, and gates at existing maintenance drives limit vehicular access to park staff. There is one entrance road into the site from Fish Lake Road (previous home site), and a small parking area and trail head introduce visitors to the site. There is a second, smaller parking area on Buckhorn Lake Road, but it is a limited-access area for ice fishing on the two adjacent water bodies.

The rural character reinforces the natural qualities of the park and contributes to a sense of place, reflecting a feeling of being in the past.

B TOWNSHIP PLANNING AND ADJACENT LAND USE

While the Village of Holly to the north creates a strong growth potential into Rose Township, the Future Land Use Plan (figure 5) designates the park and surrounding land as Conservation and Rural Preservation. As such, mostly low-density residential development will be the eventual built-out conditions abutting the park.

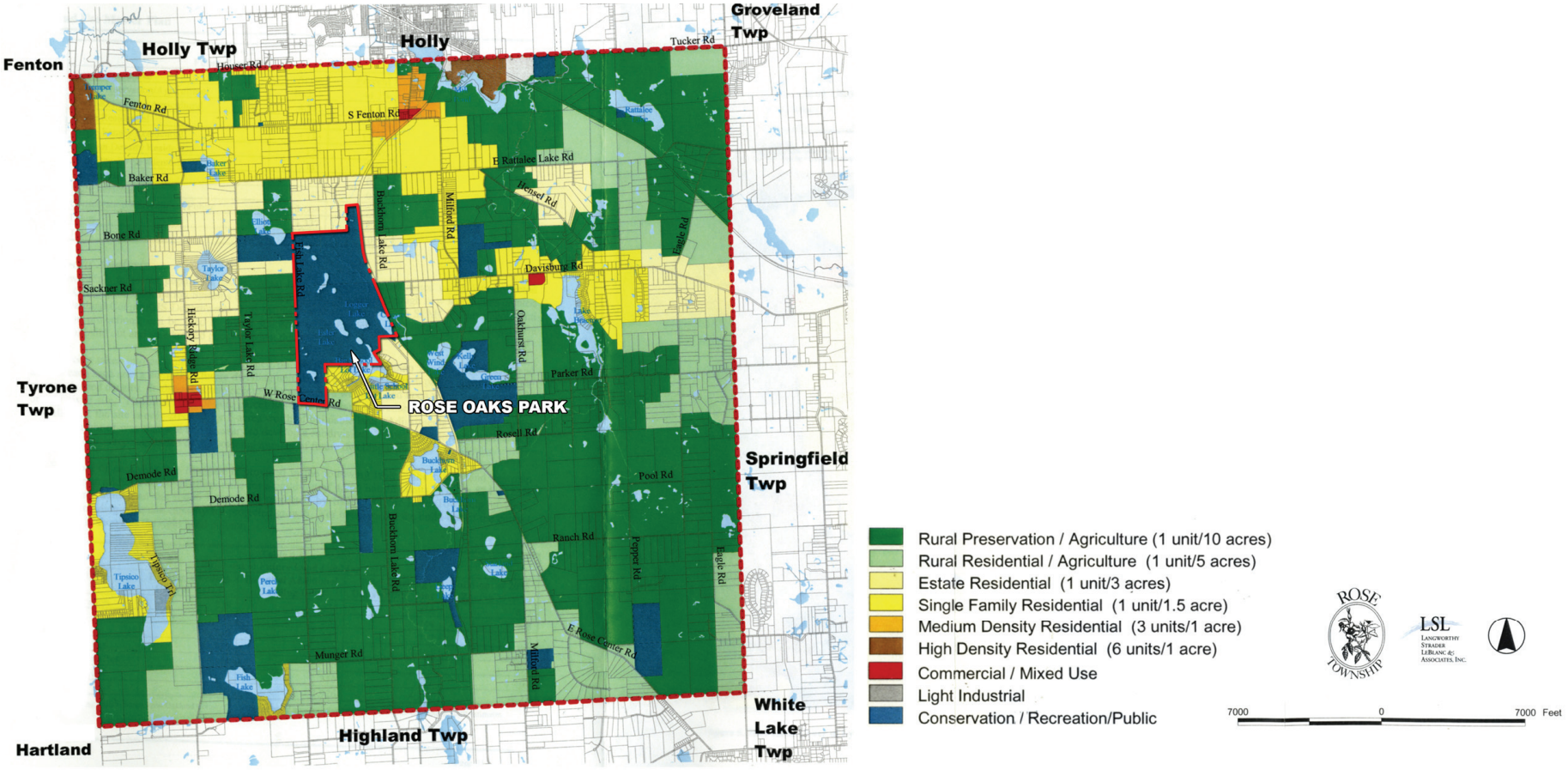


Figure 5 – Future Land Use Plan

Base Map Source:
Oakland County Planning
& Economic Development Services

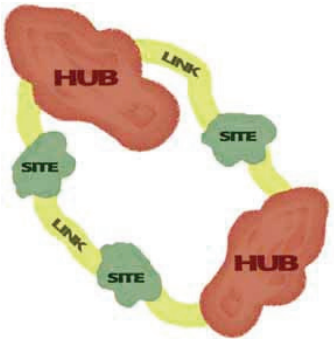
To date, the *Rose Township Land Use Master Plan* is being followed. Large lot, single-family residences have been developed around the perimeter of the park, except for the higher density lakefront development along Big School Lot Lake to the south. Residents in this well-established development have been vocal about the county's use of this lake. Future planning for the park will need to take this into consideration.

OCPR and Rose Township initiatives identify Rose Oaks County Park as a regional recreation facility.

C REGIONAL CONTEXT

Rose Oaks County Park offers unique opportunities as a regional recreation facility to the benefit of all Oakland County residents. From a township perspective, the park also creates significant opportunities for the conservation of local open space and the preservation of local recreational and ecological connectivity.

Green Infrastructure Program



Hubs: Hubs anchor the network and provide an origin or destination for wildlife. Hubs range in size from large conservation areas to smaller parks and preserves. Hubs provide habitat for native wildlife and help maintain natural ecological processes.

In particular, the Oakland County-initiated "Green Infrastructure Program" is under development. What is green infrastructure? It's an interconnected network of open spaces, natural areas and waterways. Focus is on conservation values and the services provided by natural systems in concert with, not in opposition to, land use and development.

A green infrastructure network supports native species, sustains natural ecological processes, maintains air and water resources, and contributes to our health and quality of life. Conserving green infrastructure can produce economic dividends for communities, businesses and residents, as well as provide a framework for sustainable development.

Rose Oaks County Park is currently designated as a Hub with several perimeter connecting Links that utilize natural system corridors such as wetland and forest habitat. These Links radiate out from the park and connect to other Sites and Hubs.

Horseback riding is very popular in the township, and the site's perimeter roads are part of an informal regional equestrian trail system. No established planning process has been implemented to develop and refine the equestrian trail systems in this area of the county. In an effort to minimize the use of the perimeter roads and provide increased back-country riding opportunities, the trail users have expressed a strong interest in expanding this system to include the park.

Sites: Sites are smaller ecological landscape features that can serve as a point of origin or destination, or incorporate less extensive ecologically important areas.

Links: Links are the connections that hold the network together and enable it to function. They facilitate movement from one Hub to another.

Greenway linkages throughout the county are also being considered. Acquisition of the 16-acre Camp Has-O-Rec from the Holly Area Schools is a high priority with OCPR and would provide a link to the International Transmission Company (ITC) corridor running in an east/west direction just north of the park. This utility connector could provide for ecological and trail linkages to Livingston County to the west and other conservation areas and greenway systems to the east.

D NATURAL FEATURES

The park contains an abundance of natural resources including landforms, wetlands, open water, diverse vegetation and an abundance of wildlife. These natural features contribute to a positive user experience.

Extensive and Noteworthy Natural Features

- *Geology/Landscape Context*
- *Soils*
- *Vegetation/Wetlands*
- *Wildlife*

Geology/Landscape Context

The site occurs entirely within the Jackson interlobate region that was formed approximately 10,000 years ago with the retreat of the last glacial period (source: *Regional Landscape Ecosystems of Michigan, Minnesota and Wisconsin: A Working Map and Classification*). The site landforms are typical of this regional ecosystem and occur entirely within a coarse-textured end moraine, except for a small area within the northwest corner of the site which is a medium-textured end moraine. Varying topography is a characteristic of this formation. Outwash channels are extensive and account for the numerous ponds, lakes and wetland systems.

Soils Analysis

Site soils occur in three classifications:

- ***Upland Area with Development Potential***
- ***Upland Area with Limited Development Potential***
- ***Wetland/Open Water Area***

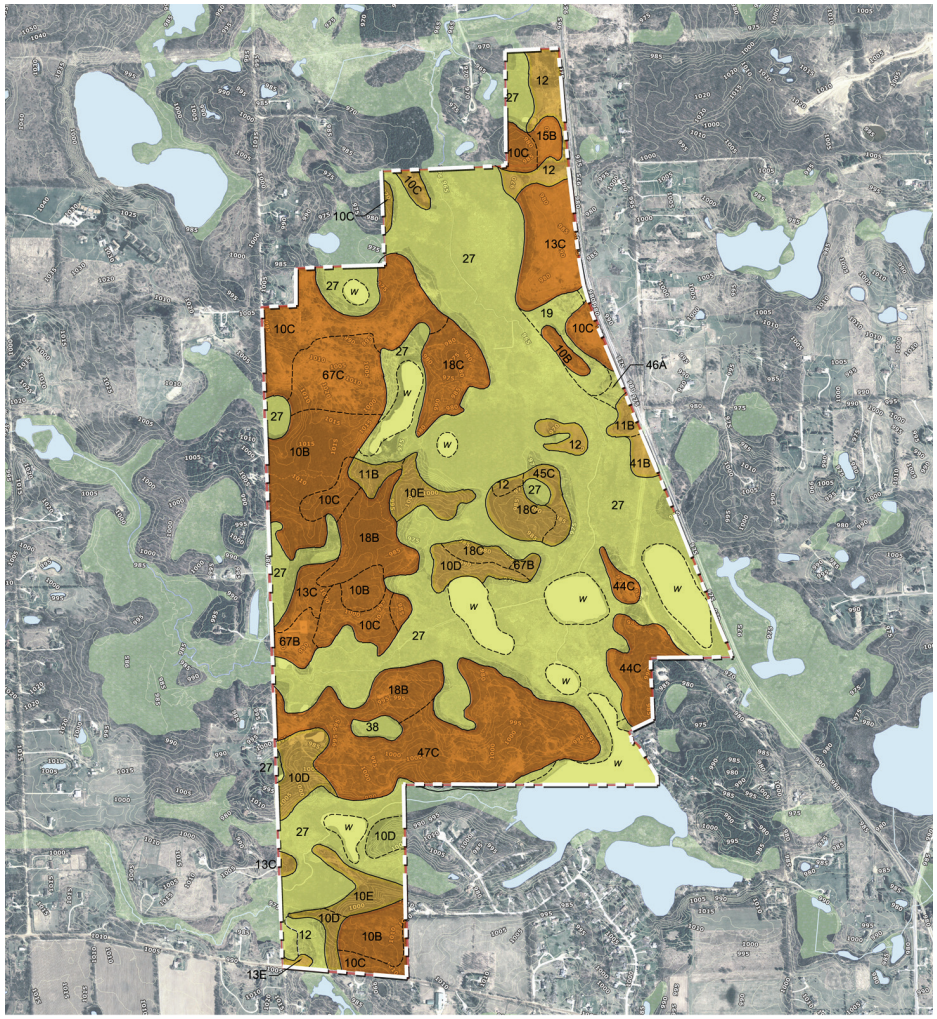


Figure 6 – USDA Soils Map

Upland Area with Development Potential: Most of the upland areas are comprised of sandy loam soils that are well drained. They are mostly gently to moderately sloping and generally suited for pasture and woodland vegetation, which protect these soils from erosion. These soils comprise the open area, old fields and upland woodlots of the site. Most of these soils, when accessible from perimeter roads, are suitable for the development of driveways, parking lots, small structures and septic tanks with absorption fields.

Upland Area with Limited Development Potential: The remaining upland areas are also sandy loam soils, but have steeply sloping conditions and/or are isolated by wetlands. These areas are only suitable for woodland vegetation, habitat restoration, interpretive experiences and limited trail construction.

Wetland/Open Water Area: Most of the low wet areas and pond substrates of the park are classified as muck soils and support some of the more unique plant communities. They are the most common soil types found in the park, and although they are not suitable for many types of park development, they offer some of the greatest possibilities for interpretive opportunities, wildlife viewing and habitat restoration. Access through these soils is difficult and costly, and cannot be accomplished without boardwalks or floating platforms.

Vegetation Analysis

During 2004-2005, the MNFI staff undertook a natural features inventory and ecological survey of several Oakland County Parks, and the findings of this investigation are presented in MNFI's report titled *Natural Features Inventory and Management Recommendations*. Rose Oaks County Park was included in this study. The report is comprehensive, and documents and categorizes the park's plant communities. It also serves as the framework for guiding future habitat restoration at the park, and includes recommendations for managing and maintaining each plant community.

Most noteworthy plant communities include:

- ***Wet-Mesic Prairie (O) – a small exemplary wetland community of statewide significance.***
- ***Fish Lake Road Bog (V) – a small unique bog ecosystem.***

The vegetation found in the park today is very different than pre-settlement vegetation.

MNFI description of pre-settlement vegetation:

> …oak barrens occurred in the uplands within the southern portion of the park, white oak-hickory forests occupied the northern upland areas. The lowlands were predominantly comprised of wet-mesic prairie and associated non-forested wetlands such as prairie fen, southern wet meadow and emergent marsh. In addition, the presence of tamarack was noted by the surveyor, which indicates that the wetlands also included mixed conifer swamp.
>
> The most drastic change is the complete loss of oak barrens, which was the most prevalent cover type in the mid-1800s. Nearly all the oak barrens at these parks have been converted to old fields, recreation areas, or have succeeded to closed canopy oak forest in the absence of natural, periodic fires." (Refer to figure 7.)

MNFI Site Codes

- *O: Wet-Mesic Prairie*
- *P: Buckhorn Road Sedge Meadow*
- *Q: Esler Lake Woodland*
- *R: Esler Lake Wetland*
- *S: Wild Rice Pond*
- *T: Richardson Lake East Shore*
- *U: Golden Pond Swamp*
- *V: Fish Lake Road Bog*
- *W: Fish Lake Road Tamaracks*
- *X: Beaver Dam Wet-Mesic Prairie*
- *Y: Beaver Pond Wet Meadow*
- *Z: White Oak Knoll*

Figure 7 – MNFI Current Land Use Map

Shrub encroachments, old field conditions, a pine plantation, a remnant nursery and closed canopy condition are dominant across the upland portions of the site. Wetland areas have been previously dredged, altering the site hydrology, which in turn allows the encroachment and expansion of forested wetland communities.

Invasive species can be found throughout the park and have a strong presence in both wetland and upland areas. The list is extensive and can be found in the MNFI report.

Figure 7 identifies the locations of the MNFI site codes for each natural plant community that exists today. A complete description of the codes and corresponding plant communities can be found in the MNFI report.

Wildlife Habitat

Although no specific wildlife inventory has been completed, the lack of development in the region, the presence of multiple habitat corridors, extensive wetlands and open water, rolling topography, and a blending of open fields and closed canopy provide a considerable amount of habitat diversity for many aquatic and terrestrial species. A complete wildlife inventory similar to the MNFI ecological survey would be an added benefit to the planning process for the park.

Oakland County natural areas support extensive populations of mammals, amphibians, waterfowl and birds, and many of these species would likely use the park for nesting, breeding, foraging and resting during migration. One noteworthy species of mammal currently existing in the park is a small population of beaver. Dam construction is present in both Richardson Lake and within a small tributary draining into Esler Lake. Beaver activity has fluctuated in the park, moving from area to area. Park staff value the ecological and educational contribution of the beaver to the Rose Oaks County Park landscape. Wildlife control measures are undertaken when water levels threaten public or private property or personal safety.

Rose Oaks County Park hosts an abundant white-tailed deer population. A 2006 aerial property survey indicated deer densities in excess of four times the recommended 10-15 deer per square mile. Such high deer densities can adversely impact local ecosystems and vegetation. MNFI has recommended a reduction in deer density to aid in the restoration and management of the park's significant natural communities. Open archery hunting would provide a valuable deer-management mechanism. OCPR will pair annual aerial deer surveys and open archery hunting to monitor and manage deer population at the park in the future.

The Framework Plan (figure 8) serves as a summary of the data that has been presented in this section. It will be used to guide the design alternatives and Final Design development for a context of the site's physical opportunities and limitations.

E FRAMEWORK PLAN

Rose Oaks County Park is considered a regional recreational facility that serves a broader area than community parks, and focuses on meeting the recreational needs of the region as well as preserving unique landscapes and open spaces.

The site is situated in a rural area of Oakland County and is maintained as rural parkland, and the *Rose Township Land Use Master Plan* acknowledges the rural character of this area. The park has an abundance of natural features, and with numerous linkage opportunities for wildlife corridors, equestrian trails and non-motorized greenways, its ability to be a regional recreation destination point is great. The park's potential for providing a more significant role for passive recreation and environmental education in this part of the county should be an integral feature of the Master Plan.

Wetlands and open water are extensive throughout the park and account for approximately 50 percent of the total park area. This feature greatly limits the ability to plan for many types of recreational facilities, but provides excellent opportunities for expansion of passive recreation opportunities such as habitat restoration, nature trails and wildlife viewing. The absence of a well-developed internal road system supports these passive opportunities.

The existing road system around the perimeter of the site is typical of most rural areas. The roads are unpaved and have site line issues, and there is a considerable potential for user/vehicular conflicts. This potential is exasperated due to the use of the road system for horseback riding and the absence of a well-defined trail network system. Public right-of-way upgrades are expensive and will impact the rural character of the roads, suggesting that expanding the park uses to include equestrian may be appropriate.

Issues

- ***Boardwalks are expensive but would be needed to cross the expansive wetland system. They may not be a suitable surface for horses, but would provide access to locations of the park where environmental education and wildlife viewing is greatest.***
- ***The sandy and erosive steep slope areas are not conducive to sustainable trail use by mountain biking, but with careful siting and the appropriate Best Management Practices, they could be suited for trail types that provide access to vista areas and for habitat restoration.***
- ***Some of the water bodies are small, and over-fishing without catch and release mechanisms may impact fish populations and negatively affect one of the park's important natural resources.***

The site's development opportunities are limited to those upland areas that will support basic infrastructure for small structures (primarily picnic), roads, parking and absorption fields for on-site restrooms. Much of the upland areas accessible from Fish Lake Road provide the greatest opportunity for these types of recreation upgrades. A secondary, but much smaller development opportunity exists at the parking area accessed from Buckhorn Lake Road. Pending the acquisition of the Camp Has-O-Rec property (Holly Area Schools), the large open field to the south of this property could have additional improvement potential if the ITC corridor to the north hosted a multi-use, non-motorized trail.

A balance between habitat preservation/restoration and the creation of a more diverse recreation base will maximize the park's recreation potential. Upgrades to the trail system, the expansion of additional trail user groups and the introduction of more clearly defined environmental education programs are the main ingredients to this balance approach. The demands for increased parking, restroom facilities, potable water and security will become a greater priority as visitor rates increase, uses are expanded and trails are upgraded. Due to the soil types and the extensive wetland systems, certain uses and trail upgrades will require careful siting consideration. While these natural features limit development potential, they provide wildlife habitat and other forms of passive recreation.

The next section of this report will expand upon this Framework Plan and will explain the remaining phases of the design process.

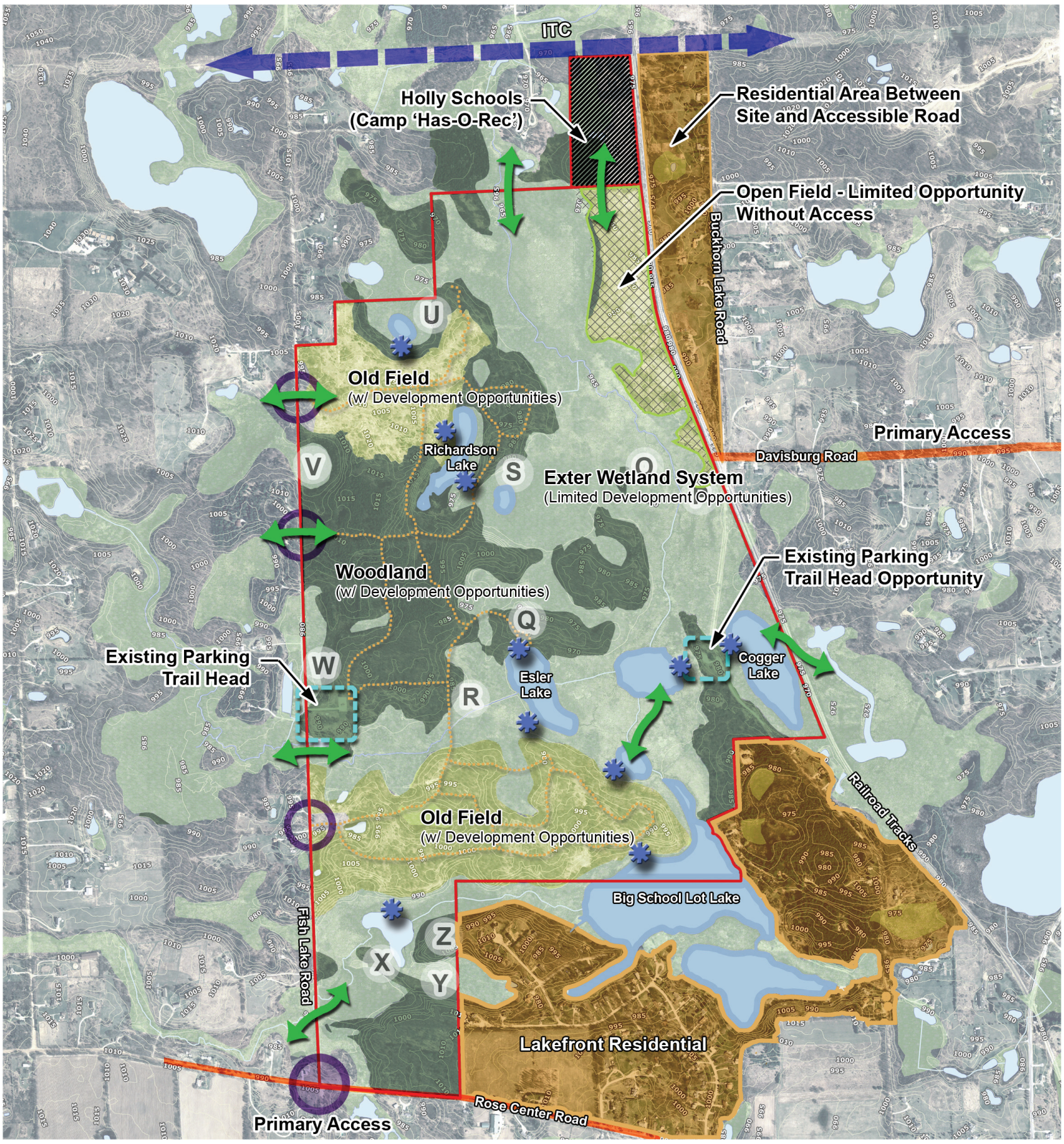


Figure 8 – Framework Plan