



Three Rivers

PARK DISTRICT

in partnership with Wright and Carver Counties



Crow River Regional Trail master plan

April 20, 2017

the **mission** of Three Rivers Park District is to promote environmental stewardship through recreation and education in a natural resources-based park system.

Three Rivers Park District was established in 1957 after legislation was enacted in 1955 allowing for the activation of park districts whose primary duties are “acquisition, development and maintenance of large parks, wildlife sanctuaries, forest and other reservations, and means for public access to historic sites and to lakes, rivers and streams and to other natural phenomena” (Minnesota State Statutes, Chapter 398.07).

There are more than 10 million annual visits to more than 26,500 acres of park reserves, regional parks and special-use areas in Hennepin and five adjoining counties and 140 miles of regional trails. Current outdoor-recreation activities in regional parks and trails include camping, hiking, cross-country and downhill skiing, tubing, bicycling, in-line skating, horseback riding, nature interpretation, golfing, fishing and swimming. Three Rivers Park District also operates a natural resources management program, which administers the restoration and perpetuation of both native wildlife and plants in order to provide park and trail visitors opportunities for high-quality recreational experiences.

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Gene Kay, Hennepin County Appointee

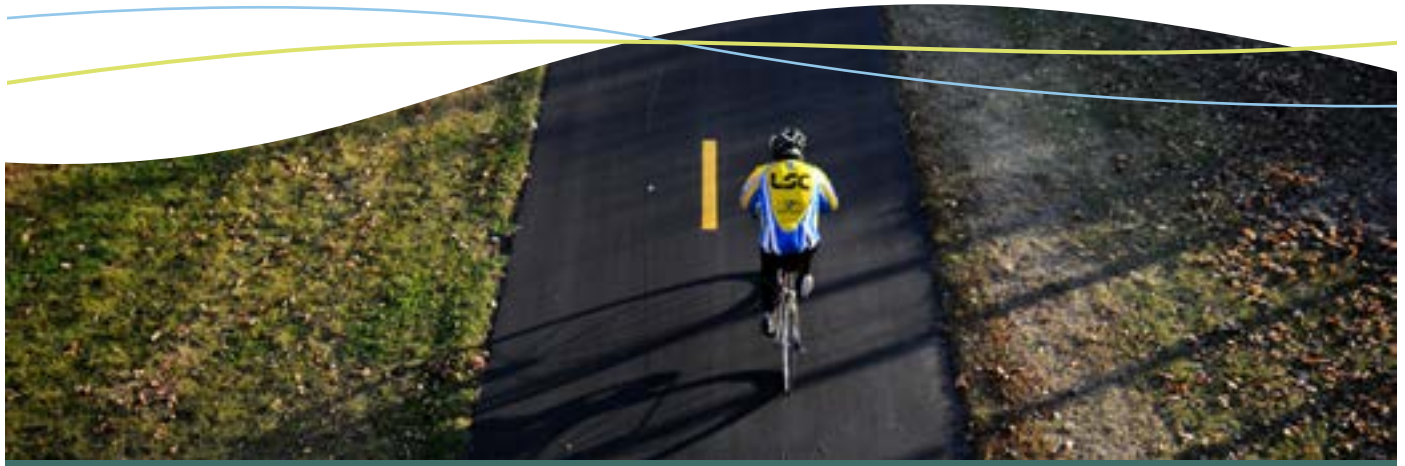
Term Expires 12/31/18

- *Serves at large*

Cover Photo

Crow River Regional Trail route through Hanover, MN

Photo Credit: Three Rivers Park District



Acknowledgements

Three Rivers Park District (Park District) gratefully acknowledges the staff, elected officials, community members and other participants who contributed to the Crow River Regional Trail Master Plan. The Park District extends a special thank you to the individuals listed below who provided guidance, time, questions, and critical insight throughout the process.

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Executive Summary

The proposed Crow River Regional Trail (CRRT) will expand recreational access to the Crow River - providing multiple opportunities along its 32-mile corridor to 'touch the river.' The CRRT's proposed route stretches from the Luce Line State Trail in Watertown Township to the West Mississippi River Regional Trail in Dayton, connecting Carver, Hennepin and Wright counties through the communities of Minnetrista, Independence, Franklin Township, Delano, Greenfield, Rockford, Rockford Township, Hanover, Rogers, and Otsego (Image I).

The CRRT is unique, in that early stakeholder coordination resulted in a route that crosses three major jurisdictions including; Hennepin County (Three Rivers Park District, Metropolitan Council), Carver County (Metropolitan Council), and Wright County (Greater Minnesota Regional Parks and Trails Commission).

For purposes of this master plan's submittal to the Metropolitan Council, only portions of the CRRT within Hennepin and Carver Counties are proposed to be included for their approval. Wright County intends to submit portions within their jurisdiction to the Greater Minnesota Regional Parks and Trails Commission for regional designation in the Statewide System Plan. However, to ensure a complete planning process and successful outcome, one comprehensive master plan is proposed.

The CRRT's route aims to provide an exclusively off-road trail experience, which in turn provides a safe and enjoyable recreation and non-motorized transportation option for users regardless of ability. The CRRT will expand recreational access to park and trail facilities, residential neighborhoods, commercial nodes, and Delano, Rockford and Hanover downtowns - which in turn supports bicycle and pedestrian mobility and economic development. Ancillary trail opportunities are created by the CRRT corridor for further connections to Watertown, Greenfield, and St. Michael.

Image I: Crow River Regional Trail Context*

Source: Three Rivers Park District



*All maps can be found full size in the Appendix C.

Current planning for the CRRT began in 2015, however the notion of a regional trail alignment along the river dates back more than 10 years. The preferred CRRT route included in this master plan aims to provide a hybrid route of earlier planning, conceding to allow segments of trail within adjacent road right-of-way (Image II). This preferred CRRT route meets the guidelines and preferences and is the best and most implementable route moving forward. The proposed regional trail will directly connect recreational destinations such as Crow-Hassan and Lake Rebecca Park Reserves, in addition to the Luce Line State Trail, and Dakota Rail and Lake Independence Regional Trails. Some segments of the proposed trail already exist, or are planned for construction funding in the future.

Image II: Crow River Regional Trail Segments

Source: Three Rivers Park District



Segment A	
Community	Watertown Township, Minnetrista, Independence, Franklin Township, Delano, Greenfield, and Rockford
County	• Carver • Hennepin • Wright
Trail Status	Mix of existing and planned
Mileage	11.7 miles
Segment B	
Community	Rockford, Rockford Township & Hanover
County	• Wright
Trail Status	Mix of existing and planned
Mileage	6.5 miles
Segment C	
Community	Hanover and Rogers
County	• Hennepin
Trail Status	Mix of existing and planned
Mileage	8.0 miles
Segment D	
Community	Rogers
County	• Hennepin
Trail Status	Mix of existing and planned
Mileage	2.9 miles
Segment E	
Community	Rogers, Otsego and Dayton
County	• Hennepin • Wright
Trail Status	Planned
Mileage	3.5 miles

The total acquisition and development costs to complete proposed and upgrade existing CRRT segments are summarized and separated by agency to fully understand the participation percentages (Image III). As seen in the table, the majority of CRRT's development is dependent on the Park District (51 percent) and Wright County (48 percent) - with Carver County contributing about 1 percent of the total project cost. The estimated master planning level acquisition and construction cost estimate for the unbuilt trail sections and upgrades to existing segments is estimated at \$37 million.

Image III: Total Acquisition and Development Costs

Source: Three Rivers Park District

Costs by Agency*			
Agency	Acquisition Costs	Development Costs	Subtotals
Three Rivers Park District	\$1,239,264	\$17,671,670	\$18,910,834
Wright County	\$1,094,544	\$16,482,594	\$17,577,138
Carver County	\$0	\$463,130	\$463,130
TOTALS	\$2,333,808	\$34,617,394	\$36,951,102

When the 17-mile CRRT corridor within Park District jurisdiction is fully realized (not including portions outside of Park District jurisdiction), routine maintenance operation costs including additional staffing are estimated to increase by \$26,500/year (2016 dollars). Additional costs for trail surface preservation and rehabilitation (trail surface repairs, striping requirements, and pavement requirements) are anticipated to increase by \$96,900/year assuming a 30-year pavement life. The combined annual maintenance operation estimated cost for both route and trail surface preventative maintenance is \$123,400/year (Image IV).

Image IV: Park District Operations & Maintenance Costs

Source: Three Rivers Park District

Park District Operations & Maintenance Costs (2016 dollars)			
	Public Safety	Natural & Cultural Resources	Maintenance
One-time expense (equipment or similar)	N/A	N/A	\$100,000
Staffing	<ul style="list-style-type: none"> No new FTE Expansion of Volunteer Patrol 	<ul style="list-style-type: none"> No new FTE Seasonal/Contract Staffing Varies 	<ul style="list-style-type: none"> 0.5 FTE Seasonal/Contract Staffing Varies
Annual operation & maintenance costs	N/A	\$5,000	\$123,400*



*Based upon full build-out of 17 additional Park District miles: \$26,500 routine maintenance (Operation Budget) and \$96,900 for Pavement Management Program (Asset Management Program)

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The Crow River bridge crossing near Rockford, MN
Image Credit: Three Rivers Park District

Planning Framework

Defining the boundary between Wright and Hennepin counties, the Crow River remains an important natural resource asset to the western Twin Cities. Named by the Ojibwe American Indians for the bird they called, “marauder of newly planted corn,” the Crow River extends through eight Minnesota counties. Comprised of the North, Middle and South forks, the Crow River is a tributary of the Mississippi River and drains a watershed of approximately 2,700 square miles. The North and South forks converge at Lake Rebecca Park Reserve - where the Crow River flows northeastward to the Mississippi River at Dayton’s historic downtown.

Overview

When complete, the 32-mile Crow River Regional Trail (CRRT) will fill a gap in both the Twin Cities metro and Greater Minnesota park and trail systems with a safe, accessible and enjoyable recreation and alternative transportation option. The CRRT will expand recreational access to park and trail facilities, residential neighborhoods, commercial nodes and several exurban downtown communities - which in turn supports bicycle and pedestrian mobility and economic development.

The CRRT’s principle goals are to provide a trail route that gives users multiple opportunities to experience the Crow River and connect to local destinations. Since this region has significant number of private properties abutting the Crow River, a trail route that achieved an acceptable level of river proximity - coupled with capitalization of river touchpoints - provided the route’s primary planning framework.

The 32-mile CRRT route travels from the Luce Line State Trail to the planned West Mississippi River Regional Trail, through the communities of Watertown Township, Minnetrista, Independence, Franklin Township, Delano, Greenfield, Rockford, Rockford Township, Hanover, Rogers, Otsego and Dayton (Map 1*).

Map 1: Crow River Regional Trail Hennepin County Context

Source: Three Rivers Park District



*All maps can be found full size in the Appendix C.

The proposed regional trail will directly connect recreational destinations such as Lake Rebecca and Crow-Hassan Park Reserves, in addition to the Luce Line State Trail, and the planned Sarah Creek, Rush Creek and West Mississippi River Regional Trails. In addition, the CRRT will connect to local recreation points-of-interest including Riverside and Central Parks in Rockford and Delano.

When fully realized, CCRT users will be able to continue east on the Luce Line State Trail to reach Baker Park Reserve via the Baker/Carver or Lake Independence Regional Trail - and further connections can be made to the Medicine Lake Regional Trail and eventually the Minneapolis Grand Rounds. By traveling west on the Luce Line State Trail, users can reach the communities of Watertown, Hutchinson, and Winsted.

Portions of the CRRT currently exist. Specifically, a 10.9 mile stretch at the southern end travels through Independence, Franklin Township, Delano and connects to Lake Rebecca Park Reserve. Another small 1.3 mile stretch exists from Hanover along the southern edge of Crow Hassan Park Reserve. These segments will be accepted as-is with detailed plans for improvements and new construction outlined in Section VII.

Jurisdictional Authority

The CRRT is unique, in that early stakeholder coordination resulted in a route that crosses three major geographic boundaries and subsequently three park implementing agency jurisdictions including;

Hennepin County (Three Rivers Park District, Metropolitan Council), Carver County (Metropolitan Council), and Wright County (Greater Minnesota Regional Parks and Trails Commission) (Map 2). For purposes of this master plan’s submittal to the Metropolitan Council, only portions of the CRRT within Hennepin and Carver Counties are proposed to be included for their approval (Maps 3 and 4). Wright County intends to submit portions within their jurisdiction to the Greater Minnesota Regional Parks and Trails Commission for regional designation in the

Map 2: CRRT Jurisdictional Authority

Source: Three Rivers Park District



Map 3: Park District Jurisdiction

Source: Three Rivers Park District



Map 4: Carver Cnty Jurisdiction

Source: Three Rivers Park District



Map 5: Wright Cnty Jurisdiction

Source: Three Rivers Park District



Statewide System Plan (Map 5). This jurisdictional discussion is required during the planning framework process, however the intent of the entire thirty-two mile CRRT corridor is to provide a seamless user experience. It is the expectation that the CRRT user will unknowingly weave between jurisdictions, focusing instead on the Crow River vistas, adjacent landscapes and connections to local destinations.

Metropolitan Council

The Twin Cities’ nationally renowned Metropolitan Regional Parks System significantly contributes to the area’s high quality of life. Establishing green space for recreation and resource protection enhances the region’s livability and economic strength. The Metropolitan Regional Parks System, includes 62 regional parks, park reserves, and special recreation features - plus 340 miles of regional trail open to the public. Currently, there are 54,286 acres of protected land open for public use, with planned acquisition of an additional 70,000 parkland acres and 760 regional trail miles over the next 25 years to meet the region’s growth expectations (Map 6). The Metropolitan Regional Parks System is made up of 10 park implementing agencies consisting of six county park departments, three city park departments, and the Park District.

The Metropolitan Council is the regional planning agency that oversees and provides partial funding of the acquisition, development, and operation of the Metropolitan Regional Parks System. The Metropolitan Council and park implementing agencies also develop regional park policies to protect the region’s water quality; promote best management practices; and help integrate the parks system with housing, transportation, and other regional priorities. The Metropolitan Council provides guidance in the development of regional park and trail master plans. The *CRRT Master Plan* reflects that guidance.

Each regional park or trail must have a master plan approved by the Metropolitan Council prior to receiving Metropolitan Council funding. The master plan must address boundaries and acquisition, demand, development concept, implementation schedule, development and operational costs, and natural resources. Public input is encouraged throughout the master planning process. The Metropolitan Council’s planning requirements help ensure consistency between the implementing agencies’ and their own regional plans. The CRRT search corridor is identified in Metropolitan Council’s 2040 Regional Parks System Plan.



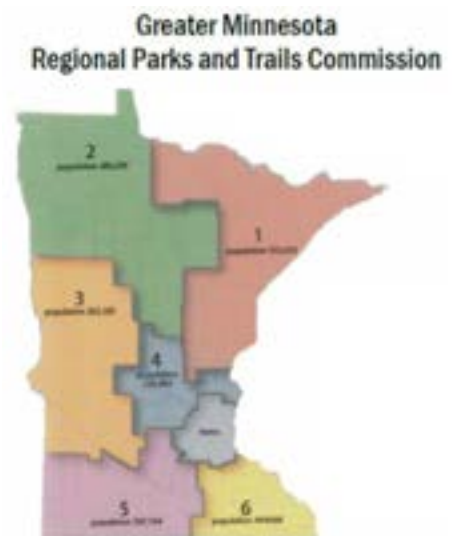
Map 6: 2040 Regional Parks System Plan

Source: Metropolitan Council

Greater Minnesota Regional Parks and Trails Commission

Established in 2013, the Greater Minnesota Regional Parks and Trails Commission (Greater Minnesota) was created to undertake system planning and provide recommendations to the legislature for grants funded by the parks and trails fund to counties and cities outside the Twin Cities seven-county metro-area jurisdiction for parks and trails of regional significance (Map 7). Prior to the establishment of the commission, Greater Minnesota did not have an established history of comprehensive planning for regional parks and trails.

The Parks and Trails Legacy Advisory Committee (LAC) was created as a part of the implementation of the 25-year Parks and Trails Legacy Plan. The Legacy Plan establishes the basic structure and guidelines both for the creation of Greater Minnesota and for the Regional System Plan it is responsible for creating. As defined in Greater Minnesota’s Strategic Plan (and guided by the Parks & Trails Legacy Plan), Greater Minnesota evaluates, ranks, and determines funding recommendations for regionally-significant projects of highest merit. All regional park and trail projects flow through Greater Minnesota’s evaluation process to ensure consistency with the protocol and criteria defined under the Strategic Plan. The vetting process defined and implemented by Greater Minnesota through the Strategic Plan is the only route to Legacy or other funding sources as related to regional parks and trails in Greater Minnesota. Greater Minnesota is responsible for ensuring that the physical system plan that emerges over time only reflects parks and trails that are well-vetted and formally recognized as being regionally-significant and essential to meeting regional needs. The CRRT route is proposed in District 4.



Map 7: Greater Minnesota Regional Parks & Trails Commission Districts

Source: GMRPTC

Three Rivers Park District

The Park District is an independent, special park district charged with the responsibilities of acquisition, development, and maintenance of regional park reserves, parks, special recreation features, and trails for the benefit and use of the citizens of suburban Hennepin County, the seven-county Twin Cities metropolitan area, and the State of Minnesota. Since its inception, the Park District has grown to serve more than 11 million annual visitors through access to 26,500 acres of park reserves, regional parks, special recreation features, and 140 miles of regional trails. The Park District works cooperatively with local communities, counties, public agencies, the Metropolitan Council, and the State Legislature.

The Park District's mission is to promote environmental stewardship through recreation and education in a natural resources-based park system. The Park District was established in 1957 by the Minnesota State Legislature when prominent members of the community promoted the benefits of parks in the outlying areas of Hennepin County.

Regional Trail Planning Guidelines

The Park District manages its lands under four categories of regional open space: regional park reserves, regional parks, regional special recreation features, and regional trail corridors.

Regional trail corridors, such as the CRRT are intended to provide recreational travel along linear pathways that transcend multiple jurisdictions and may or may not also serve a transportation component. In addition, regional trails follow criteria established by the Metropolitan Council and Park District:

Regional trail corridors are carefully selected to follow natural or cultural linear features with scenic appeal and/or historical, architectural and developmental interest, connect people with places, help create a sense of place amongst the greater community, intersect with local trail, sidewalk, and bicycle networks, provide access to mass transit, and link components of the regional park system together.

- Regional trails may function as a destination or linking regional trail or both:
 - Destination regional trails are developed as greenways or linear parks, and are distinct in that the trail itself is a destination. This type of regional trail typically is an independent facility and includes a wide corridor providing opportunities for improving wildlife habitat, protecting natural/cultural resources, and providing recreational opportunities.
 - Linking regional trails serve a greater transportation function and act as the backbone to the regional trail system by connecting the regional park system to itself and the people it serves in a logical and efficient manner.
- For either regional trail type, adjacent land with significant natural or cultural resources may be acquired as part of the trail corridor.

The CRRT will serve both a destination and linking function; however, its primary function is that of a destination trail. The primary goal of the CRRT is to celebrate the Crow River - a major natural resources asset to this part of the Twin Cities region. The CRRT route was developed in a manner to offer opportunities to experience the river through viewsheds, touch points, and access points where the user can physically touch the Crow River.

"The CRRT's principle corridor goals are to provide a trail route that gives users multiple opportunities to experience the Crow River and connect to local destinations."





CRRT Character

Park Drive adjacent to Crow-Hassan Park Reserve, Rogers, MN

Image Credit: Google Streetview

Planning & Public Process

Current planning for the CRRT began in 2015, however the notion of a regional trail alignment along the Crow River dates back more than 10 years. The Park District, as part of a planning strategy in 2007, considered a regional trail corridor and scenic byway running from the Crow River's confluence at the Mississippi River along the east side, through Crow-Hassan and Lake Rebecca Park Reserves, and through Wright and Carver Counties - terminating in Baylor Regional Park near Norwood-Young America. Significant segments of this earlier version were dependent on private property acquisition to construct the trail and protect the watershed's natural resources. This proposal however, was not politically palatable at the time. Consequently, the preferred CRRT route included in this master plan aims to provide a hybrid route of earlier planning - conceding to allow segments of trail within adjacent road right-of-way. This preferred CRRT route is the most implementable route moving forward, while providing touch points for users to feel and experience the Crow River and its natural beauty.

Precedent Planning Documents

The CRRT is consistent with the vision of several agencies. This master plan serves to solidify those independent visions into one documented trail route - agreed upon by all. The CRRT concept, generally aligned adjacent to the Crow River, is identified and defined by the following plans:

- Metropolitan Council 2040 Regional Parks Policy Plan as a 'regional trail search corridor.'
- Hennepin County 2040 Bicycle Transportation Plan as a 'planned off-street bikeway' (Hennepin County planned bikeway system, January 2015) and as a 'proposed/planned regional trail corridor' (Three Rivers Park District proposed regional trail system, 2014).
- Wright County 2011 Trail and Bikeway Plan as a 'proposed paved, regional trail.'



In addition, the CRRT corridor has been identified in local comprehensive plans - directed by the Wright County and Metropolitan Council.

The CRRT compliments various previous planning documents.

Source: Metropolitan Council, Hennepin & Wright Counties

With approval and adoption of this master plan, the CRRT ceases to simply exist as a search corridor and becomes, by Metropolitan Council and Greater Minnesota terms, a planned regional trail. With this change in status, eligibility for implementation with funding partners and various stakeholders is realized.

Engagement Plan

As part of the master plan scoping phase, a process was defined to engage the public and involve affected agencies, local units of government, and local, state and federal recreation providers. As directed by the 2040 Regional Parks Policy Plan, that engagement process must seek to mitigate existing racial, cultural or linguistic barriers and include people of diverse races, ethnic groups, classes, ages, abilities and national origin.

Agency Stakeholder Committee

Comprised of various local and state agencies, the Agency Stakeholder Committee ensured consistency across various complementary planning work. Participating agencies were invited during the master plan's early planning stage to discuss opportunities to coordinate the CRRT with current trail, bikeway, recreation plans and capital improvement projects along the corridor. Invited agencies included; Wright County, Carver County, Hennepin County Department of Transportation, Metropolitan Council, Minnesota Department of Natural Resources (MnDNR), and Minnesota Department of Transportation (MnDOT).

Advisory Committee

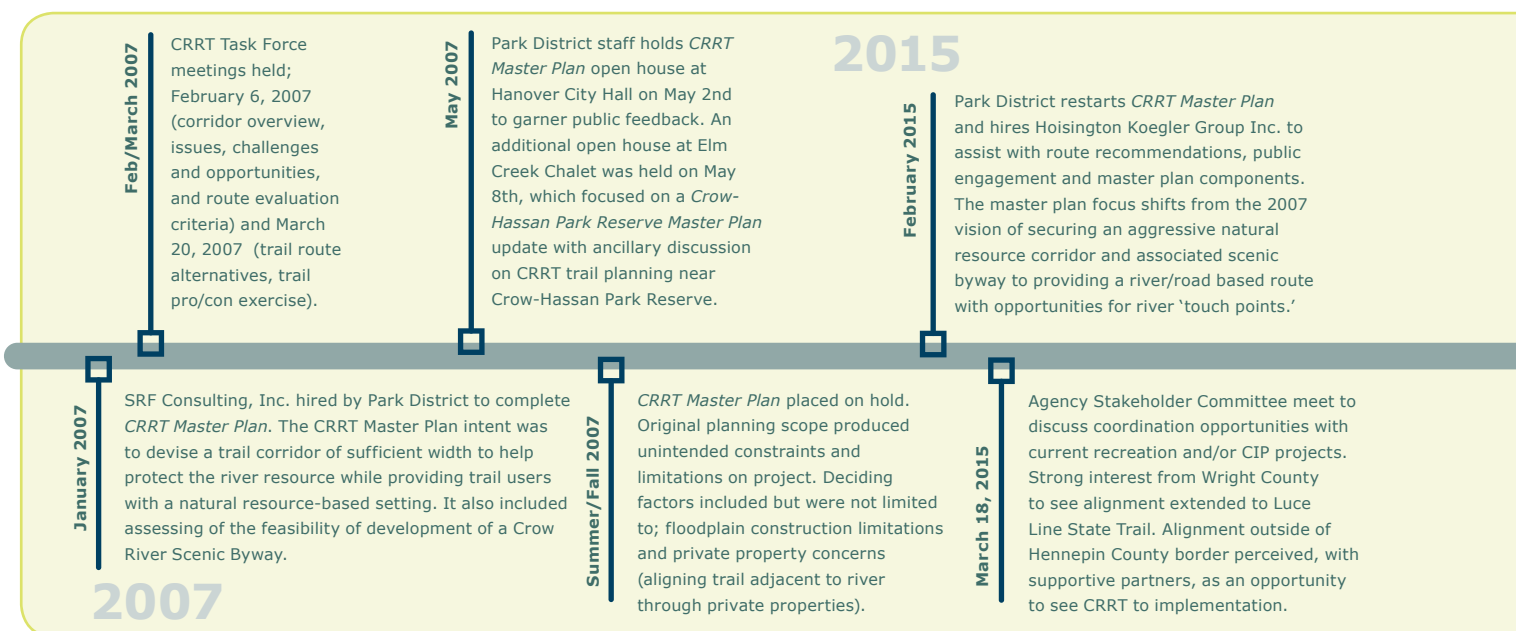
To understand local municipality issues, opportunities and avenues for comprehensive community outreach,

an Advisory Committee was assembled, comprised of staff representatives from each community along the CRRT route. Participants included the cities of Rockford, Greenfield, Hanover, Rogers, and Dayton. As the master plan progressed, several at-large participants included representatives from the cities of Watertown, Minnetrista, Independence and Delano. Townships were represented by their associated county Agency Stakeholder Committee member.

Community Outreach

Other community stakeholders within the CRRT corridor were identified in an effort to extend engagement across boundaries. Master plan staff was interested in a genuine, inclusive, innovative and flexible process that allowed stakeholders a way to explore options and issues, identify partnerships and discuss concurrent projects. Alternative venues for community outreach, other than the traditional open house, were explored to try and capture trail users who may not attend a traditional engagement open house due to work, family and child care obligations, transportation issues, or other barriers. The community outreach strategy included the following directives - each described in detail regarding objectives, outcomes, successes and areas for improvement.

- **Build relationships with local jurisdictions and community member groups.** Genuine and inclusive relationship building takes trust and most importantly - time. Early coordination efforts included identification of the following groups; Black Girls Do Bike Twin Cities, CROSS



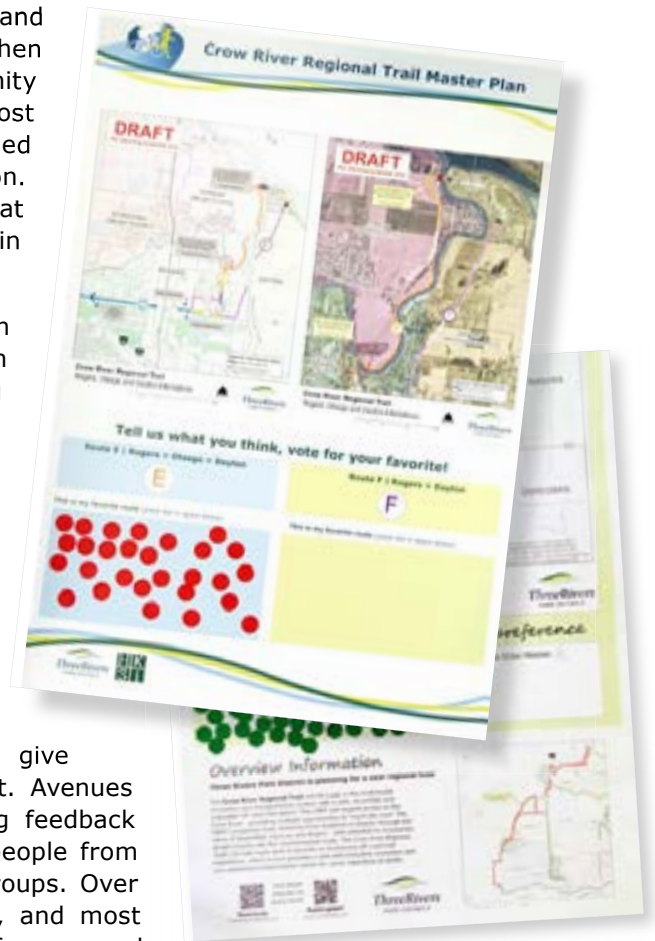
Food Shelf, Albertville/St. Michael Golden Age Club, Lions Club (Rockford, Hanover, Dayton), Minnesota Association of Small Cities, RiverWorks Community Helping Community, Delano Loretto Area United Way, Healthy Delano and Northwest Hennepin Human Services Council. When responses were obtained from requested community member groups, participation varied across groups. Most groups were supportive of the CRRT, but many provided noncommittal responses regarding outreach participation. In working with these groups, it became apparent that awareness was a key barrier to active participation within the public engagement process.

- **Go to where the people are.** Bringing information to where people are already gathering can be an effective way to gain input for high level planning efforts. Opportunities for public engagement occurred at community festivals, pop-up events and design charettes including the Hanover Harvest Festival, Rockford River Days, Otsego Prairie Festival, Rogers Farmers Market, Minnesota Design Team Visit in Dayton and Independent School District (ISD) 728 Safe Routes to School Design Charette.

During these venues, the public was asked to vote for their preferred CRRT route and to give feedback on trailhead amenities. This method of engagement proved to be effective because participants could give feedback quickly and in a low-pressure environment. Avenues for continued participation were advertised including feedback loops to the project website. Participation included people from various genders, ages, social statuses, and ethnic groups. Over 150 participants provided feedback at these events, and most responders had similar findings regarding route preference and trailhead amenity information.

Examples of a CRRT route preference exercises, completed at various community outreach events.

Source: Three Rivers Park District



Planning Timeline



- **Provide various participation mediums.**

While traditional methods of feedback were offered including opportunities to contact master plan staff and submit comments via phone and US mail, the *CRRT Master Plan* explored several web-based platforms for community outreach. The *CRRT Master Plan* acknowledges that while web-based participation does not capture all of the targeted user groups due to technology limitations, it does offer an opportunity to provide feedback 7 days a week, 24 hours a day for responders who otherwise may have barriers to in-person participation. In addition, those who received information or participated via online mediums exceeded the reaches of the immediate trail service area - meaning a larger regional context could be accessed.

- **A project website** was established as an information clearinghouse including project background, schedule and maps, frequently asked questions, alerts for in-person participation opportunities, survey results and committee meeting agendas and minutes. The project website was created by the master plan consultants due to current Park District website limitations. Over the course of ten months (June 2015 - March 2016), over 4,200 unique website visits were recorded.



A project website, maintained by the consultant, provided CRRT information to the public 24/7.

Source: www.threeriverstrails.com

- **A mySidewalk web page** was established to provide an online civic engagement forum. The mySidewalk framework provided opportunity to publish posts that could include; the title and text, one image, and tagging capabilities including up to three locations and up to three topic categories. Collectively over the course of one year,

the CRRT mySidewalk page received over 6,300 views to various posts including alerts for in-person and online participation opportunities and results. However, the number of responses and interactions was low (17), when compared to the number of total views.



The mySidewalk web page established an online discussion forum for master plan staff to engage the public in dialogue.

Source: www.mySidewalk.com

- **An online survey**, established through Survey Monkey, was broadcast to solicit feedback regarding route evaluation principles and proposed routes. Responders could comment on each question posed, in addition to several open-ended questions regarding additional destinations and river touchpoints for consideration. The survey was posted from August to November 2015 and was available through direct and referral links through the project website



The online survey garnered over 350 unique responses - providing feedback regarding CRRT route preference, evaluation of route guiding principles and several open-ended questions.

Source: www.surveymonkey.com

and mySidewalk page. Advisory Committee members also published the survey link on their own respective city websites, listservs, newsletters and Facebook pages. In total, the survey received over 350 responses - with an estimated 86 percent approval rating. Of those respondents self-reporting their location, all communities with large, uncompleted CRRT segments were represented. In addition, 5 additional communities with vested interest in regional trail connections to the CRRT also responded including Buffalo, Corcoran, Elk River, Loretto, and St. Michael. Responders voiced their support, expressing that this type of trail facility adjacent to the Crow River is desired. Furthermore, a clear, publicly-preferred, CRRT route was formulated which was complementary of accompanying community outreach including festivals, pop-up events and design charettes. In an effort to maintain transparency, a summary of survey findings was published with Park District responses to comments that warranted feedback (Appendix G). A direct email, notifying survey respondents that the summary of survey findings was published, was sent to those who elected to be contacted for continued project notifications.

Public input regarding the CCRT Master Plan was sought through various mediums including websites, listservs, newsletters and Facebook pages. The CRRT Master Plan also received newspaper coverage through the local Press & News.

Source: Cities of Rockford & Otsego and Press & NEWS Newspaper



Engagement Recommendations for Successive Master Plans

Overall, the structure of the review committees and engagement approach was valuable and effective. Early input from the Agency Stakeholder Committee help set the stage for the joint partnership across County boundaries. The following analysis and recommendations are intended to recognize areas for improvement, so that successive master plans can ensure robust and inclusive engagement strategies - which may begin well before the next master plan is even kicked-off.

- **Continue to pursue and foster relationships with local jurisdictions and interested community groups.** The intent of the *CRRT Master Plan*, as it continues to exist beyond this plan's adoption, is to continue to foster and develop healthy relationship building with local jurisdictions and community member groups who have vested interest in the CRRT. Oftentimes, the length of time between a master plan and an actual trail construction project can span years. Staff and elected official turnover naturally occurs and those that reviewed and approved the plan may not necessarily be those who implement actual construction plans. To ensure continued momentum with local jurisdictions and community member groups, Park District staff check-ins should be planned and coordinated as-needed to discuss the CRRT progress and implementation schedule.
- **Continue to go to where people are already congregating.** Careful and deliberate feedback planning can produce effective results when existing events are analyzed in advance to understand the prospective audience, message and requested feedback. Not all events are successful platforms for every project - however even an event that did not produce much feedback content builds relationships that may become invaluable at a future date.
- **Plan and design the master plan project website to be a one-stop shop.** The project website, mySidewalk web page and online survey aided the master plan by providing and collecting information and creating a two-way feedback loop for event and survey results. However, directing local jurisdictions and the interested public to three different web locations proved to be confusing. Providing meaningful feedback needs to be seamless and easy. A one-stop website is recommended, with multi-faceted capabilities of providing a stopping place to glean all the information needed to understand the project and provide feedback.

Master Plan Review at Various Levels

Elements of the *CRRT Master Plan* have been reviewed by the public, multiple agency stakeholders, advisory committees, and local jurisdictions at specified intervals throughout the course of the planning process. By nature of a 32 mile regional trail which crosses two regional park planning agencies (Metropolitan Council and Greater Minnesota), three counties, and 12 local jurisdictions - the *CRRT Master Plan* review process was complex. However, this complexity provided a sound foundation for a viable and implementable regional trail route. Having the *CRRT Master Plan* reviewed and supported by so many individuals and organizations means that it can be utilized as a tool for seeking assistance for construction and ongoing operations and maintenance.

Public Review

Recent community outreach conducted throughout 2015 produced a publicly preferred CRRT route, in addition to a comprehensive list of various items for continued consideration. Over 500 individuals have personally been involved in some type of planning feedback prior to any official agency or local jurisdictional review approvals. The feedback provided conclusive public support for a CRRT route that crosses between county and local jurisdictions seamlessly, providing Crow River touch points and ancillary trail amenities at critical points. Proximity to the Crow River proved to be an important deciding factor in route preference, as the public reacted unfavorably to proposed CRRT routes that diverged excessively from the Crow River corridor. It was also exemplified that a CRRT route with large tracts of private property impacts was unacceptable. CRRT routes that were proposed adjacent to roadways, but separate from lanes of traffic, were reacted to favorably. Many commenters noted the lack of off-road trails along the proposed CRRT corridor and were excited about the prospect of safely being able to access the Crow River, downtowns, local and regional parks, and neighborhoods.

A public comment summary report was produced and posted on the project website. Public comment responders who elected to receive master plan updates were emailed notification of the public comment summary's publication. The full public comment summary report can be found in Appendix G.

The formal public 30-day review process took place from November 21, 2016 - January 6, 2017, after the release of the *CRRT Master Plan* draft by the Park District Board of Commissioners

Agency Stakeholder Review

The process for *CRRT Master Plan* review and approval is unique in that the proposed CRRT route includes segments that cross multiple review jurisdictions. Consistent and positive response to the *CRRT Master Plan* was sought and received, as many pieces create the whole.

Metropolitan Council (Three Rivers Park District and Carver County)

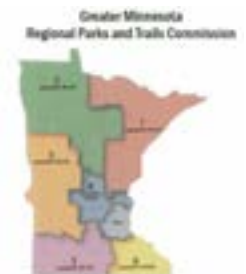
Preliminary review and check-in with Metropolitan Council staff occurred at the onset of the *CRRT Master Plan* with positive indications for a successful planning initiative. Additional check-in occurred in early 2016, as it was realized that in order to provide a cohesive route from Lake Rebecca Park Reserve to the Luce Line State Trail, Carver County's involvement was required. Consistency with the 2040 Regional Parks Policy Plan's CRRT search corridor intent was verified by Metropolitan Council staff. Carver County's Board of Commissioners provided formal support for the *CRRT Master Plan* and continue to be a valuable stakeholder to realize the missing trail segment which will complete the Luce Line State Trail connection.



After the formal 30-day public comment period and any substantial text changes made in accordance with stakeholder input, the *CRRT Master Plan* was submitted to the Park District Board of Commissioners for approval to submit to Metropolitan Council for review and approval. Upon approval by Metropolitan Council, the Park District adopted the *CRRT Master Plan*.

Greater Minnesota Parks and Trails Commission (Wright County)

As Wright County falls under the jurisdiction of the Greater Minnesota Parks and Trails Commission (Greater Minnesota), Wright County staff ensured *CRRT Master Plan* compliance with Greater Minnesota submission guidelines. The Wright County Board of Commissioners, upon initial *CRRT Master Plan* guidance and subject to partner stakeholders review and approval (Park District and Carver County), submitted Wright County's CRRT route to Greater Minnesota for regional trail preliminary designation in Spring 2016.



Hennepin County Department of Transportation



Hennepin County Department of Transportation staff provided positive CRRT feedback. Staff confirmed that the CRRT route is consistent with the Hennepin County 2040 Bicycle Transportation Plan. As the CRRT route moves from master plan to individual construction plans, continued coordination is required for any trail segment within Hennepin County road right-of-way.



MnDNR

The CRRT's southern termini exists at the intersection with the Luce Line State Trail, under the jurisdiction of the Minnesota Department of Natural Resources (MnDNR). MnDNR staff responsible for Luce Line State Trail oversight have indicated that the CRRT connection at this point is acceptable. Future coordination will be required if additional amenities (wayfinding etc.) are programmed at this location. In addition, the Crow River also falls under the MnDNR's jurisdictional umbrella, as part of the Crow River State Water Trail (North and South Forks). Preliminary discussions with MnDNR water trail staff have provided a foundation for continued coordination as the CRRT route is formalize and missing segments are constructed adjacent to the Crow River. Identified river touch points will become a common ground between the two trails (water and regional) with regards to river access, site amenities and cross-marketing opportunities. Any new pedestrian bridge crossings (i.e. Rogers/Otsego), will required MnDNR review and permitting.



MnDOT

Minnesota Department of Transportation's (MnDOT) involvement includes roadways under State jurisdiction, including CRRT adjacency-to or crossing-of Highways 12, 55, 101 and Interstate 94 (existing bridge crossing). Of special concern are the existing pedestrian and bicycle accommodations at the Highway 101 diverging diamond in the City of Rogers. Early agency stakeholder input by MnDOT staff was positive and affirming of the *CRRT Master Plan*. Any CRRT segments that include MnDOT right-of-way will require early and continued coordination to ensure planned roadway construction projects are capitalized upon by all interested CRRT stakeholders.

Advisory Committee Review

Upon staff agreement of the publicly preferred CRRT route, the Advisory Committee members - on behalf of Watertown Township, Minnetrista, Independence, Franklin Township, Delano, Greenfield, Rockford, Hanover, Rogers, Otsego and Dayton - all formally presented the CRRT route and preliminary master plan framework to their commissions and elected officials for feedback. As an integral part of the *CRRT Master Plan's* planning foundation, Advisory Committee members provided Resolutions of Support as a product of that jurisdictional review, included in Appendix A.

Local jurisdiction feedback opportunities extend beyond the initial Resolution of Support. As segments of the CRRT become financially supported and programmed, local municipal input again becomes important to ensure the trail's continued success. As referenced earlier, final implementation of the entire CRRT corridor spans many years. It is the *CRRT Master Plan's* intent that trail construction project managers engage municipal stakeholders early and often to understand important site level issues and opportunities that present themselves. Oftentimes trail construction can occur simultaneously with local public works projects, so an ongoing understanding of local capital improvement plans is important for CRRT implementors.

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CRRT Character
 CRRT's connection to Highway 12/Babcock Blvd. and River St., Delano, MN
 Image Credit: Google Streetview

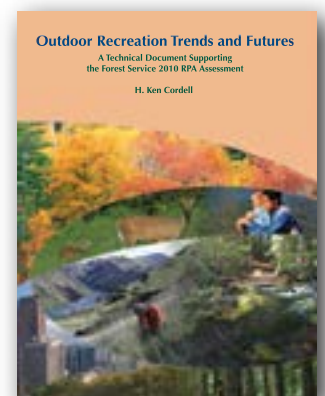
Research Trends & Demand Forecasts

Crow River Regional Trail is anticipated to become a significant regional trail destination due to its connectivity with recreational amenities including existing and proposed regional trails, regional park reserves, to the downtowns of Delano, Rockford, Hanover, and Dayton, and various retail and commercial nodes. The proposed regional trail will help fill a significant north-south gap in the regional trail system - adding 32 miles, and providing trail users a recreation-based multi-modal, alternative transportation option weaving between Carver, Hennepin and Wright Counties. The natural beauty of the Crow River provides the backbone of the regional trail alignment, offering multiple opportunities to touch and experience the river corridor. National, state, regional, and Park District recreational use trend studies support continued expansion, improvement, and implementation of trails. Recreational studies also indicate that of the wide varieties of recreation activities, trails appear to be the common thread across most demographics groups.

National Recreational Trends

According to the *Outdoor Recreation Participation Topline Report (2016)*, nearly half of all Americans - 48.4 percent - participated in at least one outdoor activity in 2015. That equates to 142.4 million participants, who went on a collective 11.7 billion outdoor outings. While the actual number of outdoor participants increased by one million over the one-year period, the overall participation rate remained the same due to population increase. Aspirational participation, which measures the physical activities that interest non-participants, showed that Americans are often drawn to outdoor recreation over sports, fitness and leisure activities. In fact all aspirational participants, regardless of age, reported bicycling in their top three most appealing activities. The report details youth, young adult and adult participation rates and frequencies for popular types of recreation. Results of those report details outline that running, jogging and trail running tops all lists for participation, followed closely by bicycling.

The *Outdoor Recreation Trends and Futures* technical document (2010) has reported that the number and percentage of people ages 16 and older participating in walking and bicycling continue to increase nation-wide, giving a positive outlook for regional trail development. Walking for pleasure and bicycling report in at over 200 and 88.3 million participants respectively (2005-2009) - numbers that have been steadily increasing since the report's first recorded numbers in 1982.



Outdoor recreation trends offer a nation-wide glimpse at participation patterns compared to regional and demographic strata.

The *Outdoor Recreation Trends and Futures* document further investigates recreational participation by ethnic populations, concluding that minority populations nation-wide are still underrepresented in outdoor recreation overall - which is also consistent with Minnesota data. However, of those ethnic populations that were surveyed who did participate in outdoor activities (the largest ethnic groups in the United States being African Americans, Asian/Pacific Islander and Hispanics), running/jogging and trail running ranked highest as their top selection (ages 6 and older).

Minnesota Recreational Trends

The *Minnesota's State Comprehensive Outdoor Recreation Plan* (SCORP), published by Minnesota Department of Natural Resources (MnDNR), provides goals and strategies that reinforce the vision and strategic directions of that comprise the *Parks and Trails Legacy Plan*. It further defines the geographic pattern of high growth continues to focus on greater Twin Cities Metropolitan Area. This new growth will fuel demands for near-home recreation opportunities in these areas. Two-thirds of all recreation use occurs within a half-hour drive from home; creating the need for outdoor recreation lands near areas of higher population density and growth. Sustaining existing outdoor recreation facilities for future generations remains a key issue.

The primary goal of the SCORP is to increase participation in outdoor recreation by all Minnesotans and visitors. By increasing recreation facilities and increasing them in or near populated areas and populated areas with increasing diverse populations, the Crow River Regional Trail will help meet this goal and start to respond to some of the trends and issues identified in the SCORP.

The SCORP cites several studies showing that involvement in nature-based outdoor recreation among young adults and their children has decreased since the 1990s. The relative participation of different segments of the population in nature-based outdoor recreation, together with their respective population growth rates, create significant challenges ahead in terms of park and trail utilization, as well as maintaining broad-based public support for park and trail investments.

"As we face reports about decreasing park visitation resulting from loss of interest among younger people and lack of relevancy among culturally diverse audiences, we have exceptional opportunities to discover new ways to make our sites meaningful in the 21st century."

- Frank Dean, Superintendent,
Saratoga National Historical Park

Twin Cities Regional Trends

The Metropolitan Council notes that the Twin Cities metropolitan area is projected to be home to almost 3.7 million people by 2040, a gain of 824,000 residents from 2010. With this growth will come new jobs, greater racial

and ethnic diversity, expanded economic opportunities and increased tax revenues. In addition, the Twin Cities populations is changing in ways that will influence park and trail decision making:

- Our region is aging rapidly. More than one in five residents will be age 65 and older in 2040, compared to one in nine in 2010.
- The region will gain 391,000 households by 2040.
- By 2040, 40% of the population will be people of color, compared to 24% in 2010. The share of people of color increases among younger age groups; 54% of residents under age 18 will be people of color in 2040.
- Broad-based trends consistently indicate that recreation participation is far greater for white and/or non-Hispanic populations within the state and nation than for people of color, according to the SCORP.

Metropolitan Council demographers have identified that about half of the total increase in population for the region from 1990 to 2000 was contributed to immigration of first-generation U.S. citizens and the births of their children. This trend was expected to continue through 2010, if not longer. Within the region, there are several prevalent immigrant groups: Hmong/Southeast Asian, Hispanic/Latino, Somali, and West Africans.

To date, this influx of new immigrant groups are generally not participating in regional trail use at the same rates as non-immigrant populations. The Park District is committed to better understanding this phenomenon and will continue to study this further with the ultimate goal of attracting regional trail users which mirror the demographics of the region.

Related Social Trends

In addition to documented demographic trends, the recreation industry is also faced with new challenges that are complex because they are shaped by human behavior such as nature-deficit disorder, the rise of obesity and generational recreation trends. Identifying and recognizing their existence helps park and trail planners shape recommendations for future recreation facilities and programs.

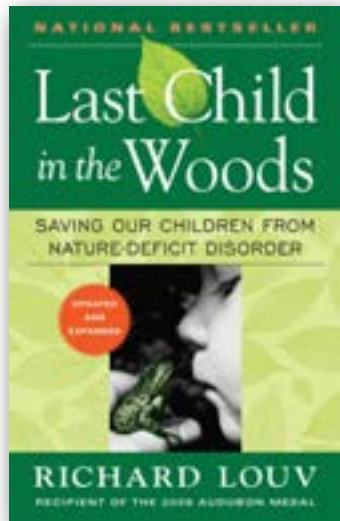
Nature-Deficit Disorder

Nature-deficit disorder, a phrase coined by Richard Louv's book *Last Child in the Woods*, provides a stark warning about the dangers of allowing children to grow up without contact with natural areas.

As Louv describes, the results of the phenomenon include parental fears, restricted access to natural areas, and the lure of screen-time. According to the U.S. National Library of Medicine, most American children spend about 3 hours a day watching television. When added together with playing video games and

surfing the internet, all types of screen time can total 5-7 hours a day. Too often these activities replace going outside, taking walks, playing, and otherwise getting the physical activity needed to stay healthy. This is true for people of all ages, and it may be of special concern with children.

A growing movement to remedy the nature-deficit disorder has been attributed to this book and has inspired the creation of grassroots groups aimed at reconnecting children with nature such as the Children & Nature Network and No Child Left Inside Coalition.



Last Child in the Woods concludes that direct exposure to nature is essential for childhood development and for the physical and emotional health of children and adults. This research further reemphasizes the need for quality parks and trails within our Twin Cities community fabric that is accessible and safe for all to enjoy.

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Rise of Obesity

The obesity epidemic is one of the country's most serious health problems. Adult obesity rates have doubled since 1980, from 15 to 30 percent, while childhood obesity rates have more than tripled. More than one-third of American adults are obese (78.6 million). Minnesota's adult obesity rate hovers at 24 percent, up from 16 percent in 2000 and 10 percent in 1990.

Rising obesity rates have significant health consequences, contributing to increased rates of more than 30 serious diseases. Obesity is a risk factor for Type 2 diabetes, cardiovascular disease and certain types of cancers - some of the leading causes of preventable death.

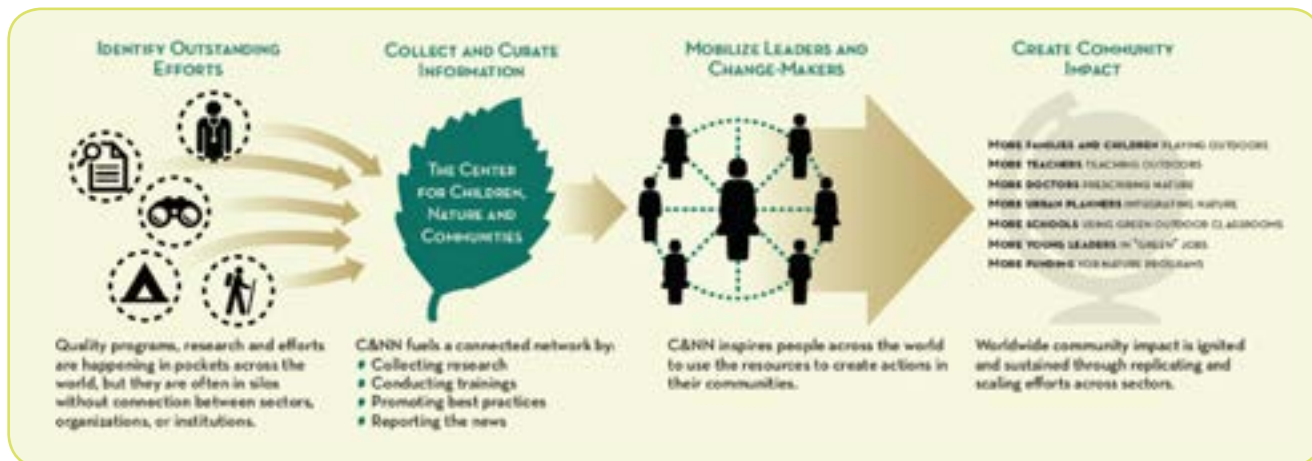
These conditions create a major strain on the health care system. More than one-quarter of health care costs are now related to obesity. The financial burden of obesity includes runaway health care costs and decreased productivity. According to the Minnesota Department of Health, Minnesotans spend over 2.8 billion dollars on rising health care costs for obesity related diseases - up from 1.3 billion in 2004.

These tangible, real-life statistics provide the necessary validation that the need to improve opportunities for a physical activity and active living through outdoor recreation is imperative.

Generational Recreation Trends

In the U.S., there are six living generations, which are six distinct groups of people. They have had collective experiences as they aged and therefore have similar ideals and stereotypes. Social generational theory provides an opportunity to help understand current and projected generational tendencies related to outdoor recreational trends. Regional trails appeal in some form to all six generations for various reasons - whether that be healthy living objectives or quality of life factors.

The Park District continues to explore how to retain existing regional trail users and remain relevant to the changing needs of future generations. This may be in the form of more identified vehicle parking for users with ambulatory needs or more pet-waste stations for young adults that use Park District trails with dogs. These generational recreation trends require occasional review - because as trail users age, so do their desires and needs for a robust regional trail system.



Children & Nature Network's collection of research, practices and leadership writing is designed to equip park and trail planners to propel lasting change in communities across the world.

Source: Children & Nature Network

Retirees & Baby Boomers (1901-1964)



Photo credit: Sixty and Me

Three generations comprise Americans who have retired, or are near retirement age; the Greatest Generation (1901-1926), Silent Generation (1927-

1945) and Baby Boomers (1946-1964). Recent research has found that spending time outdoors and staying physically active can have significant health benefits for older adults. Physical and mental benefits include increased vitamin D levels, improved immunity, reduced feelings of anxiety and depression, increased energy, more restful sleep, better attention levels and better recovery rates from injury and illness.

Many older retirees who are interested and able, connect with outdoor recreation through walking and light exercise. Outdoor spaces that have sufficient seating at predictable intervals is imperative. Pavement must be well-maintained, free of obstructions, non-slip and wide enough for wheelchairs. Intersections and crossings must have truncated dome treatments with adequate crossing times. Multi-use trails are important for aging adults - however they feel more safe when bicyclists and pedestrians are separated.

The Silent Generation, ages 71-89, is the healthiest, most educated and wealthy generation of American elders. Many of the Silent Generation who are active seek to keep muscles and joints healthy and strong to maintain a range of motion, movement and balance. The Sporting Good Manufacturers Association has reported that seniors (including the Silents and Baby Boomers) are frequent day hikers as more than 1.5 million Americans age 55 and older hike at least 15 days a year.

Boomers, are categorized as individuals aged 52-70 who, as they continue to age, will be healthier, more active and trendier than previous generations. Most also understand the importance of fitness, meaning facility managers won't have to convince them that working out is important because this population already embraces those principles. Instead, they simply need to be given classes and programs that address their specific health concerns and personal interests. The recreational preferences and habits for this group are well established and demand for their preferred activities will continue to be strong. However, as this group ages, physical limitations will require some park and trail visitors to change their recreational activities from higher intensity activities such as running, in-line skating, and biking to lower-impact recreational

activities such as walking, nature observation, and educational opportunities. Many of these activities are accommodated by the regional trail system. As this generation ages, trail use over time may initially decrease and then increase when the housing stock turns over to younger families with children.

Generation X (1965-1980)



Photo credit: MnDNR

Gen-Xers, ages 36-51, grew up in a very different world than previous generations. Risk, challenge and adrenaline are important motivators for participating

in outdoor activities. They find talk about the spirituality of outdoor experience and the moralizing of the Silent Generation tiresome. There is less of a need to escape civilization, and the individual parts of the outdoor experience are as important as whole.

Gen-Xer's take a more lighthearted attitude than their predecessors, and approach outdoor activity more as a sport. They embraced competition and particularly risk, pushing back the limits of every outdoor sport - and inventing some new ones of their own. The term "extreme sports" is associated with Generation X. Participation and risk levels are assumed to continue, fueled by the need for adrenaline. However, as this group ages and ambulatory conditions change - the need and desire for trails will become even more important as an outlet for fitness.

Gen-Xer households who have children are typically comprised of either young Millennials or Generation Zers. Large demand exists within Gen X for walkable neighborhoods which connect to parks and local destinations - both complement active family lifestyles. This generation has influenced the real estate market and community planners to answer this recreational need nationwide - promoting access to parks, recreation amenities and programming.

Millennials (1981-2000)



Photo credit: MillennialMagazine.com

Millennials are different from their counterparts in a number of ways. Generally categorized as individuals aged 16-35, they are

the most racially diverse generation in American history: 43% of Millennial adults are non-white, the highest share of any generation. And while they are on

track to be the most educated generation to date, this achievement has come at a cost, as many Millennials are struggling with student debt. In addition to the weak labor market of recent years, student debt is perhaps one reason why many are still living at home.

They are seen as tech-savvy, socially conscious, achievement-driven people with more flexible ideas about wealth, work and play. It stands to reason, therefore, that their expectations about park activities would be different too.

Millennials are digital natives that, because of social media and access to the internet, are not used to feeling alone. That means that most of them are not looking to spend a quiet day alone in a park. Given the social nature of these individuals, parks and recreation areas that offer a chance for group activities are more likely to appeal to them.

Not only are Millennials used to having ready access to the Internet via smart phones and tablets, they use these devices to share their travel and recreation experiences in real-time. Millennials like to stay active. They like parks with bike trails, running trails and open fields for group activities. This generation is not afraid to play a game of tag or kickball in public.

Researchers have noted Millennial trending as pet owners. As this generation puts off marriage longer than Boomers, they are getting pets as adults, according to a research study done by Wakefield Research. Park and trails with water access for dogs appeal to Millennials, as would pet cleanup stations and ready access to trash bins.

The exact form of Millennial outdoor recreation over the next several of decades is unclear. Nonetheless, what is clear, at least from the perspective of generational analysis, is that the outdoor recreation panorama will take on an entirely different form than what it is now.

Generation Z (born after 2001)



Photo credit: Ann Rexine

The generation following Millennials has been coined Generation Z and, according to Forbes, is the largest generation cohort in the United States. Predominantly

the children of Generation X and Millennials aged 15 and younger, technology has strongly influenced this generation - often being defined as the first true digital natives. Generation Z is growing up in a world where their options are limitless but their time is not. As such, Generation Z have

adapted quickly to sorting through and assessing enormous amounts of information. While this generation’s recreational identity and interests are still developing, enticing them away from screen-time and into the outdoors will continue to be a challenge for park and recreation practitioners.

Park District Trends

Visitation to the Park District’s regional trails is now estimated at approximately 4.5 million visits per year (Table 1). The number of trail miles has grown from 56 miles (2009) to 140 miles (2015). Use patterns within the Park District’s system of parks and trails have also changed. The Boomers who used to bring their children to Park District parks are now empty-nesters, and they have flocked to the regional trails to get exercise and to get outdoors. Biking, as an alternative form of transportation, has gained traction over the past five years throughout the metro region and more users are now bike commuting. The Park District’s work with local communities and Hennepin County has resulted in a regional trail network that is better connected to the local “feeder” trail, sidewalk, and bike lane networks, making the system more accessible to a larger portion of the population.

In 2011, the Cedar Lake LRT Regional Trail surpassed 500,000 visits - marking the first time in the Park District’s history that a regional trail received a half million visits. Now nearly 5 years later, the Cedar Lake LRT Regional Trail remains the most visited in the Park District’s system; second only to Minnehaha Parkway Regional Trail (1,436,000 visits in 2015) within the Metropolitan Regional Parks System.

Of the 14 Park District regional trails that received visitor counts in 2015, six received 400,000 or more visits. For comparison purposes, five of the 21 park

Table 1: 2015 Regional Trail Visitation Estimates

Regional Trail	Total Visits (1,000's)
1 Cedar Lake Regional Trail	735.6
2 Medicine Lake Regional Trail	631.1
3 Dakota Rail Regional Trail	504.8
4 Luce Line Regional Trail	498.7
5 Lake Minnetonka LRT Regional Trail	441.5
6 North Cedar Lake Regional Trail	417.3
7 Shingle Creek Regional Trail	287.9
8 Rush Creek Regional Trail	284.4
9 Minnesota River Bluffs LRT Regional Trail	244.1
10 Nine Mile Creek Regional Trail	128.8
11 Bassett Creek Regional Trail	105.2
12 Twin Lakes Regional Trail	104.3
13 Lake Independence Regional Trail	70.8
14 Northeast Diagonal Regional Trail	54.4
Total	4,508.9

Source: Three Rivers Park District and Metropolitan Council

reserves, regional parks and/or special recreation features received 400,000 or more visits. As of 2015, regional trail visits accounted for over 45 percent of all visits to the Park District’s facilities. Trail visitation is expected to continue to increase at a rate greater than the expected increase in population, and to increase at a rate faster than expected visitation increases to the Park District’s park units.

Park District Regional Trail User Data

Metropolitan Council data reveals that regional trails are most heavily visited during the spring, summer, and fall seasons with summer receiving 40 percent of annual visits, spring and fall each receiving 25 percent of annual visits, and winter receiving 10 percent of annual visits (Table 2). Winter has seen more seasonal growth, in part due to warmer winters, the increased use of trails for commuting, and the use of trails for year-round exercise regimens.

Table 2: Regional Trail Use by Season

	Spring	Summer	Fall	Winter
Percent of annual visitation	25%	39%	27%	9%
Crow River Regional Trail Projected annual visitation*	72,500	113,100	78,300	26,100

*Based upon a fully constructed 32-mile Crow River Regional Trail corridor receiving 290,000 annual visits.

Source: Three Rivers Park District

Park District research shows that summer trends continue to indicate that biking is, and will remain, the predominant regional trail activity at 73 percent, followed by walking (18 percent), and running (7 percent). In-line skating, mobility-device users and other miscellaneous uses make up the balance of trail users. However, Park District winter data reveals a different narrative. Bicycling drops significantly during the winter season, while the walking and running groups continue to utilize regional trails (Chart 1).

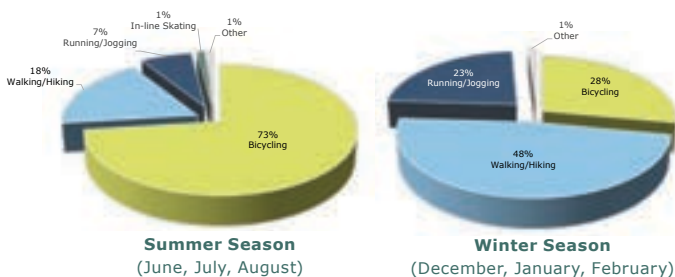


Chart 1: Regional Trail Use by Activity

Source: Three Rivers Park District

The vast majority of regional trail visitors use trails for recreation and exercise. However, regional trail use for commuting/transportation purposes is on the rise. Recently, the Park District significantly expanded the regional trail system within urban, fully-developed communities. This increased commuting/transportation regional trail use is captured in current Park District data that shows 23 percent of all regional

trail visits are now for commuting purposes (up from about 1 percent in 1998, and up from 12 percent in 2014). Regional trails that are paved, with few stop conditions, limited interactions with vehicles, and with seamless connections to employment, retail, and commercial centers have a greater percentage of regional trail visits attributed to commuting than regional trails without these three attributes. While these certainly are not the only factors in determining the desirability of a regional trail corridor for commuting purposes, they appear to play an important role.

Trail Visitor Preferences

Bicycle and pedestrian studies from across the country, and over the last twenty-five years, have come to the same general conclusions regarding user preferences - regardless of user type. Trails with these characteristics will attract visitors from greater distances, will have greater annual use, and will produce more enjoyable experiences for trail users:

- Natural settings (scenic, vegetation, limited evidence of the built environment, etc.)
- A diversity of natural settings (woodlands, wetlands, prairies, etc.)
- Visual and physical separation from vehicles.
- A continuous and contiguous route with limited stop conditions.
- A smooth surface (either paved or aggregate).
- Connectivity with destinations and other bicycle/pedestrian facilities.
- Opportunities for loops.
- Trail amenities - drinking water, mileage markers, restrooms, and wayfinding.

Some bicycle and pedestrian studies also indicate that participants are willing to spend more money and travel longer distances to utilize facilities that incorporate these preferences. In recognition of user preferences, the CRRT route was selected to provide linkages to regional recreation destinations; balance recreation and natural resources; minimize stop conditions, provide a safe, off-road, multi-modal transportation option, and ultimately, increase the desirability of the regional trail. As such, it is reasonable to expect that a regional trail, such as CRRT that incorporates these preferences, will be used more and provide a more enjoyable experience than a regional trail that does not.

CRRT Projected Trail Use & Visitation

The percentage breakdown by activity of CRRT will generally mirror Park District regional trail activity trends. Bicycling will be the primary regional trail use, with ancillary uses such as walking, running and in-line skating capturing a smaller percentage of the total use. These expected uses remain consistent throughout the trail corridor with the exception of where the regional trail passes through commercial areas. In these locations, it is anticipated that the regional trail will receive an increased percentage of pedestrian activity associated with the sidewalk network.

Seasonal use percentages for the CRRT are expected to be consistent with regional trail seasonal use with 90 percent of visitation occurring in the spring, summer, and fall seasons (Table 2). Winter use of the CRRT is dependent on weather conditions, available budget, and the assistance of local communities to maintain the trail. At the time this master plan was written, it is anticipated that the local communities will maintain the regional trail during the winter months as resources allow and demand warrants it.

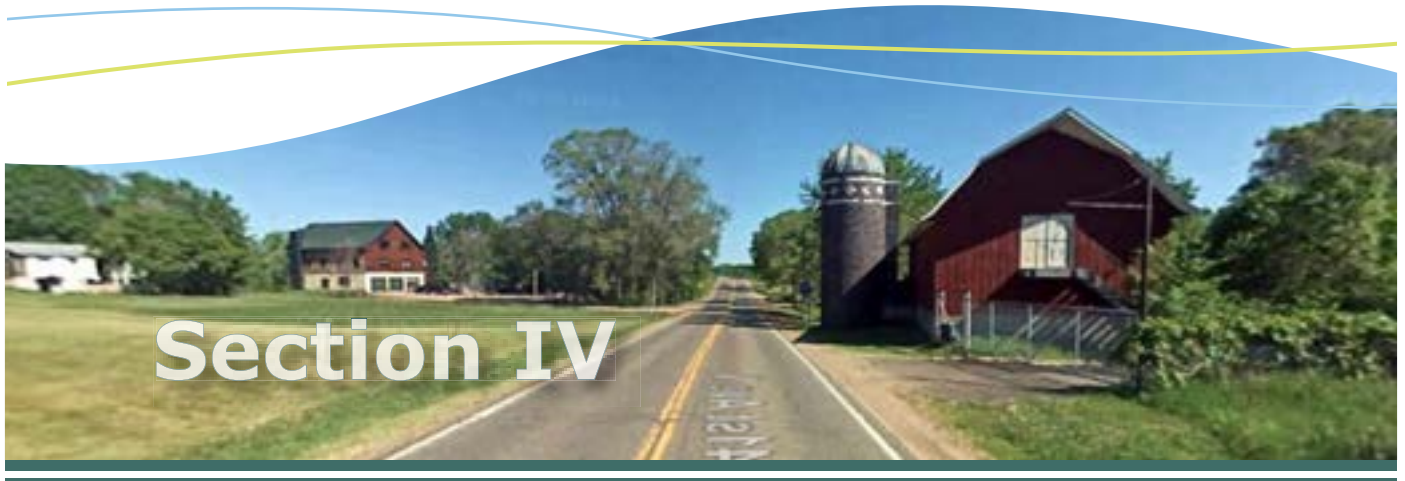
When fully constructed, the CRRT is projected to generate 290,000 annual visits. This visitation estimate is calculated based on the following cumulative methodology: 1) connectivity to existing regional recreational amenities, 2) destination aesthetic qualities along the trail corridor and, 3) connection to commercial areas (Appendix B). Metropolitan Council studies indicate that 50 percent of regional trail users live within 0.75 miles from the trail (core service area) and 75 percent of users live within 3 miles of the trail (primary service area) (Map 8). In addition, due to the regional trail's destination qualities, it can be expected that the regional trail will draw users from a larger Twin Cities service area.

Map 8: Crow River Regional Trail Service Area

Source: Three Rivers Park District



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Example of rural portions of 141st Avenue North, Rogers, MN
Image Credit: Google Maps

Trail Route Description & Development Concept

The 32-mile Crow River Regional Trail is planned through the Hennepin County cities of Minnetrista, Independence, Greenfield, Rogers and Dayton, Wright County townships of Franklin and Rockford, and cities of Delano, Rockford, Hanover and Otsego and Carver County township of Watertown. The regional trail will fill a critical gap in the regional trail system while providing a highly desirable recreation amenity to adjacent communities as well as the greater region. The regional trail will also incorporate safe crossings of significant pedestrian and bicycle barriers including county/state highways, several railroad crossings and the Crow River.

Overview

The trail is planned as a destination regional trail, weaving across the Crow River corridor several times - offering opportunities to view, touch and feel the river. The incorporation and routing of the regional trail through Lake Rebecca and Crow-Hassan Park Reserves will preserve the opportunity for regional trail users to enjoy and experience some of the region's most scenic landscapes and areas of high quality natural resources in perpetuity.

The primary intended use of the regional trail is recreation. However, the regional trail also will serve an alternative transportation function to those users using the trail corridor to access one or more of the places of interest along the regional trail corridor including, local residential neighborhoods, several historic rural communities and several existing regional and state recreational amenities. Those recreational amenities include; Luce Line State Trail, Lake Rebecca Park Reserve and Crow-Hassan Park Reserve. Planned trail connections include the proposed Lake Sarah, Rush Creek extension and West Mississippi River Regional Trails. In addition, a future trail connection is proposed for study from downtown Rockford east through Greenfield and Corcoran - connecting to the Medicine Lake Regional Trail in Maple Grove.



The Crow River Regional Trail will connect 3 counties, 11 municipal jurisdictions, 2 park reserves, 1 state trail, 3 proposed regional trails and 1 future trail corridor study area.

Photos: Crow-Hassan Park Reserve prairie and Crow River frontage.

Route Evaluation

Early in the planning process, the Agency Stakeholder Committee and Advisory Committee was tasked with developing CRRT route evaluation guiding principles. These guiding principles were the foundation to review proposed routes against. The seven guiding principles were outlined as follows:

The Crow River Regional Trail must:

- Engage with the Crow River.
- Connect to local destinations (i.e. parks and trails, schools, employment and entertainment).
- Be politically supported.
- Be fiscally responsible.
- Be direct and not duplicative of similar efforts led by other agencies (local and regional).
- Be environmentally sustainable (avoid traveling through wetlands, sensitive areas, etc.).
- Promote trail user safety.

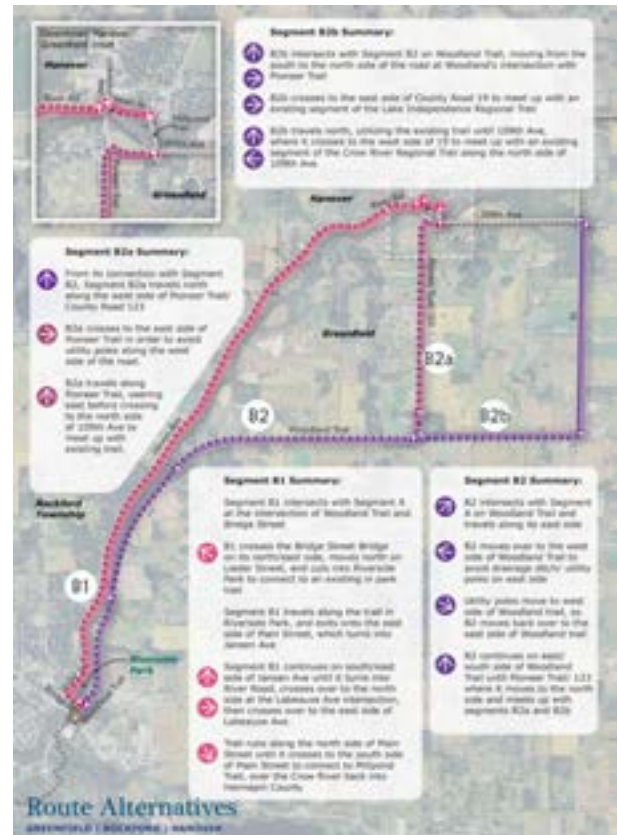
Members of the public that provided route guiding principle feedback felt most strongly that the CRRT must engage with the Crow River and connect to local destinations. Responders expressed a critical desire for Crow River exposure which could offer a unique river-based recreational experience currently lacking in this area. In addition, responders desired safe connections to adjacent residential developments, neighboring downtowns and parks.

The public also provided feedback for several CRRT segments that had multiple routes for consideration, including Segments B, C, D and E. All feedback received via public events or online survey were summarized, responded to and published on the project website. This comprehensive route evaluation analysis, including results of the public feedback survey, is included as Appendix G.

Segment B | Rockford to Hanover

Several routes were proposed to connect Rockford to Hanover (Segment B), including route evaluation on both the Wright and Hennepin County sides of the Crow River (Map 9). Public feedback strongly supported Segment B along the Wright County side - specifically Jansen Ave/CR20 (referred to during this planning phase as Segment B1). Responders felt that the intent of the CRRT was to be as close to the Crow River as possible - acknowledging several existing opportunities to touch and feel the river via publicly owned property along Jansen Ave. The Greenfield route, while achieving the same Rockford/Hanover touchdown points, deferred too far from the Crow River while a viable alternative river-based route existed (Wright County).

In response to the Greenfield request to plan regional trails within the community, a long-term alternative search area to/from the CRRT was approved by the Park District for future study along Rebecca Park Trail (Map 10). This regional trail search corridor seeks to achieve the city's goals of connecting Greenfield Central Park with school property and the CRRT. In addition, the future regional trail search corridor aims to connect to the larger regional trail network, by connecting east to the Lake Independence Regional Trail and eventually making connection through Corcoran and Plymouth to the Medicine Lake Regional Trail.



Map 9: Segment B Route Analysis

Source: Three Rivers Park District and HKgi Consultants



Map 10: Greenfield Regional Trail Search Corridor

Source: Three Rivers Park District and HKgi Consultants

Segment C | Rogers

Crow-Hassan Park Reserve preserves unique and treasured natural resources within its 2,500 acres. Located along the eastern banks of the Crow River, this park offers uninterrupted expanses of restored prairies which create habitat for wildlife and scenic vistas for visitors. Primarily utilized as a passive recreation park, the northern portion of Crow-Hassan Park Reserve has been dedicated to active-use recreation - including a dog-off leash area and Crow River canoe access point.

Due to Crow-Hassan Park Reserve's intact core, the CRRT route meanders along the park's perimeter - to avoid any further natural resource land fragmentation. However, public responders were asked to comment on a small route deviation near the northern part of the park. Two alternatives were given - one providing connection to the Crow River and future connection to St. Michael and another following a future Sylvan Lake Road extension (referred to during this planning phase as C3 and C2 respectively) (Map 11). Responders favored the C3 route that allows the users to touch and feel the Crow River and could be transformed into a trailhead near the dog off-lease area with relative ease. Responders also noted that without this Crow River touchpoint, the CRRT route would travel many miles between Hanover and Rogers/Otesgo without accessing the river.

Segments D & E | Rogers to Dayton

The CRRT nexus point at the confluence of the Crow and Mississippi Rivers created several north/south routes for consideration. Responders were asked to consider either a Wright County route across the Crow River into Otsego or a Hennepin County route along Brockton Lane in Dayton (referred to during this planning phase as E1 and E2 respectively) (Map 12).

Ultimately the Wright County route (E1) was selected as the publicly preferred option. While the E1 route exhibits more complexity than its Hennepin County counterpart, responders felt that the integrity of the route evaluation guiding principles were withheld with the Wright County route, including proximity to the Crow River and connections to local destinations. Responders also noted that as Brockton Lane continues its transformation to a busier roadway, due to the proposed I-94 interchange, its value as a destination regional trail would be devalued.

Several multidisciplinary, budget-intense projects will be required for the selected route including; a 141st Ave. N tunnel between Rogers Middle and High Schools, new Crow River bridge crossing between Rogers and Otsego, and modifications to an existing vehicle bridge between Otsego and Dayton.

During the planning process, much discussion ensued between the Wright and Park District agency partners and the City of Dayton to discuss an additional new Crow River bridge crossing. Dayton's city boundary includes property located on both sides of the Crow River (including both Wright and Hennepin Counties). As envisioned in their Comprehensive Plan, a new pedestrian and bicycle bridge could be erected at a former bridge location, thus reconnecting Dayton's Slabtown (Wright County) with its historic downtown (Hennepin County). However, due to the existence of a lower-cost bridge modification alternative, the *CRRT Master Plan* recommends connecting to Dayton and subsequently the Crow and Mississippi River confluence along CSAH 12/Robinson St. Should a new bridge crossing prove to be financially and politically feasible, the agency project partners will consider further study of this route alternative.



Map 11: Segment C Route Analysis

Source: Three Rivers Park District and HKgi Consultants



Map 12: Segment D and E Route Analysis

Source: Three Rivers Park District and HKgi Consultants

Natural Resources Overview

The CRRT corridor is defined as predominantly located adjacent to road right-of-way, thus opportunities to restore degraded natural resources is fairly limited. However, in those areas where the CRRT crosses property owned and operated by a public agency, measures will be taken to either restore or maintain high-quality natural resource features. The design and final construction of the CRRT will ensure that the public has the opportunity to view and enjoy these natural habitats with minimal impact to that habitat. Where the CRRT route is adjacent to wetlands, the first provision is to avoid wetland impacts, secondly, minimize impacts and finally, mitigate impacts when no other options are available. All CRRT design will adhere to the standard requirements of the Minnesota Pollution Control Agency’s best management practices for stormwater management. Vegetation adjacent to the trail, within the CRRT corridor’s jurisdiction, is addressed in Section X.

Corridor Segmentation

For purposes of further describing the regional trail corridor and associated land acquisition and development plans, the regional trail is divided into five segments (Map 13). Each trail segment documents its particular location and status, context and destinations, natural resources, Minnesota Land Cover Classification System (MLCCS), species of special concern, acquisition needs and design and construction assessment. Larger regional trail segment, MLCCS and acquisition maps can be found in Appendices D and E. Trail subsegmentation is denoted by change in jurisdiction.

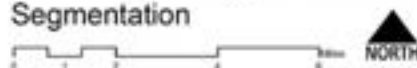
Segment A	
Community	Watertown Township, Minnetrista, Independence, Franklin Township, Delano, Greenfield, and Rockford
County	<ul style="list-style-type: none"> • Carver • Hennepin • Wright
Trail Status	Mix of existing and planned
Mileage	11.7 miles
Segment B	
Community	Rockford, Rockford Township & Hanover
County	<ul style="list-style-type: none"> • Wright
Trail Status	Mix of existing and planned
Mileage	6.5 miles
Segment C	
Community	Hanover and Rogers
County	<ul style="list-style-type: none"> • Hennepin
Trail Status	Mix of existing and planned
Mileage	8.0 miles
Segment D	
Community	Rogers
County	<ul style="list-style-type: none"> • Hennepin
Trail Status	Mix of existing and planned
Mileage	2.9 miles
Segment E	
Community	Rogers, Otsego and Dayton
County	<ul style="list-style-type: none"> • Hennepin • Wright
Trail Status	Planned
Mileage	3.5 miles



Map 13:
Crow River Regional Trail
- Corridor Segmentation

Source: Three Rivers Park District

Crow River Regional Trail Segmentation



June 20, 2014

Segment

A

Luce Line State Trail >> Delano >> Rockford				
A1	Watertown Township	Carver County	Future construction	0.3 miles
A2	Minnetrista	Hennepin County	Future construction	0.03 miles
A3	Independence	Hennepin County	Future construction	0.04 miles
A4	Independence	Hennepin County	Existing	0.4 miles
A5	Franklin Township	Wright County	Existing	3.8 miles
A6	Delano	Wright County	Existing	2.6 miles*
A7	Independence	Hennepin County	Existing	0.1 miles
A8	Independence	Hennepin County	Existing	1.1 miles
A9	Greenfield	Hennepin County	Existing	2.9 miles
A10	Greenfield	Hennepin County	Future construction	0.04 miles
A11	Rockford	Hennepin County	Future construction	0.5 miles

Total 11.7 miles

*Delano long-term alignment is currently not included in the 11.7 mile total. The desired alignment, which connects to Delano's downtown and Central Park, includes 0.9 miles of existing trail and 1.1 miles for future construction.

Location, Context & Destinations

This segment of the CRRT is characterized by its scenic vistas adjacent to large lot residential and agriculture land, connection to expanding rural communities and the natural resource and recreation components of Lake Rebecca Park Reserve (Maps 14 and 15). The proposed CRRT makes connection with the Luce Line State Trail in Watertown Township. Extending northward, the CRRT weaves briefly through Minnetrista and Independence before entering Franklin Township and eventually connecting to the rural town of Delano. The long term CRRT alignment is intended to connect to Delano's downtown and Central Park before reaching Lake Rebecca Park Reserve and eventually downtown Rockford. This segment is the only segment along the CRRT's alignment that includes all three county jurisdictions.

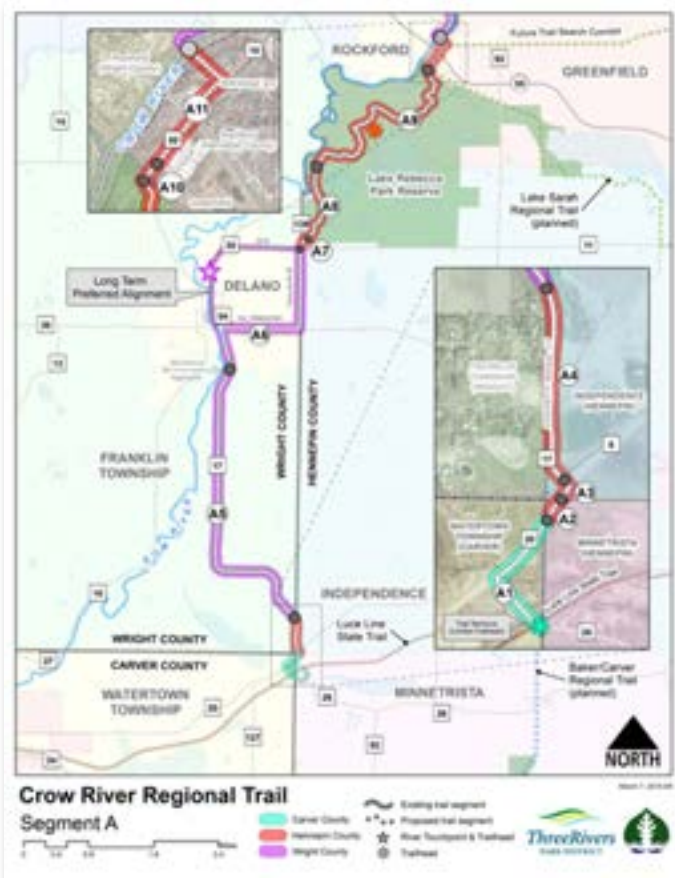
Subsegments A1, A2 & A3

Proposed A1, A2 and A3 subsegments close the 0.37 mile gap from the Luce Line State Trail to the existing aggregate trail that runs adjacent to CR17. Initial conversations between the Park District and Minnesota Department of Natural Resources (MnDNR), operator and maintainer of this section of the Luce Line State Trail, have provided positive feedback on the connection and potential trailhead. In addition, Carver County has also provided positive feedback and resolution of support regarding the proposed connection.



Connection to the Luce Line State Trail will close a 0.37 mile gap along CR20 and CR26/Watertown Road.

Source: Google Maps



Maps 14 & 15: Segment A Corridor Overview and Details

Source: Three Rivers Park District

Subsegment A1 begins/ends on the east side of CR26 at the Luce Line State Trail. CRRT travels northwest, along the east side of CR26 and crosses to the northside of CR20/Watertown Road. Subsegments A2 and A3 travel along the north side of CR20 and connects with the existing aggregate CRRT segment at the intersection of CR20 and CR17.

Subsegments A4 & A5

Subsegments A4 and A5 currently exist as an aggregate trail constructed by Wright County in 2009. Constructed on the east side of CR17, these subsegments connect to existing CRRT bituminous at the Franklin Township/Delano municipal boundary.

Subsegments A6 & A7

Subsegments A6 and A7 currently exist as bituminous trail. Beginning/ending at the change in pavement, subsegment A6 begins as an existing bituminous trail along the west side of CR17 as it becomes River Street S. The CRRT weaves under Highway 12/Babcock Boulevard and then traverses east along an embankment to reach Highway 12's grade. The existing CRRT route continues along Highway 12's north side and then along County Line road's west side. Subsegment A7 begins as the CRRT crosses into Lake Rebecca Park Reserve at CR30.

Subsegments A8 & A9

Traversing through Lake Rebecca Park Reserve, the CRRT utilizes existing Park District bituminous trail that extends north/south through the park reserve. The CRRT route offers direct access to the active-use recreation area, including picnic areas, creative play area, swim beach, drinking water and restrooms. A trailhead is proposed to be formalized at this location.

Subsegments A10 & A11

Subsegments A10 and A11 connect the existing portions of CRRT from Lake Rebecca Park Reserve to downtown Rockford along the east side of CR50/Rebecca Park Trail to the west side of Woodland Trail, north of the Highway 55 crossing. At Bridge Street, the CRRT is proposed along the north side of the bridge connecting to the Wright County side of Rockford.

Delano Long-Term Alternative Route

A long-term CRRT alternative route that continues along River Street S. to CR30 is desired, due to its direct connection to downtown Delano, Central Park and the school campus. A river touchpoint and trailhead is proposed near intersection of Bridge Ave. E. and River Street S.

MLCCS

MnDNR's Minnesota Land Cover Classification System (MLCCS) defines the area immediately adjacent to Segment A as artificial/impervious surfaces (Delano and Rockford areas), planted or cultivated vegetation (agriculture), grasslands (dry tall, maintained and short), forest, shrubland, tree plantation, wetland, and open water. Agriculture and maintained tall grasses



Wright County's existing aggregate trail comprises sub-segments A4 and A5 of the CRRT.

Source: Google Maps



Safe access across Highway 12/Babcock Boulevard is achieved via an underpass along River Street S. in Delano. Scenic viewsheds of the Crow River can be seen from this vantage point.

Source: Google Maps

are scattered throughout the mid-to-lower portions of Segment A. Lake Rebecca Park Reserve, located at the northern portion of Segment A, offers access to a gently rolling forested landscape and numerous wetland areas. Measuring over 2,500 acres in size, the Park District actively manages the park reserve's forested areas and open spaces.

NHIS

MnDNR's Natural Heritage Information System (NHIS) includes the following rare plants and animals, native plant communities, geologic features and/or animal aggregations within one-mile of Segment A: *Haliaeetus leucocephalus* (bald eagle), *Cygnus buccinator* (trumpeter swan), *Alamidonta marginata* (elktoe), *Panax quinquefolius* (American ginseng), tamarack swamp, maple-basswood forest (Big Woods), and lowland hardwood forest.

Acquisition Status

CRRT subsegments that are planned for construction within the road right-of-way may require private easements to accommodate the off-road trail which will be identified in the design phase. However, high-level master planning did not reveal any substantial easements needed for Segment A.

Design & Construction Assessment

Design and construction of non-existing subsegments A1-A3 are assumed to require CR20/CR26 roadway crossing improvements and a proposed retaining wall along the north side of CR20. In addition, design and construction of non-existing subsegments A10 and A11 also require substantial design and construction to implement the CRRT along CR50, including at-grade railroad crossing improvements, curb and gutter, and utility relocation. Existing aggregate subsegments will continue as-is, but long-term budget estimates account for bituminous surface upgrades.

Segment

B

Rockford >> Hanover

B1	Rockford	Wright County	Future construction	0.2 miles
B2	Rockford	Wright County	Existing	0.2 miles
B3	Rockford	Wright County	Future construction	0.3 miles
B4	Rockford Township	Wright County	Future Construction	4.6 miles
B5	Hanover	Wright County	Future construction	1.0 miles
B6	Hanover	Wright County	Existing	0.1 miles

Total 6.5 miles

Location, Context & Destinations

Located wholly within Wright County, Segment B follows the Crow River more closely than any other segment of the CRRT corridor - a critical component to the route evaluation (Maps 16 and 17). Beginning along the Bridge Street bridge which crosses the Crow River, Segment B connects to Rockford's rural downtown and parkland adjacent to the Crow River. Further north, as the trail enters Rockford Township, the CRRT follows the Jansen Avenue SE/CR20 road right-of-way, offering sweeping vistas of the Crow River floodplain - in addition to providing access to several publicly-owned Crow River properties. These Crow River properties offer trail users direct access to touch and feel the river. At the northern portion of Segment B, the CRRT enters the rural community of Hanover, offering access to its commercial nodes and historic Crow River pedestrian bridge crossing.

Subsegments B1 & B2

A short piece of trail is required along the north side of the Bridge Street bridge and through property owned by the city of Rockford to reach the existing B2 subsegment through Riverside Park - a proposed CRRT river touchpoint and trailhead. Rockford's largest community park, Riverside Park is located on 7 acres of land adjacent to the Crow River. The park has picnic areas, fishing pier, horseshoe pits, volleyball and basketball courts, skate boarding, gazebo and community center.

Subsegments B3, B4 & B5

Non-existing subsegments B3, B4 and B5 traverse the east side of CR20 from Riverside Park to downtown Hanover. These subsegments make contact with property owned and operated by Wright County, specifically Crow River access points named Pleasant View South and Pleasant View. In addition, an unnamed Wright County Highway Department property is located adjacent to the Crow River, offering an additional CRRT touchpoint. As CRRT crosses Labeaux Ave NE/CR19 in Hanover, the proposed route continues along the south side of River Road NE to Mill Pond Trail NE. A proposed trailhead is to be located in this vicinity, however a specific location has not been identified and will be explored as the CRRT is designed and constructed.



Maps 16 & 17:
Segment B Corridor Overview and Details

Source: Three Rivers Park District

Subsegment B6

The short B6 subsegment encompasses the iconic Crow River bridge in Hanover. The historic city-owned structure is the second-oldest Pratt truss bridge remaining in Minnesota and is listed on the National Register of Historic Places. Originally constructed in 1885, the bridge carried traffic until 1966. Rehabilitated for pedestrian and bicycle use only, the bridge offers a unique Crow River crossing for CRRT users.

MLCCS

MnDNR's Minnesota Land Cover Classification System (MLCCS) defines the area immediately adjacent to Segment B as artificial/impervious surfaces (Rockford and Hanover areas), planted or cultivated vegetation (agriculture), grasslands (dry tall, maintained and short), forest, shrubland, tree plantation, wetland, and open water. Closer to the Crow River, shrublands become apparent especially on the southern end of Rockford Township. A mix of maintained tall grasses and agriculture predominantly comprise the mid-section of Segment B with patches of forest and wetland dotted throughout. Larger wetland complexes exist in the northern end of Segment B, within the city of Hanover.

NHIS

MnDNR's Natural Heritage Information System (NHIS) includes the following rare plants and animals, native plant communities, geologic features and/or animal aggregations within one-mile of Segment B: *Haliaeetus leucocephalus* (Bald eagle), *Cygnus buccinator* (Trumpeter swan), *Emydoidea blandingii* (Blanding's turtle), *Panax quinquefolius* (American ginseng), wet meadow, willow swamp, tamarack swamp, seepage meadow, cattail marsh, and maple-basswood forest (Big Woods).

Acquisition Status

City of Rockford parkland and an ample road right-of-way are available to accommodate the majority of the Segment B route. However, a five-foot permanent easement is assumed along 0.6 miles for master planning purposes due to predicted inadequate right-of-way.

Design & Construction Assessment

Additional engineering analysis for the Bridge Street bridge in Rockford is required to accurately determine if the CRRT can be accommodated by reworking the concrete deck. If modifications are not possible to the concrete deck, a new grade-separated pedestrian bridge is recommended adjacent to Bridge Street.

Additional budgetary allotments have been taken into account for tree impacts and embankment work. While no boardwalks are anticipated, a small 0.1 mile segment of trail may pass through wetland.



The north side of the Bridge Street bridge (as shown right) in Rockford is planned to accommodate the CRRT route by reworking the concrete decking. If modifications to the bridge deck are not feasible, a new grade-separated pedestrian bridge is proposed.

Source: Google maps



Segment B follows the Crow River floodplain and river edge for over 5.5 miles. Several river access touchpoints exist along this segment, offering multiple opportunities to touch and feel the Crow River.

Source: Google maps



The CRRT route passes over the historic Hanover pedestrian bridge - offering trail users an iconic Crow River vista.

Source: Three Rivers Park District

Segment



Hanover >> Rogers				
C1	Hanover	Hennepin County	Existing	0.9 miles
C2	Hanover	Hennepin County	Existing	0.4 miles
C3	Hanover	Hennepin County	Future construction	1.8 miles
C4	Rogers	Hennepin County	Future construction	4.1 miles
C5	Rogers	Hennepin County	Future construction	0.8 miles
				Total 8.0 miles

Location, Context & Destinations

Segment C is largely defined by its adjacency and access to Crow-Hassan Park Reserve (Maps 18 and 19). Extending east from Hanover, the CRRT weaves along the CR19 right-of-way before turning north along Crow-Hassan Park Reserve in Rogers. This segment is entirely within Hennepin County and subsequently Park District jurisdiction. The future extension of Rush Creek Regional Trail is expected to connect to the CRRT along this segment, offering larger connections to the regional trail network and direct trail access to Elm Creek Park Reserve. At Crow-Hassan Park Reserve's active-use recreation area, located at the northern reaches of Segment C, connection to St. Michael and eastern Wright County can be considered for future planning via Aber Road N/CR22 across the Crow River.

Subsegments C1 & C2

Recently constructed along CR19's north side, the CRRT connects the Hanover's downtown and historic bridge with Crow-Hassan Park Reserve's southern end and the Lake Independence Regional Trail at the CR19/Crow-Hassan Park Road intersection.



Constructed adjacent to CR19, the new CRRT portions connect downtown Hanover to Crow-Hassan Park Reserve's southern end and Lake Independence RT.

Source: Google Maps

Subsegments C3 & C4

These CRRT subsegments comprise nearly 6 miles of proposed trail - contained within the periphery of Crow-Hassan Park Reserve. The semiprimitive park reserve contains large uninterrupted expanses of land bordering the Crow River and offers rustic wilderness and solitude. The restored prairie is a year-round attraction and miles of unpaved trails offer opportunity to spot wildlife such as deer, fox, coyotes, trumpeter swans, hawks, and bald eagles.



Maps 18 & 19: Segment C Corridor Overview and Details

Source: Three Rivers Park District

Scenic trails and group campsites that accommodate horses make this a popular destination for horseback riders. An off-leash dog area is located at the park's north end with parking and river access. The CRRT route is proposed to weave along the park reserve's eastern edge, to respect the integrity of the interior pristine natural resources - including adjacency to Crow-Hassan Park Road, Tucker Road, Park Drive, Sylvan Lake Road and Territorial Road/CR116. The CRRT route crosses CR116 to a proposed Crow River touchpoint and trailhead. An existing parking lot, restrooms and 40-acre dog off-leash area currently support this active-use area.



The CRRT route is planned within Crow-Hassan Park Reserve (shown at left), offering exposure to the park reserve's rustic natural resources and rural vistas.

Source: Google Maps



Located at the northern portion of Crow-Hassan Park Reserve and adjacent to the Crow River, a dog-off leash area exists on approximately 40-acres. Creative design solutions must be explored for trail construction, as this is a critical touchpoint to the Crow River for multiple users.

Source: www.doggoes.com

Subsegment C5

This subsegment travels east/west along the Crow River, offering an additional river touchpoint for users. As this subsegment is dependent on private property purchase, an alternative alignment could be pursued along 141st Ave N from its intersection with Territorial Road/CR116.

MLCCS

MnDNR's Minnesota Land Cover Classification System (MLCCS) defines the area immediately adjacent to Segment C as artificial/impervious surfaces (Hanover, Rogers and greater St. Michael areas), planted or cultivated vegetation (agriculture), grasslands (dry tall, maintained and short), forest, shrubland, tree plantation, wetland, and open water. A mix of maintained dry tall grasses and agriculture predominantly comprise land south and east of Crow-Hassan Park Reserve, with patches of forest and wetland dotted throughout. Larger wetland complexes exist in the northern end of

Segment C, between Rogers and St. Michael - along the edges of the Crow River. MLCCS identifies Crow-Hassan Park Reserve as being comprised primarily of tall grasses, forest and wetland complexes.

NHIS

MnDNR's NHIS includes the following rare plants and animals, native plant communities, geologic features and/or animal aggregations within one-mile of Segment C: *Haliaeetus leucocephalus* (Bald eagle), *Cygnus buccinator* (Trumpeter swan), *Emydoidea blandingii* (Blanding's turtle), *Pituophis catenifer* (Gophersnake), *Bartramia longicauda* (Upland sandpiper), *Panax quinquefolius* (American ginseng), lowland hardwood forest, and maple-basswood forest (Big Woods).

Acquisition Status

Segment C is predominantly identified by its adjacency to Crow-Hassan Park Reserve, thus acquisition to accommodate the CRRT is not necessary for those portions. As the CRRT route exits the park reserve at the northern end, near the dog off-lease area, the trail requires private property purchase by permanent easement. As an alternative, further discussion may be appropriate at a future date to discuss the timing and proposed acquisition of these parcels for expansion of Crow-Hassan Park Reserve. That type of park reserve expansion or new regional park requires a policy plan and/or master plan amendment to modify the park reserve's boundary. An alternative route for subsegment C5, if private easement/parcel purchase is not feasible, could be considered along 141st Ave N, thus bypassing these properties in their entirety. Ultimately, the final route and acquisition needs will be defined in the design phase.

Design & Construction Assessment

Where possible, the CRRT alignment may shift slightly along the park reserve's edge to provide visual interest to the trail user. Any modifications to the CRRT route along the park reserve's periphery must respect existing unpaved trails and users.

Currently the dog off-leash area, at the northern end of the park reserve, exists unfenced due to Crow River floodplain regulations. Potential conflicts between dog off-leash and CRRT users may arise, and creative design solutions must be explored to alleviate those concerns. This location for a CRRT river touchpoint and trailhead is critical, as it is the only location within Crow-Hassan Park Reserve that will be accessible via paved trail to the river. In addition, a trail touchpoint is created at this location for future cross-county jurisdiction connections to St. Michael and greater Wright County.

A second river touchpoint may be considered during the design phase for the south end of the park reserve in a location that does not significantly impact the semiprivate nature of the park.

Segment

D

Rogers				
D1	Rogers	Hennepin County	Future construction	1.2
D2	Rogers	Hennepin County	Future construction	0.8
D3	Rogers	Hennepin County	Existing	0.6
D4	Rogers	Hennepin County	Future construction	0.3
Total				2.9 miles

Location, Context & Destinations

Connecting Crow-Hassan Park Reserve with Rogers residential areas and commercial nodes, Segment D traverses across major physical barriers including a Burlington Northern Santa Fe (BNSF) railroad line, Interstate 94 (I-94), Highway 101 and 141st Ave N. (Maps 20 and 21). In addition, this key CRRT segment connects three Independent School District (ISD) 728 schools to residential neighborhoods and beyond. Providing an off-road, multi-use trail through this heavily traversed area is critical for a safe, non-motorized recreation and transportation option. This CRRT segment is completely contained within Hennepin County, and thus under Park District jurisdiction.

Subsegment D1

Beginning along 141st Ave N, east of Crow-Hassan Park Reserve, subsegment D1 is slated to cross to the south side of 141st Ave N between Willandale Road and Hassan Elementary School. The CRRT route crosses the BNSF railroad line and I-94 across a grade-separated existing vehicle bridge to make connection Hassan Elementary School/Orchid Ave. This particular I-94 bridge does not have ramp access which makes this a preferred east/west crossing of a major physical barrier.

Subsegment D2

Beginning at Hassan Elementary School, subsegment D2 passes along the south side of 141st Ave N from Orchid Ave to Marie Ave. This subsegment is part of a city of Rogers planned construction initiative, and will serve a dual role - connecting users to Hassan Elementary School and adjacent residential neighborhoods and serving the larger CRRT route.

Subsegment D3

From Marie Ave., subsegment D3 continues along the south side of 141st Ave N, navigating the Highway 101 diverging diamond constructed in 2014, and connecting to the Rogers High and Middle School campuses.

Subsegment D4

The CRRT route requires crossing 141st Ave N, north towards Rogers High School at either the controlled intersection between the two campuses, or by a proposed grade-separated pedestrian tunnel beneath 141st Ave N.



Maps 20 & 21:
Segment D Corridor Overview Jurisdiction Map and Detail Map

Source: Three Rivers Park District

MLCCS

MnDNR’s Minnesota Land Cover Classification System (MLCCS) defines the area immediately adjacent to Segment D as artificial/impervious surfaces (Rogers and greater St. Michael), planted or cultivated vegetation (agriculture) predominantly located near Crow-Hassan

Park Reserve with patches scattered on Segment D's edges, grasslands (dry tall, maintained and short), small forest patches, shrubland, wetland, and open water.

NHIS

MnDNR's NHIS includes the following rare plants and animals, native plant communities, geologic features and/or animal aggregations within one-mile of Segment D: *Haliaeetus leucocephalus* (Bald eagle) and *Ligumia recta* (Black sandshell).

Acquisition Status

Segment D is planned for construction within the 141st Ave N road right-of-way and may require a minimal amount of private easements to accommodate the off-road trail. Final acquisition needs will be determined in the design phase.

Design & Construction Assessment

Segment D weaves through a highly developed area of Rogers, crossing several major physical barriers requiring design attention including: BNSF railroad crossing safety improvements, I-94 bridge deck modifications, Highway 101 diverging diamond improvements and 141st Ave N crossing.

ISD 728

The Park District participated in a Safe Routes to School design charrette hosted by ISD 728 in Spring 2016. This charrette was attended by various stakeholders including ISD 728 staff members (including school principals), Rogers Parks and Recreation Department staff, Rogers Police Department, Park District staff, Hennepin County Transportation Department staff, and design and engineering consultants - with a concerted aim at making ISD 728 schools more accessible via non-motorized alternatives.

As a result of the charrette, the following recommendations were provided for inclusion into the *CRRT Master Plan*:

- The Highway 101 diverging diamond interchange is currently extremely difficult to navigate as a pedestrian or bicyclist. Open and accessible 141st Ave N embankments under Highway 101 create unsafe conditions for increased vehicular conflicts with pedestrians and bicyclists. Creative wayfinding and/or design interventions may be necessary to alleviate confusion. MnDOT, in cooperation with agency partners, are committed to improving any known safety issues.
- The proposed pedestrian tunnel under 141st Ave N between Rogers High and Middle Schools is anticipated to be a joint partnership between the Park District, Hennepin County, City of Rogers and ISD 728 - and other stakeholders as appropriate.



Connecting to several ISD 728 schools (Hassan Elementary shown), the CRRT route is planned to provide safe, alternative transportation options to school children.

Source: Google Maps



The Highway 101 diverging diamond interchange requires additional navigation interventions to lessen wayfinding confusion and improve CRRT user safety.

Source: Three Rivers Park District



Through a joint partnership, a pedestrian tunnel is planned between Rogers High and Middle Schools - which is a critical north/south connection point for the CRRT route.

Source: Google Maps



Safe Routes to School charrette connected community stakeholders to improve alternative transportation mode access for children.

Source: Three Rivers Park District

Segment

E

Rogers >> Otsego >> Dayton

Segment	Location	County	Status	Mileage
E1	Rogers	Hennepin County	Future construction	1.2 miles
E2	Otsego	Wright County	Future construction	0.4 miles
E3	Otsego	Wright County	Future construction	0.5 miles
E4	Otsego	Wright County	Future construction	1.3 miles
E5	Dayton	Hennepin County	Future construction	0.1 miles*

Total 3.5 miles

*An alternative, long-term CRRT alignment could be realized via a proposed Crow River pedestrian bridge between Wright and Hennepin County - connecting Dayton's 'Slab Town' with the historic village. If this option is realized, the total mileage is not anticipated to be altered.

Location, Context & Destinations

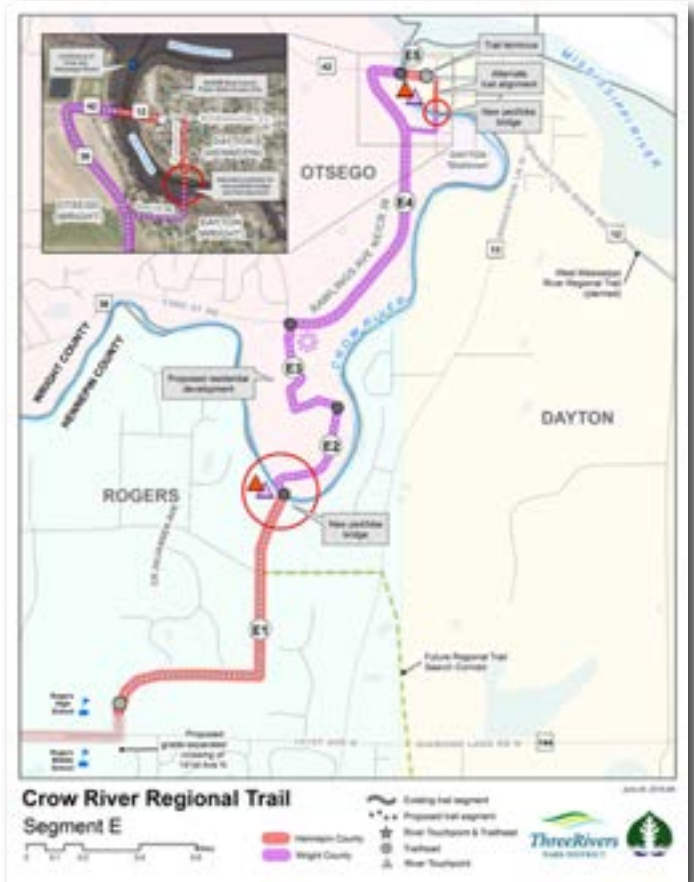
The CRRT connects to its final destination, the Mississippi River, with completion of Segment E (Maps 22 and 23). Incorporating both Hennepin and Wright County jurisdictions, the CRRT passes from Rogers High School campus northeast towards the Crow River. Crossing the river by a proposed grade-separated bridge, the CRRT enters Otsego through a planned residential neighborhood. The CRRT route continues along Rawlings Ave NE/CR36 and connects east along River Road NE/Robinson St. It is here that the CRRT terminates at the confluence of the Crow and Mississippi Rivers.

Subsegment E1

From property adjacent to the Rogers High School campus, subsegment E1 travels northeast through private property and city owned parkland. While the preliminary cost estimate accounts for trail construction prior to land development for estimating purposes, it is assumed that the private property required for the CRRT construction will be development driven. Reliant on a proposed grade-separated pedestrian bridge across the Crow River (between Hennepin and Wright Counties), subsegment E1 provides a critical river touchpoint. As the CRRT route crosses back into Wright County, the proposed Crow River pedestrian bridge placement is dependent on future discussions between the two counties, Park District and MnDNR.

Subsegments E2 & E3

Located on a lobe of Otsego created by the meandering Crow River, this large property south of CR36 is currently undergoing subdivision into a 345-lot residential development. Provisions for the CRRT were created from the southern terminus of the development to its intersection with CR36. A short, 0.4 mile CRRT gap between the Crow River pedestrian bridge, at the development's southern terminus, requires construction separate from the residential development. Depending on land availability within or near the residential development, a trailhead is proposed to accommodate the northern terminus of the CRRT corridor within Wright County.



Maps 22 & 23:
Segment E Corridor Overview and Details

Source: Three Rivers Park District

Subsegment E4

The CRRT continues from the residential development along the south/east side of CR36 to the intersection of River Road NE. The CRRT route must cross River Road NE to traverse east along the north side of the road until it meets the highway bridge crossing the Crow River. This alignment along the north side of River Road NE is dependent on the bridge modifications necessary to accommodate the CRRT.

Subsegment E5

As River Road NE travels east across the Crow River from Wright to Hennepin County, it becomes CSAH 12/Robinson Street. The CRRT route is planned to terminate at the entrance to the Crow/Mississippi River confluence boat launch, operated and maintained by the MnDNR. It is here that the planned West Mississippi River Regional Trail begins and continues an additional 15 miles east along the Mississippi River through the communities of Dayton, Champlin, Brooklyn Park and Brooklyn Center - connecting into the Minneapolis Grand Rounds at North Mississippi Regional Park.

Dayton Long-Term Alternative Route

The *CRRT Master Plan* revealed an alternative pedestrian bridge crossing of the Crow River, proposed by the city of Dayton. The location of such pedestrian bridge would connect Dayton's 'slab-town' residential area (located within Wright County) with Dayton's historic village (located in Hennepin County). Development of such pedestrian bridge is dependent on available funding and coordination between the two counties.

MLCCS

MnDNR's Minnesota Land Cover Classification System (MLCCS) defines the area immediately adjacent to Segment E as artificial/impervious surfaces (developed portions of Rogers and Dayton), planted or cultivated vegetation (agriculture) predominantly east of Rogers High School and throughout Otsego, grasslands (dry tall, maintained and short), shrubland, tree plantation, wetland, and open water. A large wetland complex exists south of the Crow River within Rogers. River land cover, existing of open water, wetland, and small patches of forest adjacent to agriculture are common throughout Segment E.

NHIS

MnDNR's NHIS includes the following rare plants and animals, native plant communities, geologic features and/or animal aggregations within one-mile of Segment E: *Haliaeetus leucocephalus* (Bald eagle), Colonial waterbird nesting area, *Ligumia recta* (Black sandshell), and *Lampsilis cardium* (River mussel).



Segment E is planned along road right-of-way (as seen above), through residential developments, private property slated for development, and city owned parkland.

Source: Google Maps



The CRRT connects to the Crow and Mississippi River confluence and the proposed West Mississippi River Regional Trail across the CSAH 12/Robinson Street bridge.

Source: Three Rivers Park District

Acquisition Status

Subsegment E1 is highly dependent on implementation through future residential development or easement purchase. Subsegment E2 utilizes dedicated Otsego parkland to connect to the proposed subsegment E3 residential development - thus substantial acquisition is not anticipated. Subsegments E4 and E5 are planned for construction within road right-of-way and may require a minimal amount of private easements to accommodate the off-road trail which will be determined during the design phase.

Design & Construction Assessment

Segment E requires ongoing dialogue between Wright County and the Park District to ensure there is continued momentum to fund, design and construct the necessary Crow River crossing improvements. All new river crossings must also engage the MnDNR who is the responsible agency for river permitting.

Preliminary planning analysis, conducted by the Hennepin County Transportation Department, revealed that the CSAH 12/Robinson Street bridge can be redecked to accommodate the CRRT. In the event that preliminary engineering reveals that the CRRT route can be accommodated on the south side of the CSAH 12/Robinson Street bridge, it is preferred - and would negate the subsegment E4 crossing of River Road NE and the subsegment E5 crossing of Robinson Street.



Section V

The Crow River meanders adjacent to the CRRT route.
Hanover, MN
Image Credit: Three Rivers Park District

Design Guidance

The Crow River Regional Trail is intended to safely accommodate 290,000 annual visits, an array of non-motorized uses, a variety of skill levels, and persons with special needs. In addition, the regional trail is intended to support both recreation and commuting uses and incorporate trail amenities that enhance trail users' experiences.

Similar to many regional trail corridors, the CRRT corridor includes several challenges associated with constructing a regional trail where trail right-of-way doesn't exist, providing access to and across natural resources areas, and balancing safety, public expectations, natural resource protection, and potential private property impacts.

One of the key elements to constructing the CRRT is to design and construct it in a manner that meets users expectations and needs, meets industry standards and best management practices, and is financially responsible. As such, the agency park implementing agencies utilize a series of regional trail practices and guidelines in respect to trail design and support amenities. These practices and guidelines are summarized in this chapter and will serve as the basis for design and construction of the CRRT.

Permitted Regional Trail Uses

The regional trail will be open to the general public. Its intended uses include walking, jogging, in-line skating, bicycling, and other uses mandated by state law including, but not limited to, non-motorized electric personal assisted devices. Motorized vehicles will be prohibited, except for motorized vehicles used by the Park District and partner cities for maintenance or law enforcement activities or otherwise permitted for



Crow-Hassan Park Reserve



Lake Rebecca Park Reserve



Rogers, MN

Various images along the CRRT route exemplify connection to Park District resources, rural characteristics and adjacent landscapes.

Source: Three Rivers Park District

ADA access. Wright County existing segments will accept current permitted trail uses as-is until future surface improvements are made. Wright County will reassess permitted regional trail uses at time of surface upgrades

Access to All

The agency partners are committed to providing access and recreational opportunities to all people, including persons with disabilities, minorities, and other special-population groups. The Park District meets this commitment through appropriate facility design, programming considerations, and by actively addressing potential barriers to participation.

All regional trail facilities, including associated trailheads and trail amenities, will be designed to accommodate individuals with disabilities and developed in accordance with Americans with Disabilities Act (ADA) standards and guidelines. Specific design guidelines are discussed on the following pages of this section.

The Park District pursues promotional outreach activities and works with special-interest organizations such as the Courage Kenny Rehabilitation Institute and Wilderness Inquiry to further encourage participation in activities and use of park facilities by persons with special needs. If arrangements are made in advance, interpreters and alternative forms of printed material are available at programmed events.

In addition to accommodating individuals with disabilities, the trail corridor passes through rural underdeveloped areas to small towns, providing access to people with different social and cultural backgrounds and connecting those persons with important local community destinations such as parks, commercial areas, community facilities, cultural destinations, and transit facilities.

On a broader scale, communities adjacent to the trail will not only have access to the CRRT but also gain direct and indirect access to several existing park reserves, regional parks and regional and state trails. To improve local access, neighborhood trail connections are anticipated at regular intervals.

The Park District does not charge entrance fees for its regional trails; therefore, the regional trail is available for all users to enjoy regardless of financial status.

Design Guidelines

In accordance with its regional designation and associated anticipated use, the CRRT will be designed as an off-road 10-foot-wide, non-motorized paved multi-use trail. A bituminous trail surface is preferred because it is cost-effective, less prone to erosion than aggregate surfaces, provides a desirable trail

user experience, and is more appropriate given the anticipated visitation and connections to other paved facilities. In consideration of the Crow River crossings associated with this regional trail, bridge modification and new bridge construction is anticipated in a few key water crossing locations.

Curb ramps will be used at all roadway crossings. The preferred maximum trail grade is 5 percent with a 2 percent cross slope for drainage.

Much of the CRRT is anticipated to be an independent trail corridor separate from roadways, including both rural and urban road sections. However, in areas where the trail will be located adjacent to a roadway, the following design considerations apply. Where right-of-way allows, final trail design will attempt to maximize the boulevard width to account for sign placement, snow storage, and possibly trees or other complementary enhancements. In circumstances with limited right-of-way, the trail is still planned to be located off-road, but with less boulevard between the trail edge and back of the curb. In these locations, the trail will be separated from the road by a minimum paved two-foot-wide clear zone. This paved clear zone between the back of the curb and the trail edge provides a buffer between the trail users and motorists and will be striped to delineate the edge of the trail.

In the event there are instances where the trail will not initially meet the preferred design, trail designers will evaluate a wide variety of design tools to determine the best fit for the unique situation. Unless the alternative trail design is an acceptable long range solution, it is anticipated that noncompliant trail segments would be improved as funding, right-of-way, or other opportunities present themselves.

A number of factors will be considered during the design phase, such as:

- Right-of-way width/acquisition needs.
- Topography and drainage impacts.
- Existing vegetation.
- Driveway/road crossings.
- Overhead and subsurface utilities.
- Proximity to adjacent buildings, homes, businesses, and industrial facilities.
- Wetlands/floodplain locations, potential impacts, and rules.
- Wildlife (species, nesting/breeding areas and times, concentrations).
- Existing infrastructure.
- Connectivity with other trail/sidewalk/bicycle facilities.
- Safety.
- Cost.
- Obstructions.
- Trail user preferences/desired trail user experience.
- Opportunities to coordinate with other projects/agencies.

Regional Trail Typical

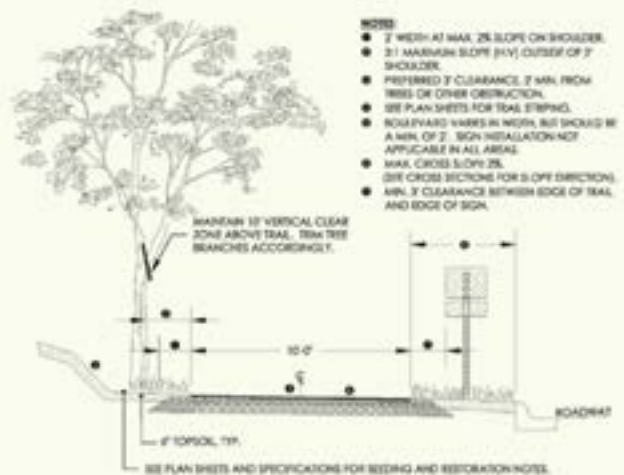
In addition to the discussed design considerations, regional trail segments will be designed in accordance with all applicable federal, state, and local codes. More specifically, the following sources will be referred and adhered to when preparing the design and construction plans as appropriate:

- *Guide for the Development of Bicycle Facilities*, prepared by the American Association of State Highway and Transportation Officials (AASHTO), 1999.
- *Selecting Roadway Design Treatments to Accommodate Bicycles*, Federal Highway Administration, January 1994.
- *MnDOT Bikeway Facility Design Manual*, Minnesota Department of Transportation (MnDOT), March 2007.
- *State Aid Rule 8820.9995 Minimum Bicycle Path Standards*, State Aid for Local Transportation.
- *Trail Planning, Design, and Development Guidelines*, Minnesota Department of Natural Resources (MnDNR).
- *Manual on Uniform Traffic Control Devices (MUTCD)*, MnDOT, May 2005.
- *Public Right-of-way Access Guidelines (PROWAG)*.
- *Best Practices for Traffic Control at Regional Trail Crossings*, A collaborative effort of Twin Cities road and trail managing agencies, July 2011.
- *Bicycle and Pedestrian Wayfinding*, Metropolitan Council, October 2011.
- *Designing Sidewalks and Trails for Access, Part I and II: Best Practices Design Guide (FHWA)*; *ADA Accessibility Guidelines for Outdoor Developed Areas* (United States Access Board); and *ADA and ABA Accessibility Guidelines for Buildings and Facilities* (U.S. Access Board).
- *Guidance for Three Rivers Park District Trail Crossings, Determining Effective Trail Crossing Practices in TRPD Parks and Public Rights-of-Way*, SRF Consulting Group, Inc., December 2013.

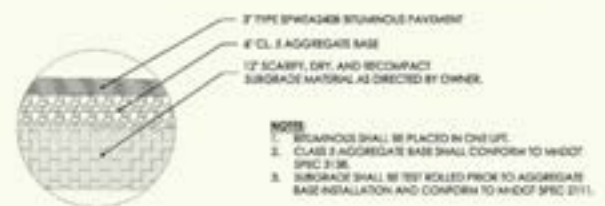
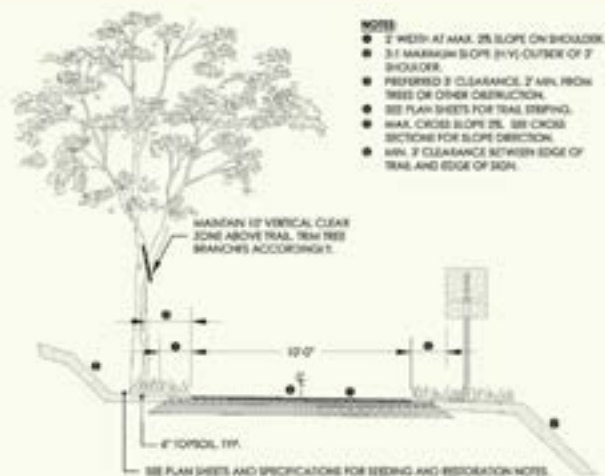
Throughout the design process of CRRT, the agency partners will work closely with the local communities to design the trail in a manner that has the greatest public benefit and least amount of private property impacts.

Trail/Road Crossings

There are several locations where the regional trail crosses roadways and in which careful attention to detail is required to provide a safe and user friendly crossing. The types of trail crossing treatments will be designed in accordance with industry best standards to ensure conflicts between trail users and roadway traffic are minimal.



18.1 TYPICAL TRAIL SECTION 10' URBAN



18.2 TYPICAL TRAIL SECTION 10' OFF-ROAD

In all cases, existing roadway configuration, infrastructure elements, vegetation, and other potential visual obstructions will be evaluated so sight lines can be maintained. Special provisions, such as mirrors, may be added to improve trail visibility from driveways if deemed appropriate. As vehicular traffic fluctuates, there may be a need for additional traffic signals or modifications to existing signalized intersections. These type of design considerations and trail enhancements will be addressed during the trail design phase.

Wetland and Floodplain Crossings

There may be portions of the regional trail that traverse wetlands and floodplains. In these instances, the regional trail design may incorporate bridges, boardwalks, and other creative solutions to minimize potential natural resources impacts while maintaining a contiguous and continuous trail corridor. Design and implementation of bridges and boardwalks will be coordinated with the appropriate regulatory agencies to ensure all requirements are met and any potential impacts are minimized.

Drainage

In locations where the regional trail is adjacent to a roadway, the drainage of the regional trail is similar to that of a typical sidewalk. Stormwater sheet flows over the trail pavement and onto adjacent urban roadways, where it is collected and conveyed by the roadway stormwater drainage system. In areas where the regional trail is on an independent route, such as through parks or other green spaces, or adjacent to rural road segments, alternative stormwater best management practices, such as rain gardens and infiltration swales, may be explored during the design phase of the regional trail. Stormwater must shed rapidly from the surface of the trail and not pool on the trail surface to prevent hazardous situations for the users. Design of stormwater management practices will be coordinated with regulatory and other affected parties to ensure all requirements are met and any potential impacts are minimized.

Traffic Signage & Devices

In addition to wayfinding signage, the regional trail will incorporate traffic control signs and devices, such as trail stop signs and center line pavement markings. These signs and devices will reflect the physical characteristics and usability of individual trail segments and the system as a whole. The cost to add traffic control signs and devices, including striping, to a regional trail is approximately \$1 per linear foot (2016 dollars).

Bridge Modifications & Road Challenges

There are four instances where the CRRT route crosses the Crow River; three existing bridges and one proposed. Additionally, there are two vehicle road crossings and one railroad crossing that present

physical challenges which require design modifications. To date, these challenging bridges and intersections have been reviewed only at the planning level. More details will be required as these improvements move from planning to programmed projects.

Bridge Street, Rockford

Located one block north of Highway 55, the Bridge Street bridge crosses the Crow River between Hennepin and Wright Counties. This river crossing was selected as the CRRT route due to low traffic volumes when compared to the adjacent Highway 55 bridge. The Bridge Street bridge currently exists as a two-lane vehicular bridge with pedestrian sidewalks on either side. The *CRRT Master Plan* calls for bridge deck modification to accommodate the CRRT, however additional engineering analysis is required. If modifications are not possible to the concrete bridge deck, a new grade-separated pedestrian bridge is recommended adjacent to Bridge Street. As this bridge connects two counties, it is assumed that any CRRT improvements here would be jointly initiated by both Hennepin (in cooperation with the Park District) and Wright Counties.



The Bridge Street bridge in Rockford was selected for the CRRT route due to low traffic volumes when compared to the adjacent Highway 55 Crow River bridge crossing.

Source: Three Rivers Park District

Historic Bridge, Hanover

The iconic, historic bridge in downtown Hanover was originally constructed in 1885 and carried traffic until 1966. Recently rehabilitated for pedestrian and bicycle use only, the bridge offers a scenic vistas of the Crow River. As portions of the CRRT route are incorporated into long-term operations and maintenance programs of the agency partners, this bridge will be accepted as-is and will be routinely evaluated for improvements to the trail surface only. The bridge will remain under the ownership of the City of Hanover.



The historic Hanover bridge is listed on the National Register of Historic Places.

Source: Three Rivers Park District

At-Grade Railroad Crossing, Rogers

The CRRT route crosses a Burlington Northern Santa Fe (BNSF) railroad route along 141st Ave N, just west of I-94. This at-grade railroad crossing will require additional engineering analysis, as the horizontal curve along 141st Ave N poses potential design and safety challenges. Ongoing dialogue with BNSF and Hennepin County Transportation Department will be required as this project moves from planning to implementation.



An at-grade railroad crossing poses a CRRT challenge due to the horizontal curve along 141st Ave. N.

Source: Google Maps

I-94 Overpass Bridge, Rogers

The CRRT route crosses I-94 via a bridge overpass along 141st Ave. N. This route was chosen due to its existing state over a major physical barrier and its key location to provide east/west connections. In addition, the 141st Ave. N bridge overpass does not have direct access to I-94 via on and off ramps, providing a safer environment and reduced opportunities for vehicle/trail user conflicts. The bridge overpass currently accommodates two lanes of vehicle traffic with paved shoulders. No sidewalks currently exist. The *CRRT Master Plan* calls for bridge deck modification to accommodate the CRRT, however additional engineering analysis is required. It is assumed that any CRRT improvements here would be in coordination with Hennepin County Transportation Department and Minnesota Department of Transportation (MnDOT).



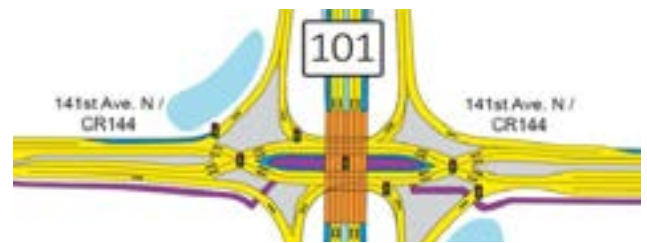
The I-94 overpass along 141st Ave. N. provides a critical east/west connection over a major physical road barrier.

Source: Three Rivers Park District

Diverging Diamond Interchange, Rogers

Vehicular traffic congestion near I-94 and Highway 101 in Rogers was recently improved with the reconstruction of Highway 101. Several former at-grade intersections were replaced by MnDOT in 2014 with overpasses, including the 141st Ave N./CR144 and Highway 101 intersection. This intersection was reconstructed to elevate Highway 101 and install a

diverging diamond interchange (DDI) along 141st Ave. N. Visibility to/from Highway 101 was important to adjacent business properties - and the DDI provides the ability to lower the 141st Ave N. road profile within a shorter distance. Designed to cut overall traffic delays by up to 60 percent, DDIs are intended to improve safety by eliminating standard intersection geometrics and conflict points. They are unusual, in that they require traffic on the highway overpass (or underpass in this instance) to briefly drive on the opposite side of the road from what is customary. Pedestrians and bicyclists cross to the middle of the intersection and walk between the eastbound and westbound lanes with protective barriers on either side. Four separate cross traffic conditions exist for pedestrians and bicyclists within the DDI design, versus two cross traffic conditions within a standard signalized intersection.



The 141st Ave N. / Highway 101 diverging diamond depicts the CRRT route in purple.

Source: MnDOT

Observed concerns from Rogers city staff and public safety department document that a percentage of pedestrians and bicyclists do not traverse the DDI correctly. Instead, pedestrians and bicyclists utilize a large expansive underpass embankment that is open, visible, and more direct than the center refuge island. Users are risking their safety by crossing traffic lanes that have free turning movements.

Park District planning staff met with MnDOT representatives to discuss the 141st Ave N. diverging diamond interchange safety concerns. At the date of this publication, MnDOT was committed to investigate reported safety concerns and work with CRRT partners towards modifications.



Bicyclist correctly utilizing the center refuge island of the 141st Ave N. diverging diamond interchange.

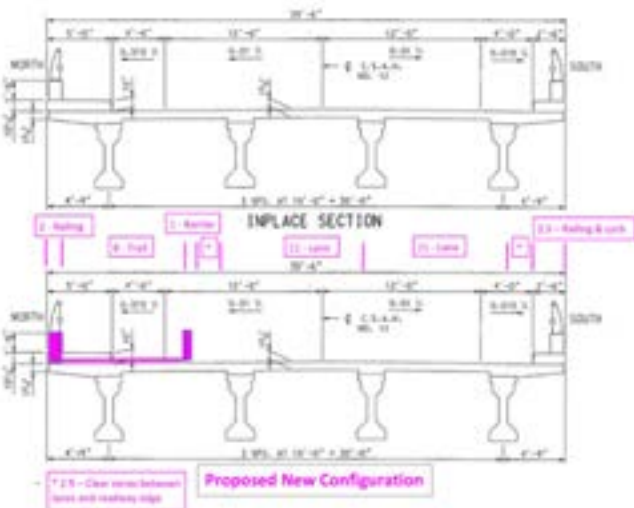
Source: Three Rivers Park District

Pedestrian Bridge, Rogers/Otsego

A new Crow River crossing is proposed between Rogers and Otsego. Exclusively intended for pedestrians and bicyclists, the new river crossing offers a critical, scenic and safe north/south CRRT connection. As this bridge connects two counties, it is assumed that any CRRT improvements here would be jointly initiated by both Hennepin (in cooperation with the Park District) and Wright Counties. As this is a new bridge crossing of the Crow River, permitting at both the State and Federal levels are anticipated.

CSAH 12/Robinson St. Bridge, Otsego/Dayton

The CRRT route utilizes an existing vehicle bridge between Otsego and Dayton along CSAH 12/Robinson Street. Preliminary planning analysis, conducted by the Hennepin County Transportation Department, revealed that the CSAH 12/Robinson Street bridge currently accommodates two lanes of vehicle traffic with a three (3) foot wide sidewalk on the north side of the bridge. By re-working the bridge deck, an eight (8) foot wide trail with barrier could be achieved by reducing the drive lanes. In the event that preliminary engineering reveals that the CRRT route can be accommodated on the south side of the CSAH 12/Robinson Street bridge, it is preferred and would negate the subsegment E4 crossing of River Road NE and the subsegment E5 crossing of Robinson Street.



The CSAH 12/Robinson Street bridge proposed new configuration sketch to accommodate the CRRT route.
Source: Hennepin County Department of Transportation

Should the proposed CSAH 12/Robinson St. bridge redecking prove to excessively exceed planning budget expectations (Appendix F), agency stakeholders - including Hennepin (Park District) and Wright Counties - may consider an alternative Crow River crossing further south. As this would be a new pedestrian and bicycle bridge crossing of the Crow River, permitting at both the State and Federal levels are anticipated.

Additional Trail Elements

Trail identity, crossings, wayfinding, traffic signage and devices, rest stops, drainage, and trailheads are important elements of regional trails. Their proper design and placement add both aesthetic and functional value to the trail.

As a destination regional trail, a primary design goal is to create a sense of place along the regional trail and an enjoyable trail user experience. The CRRT corridor is unique, in that it crosses three agency jurisdictions including Carver, Wright and Three Rivers Park District. During the CRRT planning process it was discussed that the average CRRT user will not realize that they are crossing jurisdictions, thus a unifying identity for the entire 32-mile corridor is desired. As the Park District currently deploys a comprehensive regional trail amenities template, it will be the basis of the CRRT corridor.

Designing the trail with unifying elements and incorporating local parks and adjacent natural resources will help achieve a cohesive CRRT corridor. Unifying elements may include distinctive trail design, wayfinding signage, rest stops, and trail crossings. Where it is not possible to utilize parkland or acquire a wider corridor width, it is desirable to incorporate other enhancements that help evoke a sense of place such as wide tree-lined boulevards and buffers from adjacent land uses.

Wayfinding

Regional trail wayfinding signage provides trail users with orientation and location information for amenities and services. Wayfinding located outside of Park District jurisdiction (Carver County, Wright County and MnDNR - Luce Line State Trail) may require additional approvals and/or modification to recognize the joint CRRT partnership interests. However, the intent is to utilize the Park District wayfinding structures, while providing cross marketing content for all agency partners. Wayfinding signage typically provides:

- An overview map of the agency partner's regional trail system and the specific regional trail.
- Directions and distances to major destinations and points of interest along the regional trail.
- Directions for long-term detours or interim routes when there are gaps within the regional trail.
- Location information for nearby amenities such as local parks and local trails.
- Location information for nearby services, such as drinking water, public restrooms, and public parking.
- Visual identification of the regional trail network through physical kiosk/signage structures.

The Park District employs three types of wayfinding signage structures: system kiosks, regional trail kiosks, and directional signage. Those structures have been modified to provide context for all agency partners as follows:

System Kiosks

A free-standing, roofed structure that provides trail users with a map of agency partner's regional trail systems, the regional trail rules, and general information about the agency partnership.

Table 3: Wayfinding signage configurations (2016 dollars)

Source: Three Rivers Park District



Level A Configuration

Level A		
Location	Components	Estimated Costs
Beginning/end of regional trail and at halfway point if regional trail is greater than 10 miles.*	<ul style="list-style-type: none"> System kiosk Regional trail kiosk Directional sign 	\$46,500 (Includes all signage, bicycle repair station & concrete pad)

Regional Trail Kiosks

A free-standing, roofed structure that provides trail users with an aerial map, a description of trail highlights, and a map of the entire regional trail that depicts local trails, amenities, and services near the regional trail.



Level B Configuration

Level B		
Location	Components	Estimated Costs
Approximately every 2 miles along regional trail. For new Level B locations, consider establishing on trails north side*	<ul style="list-style-type: none"> Regional trail kiosk Directional sign 	\$28,500 (Includes all signage and concrete pad)

Directional Signs

A post structure with description blades attached, depicting the direction, the name, and the distance to major destinations and points of interest on the trail. Each post structure has the capability of holding up to 12 description blades.



Level C Configuration

Level C		
Location	Components	Estimated Costs
Approximately every 1 mile along regional trail. For new Level C locations, consider establishing at intersections with other regional trails or comprehensive trail systems (not trail spurs).*	<ul style="list-style-type: none"> Directional sign 	\$9,000 (Includes all signage and concrete pad)

*Exact location and content determined in conjunction with local community input.

Placement of wayfinding signage structures along regional trails typically follows one of three configurations listed as Level A, B or C (Table 3). The wayfinding is intended to complement and work in collaboration with local and regional wayfinding efforts as well as adjacent land uses and development initiatives. There may be conditions along the regional trail corridor where the wayfinding signage is altered or otherwise enhanced to better serve the trail user and appropriately fit the surrounding environment.

The wayfinding plan for the CRRT includes signage at strategic delineated points (Map 24 with greater details found in Segment mapping, Section IV). The exact location and content of wayfinding signage will be determined in conjunction with local community input and is often dictated by available public right-of-way. Further wayfinding details are included in the planning budget analysis (Appendix F).

Trailheads and Crow River Touchpoints

Identifying CRRT trailhead locations and establishing dedicated Crow River touchpoints was critical to the master plan's success - as established by the planning team and public (Table 4, next page). These trailheads and river touchpoints reinforce the CRRT's recreation and transportation function by providing ancillary user support functions. Crow River touchpoints further emphasize the importance of the river to the CRRT corridor, as these specific locations were selected to either offer river vistas and/or access points to touch and feel the water.

Map 24: Comprehensive Wayfinding plan

Source: Three Rivers Park District



Table 4: Proposed Trailhead and River Touchpoint Locations and elements

Source: Three Rivers Park District

Segment A

Limited Trailhead	1) Nexus Point with Luce Line State Trail	
	Approximate Location	Additional Components
	Watertown Township, Carver County Limited trailhead, developed in partnership with MnDNR, near the CRRT/Luce Line State Trail nexus point.	<ul style="list-style-type: none"> Level A wayfinding Benches Picnic table
Trailhead	2) Lake Rebecca Park Reserve	
	Approximate Location	Additional Components
	Greenfield, Hennepin County Trailhead within Lake Rebecca Park Reserve, near the creative play area.	<ul style="list-style-type: none"> Level A wayfinding Bike racks
TRAILHEAD & TOUCHPOINT	Delano Central Park, Wright County	
	Approximate Location	Additional Components
	Delano, Wright County Identified within the long-term preferred CRRT alignment.	<ul style="list-style-type: none"> Level B wayfinding Bike rack Designated parking lot spaces

Segment B

Trailhead & Touchpoint	4) Downtown Rockford, Riverside Park	
	Approximate Location	Additional Components
	Rockford, Wright County Trailhead and Crow River touchpoint within Rockford Riverside Park.	<ul style="list-style-type: none"> Level A wayfinding Bike rack Designated parking lot spaces
Touchpoints	5) Wright County Owned Parcels	
	Approximate Locations	Additional Components
	Rockford, Wright County Crow River touchpoints within Wright County owned parcels; Pleasant View South, Pleasant View and unnamed parcel.	<ul style="list-style-type: none"> Level C wayfinding (at each touchpoint)
Trailhead & Touchpoint	6) Downtown Hanover	
	Approximate Location	Additional Components
	Hanover, Wright County Trailhead and Crow River touchpoint location to be determined, near the historic pedestrian bridge.	<ul style="list-style-type: none"> Level A wayfinding Benches Bike rack Lighting Designated parking lot spaces Picnic tables Picnic shelter Waste receptacle Drinking fountain Landscaping

Segment C

Trailhead & Touchpoint	7) Crow-Hassen Park Reserve	
	Approximate Location	Additional Components
	Rogers, Hennepin County Trailhead and Crow River touchpoint located within Crow-Hassen Park Reserve, near dog off-leash area.	<ul style="list-style-type: none"> Level A wayfinding Bike racks

Segment E

Touchpoint	8) Proposed Crow River Pedestrian Bridge Crossing	
	Approximate Location	Additional Components
	Rogers, Hennepin County & Otsego, Wright County Crow River touchpoint between Rogers & Otsego residential development.	<ul style="list-style-type: none"> Level B wayfinding Benches
Trailhead	9) Otsego Residential Development	
	Approximate Location	Additional Components
	Otsego, Wright County TBD, near 53rd St. NE/Rawlings Ave NE and River Road NE.	<ul style="list-style-type: none"> Level A wayfinding Benches Bike rack Lighting Designated parking lot spaces Picnic tables Restroom shelter Picnic shelter Waste receptacle Drinking fountain Landscaping
Touchpoint	10) Crow River Pedestrian Bridge Crossing	
	Approximate Location	Additional Components
	Otsego, Wright County Rogers & Dayton, Hennepin County Crow River touchpoint between Otsego & Dayton, location to be determined.	<ul style="list-style-type: none"> Level C wayfinding Benches

Large regional and community parks, as well as public facilities along the regional trail corridor that are easy to locate, were identified as trailheads simply by the nature of their existence and their offerings (i.e. water, parking, restrooms, benches, rest facilities, and picnic areas). Additional trailhead improvements are necessary to adequately support the regional trail while not negatively affecting the existing function of facilities. The Park District will collaborate with local communities where trailhead improvements are necessary. Further trailhead and river touchpoint details are included in the planning budget analysis including Delano’s long-term amenities (Appendix F).

Rest Stops

Rest stops are generally located every mile and provide places for trail users to stop and rest and an area for amenities such as trash receptacles, benches, and bicycle racks. These simple but important amenities can serve to reinforce the identity of the regional trail route and better support trail users with mobility challenges. General locations will be further evaluated during the design phase. The rest stop design may be modified to best meet the available right-of-way, adjacent land use, and complimentary facilities such as a bus stop. Further rest stop details are included in the planning budget analysis (Appendix F).



Regional trail rest stops are planned every mile and typically include benches, trash receptacles and bicycle racks.

Source: Three Rivers Park District

Bicycle Repair Stations

Recently, the Park District has been installing bicycle repair stations, which provide tools necessary to perform basic bike repairs and maintenance - from changing a flat to adjusting brakes and derailleurs. The tools and air pump are securely attached to the stand with stainless steel cables and tamper-proof fasteners. Hanging the bike from the hanger arms allows the pedals and wheels to spin freely while making adjustments. Bicycle repair stations are recommended at Level A wayfinding configurations and as-needed throughout the regional trail corridor.



Bicycle repair station example.

Source: Dero



Operations & Maintenance Plan

As noted previously, the CRRT route is unique in that it crosses three park agency jurisdictions including; Three Rivers Park District (Hennepin County), Wright County Parks Department, and Carver County Parks and Recreation Department. For the purposes of the *CRRT Master Plan* submittal by Three Rivers Park District, the following operations and maintenance guidelines pertain to the Park District's interests in the CRRT. The other participating CRRT park agency jurisdictions are encouraged to follow these guidelines to ensure consistency and quality of maintenance between jurisdictional boundaries. Further maintenance expectations will be solidified as part of the Trailway Cooperative Agreement implementation phase.

General Operation

The Park District will operate CRRT portions within Hennepin County using a wide variety of professional staff and in accordance with Park District policies, guidelines, and ordinances. The ordinances define the rules and regulations to provide for the safe and peaceful use of the parks and corresponding facilities; for the educational and recreational benefits and enjoyment of the public; for the protection and preservation of the property, facilities and natural resources; and for the safety and general welfare of the public. The current Park District ordinances define regional trail hours as 5 AM to 10 PM.

The Park District's present policy provides for the operation and maintenance of regional trails from April 1 to November 14. As such, the Park District does not anticipate plowing or otherwise maintaining the CRRT during the winter season. Local communities may elect to operate and maintain the regional trail segment during winter months with a winter use permit. The Park District may revise this policy at a future date and elect to operate and maintain the trail year-round.

Regional trail staffing levels fluctuate to account for seasonal use patterns, maintenance requirements, and available funding.

Public Safety

Three Rivers Park District Public Safety Department is the law enforcement agency responsible for providing a safe environment for regional trail users. Public Safety officers strive to provide an excellent experience for our visitors by protecting the facilities, trails, and natural resources of the Park District. The main goal of Public Safety is to educate park guests on the use of the parks and the Three Rivers Park District Ordinances and state statutes.

The Public Safety Department is a full-service POST-recognized law enforcement agency comprised of command staff, administrative staff, Park Police Officers, and campground and large event security.

The Public Safety Section is further supported by a volunteer Trail Patrol program and the statewide mutual aid program which facilitates the sharing of public safety resources in times of emergency or other unusual conditions. This program serves to facilitate assistance from surrounding police agencies.

Patrol Plan

Public Safety Officers and volunteers will patrol the CRRT utilizing a variety of specialized patrol methods. Patrol frequencies will be adjusted as necessary to account for trail use, incident level, other concerns

which may arise, and available funding. In addition to routine patrol, Park District Public Safety Officers may be dispatched through the Hennepin County Dispatch System to respond to incidences as they occur.

Public Safety Staffing

Due to the creative deployment of existing Park Police Officers, utilization of seasonal staff, statewide mutual aid program, and a successful Trail Patrol volunteer program, no additional full-time Public Safety positions are anticipated to serve the CRRT. As such, no additional operational funds are needed to provide public safety services along the Regional Trail.

Maintenance

The Park District Maintenance Department is responsible to maintain parks and trails in a safe, clean, and usable manner. The Maintenance Department provides both typical, routine maintenance such as mowing, sweeping, and trash clean-up as well as specialized maintenance such as small building construction, non-paved trail repair, and grooming.

The Maintenance Department is comprised of a wide variety of highly skilled and trained maintenance professionals including carpenters, mechanics, park workers, and electricians complemented by seasonal staff.

Maintenance Plan

Maintenance operations will include seasonal condition assessments and periodic inspections, followed by necessary maintenance actions. Inspections will address possible safety issues, vandalism and non-routine maintenance concerns. The Park District will also respond to maintenance issues identified by the public on a timely basis as funding permits. Extraordinary maintenance occurs in response to storm damage, vandalism or other unplanned circumstances. Routine maintenance is outlined in Table 5.

Table 5: Routine Maintenance

Source: Three Rivers Park District

Routine Trail Maintenance	
Time of Year	Routine Maintenance
April & May	<ul style="list-style-type: none"> • Sign inventory and replacement • Spring cleanup • Minor bridge and underpass repair (as needed)
June, July, August & September	<ul style="list-style-type: none"> • Erosion repair • Fence repair • Sign and post replacement • Trash pickup • Bridge and boardwalk repair (as needed)
October & November	<ul style="list-style-type: none"> • Bituminous patching and striping replacement (as needed)
Throughout the season and/or in response to storm-related damage	<ul style="list-style-type: none"> • Mowing • Periodic trail sweeping • Trash pickup • General clean-up and similar tasks

Maintenance of regional trail segments with limited property rights or segments that do not meet standard regional trail characteristics may require atypical maintenance.

The majority of the equipment necessary to provide routine maintenance of the CRRT will be shared with the Elm Creek and Carver Work Clusters. Some tools and equipment specific to this regional trail may be needed to adequately and efficiently maintain the regional trail. A onetime expense of \$110,000 (2016 dollars) is anticipated to cover the cost of additional maintenance equipment which may include an additional vehicle, mower, trailer, electric utility cart, tool cat and implements, and miscellaneous hand and power tools.

Specialized maintenance is outlined below:

Preventative Surface Treatment

CRRT will receive scheduled striping, seal coating and redevelopment under the Park District’s pavement management program and in accordance with Park District standards and as funding permits. Pavement management is a systematic method for tracking and addressing pavement conditions at a District-wide level. The Park District will also seek opportunities to work with Hennepin County and local cities in conjunction with road projects to improve trail design and surfacing.

Trail/Bridge Inspection and Maintenance

Trails are inspected annually in the spring as part of the pre-season maintenance program and are then inspected periodically by Park District maintenance staff as part of ongoing operations. Minor trail repair is handled on a timely basis, and probable major repair needs are evaluated and recommended to Park District management for planning or engineering review. Major trail rehabilitation projects are submitted to the Park District Board of Commissioners for funding as part of the annual operating budget, preservation and rehabilitation program, or capital improvement program.

The ownership and maintenance responsibilities associated with new pedestrian bridges constructed as part of the CRRT will be determined when the bridges move into the design development phase.

Bridges owned by MnDOT are the responsibility of MnDOT. The Park District only maintains the trail use of said bridges and underpasses. Maintenance includes sweeping, cleaning and painting as necessary.

Noxious Weed Management

The Park District mechanically or chemically removes noxious weeds within the defined trail corridor at the request of cities.

Edge/Trail Shoulder Vegetation Management

The Park District will maintain vegetative clearances so as not to negatively affect trail use on any sections where trail shoulder vegetation exists.

Regional Trail Maintenance Staffing

The CRRT will be primarily maintained by the Elm Creek and Carver Work Clusters which provide maintenance services to four park reserves, two regional parks (one undeveloped), three special recreation facilities (one undeveloped), three regional trails, and the Lake Minnetonka Islands. The inclusion of the regional trail will add an additional miles (5.69 miles already existing/maintained) of regional trail maintenance responsibilities. In consideration of the future increased responsibilities within these Work Clusters, an additional 0.5 FTE maintenance position is needed to provide regional trail maintenance in accordance with current Park District regional trail maintenance practices and procedures.

In the event, the development of rain gardens, best management practices, or other mitigation requirements require ongoing maintenance, additional seasonal staffing may be required to complete the work. If necessary, seasonal staffing budgets will be developed and evaluated during the design development phase.

Natural & Cultural Resources

The Natural Resource Department is responsible for restoring and protecting natural resources such as native plant communities, wildlife diversity and water quality on Park District property. The Natural Resources Department is comprised of Forestry Management, Wildlife Management and Water Resources Management. The Cultural Resource Section is responsible for identification, evaluation, protection, restoration, and interpretation of cultural resources on Park District property.

Resource Protection Plan

CRRT is routed in a manner to maximize the access and enjoyment of remaining natural resources corridors and areas of cultural significance through western Hennepin County. The Park District will operate and maintain the regional trail corridor to highlight and not negatively affect the adjacent natural and cultural resources.

In recognition of the natural and culturally interesting areas that the regional trail passes through or adjacent to, the Park District will utilize best management practices to minimize any potential impacts on those resources, work with adjacent property owners on how to best protect and manage significant resources, and incorporate opportunities to enjoy and interpret the resources.

In the event the Park District acquires additional property along the regional trail which encompasses significant natural or cultural resources, the Park District will develop a stewardship plan specific to that resource and in accordance with other Park District natural and cultural resource management plans.

Potential natural or cultural resource impacts as a result of trail design and construction are addressed in Sections IV and V.

Resource Staffing

Much of the CRRT is routed through existing parkland that is currently already receiving natural and cultural resource management. The width of the remaining trail corridor will vary from as little as 16 feet wide to possibly several hundred feet wide; however, it is anticipated that the majority of the trail corridor will be narrower with limited natural and cultural resources. Areas of significant width will be more of the exception than the rule and directly relate to the resource value, direct and indirect costs, recreation benefit, willingness of the property owner, and support of the local municipality. To account for minimal resource management along the trail corridor, additional seasonal or contract staffing such as Conservation Corps Minnesota is anticipated at an annual expense of \$5,000 (2016 dollars).

Sustainability

The Park District's *2012 Sustainability Plan* guides the Park District's efforts toward achieving established sustainability goals and targets by outlining broad strategies for organizational implementation.

The following goals provide broad guidance and intent to Park District sustainability efforts:

- Manage and operate District parklands and facilities in a manner that ensures ecologic, financial and social integrity of the park system in perpetuity.
- Reduce dependence on fossil fuels to minimize green house gas (GHG) emissions and reduce public expenditures.
- Reduce the amount of waste sent to the incinerator and landfill to minimize costs and GHG emissions.
- Preserve groundwater supplies in the Twin Cities metropolitan area to ensure that current and future water needs can be met.
- Reduce Park District environmental impacts to demonstrate (or model) organizational commitment to environmental stewardship.

- Provide opportunities for public education and involvement in Park District sustainability initiatives.
- Design parks and trails that maximize the ability of the public to use non-motorized transportation.

To move towards sustainability targets for GHG emissions, waste, and groundwater consumption reduction for the years 2015, 2025, and 2050, the Park District will focus on the following areas of implementation: facility systems, vehicles/equipment and fuel use, waste management, groundwater conservation, sustainable work practices, public education and advocacy and system planning and development.

The Park District strives to utilize appropriate sustainable best management practices and guidelines such as the Minnesota Sustainable Building Guidelines (B3 Project) and Leadership in Energy and Environmental Development (LEED) Rating System on construction projects.

Specific to regional trails, the *2012 Sustainability Plan* provides the following strategies:

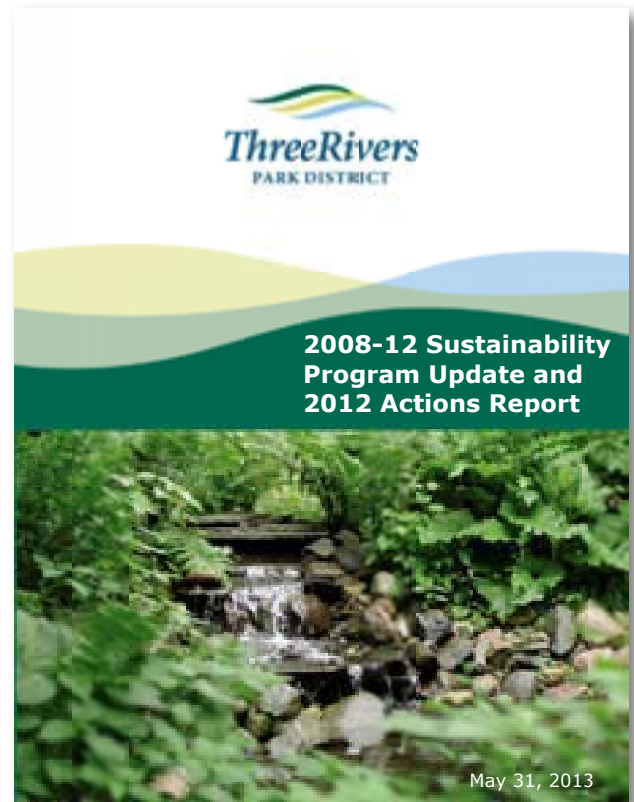
- Place priority on regional trail routes that have the potential for the greatest number of non-motorized commuting trips over routes with lesser commuting potential;
- Work collaboratively with municipalities and neighborhoods to reconfigure park and regional trail access points to encourage pedestrian and bicycle access.

Metrics used to measure Park District regional trail sustainability success depend on the number and mileage of regional trail routes and additions and number of local connections to regional trails.

Public Awareness

The Park District's Marketing Communications Department manages a centralized marketing communications function that oversees public relations, marketing, media relations, the website, brand management, event planning and promotion. A number of effective marketing and outreach tools are used to promote the Park District, including but not limited to an annual distribution of District-wide map, the website, direct mail, press releases, centralized reservation system, feedback phone line, brochures, ads and on-site promotion.

The Park District collaborates with a wide array of community, business and government organizations to promote its facilities, programs and services, and to educate the public about its resources. The Park District also works with the Metropolitan Council Regional Parks System and the State Office of Tourism to leverage shared opportunities for creating awareness and visibility and works with the county agencies to provide information about scholarship programs available to individuals receiving economic assistance.



The 2012 Sustainability Plan outlines sustainability targets including regional trail planning strategies .

Source: Three Rivers Park District



Lake Rebecca Park Reserve

Image Credit: Three Rivers Park District

Implementation, Estimated Costs & Funding

Construction of non-existing CRRT segments spanning three park implementing jurisdictions and ten communities will occur as opportunities present themselves and as resources allow. The timing of implementation is also dependent on the acquisition of the corridor (where necessary) which, under a predominantly willing-seller approach, may take decades to realize. Implementation will be phased as available land and financial resources prohibit the entire 32-mile corridor from being constructed as one project in the near future. A phased approach allows for trail segments to be constructed in a logical manner and respond to the demand and support from the local community, collaboration with other projects, and maximizing internal and external funding opportunities. For the purposes of the *CRRT Master Plan*, a cohesive implementation plan is outlined which includes estimated costs and funding strategies for all three park implementing agencies - however, it is understood that each agency will be responsible for being the project lead for any segment construction within their jurisdiction. Cross-agency cost participation may occur, but is not required. Implementation will occur at the discretion of the individual park implementing agency direction and only when they are financially prepared to assume the operation and maintenance responsibilities and costs of the regional trail.

Route Status

The 32-mile CRRT route is comprised of 17 miles within Park District jurisdiction, 15 miles within Wright County jurisdiction and 0.3 miles within Carver County jurisdiction.

Thirteen (13) miles of the CRRT exist, in varying conditions, completing nearly 40 percent of the 32-mile corridor. Those completed segments are currently owned, operated and maintained by the Park District, Wright County and local municipalities (Table 6). The *CRRT Master Plan* directs that the existing CRRT segments be elevated to regional status, thus allowing park implementing agencies to enter into trailway cooperative agreements with local municipalities to own, operate and/or maintain said segments. The timing of which these trailway cooperative agreements occur are at the discretion of the associated park implementing agency.

Table 6: Completed CRRT Segments

Source: Three Rivers Park District

Completed CRRT Segments			
Seg	Miles	Location	Current Jurisdiction
A4 & A5	4.2	<ul style="list-style-type: none"> Independence (Hennepin County) Franklin Township (Wright County) 	<ul style="list-style-type: none"> Wright County
A6	2.6	<ul style="list-style-type: none"> Delano (Wright County) 	<ul style="list-style-type: none"> City of Delano
A7	0.1	<ul style="list-style-type: none"> Independence (Hennepin County) 	<ul style="list-style-type: none"> Park District
A8 & A9	4.0	<ul style="list-style-type: none"> Independence (Hennepin County) Greenfield (Hennepin County) 	<ul style="list-style-type: none"> Park District Lake Rebecca Park Reserve
B2	0.2	<ul style="list-style-type: none"> Riverside Park (Wright County) 	<ul style="list-style-type: none"> City of Rockford
B6	0.1	<ul style="list-style-type: none"> Hanover (Wright County) 	<ul style="list-style-type: none"> City of Hanover
C1	0.9	<ul style="list-style-type: none"> Hanover (Hennepin County) 	<ul style="list-style-type: none"> Park District
C2	0.4	<ul style="list-style-type: none"> Hanover (Hennepin County) 	<ul style="list-style-type: none"> Park District Crow-Hassan Park Reserve
D3	0.6	<ul style="list-style-type: none"> Rogers (Hennepin County) 	<ul style="list-style-type: none"> City of Rogers & MnDOT (Highway 101 diverging diamond)
TOTAL	13.1		

Acquisition and Development Costs

The total acquisition and development costs to complete proposed and upgrade existing CRRT segments are summarized and separated by agency to fully understand the participation percentages (Table 7). As seen in the table, the majority of CRRT's development is dependent on the Park District (51 percent) and Wright County (48 percent) - with Carver County contributing about 1 percent of the total project cost. The estimated master planning level acquisition and construction cost estimate for the unbuilt trail sections and upgrades to existing segments is estimated at \$37 million. In recognition of the anticipated acquisition phase duration and amount of resources and coordination necessary to construct the remaining 19 miles of regional trail, it is anticipated that the CRRT will not be fully constructed for another 20 to 30 years.

Table 7: Total Acquisition and Development Costs

Source: Three Rivers Park District

Costs by Agency*			
Agency	Acquisition Costs	Development Costs	Subtotals
Three Rivers Park District	\$1,239,264	\$17,671,670	\$18,910,834
Wright County	\$1,094,544	\$16,482,594	\$17,577,138
Carver County	\$0	\$463,130	\$463,130
TOTALS	\$2,333,808	\$34,617,394	\$36,951,102

*Costs include 18% design/engineering and 10% contingencies.

Acquisition Needs

The remaining proposed CRRT segments are a combination of trail adjacent to roads (off-street, within road right-of-way), trail through public property, and trail through private property.

CRRT segments adjacent to roads require coordination from/with the operating jurisdiction - whether that be local, county or state. This is typically realized in the form of right-of-way certificates, limited use permits, and/or easements. The *CRRT Master Plan* assumes when the right-of-way is utilized, it is at no cost.

The CRRT route includes segments through public property. Properties included in this category include several Wright County-owned parcels adjacent to the Crow River, along CR20. The CRRT also includes extending segments through Riverside Park (Rockford) and Central Park (Delano) - both municipal properties. The *CRRT Master Plan* assumes when publicly owned property is utilized, it is at no cost.

CRRT segments through private property will be primarily pursued through a willing-seller approach. As such, acquisition will occur when land owners are ready and interested in selling their property or are considering development of their property - providing an opportunity to negotiate the designation

of the regional trail corridor as part of development. Participating CRRT agency partners will work with property owners and the local municipality to explore creative acquisition strategies such as easements, lot splits, resale of surplus property, transfer of development rights, and similar to best meet the needs and expectations of all involved parties.

Due to the willing-seller approach, the CRRT acquisition phase may take decades to fully realize. The minimum estimated property rights acquisition cost is \$2,333,808 (2016 dollars). This cost could be reduced by waiting for the regional trail to be realized through land use development. As an example, this development-driven cost savings is currently being realized in Otsego, with a single family residential subdivision occurring in Segment E3, which will accommodate the CRRT - a land acquisition cost savings of approximately \$600,000 and a trail construction cost savings of nearly \$280,000 (2016 dollars). A detailed analysis of the acquisition costs area outlined in Appendix F.

There may be additional acquisition opportunities to acquire a wider trail and ultimately create a more desirable trail corridor by buffering the trail from surrounding development and by incorporating areas of natural or cultural resource significance directly into the corridor. As such, the acquisition needs presented in this master plan are the minimal acquisition requirements to achieve a continuous and contiguous corridor.

Development Needs

The development costs for the remaining 19 miles include all foreseeable costs to construct the trail to regional trail standards including site preparation, reconfiguration and upgrade of rural to urban roadways (addition of curb and gutter), modification of drainage patterns, storm water treatment, bridges and boardwalks, wetland mitigation, utility relocation, and installation of signage, striping, kiosks, rest stops, landscaping, and similar support elements. The preliminary cost estimate also includes upgrading portions of existing aggregate trail to bituminous standards and the long-term plans to route the CRRT through Delano.

A very preliminary implementation and funding plan is summarized in Table 8. Specific trail projects were itemized and grouped together to assist park implementing agencies in determining timing and potential funding sources.

Regional trail development will be phased and significantly tied to opportunities that take advantage of external funding sources, road reconstruction projects, development initiatives, and local and regional political will. Several near term projects have been identified and include construction of

achievable, small gaps and wayfinding to establish the CRRT's place within the regional trail network. Mid and long-term projects require significant funding which often takes a substantial amount of time to coordinate.

Segment costs are further identified and itemized to understand the substantial investments required in specific segments (Chart 2). Each segment differs greatly from each other, dependent on land acquisition costs and significant engineering including but not limited to; new and/or modified river crossings, boardwalks, at-grade railroad crossings, and embankment work.

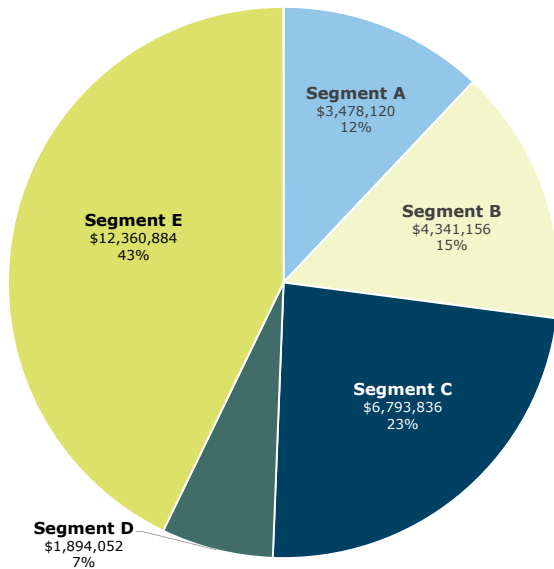


Chart 2: Preliminary Segment Costs
Source: Three Rivers Park District

Operations & Maintenance Costs

The operations and maintenance cost summary provided is for Park District operated and maintained CRRT segments - as primary authors of the CRRT Master Plan. CRRT segments located within Wright and Carver Counties are the responsibility of the respective park implementing agency - unless otherwise stated and arranged by separate agreement.

There are 4.4 miles of CRRT currently in Park District operation - located within both Lake Rebecca (4 miles) and Crow-Hassan (0.4 miles) Park Reserves. Those operation and maintenance costs are currently being absorbed in existing maintenance budgets.

Operation and maintenance costs for new Park District CRRT segments will be primarily funded through the Park District Operating Budget. The Operating Budget's primary source of funds is local property taxes with some revenue from the State of Minnesota as part of the Operations and Maintenance Fund allocations from the Metropolitan Council.

Additional costs associated with pavement maintenance will be funded from the Park District's Asset Management Program, which includes revenue allocated to the Park District from the State of Minnesota as well as the Park District general obligation bonds. All operation and maintenance costs are subject to the annual operating budget preparation process approved by the Park District Board of Commissioners.

A summary of staffing needs and one-time and annual expenses necessary to operate and maintain the regional trail to current Park District standards and practices is provided (Table 9). This cost summary assumes full CRRT build-out, estimated to be years in the making.

Maintaining the Park District's regional trail system surface is part of an comprehensive Pavement Management Program (PMP). Annual PMP costs to maintain regional trail surfaces include routine operations and maintenance (materials, labor, equipment, fuel and similar expenses). Actual numbers may vary significantly depending on weather, vandalism, damage due to accidents, etc.

When the 17-mile CRRT corridor within Park District jurisdiction is fully realized (not including portions outside of Park District jurisdiction), routine maintenance operation costs including additional staffing are estimated to increase by \$26,500/year (2016 dollars). Additional costs for trail surface preservation and rehabilitation (trail surface repairs, striping requirements, and pavement requirements) are anticipated to increase by \$96,900/year assuming a 30-year pavement life. The combined annual maintenance operation estimated cost for both route and trail surface preventative maintenance is \$123,400/year.

Table 9: Park District Operations and Maintenance Costs

Source: Three Rivers Park District

Park District Operations & Maintenance Costs (2016 dollars)			
	Public Safety	Natural & Cultural Resources	Maintenance
One-time expense (equipment or similar)	N/A	N/A	\$100,000
Staffing	<ul style="list-style-type: none"> No new FTE Expansion of Volunteer Patrol 	<ul style="list-style-type: none"> No new FTE Seasonal/Contract Staffing Varies 	<ul style="list-style-type: none"> 0.5 FTE Seasonal/Contract Staffing Varies
Annual operation & maintenance costs	N/A	\$5,000	\$123,400*



*Based upon full build-out of 17 additional Park District miles: \$26,500 routine maintenance (Operation Budget) and \$96,900 for Pavement Management Program (Asset Management Program)