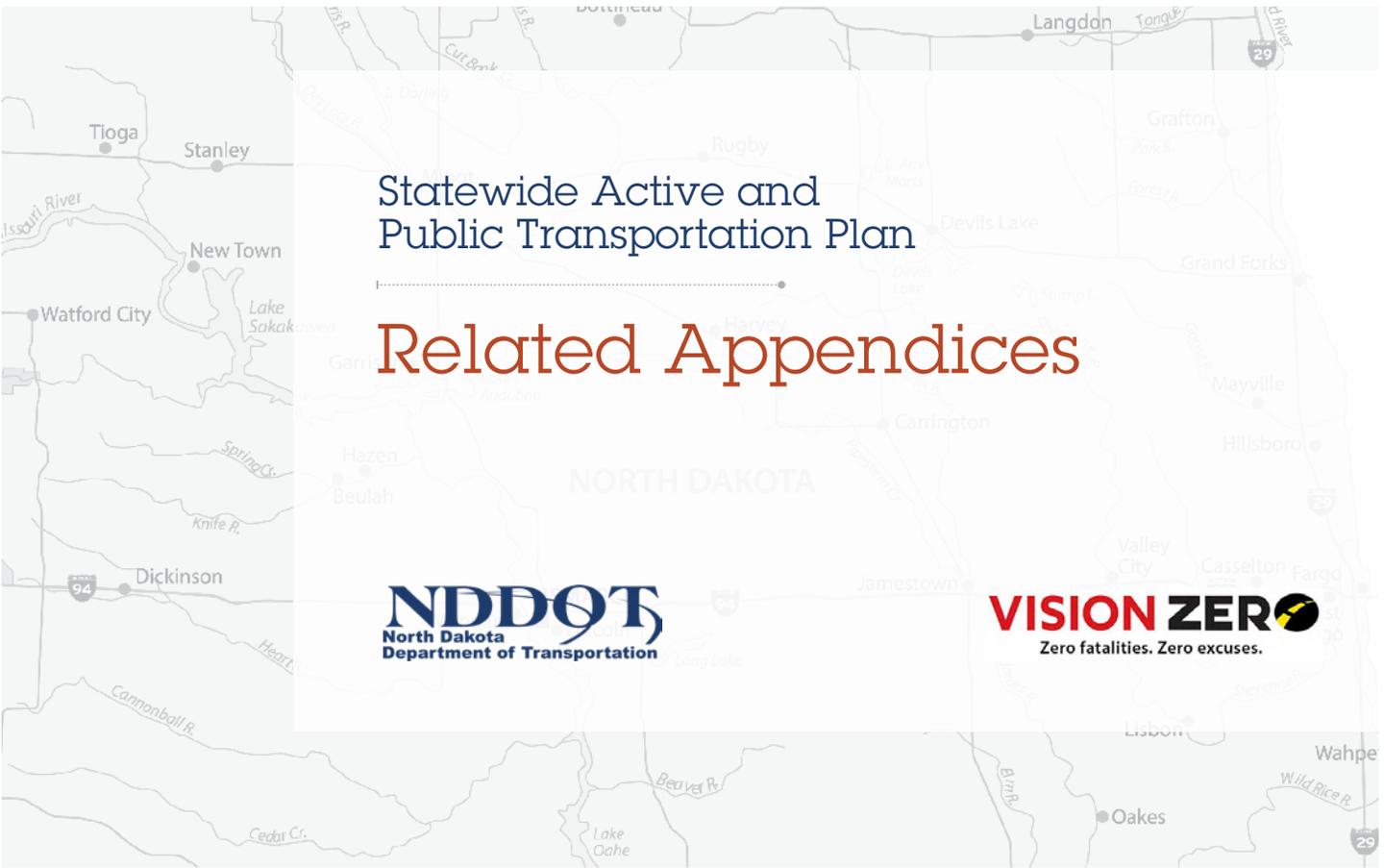


ND Moves

active & public transportation plan



Statewide Active and Public Transportation Plan

Related Appendices





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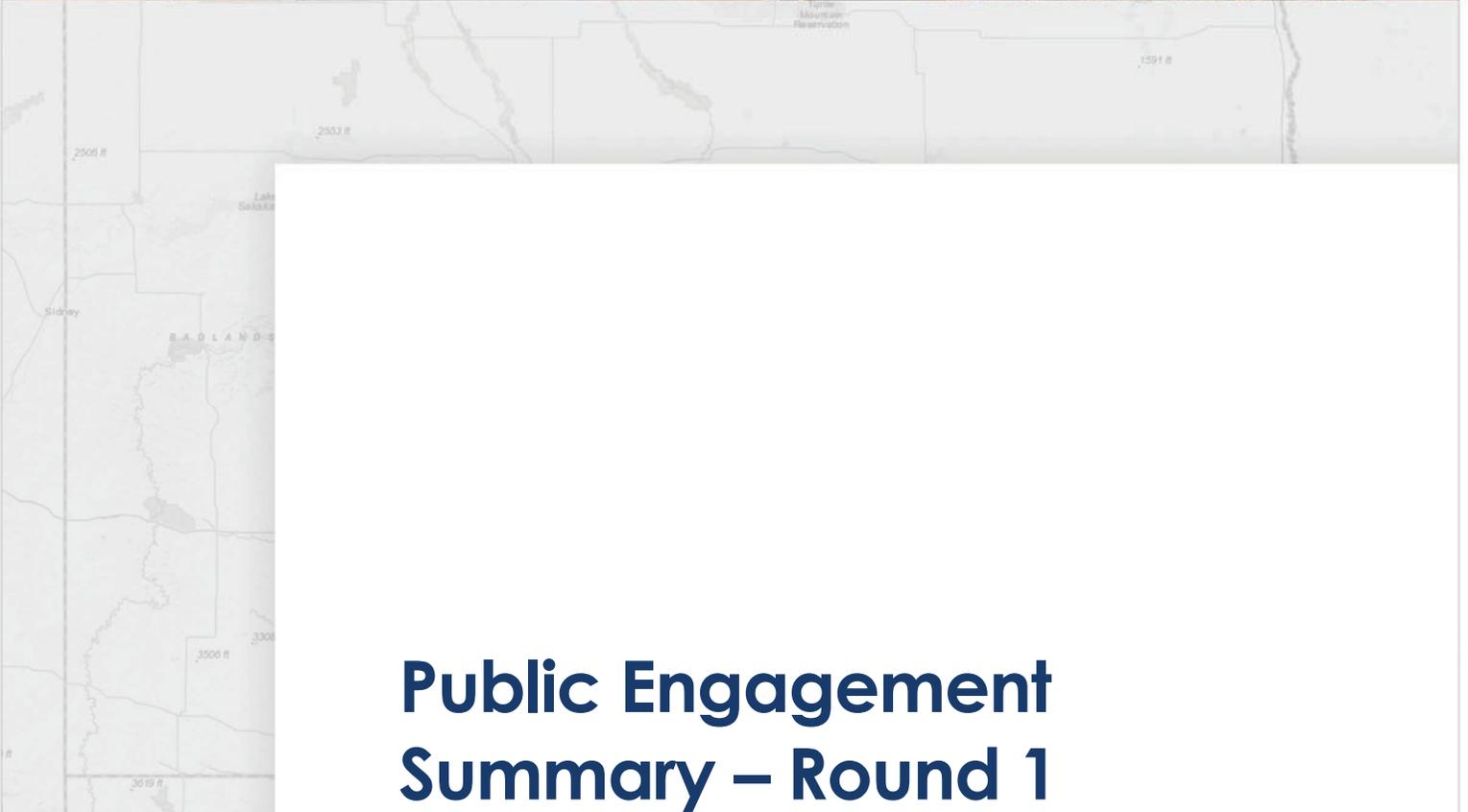
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APPENDIX A:

Public Engagement Summaries





Public Engagement Summary – Round 1

January 2018



ND Moves
NDDOT active & public
transportation plan

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Introduction & Background

The first series of public input meetings was held in November and December 2017 at various locations across the state. These meetings were advertised through multiple channels. NDDOT distributed notice via newspaper advertisements, press releases, project email list, and Facebook. Additionally, key stakeholders such as the League of Cities, Association of Counties, Community Action Agencies, North Dakota Planning Association and Metropolitan Planning Organizations (MPOs) distributed materials widely through internal communication and contact channels. A summary of each meeting is shown in Table 1.

Table 1: Summary of Public Input Meetings

City	Location	Date (2017)	Number of Attendees	Description of Attendees
Fargo	Fargo City Hall	11/8	27	<ul style="list-style-type: none"> • City and county staff and elected officials • Representative Cramer's office • Lake Agassiz Regional Council • Health organizations • Interested citizens
Grand Forks	Grand Forks City Hall	11/9	16	<ul style="list-style-type: none"> • City staff • Cities Area Transit • University of North Dakota • Grand Forks – East Grand Forks MPO • North Dakota Representatives • Senator Heitkamp's office • Interested citizens
Williston	Williston City Library	11/14	8	<ul style="list-style-type: none"> • City staff • North Dakota Representatives • Interested citizens
Minot	Minot City Auditorium	11/15	25	<ul style="list-style-type: none"> • City and county staff • Minot Transit • North Dakota Representatives and Senators • Interested citizens
Bismarck	Bis-Man Transit Board Room	11/16	23	<ul style="list-style-type: none"> • City and county staff and elected officials • Bis-Man transit • Bismarck-Mandan MPO • Community organizations • North Dakota Department of Health • Senator Heitkamp's office • Interested citizens
Dickinson	TownePlace Suites	12/12	10	<ul style="list-style-type: none"> • City and county staff • Dickinson Transit • Interested citizens
Jamestown	Stutsman County Law Enforcement Center	12/13	12	<ul style="list-style-type: none"> • City staff • Interested citizens
Devils Lake	Ramsey County Courthouse	12/14	18	<ul style="list-style-type: none"> • City staff and elected officials • Local businesses • Social service providers • Interested citizens

Stakeholder Outreach

Prior to the development of the first round of public input meetings for ND Moves, NDDOT worked closely with key stakeholder groups from around the State of North Dakota. Early outreach to key stakeholder groups was critical to increasing awareness of the ND Moves planning process, gathering early input from key stakeholders and maximizing existing communications channels. NDDOT worked through the following groups early in the development of ND Moves and provided project updates, and solicited early input and assistance in getting the message regarding upcoming public meetings:

- North Dakota Planning Association (NDPA)
- North Dakota Community Action Partnership (NDCAP)
- North Dakota Metropolitan Planning Organization
- North Dakota Quarterly Transit Providers Meeting
- North Dakota League of Cities

Direct comments received from this groups and associations were integrated into the overall summary of public involvement. Most importantly, these groups were critical in assisting in getting information to their direct constituents and partners on public input opportunities.



Identification of Issues (Poster/Prioritization Tally)

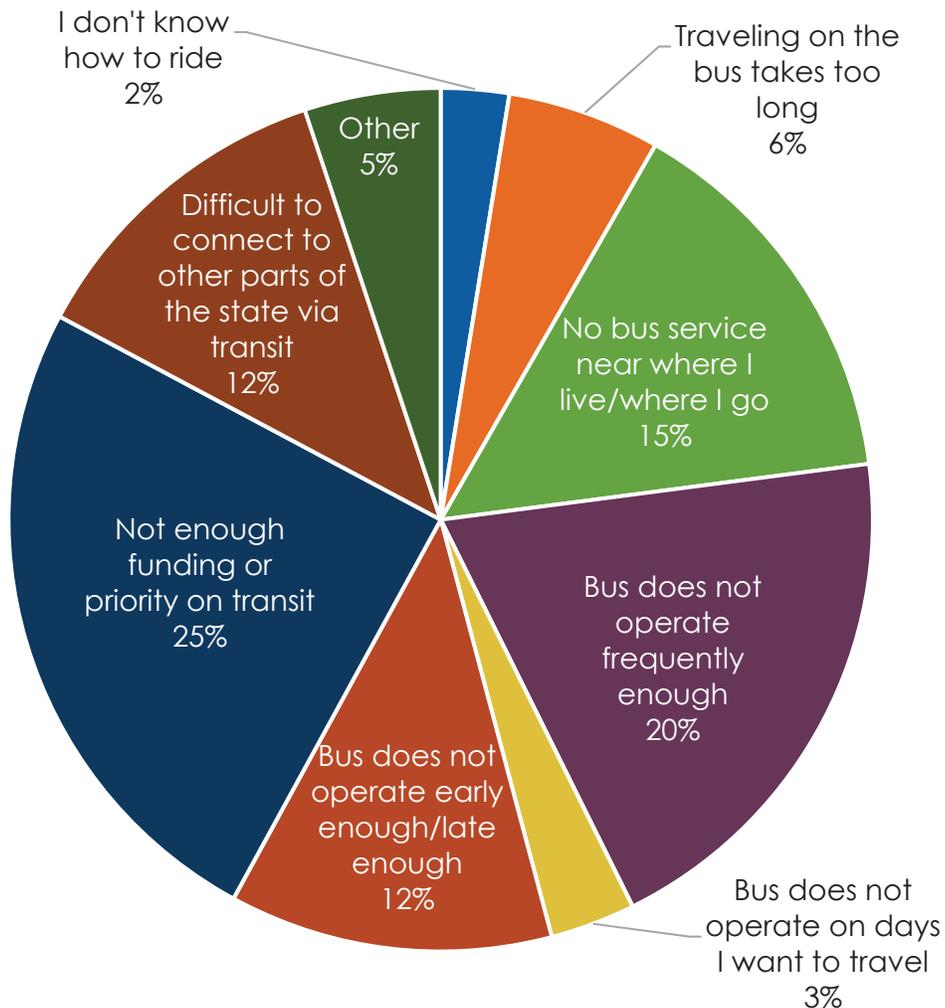
Biggest Barriers

At each meeting, participants were asked to identify the biggest barriers to more successful pedestrian, bicycle and transit systems in their area. The responses are summarized below by mode and include aggregated results at the statewide level, followed by results by meeting location .

Transit System

The biggest transit barriers in the State include not enough funding or priority on transit (25 percent), bus frequency (20 percent), and no bus service where I live/go (15 percent), as shown in Figure 1.

Figure 1: Overall Barriers to Transit Ridership



The top three issues by location are summarized in Table 2. The issues that show up across every location are bus frequency (bus does not operate frequently enough) and funding or priority on transit as a mode of travel.

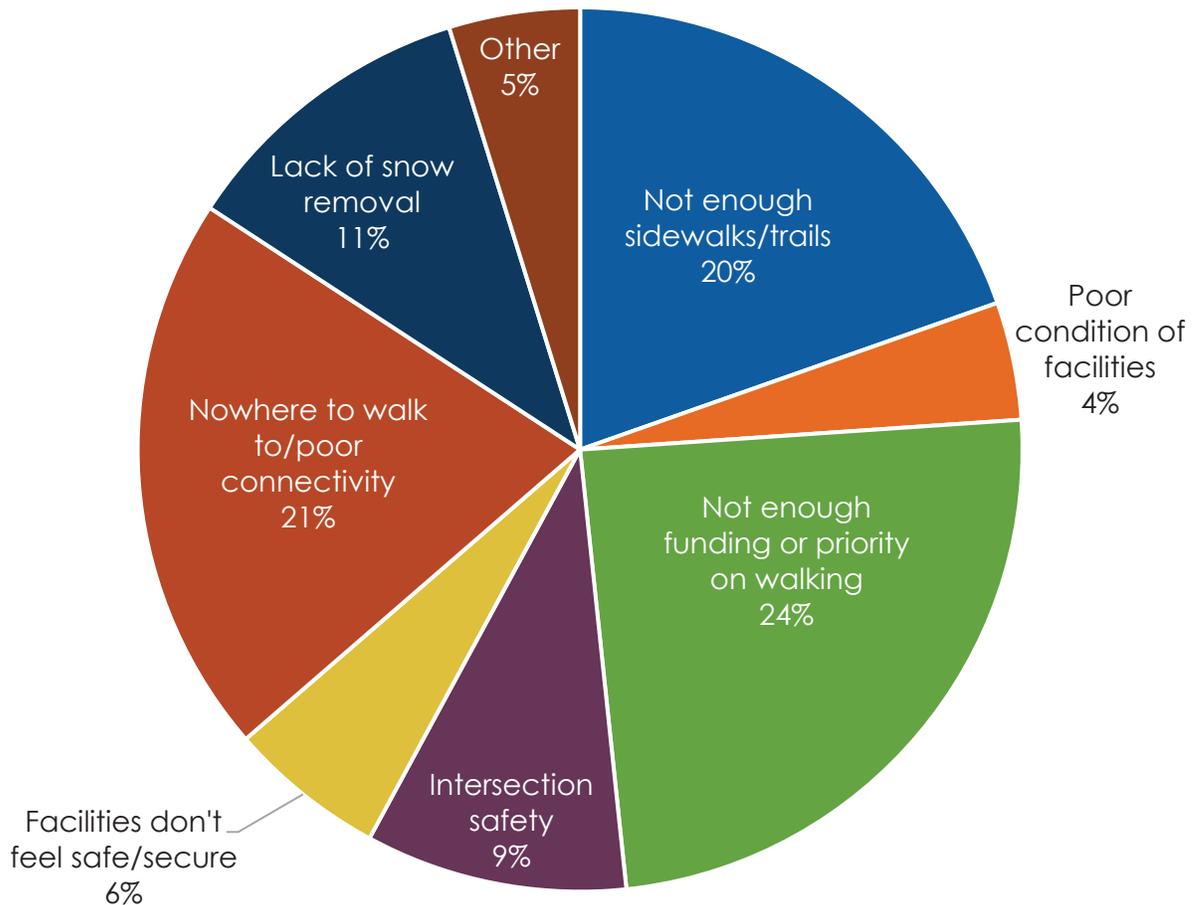
Table 2: Barriers to Transit Ridership (by City)

	Fargo	Grand Forks	Williston	Minot
Barrier 1	Bus Frequency	Bus Frequency	Intercity Service	Service Area, Operating Hours
Barrier 2	Funding/Priority	Operating Hours, Funding/Priority, Intercity Service	Funding/Priority, Bus Frequency	Funding/Priority, Frequency
Barrier 3	Intercity Service			
	Bismarck	Dickinson	Jamestown	Devils Lake
Barrier 1	Funding/Priority	Funding/Priority	Intercity Service	Bus Frequency
Barrier 2	Bus Frequency	Service Area, Intercity Service, Other	Funding/Priority, Service Area	Service Area, Operating hours
Barrier 3	Service Area			

Pedestrian System

The biggest pedestrian barriers in the state include intersection safety, not enough sidewalks/trails, and nowhere to walk/poor connectivity, as shown in Figure 2.

Figure 2: Overall Barriers to Pedestrian Network



The top three issues by location are summarized in Table 3. The biggest barriers for pedestrian systems were varied across jurisdictions: Fargo and Devils Lake identified Poor Connectivity; Dickinson, and

Jamestown identified Not Enough Facilities; Minot and Bismarck identified Funding/Priority; and Grand Forks and Williston identified Intersection Safety.

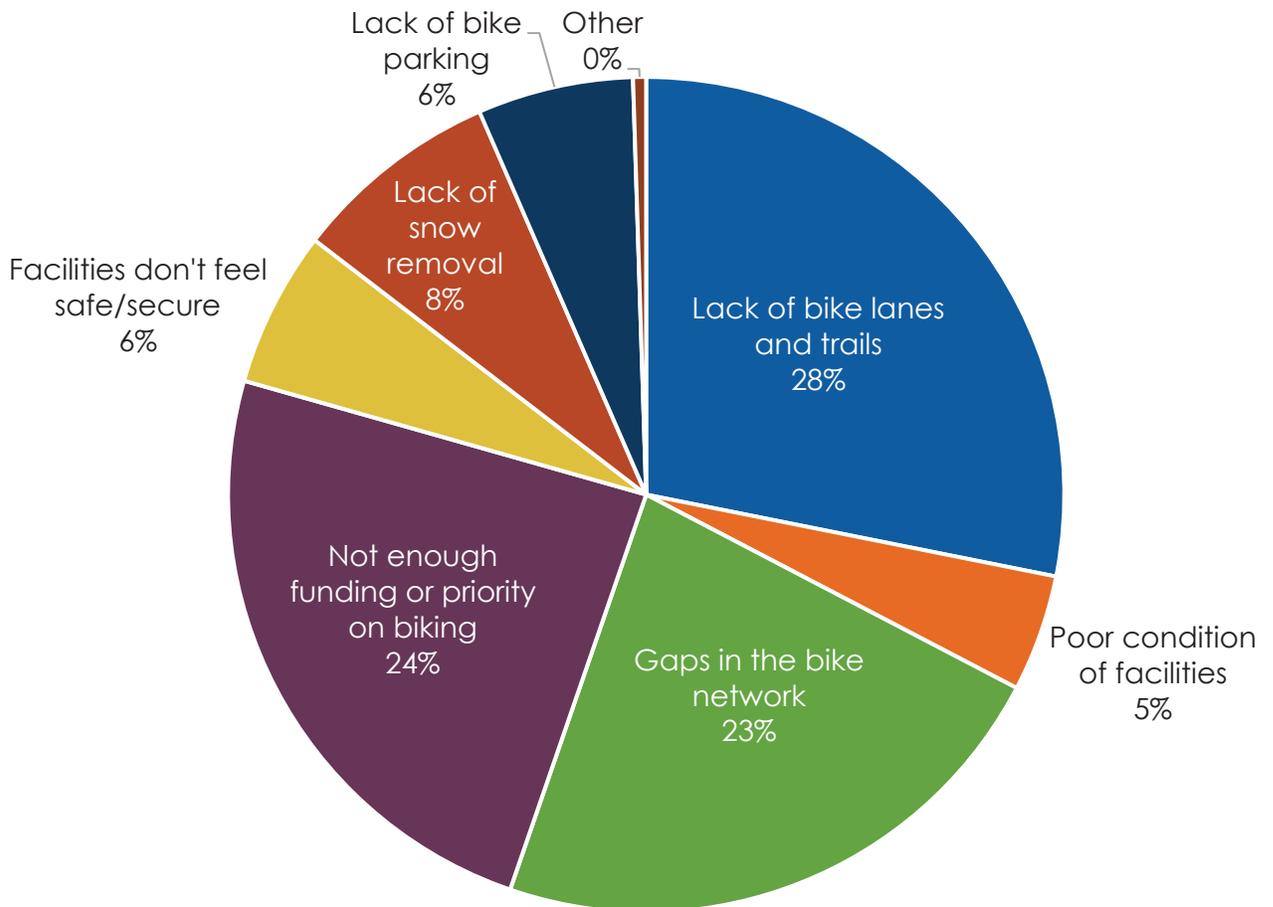
Table 3: Barriers to Pedestrian System (by City)

	Fargo	Grand Forks	Williston	Minot
Barrier 1	Poor Connectivity	Intersection Safety	Intersection Safety, Snow Removal	Funding/Priority
Barrier 2	Funding/Priority	Funding/Priority,		Not Enough Facilities
Barrier 3	Not Enough Facilities	Snow Removal		Poor Connectivity
	Bismarck	Dickinson	Jamestown	Devils Lake
Barrier 1	Funding/Priority	Not Enough Facilities	Not Enough Facilities	Poor Connectivity, Safety
Barrier 2	Not Enough Facilities	Funding/Priority	Poor Connectivity	
Barrier 3	Poor Connectivity	Poor Connectivity	Funding/Priority	Condition of Facilities

Bicycle System

The biggest bicycle barriers in the state include lack of facilities, funding/priority, and gaps in the bike network, as shown in Figure 3.

Figure 3: Overall Barriers to Bicycle Network



The top three issues by location are summarized in Table 4. Network gaps is the biggest barrier for four of the eight jurisdictions, lack of facilities for three.

Table 4: Barriers to Bicycle System (by City)

	Fargo	Grand Forks	Williston	Minot
Barrier 1	Network Gaps	Network Gaps	Lack of Facilities, Network Gaps	Network Gaps
Barrier 2	Lack of Facilities	Funding/Priority		Lack of Facilities
Barrier 3	Funding/Priority	Lack of Facilities	Snow Removal	Funding/Priority
	Bismarck	Dickinson	Jamestown	Devils Lake
Barrier 1	Funding/Priority	Lack of Facilities	Network Gaps	Lack of Facilities
Barrier 2	Lack of Facilities	Funding/Priority	Lack of Facilities, Funding/Priority	Bike Parking
Barrier 3	Safety/Security	Network Gaps		Condition of Facilities, Funding/Priority

Vision Statements

At each meeting, participants were also asked to provide words or phrases to help craft an overall vision for biking, walking, and transit in the state of North Dakota. Overall, safety, connectivity, accessibility, and convenience stand out across jurisdictions. The phrases collected are discussed below.

Fargo

For attendees of the Fargo meeting, biking, walking, and transit should be:

- Safe and convenient
- Varied (wooded trails along the rivers and paved) and connected
- At least as good as in Minnesota
- The safe and consistent way for people of all mobility to experience an equity of health to improve lifelong outcomes
- Enjoyable
- When we design for cars first, people come in second
- A priority
- Design roads for the context, slow and safe in downtowns and neighborhoods
- Available to all citizens

Grand Forks

For attendees of the Grand Forks meeting, biking, walking, and transit should be:

- We are all pedestrians on every trip
- Connectivity, safety, and accessibility
- Safe, easily accessible, and fun transportation activity for everyone

Williston

For attendees of the Williston meeting, biking, walking, and transit should be:

- Balancing cost of facilities

Minot

For attendees of the Minot meeting, biking, walking, and transit should be:

- Train between Bismarck, Fargo, Grand Forks, and Minot
- Paved bike path from Bismarck to Minot



- Walkable/rideable shoulders or off-shoulder paths
- 4-lane 52 Partial to Minot
- Larger takedown of STPG for transportation alternatives

Bismarck

For attendees of the Bismarck meeting, biking, walking, and transit should be:

- Available and actively used
- A priority
- Available to all who need/want to utilize it
- Linking people to access healthy food (groceries, farmers markets)
- Linked to schools

Dickinson

For attendees of the Dickinson meeting, biking, walking, and transit should be:

- Accessible
- Safe, convenient
- Connecting, accessible, safe, affordable
- Well maintained
- Patrolled
- Located in or provide access to scenic areas
- A higher priority
- Safe and affordable
- In the same discussion as cars or other modes of transit

Jamestown

No Jamestown attendees participated in this activity.

Devils Lake

For attendees of the Devils Lake meeting, biking, walking, and transit should be:

- Safe
- Connected
- Advertised

Identification of Key Issues

Several localized issues were identified by stakeholders across the state as part of the first round of public input for ND Moves. Because ND Moves is a statewide plan, these issues have been identified in the context of how they can factor back into statewide policy and programming changes by NDDOT.

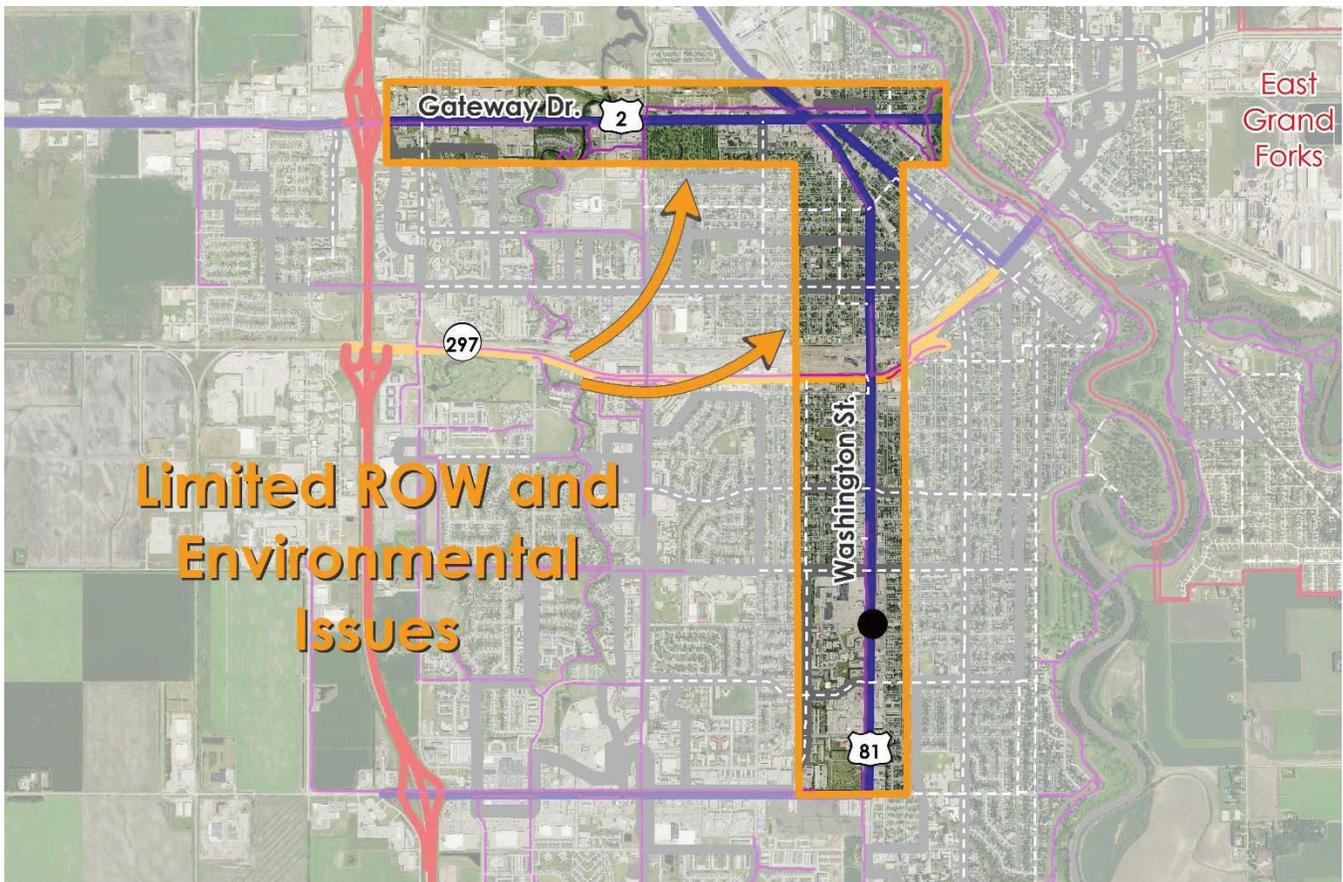
Based on public feedback, a set of key issues have been identified related to active and public transportation, and specific statewide examples are provided to add context specific example(s) to each issue. These examples are provided to show individual issues which likely resonate across the state highway system in North Dakota regarding public and active transportation issues and needs.

Localized Issues of Statewide Significance

Issue: Limited Right of Way & Environmental Issues on State System

Context Example: US 2 and US 81B Examples (Grand Forks)

A common issue identified for active transportation improvements along the state system in North Dakota is the real and perceived lack of right of way. This is particularly true for those stretches of state highway on the US Highway Route System. many of these corridors were developed decades ago, and



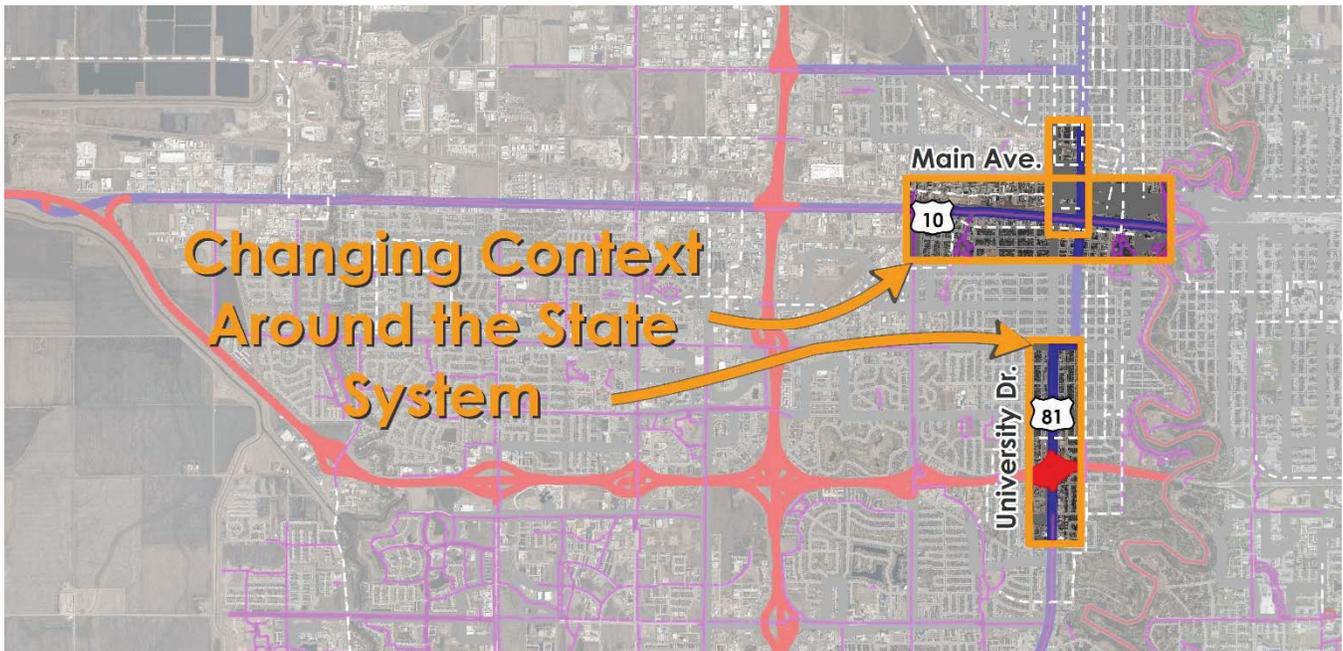
several have not been fully reconstructed or substantially modified for several years. When considering integrating active transportation features in these corridors, issues of available right-of-way is a commonly identified barrier. Opportunities likely exist to promote the development of active transportation features in these corridors as they are considered for future investment.

Issue: Changing Context around the State System

Context Examples: University Drive/10th Street/US 81B (Fargo); Fargo Main Avenue/US10 (Fargo)

Across North Dakota the state highway system often acts as Main Street or a key central corridor in many communities. In many of North Dakota’s larger urban settings, there is growing interest in reinvestment and redevelopment along and adjacent to the state highway system. In these areas, local leaders, engineers, and planners are pointing towards options and opportunities to modify the state system to match the changing context of surrounding land uses. Examples of these are prevalent in the City of Fargo. The pressure to change the operation of the state system to match evolving conditions around it present challenges and choices in how mobility needs are balanced between automobiles and active transportation users.

Figure 5: Changing Context around State System (Fargo)



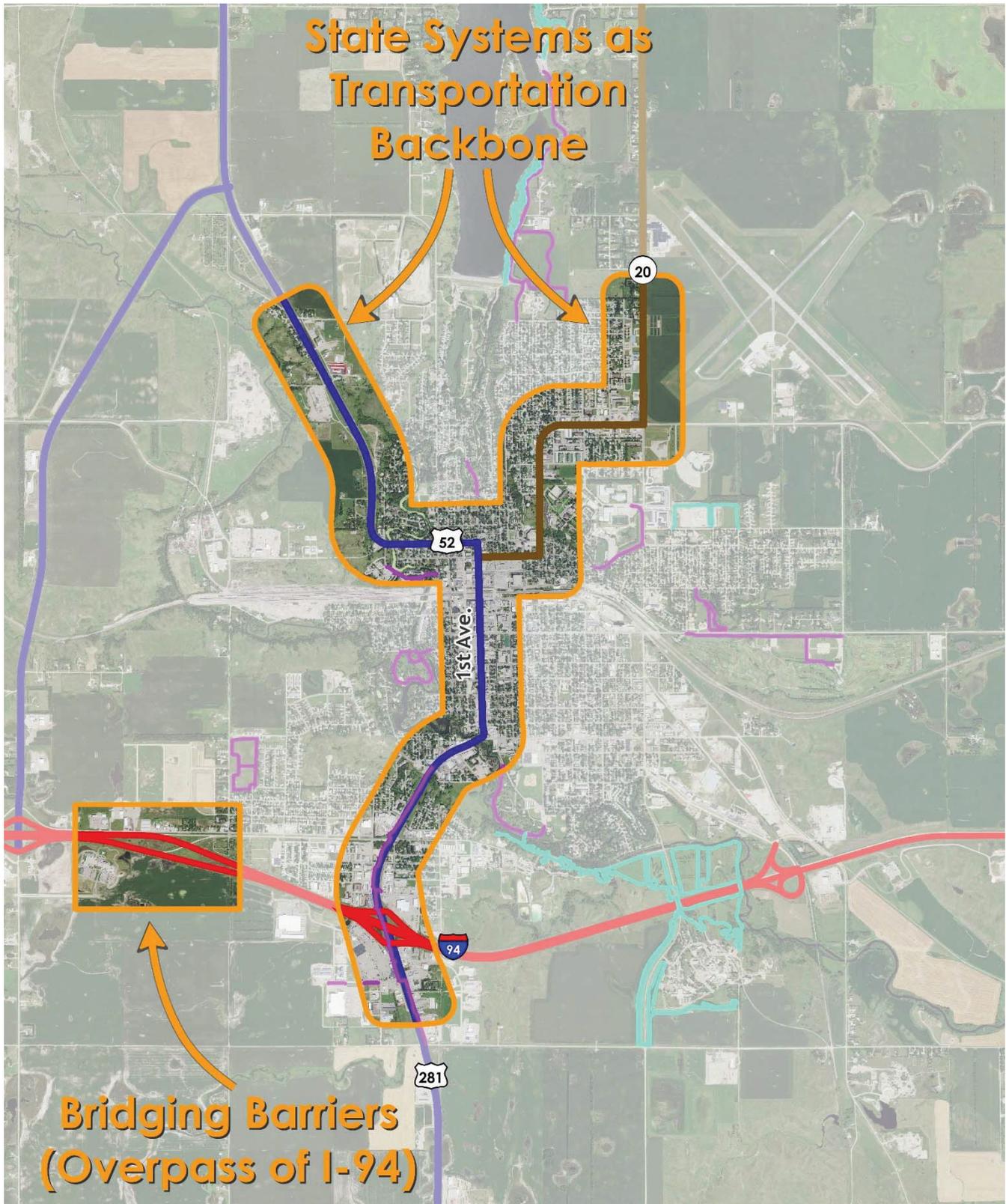
Issue: State System as Transportation Backbone

Context: Example: US 52/281 ND 20 in Jamestown

In many communities, especially mid-sized urban areas, the state highway system serves as the backbone of the local transportation network. Because of this, active transportation facilities along the state highway system can be critical to providing needed linkages throughout a community. A great example of this is in Jamestown, where the state highway systems serve as a backbone of the local transportation network. Ensuring a balanced, yet continuous active transportation system along the state highway system in these communities is perceived as an important issue.



Figure 6: State Systems as Transportation Backbone (Jamestown)



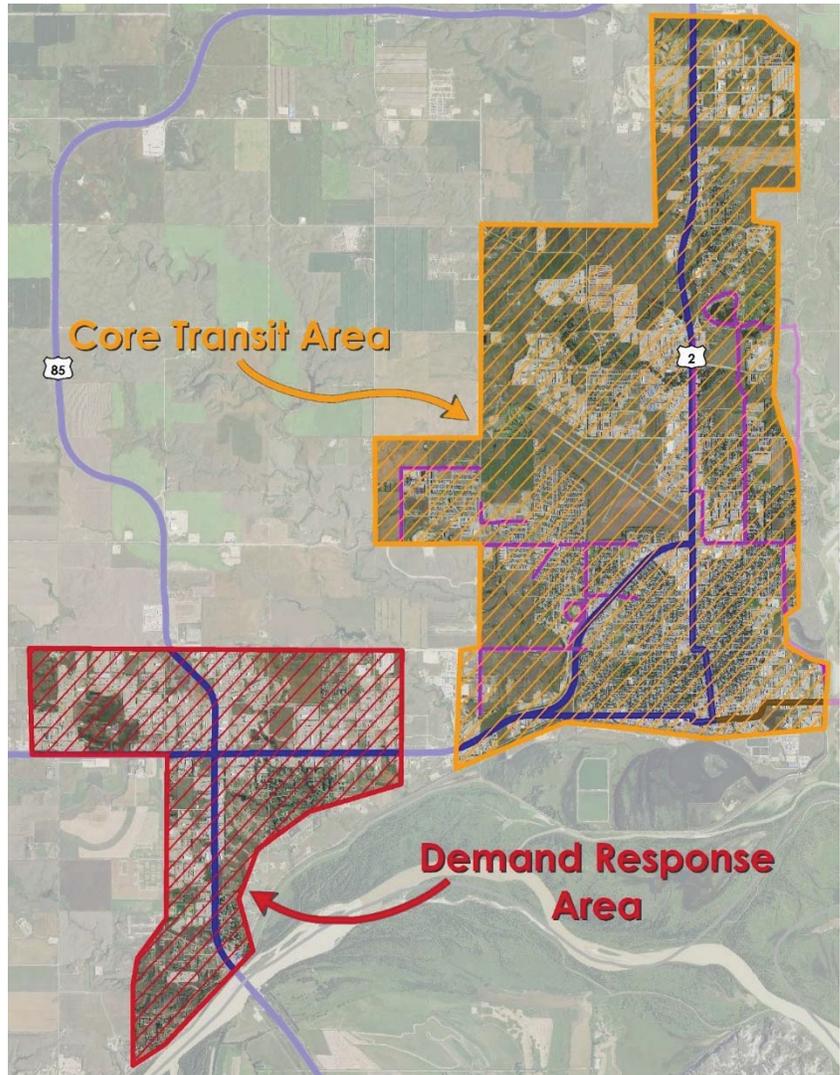


Issue: Emerging Need for Small Urban Transit Development

Context Examples: Williston & Dickinson

In some of North Dakota's medium sized urban areas, there is an emerging need for more dependable fixed route or flexible scheduled public transit options. Demand response systems no longer appear appropriate to meet changing conditions. North Dakota's four largest urban areas all currently operate varying levels of fixed route plus demand responsive public transportation systems. In communities such as Williston (population 26,977) and Dickinson (population 23,765), transit systems are not structured to meet the emerging need for a more urbanized scale of public transit. Dickinson has recently undergone a transit system analysis, and future changes may assist in meeting growing public transit demands. Williston currently lacks an overall framework for public transit service strategies. Comparable cities such as Mandan (population 21,382) and West Fargo (population 33,597) receive higher levels of public transit service given their relationship within an urbanized area. Addressing public transit mobility in medium sized urban areas in North Dakota is an important issue identified by the public and among key stakeholders.

Figure 7: Small Urban Transit Development (Williston)



Issue: Limited Mobility on State System in Urbanizing Areas

Examples: State Street/US 83 (Bismarck); ND 22 North of Dickinson

In many communities in North Dakota, the state highway system also serves as the primary growth corridor as areas urbanize. Examples were identified throughout the state where investments in active transportation facilities along growing and urbanizing sections of state highway are lacking. In these instances, barriers emerge between existing developments and new commercial (and residential) areas which develop along the state highway system. Two examples noted through the ND Moves process were in Bismarck (State Street/US 83) and in Dickinson (3rd Street/ND 22). In each case, as the community has grown along the state highway system, investments in active transportation connections have not kept pace. The situation serves to disconnect elements of the community, and present conditions where access to new developments are limited for active transportation users.



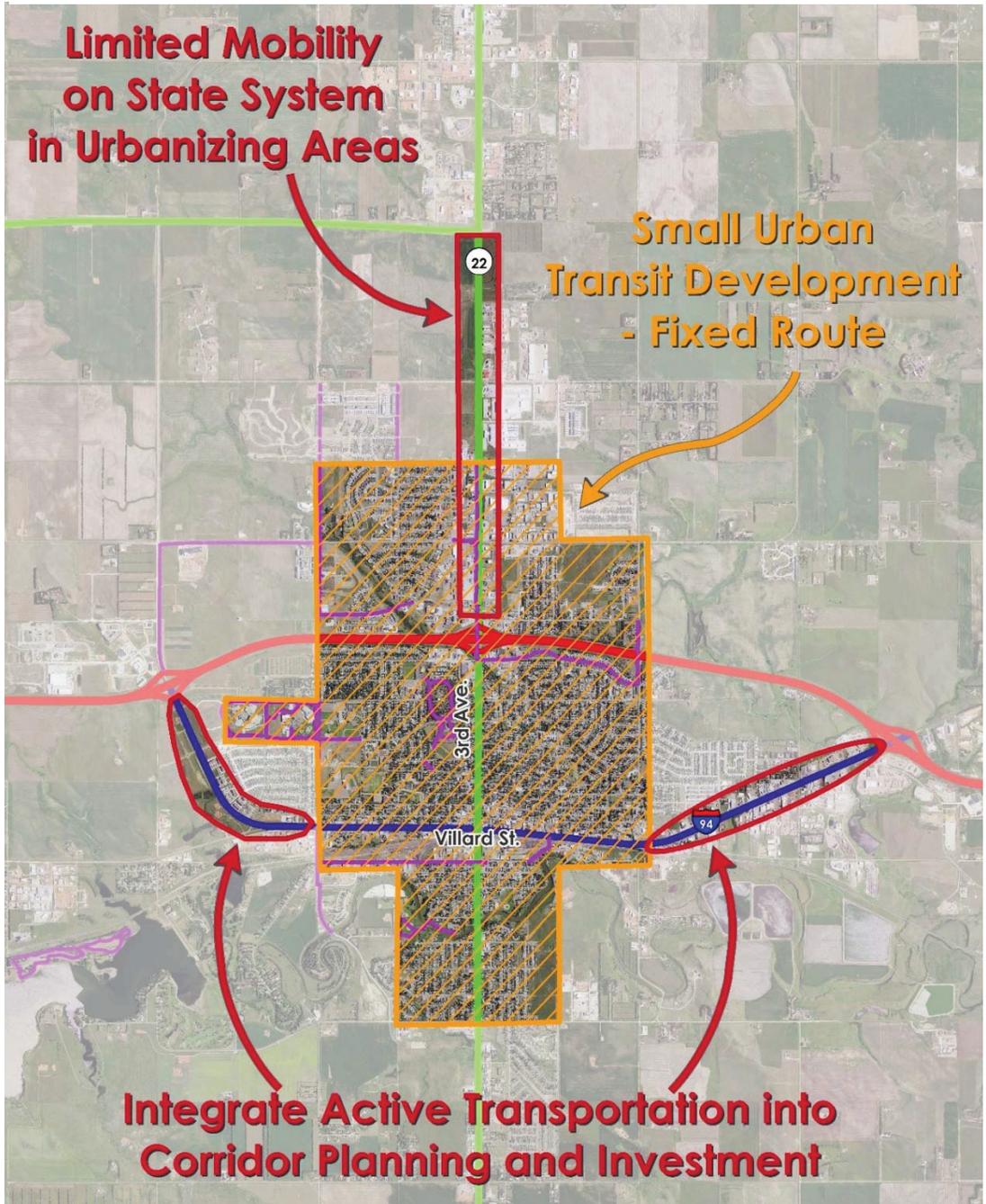
Issue: Integrate Active Transportation into Corridor Planning & Investment

Context Example: East and West Villard (Dickinson) + Exit 59 + ND 22 (South of I-94)

There are significant barriers to active transportation along the state highway system in North Dakota. However, some of the most significant active transportation needs along the state highway system are also on urban corridor segments which are nearing the project investment phase in which the corridor will be reconstructed or significantly modified. These stretches of corridor while currently lacking in active transportation assets, can be viewed from a clean slate as they approach future investments.

Several examples exist throughout the state, however several were highlighted in Dickinson along East and West Villard, as well as along ND 22 (3rd Street) south of I-94. Maximizing the invest phase in a corridors life cycle to address active transportation needs was identified as a key issue. However, this requires a new approach to how the planning and reinvestment phase of corridors life cycle is developed by NDDOT, specifically in non-metropolitan areas where significant “corridor studies” are less frequently undertaken prior to development of project development efforts (i.e. design and construction).

Figure 8: Limited Mobility on State System and Small Urban Transit Development Needs (Dickinson)



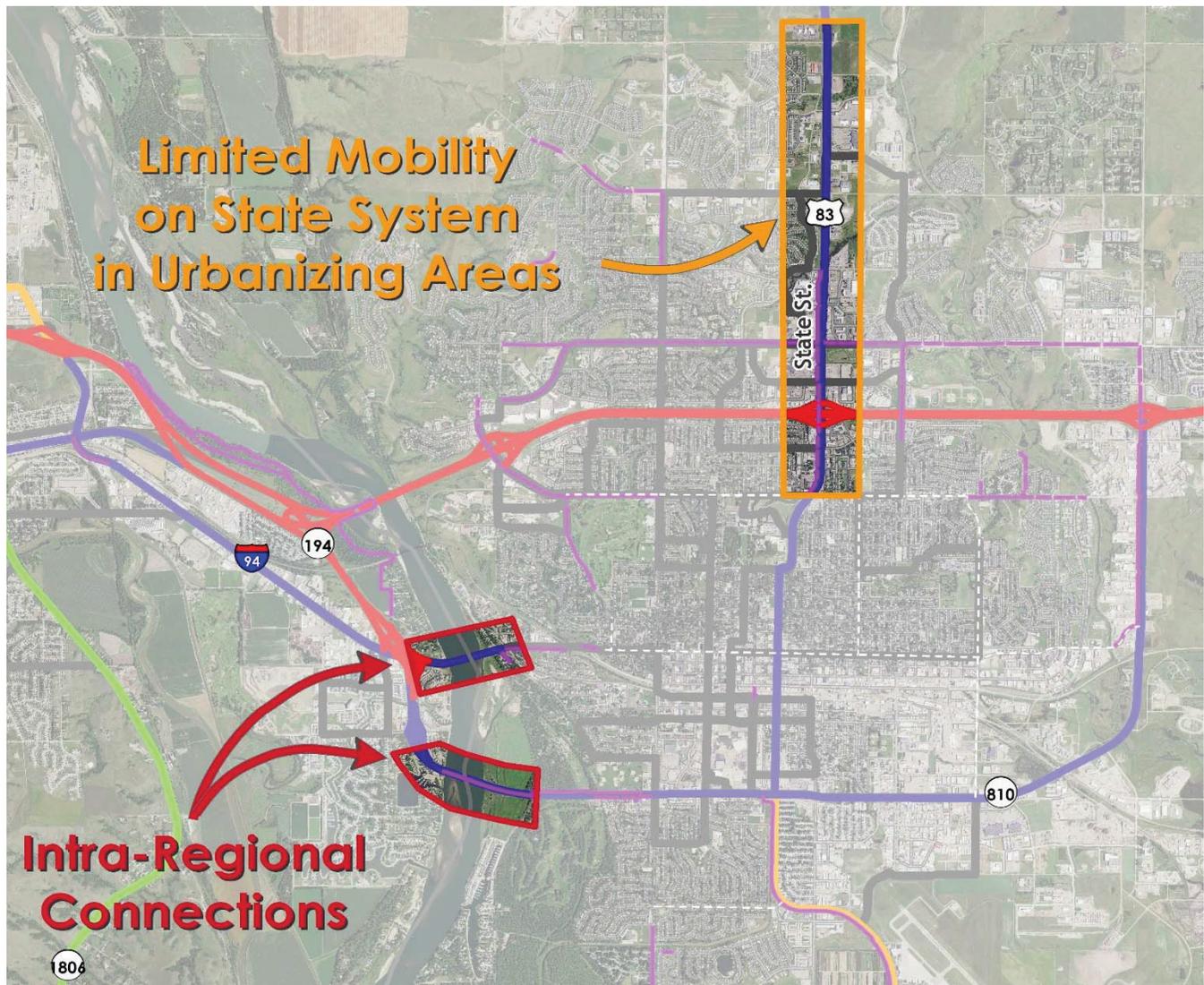
Statewide Issues

Issue: State System as Intra Regional Connectors

Context Examples: Memorial Highway & Bismarck Expressway (across Missouri Bismarck); Fort Totten to Devils Lake (along ND 20 & ND 57)

There are several examples where the state highway system can serve to better link communities and provide intraregional connections. However, in many instances the state system is perceived as a barrier between communities, even those with in short distances from one another. Examples suggested through the ND Moves public input process were connections between Fort Totten and Devils Lake (ND 20 and ND 57) and between Bismarck and Mandan (Memorial Highway and Bismarck Expressway) across the Missouri River. Ensuring active transportation connections between places in North Dakota is perceived as an issue requiring consideration, especially places perceived as being within a similar "regions".

Figure 9: State System as Intra-Regional Connectors (Bismarck)

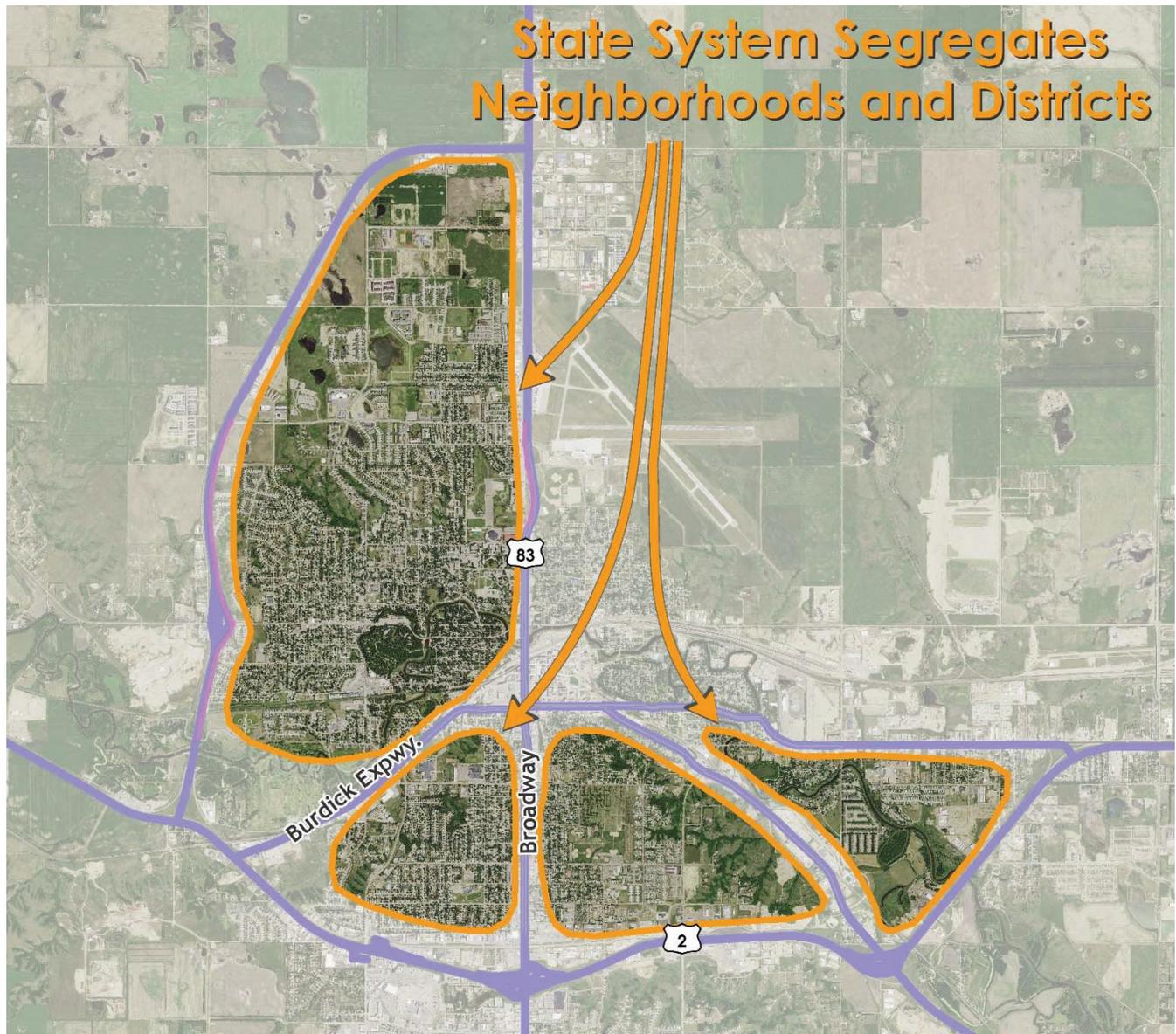


Issue: State System Segregates Neighborhoods & Districts

Context Example: Minot

As has been previously expressed, the state highway system is in many cases the primary transportation corridor through communities in North Dakota. Barriers exist “along” the state highway system through communities, these have been noted. However, barriers “across” the state highway system are also identified as an issue. Where a community is dominated by the state highway system, such as Minot, an inaccessible state highway system can serve to segregate various neighborhoods and districts within a community. Using Minot as an example, the state highway system can serve to subdivide the community, and without appropriate active transportation connections, the state system can be perceived as dividing and segregating parts of a community, thus reducing mobility and connectivity for the active transportation users.

Figure 10: State System Segregates Neighborhoods (Minot)



Issue Bridging Barriers

Context Examples: US 2 Pedestrian Underpass in Devils Lake; potential overpass in Jamestown (near existing Exit 257);

As discussed previously, the state highway system can present substantial barriers to active transportation users. However, best practices and opportunity areas exist which serve to bridge barriers created by the state highway system. One great example is the pedestrian underpass along US 2 through Devils Lake. Centrally located, this connection across US 2 serves to connect the north and south side of the community and serve as a lynchpin in existing and future active transportation system investment in Devils Lake. In Jamestown, a possible future overpass of I-94 (in proximity to the current Exit 257) is viewed as a possible opportunity to improve connections across I-94 and improve access between existing and developing areas in the community of Jamestown.

Issue: Integrate Active Transportation into Corridor Management

Example: US 2 East and West of Devils Lake

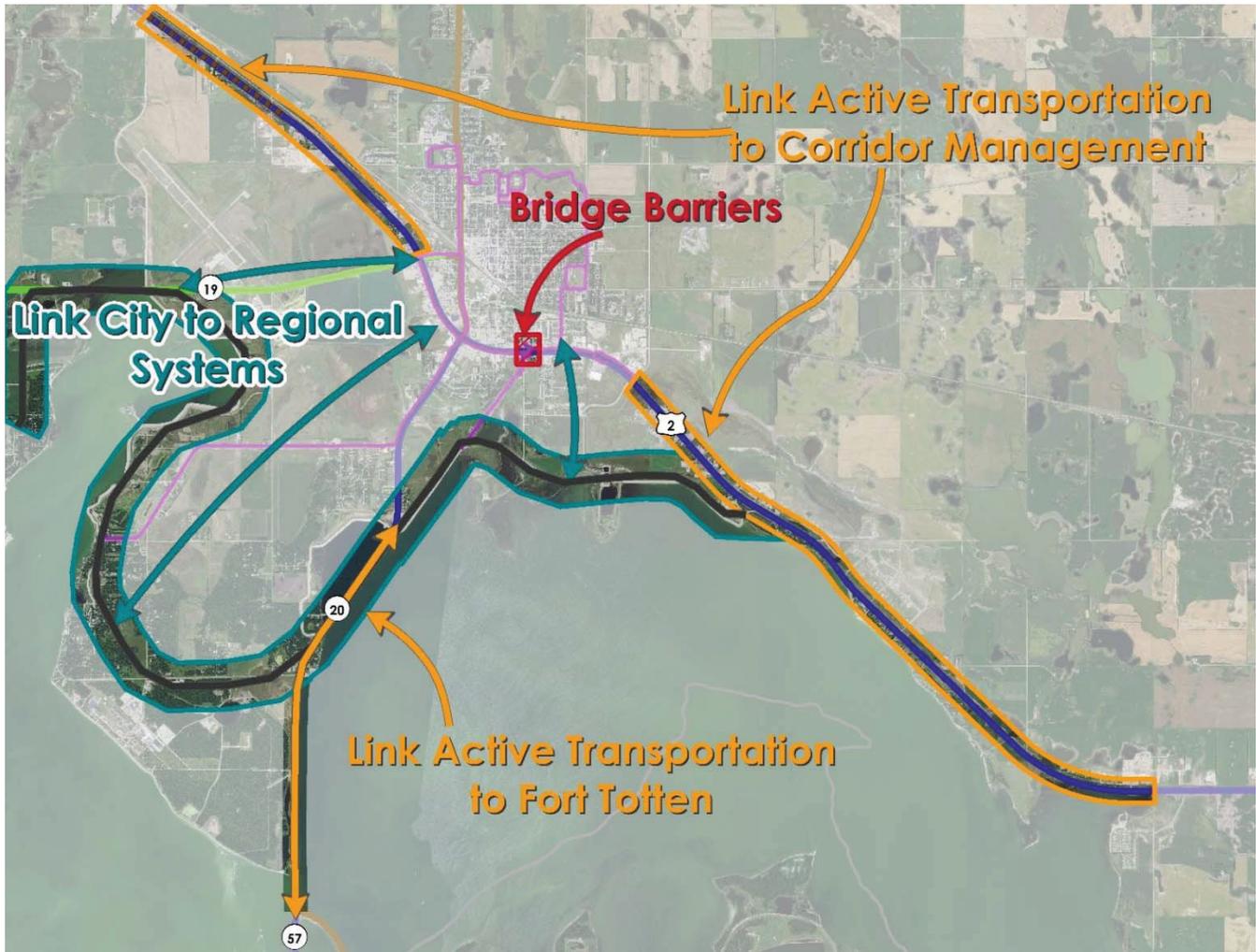
As discussed earlier, addressing active transportation needs are best done through the corridor planning and investment phase. However, opportunities arise throughout the life cycle of a corridor to address and consider active transportation investments. An example of this is currently taking place east of Devils Lake along US 2 where NDDOT is currently looking at access management needs through a corridor management plan. Needs were identified to better connect Devils Lake and developments occurring east (and west) of town. However, the current NDDOT corridor management plan along US 2 effort is only looking narrowly at access management, as opposed to other issues such as active transportation connections along the corridor. Opportunities were identified by the public and key stakeholders to integrate more multi-modal considerations in corridor management and project scoping efforts developed by NDDOT.

Issue: Linking Larger Regional Attractions & Destinations

Context Example: Needed linkages between State system, existing trails and Levee system (Devils Lake)

Locally developed active transportation systems are most pronounced in small to medium urban areas across North Dakota. In these conditions connectivity between both the state and local systems are important to ensure enhanced connectivity and mobility through communities in North Dakota. In some cases, a mixing of investments in state system assets with local system assets can serve to build a truly connected system of community of active transportation systems. An example of this opportunity resonates in and around the community of Devils Lake in looking at future potential for expanded local systems along the dike and levee system as well as expanded connections along state system routes such as ND 19, ND 20 and US 2.

Figure 11: State System Linkages (Devils Lake)



Issue: Intercity Bus Transportation

Context Examples: Bismarck to Minot to Williston (via US83 and US 2); Grand Forks to Devils Lake to Minot (via US2); Dickinson to Williston (via US85)

In a rural state like North Dakota, intercity bus transportation is important to linking regional centers. A key issue discussed in all parts of North Dakota was the current lack of intercity bus transportation. Current intercity bus services are perceived as lacking in connecting regional centers across North Dakota.

Issue: Create Linkages to Larger Systems & Networks

Context Examples: Scenic Highways & Byways; North County Trail Designation (along McCluskey Canal); Connections to State and Regionally Significant Parks and Recreation Facilities (E.g. Sheyenne River Grasslands)

Given the limited statewide network of active transportation assets in North Dakota, there is significant opportunity to build upon existing systems and networks. Where appropriate, there is interest in exploring options to utilize segments of currently designated Scenic Byways and Backways around the state. In

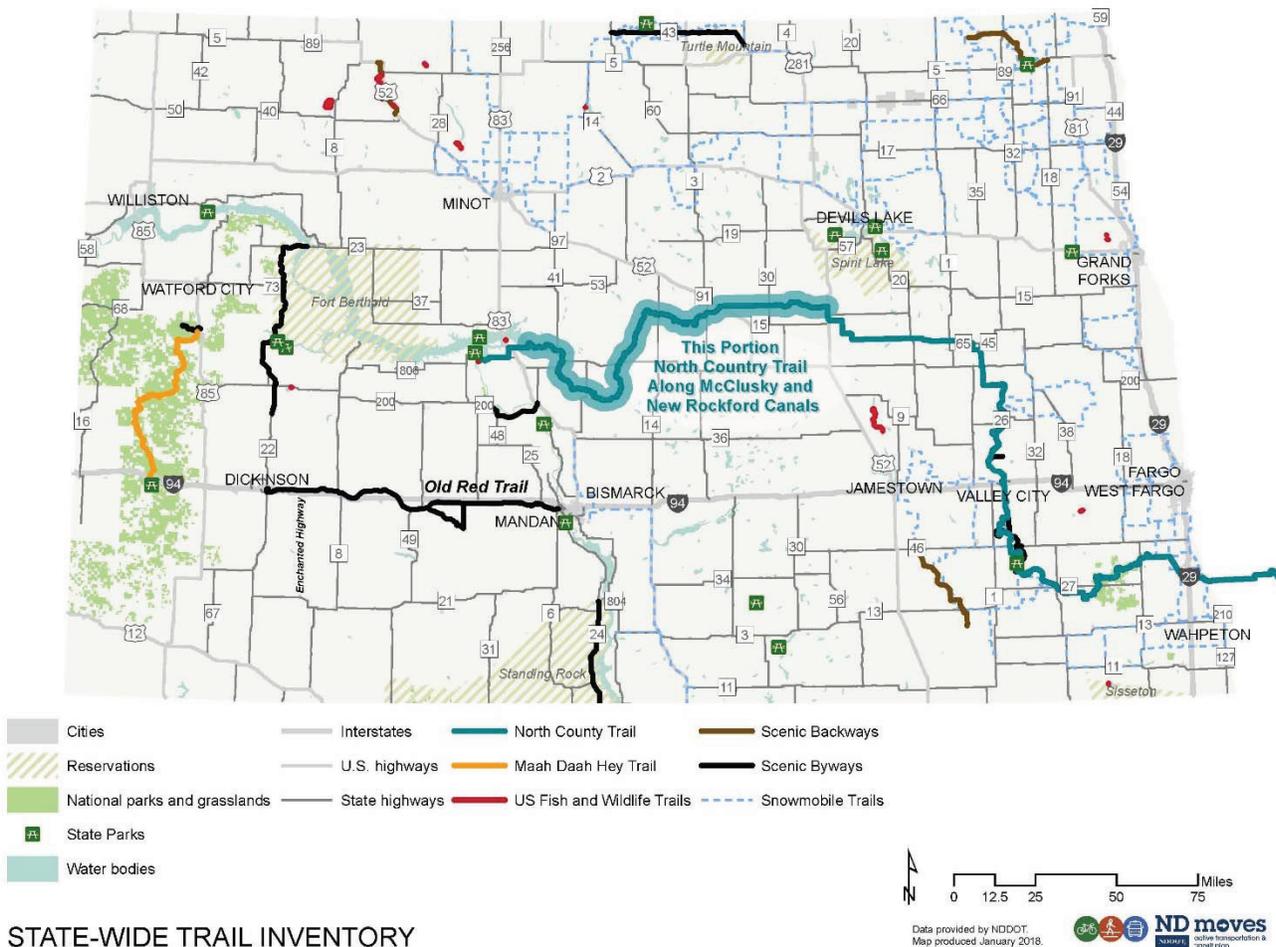
many cases, these corridors can assist in providing better access to existing recreational and historical/interpretive sites around the state.

Issue: Continue to Expand Historical & Interpretative Features

Context Example: Existing Old Red Trail

Opportunities exist to continue to develop and expand corridors such as the Old Red Trail as an interpretive and recreational corridor. The Old Red Trail offers a great example of a low traffic corridor currently being promoted as “alternative” corridor to experience natural and historic features of North Dakota. Other examples of similar potential corridors likely exist in North Dakota.

Figure 12: Statewide Trail Inventory



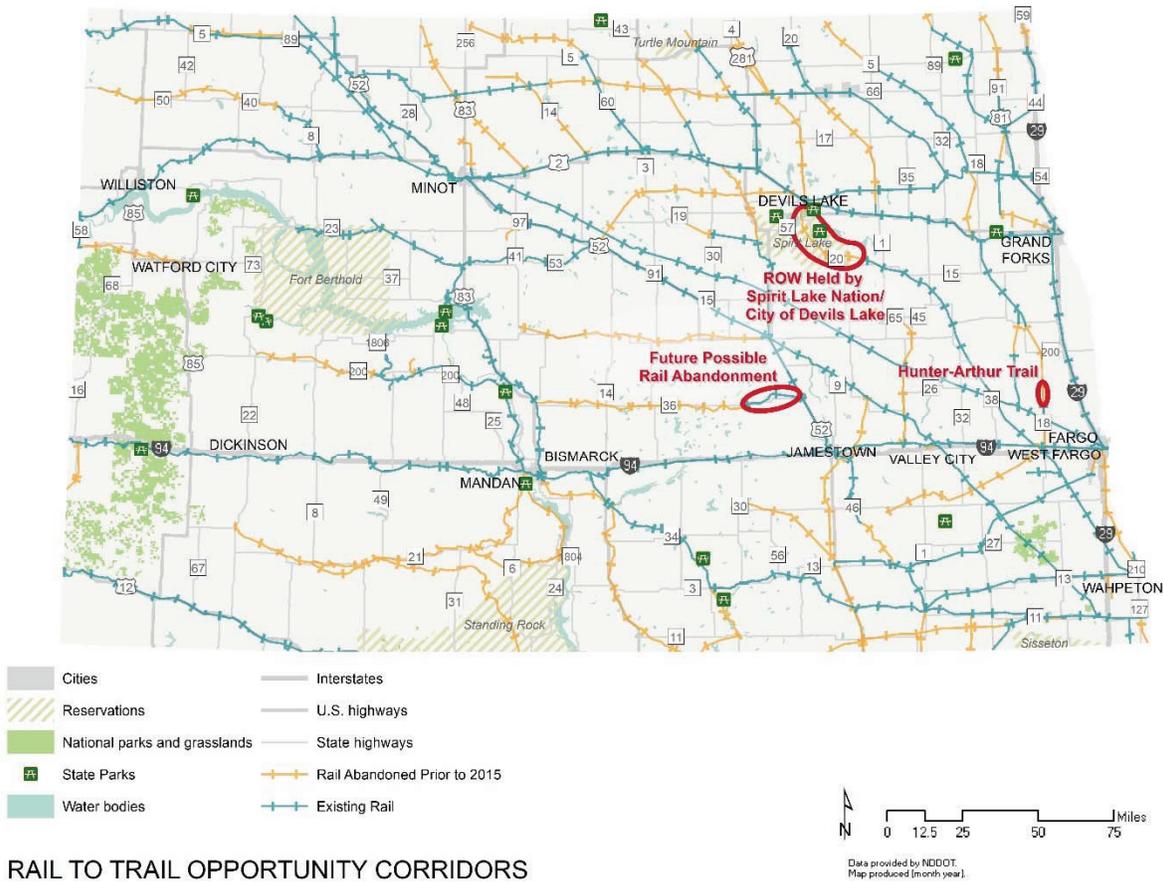
STATE-WIDE TRAIL INVENTORY

Issue: Proactive Rails to Trails Conversion

Context Examples: Arthur-Hunter Trail; RRVW line east of Pingree; NPR Line west of Devils Lake

Rail to trails were a frequent point of discussion throughout North Dakota. A great example of a recent rails to trails conversion is along ND 18 between Hunter and Arthur. Rails to trails work requires a lot of effort and enthusiasm from local groups and stakeholders. Just as important is planning to better understand rail corridors which may be subject to future abandonment. Several corridors were highlighted by the public. However, these corridors have completed the abandonment process and the potential for future trails would be limited at best. However, working with the railroads to determine future potential abandonments would assist in starting a railbanking program in North Dakota.

Figure 13: Rails to Trails Opportunity Corridors



RAIL TO TRAIL OPPORTUNITY CORRIDORS

APPENDIX B:

Demonstration Projects Lessons Learned



ND Moves Pop-up Demonstrations Lessons Learned

Introduction

This document summarizes successes and lessons learned during the nine ND Moves pop-up demonstrations installed during June and July 2018. NDDOT is one of the few State DOTs that have led demonstration projects in the United States. This record will help NDDOT staff and others learn from the innovative process. The pop-up demonstrations intended to obtain public input for active transportation-focused infrastructure features and potential future projects. This type of public input gathering tool may be appropriate for other locally or state sponsored projects that include active transportation design features that are new to the community.

Pop-up demonstration successes and lessons learned were summarized based on feedback from FHWA, NDDOT, participating communities, and the consultant team.

Pop-up Demonstration Successes: NDDOT and Consultant Team

General

- This demonstration effort was precedent setting. Only a few State DOTs have completed demonstration projects.
- The approach allowed concepts to be tested at a relatively low cost rather than investing significant resources on a permanent project that may or may not work
- The demonstrations initiated community conversations about concepts that may have been new to the participating community
- A broad cross-section of communities were represented from a population and geographic stand point
 - Communities with fewer than 5,000 residents enthusiastically accepted NDDOT's invitation to participate in the program. Smaller community participation is particularly innovative for pop-up demonstration.
 - NDDOT / consultant team technical assistance was especially valuable for smaller communities that may not otherwise have much access to active transportation planning and design resources.
- No injuries occurred as a result of the pop-up demonstrations.
- The number of public comments received was much larger than for most previous planning efforts, especially for a strategic planning effort. Therefore, the demonstrations appear to be an effective tool for engaging the public. Most projects were installed for about four weeks. This timeframe is considered "longer-term" for demonstration projects, which typically are installed from one day to one month.

Process, administration, and communication

- NDDOT refined internal processes related to managing the development and installation of pop-up demonstration projects.
- Communities that hired summer interns were better equipped to perform data collection, outreach, design of additional demonstrations outside the ND Moves scope, and other tasks.

Materials

- Materials were easily and quickly installed. Most materials lasted through the recommended length of the demonstration, with tempura paint being the lone exception and refreshing that paint following rain events was not difficult.
- Communities used the opportunity to add beautification elements, in addition to safety improvements.

Project design

- Community workshops were very productive. Workshops efficiently used community leader, NDDOT, and consultant time to make decisions.
- Community leaders completed short worksheets before the community planning workshops. These forms helped consultant team staff learn about local ideas in advance to kickstart pop-up demonstration project planning efforts.
- Pop-up demonstration project sites located near community leaders' places of employment were easy to monitor.

Public outreach and input

- The demonstrations generated significant public feedback with more than 1,500 people taking the online survey. Residents who used active and public transportation generally responded that they felt safer as a result. Motorists noticed the demonstrations' visually narrowing effects. This was consistent with the project's traffic calming goals.
- Survey responses were sortable based on certain answer choices (i.e., mode of transportation, community). The pop-up demonstrations helped communities and NDDOT understand differing desires for comfort and safety, based on survey respondents' indicated forms of transportation.
 - In general, survey respondents walking, biking, and using public transportation generally had positive responses about the demonstrations while respondents driving generally had negative responses about the demonstrations. This is likely due to the traffic-calming intent of most the demonstrations, which tended to slow vehicular traffic.
- Approximately 83 volunteers and City staff helped install the temporary demonstrations. The sufficient number of volunteers per community contributed to efficient installation. Other residents and City staff helped conduct evaluations before and during the demonstrations.
- Issuing a call for volunteers to local engineering firms proved useful for more technically challenging installations.
- The demonstrations allowed for enhanced collaboration with other state agency partners such as the ND Department of Health, as well as, local jurisdictions.

Project results

- Communities completed standardized before and during evaluations to understand the impacts of the pop-up demonstrations.

- The pop-up demonstrations have spurred conversations for local safety and beautification projects among community leaders.
 - Communities have learned about planning and designing for people walking and bicycling.
 - Participating communities have had the opportunity to try out street designs with innovative ideas.
- ND Moves pop-up demonstrations have resulted in residents talking about active transportation and telling community decision makers about a desire for more opportunities to walk and bike safely.
 - In Williston and Hazen, residents have expressed a desire for more bike lanes. They would like the buffered bike lanes extended. Residents would also like new routes to other destinations.
 - Due to efficiently accomplishing meeting goals during the community workshops, there were many instances in which community leaders, residents, NDDOT staff, and members of the consultant team used extra meeting time to discuss related ideas for potential active transportation network improvements.

Lessons Learned: NDDOT and Consultant Team

Materials

- For any future pop-up demonstration organized by local or state partners, it is recommended to have one organization (lead agency or Consultant) responsible for procuring materials. Centrally procuring materials would have resulted in more uniform material choices across communities (e.g., white bollards). NDDOT should consider including material costs in future pop-up demonstration funding.
- Federal requirements, such as, but not necessarily limited to, the MUTCD and PROWAG, still apply for temporary demonstrations, regardless of their duration. Pop-up demonstration pavement marking and delineator colors must follow the MUTCD. Transportation law does not allow flexibility for short-term demonstrations.
 - Future pop-up demonstrations should determine a color palette in advance. This topic should be discussed with communities during the planning workshops and must be consistent with the MUTCD.
 - Consideration must be provided as to how visually and mobility impaired individuals will navigate through the demonstration
- Determine clear zone requirements in advance.
- Material selection should emphasize materials that are easy to install and remove. This requires more maintenance to refresh the materials throughout the demonstration. However, less durable materials more easily allow changes during the demonstration. Acrylic traffic paint is not recommended for temporary installations.
 - The more durable paints used in some of these demonstrations reduced the interim maintenance efforts, but significantly increased the end-of-demonstration removal work. In general, the use of tempura paint seems preferable for any demonstration scheduled for the length of time used in this planning effort.
- Bold color choice, even if consistent with the MUTCD, can have both a positive and negative impact. From a positive perspective, it may draw attention to the project. From a negative perspective, if an individual doesn't like the color choice they may indicate they don't like the concept (the pop-up demonstration is trying to represent) entirely.



Pop-up demonstration design

- Mini-roundabouts may be better suited for a one-day installation. Vertical elements on the outside of the circles increased driver compliance.
- Pop-up demonstrations that require alteration for ADA compliance are not recommended as long-term demonstration projects. If selected for a pop-up demonstration, communities should plan for these alterations in advance.
- Further develop the detailed concept or plan review process, especially for pop-up demonstrations longer than one week. Some issues were noted only after installation (i.e., MUTCD pavement color non-compliance, ADA issues). Plan documents should clearly specify pop-up demonstration colors and patterns in advance of plan approval.
- Representatives from the ND FHWA Division Office and FHWA Headquarters interpreted the MUTCD definition of “Traveled Way” (as it relates to pop-up demonstrations) to be any location on the roadway between permanent curb faces. Based on this interpretation a solid white barrier line painted to demonstrate a temporary curb extension, for instance, is not sufficient to delineate the “traveled way” associated with a pop-up demonstration if painted on the roadway between permanent curb faces. In other words, even if a solid white barrier line is painted on a roadway surface between permanent curb faces to demonstrate a curb extension, all associated colors to fill in the pop-up demonstration curb extension need to be consistent with the MUTCD.
- Patterns associated with the pavement markings need to be consistent with the MUTCD particularly with the following: [Interpretation Letter 3\(09\)-24\(I\) – Application of Colored Pavement. Several participating communities expressed interest in artful cross-walk treatments which were not consistent with the preceding referenced MUTCD document. The ND FHWA Division Office and FHWA Headquarters has also interpreted that painted curb extensions which incorporate patterns utilizing pictographs are also not consistent with the MUTCD.](#)

Public outreach and input

- FHWA and other agencies such as the State Historic Preservation Office (depending on location of the demonstration) should be included as early as possible in the planning of the pop-up demonstration including color palette, pattern, and material choice, to avoid potential issues following installation.
- Pop-up demonstrations focused on local communities leading public outreach. NDDOT may want to consider assisting with this work for any future demonstrations. The pop-up demonstration team should ensure that local jurisdictions clearly understand outreach needs before and during the pop-up demonstration.
- Show examples of permanent features, the pop-up is attempting to demonstrate, to the public early and throughout the pop-up demonstration. A variety of individuals were confused about what was meant by “permanent”. For example, some assumed that their community intended to permanently paint curb extensions, as opposed to constructing concrete curb extensions.
- Communities would benefit from earlier sharing of educational materials related to walking, bicycling, driving, and parking near the pop-up demonstrations. Community leads shared these materials, but they require time to reach a broad segment of the population.
- Some residents who took the survey felt the pop-up demonstration planning process should have included public input.
- Some pop-up demonstrations received an overwhelming volunteer response from local residents. Although residents were enthusiastic, a few communities had too many volunteers on installation day.

- Work with local community leads to publicize pop-up demonstration successes and lessons learned from public feedback soon after removal.

Process, administration, and communication

- As previously stated, the NDDOT had no experience with similar types of demonstrations so it was unaware of what it was unaware of. Participating in this process helped NDDOT understand where previously unknown issues pose challenges.
- Required community agreements and the signature collecting process should occur at the beginning of the pop-up demonstration process. Add additional time to the signing process, given communities' need for Commission / Council approval.
- The project team should be sure that community leads understand the estimated cost and potential challenges related to long-term temporary installations (i.e., 4 weeks or more).
- Similarly, providing a time commitment estimate for pop-up demonstration installation to community leaders could help manage expectations.
- A debrief meeting or workshop at the end of the pop-up demonstration could continue momentum toward long-term changes. This time could also be structured as technical assistance related to other active transportation improvement projects.
- Additional coordination of demonstration development activities should be considered with a variety of other State agencies, for example: State Historic Preservation Office, and North Dakota Parks and Recreation.
- Notify internal NDDOT stakeholders about the pop-up demonstrations. Consider forming an internal pop-up demonstration team with decision-making authority to answer questions and unexpected issues as they arise during planning and installation phases. The team may be composed of NDDOT experts from Planning, Local Government, Design, and Programming. Including the latter two divisions would handle ADA and MUTCD compliance questions, respectively. The team would ensure that all roadway users are considered in the pop-up demonstrations, including people with limited mobility and low vision.

Lessons Learned: Federal Highway Administration

Overall, the project showed a need for FHWA and NDDOT staff to collaborate early in the project planning stages.

ADA Access

Demonstration projects must still consider ADA access requirements. The implementing agency would be liable for any risk associated with the project. A project that is installed for one day will generally face lower risk than projects meant for longer installation.

Color / Pattern

- MUTCD requirements still apply for temporary demonstrations, regardless of their duration. Demonstration pavement marking and delineator colors must follow the MUTCD. FHWA does not allow flexibility for short-term demonstrations.
- Refer to [Interpretation Letter 3\(09\)-24\(1\) – Application of Colored Pavement](#). The letter rules that subdued, earth tone colors such as brick and tan be used for aesthetic treatments. Curb extensions, mini roundabouts, crosswalks, and other features must, by law, follow this guidance, regardless of

funding source. For example, the interior of a curb extension is considered an aesthetic treatment or “island”.

Project Successes: Participating Communities

- Overall, communities were satisfied with the planning process, pop-up demonstration installation, and installation period.
- Communities felt like the workshops were efficient and helped bring the right decision makers together.
- The number of phone meetings was appropriate for the pop-up demonstrations. One biweekly call was held per community. Check-in calls began in late April / May after each community's pop-up demonstration planning workshop. Approximately eight calls were held per community, or seventy-two total check-in calls.
- The pop-up demonstrations were a great way to gather public input and were seen as more effective than other strategies, such as community meetings.
- Deliverables were useful and easy to use. Some communities are interested in future, locally led pop-up demonstrations and learned a lot from this effort.
- The pop-up demonstrations have started conversations about how to build walking and bicycling infrastructure throughout the community and to connect to more destinations.

Lessons Learned: Participating Communities

- In the future, communities would like expectations for pop-up demonstration parameters (i.e., colors, materials within ROW, etc.) established before the workshops.
- Communities were frustrated by the need to change pop-up demonstration colors shortly before pop-up demonstration installation.
- Communities were confused by the need for an agreement for pop-up demonstrations on local roadways.
- Some smaller communities faced challenges with volunteer recruitment for the installation.
- Community leaders would have liked more information about their role in and expected level of effort for demonstration coordination.
- Some community leaders represent the local Chamber of Commerce or similar organizations. This sometimes led to some tension between staff and business owners who may have been opposed to certain elements of the pop-up demonstration. Future demonstrations should identify others from the City to help discuss pop-up demonstration design choices and safety benefits with business owners. Outreach to some business owners was challenging.
- Acrylic paint removal was more challenging than expected.

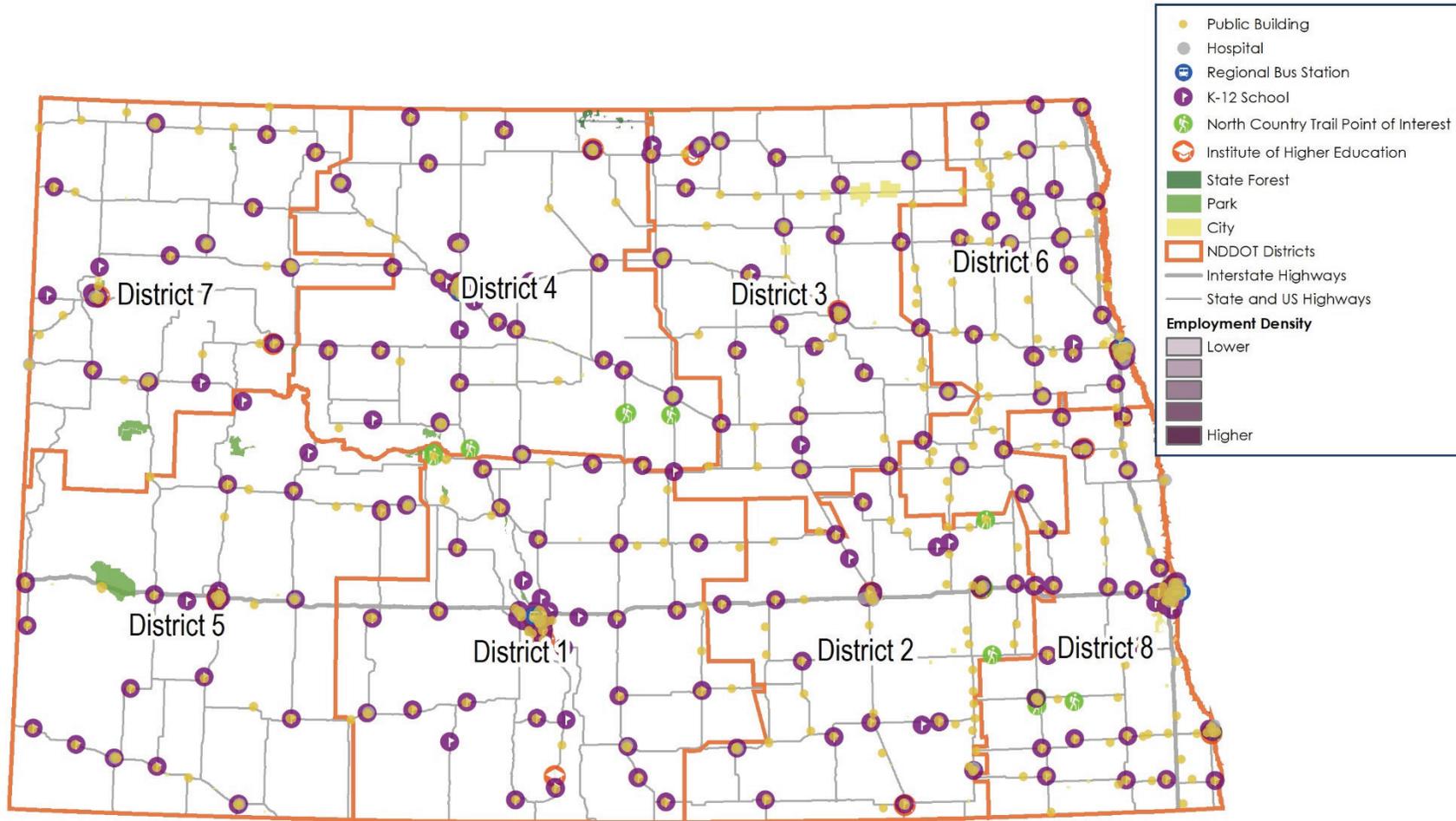
APPENDIX C:

Active Transportation Destinations



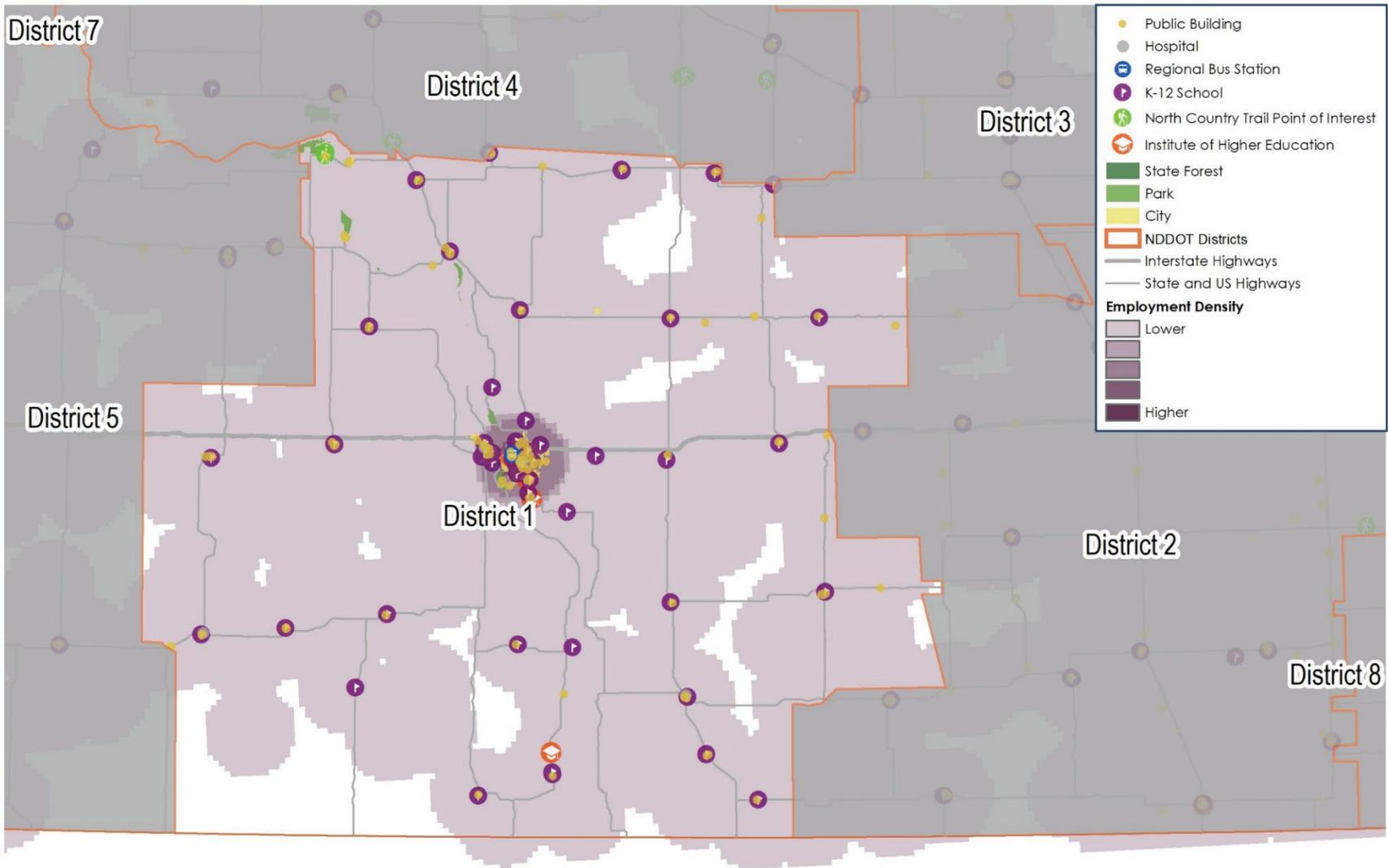


Destinations for Active Transportation: Statewide

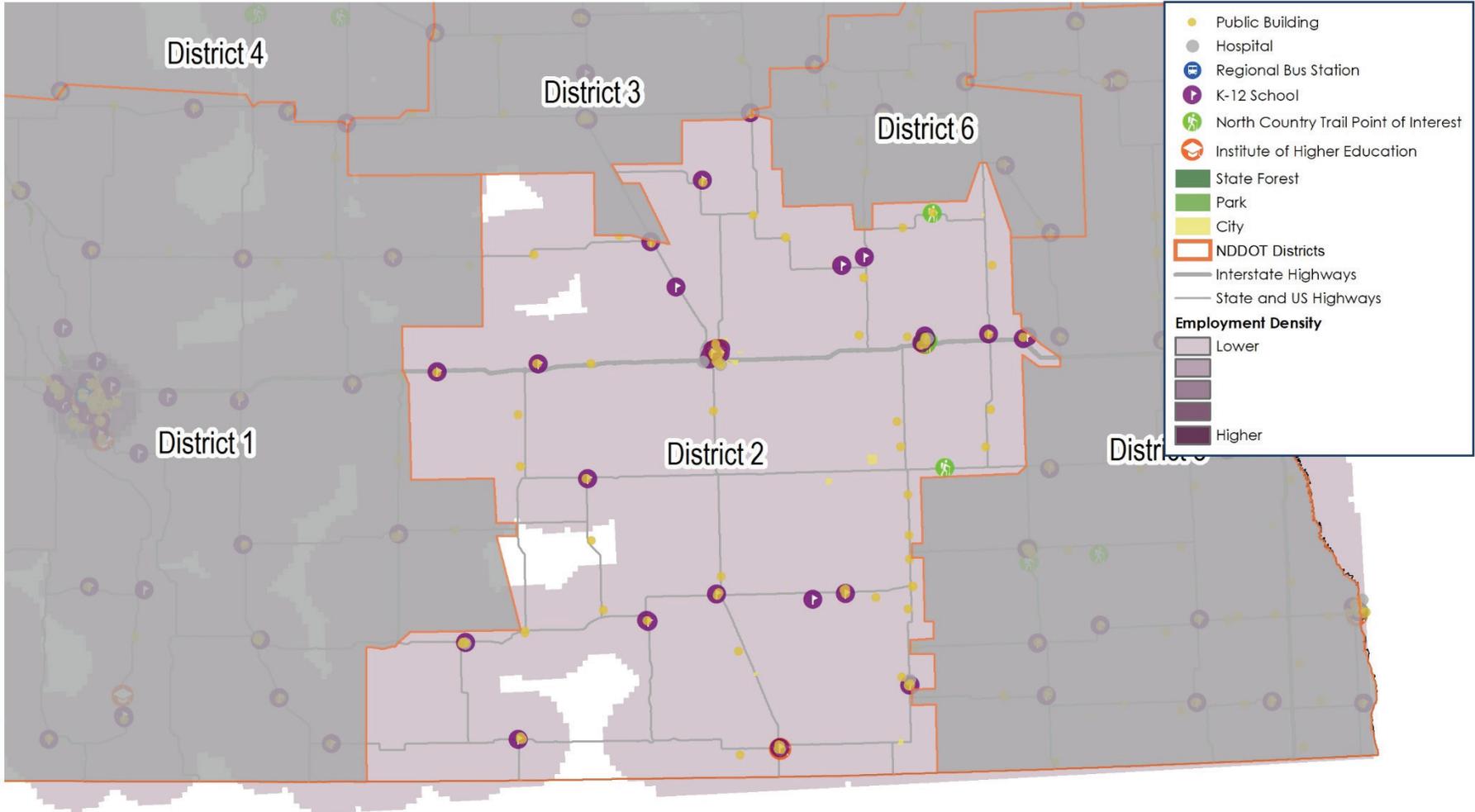




Destinations for Active Transportation - NDDOT District 1

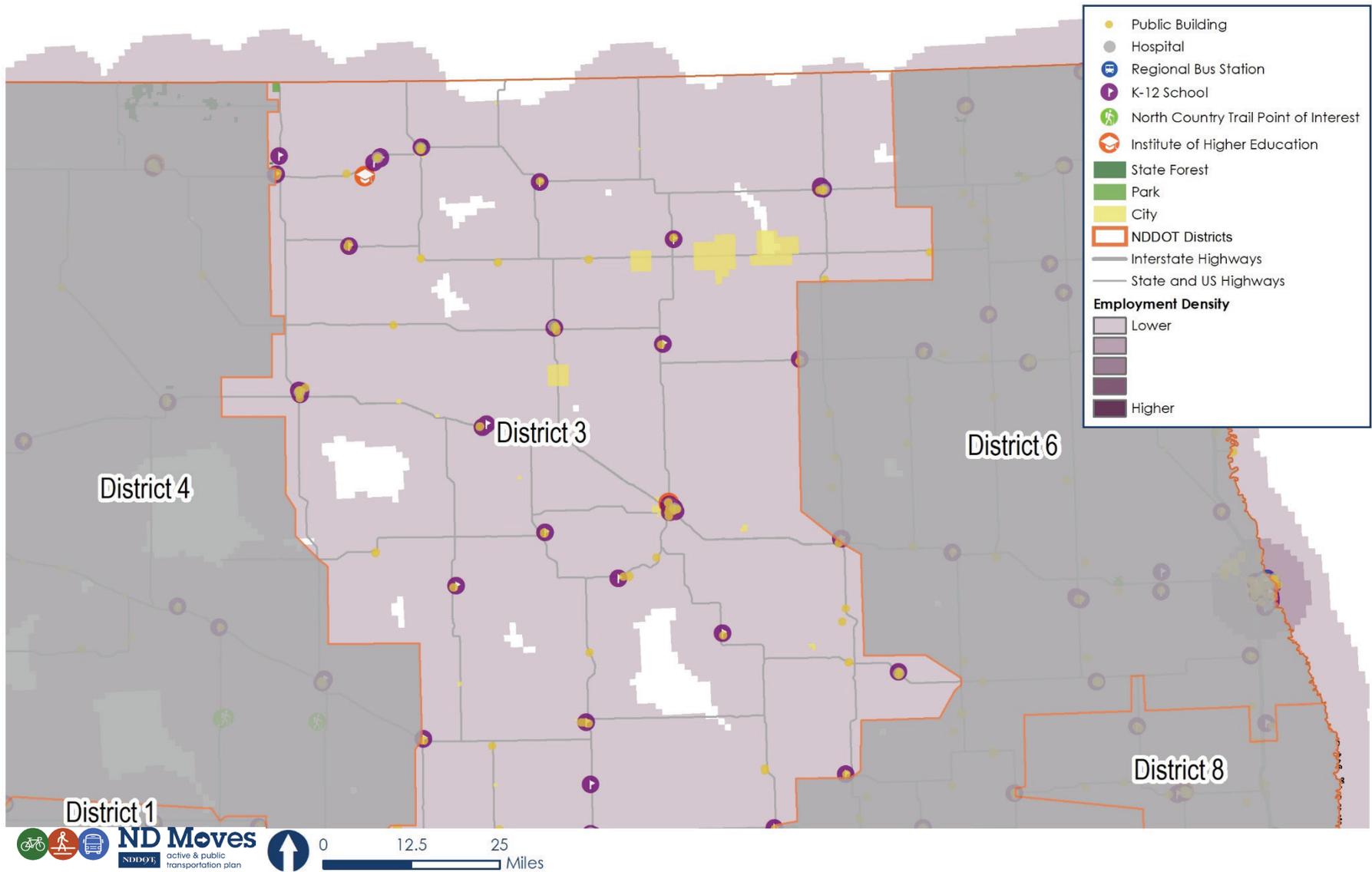


Destinations for Active Transportation - NDDOT District 2



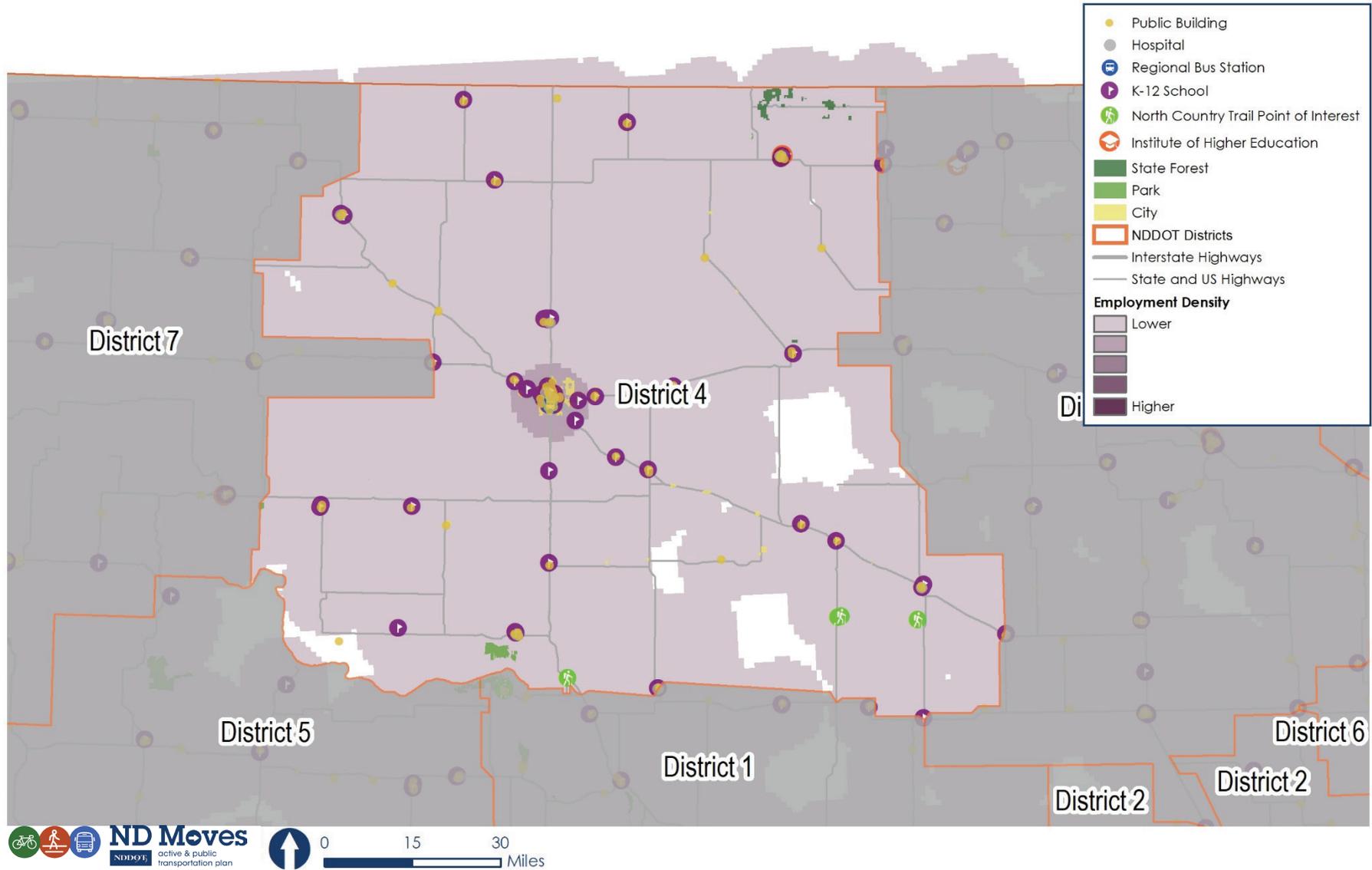


Destinations for Active Transportation - NDDOT District 3



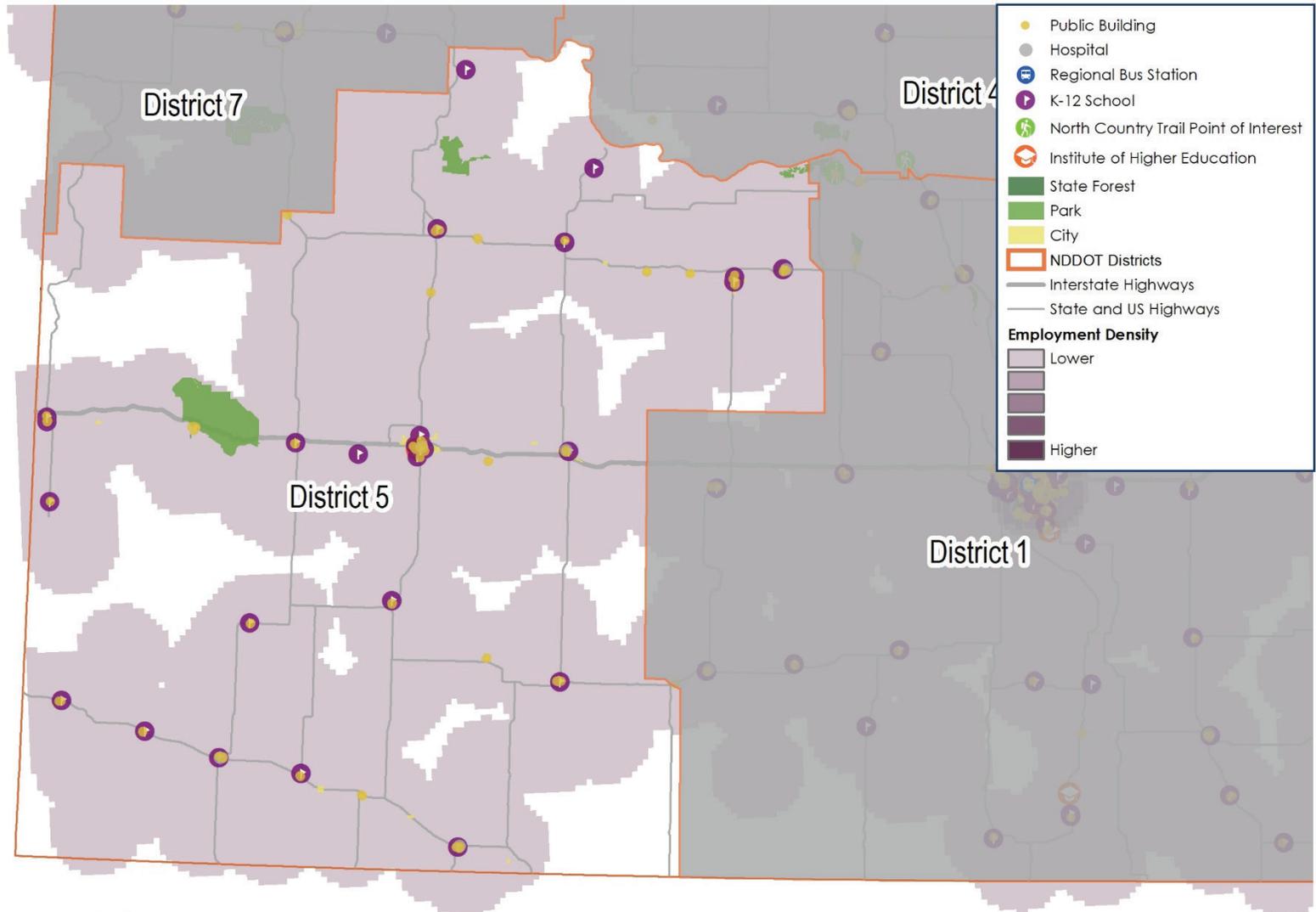


Destinations for Active Transportation - NDDOT District 4



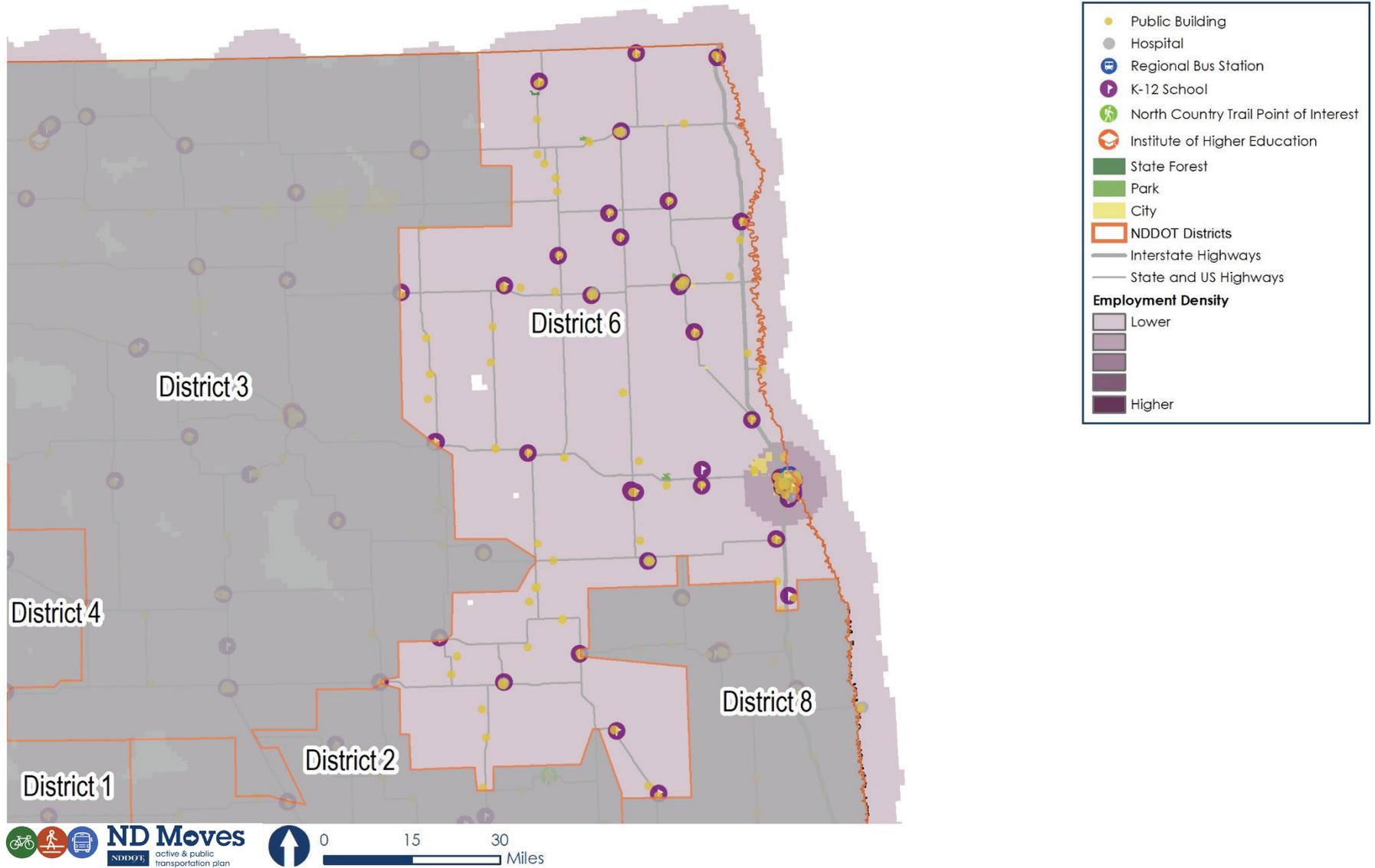


Destinations for Active Transportation - NDDOT District 5



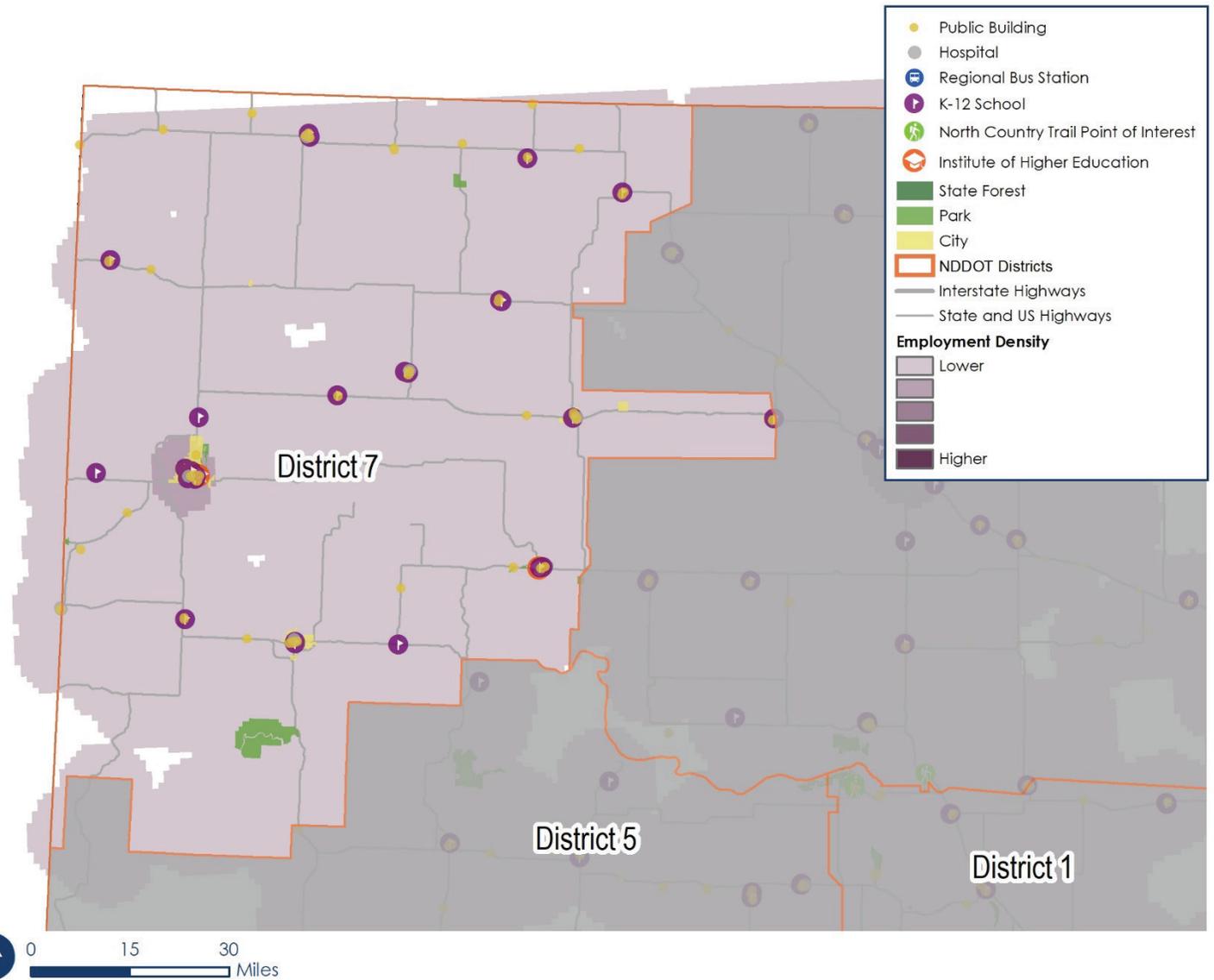


Destinations for Active Transportation - NDDOT District 6

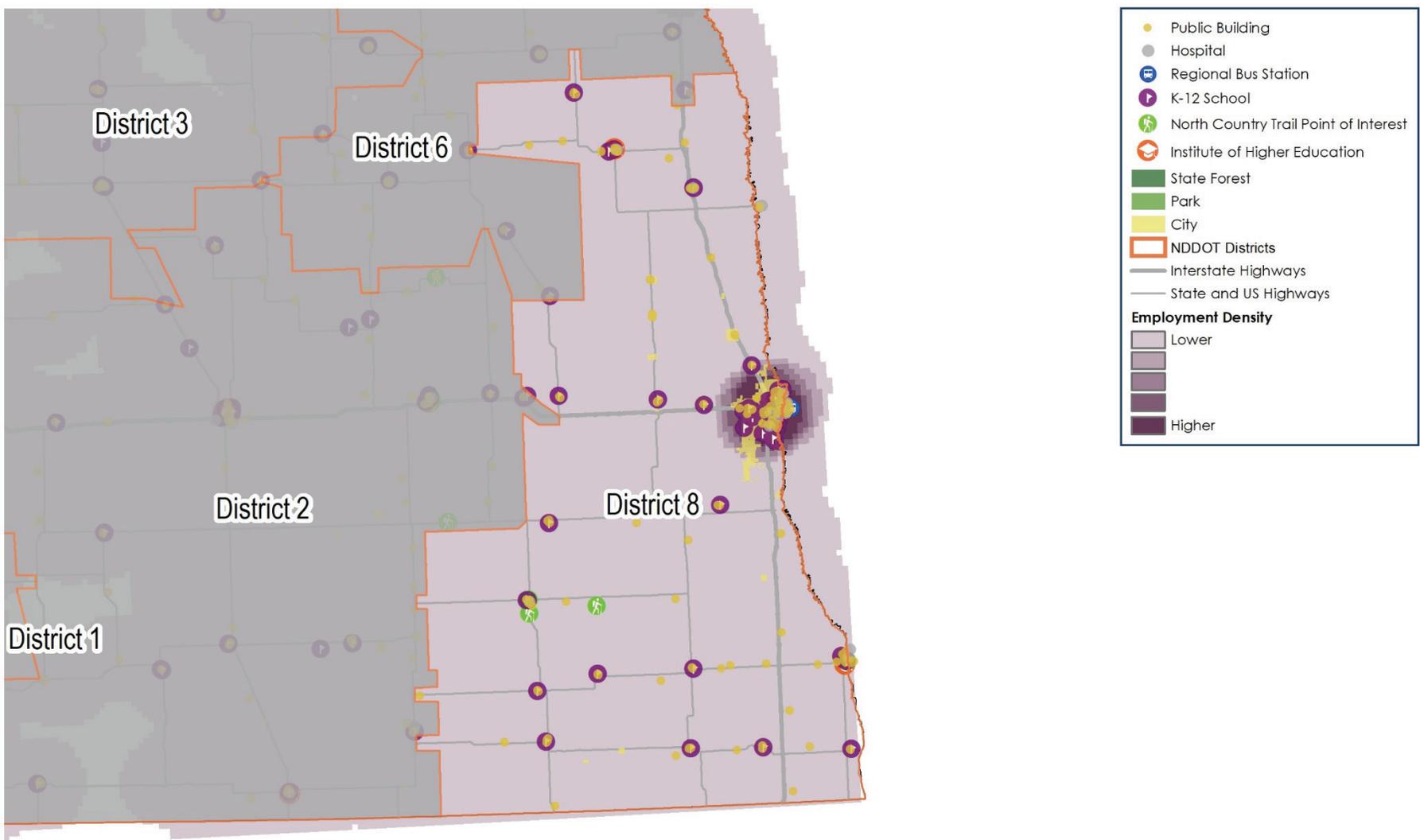




Destinations for Active Transportation - NDDOT District 7

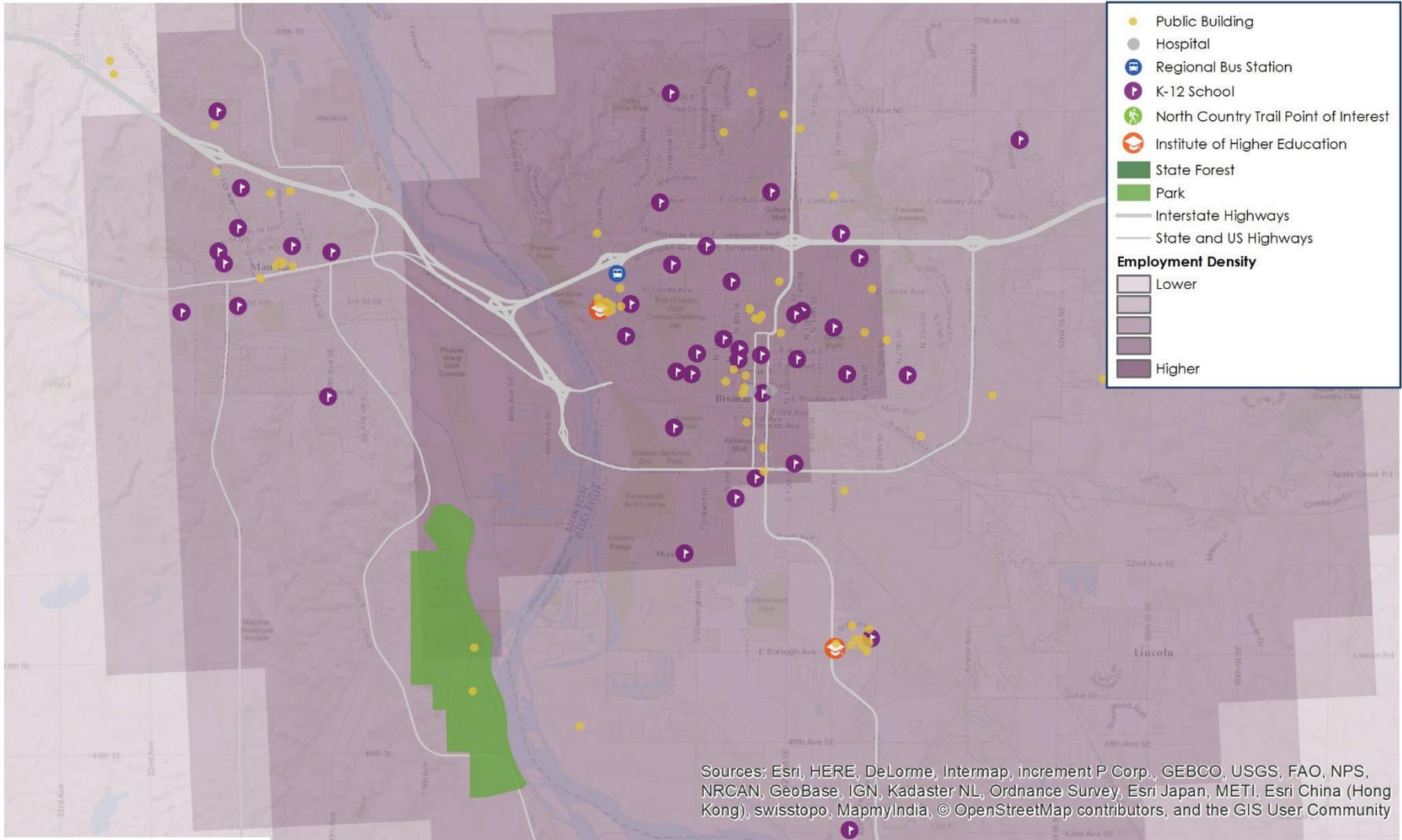


Destinations for Active Transportation - NDDOT District 8





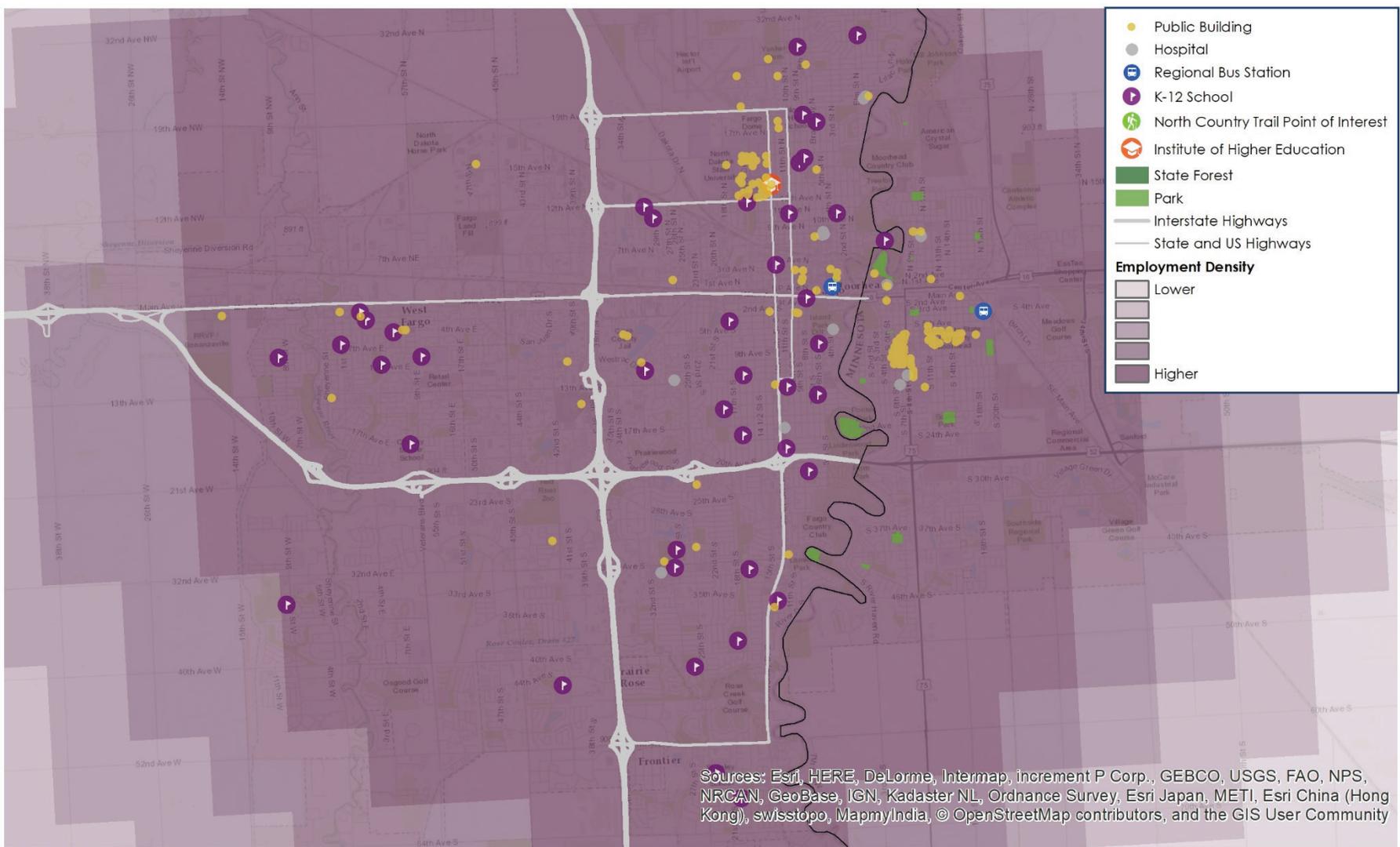
Destinations for Active Transportation - Bismarck-Mandan MPO



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

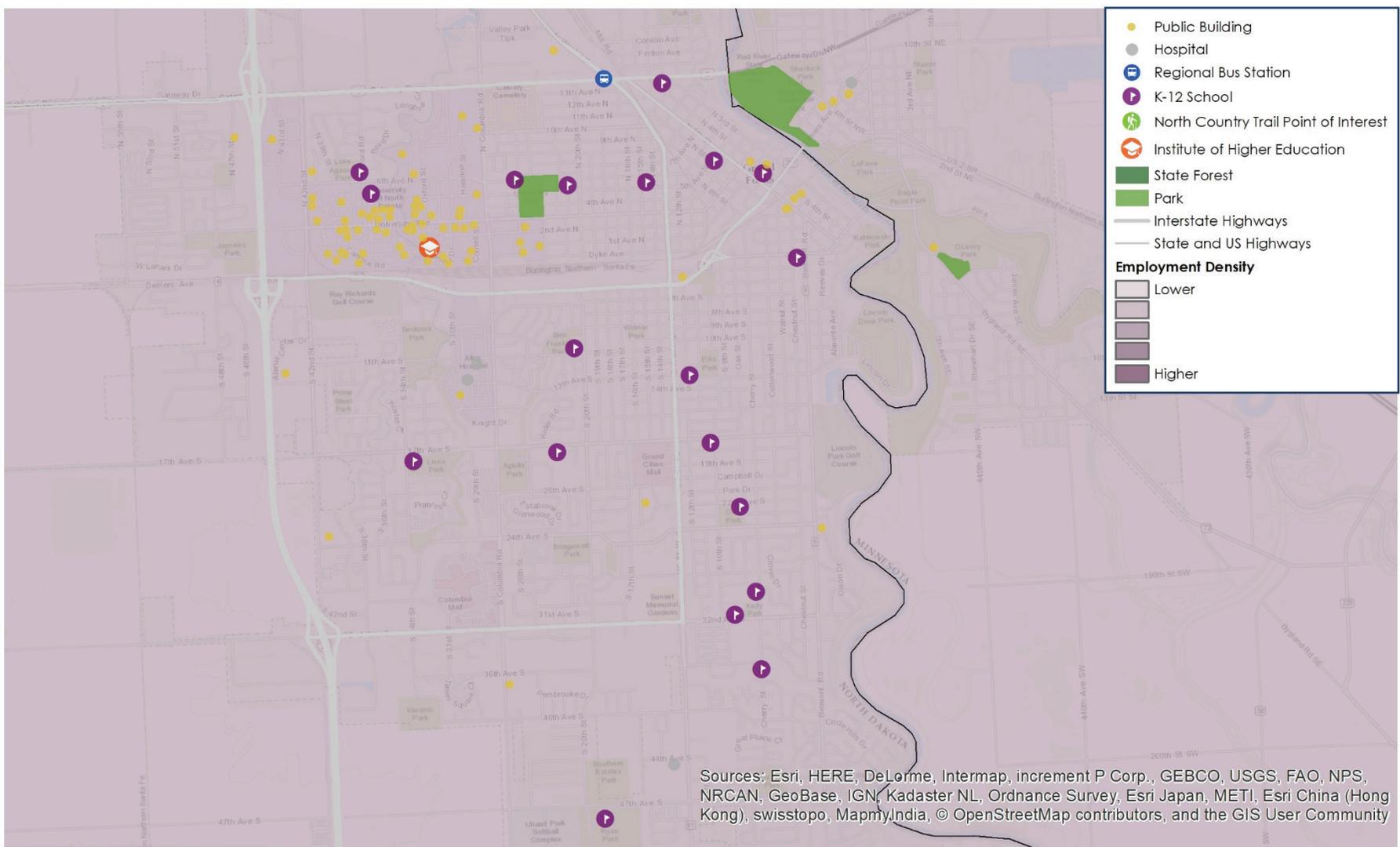


Destinations for Active Transportation - Fargo-Moorhead MPO



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Destinations for Active Transportation - Grand Forks-East Grand Forks MPO



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapnyIndia, © OpenStreetMap contributors, and the GIS User Community



APPENDIX D:

State Bike Network - Urban System Gap Maps



Safety Analysis and Gaps | Valley City

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



Number of crashes within 100 feet of each other

- 1
- 2
- 3
- 4 - 5
- 6 - 7

- █ Bike Gaps
- █ Other Existing Bike Facilities
- █ Existing Shared Use Paths
- █ Existing Sidewalks
- █ Principal arterials with posted speed of 35 or 40mph
- █ Principal arterials with posted speed of 25 or 30 mph

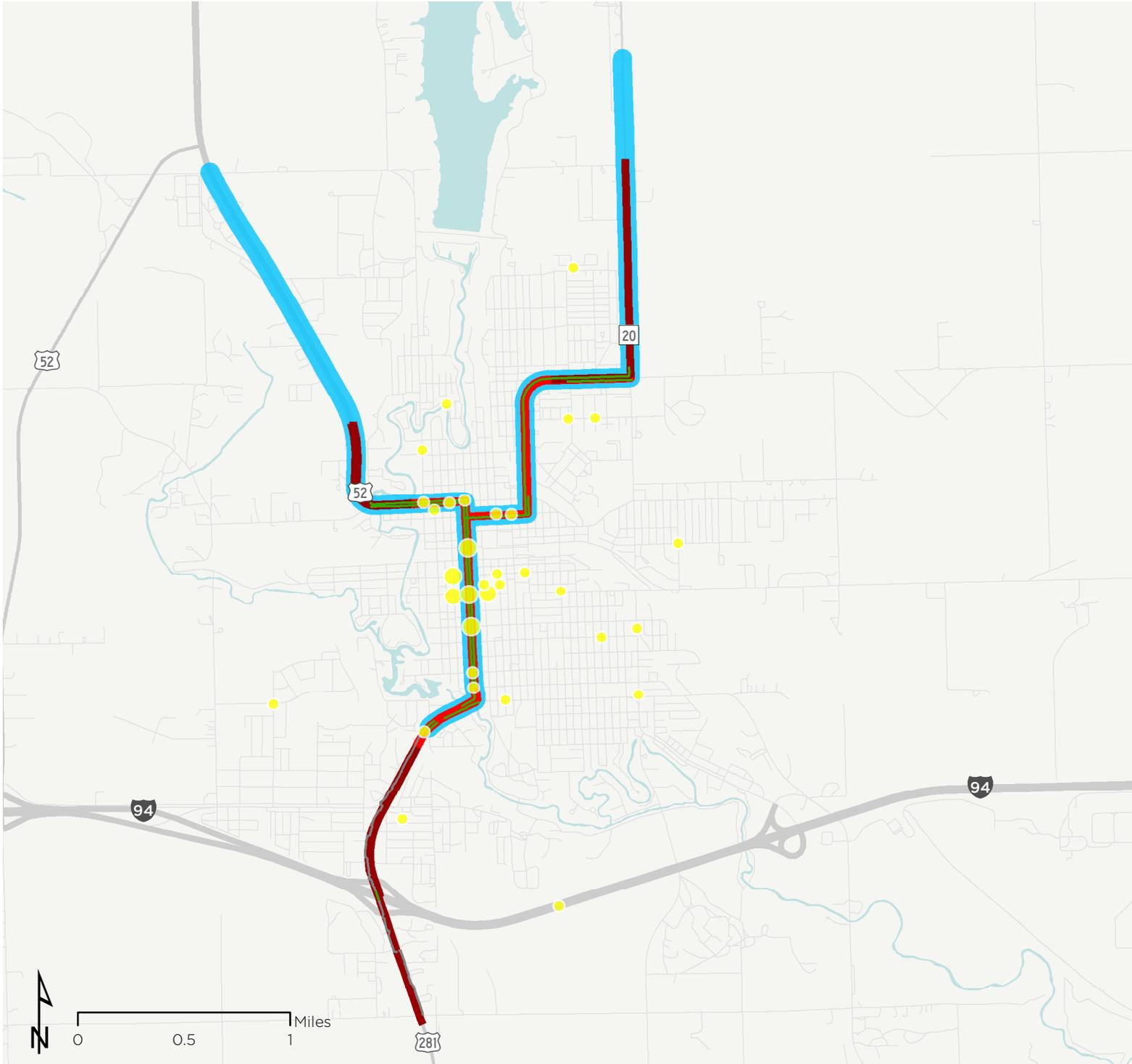
- █ Interstates
- █ U.S. highways
- █ State highways
- █ Local Roadways
- █ Water bodies
- ▨ Tribal lands
- █ National parks and grasslands



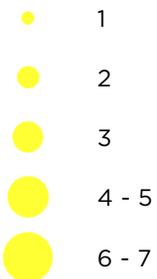
Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Jamestown

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



Number of crashes within 100 feet of each other



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- █ Existing Shared Use Paths
- █ Existing Sidewalks
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- █ U.S. highways
- █ State highways
- █ Local Roadways
- █ Water bodies
- █ Tribal lands
- █ National parks and grasslands



Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Wahpeton

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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- 3
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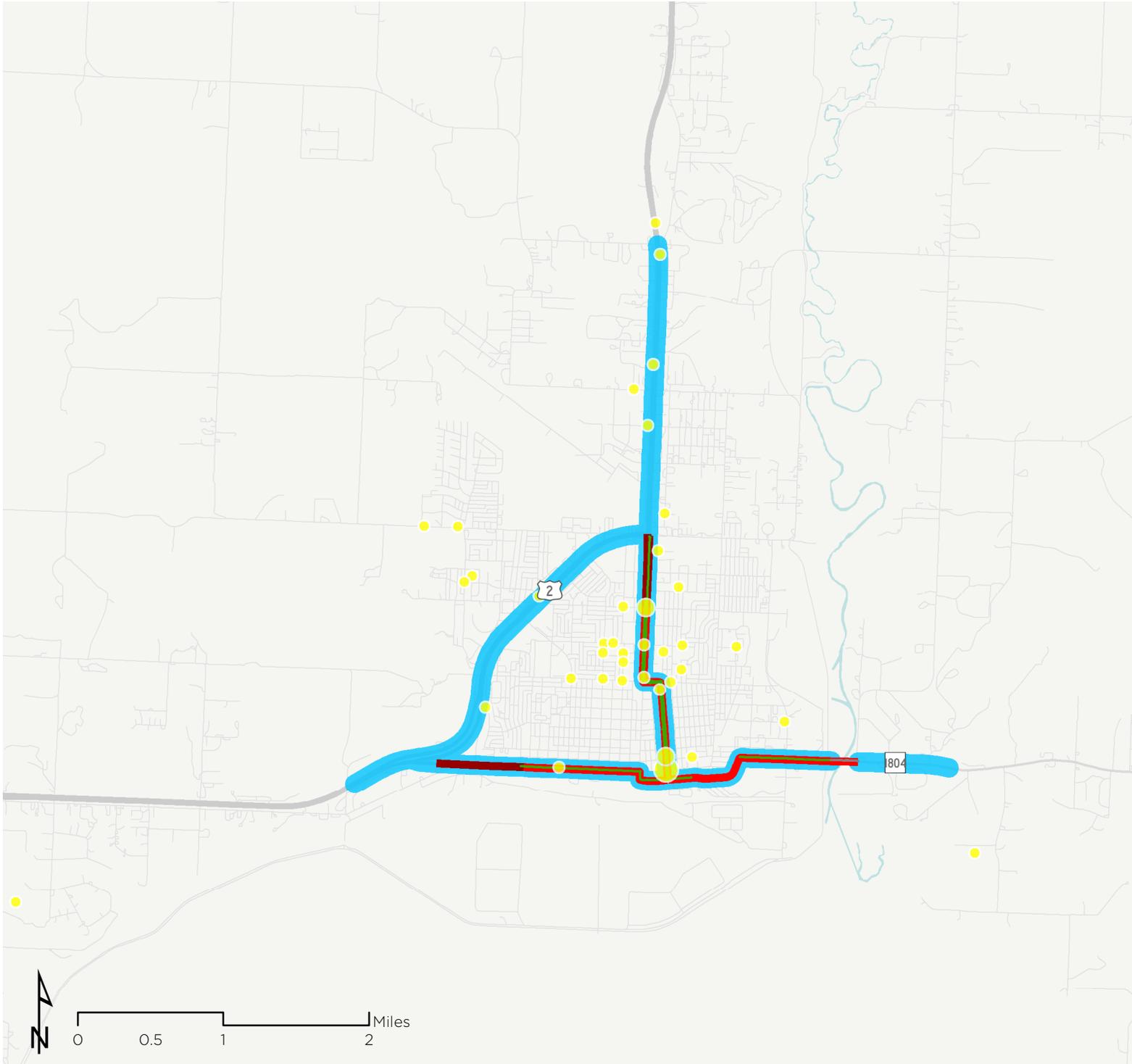
- █ Interstates
- █ U.S. highways
- █ State highways
- █ Local Roadways
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- █ National parks and grasslands



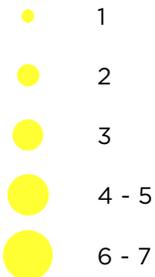
Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Williston

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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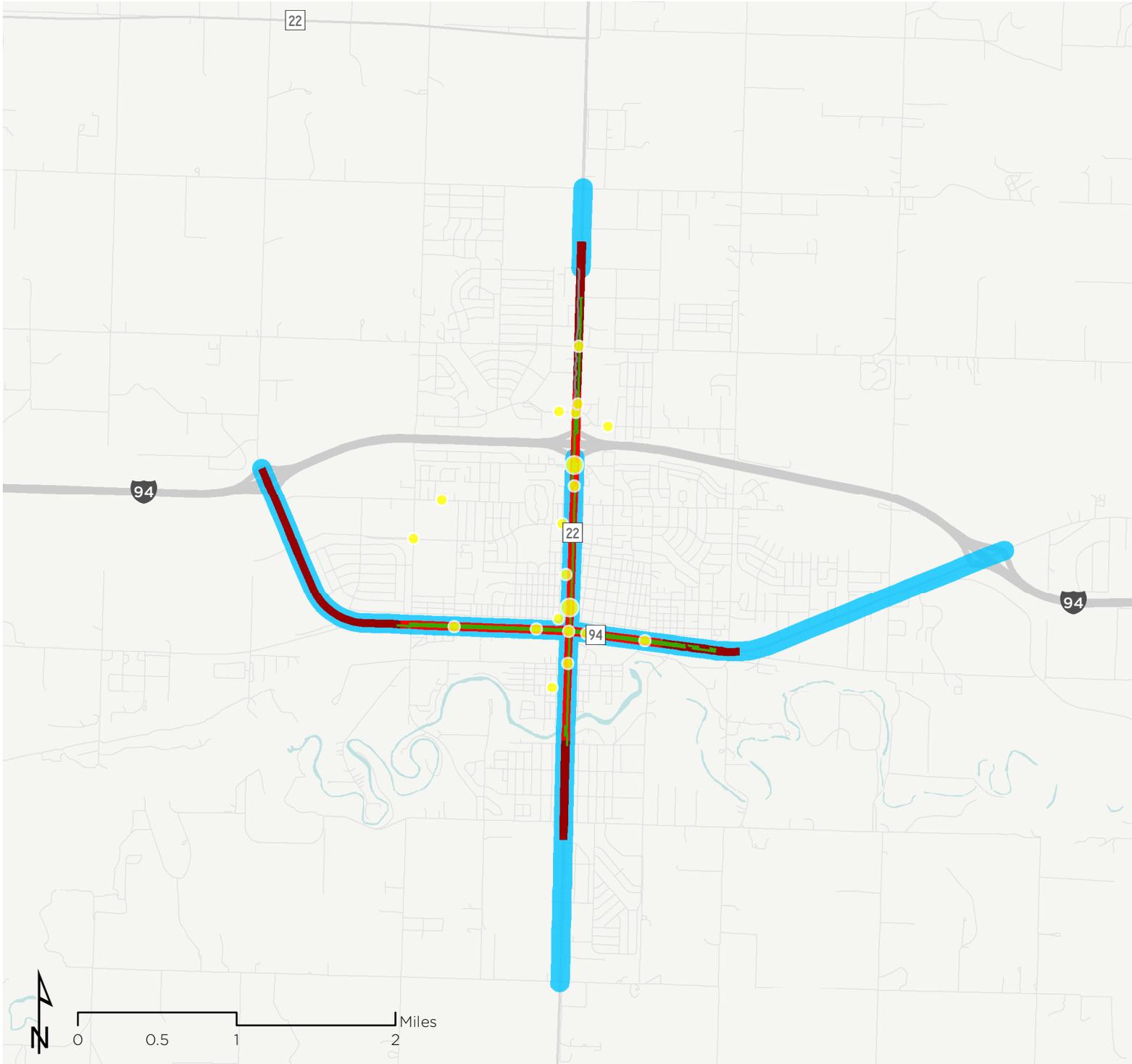
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- █ State highways
- █ Local Roadways
- █ Water bodies
- ▨ Tribal lands
- █ National parks and grasslands



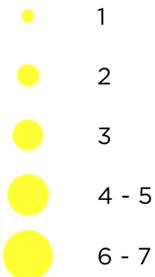
Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Dickinson

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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- Existing Shared Use Paths
- Existing Sidewalks
- Principal arterials with posted speed of 35 or 40mph
- Principal arterials with posted speed of 25 or 30 mph

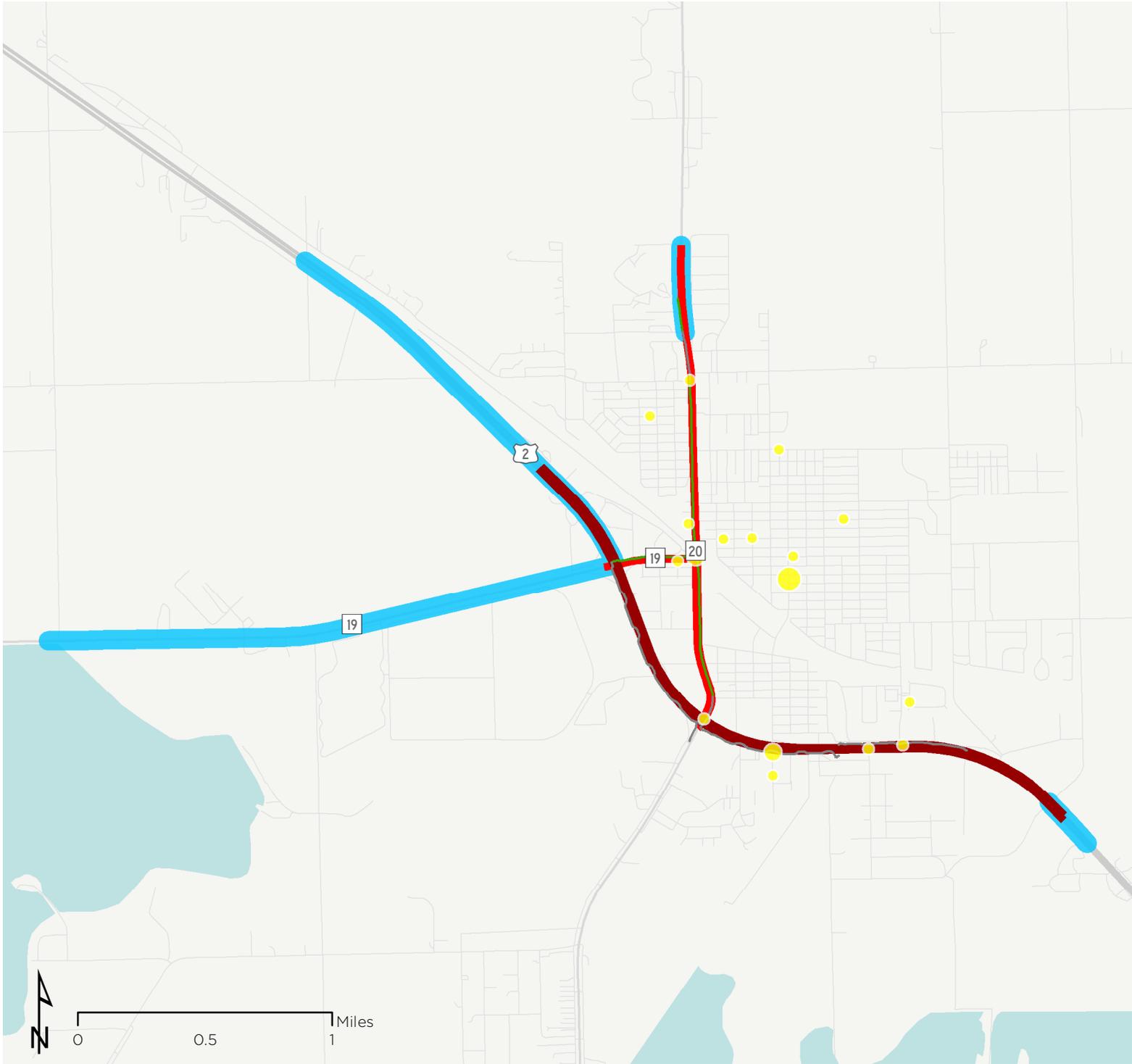
- Interstates
- U.S. highways
- State highways
- Local Roadways
- Water bodies
- Tribal lands
- National parks and grasslands



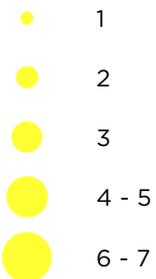
Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Devils Lake

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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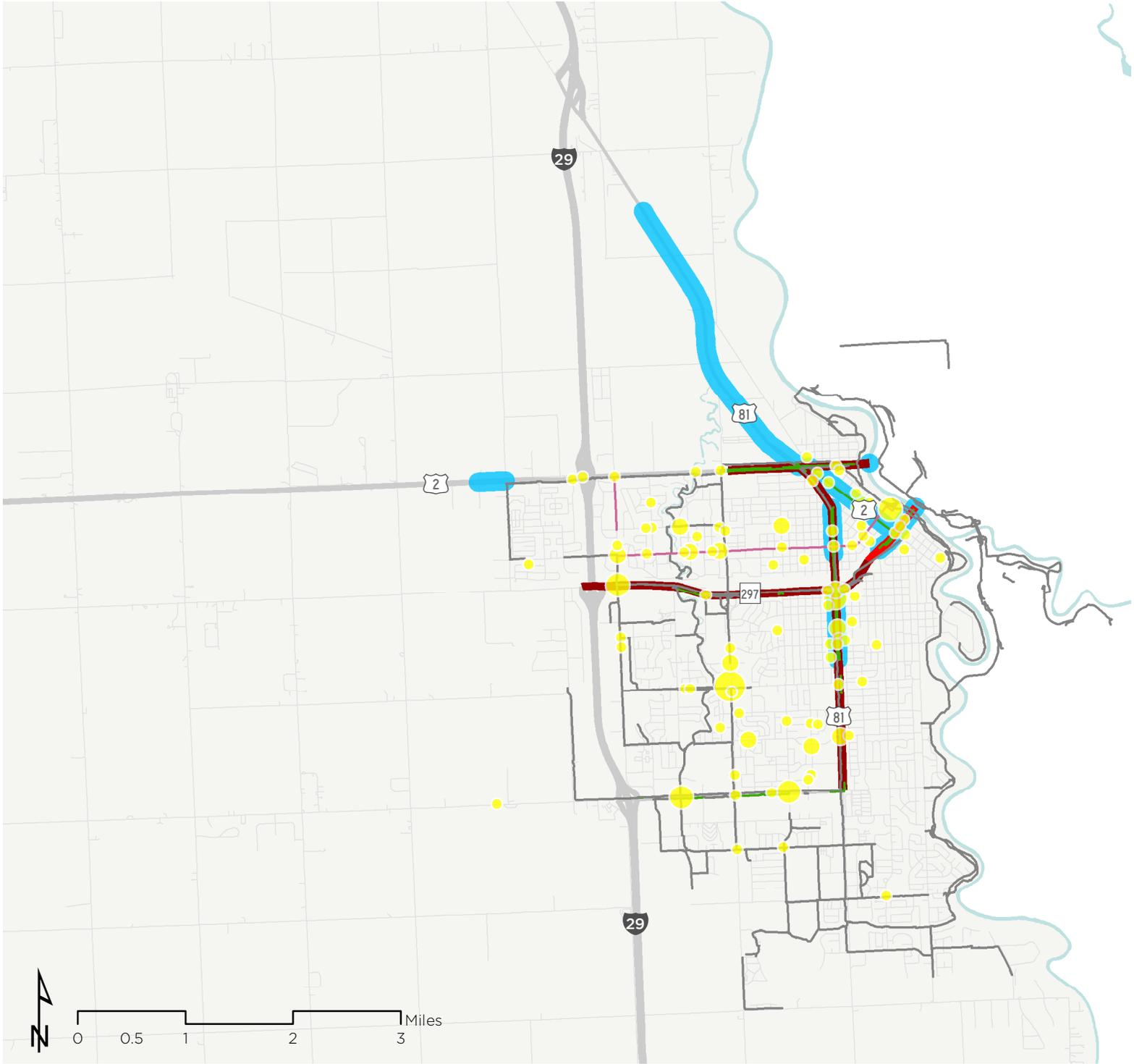
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- █ U.S. highways
- █ State highways
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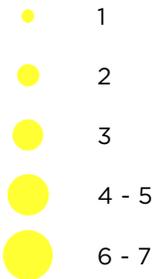
Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Grand Forks

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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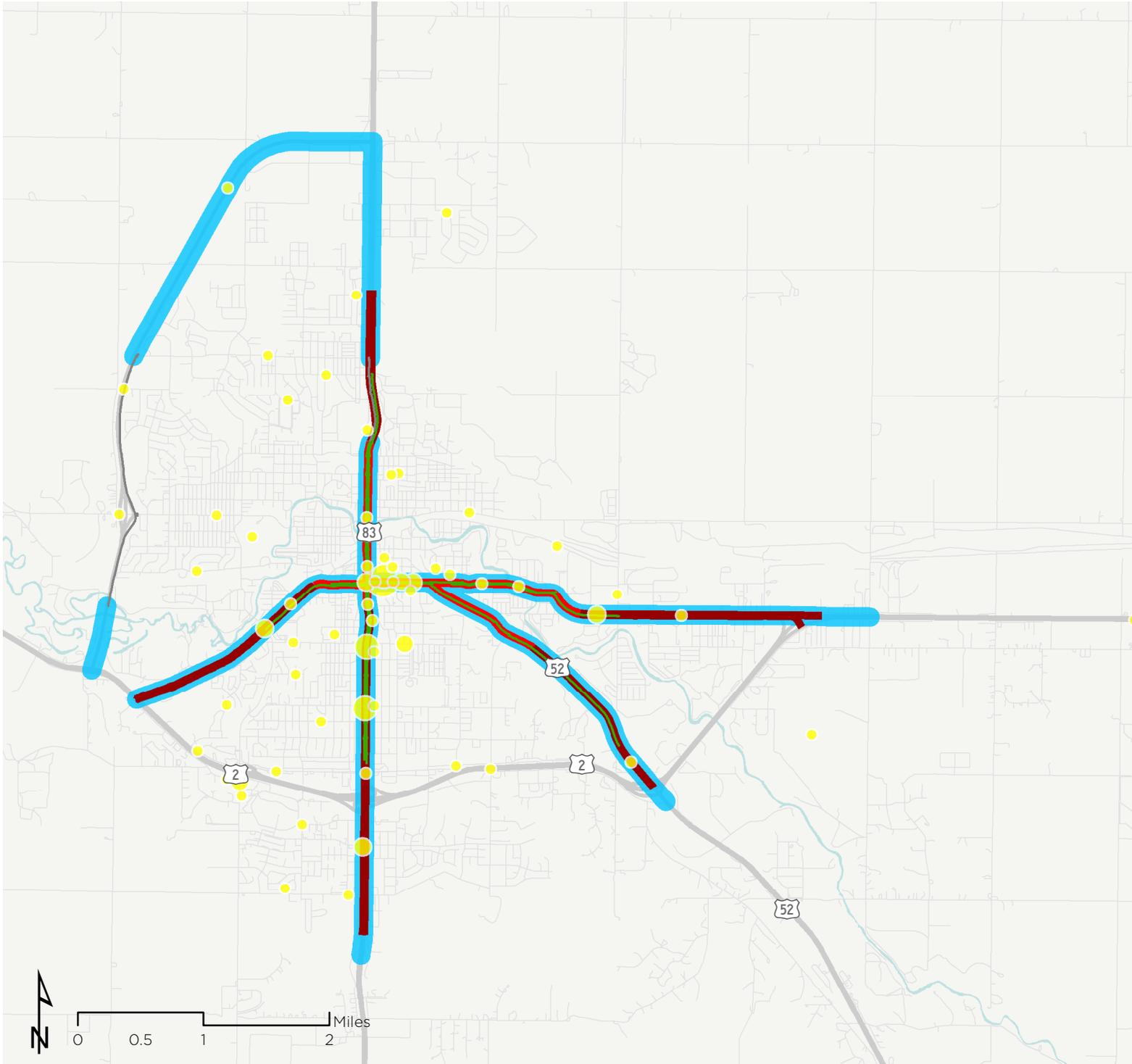
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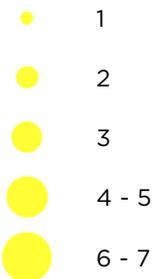
Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Minot

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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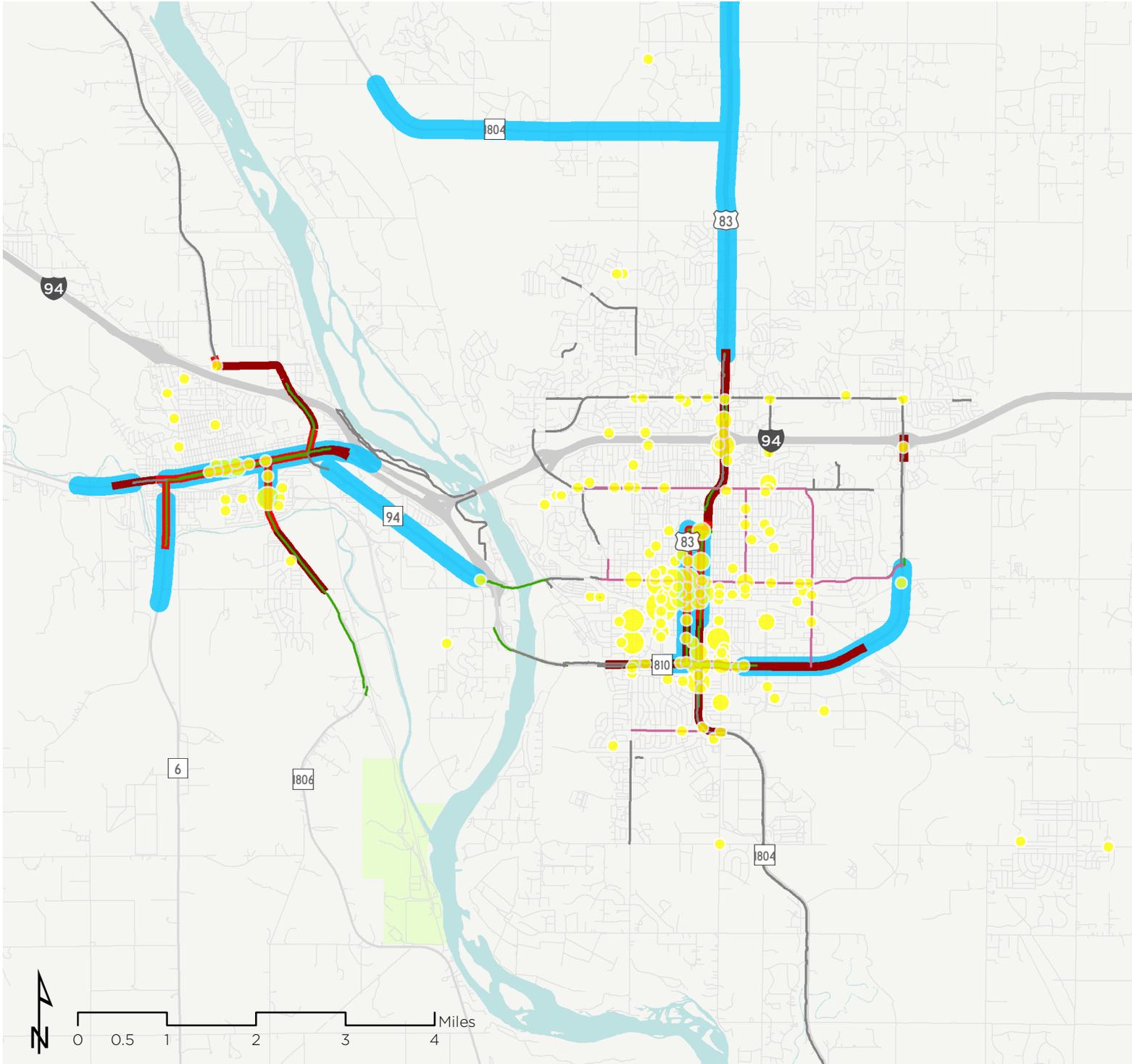
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- █ U.S. highways
- █ State highways
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- █ Water bodies
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- █ National parks and grasslands



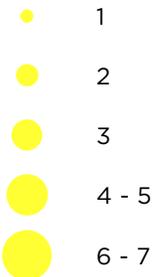
Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Bismarck-Mandan

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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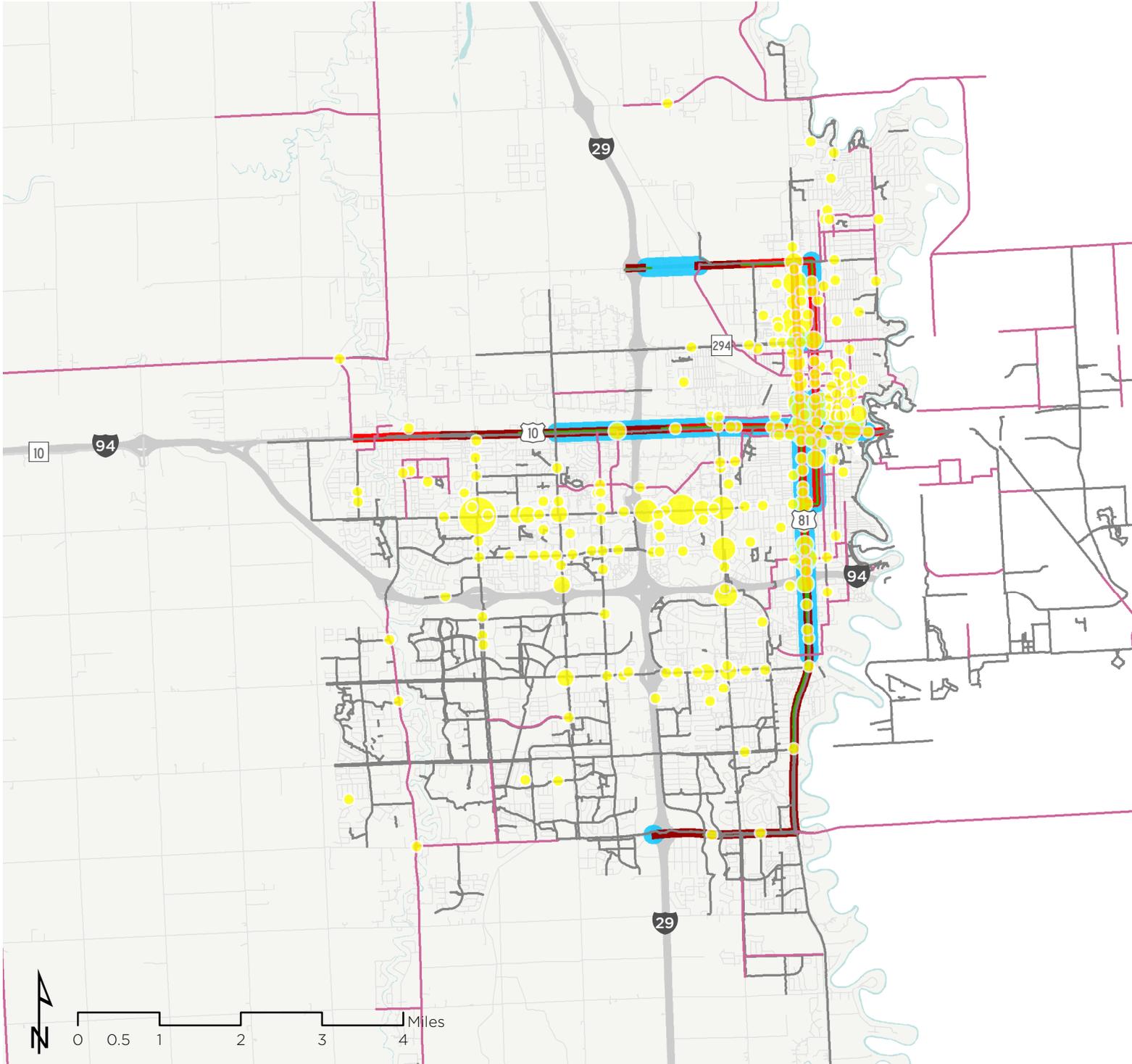
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- █ Water bodies
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Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

Safety Analysis and Gaps | Fargo-West Fargo

This analysis identifies gaps in existing bicycle facilities. Gaps do not have infrastructure intended for bicycles such as bike lanes, bike-friendly shoulders, or sidepaths. They are located near roadways with high posted speed limits and multiple active transportation crashes. The analysis was limited only to urban segments of state highways.



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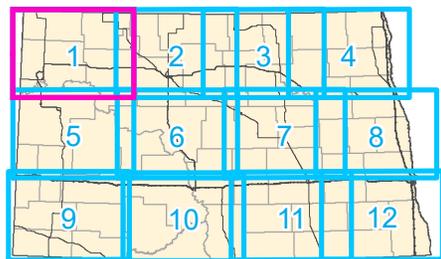
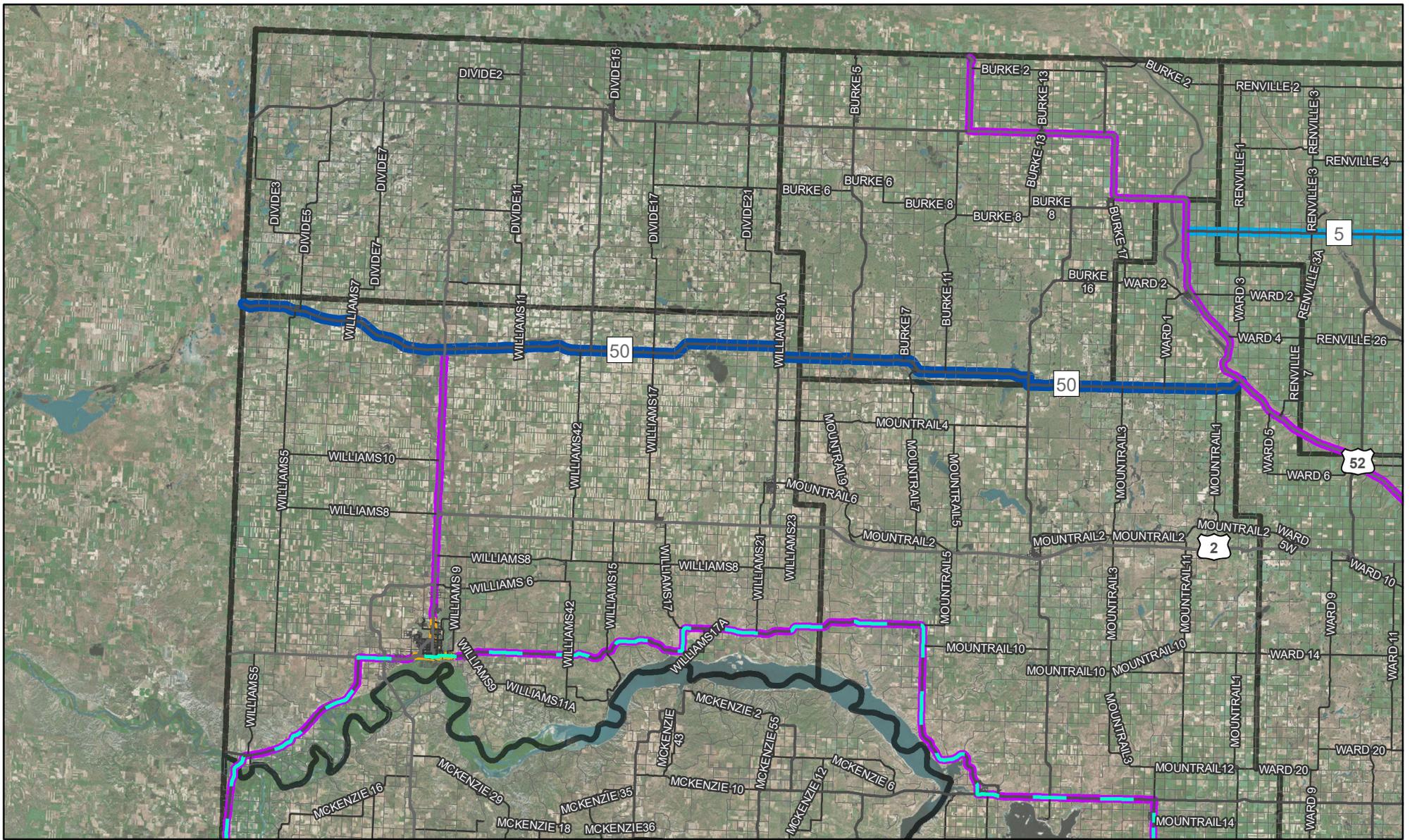


Data provided by NDDOT. Crash data shows recorded active transportation crashes from 2012-2016. Map produced April 2019.

APPENDIX E:

State Bike Network - County Maps





North Dakota County Road Network

Divide, Burke, Williams & Mountrail Counties

Draft State Bike Network

 Tier 1: State Bike Corridors

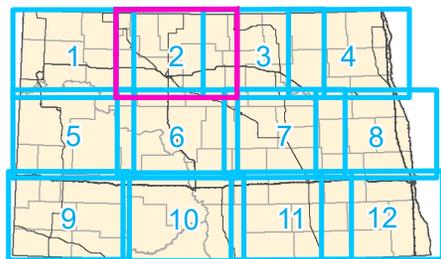
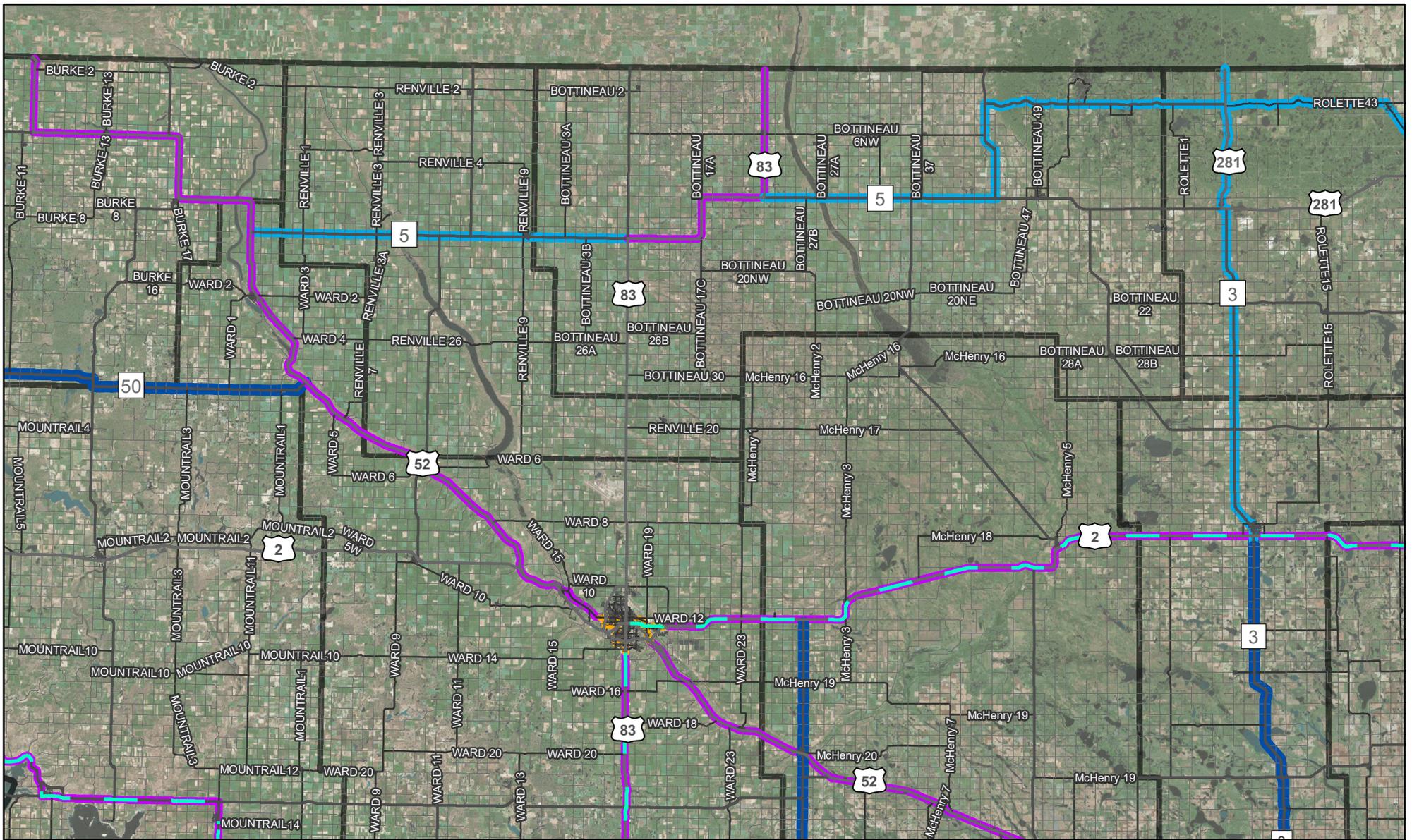
 Tier 2: State Bike Corridors

 Tier 3: Regional Bike Connector Corridors

 Urban Bike Desire Lines

 Proposed U.S. Bicycle Route System

 County Border



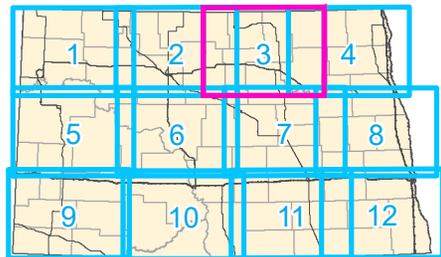
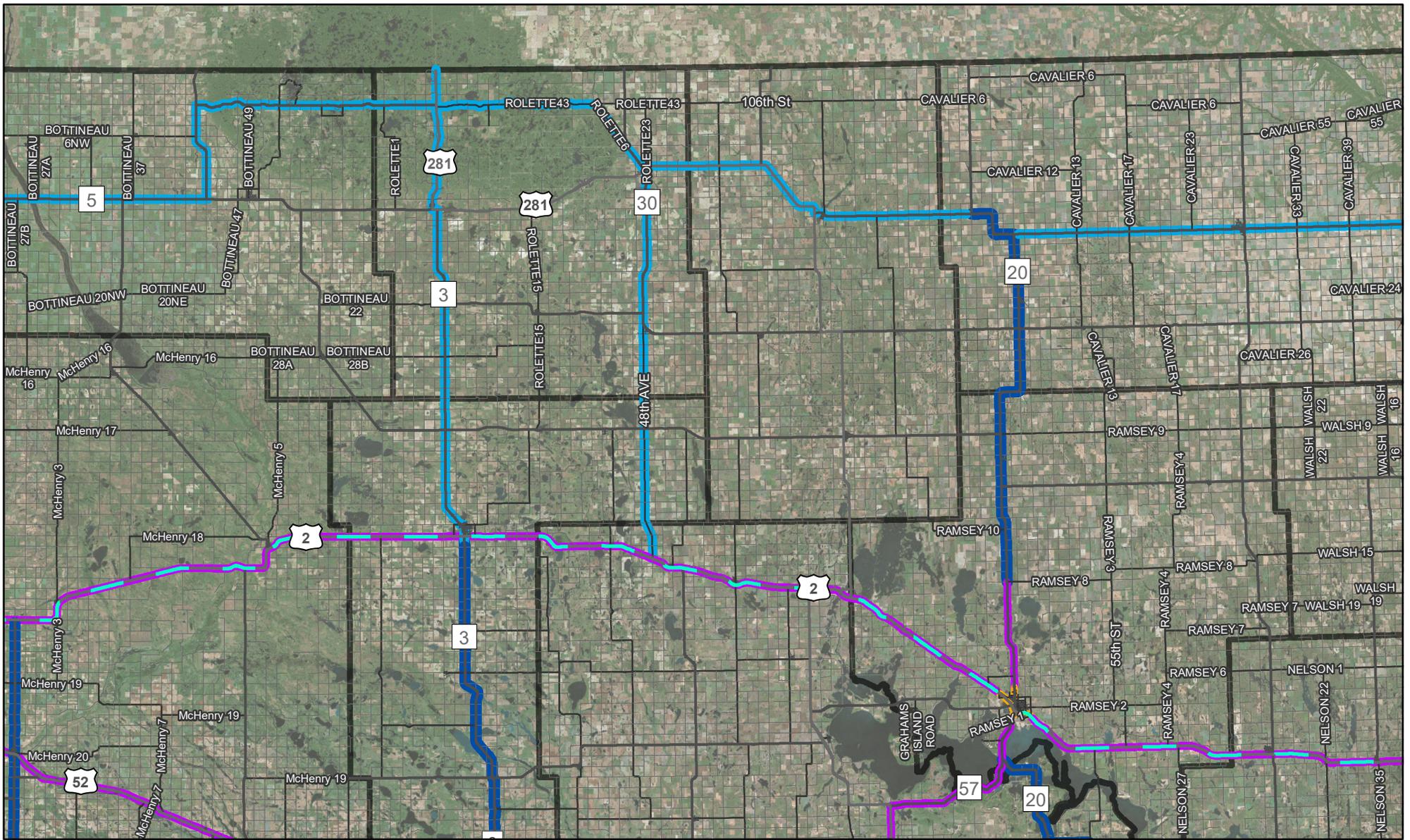
North Dakota County Road Network

Renville, Bottineau, Ward & McHenry Counties

Draft State Bike Network

- Tier 1: State Bike Corridors
- Tier 2: State Bike Corridors
- Tier 3: Regional Bike Connector Corridors
- Urban Bike Desire Lines

- Proposed U.S. Bicycle Route System
- County Border



North Dakota County Road Network

Rolette, Towner, Pierce, Benson & Ramsey Counties

Draft State Bike Network

 Tier 1: State Bike Corridors

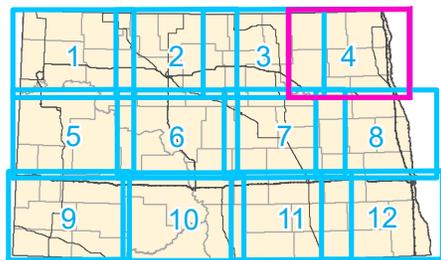
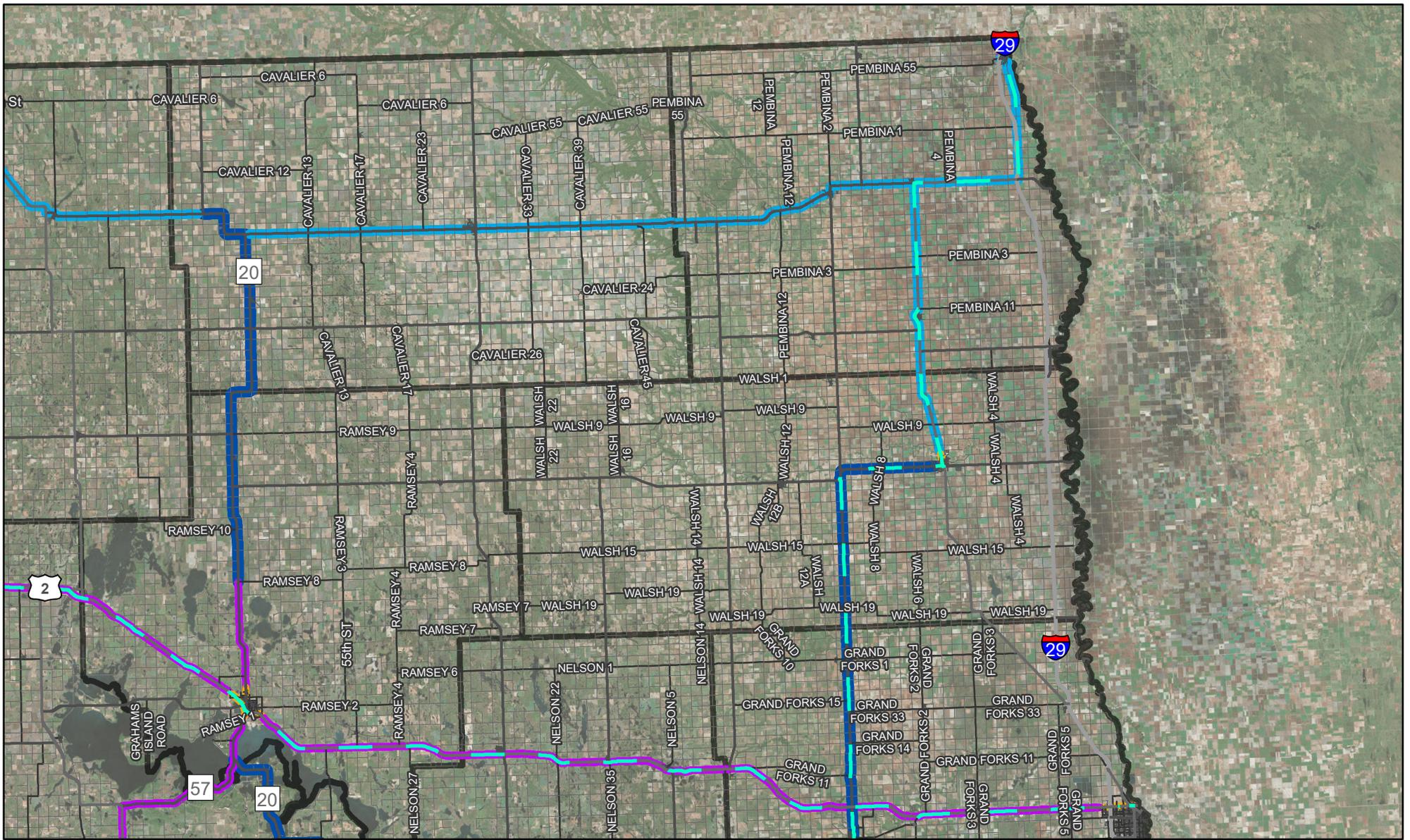
 Tier 2: State Bike Corridors

 Tier 3: Regional Bike Connector Corridors

 Urban Bike Desire Lines

 Proposed U.S. Bicycle Route System

 County Border



North Dakota County Road Network

Cavalier, Pembina, Ramsey & Walsh Counties

Draft State Bike Network

 Tier 1: State Bike Corridors

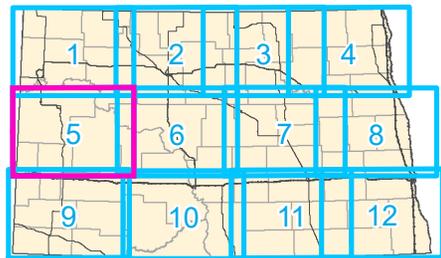
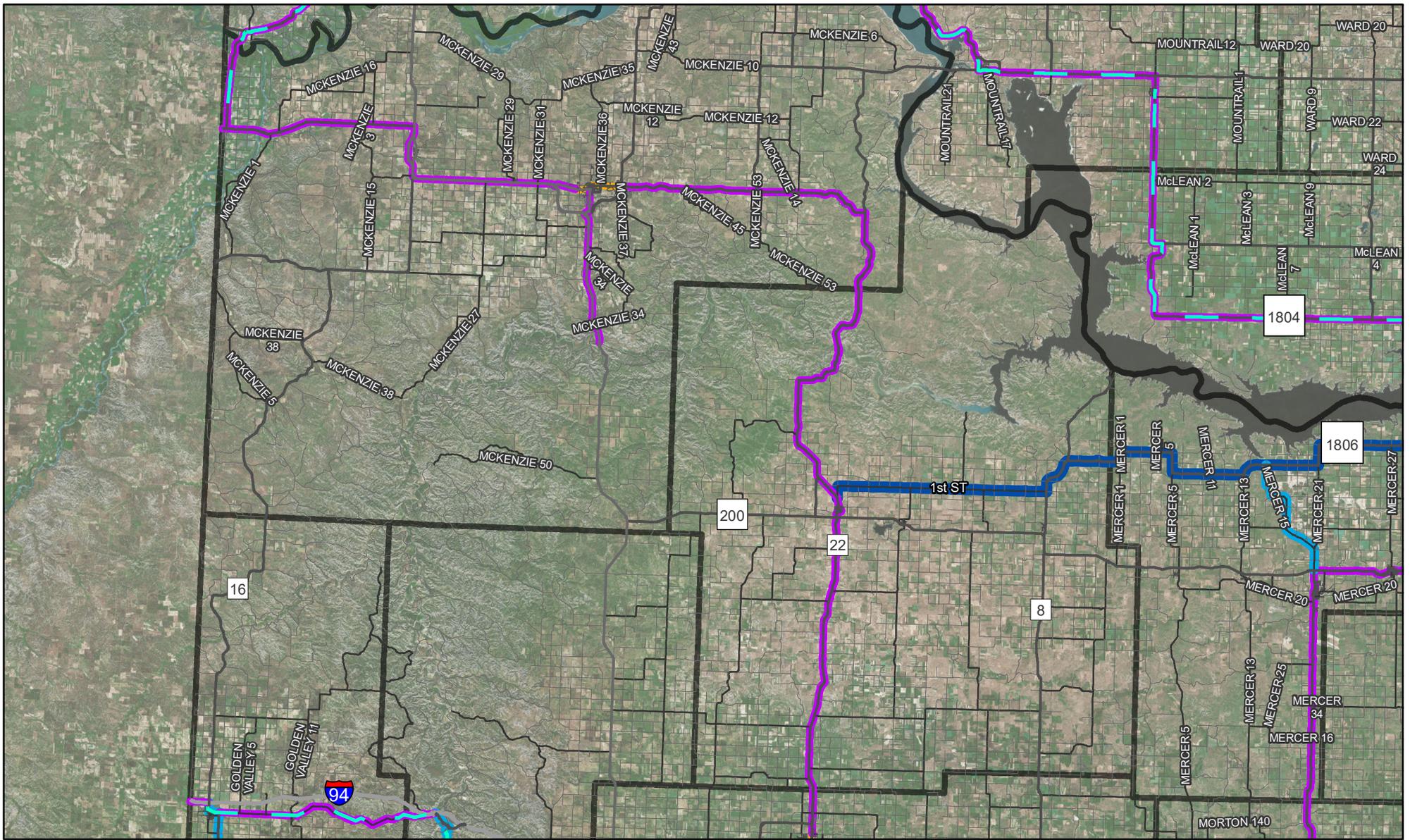
 Tier 2: State Bike Corridors

 Tier 3: Regional Bike Connector Corridors

 Urban Bike Desire Lines

 Proposed U.S. Bicycle Route System

 County Border



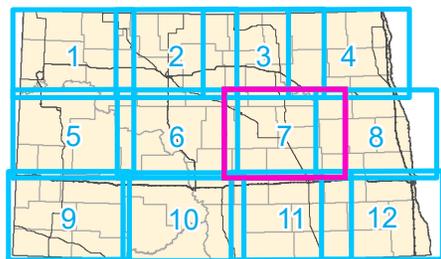
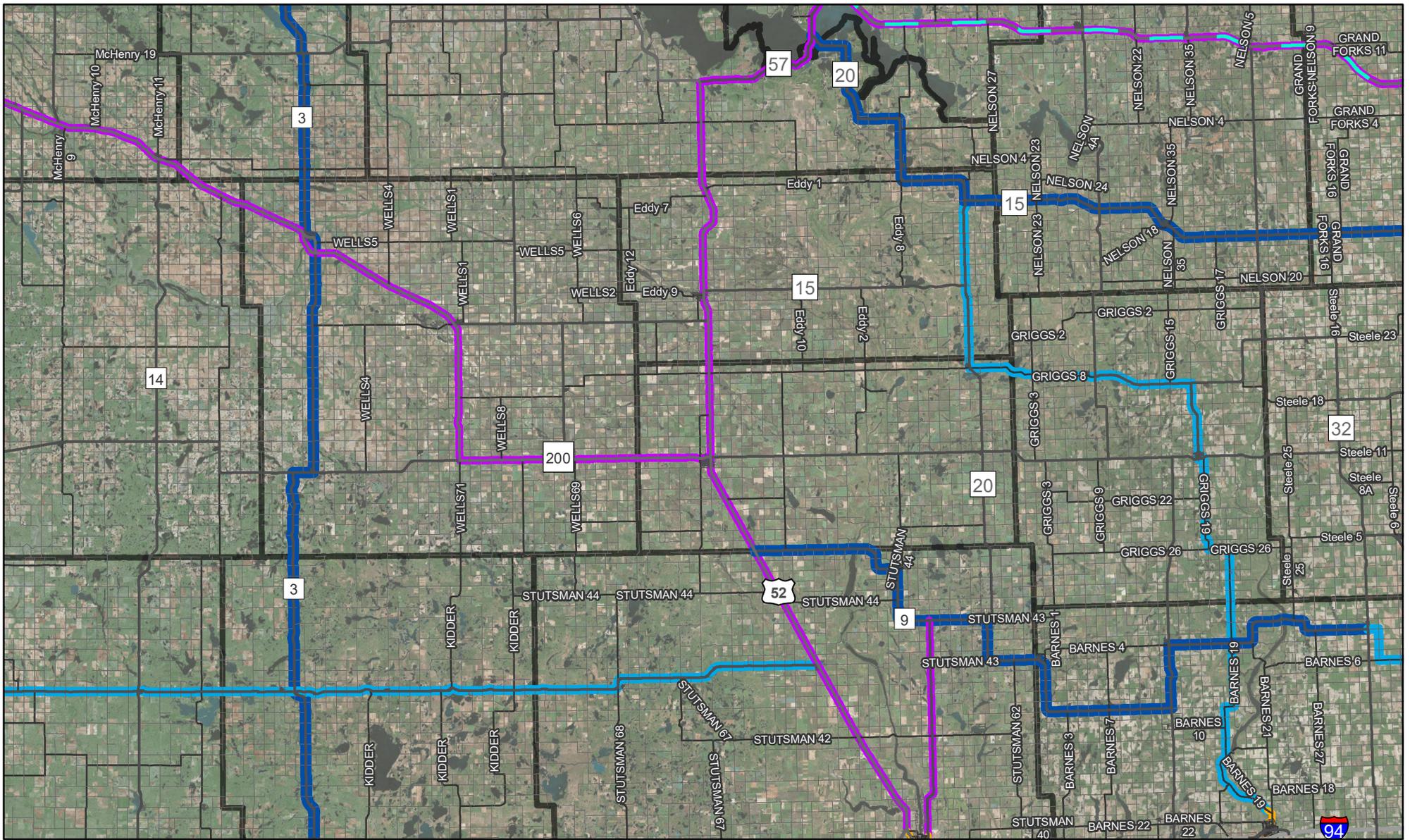
North Dakota County Road Network

McKenzie, Dunn, Golden Valley & Billings Counties

Draft State Bike Network

- Tier 1: State Bike Corridors
- Tier 2: State Bike Corridors
- Tier 3: Regional Bike Connector Corridors
- Urban Bike Desire Lines

- Proposed U.S. Bicycle Route System
- County Border



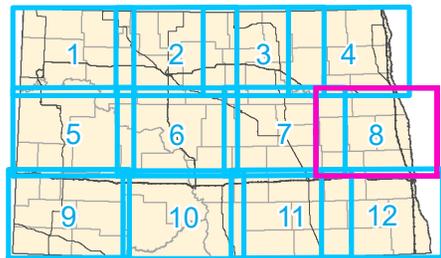
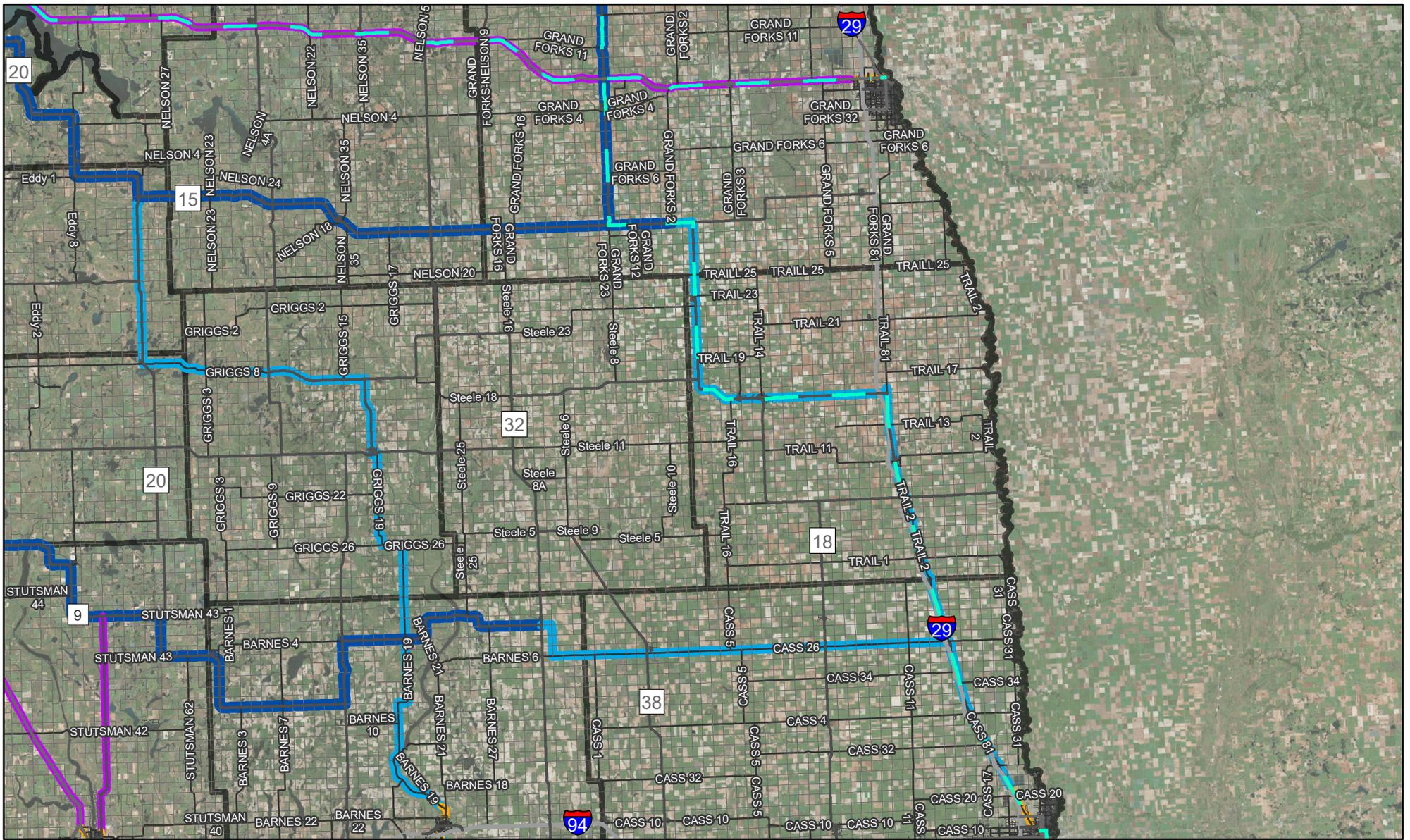
North Dakota County Road Network

Wells, Eddy, Foster, Nelson, Griggs, Kidder & Stutsman Counties

Draft State Bike Network

- Tier 1: State Bike Corridors
- Tier 2: State Bike Corridors
- Tier 3: Regional Bike Connector Corridors
- Urban Bike Desire Lines

- Proposed U.S. Bicycle Route System
- County Border



North Dakota County Road Network

Nelson, Grand Forks, Griggs, Steele, Traill, Barnes & Cass Counties

Draft State Bike Network

 Tier 1: State Bike Corridors

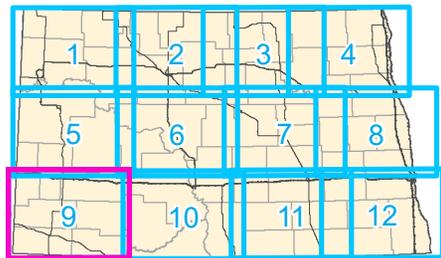
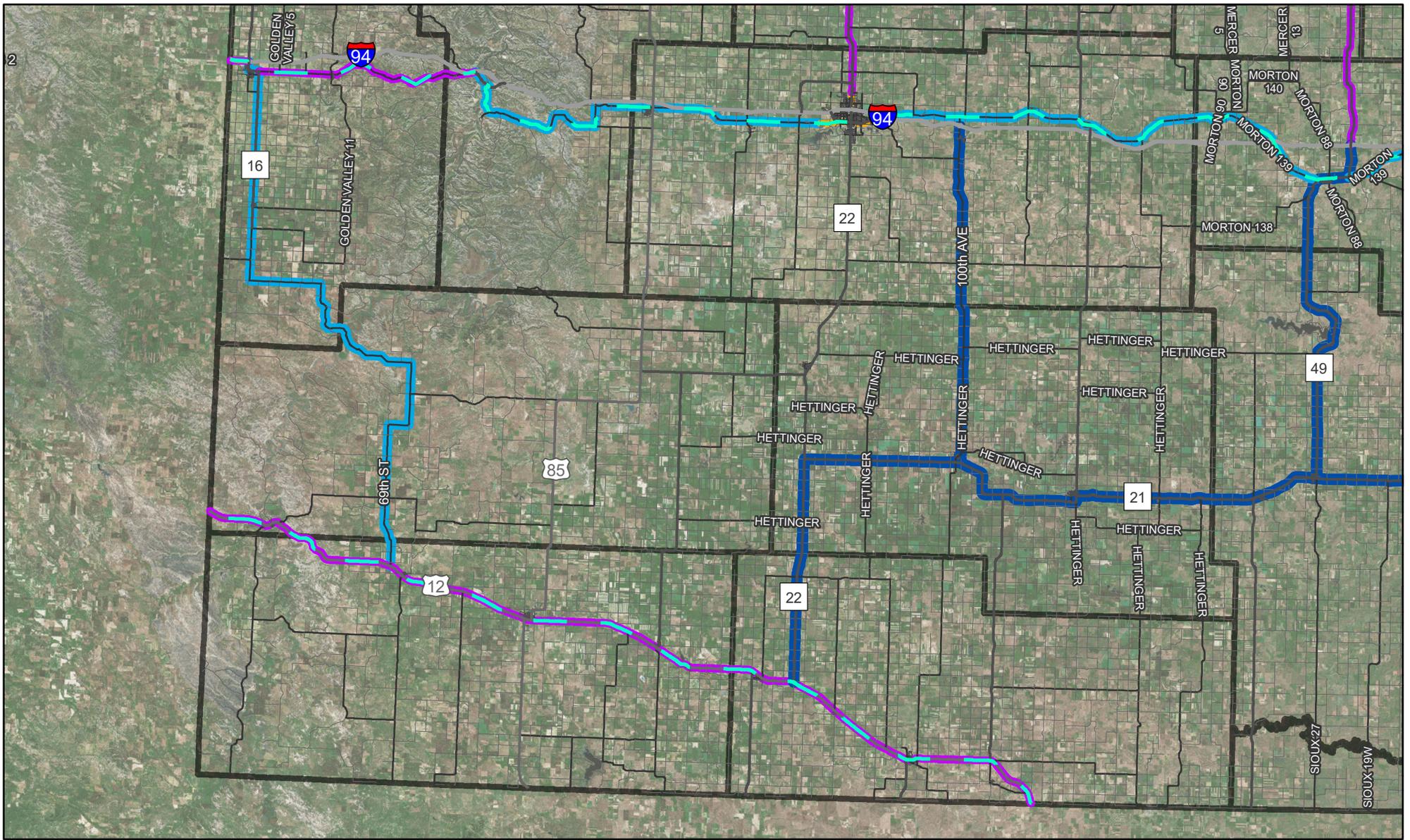
 Tier 2: State Bike Corridors

 Tier 3: Regional Bike Connector Corridors

 Urban Bike Desire Lines

 Proposed U.S. Bicycle Route System

 County Border



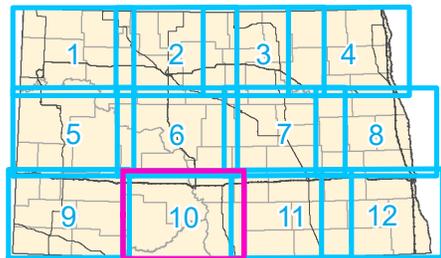
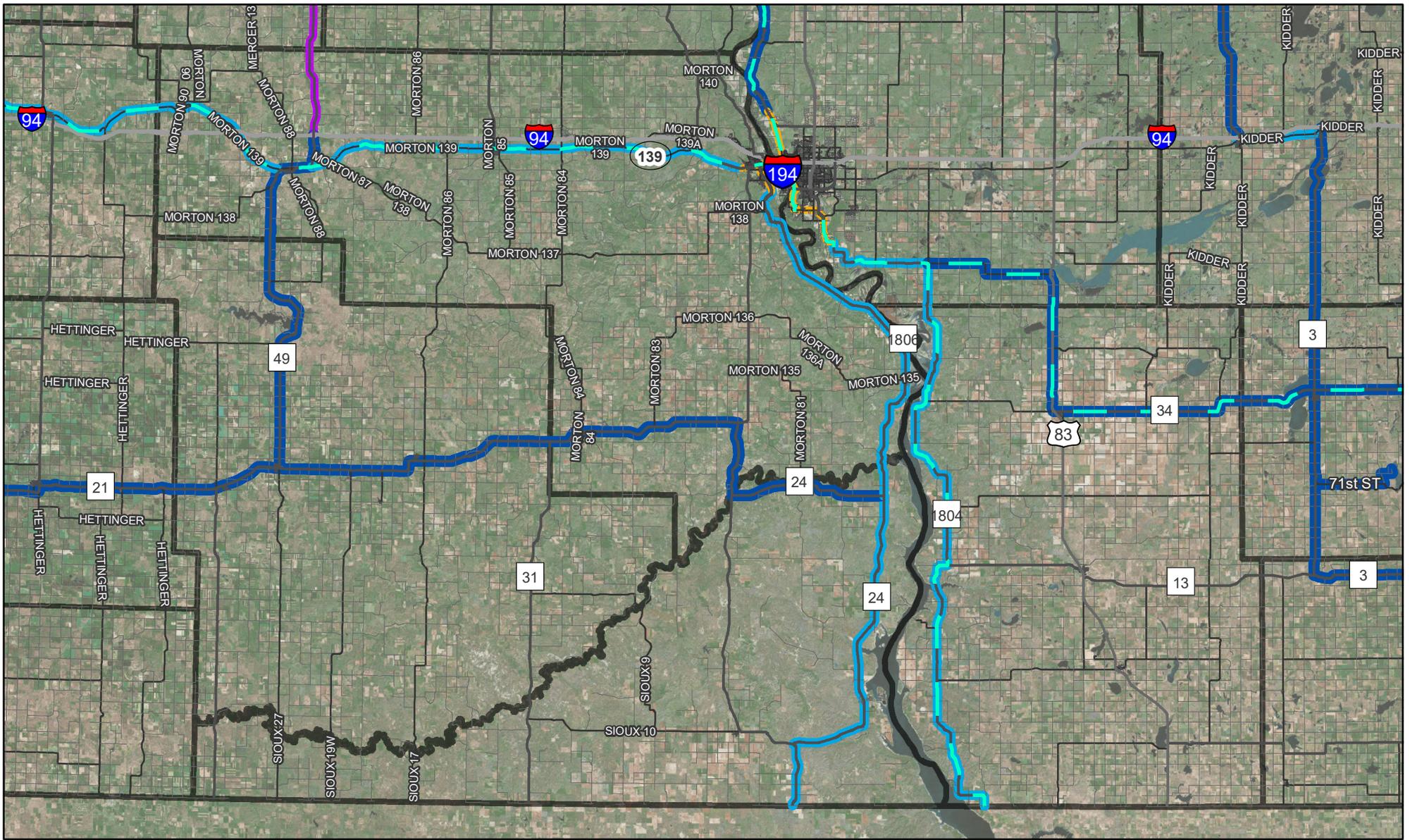
North Dakota County Road Network

Golden Valley, Billings, Stark, Slope, Hettinger, Bowman & Adams Counties

Draft State Bike Network

- Tier 1: State Bike Corridors
- Tier 2: State Bike Corridors
- Tier 3: Regional Bike Connector Corridors
- Urban Bike Desire Lines

- Proposed U.S. Bicycle Route System
- County Border



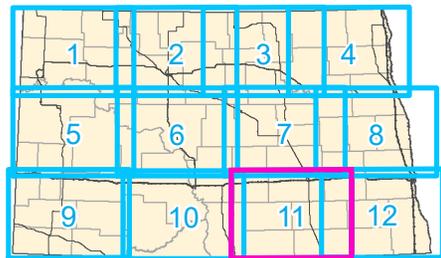
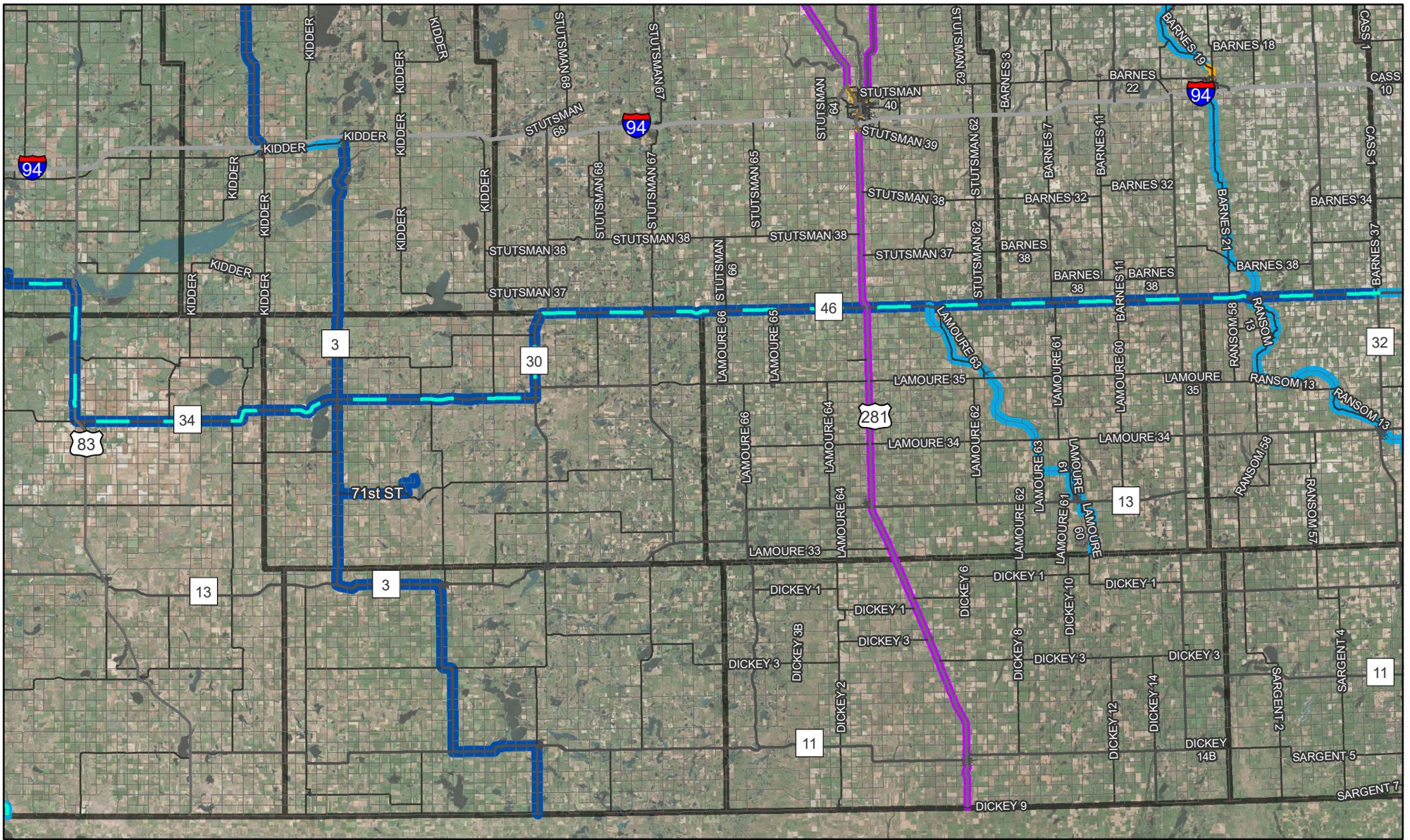
North Dakota County Road Network

Morton, Grant, Sioux, Emmons & Burleigh Counties

Draft State Bike Network

- █ Tier 1: State Bike Corridors
- █ Tier 2: State Bike Corridors
- █ Tier 3: Regional Bike Connector Corridors
- █ Urban Bike Desire Lines

- █ Proposed U.S. Bicycle Route System
- County Border



North Dakota County Road Network

Kidder, Stutsman, Barnes, Logan, LaMoure, McIntosh & Dickey Counties

Draft State Bike Network

● Tier 1: State Bike Corridors

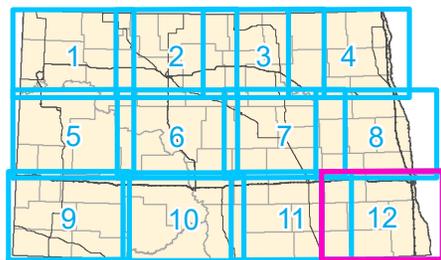
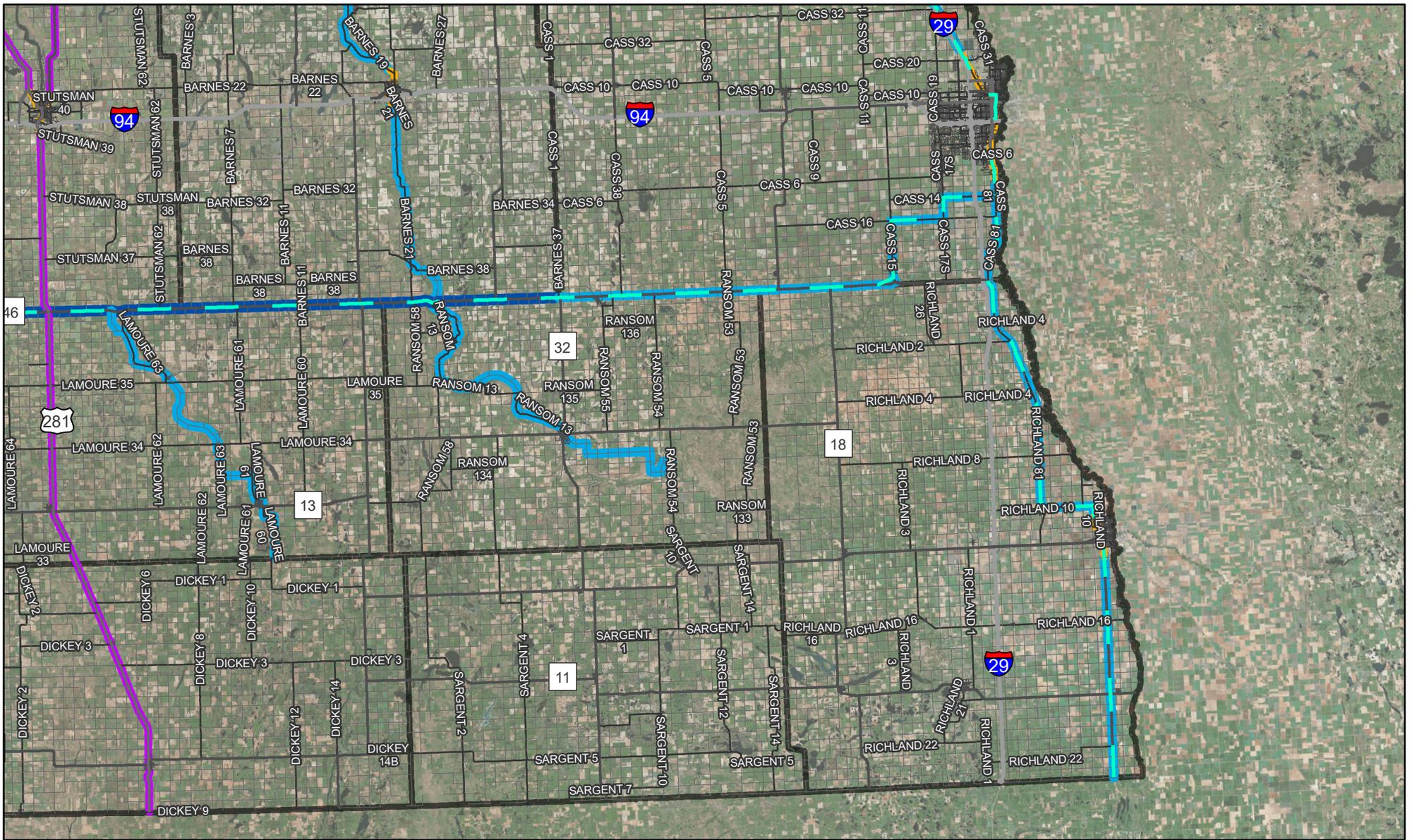
● Tier 2: State Bike Corridors

● Tier 3: Regional Bike Connector Corridors

● Urban Bike Desire Lines

— Proposed U.S. Bicycle Route System

▭ County Border



North Dakota County Road Network

Barnes, Cass, LaMoure, Ransom, Richland, Dickey, Sargent Counties

Draft State Bike Network

Tier 1: State Bike Corridors

Tier 2: State Bike Corridors

Tier 3: Regional Bike Connector Corridors

Urban Bike Desire Lines

Proposed U.S. Bicycle Route System

County Border

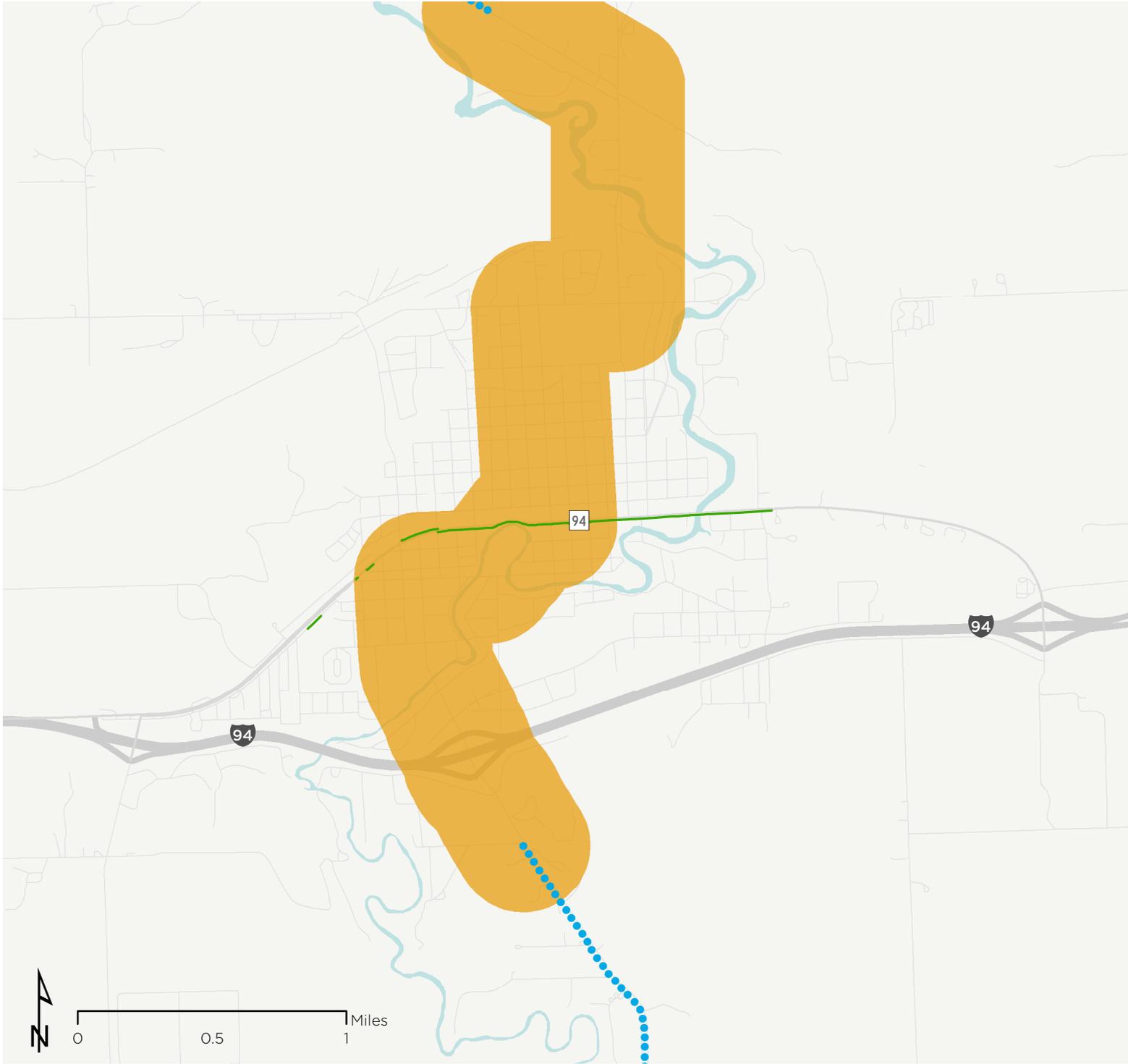
APPENDIX F:

State Bike Network - Possible Urban Area Connections



Possible Urban Area Connections to State Bicycle Network | Valley City

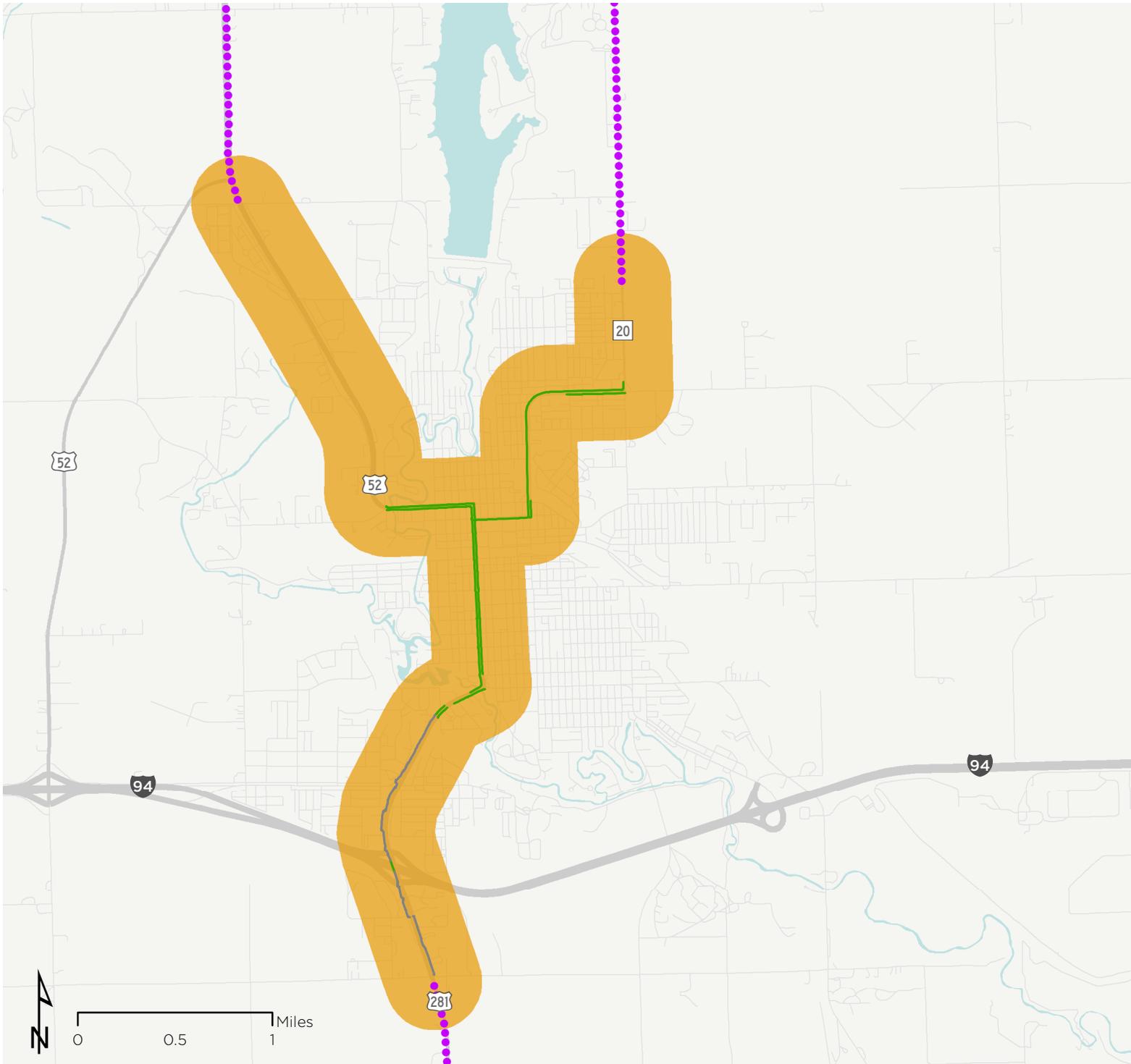
This analysis identifies potential NDDOT Statewide Bicycle Network connections through urban areas. The analysis identifies potential alignments within a 1/2 mile buffer. However, potential improvements are not limited to these areas. The analysis was limited only to urban segments of state highways.



<ul style="list-style-type: none">  Potential Urban State Bike Network Alignments (1/2 mile buffer)  Other Existing Bike Facilities  Existing Shared Use Paths  Existing Sidewalks 	<h3>Draft State Bicycle Network</h3> <ul style="list-style-type: none">  Tier 1 State Bike Corridors  Tier 2 State Bike Corridors  Tier 3 Regional Bike Connector Corridors 	<ul style="list-style-type: none">  Interstates  U.S. highways  State highways  Local Roadways  Water bodies  Tribal lands  National parks and grasslands 	 <p>Data provided by NDDOT. Map produced April 2019.</p>
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Possible Urban Area Connections to State Bicycle Network | Jamestown

This analysis identifies potential NDDOT Statewide Bicycle Network connections through urban areas. The analysis identifies potential alignments within a 1/2 mile buffer. However, potential improvements are not limited to these areas. The analysis was limited only to urban segments of state highways.



- Potential Urban State Bike Network Alignments (1/2 mile buffer)
- Other Existing Bike Facilities
- Existing Shared Use Paths
- Existing Sidewalks

- ### Draft State Bicycle Network
- Tier 1 State Bike Corridors
 - Tier 2 State Bike Corridors
 - Tier 3 Regional Bike Connector Corridors

- Interstates
- U.S. highways
- State highways
- Local Roadways
- Water bodies
- Tribal lands
- National parks and grasslands

ND Moves
active & public transportation plan

Data provided by NDDOT.
Map produced April 2019.

Possible Urban Area Connections to State Bicycle Network | Wahpeton

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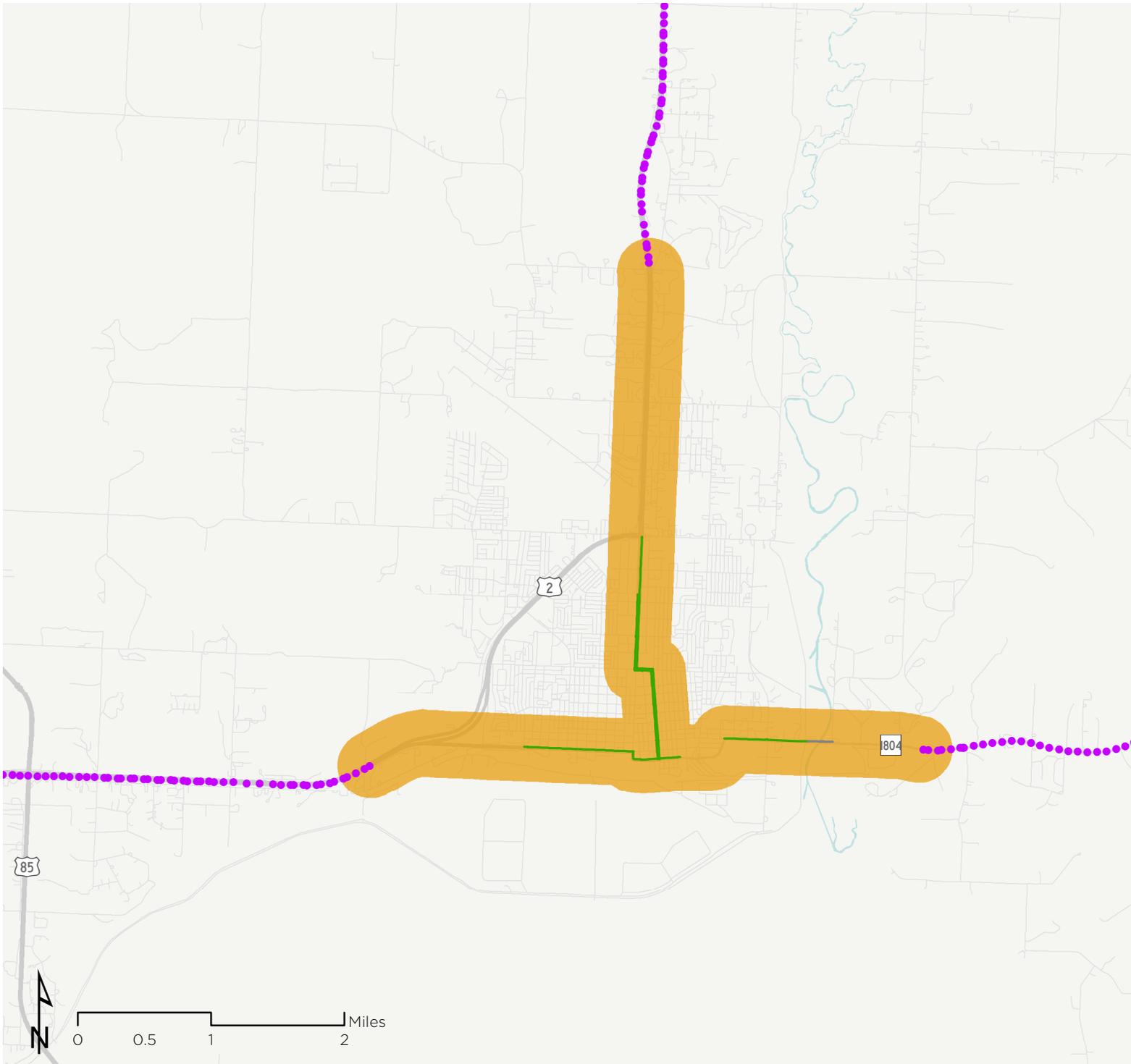
-  Potential Urban State Bike Network Alignments (1/2 mile buffer)
-  Other Existing Bike Facilities
-  Existing Shared Use Paths
-  Existing Sidewalks

- ### Draft State Bicycle Network
-  Tier 1 State Bike Corridors
 -  Tier 2 State Bike Corridors
 -  Tier 3 Regional Bike Connector Corridors

-  Interstates
-  U.S. highways
-  State highways
-  Local Roadways
-  Water bodies
-  Tribal lands
-  National parks and grasslands

Possible Urban Area Connections to State Bicycle Network | Williston

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- Existing Shared Use Paths
- Existing Sidewalks

- ### Draft State Bicycle Network
- Tier 1 State Bike Corridors
 - Tier 2 State Bike Corridors
 - Tier 3 Regional Bike Connector Corridors

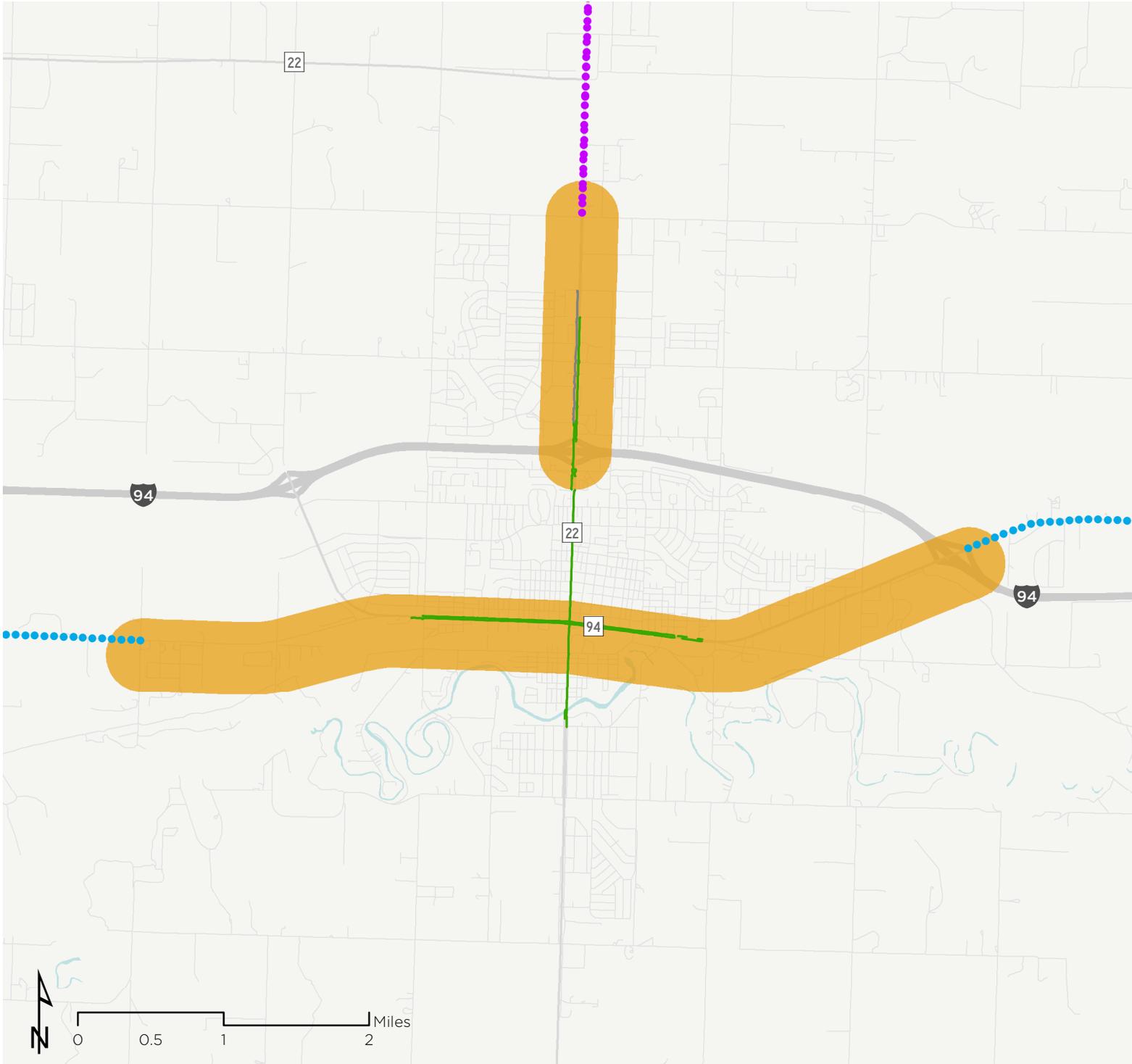
- Interstates
- U.S. highways
- State highways
- Local Roadways
- Water bodies
- Tribal lands
- National parks and grasslands

ND Moves
active & public transportation plan

Data provided by NDDOT.
Map produced April 2019.

Possible Urban Area Connections to State Bicycle Network | Dickinson

This analysis identifies potential NDDOT Statewide Bicycle Network connections through urban areas. The analysis identifies potential alignments within a 1/2 mile buffer. However, potential improvements are not limited to these areas. The analysis was limited only to urban segments of state highways.



- Other Existing Bike Facilities
- Existing Shared Use Paths
- Existing Sidewalks
- Potential Urban State Bike Network Alignments (1/2 mile buffer)

- ### Draft State Bicycle Network
- Tier 1 State Bike Corridors
 - Tier 2 State Bike Corridors
 - Tier 3 Regional Bike Connector Corridors

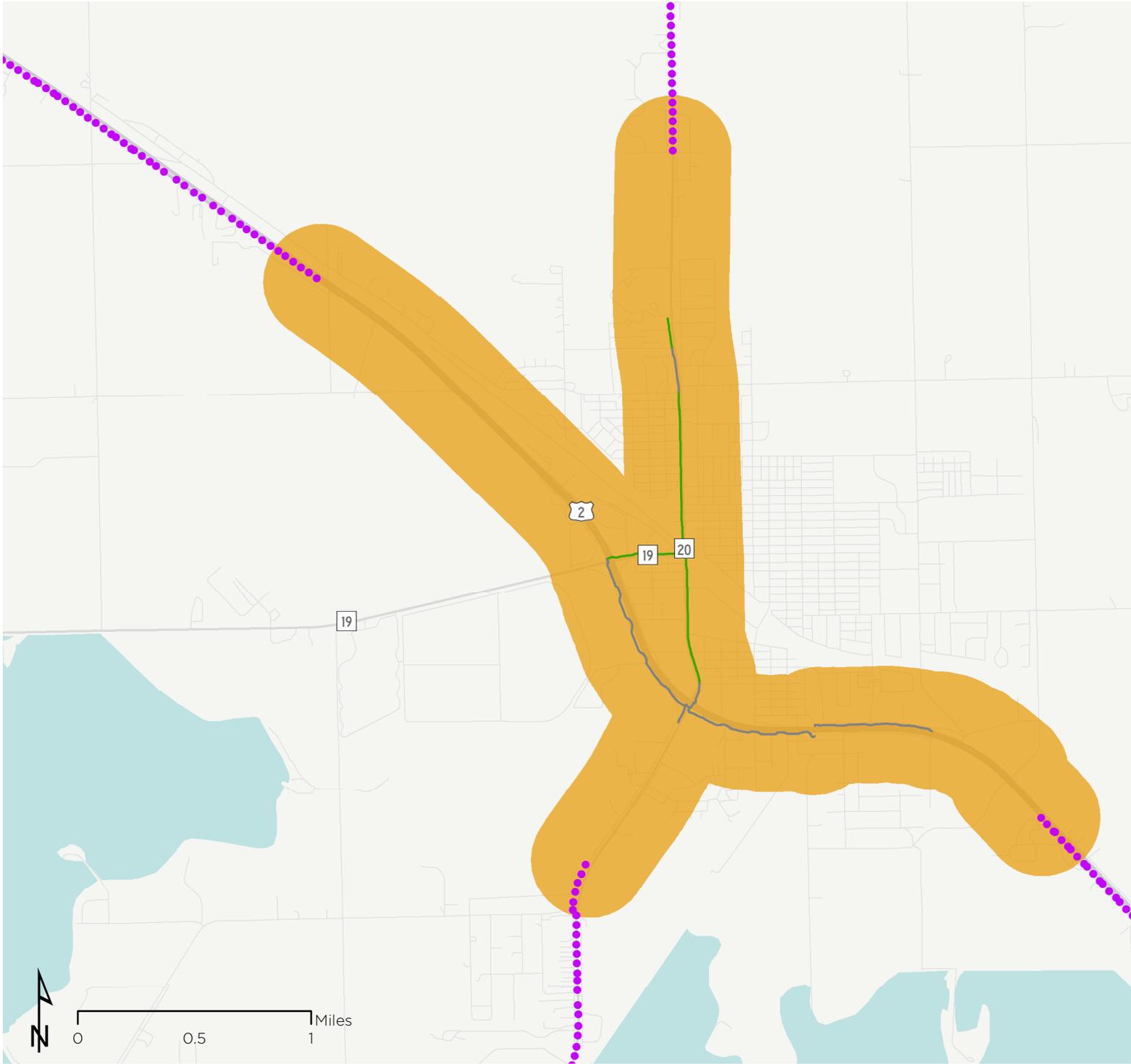
- Interstates
- U.S. highways
- State highways
- Local Roadways
- Water bodies
- Tribal lands
- National parks and grasslands



Data provided by NDDOT.
Map produced April 2019.

Possible Urban Area Connections to State Bicycle Network | Devils Lake

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- ### Draft State Bicycle Network
- Tier 1 State Bike Corridors
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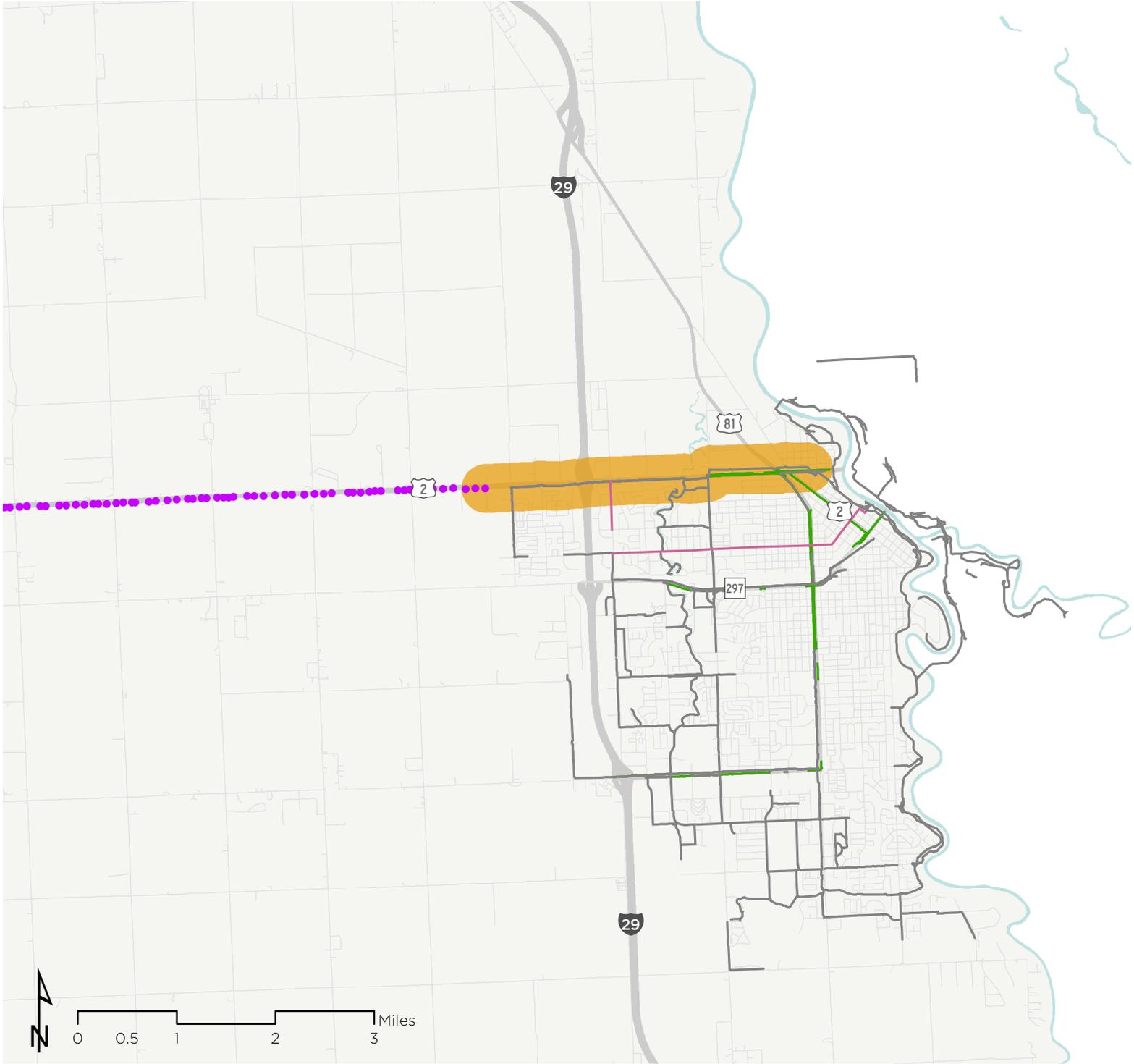
- Interstates
- U.S. highways
- State highways
- Local Roadways
- Water bodies
- Tribal lands
- National parks and grasslands

ND Moves
active & public transportation plan

Data provided by NDDOT.
Map produced April 2019.

Possible Urban Area Connections to State Bicycle Network | Grand Forks

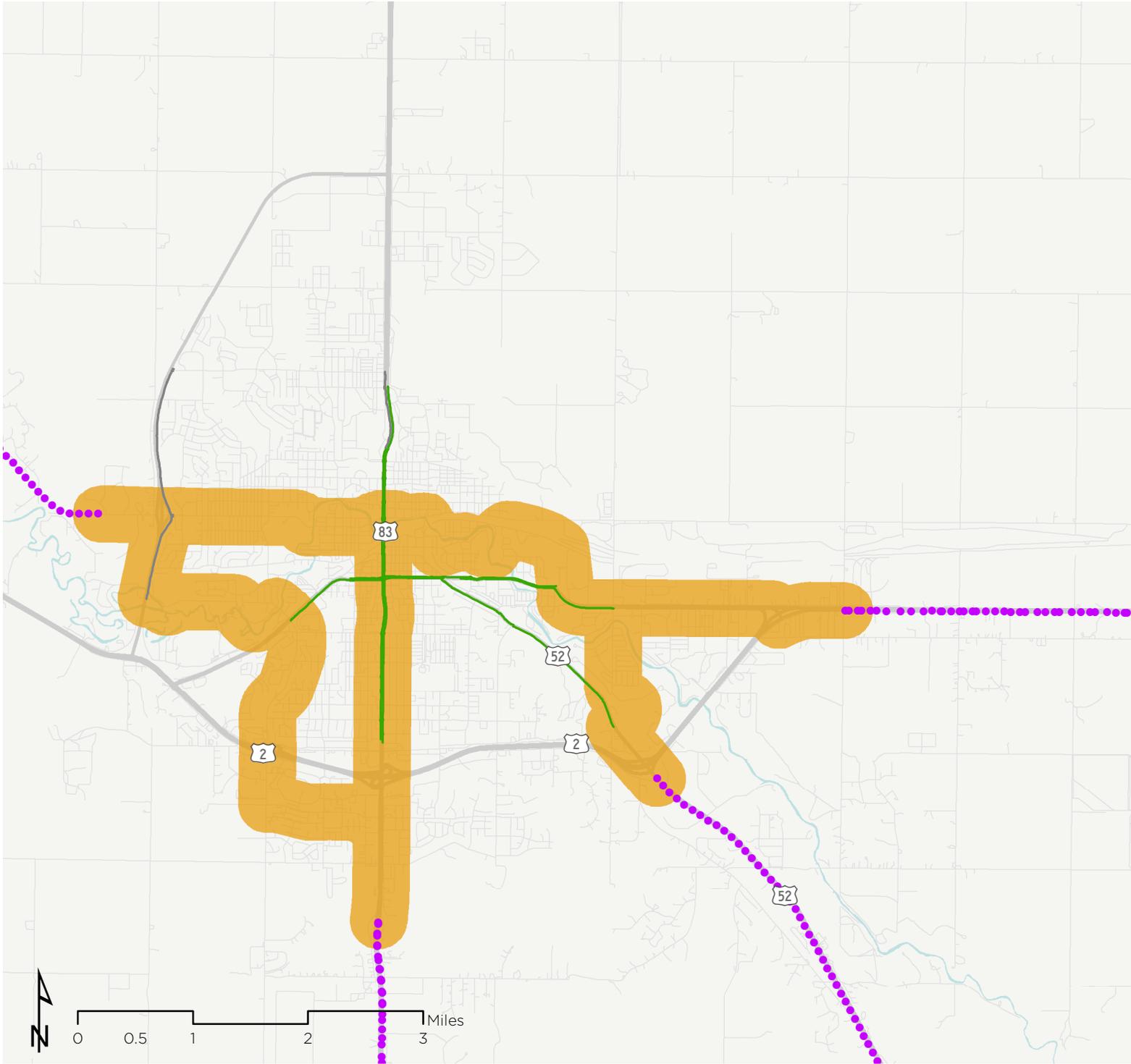
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<ul style="list-style-type: none">  Potential Urban State Bike Network Alignments (1/2 mile buffer)  Other Existing Bike Facilities  Existing Shared Use Paths  Existing Sidewalks 	<h3>Draft State Bicycle Network</h3> <ul style="list-style-type: none">  Tier 1 State Bike Corridors  Tier 2 State Bike Corridors  Tier 3 Regional Bike Connector Corridors 	<ul style="list-style-type: none">  Interstates  U.S. highways  State highways  Local Roadways  Water bodies  Tribal lands  National parks and grasslands 	 <p>Data provided by NDDOT. Map produced April 2019.</p>
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Possible Urban Area Connections to State Bicycle Network | Minot

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- Potential Urban State Bike Network Alignments (1/2 mile buffer)
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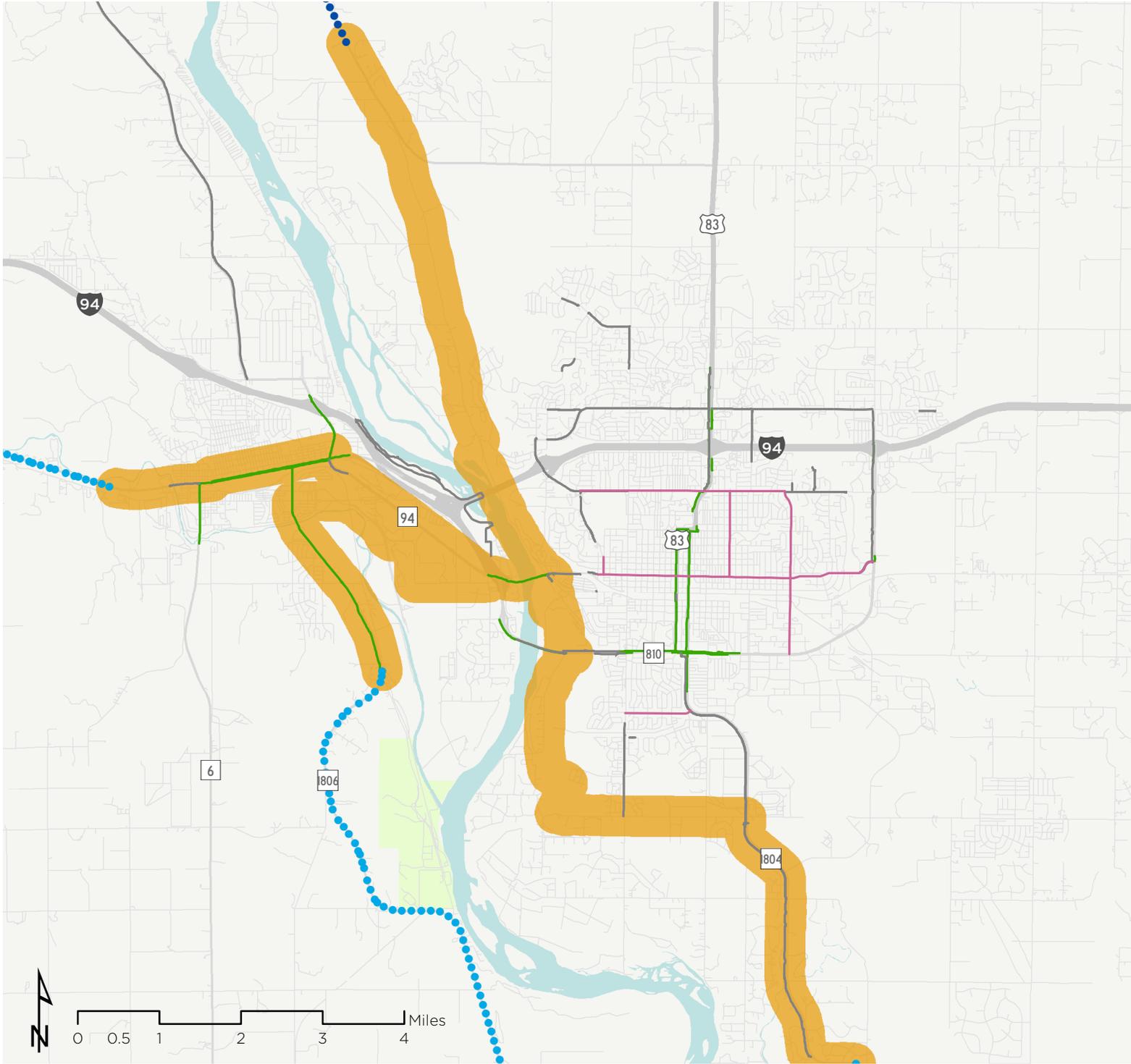
- ### Draft State Bicycle Network
- Tier 1 State Bike Corridors
 - Tier 2 State Bike Corridors
 - Tier 3 Regional Bike Connector Corridors

- Interstates
- U.S. highways
- State highways
- Local Roadways
- Water bodies
- Tribal lands
- National parks and grasslands

Data provided by NDDOT.
Map produced April 2019.

Possible Urban Area Connections to State Bicycle Network | Bismarck-Mandan

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- ### Draft State Bicycle Network
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 - Tier 3 Regional Bike Connector Corridors

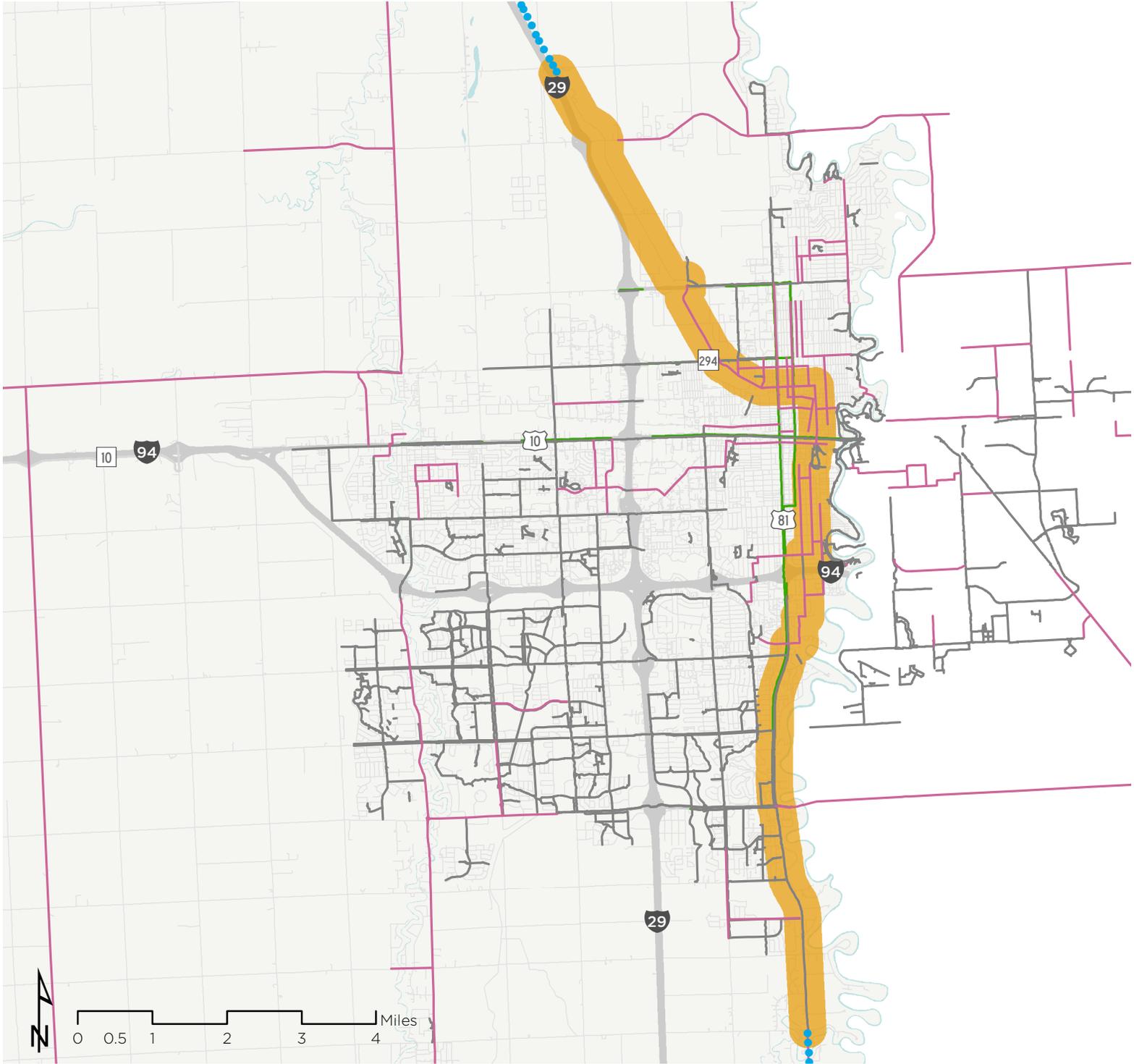
- Interstates
- U.S. highways
- State highways
- Local Roadways
- Water bodies
- Tribal lands
- National parks and grasslands

ND Moves
active & public transportation plan

Data provided by NDDOT.
Map produced April 2019.

Possible Urban Area Connections to State Bicycle Network | Fargo-West Fargo

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<ul style="list-style-type: none">  Potential Urban State Bike Network Alignments (1/2 mile buffer)  Other Existing Bike Facilities  Existing Shared Use Paths  Existing Sidewalks 	<p>Draft State Bicycle Network</p> <ul style="list-style-type: none">  Tier 1 State Bike Corridors  Tier 2 State Bike Corridors  Tier 3 Regional Bike Connector Corridors 	<ul style="list-style-type: none">  Interstates  U.S. highways  State highways  Local Roadways  Water bodies  Tribal lands  National parks and grasslands 	 <p>Data provided by NDDOT. Map produced April 2019.</p>
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