

# SAFE ROUTES TO SERVICES & COMPLETE STREETS STUDY

Final Report

December 2024



**Bismarck-Mandan**   
METROPOLITAN PLANNING ORGANIZATION

## Acknowledgments

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- Bismarck-Mandan Metropolitan Planning Organization;
- City of Bismarck;
- City of Mandan;
- Federal Highway Administration;
- Federal Transit Administration; and
- North Dakota Department of Transportation

The study team also recognizes the incredible support and collaboration from the participating community-based organizations and service entities in the Bismarck—Mandan Region, Burleigh County, and Morton County.

The team would like to thank the following organizations:

- Sacred Pipe Resource Center;
- Ministry On The Margins;
- Missouri Valley Coalition for Homeless Persons;
- Youthworks; and
- Missouri Slope Areawide United Way

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# 1. Introduction

## Project Intent and Process

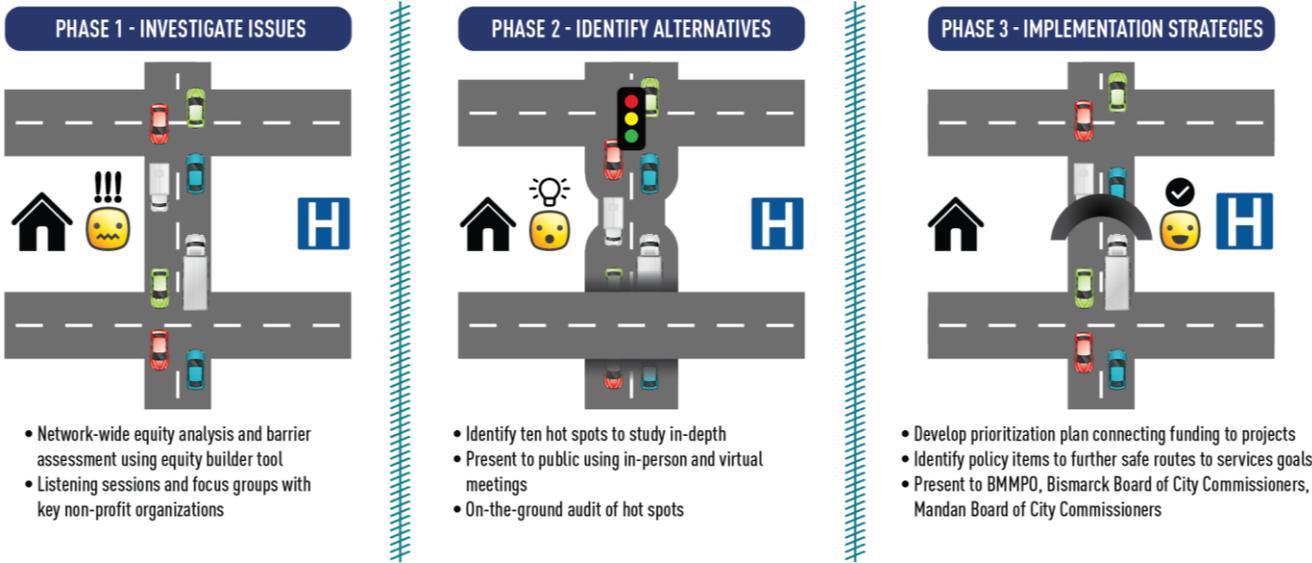
The Safe Routes to Services and Complete Streets Study embodies the power of collaboration. It brings together multiple agencies and communities in a shared mission to enhance transportation accessibility, safety, fairness, and equity in the Bismarck-Mandan Metropolitan Planning Area (MPA). This study holistically explored accessibility, mobility, connectivity, and safety issues to enhance the various mobility modes of walking, bicycling, and public transportation.

Disadvantaged and underrepresented populations were vital stakeholders and collaborators in this project, providing invaluable insight into identifying issues and barriers within the transportation system. Their input, time, and energy helped to produce alternatives and implementation strategies for the Bismarck-Mandan Metropolitan Planning Organization (MPO) and regional leadership.

This process was accomplished through thoughtful deliberation, data-driven analysis, intentional collaboration, and public engagement. Guided by the Steering Committee and Community Advisory Groups, the project team identified numerous transportation opportunities and potential hot spot locations within the Bismarck-Mandan MPA. While it was not feasible to explore every issue in detail (adhering to scope and budget), this report comprehensively identifies the critical transportation needs in the Bismarck-Mandan MPA.

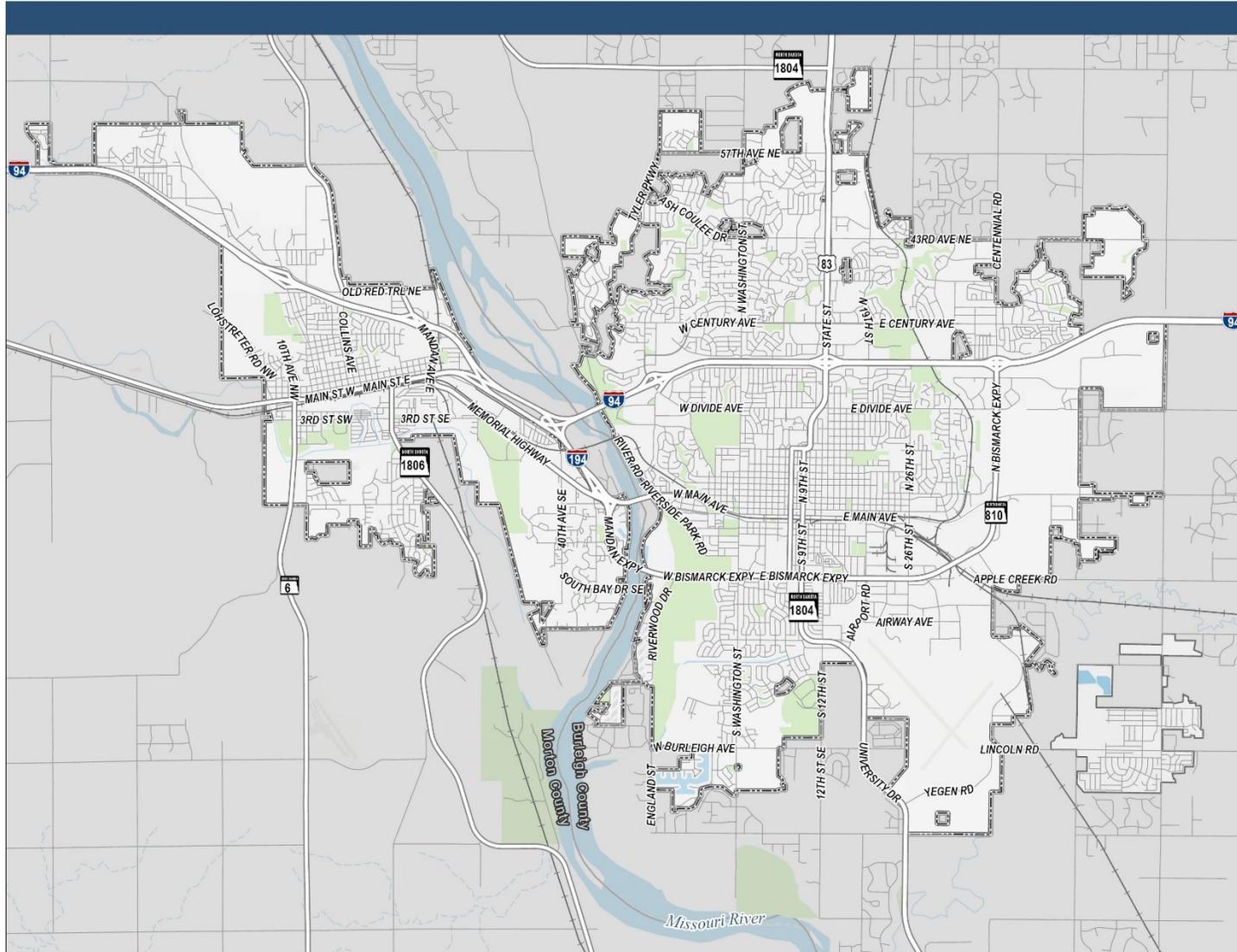
The Bismarck-Mandan MPO is optimistic that the momentum generated by this initiative will contribute to future enhancements of the Safe Routes to Services plan, ultimately working towards greater accessibility for all residents. The project was implemented through an iterative and three-phased approach, adhering to a continuous-quality-improvement methodology and adapting to changing conditions.

Figure 1: Project Process



# Study Area

Figure 2: Study Area



## Community Context

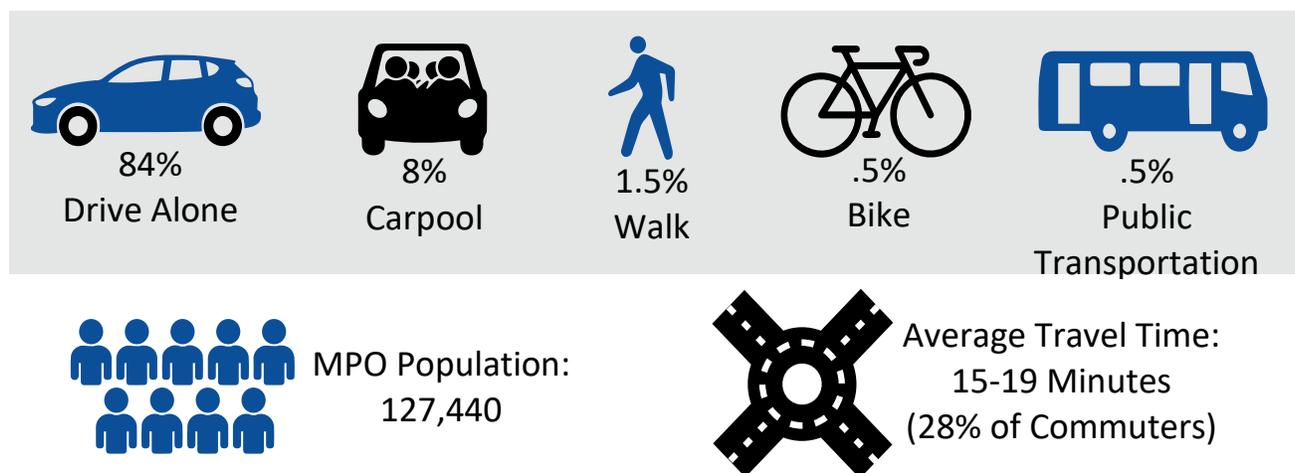
The study encompassed the Cities of Bismarck and Mandan. These communities are part of the Bismarck-Mandan Metropolitan Planning Area (MPA), which includes the City of Lincoln and portions of Burleigh and Morton Counties. The MPA's geographic boundary spans approximately 400 square miles and is home to roughly 127,440 residents. While the City of Lincoln and certain areas of Burleigh County and Morton County are not part of this study, residents and visitors of these communities are considered system stakeholders as the two cities are regional economic, social, cultural, and service hubs. Thus, this study underscores and highlights its relevance to the diverse communities within the MPA.

The following community demographic and transit information was used to identify areas where transportation alternatives may be sparse, and barriers may be highest. According to 2020 U.S. Census Bureau data, the median age of residents in the study area is 39; of these people, an estimated 64,280 are workers (Age 16+). The median household income is \$72,400.

Of those employed:

- 84% drive alone to work
- 8% carpool
- 1.5% walk
- .5% bike,
- .5% utilize public transportation.
- 5.5% work from home

The average travel time is 15-19 minutes for 28% of commuters and 10-14 minutes for 26%. Almost **20%** of trips to work are equal to or less than 10 minutes. Between 2018 and 2022, there were **242 reported bike/pedestrian crashes**. Implementing safe pedestrian and bicycle infrastructure can potentially convert these trips into walking or biking excursions rather than automobile trips.



## Communities of Concern

Communities of Concern refer to populations that face significant barriers or risks due to social, economic, or environmental factors. From an Environmental Justice and transportation planning perspective, these communities often include low-income households, racial and ethnic minorities, individuals with disabilities, older adults, and those with limited English proficiency. They are more likely to experience negative impacts from transportation decisions, such as displacement, increased pollution, or lack of access to safe and reliable transit options. Identifying and prioritizing these communities ensures that transportation planning addresses inequities and fosters fair access to resources and opportunities.

Assessing and exploring the poverty line is useful because this metric determines the minimum income needed for basic living standards. It consists of poverty thresholds, set by the Census Bureau for statistical purposes, and poverty guidelines issued by the Department of Health and Human Services to determine eligibility for federal aid programs. This measure is vital for federal programming, resource allocation, and policy development. For Environmental Justice groups, the poverty line is particularly significant because many low-income communities face greater environmental risks and have less access to resources to address these challenges. People who are at or close to 150% of the poverty line means individuals still struggle with financial strain, limited access to assistance, poorer health outcomes, and restricted economic mobility, all of which can exacerbate environmental injustices.

No concentrated areas of Communities of Concern exist because they are dispersed throughout the study area. However, these communities are more represented around major roadways, such as the intersection of I-94 Business and North 7<sup>th</sup> Street and North 9<sup>th</sup> Street and North Dakota 1804 more broadly.

Communities of Concern are visually represented in these figures and metrics:

- Percent of the Population below 150% of the Federal Poverty Level
  - 150% of the Federal Poverty Level is commonly used as an income threshold to determine eligibility for various government programs. It represents a level where individuals are considered low-income enough to need financial assistance potentially.
- Percent of Households with a Disability
- Percent of the Population identifying as Black, Indigenous, and Other People of Color (BIPOC)
- Percent of Workers who Walk, Bike, or Take Public Transportation.

## Disadvantaged Communities

Although related to Communities of Concern, Disadvantaged Communities is a broader term often used in federal and state program initiatives. Identification and assessment of Disadvantaged Communities is often tied to funding allocations and compliance with state and federal mandates. Disadvantaged Communities are areas with high concentrations of adverse impacts related to health, economics, transportation, and other factors that burden the population. In the study area, Disadvantaged Communities were determined based on the prominence of three demographics:

- Percentage of Population that Identifies as Black, Indigenous, or Person of Color (BIPOC)
- Percentage of Population that is below 150% of the Federal Poverty Level
- Percentage of Households with at least one person with a Disability

These indicators were summed for each census block in Bismarck and Mandan. Five general areas ranked highest in the disadvantaged communities' analysis, including:

### Bismarck

Area 1 - Bounded by:

- North Washington to Century Avenue
- West Interstate Avenue to West Century Avenue

Area 2 - Bounded by:

- East Avenue C to East Avenue B
- 9<sup>th</sup> Street North to North 26<sup>th</sup> Street

Area 3 - Bounded by:

- East Bismarck Express Way
- East Watcher Avenue to University Drive to South 3<sup>rd</sup> Street

### Mandan

Area 4 - Bounded by:

- 10<sup>th</sup> Avenue Southwest to 6<sup>th</sup> Avenue Southeast
- Heart River to West Main Street

Area 5 - Bounded by:

- Sunset Drive to Collins Avenue
- Division Street Northwest to Interstate 94

The following figures illustrate the study's community contextual demographics geographically, as discussed above.

Figure 3: Population Density

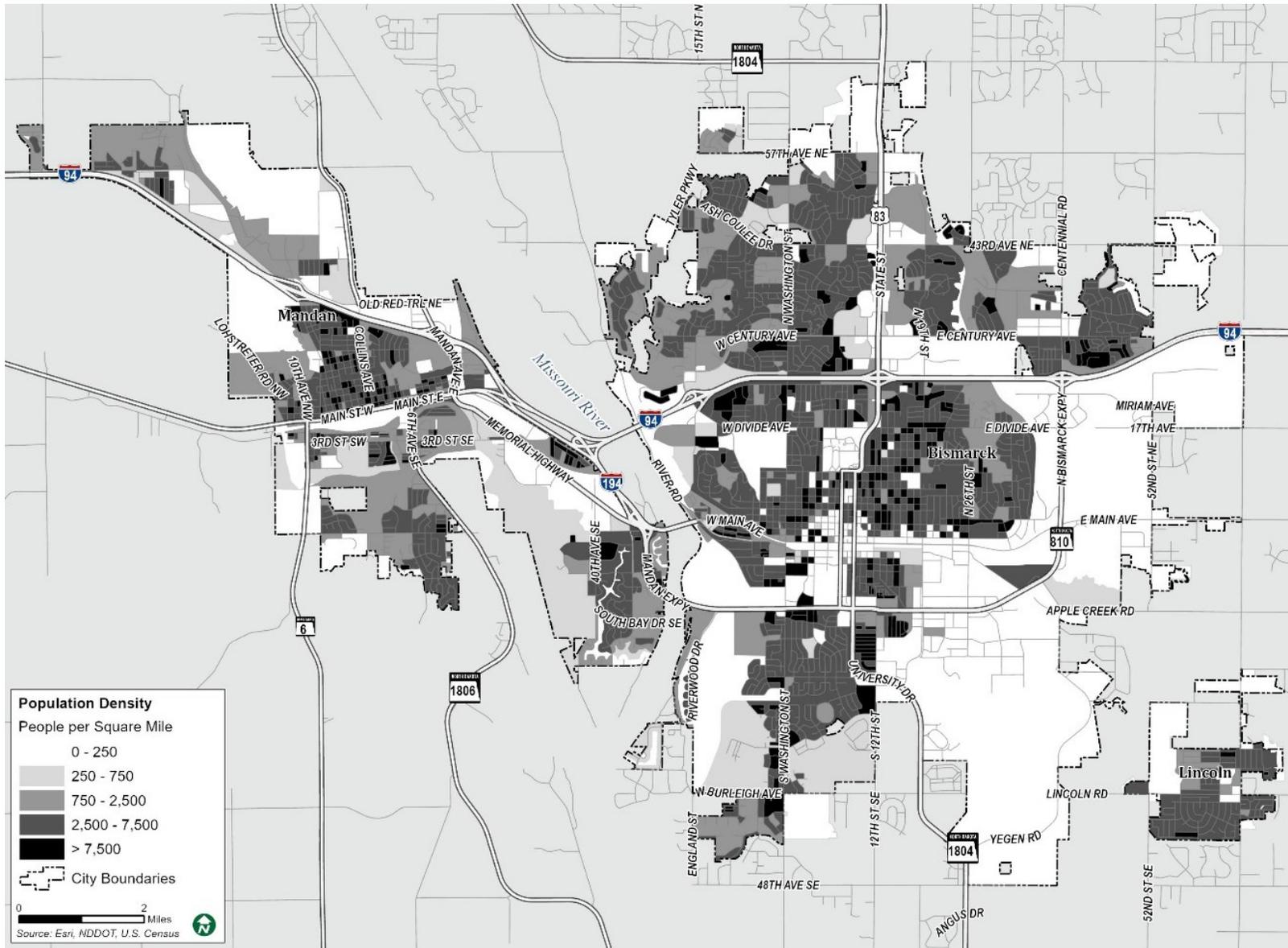


Figure 4: Job Density

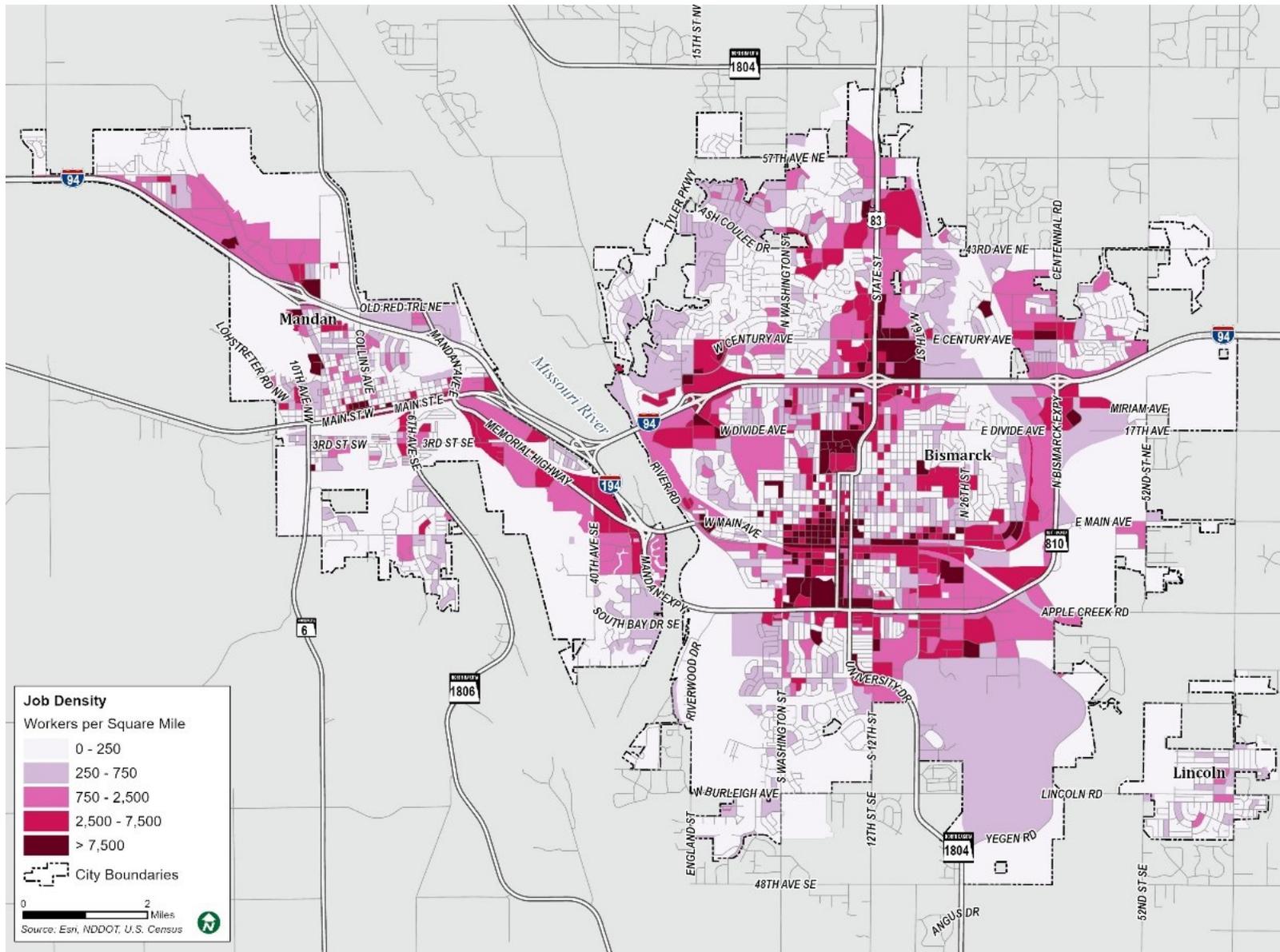


Figure 5: Households with a Disability

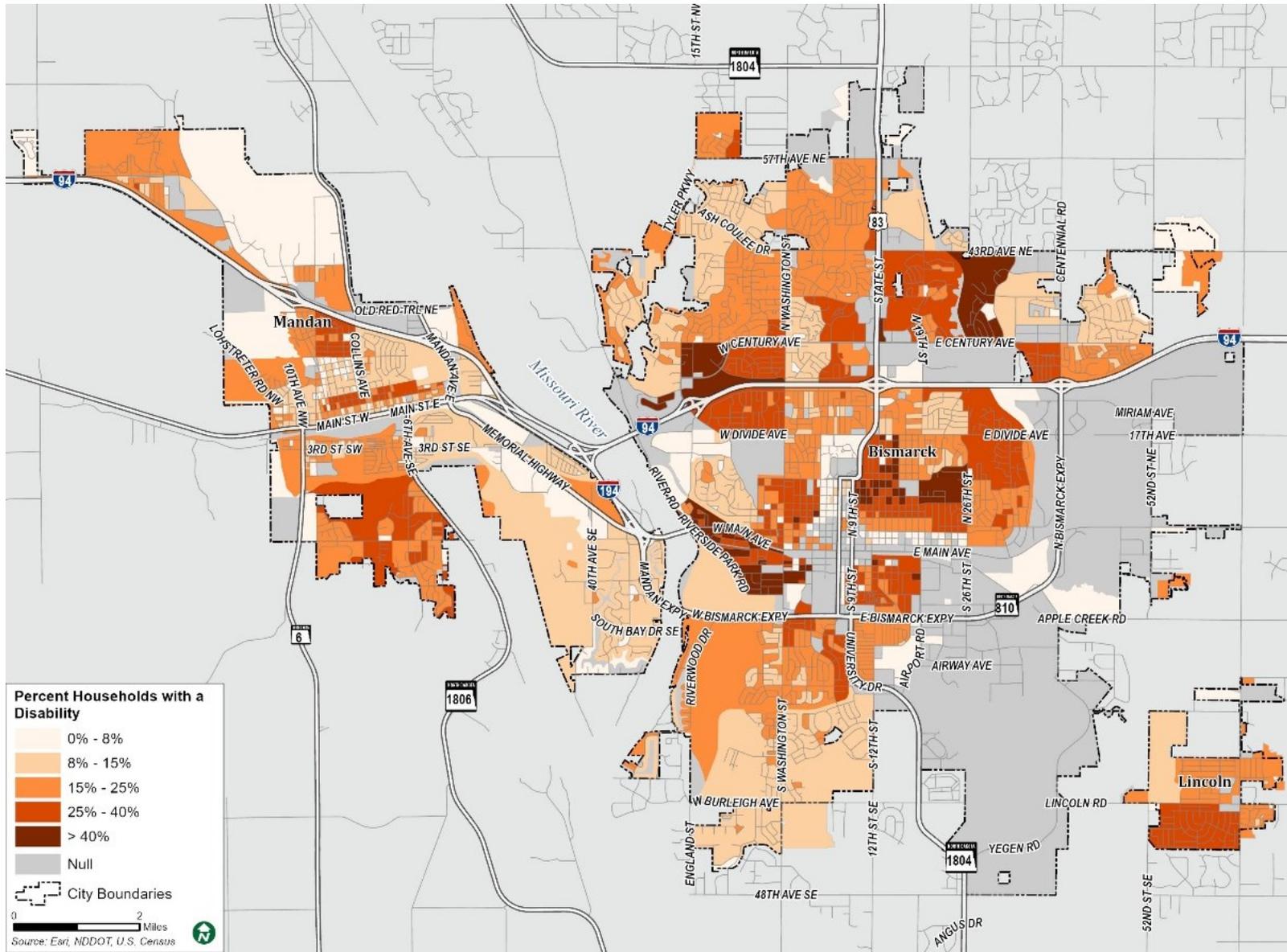


Figure 6: Percent of Population Identifying as Black, Indigenous, and People of Color (BIPOC)

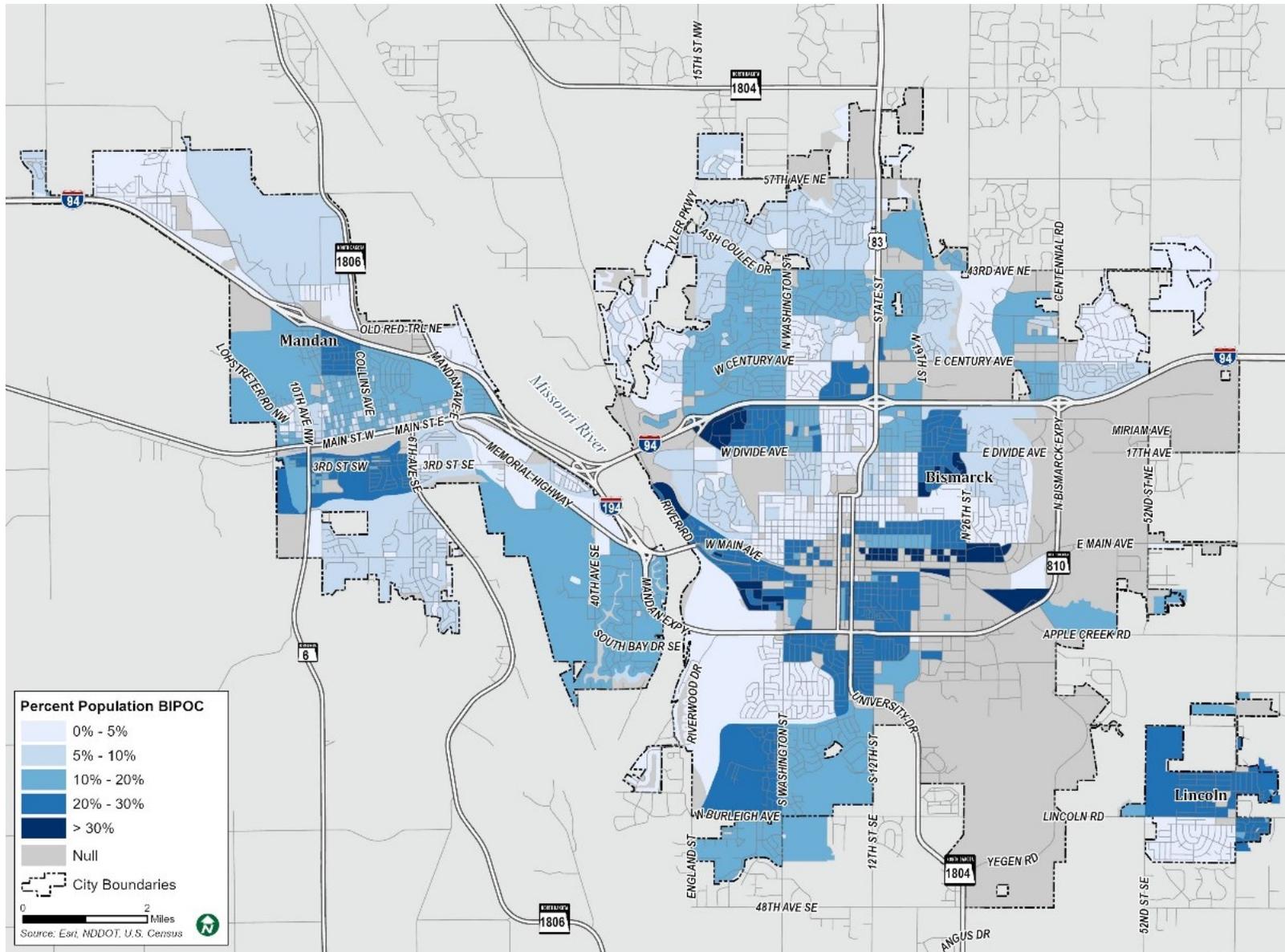


Figure 7: Percent of the Population Below 150% of the Federal Poverty Level

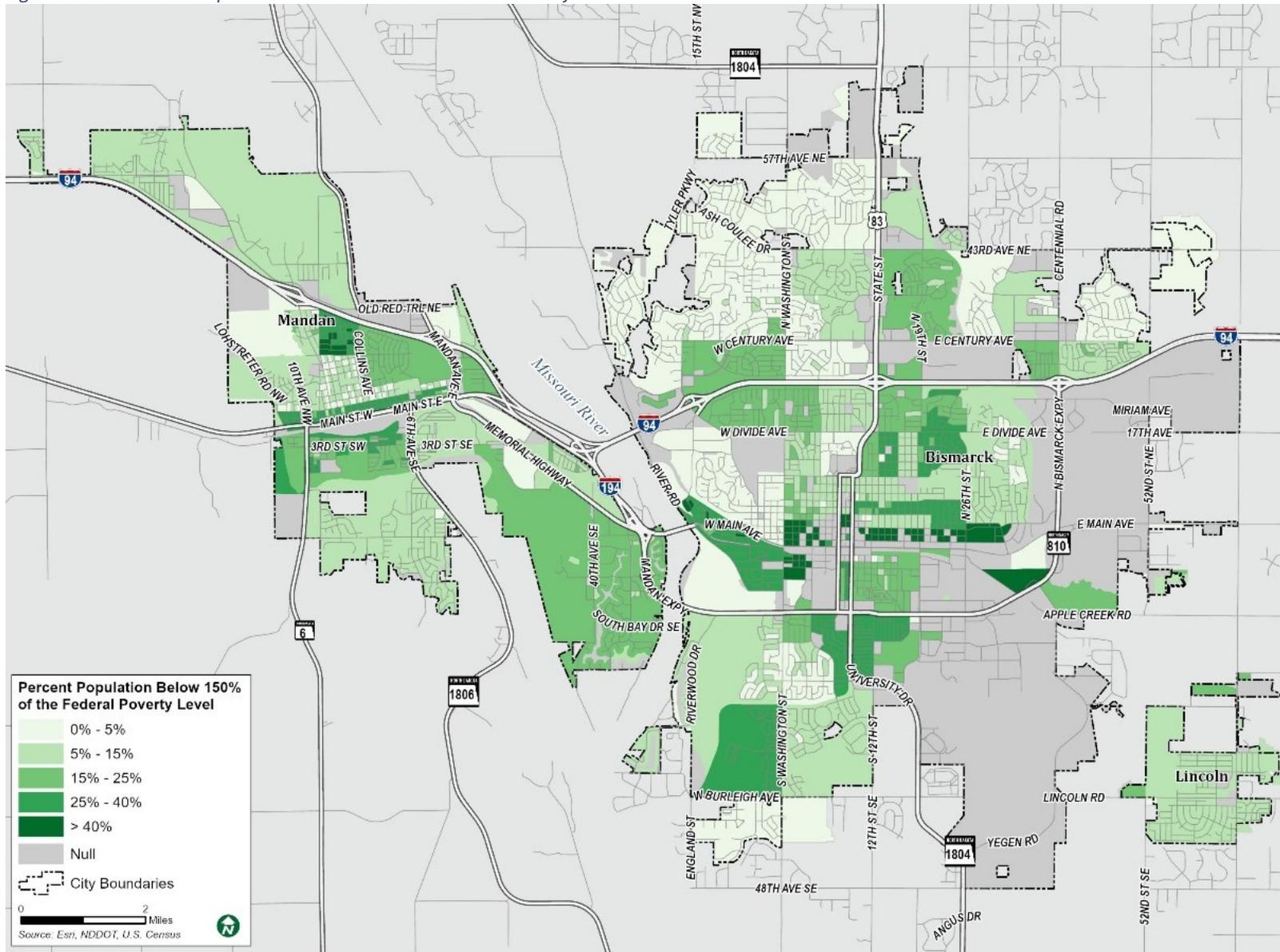


Figure 8: Percent of Workers who Do Not Drive Alone to Work

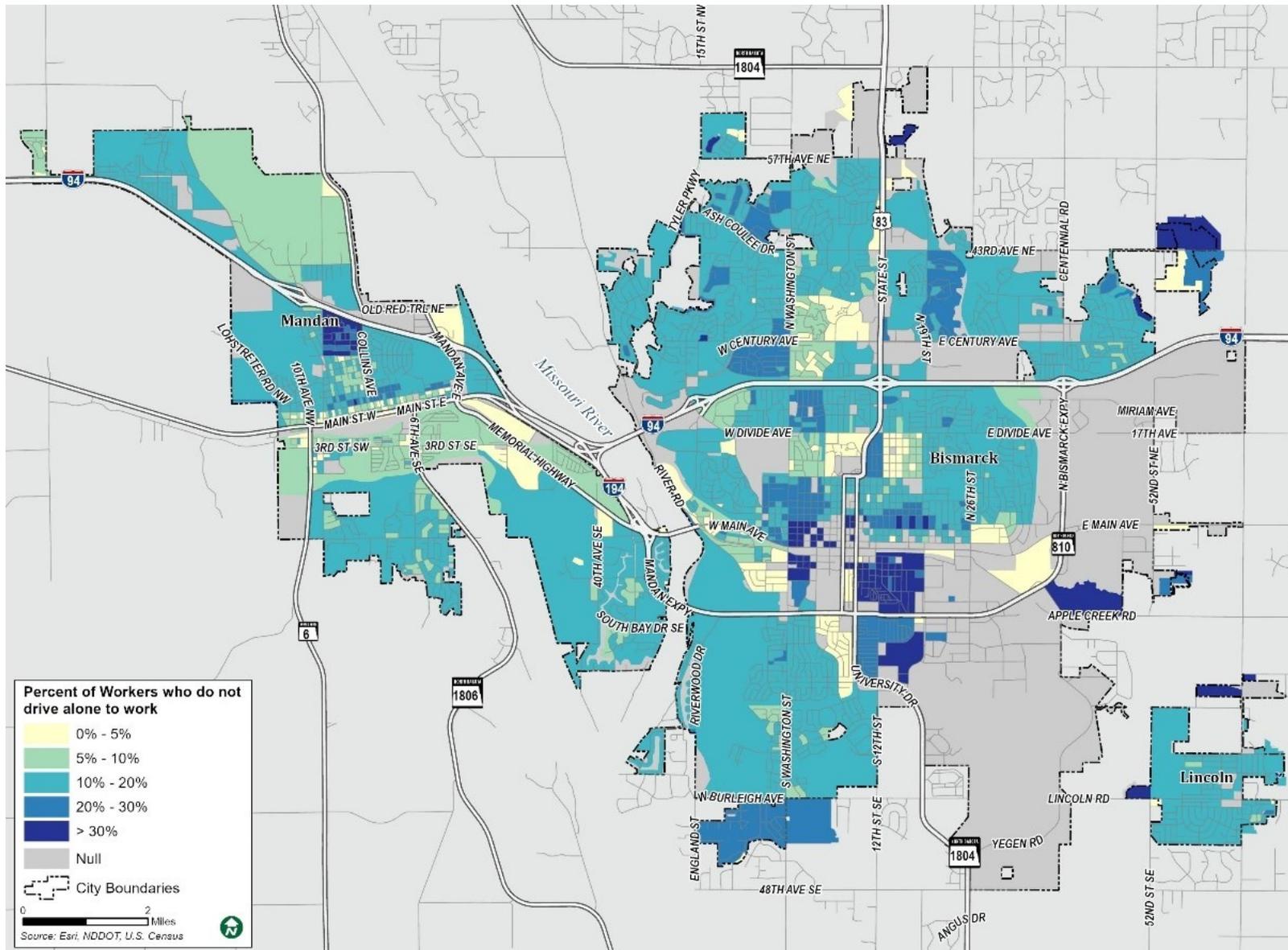
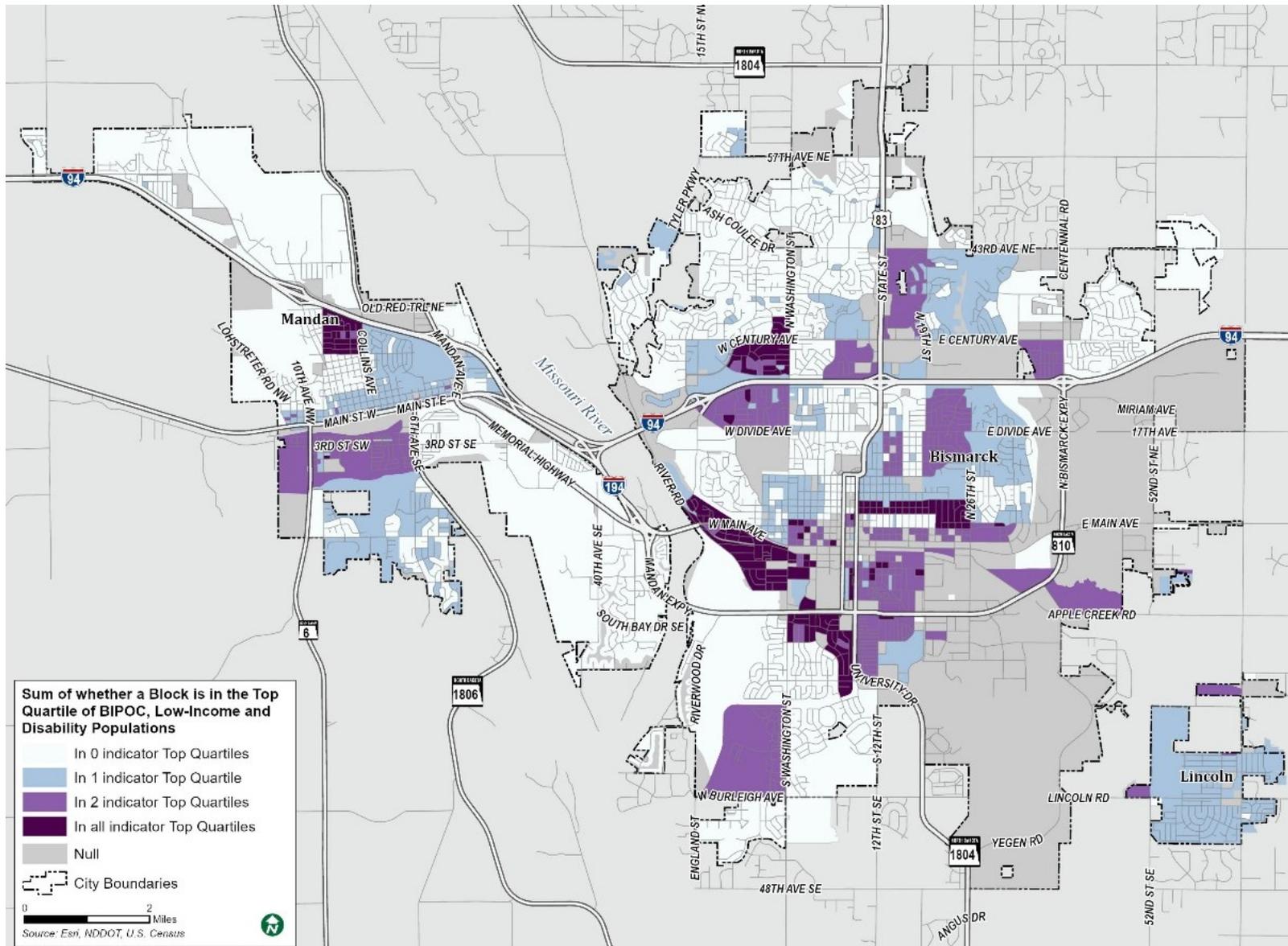


Figure 9: Disadvantaged Communities Scoring



## Previous Reports Summary

The *Safe Routes to Services and Complete Streets Study* aligns and extends the [ND DOT Vision Zero Plan \(2024-2028\)](#) and builds upon previous Bismarck – Mandan MPO efforts. This includes acknowledging and understanding the current Metropolitan Transportation Plan Arrive 2050 update scheduled for adoption in December 2024. Previously completed studies, such as [Bismarck- Mandan Metropolitan Transportation Plan Arrive 2045](#), provided a foundation for the *Safe Routes to Services and Complete Streets Study*.

*Arrive 2045* was published in March 2020 and worked to guide the area’s transportation system for the next twenty-plus years. The Plan had seven goals, many of which apply to *Safe Routes to Services and Complete Streets Study* – reflective of guidance from MAP-21 and FAST Act National Performance Goals, the NDDOT statewide transportation plan, [Transportation Connection \(2021\)](#), and input from project stakeholders and community members. Performance measures and targets were set for each goal by the MPO, going above and beyond federal requirements. Targets related to *Services and Complete Streets Study* include reducing crashes, increasing fixed route transit ridership, and increasing miles of bicycle facilities.

The [Bismarck-Mandan Bicycle + Pedestrian Plan](#) was published in December 2017. This plan was “initiated to support and grow engineering, education, encouragement, enforcement, and evaluation efforts to continue to advance bicycling and walking as safe, comfortable, and reliable modes of transportation in Bismarck-Mandan.” The plan’s goals focus on Network Use, Connectivity, Safety and Comfort, Maintenance, and Planning.

Based on the analysis conducted in the Bismarck-Mandan Bicycle + Pedestrian Plan, five routes (three in Bismarck and two in Mandan) and five intersections (three in Bismarck and two in Mandan) were further explored to identify opportunities and constraints.

### Routes

- South Washington Street: W Wachter Avenue to W Main Avenue (Bismarck)
- North 4<sup>th</sup> Street & Dominion Street: West Main Avenue to N 10<sup>th</sup> Street (Bismarck)
- 12<sup>th</sup> Street: E Bismarck Expressway to Avenue C (Bismarck)
- 6<sup>th</sup> Avenue SE: 3<sup>rd</sup> Street SE to 1<sup>st</sup> Street NE (Mandan)
- 3<sup>rd</sup> Street SW & SE: Highway 6 to 6<sup>th</sup> Avenue SE (Mandan)

### Intersections

- South Washington Street & Bismarck Expressway (Bismarck)
- East Divide Avenue & State Street (Bismarck)
- I-94 South Ramp & State Street (Bismarck)
- East Main Street & East Mandan Avenue (Mandan)
- 3<sup>rd</sup> Street SE and 6<sup>th</sup> Avenue SE (Mandan)

The MPO also completed numerous other studies, including School Safety Crossing Studies for [Bismarck](#) and [Mandan](#) area schools in 2017. These studies give an overview of existing conditions and issues for all schools within the two municipalities. Possible alternatives to address issues were developed based on parent, staff, and student concerns and an alternative’s overall feasibility.

In December 2020, the MPO published the [Bismarck-Mandan Intersection Analysis Study](#). The Study is broken into three chapters: Chapter 1, Macro-Level Intersection Review; Chapter 2, Micro-Level Intersection Review; and Chapter 3, Improvement Plan. The Micro-Level Intersection Review included a detailed analysis of potential improvements to mitigate issues identified in the Macro-Level Review. This study identified small-scale improvements, including signal improvements and lane assignment revisions, while large-scale improvements included access modifications and roundabouts. Many of the Highest Need intersections are located within Downtown Bismarck and Downtown Mandan, while others are located outside the Central Business Districts near shopping and employment centers.

## 2. Public Engagement

Transportation projects must reflect the lived experiences and needs of those they serve; the engagement strategy prioritized diverse community representation and meaningful input. The plan ensured inclusive participation by leveraging a multi-pronged approach and created real-time feedback and collaboration opportunities to guide project development.

### Planning and Prioritizing

The engagement plan for this study focused on a multi-pronged approach to gather meaningful community input. Various methods were combined, including listening sessions, focus groups, and pop-up events, to allow direct interaction with specific populations impacted by the project. A Steering Committee and Community Advisory Groups were established to ensure diverse perspectives informed the work. The Community Advisory Groups represent community-based organizations, fostering collaborative discussions and integrating feedback to adapt the project based on real-time community insights.

Various in-person, paper-copy, and digital tools effectively engaged community members. INPUTiD™, an interactive digital platform, enabled geographically specific online feedback, while traditional methods like comment boxes captured input from those without internet access. This strategy informed the study and fostered trust, ensuring an inclusive and accessible engagement process for all Bismarck and Mandan residents.

*Figure 10: Example - Comment Boxes at Bis-Man Transit Transfer Points*



## Engagement as a Success Driver for Safe Routes to Services

Community outreach and public engagement are vital to building meaningful connections within a community, especially in the context of planning and development. The process is multifaceted and demands a deep understanding of the community’s unique context and a commitment to creating accessible avenues for participation.

Understanding community voices is crucial to avoid the exclusion of insights that can shape more inclusive, practical outcomes. This methodology included deploying culturally responsive methods and intentional collaboration with community leaders who represent diverse populations.

Identifying and building relationships with community champions and community-based organizations is an effective way to build trust, gather meaningful insights, and secure buy-in. These trusted figures and organizations are deeply embedded within their communities and serve as essential connections to environmental justice communities.

Community champions and organizations deeply understand the local landscape and their communities’ specific challenges and concerns. Their “boots on the ground” presence allows them to elevate the voices of those often left out of traditional transportation planning processes. By connecting with their networks and drawing on their insights, outreach efforts were tailored to resonate with the community’s values and realities. These collaborations enhanced the relevance of the insights gathered and fostered a sense of shared purpose, encouraging genuine engagement and long-term support for initiatives.

This approach achieved valuable data, fruitful interactions, and initiated trusting relationships. It respected community lived experiences and reinforced their role in shaping the *Safe Routes to Services and Complete Streets Study*.

## Engagement Timeline

This engagement timeline illustrates the phased approach used to gather community input—the data-informed and shaped Steering Committee meeting discussions and decision-making. Engagement began in February 2024 with comment boxes and online engagement, progressing through a series of listening sessions, Community Advisory Group meetings, and pop-up events over the spring, each designed to bring diverse voices into the conversation. A public open house in June further broadened outreach, while an August steering committee bus tour provided hands-on insights into specific community needs. By October 2024, a final steering committee session and open house synthesized findings and prepared for the next steps. This structure ensured that community input and committee guidance aligned closely at each stage, enhancing the depth and relevance of outreach efforts.

Figure 11: Engagement Timeline (2024)



## Engagement Guidance & Oversight

The **Steering Committee** and **Community Advisory Groups** were vital in providing leadership oversight and ensuring the engagement process was effective and responsive. These groups acted as validation mechanisms, confirming our outreach aligned with community needs and objectives. They were instrumental in troubleshooting issues as they arose, allowing us to address challenges in real time and adapt our approach as needed. By regularly reviewing engagement outcomes and offering feedback, these groups facilitated continuous quality improvement, ensuring that the process remained inclusive, accurate, and accountable to the community's vision and priorities.

## Steering Committee Meetings

Regular meetings ensured implementation plans were vetted by leadership and subject-matter experts before being released to the public. Committee members' insights were crucial for project refinement, troubleshooting, guidance, and alignment of our engagement efforts.

The *project team* facilitated four Steering Committee meetings:

- 12/20/23 – Kickoff: Engagement Plan & Stakeholder Identification
- 04/12/24 – Issues and Hotspot Identification
- 08/07/24 – Site Visits and Alternative Brainstorming
- 10/02/24 – Alternative Refinement and Implementation Plan

The meetings coincided with the study's three-phased engagement approach.

- Phase 1 – Investigate Issues
- Phase 2 – Identify Alternatives
- Phase 3 – Implementation Strategies

## Community Advisory Groups

### Incorporating Environmental Justice Populations' Lived Experiences and Expertise

Historically, the voices of environmental justice populations—often low-income, minority, and marginalized communities—have been overlooked in infrastructure development.

This can affect and has led to the following challenges:

- **Disproportionate Impacts:** These communities have often borne the brunt of adverse environmental and public health impacts, such as pollution and displacement, without reaping the benefits of infrastructure improvements.
- **Lack of Representation:** Their lack of representation in decision-making has perpetuated inequality and neglect cycles.
- **Project Inefficiencies & Increased Cost:**
  - **Rework and Redesign:** Misalignment with community needs can result in costly modifications, upgrades, or complete redesigns.

- Delays: Lack of trust can result in community opposition, protests, and legal challenges, causing delays and increasing project costs.

Thus, intentional community engagement and trust-building are crucial for gathering practical and useful insights for transportation decision-making and overall communal health.

We collaborated with four Community-Based Organizations (e.g., non-profits, social service groups, religious and cultural organizations) to create Community Advisory Groups.

Community Advisory Groups were integral to the Safe Routes to Services project because they supported planning and decision-making that reflected the lived experiences of diverse, often underserved populations. They helped project leaders understand residents' priorities, challenges, and transportation needs, ultimately facilitating targeted, culturally sensitive solutions.

The advisory groups were a link between local leaders and the community, providing direct feedback from low-income families, people with disabilities, youth, seniors, and BIPOC identities. They also verified and validated our environmental justice database information, providing a richer context and a deeper understanding of disadvantaged communities.

This engagement amplified outreach through trusted networks, fostering transparency and public trust. It enabled leaders to understand and address related socio-economic issues, including housing, healthcare, and education.

### **Compensation in Engagement**

To acknowledge their expertise and contributions, Community Advisory Groups were compensated for their time and efforts, reinforcing equity and respect for their input.

Compensating members acknowledged their vital role in the Safe Routes to Services project, validating their expertise and encouraging active participation. This approach incentivized detailed feedback and highlighted the value of their insights.

- **Building Trust and Respect:** Compensation builds trust by demonstrating that the project values community-driven input and respects members' time. This fairness fosters collaborative relationships and shows members their contributions are genuinely appreciated.
- **Highlighting Community Expertise:** Treating feedback as compensated expertise emphasized the importance of community knowledge alongside technical insights. This signaled that their lived experience was essential for informed decision-making.
- **Inclusive Engagement Practice:** Compensating members set a standard for fair engagement, signaling to the broader community that their voices were prioritized. This strengthened public trust and ensured high-quality input to guide effective solutions.

The Community Advisory Groups' contributions were instrumental in the project's success, and their time and energy are noteworthy.

## Bismarck-Mandan Community Advisory Groups



**Sacred Pipe Resource Center** focuses on the well-being of Native American populations in Bismarck-Mandan. Their involvement highlighted transportation issues like inadequate service to cultural centers, gaps in pedestrian infrastructure, and limited bike-share options.



**Ministry on the Margins** supports individuals in transition, particularly those facing homelessness, poverty, or social isolation. Their engagement revealed concerns about snow removal, unsafe bus routes, and pedestrian safety.



**Missouri Valley Coalition for Homeless Persons** advocates for safe, stable housing. They also provide data to support the unhoused. Their reach touches over 40 service organizations to support the community. Their participation gave perspectives and ideas from the often misunderstood unhoused identities.



**Youthworks** supports at-risk youth and families with shelter, counseling, and education services. It emphasized safe routes to schools, issues with school bus policies, and the need for accessible transport to after-school programs.

## Multi-Phased Community Engagement

### Phase 1: Identify Issues

#### **Steering Committee Meeting #1**

Meeting Date: December 20, 2023

**Goal:** Discussion focused on introductions, establishing the engagement framework, and setting initial project objectives. The meeting aimed to build consensus among key stakeholders and outline the technical work plan, public engagement strategy, and community outreach schedule.

#### **Attendees and Agency Representation**

- 15 Total Attendees
- **Agency Representations:**
  - Bismarck-Mandan MPO: 1
  - NDDOT: 2 - MPO Coordinator & Bismarck District Representative
  - Public Health: 2 - Bismarck-Burleigh Public Health & Western Plains Public Health
  - Mandan Engineering: 1
  - Mandan Planning: 1
  - Dakota Center for Independent Living: 1
  - BisMan Transit: 1
  - Bismarck Engineering: 1
  - Bismarck Community Development: 1
  - Bolton & Menk, Inc.: 4 Staff Members

#### Synopsis

The first meeting was centered on facilitating a workshop to identify stakeholders and the relationship management processes to develop engagement strategies and methods.

The activity helped identify key groups, gauge their desire for involvement, and understand their interests and potential conflicts. It also gave the team a thorough understanding of the intricate web of stakeholder relationships. This dynamic process is iterative and refined for continuous quality improvement.

This structured approach mapped out individuals and groups essential to the project's success, including community members, local agencies, and advocacy organizations. We evaluated each stakeholder's level of interest and involvement, enabling us to tailor engagement strategies accordingly. This process ensured we effectively engaged the appropriate stakeholders, addressed their concerns, and fostered collaboration throughout the project.

#### **Group Activity Highlights**

- Identified stakeholders, their interests, and potential conflicts.
- Highlighted the unique interests and potential conflicts between cities/counties and advocacy-focused community-based organizations.
- It started with 15 community organizations and agencies and later expanded to include additional stakeholders as workshopped with the group.

- Assessed interests and conflicts to understand stakeholder dynamics, such as infrastructure needs and policy overlaps.
- Mapped stakeholders by perceived involvement and interest (low, medium, high) to tailor engagement strategies.
- Identified special considerations for Native American tribes and their advocacy networks for better communication.
- Recognized evolving involvement levels for elected officials and strategies to keep them informed.
- Acknowledged the engagement strategy as a living document to guide ongoing engagement, with updates at Steering Committee meetings to ensure alignment and responsiveness.

### *Listening Sessions and Focus Groups Overview*

**Goal:** Understand specific community needs, barriers to accessing services, and infrastructure issues by gathering firsthand insights from vulnerable community members.

#### Feedback Mechanism

- Conducted listening sessions with various community organizations and focus groups, including the Community Advisory Groups of Ministry on the Margins, Sacred Pipe Resource Center, and Missouri Valley Coalition for Homeless Persons.
- Key data was collected during three separate sessions held throughout March 2024.

#### Findings

- **Pedestrian Safety and Accessibility:**
  - Frequent pedestrian accidents were reported in the 12<sup>th</sup> Street and East Bismarck Expressway and the South Washington/London/Manchester region. Specific unsafe intersections, like 26<sup>th</sup>/Rosser, were repeatedly highlighted as dangerous for pedestrians due to insufficient infrastructure and maintenance
  - Snow removal remains a persistent issue, forcing individuals to walk on streets, exposing them to increased risk and harassment. Areas such as the 1<sup>st</sup>/Rosser, routes, and spaces between Ministry on the Margins and the Dream Center lacked consistent snow clearance.
- **Public Transportation Challenges:**
  - Feedback emphasized limited late-night and Sunday services and the overall cost, which may restrict accessibility for some community members. Additionally, participants highlighted that the current bus schedules could be better aligned with peak travel times to enhance convenience for individuals who depend on public transit to reach their jobs and essential services.
  - Barriers related to requiring credit/debit cards as payment and smartphones for transit access, as well as limits on the number of bags allowed on buses, were noted as significant barriers for low-income individuals and those without digital access

### **Comment Boxes – Paper Surveys**

**Goal:** Gather public input on transportation needs and accessibility issues through anonymous comment boxes and structured paper surveys placed at strategic service locations. Traditional paper survey methods enable engagement with those without the internet or preference for pen and paper.

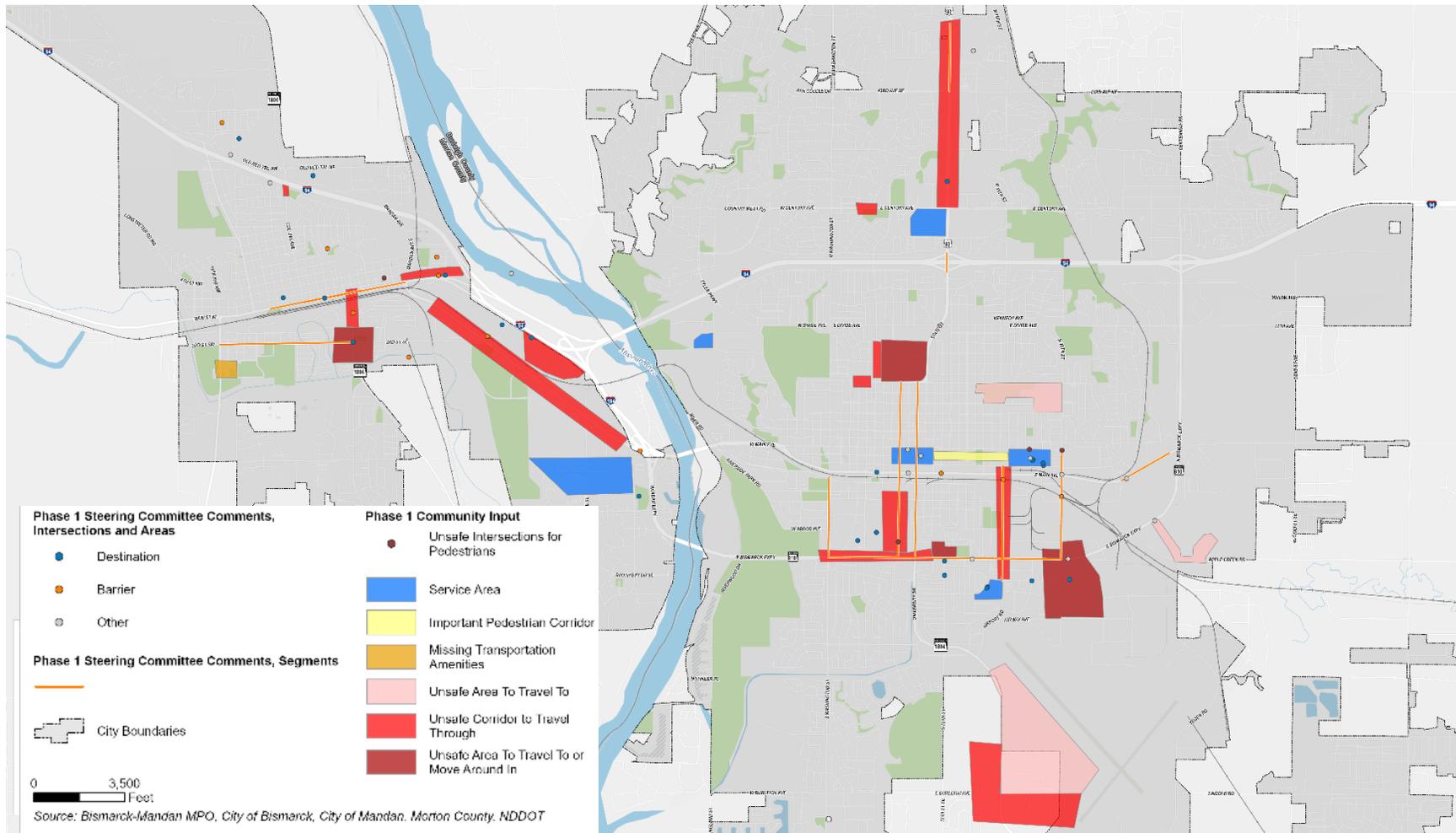
#### Feedback Mechanism

- The *project team* placed comment boxes at five high-traffic locations:
  - Sacred Pipe Resource Center,
  - Front Avenue Bus Shelter,
  - Bismarck Veterans Memorial Public Library,
  - Morton Mandan Public Library, and
  - Community Action’s East Side Office.

#### Findings

- Morning/evening and rush hour are critical transit times
- Most are using public transit and walking
- Primary Areas identified: Surrounding State Capital and Downtown, and the corridor between Ministry on the Margins/Soup Kitchen and Dream Center
- Common Barriers: Availability and distance from bus routes
- Desired improvements: Expanded public Transit and pedestrian infrastructure
- Funding and infrastructure enhancements suggested
- Pedestrian safety was a constant theme
- Low-income populations and lack of connections to school areas

Figure 12: Phase 1 Input



## Phase 2: Identify Alternatives

### **Steering Committee Meeting #2**

Meeting Date: April 12, 2024

**Goal:** Review community engagement feedback, identify priority areas for targeted outreach, and develop initial alternative solutions to address transportation barriers.

#### **Attendees and Agency Representation:**

- 13 Total Attendees
- **Agency Representations:**
  - Bismarck-Mandan MPO: 1
  - NDDOT: 2 - MPO Coordinator & Bismarck District Representative
  - Public Health: 2 - Bismarck-Burleigh Public Health & Western Plains Public Health
  - City of Bismarck: 3
  - City of Mandan: 2
  - Sacred Pipe Resource Center: 1
  - Bolton & Menk, Inc.: 2 Staff Members

#### Synopsis

- The Steering Committee met to discuss the progress of Phase 1 engagement activities and initiate plans to identify viable solutions. Discussions included summarizing priority barrier locations, transit route adjustments, and additional pedestrian infrastructure.
- The meeting focused on refining the list of high-impact locations that would benefit from enhanced transportation services, including major medical facilities, underserved residential areas, and critical corridors identified by the community.
- Specific issues such as snow removal on priority routes, limited accessibility of current transit stops, and the need for safer pedestrian crossings were critical topics during this discussion.
- Steering Committee Workshop – “Safe Routes to Services and Complete Streets Study” questionnaire to identify:
  - Top **Destinations** needing transportation enhancements.
  - Top **Barrier** locations requiring physical improvements.
  - Top **Non-Physical** improvements for better transit access (e.g., policy changes, infrastructure maintenance).

Responses were collected and analyzed to identify common themes and critical areas for intervention.

## Findings and Themes

### **Destination Transportation Enhancements**

#### **Bismarck**

1. **Downtown Bismarck:** Improve pedestrian and transit links to health facilities and Kirkwood Mall. (Bismarck)
2. **Kirkwood Mall/Family Fare/Burleigh County Housing Authority Area:** Enhance transit and pedestrian access for environmental justice residents. (Bismarck)
3. **South Cash Wise/United Way Emergency Shelter:** Strengthen connectivity to essential services for vulnerable populations. (Bismarck)
4. **Ministry on the Margins (East Main Corridor):** Improve access to support services. (Bismarck)
5. **South Walmart/Dream Center:** Enhance accessibility to retail and support facilities. (Bismarck)

### **Barrier Locations**

#### **Bismarck**

1. Airport Road from Broadway to Bismarck Expressway
  - Missing pedestrian/bicycle facilities adjacent to either side of the corridor for much of the length of the corridor identified
  - Pedestrian-oriented intersection enhancements could be considered at Broadway, Main, the railroad tracks, and Expressway
2. 7<sup>th</sup> and 9<sup>th</sup> Streets from Broadway to Bismarck Expressway
  - One-way travel on each roadway may contribute to higher volumes of faster-moving traffic, creating an unfriendly pedestrian environment but also making it more difficult to find gaps to cross the roadways safely
    - No clear designated crossings for 7<sup>th</sup> Street near Target. Residents of environmental justice populations may be taking direct routes from their homes in the area east of South 9<sup>th</sup> Street, moving west to the Target - Kirkwood Mall area rather than traveling north to Bowan Ave or South to Arbor Avenue
  - Minimal pedestrian facilities provided adjacent to the roadways (narrow sidewalks)
  - Pedestrian-oriented intersection enhancements could be considered at Rosser, Thayer, Broadway, Main, Front, Bowen, Arbor, and Bismarck Expressway.
3. Bismarck Expressway from Washington to 26<sup>th</sup> Street
  - There are many gaps in providing a continuous pedestrian/bicycle network along this stretch. The portions that exist are narrow and uninviting to traverse.
  - Pedestrian-oriented intersection enhancements could be considered at the following locations: South Washington Street, South 2<sup>nd</sup> Street, South 3<sup>rd</sup> Street, South 7<sup>th</sup> Street, South 9<sup>th</sup> Street, University Drive, South 12<sup>th</sup> Street, Airport Road, and South 26<sup>th</sup> Street.
4. Washington Street from Front Avenue to Bismarck Expressway

- Narrow sidewalks discourage foot traffic. Inadequate width for co-mingling of bicycle and pedestrian utilization.
  - Limited to no buffer distance from the sidewalk to the street and a lack of foliage shade adversely affect the pedestrian experience. This is further encumbered and compounded by the large amounts of fast-moving traffic in this area.
  - Pedestrian-oriented intersection improvements are a priority
    - Slip lanes should be eliminated as they encourage fast-moving traffic southbound to westbound right turns without stopping. The pedestrian refuge island is not large enough at areas such as Sweet Arbor, the driveway to Family Fare, and Expressway.
5. 26<sup>th</sup> Street between Main Avenue to Bismarck Expressway
- Limited if any adjacent pedestrian facilities along the roadway
    - No facilities from South 26th Street to East Bowen Avenue, which includes a railroad crossing
    - Sidewalk only on the east side from the East Bowen Avenue to Bismarck Expressway intersection
  - Pedestrian-oriented intersection enhancements could be considered at the Main Avenue and Bismarck Expressway
6. 3<sup>rd</sup> Street South from Main Avenue to Bismarck Expressway
- Narrow sidewalk adjacent and on either side of the corridor
    - No buffer distance between the street and no street trees allows for a very uninviting pedestrian experience and perceptions of safety issues given the fast-moving traffic with no visual buffers/friction
  - Pedestrian-oriented intersection enhancements could be considered at East Main Avenue, Front Avenue, Sweet Avenue, Bowen Avenue, Indiana Avenue, Arbor Avenue, and Expressway Avenue.
    - Additionally, the inclusion of a formal pedestrian crossing mechanism (pedestrian rapid flashing beacon or similar traffic control device) should be considered between the Ramkota Hotel and Kirkwood Mall (between Indiana Avenue and Arbor Avenue)

## Non-Physical Improvements

### Bismarck

1. Increase the frequency of headway public transportation circulator route
  - Circulating roughly around the area bounded by East Broadway Avenue, South Washington Street, Bismarck Expressway, and South 26<sup>th</sup> Street)
  - Explore the possibility of providing subsidized bicycles and scooter passes to low and moderate-income people through sources such as the Community Development Block Grant program
2. Increase the frequency of headway public transportation north-south repeater route
  - Between Gateway Mall to Kirkwood Mall and linking the Bismarck Capitol Building area and downtown

- Explore the possibility of providing subsidized transit passes to low and moderate-income people through CDBG program and similar sources
- 3. Climate-controlled public transportation hub in central Bismarck
  - Previous Transit Development Plans have identified this as a priority
- 4. Partner with micro-mobility options such as Bird Scooters to cache vehicles at strategic locations
  - Explore the possibility of providing subsidized transit passes to low and moderate-income people through community development block program and similar sources
- 5. Partner with Bismarck Parks and Recreation to reposition or create new bike share stations with new E-bike options for the bike share program at strategic locations
  - Explore the possibility of providing subsidized transit passes to low and moderate-income people through community development block program and similar sources

### **Pop-Up: Ministry on the Margins**

Meeting Date: May 31, 2024

**Goal:** Present initial findings of the issues identified, present alternatives, and solicit feedback from previously engaged stakeholders on potential outcomes and target areas.

#### Synopsis

Ministry on the Margins hosted an opportunity for direct community engagement, with contributions from six clients, three staff members, a service provider, and a small business owner. This discussion reinforced previously identified issues while bringing additional insights to light.

#### Key Themes and Issues:

#### **Pedestrian and Road Safety**

##### **Bismarck**

- **Critical Intersections:** The Bismarck Expressway, particularly at 12th Street and near McDonald’s, was highlighted as highly unsafe to pedestrians due to high-speed traffic and inadequate crossing infrastructure. Other intersections, such as 26th/Rosser, were also mentioned as hazardous.

##### **Bismarck & Mandan**

- **Speed Limit Concerns:** The high-speed limit on the Bismarck Expressway poses dangers for pedestrians and cyclists alike.
- **Snow Removal Deficiencies:** Poor snow removal forces pedestrians to walk on streets, exposing them to dangerous conditions and instances of harassment.
- **Crosswalk Timing:** Short crossing times at pedestrian crosswalks, particularly during winter, make safe passage difficult.

#### **Public Transit Challenges**



## Bismarck & Mandan

- **Bus Stop Accessibility:** There is a pressing need for more bus stops near critical social and public service locations (e.g., treatment and recovery centers, human services, and libraries).
- **Service Limitations:** High bus fares, limited-service hours (especially late nights and Sundays), and the absence of direct routes between Bismarck and Mandan were significant points of concern. These limitations increase reliance on expensive ride services like Uber and Lyft.
- **Scheduling Adjustments:** Aligning bus schedules with peak times could improve accessibility for residents and reduce their reliance on alternative, costly transport.
- **Hospital Discharge Transport:** Patients discharged from hospitals often face difficulties getting home due to inadequate transportation options.

## Access to Social and Peer Support Services

- **Walking Paths to Community Service and Cultural Pillar Hubs:** There is a call for better walking paths within the immediate and tertiary footprints of the Ministry of the Margins and the Dream Center organizations. These organizations work synergistically to support Environmental Justice communities that access their services.
- **Bicycle Infrastructure:** Residents who rely on bicycles face challenges due to the scarcity of bike racks, maintenance difficulties, and theft. Proposed solutions include bike donations and community-run maintenance workshops.
- **Public Restrooms and Shelter:** The absence of public restrooms and a low-barrier shelter is problematic, particularly during winter. This significantly impacts individuals experiencing homelessness.
- **Painted Crosswalks:** A strategic plan to repaint crosswalks in service-heavy areas could enhance pedestrian safety.
- **Park and Facility Concerns:** Specific areas, such as the available routes between 23<sup>rd</sup> Street Park and Serenity Place – an addiction treatment and recovery support non-profit - were noted for their lack of amenities like restrooms, compounding the difficulties faced by community members.

## Broader Community Considerations

- **Community versus Business Priorities:** One concern was raised about city planning being more business-centric, potentially neglecting the connectivity between low-income housing and employment hubs.
- **Data-Driven Solutions:** A potential data collection effort involving 911 calls could show how emergency responses affect transportation needs post-hospital visits.
- **Policy Clarity:** Questions arose regarding the city's policies on loitering on sidewalks, suggesting a need for clarity, considering Bismarck adopted an ordinance prohibiting encampment on public right of way in October 2024.
- **Chronic Issues:** Other issues underscored that the lack of a low-barrier shelter and public amenities presents substantial obstacles, particularly in winter.

## Humanizing Public Health and Safety

Challenges of environmental justice populations and those at the event are made even more poignant and visible, especially when we consider an article from the ND News Cooperative, [Better coordination, funding needed for homeless, providers say](#), encapsulates the need for and underscores the potential for significant, community-oriented improvements in transportation, pedestrian safety, and essential services to enhance the quality of life for residents, especially vulnerable populations.

- **Community Loss:** During this engagement event, a poignant story was shared by a community member who spoke about the tragic loss of their dear friend, Raymond Mallard. Mallard, a 53-year-old unhoused man, passed away after missing a bus and inadvertently had to walk in dangerously cold temperatures.
  - **Connecting Insights:** The story of Raymond Mallard echoes the themes shared in during the pop-up and aligned with the points presented in the article, which underscores the lack of low-barrier shelters, coordinated responses, and adequate resources to support vulnerable populations during extreme weather events. The shared experience at the event humanizes the urgent need for action, providing a real-life example of how these issues affect individuals in profound and irreversible ways.



## **Open-House: Dream Center**

Meeting Date: June 18<sup>th</sup>, 2024

**Goal:** Present initial findings of the issues identified, present alternatives, and solicit feedback from the public on preferred alternatives.

### Synopsis

The *project team* facilitated an open house at the Dream Center, a nonprofit organization dedicated to providing free meals, grocery distribution, and various support services to individuals and families in need, aiming to address food insecurity and promote community well-being. Four staff members, five members of the public, and a member of KX News were in attendance.

### Key Themes and Findings:

#### **Public Transit Challenges**

- **Medical Appointments:** Difficulty with reliable transportation to and from medical appointments with the various times and transit lines, with a heavy emphasis on late evening timing.
- **Transit Timing:** Frustration around the early morning and late afternoon transit times have made work and access difficult. More consistent timing for medical appointments and circulation between specific service areas are needed.
- **Service Areas:** The comment of St. Alexius/Mid-Dakota Clinic not receiving enough Transit Service.

#### **Specific Intersections and Infrastructure**

##### **Bismarck**

- **State Street/9<sup>th</sup> Street Intersection:** It was identified as “over-engineered,” and some pedestrians expressed that the design made them feel unprioritized.
- **Century Avenue:** Between ND Job Service, Commerce, and Tourism, the six lanes have become significantly challenging to cross for pedestrians who are often without vehicles and are looking to lift themselves out of situations that require walking.
- **Winter Maintenance:** Comments around sidewalks downtown and connecting between the Soup Kitchen and primary health services in the downtown area are often cleared last, forcing people into the street. *Key locations: The Patterson, the Depot, South 5<sup>th</sup> Street.*
- **Addition Ped Crossings:** Multiple intersections were identified as areas that would greatly benefit from Rectangular Rapid Flashing Beacons (RRFB) and similar beacons, including crossings at Washington, Expressway, Family Fare, and Kirkwood Apartments.

## Virtual Engagement: INPUTiD - Survey Analysis

### Overview

Feedback was classified into five thematic categories:

1. Services
2. Ideas
3. Bad Crossing
4. Issues
5. Thumbs Down

Each comment provided valuable insights into specific transportation issues and suggestions for improvements across Bismarck and Mandan.

### Thematic Categories and Analysis

#### 1. Services

Community service nodes:

##### Mandan

- **West River Head Start:** Respondents emphasized the lack of convenient bus stops or shelters, making it difficult for families to access preschool services. The absence of transportation options discourages some families from enrolling in the program.

##### Bismarck

- **Substance Use Support:** Comments noted a need for improved access to service locations (e.g., substance abuse treatment and recovery services).
- **Heavens Helpers Soup Cafe and Ministry on the Margins:** Both locations serve vulnerable populations who rely on accessible transit. Respondents stressed the importance of connecting these centers to safe, reliable transportation.
- **Native American Development Center and Bismarck VA Clinic:** Community members called for easier access to these centers to ensure critical services are accessible to those in need.

#### 2. Idea

Improvement suggestions:

##### Bismarck and Mandan

- **Bulb-outs and Pedestrian Amenities:** Ideas included adding bulb-outs and amenities like benches and shaded areas to create safer and more comfortable pedestrian spaces.
- **Street Trees and Aesthetics:** Adding street trees and enhancing the visual appeal of sidewalks were recommended to make downtown areas more walkable and pleasant.

#### Bismarck

- **Crossing Enhancements:** Several comments suggested installing leading pedestrian intervals and mid-block crossings, particularly on busy roads like Main and 7th, to improve pedestrian safety.

#### Mandan

- **Barricades and Crossings:** Respondents proposed adding barricades along Collins Avenue to protect pedestrians from traffic. They also suggested new pedestrian bridges or tunnels to improve safe crossings.

### 3. Bad Crossings

Highlighted intersections and pedestrian pathways:

#### Bismarck

- **Main Street Crossings:** Multiple respondents flagged Main Street for its lack of safe crossings, especially between key locations like 6th and Collins, where pedestrian infrastructure is limited.
- **Jaycee Park and Century Ave:** Respondents suggested adding a lighted crosswalk to enable safe access to Jaycee Park, which has significant pedestrian traffic.

#### Mandan

- **Twin City Estates:** This area was noted for lacking sidewalks, forcing pedestrians to navigate unsafe paths to access nearby services and facilities.

### 4. Issues

General transportation and infrastructure problems:

#### Mandan

- **Sidewalk Connectivity:** Incomplete sidewalk networks, particularly near clinics and neighborhoods like Shady Acres, create accessibility challenges, especially for those relying on foot traffic.
- **Drainage and Lighting:** Some comments pointed out specific areas, like the 1806 shared-use path tunnel, where drainage and lighting issues make the pathway unsafe.
- **Housing Concerns:** Several responses discussed housing issues, specifically poor conditions provided by landlords, which intersect with the need for reliable transportation options for low-income residents.
- **Lack of Accessible Transit for Medical Needs:** Comments noted a need for extended public transit hours near medical facilities, allowing access for patients attending late appointments or procedures.

## 5. Thumbs Down

Negative feedback on specific areas or aspects of the current infrastructure:

- **Unsafe Pedestrian Areas:** Respondents criticized the 7th Avenue corridor as unfriendly to pedestrians due to a lack of crossings, fast traffic, and pedestrian amenities.
- **Inadequate Sidewalks:** Areas with missing or poor-quality sidewalks, like those around Walmart and Main Street in Shady Acres, were cited as problematic for pedestrians.
- **General Feedback on Pedestrian Infrastructure:** Negative feedback underscored the lack of investment in making high-traffic pedestrian areas walkable and safe, with several calls for more comprehensive sidewalk and crossing improvements.

### Discussion of Outlier Comments & Highlighted Findings

#### Outlier Comments

Some survey responses reflect concerns that extend beyond infrastructure, touching on socio-economic and public trust issues. Negative comments about government leadership, quality of housing, and “slumlords,” while not directly actionable for transportation planning, signal a need for enhanced community trust-building and housing support. To address these broader issues in a transportation context:

- **Continued Outreach:** Expanding communication channels and feedback loops with the community could help reinforce public trust and demonstrate follow-through on promised improvements can foster confidence.
- **Interagency Collaboration:** Partnering with housing, social services, and advocacy groups to address interconnected issues around transportation, housing quality, and public safety could provide a more holistic response to the needs of vulnerable populations.

This approach may strengthen the long-term impact of the Safe Routes to Services initiative by creating a foundation of trust and addressing the underlying socio-economic challenges identified in the feedback.

#### Highlighted Finding

### West River Head Start Transportation Needs

Out of all the INPUTiD comments, the topic of West River Head Start, a preschool serving low-income children, received the most public interaction.

### Summary of West River Head Start Feedback

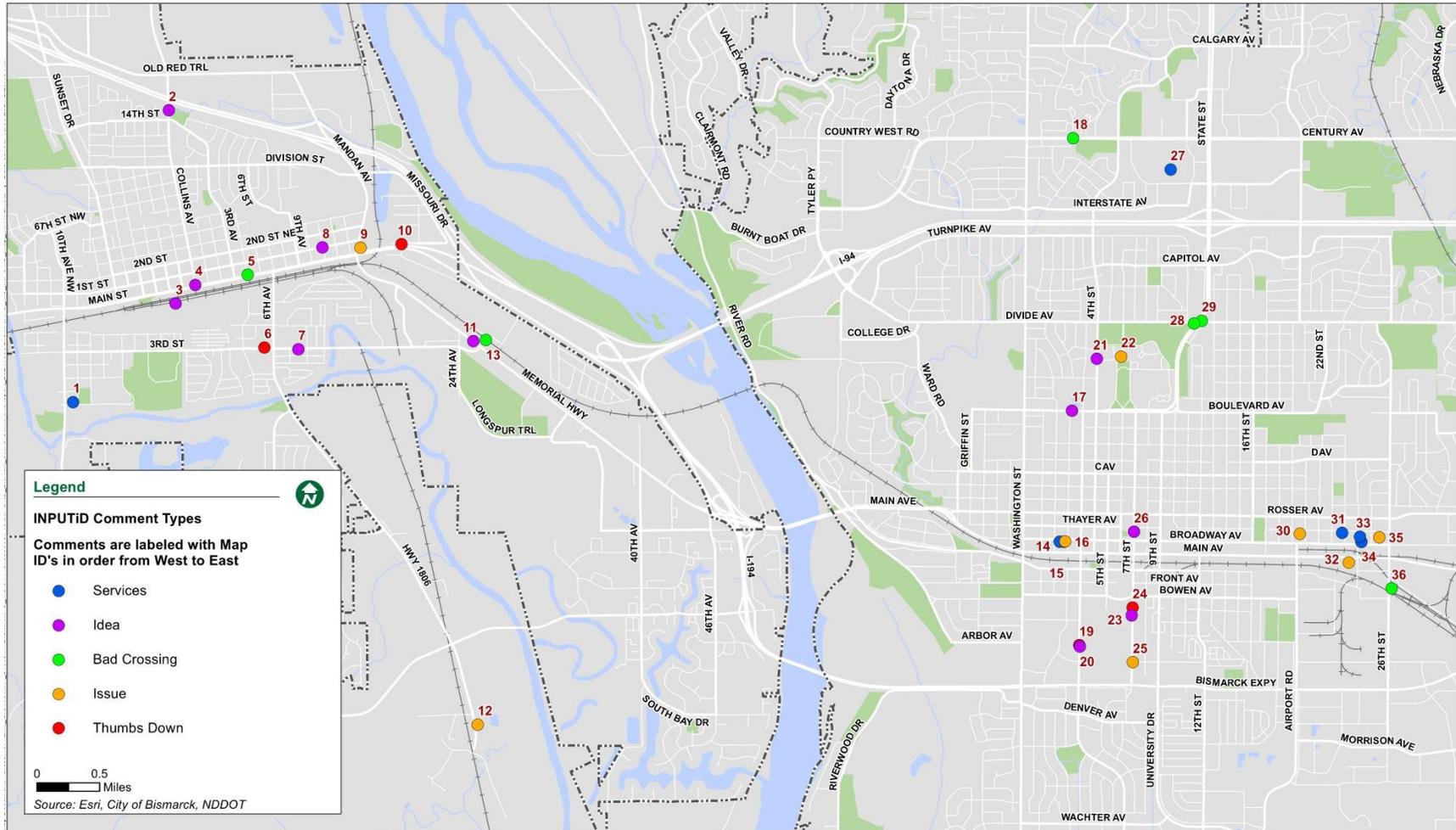
West River Head Start serves preschool-aged children (3-5 years) from low-income families, and transportation is a primary barrier to enrollment and consistent attendance. Key challenges outlined include:

- **Distance and Accessibility:** Families often walk long distances, with young children in tow, to reach the nearest bus stop.

- **Scheduling Conflicts:** The preschool’s hours (8 a.m. to 2 p.m. and 8 a.m. to 4 p.m.) do not align well with current bus schedules, creating accessibility issues for families relying on public transportation.
- **Funding Constraints:** Although previously partnered with Mandan Public Schools to provide bussing, this option is no longer available, and limited funding prevents the preschool from covering transportation costs independently.

These barriers deter many families from enrolling their children, fearing they cannot reliably bring them to school. Suggestions from the community include installing a nearby bus stop and providing a sheltered waiting area for families.

Figure 13: INPUTiD Comment Types



## Phase 3: Implementation Strategies

### Steering Committee Meeting #3

Meeting Date: August 7, 2024

**Goal:** Reviewed community engagement data and consolidated essential issues. Troubleshooting and brainstorming session. Bus tour for context-making and perspective-taking.

#### Attendees and Agency Representation

- 14 Total Attendees
- **Agency Representations:**
  - Bismarck-Mandan MPO: 2
  - NDDOT: 1
  - Public Health: 1
  - City of Bismarck: 3
  - City of Mandan: 2
  - Dakota Center for Independent Living: 1
  - BisMan Transit: 1
  - Bolton & Menk, Inc.: 3

#### Synopsis - Brainstorming Session and Bus/Walking Tour: Safe Routes to Services Study

**Brainstorming Session Insights:** The brainstorming session provided valuable input for short-term and long-term solutions to enhance pedestrian and transit infrastructure.

#### Key Points

##### **Bismarck**

- **26th Street Improvements:** In the short term, ideas included creating a bike/pedestrian railroad crossing north of Bowen Avenue, moving bikes to sidewalk level at the rail crossing, completing sidewalk gaps, and adding bike lane markings. Long-term strategies involved reconstructing the roadway to narrow its width, adding shared-use paths, and ensuring sidewalk continuity without impacting utilities.
- **7th and 9th Streets:** Ideas revolved around re-striping the corridor for shared bus and bike lanes and considering a “road diet” to improve multimodal use. Long-term goals included lane reconfigurations, adding turn lanes, bulb-outs, and climate-controlled transportation hubs.
- **Main Street and Airport Road:** Discussions emphasized the need for signal crossing enhancements, protected crossings, and improvements like pedestrian refuge islands and sidewalk gap completion. Long-term strategies on Airport Road proposed lane narrowing and creating shared-use paths.

##### **Mandan**

- **3rd Street Enhancements:** Short-term considerations highlighted temporary solutions such as parking studies, shared lane markings, and curb ramps at critical intersections. Long-term plans suggested removing parking on one or both sides to build sidewalks and a two-way bikeway, adding permanent bulb-outs for pedestrian safety.

**Bus Tour:** Steering Committee members participated in a bus tour across Bismarck and Mandan to gain a firsthand view of transportation challenges. These tours provided an on-the-ground perspective, helping to visualize the project’s potential impact. The bus and walking tour allowed participants to observe current infrastructure conditions and identify priority areas for immediate and future interventions. The tour reinforced the need for improved pedestrian safety measures and transit access, especially at high-traffic intersections and areas with significant community use.

Participants noted:

- **Critical Intersections and Areas:** High-risk areas like Expressway intersections were noted for safety improvements.
- **Accessibility Gaps:** Inadequate crosswalks, sidewalk gaps, and limited transit access were visible issues that needed addressing.
- **Infrastructure Needs:** Observations confirmed the necessity for strategic additions such as ADA-compliant sidewalks, public amenities, and climate-controlled hubs.

This session and tour underscored the importance of implementing immediate and longer-term changes to create safer, more accessible routes for residents, aligning with community needs and priorities.



## Steering Committee Meeting #4

Meeting Date: October 2, 2024

**Goal:** Reviewed community engagement data, priority area analysis and discussion, implementation plan validation, and next steps to close out.

### Attendees and Agency Representation

- 10 Total Attendees
- **Agency Representations:**
  - Bismarck-Mandan MPO: 1
  - NDDOT: 1
  - Public Health: 2
  - City of Bismarck: 2
  - City of Mandan: 1
  - Bolton & Menk, Inc.: 3

### Synopsis

#### 1. Implementation Planning:

##### Bis-Man Transit System

- **Transit Improvements:**
  - Discussed the proposed circulator route, noting overlap with the existing orange route and plans for a phased approach with designated stops.
  - Emphasized using a smaller 24-30 ft. bus for accessibility and practicality; avoiding vans due to ADA limitations.
  - Additional funding is in place for four new buses, aiding route implementation.
- **Mobility Hubs:**
  - Recognized as a significant benefit, especially for public health and the potential of providing low-barrier shelters.
  - Key aspects include climate-controlled primary hubs with restrooms and lockers and potential partner involvement (e.g., Dream Center, United Way).
  - E-bike funding and usage linked to these hubs.
- **Complete Streets and Implementation:**
  - Strategies reviewed focused on snow removal using fire routes to ensure year-round accessibility.
  - Previous success with Mandan's "golden shovel" initiative highlighted as a model for incentivizing community participation.
  - Business Improvement Districts are mentioned as potential but challenging due to differing community opinions.
- **Corridor-Specific Notes:**
  - Discussed challenges and opportunities for areas such as Main St. in Mandan, 26th St. Corridor, and others, focusing on safety, multimodal enhancements, and potential long-term changes like roundabouts.

## Key Takeaways

- **Community and Stakeholder Alignment:** The presentation stressed the need to keep community and stakeholder interests central to planning, especially in areas like mobility hubs that can foster broader engagement and resources.
- **Balancing Long-Term Vision with Immediate Actions:** Suggested presenting actionable short-term strategies and visionary long-term recommendations.

### Open House: Morton Mandan Public Library

Meeting Date: October 21, 2024

**Goal:** Present draft recommendations of the alternatives identified and solicit feedback on complete streets, transit improvements, mobility hubs, and final reports.

### Synopsis

The *project team facilitated an open house* at the Morton Mandan Public Library in downtown Mandan. In attendance were 3 staff people, with 6 members of the public in attendance. Key themes were:

- **Complete Streets, Transit Improvements, and Mobility Hubs:**
  - Bike infrastructure is supported, while on street bike facilities have more hesitation.
  - More snow removal and finding ways to incentivize better clearing of primary routes.
  - Support of road diets where applicable without major impacts on traffic flow.
  - A circulator route would be amazing if possible. Timing transit to later evening times could have a large impact on ridership.
- **Bismarck Locations 1:**
  - Shared Use Paths would be beneficial but would need to be paired with safe crossing or the solutions feel that they would be for nothing.
  - Road Diets would be great if they can accommodate the traffic volumes.
- **Bismarck Locations 2:**
  - Sidewalk widening would be great, but the hesitation remains when associated with snow removal, primarily finding who would be responsible for these solutions.
- **Mandan Locations:**
  - BNSF Overpass, though difficult, would be a community game-changer. Pedestrian elements throughout Mandan would be extremely beneficial, primarily with the addition of future affordable housing.

Figure 14: Open House Event



### In Summary

The engagement strategy included listening sessions, focus groups, pop-up events, and digital tools like INPUTiD™, allowing community members to voice concerns about pedestrian safety, public transportation limitations, and access to essential services. This multi-faceted approach captured feedback from a wide array of residents, ensuring that the solutions were informed by real-life needs and experiences.

Local partnerships with organizations such as the Sacred Pipe Resource Center and Ministry on the Margins were essential in reaching individuals who might not usually participate in transportation planning. These groups, representing diverse communities, provided valuable perspectives on their members' unique challenges. Compensation for advisory group participants underscored the value placed on community input, fostering trust and long-term relationships. This inclusive method enabled the project team to design practical solutions that address genuine community needs.

The community engagement process provided critical data and built trust in the project. A phased structure ensured that input was incorporated at every stage, from identifying issues to finalizing actionable recommendations. The project has laid the groundwork for enhanced pedestrian and transit infrastructure, improved mobility options, and safer street crossings by combining community feedback with technical expertise. This highlighted the importance of an inclusive, responsive approach to transportation planning that truly resonates with and benefits the community.

### 3. Issues Identification

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#### Walking and Biking

Most streets within the Bismarck-Mandan MPA boundaries have been constructed with sidewalk facilities. Sidewalks connect many destinations, such as pharmacies and schools, to housing along streets more residential in nature. Commercial areas, including the Kirkwood Mall, lack sidewalk connections between the street and main entrances, forcing bicyclists and pedestrians to travel through parking lots with vehicle traffic. Bike lanes are less common and only cover small sections on a few roadways. Multi-use trails are more common within parks and natural areas, but rarely do trails extend beyond these areas. There are three Missouri River roadway crossings between the cities of Bismarck and Mandan. Two crossings, Memorial Highway and the Bismarck Expressway, are suitable for pedestrians and cyclists. The other crossing, Interstate 94, is for vehicular traffic only. An active BNSF railway bridge also crosses the Missouri River south of Interstate 94. The BNSF railway runs parallel to downtown Mandan and Bismarck, limiting the availability of crossings in these activity zones.

Figure 15: Desire line along 3rd St SE in Mandan



Several flashing pedestrian crossing beacons (rectangular rapid flashing beacons or HAWK signals) are in the City of Bismarck. However, many of the schools in both Bismarck and Mandan are located in areas without this infrastructure in place. Bicycle racks are readily available at many destinations throughout downtown Bismarck and around Kirkwood Mall. However, the limited bicycle lanes and multi-use trails available in these areas require bicyclists to utilize sidewalks and/or roadways on their journey.

When determining which type of infrastructure is most appropriate for bicyclists, it is critical to consider an individual's preferences for comfort, safety, accessibility, and convenience.

Figure 16 shows four cyclist categories developed for the FHWA's Bikeway Selection Guide.

Figure 16: FHWA Bicyclist Design user Profiles

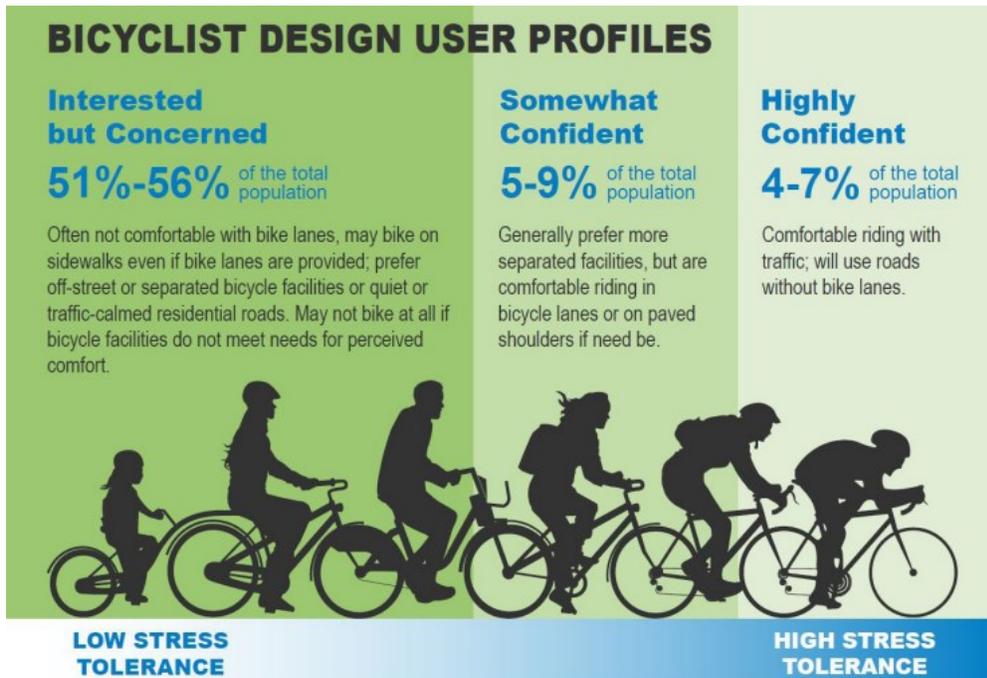


Table 1: Pedestrian and Bicycle Infrastructure Statistics within the MPO

	Bismarck	Mandan
% of City/County Roadways with Pedestrian Facilities	<b>86%</b>	<b>78%</b>
% of all Functionally Classified Roads with Bicycle Facilities*	<b>29%</b>	<b>37%</b>
% of Traffic Control Devices with Pedestrian Accommodations (Beacons/Signals)	<b>73%</b>	<b>N/A</b>
Number of Bike Racks	<b>121</b>	<b>12</b>

\*Bicycle Facilities are any infrastructure or amenity designed to accommodate and enhance the safety, comfort, and convenience of cyclists, including bike lanes, paths, parking, and signage.

Bicycle and pedestrian trip data was reviewed using the StreetLight, Inc. platform. StreetLight is a big data source that integrates connected vehicle data, aggregated GPS data, location-based service mobility data, and thousands of vehicles, bicycle, and pedestrian sensors, among other sources, to understand trip patterns and volume. StreetLight can analyze vehicle, pedestrian, and bicycle travel patterns. StreetLight volumes are estimated using their machine-learning models based on real-world data. One limitation is that data uploads to the database may lag, resulting in possibly outdated data.

Based on analysis from StreetLight, Inc., five high-activity centers based on total daily trips from April 1, 2021, to April 30, 2022, were found. This included much of downtown Bismarck, stretching from Kirkwood Mall north of the Bismarck Event Center, the hospital district, and Bismarck High School. Additional activity centers were observed near the north Walmart and Century High School area.

Figure 17: Existing Bicycle and Pedestrian Infrastructure (Bismarck)

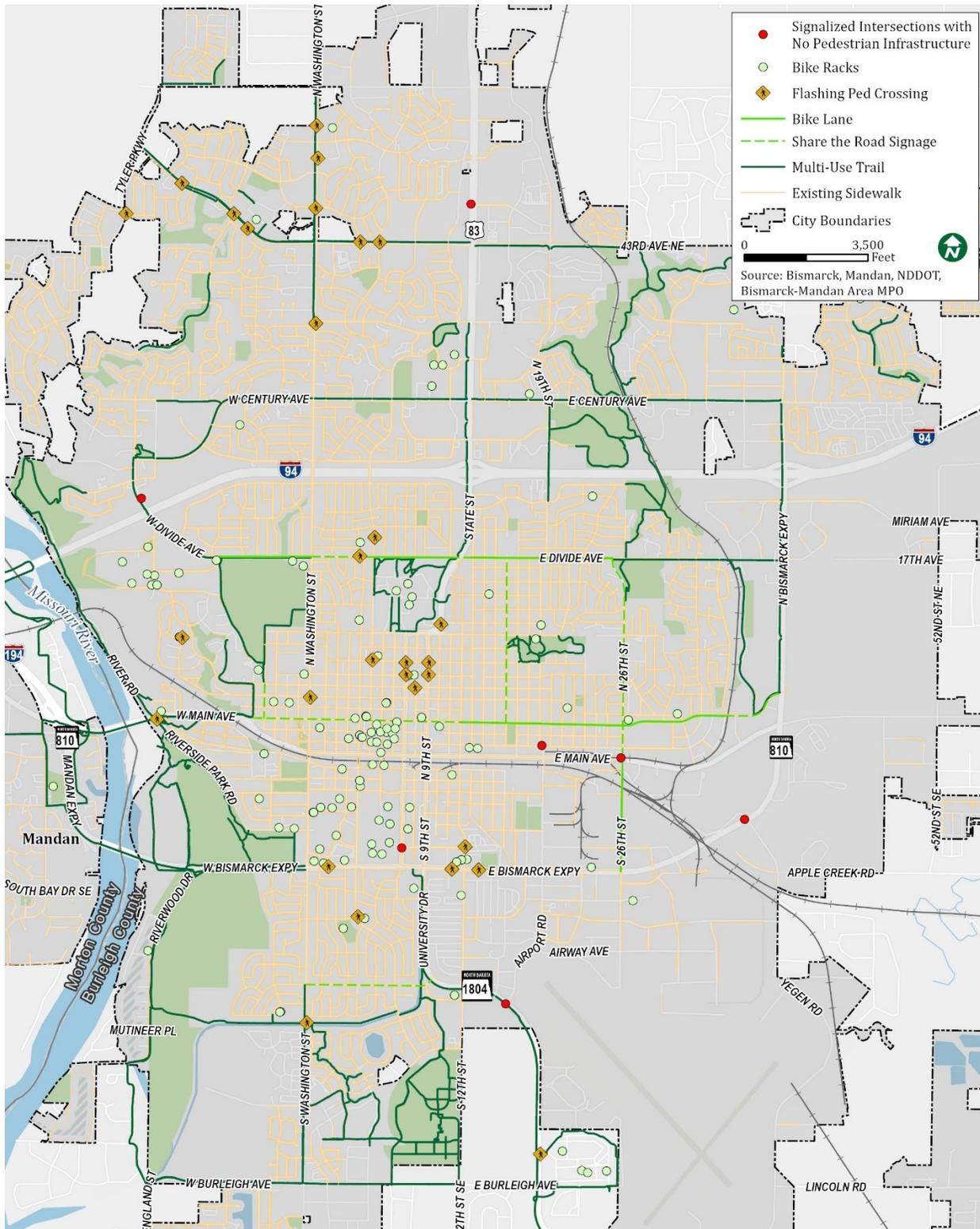


Figure 18: Existing Bicycle and Pedestrian Infrastructure (Mandan)

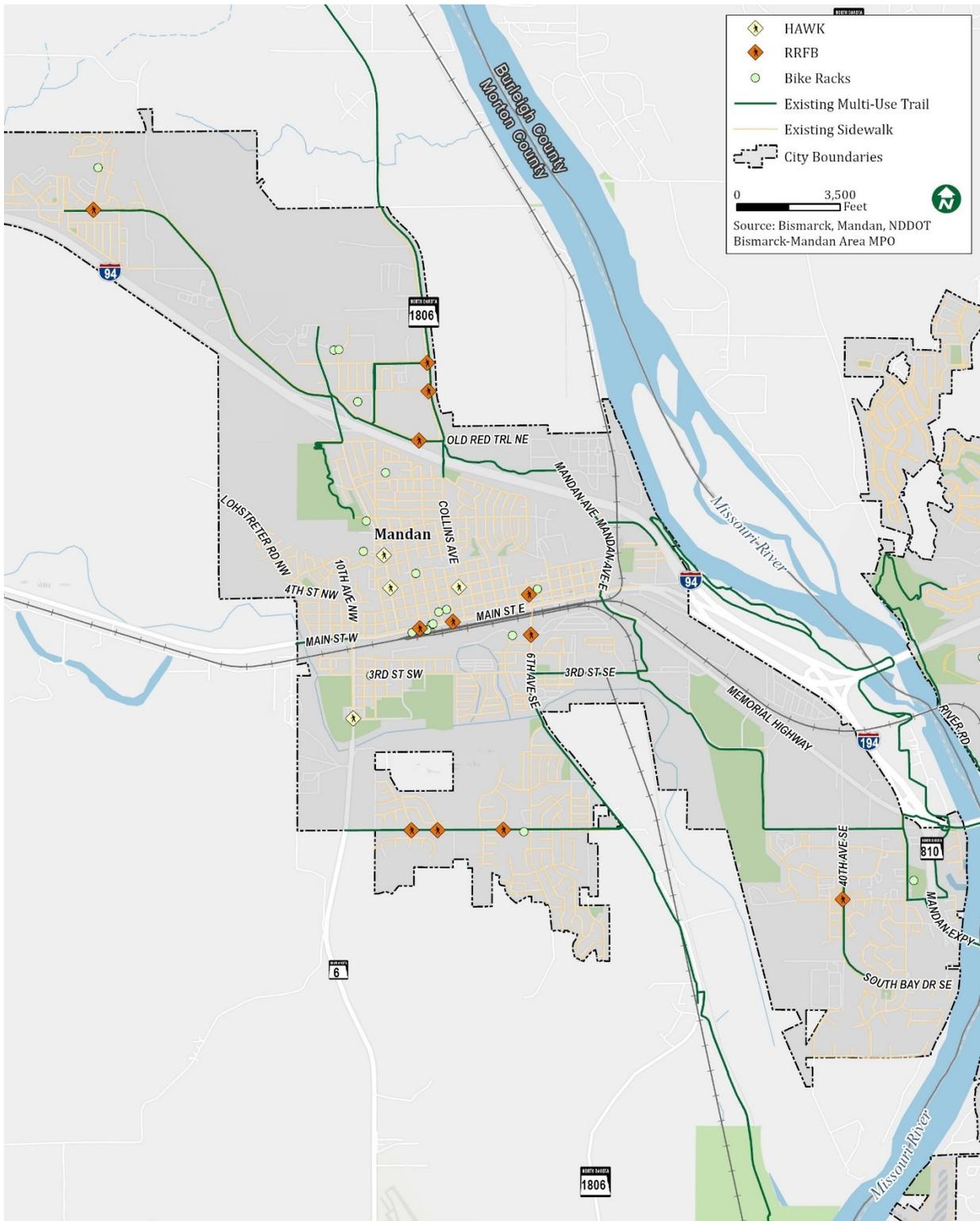
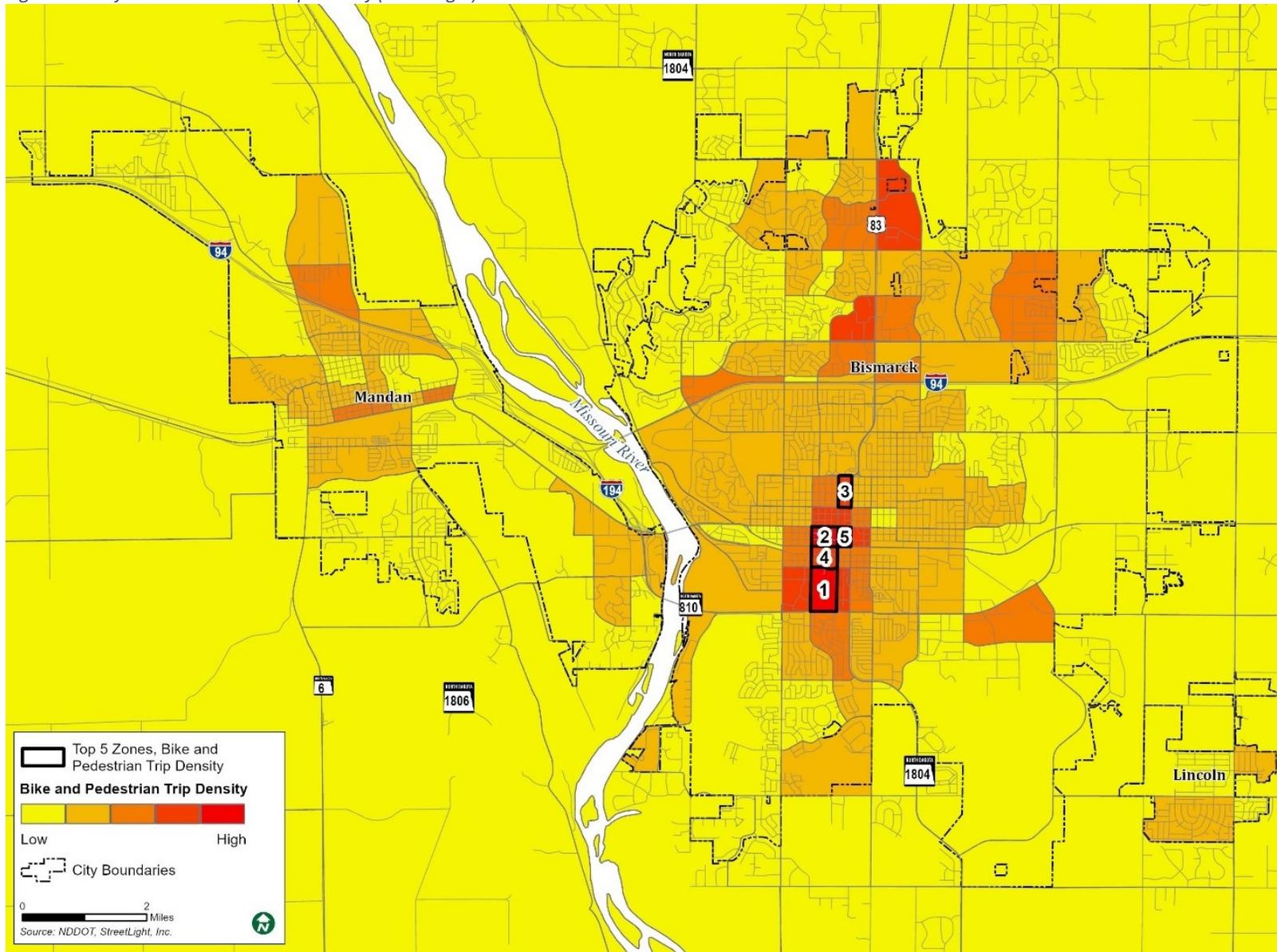


Figure 19: Bicycle and Pedestrian Trip Density (StreetLight)



## Transit

Six routes serve the urbanized area through Bismarck-Mandan Transit (Figure 15), identified as Routes:

- Black 1
- Blue 2
- Green 3
- Red 4
- Orange 5
- Purple 6

Bismarck-Mandan Transit operates a hub-and-spoke model, with most routes starting and ending their trips at the Front Avenue Shelter in downtown Bismarck. Each route operates at a one-hour frequency, except the Purple 6 Route, which operates at a two-hour frequency. The Purple 6-Route is also currently the only route serving the City of Mandan. The transit system provided an average of 304 daily rides between January and August 2023.

Bismarck-Mandan Transit utilizes what is commonly known as a “flag-down system,” meaning buses will stop at any corner along a bus route if the operator believes it is a safe place to stop. 41 designated bus stops serve major destinations and connect to areas with pedestrian infrastructure and/or are in walkable areas like shopping centers. However, almost none of the designated stops intersect with bicycle lanes or trails. In this case, creating multimodal trips may prove difficult even for riders who are more comfortable biking in vehicular traffic lanes. By relying on a flag-stop system, transit riders often lack the necessary infrastructure to safely utilize the public transportation system. This model can also create barriers to access for new users who may not know where the routes travel without having access to maps/online resources.

Figure 21 highlights an example of this: a bus bench in the grass lacks a concrete pad to connect transit riders to the sidewalk and curb.

Transit utilization is highest at three key locations in Bismarck: the Mapleton Avenue Transfer Point, the South Walmart, and the Front Avenue Shelter. The Front Avenue Shelter, located near the Bismarck Event Center, is the main transfer point between bus routes and has the highest ridership of any transfer point in the system.

Figure 20: Google Streetview of Existing Bus Stop Bench (College Drive at Divide Avenue)



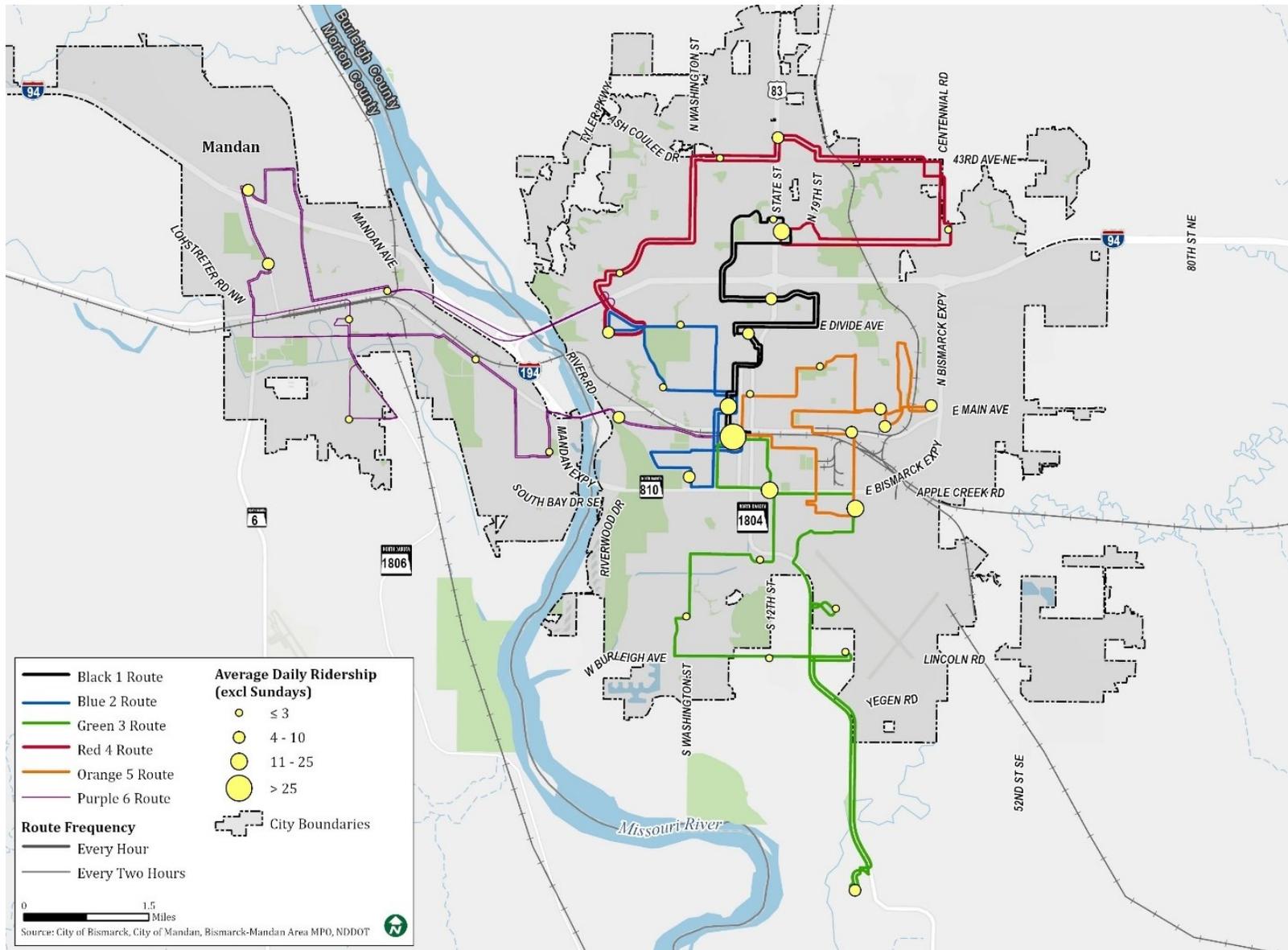
Figure 21: Google Streetview of Front Avenue Shelter



Figure 22: Google Streetview of Bus Stop Shelter on 6th Avenue SE at Burlington Street SE (Mandan Family Fare)



Figure 23: Transit Ridership at Designated Stops



## Activity Nodes

Key community destinations and the nodes of activity that they create around them include schools, colleges, churches, healthcare facilities (including hospitals and primary care services), civic service buildings, major commercial areas, grocery stores, and recreational facilities. These destinations are found throughout the Bismarck-Mandan area, with a higher concentration in the respective downtown areas. Three of the region's major medical centers are within the MPO boundary - Vibra Hospital of the Central Dakotas in Mandan, Sanford Medical Center, and CHI St. Alexius Health Medical Center in Bismarck. In addition to the various elementary, middle, and high schools, the study area is home to several colleges that present opportunities for walking, biking, and transit use, including the University of Mary, Bismarck State College, and United Tribes Technical College.

As demonstrated in the following figures, these destinations are located on numerous types of roadways that support bicycle, pedestrian, and transit travel opportunities to varying degrees. Travel opportunities are measured by the number of modes other than vehicular travel that are available along each roadway segment. Most roads do not support all three modes, with many supporting only one or two. Roadways supporting two of the three modes tend to be along transit lines where sidewalks are also present.

Figure 24: Travel Opportunities (Mandan)

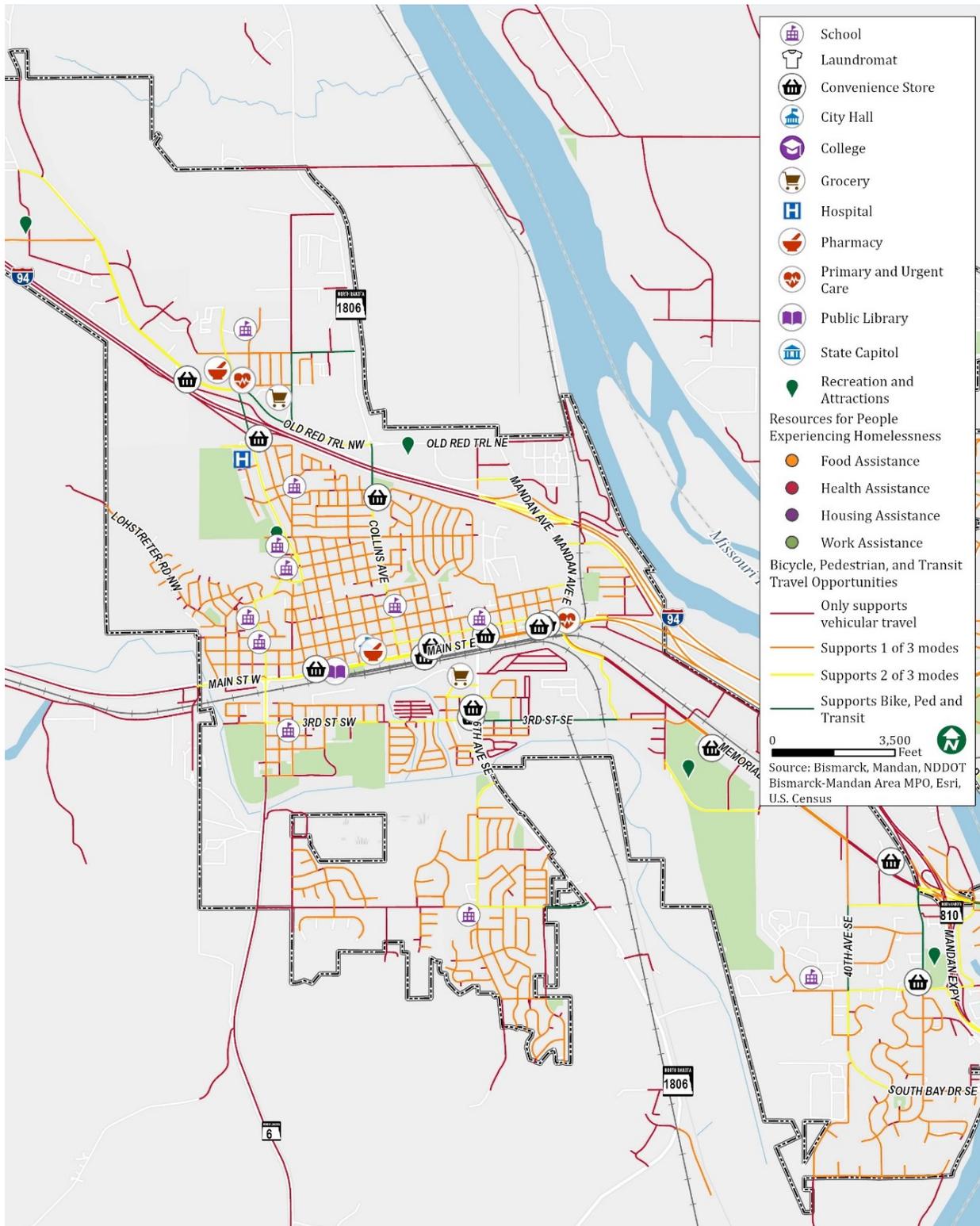
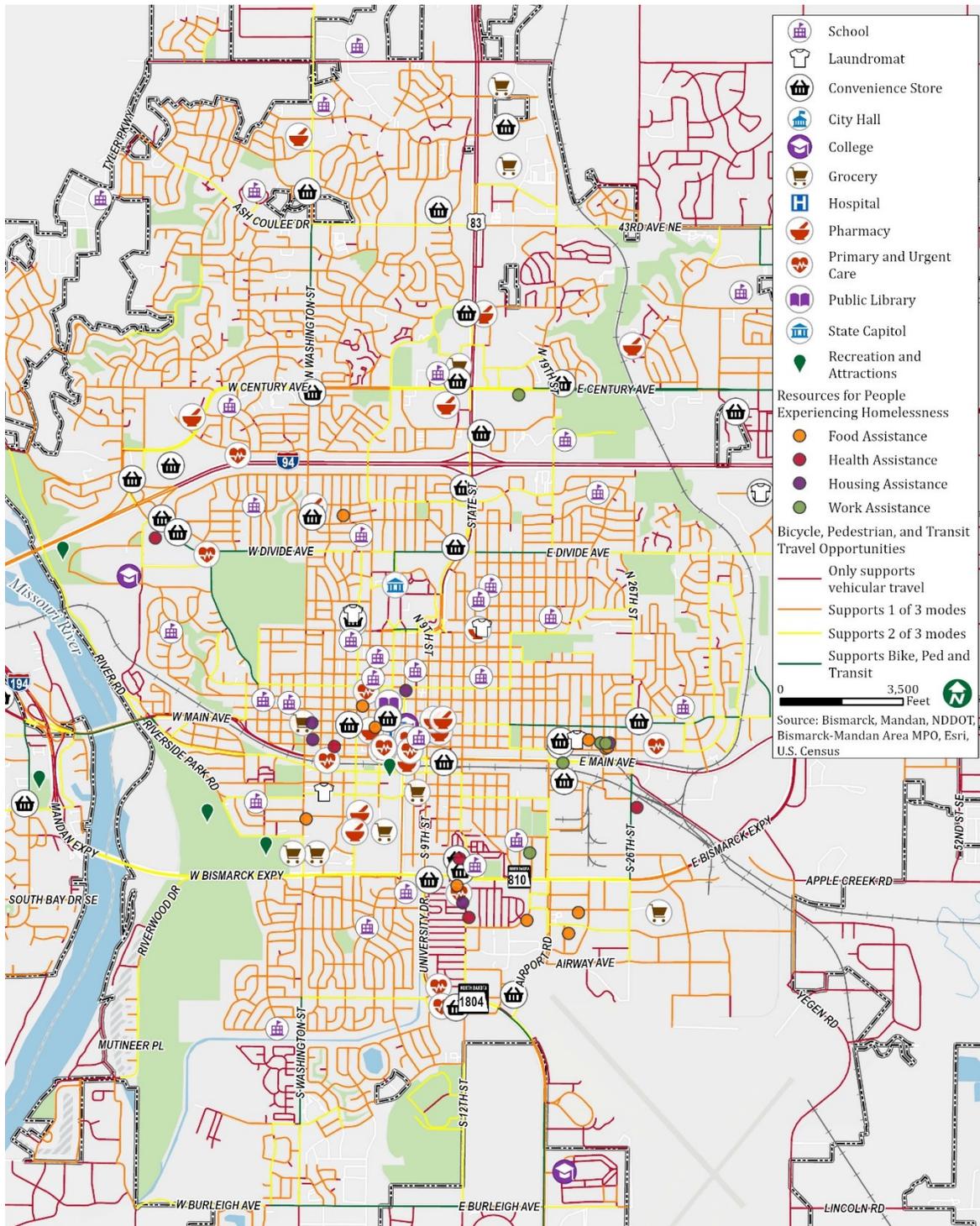


Figure 25: Travel Opportunities (Bismarck)



## Barriers

While sidewalk connectivity is a key feature of an area's walkability, many other barriers exist. In Bismarck, current potential barriers include the East/West Bismarck Expressway, Interstate 94, East/West Century Avenue, State Street / US Route 83. Potential barriers in Mandan include Main Street, Mandan Avenue, Interstate 94, and 6<sup>th</sup> Avenue SE. The railroad line that passes through each community, owned by BNSF Railway Company, is another barrier limiting crossings' availability and safety. These barriers have been identified through speed limits, the volume of vehicles per day, pedestrian and bicycle facilities (or lack thereof), and the number of safe crossings of the route. Additionally, the Missouri River itself is a barrier between the two cities. Three roadway crossings and one railway bridge exist over the Missouri River today. Only two of the crossings, Memorial Highway and Bismarck Expressway, are suitable for walking and biking, both of which are southeast of Downtown Mandan and not well connected to where people may be originating from.

Of pedestrian and bicycle crashes within Bismarck,

- 17% are Serious or Fatal
- 33% occur in Environmental Justice Neighborhood
- 70% were within ¼ mile of a Key Activity Node
- 10% were on a Road with Speeds at or above 40 MPH
- 8% were on a Road with ADTs above 15,000

Of pedestrian and bicycle crashes within Mandan,

- 19% are Serious or Fatal
- 40% occur in Environmental Justice Neighborhoods
- 52% were within a quarter mile of a Key Activity Node

Figure 26: Traffic Barriers (Bismarck)

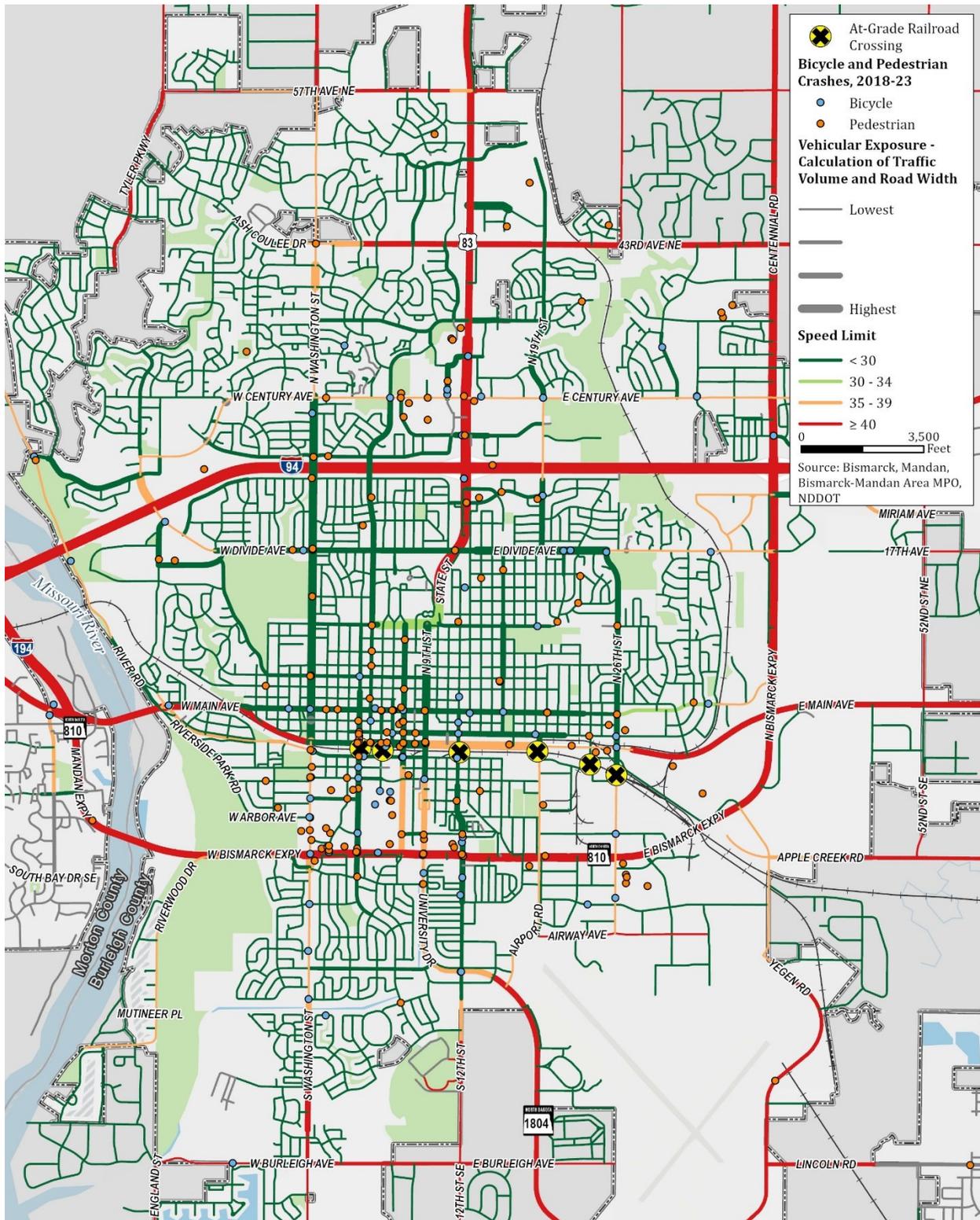
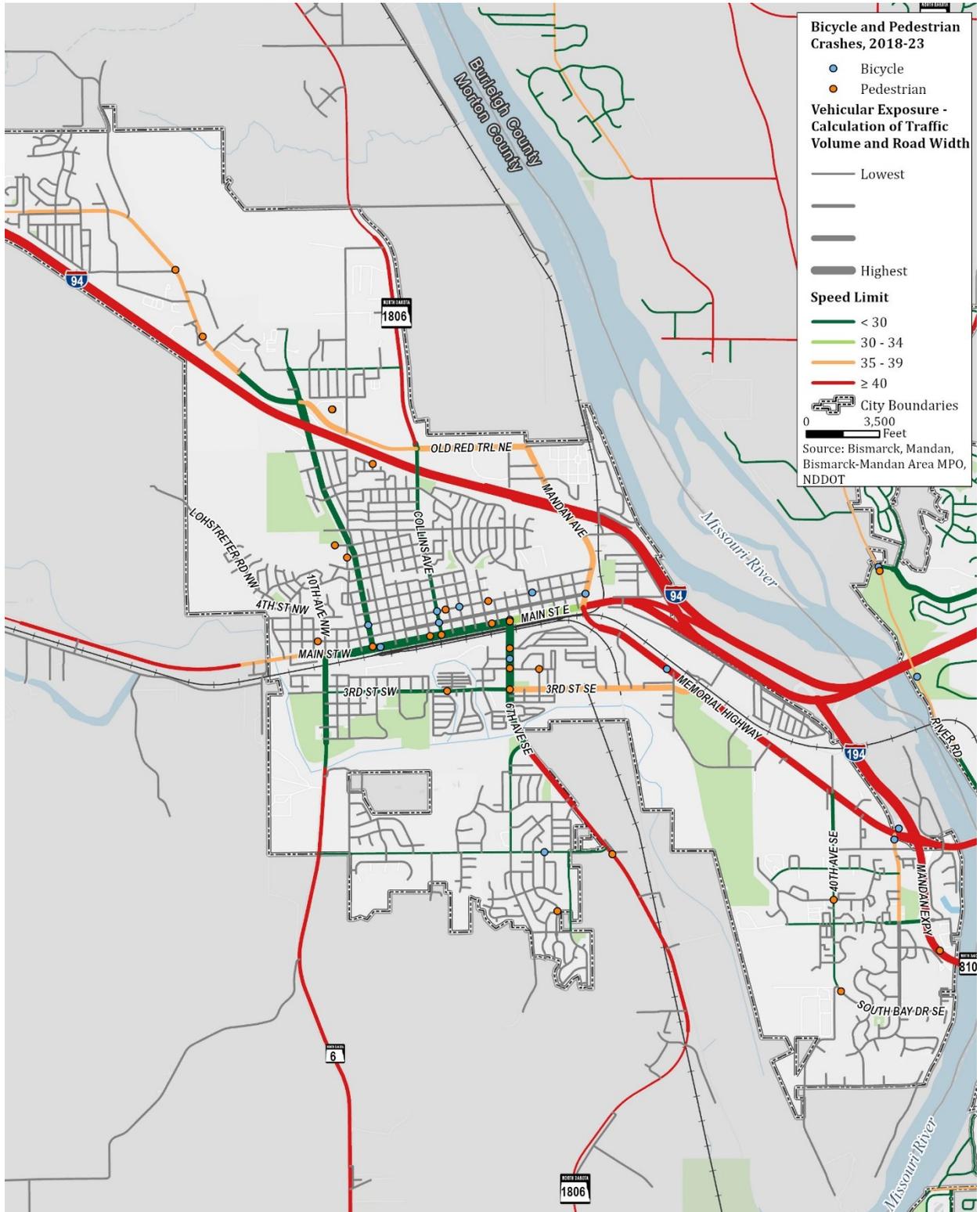


Figure 27: Traffic Barriers (Mandan)



## Destination Analysis

A destination analysis was developed to identify general areas with high-priority destinations. The analysis is shown in the figure below and can be viewed on the interactive online map.

In consultation with the Steering Committee, the project team identified nearly 250 destinations in the Bismark-Mandan area and scored them using a set of evaluation criteria. A variety of destination types were included in the analysis. Destinations can be summarized by these broad groups: Community Assistance, Food and Home Management, Education, Medical, Recreation/Attraction and Government.

- Community Assistance: nonprofit organizations and resources for people experiencing homelessness;
- Food and Home Management: grocery stores, convenience stores, laundromats;
- Education: K-12 schools, colleges, public libraries;
- Medical: hospitals, primary care clinics, pharmacies, urgent care;
- Recreation/Attractions & Government: recreation centers, museums, attractions, City Halls, and the North Dakota State Capitol.

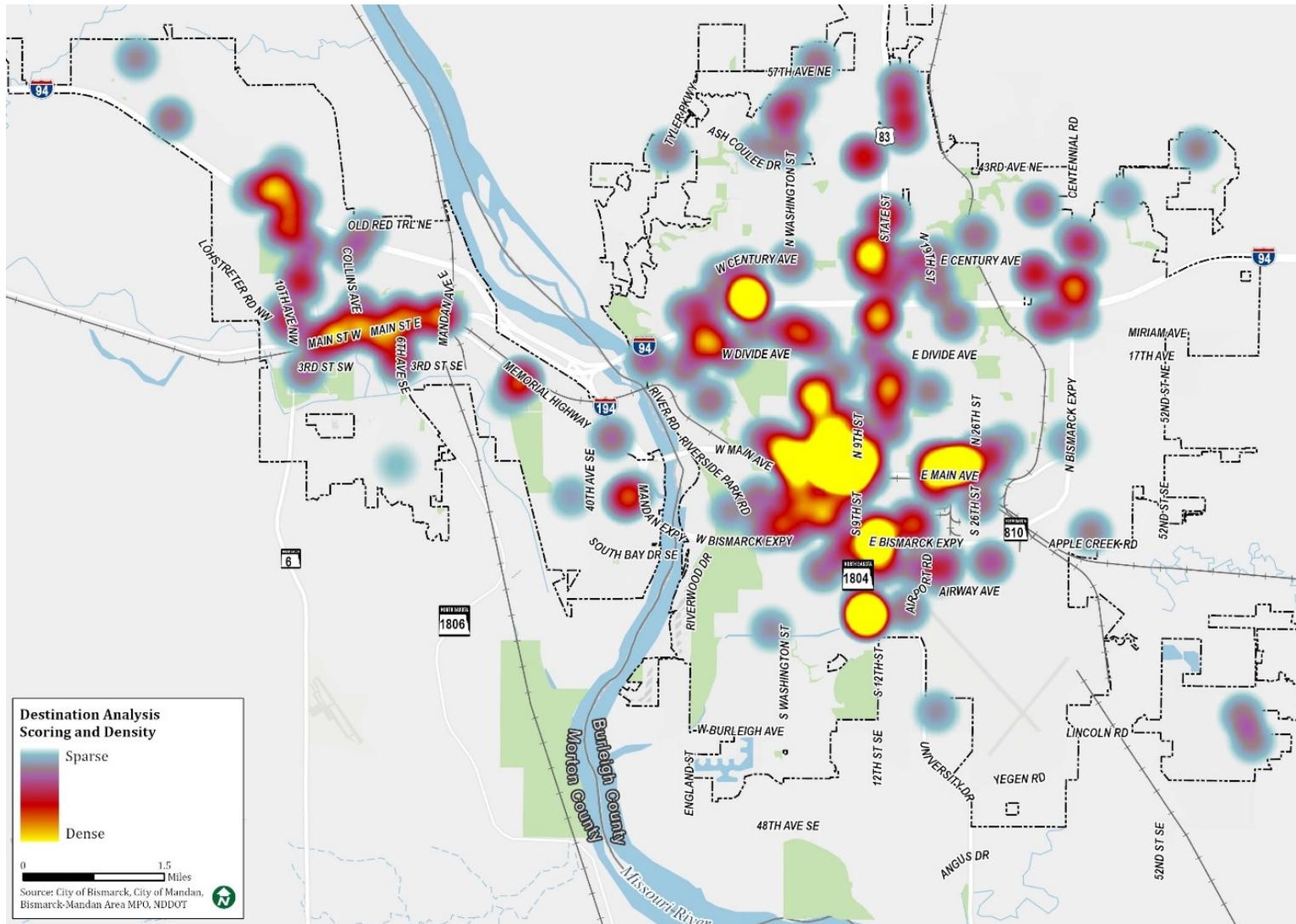
The project team analyzed a quarter-mile buffer around each destination and assigned a quantitative score based on the following criteria:

- Safety
  - Crosses a roadway with high speeds
  - Crosses a roadway with high traffic volumes
  - Located in a high crash area
  - Crosses a railroad
- Active Transportation Infrastructure
  - Lacks pedestrian facilities
  - Lacks bicycle facilities
  - Lacks connections to transit
- Activity
  - In an area with high pedestrian and bicycle activity
  - In an area where the low-income population has high pedestrian and bicycle activity
  - In an area where the minority population has high pedestrian and bicycle activity
  - In an area where the disability population has high pedestrian and bicycle activity
  - In an area with steep grades/slope

The heat map is a visual representation of the results of the destination analysis. It shows both destination density and destinations that scored highly based on the above criteria. Areas in yellow represent the densest and highest scoring areas, red areas are medium/high, purple areas are medium, and lighter blue-grey areas are the lowest scoring areas.

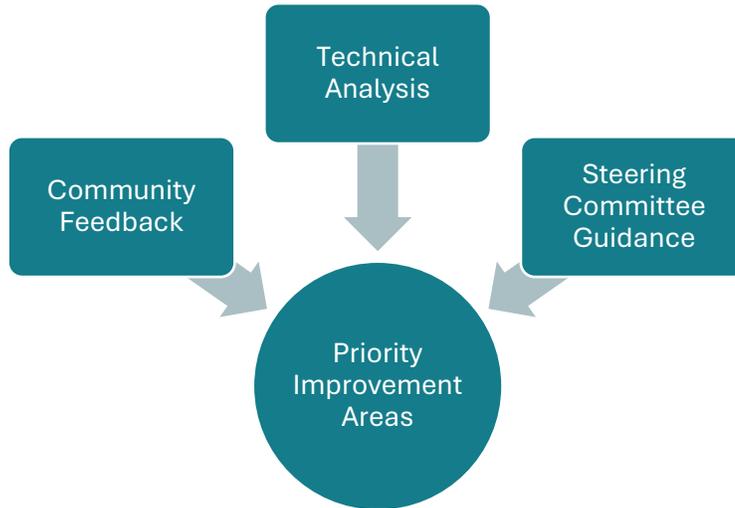
The heat map is a guide to understanding both where services are located and how those services compare to one another on the scoring criteria. When viewed along with the areas showing summaries of community feedback, this is a helpful tool for identifying needs.

Figure 28: Destination Analysis Heat Map



## 4. Strategy Development

Three strategies were deployed to identify priority improvement areas throughout the study area to ensure equitable, data-driven results. These strategies included feedback from the community, results from the technical analysis, and guidance from the project’s Steering Committee.



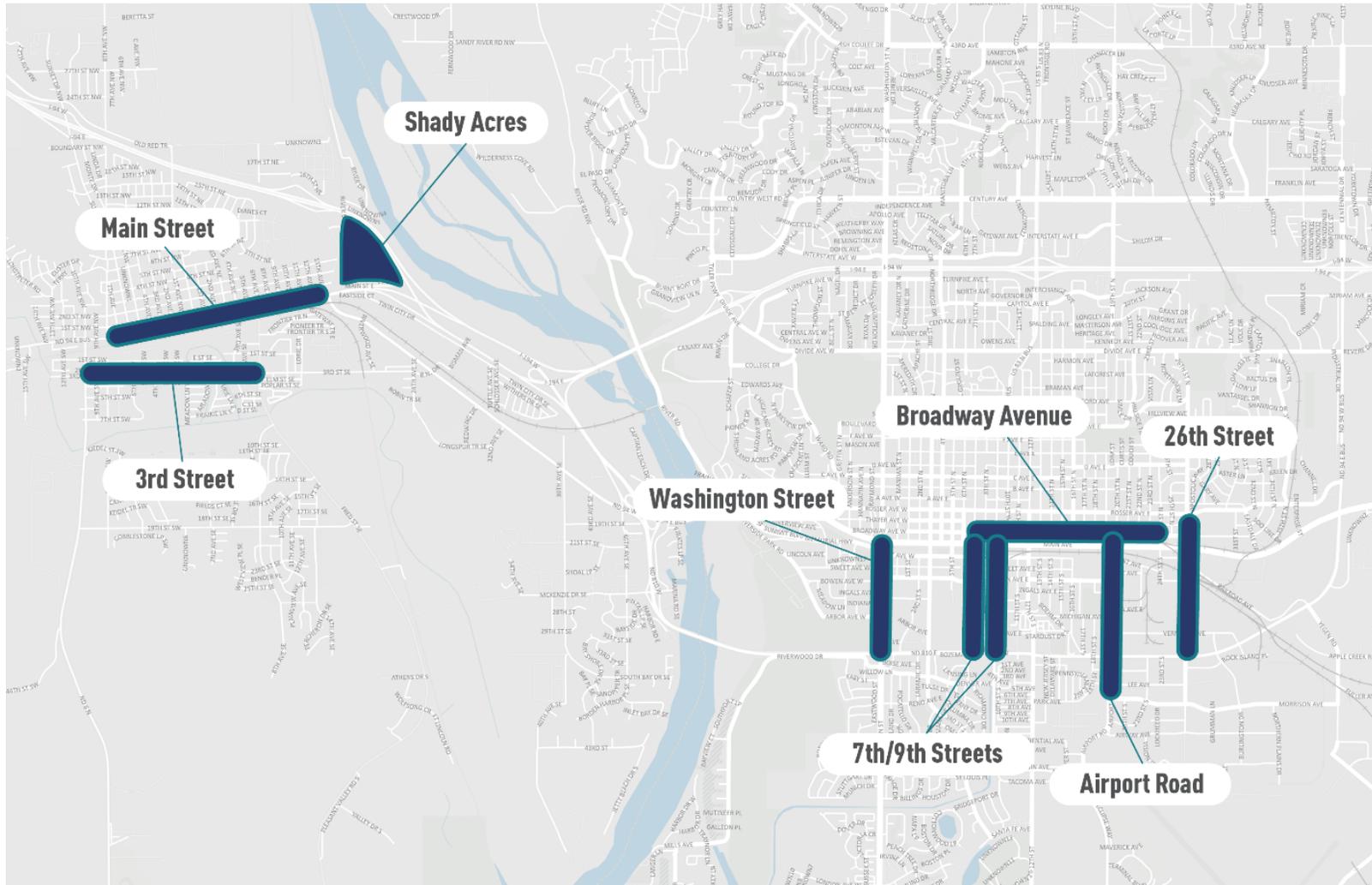
As was discussed in Chapter 2. Public Engagement: the community was connected throughout 2024 via various engagement activities. These included comment boxes, listening sessions, pop-up events, and open houses. Technical analysis was also completed using data from the Bismarck-Mandan MPO, the Cities of Bismarck and Mandan, and the North Dakota Department of Transportation. This analysis is shown in the figures in previous sections. In addition, the Steering Committee developed at the project's onset, gave critical feedback throughout each phase, ensuring that the analyzed areas were crucial to the community and transportation system.

### Priority Improvement Areas

Together, community feedback, technical analysis, and Steering Committee guidance ensured that the following eight projects would most impact communities that need Safe Routes to Services the most. (These locations are displayed in Figure 29.) While there may be additional improvement areas, the project team had a limited budget and therefore could not address each identified issue. However, by documenting all identified issues, future iterations of this plan will be able to build off the momentum started here.

- 7<sup>th</sup>/9<sup>th</sup> Streets (Bismarck)
- 26<sup>th</sup> Street (Bismarck)
- Airport Road (Bismarck)
- Broadway Avenue (Bismarck)
- Washington Street (Bismarck)
- 3<sup>rd</sup> Street (Mandan)
- Main Street (Mandan)
- Shady Acres Neighborhood (Mandan)

Figure 29: Priority Improvement Areas



## Overview

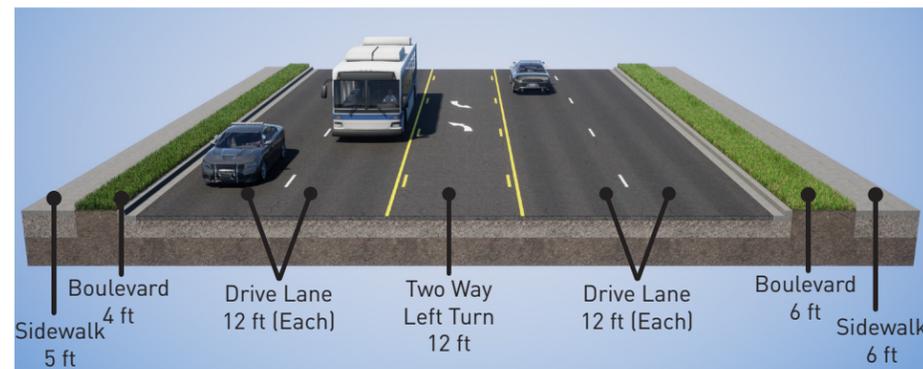
The Washington Street Corridor extends from Front Street to the Bismarck Expressway in west Bismarck. To the east is the Downtown Core and Kirkwood Mall and to the west are neighborhoods, parks, and outdoor athletic facilities.

The roadway is generally five lanes with a center turn lane. **Wide lanes may encourage speeding** and create unsafe conditions for other roadway users. Each side is bordered by a sidewalk that is either **located at the back of the curb or buffered by a narrow planting strip**. These conditions have created non-compliant ADA facilities and does not leave enough room for proper snow storage in the winter. Additionally, there are **very few controlled pedestrian crossings across Washington Street**, but side streets are typically painted although many are faded or are difficult to identify. The roadway does not have bicycle facilities.

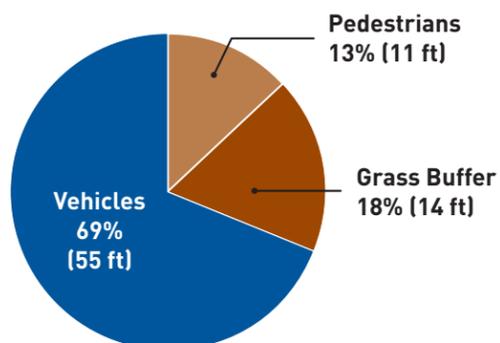
The corridor is served by the Blue Route which has an hour frequency and crosses Washington Street at Bowen Avenue and Arbor Avenue.

Households in the area flag for all Disadvantaged Indicators which include: **BIPOC communities, Households with a Disability, and Income Below 150% Federal Poverty Level.**

## Existing Conditions



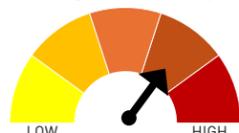
### Typical Right-of-Way Distribution (80 feet)



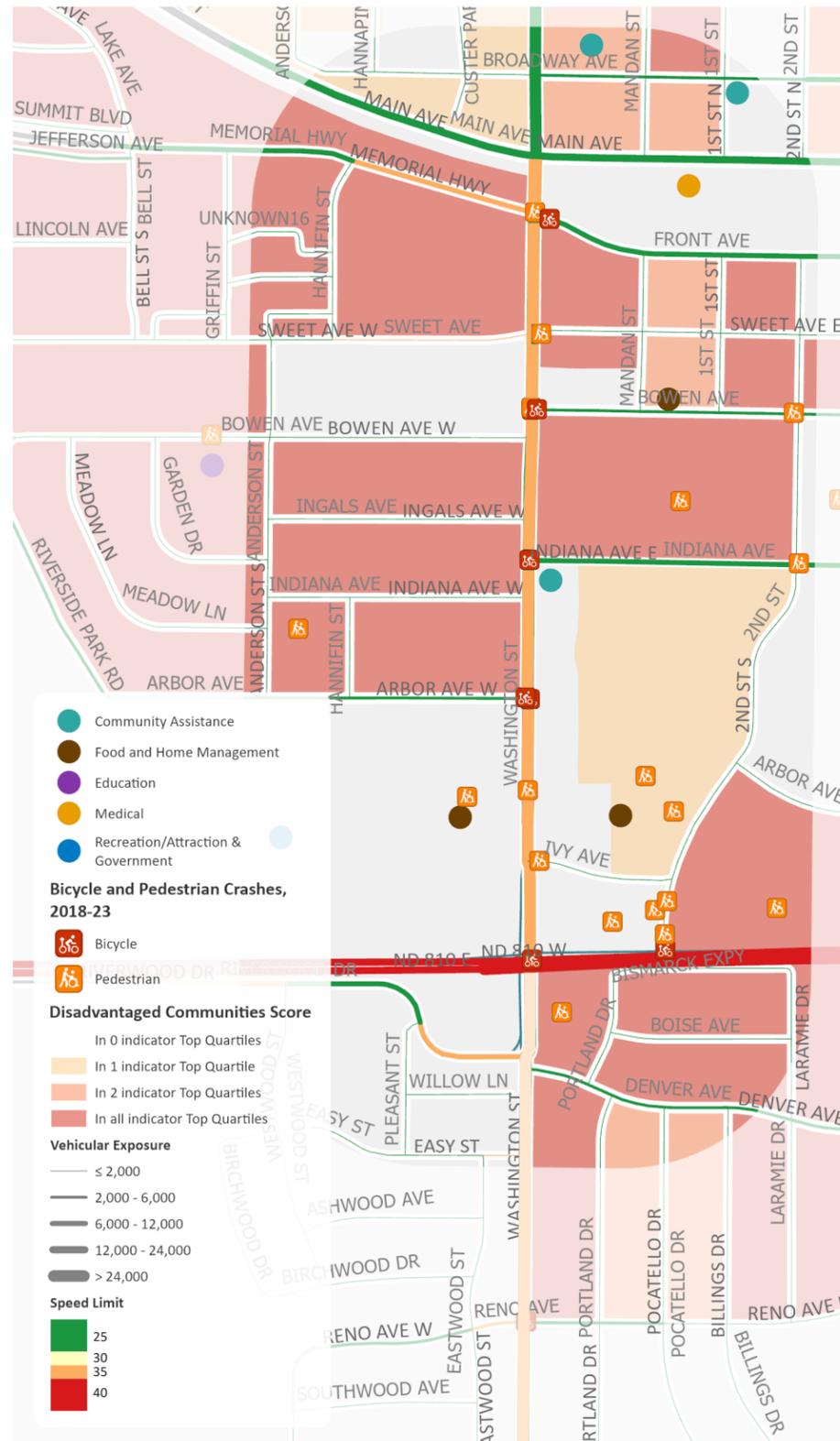
### Buses per Hour (Route Color Denoted)



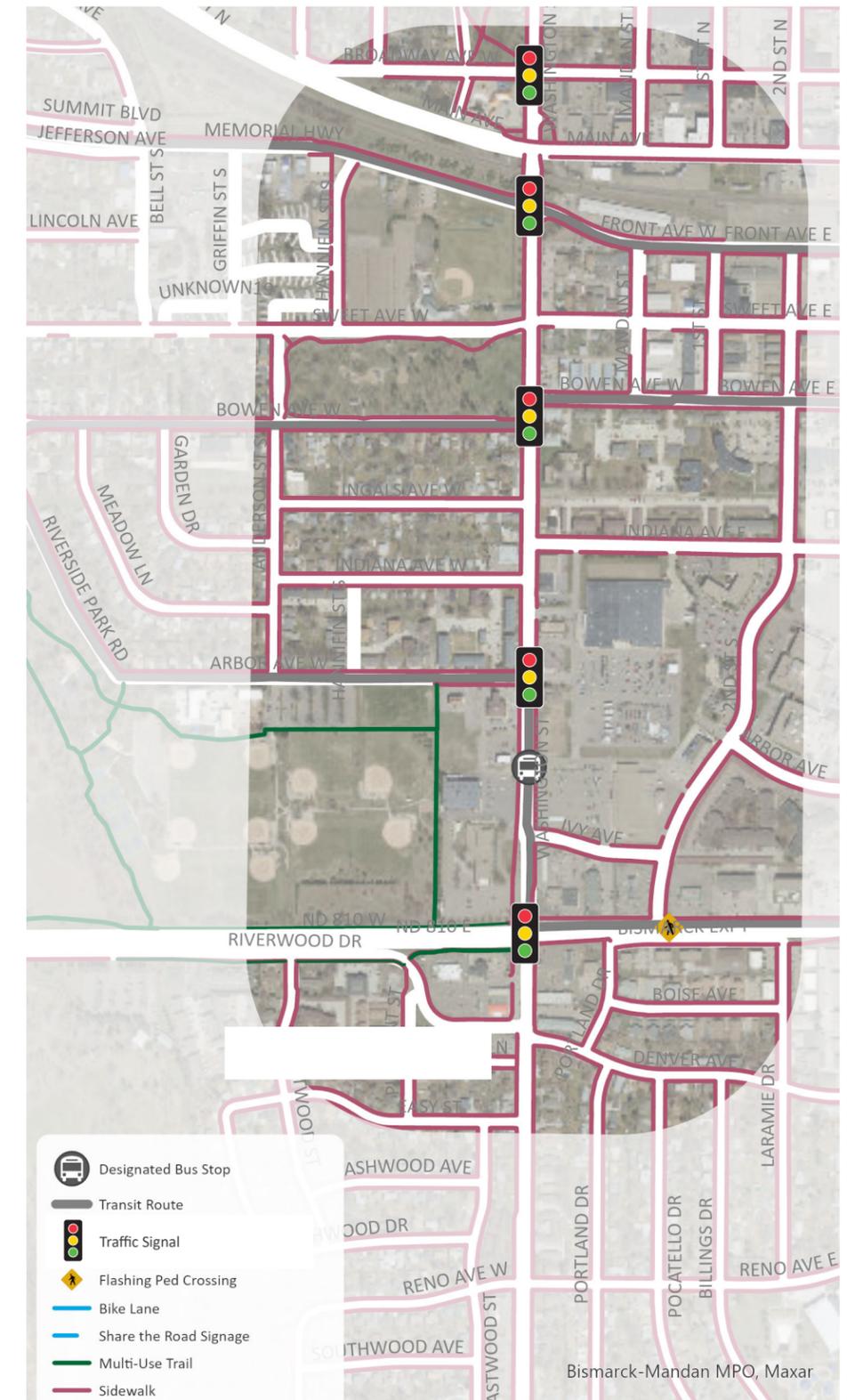
### Bike and Pedestrian Trip Density



## Corridor Context



## Bicycle, Pedestrian & Transit Infrastructure



## Short-Term Improvements

### A Targeted ADA improvements at driveways

- » Provide ADA improvements at driveway crossings by bending the sidewalk out towards the edge of the right-of-way and increasing the slope of the driveway. This keeps the pedestrian route at a level surface.

### B Signal crossing enhancements

- » Improvements such as leading pedestrian intervals (LPI), protected only on flashing yellow arrow (POOFYA) and no right-turn on red during pedestrian actuation will prioritize pedestrian safety in Bismarck's downtown area by reducing vehicle-pedestrian crash potential by up to 60%.

### » Pilot corridor for high-priority snow removal due to sidewalk proximity to road

- » In this area, the sidewalk is back of curb or separated from the roadway by a small planting strip. During the winter months, this space does not allow for proper snow storage. With City led snow removal efforts, sidewalks and tall banks would be removed more efficiently and effectively. If City led, efforts could be specially assessed for this service.

## Long-Term Improvements

### C Restriping Washington Street from 5-lanes to 3-lanes

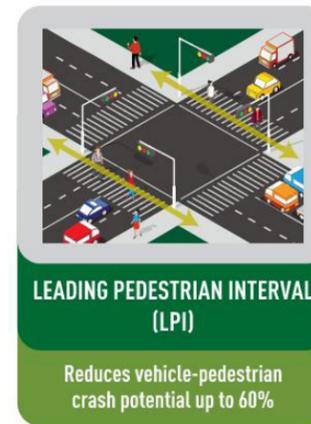
- » Reducing Washington Street from **5-lanes to 3-lanes** provides opportunities to increase the safety of the corridor, while meeting its capacity needs. A 3-lane roadway **can support traffic volumes of over 18,000 vehicles per day** and NDDOT's 2022 traffic counts show 15,000-16,500 vehicles per day. This road diet would provide space for new buffered bike lanes and reduce the conflict points for pedestrians crossing Airport Road. The addition of bicycle lanes **can reduce crashes by up to 49%**.

### » Utility Burying

- » Bury the utility line on the east side of Washington Street would allow the west curb line to be brought in, allowing for an expansion of the sidewalk. This would allow more space for pedestrians and increase their safety and comfort.

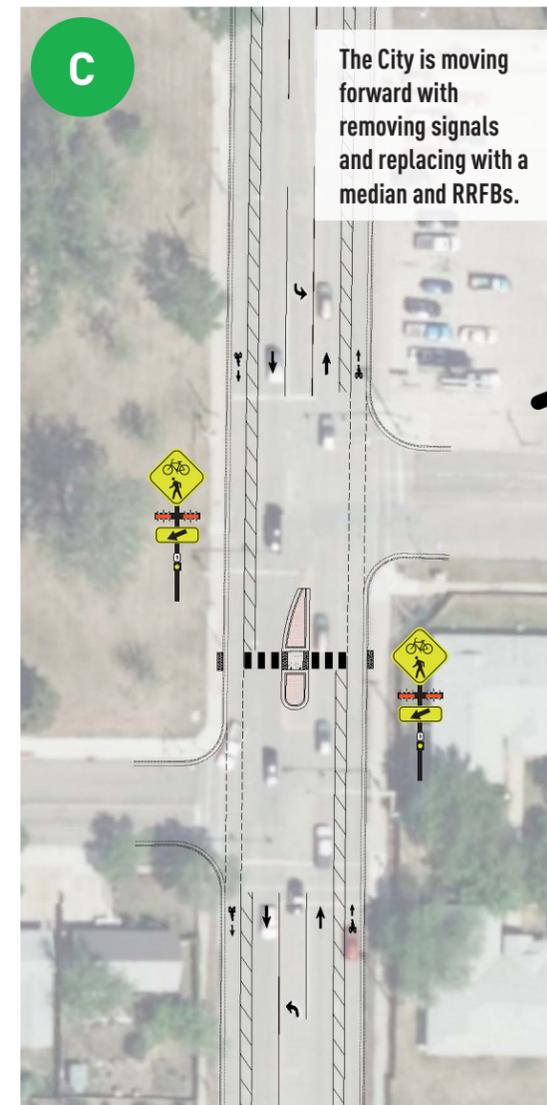
### » Widen sidewalk on the west side of the street to create a shared-use path

- » Careful consideration with 4(f)/6(f) Properties

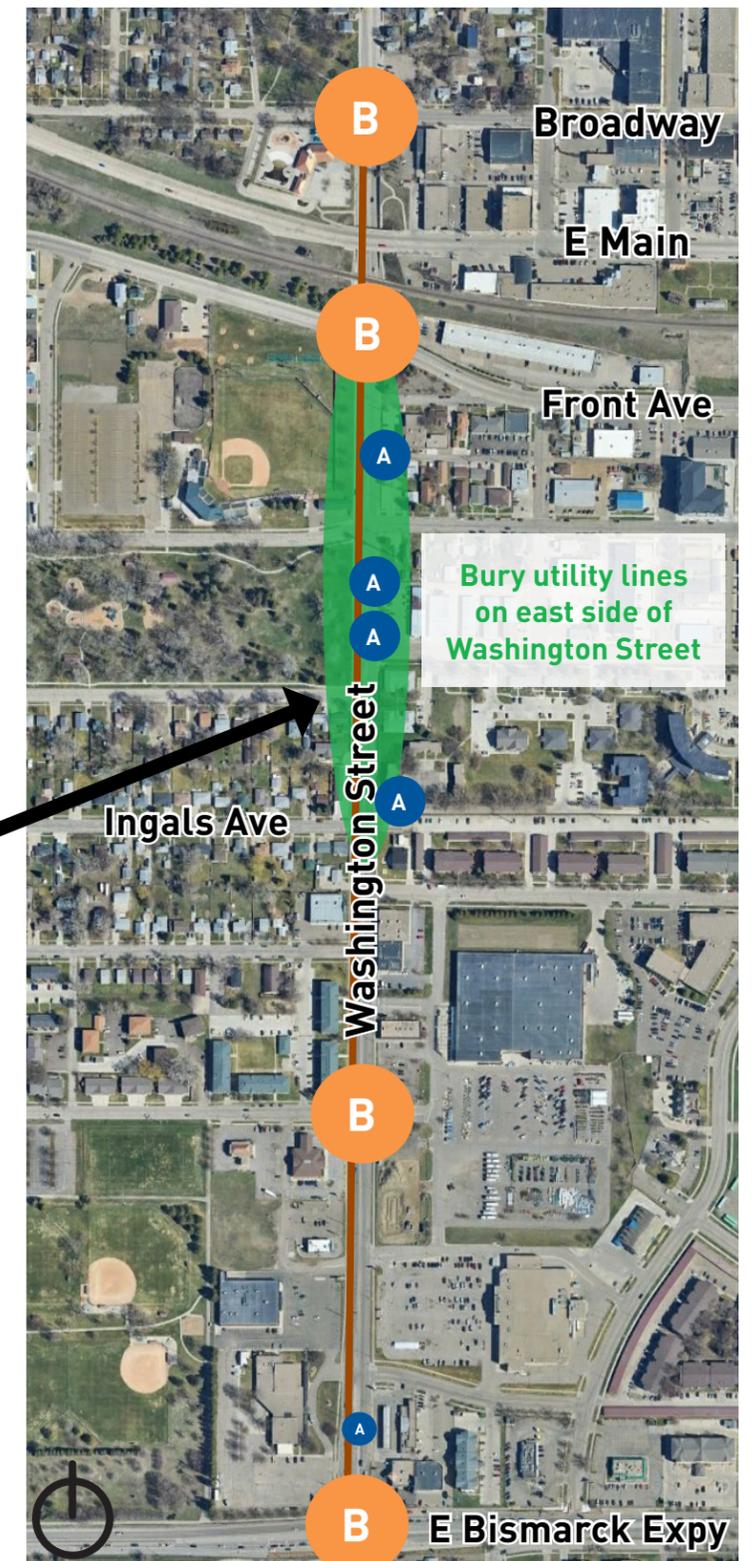


## Implementation Opportunities

- » **Impacts:** Driveway impacts along the west side of the corridor, utility relocations
- » **Programmed Projects:** No programmed improvements
- » **Potential Funding Sources:**
  - » Transportation Alternatives: ADA improvements at driveways
  - » Highway Safety Improvements Program (HSIP): Signal Crossing enhancements
  - » Safe Streets and Roads for All (SS4A): Signal Crossing enhancements as part of a Demonstration project



## Improvement Locations

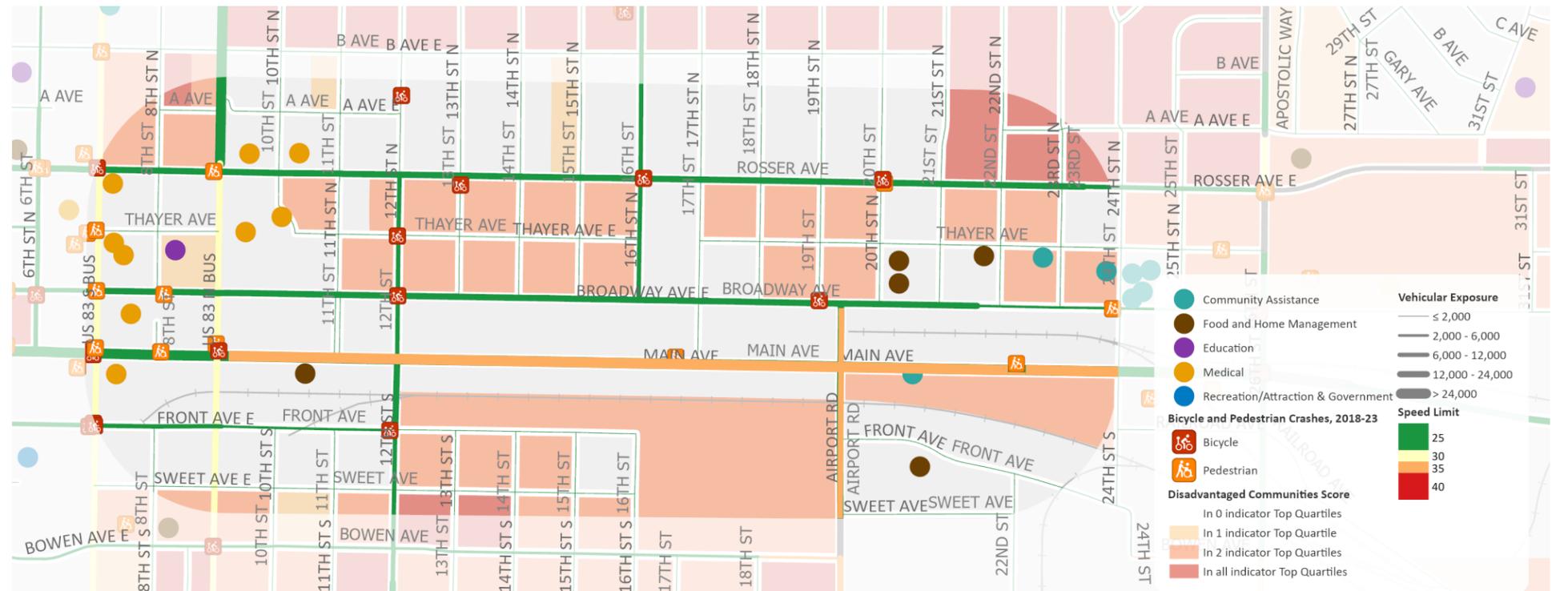


## Overview

The Broadway Avenue Corridor in Bismarck extends from 7th Street in the west to 24th Street in the east. Many different land uses are present along the corridor including medical, commercial, industrial, residential, and community assistance facilities. These destinations attract many residents throughout the day. Additionally many **Disadvantaged Communities live along and near Broadway including BIPOC communities** and households with **incomes below 150% of the Federal Poverty Level**.

The roadway section is typically 3-lanes with a center turn lane and parking along both sides. There are **no dedicated bicycle facilities** and sidewalks are either located at the back of the curb or separated by a small planted buffer. The **Orange transit line runs briefly along Broadway** but does not have any stops.

## Corridor Context



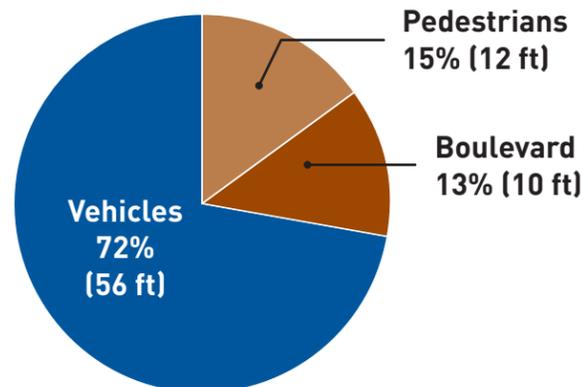
## Existing Conditions



## Bicycle, Pedestrian & Transit Infrastructure



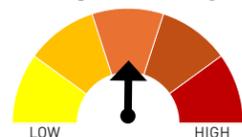
## Typical Right-of-Way Distribution (78 feet)



## Buses per Hour (Route Color Denoted)



## Bike and Pedestrian Trip Density



## Short-Term Improvements

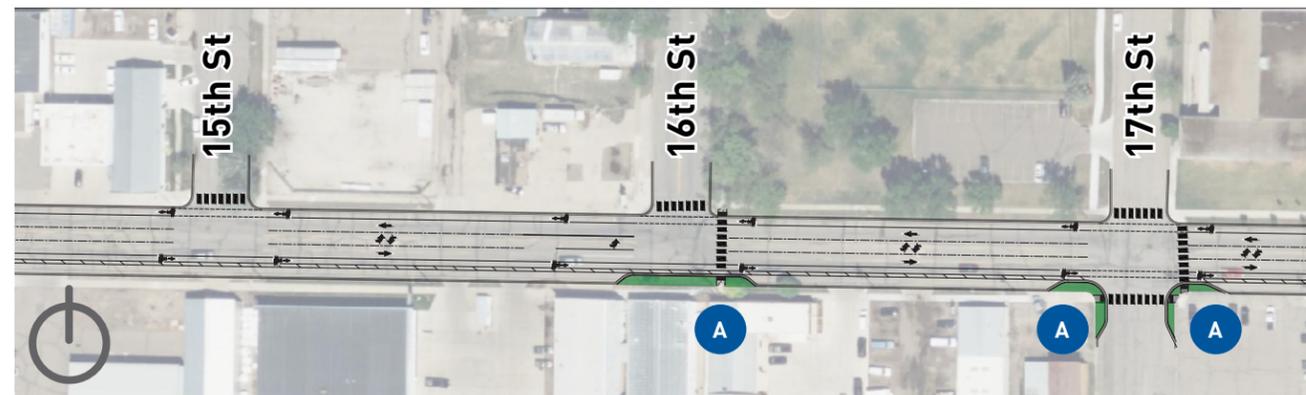
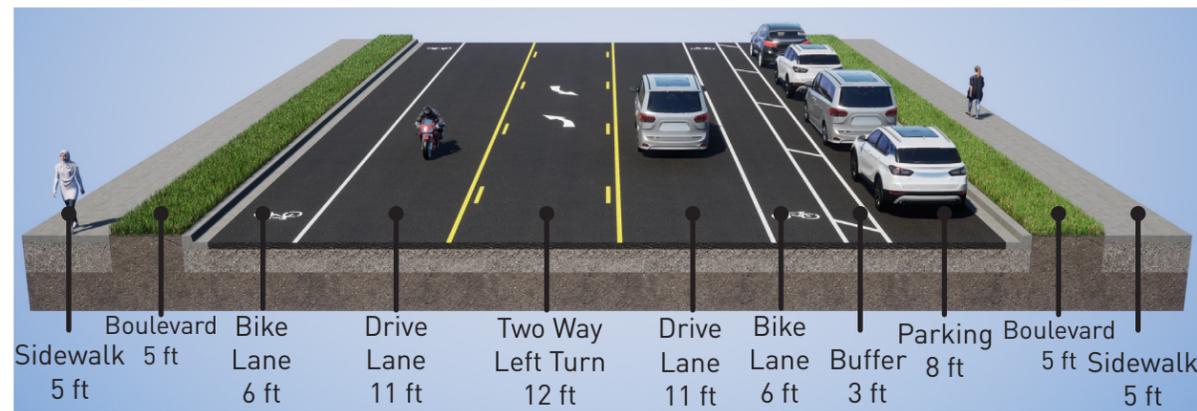
### A Bulb-outs at T-intersection crossings

» Bulb-outs on the south side of Broadway Avenue will extend the curb line and perpendicular sidewalk into the parking lane, reducing the amount of roadway that pedestrians and bicyclists will cross while increasing their visibility.

Bulb-outs increase pedestrian visibility while reducing vehicular speeds

### » Road Diet and Improved Lane Delineation

» Parking on the north side of the roadway will be removed and lane widths will be narrowed to add dedicated bike facilities on both sides of the roadway. This would increase connectivity for bicyclists while providing delineated areas for all modes.



## Long-Term Improvements

### B Installation of Bulb-Outs

» Installation of an RRFB at 16th Street, Airport Road, and 24th Street would improve pedestrian safety by providing an additional crossing locations across Broadway Avenue. This would increase accessibility to 16th Street Park, surrounding neighborhoods, and amenities on Airport Road.

### C Median Refuge Islands

» Median Refuge Islands would help to calm traffic and manage access to driveways along the corridor.

### D Separated Bikeway

» A two-way cycle track would be implemented to further improve safety of bicyclists. Alternatively, the cycle track and sidewalk space could be combined to a shared use path with a larger boulevard space behind the curb.



## Implementation Opportunities

- » **Impacts:** Removal of parking along north side of corridor only, no right-of-way acquisition
- » **Programmed Projects:** No programmed improvements
- » **Potential Funding Sources:**
  - » Transportation Alternatives: Bulb-outs at T-Intersection crossings
  - » Highway Safety Improvement Program (HSIP): Bulb-outs at T-intersection crossings
  - » SS4A Demonstration (if on high-injury network): RRFB installation could be implemented as a Demonstration project

## Improvement Locations



## Overview

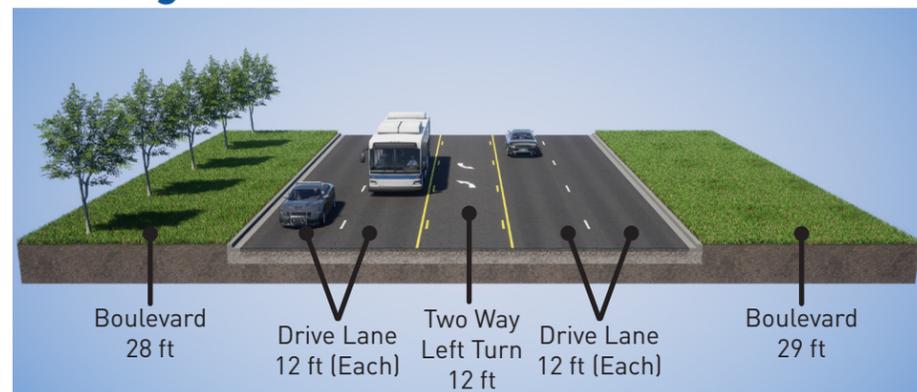
The Airport Road Corridor in Bismarck extends from E Broadway Avenue and ends just south of Morrison Avenue. It spans approximately one mile in length and is intersected by I-94 Business Loop and the Bismarck Expressway. Land uses adjacent to the corridor include warehousing and commercial.

At the northern end of the corridor, there are **numerous human services centers** such as Heaven Helpers Soup Kitchen and Closet (701). Similarly, at the southern end of the corridor, the Dream Center, **a community hub and service center**, houses its headquarters. Tatley-Eagles Park, located in the middle of the corridor, offers space for recreation and hosts the Capital Farmer's Market. These **destinations serve those who do not or cannot drive** and should be accessible by other modes, such as walking, rolling, and transit.

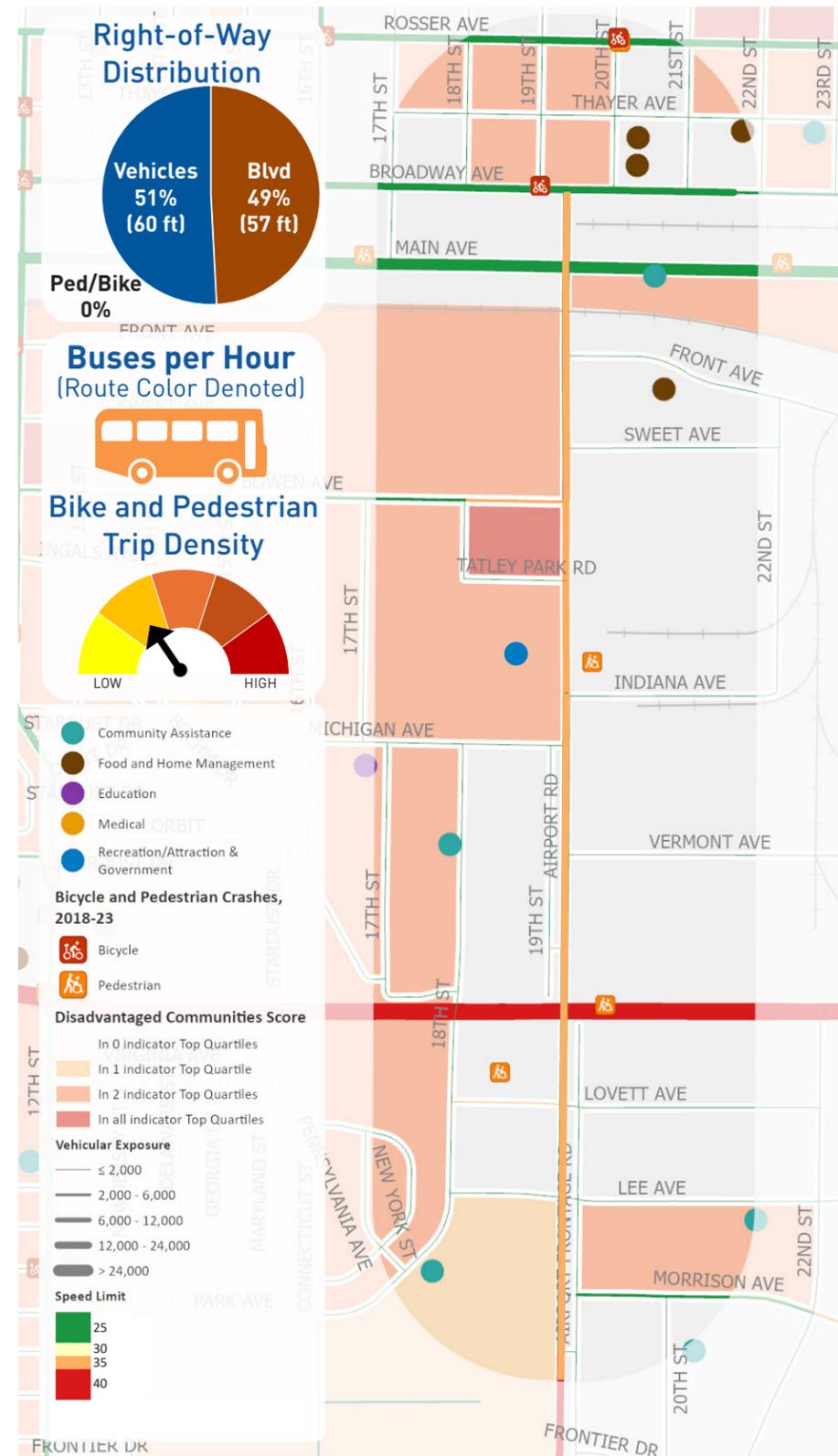
However, the **corridor currently lacks bicycle facilities and reliable sidewalks**. Despite its mile-long span, only two blocks feature sidewalks. While the intersection with I-94 Business Loop has push buttons and pedestrian crossing signals, it lacks painted facilities. Near the intersection with I-94 Business Loop, a railroad line crosses Airport Road without safe pedestrian or bicycle crossings.

Households in the area flag for all Disadvantaged Indicators which include: **BIPOC communities, Households with a Disability**, and less frequently, **Income Below 150% Federal Poverty Level**.

## Existing Conditions



## Corridor Context



## Bicycle, Pedestrian & Transit Infrastructure



## Short-Term Improvements

### A Add sidewalks to the corridor

» The addition of sidewalks will allow non-drivers to safely access destinations along Airport Road. This will separate high speed moving vehicles from vulnerable pedestrians and bicyclists, reducing the risk of conflict and serious injury.

### B Add medians with pedestrian crossings

» Medians with pedestrian crossings will provide safe and visible areas for non-drivers to cross the wide roadway. Crossing can be equipped with a rectangular rapid flashing beacon (RRFB) that can alert drivers of pedestrians in the crosswalk.

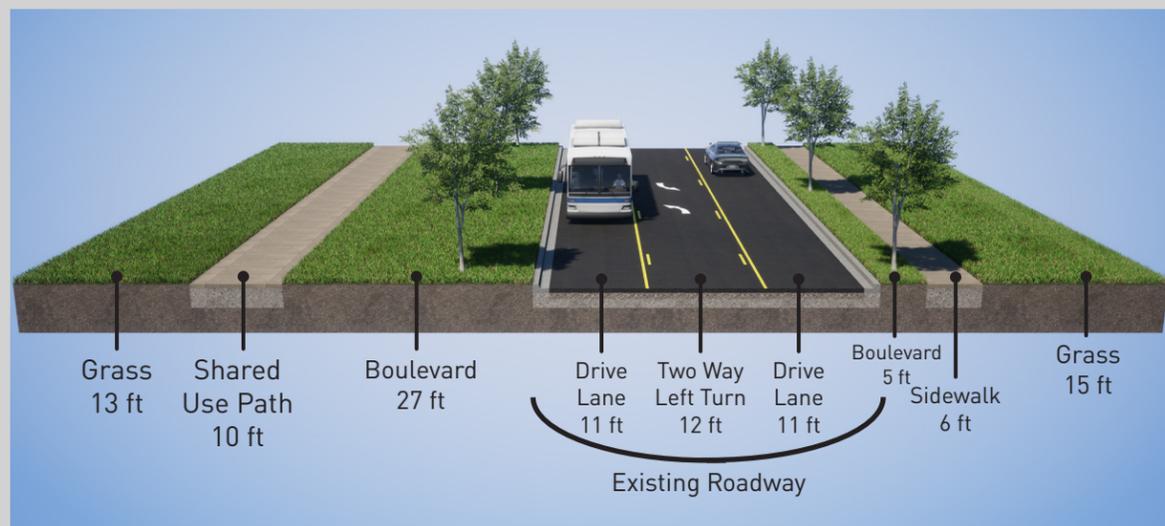
## Road diet using striping

» Reducing Airport Road from 4-lanes to 3-lanes provides opportunities to increase the safety of the corridor, while meeting its capacity needs. A 3-lane roadway can support traffic volumes of over 18,000 vehicles per day and NDDOT's 2022 traffic counts show 6,500-7,500 vehicles per day. This road diet would provide space for new buffered bike lanes and reduce the conflict points for pedestrians crossing Airport Road. The addition of bicycle lanes can reduce crashes by up to 49%.

RRFBs can reduce crashes up to 47% for pedestrian crashes

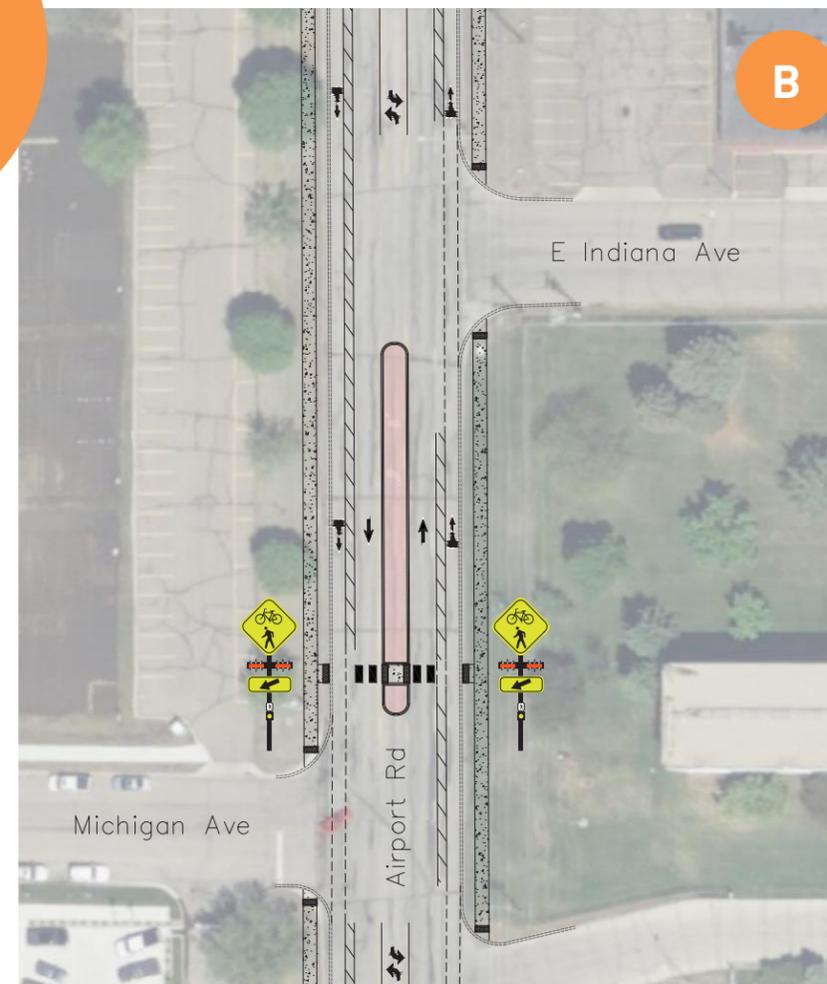
## Long-Term Improvements

» The roadway will be modified to allow for 3-lanes of traffic, a wide boulevard, shared-use path, and a sidewalk on the eastern side. This will provide comfortable biking and walking facilities to destinations that serve as community hubs and resources.

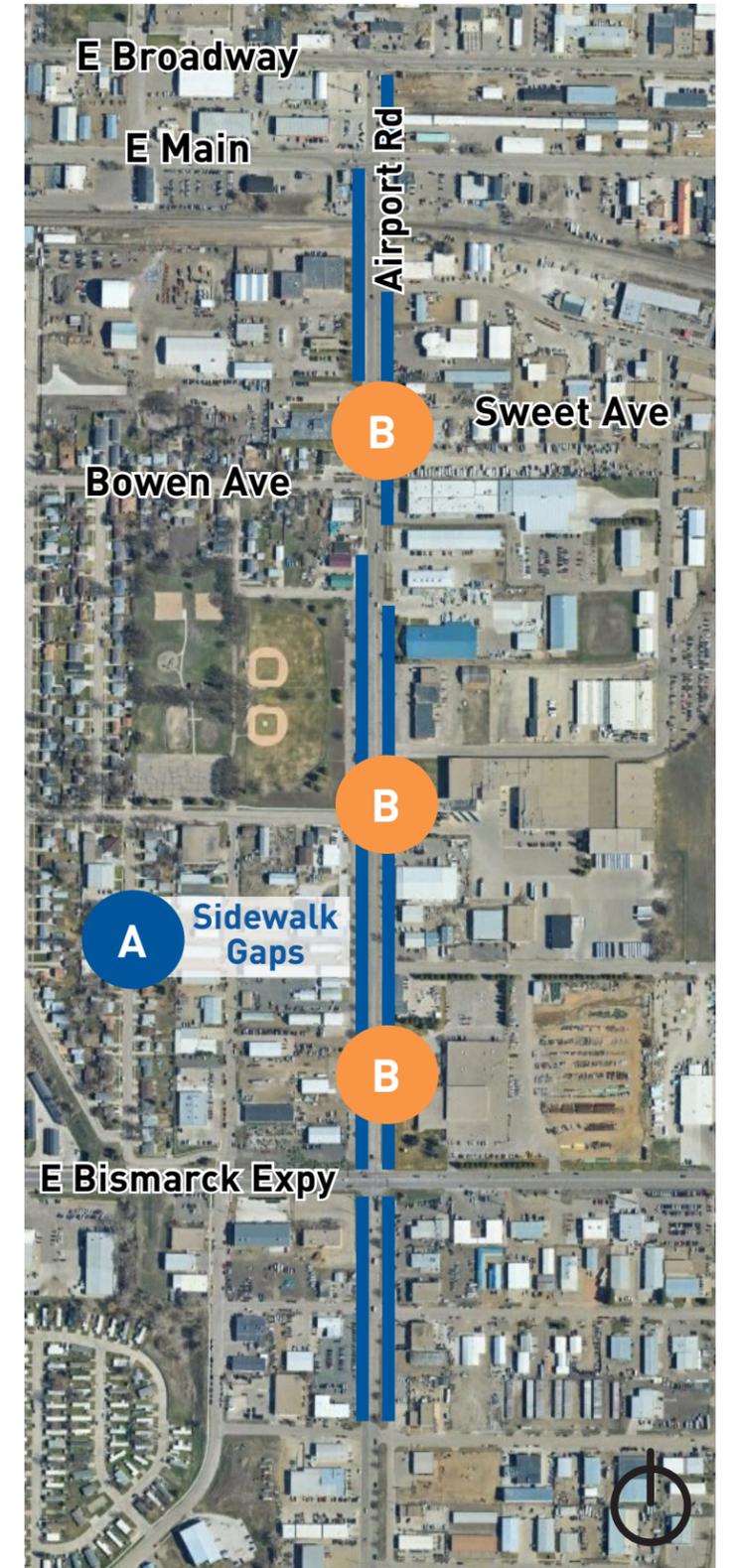


## Implementation Opportunities

- » **Impacts:** Curbline impacts along west side of the corridor only, no right-of-way acquisition
- » **Programmed Projects:** No Programmed Improvement
- » **Potential Funding Sources:**
  - » Transportation Alternatives: sidewalk, ADA improvements, and bike lanes
  - » Highway Safety Improvement Program (HSIP): Median refuge islands with pedestrian crossings
  - » SS4A Demonstration (if on high-injury network): Bike lanes and RRFB
  - » Flexible Transportation Fund Program: Medians with pedestrian crossings
  - » Urban Grant Program: Medians with pedestrian crossings



## Short-Term Improvements



## Overview

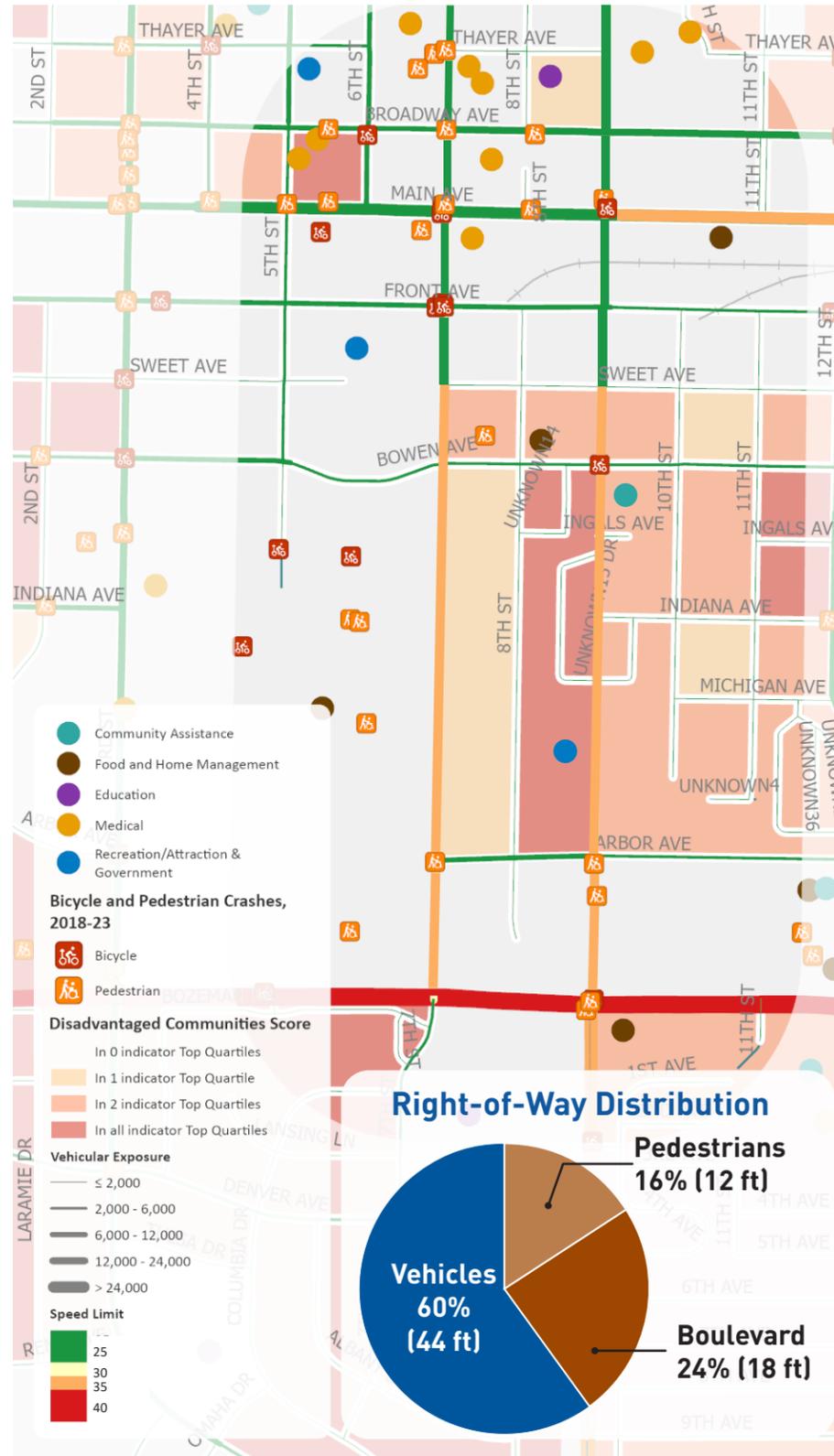
The 7th and 9th Street Corridors form a **one-way pair** traveling North to South throughout Bismarck. This specific corridor area examines Main Avenue south, to the Bismarck Expressway. The corridors are **primary hubs for many civic buildings** including the state capital, city hall, and the Civic Center. Along the corridor are also **human services facilities** as well as **locations with higher density of lower paying jobs**.

Residential along the corridor includes mobile homes, high density multi-family, and single family housing. Households in the area flag for all Disadvantaged Indicators which include: **BIPOC communities, Income Below 150% Federal Poverty Level, and Households with a Disability**.

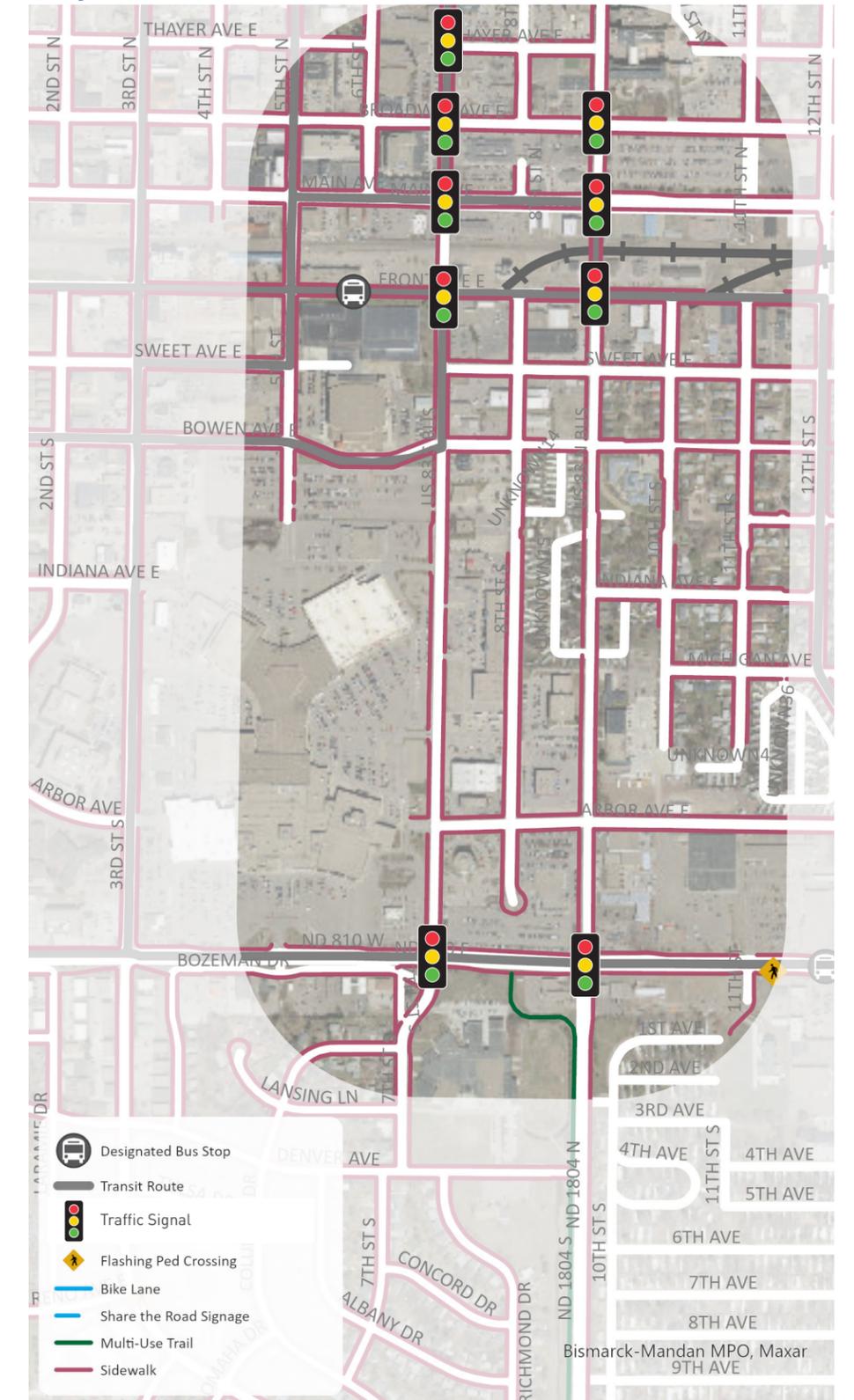
The area is dominated by automobile use with **curb-cuts impacting sidewalks and creating ample opportunities for conflicts**. There are **no bicycle facilities** on either roadway although commercial areas are within biking distances for many people.

**Transit has been intentionally routed away from these corridors** as it has been deemed unsafe to stop due to high traffic volumes and speeds. Although transit runs along the corridor, there are no designated stops.

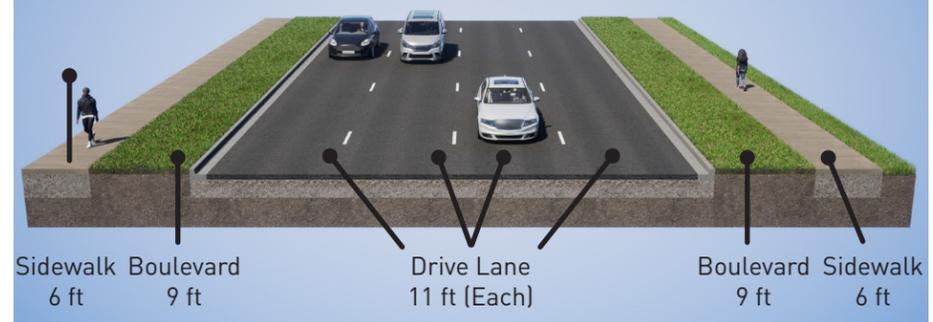
## Corridor Context



## Bicycle, Pedestrian & Transit Infrastructure



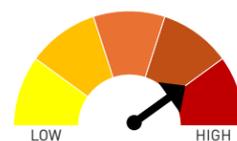
## Existing Conditions (7th St)



### Buses per Hour (Route Color Denoted)



### Bike and Pedestrian Trip Density



## Short-Term Improvements

### » 4-lane to 3-lane road diet and spot access improvements

» Restripe the roadway to include a buffered bike lane or shared bus/bike lane in the right-most lane. The addition of bicycle lanes can reduce crashes by up to 49%.



### Install Rectangular Rapid Flashing Beacons (RRFB)

» Rectangular Rapid Flashing Beacons are traffic control devices that use flashing lights to increase visibility of pedestrians crossing a street. They can be installed on roadways at mid-block locations or trail crossings and have been proven to reduce pedestrian crashes by 47%. The beacons can be triggered by a pedestrian push button, or else they remain “dark” and allow for a continued flow of vehicle traffic.

**RRFBs can reduce up to 47% of pedestrian crashes**

## Long-Term Improvements

### 4-lane to 2-lane road diet

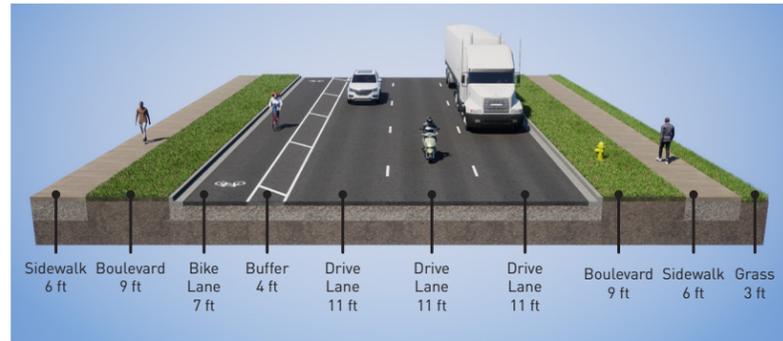
» Reducing 7th Street and 9th Street from 4-lanes to 2-lanes provides opportunities to increase the safety of the corridors, while still meeting their capacity needs. Bismarck’s previous corridor study of 7th Street and 9th Street showed that vehicular traffic could be accommodated with 2-lanes on each corridor. This road diet would provide space for new shared use paths along both corridors, dedicated turn lanes at warranted intersections, reduced crossing distances for pedestrians, and opportunities for bus pullouts. Road diets are a proven safety countermeasure with crash reductions of up to 47%.

**Road diets may reduce crashes by up to 47%**

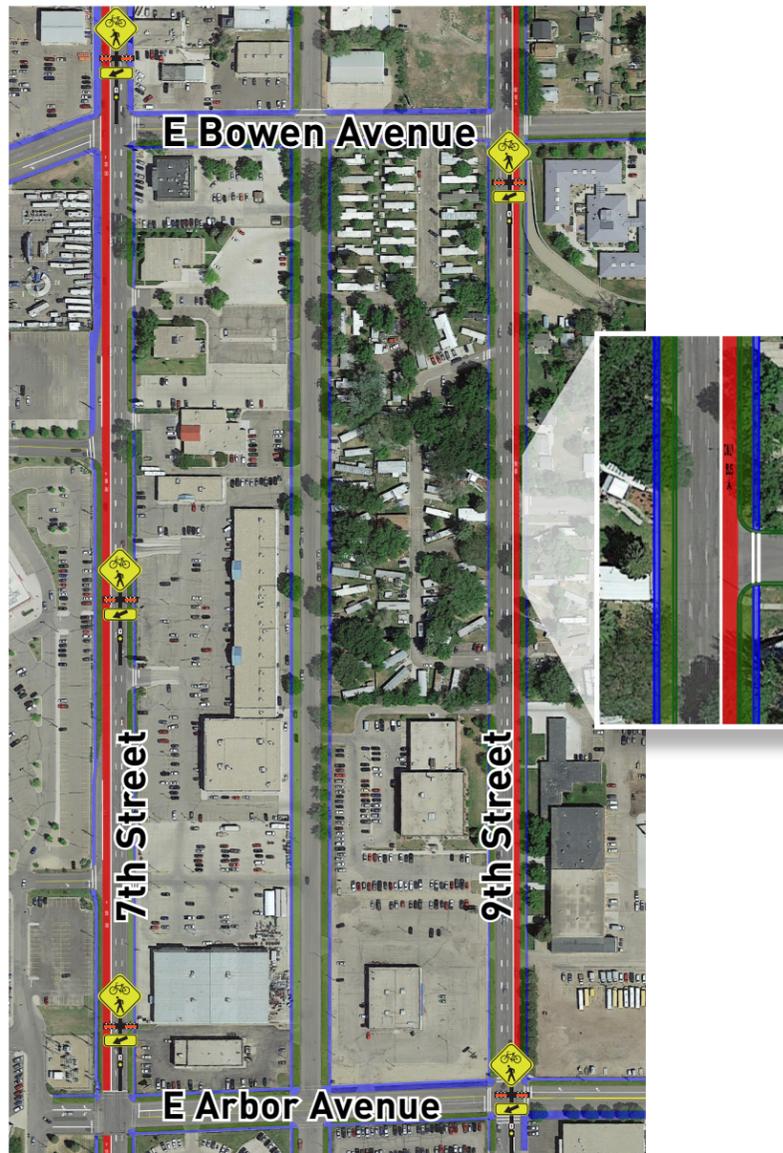
## Implementation Opportunities

- » **Impacts:** Curbline impacts along east and west side of both 7th Street and 9th Street for long-term improvements, no right-of-way acquisition
- » **Programmed Projects:** No programmed improvements
- » **Potential Funding Sources:**
  - » Transportation Alternatives: sidewalk and ADA improvements
  - » SS4A Demonstration (if on high-injury network): bike lanes and RRFBs
  - » RAISE: 4-lane to 2-lane road diet
  - » Highway Safety Improvement Program (HSIP): 4-lane to 3-lane or 2-lane road diet and spot access improvements, Pedestrian Hybrid Beacons
  - » Flexible Transportation Fund Program: 4-lane to 3-lane road diet and spot access improvements, Pedestrian Hybrid Beacons
  - » Urban Grant Program: 4-lane to 3-lane or 2-lane road diet and spot access improvements, Pedestrian Hybrid Beacons

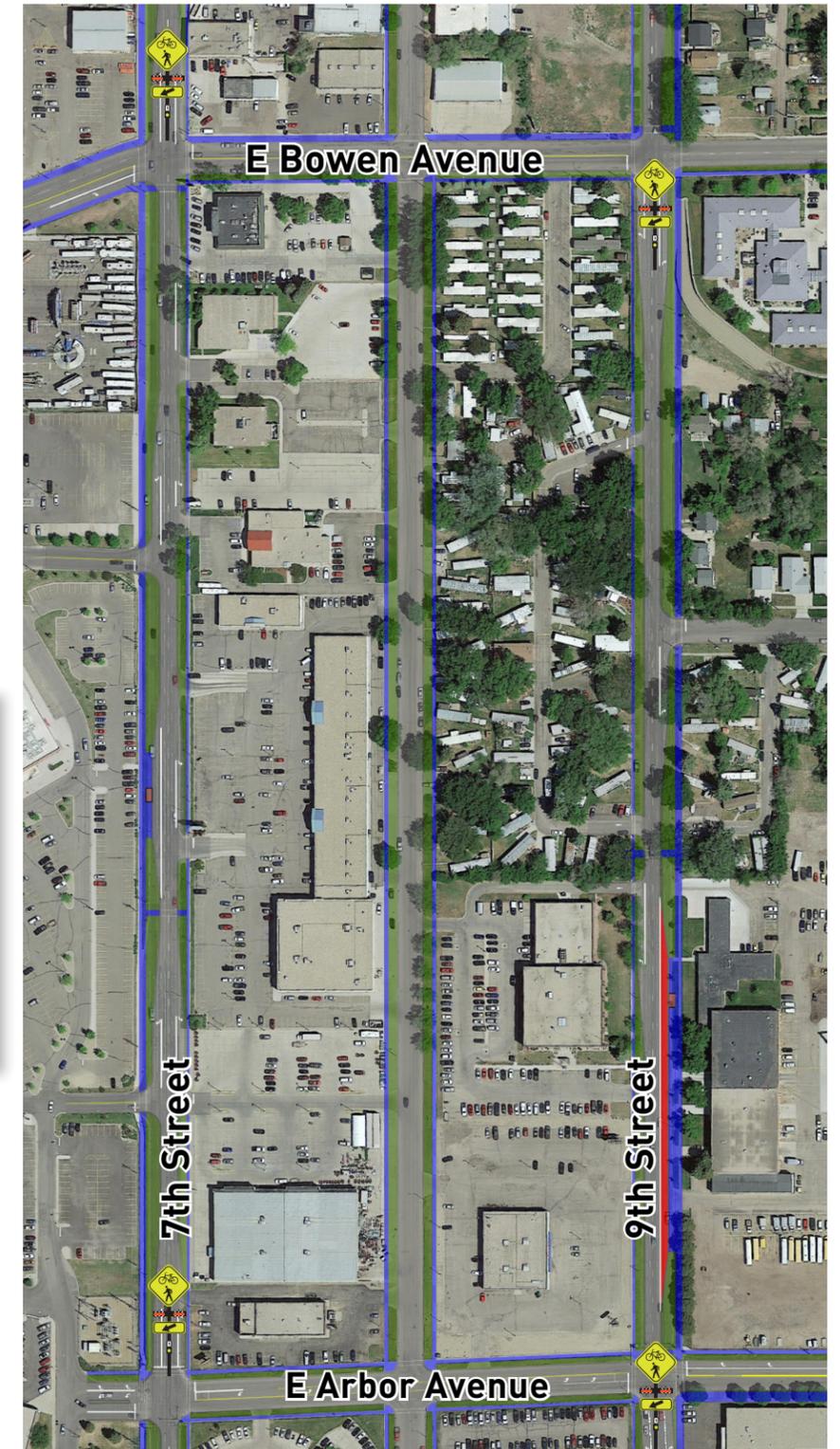
### Short-Term (7th Street)



### Shared Bus/Bike Lane



### Long-Term Improvements



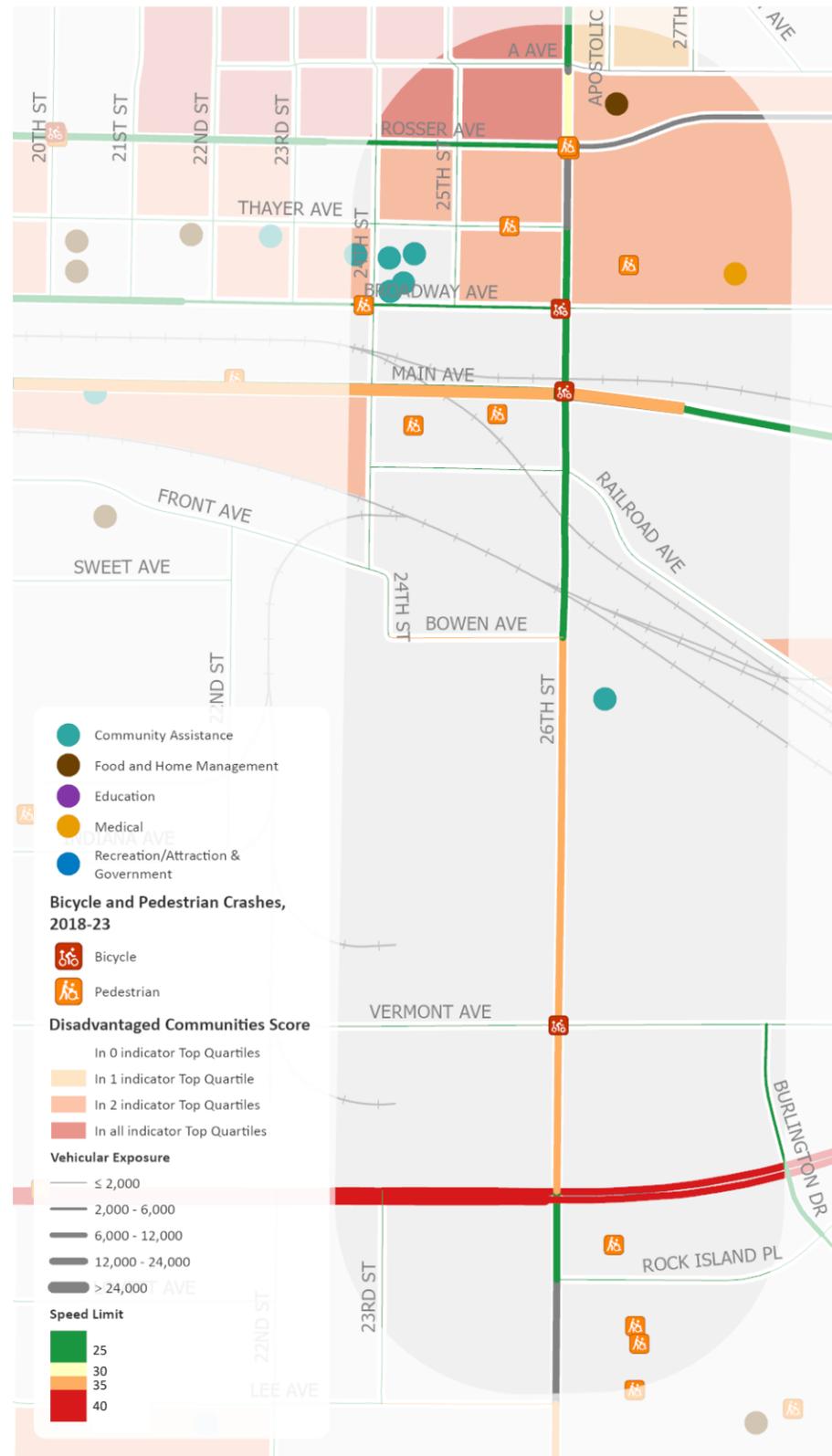
## Overview

The 26th Street Corridor stretches from Rosser Avenue to Lee Avenue in Central Bismarck. It crosses the I-94 Business Loop and the Bismarck Expressway intersections, and passes over several rail lines. At the **northern end are community destinations** such as Ministry on the Margins and Heaven's Helpers Soup Kitchen. The **southern end features a retail center** with a Sam's Club and a Walmart Supercenter.

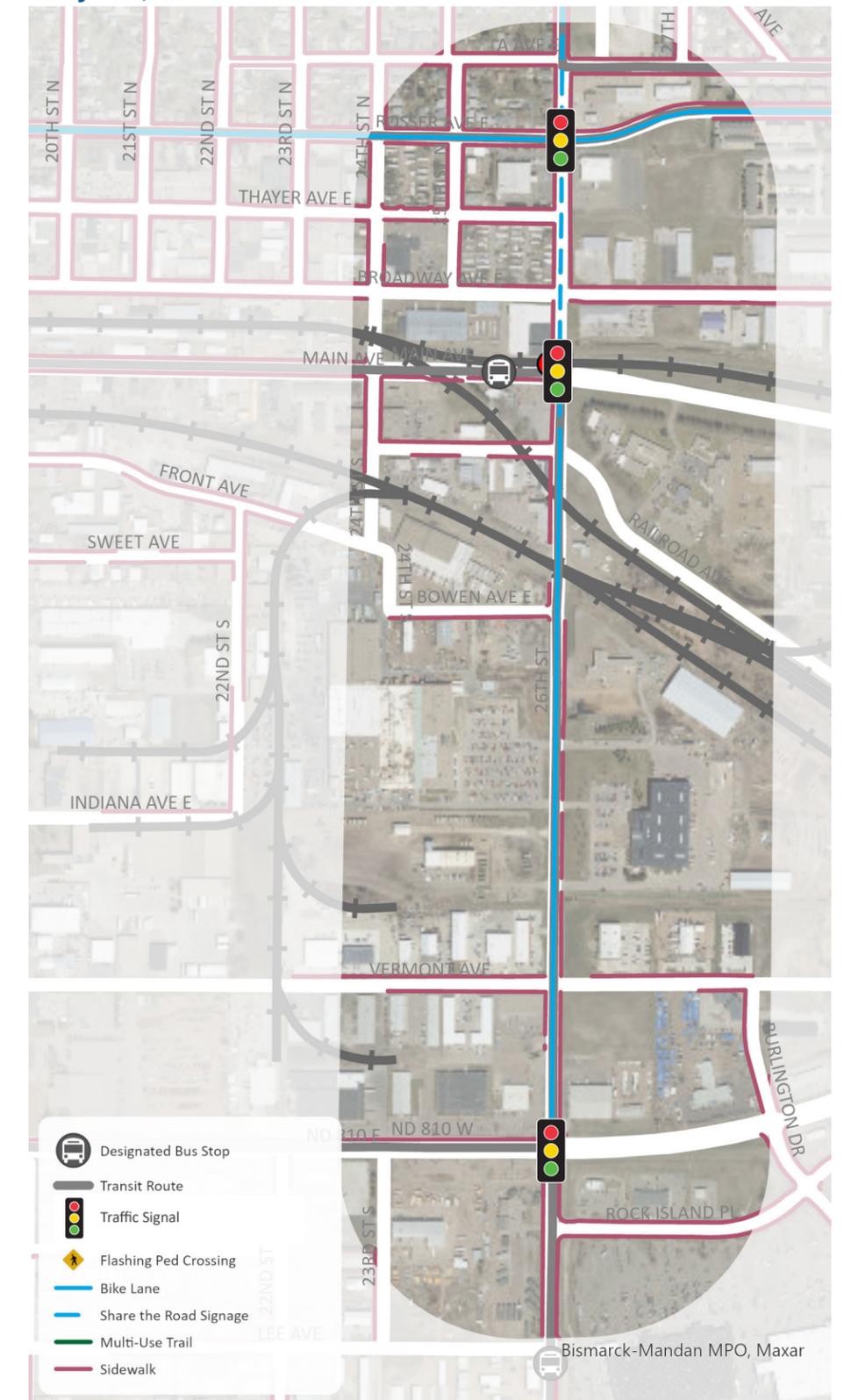
Despite these destinations, the **corridor lacks pedestrian amenities**. Sidewalks are sporadic and often incomplete, offering limited usefulness due to **numerous gaps**. Additionally, there are no pedestrian crossings over the rail lines or the I-94 Business Loop. **Bicycle facilities are present** along the corridor from I-94 Business Loop south, however they are **unprotected from moving vehicles**.

The northern end of the corridor contains all of the housing on 26th Street. Households in the area score in the top quartile for **incomes below 150% of the Federal Poverty Level** and **BIPOC communities**. Areas with more than two indicators flag for households with a disability.

## Corridor Context



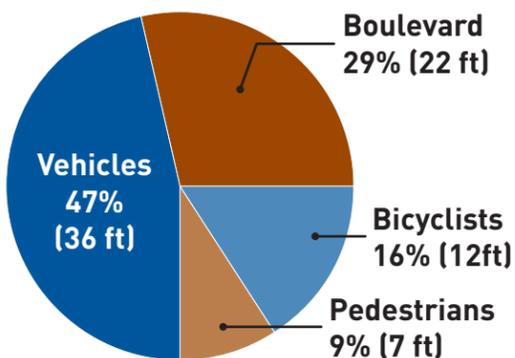
## Bicycle, Pedestrian & Transit Infrastructure



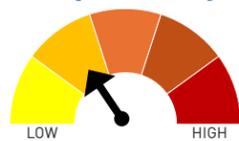
## Existing Conditions



## Right-of-Way Distribution



## Bike and Pedestrian Trip Density



## Buses per Hour (Route Color Denoted)



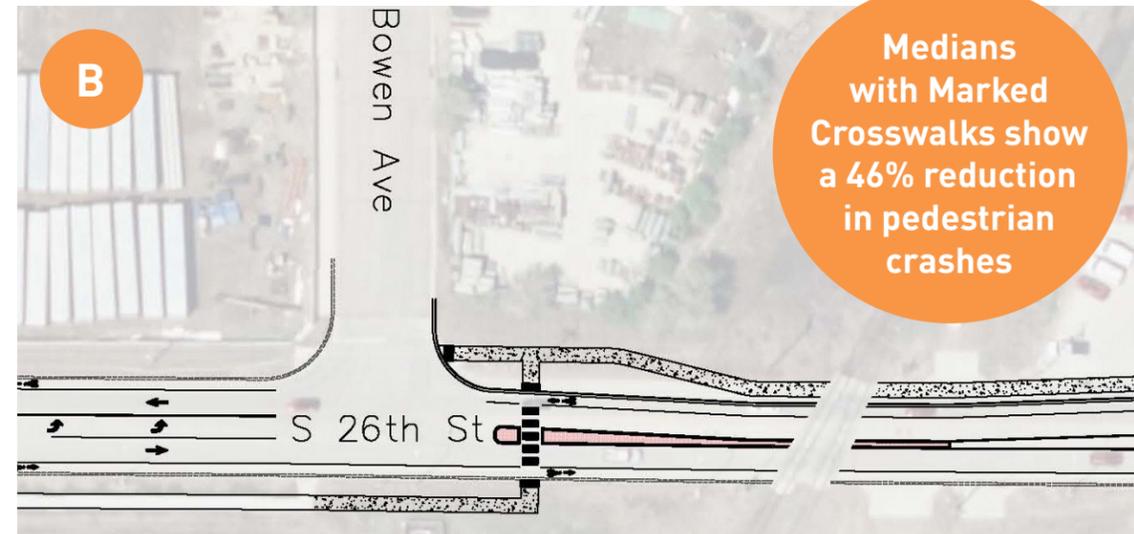
## Short-Term Improvements

### A Fill sidewalk gaps

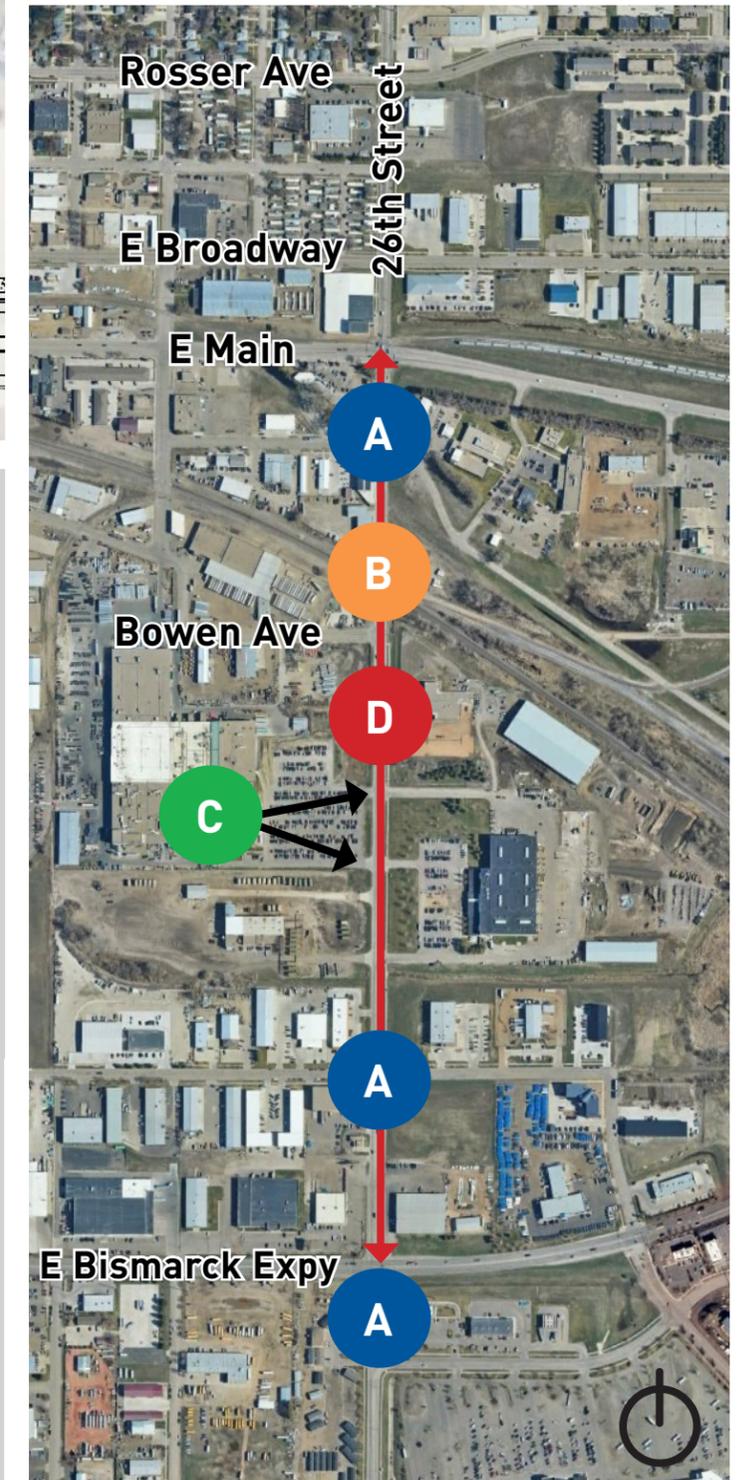
» Sidewalk gaps will be filled along the corridor to create a seamless path along the roadway for the safety and comfort of non-vehicular users.

### B Implement a bike and pedestrian crossing across the railroad tracks north of Bowen Avenue

» A bike and pedestrian safe crossing of the railroad tracks will be constructed to increase the visibility of the rail line and allow for the safe movement of those with wheeled objects and mobility devices.



## Improvement Locations



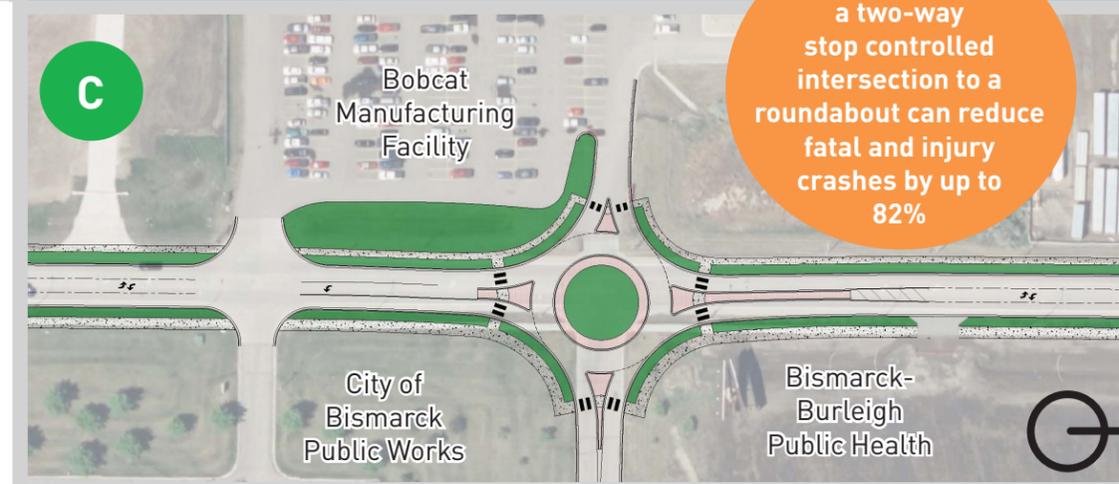
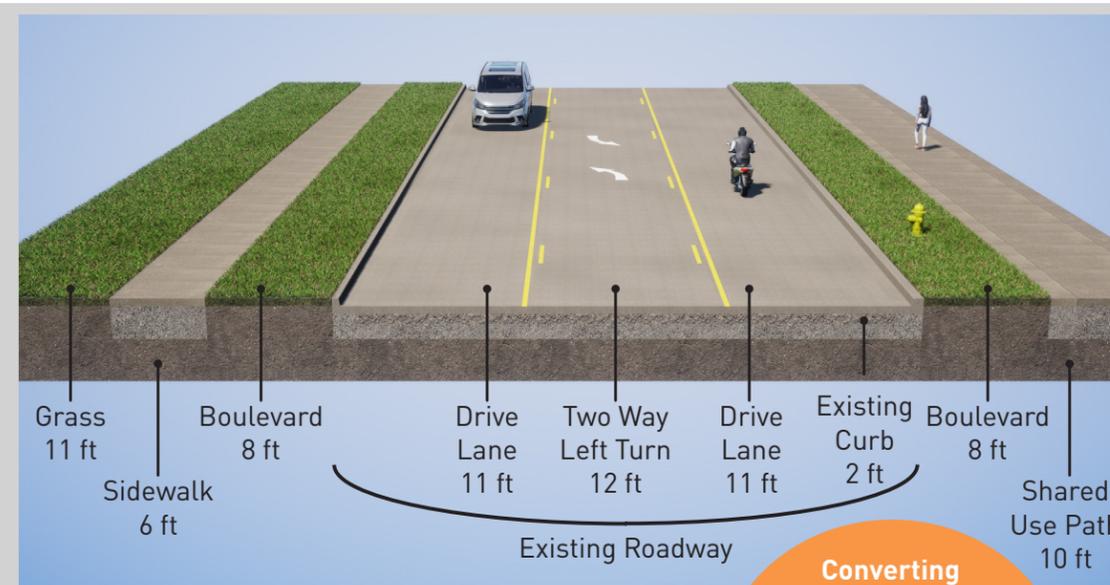
## Long-Term Improvements

### C Roundabouts

» Could be constructed at one of two employee entrances of the Bobcat Manufacturing Facility. The roundabout would be an effective way to improve operations and safety at these intersections while acting as a traffic calming measure for the corridor.

### D Narrow roadway

» The roadway will be narrowed by reducing travel lane width and removing bicycle lanes. A shared-use path and sidewalk will be constructed on either side to separate non-motorized and motorized users to increase safety and comfort.



## Implementation Opportunities

- » **Impacts:** Curblin impacts along west side of the corridor only, no right-of-way acquisition
- » **Programmed Projects:** No programmed improvement
- » **Potential Funding Sources:**
  - » Transportation Alternatives: Fill sidewalk gaps, Bike/Ped railroad track crossing near Bowen Avenue
  - » Highway Safety Improvement Program (HISP): Bike/Ped railroad track crossing near Bowen Avenue
  - » Flexible Transportation Fund Program: Fill sidewalk gaps, Roadway narrowing
  - » Urban Grant Program: Fill sidewalk gaps, Roadway narrowing

## Overview

The Main Street / I-94 Business Loop Corridor in Mandan is divided into two sections. East Main Street and West Main Street. Collins Avenue splits the roadway into the two sections. East Main Street stretches from Collins Avenue to the Memorial Highway interchange. It is characterized by **wide drive lanes, limited pedestrian facilities, and the commercial developments** that surround it. The commercial developments are predominately those with lower wages with a higher percentage of those who walk or bike to their place of work.

The West Main Street Corridor begins at Collins Avenue and ends at 4th Avenue NW. The corridor also **lacks connections to the southern neighborhoods** of low income housing from the commercial corridor. The drive lanes are composed of a three-lane section with a center turn-lane and two lanes of parking on either side. The **sidewalks lack controlled crossings**. There are **no safe bicycle facilities** on the corridor and the Purple Line serves the corridor but only runs once every two hours.

Households in the area score in the top quartile for **incomes below 150% of the Federal Poverty Level**. Areas with more than one indicator flag for households with a disability or BIPOC communities.

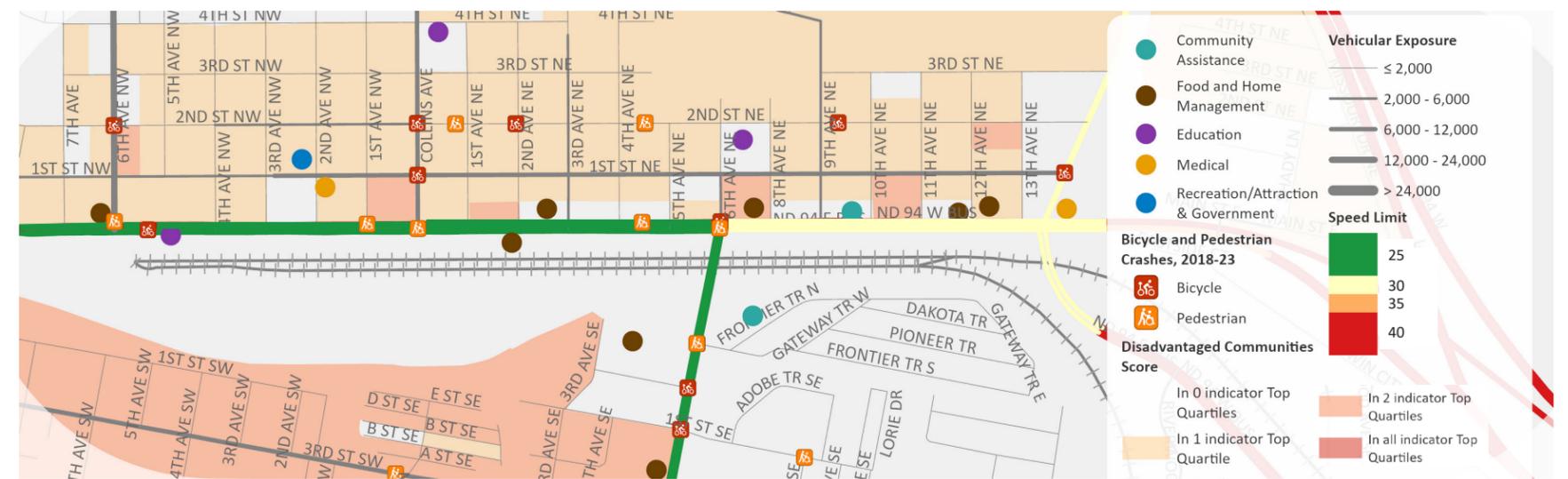
## Existing Conditions (E Main)



## Existing Conditions (W Main)

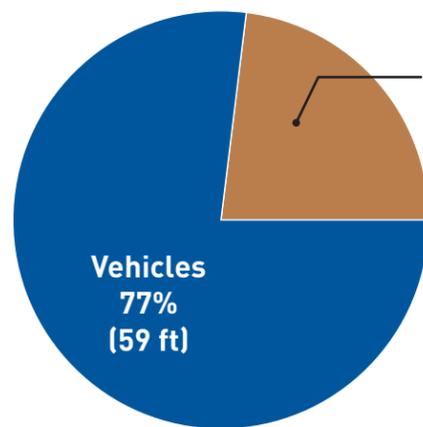


## Corridor Context

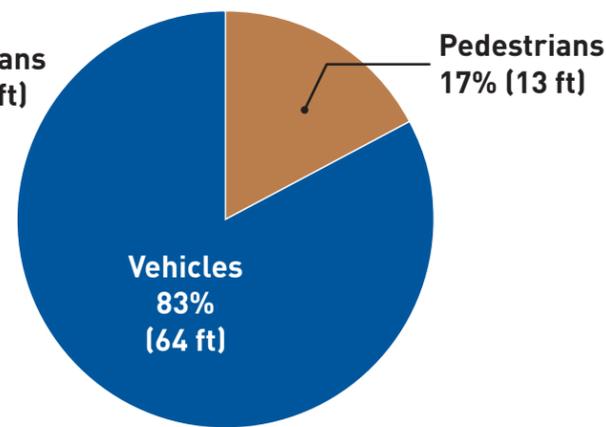


## Right-of-Way Distribution

### W Main Street



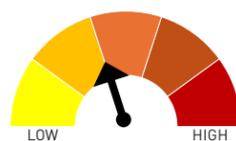
### E Main Street



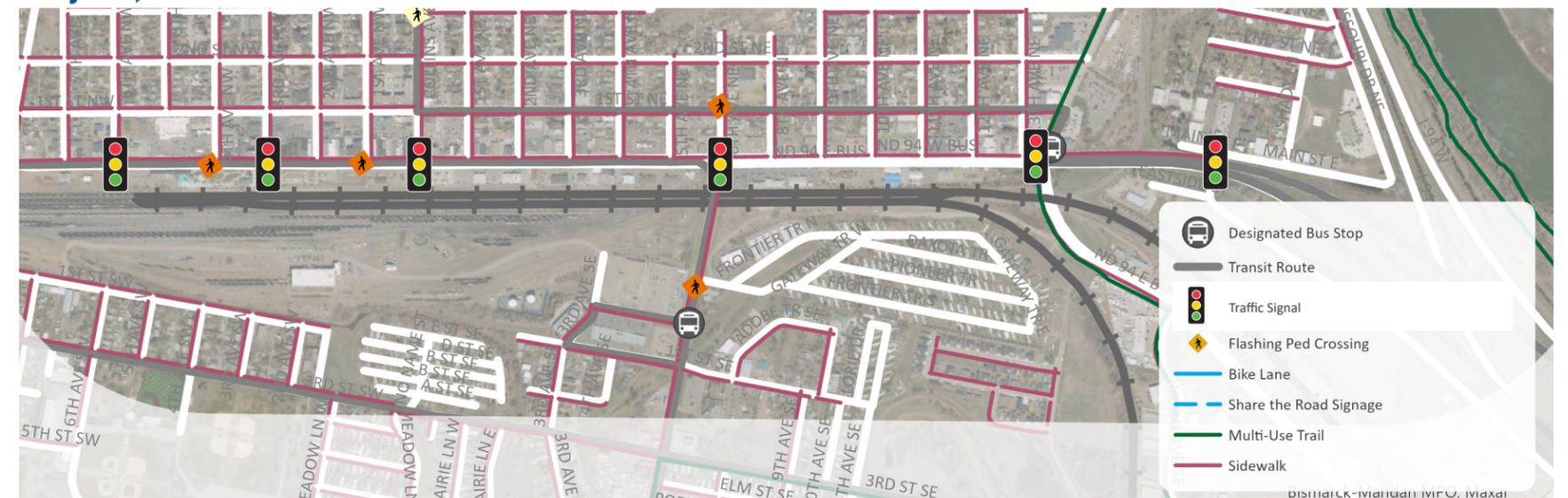
### Buses per Hour (Route Color Denoted)



### Bike and Pedestrian Trip Density



## Bicycle, Pedestrian & Transit Infrastructure



## Short-Term Improvements

### A Signal crossing enhancements

- » Improvements such as lead pedestrian intervals (LPI), protected only on flashing yellow arrow (POOFYA) and no right-turn on red during pedestrian actuation will prioritize pedestrian safety in Mandan's downtown area by reducing vehicle-pedestrian crash potential by up to 60%. Rectangular Rapid Flashing Beacons (RRFB) may also be considered at these locations.

**LEADING PEDESTRIAN INTERVAL (LPI)**

Reduces vehicle-pedestrian crash potential up to 60%

**PEDESTRIAN OMIT ON FLASHING YELLOW ARROW (POOFYA)**

Reduces vehicle-pedestrian crash potential up to 28%

**NO RIGHT TURN ON RED (NO RTOR)**

60%+ Reduction in vehicle-pedestrian crashes

## Implementation Opportunities

- » **Impacts:** Removal of parking
- » **Programmed Projects:** No programmed improvement
- » **Potential Funding Sources:**
  - » Transportation Alternatives: Construction of shared-use path
  - » Reconnecting Communities: Railroad overpass
  - » Highway Safety Improvement Program (HSIP): Traffic signal enhancements
  - » SS4A Demonstration (if on high-injury network): Traffic signal enhancements as part of a Demonstration Project

## Long-Term Improvements

### B Potential overpass

- » The BNSF railroad is a major travel barrier that divides the northern half of Mandan from the southern half. With the limited number of crossings today, an additional overpass would provide improved connections to services within the downtown Mandan area.

### Complete Vision on the West Side of Main Street

- » Installing bulb-outs on the south side of the roadway will complete the vision for this section of Main Street. Bulb-outs will shorten pedestrian crossing distances and increase their visibility, especially at unsignalized intersections. This will also act as traffic calming to help enforce the posted 25 MPH speed limit.

### Continue the Vision on the East Side of Main Street

- » A complete E. Main Street could include bulb-outs on each side of the roadway and a continuation of the 3-lane roadway section of W. main Street up to 6th Avenue NE. This would allow for on-street parking to remain for businesses along the north side of Main Street without surface lots, create wider sidewalks, and allow for a shared-use path along the south side of Main Street.

**EAST MAIN STREET**  
5-Lane Section With Shared Use Path

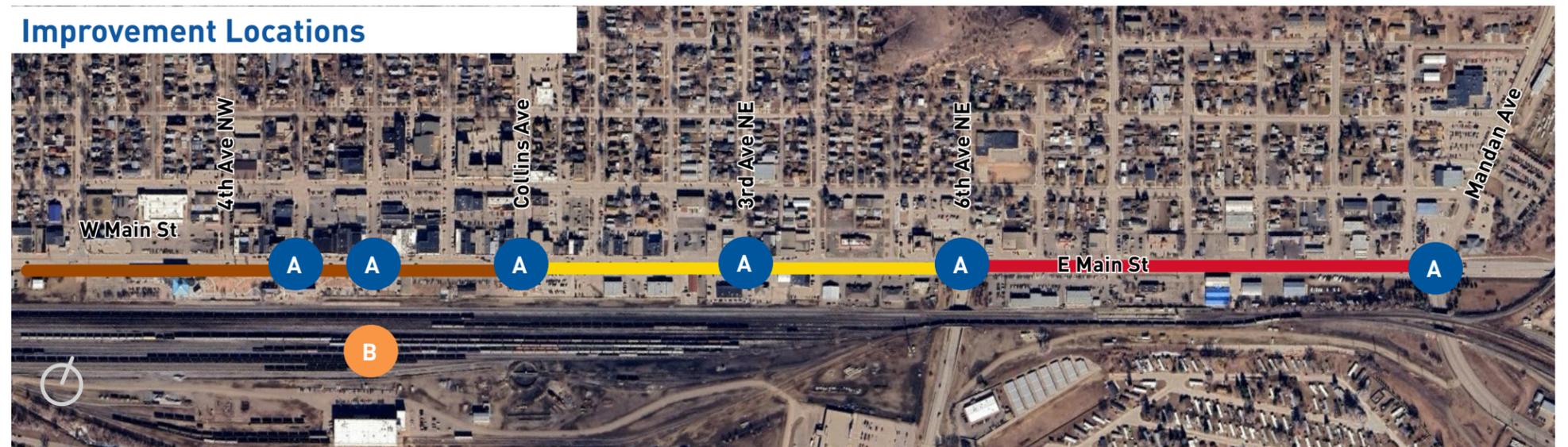
Intersection	Main St and 3rd Ave E	Main St and 6th Ave E	Main St and Mandan Ave
Control	TWSC	Signal	Signal
AM LOS*	A/C	C	C
PM LOS*	A/E	D	D

\*Overall Intersection LOS at Signalized Intersections ; Overall Intersection LOS/Poorest Approach LOS at TWSC Intersections

2040 Traffic Operations

Mode Category	Mode Score	Mode Scoring Weight (Sums to 100)	Notes	Benefits Score	Weighted Final Score
Pass Through and Truck Traffic	*****	45	Maintains existing roadway capacity; traffic flow can be improved with access management.	*****	*****
Local Traffic, Parking, and Transit	*****	31	Maintains existing roadway capacity	*****	*****
Bicycle Facilities	*****	11	Widened south sidewalk (now a shared use path) provides bicycle facility.	Cost Score:	*****
Pedestrian Facilities	*****	13	Pedestrians required to share space with cyclists on the south side.	\$\$\$	*****

## Improvement Locations



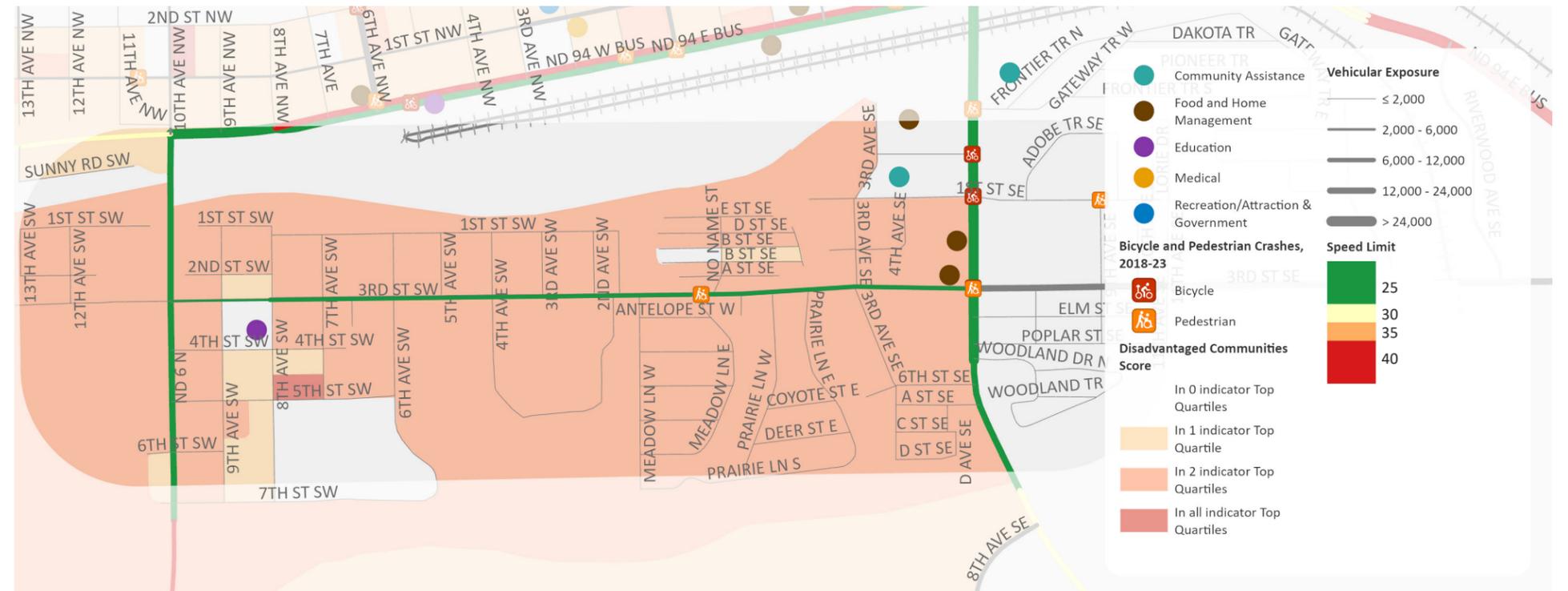
## Overview

The 3rd Street Corridor in Mandan connects low income housing with some commercial at the intersection of 3rd Street and 6th Ave SE, while also traveling through multiple green spaces and parks. This corridor also contains the most direct access to primary services in the Mandan area such as Centre, Inc. and Western Plains Public Health.

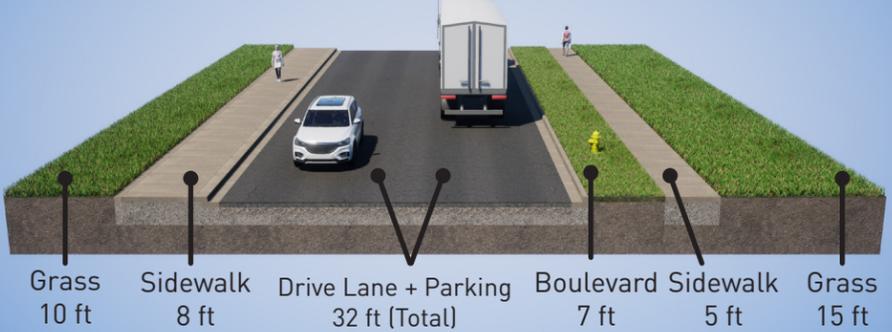
The roadway features one lane in each direction and lanes for parking on each side. On the south side of 3rd Street, there is a sidewalk adjacent to the roadway, which transitions into a multi-use path on the east side of 6th Avenue. Although there is no sidewalk on the north side of the street, there is a desire line through the grass. At the intersection of 3rd and 6th, there is a controlled pedestrian crossing. The corridor lacks bicycle infrastructure but is served by the Purple Route which runs every two hours.

Households in the area score in the top quartile for incomes below 150% of the Federal Poverty Level. Areas with more than one indicator flag for households with a disability.

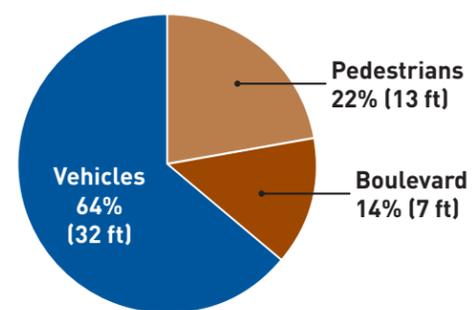
## Corridor Context



## Existing Conditions



### Right-of-Way Distribution



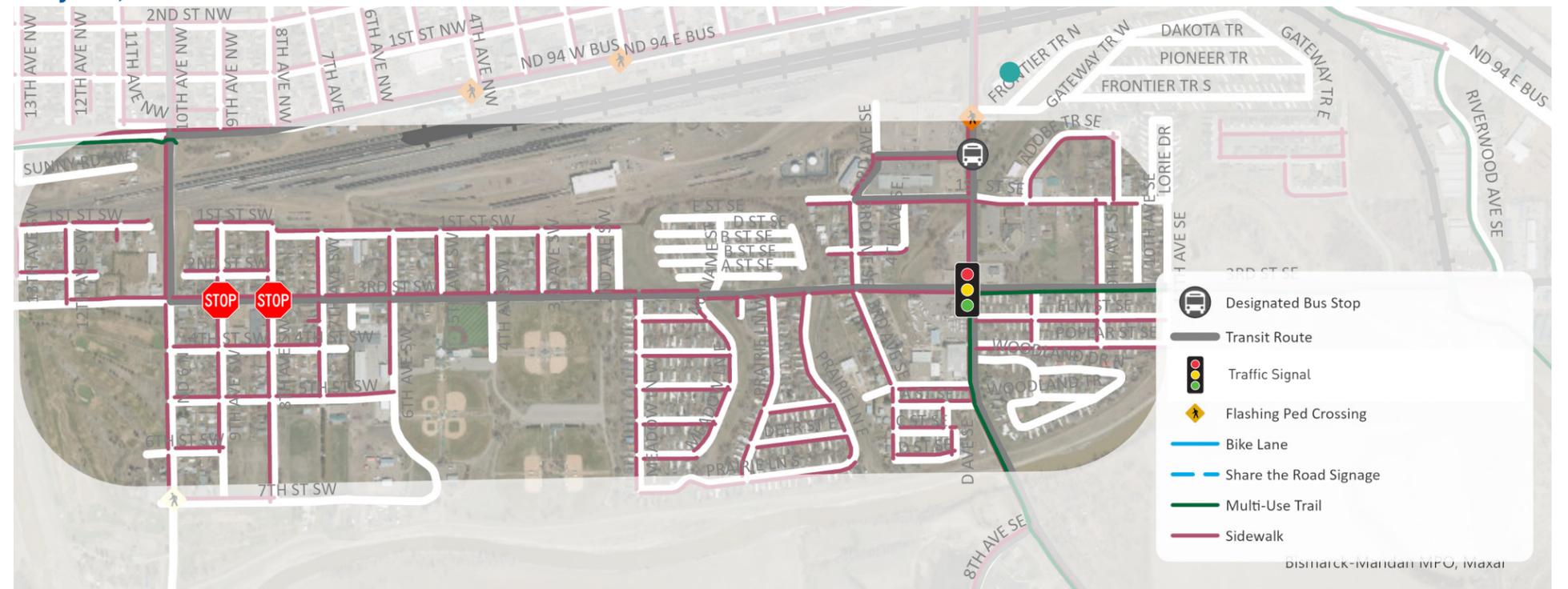
### Buses per Hour (Route Color Denoted)



### Bike and Pedestrian Trip Density



## Bicycle, Pedestrian & Transit Infrastructure



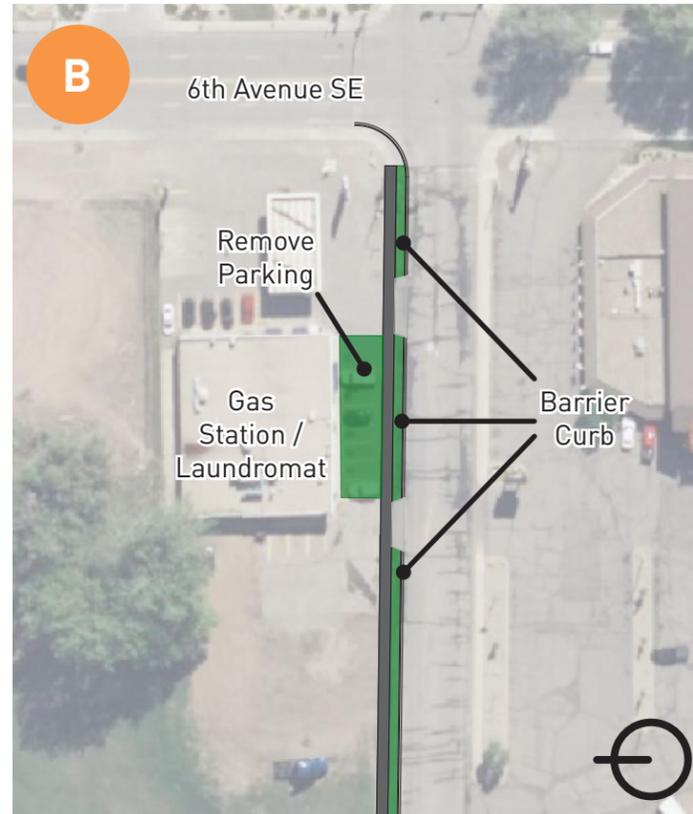
## Short-Term Improvements

### A Temporary bulb-outs at intersections

» Bulb-outs on 3rd Street will extend the sidewalk into the parking lane, reducing the amount of roadway that pedestrians and bicyclists will cross while increasing their visibility. Improvements will also slow turning traffic.

### B Fill sidewalk gaps

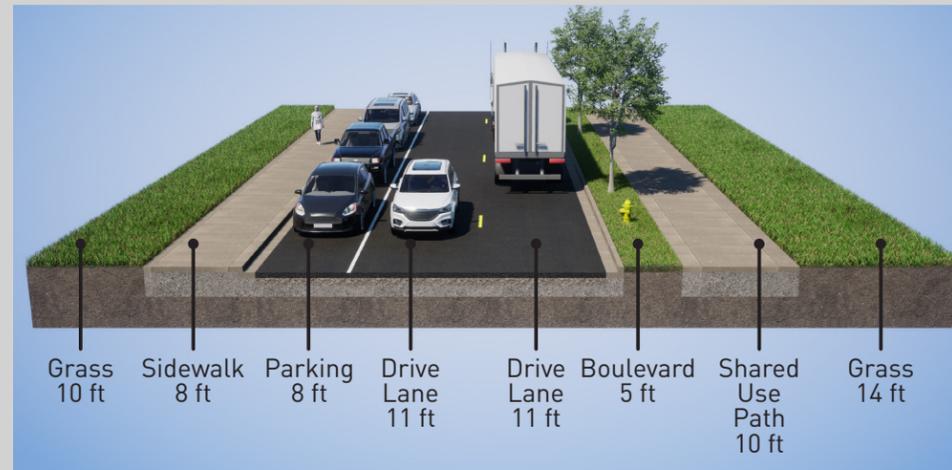
» Filling sidewalk gaps on the east end of 3rd Street will improve overall connectivity for residents in this area and provide increased accessibility to public transit, the Burlington Street Plaza, and the Family Fare Supermarket.



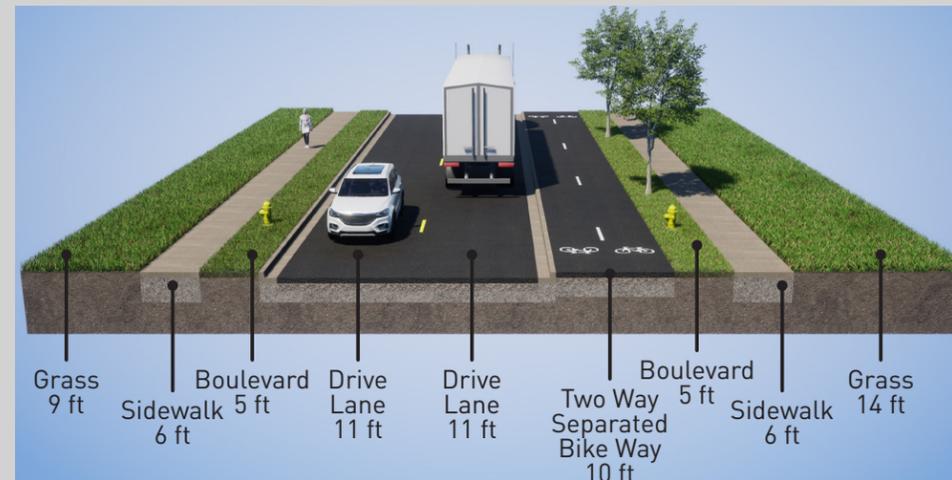
## Temporary Bulb-Out Example



## Alternative One (Long-Term)



## Alternative Two (Long-Term)



## Implementation Opportunities

- » **Impacts:** Removal of parking
- » **Programmed Projects:** Potential alignment with economic development study for housing and transportation improvements
- » **Potential Funding Sources:**
  - » Transportation Alternatives: sidewalk and ADA improvements
  - » SS4A Demonstration (if on high-injury network): temporary bulb-outs
  - » HSIP: Temporary bulb-outs
  - » Flexible Transportation Fund Program: Fill sidewalk gaps
  - » Urban Grant Program: Fill sidewalk gaps

## Long-Term Improvements

### » Alternative One

- » Create on-street parking and widen the existing 5-foot sidewalk to a 10-foot multi-use path
- » Permanent bump-outs will be constructed at intersections to improve pedestrian safety and calm traffic

### » Alternative Two

- » Widen both sidewalks to a minimum of six feet
- » Create a two-way separated bikeway by reducing the total width of all drive lanes

## Improvement Locations



## Overview

The **Shady Acres neighborhood in Mandan is located between three large barriers:** Interstate 94 to the east, E Main Street to the south, and a railway line to the west. The neighborhood is composed of **some commercial and approximately seventy single family homes.** The area has a park located adjacent to the rail line and many of the streets end at the park.

While the **residential streets have sidewalks, they do not connect onto the collector street** or sidewalk that travels along E Main Street. This connection travels under the rail line and into Downtown Mandan. Additionally, the sidewalk along E Main Street ends at Twin City Drive, where through traffic enters and exits I-94. E Main Street within the Shady Acres neighborhood does not have a public sidewalk, just constrained pedestrian zones between the businesses and parking that is directly off of E Main Street.

The neighborhood has a multi-use path that travels north along Missouri Drive to Mandan Avenue, but it begins at 4th Street NE, the very north end of the area and is not safely accessible by the majority of residents.

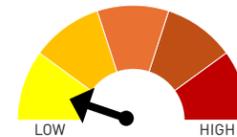
Households in the area score in the top quartile for **incomes below 150% of the Federal Poverty Level** which underscores the need for improvements to biking and walking facilities and additional connectivity.



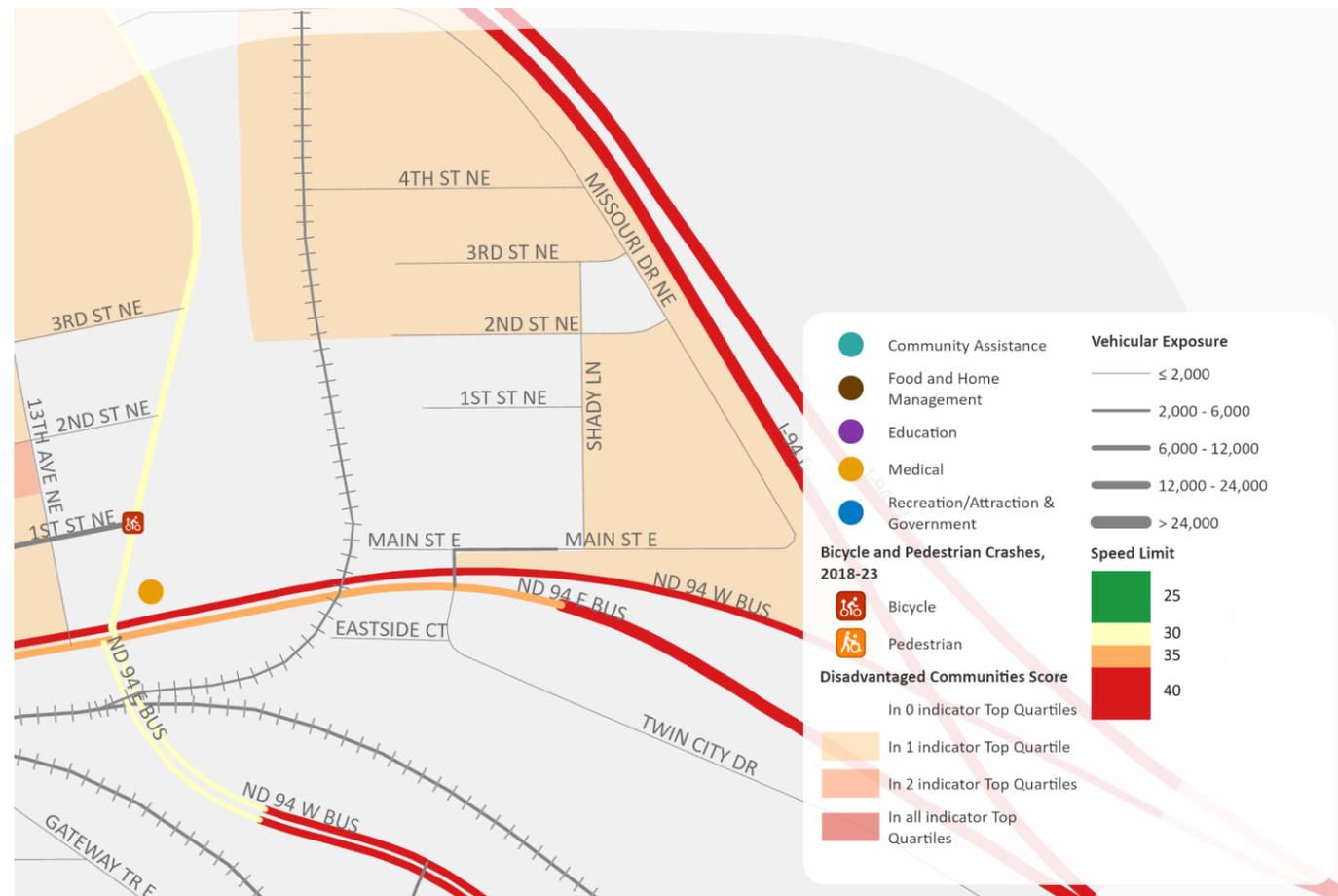
**Buses per Hour**  
(Route Color Denoted)



**Bike and Pedestrian Trip Density**



## Corridor Context



## Bicycle, Pedestrian & Transit Infrastructure



## Short-Term Improvements

### A Complete the pedestrian network

» The Shady Acres neighborhood generally has a strong east-west pedestrian network, however it currently lacks north-south connections on Shady Lane and Missouri Drive. In addition, East Main Street is missing sidewalks. Filling the sidewalk gaps will improve overall connectivity for residents in this area who are already burdened with major travel barriers such as the BNSF railroad, Main Street, and I-94.



## Long-Term Improvements

### B Pedestrian overpass of BNSF railroad to connect to the shared-use path on Mandan Avenue

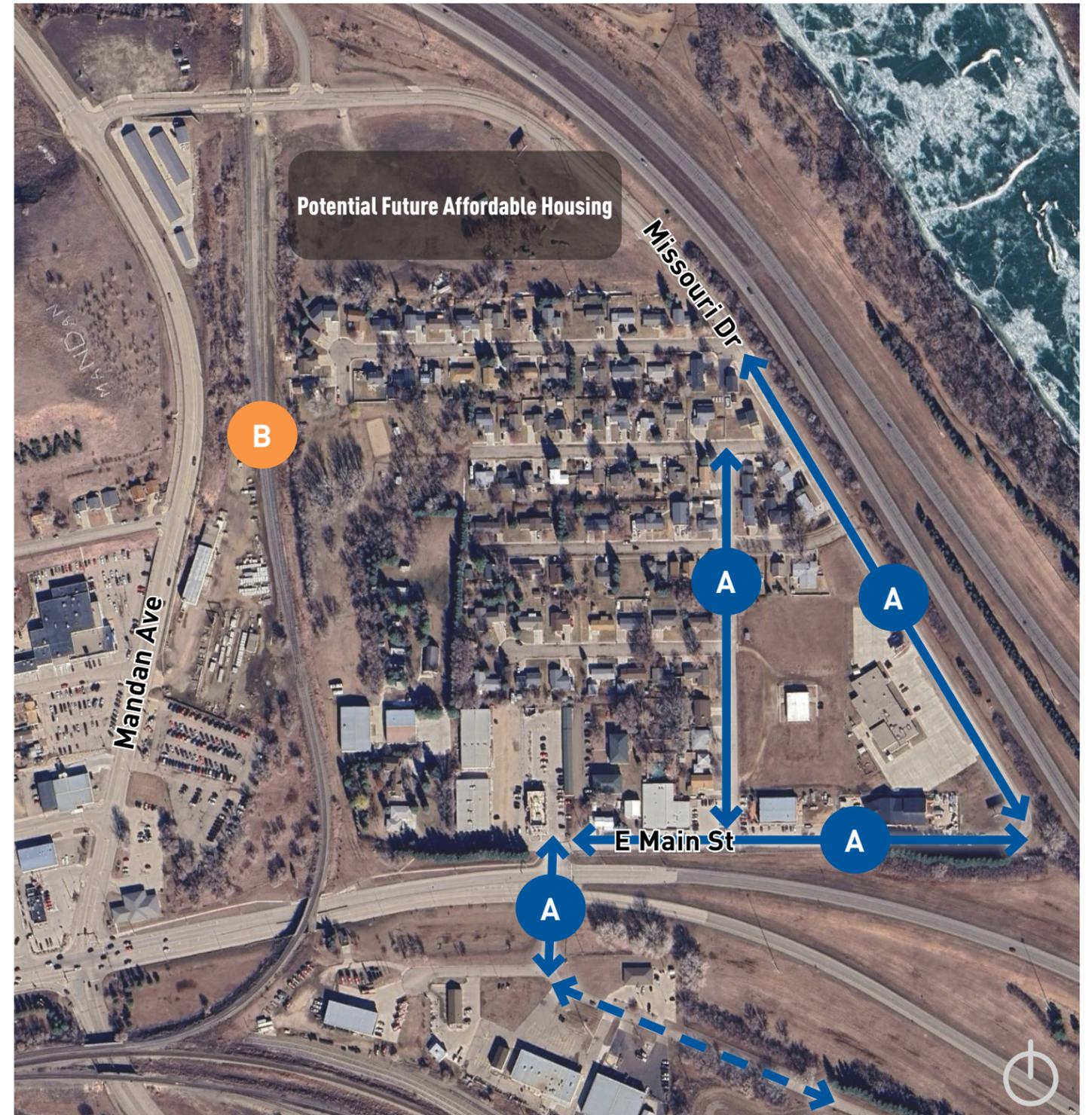
» A pedestrian overpass would provide improved accessibility to Shady Acres residents and provide a new connection to an existing multi-use trail.



## Implementation Opportunities

- » **Impacts:** Business impacts for sidewalk improvements in the Riverbend Centre, park impacts and railroad agreements for the overpass
- » **Programmed Projects:** No programmed improvements
- » **Potential Funding Sources:**
  - » Transportation Alternatives: Sidewalk and ADA improvements
  - » Reconnecting Communities: Pedestrian overpass

## Improvement Locations



## Priority Strategies

In addition to the physical infrastructure improvements of specific corridors, additional priority strategies were developed to aid in making the Bismarck-Mandan MPO safer and more connected through alternative modes of transportation. These strategies include Mobility Hubs, Transit Improvements, including a potential circulator route and microtransit, and the introduction of a Complete Streets policy to guide future roadway development in the region.

### Mobility Hubs

#### *What are Mobility Hubs?*

Mobility hubs are places that cluster several different transportation modes or amenities into one location, making traveling more convenient, accessible, and comfortable for a greater portion of the population. They enhance and support multimodal transportation systems by allowing users to transition from public transit services (such as bus or paratransit) to micro-mobility solutions (such as shared bicycles, scooters, micro transit, or other shared mobility devices). Mobility hubs may also be equipped with other infrastructure that makes them more accessible and attractive, such as bike repair stations, accessible Wi-Fi, and real-time community-specific information such as bus locations and local events. Depending on their location and user preferences, mobility hubs often combine various components to meet the needs of users at each location. They come in a variety of sizes to meet the needs of communities, both large and small.



Source: City of Minneapolis

## Community Benefits

- **Increased Mobility** – People can transfer from public transit service to other modes of transportation (micro transit, paratransit, scooter, and bike shares) to access areas that they want to travel to that may have previously been out of reach, such as locations not served by local bus service. Climate-controlled facilities also increase mobility by creating more welcoming and comfortable spaces for people to utilize, especially in the winter.
- **Equitable Transportation** – In addition to increasing transportation options for those without access to a personal vehicle, mobility hubs may also include climate-controlled waiting areas, public restrooms, and public lockers that can be used by unhoused populations to store personal belongings. Mobility hubs often provide multiple payment options, including cash, which increases equitable access to transportation options for people of all backgrounds who may not have a bank account or credit card.
- **Modal Variety** – People can choose between several mobility options (public transit service, car share, bicycle share, scooter share, walking etc.) based on their preferences or physical abilities.

## Mobility Hub Components

- Bus / Transit Stops
- Rideshare Pick-up/Drop-off
- Transit Ticket Kiosks
- Seating
- Shelter/Shade Structure
- Climate Controlled Waiting Area
- Scooter Parking
- Bikeshare Parking
- Park and Ride
- Carshare Parking
- Bike Lockers
- Electric Vehicle Charging Stations
- Wayfinding
- Information Kiosks
- Accessible Wi-Fi
- Water Fountains
- Public Restrooms and/or Transit Operator Restrooms
- Convenience Retail
- Trash Receptacles
- Enhanced Pedestrian Crossings
- Bike Repair Stations
- Placemaking / Greenspace
- Public Art
- Food options or Vending Machines

## Mobility Hub Examples: Large Scale, Small Scale, and Pilot Projects

Mobility Hubs come in many different forms. Large-scale hubs may include climate-controlled buildings with many amenities that enhance the comfort and experience for people traveling around town, such as lockers for storing personal belongings and public restrooms. Small-scale hubs may only include a couple of additional elements or amenities that are paired with a bus stop, such as a bike-share station, benches, and lockers. Below are examples of mobility hubs with varying degrees of permanence, cost, amenities, and modal choices.

### Large Scale Mobility Hub: Minot City Transit Center

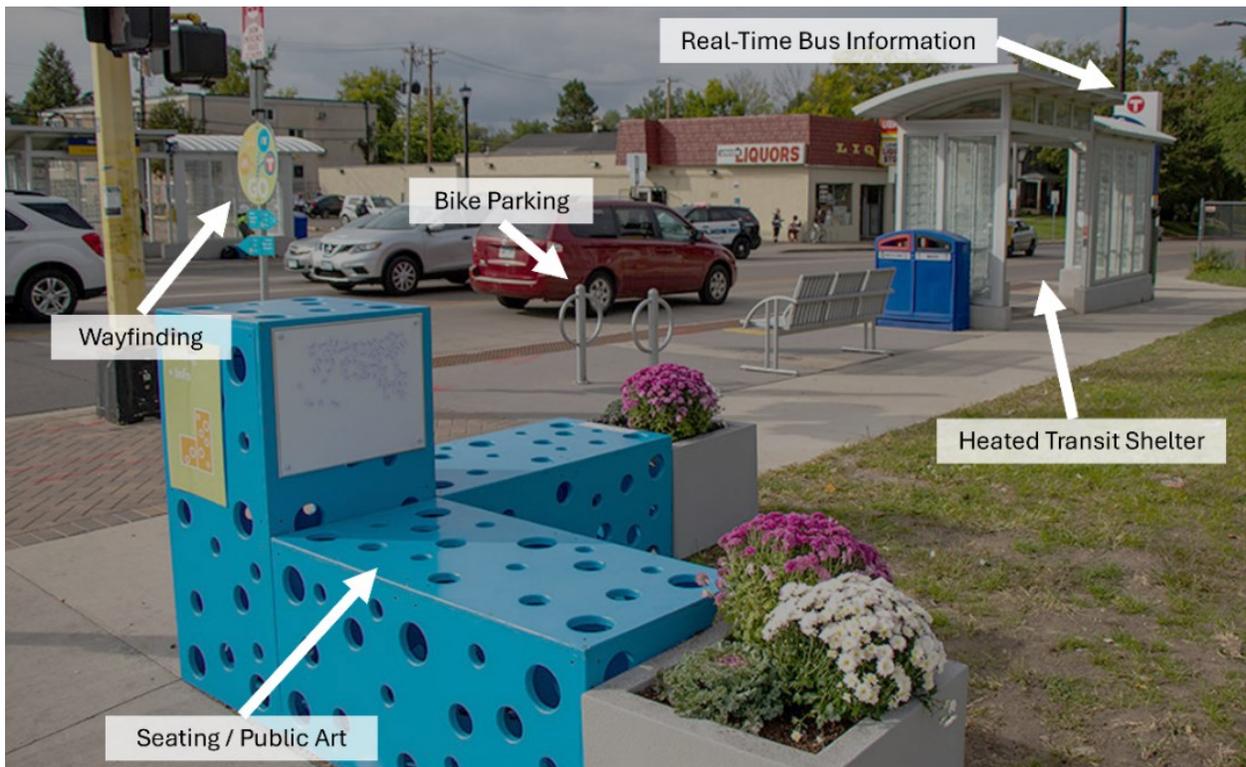
The Minot City Transit Center is an example of a larger-scale mobility hub that provides more amenities. As the main transfer point between all of Minot City Transit’s routes, this facility provides a climate-controlled passenger waiting area with restrooms, ticket vending machines, and a driver lounge. On the exterior, they provide bike parking, seating, and designated bus stops for each

transit route. In the future, this site could be easily adapted to include additional forms of transportation such as shared micromobility (e.g., scooters or bikeshare) or carshare parking.



#### Small Scale Mobility Hub: City of Minneapolis

This mobility hub in Minneapolis is a simpler, smaller scale example located on a bus route. It provides key elements to make the connections between bus and other modes of transportation easier, such as bike parking, wayfinding signage, seating, a heated transit shelter, and a dynamic screen with real-time bus arrival times and more information.



Source: City of Minneapolis

### Pilot Mobility Hubs

Mobility hubs can also be piloted for a temporary period with features that can be easily added or removed without permanent infrastructure changes or major investments. Pilot mobility hubs offer an opportunity to test ideas as a proof-of-concept at a lower cost, learn what worked well and what could be improved, and educate the public about mobility hubs.

Some mobility hub features require permanent, expensive infrastructure such as heated waiting areas or plumbed water fountains. Other features can be tested in a less expensive, temporary manner that could be quickly and easily deployed, such as:

- **Restrooms** – portable restrooms or restrooms on trailers with handicap-accessible ramps can be temporarily stationed at a pilot mobility hub
- **Seating or parklets** – temporary benches, seating areas, or a parklet featuring seats and tables.
- **Bike Parking** – Moveable or portable bike parking racks stationed near a transit stop
- **Placemaking/green space** – portable planter beds or modular planter boxes added along a sidewalk or near a transit stop can make a space feel more inviting and comfortable
- **Wayfinding** – low-cost wayfinding such as printed and laminated signs or corrugated plastic signs can be strapped to an existing sign or pole (shown in image below left)
- **Lockers** – temporary public lockers (shown in image below right) provide a place for people to temporarily store possessions, which is especially beneficial for unhoused populations.

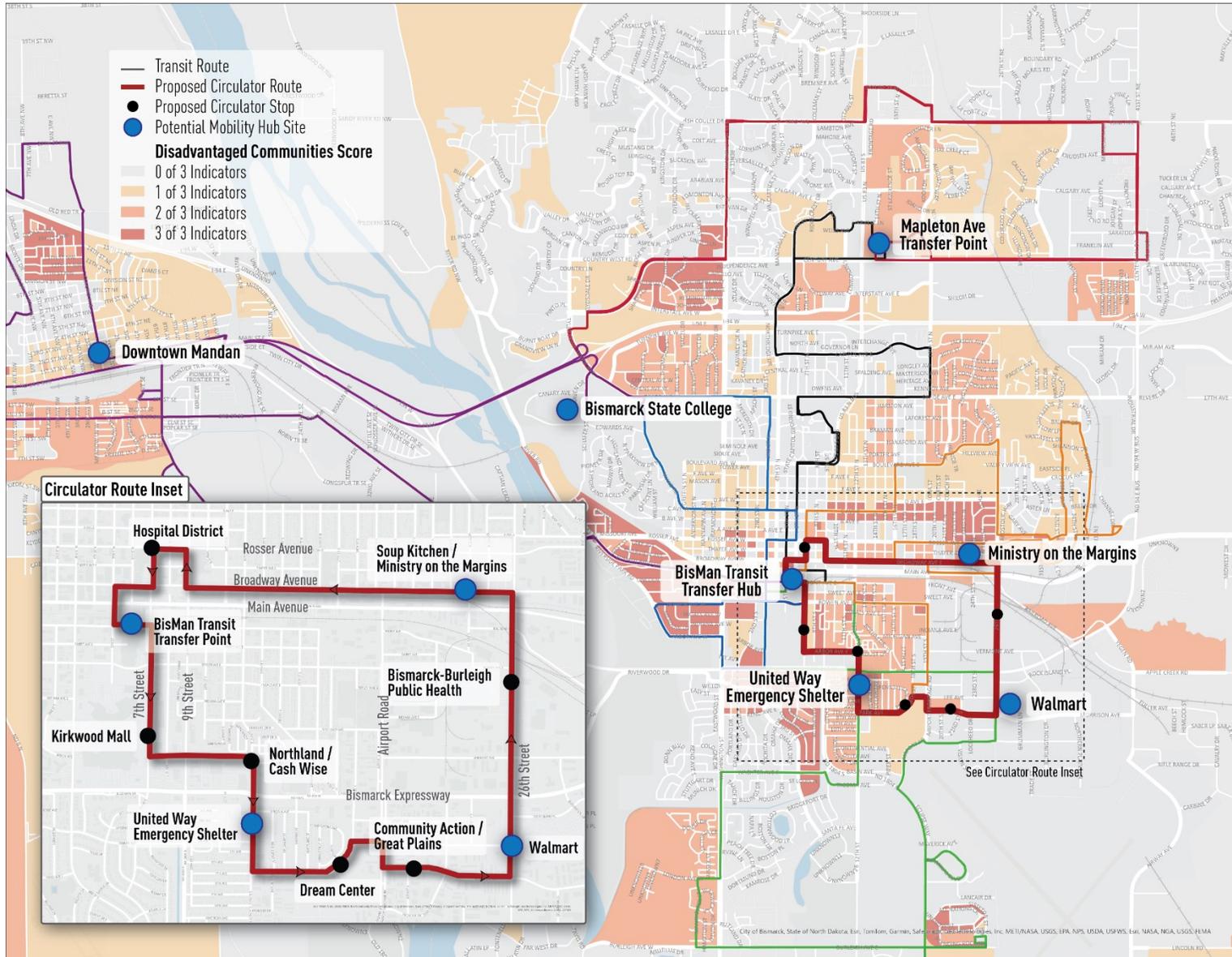
Figure 32 identifies suitable locations for potential mobility hub sites that could incorporate the elements listed above. These sites were identified based primarily on their proximity to key destinations and access to transit, though additional locations may be considered, especially if a partnership opportunity arises.

Figure 30: Lockers at a City of Minneapolis Mobility Hub



Source: City of Minneapolis

Figure 31: Transit and Mobility Hub Strategies



## **Operations and Maintenance**

Operating and maintaining mobility hubs is often a shared responsibility amongst many partners. Peer communities have developed legal agreements and Operations and Maintenance Plans to divide roles and responsibilities formally.

In Columbus, Ohio, they have installed mobility hubs at community colleges, transit centers, and community resource centers. The Bismarck-Mandan area has similar spaces that could be home to mobility hubs in the future. For Columbus, site maintenance is the responsibility of the adjacent area's owner while maintaining the mobility infrastructure is the responsibility of the service provider (e.g., the bus stop is maintained by the transit agency). Before deploying any mobility hubs, the City of Columbus developed an [Operations and Maintenance Plan](#) with signed agreements to solidify roles and responsibilities formally.

The Metropolitan Council of Minnesota also recommends a [Management and Contingency Plan](#) that identifies potential issues (routine, recurring/seasonal, or unforeseen events) and sets out a process and responsibilities for dealing with them. Developing a clear set of protocols that outline mutually agreed-upon mechanisms for resolving disputes will enable the long-term success of a mobility hub despite two common challenges that may arise:

- Potential conflicts between private mobility vendors offering services at a hub and the public agencies who own the physical locations.
- Potential coordination and ownership issues between public agencies and their departments.

Management and Contingency Plans should be updated as mobility hub elements are added or removed and as stakeholders' responsibilities change to provide the most clarity for all involved.

## **Community Partnership Opportunities**

In Bismarck, opportunities exist with community partners who have a vested interest in increasing access to their locations and would benefit from a collaborative approach to pilot a mobility hub, such as Ministry on the Margins, the Dream Center, and the United Way, among others. The level of partnership for ongoing maintenance and operations may vary based on the amenities available at each pilot location (e.g., bike parking, placemaking, storage lockers, restrooms, etc.). Partners could also be involved in pursuing grant funding, site design, and identifying amenities to be included at each location.

## **Case Study: Storage Lockers for Unhoused Populations in Minneapolis**

As mentioned previously, storage lockers provide a place for people to temporarily store possessions, which is especially beneficial for unhoused populations. Through community partnerships, the City of Minneapolis has been able to implement free storage for personal belongings for people experiencing homelessness. In one partnership, the City provided funding to the Minneapolis Downtown Improvement District to provide storage options in their downtown (<https://www.mplsdid.com/storage>). As part of a Mobility Hub Pilot Program, the City also installed temporary lockers at a local library as a response to resident requests. This short term pilot included a low-tech locker where "transit comfort kits" were also distributed

(<https://www.minneapolismn.gov/media/-www-content-assets/documents/Mobility-Hubs-Pilot-2020.pdf>).

**Potential Funding Sources**

Funding Opportunity	Description	Eligible Projects
<u>Rebuilding American Infrastructure with Sustainability and Equity (RAISE)</u>	Federal program for investments in surface transportation infrastructure that will have a significant local or regional impact to advance racial equity and support underserved communities.	Capital projects that include planning, preparation, or design of eligible surface transportation projects.
<u>Rural Surface Transportation Grant Program</u>	Federal program supports projects that improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.	Projects that develop, establish, or maintain an integrated mobility management system, a transportation demand management system, or on-demand mobility services.
<u>Urban Grant Program</u>	NDDOT program provides funding to improve pedestrian, bicycle, and other multimodal facilities to enhance downtown areas within applicant communities.	Examples of eligible activities include bike racks, sidewalk, pedestrian beacons, benches, trash receptacles, planters, bus stops, bus shelters, and trees.
<u>NDDOT Transit Grant, Bus and Bus Facilities Program, Section 5339</u>	NDDOT program provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus related facilities.	Passenger amenities such as passenger shelters and bus stop signs.

**Transit Improvements**

**High-Frequency Circulator Route**

A high-frequency circulator route in Bismarck would serve as a key connector to a wide variety of important services for residents. Figure 31 displays a proposed routing for the circulator, which would serve the following locations:

- Hospital District
- BisMan Transit Transfer Point
- Kirkwood Mall
- Grocery stores (Cash Wise, Walmart)
- United Way Emergency Shelter
- Dream Center
- Community Action
- Great Plains Food Bank
- Bismarck-Burleigh Public Health
- Soup Kitchen
- Ministry on the Margins



At a recommended 30-minute frequency, the proposed circulator route would provide convenient connections to the locations listed above while only requiring one vehicle with two drivers throughout the day. The circulator would run from 6:30 a.m. to 7:30 p.m. to match existing fixed route schedules, operating around 13 platform hours daily. It's estimated this service would cost around \$250,000 annually to operate on weekdays (based on 2022 NTD reported operating expenses per vehicle revenue hour). The current route allows for two one-way loops within each hour, providing efficient use of platform hours with a few minutes of recovery and break time at the end of each trip. The schedule may be adjusted throughout the day to accommodate longer break periods.

To support a circulator route's operations, it's recommended that Bismarck-Mandan Transit review the route's implementation in conjunction with other route adjustments, such as the re-routing of segments that overlap with the proposed circulator, to ensure the new service is using resources as efficiently as possible. In particular, the Orange-5 Route would have an opportunity for routing adjustments if the circulator were to be implemented.

### **Alternative Transit Strategies**

#### **Flag Down Stops Marketing Campaign**

As referenced in the Investigate Issues phase, Bismarck-Mandan Transit's current use of a "flag-down" system can present challenges to current and future riders. Given the lack of infrastructure such as concrete pads or bus stop signage, it can be difficult for riders to understand where they can board and alight the bus. In addition, it presents a barrier to attracting new riders as it leads to confusion and uncertainty about where they can access the service. While using designated stops may prevent some of these challenges, they would also force customers to walk further to get on the bus, potentially making the system unusable for some.

To counteract the confusion and misunderstanding that may come from a flag-down system, it's recommended that Bismarck-Mandan Transit develop a marketing campaign to spread awareness to both existing and potential riders. The campaign should be recurring and focus on the basics of a flag-down system, including determining safe areas to wait for the bus. By educating the community on how to access the bus, Bismarck-Mandan Transit would be eliminating one of the main barriers to attracting new riders, which should see increased ridership.

#### **Increased Connections to Schools**

Public transit services provide students, especially those in middle and high schools, with reliable transportation options to access their education and extracurricular activities. Improved connectivity ensures that students can reach schools in areas that may have been challenging to access due to limited or non-existent transportation options. This can reduce barriers for families without private vehicles and support consistent school attendance. Additionally, transit facilities near schools can enhance safety and convenience, fostering greater independence for students while reducing traffic congestion around school zones.

#### **Microtransit in Mandan**

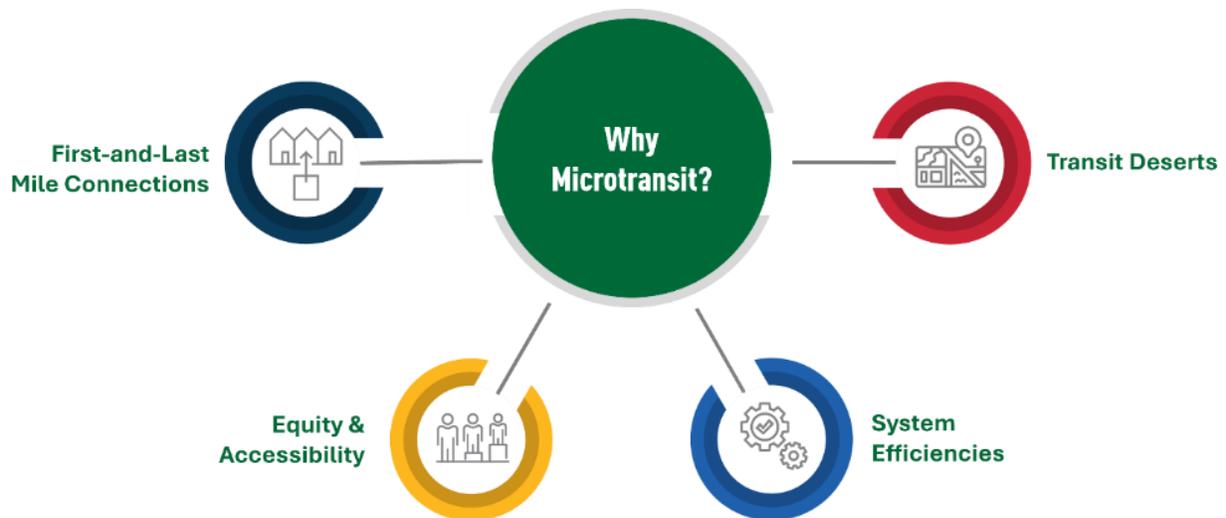
As an alternative approach to the Purple-6 Route serving Mandan, a new microtransit service should be studied as a way to improve overall accessibility for residents and connect them to key services within the Bismarck-Mandan region. Simply put, microtransit is tech-enabled shared



transportation that lives in the space between traditional fixed-route transit and ride hailing technology. While service can sometimes cost more than fixed route, it generally expands coverage areas by providing curb-to-curb service within a specified service area and typically utilizes smaller vehicle types. Microtransit services also work best when coordinated with existing fixed route connections, which makes a connection from Mandan to downtown Bismarck and surrounding areas a prime area to consider this service type.

Existing resources could be utilized to help with implementation and replace the existing fixed route service. The existing Purple-6 Route currently only runs every other hour. Replacing it with a microtransit service allows riders to schedule more timely trips that better meet their schedules. Microtransit should be a topic of further study to determine the feasibility of implementing this service model and determine a potential service area zone connecting Mandan to Bismarck.

Figure 32: Why Microtransit?



## Four Seasons Complete Streets

### What are Complete Streets?

“Complete Streets” refers to planning, designing, constructing, and managing streets to accommodate all forms of local and regional transportation safely. Many states and local governments nationwide recognize the importance of Complete Streets and its principles. They have adopted Complete Streets policies to guide the design and decision-making process for street and highway projects under their jurisdiction.

By designing Complete Streets, we increase their ability to serve everyone, whether they travel by car, foot, bicycle, public transit, or other means. Complete Streets are significant for those unable to drive—due to age, disability, financial constraints, or other factors—and for individuals who choose alternative modes of transportation to save money, protect the environment, or lead a healthier, more active lifestyle.

Complete Streets is not groundbreaking; it emphasizes coordinated, comprehensive, and context-sensitive planning and design. It is not about adhering to a specific design or outcome but rather a process guided by key principles.

Smart Growth America and the National Complete Streets Coalition developed the Complete Streets Policy Framework. Having coined the term “Complete Streets” in the early 2000s, the nascent National Complete Streets Coalition succeeded in popularizing a fresh approach to street design that prioritizes making streets safe for people of all ages and abilities. However, they get around. But by the mid-2010s, as pedestrian fatalities increased to historic levels, the Coalition realized that many of the policies being passed failed to make streets safer. Most alarmingly, the crisis of people being struck and injured or killed while walking or biking was not felt evenly—people of color and people in lower-income areas were being killed at disproportionately higher levels.

### Community Benefits

The advantages of Complete Streets can be both qualitative and quantitative, benefiting communities in the short and long term. The following is a list of potential benefits that could be achieved through the design and implementation of Complete Streets:

- **Safety:** Reduction of conflict points and encouragement of more predictable interaction among motorists, bicyclists, and pedestrians of all ages and abilities
- **Environmental:** Less air and noise pollution
- **Maintenance:** Reduced long-term roadway maintenance needs if a significant mode shift occurs away from motor vehicles
- **Congestion:** Integration of transit and non-motorized modes can reduce local congestion if a mode shift occurs away from motor vehicles
- **Health:** Increased physical activity from walking or biking enhances personal health and can lead to a reduction in healthcare costs over the long term
- **Accessibility:** Approximately one-third of the U.S. population cannot or does not drive a car; increased compliance with the Americans with Disabilities Act (ADA) will provide better access for people of all ages and abilities
- **Reduced Personal Transportation Costs:** Reduction in personal transportation costs due to more modal choices that are less expensive (e.g., transit, biking) or free (e.g., walking)
- **Economic Activity:** A network of Complete Streets is safer and more appealing to residents and visitors, which can have positive impacts on retail and commercial developments
- **Quality of Life:** A variety of transportation options allows everyone—particularly people with disabilities and older adults—to get out and stay connected to the community

### What does a Complete Street look like?

While Complete Streets represents a process and philosophy in street design, there isn't a one-size-fits-all solution. Each Complete Street is tailored to its unique community context. A Complete Street may feature sidewalks, bike lanes (or wide paved shoulders), dedicated bus lanes, accessible public transit stops, safe and frequent crosswalks, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more. However, not all Complete Streets will (or should) accommodate all the street design features listed above. The

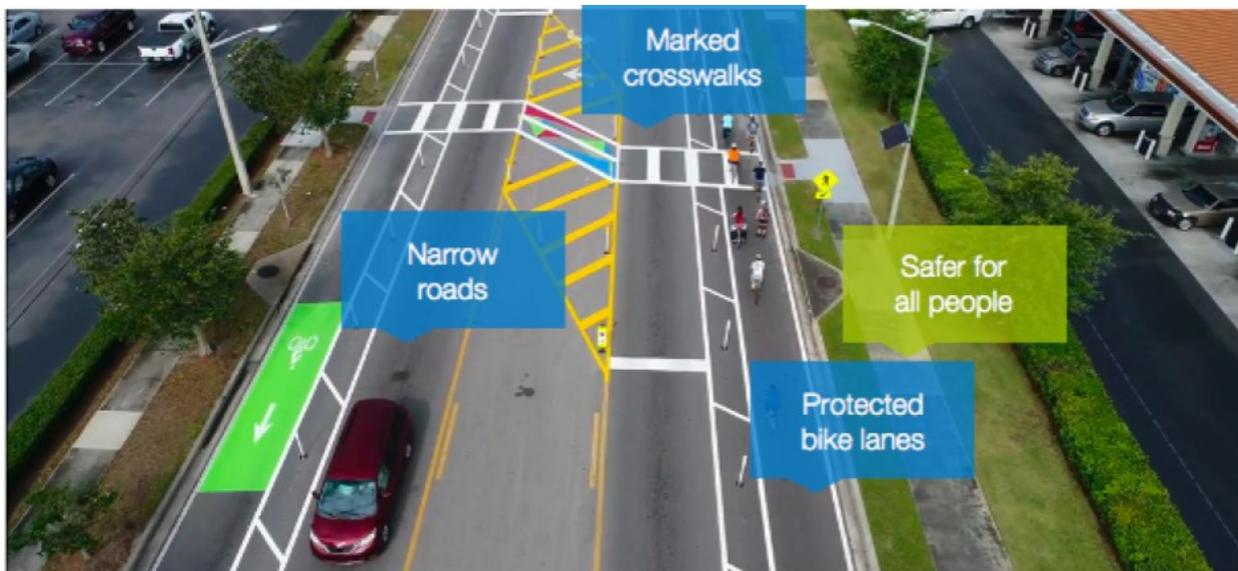


context and needs of users vary across rural, suburban, and urban areas, resulting in different street designs even within the Complete Streets framework.



Images: Clockwise from upper left – Indianola, IA; Richfield, MN; Battle Lake, MN; Plymouth, MN

Below is an example of a broad, 5-lane roadway that was transformed using a Complete Streets approach, which has made it safer and more comfortable for all roadway users.



Source: Smart Growth America

## Year-Round Complete Streets

In snowy climates like North Dakota, winter maintenance of Complete Streets is very important in ensuring their usefulness year-round. This includes snow clearing or snow removal and ice mitigation. Complete Streets can be adequately maintained through street design and maintenance policies and programs. A Complete Streets Policy is one tool that can help guide the planning, design, and maintenance activities for streets, trails, and other transportation facilities so that they remain accessible and safe year-round.

### *Designing for Snow and Ice*

Complete Streets in snowy climates should be designed with winter in mind - which means designing roads and bike facilities to accommodate the necessary snow-clearing equipment. It also means designing boulevards or medians with adequate width for snow storage and designing walking and biking facilities to mitigate the negative impacts of freeze-thaw cycles. On warmer winter days, it's common for the sun to melt snow, leaving water running over sidewalks and bike lanes. In the evening, when the temperatures drop, and the sun is down, that water freezes and leaves an icy walkway or bikeway. This freeze-thaw cycle is impossible to avoid, but building trails, sidewalks, and bikeways with well-designed drainage and snow storage areas can mitigate it.



Figure 33: A puddle freezes along a trail, creating a slippery and hazardous condition.

### *Sidewalk Snow Clearing Program: Opt-in Assessments*

Individual property owners are responsible for clearing snow and ice from sidewalks adjacent to their properties. On busier commercial corridors with higher levels of pedestrian traffic, it can be more effective for property owners to pool their money together and have sidewalk snow clearing done by a private contractor. This approach can be more reliable and efficient than having multiple property owners clear their stretch of sidewalk at different times, which sometimes results in mixed compliance with sidewalk snow-clearing requirements. It can also be more cost-effective for property owners than hiring contractors to clear a short sidewalk adjacent to their property.

These opt-in sidewalk snow-clearing arrangements operate like a business improvement district or HOA and use assessments for each property owner to pay for the services. Most property owners along the designated snow-clearing corridor must agree to the arrangement's terms. Contractors performing the snow clearing typically charge a flat fee per year regardless of the number of snowfall occurrences (instead of charging per snowfall event).

### *Sidewalk Snow Clearing Program: Municipality-Led on Priority Routes*

Some municipalities will take responsibility for clearing snow from sidewalks in high-priority areas of the community. While not common, programs like these ensure that the most important and heavily traveled sidewalks in a community get cleared of snow and ice promptly and consistently after each snowfall. No additional fees are charged or assessed to property owners along the high-priority routes.

Priority sidewalk snow-clearing networks often include:

- Sidewalks along school walking routes
- High pedestrian traffic areas / busy commercial areas
- Sidewalks along public transit routes
- Park facilities

Agencies typically set a snowfall threshold that triggers snow clearing - commonly 2-3" or more. Some municipalities will clear high-priority routes with agency staff and use agency equipment, while others will hire private contractors. Sidewalk snow clearing typically requires specialty equipment narrow enough for sidewalks, such as a compact tractor about 6' wide. Depending on the depth of snowfall, specialty tractors can use broom attachments or plow attachments. Programs like this are used in communities ranging from small towns like Cloquet, MN, to large cities like [Rochester, MN](#).



Figure 34: A specialty tractor with a broom attachment.  
Photo credit: Ventrac

### **Creating a Complete Streets Policy**

The ten elements below serve as best practices to create a policy that can be implemented at any level of governance. An ideal Complete Streets policy includes statements that accomplish the following:

- 1. Establishes commitment and vision.** How and why does the community want to complete its streets? This specifies a clear statement of intent to create a complete, connected network and consider the needs of all users.
- 2. Prioritizes underinvested and underserved communities.** Requires jurisdictions to define who are their most underinvested and underserved communities and prioritize them throughout.
- 3. Applies to all projects and phases.** Instead of a limited set of projects, the policy applies to all new projects, retrofit or reconstruction projects, maintenance projects, and ongoing operations.
- 4. Allows only apparent exceptions.** Any exceptions must be specific, with a straightforward procedure requiring high-level approval and public notice before exceptions are granted.
- 5. Mandates coordination.** It requires private developers to comply and requires interagency coordination between government departments and partner agencies.
- 6. Adopts excellent design guidance.** Directs agencies to use the latest and best design criteria and guidelines and sets a time frame for implementing this guidance.
- 7. Requires proactive land-use planning.** Considers every project's greater context and the surrounding community's current and expected land-use and transportation needs.

8. **Measures progress.** Establishes specific performance measures that match the goals of the broader vision, incorporate equity considerations, and are regularly reported to the public.
9. **Set criteria for choosing projects.** Creates or updates the requirements for selecting transportation projects so that Complete Streets projects are prioritized.
10. **Create an implementation plan.** A formal commitment to the Complete Streets approach is only the beginning. It must include specific steps for implementing the policy in ways that will make a measurable impact on what gets built and where.

## Additional Locations to Consider

### 24<sup>th</sup> Street

The area around Ministry on the Margins, Heaven’s Helpers Cafe, and Closet is a primary service area. Still, compared to the national average, it falls within the 73rd percentile for low-income households and the 67th percentile for people of color. Similar to Airport Road, this section of 24<sup>th</sup> Street has excess roadway capacity, significant sidewalk gaps, and railroad crossings.

### Dream Center

As a primary service facility for underserved and lower-income populations, the location of the Dream Center is far removed from the primary residence of its most supported populace. The surrounding neighborhoods often fall in the 20<sup>th</sup> percentile of low income, demonstrating a strong need for greater accessibility to the community. Park Avenue from 12<sup>th</sup> Street to E Bismarck Expressway lacks pedestrian crossings and includes sidewalk gaps along the south side of Park Avenue from 12<sup>th</sup> Street to Connecticut Street.

### Mandan High School

The new high school on the northern side of I-94, though accessible to adjacent neighborhoods, is on the other side of the interstate with some of the most vulnerable populations, including the highest density of those living below the federal poverty level, thus necessitating the need for strong non-motorized connections. Residents west of Sunset Drive also lack a connected, accessible route for walking or biking to school.

## Summary

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The Bismarck-Mandan Safe Routes to Services and Complete Streets Study underscores a commitment to enhancing transportation accessibility, safety, and equity throughout the Bismarck-Mandan Metropolitan Planning Area. The study demonstrates the transformative potential of integrating community input with technical analysis by identifying critical barriers and needs in walking, biking, and transit.

The project reached underserved populations through partnerships with organizations such as the Sacred Pipe Resource Center, Ministry on the Margins, and the Missouri Valley Coalition for Homeless Persons and ensured inclusive participation. Multi-phase engagement strategies brought forward the perspectives of underrepresented groups, aligning the study's recommendations with real community needs.

The study identifies priority improvement areas and offers actionable recommendations, such as enhanced pedestrian crossings, expanded transit routes, and establishment of mobility hubs. These solutions address immediate safety concerns while laying a foundation for long-term infrastructure development. By leveraging tools like data analysis and community feedback, the study provides a robust framework for implementing these strategies and securing future funding opportunities.

This effort establishes a safe, inclusive, and equitable transportation planning model. It paves the way for a more connected and accessible future, prioritizing the voices and needs of those most affected by current mobility challenges.

## Appendices

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- Priority Area Project Sheets
- Public Engagement Content
- Cost Estimates