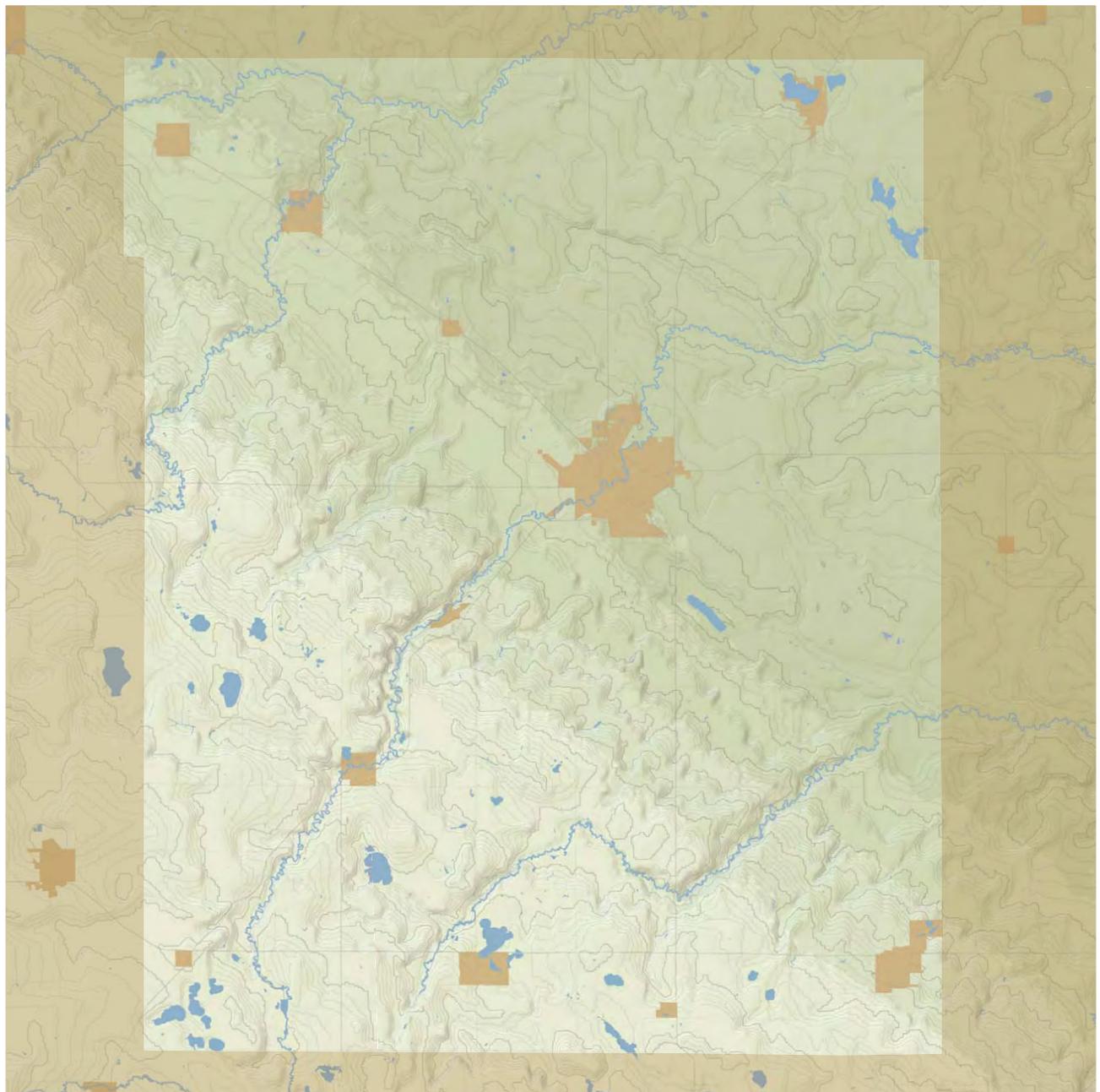


# COUNTY TRAIL SYSTEM DESIGN: LYON COUNTY



APRIL 2010

# ACKNOWLEDGEMENTS

This project was produced and completed by The Center for Changing Landscapes, College of Design, College of Food, Agricultural, and Natural Resource Sciences at the University of Minnesota.

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# LYON COUNTY ANALYSIS

- TOPOGRAPHY & WIND ■
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- HISTORIC RAILROAD/COMMUNITY SETTLEMENT PATTERNS ■
- ROADS & TRAFFIC COUNTS ■
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- LAND USE ■
- OWNERSHIP ■
- AMENITIES ■
- HISTORIC SITES & MUSEUMS ■

# ANALYSIS

## TOPOGRAPHY & WIND

Buffalo Ridge or Coteau des Prairies is the most distinctive topological feature of Lyon County.

At its highest point south of Lyon County, the Ridge is 1750 feet above sea level. This elevation creates opportunities for harvesting the wind by the wind farms that have been developed there.

In Lyon County Buffalo Ridge creates a great diagonal as it rises from the flat prairie that surrounds Marshall on the northwest, the north, and the east; this change in topography essentially divides the county into three distinct areas.

Northern and eastern Lyon County is a flat, fertile triangle.

The county to the south is quite different. The Ridge climbs in a narrow band of increasing elevation. As the land rises, the Yellow Medicine River, the Redwood River, and the Cottonwood River cut ravines as they flow northeast to the Minnesota River. Lynd and Tracy are in this transitional area.

The rest of the county is on Buffalo Ridge. The smaller communities of Russell, Florence, and Balaton are located in the southwest triangle of Lyon County, a higher landscape of rolling terrain.

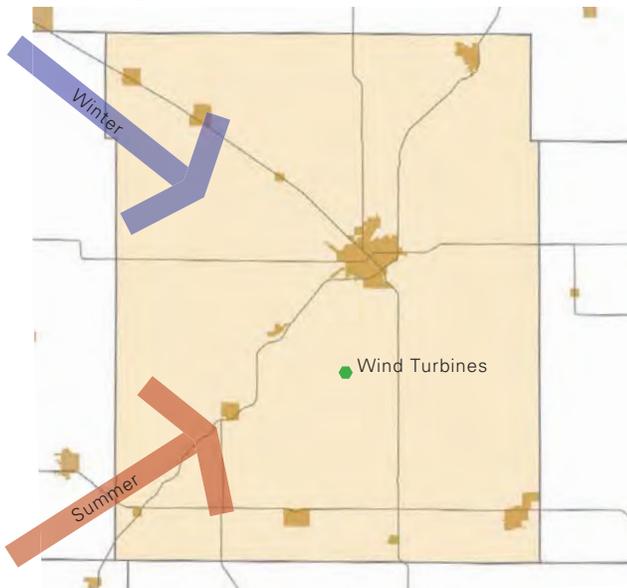
Prevailing western prairie winds often blow across the flat prairie landscape.

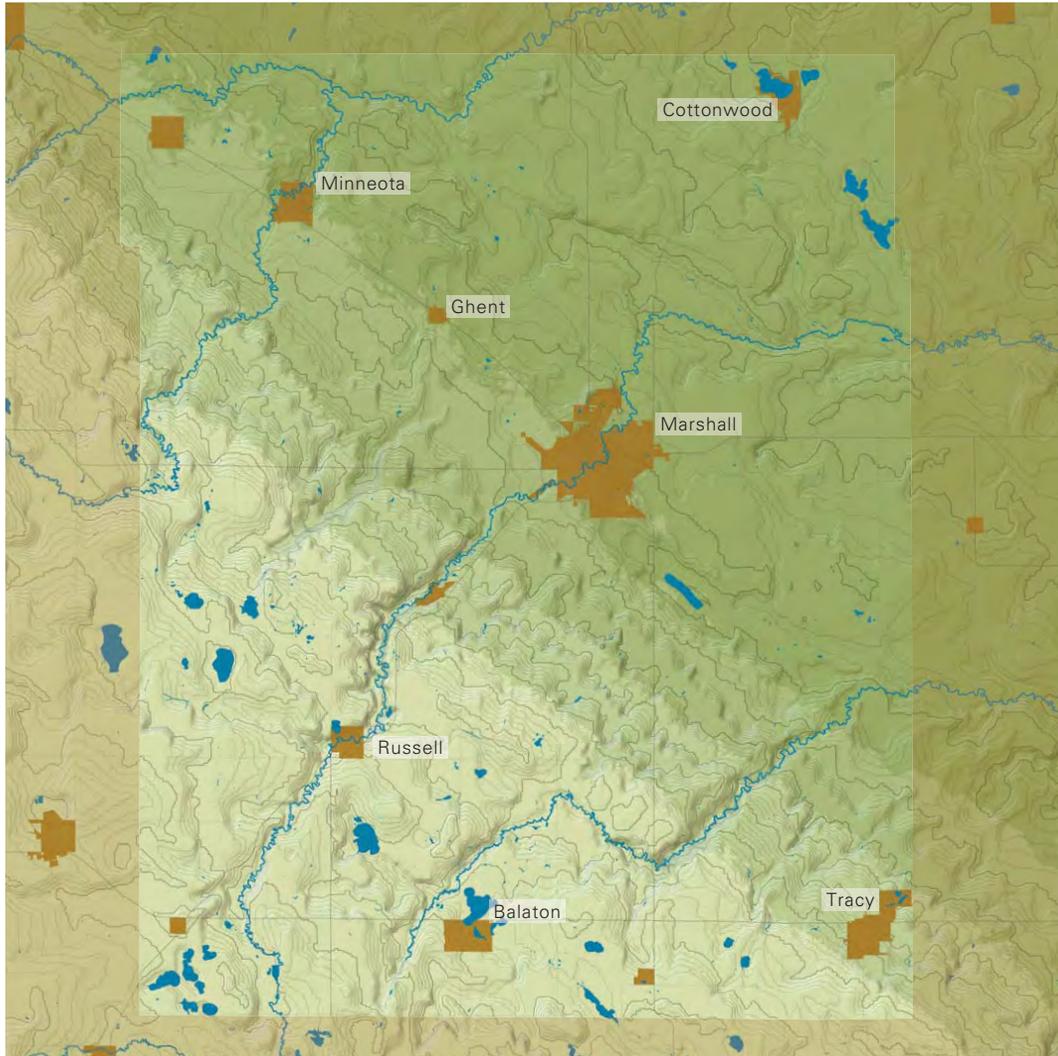
## Design Implications

The changes in topography, the wind, and the prairie suggest a trail strategy that:

- Creates distinct trail loops that are located in one or the other of the “triangle areas” of the county with carefully located linkages in the areas of the greatest grade changes to provide a connection between the lower and upper loops and make a countywide system with routes that are not too challenging.
- Locates the trail in areas that are protected from the wind whenever possible and when not, incorporates wind buffering as part of the trail design.

Prevailing Wind Pattern





- Municipalities
- Open Water

# ANALYSIS

## WATERSHEDS & HYDROLOGY

Flowing water and lakes characterize Lyon County's highly altered hydrology. The landscape has been engineered with ditches and drain tiles to increase the farmable land and to reduce flooding of fields.

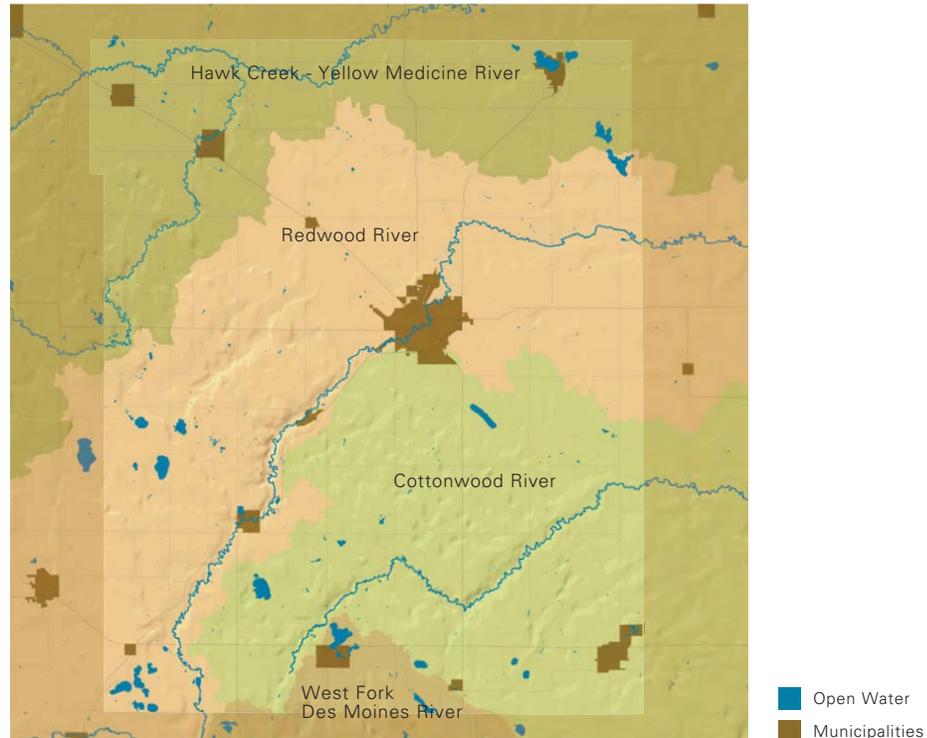
Because the three large prairie rivers of southwestern Minnesota all flow through Lyon County on their way to the Minnesota River, the county has three major watersheds. An important Iowa river also receives water from the county.

Historically many small streams fed rivers, areas of wet prairie, and prairie pothole lakes. A network of drainage ditches has drained many of the historic wet areas and the lakes. Although many small feeder watercourses still exist, some of the larger streams have been transformed into drainage channels. Most of the remnant prairie pothole lakes are located on the Ridge in the southwestern part of the county.

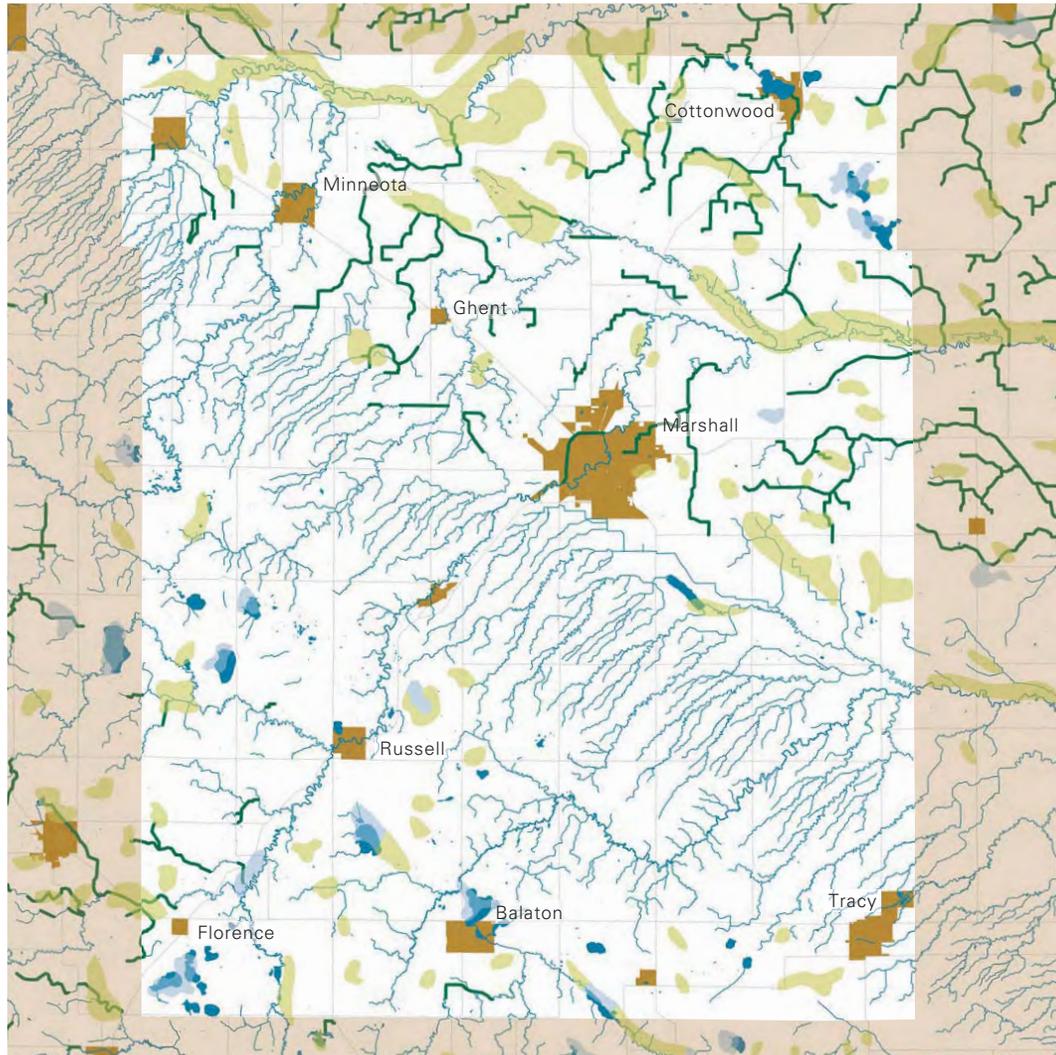
### Design Implications

- Creating special places where the trail intersects with the rivers as places to stop, rest, and enjoy the rivers.
- Celebrating the remaining lakes as features to be enjoyed and interpreted.
- Interpreting the engineering that created the rich farmland and the flood control infrastructure.

### Major Watersheds



## Hydrologic Alterations



- Municipalities
- Present Day Open Water
- Pre-European Settlement Lakes
- Present Day Drainage Ditches
- Present Day Rivers & Streams
- Pre-European Settlement Wet Prairie

## ANALYSIS

### HISTORIC RAILROAD/COMMUNITY SETTLEMENT PATTERNS

The map below of Lyon County depicts the lakes and the rivers and shows how important the railroad was in the early white settlements.

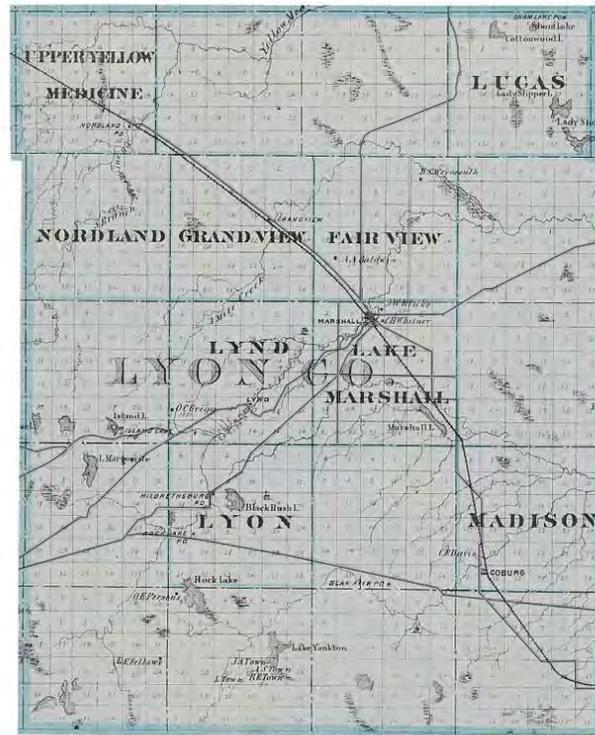
The current communities of Lyon County reflect the European immigrant settlements of the late 19th century. Settlement was promoted by the railroads as they spread across the landscape. Towns were located along the rail lines at seven-mile intervals, distances that facilitated servicing the trains' engines and provided access to shipping for farmers' produce. The standardized railroad community plan was an orthogonal grid pattern that was oriented to the railroad tracks with numbered streets running parallel to the tracks. The plan included a brick commercial block, a lumberyard located by the railroad tracks, the bank on 1st and Main, and churches on 2nd and 3rd.

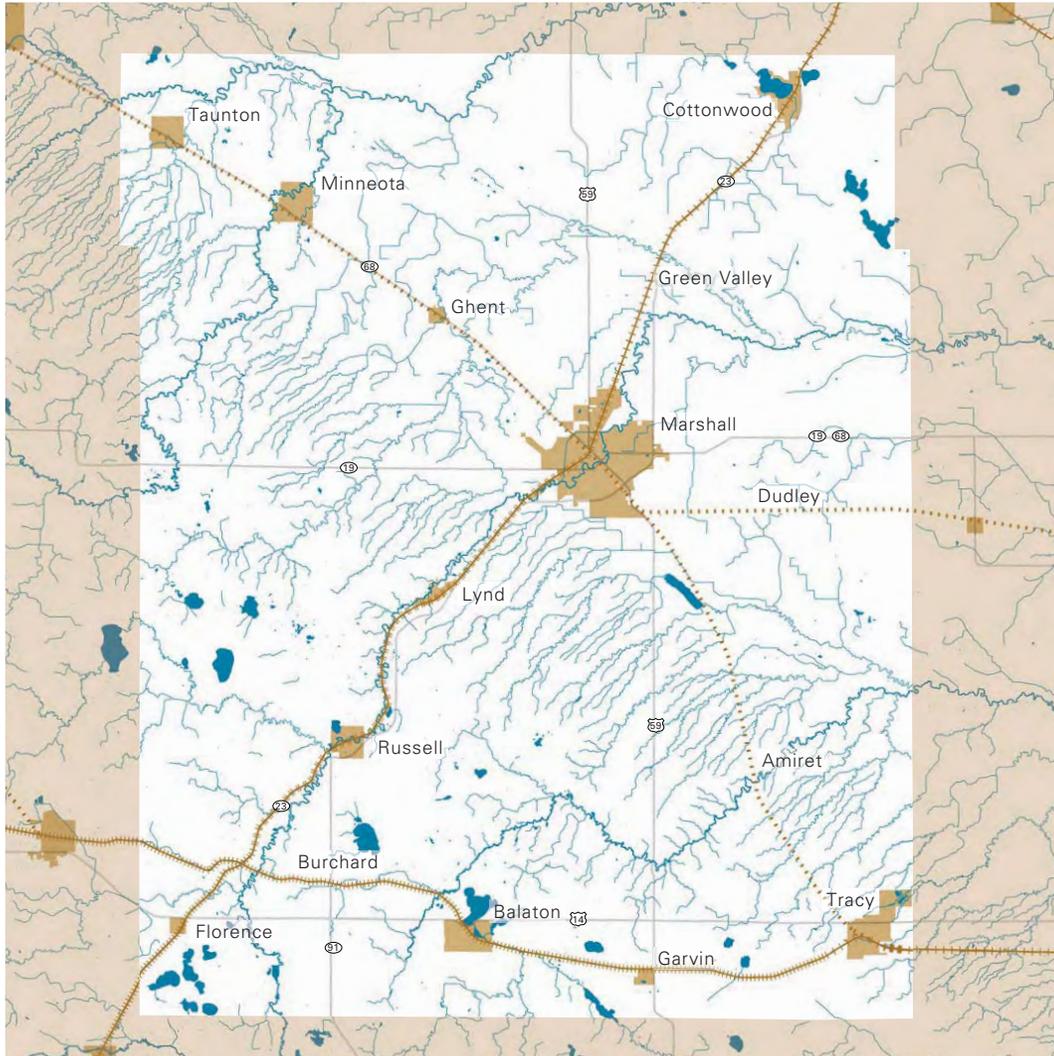
Most of these early communities still exist in this era of the truck and the automobile. However, some rail lines have been abandoned and some communities are very small.

#### Design Implications

- The seven-mile interval between communities provides the potential for trails connections between communities that are scaled to short distance cyclists.
- There is a potential for community trailheads that provide amenities.

1874 Map





# ANALYSIS

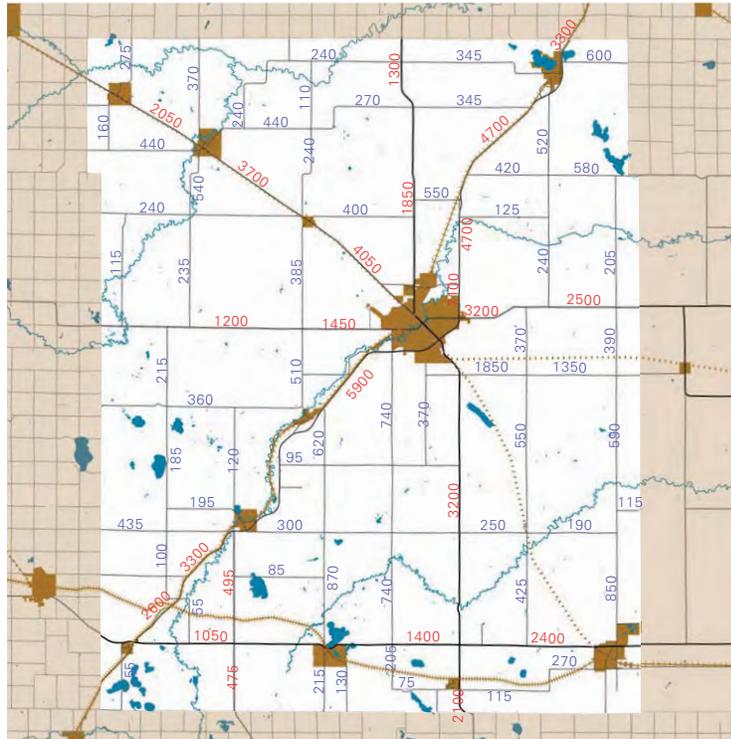
## ROADS & TRAFFIC COUNTS

Lyon County has a network of county and township roads that follow section lines. This pattern is broken when natural features such as a prairie pothole lake or a river makes them deviate slightly from their east/west or north/south paths or a large farm has consolidated several smaller farms into one. Many of the roads are gravel, but a network of county roads connects all four corners of the county. Federal and state highways cross the county orthogonally and diagonally following section lines, the railroad, or the Redwood River.

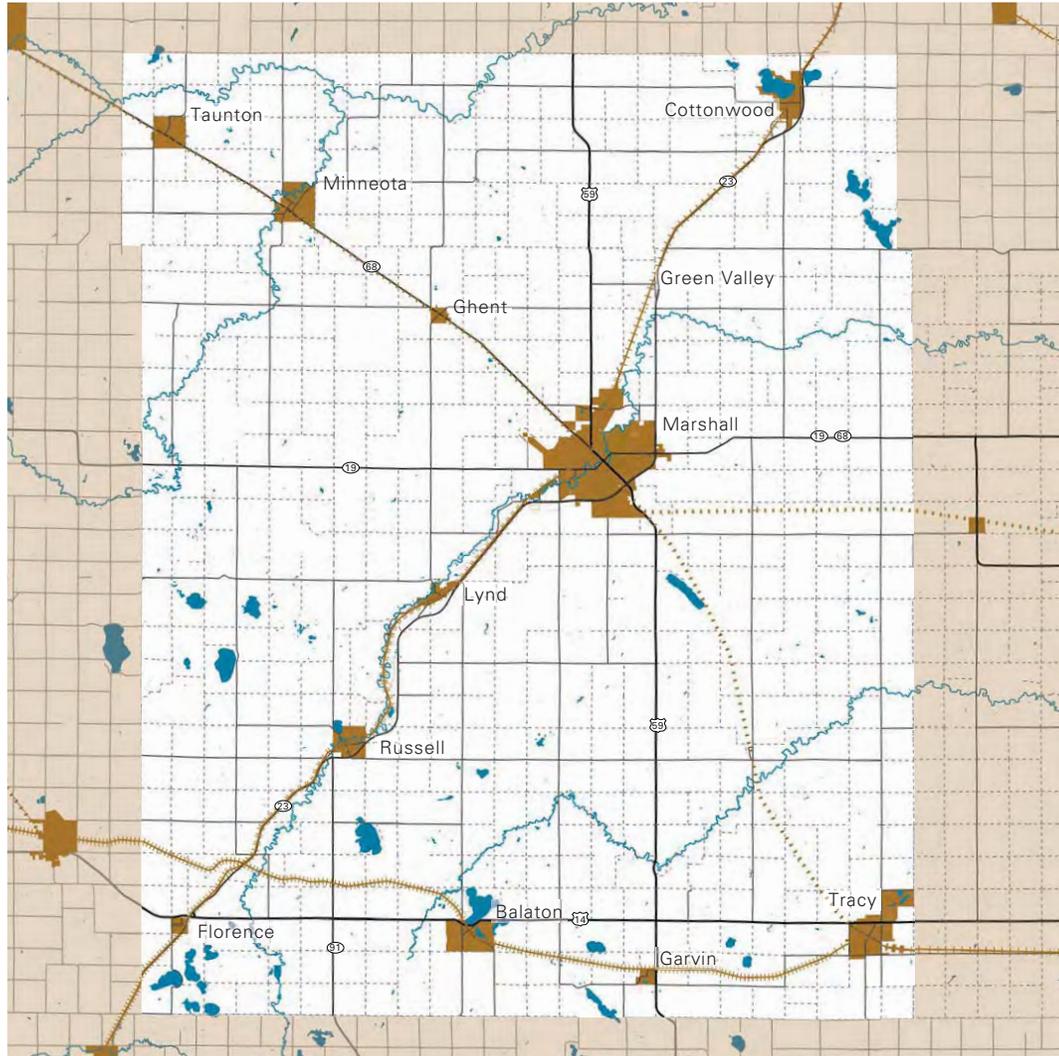
### Design Implications

- Some of the roads in Lyon County are very busy with car and truck traffic. High traffic counts make highways poor candidates for siting trails along them since high numbers of cars and trucks make cycling unpleasant and more dangerous.
- Long stretches of gravel roads are not good candidates either because of the dust generated on them by trucks and cars. However, trails work on infrequently traveled gravel roads for short distances.

Traffic Counts



## Paved and Unpaved Roads



## ANALYSIS

### ABANDONED RAILROAD LINES & ROAD RIGHT-OF-WAYS

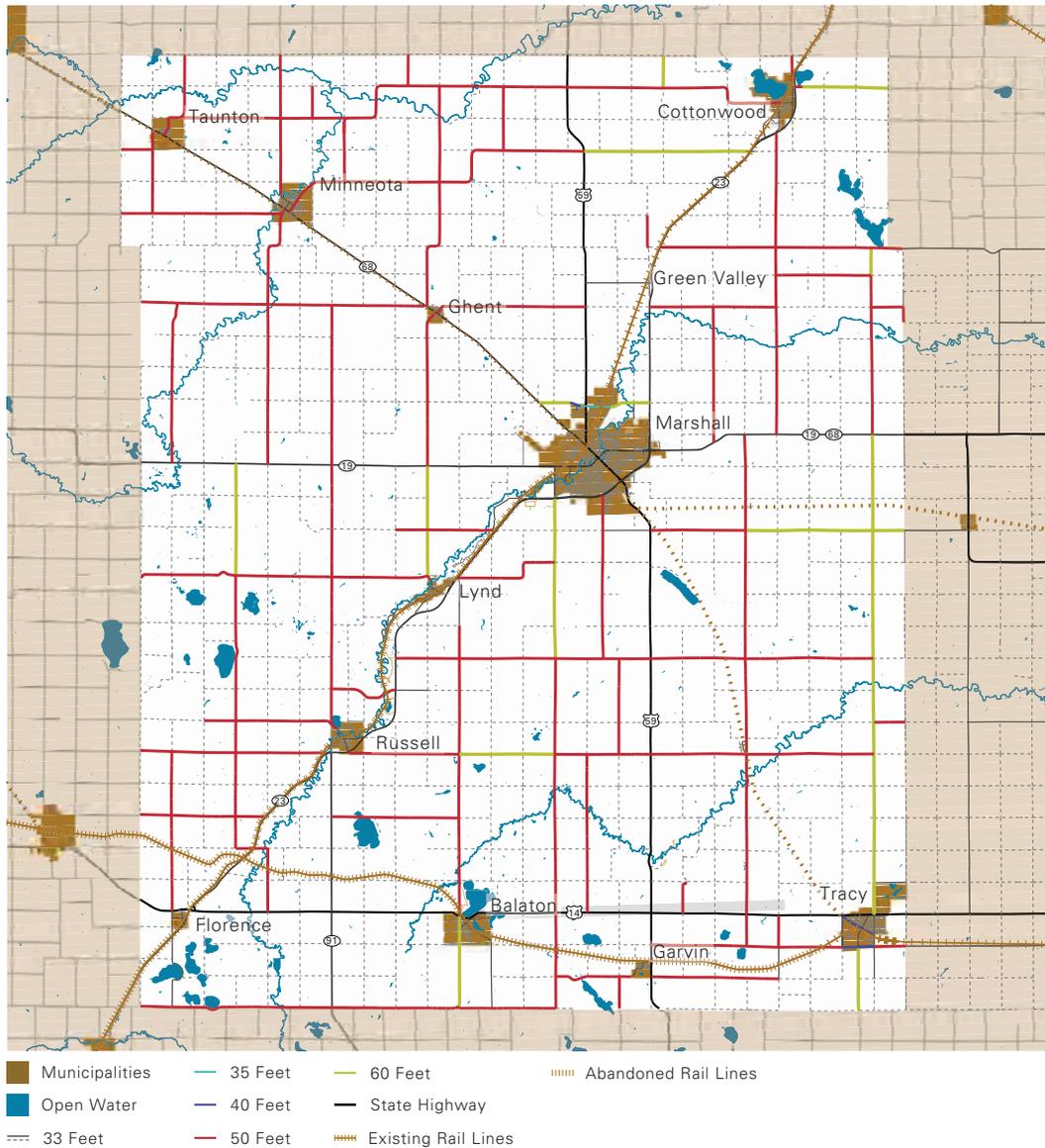
Abandoned railroad beds often offer opportunities for siting trails; however, because almost all of the beds have been sold to adjacent farmers and have been incorporated into existing farms, very little is available for this use at this time.

Road right-of-ways are often important considerations in siting a trail. right-of-ways vary in Lyon County. In some areas they are generous and able to accommodate an off-road trail. Others are narrow and are bounded by wetlands and valuable farm fields.

#### Design Implications

- Abandoned rail lines may be potential trail corridors.
- High traffic counts may disqualify some roads for roadside trails when the right-of-way does not accommodate an off-road trail alignment.





# ANALYSIS

## ROAD RIGHT-OF-WAYS

Over half of the roads in the county have a right-of-way width of 33' or 35' and are gravel roads. The drive lanes on the roads with the lowest traffic counts may even be 8' or less, causing the grass shoulder to be used on the rare occasion that multiple vehicles meet.

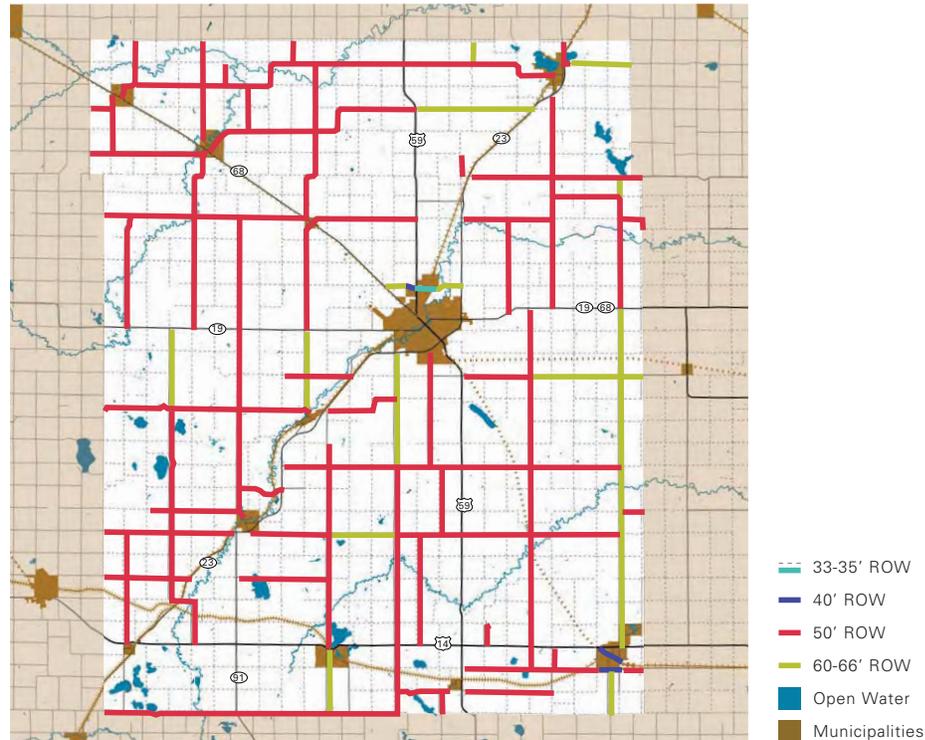
Forty foot right-of-way widths are only located within the town of Tracy and a small segment at the northern edge of Marshall.

Most of the paved county roads have a 50' right-of-way. The 50' and 60' roads provide about 14' to 18' of space between the edge of traffic and the outer edge of the right-of-way.

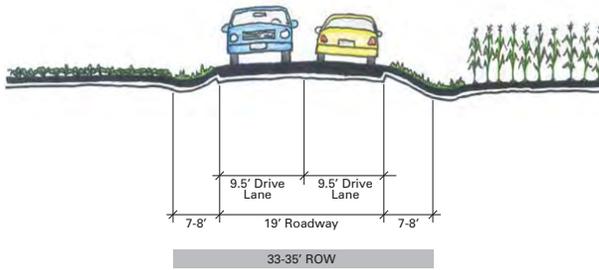
## Design Implications

- The combination of a narrow right-of-way and a gravel surface restricts the use of the 33-35' right-of-way roads.
- Forty to sixty foot right-of-way widths could provide space for a trail within the right-of-way but separated from the drive lanes if a deep ditch or ditched stream does not restrict this.

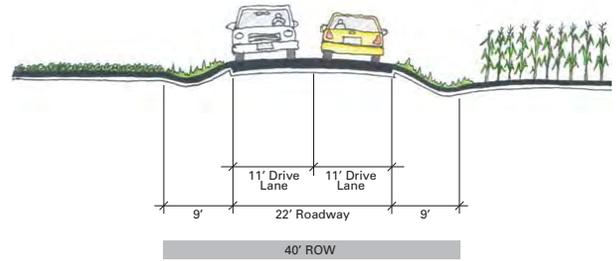
County and Township Road Right-of-Way Widths



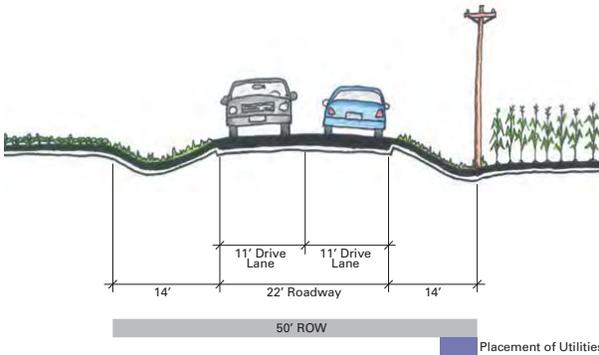
33-35' ROW



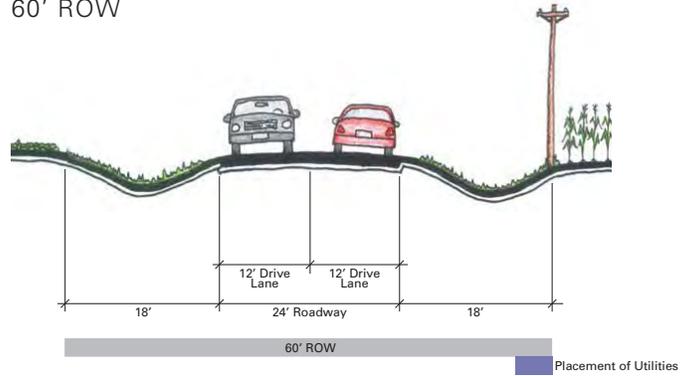
40' ROW



50' ROW



60' ROW



# ANALYSIS

## ROAD RIGHT-OF-WAYS

State Highway 68 connects Taunton to Marshall through Minneota and Ghent. There is an abandoned rail line with a former 100' right-of-way that runs adjacent to the road. The road right-of-way is typically 75' from the road center line on the north side of the road but only 25'-50' on the south side because of the abandoned railroad right-of-way.

US Highway 59 runs north/south splitting the county in half and connecting Marshall to Garvin, passing Garvin County Park. Its right-of-way is typically 150' but reaches 200' points around curves and at intersections.

State Highway 23 crossed the county from Florence up to Cottonwood, passing by Russell, Lynd, Marshall, and Green Valley. Its right-of-way ranges from 200' to nearly 300' in some sections of divided highway.

State Highway 19 heads east from Marshall and has a 100' right-of-way.

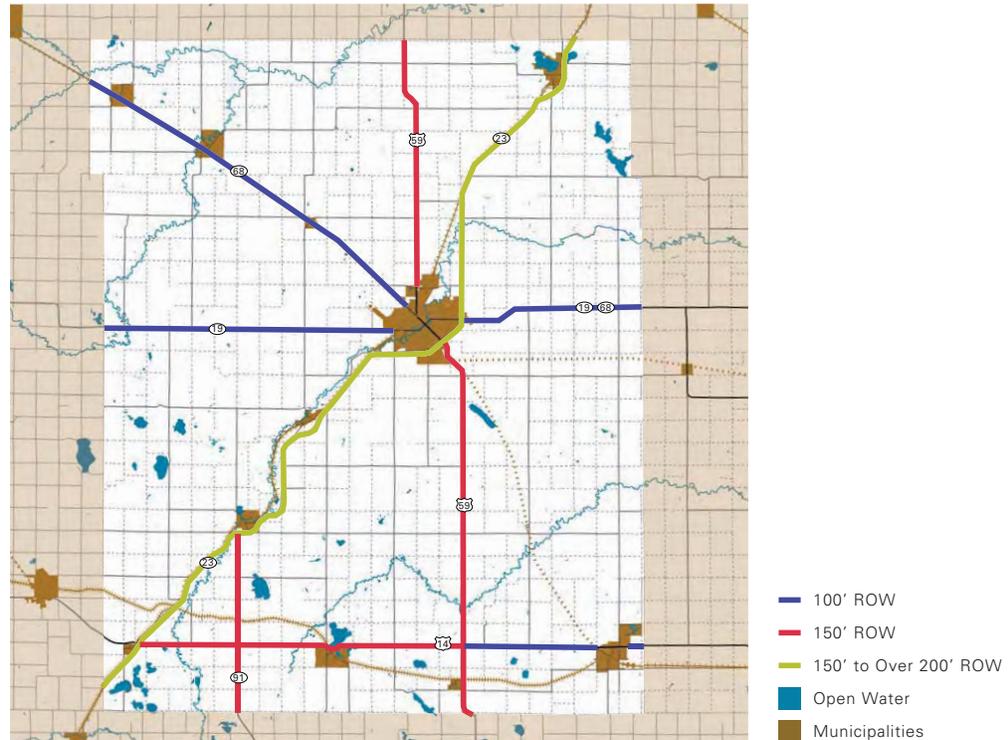
State Highway 91 heads south from Russell with a 150' right-of-way.

US Highway 14 runs east/west connecting Florence to Tracy through Balaton. On the western half of the county the right-of-way is ample at 150', but near Tracy the right-of-way is 100'.

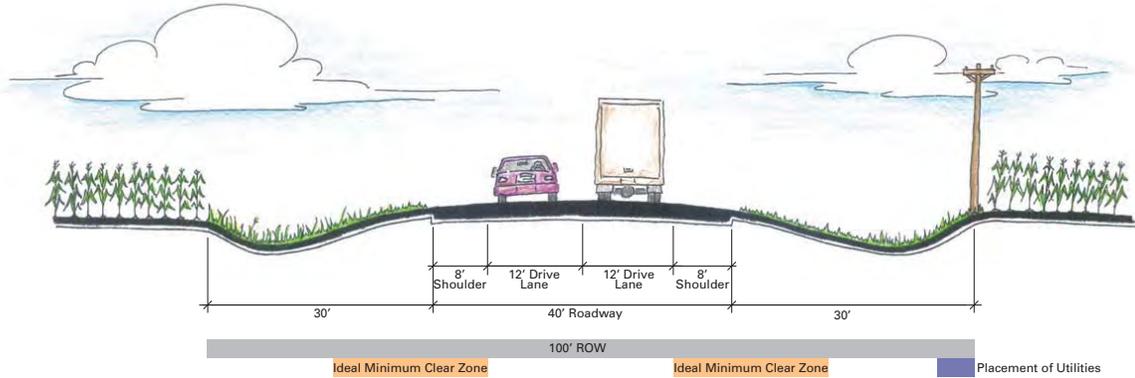
### Design Implications

- Relatively wide right-of-ways of State and US Highways provide opportunities for siting off-road trails throughout Lyon County.
- Consideration must be taken to preserve the clear zones recommended for the recovery of vehicles that run off the road and for sight lines to see animals entering the roadway.

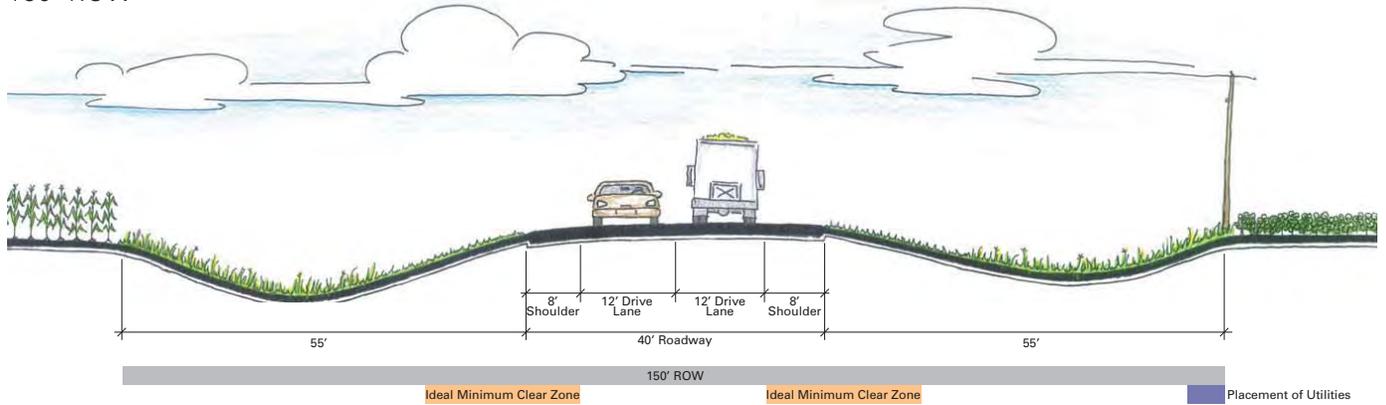
Highway Right-of-Way Widths



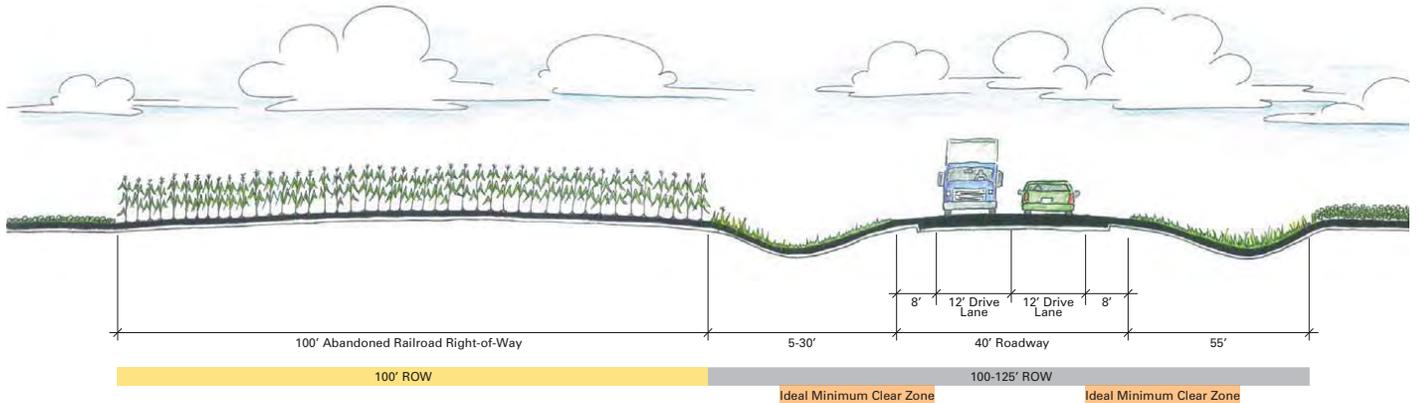
100' ROW



150' ROW



100' ROW With Abandoned Railroad ROW



# ANALYSIS

## TRAILS, PARKS & WATER ACCESS

City trail systems exist in a number of the County's communities.

Although most of the water access points are on lakes in the southwestern triangle of the county, there are three in the county's northeastern corner.

The Birding Trails concentrated in the southern half of the county where most of the remnant prairie pot hole lakes and wetlands provide habitat for both resident and migrating birds.

Lyon County has one state park, one county park, and plans for a second county park. All of these parks are major natural resource amenities and provide a wide range of recreational facilities and interpretive opportunities.

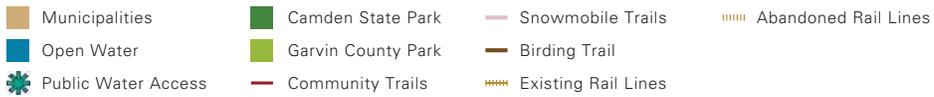
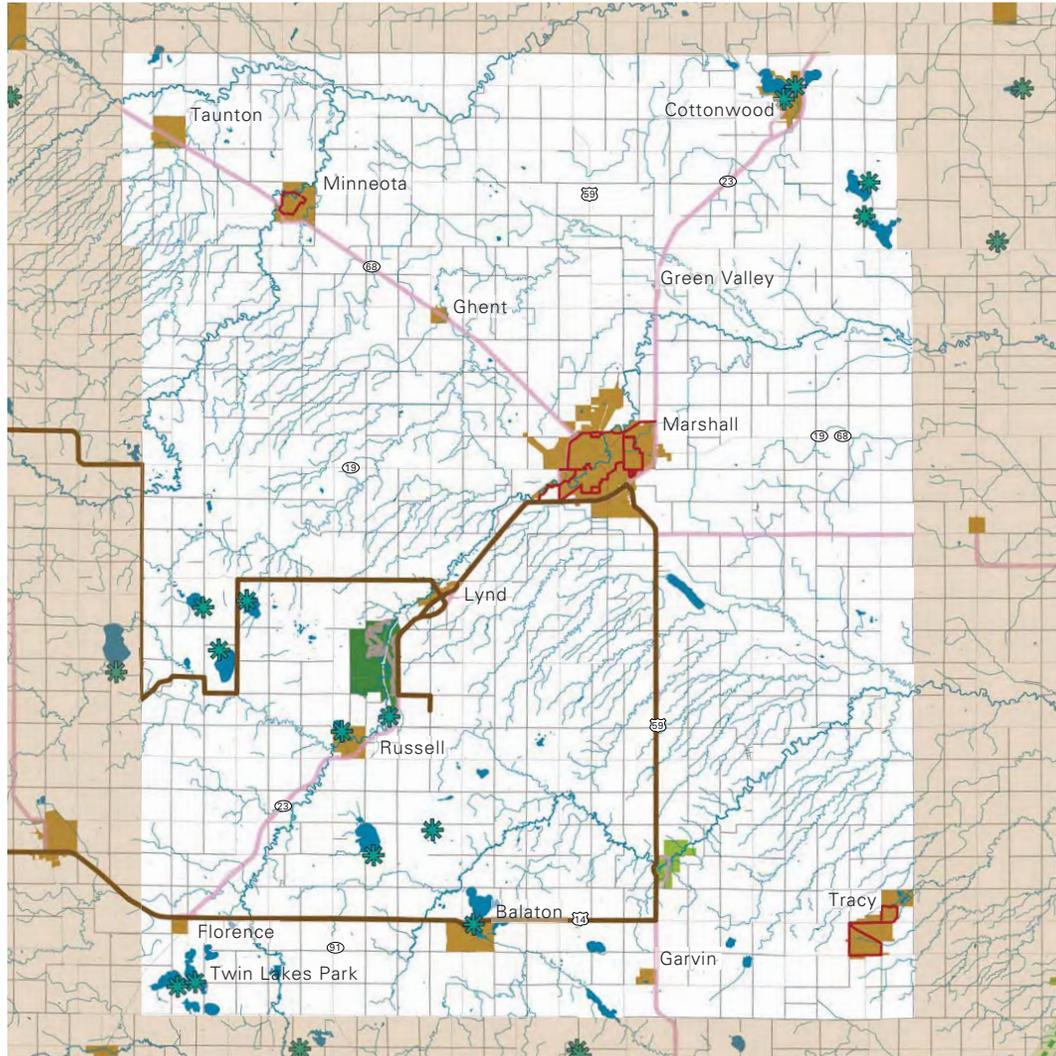
Camden State Park is located on the Redwood River in the transitional area between two different topographies. It is located between the zone where the Buffalo Ridge starts its rise from the flat prairie and the Ridge's area of higher elevation. As such, its northern entrance is low, and the southern entrance is high. To transverse the park's inclines by bicycle is challenging.

Garvin County Park with its many amenities straddles the banks of the Cottonwood River and is bounded by a busy highway.

The proposed Twin Lake County Park is to be sited among a cluster of prairie pothole lakes in the southwestern corner of the county south of Florence and south of busy Highway 14 and Highway 23.

## Design Implications

- In order to provide local access to the county trails, the city trails should be connected wherever possible to the county trail system with trailheads.
- Water access points should be evaluated as points for trailheads and/or rest stops.
- The three parks suggest:
  - Trail access to all three parks is very desirable,
  - Trail connections to Camden State Park should be made from Marshall on the north and from Russell on the south,
  - Garvin Park needs to be reached by a safe trail, not by a trail on a shoulder along a busy road,
  - A trail loop to Garvin Park from Balaton, Garvin, and Tracy is desirable, and
  - A trail loop from Florence to the new Twin Lakes County Park is desirable, but the safety issues associated with crossing two busy highways need to be addressed.
  - The trail should be configured to provide access to birding sites.





# ANALYSIS

## LAND USE

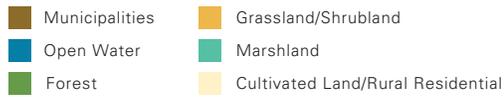
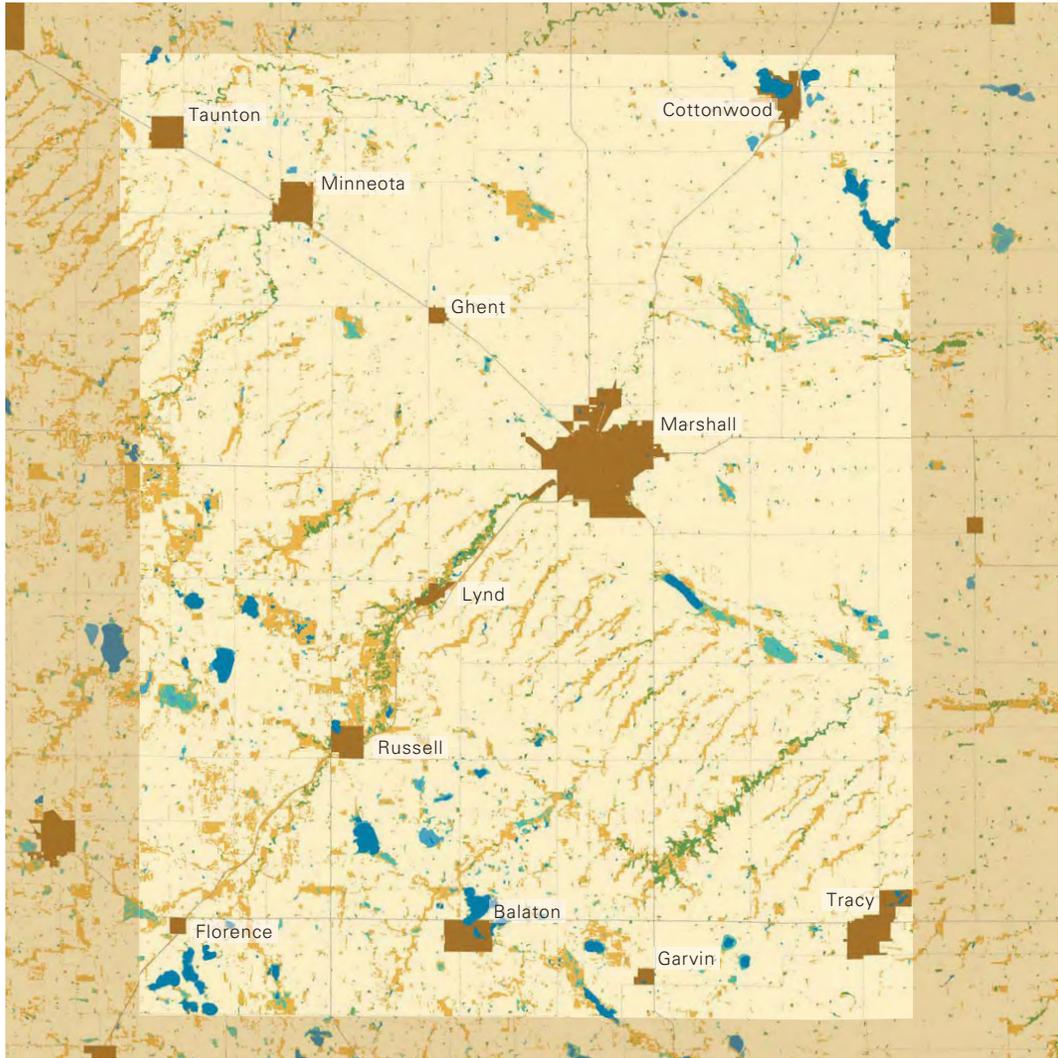
Most of the land in Lyon County is used for crop agriculture. The highly farmed and greatly drained nature of Lyon County's landscape impacts recreational use. This area of the Minnesota was once known as the "duck factory" because of the large number of waterfowl that bred and lived in its lakes and wetlands. Its prairies with its native grasses were prime habitat for prairie species. These have implications for bird watching. Riparian woodland valleys along the County's prairie rivers are remnant landscapes for woodland-loving species like wild turkey, eastern screech owl, black-bellied cuckoo, spotted towhee, and Northern Cardinal. Waterfowl concentrate in the remaining wet areas.

The land is characterized by:

- Remnant marshes that concentrate waterfowl and other birds exist in scattered areas;
- Wooded areas along perennial and intermittent streams, and
- Utility corridors sited along roads and in fields.

## Design Implications

- Remnant areas of natural resource amenity such as ravines, open water, forests, and grasslands are assets to be accessed by the trail for rest, interpretation, and bird watching;
- Much of the countryside is farmland to be interpreted by the trail;
- Many of the utility corridors are not good candidates for siting a trail; and
- The openness of the land requires a wind buffering strategy.





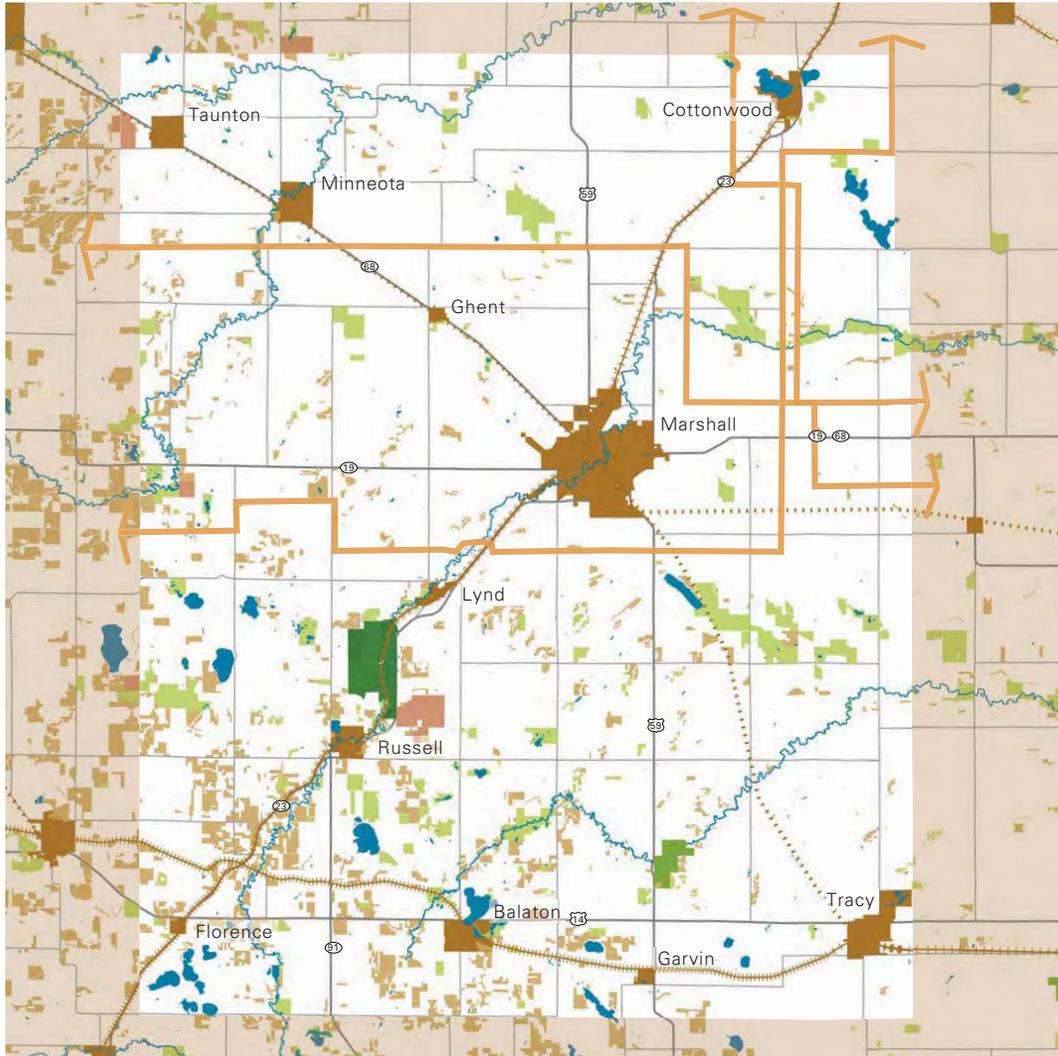
## ANALYSIS

### OWNERSHIP

Because it has rich farmland, Lyon County has little publicly owned or controlled land. Most areas of high amenity are controlled by the Minnesota's Department of Natural Resources: Camden State Park, Wildlife Management Areas, and Scientific and Natural Areas. Conservation land is concentrated on the Ridge. These protected areas are important environmental assets that provide habitat for many species.

### Design Implications

- The lack of public land limits trail alignment opportunities; it requires that easements will be needed for the trail and/or many trail alignments will have to be sited along the right-of-ways of existing roads; and
- The protected landscapes that provide habitat for native species are potential assets to be enjoyed carefully by trail users; siting trails along these areas would add much to the trail experience.



- Municipalities
- County Land
- Camden State Park
- Open Water
- Federal Land
- Proposed CapX2020 Alternatives
- Private CRP Land
- DNR Land

# ANALYSIS

## AMENITIES

Connections to Lyon County's parks, lakes, and communities are high priorities for the trail steering committee. Connecting to Camden State Park is the highest priority.





# ANALYSIS

## HISTORIC SITES & MUSEUMS

There are a number of historic sites and museums that tell the story of early settlement of Lyon County. These include:

Cottonwood:

- Martin Norseth House - 1898

Lynd:

- Kiel and Morgan Hotel - 1871

Marshall:

- Bridge No. 5083/5151 - 1931
- Masonic Temple - 1917
- Museum of Natural History - Department of Biology, SW State University
- William F. Gieske House - 1900

Minneota:

- J. S. Anderson House - 1896
- O. G. Anderson and Company Store - 1901
- Saint Paul's Evangelical Lutheran Church - 1895

Tracy:

- First National Bank - 1897
- Wheels Across the Prairie Museum

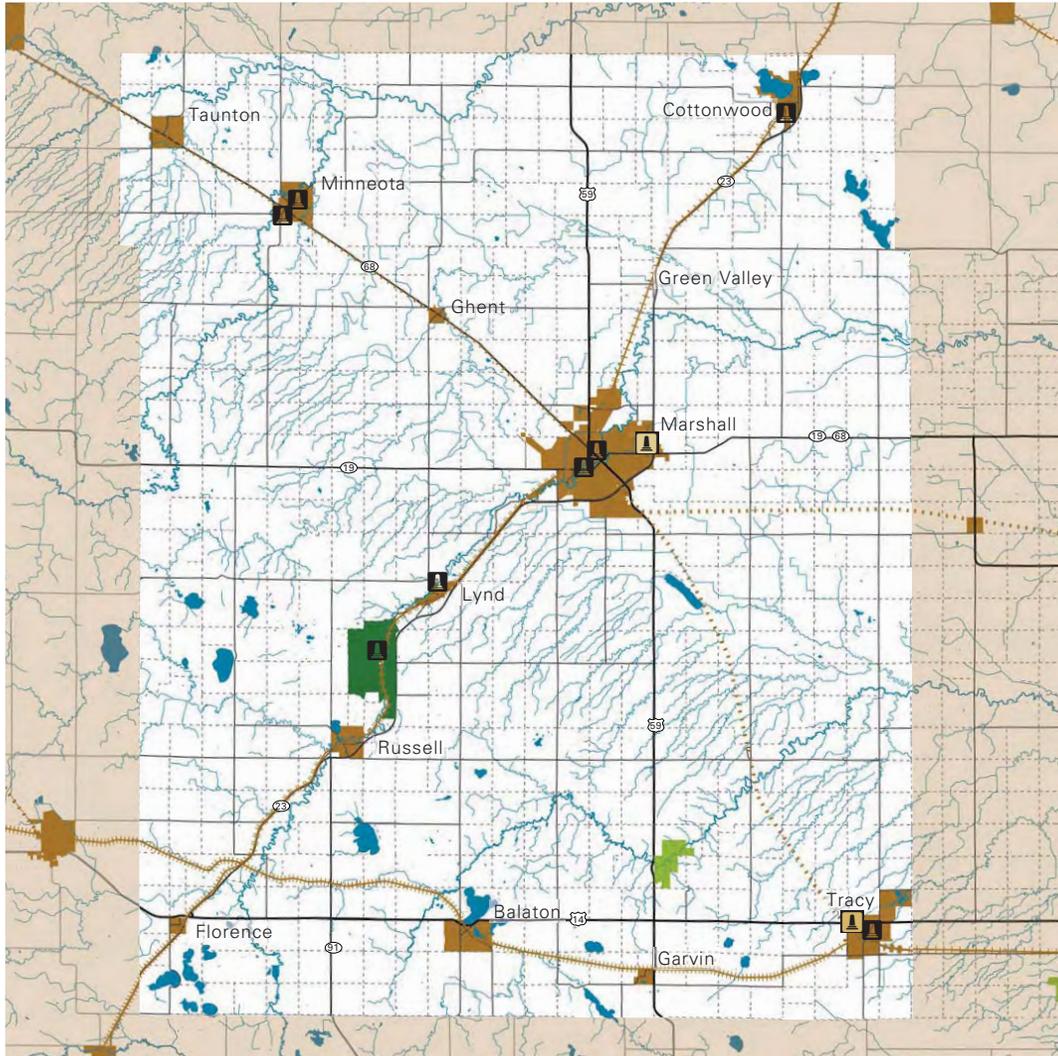
Camden State Park:

Camden State Park has a rich heritage of New Deal projects. The Park has been designated the Camden State Park CCC/WPA/Rustic Style Historic District for its National Park Service landscape design and split-stone park buildings/structures developed by CCC and WPA workers in 1934–38. These include:

- Bath House
- Bridge
- Custodian's Cabin
- Diversion Dam
- Drinking Fountains
- Ice and Wood House
- Instructor's Cabin
- Recreation Dam and Lake
- Sanitation Building
- Shelter and Concession
- Warehouse and Garage
- Wood Shed

## Design Implications

- Trails and trail heads should be sited to provide access to Lyon County's historic resources.



- Municipalities
- Open Water
- Museum
- Historic Site





# LYON COUNTY TRAIL DESIGN

LYON COUNTY TRAIL SYSTEM ■

TRAILS IN ROAD RIGHT-OF-WAYS ■

PARKS ■

TOWNS ■

SIGNATURE ELEMENTS ■

REST STOPS ■

# TRAIL DESIGN

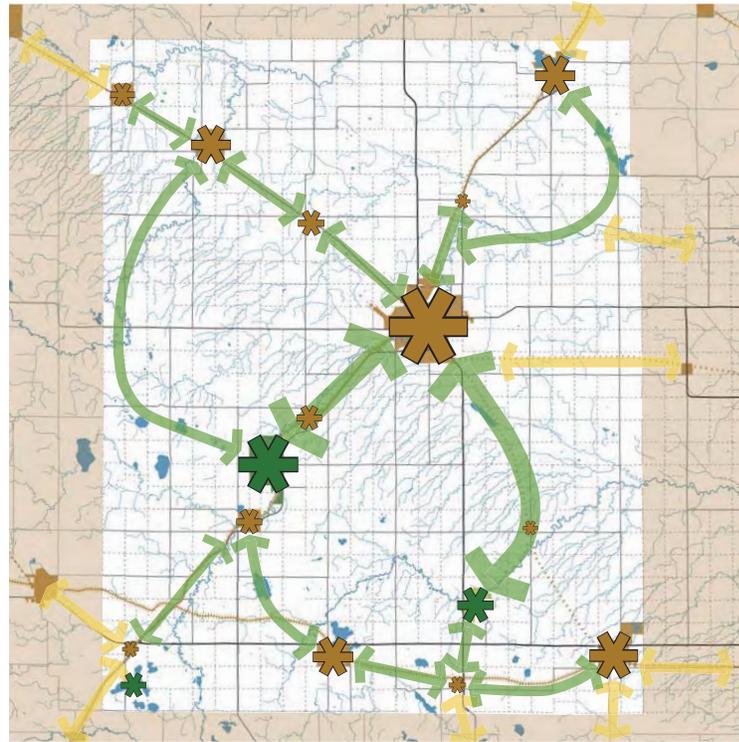
## LYON COUNTY TRAIL SYSTEM

The Lyon County Trail System is a series of interconnected loops with short, family-oriented trips and longer, more challenging rides. Because of the changing terrain, rides can be confined either to the flat area of the county or to the rolling terrain of the Buffalo Ridge.

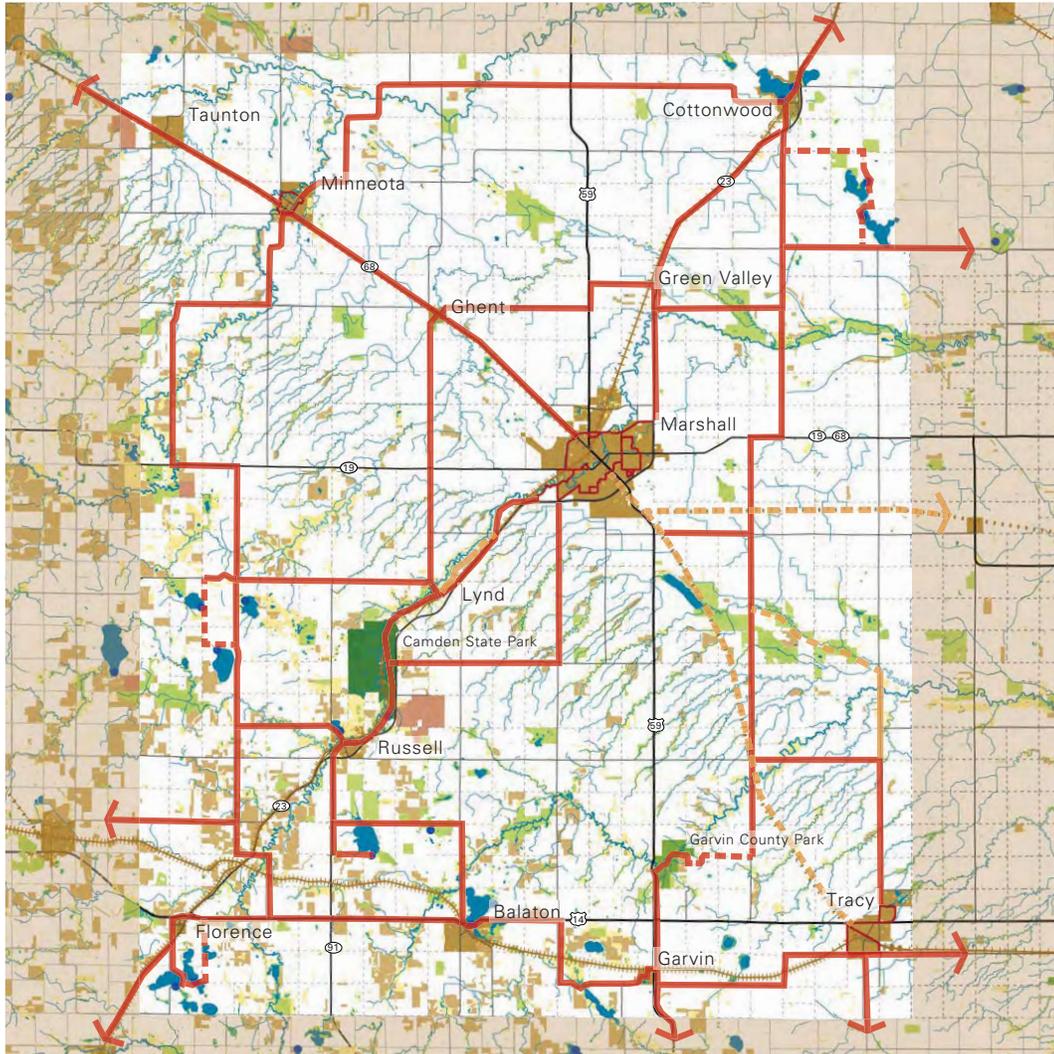
The proposed trail system is a network of trails that:

- Connects the major population centers with the County's major natural amenities,
- Connects to existing city trails,
- Provides many opportunities to interpret the larger landscape,
- Requires little if any land acquisition because it is sited along the less traveled paved roads or off the road in the road right-of-way,
- Avoids busy highways whenever possible,
- Has short segments on gravel roads to access amenities like Garvin County Park,
- Enters Camden State Park from the lower elevation from the north and the higher elevation from the south, and
- Can be implemented in increments over time.

### Connecting Amenities



- Possible Connections to Other Counties
- Possible Trail Corridors
- County & State Parks
- Municipalities



- |                      |                     |  |
|----------------------|---------------------|--|
| Municipalities       | Private CRP Land    | Proposed County Trails Adjacent to Paved Roads           |
| Federally Owned Land | Grassland/Shrubland | Proposed County Trails Adjacent to Unpaved Roads         |
| DNR Owned Land       | Forested Land       | Alternate Proposed County Trails Adjacent to Paved Roads |
| County Owned Land    | City Trails         | Alternate Proposed County Trails Through Private Land    |

# TRAIL DESIGN

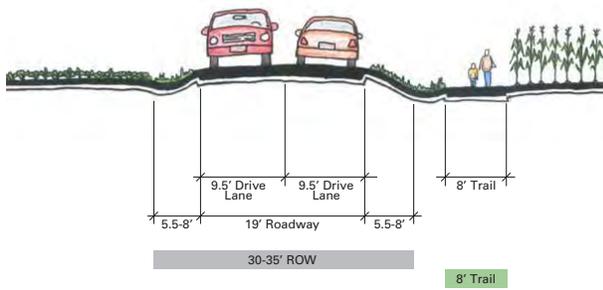
## TRAILS IN ROAD RIGHT-OF-WAYS

Ideally trails along roads would have a buffer of trees, shrubs, and/or prairie grasses that creates some separation between the trail and roadway. This buffer would also protect from the strong winds and provide some relief from the blazing summer sun. Trees larger than small ornamental trees will have to be located opposite power lines. Some separation must be left between the edge of the drive lane and the beginning of the vegetative buffer. This provides sight lines so vehicles can see animals entering the roadway and also allows room in case a vehicle runs off-the-road.

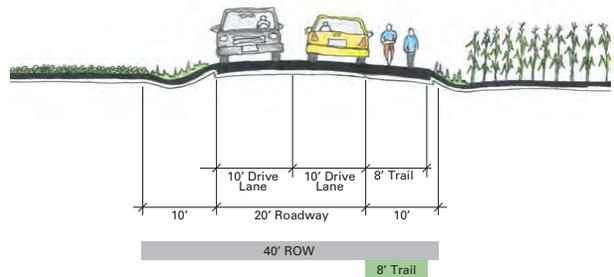
### Design

- The majority of 30-35' right-of-way roads are gravel. There is little room to place an 8' wide trail within the right-of-way and it would ideally have some separation because of the dust produced by vehicles on an unpaved road.
- The trail will have to be located next to the drive lane or outside of the right-of-way when the right-of-way is 40' or narrower because the road shoulders are typically 10' or narrower.
- A 50 foot right-of-way may allow a separated trail if the ditches are not deep. Adding retaining walls would greatly increase the cost but may be necessary in some areas.
- Sixty to sixty-six foot right-of-ways will more easily allow for trails within the typical 18'-21' shoulder area.

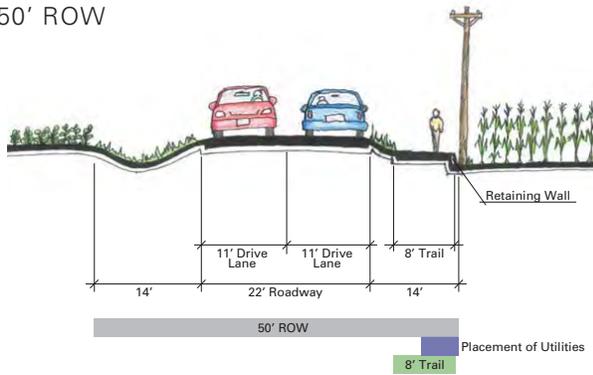
30-35' ROW



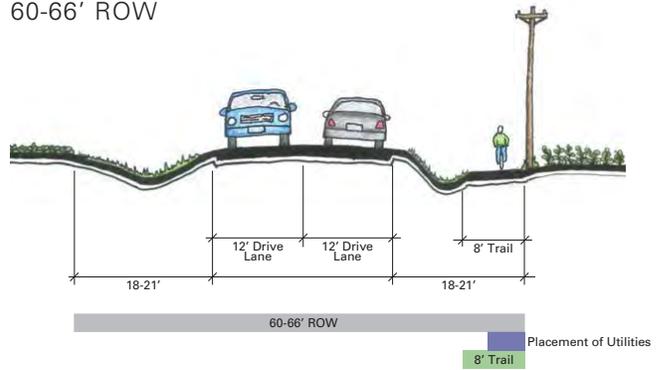
40' ROW



50' ROW



60-66' ROW



# TRAIL DESIGN

## TRAILS IN ROAD RIGHT-OF-WAYS

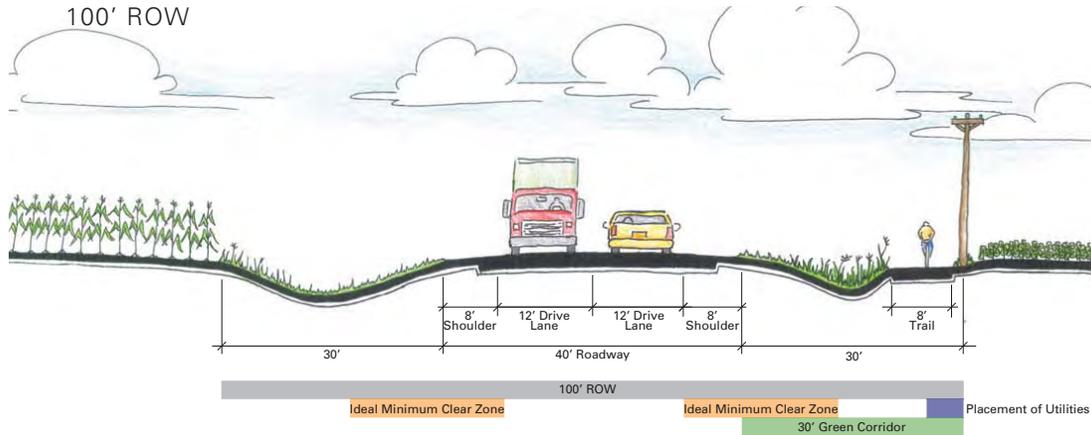
In Lyon County, the roads with a Right-of-way width of 100' and greater are State and Federal Highways. These roads have higher daily average traffic counts, so although all roads ideally would have a clear zone of at least 17', it is more important to follow the clear zone design rules when possible on these roads than the narrower county and township roads. These rules include:

- A 1:4 or flatter inslope and 1:3 or flatter backslope;
- No vegetation taller than 12 inches within the clear zone; and
- The accommodation of two passes of the mower from the edge of the shoulder.

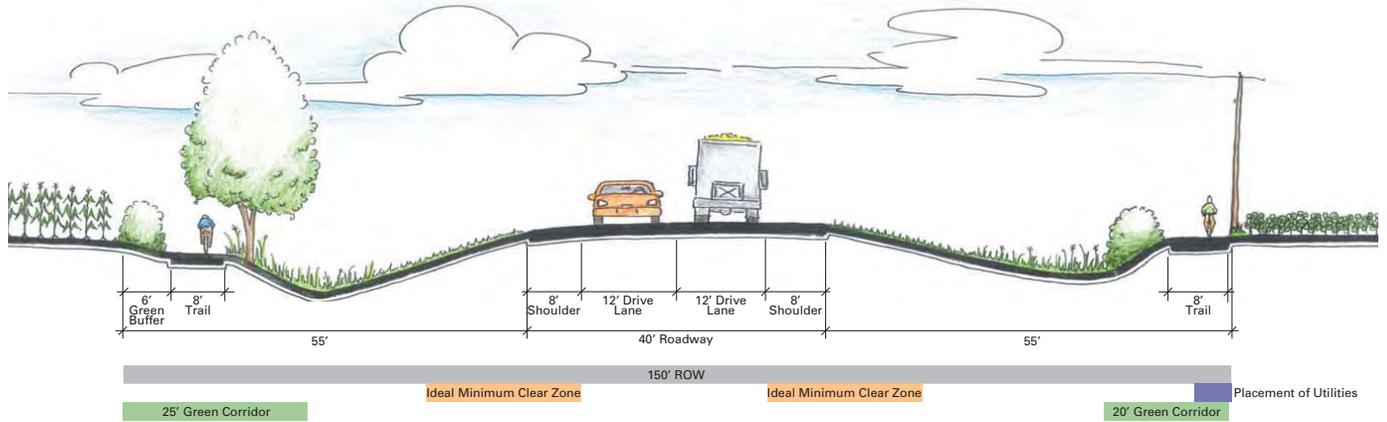
*Source: Mn/DOT Road Design Manual, Section 4.*

## Design

- Road widths 100' or wider provide ample room for trail plus a thin green corridor/buffer.
- The 150' right-of-way section shows multiple vegetation options if the trail passes under above ground utilities.
- Clear zones and clear sight lines are provided where the trail crosses roads.
- An easement or an acquisition of former railroad right-of-way that is currently privately held could provide for multiple trail uses and dense vegetative buffers.



### 150' ROW



### 100' ROW With Abandoned Railroad ROW



# TRAIL DESIGN

## CAMDEN STATE PARK

Camden State Park is a 2245-acre park straddling the Redwood River three miles south of Lynd. A central feature of the park is its topography; the Redwood River cut its deep ravine over time. The park can be accessed at its lower level from the north and at its upper level from the south.

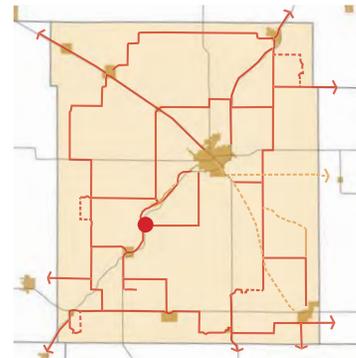
Its trails include 15.8 miles of hiking trails, 4.25 miles of mountain bike trails, 5 miles of cross country skiing trails, 1.4 miles of skate skiing trails, 7.6 miles of snowmobile trails, and 10 miles of horse trails. The upper and lower campgrounds have showers, toilets, and total of 82 drive-in campsites. The one group campsite is on the banks of the Redwood River and has picnic tables, an enclosed picnic shelter, toilets, sinks, and a dump station. Fishing is available in the Redwood River and Browner Lake. Mink, raccoons, songbirds, hawks, coyotes, and a large winter herd of whitetail deer can be found in the park.

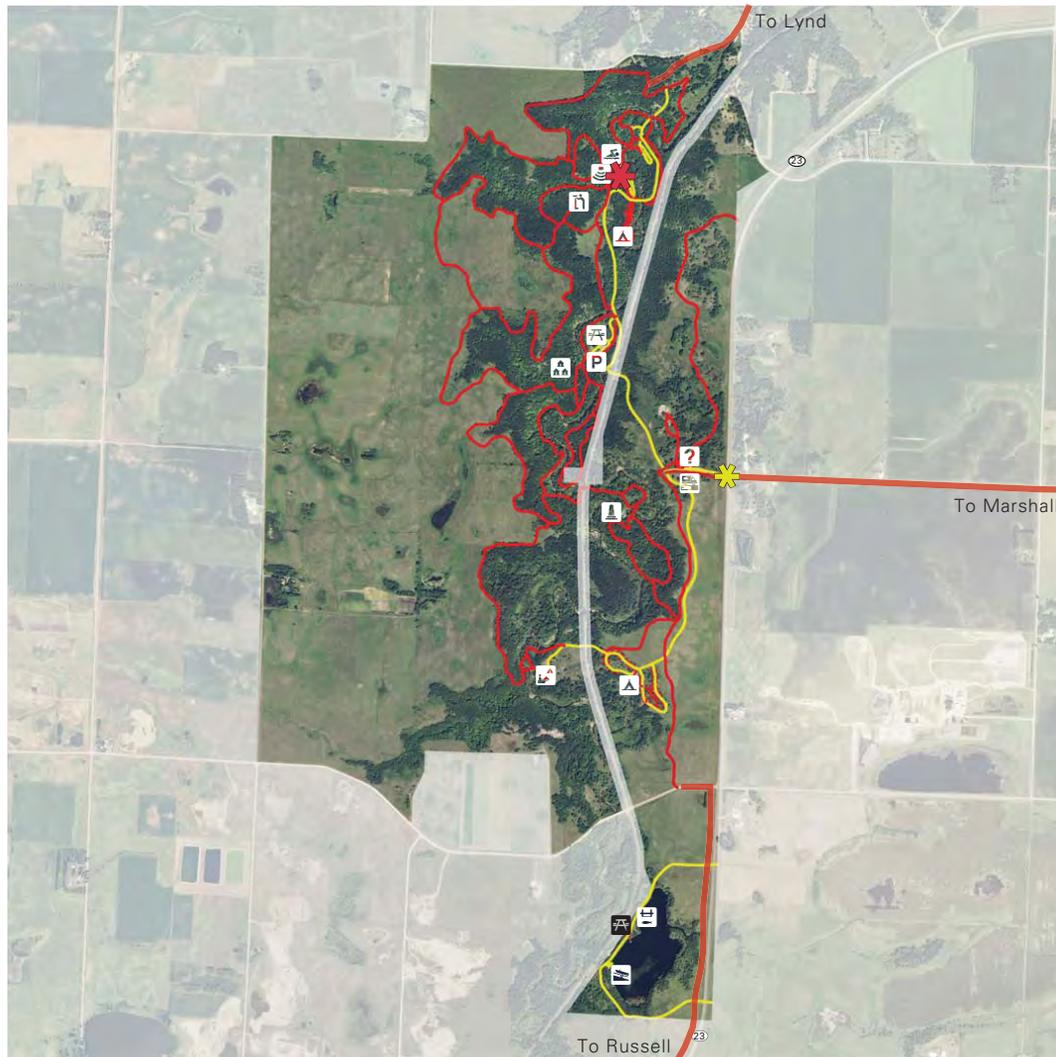
The Camden Village was founded in the late 19th century and fell into decline when a railroad depot was not located there. Camden had a general store, hotel, blacksmith shop, and a sawmill that was later converted to a gristmill. This scenic area was only used by locals for picnics until the state park was established in 1935. The site of a CCC camp, the park has a number of memorable WPA and CCC features including a marvelous stone building and a swimming beach created by damming a tributary of the Redwood River.

*Source: Minnesota DNR*

### Design

- Trail accesses should be located at both the northern and southern access points.
- Two Trailheads, one north and one south, should be located in the park.





- |                       |               |            |                      |
|-----------------------|---------------|------------|----------------------|
| Proposed County Trail | Park Roads    | Parking    | Trailer Dump Station |
| Proposed Trailhead    | Historic Site | Swimming   | Primitive Group Camp |
| Park Entrance         | Picnic Area   | Campground | Equestrian Camping   |
| Park Trails           | Fishing Pier  | Overlook   | Information/Office   |

# TRAIL DESIGN

## GARVIN COUNTY PARK

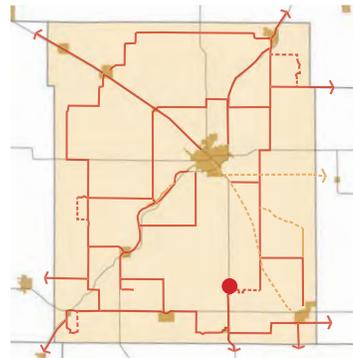
Garvin Park is located on the banks of the Cottonwood River in south central Lyon County. Its 700 acres of rolling terrain features five picnic shelters, 2½ miles of hiking trails, a softball field, playground equipment, a horse camp area with several miles of horse trails, a lookout tower, and 30 campsites in two camp grounds, one with showers one without.

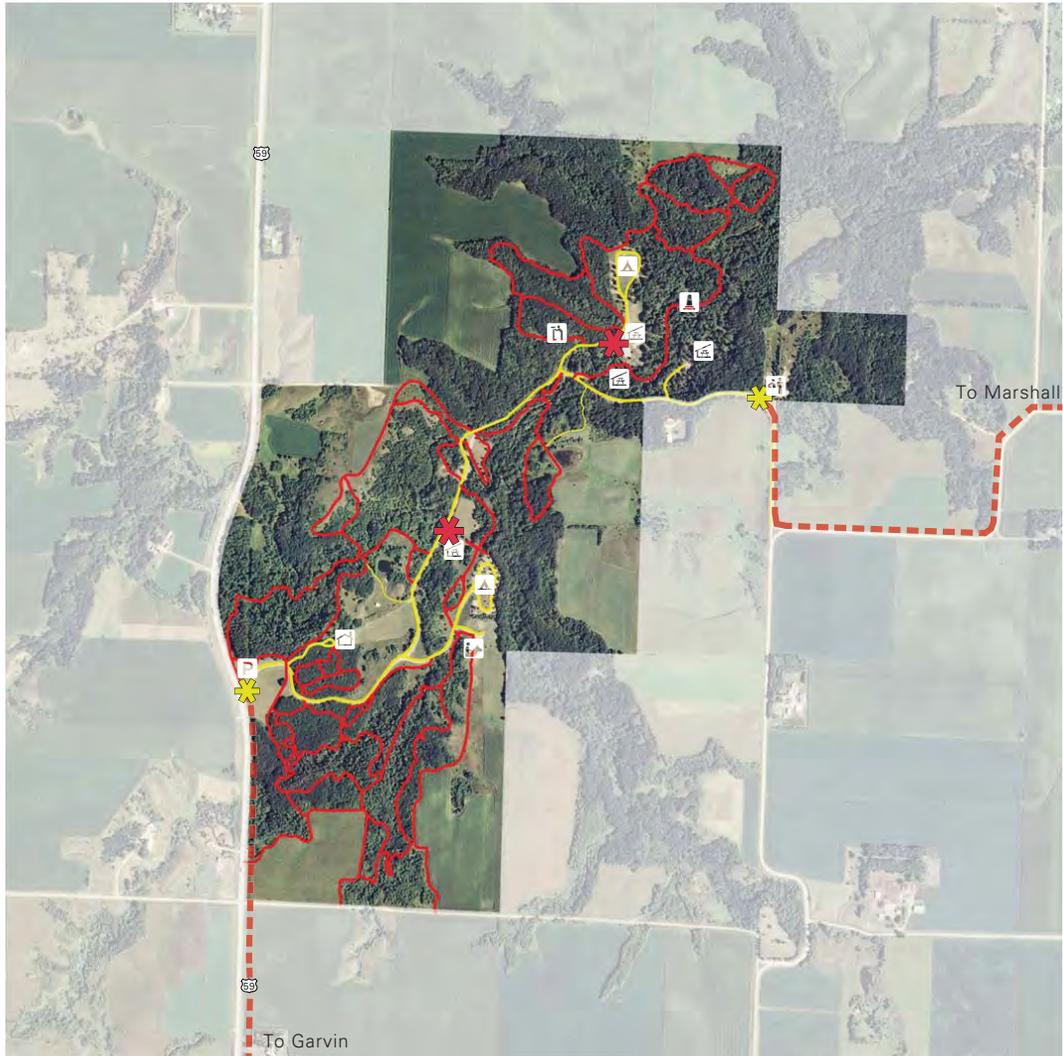
The park is named for Mr. H.C. Garvin a retired Winona businessman who had been a station agent for the Chicago Northwestern Railroad at Tracy. He was the chief contributor of money and equipment for the park.

*Source: Lyon Co Public Works*

### Design

- This park is a candidate for a trail head.
- The park location along US Highway 59 makes trail access to it a design issue.





- |  |               |                |         |                    |
|--|---------------|----------------|---------|--------------------|
| Proposed County Trail                    | Park Trails   | Picnic Shelter | Shop    | Horse Staging Area |
| Proposed County Trail Along Unpaved Road | Park Roads    | Warming House  | Lookout | Log Cabin          |
| Proposed Trailhead                       | Park Entrance | Campground     | Parking |                    |

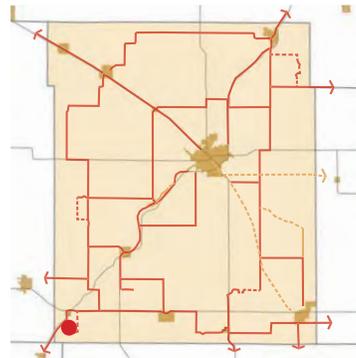
# TRAIL DESIGN

## TWIN LAKES COUNTY PARK

This park south of Florence is not yet built. It will provide public access to two lakes.

### Design

- This new park is an ideal place for a trailhead/rest area that complements the park's amenities.





- \* Proposed Trailhead
- Proposed County Trail
- - Proposed County Trail Along Unpaved Road
- 🚤 Proposed DNR Boat Landing

# TRAIL DESIGN

## GHENT

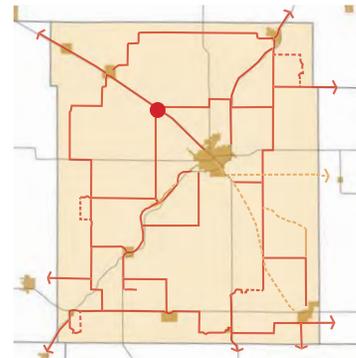
Ghent is a small community along Highway 68 at its intersection with County Roads 5 and 8. Surrounded by rich agricultural land with large farms, it is one of the many small towns located at intervals along a rail line to permit locomotive servicing and access by farmers. Ghent is one of the two Catholic frontier colonies in Lyon County created by a partnership between Bishop John Ireland and the railroad with Bishop Ireland acting as a land agent for the railroad. The railroads were given a land grant by the federal government to all odd numbered sections for ten miles on either side of the track as an incentive for expansion. Belgian, French Canadian, and Irish immigrants were its first white settlers. Saint Eloi Church, the popularity of rolle bolle, and an annual rolle bolle tournament reflect that heritage.

The community's form reflects the original railroad community plan. Its grid is parallel to the original, now abandoned rail line. The civic and commercial buildings are sited to the northeast with the residential area beyond. Industrial areas are sited along the rail line to the southwest. Today trucks from Highway 68 service the elevators that were originally sited along the rail line and a number of homes have been built across the highway.

At Highway 68 the original creek bed of Bluebird Creek has been engineered to become a drainage ditch that drains the rich farmland to the southwest.

## Design

- County Roads 5 and 8 offer an opportunity to site the county trail through Ghent.
- The opportunities to interpret include:
  - Railroad community plan,
  - The Catholic Colony Movement,
  - Belgian heritage,
  - Rolle Bolle, and the
  - Drainage system.





# TRAIL DESIGN

## MINNEOTA

Minneota means “much water” in the Dakota language. German, Icelandic, Belgian, and Norwegian immigrants settled the community and its surrounding landscape; the Norwegians were the first settlers. This ethnic mix is reflected in the ancestry of the city’s current residents. It is located on the south branch of the Yellow Medicine River, one of the major prairie rivers of Southwestern Minnesota.

Minneota, like Ghent, was established as a Catholic colony by a partnership between Bishop Ireland and the railroad. Minneota is an archetypal prairie community established by the railroad as it moved west across the prairie. Although the railroad that created it is gone, the railroad’s original community plan continues to shape the Minneota’s form. It is laid out in an orthogonal grid parallel to the rail line, a pattern typical of nineteenth century railroad towns. First, second and third streets were parallel to the tracks and Washington, Adams, Jefferson, Madison and Monroe, named for the first five presidents, intersected them at right angles. The original civic and commercial masonry buildings are located on First Street just north of the tracks. The commercial district soon had hardware, grocery dry goods and general stores and a bank.

The original industrial buildings were located by the tracks south of First. At one time Minneota had a lumberyard and five grain elevators between the railroad tracks and First Street. The original residential neighborhood is located north of the commercial/civic district. The original community was treeless.

The most well-known retail establishment in the community was the Big Store, the largest store on the rail line between Mankato and Watertown South Dakota. Located at Jefferson and Second Streets, its large, diverse merchandise was sold in its 50 by 100 foot main floor while the Opera House, the center for community entertainment, occupied its second floor.

Although the commercial uses have changed over time as some activities have moved to larger regional communities; the city’s downtown retains its essential nineteenth century/early twentieth small town character. Currently the Big Store building, the landmark retail store and opera house that was once dominant in the region, is being refurbished to serve twenty-first century commercial and civic uses. Highway 68, located on the original First Street, provides access to the industrial activities located adjacent to the abandoned rail line. Housing is now located south of the tracks as is the Sportsman’s Club, a club that promotes environmental awareness by acquiring land and returning it to its natural state.

Minneota is the home of Bill Holm, an internationally known author famous for his poetry, memoirs, and essays that celebrate the prairie and the culture of Icelandic settlers. His work contributes greatly to the understanding and appreciation of the natural and cultural landscape of Minneota and its surrounds. Currently a memorial to him is being planned.

Minneota has a city trail system that encircles the city.

### Design

#### Trail Alignment

- The abandoned rail right-of-way and the county roads that enter the community from the northeast, south, and southeast provide opportunities for siting the proposed county trail and linking it to the existing city trail.

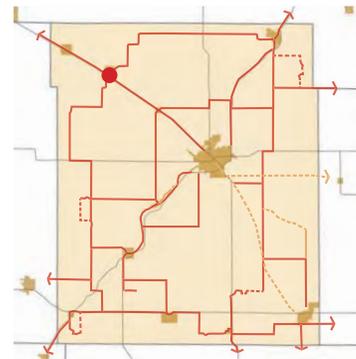
#### Trailheads

Potential trailhead locations include:

- A trailhead at Trail Park in the west,
- A trailhead downtown that supports local businesses, and
- A trail head at the junction of the city trail and the county trail south of Highway 68.

#### Kiosks

- The environmental, cultural and historic information on Minneota kiosks should include descriptions of the Catholic colonization efforts and references to Bill Holm and his work that interprets the prairie and its communities.





- Proposed County Trail
- ✱ Proposed Trailhead
- Community Trail



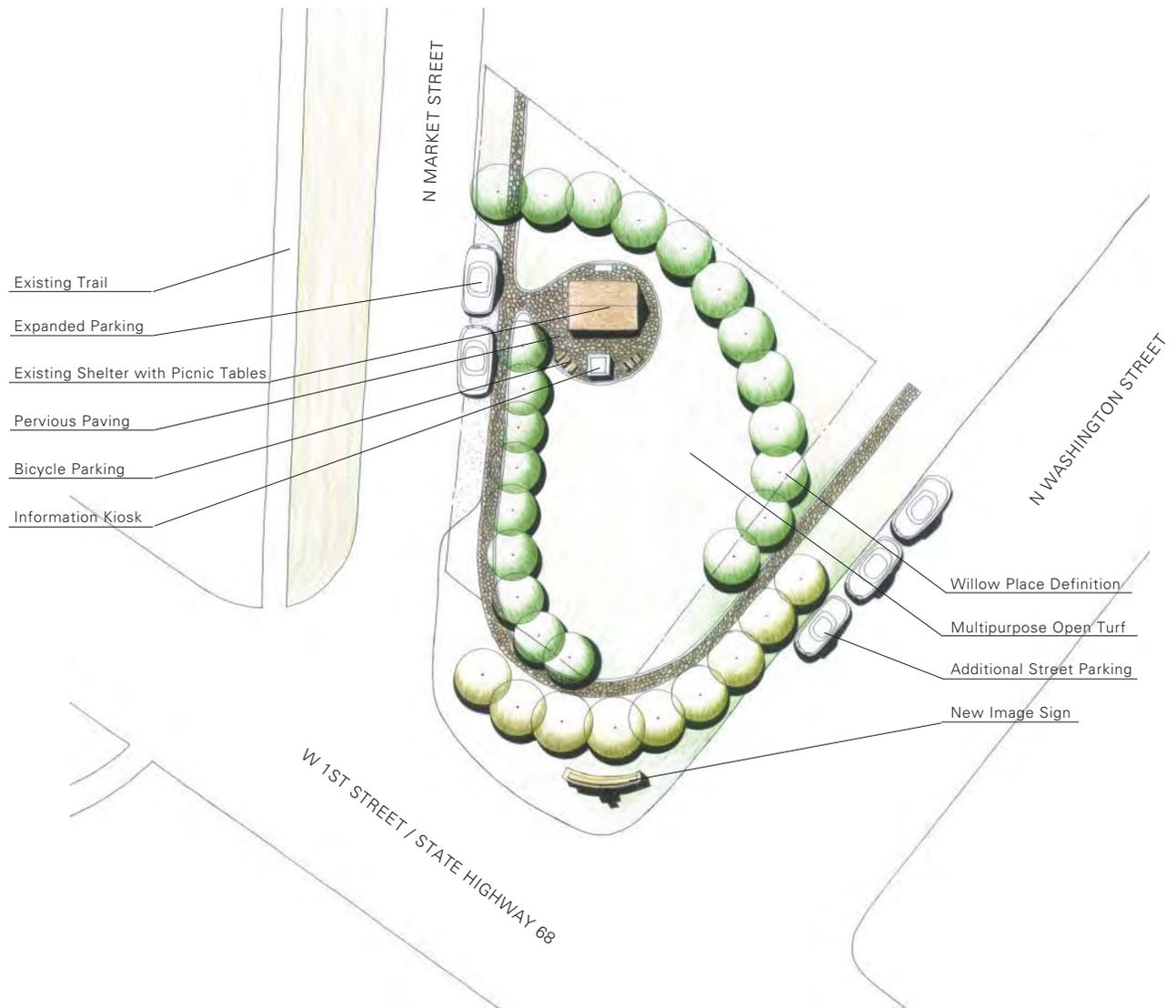
## TRAIL DESIGN

### MINNEOTA: TRAIL PARK TRAILHEAD

The existing Trail Park is improved to make it a trailhead for both the city trail and the Lyon County Trail System. Its features include:

- A new image sign is located at the intersection of Highway 68 and N Washington Street,
- Pervious paving edges the multi-purpose turf area,
- Willow trees encircle the space giving identity definition to the trailhead,
- An information kiosk, pervious paving, and bicycle racks are added to the existing shelter, and
- Parking for cars is expanded in a parking bay along N Market Street.





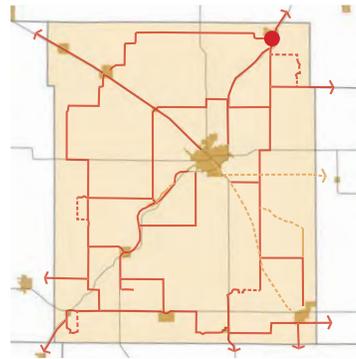
## TRAIL DESIGN

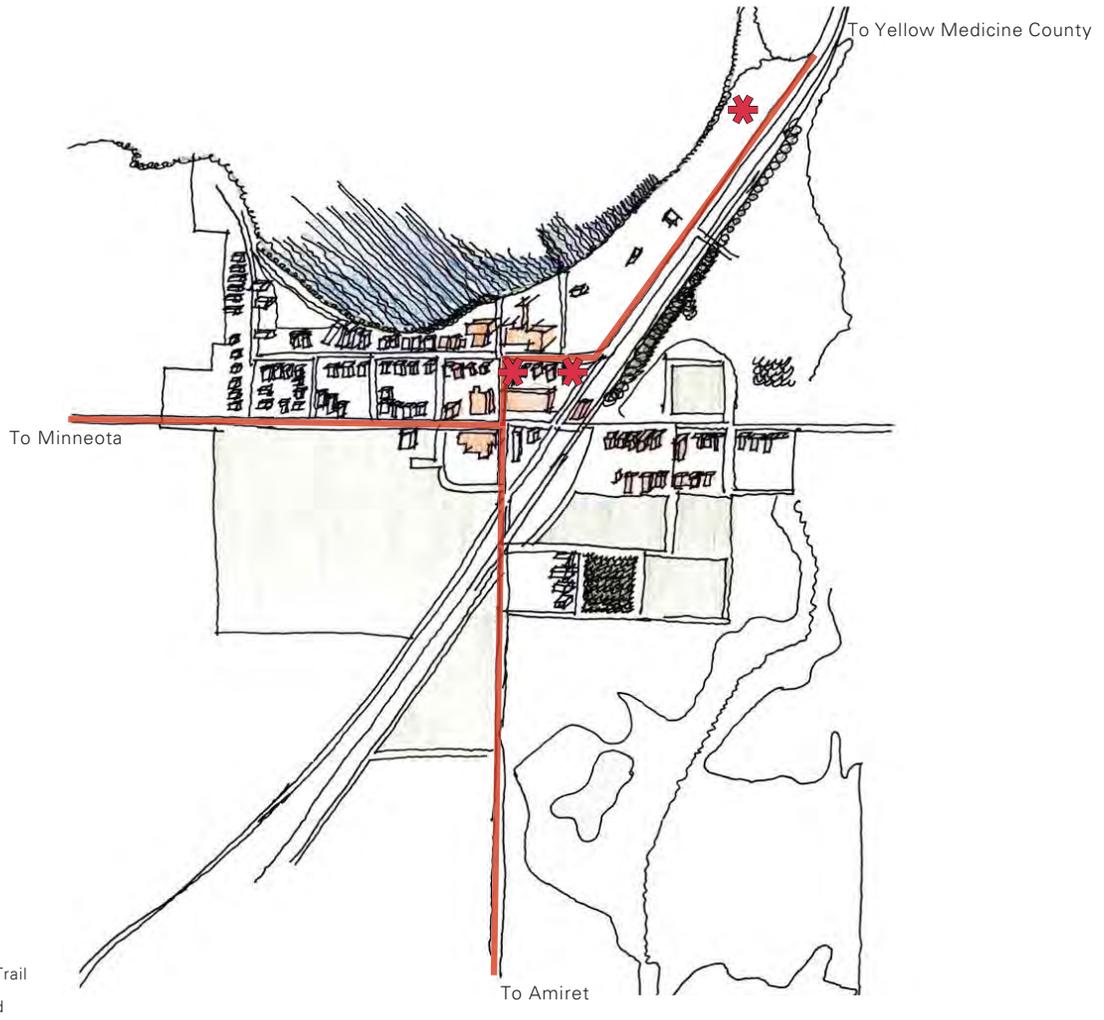
### COTTONWOOD

Cottonwood is a town of 1100 people on Lake Cottonwood and the active rail line from Granite Falls, at the intersection of State Highway 23 County Roads 9, 10, and 75 in northeastern Lyon County. Surrounded by fertile farmland, 25 miles of the original prairie landscape is drained into Lake Cottonwood. The rail line bisects the town with residential and commercial land uses in both the western and the eastern portions of the community. It has a small business district and a city park on Lake Cottonwood.

#### Design

- County Road 10 offers an opportunity to bring the trail from Minneota into Cottonwood along Main Street to Barstad Road.
- Other routes include siting it along County Road 9 south to the Green Valley Wildlife Management Areas, southwest to Marshall and northwest to Granite Falls along Highway 23, west to Green Valley, and east to Redwood County.





# TRAIL DESIGN

## COTTONWOOD: MAIN STREET TRAILHEADS

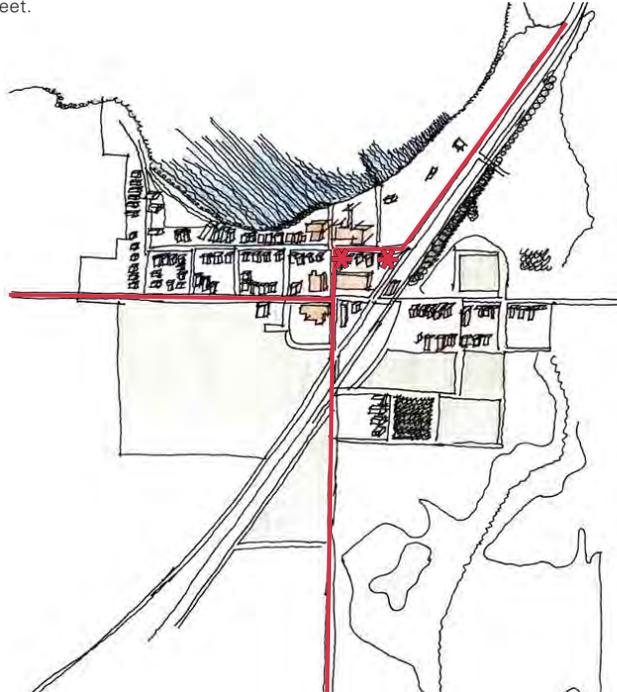
Potential trailhead locations include a downtown location on Main Street that would support the local businesses while providing amenities for trail users and at Cottonwood City Park, a park located along Barstad Road on the shores of Lake Cottonwood. There are two potential locations for trailheads on Main Street. Because of the location and the nature of each site, each trail head is different.

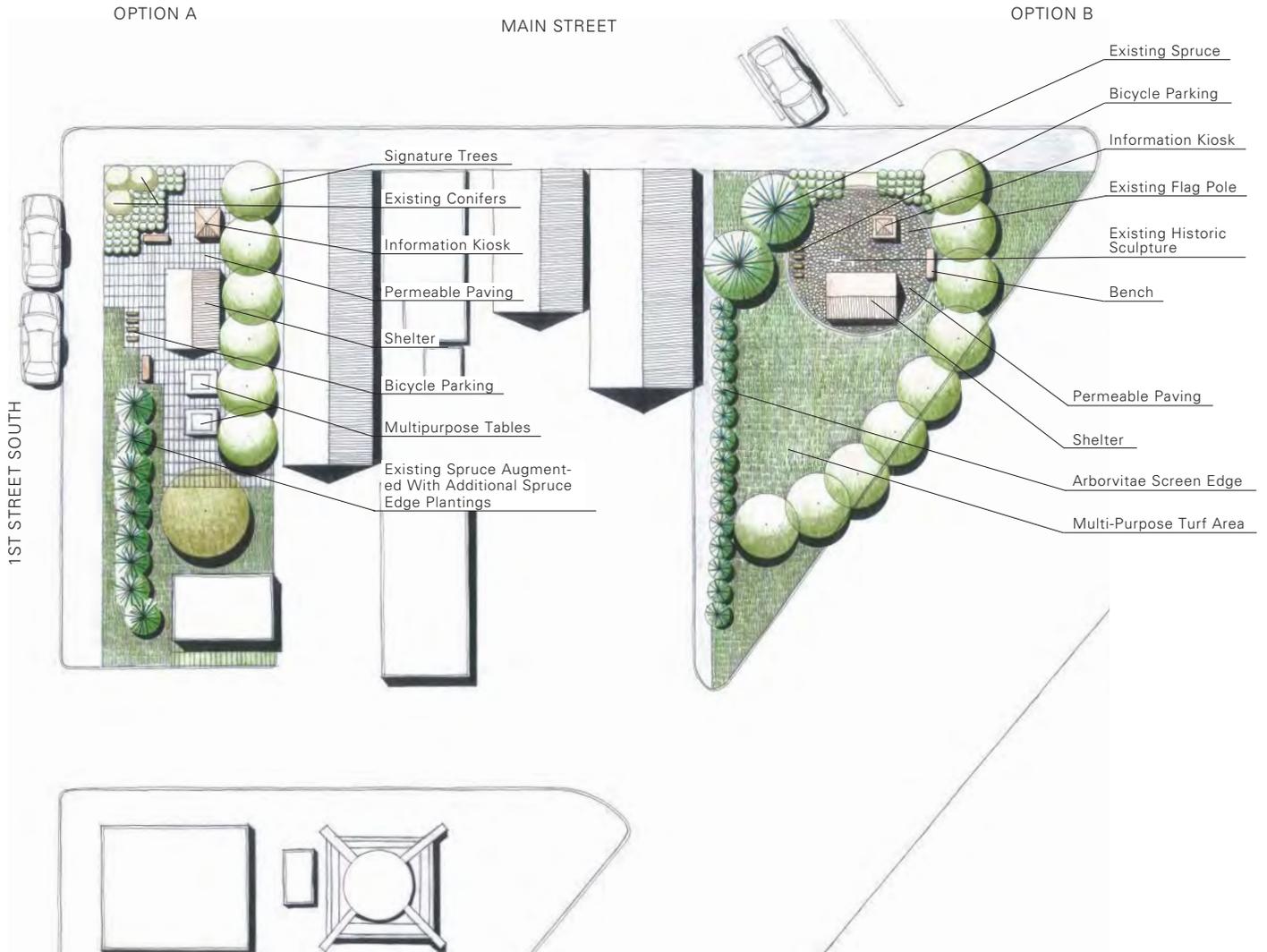
The Trail head at Main and W 1st Street is integrated into the community as a multi-use gathering place that supports stopping to visit downtown. Its features include:

- A signature row of trees that separate the space from the building to its east;
- The existing row of spruce trees on the site's western edge is augmented to define the site's edge and enclose the space;
- An information kiosk, a shelter, multipurpose tables, and bicycle racks are sited on permeable paving; and
- Parking is provided on W 1st Street.

The Trailhead at Main Street and Barstad Road is a welcoming space. Its features include:

- The triangular space is bounded by an arc of trees along Barstad Road and a row of shrubs along its western edge,
- The northern entrance to the space has flowers on either side of the entrance and is framed by existing spruce trees and the arc of new trees,
- An information kiosk, bicycle racks, and a shelter are sited on a circle of permeable paving along with the existing sculpture, and
- Turf covers the rest of the site.





# TRAIL DESIGN

## GREEN VALLEY

Green Valley is an unincorporated community half way between Cottonwood and Marshall. Located between the active rail line and State Highway 23, it is accessed from the west and the east by County Road 8.

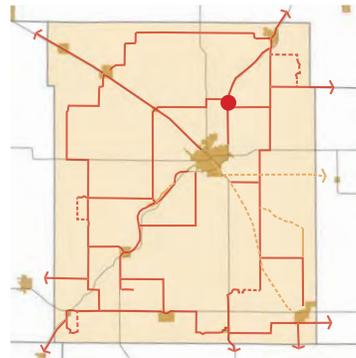
### Design

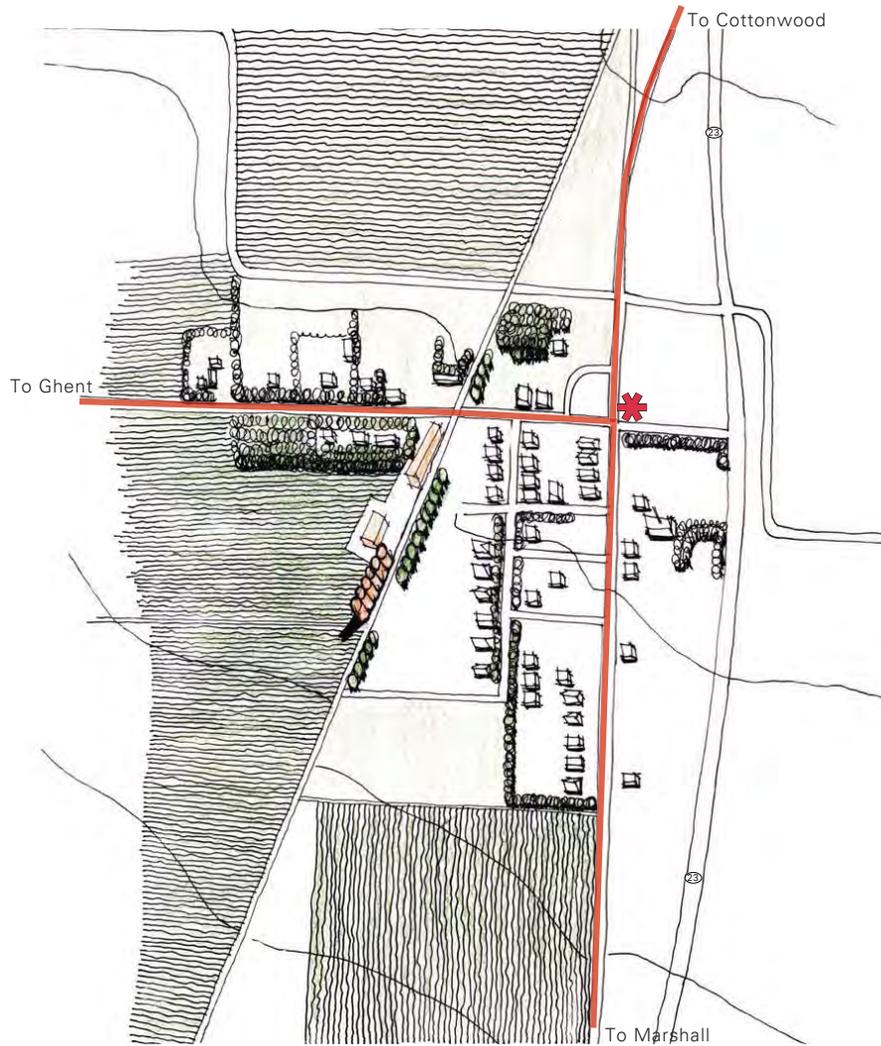
#### Trail Alignment

- County Road 8 and Highway 23 provide opportunities to site trails along them that connect to Ghent, Marshall, and the Green Valley Wildlife Management Area.

#### Trailhead

- A trailhead could be located in the center of this very small community.





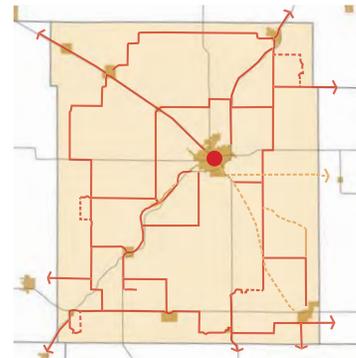
- Proposed County Trail
- \* Proposed Trailhead



# TRAIL DESIGN

## MARSHALL

Because Marshall is at the geographic center of the county and is its population center; it offers an opportunity to be the center of the trail system's figure eight configuration: the place where the loops of the "figure eight" meet. The Lyon County Trail system connects with Marshall's community trails at many points. From the northwest at the Legion and Justice Parks, northeast at the Southwest Minnesota State University, southeast at the Middle School, and southwest at the Great Diversion Park.





## TRAIL DESIGN

### MARSHALL: DOWNTOWN LOOP

The county trail system connects to Marshall's Downtown Loop bringing trail users into the retail/civic core of the city and the stores, recreational, and cultural facilities located there. A segment of this city trail follows the Redwood River.

Marshall River Place, an enhanced downtown civic space is a major new amenity along the trail loop.





## TRAIL DESIGN

### MARSHALL: RIVER PLACE TRAILHEAD

The Downtown Loop passes through Marshall River Place. This new civic space provides an outdoor gathering place for visitors and those that work in the downtown area. It's a place for trail users to stop, rest, and visit downtown. Its features include:

- The Redwood River that flows through its center,
- A small amphitheater for performances,
- Kiosks that provide information about Marshall,
- An observation deck,
- Shorelines with native plants,
- A prairie pothole rainwater garden that catches storm water and cleans pollutants in it,
- Bicycle racks, and
- A variety of trees that define the spaces and provide shelter from the sun and the wind.





## TRAIL DESIGN

### MARSHALL: JUSTICE PARK TRAILHEAD

Located at the junction of the Diversion Channel and the Redwood River in northwestern Marshall, Justice Park is enhanced to be a trailhead for both the city and the county trail systems. Its features are designed to encourage park users to bike and walk to the park; these include:

- Bicycle racks,
- An improved parking lot for trail users,
- A special seal coat for the existing trail,
- A convergence observation deck with kiosks that interpret the Marshall Flood of 1957 and promote healthy living,
- Rest facilities,
- A bike drop-off for cars, and
- A parking lot for trail users.





## TRAIL DESIGN

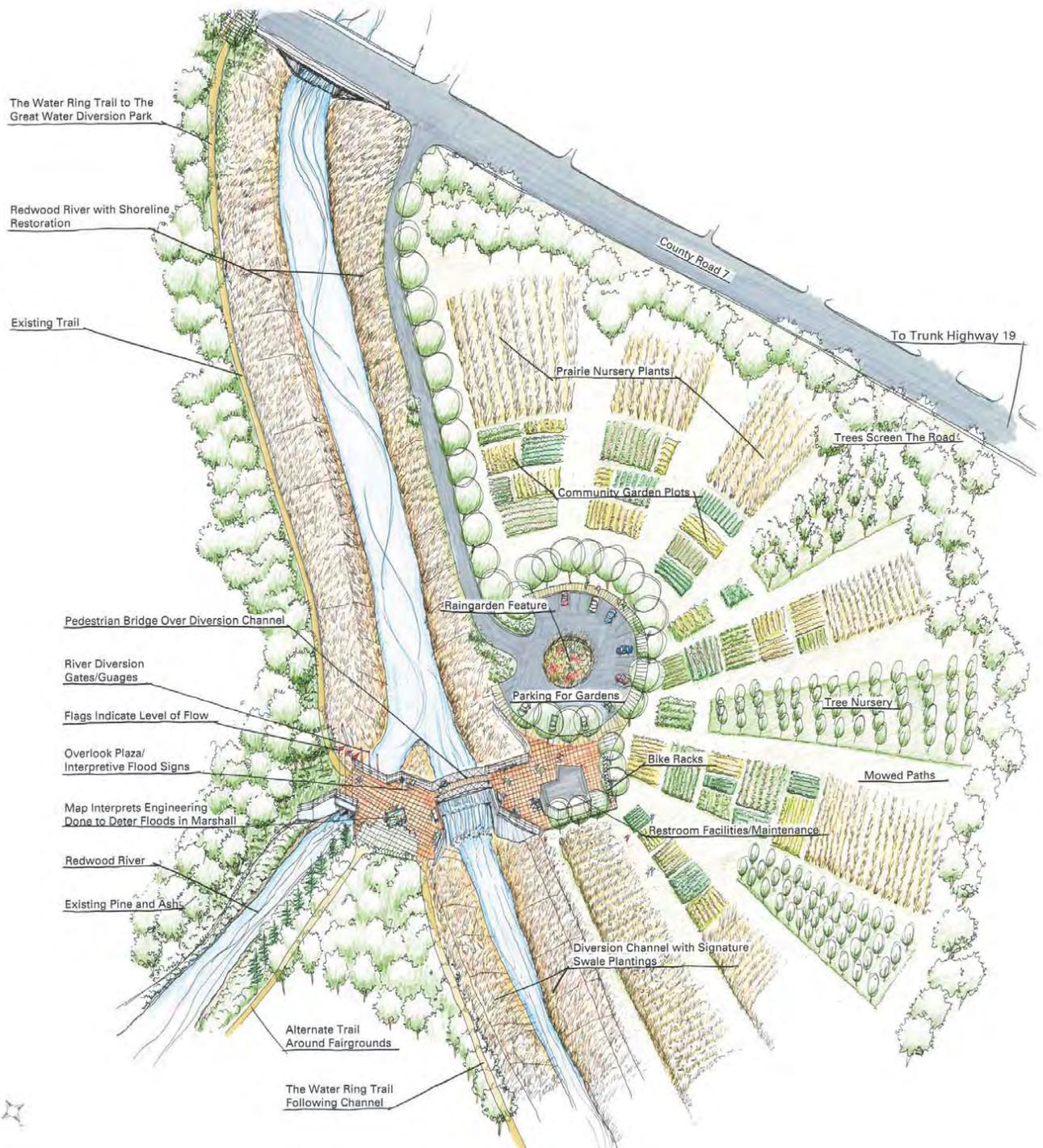
### MARSHALL: CHANNEL PARK, COMMUNITY GARDENS & CITY NURSERY

The county trail system is connected to the Channel Park, the Community Gardens and Nursery, and the Lyon County Fairgrounds. Channel Park, Community Gardens, and City Nursery are created at the junction of the Diversion Channel and the Redwood River by the Lyon County Fairgrounds in southwestern Marshall. The garden is a large semi-circular area screened from County Road 7 by a row of trees. The community gardens serve both the city and its individual residents. The garden plots provide opportunities for local residents to grow their own healthy fresh produce. Many of the native plant and tree materials needed for the trail's prairie elements that give Marshall a prairie signature can be grown in this area. Local garden clubs, service clubs, 4-H clubs, and/or city staff can be responsible for growing the trees and plants.

The Channel Park, Community Gardens and City Nursery feature:

- A rainwater garden,
  - A restroom and maintenance facility,
  - Community garden plots with water sources,
  - A large native prairie plot,
  - An area for growing trees,
  - River and channel gauges,
  - Flags indicating level of flow,
  - An overlook that interprets the flood prevention civil engineering,
  - A pedestrian channel bridge with signature railings, and
  - A trail connection to the county fairgrounds.
- Car and bicycle parking for gardeners,





## TRAIL DESIGN

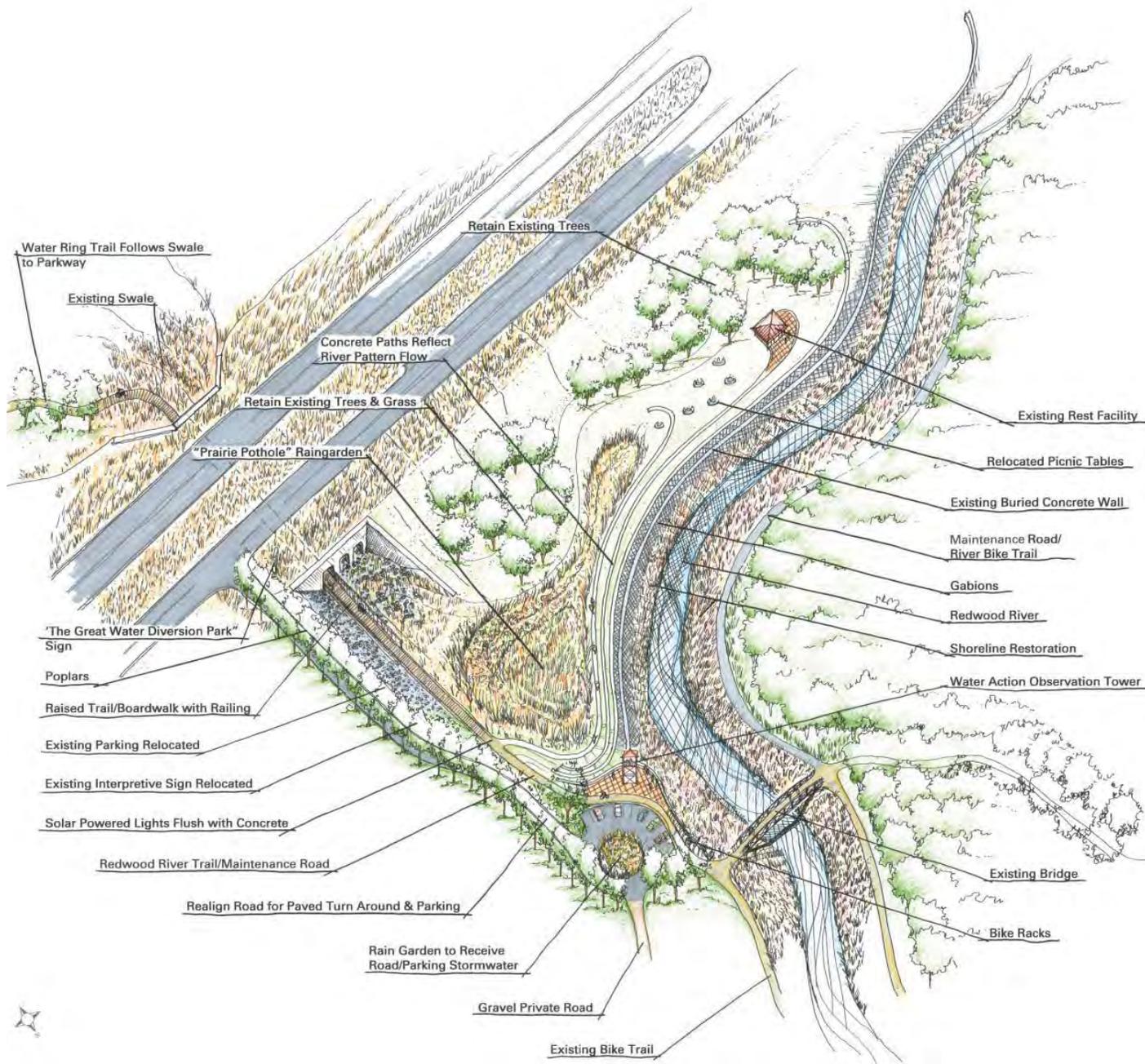
### MARSHALL: THE GREAT WATER DIVERSION PARK

The county trail system is connected to the Great Diversion Park. Existing park facilities are upgraded to interpret the flood prevention strategy, create a trailhead, and make it an important feature of the Water Ring Trail.

Its features include:

- Using the existing rest facility,
- Adding bicycle racks,
- Relocating the picnic tables, interpretative sign, and parking area,
- Realigning the road for a paved turnaround and parking area,
- Creating a rainwater garden to receive road and parking lot run off,
- Lining the road with trees,
- Adding an observation area with a tower,
- Adding solar lighting to the park and the underpass, and
- Using one bypass culvert for the trail's highway underpass when not in use.



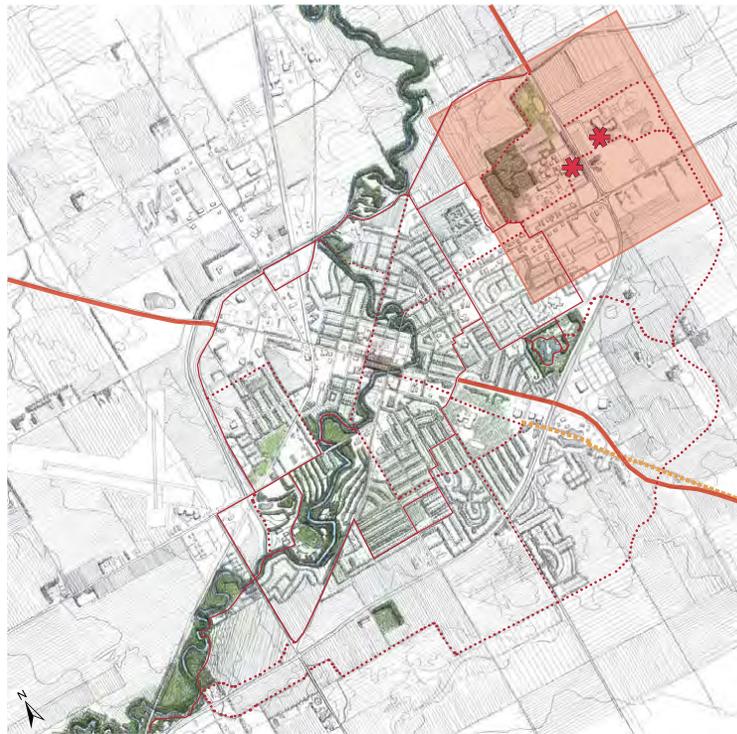


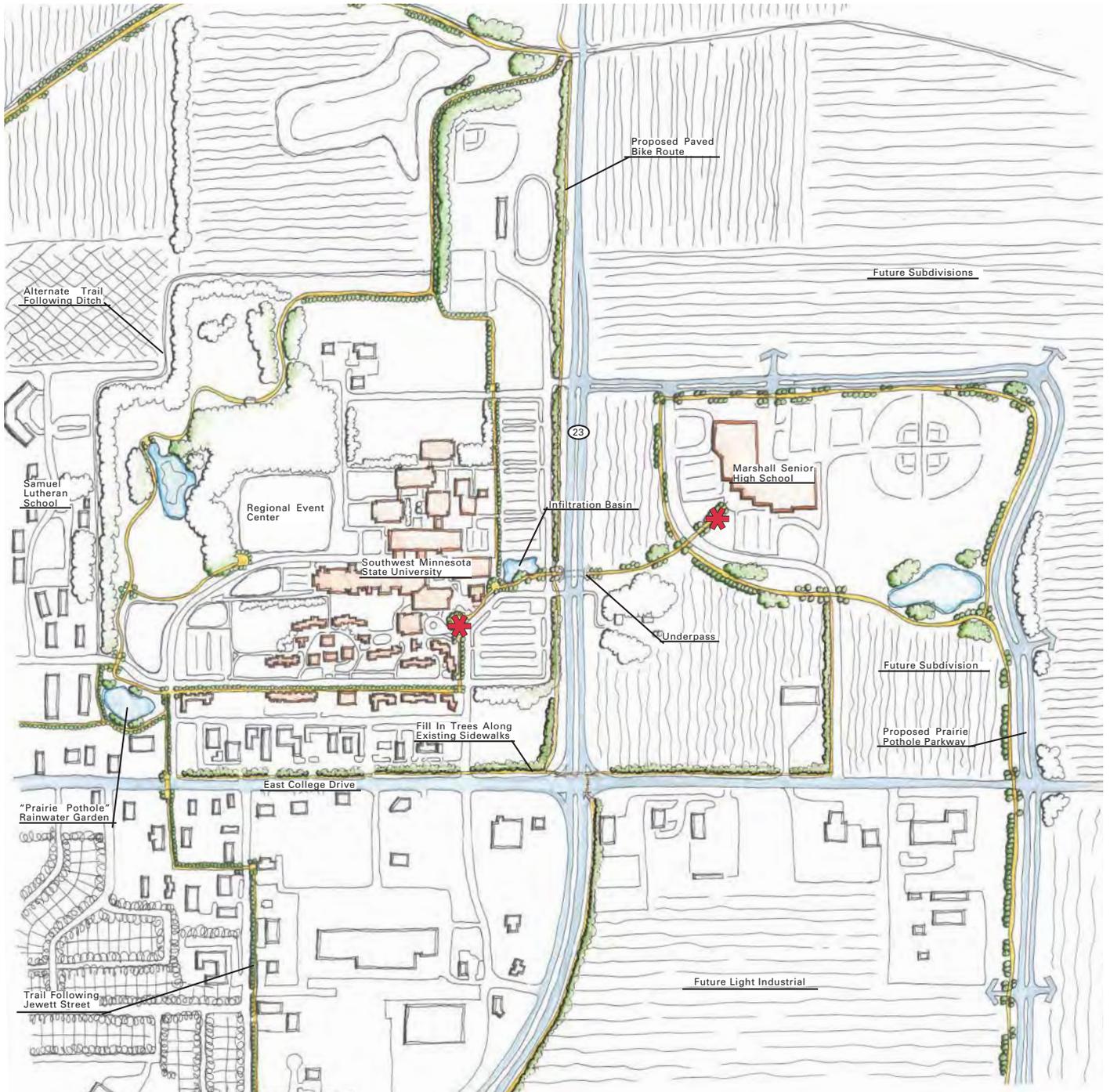
## TRAIL DESIGN

### MARSHALL: SOUTHWEST MINNESOTA STATE UNIVERSITY & HIGH SCHOOL TRAILS

The community trail system connects with a pedestrian and bicycle friendly pathway through SMSU campus and the high school campus. It features include:

- A well-lighted Highway 23 underpass provides a safe connection between the University campus and the high school campus and the Prairie Parkway.





# TRAIL DESIGN

## LYND

Sited along the Redwood River, Lynd is one of the oldest communities in the county. The Kiel & Morgan Hotel is located on the original meeting site of the Lyon County Government from 1872-1873. A historic marker and marble pillar from the county's first permanent courthouse in Marshall marks this site that is located at the edge of town. Currently the commercial area is very modest.

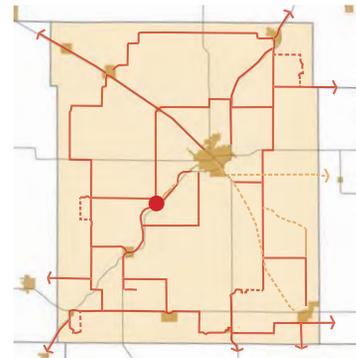
Around Lynd the topography becomes more varied as flat cornfields give way to rolling, rising terrain of the transitional area between the flat prairie and the plateau of the Buffalo Ridge. This landscape is interspersed with small streams and watercourses that carry water and the snowmelt from the Ridge to the southwest to the systems that feed the Minnesota River to the northeast.

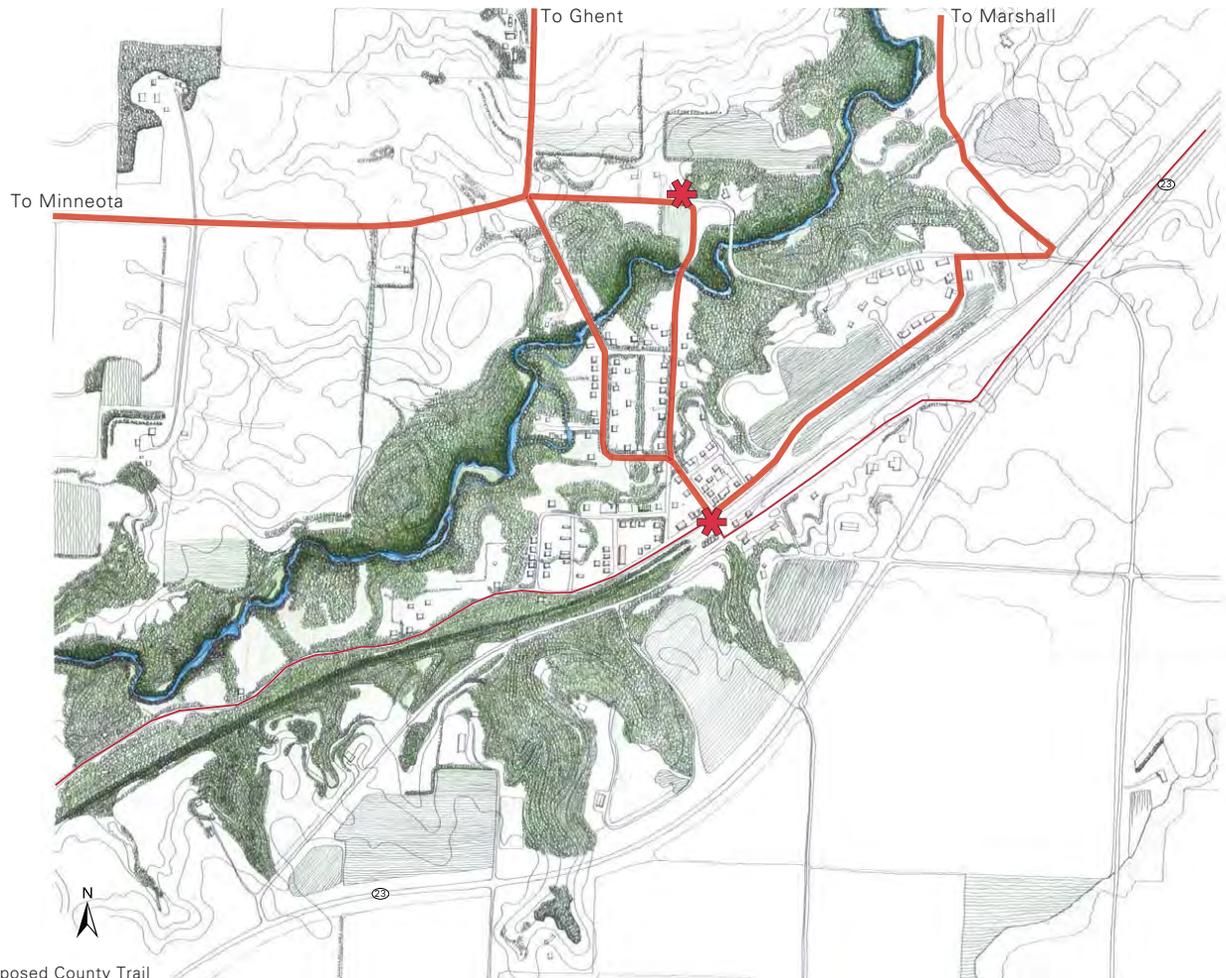
Lynd is the gateway to Camden State Park to the south. Although the northern entrance to the park is no longer open to automobiles, the entrance provides an opportunity for cyclists to bike into the park without having to climb the steeper terrain to the higher southern entrance.

An existing trail is sited along the very busy Highway 23 from Marshall to Lynd.

## Design

- The current trail between Marshall and Lynd that follows Highway 23 is not an optimal trail route because it does not offer an opportunity to experience the beautiful countryside west of the Redwood River. An alternative route is sited along less traveled roads to move through this countryside and enter Lynd by E Railroad Street. It leaves Lynd by the road to Camden State Park.
- Proposed trailheads include a trailhead at the historic Kiel & Morgan Hotel site and in front of the small commercial strip.





- Proposed County Trail
- ✱ Proposed Trailhead
- Community Trail



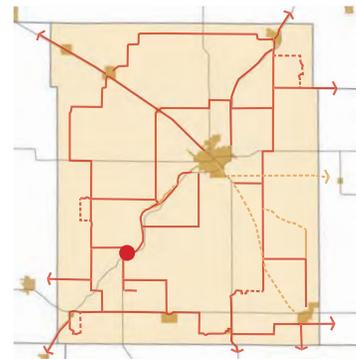
# TRAIL DESIGN

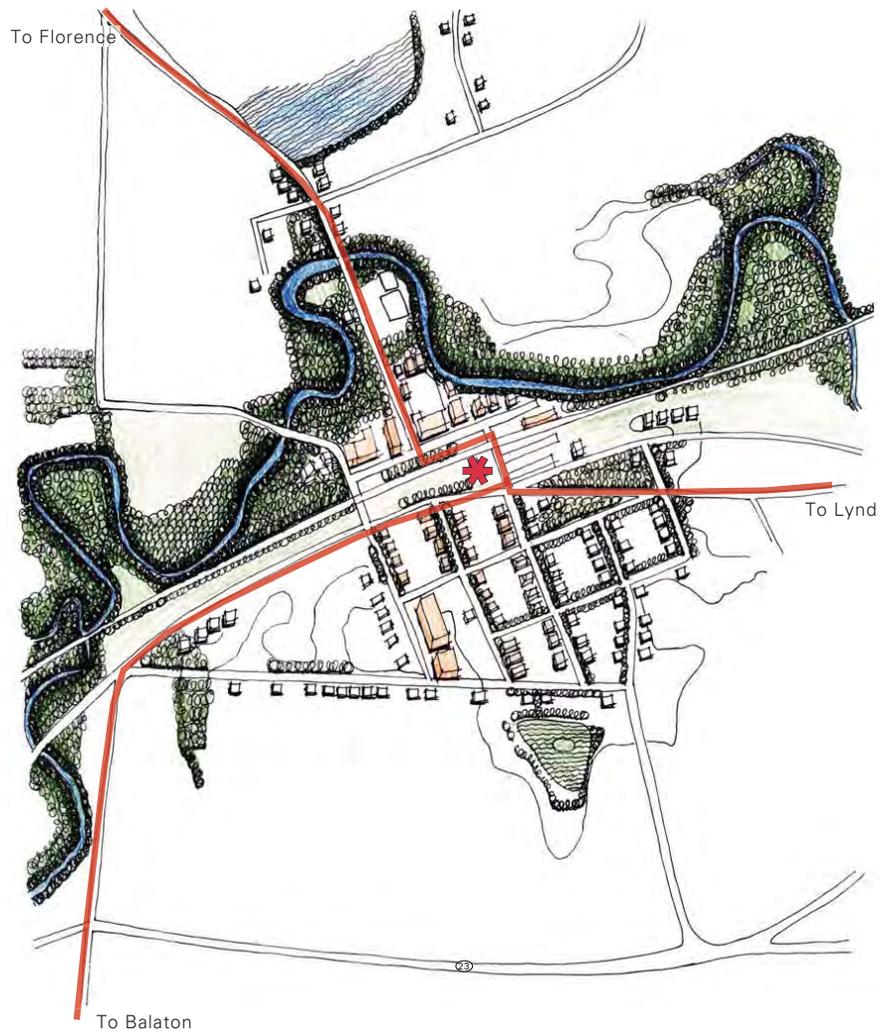
## RUSSELL

Russell is a small railroad town sited along the Redwood River on the Buffalo Ridge between Highway 23 and an active rail line. It is southwest of Camden State Park. Clear Lake is located immediately west of the community on County Road 66.

### Design

- A potential trail route links the community to Camden State Park entering the park on its higher elevation.
- Other desired alignments connect to Clear Lake along County Road 66.
- A desired trailhead at County Road 31 and 1st Street supports the community's modest commercial area and provides trail access to the city residents.





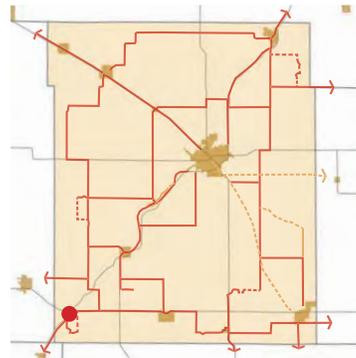
# TRAIL DESIGN

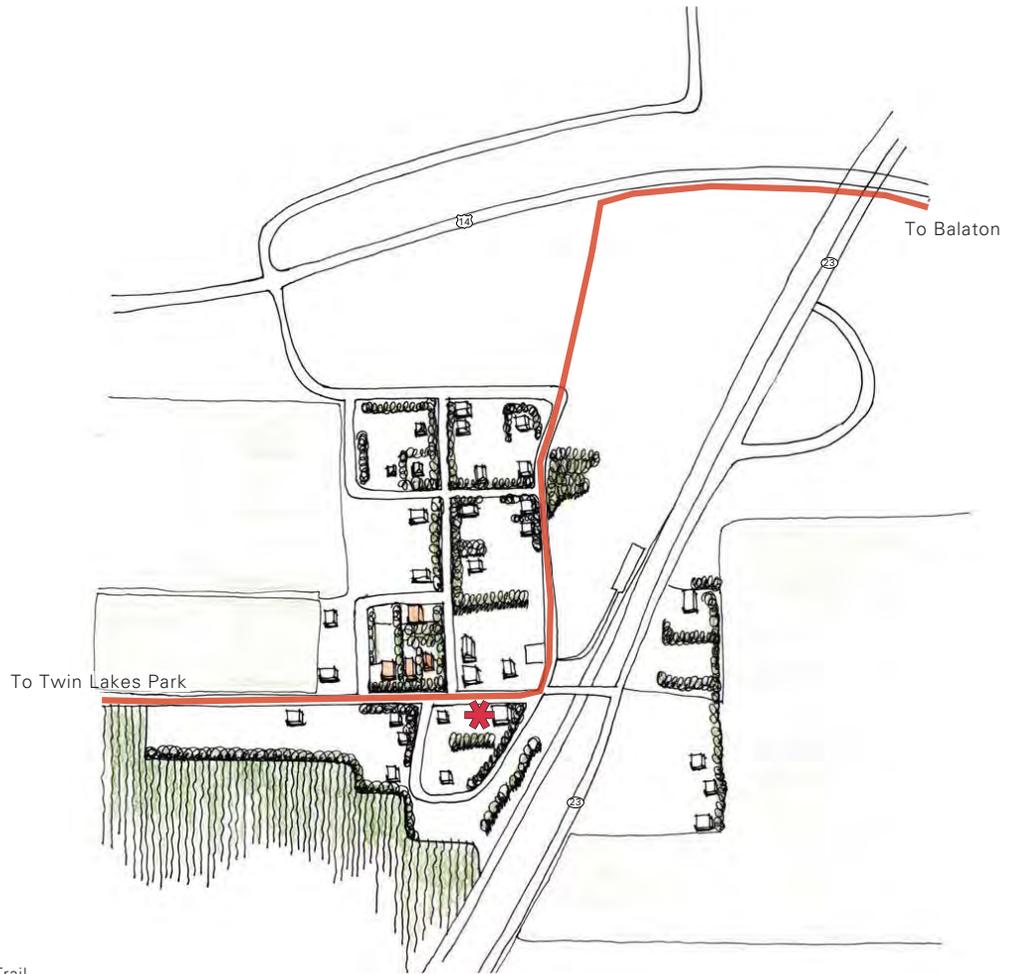
## FLORENCE

Florence is a very small community in the southwestern corner of Lyon County. It is located on Buffalo Ridge southwest of the intersection of Highways 23 and 14, west of the rail line, between Hope State Wildlife Management Area and Nyroca Flats State Wildlife Management Area, and north of the newly designated Twin Lakes County Park.

### Design

- A trailhead is sited along the proposed trail route between County Road 21 and Railroad Street. It is located in a small park space across from the town hall building on Blaine Street.





- Proposed County Trail
- \* Proposed Trailhead



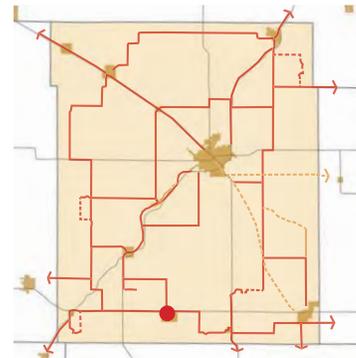
# TRAIL DESIGN

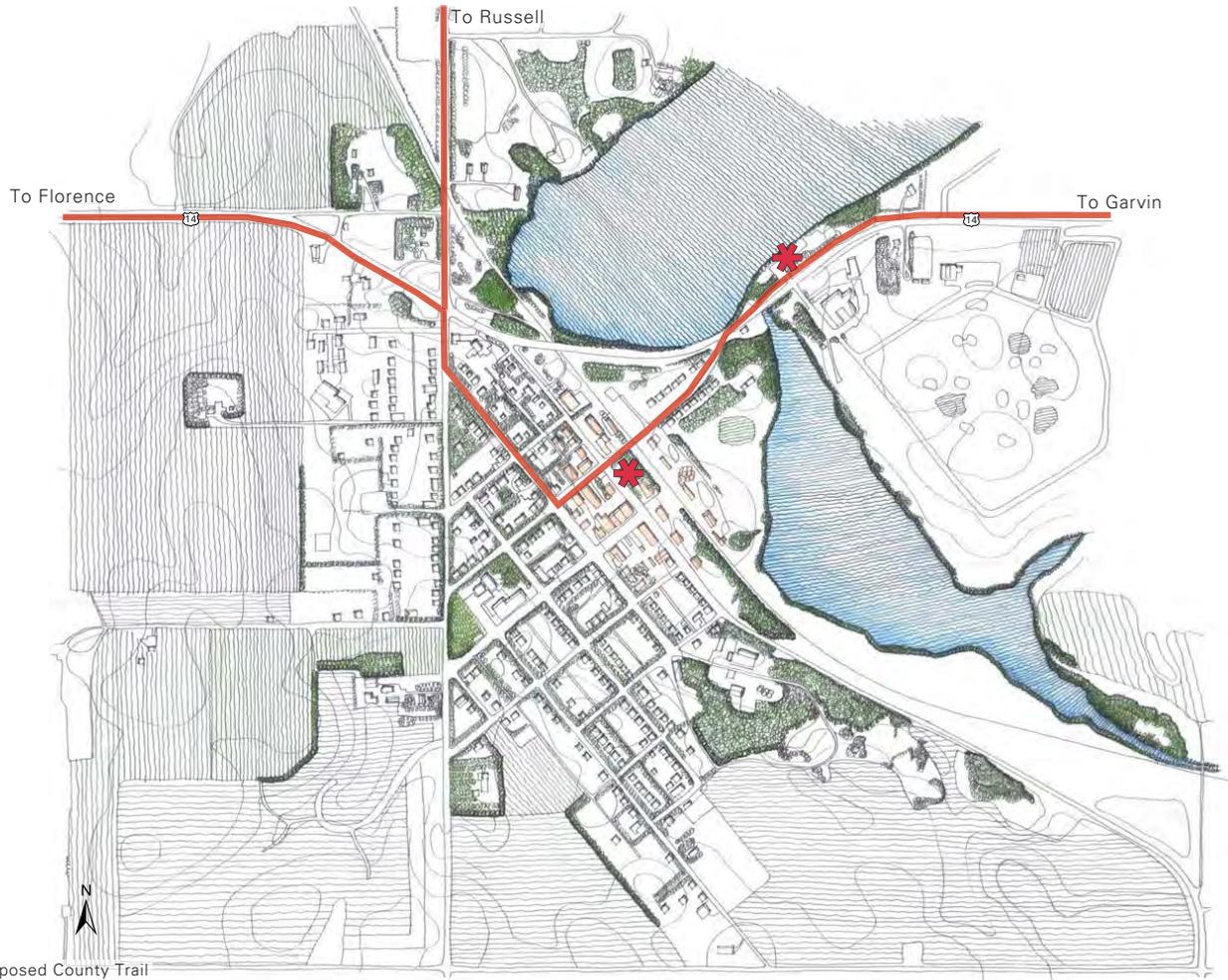
## BALATON

Balaton is located at the junction of Federal Highway 14 and County Road 5 along an active rail line. Like the other communities of Lyon County, it is a railroad town whose orthogonal grid is oriented to the original railroad line. Its grain elevator dominates the skyline. It has a modest commercial block in its heart. A small community, it is graced by two lakes. The larger lake, Lake Yankton, has a public access point, bathrooms, picnic facilities, and swimming beach.

### Design

- The trail is sited along Highway 14 since few other paved roads exist in the area. The trail should be placed at the outer edge of the 150' road right-of-way to minimize the impact of the traffic. The two necessary crossings are located at well-marked and controlled intersections. The railroad crossing also needs to be carefully marked.
- A trailhead is located downtown to support the local businesses.
- Because the lakes offer an opportunity for trail access and amenity, a trailhead is located in Wayside Park on Lake Yankton where rest facilities already exist.





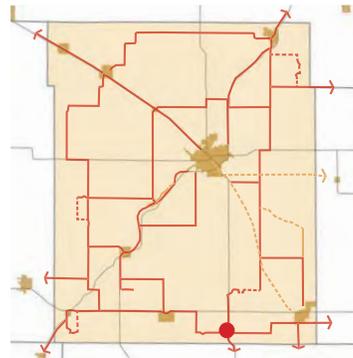
# TRAIL DESIGN

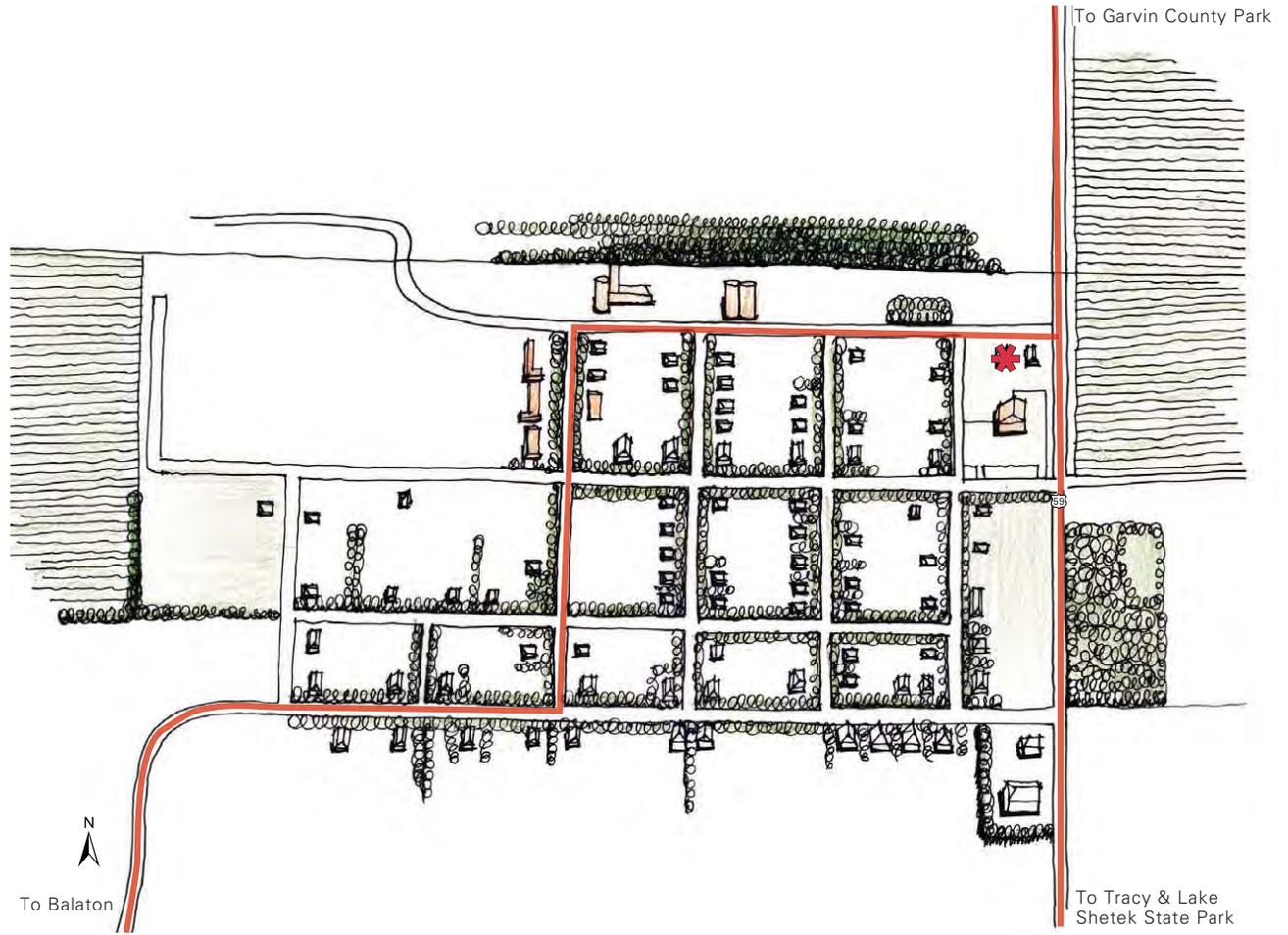
## GARVIN

Garvin is a small community sited along an active rail line. A grain elevator, a church, and a small commercial building are its landmarks. Modest homes are dispersed among its dozen residential blocks.

### Design

- The trail enters Garvin from the west along County Road 14, continues to follow 14 as it turns north along a residential street to the commercial district before turning east along 1st Street to join with Highway 59. It heads out of town along Highway 59 north to Garvin Park or south and east to Tracy.
- A trailhead is proposed for 1st Street at Highway 59.





- Proposed County Trail
- ✱ Proposed Trailhead



# TRAIL DESIGN

## TRACY

Located in the extreme southeast corner of the county among fertile farm fields, Tracy was established as a railroad town and a division point for the railroad where railroad crews were switched. A busy line from Winona to Pierre South Dakota still runs through the town, but the spur line to the City of Marshall has been abandoned.

Tracy's community form reflects its railroad identity. The "y" created by the junction of the two rails lines is still visible in southwestern Tracy. The city's original grid parallels the rail line. The commercial/civic core of 19th and early 20th century brick buildings and the original residential neighborhood are northeast of the tracks and the highway. The grain elevator and other industrial are across the highway to the southwest.

Subsequent development is laid out on north/south and east/west grid and the original plat is bounded by Highway 14/Craig Street, an east/west street and Center Street, a north/south street. This change in grid pattern shapes the original city into a right angle triangle. In the places where the old and new street patterns intersect, trapezoidal city blocks and potentially unsafe traffic conditions are created.

Wheels Across the Prairie Museum is located on the Tracy's western edge along Highway 14. The museum exhibits include a freight train and historic buildings that have been moved to the site.

A local trail surrounds most of the city and slices across to the central business district. These trails are sited along streets: County Road 14, 330th Avenue, Highway 14, County Road 28, and Center Street/County Road 11.

## Design

### Trail Alignment

- The county trail alignments are along county roads and come into Tracy from all four directions.
- Local trail connections to county trail make the county trail system accessible to city residents and support patronage of local businesses by visitors.

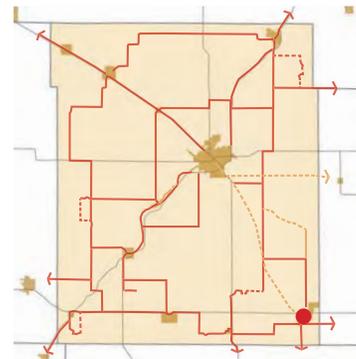
### Trailhead Locations

- A downtown trailhead provides access to local businesses
- A second trailhead in Swift Lake Park on County Road 11 provides access to fishing and camping.
- The third trailhead is by the Wheels Across the Prairie Museum.

## Kiosks

The kiosks should provide:

- Trail information,
- Community information that portrays its railroad history, and
- Interpret the presences of Laura Ingles Wilder and her family.





# TRAIL DESIGN

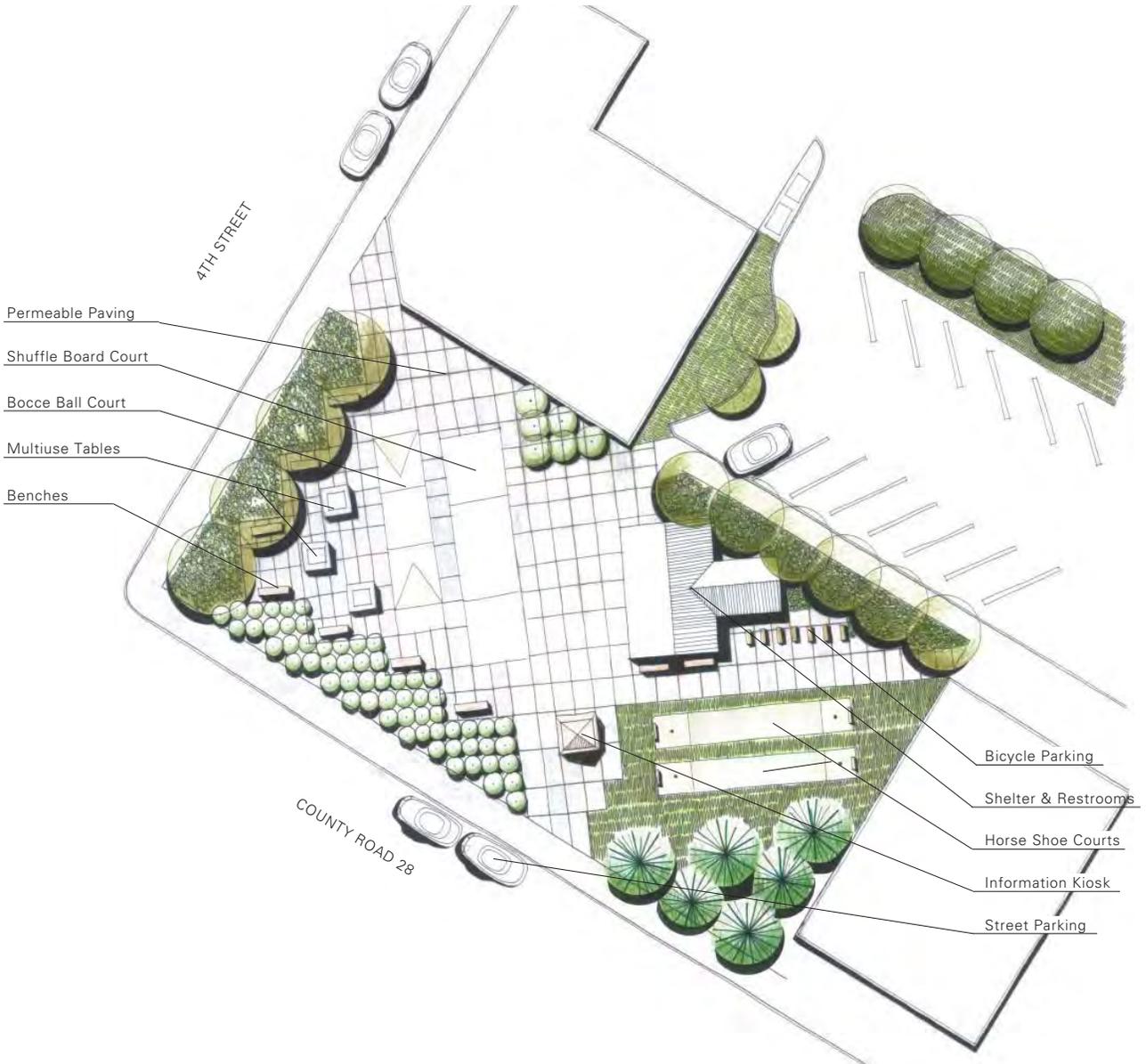
## TRACY: GATHERING PLACE TRAILHEAD

Tracy's downtown trailhead supports visiting downtown Tracy businesses for trail users and creates a gathering place to community activities. It is located at the corner of County Road 23 and 4th Street adjacent to Ecco, a rehabilitation center, and a block from the Tracy Area Chamber of Commerce. Parking is located along city streets and along the alleyway.

The trailhead design features:

- A trail shelter and restrooms;
- An information kiosk that provides information about the trail and the City of Tracy;
- Bicycle racks;
- Multi-use tables;
- A bocce ball court, a shuffle board court, and two horseshoe courts;
- Permeable paving covering most of the site; and
- Plants and trees sited along the edges that define and enclose the site.





Permeable Paving  
 Shuffle Board Court  
 Bocce Ball Court  
 Multiuse Tables  
 Benches

Bicycle Parking  
 Shelter & Restrooms  
 Horse Shoe Courts  
 Information Kiosk  
 Street Parking

4TH STREET

COUNTY ROAD 28

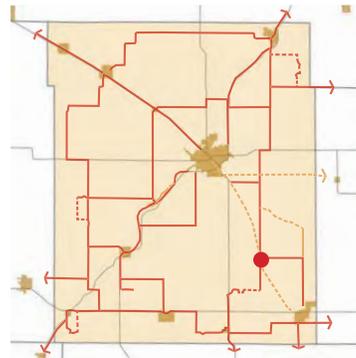
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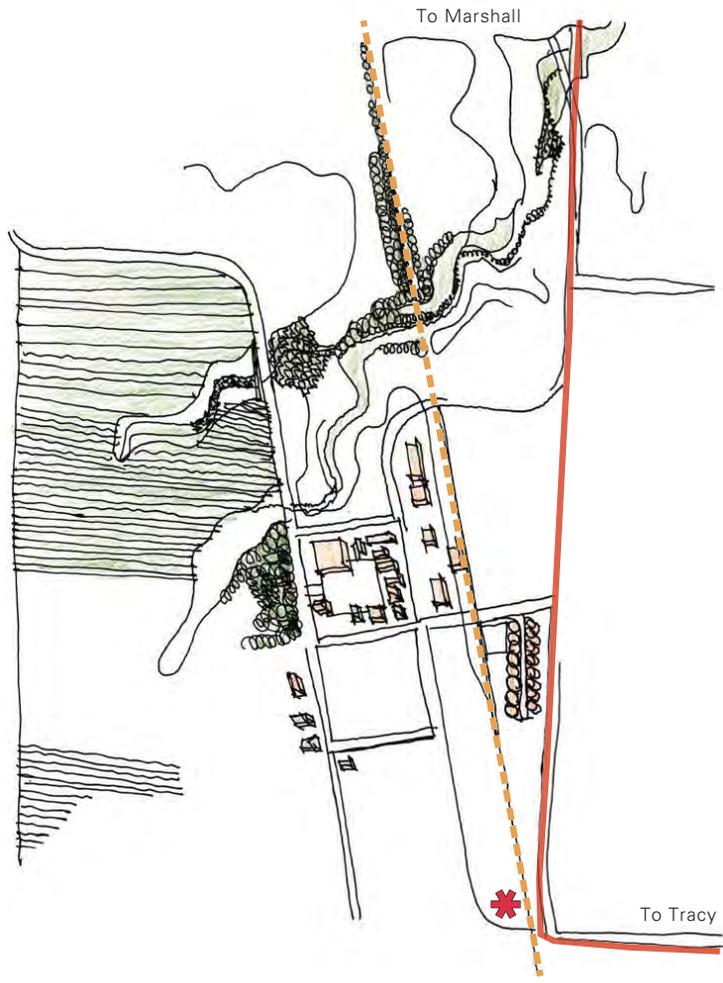
## AMIRET

Amiret is an agricultural community developed on a now abandoned rail line. Currently tiny in size at the intersection of County Roads 2 and 9, its major landmarks are a grain elevator and large cylindrical grain storage bins.

### Design

- The trail follows the old rail right-of-way where possible and along County Road 9 where it is not possible.
- The trailhead is located by the intersection of the trail and the County Road 2.





- Proposed County Trail
- - - Proposed County Trail on Abandoned Railroad Right-of-Way
- \* Proposed Trailhead



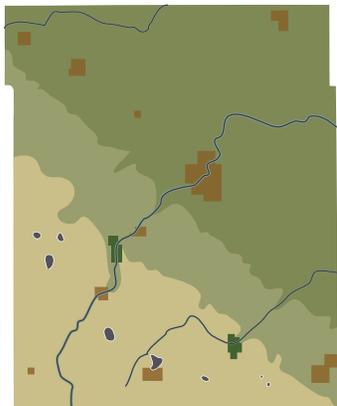
# TRAIL DESIGN

## SIGNATURE ELEMENTS

### The Logo

The Lyon County Trail logo depicts the county's major natural and cultural features:

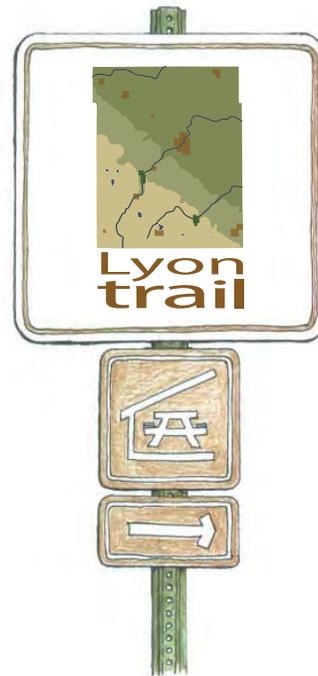
- Its topographic areas: flat farmland, transitional zone, and Buffalo Ridge;
- The three major tributary rivers in Southwestern Minnesota that flow into the Minnesota River: the Yellow Medicine, the Redwood, and the Cottonwood rivers;
- Its parks: Camden State Park and Garvin County Park; and
- Its communities: Marshall, Tracy, Minneota, etc.



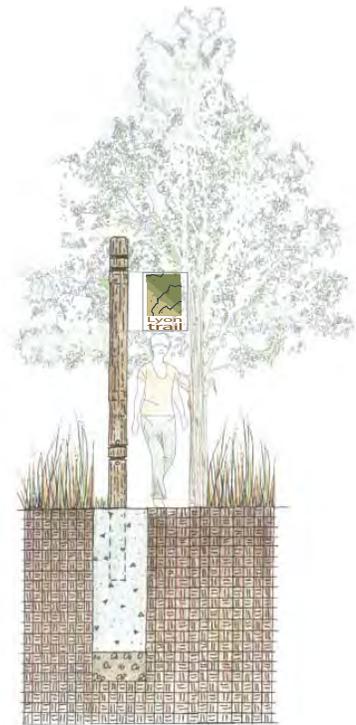
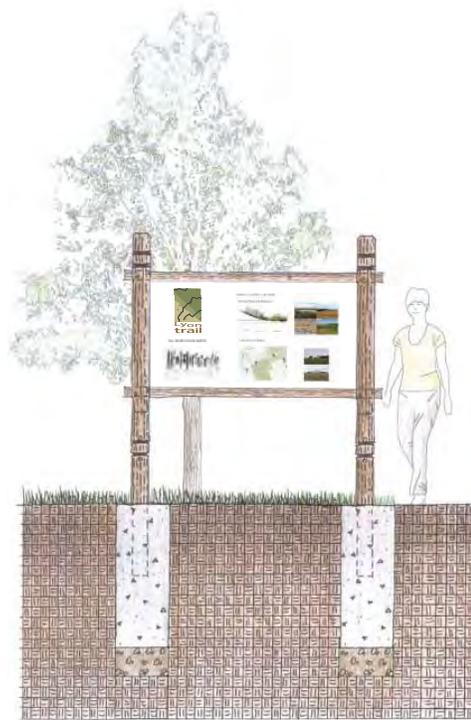
**Lyon  
trail**

### Trail Signs

- Signs marking the trail route will have the logo and the words "Lyon Trail." The signs will be attached to metal posts.



- 6"x6"x7"  
BROWN TREATED TIMBER
- COUNTY LOGO
- 1/2 BOLT
- 1/4 STEEL KNIFE PLATE
- 1" DEEP  
ROUTED RECESS
- 18"x18"x4"  
SONNO TUBE



# TRAIL DESIGN

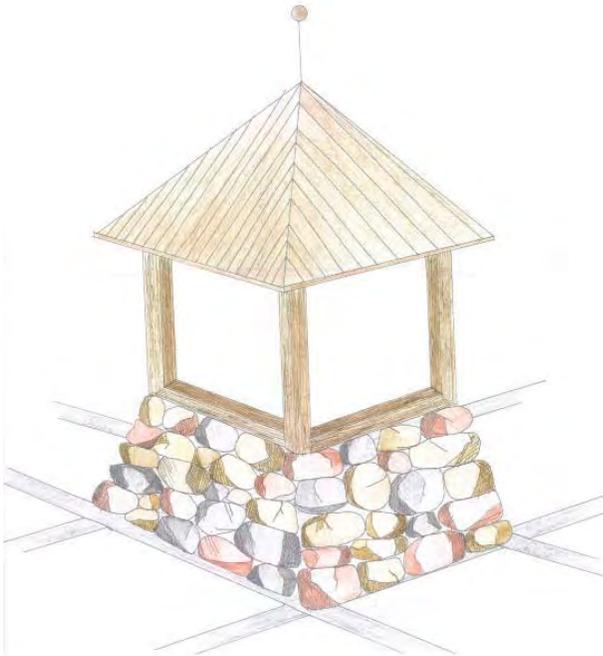
## SIGNATURE ELEMENTS

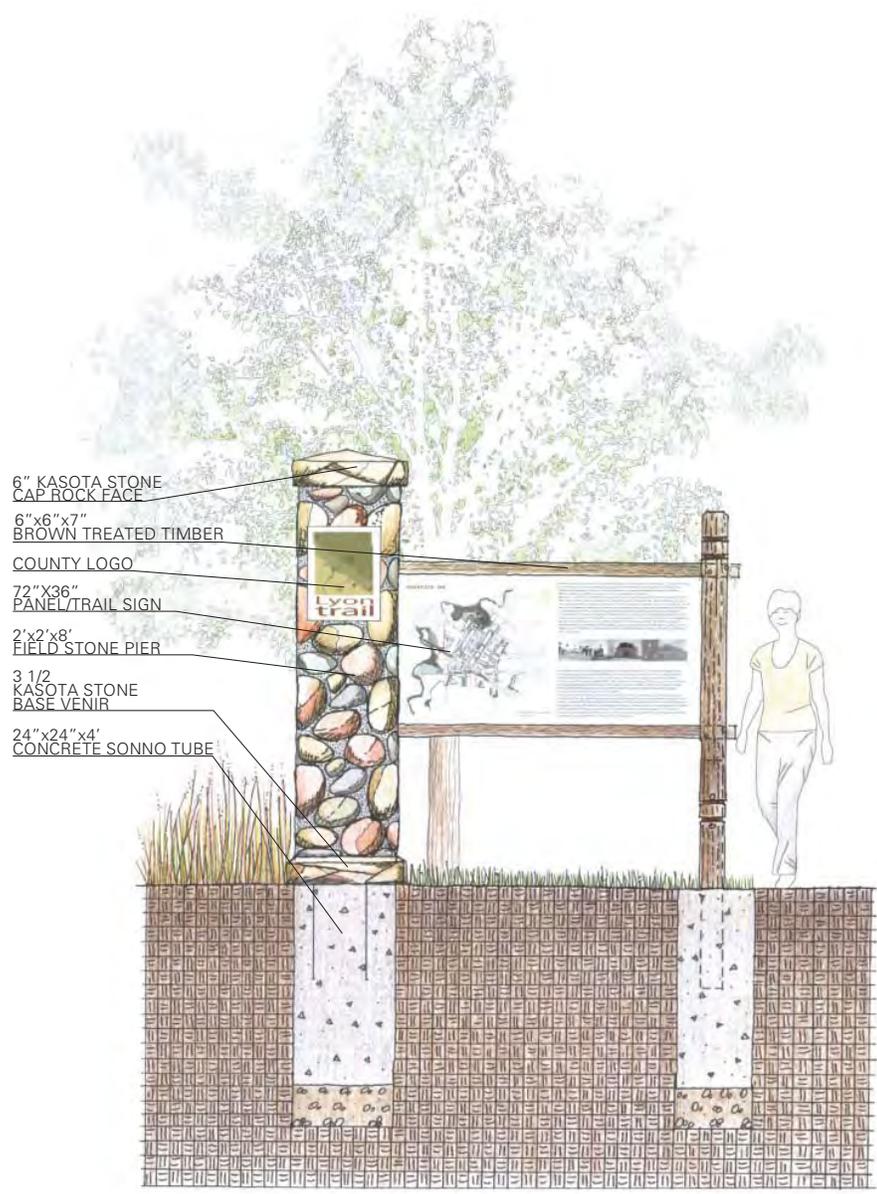
### Trail Kiosks

Trail kiosks will be placed at trailheads and at significant locations along the trail. The kiosk is made of fieldstones left by the glaciers, prominent features of the Lyon County landscape.

Information presented on the kiosk panels include:

- A trail map depicting trail features;
- A community drawing/map showing community features with a "You are here" locator icon;
- Community pictures;
- The landscape's natural and cultural features;
- Historical and other cultural information: settlement, historic photos, town histories, etc.;
- Challenges to early settlers: grasshopper s of 1873-6, prairie fires, blizzards;
- Northwest Ordinance 1785 & 1862 Homestead Act;
- Land divisions: Jeffersonian grid: 6 mile square townships, sections, 160 acre quarter sections;
- County's gridded pattern: townships, roads, drainage ditches, field drain tiles;
- Geology;
- Land cover & Vegetation: prairie plants, etc.;
- Rivers & Watersheds;
- Hydrology;
- Wind: summer & winter patterns;
- Native Americans;
- Railroads; and
- Farms: area economy, history, changes, etc.





# TRAIL DESIGN

## REST STOPS

Rest stops can be located in parks and other public areas along the trail. The design drawings show two conditions for rest stops. One is for a flat terrain, another for a sloping site. The rest stop features:

- A windbreak of conifers and deciduous trees and shrubs,
- Bike racks made of native fieldstone,
- An information kiosk, and
- A resting bench shaded by willows.

