

The Heartland Trail Study

in Clay County



DRAFT, AUGUST 11, 2025

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in Clay County



PREPARED BY:



DRAFT, AUGUST 11, 2025

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CHAPTER 1 | INTRODUCTION

INTRODUCTION

The existing Heartland State Trail is located in north-central Minnesota and provides recreation and transportation opportunities for bicyclists, walkers, runners, snowmobilers and cross-country skiers year-round. Presently, there are 49 miles of paved trail extending from Cass Lake to Park Rapids that were constructed between 1979 and 2002.

In 2006, the Minnesota Legislature authorized the extension of the Heartland State Trail from Park Rapids west to Moorhead. In 2011, the Minnesota Department of Natural Resources completed a master plan for the trail extension. Since 2006, additional sections of the trail have been completed, including five miles from Detroit Lakes to Frazee in Becker County.

Planning efforts for the Clay County segment began in 2014, led by the Fargo-Moorhead Council of Governments (Metro COG), in partnership with other jurisdictions including Clay County, townships and communities along the corridor. A one-mile segment of trail was constructed in Glyndon in 2019 with the intention of being part of the Heartland Trail or a key local connection into downtown.

The primary purpose of the Heartland Trail Study in Clay County is to build on past planning efforts by reviewing previously proposed trail alignment alternatives, and identifying other options based on public and stakeholder input to identify a preferred alignment. A second component of this study is to conduct a detailed assessment of the preferred alignment, including cost estimates and phasing options.

One outcome of this study will be the determination of whether the Clay County segment of the Heartland Trail will be a regional trail or part of the Heartland State Trail. There are important distinctions between the two trail types related to design, funding, trail management and operations.

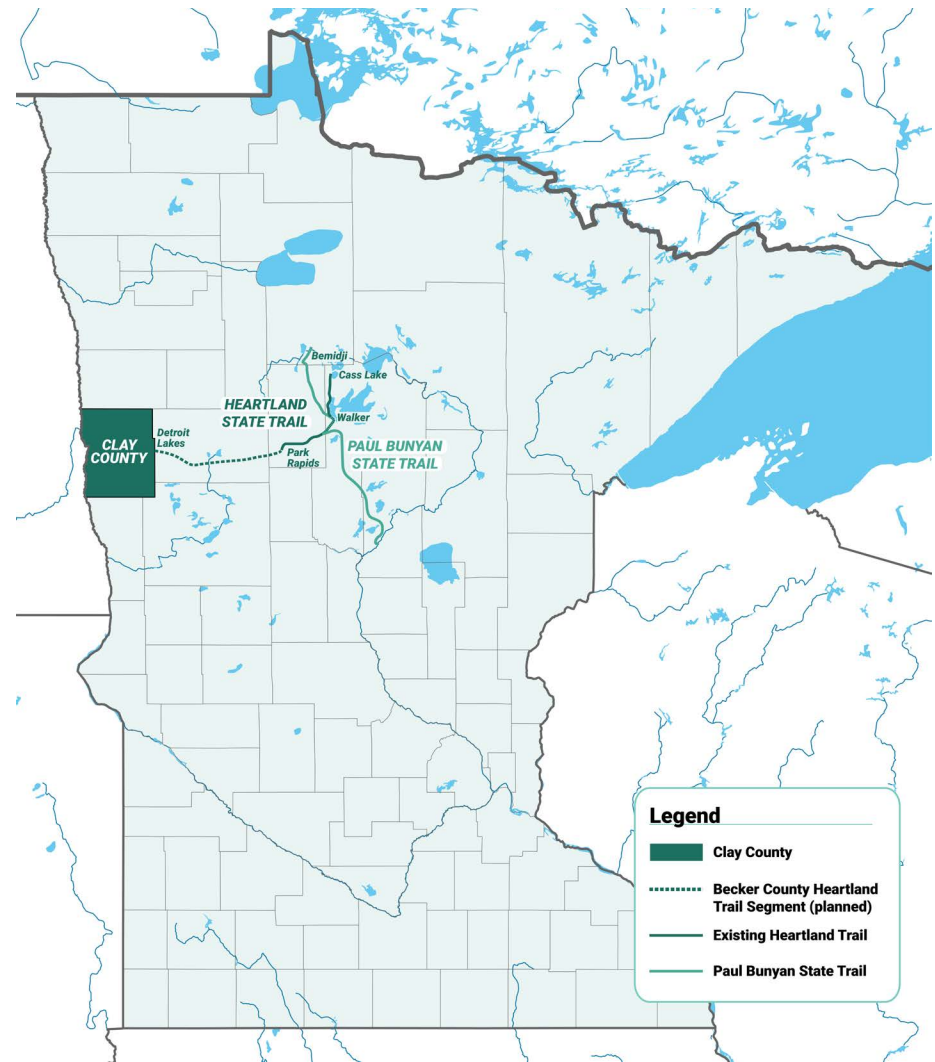


FIGURE 1: Corridor Study Area

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CHAPTER 2 COMMUNITY ENGAGEMENT

Engagement Strategy

Engagement Timeline

Online Engagement

Open Houses and Pop-up Events

Study Review Committee and Stakeholders

COMMUNITY ENGAGEMENT

Engagement Strategy

Community engagement for the Heartland Trail Study in Clay County was very important to the study process. Gathering input and ideas from nearby residents, community leaders and recreation enthusiasts strengthened the study by providing direction on where trail connections should be made, what locations are important to connect with, and challenging situations for future trail development.

The public engagement process included in-person and online opportunities to learn about the project and to provide input. There was a project website that could be accessed on the Metro COG website that provided project information including a project description, a summary of public engagement, frequently asked questions, links to previous master plans, corridor analysis and proposed trail alignment maps. The website also included a link to a custom online mapping tool designed specifically for the Heartland Trail Study.

To get the word out, the project team developed a post card that was widely distributed along the corridor from Moorhead to Hawley. The post card included a link to the project website. Other outreach included social media posts, newspaper ads, press releases, mass emails, and more.



The Heartland Trail Study in Clay County
Draft August 2025

Engagement Timeline

APRIL 2024

- Online mapping activity opens
- MSUM Earth Day event

MAY 2024

- Online trail experience survey opens
- Stakeholder Meeting 1

JULY 2024

- Online trail experience survey closes
- Online route alternatives survey opens
- Heartland Trail Open House 1
- Inforum Article Published

AUGUST 2024

- Online mapping activity and route alternatives survey closes
- Hawley Night to Unite, Glyndon Days and Moorhead Farmer's Market pop-up events
- KVRN Local News article/video published

SEPTEMBER 2024

- Event at M.B. Johnson Park
- Deep Roots Festival

OCTOBER 2024

- Heartland Trail Open House 2
- Stakeholder Meeting 2
- Landowner Meeting

ONLINE COMMUNITY ENGAGEMENT

Online Engagement Totals	
3,054 website visits	2,235 total visitors
447 Contributions	354 Contributors

Online Mapping Tool

The website and mapping tool opened in April 2024. It included an interactive map where people could leave site-specific comments about proposed trail routes. There were over 2,400 visits to the project website during the five months that the online materials were available, with over 430 contributions made.

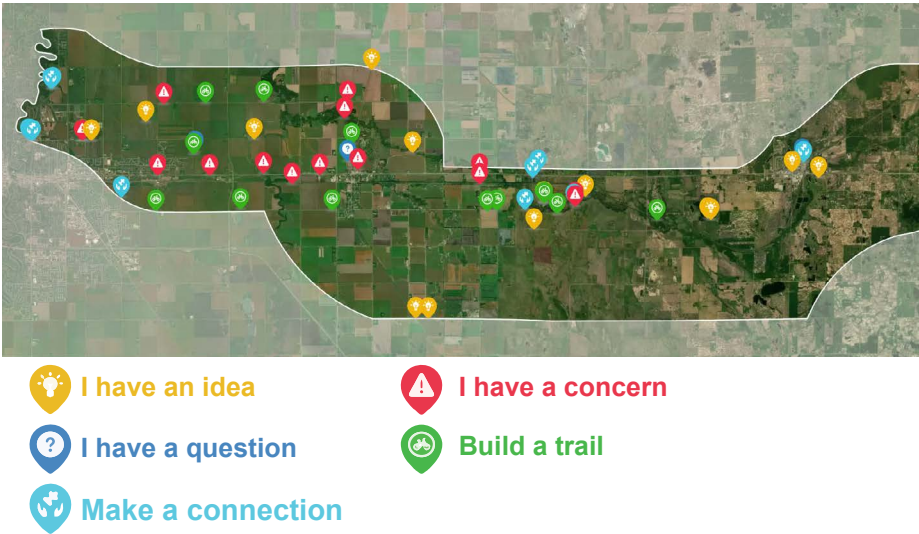


FIGURE 2: Online interactive map and mapping categories. Image source: Mend Collaborative

Trail Segment and Trail Typology Surveys

The site also included example images of state and regional trails and trail amenities. The website included a trail experience survey that opened in May 2024 and asked pointed questions about what people would like to experience when using the Heartland Trail. Most people wanted to experience connection to nature, relaxation and tranquility, health and energy and connection to shops. People also posted general comments about the four primary trail segments (western, west-central, east-central, and eastern), and filled out a survey about what trail typologies people like. 213 people provided input on the trail segments, and trail typologies.

PUBLIC OPEN HOUSES AND POP-UP EVENTS

Open House 1

The first open house was held on July 16, 2024. The purpose of this meeting was to provide an overview of the project, respond to specific questions about the project, and provide responses to commonly asked questions. There were maps showing the three primary route options, and people were asked to add comments directly to the maps or fill out a comment card that would be included in the meeting summary. A brief presentation was provided followed by a question-and-answer session. Approximately 40 people attended the first open house and provided important information about the proposed routes and potential trail destinations.

Open House 2

The second open house was held on October 23, 2024. This meeting was attended by approximately 30 people. The main purpose of the meeting was to provide project updates, responses to frequently asked questions, and to show the preferred Heartland Trail alignment across Clay County. Maps and information boards were available, and a brief presentation was given, followed by a question-and-answer session.



Route option and mapping discussions and a project overview presentation. Image sources: Mend Collaborative.

MSUM Earth Day

Members of the Study Review Committee and Metro COG staff attended other engagement events to help promote the trail study. On April 25, representatives attended the MSUM Earth Day Event, distributing post cards to attendees and responding to questions about the planning effort.

Moorhead Farmer's Market & Night to Unite

Planning staff attended community events throughout the summer, including the Moorhead Farmer's Market on August 13, and Night to Unite events in Glyndon and Hawley on August 6.



The project tabled at several events in the region including the Moorhead Farmer's Market and Nite to Unite events in Glyndon and Hawley. Image sources: Metro COG.

Landowner Meeting

After establishing a preferred trail alignment, a meeting was held with landowners whose properties are adjacent to the proposed corridor. All landowners along the corridor were notified of the meeting through postcards mailed to their addresses. During the meeting, specific details about the alignment were presented, and landowners had the opportunity to ask logistical questions about how the trail might affect their properties.

STUDY REVIEW COMMITTEE & STAKEHOLDERS

Study Review Committee

The Study Review Committee (SRC) met five times over the course of this study, with the first meeting in March 2024 and the final meeting in March 2025. The SRC included representation from entities who played a key role in the planning, design, and/or implementation of the Heartland Trail. The purpose of the SRC was to guide the study, provide guidance, expertise, & advise, and be a mediator between the study team and their agency.

The expertise of each SRC member in their respective department and jurisdiction made for a well-informed study process. SRC members brought new, innovative, and differing perspectives to the study, making for a comprehensive and well-rounded study.

As Study Review Committee members represent key entities, they helped to coordinate the sharing of information about the study through their channels, including email lists, newsletters and social media. The study team provided SRC members with materials to be distributed.

Study Review Committee Members

- | | |
|---------------------------------------|---|
| - Dan Farnsworth, Metro COG | - Lonnie Neuner, City of Hawley |
| - Chelsea Levorsen, Metro COG | - Kent Skaar, Minnesota DNR |
| - Matt Jacobson, Clay County | - Jeff Fjestad, Minnesota DNR |
| - Justin Sorum, Clay County | - Shawn Donais, Minnesota DNR |
| - Jonathan Atkins, City of Moorhead | - Rosemary Bruce-White, Minnesota DOT |
| - Forrest Steinhoff, City of Moorhead | - Patrick Hollister, PartnerSHIP 4 Health |
| - Holly Heitkamp, City of Moorhead | - Cleone Stewart, Visit Detroit Lakes |
| - Peyton Mastera, City of Dilworth | - Will Hutchings, North Dakota DOT |
| - Wendy Affield, City of Glyndon | |

Stakeholder Meetings

Stakeholders for the Heartland Trail Study included groups, agencies, and officials associated with, and/or involved with the Heartland Trail. While not as involved as the SRC members, the stakeholders still played an important role during this study.

There were three groups of stakeholders that met two times throughout the planning process. The meetings were held at the Glyndon City Hall and Community Center on May 23, 2024, and on October 23, 2024. One group of stakeholders included representatives from townships, and Clay County. A second group of stakeholders included representatives from Buffalo River State Park, the Nature Conservancy, MSUM Science Center, and recreation clubs including snowmobiles and cycling groups. A third stakeholder group included representatives and public officials from communities along the corridor including Moorhead, Dilworth, Glyndon, and Hawley, as well as state elected officials.

Key Stakeholder Groups

- | | | |
|---|--|---|
| - Oakport, Moorhead, Moland*, Glyndon, Cromwell, Hawley, Highland Grove and Riverton Township Representatives | - Buffalo Red River Watershed District | - Fargo-Moorhead Economic Development |
| - Clay County District 2 & 5 Commissioners | - Flatland Cycling | - MN Representative Heather Keeler* |
| - Buffalo River State Park | - Clay County Trail Blazers Snowmobile Club | - MN Representative Jim Joy |
| - Otter Tail County Parks & Trails* | - Hawley area Snowmobile Club | - MN Senator Rob Kupec |
| - MSUM Science Center | - Chamber of Fargo-Moorhead* | - Moorhead, Dilworth and Hawley* Councilmembers |
| - The Nature Conservancy* | - Fargo-Moorhead Convention & Visitors Bureau* | - Glyndon Mayor |
| | | - Becker County Heartland Trail Group* |
| | | - Moorhead Business Association* |

* Invited, but unable to attend.

PUBLIC ENGAGEMENT RESULTS

Trail Experience Survey

Q: What would you like to experience when using the Heartland Trail?

213 Contributions

- 1. Connection to Nature**
- 2. Health and Energy**
- 3. Relaxation and Tranquility**

4. Connection to Shops
5. Fun and Excitement
6. Connection to History
7. Social Connections
8. Connectivity to Schools

Top 3 trail
experience
priorities

Trail Type and Amenity Preferences

Q: Which types of trails do you prefer?

148 Contributions

- 1. Trail along a lakeshore**
- 2. Trail Adjacent to wetlands**
- 3. Trail on a boardwalk**
4. Trail along a county road
5. Trail along a gravel road
6. Trail adjacent to a county road with curb
7. Trail along a highway
8. Trail between highway 10 and a local street
9. Trail adjacent to highway 10

The community
prefers a trail
adjacent to a natural
setting

Q: Which trail amenities do you prefer?

163 Contributions

- 1. A rest stop**
- 2. Trailhead parking**
- 3. A trail overpass**
4. Trail crossings
5. A trail underpass
6. Driveway crossings

The community values
trail accessibility and
spaces to gather

PUBLIC ENGAGEMENT RESULTS

Trail Alternatives Survey

Q: Which alternative do you prefer in the western segment?

160 Contributions

Rivers & Forest



Notice the red icons along highway 10?

“Following Highway 10 is not ideal.

The fewer cars I hear, the better.” 👍 18 upvotes

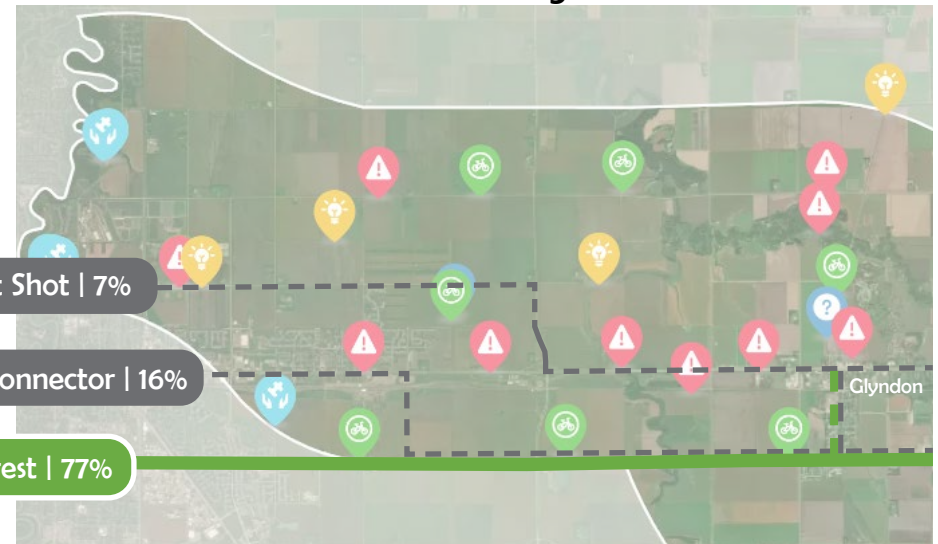
“...staying away from the highway would be preferred even if only on by a tree line...” 👍 16 upvotes

The Straight Shot | 7%

The Town Connector | 16%

Rivers & Forest | 77%

Western Trail Segment



Q: Which alternative do you prefer in the west-central segment?

162 Contributions

Rivers & Forest



Notice the green icons in Buffalo River State Park?

“Having a trail from Moorhead to Buffalo

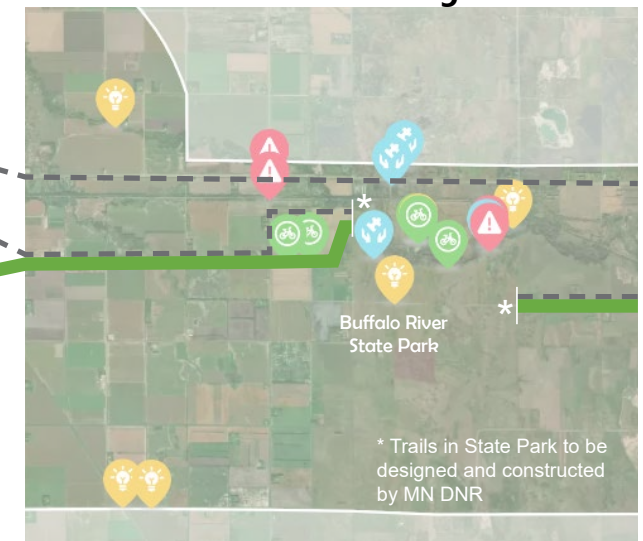
State Park would be fantastic!!” 👍 15 upvotes

The Straight Shot | 5%

The Town Connector | 10%

Rivers & Forest | 85%

West-central Trail Segment



Trail Alternatives Survey Continued

Q: Which alternative do you prefer in the east-central segment?

164 Contributions

Rivers & Forest



Notice the yellow icons near Maria Lake?

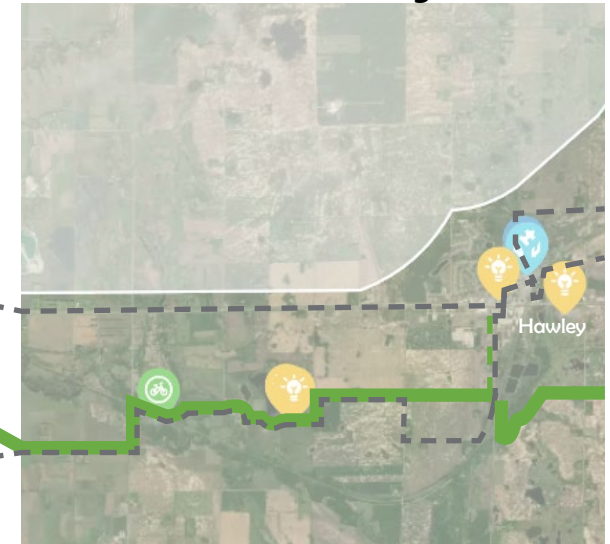
"This lake has the potential to be a scenic, valuable entity for the Heartland trail. I love when trails cross by lakes and rivers; it makes the journey more enjoyable and less utilitarian." 👍 11 upvotes

The Straight Shot | 5%

Rivers & Forest | 76%

The Town Connector | 19%

East-central Trail Segment



Q: Which alternative do you prefer in the eastern segment?

162 Contributions

Rivers & Forest The Town Connector



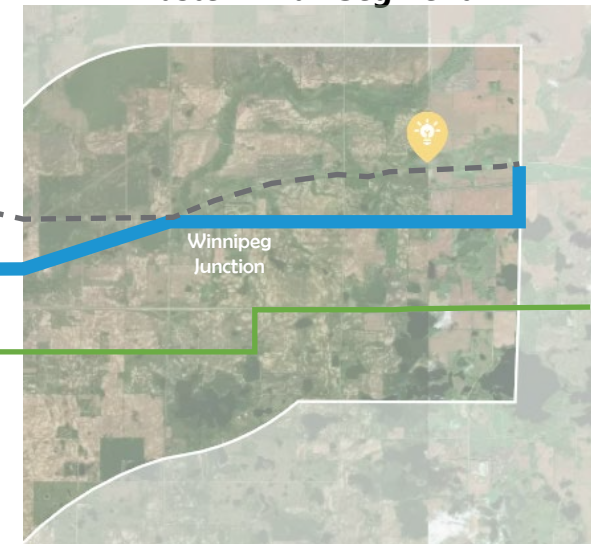
Based on conversations with community members at the July 16th open house, there is a desire to "flip" the green and blue lines to connect to Hawley and the scenic nature of the blue segment.

The Straight Shot | 7%

The Town Connector | 35%

Rivers & Forest | 58%

Eastern Trail Segment



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CHAPTER 3

EXISTING & PLANNED CONDITIONS

DNR Master Plan Corridor

Previous Corridor Studies

Analysis Mapping

PRELIMINARY ANALYSIS PROCESS

Using existing data sources and mapping tools, the study team conducted a desktop analysis of the trail corridor to identify all existing features. These features included wetlands, rivers, streams, roadways and known right-of-way, driveways, railroad crossings and right-of-way, bridge locations, above ground utilities, parcel lines, parks and other public lands such as Wildlife Management Areas, Scientific and Natural Areas, current snowmobile trails, jurisdictional boundaries, topographic information, and snow fences.

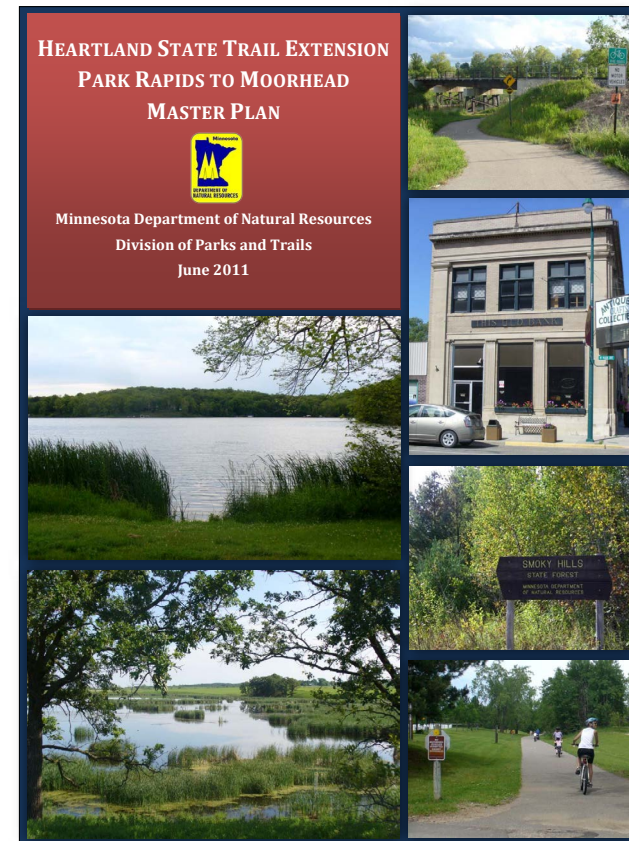
In addition to creating base maps with the above referenced features included, the study team reviewed relevant planning documents including the 2011 DNR Heartland State Trail Extension Master Plan, city comprehensive plans and trail plans. A primary focus of the Heartland Trail Study was to keep alternative trail alignments within the search corridor as defined in the 2011 DNR master plan. This is important because any proposed trail segment that extends outside the approved search corridor would require the DNR to amend the 2011 master plan, if the trail is to be considered for state trail status. This process can be time-consuming and is reliant on DNR budgeting and workloads.

The Clay County segment of the Heartland Trail extends from Moorhead to the Clay County/Becker County line east of Hawley. There are several defining characteristics of this corridor. The landscape is part of the Red River Prairie landscape that was once part of the bed of Glacial Lake Agassiz. It is generally flat with few hills present, except for old beach ridges and bluffs cut by local waterways. The overarching land use is agricultural with a variety of crops grown including corn, soybeans, and sugar beets. However, in the central portion of the corridor, a large area of native and restored prairie exists in and around Buffalo River State Park. In addition to the state park, the Bluestem Prairie Scientific and Natural Area, and private property owned by the Nature Conservancy include several hundred acres of some of the last remaining native prairie remnants. Minnesota State University Moorhead's Regional Science Center abuts the state park on the east side. The Science Center

maintains similar management practices as Buffalo River State Park.

Other key features of the corridor include the Buffalo River, several tributaries including Hay Creek, Minnesota Highway 10, and the BNSF Railroad. There are several Waterfowl Production Areas and Wildlife Management Areas along the corridor as well.

The existing and planned conditions were used as a base for identifying alternative trail routes through the corridor. The DNR Master Plan identified two primary alternative trail alignments. These alignments make connections to Buffalo River State Park, and then extend west to Glyndon, and then north and west to Moorhead.



2011 DNR Heartland State Trail Extension Park Rapids to Moorhead Master Plan.

This map illustrates the Heartland Trail Search Corridor in Minnesota, highlighting various trail types and land management areas. The corridor is shown as a light purple shaded region. Key features include:

- Trail Types:**
 - Heartland Trail Search Corridor:** Light purple shaded area.
 - Alternative Trail Alignments:** Blue dashed lines.
 - Snowmobile Trails:** Yellow lines.
 - Minnesota Water Trails:** Blue lines.
- Roads:**
 - Interstate Highways:** Red lines with blue and red shields (e.g., I-94).
 - U.S. Highways:** Red lines with white shields (e.g., US-10, US-75).
 - State Highways:** Yellow lines with white shields (e.g., MN-336).
 - Railroads:** Black lines with cross-ticks.
- Land Management Areas:**
 - USFWS Waterfowl Production Areas:** Stippled pattern.
 - State Wildlife Management Areas:** Orange shaded areas (e.g., Gruhl WMA, Magnusson WMA, Hawley WMA).
 - State Parks:** Light green shaded areas (e.g., Buffalo River State Park).
 - State Scientific and Natural Areas:** Dark green shaded areas (e.g., Bluestem Prairie SNA).
 - Wetlands:** Light blue shaded areas.

The map includes a legend, a north arrow, and a scale bar (0 to 8 miles). Major cities and towns shown include Moorhead, Dilworth, Glyndon, and Hawley. The Buffalo River and Maria Lake are also labeled.

Source: Minnesota DNR

Legend

- Heartland Trail Search Corridor
- Alternative Trail Alignments
- Railroads
- U.S. Highways
- State Highways
- Snowmobile Trails
- State Wildlife Management Areas
- Wetlands
- National Wildlife Refuges
- USFWS Waterfowl Production Areas

Map Labels: Hawley, Lake Park, Audubon, Detroit Lakes, DNR Office, Hamden Slough NWR, Highland Grove WMA, Cuba WMA, Audubon WMA, Lunde WMA, Sinking L., Sakke L., Big Cormorant L., 9, 10, 11, 12, 13, 15, 17, 19, 22, 24, 26, 33, 37, 48, 51, 59, 60, 66, 70, 72, 74, 76, 78, 80, 81, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000.

Source: Minnesota DNR

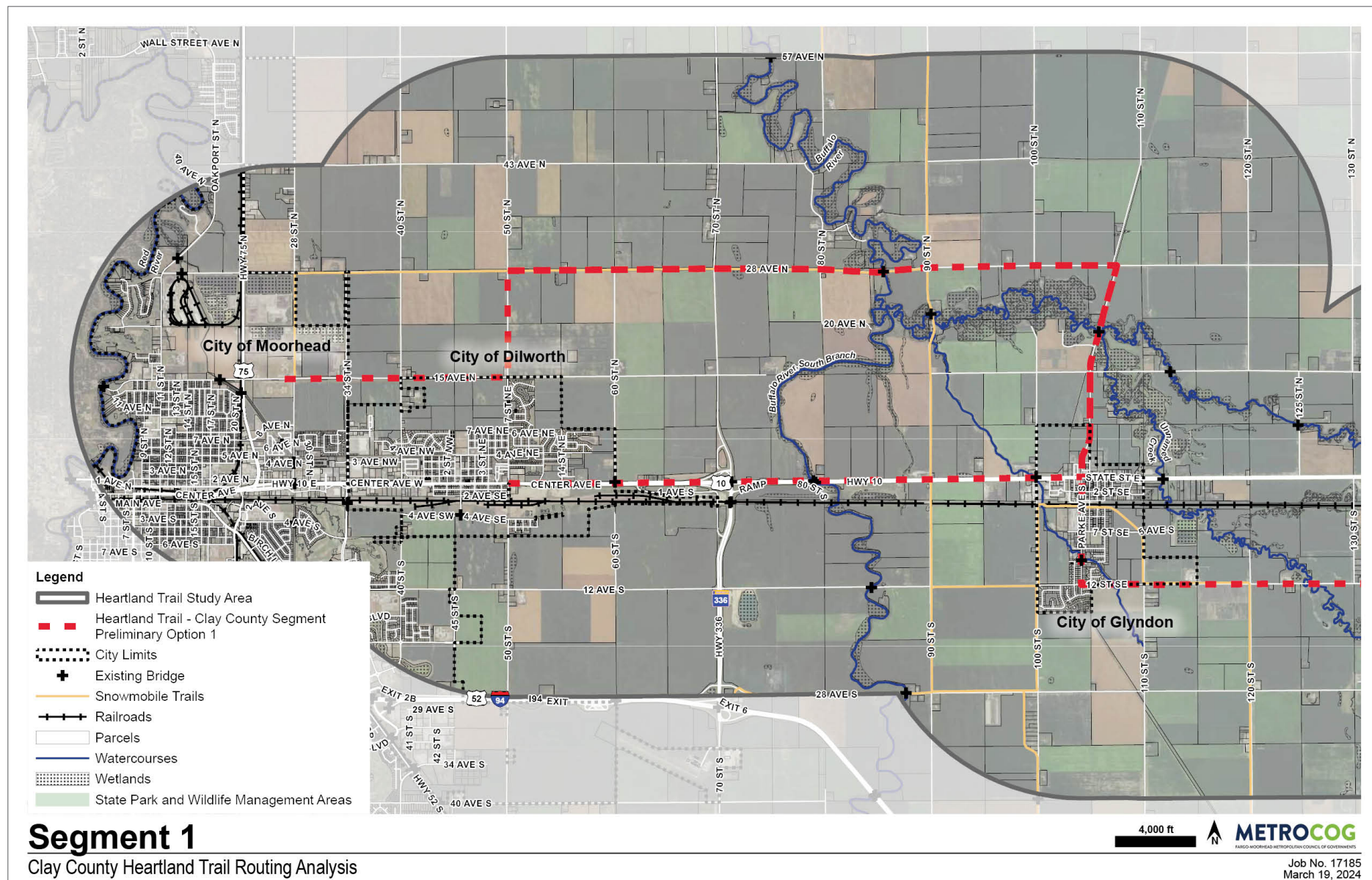


FIGURE 5: Segment 1 of the preliminary analysis of the Clay County trail corridor

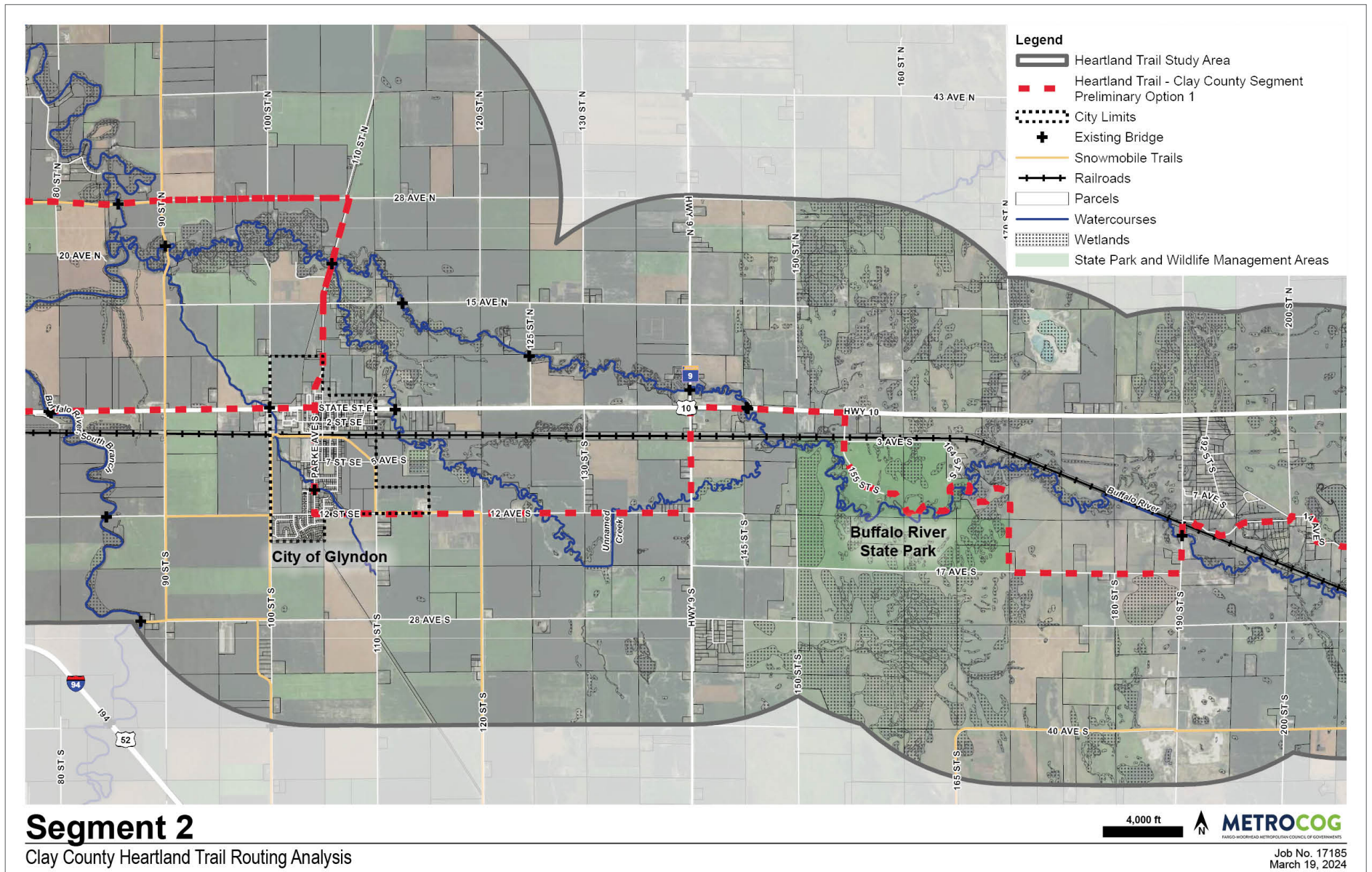
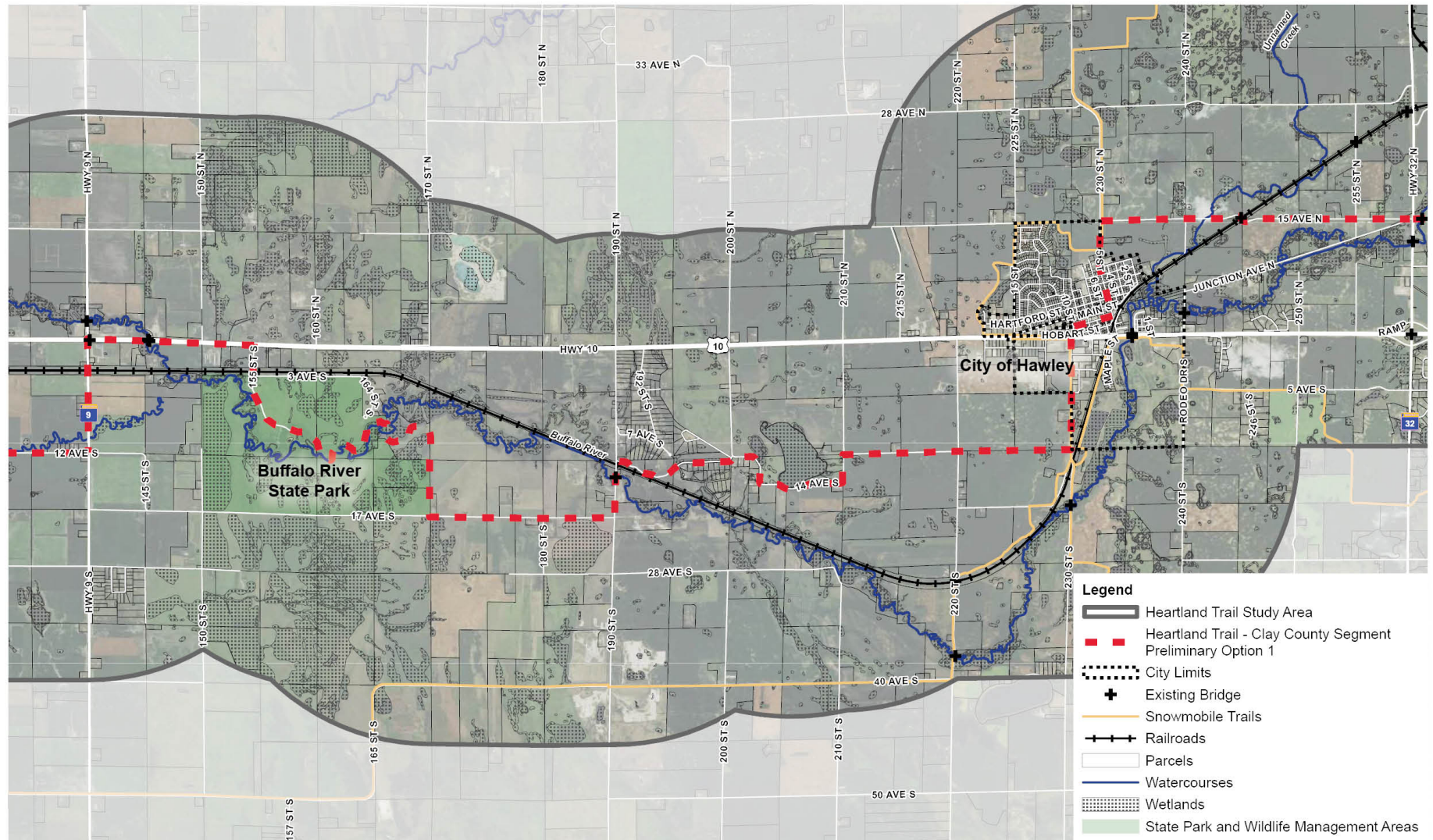


FIGURE 6: Segment 2 of the preliminary analysis of the Clay County trail corridor



Segment 3

Clay County Heartland Trail Routing Analysis

4,000 ft  **METROCOG**
HAWKWOOD METROPOLITAN COUNCIL OF GOVERNMENTS

Job No. 17185
March 19, 2024

FIGURE 7: Segment 3 of the preliminary analysis of the Clay County trail corridor

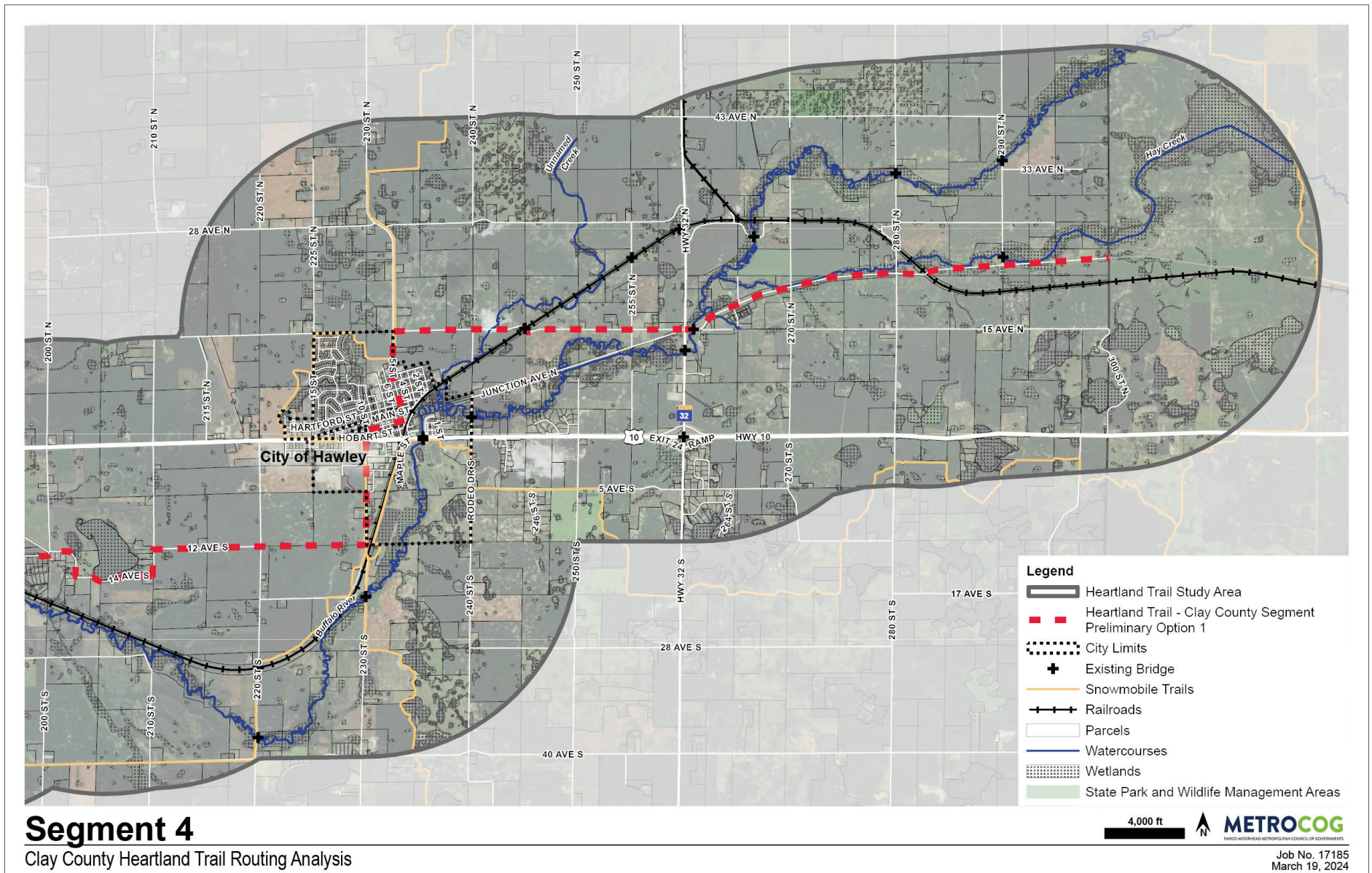


FIGURE 8: Segment 4 of the preliminary analysis of the Clay County trail corridor

TYPICAL TRAIL FEATURES

Sample trail images and examples were used throughout the planning process to give members of the public, officials and adjacent property owners a better understanding of what the Heartland Trail in Clay County might look like. Some of the images used are shown below in Figure 9.



Path along a gravel road.



Path along a highway.



Path along a wetland.



Trail underpass.



Boardwalk.



Trail Bridge.

FIGURE 9: Typical trail features and example images

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4

CHAPTER 4

ALIGNMENT ANALYSIS

Macro-Scale Analysis

Preferred Alignment

Parcel Ownership

Snowmobile Use on the Heartland Trail

The analysis process for the Clay County Heartland Trail Study was organized around four distinct trail segments. The segments were divided as noted below:

- Segment 1: Moorhead to Glyndon
- Segment 2: Glyndon to Buffalo River State Park
- Segment 3: Buffalo River State Park to Hawley
- Segment 4: Hawley to the Becker County Line

The project team started the analysis process by looking at the greater area, at a macro-scale. This macro analysis included options carried forward from other planning efforts including the 2011 DNR Master Plan, and previous Clay County Heartland Trail planning efforts. Each segment had between three and seven route alternatives. Routes followed roadways, parcel boundaries, waterways and wetland boundaries, and railroad right-of-way. Trail routes were analyzed and discussed with the SRC, but it was a desired goal to pare down route alternative to three primary route options. Key factors in determining which route alternatives were removed and which were carried forward included impacts to floodplain and wetlands, proximity to communities and to Buffalo River State Park, number of river, roadway and railroad

crossings, and overall length. The three options were defined by their character and location. They included the following:

- The Straight Shot: This was the most direct trail route that most closely follows 15th Avenue N and Highway 10.
- The Town Connector: This corridor aimed to connect with the downtown areas of Moorhead, Dilworth, Glyndon, and Hawley.
- The Rivers and Forest: This corridor sought to connect scenic, off-road segments as much as possible to make the trail journey as enjoyable as possible.

The community engagement results overwhelmingly supported The Rivers and Forest route with between 58 and 85 percent of respondents choosing this option over The Straight Shot and The Town Connector. This feedback helped the planning team refine the routes down to a preferred alignment.

Once a preferred alignment in each segment was confirmed, the project team focused the analysis at the micro-scale, looking closely at major crossings, right-of-way, grades, and locations for trailheads and rest stops.

Each of the four segments are described in detail below.



Segment 1: Moorhead to Glyndon

KEY CONSIDERATIONS

Key considerations for Segment 1 include where to connect with local trails and the greater network of the Fargo-Moorhead trail network, a trailhead at Centennial Park in Moorhead, a trailhead near the Dilworth Rail District, and trail crossings of Highway 10, the BNSF Railroad, Highway 336, and the Buffalo River.

MACRO-SCALE ANALYSIS

The macro-scale analysis identified several route alternatives. Early public input clarified that most people are interested in trail connections between corridor communities and Buffalo River State Park. This is an important distinction because route alternatives in the northern part of the search corridor were deemed too distant to make a realistic

connection to the state park. In addition to adding at least two miles of trail, far northern routes required crossing the Buffalo River, Highway 10, and the BNSF railroad corridor in locations that may not be adjacent to or coordinated with existing or future crossings. The Preliminary Option, developed by Metro COG and local partners several years prior to this study, included a corridor concept that extends along 15th Avenue, then north along 28th Avenue east to 110th Street where it heads south into downtown Glyndon. Three other options were reviewed north of Highway 10, including the Dilworth- 70th Street South connection, the Dilworth- 15th Avenue North connection and the Dilworth- North River Route. In addition, three routes were considered along Highway 10 or south of the highway, including Alternate B Route that extends along Highway 10, Dilworth- 70th Street South 2 along Highway 336, and the Alternate C- South Route along 12th Avenue.



15th Avenue N. looking east between Moorhead and Dilworth.



12th Avenue S. looking east toward the Buffalo River between Dilworth and Glyndon.

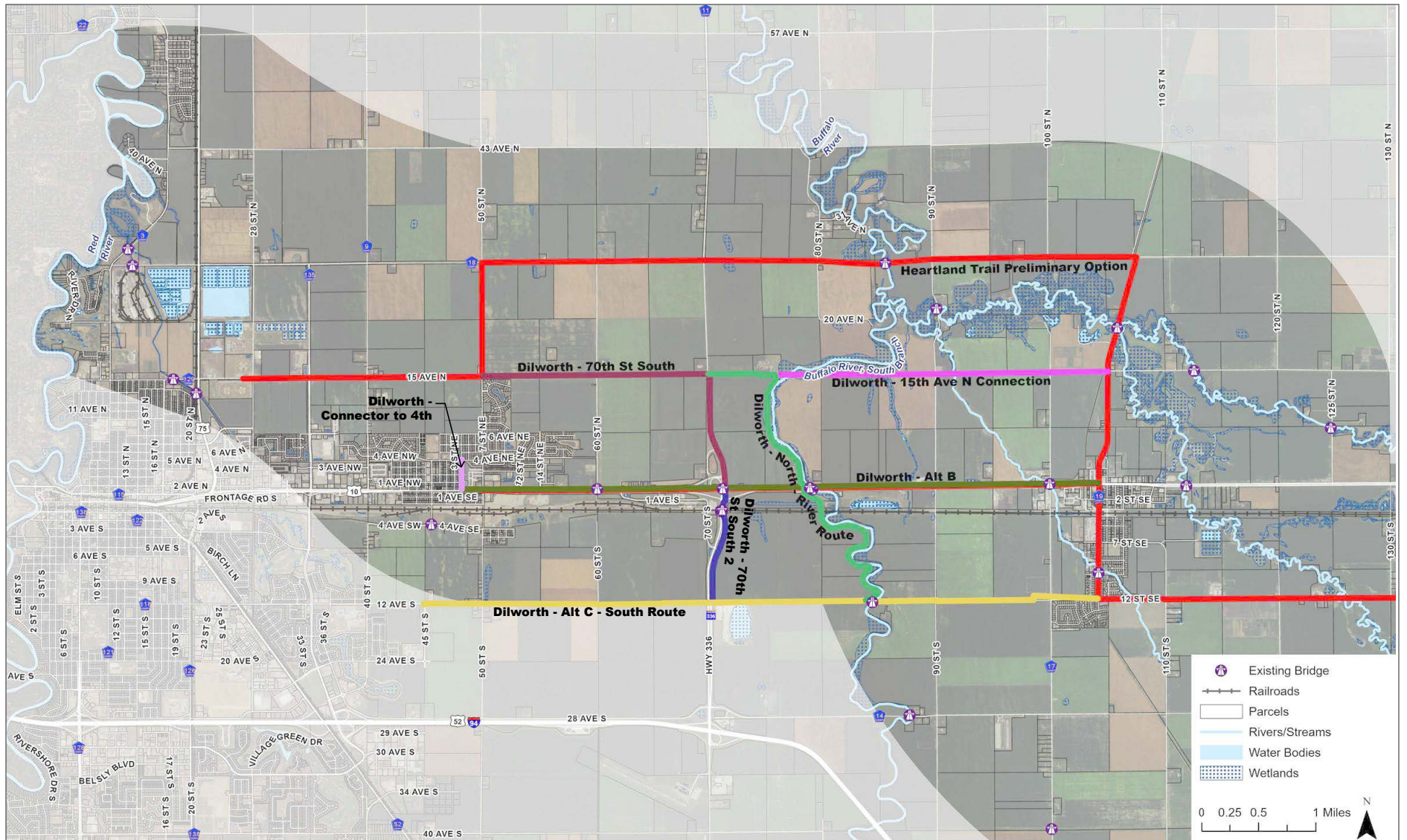


FIGURE 10: Segment 1: Macro-scale analysis

SEGMENT 1 PREFERRED ALIGNMENT

The preferred trail alignment for Segment 1 begins at Centennial Park on 15th Avenue in northeast Moorhead. This would entail a trailhead in the north parking lot of Centennial Park that would include trail amenities, including benches, bike racks, picnic tables, trail signage, and a concrete plaza with landscaping. The trail extends along the south side of 15th Avenue toward Dilworth, and heads south on 14th Street NE, which would eventually connect with 15th Avenue. Metro COG recently completed a study of 15th Avenue, and coordination between the two studies has helped identify the best option for including a trail along this roadway. The trail would extend down the west side of 14th Street NE. A trailhead is proposed on the west side of 14th Street NE in the vicinity of the Rail District, a growing area of Dilworth that will become a key trail connection location. This trailhead would include amenities such as benches, bike racks, a water fountain, and trail signage.

From the Rail District, the trail extends south, crossing over Highway 10 at-grade, and then over the BNSF Railroad on a future bridge that is being planned for this area. A bridge crossing is being pursued because it will be a safer way of crossing the tracks than the current crossing at Main Street, which is in the center of the BNSF switchyard, and is frequently blocked by rail traffic. Once across the railroad on 14th Street, the trail

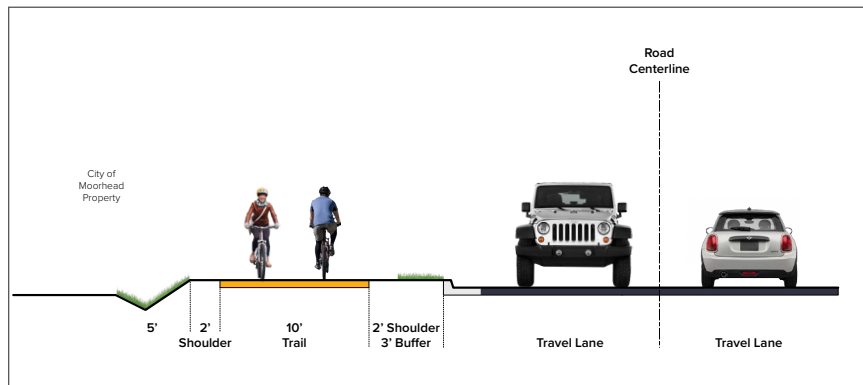


FIGURE 11: 15th Ave N at 28th St N in Moorhead

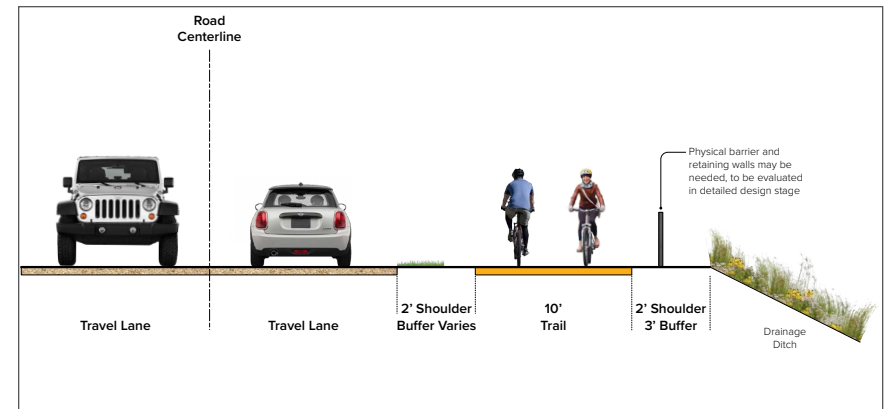


FIGURE 12: 15th Ave N at 14th St N in Dilworth, next to the drainage ditch

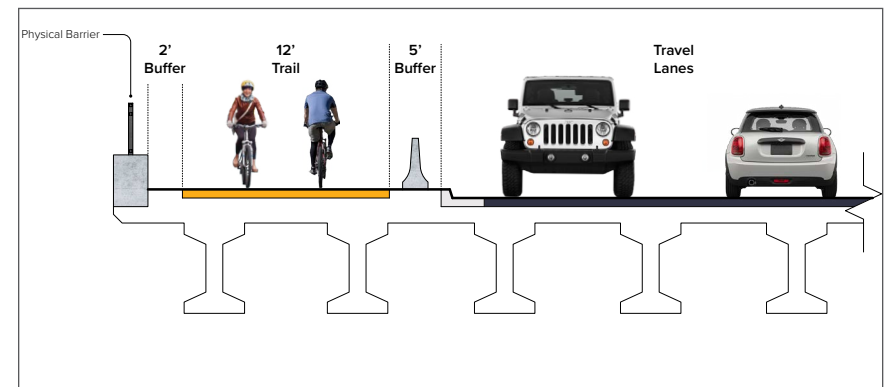


FIGURE 14: Concept of trail on the future 14th St Bridge over the BNSF tracks in Dilworth

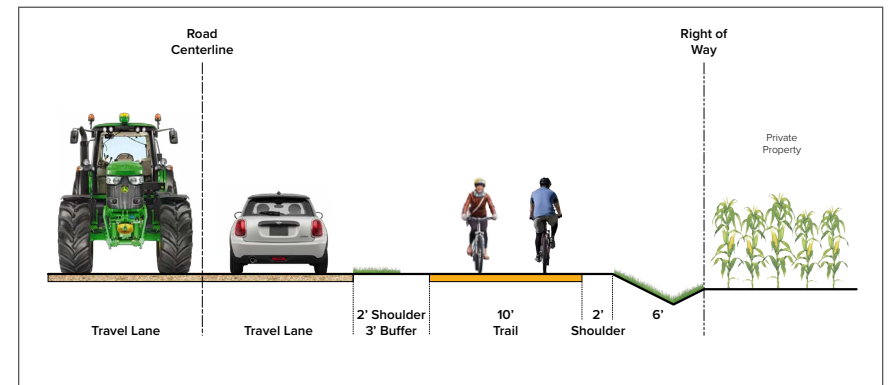


FIGURE 13: Concept of trail on 12th Ave looking east south of Glyndon

will extend along 12 Avenue South toward Glyndon. An interim trail is identified along 34th Street utilizing existing trails from 15th Avenue south to 12th Avenue until bridge and trail improvements are completed along 14th Street. There are two challenging crossings along this segment of 12th Avenue. The first is State Highway 336, a divided, four-lane roadway. The best alternative for a trail crossing is an underpass that will provide safer pedestrian movements across this high-speed and heavy truck traffic roadway. Approximately one mile east of Highway 336, 12th Avenue crosses the Buffalo River. The existing bridge is slated to be reconstructed by Clay County in 2025, and the design does not include room for a trail crossing. This study was started after the timeframe for modifying the bridge design to accommodate a trail. A future trail crossing will likely require a separated bridge structure on the south side of 12th Avenue.

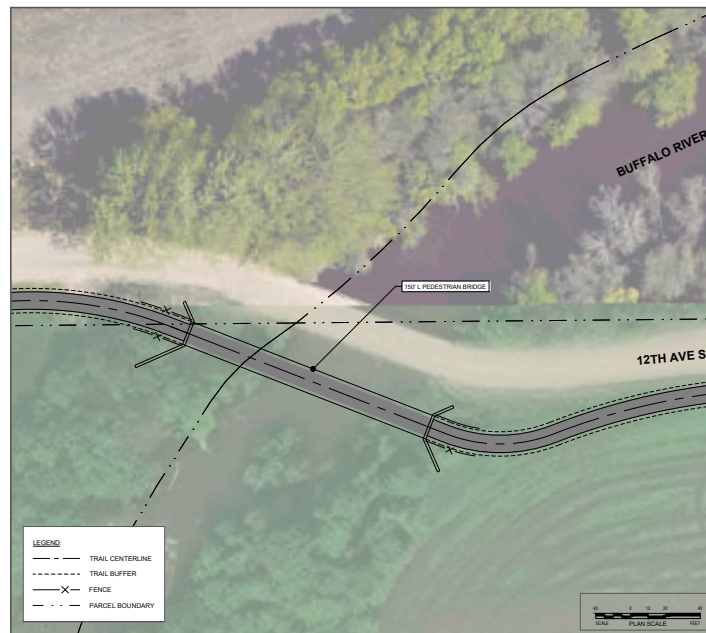


FIGURE 16: New Trail Bridge over the Buffalo River

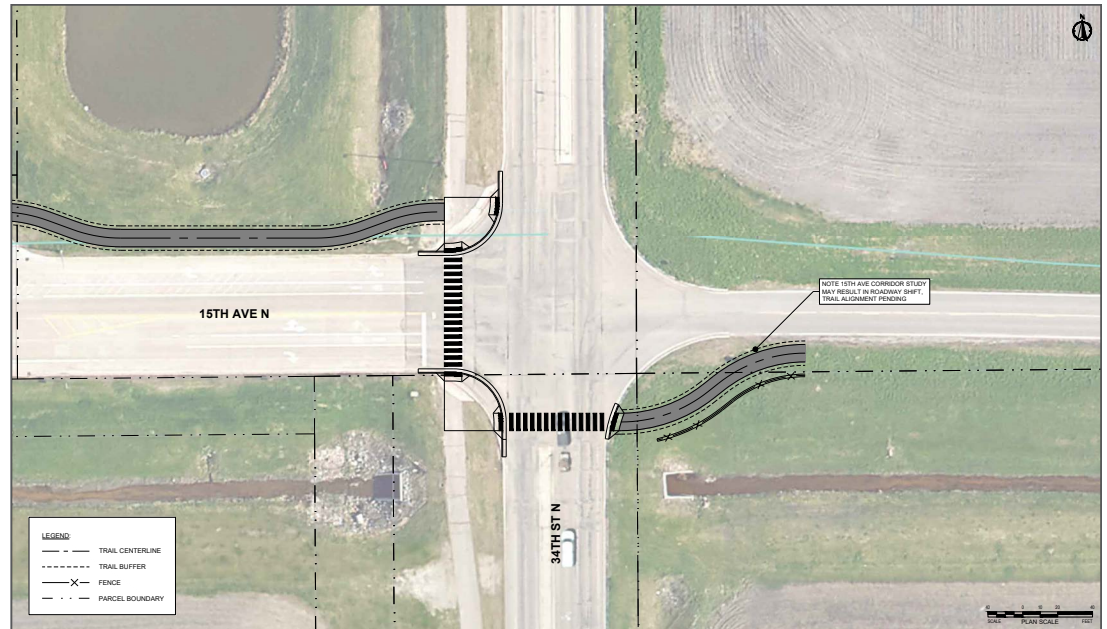


FIGURE 17: Conceptual intersection treatment for 15th Ave N and 34th St N in Moorhead

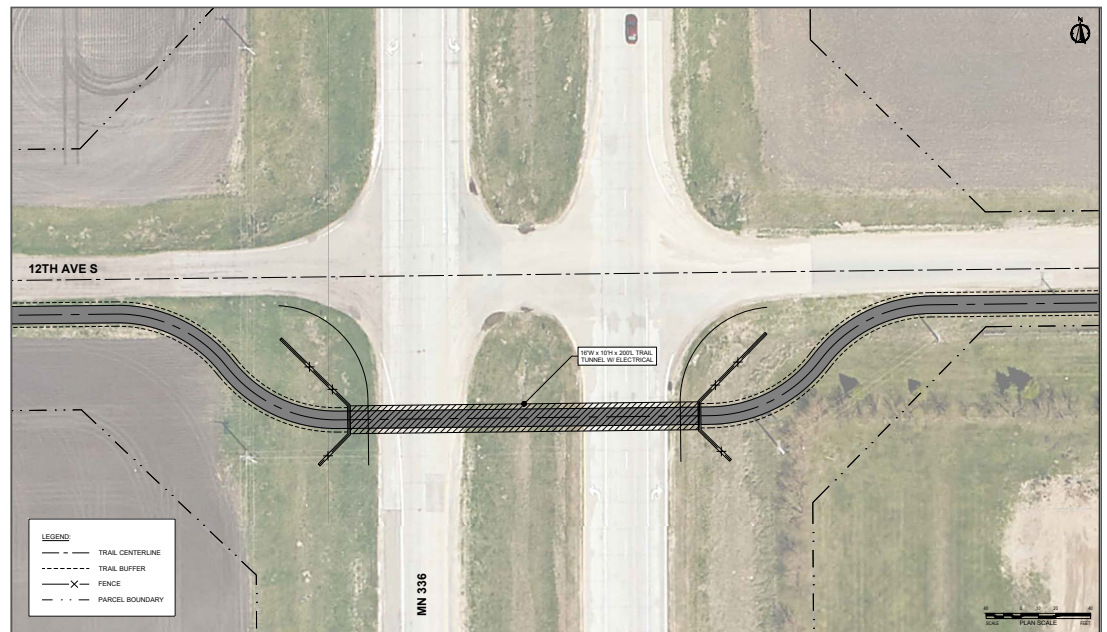


FIGURE 18: Conceptual trail underpass at 12th Ave S at Highway 336

LOCAL TRAILHEAD IN DOWNTOWN MOORHEAD

Moorhead is the largest community along the Clay County segment of the Heartland Trail with a population of over 45,000 residents. Moorhead has a comprehensive local trail network including trails along the Red River, and trails linking city parks. The proposed Heartland Trail trailhead in Centennial Park will provide a full suite of trail amenities including parking, restrooms, seating, and wayfinding. Centennial Park is a good starting point for residents living in the northern portion of the city. There is interest in developing a Heartland Trail trailhead in downtown Moorhead which would provide more direct access to the trail for more users. A downtown trailhead would also increase visibility for the Heartland Trail.

The Downtown Moorhead Trailhead could be located at the Hjemkomst Center or in the heart of Moorhead's revitalizing downtown along Center Ave. Such a trailhead would connect the Heartland Trail at Centennial Park to Original Homestead Park, the new Rotary Natural Play Hill & Bike Park, Viking Ship Park/Hjemkomst Center, and downtown Moorhead. This route would also provide connections to Fargo via 15th Ave N, Oak Grove pedestrian bridge, and the downtown bridges.



The downtown trailhead will provide a key connection to the Heartland Trail for Moorhead residents and visitors.



Heartland Trail local connection to downtown Moorhead.

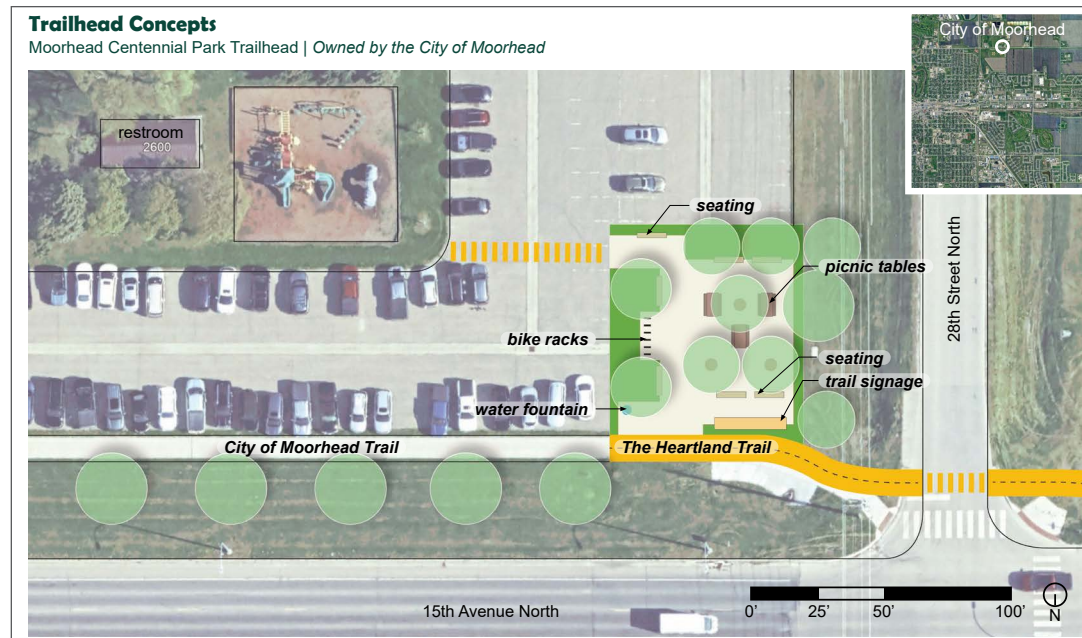


FIGURE 19: Centennial Park Trailhead in Moorhead on 15th Avenue N



FIGURE 20: Rail District Trailhead in Dilworth on 14th Street NE

Segment 2: Glyndon to Buffalo River State Park

KEY CONSIDERATIONS

Key considerations for Segment 2 include adding a trailhead in Glyndon Parke Avenue S adjacent to Glyndon Lutheran Church, extending the trail under BNSF Railroad bridges on State Highway 9 and 155th Street, which is located at the entrance to Buffalo River State Park, confirming trail access into Buffalo River State Park, and confirming an alignment across MSUM Science Center property.

MACRO-SCALE ANALYSIS

The proposed trail alignment heading east from Glyndon to Buffalo River State Park is along 12th Avenue. At State Highway 9, there are three alternative routes that were considered for access into Buffalo

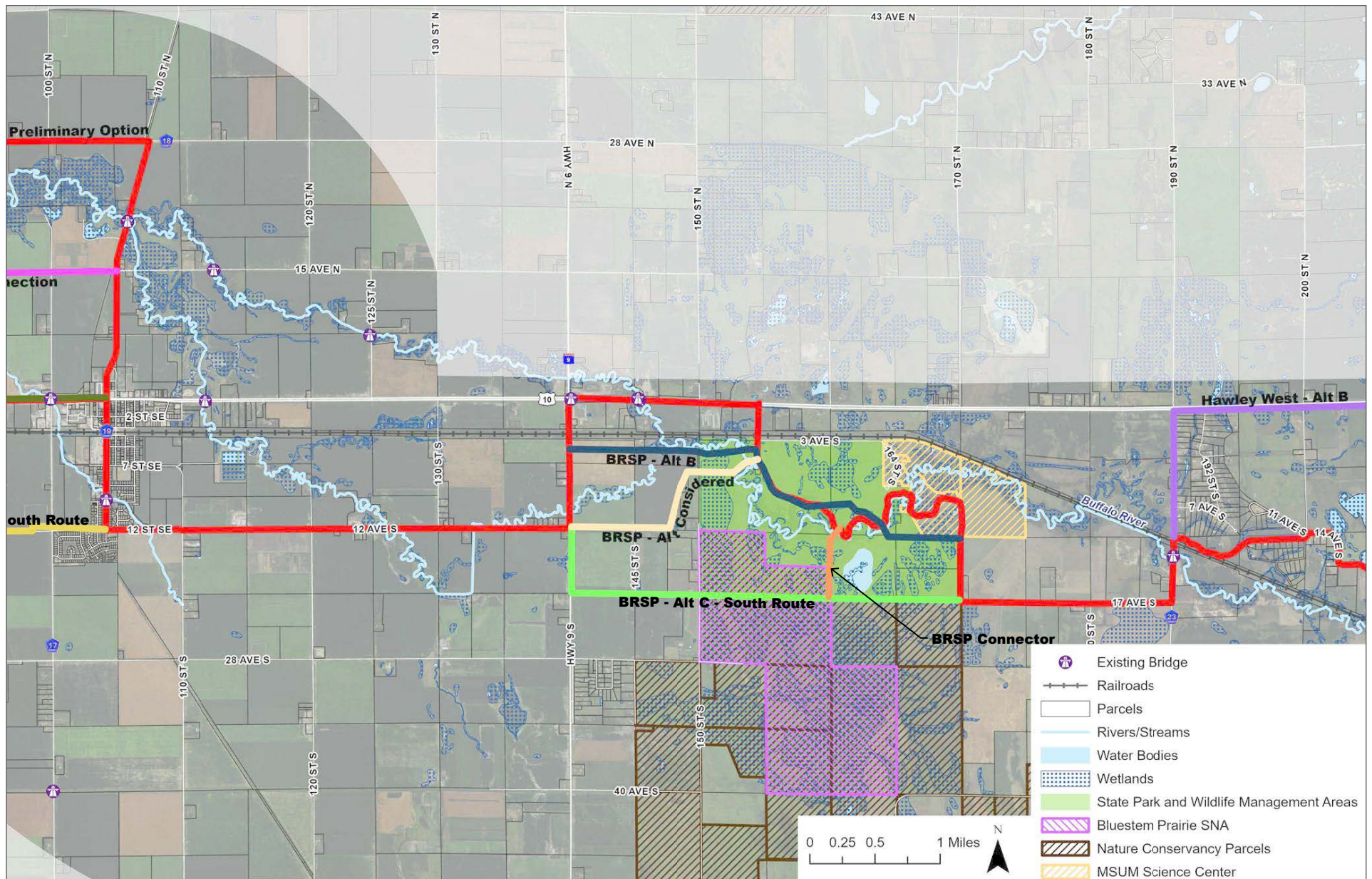
River State Park. Alternates A and B access the park south of the BNSF Railroad tracks, across private property. These alternates pose several challenges, including impacts on private property, and to sensitive landscapes within Buffalo River State Park. Another route that was considered, Alternate C- South Route extended east along 17th Avenue on the south side of Buffalo River State Park, through sensitive landscapes including the Bluestem Prairie Scientific and Natural Area. For this reason, a third alternative was identified to extend the trail north along the east side of Highway 9, crossing underneath the BNSF Railroad Bridge, then heading east on the south side of the Highway 10 right-of-way, then south on 155th Street, under a second BNSF Railroad Bridge, and into Buffalo River State Park.



State Highway 9 under BNSF Bridge west of Buffalo River State Park.



Old golf course bridge over the Buffalo River in MSUM Science Center property.



SEGMENT 2 PREFERRED ALIGNMENT

The preferred alignment route follows 12th Avenue S east toward State Highway 9. At State Highway 9, the trail would extend north on the east side of the roadway. The BNSF Bridge over State Highway 9 has limited shoulder space with concrete piers close to the roadway edge and sloped abutments. The trail could be installed on top of the sloped abutment with approach ramps on both sides. From this bridge, the trail would extend north to Highway 10, then east to 155th St S. The trail would extend down the west side of 155th St S until it enters Buffalo River State Park. The BNSF Bridge over 155th St S has room to accommodate a trail adjacent to the roadway, but additional protection would be beneficial along the steel bridge piers.

Two alternate routes that would enter Buffalo River State Park from State Highway 9 have been identified that would extend the trail south of the BNSF tracks and the Buffalo River. In these alternatives, the trail would enter the park on the west boundary and could follow unpaved park trails toward the river. A new trail crossing over the Buffalo River would be required, but this would provide access to the park at the approximate location of the park headquarters.

The DNR manages Buffalo River State Park and is ultimately responsible for all trail planning into and through park property. Through the trail planning process, the DNR raised concerns about the highly sensitive unique native landscapes within the park, and the documented and undocumented archaeological sites in the park. Buffalo River State Park is a very sensitive landscape, and planning for the Heartland Trail into

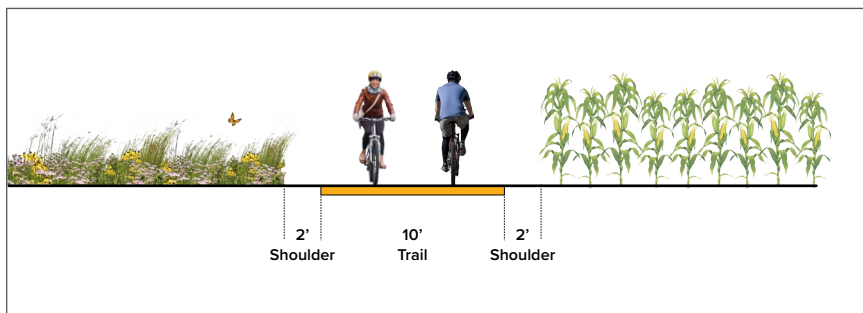


FIGURE 22: Agricultural / park independent trail section

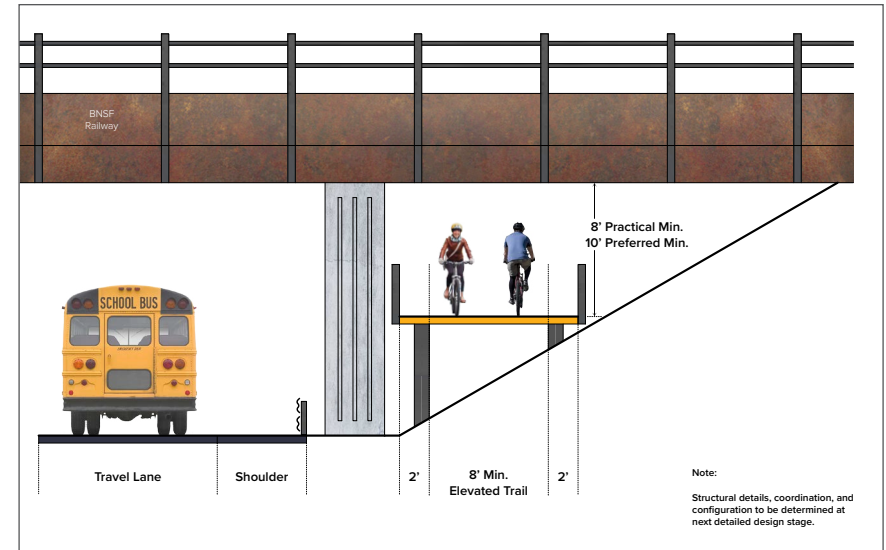


FIGURE 23: Trail concept for State Highway 9 under the BNSF Bridge

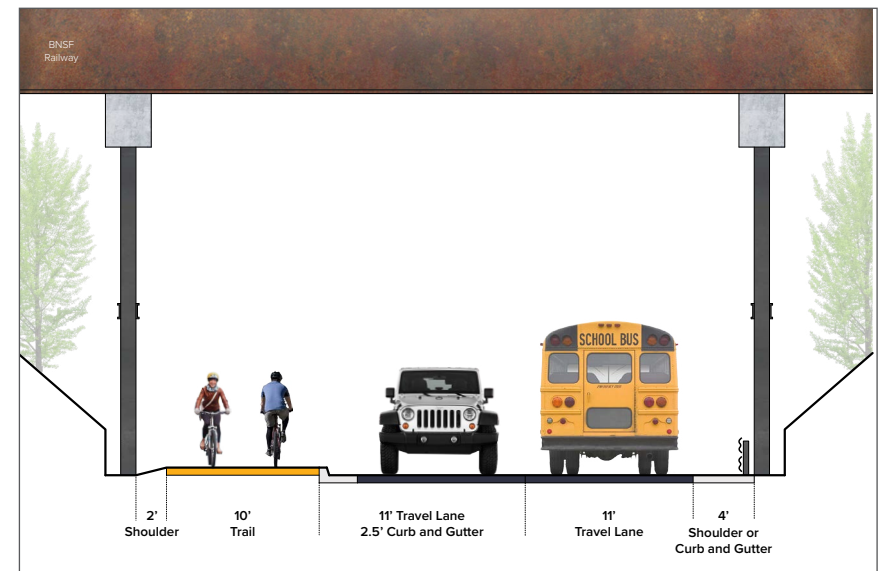


FIGURE 24: Trail concept for 155th St under the BNSF Bridge at Buffalo River State Park entrance

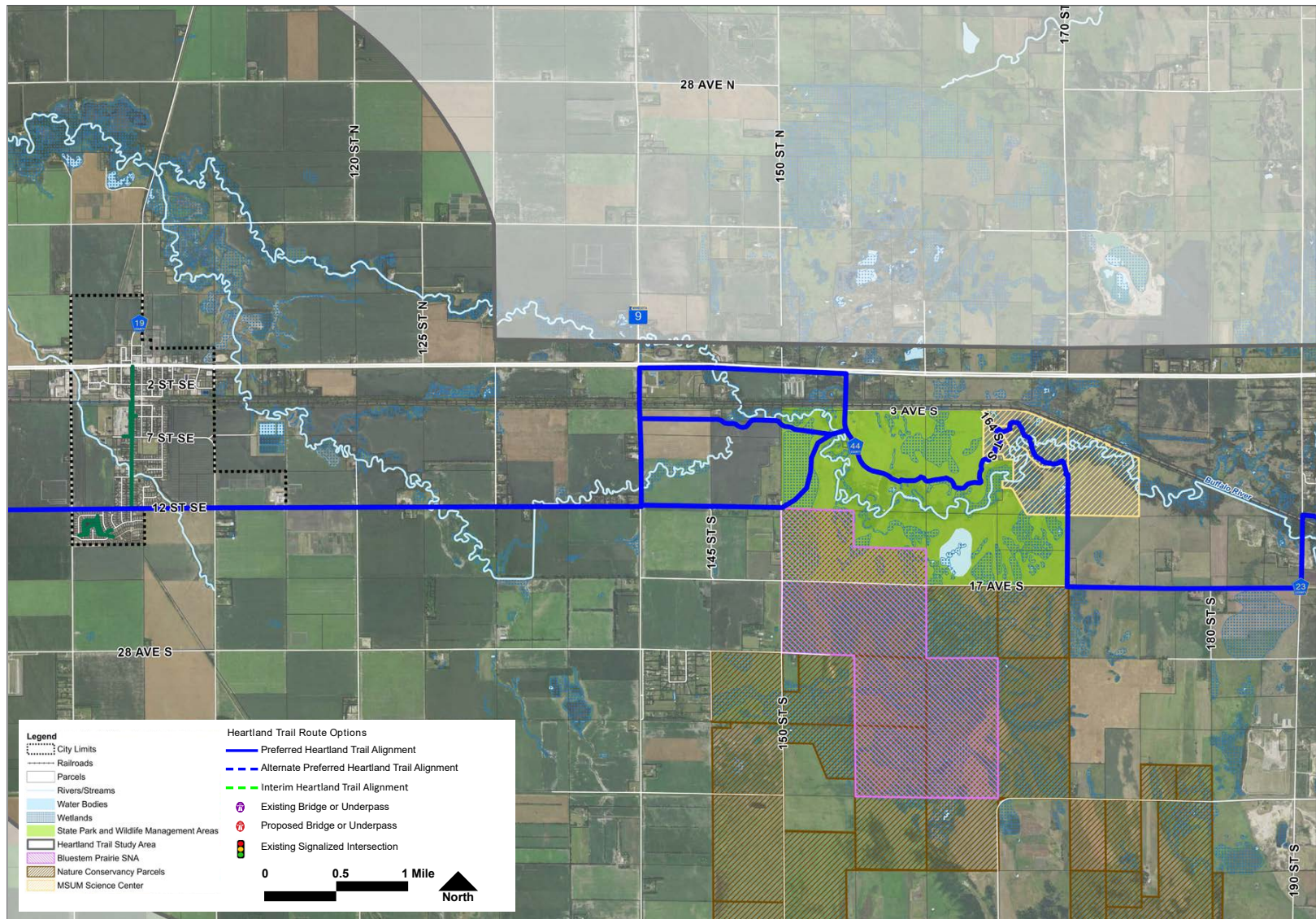


FIGURE 25: Segment 2: Preferred alignment

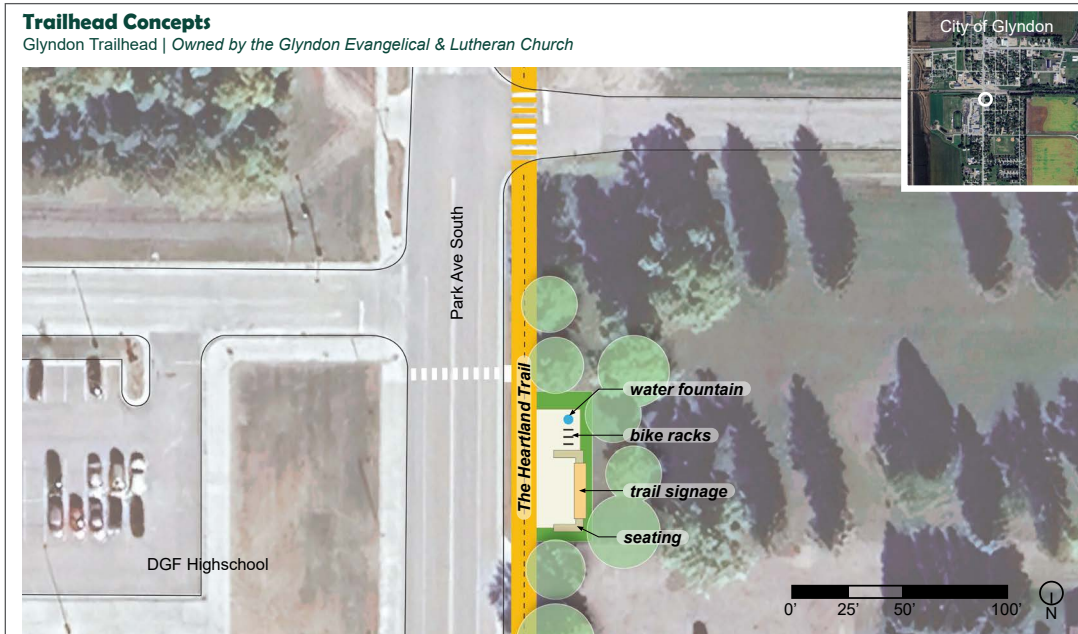


FIGURE 26: Glyndon Trailhead on Parke Avenue S adjacent to the Glyndon Lutheran Church

and through the park will require special coordination with DNR Parks and Trails staff.

The MSUM Science Center is a separate public entity that manages a substantial amount of property on the east side of Buffalo River State Park. While much of the property was once a public golf course with several crossings of the Buffalo River, concerns remain about impacts to archaeological and cultural sites on the property. Additional coordination and planning will be needed with MSUM about trail access through the Science Center property.

After exiting the MSUM property, the trail would extend south along the west side of the section line on public property toward 17th Avenue.

Segment 3: Buffalo River State Park to Hawley

KEY CONSIDERATIONS

Key considerations for Segment 3 include existing the park and MSUM properties, crossing the Buffalo River and the BNSF tracks on County Road 23, tight right of way along 12th Avenue in the Muskoda area, crossing improvements at the Highway 10 signal in Hawley, a trailhead in downtown Hawley, and improvements to the Valley Street Bridge under the BNSF tracks.

MACRO-SCALE ANALYSIS

Multiple options were considered to extend the trail east from Buffalo River State Park to Hawley. After exiting Buffalo River State Park and MSUM Science Center property, the trail would extend east on 17th

Avenue toward County Road 23. It then heads north on County Road 23 toward Muskoda, crossing the Buffalo River and, shortly after, the BSNF tracks at-grade. Two alternate trail alignments were considered to extend from the BNSF tracks on County Road 23 to Hawley. The preferred alternative is to run the trail along the north side of 12th Avenue in Muskoda east from County Road 23 toward Lake Maria, then east on 12th Avenue to 220th Street, and across private section line land between 220th Street and 230th Street, then north along County Road 31/230th Street to the existing Highway 10 traffic signal in Hawley. A second option, Alternate B, extends the trail along County Road 23 to Highway 10 and then east toward Hawley along the south side of Highway 10 right-of-way.

Several alternatives were identified to extend the trail into and around Hawley from the south. In addition to following County Road 31/230th Street north to Highway 10 in Hawley, several trail options were identified that crossed the BNSF tracks and extended through the Hawley Golf



County Road 23 Bridge over the Buffalo River.



14th Avenue S on the south shore of Lake Maria.

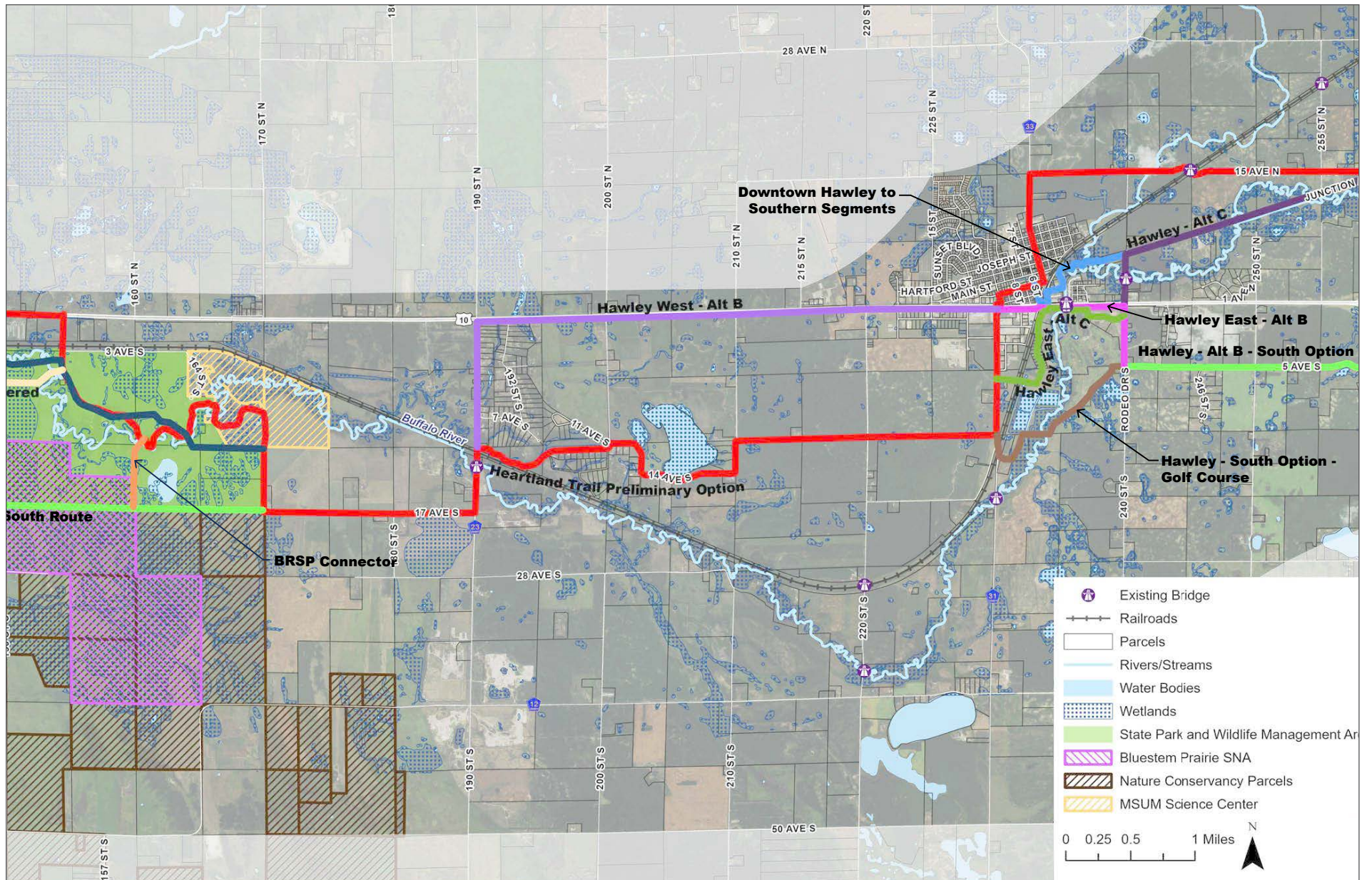


FIGURE 27: Segment 3: Macro-scale analysis.

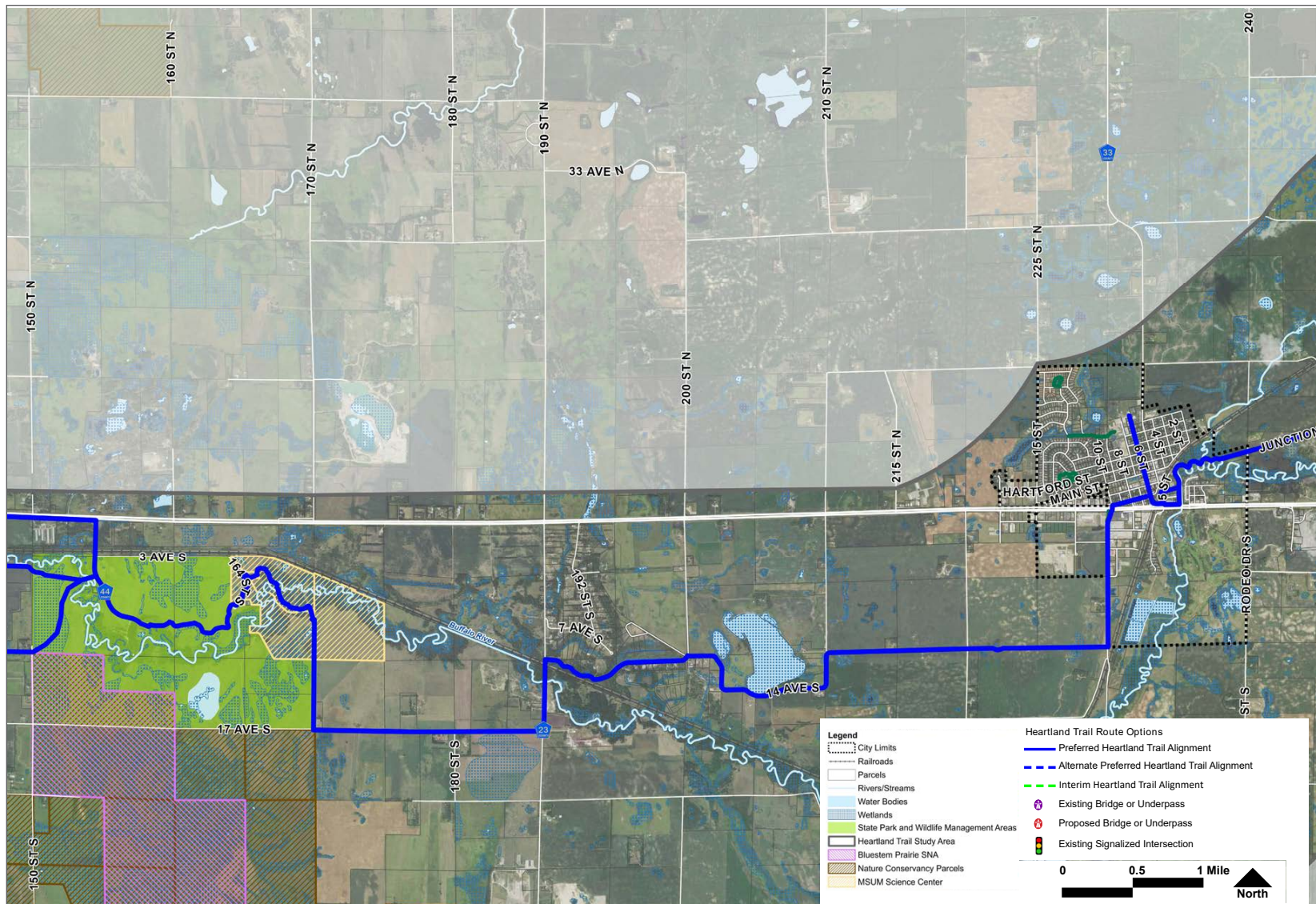


FIGURE 28: Segment 3: Preferred alignment

Course and then north on Rodeo Drive. These options would require a new at-grade crossing of the railroad, a new bridge over the Buffalo River, and a new grade-separated crossing of Highway 10. A third option was identified that would extend the trail along the south side of Highway 10 through Hawley, then south on Rodeo Drive, and east on 5th Avenue toward Becker County.

SEGMENT 3 PREFERRED ALIGNMENT

East of Buffalo River State Park and MSUM, the preferred alignment of the trail would extend east along 17th Avenue to the intersection with County Road 23. 17th Avenue is a gravel road that has eight parcels on the north side. 17th Avenue is like 12th Avenue on the west side of the park in that the road is on a prescriptive easement. Future trail development would likely require acquisition of additional easements or right of way along the roadway. The trail would cross County Road 23 at the intersection with 17th Avenue and head north on the east side of County Road 23 crossing the Buffalo River and then the BNSF railroad tracks. The bridge over the Buffalo River is currently not wide enough to accommodate a trail, so the structure would need to be widened for a trail, or a separate bridge structure adjacent to the roadway bridge would need to be constructed. The railroad crossing would be at-grade and would require installing a new pedestrian crossing with crossbars, flashing lighting, and approach signage. It is possible that the entire crossing, including the roadway, will need to be upgraded at the time the trail is developed. Further coordination with BNSF Railroad would be required to coordinate agreements and design details.

From the at-grade railroad crossing the trail would extend east along 12th Avenue S, an unmaintained township road. The first half mile east of 12th Avenue is challenging because there is no public right-of-way



FIGURE 29: At-grade crossing of the BNSF tracks at Highway 23 in Muskoda

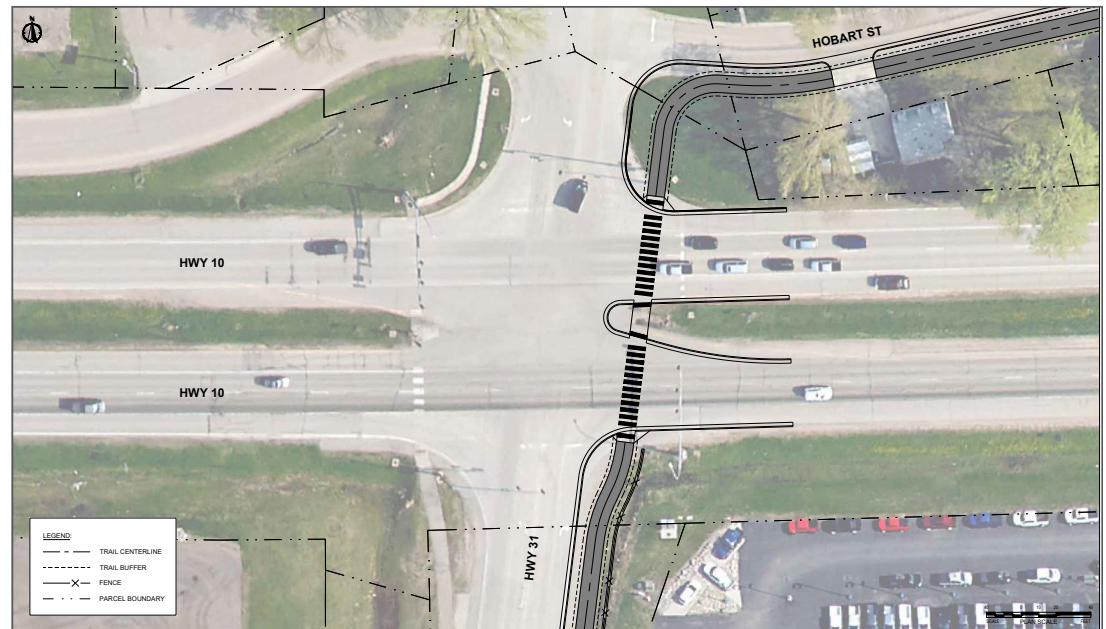


FIGURE 30: New east side trail crossing of Highway 10 in Hawley at the existing Highway 31 signal

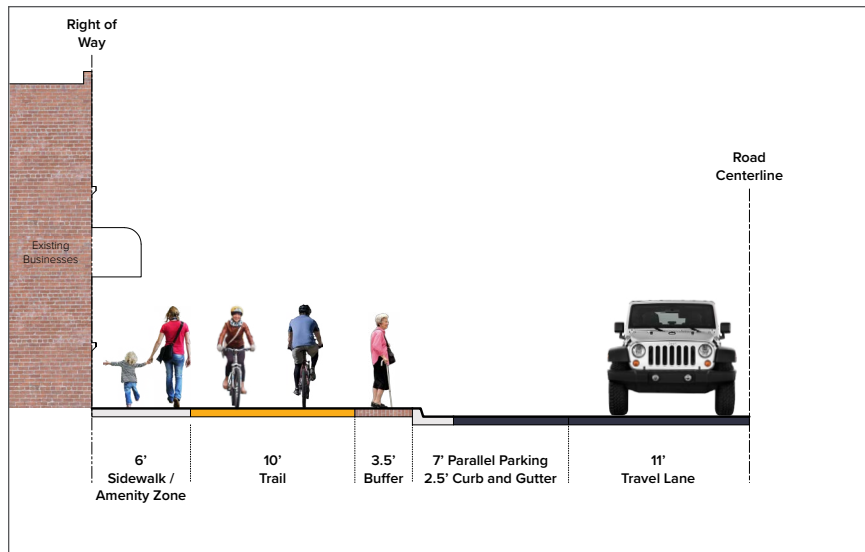


FIGURE 31: Trail concept for downtown Hawley spur to school

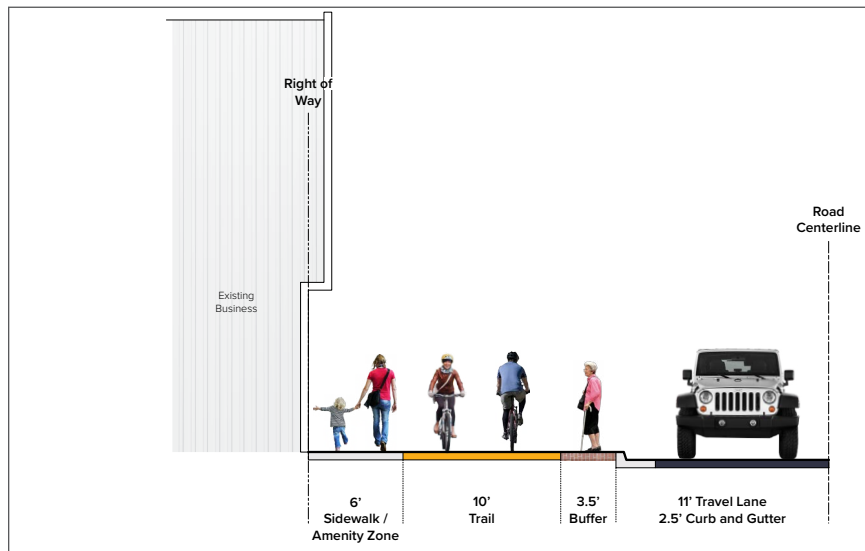


FIGURE 32: Trail concept for downtown Hawley at 6th St

to accommodate a trail, with only a narrow easement for the existing minimum maintenance township road. The next half mile ending at 14th Avenue S has been platted, and an easement is set aside for a future trail along the north side of the road. The trail would then extend east on 14th Avenue S. around the south side of Lake Maria. This is a challenging location because the roadway is within 30 feet of the south shoreline, leaving little room for the trail. Options to accommodate a trail could include shifting the roadway several feet south to make room for the trail or placing the trail on the south side of 14th Avenue for the segment along the south side of Lake Maria. East of Lake Maria, the trail would extend north for a short segment along 210th Street and then east along 12th Avenue to the intersection with 220th Street. From 220th Street east to 230th Street, the trail would extend across agricultural properties, following the alignment of the winter snowmobile trail located on the section line. From County Road 31, the trail would head north on the east side of the street toward Highway 10.

The Highway 10 and County Road 31 signal currently includes pedestrian crossing facilities on the west side of the intersection. To establish a safer connection into downtown Hawley, the trail would cross on the east side of the intersection and would require additional pedestrian crossing improvements including countdown timers, crosswalk, and pedestrian ramps. Installing the trail on the east side of the intersection provides a safer connection to Hobard Street and downtown Hawley, eliminating the need to cross the challenging intersection of the Frontage Road on the north side of the signalized Highway 10 intersection.

In Hawley, the trail would extend on the south side of Hobard Street to a new trailhead facility that could be constructed on city-owned property at the southeast corner of Hobard Street at 6th Street. The trailhead would include trail amenities, a shade structure and on-street parking for trail users. The trailhead will be a year-round asset, with trail access in the winter months for fat tire bicycles and snowmobiles.

From downtown Hawley, the trail would extend east on Valley Street under the BNSF tracks toward the Buffalo River. The current Valley Street Bridge is narrow with height restrictions, allowing only one vehicle to pass at a time. Modifications could be made to the existing underpass to accommodate a trail and a single lane of traffic, but the preferred option is to reconstruct the Valley Street Bridge to accommodate two lanes of traffic and an independent trail on the north side.

East of the BNSF Valley Street Bridge, the trail would head east to the west bank of the Buffalo River where it would extend north in public right-of-way. The Buffalo River was re-meandered north of Hobart Street, and the desired trail location is on the north side of the meandering river heading east to Junction Avenue N.

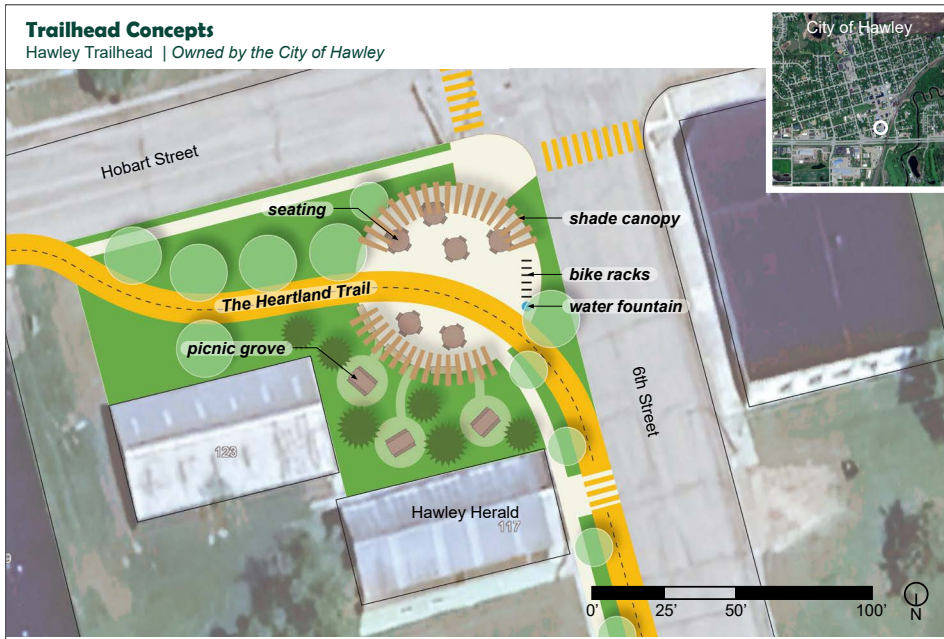


FIGURE 33: Trailhead concept for downtown Hawley at Hobart St and 6th St

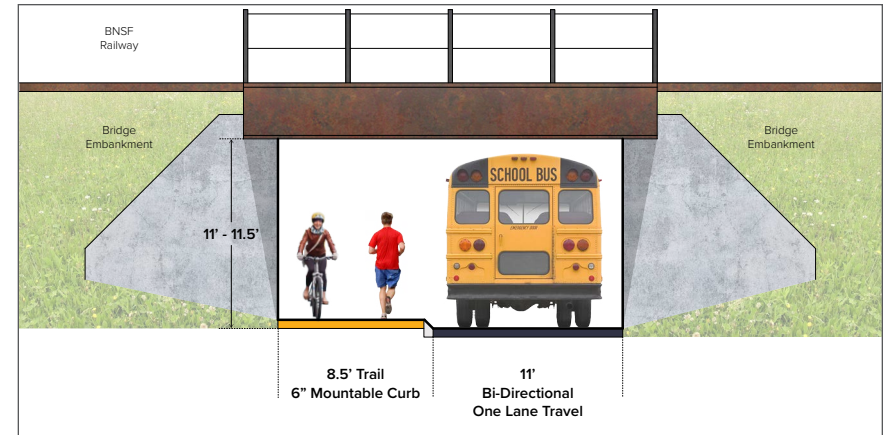


FIGURE 34: Valley St Bridge modifications to existing condition

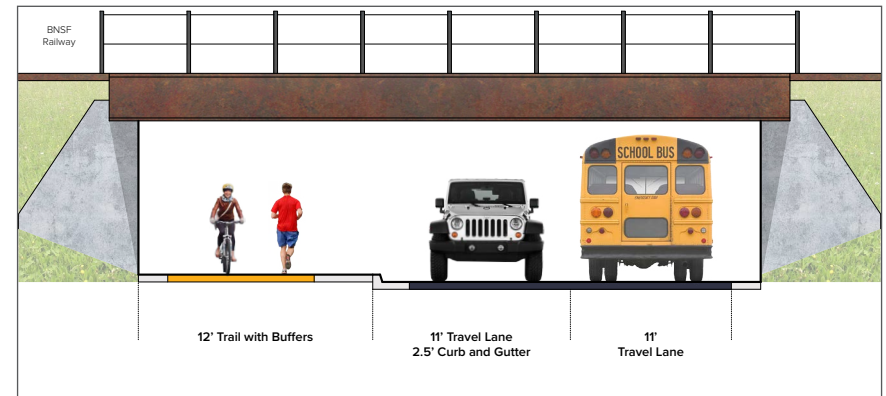


FIGURE 35: Valley St Bridge potential future concept with trail and two-lane vehicle traffic

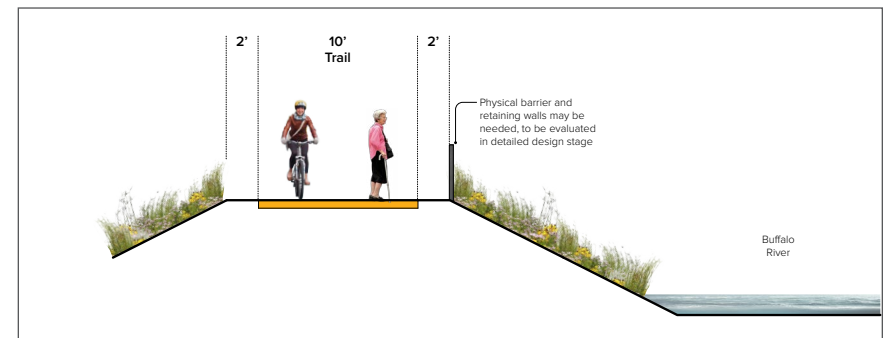


FIGURE 36: West side of Buffalo River in Hawley, looking northeast

Segment 4: Hawley to the Becker County Line

KEY CONSIDERATIONS

Key considerations for Segment 4 include boardwalks at low-lying wetland locations along Junction Avenue, crossing State Highway 32 and the Buffalo River, a narrow underpass under the BNSF tracks and considerations for connecting with the Becker County segment of the Heartland Trail.

MACRO-SCALE ANALYSIS

Segment 4 extends the trail from Hawley to the Becker County line. Previous trail planning in Becker County identified three potential trail connections into Clay County, including a trail south of Highway 10 along Becker County Road 4/Clay County Road 10 that extends toward Big Cormorant Lake. This trail option was not considered in this study because it is far south of the DNR Master Plan search corridor.



Junction Avenue northeast of Hawley.

The other two trail options included a connection along Highway 10, and along Junction Avenue. Three alternatives were considered for this area, including the south option that extends north on 270th Street from Highway 10 and east on 15th Avenue. This option would require an off-road connection to the north, crossing the BNSF tracks to connect with Junction Avenue at the County Line. A second option is extending the trail along the south side of Highway 10 right-of-way to the Becker County line. While a trail along Highway 10 would provide ample right-of-way, a trail along Highway 10 is highly undesirable by the public.

The third trail alternative considered extends north on 5th Street out of Hawley, then east on 15th Avenue N toward Highway 32. This option would require crossing the BNSF tracks on or adjacent to a single-lane wooden bridge that would require major improvements. East of Highway 32 the trail extends east along Junction Avenue crossing under the BNSF tracks in a narrow roadway underpass that would require modifications for trail access. From the tracks, the trail would extend east along Junction Avenue to the Becker County line.



Existing Junction Avenue underpass at the BNSF tracks near the Becker County line.

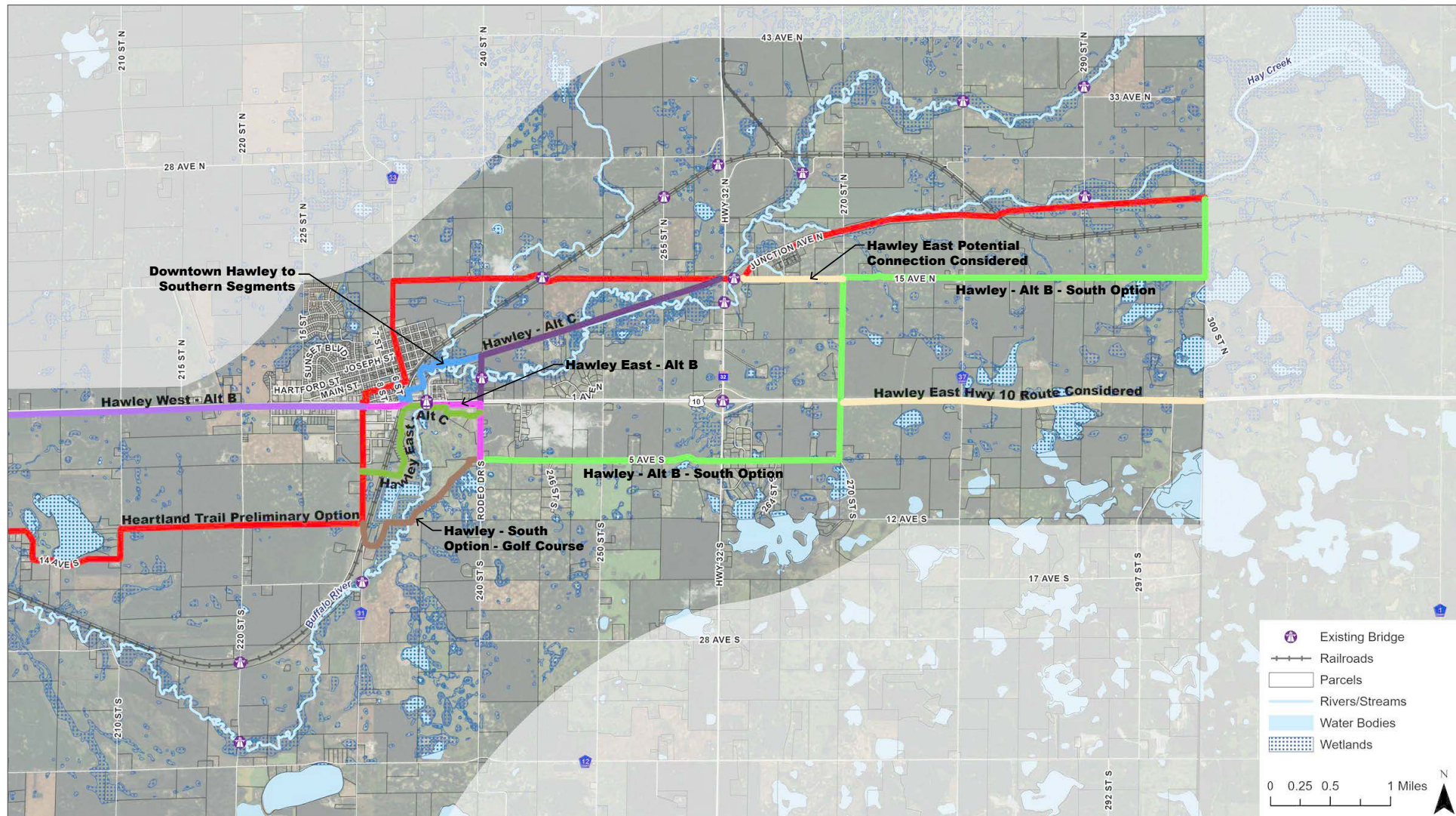
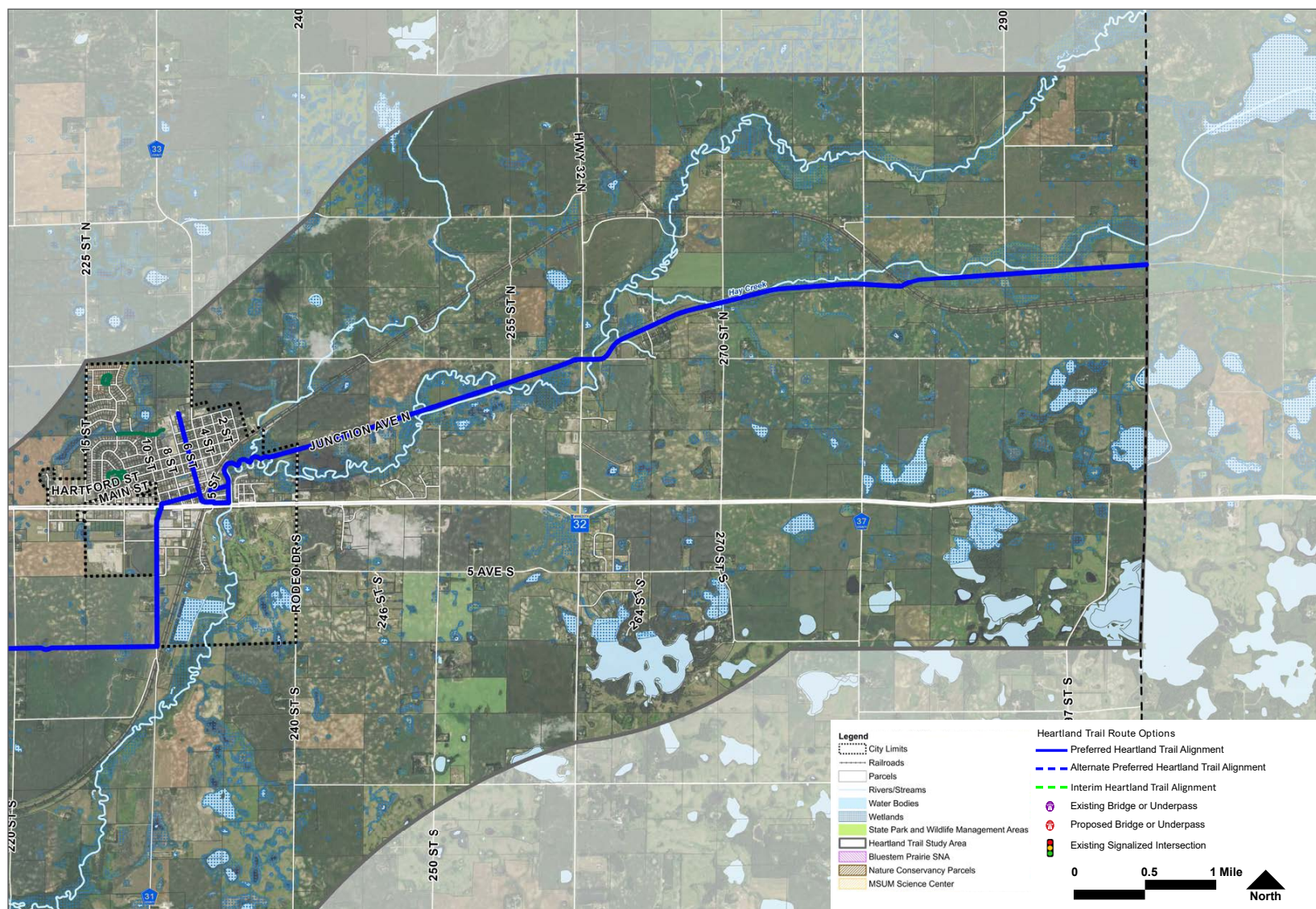


FIGURE 37: Segment 4: Macro-scale analysis.



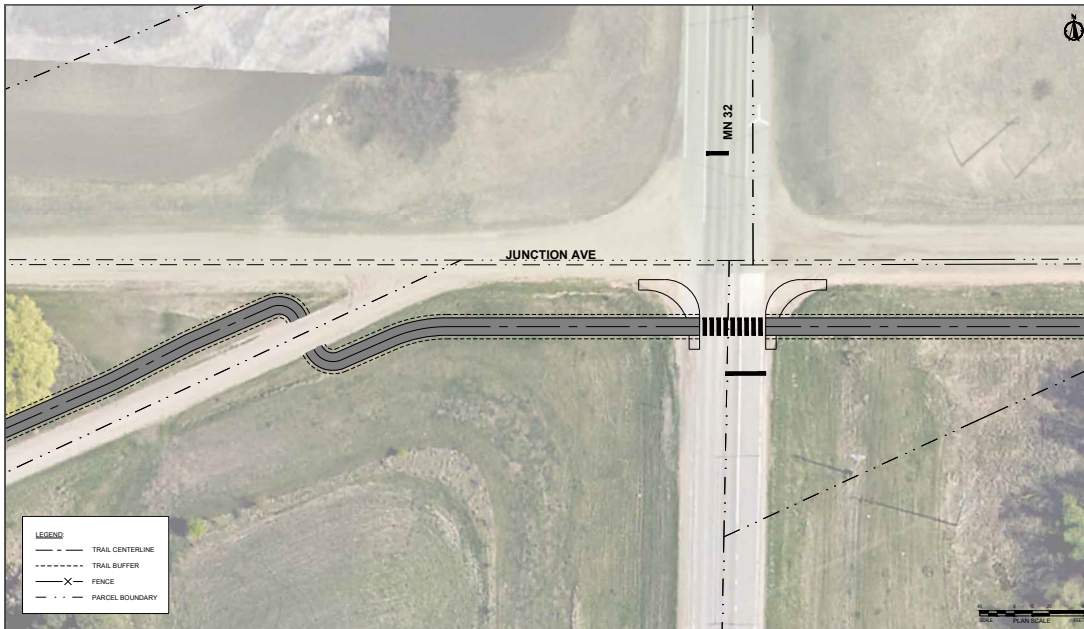


FIGURE 39: Trail crossing concept at the intersection of Junction Avenue and MN 32

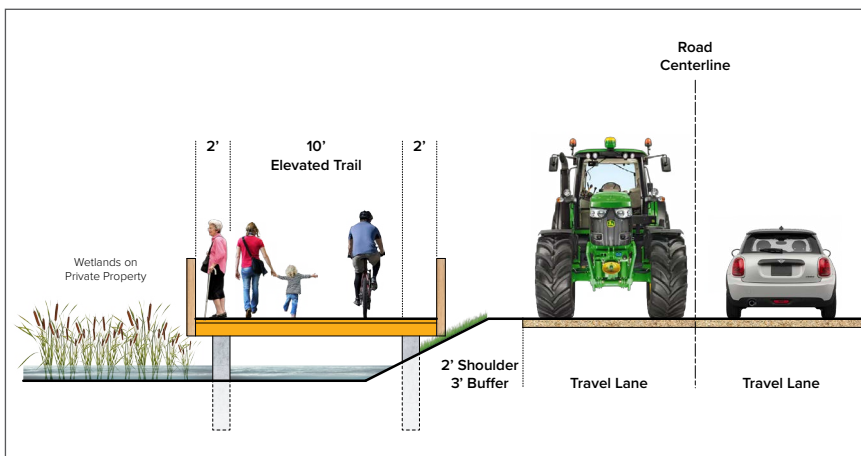


FIGURE 40: Junction Avenue northeast of Hawley

SEGMENT 4 PREFERRED ALIGNMENT

The preferred trail alignment from Hawley to the Becker County line follows Junction Avenue diagonally to Highway 32, then east to the County line. In Hawley, from 240th Street N, Junction Avenue would extend northeast following the Buffalo River. The road is gravel, and a trail could be placed on the north side adjacent to the gravel travel lane. There are several segments where the trail would potentially impact wetlands, and a boardwalk could be constructed to minimize impacts to the wetlands.

The trail will cross Highway 32 at-grade, which would require advanced roadway signage and crossing markings. Shortly after crossing the highway the trail would cross the Buffalo River. The existing bridge structure could be modified to accommodate a trail with striping. Junction Avenue is a gravel road and a paved trail adjacent to the roadway would work best with some separation to

prevent gravel from spilling onto the trail. The trail would pass through Winnipeg Junction, crossing 270th Street and 280th Street at-grade.

Junction Avenue passes under the BNSF Railroad via an old, single lane, offset underpass that accommodates only one lane of vehicle traffic with poor sightlines. This underpass would need to be modified to accommodate a trail and roadway. The underpass is currently insufficient for some vehicles including farm equipment, so when future improvements are made, accommodation should be included for a trail.

East of the BNSF underpass, the trail would extend on the north side of Junction Avenue to the Becker County line. This segment of trail would need to be coordinated with Becker County for trail design and development and would likely be constructed at the same time future trail improvements are made on the Becker County side of the county line.

Parcel Ownership

The preferred trail alignment for the Heartland Trail in Clay County extends along roadways of varying jurisdictions, including township roads, county roads and state highways. During the analysis phase, the planning team noted that several segments of the preferred alignment extend along roadways that do not have dedicated public right-of-way. While not consistent, typically the township roads and some segments of county roads along the proposed trail alignment have prescriptive easements with the adjacent parcel boundaries extending to the center of the roadway. This is common along 15th Avenue between Moorhead and Dilworth, along 12th Avenue between Glyndon and State Highway 9, 17th Avenue east of Buffalo River State Park, segments of 12th and 14th Avenues in the Muskoda area, and portions of Junction Avenue northeast of Hawley. The map below highlights the locations where

there is full or partial public right-of-way underlying roads along the corridor, and segments that do not have public right-of-way.

Parcel ownership for the study was based on the Clay County online interactive property map. The planning team picked several parcels along the proposed trail corridor to investigate whether any public easements or other access legally granted. The results showed that in general, the parcels reviewed did not have public easements or other access legally granted access.

As planning for the Heartland Trail in Clay County continues, it would be beneficial to conduct a parcel analysis of the proposed corridor to confirm, parcel by parcel, the ownership of the roadways along the corridor. This will provide valuable information for the agencies developing the trail as to whether easements or property ownership is needed for future trail development.

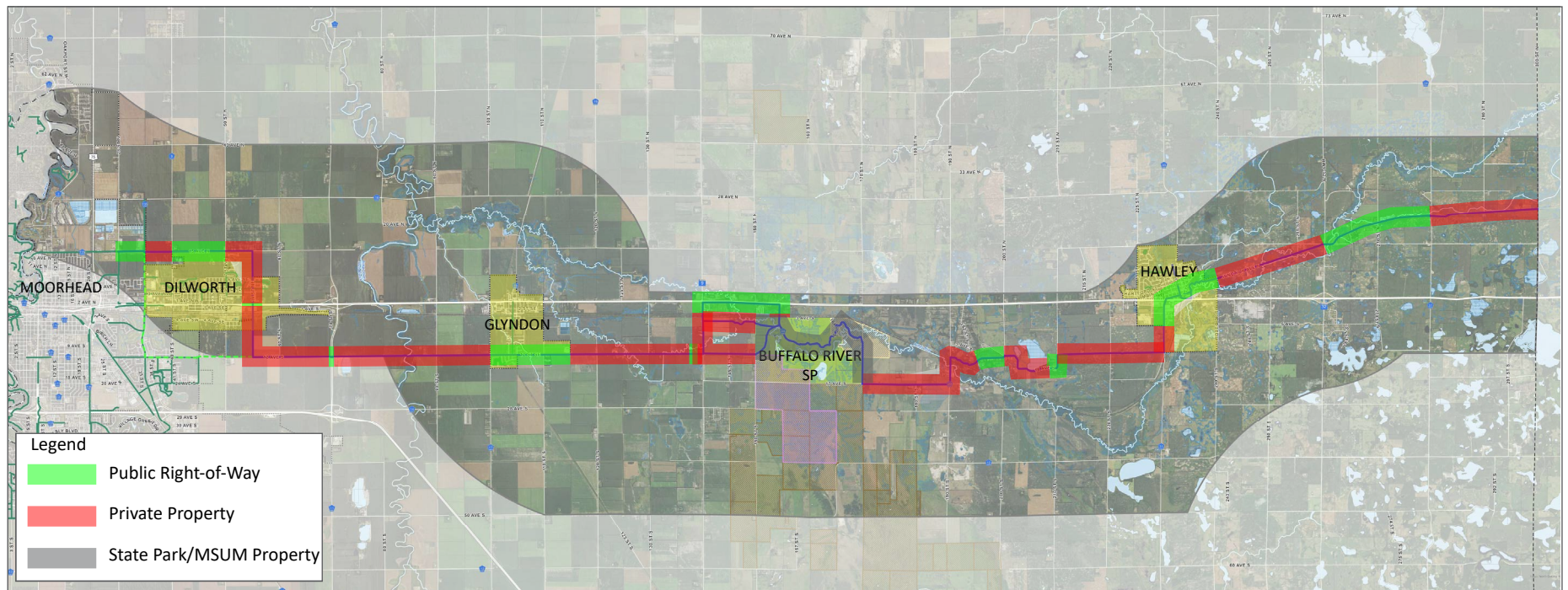


FIGURE 41: Right-of-way along the corridor

Snowmobile Use on the Heartland Trail

The Heartland Trail in Clay County will be developed as a multi-use, multi-seasonal trail with a paved, ten to twelve-foot-wide surface. The trail will be designed for pedestrians, bicycles and other non-motorized uses such as hiking, dog walking, and in-line skating or cross-country skiing. If the Clay County segment of the Heartland Trail is designated as a State Trail, like other segments of the Heartland State Trail in Becker and Hubbard Counties, then winter use must include snowmobiles, where the width of right-of-way permits, and local jurisdictions allow their use. Clay County has an extensive snowmobile trail system in-place, and the Heartland Trail corridor could supplement this trail network, providing several key trail connections. The following map illustrates the proposed snowmobile route for the Heartland Trail in Clay County. During winter months, segments of the paved trail may be groomed to accommodate snowmobile traffic. Segments of the proposed

Heartland Trail that cannot accommodate snowmobiles because of use restrictions will divert to existing snowmobile trails to fill the gaps. Because the Heartland State Trail's uses includes snowmobiles in the winter, the continuity of the trail for snowmobiles cannot be served by local ordinance. If local ordinance prohibits snowmobiles, the State Trail would either have to follow a route that avoids the prohibition, or a permanent alternative winter corridor would need to be identified around the community. In many cases the existing Grant-In-Aid (GIA) Snowmobile Trail system provides what the users want and the State Trail would not be a preferred corridor. In that case the State Trail would represent a secondary option should the GIA trail system change and/or permits could not be secured. It should be noted that along Highway 10 and adjacent roadways, two-way night time snowmobile traffic would not be permitted, requiring further consideration of the snowmobile accommodation during future phases of trail planning and development.

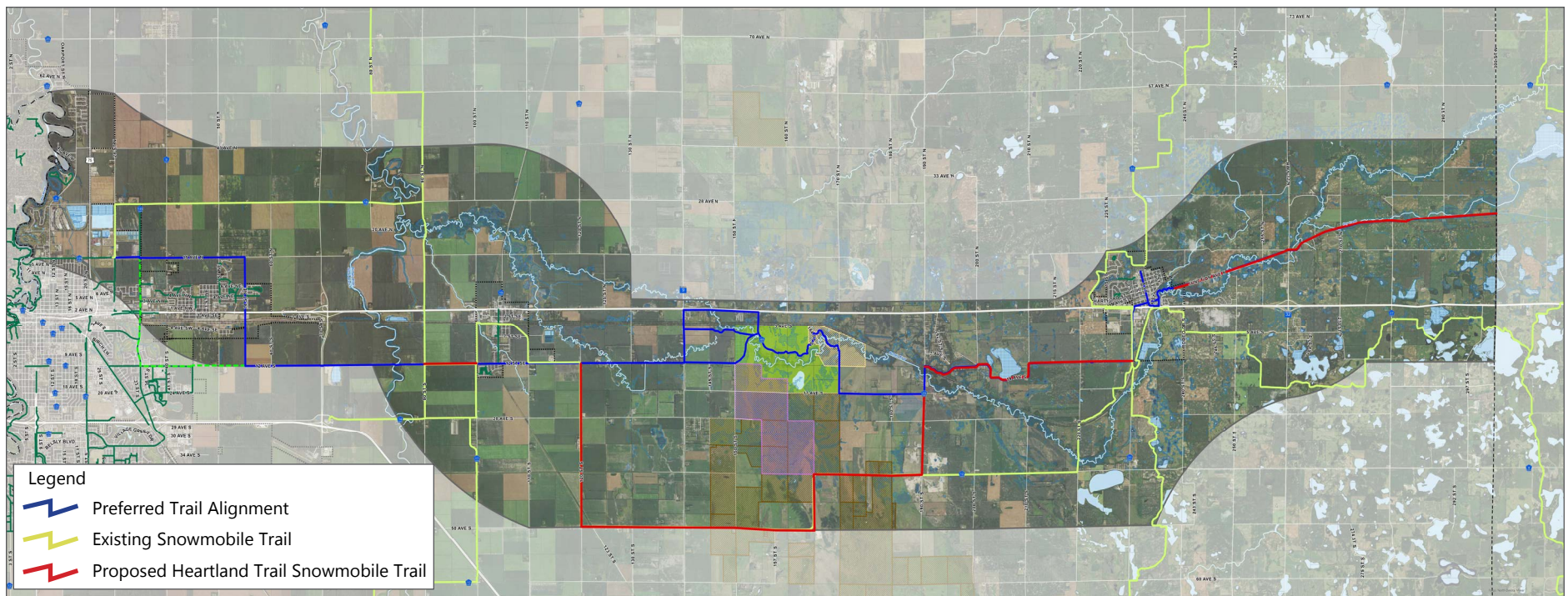


FIGURE 42: Snowmobile routes

5

CHAPTER 5

IMPLEMENTATION PLAN

State or Regional Trail

Other Funding Opportunities

Designing and developing the Heartland Trail in Clay County may take several years or decades to fully implement. The proposed trail will be over twenty-five miles long and is proposed to extend along public roadways, across private property, and it will connect with four communities and Buffalo River State Park.

PHASING PLAN

To help guide the process of developing the Heartland Trail in Clay County, a phasing plan has been prepared. Making off-road trail connections to

Buffalo River State Park from the east and west sides of the corridor was a major theme during public engagement. Creating off-road trail connections between communities was another primary interest. A trail study like this allows coordination for future trail development to occur when roadways are upgraded, or when other public projects in the corridor are developed, such as bridge construction, or intersection improvements.

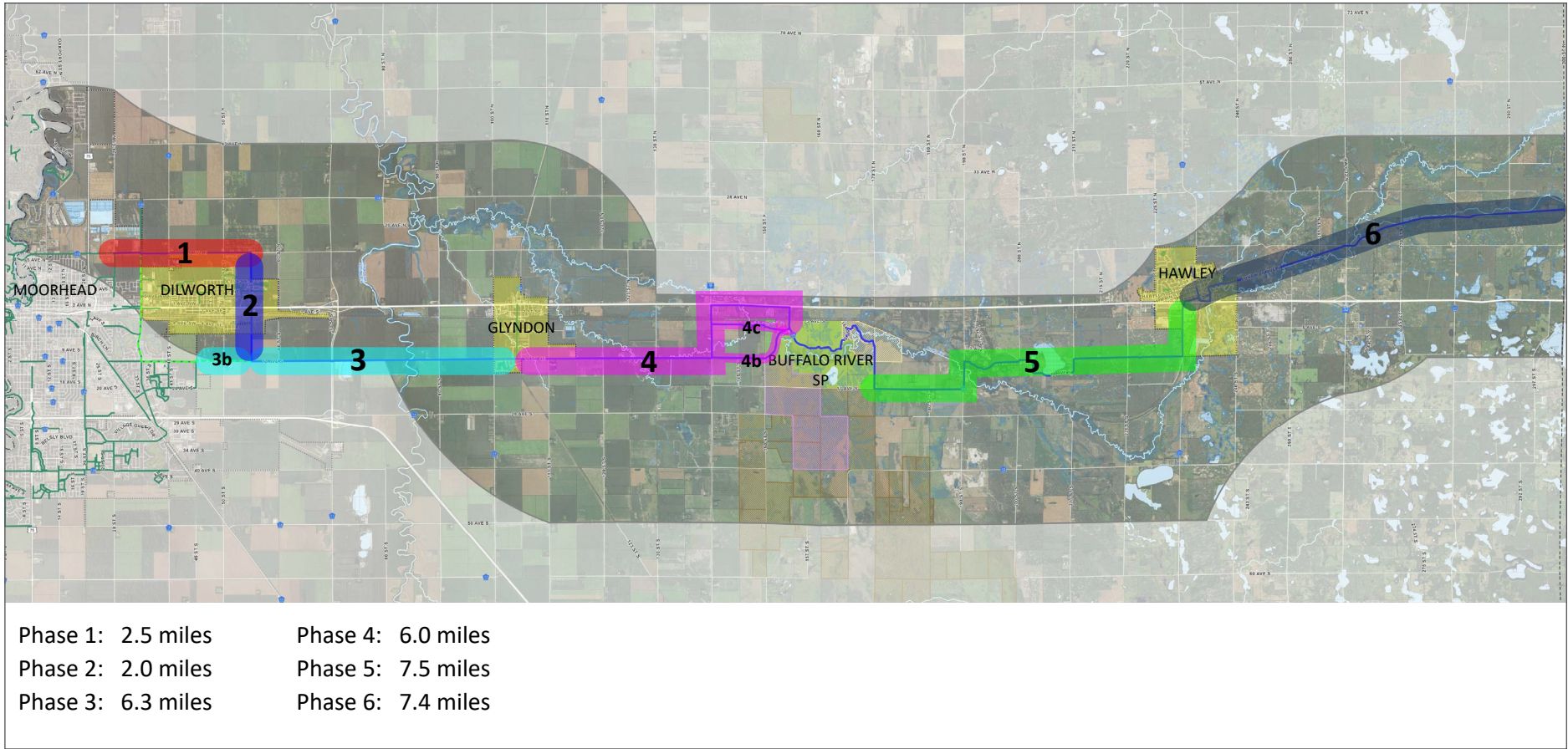


FIGURE 43: Phasing plan

STATE TRAIL OR REGIONAL TRAIL

The Heartland Trail in Clay County is a key component of the proposed state trail as identified in the Minnesota Department of Natural Resources Heartland State Trail Extension Park Rapids to Moorhead Master Plan. The Clay County segment of the Heartland Trail can be designed and constructed as a state trail, or it can be designed and constructed as a regional trail. There are advantages and disadvantages to the process of designing, implementing, and managing the two trail types. Coordination with the Minnesota Department of Natural Resources will be critical to successfully implementing the Clay County Segment of the Heartland Trail as either a regional trail or as part of the Heartland State Trail.

State Trail: If trail implementation for the Clay County segment of the Heartland Trail proceeds as a state trail, funding for design, land acquisition and construction will need to be approved by the Minnesota Legislature before work can proceed. The process for getting a project into the capital budget is explained in the following graphics. If the trail is developed as a state trail, once completed, the DNR will oversee trail maintenance activities.

The Minnesota DNR utilizes a variety of funding sources for state trail development and maintenance, including state funds, federal funds, and grants. State funds can include the General Fund, dedicated natural resource funds, funds from the State Park Revenue Dedicated Account, Legacy funds, Lottery-in-lieu, or other statutory appropriations. Decisions about state trail development are made through the Minnesota Legislature, and are not made at the by DNR staff.

Regional Trail: If the trail proceeds as a regional trail, the lead agency will need to follow the guidelines of the Greater Minnesota Regional Parks and Trails Commission (GMRPTC). The GMRPTC was established in 2013 to carry out system planning and provide recommendations to the legislature for grants funded by the Legacy Parks and Trails Fund to counties, cities, and Tribal Governments outside the seven-county metropolitan area for parks and trails of regional significance. The lead

local agency will be responsible for trail development, and for annual trail maintenance, including winter maintenance if the trail is open year-round.

The first step is to apply to the GMRPTC for designation as a regional facility. Once the project is approved as a Facility of Regional Significance, a master plan for the trail must be approved by the GMRPTC before applications for Legacy funding can be submitted. It is possible that much of the work that went into developing this trail study could be used to develop the master plan.

The GMRPTC has several types of grants available, and some have local match requirements.

OTHER FUNDING OPPORTUNITIES

A project of this size may require multiple funding sources. For a regional trail, in addition to Legacy funding or funding that is allocated by the state legislature, there may be opportunities with the following sources:

- Legislative-Citizen Commission on Minnesota Resources (LCCMR) grants
- DNR Local Trail Connections Program grants
- DNR Recreation grants
- Federal Recreational Trail Program grants
- Local businesses, foundations, and chamber of commerce donations
- PartnerSHIP 4 Health

STATE TRAIL

ADVANTAGES

- Helps complete the vision of the overall Heartland State Trail
- Consistency with existing adjacent Heartland State Trail segments (Park Rapids to Cass Lake)
- Little/no local funding needed for construction
- Maintenance paid for by state

DISADVANTAGES

- May take longer to acquire funding and approvals
- May have more restrictive guidelines (state trail specs, snowmobiles required, etc.)
- If the trail is outside of DNR Heartland State Trail Master Plan boundary, an amendment is required, requiring extra time & effort

REGIONAL TRAIL

ADVANTAGES

- More flexibility in requirements (could be outside of DNR Heartland State Trail master plan boundary, snowmobile accommodations not required, don't need to follow state trail specs)
- Less approvals required, thus speeding up process

DISADVANTAGES

- More local funding may be necessary for construction
- Maintenance costs footed by local jurisdiction(s)
- Does not fulfill the vision of the overall Heartland State Trail



Heartland State Trail - Detroit Lakes to Frazee.



Otter Tail County - Heart of the Lakes Trail.

FIGURE 44: State trail vs. regional trail designation comparison

The Minnesota Capital Budget Explained



What is the capital budget?

The capital budget primarily funds public infrastructure projects, which are owned by a government entity. These projects are mainly funded through the use of bonds.

What is a capital project?

Generally, a capital project is the acquisition or improvement of long-lived fixed assets: buildings, roads, and other infrastructure.

Capital budgets often include projects like acquisition of land, repair or construction of state facilities or state parks, as well as for local governments to repair or build bridges and parks.

What is the timeline for the capital budget?

The governor is required to submit a capital budget recommendation every even-numbered year, but can submit one every year.



How are capital projects funded?

The state pays for capital improvement projects using a variety of methods. The prevalent method is by borrowing money through the issuing of bonds. Bonds are essentially promises to repay the money borrowed at a specified time and interest rate. Additionally, local projects often combine state funds with local funding.

Questions about the process?

Contact Clark at cgoldenrod@mnbudgetproject.org

Want to know who serves on the Legislature's Capital Investment Committees?

<https://www.leg.state.mn.us/>

Sources: Minnesota Management and Budget, House Research

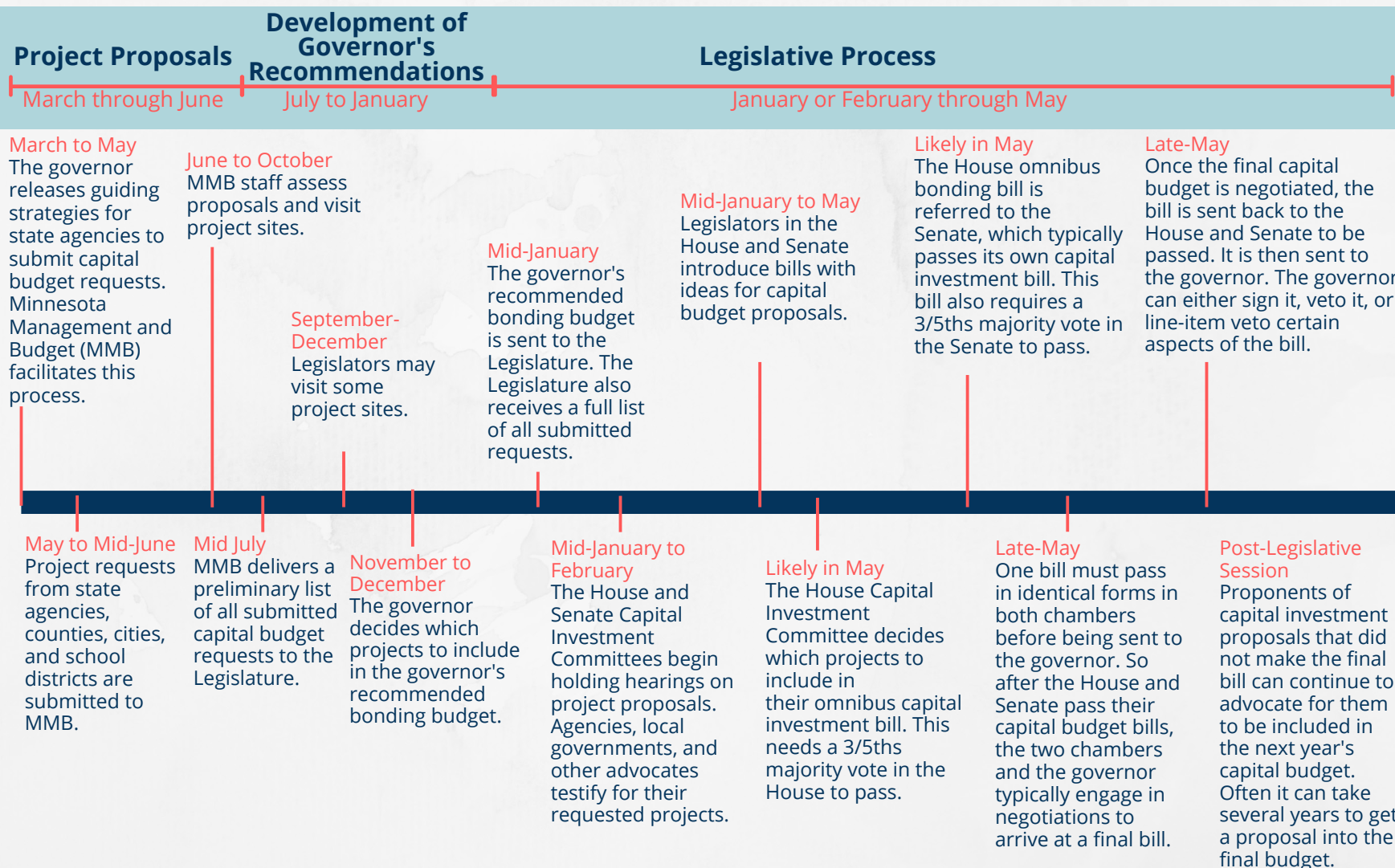
FIGURE 45: Minnesota Capital Budget process for state or regional trail development

Minnesota Capital Budget Timeline



**MINNESOTA
BUDGET
PROJECT**

An initiative of
the Minnesota Council
of Nonprofits



Research by Ben Becker

FIGURE 46: Minnesota Capital Budget timeline

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CHAPTER 6 | COST ESTIMATES

The planning team developed cost estimates for the Clay County segment of the Heartland Trail to assist Metro COG and other agencies in understanding the potential costs associated with developing the trail from Moorhead to the Becker County line. Cost estimates were prepared for each of the four segments, and were prepared in 2025 dollars.

The cost estimates include five categories including:

- Asphalt, Concrete & Trail Surfacing
- Architectural & Structural Elements
- Site Furnishings
- Utilities
- Landscaping/Site Restoration

In addition to the items included in each of the five cost categories, a contingency of 40 percent is added at the bottom of each segment estimate. This contingency includes 20 percent for design and engineering, and 20 percent for construction elements and unknowns.

A summary of segment cost is included here. More detail for each segment cost estimate is included on the following pages.

- Segment 1 total: \$18,202,000
- Segment 2 total: \$10,132,000
- Segment 3 total: \$12,332,000
- Segment 4 total: \$10,863,000

Segment 1 Planning Level Cost Estimate

UNIT LEGEND: <u>LS</u> =Lump Sum, <u>SF</u> =Square Feet, <u>SY</u> =Square Yard, <u>EA</u> =Each, <u>LF</u> =Lineal Foot, <u>CY</u> =Cubic Yards, <u>AC</u> =Acre					
Heartland Trail Segment 1 - Moorhead to Glyndon					
Planning Level Cost Estimate (2025 Dollars)					
Notes	Asphalt, Concrete, & Trail Surfacing	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
1	10' Wide Bituminous Trail	LF	\$175	48,200	\$8,435,000
3	Trail Crossing Type 2	LS	\$14,500	9	\$130,500
4	Trail Crossing Type 3	LS	\$25,000	3	\$75,000
Subtotal					\$8,640,500
Notes	Architectural & Structural Elements	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
5	Trailhead w/o Shelter	LS	\$40,000	3	\$120,000
7	200' Box Culvert Underpass	LS	\$2,000,000	1	\$2,000,000
8	150' Truss Pedestrian Bridge	LS	\$2,000,000	1	\$2,000,000
11	14' Wide Boardwalk / Ditch Crossing / Elevated Trail Underpass	LF	\$2,000	40	\$80,000
Subtotal					\$4,200,000
Notes	Site Furnishings	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
12	Trail Signage	LS	\$10,955	1	\$10,955
Subtotal					\$10,955
Notes	Utilities	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
13	Water Service	LS	\$4,000	3	\$12,000
14	Electrical Service	LS	\$2,000	3	\$6,000
15	Light Pole	EA	\$9,000	3	\$27,000
16	Rectangular Rapid Flashing Beacon	EA	\$12,500	6	\$75,000
Subtotal					\$120,000
Notes	Landscaping / Site Restoration	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
17	Trail Buffer Seed Mix	LB	\$15	2,008	\$30,125
Subtotal					\$30,125
Segment Subtotal					\$13,001,580
18	Design and Construction Contingency (40%)	LS		1	\$5,200,632
Segment Total					\$18,202,000

Segment 2 Planning Level Cost Estimate

UNIT LEGEND: <u>LS</u> =Lump Sum, <u>SF</u> =Square Feet, <u>SY</u> =Square Yard, <u>EA</u> =Each, <u>LF</u> =Lineal Foot, <u>CY</u> =Cubic Yards, <u>AC</u> =Acre					
Heartland Trail Segment 2 - Glyndon to BRSP					
Planning Level Cost Estimate (2025 Dollars)					
Notes	Asphalt, Concrete, & Trail Surfacing	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
1	10' Wide Bituminous Trail	LF	\$175	33,000	\$5,775,000
3	Trail Crossing Type 2	LS	\$14,500	2	\$29,000
Subtotal					\$5,804,000
Notes	Architectural & Structural Elements	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
8	150' Truss Pedestrian Bridge	LS	\$1,000,000	1	\$1,000,000
10	At-grade Railroad Bridge Underpass	LS	\$80,000	1	\$80,000
11	14' Wide Boardwalk / Ditch Crossing / Elevated Trail Underpass	LF	\$2,000	150	\$300,000
Subtotal					\$1,380,000
Notes	Site Furnishings	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
12	Trail Signage	LS	\$7,500	1	\$7,500
Subtotal					\$7,500
Notes	Utilities	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
16	Rectangular Rapid Flashing Beacon	EA	\$12,500	2	\$25,000
Subtotal					\$25,000
Notes	Landscaping / Site Restoration	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
17	Trail Buffer Seed Mix	LB	\$15.00	1,375	\$20,625
Subtotal					\$20,625
Segment Subtotal					\$7,237,125
18	Design and Construction Contingency (40%)	LS		1	\$2,894,850
Segment Total					\$10,132,000

Segment 3 Planning Level Cost Estimate

UNIT LEGEND: <u>LS</u> =Lump Sum, <u>SF</u> =Square Feet, <u>SY</u> =Square Yard, <u>EA</u> =Each, <u>LF</u> =Lineal Foot, <u>CY</u> =Cubic Yards, <u>AC</u> =Acre					
Heartland Trail Segment 3 - BRSP to Hawley					
Planning Level Cost Estimate (2025 Dollars)					
Notes	Asphalt, Concrete, & Trail Surfacing	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
1	10' Wide Bituminous Trail	LF	\$175	46,000	\$8,050,000
2	Trail Crossing Type 1	LS	\$2,500	1	\$2,500
3	Trail Crossing Type 2	LS	\$14,500	6	\$87,000
4	Trail Crossing Type 3	LS	\$25,000	5	\$125,000
Subtotal					\$8,264,500
Notes	Architectural & Structural Elements	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
6	Trailhead w/ Shelter	LS	\$60,000	1	\$60,000
9	At-grade Railroad Crossing	LS	\$300,000	1	\$300,000
10	At-grade Railroad Bridge Underpass	LS	\$80,000	1	\$80,000
Subtotal					\$440,000
Notes	Site Furnishings	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
12	Trail Signage	LS	\$10,455	1	\$10,455
Subtotal					\$10,455
Notes	Utilities	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
13	Water Service	LS	\$4,000	1	\$4,000
14	Electrical Service	LS	\$2,000	1	\$2,000
15	Light Pole	EA	\$9,000	1	\$9,000
16	Rectangular Rapid Flashing Beacon	EA	\$12,500	4	\$50,000
Subtotal					\$65,000
Notes	Landscaping / Site Restoration	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
17	Trail Buffer Seed Mix	LB	\$15	1,917	\$28,750
Subtotal					\$28,750
Segment Subtotal					\$8,808,705
18	Design and Construction Contingency (40%)	LS		1	\$3,523,482
Segment Total					\$12,332,000

Segment 4 Planning Level Cost Estimate

UNIT LEGEND: <u>LS</u> =Lump Sum, <u>SF</u> =Square Feet, <u>SY</u> =Square Yard, <u>EA</u> =Each, <u>LF</u> =Lineal Foot, <u>CY</u> =Cubic Yards, <u>AC</u> =Acre					
Heartland Trail Segment 4 - Hawley to Becker County					
Planning Level Cost Estimate (2025 Dollars)					
Notes	Asphalt, Concrete, & Trail Surfacing	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
1	10' Wide Bituminous Trail	LF	\$175	34,000	\$5,950,000
4	Trail Crossing Type 3	LS	\$25,000	3	\$75,000
Subtotal					\$6,025,000
Notes	Architectural & Structural Elements	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
10	At-grade Railroad Bridge Underpass	LS	\$80,000	1	\$80,000
11	14' Wide Boardwalk / Ditch Crossing / Elevated Trail Underpass	LF	\$2,000	800	\$1,600,000
Subtotal					\$1,680,000
Notes	Site Furnishings	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
12	Trail Signage	LS	\$7,727	1	\$7,727
Subtotal					\$7,727
Notes	Utilities	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
16	Rectangular Rapid Flashing Beacon	EA	\$12,500	2	\$25,000
Subtotal					\$25,000
Notes	Landscaping / Site Restoration	Unit	Unit Price (in Dollars)	Quantity	Total (In Dollars)
17	Trail Buffer Seed Mix	LB	\$15	1,417	\$21,250
Subtotal					\$21,250
Segment Subtotal					\$7,758,977
	Design and Construction Contingency (40%)	LS		1	\$3,103,591
Segment Total					\$10,863,000

Cost Estimate Notes

- 1 Includes grading, 6" base material and 3" asphalt.
- 2 Includes high visibility crosswalk striping.
- 3 Includes high visibility crosswalk striping and ADA curb ramps.
- 4 Includes high visibility crosswalk striping, ADA curb ramps, trail paving, and new curb and gutter.
- 5 Includes seating, bike racks, and signage.
- 6 Includes seating, bike racks, and signage.
- 7 Includes grading, retaining walls, fencing, pump stations, and lighting.
- 8 Includes grading, abutments, retaining walls, and fencing.
- 9 Includes paving, trail crossing arms, and relocation of roadway crossing arms.
- 10 Includes curb and gutter, trail paving, and guardrails.
- 11 Includes piers, deck, and railing for boardwalks.
- 12 Assumes \$1,200 per mile for all types of trail and intersection signage.
- 13 Assumes all components included to hook to municipal water system, 50 LF.
- 14 Single-phase electrical service. Assumes above-ground poles and wiring to access site.
- 15 Price is per light pole and includes base.
- 16 \$25,000 per intersection for RRFB where identified.
- 17 Assumes native seed mix for trail buffer area.
- 18 Includes mobilization, erosion and sediment control, traffic control, and drainage allowances.

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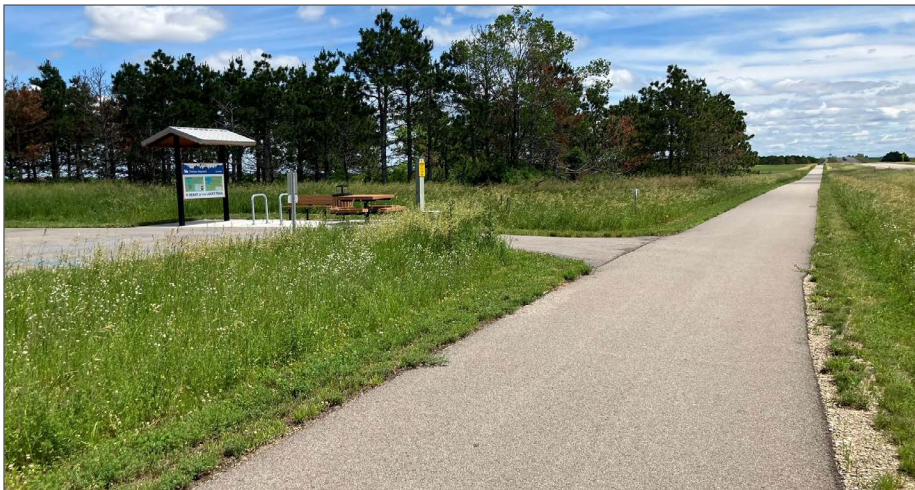
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CHAPTER 7 | CONCLUSION & NEXT STEPS

The Clay County segment of the Heartland Trail, once completed, will be an exciting and well-used trail providing off-road recreation and transportation opportunities for residents and visitors to the region. The trail will provide connectivity to Buffalo River State Park, and the cities of Hawley, Glyndon, Dilworth, and the Fargo-Moorhead metropolitan area. Once fully developed, the trail will connect to other segments of the Heartland State Trail in Becker County.

FUTURE PLANNING

Metro COG and other coordinating jurisdictions have the opportunity to move forward with planning and design development for the Clay County segment of the Heartland Trail. Whether the trail is deemed a regional facility or will be part of the Heartland State Trail is a key distinction that should be determined early in the process because funding mechanisms and sources will be different, depending on the type of trail this segment will be. It is possible to design the trail to DNR State Trail Standards and yet pursue regional trail designation to open alternate funding opportunities. This decision will need to be made in coordination with Minnesota DNR Parks and Trails staff to ensure appropriate channels are followed.



Rest stop on the Heart of the Lakes Trail in Otter Tail County.

CONNECTION TO BUFFALO RIVER STATE PARK

Buffalo River State Park is a primary destination for the Clay County segment of the Heartland Trail. Responses received during the public engagement process made this quite clear. Trail development within state parks is handled by the Parks and Trails Division of the Minnesota DNR. Connections to the park on the west side and through the MSUM Science Center on the east side will need to be studied further to understand limitations with archaeological, cultural and high-quality natural resources that are abundant in and around the state park. Further analysis is needed in this area.

FUTURE COORDINATION

The next steps in the planning and trail development process may be a joint effort between local agencies, including Clay County, cities along



Frazee to Detroit Lakes segment of the Heartland State Trail.

the corridor, and Metro COG. Ideally, coordination between multiple agencies would occur, providing more guidance and support for trail development.

PARCEL ANALYSIS

Much of the proposed Heartland Trail in Clay County follows road corridors. As noted earlier, additional research is needed to determine property ownership along the proposed trail route. Conducting a parcel analysis of the proposed corridor to confirm, parcel by parcel, the ownership of the roadways along the corridor. This will provide valuable information for the agencies developing the trail as to whether easements or property ownership is needed for future trail development.



Heartland State Trail County Road 10 bridge crossing in Frazee.



Hawley Co-op grain elevator.