



# STIOUX FALLS

Metropolitan Planning Organization  
2045 Long Range Transportation Plan



PREPARED FOR:



PREPARED BY:





## ACKNOWLEDGEMENTS

### STUDY ADVISORY TEAM MEMBERS

Tami Jansma, Brandon  
Mark Hoines, FWHA  
Michael McMahon, Harrisburg  
Teresa Sidel, Hartford  
Toby Brown, Lincoln County  
Terry Fluit, Lincoln County  
Shannon Schultz, Minnehaha County  
Scott Anderson, Minnehaha County  
Jerry Ortbahn, SDDOT  
Sarah Gilkerson, SDDOT  
Travis Dressen, SDDOT

Jim Feeney, SECOG  
Shannon Ausen, Sioux Falls  
Sam Trebilcock, Sioux Falls  
Kevin Nissen, Tea  
Tom Murphy, Citizens Advisory Committee  
Jarod Larson, TAC - Public Transportation  
Dan Letellier, TAC - Air Transportation  
Clark Meyer, TAC - Railroad  
Myron Rau, TAC - Trucking  
Todd Vik, TAC - Sioux Falls School District  
Cory Diedrich, Citizens Advisory Committee

### CITIZENS ADVISORY COMMITTEE (CAC) MEMBERS

Jesse Fonkert, Business  
Tom Murphy (Chair), Private Transportation  
Chris Parsley, Community Service Boards  
Koni Sims, Community Service Boards  
Cory Diedrich (Vice Chair), Private Transportation  
Jacob Koch, Persons with Disabilities  
P. Sean Garney, Safety

Chuck Parsons, Retirement Community  
David Jackson, Business  
Bradley Meyer, Construction and Development  
Gayleen Riedemann, Concerned Citizens  
Kevin Smith, Environment  
Amanda Snoozy, Retirement Community

### TECHNICAL ADVISORY COMMITTEE MEMBERS

Brooke White (Chair), South Dakota Department of Transportation (SDDOT) Operations  
Scott Anderson (Vice-Chair), Minnehaha County Planning  
Shannon Ausen, City of Sioux Falls Engineering  
Sam Trebilcock, City of Sioux Falls Planning  
Jessica Evans, South Eastern Council of Governments (SECOG)  
Mark Hoines\*, Federal Highway Administration  
Chad Huwe, City of Sioux Falls Engineering  
Dan Letellier, Sioux Falls Regional Airport  
Robert Speeks, Sioux Falls Public Transportation  
Myron Rau, Trucking (SD Auto Dealers Assoc./SD Trucking Assoc.)

Sarah Gilkerson, South Dakota Department of Transportation (SDDOT) Division of Planning and Engineering  
Shannon Schultz, Minnehaha County Highway  
Todd Vik, Sioux Falls School District  
Terry Fluit, Lincoln County Highway  
Toby Brown, Lincoln County Planning  
Jack Dokken, SDDOT Office of Secretary (Air, Rail and Transit)  
Clark Meyer, Railroad  
Jarod Larson, Private or Public Transportation Carrier



## URBANIZED DEVELOPMENT COMMISSION MEMBERS

Jeff Barth, Minnehaha County Commission

Paul Lundberg, Mayor of Brandon

Mark Hoines\*, Federal Highway Administration

Paul TenHaken, Mayor of Sioux Falls

Marshall Selberg, Sioux Falls City Council

Gerald Beninga, Minnehaha County Commission

Rick Kiley, Sioux Falls City Council

Joel Arends, Lincoln County Commission

Tiffani Landeen, Lincoln County Commission

Greg Neitzert, Sioux Falls City Council

Carol Twedt (Chair)

Pat Starr (Vice-Chair), Sioux Falls City Council

Derick Wenck, Mayor of Harrisburg

Dave Gillespie, Lincoln County Commission

Dean Karsky, Minnehaha County Commission

Vacant, SDDOT Transportation Commission

\* Denotes a non-voting member

*The Sioux Falls Metropolitan Planning Organization (MPO) provides services without regard to race, color, gender, religion, national origin, age or disability, according to the provisions contained in SDCL 20-13, Title VI of the Civil Rights Act of 1964, the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990 and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 1994. Any person who has questions concerning this policy or who believes they have been discriminated against should contact the Sioux Falls MPO at 605-367-5390.*

*The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.*



## TABLE OF CONTENTS

- Acknowledgements..... i
  - Study Advisory Team Members..... i
  - Citizens Advisory Committee (CAC) Members..... 1
  - Technical Advisory Committee Members..... 1
  - Urbanized Development Commission members..... ii
- TABLE OF CONTENTS..... iii
- List of Appendices..... vi
- List of Acronyms..... vii
- 1.0 Executive Summary..... 1
  - 1.1 Planning Process..... 2
  - 1.2 Guiding Principles, Goals, Objectives, and Planning Factors..... 4
  - 1.3 Demographics and Growth Trends..... 5
  - 1.4 Project Prioritization..... 5
  - 1.5 Financial Resources..... 6
  - 1.6 Work Plan and Implementation..... 10
- 2.0 Introduction..... 12
  - 2.1 Purpose..... 12
  - 2.2 Federal Transportation Requirements..... 12
  - 2.3 Planning Area..... 13
- 3.0 Planning Process..... 14
  - 3.1 Plan Development..... 14
  - 3.2 Process Overview..... 15
  - 3.3 Community Outreach..... 16
  - 3.4 2019 Market Research Study..... 18
  - 3.5 Other Guiding Transportation Plans..... 24
- 4.0 Guiding Principles, Goals, Objectives, and Planning Factors..... 26
  - 4.1 Guiding Principles, Goals and Objectives..... 26
  - 4.2 FAST Act Planning Factors..... 28
- 5.0 Demographics and Growth Trends..... 30





5.1 Existing Population trends.....	30
5.2 Future Growth Projections.....	32
5.3 Employment Trends.....	33
5.4 Demographic Trends.....	34
5.5 Housing Trends.....	38
5.6 Travel Characteristics.....	38
6.0 Current Transportation System.....	40
6.1 Roadway system.....	41
6.2 Roadway Safety.....	41
6.3 Bicycle System.....	43
6.4 Pedestrian System.....	45
6.5 Public Transit System.....	46
6.6 Freight & Aviation.....	49
7.0 System Plans and Project Prioritization.....	53
7.1 Process Overview.....	53
7.2 Mode-Specific Projects and Strategies.....	53
7.3 Access & Connectivity.....	63
7.4 Emerging Issues and Trends.....	64
7.5 Prioritization Methodology.....	67
7.6 Roadway Project Prioritization Results.....	70
8.0 Financial Resources and Implementation.....	90
8.1 Financial Resource Assessment.....	90
8.2 Financially Constrained Plan.....	95
8.3 Bicycle and Pedestrian Projects.....	113
8.4 Alternative Funding Options.....	114
9.0 Work Plan and Implementation.....	118
9.1 COVID-19 (coronavirus).....	118
9.2 Highway Related Studies.....	119
9.3 Emerging Transportation technology.....	120
9.4 Regional Transportation Research and Modeling.....	120



9.5 Multimodal Studies..... 121

9.6 Transit Related Studies..... 122

9.7 Bicycle and Pedestrian Related Studies..... 122

9.8 Freight Related Studies..... 123

9.9 Other Planning studies..... 123

## LIST OF FIGURES

Figure 1: Sioux Falls MPO Planning Area. Source: Sioux Falls MPO..... 13

Figure 2: LRTP Process Committee Structure..... 14

Figure 3: Most Important Aspects of the Transportation System..... 21

Figure 4: Current Emerging Transportation Issues..... 21

Figure 5: Satisfaction with the Existing System..... 23

Figure 6: Transportation Priorities..... 24

Figure 7: Sioux Falls City and MPO Population Growth. Source: ACS Population Data..... 30

Figure 8: Average Annual Growth Rates in the Sioux Falls Area. Source: ACS Population Data..... 31

Figure 9: Historical Growth Rates for Sioux Falls MPO Area Communities. Source: ACS Population Data..... 31

Figure 10: Growth Areas Within the Sioux Falls MPO Area. Source: Sioux Falls MPO..... 32

Figure 11: Total Employment in the Sioux Falls MPO Area. Source: Census LEHD data..... 33

Figure 12: Changing Demographics in the Sioux Falls MPO Area..... 34

Figure 13: Race and Ethnicity in the Sioux Falls MPO Area (2017)..... 35

Figure 14: Income Distribution in the Sioux Falls MPO Area..... 36

Figure 15: Median Age in the Sioux Falls MPO Area..... 37

Figure 16: Transportation Mode Choice (2019)..... 38

Figure 17: Average Commute Times for Sioux Falls and MPO Area Residents..... 39

Figure 18: Work locations, Census On the Map 2016..... 39

Figure 19: Home locations, Census On the Map 2016..... 39

Figure 20: Roadway Functional Classes Throughout the MPO Area..... 40

Figure 21: Crash Density Across the Sioux Falls MPO Area (2013-2018)..... 42

Figure 22: Existing and Future Bicycle Facilities in the Sioux Falls MPO Area..... 44

Figure 23: City of Sioux Falls Online Sidewalk Tool. Source: City of Sioux Falls..... 45

Figure 24: Existing Transit Routes in the City of Sioux Falls. Source: City of Sioux Falls..... 47

Figure 25: Influential Factors for Residents Choosing Public Transportation..... 48

Figure 26: Freight Routes in the MPO Area. Source: SDDOT and City of Sioux Falls..... 50

Figure 27: Brandon Growth Area Projects..... 73

Figure 28: Harrisburg Growth Area Projects..... 76

Figure 29: Hartford Growth Area Projects..... 78

Figure 30: Sioux Falls Growth Area Projects.....	82
Figure 31: Tea Growth Area Projects.....	84
Figure 32: Lincoln County Growth Area Projects.....	87
Figure 33: Minnehaha County Growth Area Projects.....	89
Figure 34: Funded and Unfunded MPO Projects.....	99

## LIST OF TABLES

Table 1: MAP-21/FAST Act Relationship to Go Sioux Falls 2045 LRTP Goals.....	28
Table 2: Population and Employment Growth Projections.....	33
Table 3: Employment Projections in the Sioux Falls MPO Area.....	34
Table 4: Sioux Falls MPO Area Household Income.....	36
Table 5: Passengers Enplaned.....	51
Table 6: Freight Activity through the Sioux Falls Regional Airport.....	51
Table 7 Roadway Capital Revenues Through 2045.....	91
Table 8 Roadway Maintenance Costs Through 2045.....	92
Table 9 Bicycle and Pedestrian Revenue.....	93
Table 10 Sioux Falls MPO 2021-2024 Transportation Improvement Program Projects.....	95
Table 11 Sioux Falls Capital Improvement Program 2021-2025: Highway and Street Projects (selected projects). 97	

## LIST OF APPENDICES

- A. Methods and Assumptions Document
- B. Community Outreach Methods and Results
  - a. Public Participation Plan
  - b. January 2020 Open House Summary
- C. Emerging Transportation Technology
- D. Sioux Falls MPO 2020 System Performance Report
- E. Project Sheets
- F. Travel Demand Model Update
- G. Environmental Review & Consultation



## LIST OF ACRONYMS

<b>BUILD Grant</b>	Better Utilizing Investment to Leverage Development Grant
<b>CAC</b>	Citizen Advisory Committee
<b>EPDO</b>	Equivalent Property Damage Only
<b>FAA</b>	Federal Aviation Administration
<b>FAST Act</b>	Fixing America's Surface Transportation Act
<b>FHWA</b>	Federal Highway Administration
<b>FTA</b>	Federal Transit Administration
<b>LOS</b>	Level of Service
<b>L RTP</b>	Long-Range Transportation Plan
<b>MPA</b>	Metropolitan Planning Area
<b>MPO</b>	Metropolitan Planning Organization
<b>PAL</b>	Passenger Activity Level
<b>PDO</b>	Property Damage Only
<b>PPP</b>	Public Participation Plan
<b>SAT</b>	Study Advisory Team
<b>SDDOT</b>	South Dakota Department of Transportation
<b>SECOG</b>	South Eastern Council of Governments
<b>TAC</b>	Technical Advisory Committee
<b>TSA</b>	Transportation Security Administration
<b>UDC</b>	Urbanized Development Commission



## 1.0 EXECUTIVE SUMMARY

The Sioux Falls Metropolitan Planning Organization (MPO) Long-Range Transportation Plan (LRTP) is designed to guide transportation planning activities by setting forth direction and strategies to help shape the region's transportation network through the year 2045. It considers all modes of transportation including driving, walking, bicycling, transit, rail, and air to set future priorities. The Go Sioux Falls 2045 LRTP satisfies the requirements of the federal Fixing America's Surface Transportation (FAST) Act, addresses changes in the transportation system and considers the MPO's current goals and objectives.

This plan applies to all areas within the Sioux Falls MPO planning area (encompassing portions of Lincoln and Minnehaha Counties, and the cities of Brandon, Crooks, Harrisburg, Hartford, Sioux Falls, and Tea).

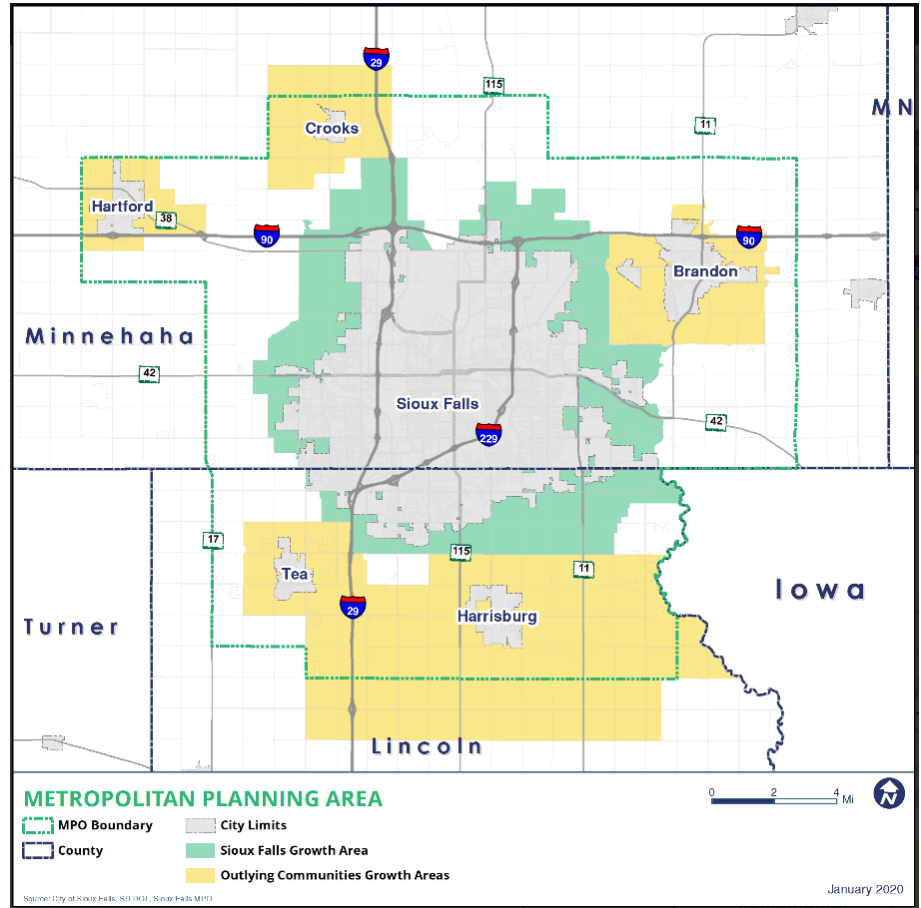


Figure 1: Sioux Falls MPO Planning Area

### Federal Transportation Requirements

The Moving Ahead for Progress in the 21st Century Act (MAP-21), signed into law on July 6, 2012, established a performance-based planning program to guide investment of Federal transportation funds. The Fixing America's Surface Transportation Act (FAST Act), signed into law on December 4, 2015, retained and advanced MAP-21 goals. Ten FAST Act Federal Planning Factors are given special focus within the MPO's LRTP.

# WHAT IS AN LRTP?

A Long-Range Transportation Plan sets forth a direction and strategies to help shape a region's transportation network.

## WHAT'S AN MPO?

Federal law requires that all urbanized areas in the United States with populations of more than 50,000 persons establish Metropolitan Planning Organizations (MPO) responsible for area transportation planning and programming activities.

It considers all modes



Updated every  
**5 YEARS**



The last LRTP was completed in **2015**. It's time to update!

**PUBLIC INPUT**



into the planning process is essential to plan development.



**TRANSPORTATION FUNDING and PROJECT PRIORITIZATION**

are considered in the plan's implementation element.



The process is being led by the **Sioux Falls MPO** with guidance from stakeholder organizations and municipalities.

Study Advisory Team, Citizens Advisory Committee, Technical Advisory Committee, Urbanized Development Commission

### 1.1 PLANNING PROCESS

The Go Sioux Falls 2045 LRTP represents a collaborative effort to refine the vision of the region's transportation network and identify a coordinated set of multimodal projects to achieve it. The plan addresses existing issues and anticipated concerns for congestion, safety, security, access, and connectivity. The planning process involved collaboration between multiple jurisdictions, key stakeholders, and citizens, and was designed to create an open dialogue among the larger community.

The process was developed to answer four key driving questions:

1. How does the multimodal system perform today?
2. What is the vision for the multimodal system by 2045?
3. Which projects will help to achieve this vision?
4. How should the region allocate resources through 2045?

Throughout the 12-month planning process, public outreach was conducted using a variety of methods. Notably, this planning process occurred during the 2020 COVID-19 pandemic, during which public gatherings and events were discouraged in most parts of the country, including the Sioux Falls region. In response to this unforeseen challenge, the project team developed online engagement materials and conducted webinars to gather feedback.



**2019 MARKET RESEARCH STUDY**

As part of the community outreach efforts, the Sioux Falls MPO conducted a comprehensive market research study to gather input from the community about transportation planning issues. The results of the study were used to help identify priorities for the Go Sioux Falls 2045 LRTP. Components of the study included survey of residents, employers, and traditionally underserved populations, interviews with stakeholders, and focus groups.

# SUMMARY OF MAJOR FINDINGS

Ratings of the region’s transportation system have **declined**. Some of the biggest decreases were related to:



- Street maintenance
- Traffic congestion
- Traffic safety near schools

Usage of alternative modes of transportation (carpooling, biking, walking, and motorcycle use) **has increased significantly**



Two-thirds of residents think the amount spent on transportation **should be increased**. The types of projects they are most willing to fund with their taxes are:



- IMPROVING EAST-WEST ROADS IN SIOUX FALLS
- IMPROVING NORTH-SOUTH ROADS IN SIOUX FALLS
- IMPROVING THE TIMING OF TRAFFIC LIGHTS

Roadways that residents think should be the **top priorities for improvement**:



- 41st St
- Minnesota Ave/SD 115
- 26th St

## 1.2 GUIDING PRINCIPLES, GOALS, OBJECTIVES, AND PLANNING FACTORS

The Guiding Principles, Goals, and Objectives for the Go Sioux Falls 2045 LRTP are the primary drivers for the entire planning process. They establish the overall direction for the plan and serve as a resource when developing and prioritizing potential projects within the region. The goals were established to respond to Federal Planning Factors required to be included in all long-range transportation plans. Additional explanation of the goals, objectives and planning factors is in Chapter 4 of the report.

*Goal A. Operational Efficiency:* Create a more efficient transportation system through system management and operational improvements as the region continues to grow.

*Goal B. Connectivity and Economic Vitality:* Support regional economic vitality through a transportation network that serves inter- and intra-regional accessibility and mobility needs for both people and goods.

*Goal C. Livability and Environmental Sustainability:* Preserve the social and environmental character of the region through an integrated approach that incorporates both transportation strategies and land use considerations.

*Goal D. Multimodal Integration:* Provide an integrated transportation network that encourages use of multiple modes by offering travel choices that are accessible to all segments of the region's population.

*Goal E. Safety and Security:* Promote a safe and secure transportation network through crash reduction, enhanced reliability and predictability, and improved emergency coordination.

*Goal F. System Preservation:* Extend the life of the transportation system by fostering a sustainable system that addresses the long-term needs of the region.

### Guiding Principles

- 1) Enhancing people's ability to travel throughout the Sioux Falls area
- 2) Ensuring that residents can safely travel in the region
- 3) Ensuring that the capacity of the region's transportation system can accommodate projected increases in population
- 4) Developing and encouraging the use of alternative modes of transportation, such as public transportation, biking, walking, and ride-sharing



### 1.3 DEMOGRAPHICS AND GROWTH TRENDS

To establish a starting point, the project team reviewed the region’s current transportation network, as well as identified key demographic factors that will guide growth and transportation need over the coming decades. The Sioux Falls metro area is a growing regional hub for transportation, health care, employment, retail, and services. Understanding trends in land use, employment, and population growth help inform current transportation needs, as well as identify future challenges and trends in the way transportation patterns are changing throughout the region.

Key trends identified include:

- The region’s population is projected to grow at a rate of 2.9% annually over the next 25 years (through 2045). The communities of Tea, Hartford and Harrisburg are slated to grow at the highest rate over the next 25 years, with Harrisburg projecting to more than triple its population.
- Regional Employment is projected to increase as the population continues to expand.
- Residential locations are heavily concentrated in the southern part of the metro area, while jobs are concentrated in the north part of Sioux Falls. This spatial mismatch creates a heavy flow of commute traffic into a concentrated area each day.

Community	Population				
	<i>2018-45 Growth</i>	<i>2008</i>	<i>2018</i>	<i>2045</i>	<i>New Residents</i>
Sioux Falls	47%	151,000	183,200	270,000	87,000
Brandon	67%	9,000	10,629	17,800	7,000
Crooks	45%	1,263	1,447	2,100	650
Hartford	159%	2,680	3,381	8,740	5,400
Tea	143%	3,600	5,397	13,119	7,700
Harrisburg	226%	3,700	6,482	21,153	14,700

### 1.4 PROJECT PRIORITIZATION

One of the key elements of the FAST Act is the focus on performance-based planning, both in terms of prioritization of projects within the Long-Range Transportation Plan and the ongoing review of regional transportation goals. The Go Sioux Falls 2045 LRTP makes use of a comprehensive multimodal project prioritization process in order to evaluate the benefits to all users of the system for every project. The projects that will serve a variety of users have the greatest potential to score higher within the evaluation framework developed, and therefore all roadway projects were advanced through the prioritization process. Dedicated bicycle and pedestrian projects were evaluated separately, as these often do not compete with roadway projects for funding.

Based on the Guiding Principles and Goals, the MPO developed a set of prioritization measures to allow for the comparison of projects. Each measure was developed to be objective and easily replicated in order to remove subjectivity from the analysis and allow for a standardized methodology that could be applied to potential future projects.

In order to ensure the needs and priorities of the MPO's rural areas were considered, roadway projects were broken down into "Urban" (those within defined city/town boundaries) and "Rural" (those outside of city boundaries but within the MPO area). Bike/Ped projects were kept as one singular list and were weighted consistently regardless of their location. The weighting applied to each group of projects is shown below:

Context	Safety & Security	Operational Efficiency	System Preservation	Livability & Environmental Sustainability	Multimodal Integration	Bonus Points
Urban Roadway	20	35	10	20	15	5
Rural Roadway	40	20	20	10	10	5
Bike/Ped	20	35	10	20	15	5

Each community within the MPO submitted a list of projects for potential inclusion in the regional plan and the results of the evaluation process are broken out by municipality. Projects within each community were assigned High, Mid, or Low priority based on their ranking within the community's projects. Full project lists are available in Chapter 7.

## 1.5 FINANCIAL RESOURCES

### FINANCIAL RESOURCE ASSESSMENT

Revenue assumptions, probable cost estimates, and financial strategies along with the detailed methodology used to derive these values were developed for the Sioux Falls 2045 LRTP.

**Capital Roadway Revenues** were compiled for each jurisdiction in the Sioux Falls MPO area. Over the life of the LRTP, the estimated roadway capital revenues for the Sioux Falls MPO region total approximately \$2.8 billion, or approximately \$550-600 million per 5-year time band.

Agency	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	Total
Brandon	\$5,792,958	\$6,062,079	\$6,445,236	\$6,849,123	\$7,274,416	\$32,423,811
Harrisburg	\$3,100,000	\$3,292,070	\$3,933,600	\$4,689,507	\$5,579,277	\$20,594,455
Hartford	\$4,955,000	\$5,151,000	\$5,493,000	\$5,855,000	\$6,238,000	\$27,692,000
Tea	\$12,602,000	\$3,394,443	\$3,557,211	\$3,722,195	\$3,888,488	\$14,562,338
Crooks	\$631,000	\$654,000	\$694,000	\$736,000	\$780,000	\$3,495,000

Lincoln County*	\$5,509,000	\$4,564,000	\$4,096,000	\$3,506,000	\$2,776,000	\$20,451,000
Minnehaha County*	\$13,641,361	\$12,134,592	\$10,341,843	\$8,211,199	\$5,699,778	\$50,028,776
SDDOT	\$398,541,518	\$375,734,029	\$315,368,737	\$285,507,702	\$295,924,252	\$1,671,076,238
Sioux Falls	\$150,740,000	\$177,147,067	\$200,663,417	\$227,925,312	\$259,529,319	\$1,016,005,115
<b>Total</b>	<b>\$595,512,837</b>	<b>\$588,133,280</b>	<b>\$550,593,044</b>	<b>\$547,002,038</b>	<b>\$587,689,530</b>	<b>\$2,856,328,733</b>

\*Capital revenues are estimated for the whole county, though only a portion of the county is within the MPO area. The amount expended within the MPO area is at the discretion of the respective County Highway Department and County Commission.

**Roadway Maintenance Funding** in the Sioux Falls MPO region primarily is used for roadway maintenance and preservation, though on-road pedestrian and bicycle facilities also are maintained with these funds. Through the 2045 horizon year of the LRTP, there is estimated to be approximately \$1.8 billion allocated throughout the region for maintenance and preservation.

Agency	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	Total
Brandon	\$3,000,000	\$3,185,000	\$3,516,000	\$3,882,000	\$4,286,000	\$17,869,000
Harrisburg	\$2,000,000	\$2,123,248	\$2,344,237	\$2,588,227	\$2,857,612	\$11,913,327
Hartford	\$1,994,000	\$2,117,000	\$2,337,000	\$2,581,000	\$2,849,000	\$11,878,000
Tea	\$3,000,000	\$3,715,684	\$4,102,416	\$4,529,398	\$5,000,822	\$20,348,000
Crooks	\$375,000	\$398,000	\$440,000	\$485,000	\$536,000	\$2,234,000
Lincoln County*	\$27,755,000	\$30,644,000	\$33,833,000	\$37,355,000	\$41,243,000	\$170,830,000
Minnehaha County*	\$16,100,000	\$17,800,000	\$19,700,000	\$21,700,000	\$24,000,000	\$99,300,000
SDDOT	\$8,126,482	\$36,031,838	\$105,372,729	\$144,903,034	\$144,903,034	\$439,337,117
Sioux Falls	\$169,500,000	\$185,379,095	\$214,905,179	\$249,134,002	\$288,134,002	\$1,017,732,866
<b>Total</b>	<b>\$231,850,482</b>	<b>\$281,393,865</b>	<b>\$386,550,561</b>	<b>\$467,157,661</b>	<b>\$513,809,470</b>	<b>\$1,791,442,310</b>

\* Maintenance costs are estimated for the whole county, though only a portion of the county is within the MPO area. The amount expended within the MPO area is at the discretion of the respective County Highway Department and County Commission.

**Bicycle and Pedestrian Funding** for the combination of on-street and off-street independent bicycle and pedestrian projects is often through the successful application for Transportation Alternatives (TA) funding. Moving forward, approximately \$230,000 per year of TA funds have been assumed to come to the region, increasing with inflation past 2021. The City of Sioux Falls does not typically receive TA funds. Instead, independent on-road bicycle and pedestrian projects are most often funded through the City's CIP. That funding is considered separately from the LRTP.

Fiscal Year	SDDOTTA	Sioux Falls	Total
2021-2025	\$1,230,900	\$2,500,000	\$3,731,000
2026-2030	\$1,427,000	\$2,374,200	\$2,801,200
2031-2035	\$1,654,300	\$3,169,700	\$4,824,000
2036-2040	\$1,917,800	\$3,674,500	\$5,592,300
2041-2045	\$2,190,400	\$4,259,800	\$6,450,235
<b>Total</b>	<b>\$8,420,400</b>	<b>\$15,978,200</b>	<b>\$23,398,735</b>

**Public Transportation Funding** takes the form of federal, state, and local sources.

- The City of Sioux Falls (through Sioux Area Metro) identified approximately \$335 million available for capital and operations & maintenance (O&M) expenditures between 2021-2045
- The Inter-Lakes Community Action Partnership (ICAP) operates the City of Hartford’s transit system. ICAP identified approximately \$2 million available for capital and operations & maintenance (O&M) expenditures between 2021-2045
- The City of Brandon identified approximately \$6 million available for capital and operations & maintenance (O&M) expenditures between 2021-2045

**FINANCIALLY CONSTRAINED PLAN, 2025-2045**

To develop a financially constrained list of projects, the project prioritization results were combined with the anticipated revenues available. This produced a clear picture of when each project might reasonably expect to be funded, the overall funding needs in each community, and the region as a whole. This constrained list of projects considers the community’s existing committed projects, the amount of funding anticipated to be available for 2025-2045 (the time period outside the 2021-2024 Transportation Improvement Program), and the total needs identified. These project lists were then used to identify the total amount of unmet needs based on current funding assumptions. *(Note: SDDOT capital projects were not included in this list to focus on the total local community shortage for the time frame.)*

Community	Available Capital Funding	Identified Needs	Surplus/Shortfall
Brandon	\$27.8 M	\$81.6 M	<b>-\$64.2 M</b>
Harrisburg	\$17.5 M	\$14.4 M	<b>\$3.1 M</b>
Hartford	\$23.7 M	\$46.5 M	<b>-\$27.2 M</b>
Tea	\$14.6 M	\$13.6 M	<b>\$0.9 M</b>
Crooks	\$2.9 M	-	<b>\$2.9 M</b>
Lincoln County	\$15.9 M	\$185 M	<b>-\$169 M</b>



Minnehaha County	\$39.0 M	\$43.1 M	-\$7 M
Sioux Falls	\$993 M	\$1,059 M	-\$211 M
Bicycle and Pedestrian Projects	\$7.5 M	\$37.2 M	-\$30 M
<b>Total</b>	<b>\$1,039 M</b>	<b>\$1,595 M</b>	<b>-\$501 M</b>

### BICYCLE AND PEDESTRIAN PROJECTS

The region identified approximately **\$7.2 million** available for bicycle and pedestrian capital projects between 2021-2045 and approximately **\$37 million** in capital needs for bicycle and pedestrian projects, leaving the area with approximately **\$30.1 million** in unmet needs. Sioux Falls bicycle and pedestrian projects were not prioritized through this process, as the 2015 Sioux Falls Bike Plan has identified priority improvements.

A map of the regional projects expected to be reasonably funded, and those expected to go unfunded based on current conditions is shown on the next page.

#### Bridging the Funding Gap

Based on the needs and funding identified in this Plan, approximately **\$500 million** of necessary improvements will not be funded between 2025 and 2045. This shortfall is felt most acutely in Lincoln County, Brandon, and Hartford. These communities are able to fund less than 50% of their needs over the life of this plan. Throughout the region, maintenance and construction costs are rising faster than revenues, meaning this deficit is expected to grow unless alternative funding is obtained.

A list of funding options was developed for this plan which may provide high utility to the Sioux Falls region, some of which are within local control to implement and manage, while others have substantial legislative hurdles to clear. Not all are new or unknown to the region, but their use may be increased if revenue from current sources cannot meet the needs of the region.

## 1.6 WORK PLAN AND IMPLEMENTATION

A list of projects that will contribute to the work of the Sioux Falls Area MPO and will likely require coordination among agencies is presented in this plan. Ongoing work items that are regularly conducted by the Sioux Falls MPO are not included here, such as annual development of the Transportation Improvement Program and Unified Planning Work Program. The next scheduled update of the Sioux Falls LRTP, as required by federal law, is due in 2025.

### Impacts of Covid-19

In spring 2020, as this plan was being drafted for public comment, the COVID-19 (coronavirus) outbreak was having intense impacts on society around the world and in the Sioux Falls region. Transportation related behavior and finances were profoundly impacted, at least in the short term. It is too soon to understand fully those short-term impacts, and any possible longer-term impacts to transportation behavior and finances and how any of these changes may impact different population groups. This plan does not reflect the results of these changes and so several work program items are discussed in light of Covid-19 impacts so that they can be considered in the future in terms of behavior and how that change in behavior affects transportation finances and safety.



# SIoux FALLS

Metropolitan Planning Organization  
2045 Long Range Transportation Plan

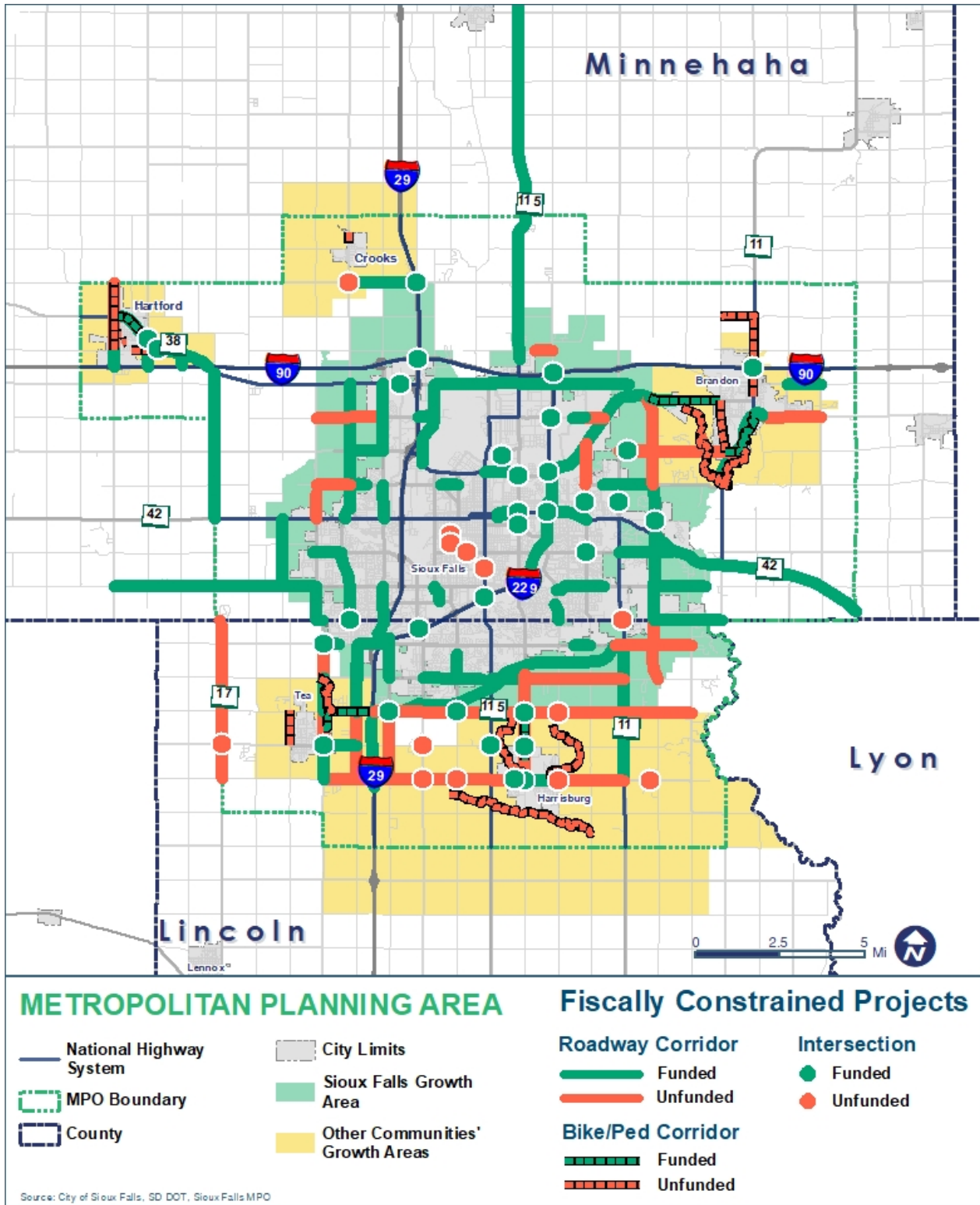


Figure 2 Funded and Unfunded Projects in the Sioux Falls MPO Area

## 2.0 INTRODUCTION

### 2.1 PURPOSE

The Sioux Falls Metropolitan Planning Organization (MPO) Long-Range Transportation Plan (LRTP) is designed to guide transportation planning activities by setting forth direction and strategies to help shape the region's transportation network through the year 2045. It considers all modes of transportation including driving, walking, bicycling, transit, rail, and air to help set priorities for the future. LRTPs are required to be updated every five years, and the current version of the Sioux Falls LRTP, Go Sioux Falls 2040, was adopted by the Urbanized Development Commission (UDC) in November 2015. The Go Sioux Falls 2045 LRTP has been developed to satisfy the requirements of the federal Fixing America's Surface Transportation (FAST) Act, which was signed into law on December 4, 2015. The plan also addresses changes in the transportation system and considers the MPO's current goals and objectives.

### 2.2 FEDERAL TRANSPORTATION REQUIREMENTS

The Moving Ahead for Progress in the 21st Century Act (MAP-21), signed into law on July 6, 2012, established a performance-based planning program intended to guide investment of Federal transportation funds towards the realization of national transportation goals.<sup>1</sup> The set of National Goals was retained and advanced through the next major federal transportation law, the Fixing America's Surface Transportation Act (FAST Act), which was signed into law on December 4, 2015, and will direct and fund transportation programs through September 2020. Under the FAST Act, two additional Planning Factors were added to the set of eight Federal Planning Factors. The full list of Federal Planning Factors<sup>2</sup>, which are given special focus within the MPO's LRTP planning program, are listed below:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency
2. Increase the safety of the transportation system for motorized and non-motorized users
3. Increase the security of the transportation system for motorized and non-motorized users
4. Increase the accessibility and mobility of people and for freight
5. Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
7. Promote efficient system management and operation
8. Emphasize the preservation of the existing transportation system

---

<sup>1</sup> §§1106, 1112-1113, 1201-1203; 23 USC 119, 134-135, 148-150

<sup>2</sup> 23 USC 134(h)(1)



9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation (*New Planning Factor established under the FAST Act*)
10. Enhance travel and tourism (*New Planning Factor established under the FAST Act*)

### 2.3 PLANNING AREA

This plan applies to all areas within the Sioux Falls MPO planning area, as illustrated on Figure 3. The planning area encompasses portions of Lincoln and Minnehaha Counties, and the cities of Brandon, Crooks, Harrisburg, Hartford, Sioux Falls, and Tea. All long-term growth areas for each municipality are included to detail the projected areas that will see the most significant growth during the plan period.

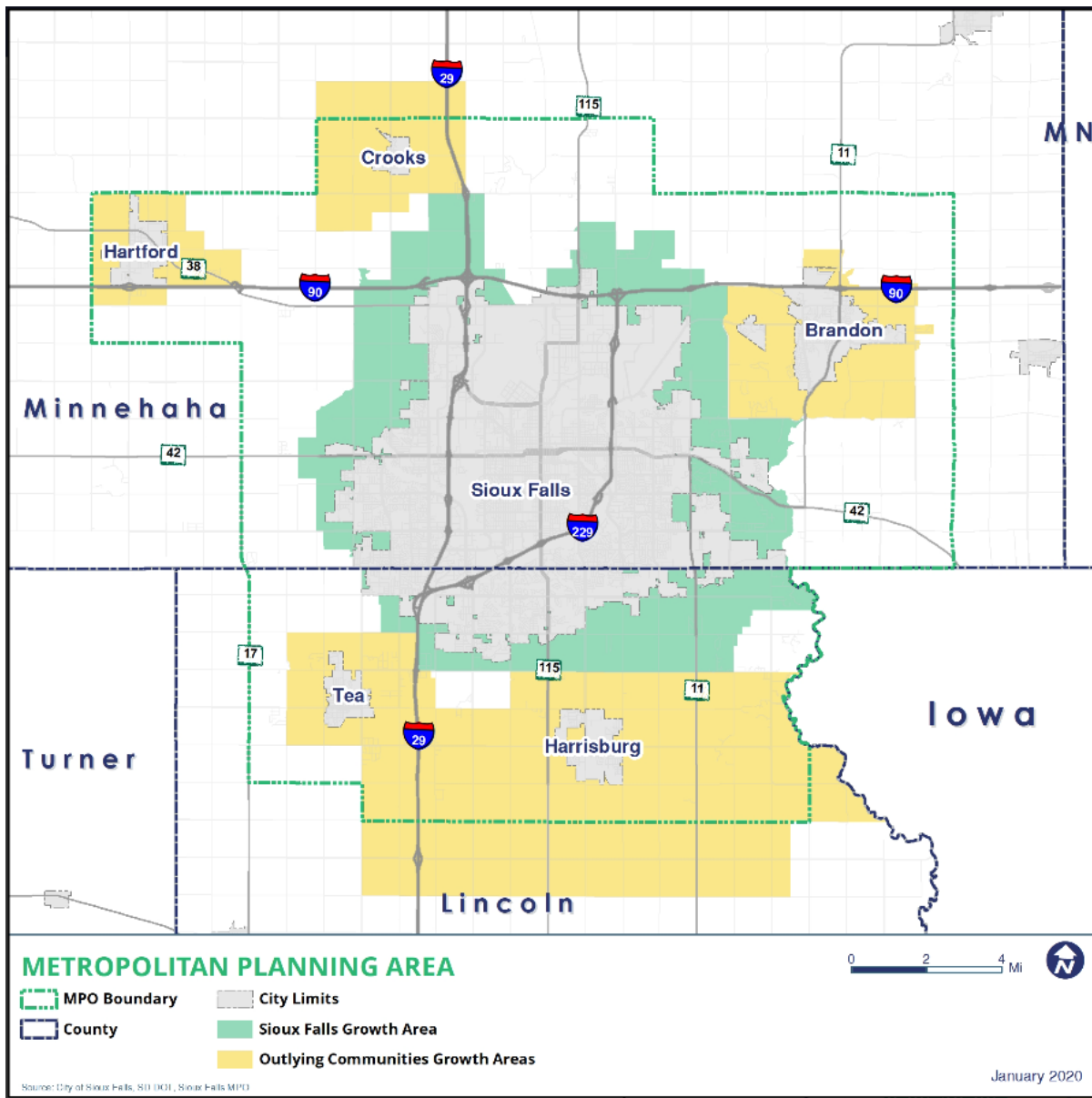


Figure 3: Sioux Falls MPO Planning Area. Source: Sioux Falls MPO

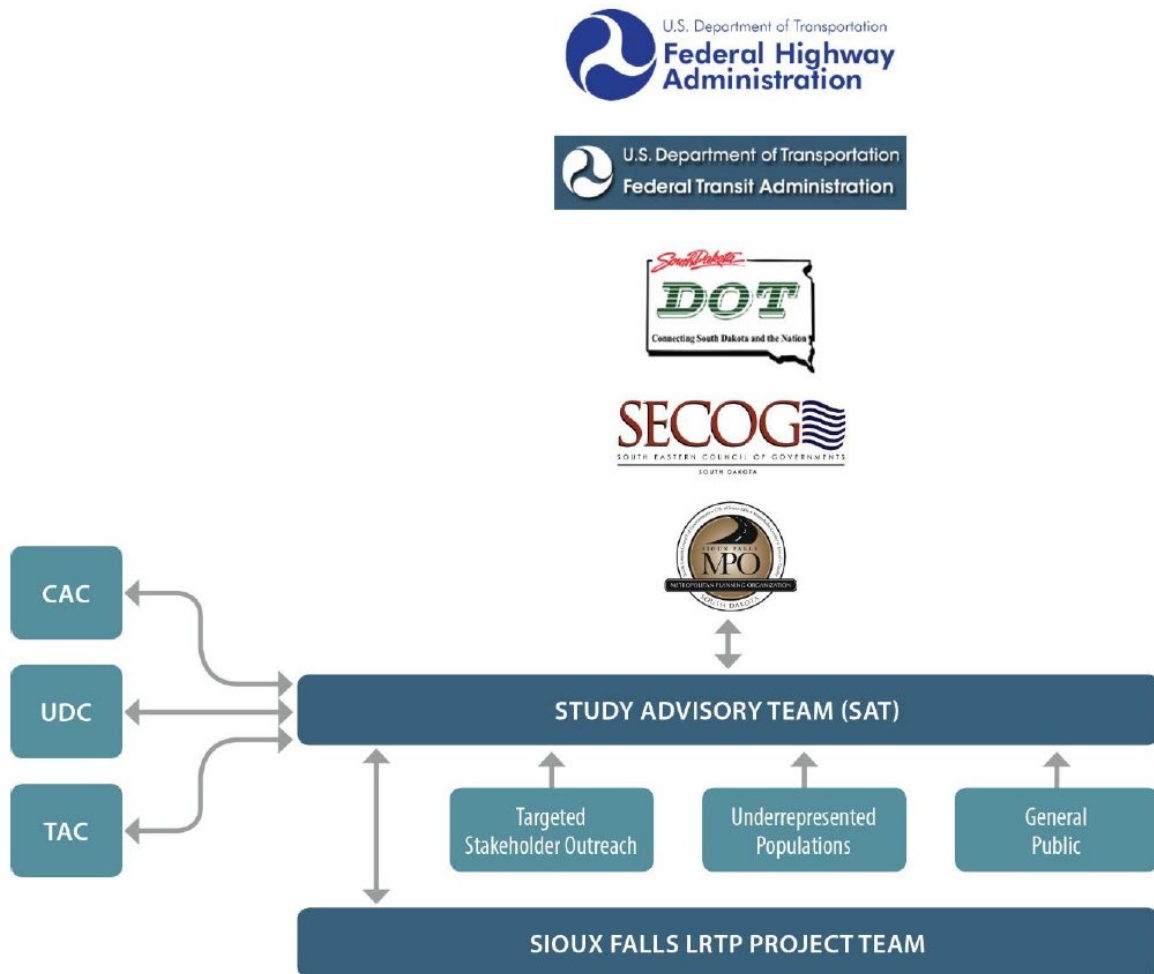
## 3.0 PLANNING PROCESS

### 3.1 PLAN DEVELOPMENT

The Go Sioux Falls 2045 LRTP was cooperatively developed through the Sioux Falls Metropolitan Transportation Planning Committees, which consist of staff, officials, and residents from the Cities of Brandon, Crooks, Harrisburg, Hartford, Sioux Falls, and Tea; Federal Highway Administration (FHWA); Lincoln County; Minnehaha County; the South Dakota Department of Transportation (SDDOT); and the South Eastern Council of Governments (SECOG).

The development of the LRTP was directed by the Study Advisory Team (SAT), with document production and technical analysis led by a Project Team consisting of MPO staff and consultant support. The SAT includes several members of the Citizen Advisory Committee and the Technical Advisory Committee. At multiple times throughout the process, the SAT provided input and additional direction to the project team. The Urbanized Development Commission (UDC) adopts the LRTP on behalf of the MPO. The organization is shown in Figure 4.

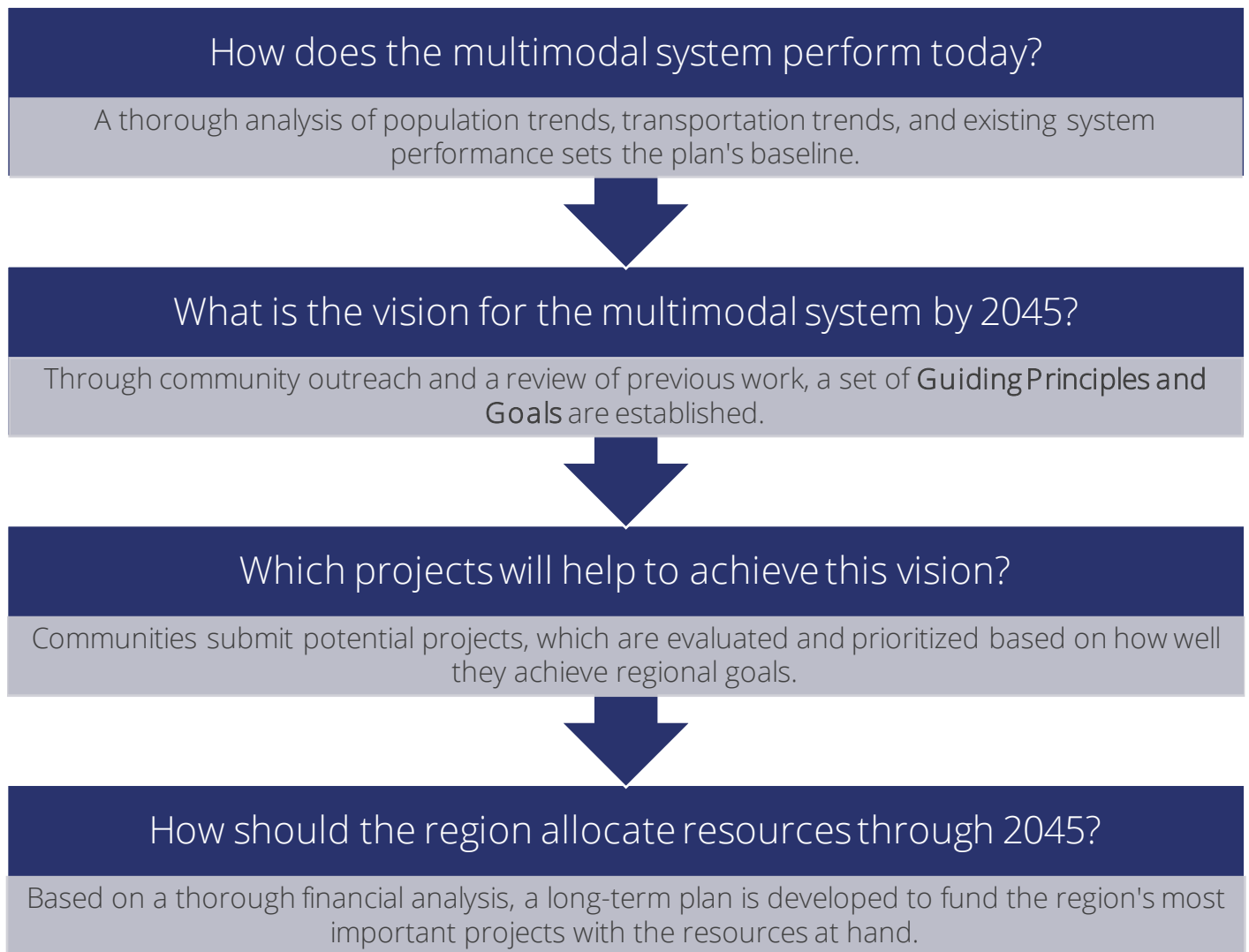
Figure 4: LRTP Process Committee Structure



### 3.2 PROCESS OVERVIEW

The Go Sioux Falls 2045 LRTP represents a collaborative effort to refine the vision of the region's transportation network and identify a coordinated set of multimodal projects to achieve it. The plan addresses existing issues and anticipated concerns for congestion, safety, access, and connectivity. The planning process involved collaboration between multiple jurisdictions, key stakeholders, and citizens, and was designed to create an open dialogue among the larger community.

The process was developed to answer four key driving questions, as show below. Each of these steps will be covered in more detail throughout the document.



The outcome of this process is a **fiscally constrained** plan for the region, which outlines a set of projects and investments that can be reasonably funded through 2045 based on current financial assumptions. The list of projects developed through this process identifies priority projects that should be put forward for consideration

in the Statewide Transportation Improvement Program (STIP), and through federal grants, which are the main vehicle for implementing projects of regional importance.

### 3.3 COMMUNITY OUTREACH

The overall intent of the public engagement process was to engage with audiences in a way that is open and respectful, while collecting input that is useful to the development of the plan. The objective was to educate and inform regional stakeholders on the LRTP process and its importance, provide multiple, flexible opportunities to provide feedback, enable stakeholders to take an active role in shaping the LRTP, and to actively incorporate stakeholder input to guide the ultimate recommendations. Developing a sense of ownership among stakeholders will be important to the prospects for successful implementation over time.

The goals and objectives of the public engagement process were established at the onset of the planning process to drive the overall development of the plan. The goals were as follows:

1. Facilitate active and collaborative participation by local units of government.
  - Give a voice to MPO communities, governments, neighborhoods, persons with disabilities, underserved populations, education, development groups, and businesses
  - Utilize the public participation process to keep elected officials informed
2. Engage stakeholders with the study process and the process of decision-making
  - Build trust between stakeholders and decision-makers through consistent, clear communication
  - Keep key stakeholders engaged throughout the entire process and allow them to see the results of their participation
  - Educate and inform on the importance of the LRTP process and its outcomes

## Regional Stakeholders

The Public Participation Plan outlined a series of key groups throughout the region whose interests were considered throughout the process:

- Local City Staff and City Council members
- Local County staff and County Commission members
- South Dakota Department of Transportation
- Federal Highway Administration
- Federal Transit Administration
- Business owners and Business organizations
- Property developers
- Development/Foundation Groups
- Housing and finance agencies
- Local residents and property owners
- Area employees
- Transit users
- Auto users/commuters
- Bicyclists and pedestrians
- Police/Fire/Emergency Services
- Citizen groups and community groups (including elderly)
- Neighborhood organizations
- Underserved populations and respective organizations
- Persons with disabilities and respective organizations
- Agriculture organizations
- Commercial transportation organizations
- Visitors
- Area legislators

- Develop a sense of ownership among stakeholders to help advance implementation in the coming years
3. Collect public input to shape the LRTP final document
    - Make engagement opportunities meaningful
    - Engage appropriate audiences, including those which are traditionally underserved and underrepresented
  4. Build upon the results of previous engagement
    - Engage regional stakeholders primarily around the topics of project identification and prioritization criteria

### **METHODS AND ACTIVITIES**

To ensure a quality engagement process, a Public Participation Plan (PPP) was developed at the outset and approved by the UDC in March 2020. This plan was used to guide engagement activities during the 12-month LRTP development process. The plan sought to provide a variety of ways to engage with regional stakeholders, community leaders, and the general public. The PPP outlined a varied series of engagement activities designed to collect information on the region's priorities, challenges, and on specific projects. The information collected was used to inform the plan's overall goals, as well as to refine the project prioritization and final plan to ensure it aligned with the region's expectations.

Notably, this planning process occurred during the 2020 COVID-19 pandemic, during which public gatherings and events were banned in most parts of the country, including the Sioux Falls region. In response to this unforeseen challenge, the project team developed online engagement materials for viewing by the general public, as well as conducted webinars with the SAT to gather feedback. Targeted stakeholder interviews were conducted via telephone, and the project website was continually updated to provide up-to-date information.

Throughout the 12-month planning process, public outreach was conducted using a variety of methods, including:

- The 2019 Sioux Falls Metropolitan Area LRTP Market Research Study (see section 3.3.3)
- Open houses (in-person and virtual)
- Public hearings prior to plan adoption
- Stakeholder interviews
- Online questionnaires
- Podcast and video
- Social media
- A project website

The information gathered was integral in developing the goals, objectives, and recommendations of the LRTP.

### *Historically Underserved and Underrepresented Populations*

It was a specific goal of Go Sioux Falls 2045 to actively engage stakeholders that have traditionally been underserved and underrepresented in planning processes. The PPP developed at the beginning of the L RTP planning process specifically identified four target populations: new immigrants, minority population, low-income persons, and persons with disabilities.

The 2019 Sioux Falls Metropolitan Area L RTP Market Research Study provided valuable input from populations in the above categories, and targeted outreach meetings conducted during the development of the L RTP built on these results to gather additional input and feedback from these groups. Specific outreach methods used to engage these populations include:

- **Online questionnaires**, providing flexibility for those unable to attend traditional meetings
- **Documents posted to the project website**, providing flexibility for those unable to attend traditional meetings
- **Podcasts and videos**, increasing accessibility for those utilizing screen readers, translators and/or closed captions
- **Stakeholder interviews**<sup>3</sup> where representatives of underrepresented communities were specifically invited to take part in small group discussions

### **3.4 2019 MARKET RESEARCH STUDY**

During the summer of 2019, the Sioux Falls MPO conducted a comprehensive market research study to gather input from the community about transportation planning issues in the Sioux Falls Metropolitan Planning Area. The results of the study were used to help identify priorities for the Go Sioux Falls 2045 L RTP. This was the fifth time the MPO has conducted a comprehensive transportation market research assessment; previous studies were completed in 1999, 2005, 2010, and 2014.

The five major components of the study included:

- A **resident survey**, which was administered to a random sample of 1,025 residents from the Sioux Falls MPO area (2019)
- An **employer survey**, which was administered to a random sample of 310 employers from the Sioux Falls MPO area (2019)
- A **survey of traditionally underserved populations**, which was administered to 222 persons who met one or more of the following criteria: had a physical disability, were the caretaker of someone with a cognitive disability, lived in poverty, were not able to speak English, did not have access to a vehicle, or were homeless (2019)
- **Stakeholder Interviews**, which were conducted with transportation stakeholders in the Sioux Falls MPO area during the month of April 2019

---

<sup>3</sup> Due to the 2020 COVID-19 public health crisis, stakeholder interviews were conducted virtually.



- **Focus groups**, which were conducted with residents in the Sioux Falls MPO area during the month of May 2019

The results of the Market Research Study provided a foundation for developing the Guiding Principles and Goals and helped guide development of projects and plan recommendations.

A selection of results from a few key questions are provided below for reference. The full results of the study can be accessed at <http://siouxfallsmpo.org/resources/2045-long-range-transportation-plan/lrtp-market-research-study/>.

### **Key Findings**

The 2019 Sioux Falls Metropolitan Area LRTP Market Research Study identified several key focus areas for the Sioux Falls MPA. Looking forward to 2045, central transportation issues will include:

**Infrastructure improvement:** Two-thirds of residents think the amount spent on the transportation system should be increased. The types of projects they are most willing to fund with their taxes are:

- Improving the timing of traffic lights
- Improving east-west roads in Sioux Falls
- Improving north-south roads in Sioux Falls

**Investment priorities:** Roadways that residents think should be the top priority for improvement are:

- 41st Street
- Minnesota Avenue/SD-115
- 26th Street

**Usage of alternative modes of transportation:** Travel by carpooling, biking, walking, and motorcycle has increased significantly.

**System condition and performance:** Ratings of street maintenance, traffic congestion, and traffic safety near schools has declined.

### **Guiding Principles**

The primary findings of the study were compiled into a final list of four Guiding Principles to be carried forward into the LRTP. The following statements served as the foundation for the development of the LRTP Goals and Objectives, discussed later in the document.

- Enhancing people's ability to travel throughout the Sioux Falls area
- Ensuring that residents can safely travel in the region
- Ensuring that the capacity of the region's transportation system can accommodate projected increases in population
- Developing and encouraging the use of alternative modes of transportation, such as public transportation, biking, walking, and ride-sharing

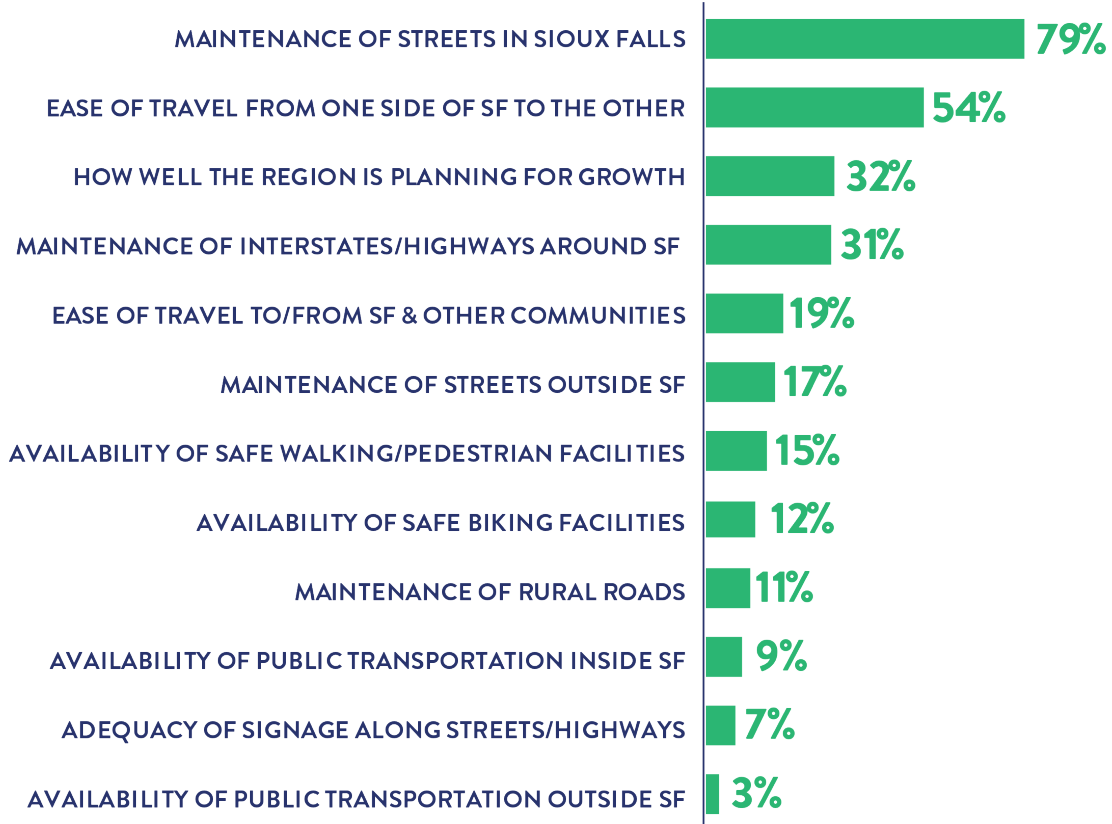
### *Recommended Projects*

At the conclusion of the study, several potential projects were identified based on the results of the community outreach effort. These include:

- Maintenance of streets in the City of Sioux Falls and the surrounding communities in the MPO planning area
- Improvements to traffic flow in the City of Sioux Falls, which could include intersection and capacity improvements that allow residents to travel to/from major destinations in the region, including Empire Mall, Downtown Sioux Falls, the Eastside Shopping area, and the Convention Center/Arena
- Investments in public transportation to meet the needs of seniors, low income residents, and other underserved populations in the region
- Expansion of the region's walking and biking system to ensure residents can safely travel on foot and by bicycle

Figure 5: Most Important Aspects of the Transportation System

## MOST IMPORTANT ASPECTS OF THE TRANSPORTATION SYSTEM

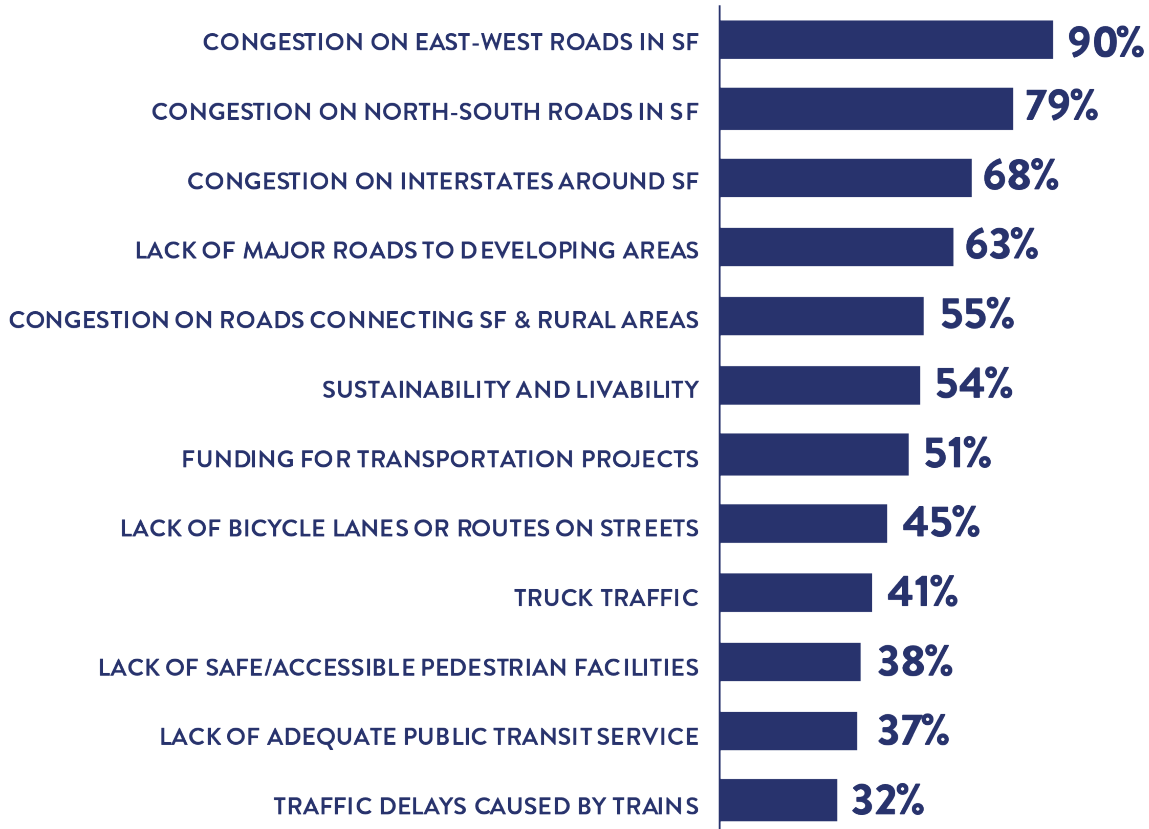


Source: ETC Institute (2019 Sioux Falls Metropolitan Area LRTP Market Research Study)

Figure 6: Current Emerging Transportation Issues



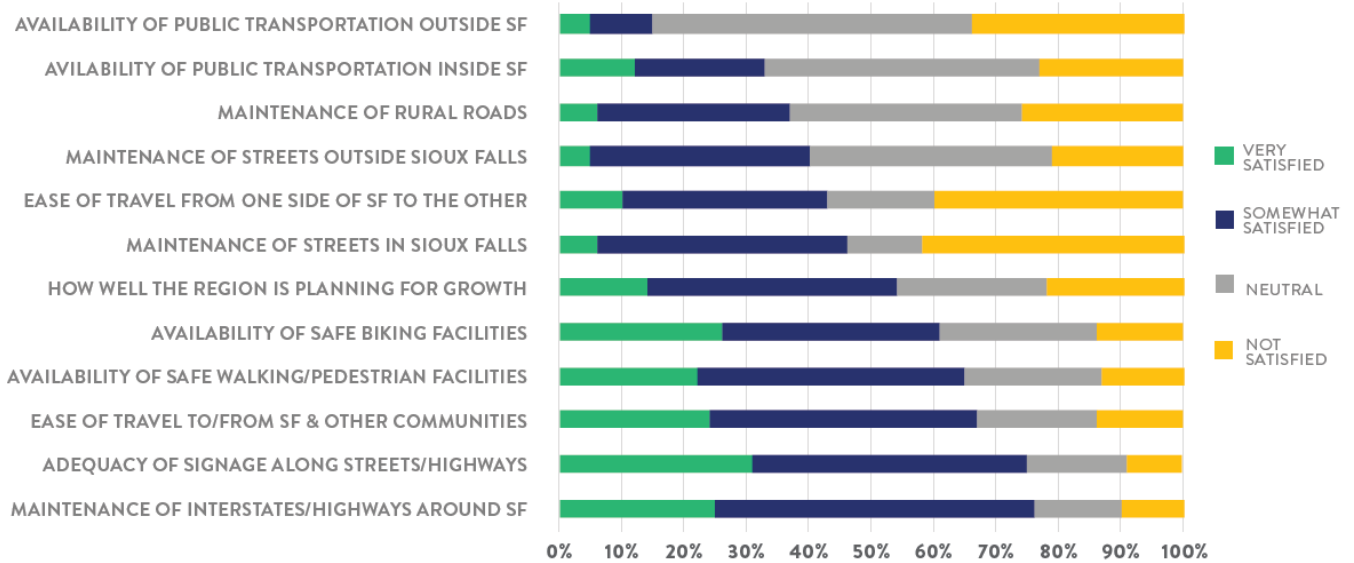
## CURRENT OR EMERGING TRANSPORTATION ISSUES



Source: ETC Institute (2019 Sioux Falls Metropolitan Area LRTP Market Research Study)

Figure 7: Satisfaction with the Existing System

# SATISFACTION WITH THE EXISTING SYSTEM



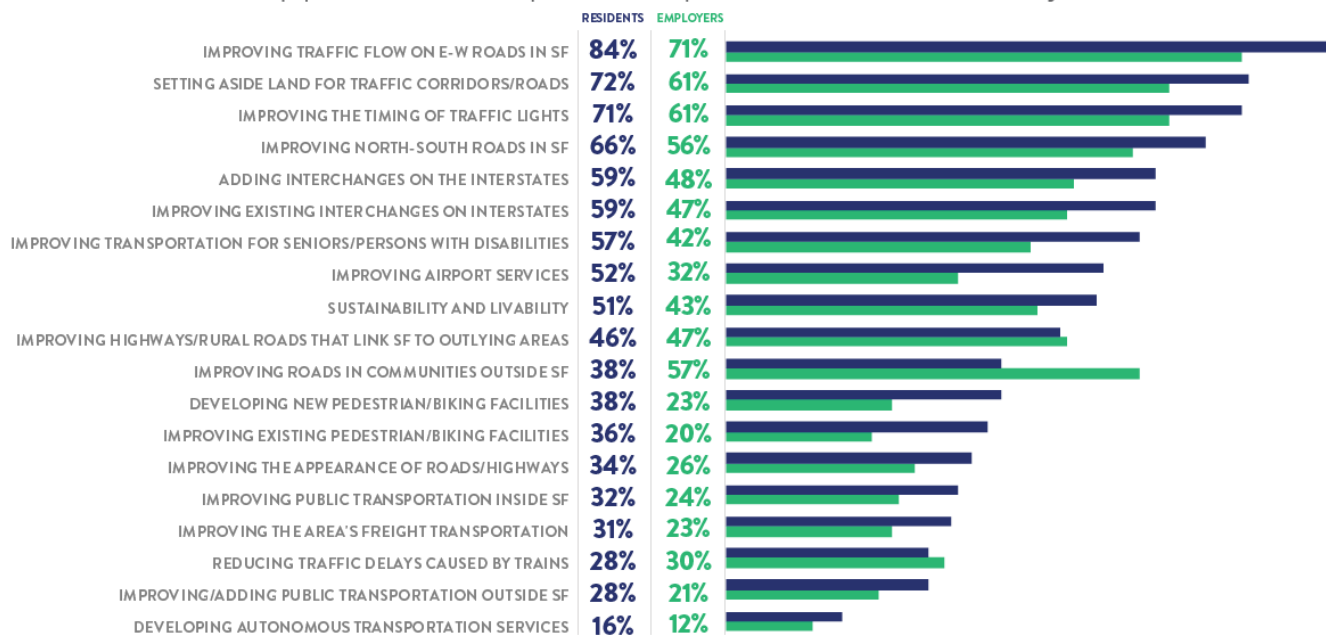
Source: ETC Institute (2019 Sioux Falls Metropolitan Area LRTP Market Research Study)



Figure 8: Transportation Priorities

# TRANSPORTATION PRIORITIES

Top priorities for transportation improvements over the next 20 years:



Source: ETC Institute (2019 Sioux Falls Metropolitan Area LRTP Market Research Study)

## 3.5 OTHER GUIDING TRANSPORTATION PLANS

One final tool used in the initial development of the Guiding Principles and Goals, as well as the development of preliminary project lists, was the detailed review of relevant planning documents in the region. The plans reviewed include:

- Sioux Falls Metropolitan Area LRTP Market Research Study (2019)
- Lincoln County Master Transportation Plan (2019)
- South Dakota Strategic Highway Safety Plan (2019)
- Sioux Falls MPO Area Coordinated Public Transit-Humans Services Transportation Plan (2018)
- 2030 Tea Comprehensive Plan (2018)
- Hartford Comprehensive Plan (2017)
- Shape Sioux Falls 2040 Comprehensive Plan (2016)
- Go Sioux Falls 2040 Long-Range Transportation Plan (2015)
- 2015 Sioux Falls Bike Plan (2015)
- Sioux Falls Regional Airport Master Plan (2015)
- Minnehaha County 2035 Comprehensive Plan (2015)
- Brandon Comprehensive Plan (2014)
- Sioux Falls Transit Development Plan (2016)





- 60<sup>th</sup> Street North Planning and Feasibility Study (2013)
- City of Harrisburg Comprehensive Plan (2011)
- Sioux Falls MPO Multi-Use Trail Study (2011)
- South Dakota Statewide Long-Range Transportation Plan (2010)
- Sioux Falls MPO Bicycle Plan (2008)
- Sioux Falls Trails Master Plan (2008)
- Crooks Comprehensive Plan (2008)
- Sioux Falls Pedestrian Plan (2006)

## 4.0 GUIDING PRINCIPLES, GOALS, OBJECTIVES, AND PLANNING FACTORS

### 4.1 GUIDING PRINCIPLES, GOALS AND OBJECTIVES

The Guiding Principles, Goals, and Objectives for the Go Sioux Falls 2045 LRTP are the primary drivers for the entire planning process. They establish the overall direction for the plan and serve as a resource when developing and prioritizing potential projects within the region.

The following Guiding Principles were established based on the results of the 2019 Market Research Study:

- Enhancing connections to allow for convenient travel between destinations in the Sioux Falls area
- Ensuring safety for all travelers throughout the region
- Ensuring the ability of the transportation network to accommodate the region's current and future transportation needs
- Developing and encouraging the use of multiple modes of transportation, including transit, walking, biking, and shared mobility

The Guiding Principles provide a foundation for the Go Sioux Falls 2045 LRTP Goals and Objectives, which also draw upon the previous LRTP (Go Sioux Falls 2040), the 2019 Market Research Study, the FAST Act Federal Planning Factors, and other regional plans. The Goals and Objectives are listed below.

\*\*Note: asterisks denote goals that align with Seed Projects identified in the 2019 Market Survey Report.\*\*

#### GOAL A. OPERATIONAL EFFICIENCY

Create a more efficient transportation system through system management and operational improvements as the region continues to grow.

- A.1 \*\*Improve and maintain efficient traffic operations on routes across Sioux Falls to provide multiple reliable **cross-town travel** options.\*\*
- A.2 Identify and improve traffic operations concerns on key rural routes throughout the MPA to preserve and enhance safety, mobility, and connectivity among **rural population centers**.
- A.3 Promote strategies and technologies that maximize the **capacity of existing facilities** to accommodate projected future growth.
- A.4 Promote reductions in **recurring congestion** through system management practices, operational strategies, and capacity enhancements.
- A.5 Maintain reliable, resilient operations by minimizing delays associated with **non-recurring congestion events**, such as incidents, work zones, weather, and special events.

#### GOAL B. CONNECTIVITY AND ECONOMIC VITALITY

Support regional economic vitality through a transportation network that serves inter- and intra-regional accessibility and mobility needs for both people and goods.

- B.1 Provide reliable access to **employment centers**, educational opportunities, health and social services, and a variety of **housing choices**.
- B.2 **\*\*Support** economic development and diversification through transportation improvements that **link communities and destinations within the region**, especially along east-west routes. **\*\***
- B.3 Increase the accessibility and mobility of people and freight through improvements that enable efficient, reliable, and cost-effective **roadway, rail, and air transportation options to other regions**.
- B.4 Align local, state, and federal transportation investments with **areas of projected population growth and economic development**.
- B.5 **\*\*Enhance** regional travel and tourism by facilitating **connectivity between key regional travel routes and major destinations.** **\*\***

### GOAL C. LIVABILITY AND ENVIRONMENTAL SUSTAINABILITY

Preserve the social and environmental character of the region through an integrated approach that incorporates both transportation strategies and land use considerations.

- C.1 Protect and enhance the **natural and historic environment** using context-sensitive transportation strategies, including stormwater management best practices.
- C.2 Conserve land and support infill development through operational and multimodal transportation strategies, including increased opportunities for public transportation, biking, walking, and ride sharing.
- C.3 Preserve the **character of existing neighborhoods and communities**.
- C.4 Provide safe and comfortable **multimodal access to key destinations**, including for traditionally underrepresented populations and communities.

### GOAL D. MULTIMODAL INTEGRATION

Provide an integrated transportation network that encourages use of multiple modes by offering travel choices that are accessible to all segments of the region's population.

- D.1 Provide **comfortable, convenient, safe, economical, and user-friendly multimodal transportation options** for all user groups, regardless of socioeconomic status or physical ability.
- D.2 **\*\*Support** a fully integrated multimodal network to **facilitate walking, bicycling, driving, and taking public transportation.** **\*\***
- D.3 **\*\*Expand** and maintain a network of bicycle, pedestrian, multimodal, and transit facilities that **closes gaps, removes barriers, and connects** homes, activity centers, and complementary amenities. **\*\***
- D.4 Implement **complete street policies** where appropriate to ensure streets serve as a shared public resource for all users.

### GOAL E. SAFETY AND SECURITY

Promote a safe and secure transportation network through crash reduction, enhanced reliability and predictability, and improved emergency coordination.

- E.1 Improve the **safety** of the multimodal transportation system for all **user groups** regardless of socioeconomic status or physical ability.
- E.2 Increase the **resiliency, reliability, and predictability** of the transportation experience through system improvements, enhanced communication, and reduced emergency response times.
- E.3 Balance **capacity and travel time enhancements** with **safety considerations** for all users.

## GOAL F. SYSTEM PRESERVATION

Extend the life of the transportation system by fostering a sustainable system that addresses the long-term needs of the region.

- F.1 **\*\*Maintain** the transportation network by **tracking** the condition of assets, **identifying needs**, and **prioritizing** preservation, rehabilitation, and replacement projects.\*\*
- F.2 **Increase** the lifespan of existing multimodal transportation infrastructure, streets, facilities, and other assets through proactive **preservation**.
- F.3 **Budget** for full **life-cycle costs** of all capital and network expansion projects to ensure the sustainability of new infrastructure.

## 4.2 FAST ACT PLANNING FACTORS

MAP-21 required that the eight Federal Planning Factors be considered within the planning process. The FAST Act carried this requirement forward and added two additional Planning Factors, including Factor #9 (Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation) and Factor #10 (Enhance travel and tourism).

The Federal Planning Factors helped to provide guidance during the development of the LRTP Goals. However, the final refined statements were developed to reflect the specific vision for the Sioux Falls MPO. As a result, the six Goals do not share a one-to-one relationship with the MAP-21/FAST Act Planning Factors. **Table 1** demonstrates the relationship between the MAP-21/FAST Act Federal Planning Factors and the Go Sioux Falls 2045 LRTP Goals.

Table 1: MAP-21/FAST Act Relationship to Go Sioux Falls 2045 LRTP Goals

MAP-21/FAST Act Planning Factors		Go Sioux Falls 2045 LRTP Goals
1	Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency	B. Connectivity and Economic Vitality
2	Increase the safety of the transportation system for motorized and non-motorized users	E. Safety and Security
3	Increase the security of the transportation system for motorized and non-motorized users	A. Operational Efficiency E. Safety and Security
4	Increase the accessibility and mobility of people and freight	A. Operational Efficiency B. Connectivity and Economic Vitality D. Multimodal Integration
5	Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation	B. Connectivity and Economic Vitality C. Livability and Environmental Sustainability



MAP-21/FAST Act Planning Factors		Go Sioux Falls 2045 LRTP Goals
	improvements and state and local planned growth and economic development patterns	
6	Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight	B. Connectivity and Economic Vitality D. Multimodal Integration
7	Promote efficient system management and operation	A. Operational Efficiency D. Multimodal Integration
8	Emphasize the preservation of the existing transportation system	F. System Preservation
9	Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation	A. Operational Efficiency C. Livability and Environmental Sustainability E. Safety and Security
10	Enhance travel and tourism	A. Operational Efficiency B. Connectivity and Economic Vitality

## 5.0 DEMOGRAPHICS AND GROWTH TRENDS

The Sioux Falls metro area is a growing regional hub for transportation, health care, employment, retail, and services. Understanding trends in land use, employment and population growth help inform current transportation needs, as well as identify future challenges and trends in the way transportation patterns are changing throughout the region.

### 5.1 EXISTING POPULATION TRENDS

The City of Sioux Falls is the largest city in South Dakota with an estimated population of 183,200 in 2018.<sup>4</sup> The total region has a population of approximately 260,000 as of 2018. Approximately 70 percent of the regional population lives within the City of Sioux Falls.

The City of Sioux Falls and the surrounding region have experienced tremendous growth in recent decades. Figures 9 through Figure 10 highlight the size and rate of population growth. In recent years, the region's total growth rate has outpaced that of the City of Sioux Falls, with communities including Harrisburg and Tea at the forefront of regional growth. Harrisburg in particular experienced a population boom in the 2000s, as its population more than quadrupled during that decade. Both the City and MPO region are growing much faster than the State of South Dakota as a whole.

Figure 9: Sioux Falls City and MPO Population Growth. Source: ACS Population Data



<sup>4</sup> ACS population data



Figure 10: Average Annual Growth Rates in the Sioux Falls Area. Source: ACS Population Data

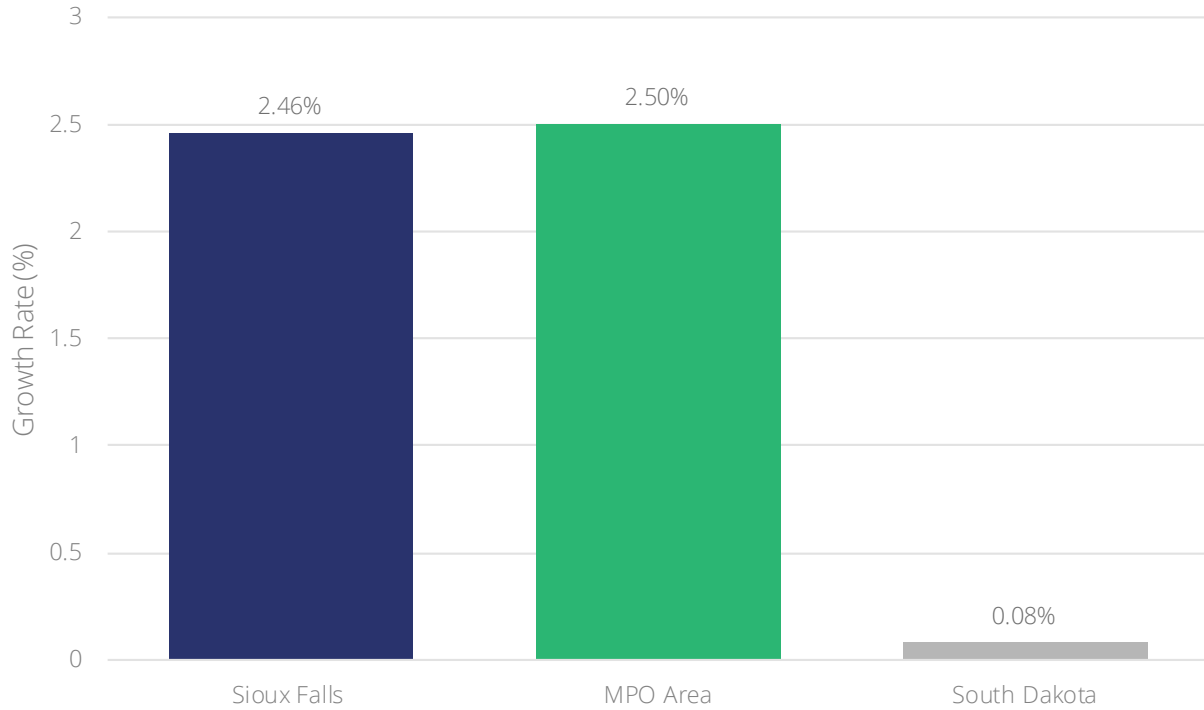
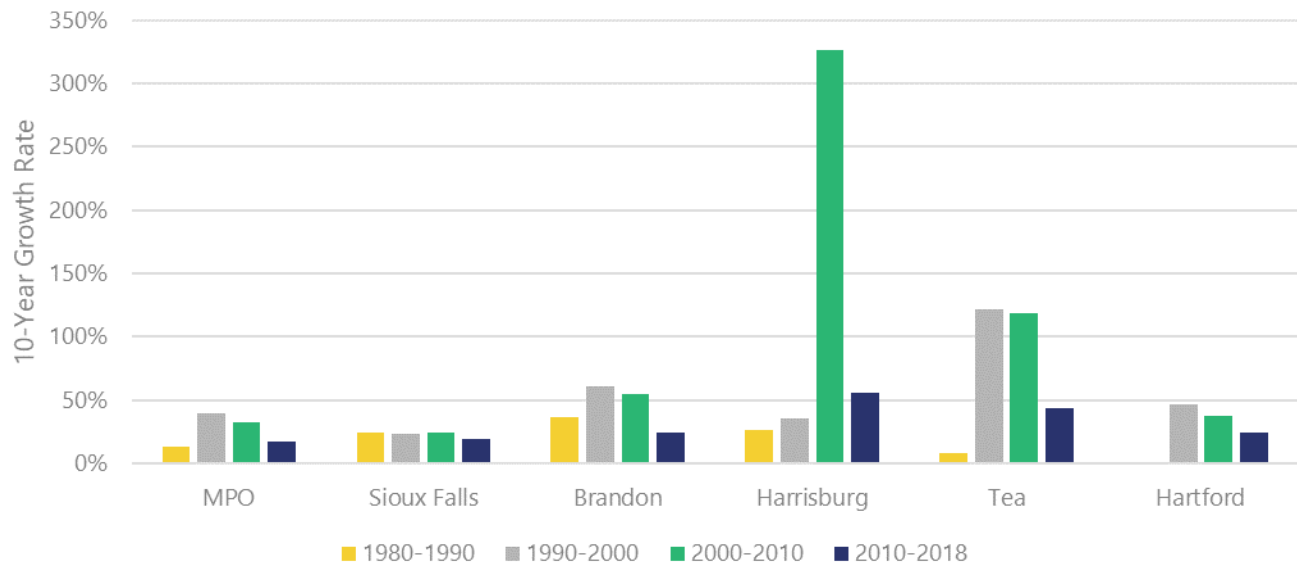


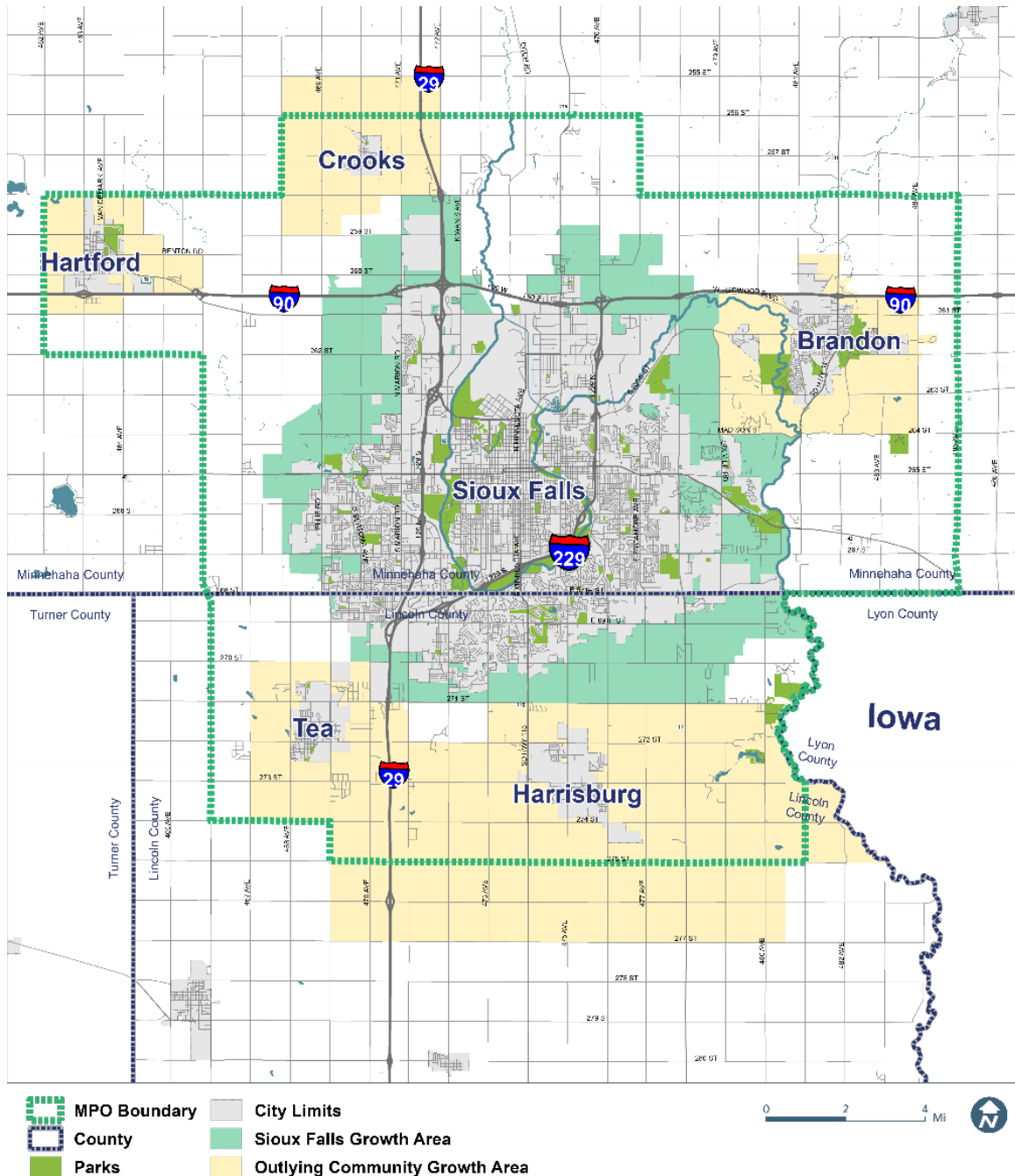
Figure 11: Historical Growth Rates for Sioux Falls MPO Area Communities. Source: ACS Population Data



## 5.2 FUTURE GROWTH PROJECTIONS

Future population projections have been developed by establishing projected growth for all communities within the Sioux Falls region. A growth area was determined for each community, denoting the areas that community expects to direct population growth between 2020 and 2045. These areas were determined mainly by analyzing sanitary sewer basins to determine where growth is best directed, and by consulting each community's comprehensive plan. The figure below shows the 2045 growth areas for each community.

Figure 12: Growth Areas Within the Sioux Falls MPO Area. Source: Sioux Falls MPO



Overall, the region’s population is projected to grow at a rate of 2.9% annually over the next 25 years (through 2045). The communities of Tea, Hartford and Harrisburg are slated to grow at the highest rate over the next 25 years, with Harrisburg expected to more than triple its population.

**GROWTH PROJECTIONS BY COMMUNITY**

Table 2: Population and Employment Growth Projections. Source: Sioux Falls MPO

Community	Population				
	2018-45 Growth	2008	2018	2045	New Residents
Sioux Falls	47%	151,000	183,200	270,000	87,000
Brandon	67%	9,000	10,629	17,800	7,000
Crooks	45%	1,263	1,447	2,100	650
Hartford	159%	2,680	3,381	8,740	5,400
Tea	143%	3,600	5,397	13,119	7,700
Harrisburg	226%	3,700	6,482	21,153	14,700

**5.3 EMPLOYMENT TRENDS**

Regional Employment is projected to increase as the population continues to expand. Job growth in the Sioux Falls MPO area will be slightly higher than the national growth rate based on projections made by U.S. Department of Labor. Continued migration within the state to the metropolitan areas is expected, and the state’s economic climate will continue to attract new businesses to the urban areas.

The majority of MPO area employment is located within the City of Sioux Falls. However, job growth has accelerated throughout the region, including major employment growth in Harrisburg and the region’s rural areas. In most cases, employment projections closely align with population growth rates.

Figure 13: Total Employment in the Sioux Falls MPO Area. Source: Census LEHD data

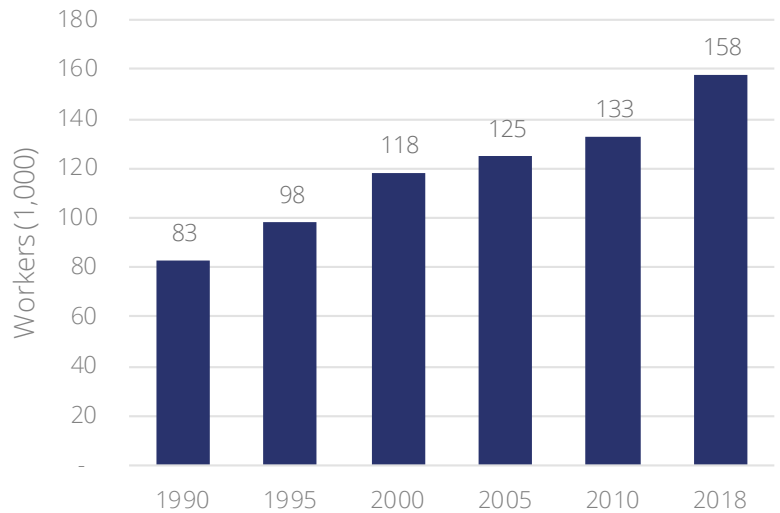


Table 3: Employment Projections in the Sioux Falls MPO Area.

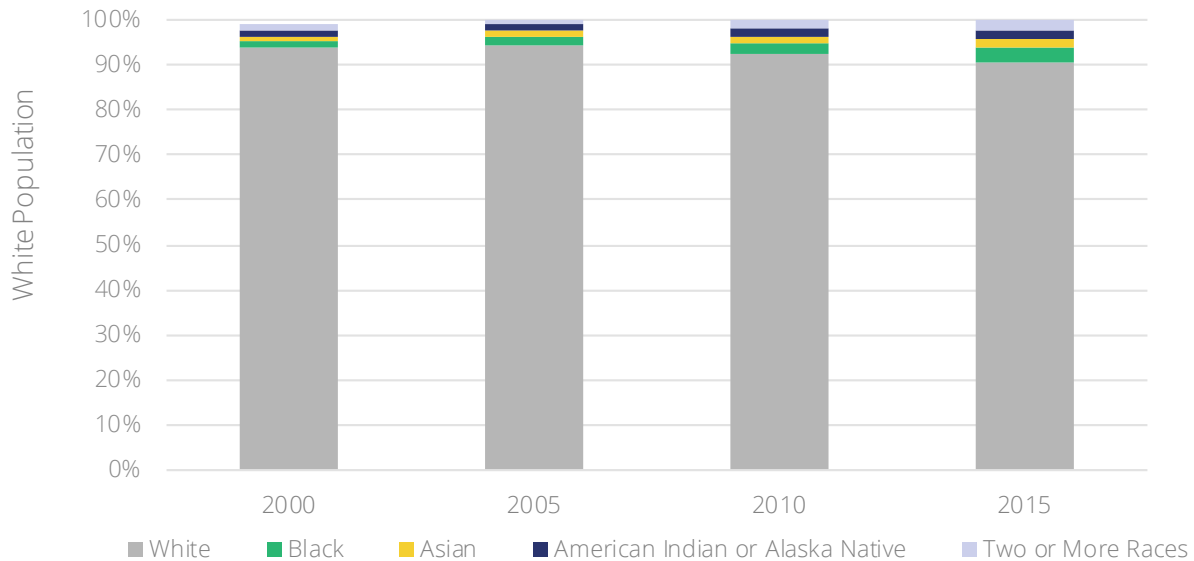
Community	Employment 2008	Employment 2018	Employment 2045	Employment New Jobs (2018-2045)
Sioux Falls	117,954	139,664	205,837	66,000
Brandon	2,058	4,311	7,219	2,900
Crooks	127	222	322	100
Hartford	558	1,138	2,942	1,800
Tea	834	2,562	6,228	3,700
Harrisburg	923	2,635	8,599	6,000

SOURCE: SD LABOR  
MANAGEMENT  
INFORMATION CENTER

### 5.4 DEMOGRAPHIC TRENDS

The population of the Sioux Falls MPO area has become increasingly diverse in recent decades. Figure 13 shows how demographics have changed since 2000, with Figure 14 showing how populations of color are distributed around the MPO Area.

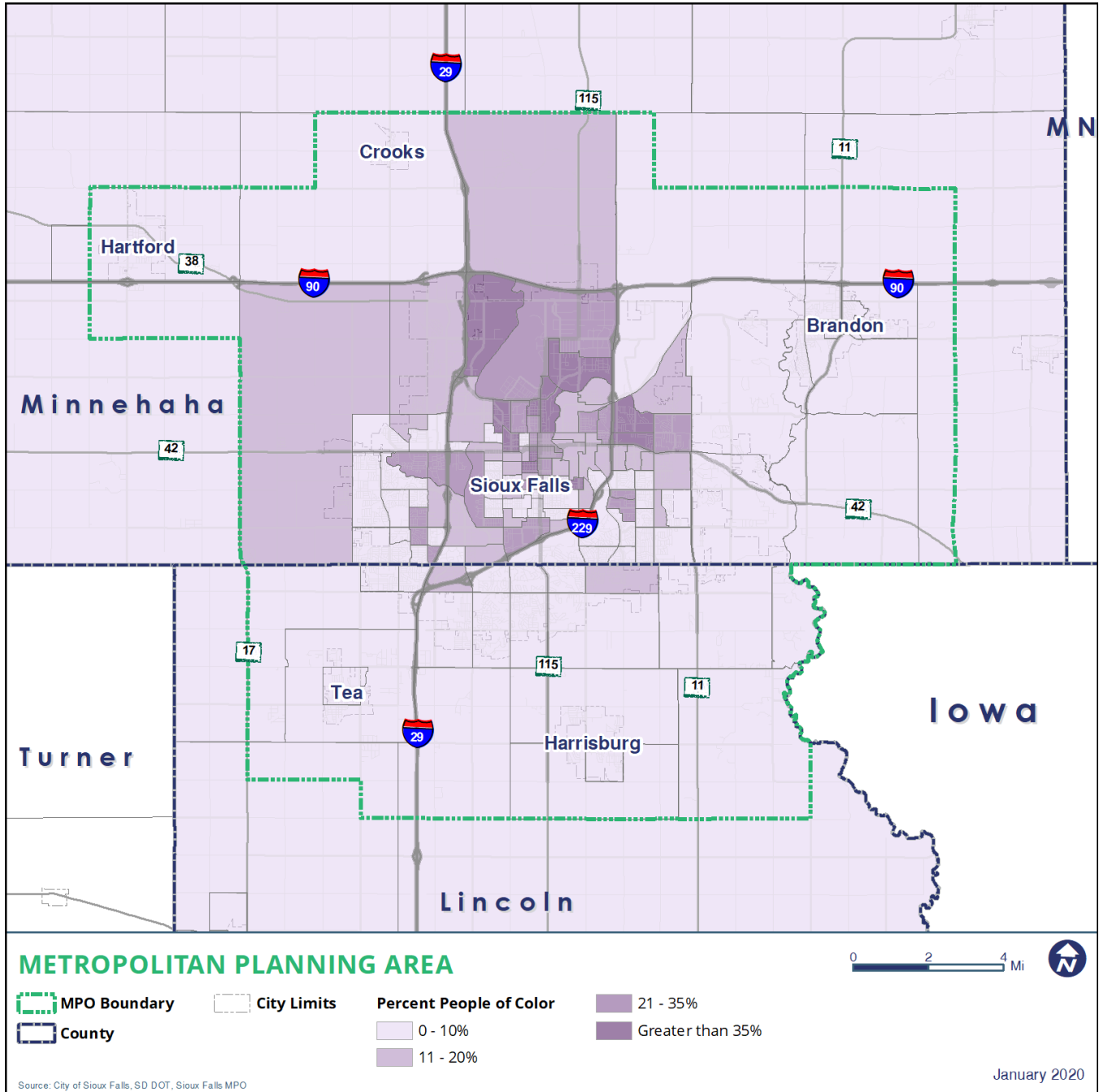
Figure 14: Changing Demographics in the Sioux Falls MPO Area



SOURCE: US CENSUS, 2017, ACS 5-YEAR ESTIMATES DATA PROFILES

For mapping purposes, “people of color” are defined as those who identify as anything other than white alone. A clear spatial pattern is evident, with people of color highly concentrated on the north side of the City of Sioux Falls.

Figure 15: Race and Ethnicity in the Sioux Falls MPO Area (2017)



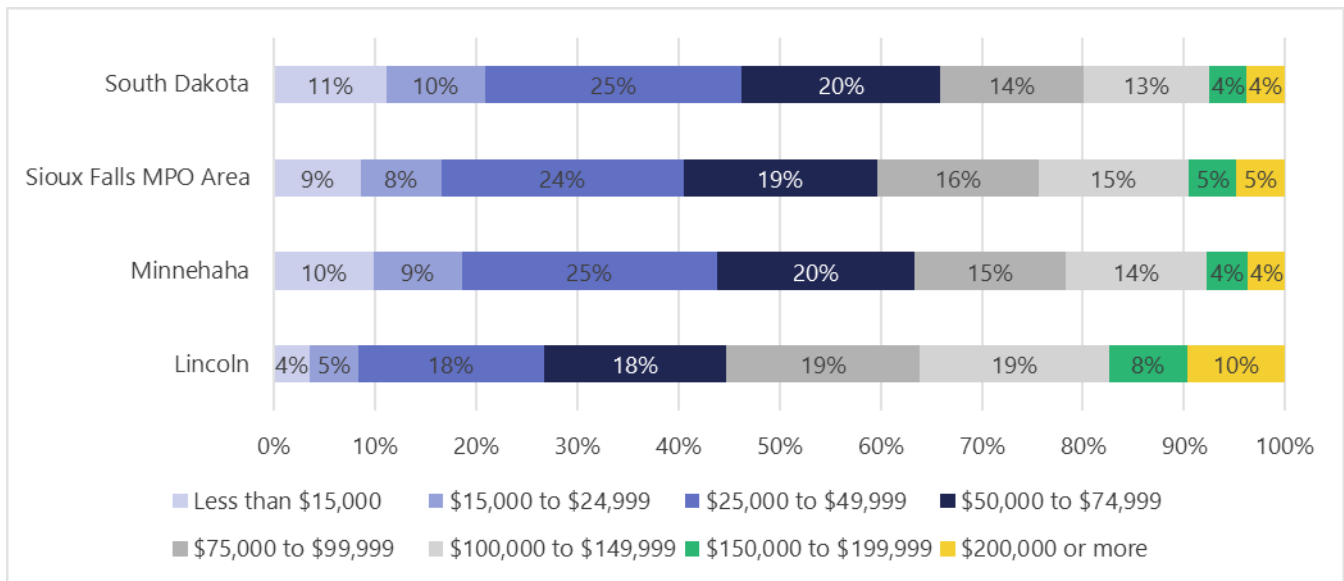
Wealth is also distributed unevenly across the MPO area. Overall, residents in the region have a higher median household income than the state of South Dakota. However, within the region, Lincoln County has a higher median income, smaller percentage of households experiencing poverty, and a higher percentage of households earning \$100,000 or higher compared to Minnehaha County. More than 37% of Lincoln County households earn \$100,000 or more, compared to just 22% of Minnehaha County households. This suggests wealth is heavily concentrated on the region's south side. Table 4 shows the comparison of income in the MPO Area and South Dakota overall.

Table 4: Sioux Falls MPO Area Household Income

Household Income	Lincoln County	Minnehaha County	Sioux Falls MPO Area	South Dakota
Median Household income	\$81,849	\$57,322	\$62,047	\$54,126
Per capita income	\$39,404	\$29,551	\$31,578	\$28,761

SOURCE: US CENSUS, 2017, ACS 5-YEAR ESTIMATES DATA PROFILES

Figure 16: Income Distribution in the Sioux Falls MPO Area

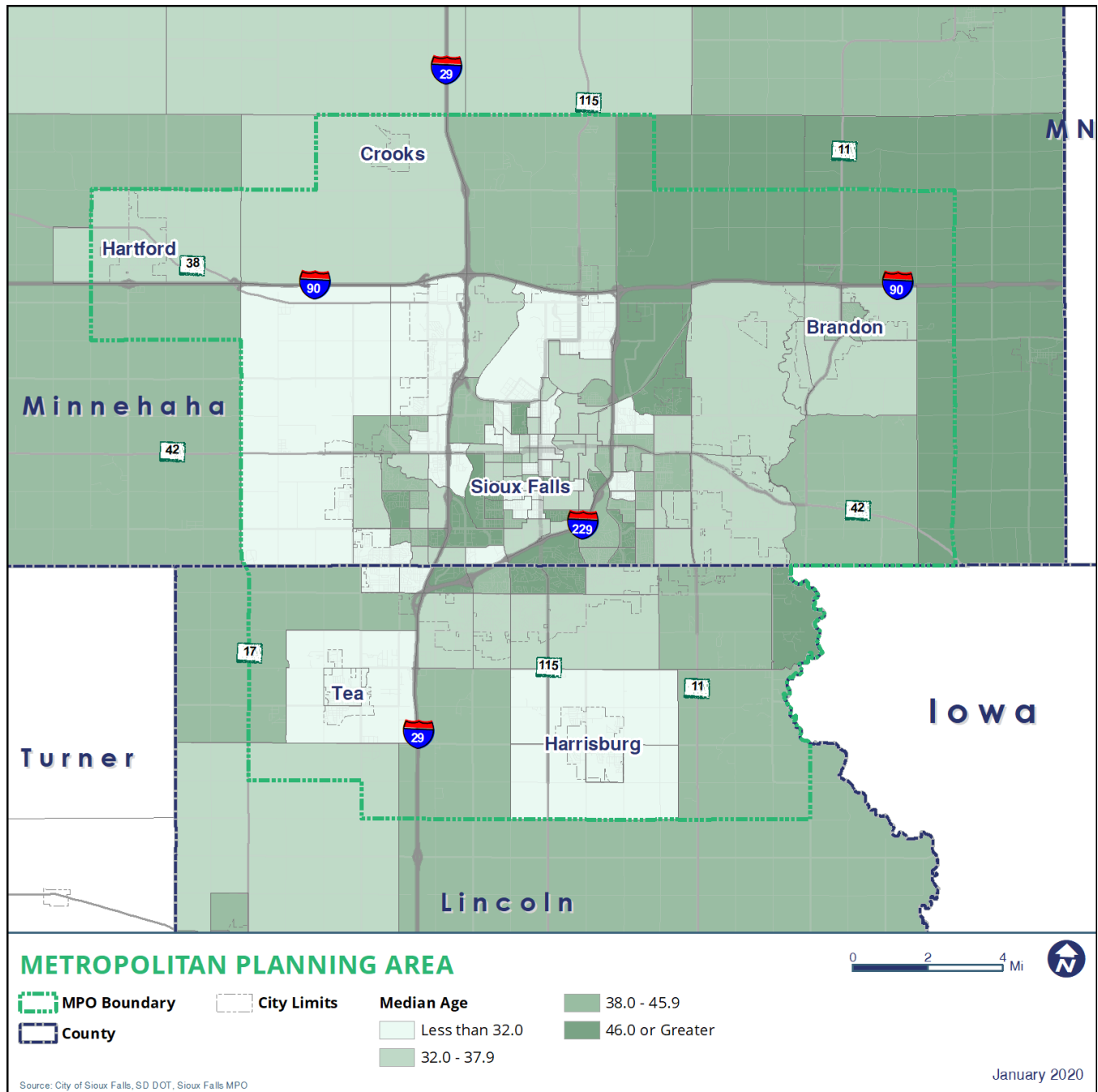


SOURCE: US CENSUS, 2017, ACS 5-YEAR ESTIMATES DATA PROFILES



National trends suggest that in many areas of the country the elderly population is growing faster than the general population. For the past 30 years, the region’s age 65 and over population has remained stable at around 10 percent of total residents. This is likely due to a strong influx of young families to the Sioux Falls region over the past 20 years. Many of the region’s smaller communities, particularly Tea and Harrisburg, appear to have much lower median ages than the region as a whole due to these growth trends.

Figure 17: Median Age in the Sioux Falls MPO Area



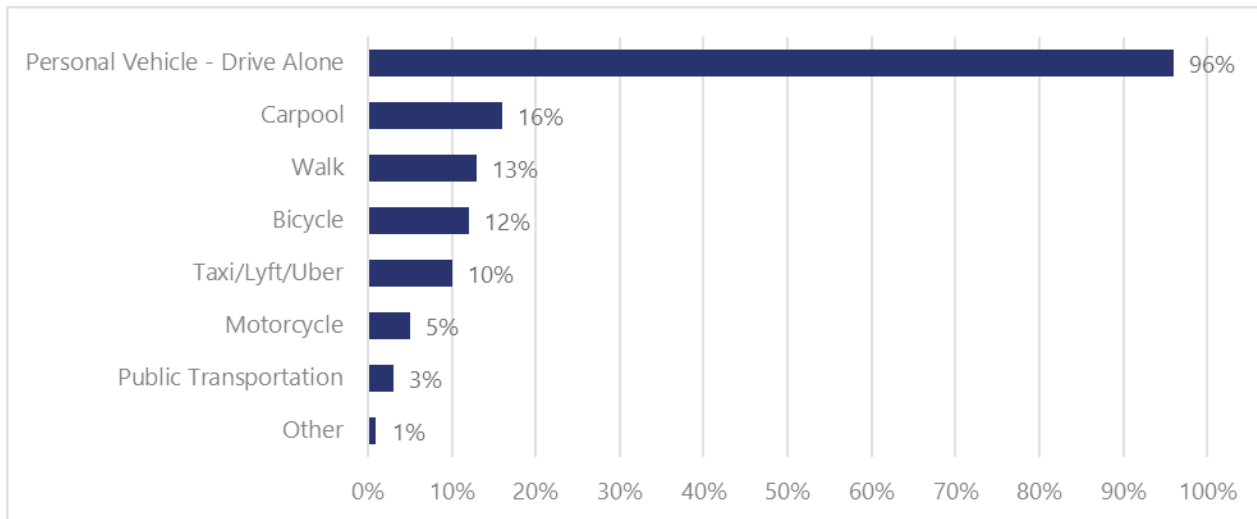
## 5.5 HOUSING TRENDS

The number, density and location of housing opportunities are key elements in forecasting transportation needs as the region continues to grow. Over the last five years the Sioux Falls MPO area has seen steady growth in the number of households and dwelling units, with the City of Sioux Falls adding approximately 1,700 new dwelling units per year, and other communities adding 300 to 500 per year. While the outlying communities are predominately composed of and continuing to add single family homes, the City of Sioux Falls is projecting similar numbers of single-family homes and multi-family dwelling units by 2045. This is consistent with historic trends towards higher density, multi-family units in urban areas.

## 5.6 TRAVEL CHARACTERISTICS

According to the 2019 Market Research Study, driving alone is the primary mode of transportation for Sioux Falls area residents. When asked which transportation mode you or other members of your household normally use for frequently traveled destinations, 96 percent of residents said they drove alone. Respondents were able to make more than one selection, so percentages equal greater than 100%. These preferences are generally in line with national trends, but more Sioux Falls area residents drive alone, while fewer take transit than the national average.

Figure 18: Transportation Mode Choice (2019)



SOURCE: 2019 MARKET RESEARCH STUDY

## COMMUTING TRENDS

In the Sioux Falls MPO area, 61 percent of commutes to work take less than 20 minutes, and 79 percent of commutes to work take 30 minutes or less. Figure 18 shows the average commute time for residents of the City of Sioux Falls and MPO area. Employees who live outside the City of Sioux Falls are more likely to have a longer commute than City residents due to the central location of employment opportunities.

Figure 19: Average Commute Times for Sioux Falls and MPO Area Residents

Community	Average Commute (minutes)
Sioux Falls	16.7
Brandon	19.9
Tea	19.1
Harrisburg	18.7
Hartford	20.6
Crooks	20.7
MPO average	18.2

SOURCE: U.S. CENSUS BUREAU, AMERICAN COMMUNITY SURVEY 2013-2017 5-YEAR ESTIMATES

While most people live and work within the region, each day over 35,000 people (25% of the total workforce) commutes into the Sioux Falls region for work. This emphasizes the need to strengthen connections with the surrounding communities to facilitate commute trips.

According to 2016 data, residential locations are heavily concentrated in the southern part of the metro area, while jobs are concentrated in the north part of Sioux Falls. This spatial mismatch creates a heavy flow of commute traffic into a concentrated area each day.

Figure 21: Home locations, Census On the Map 2016

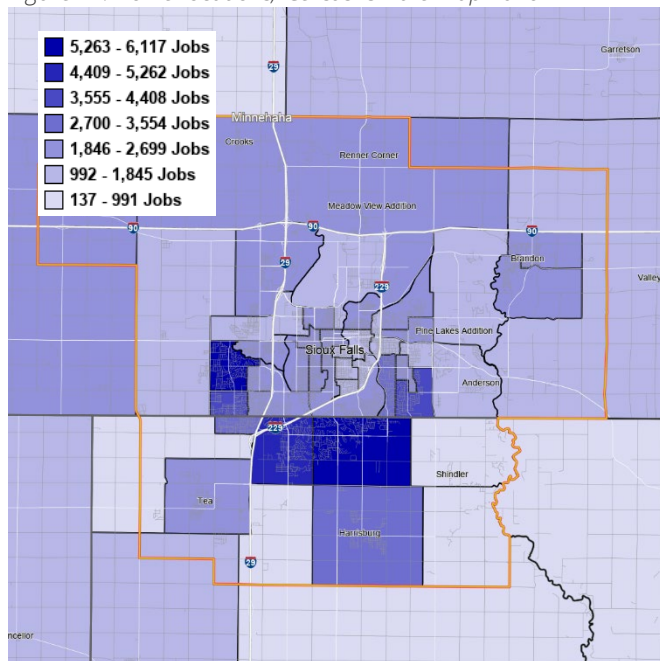
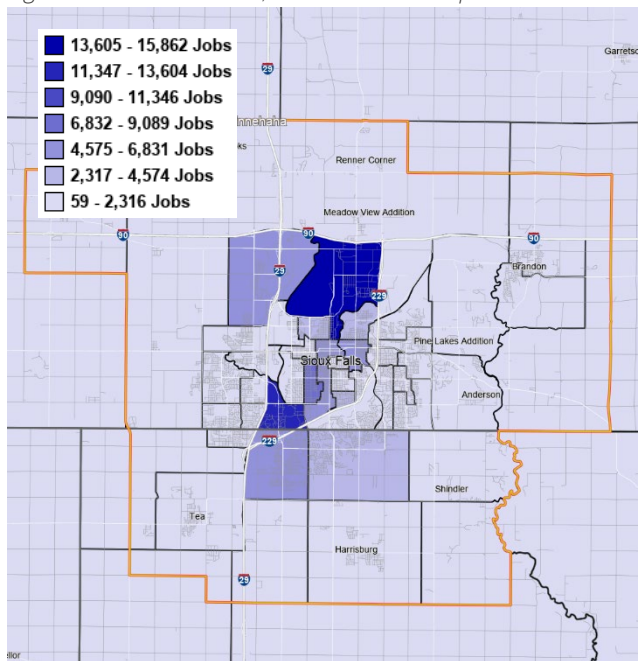


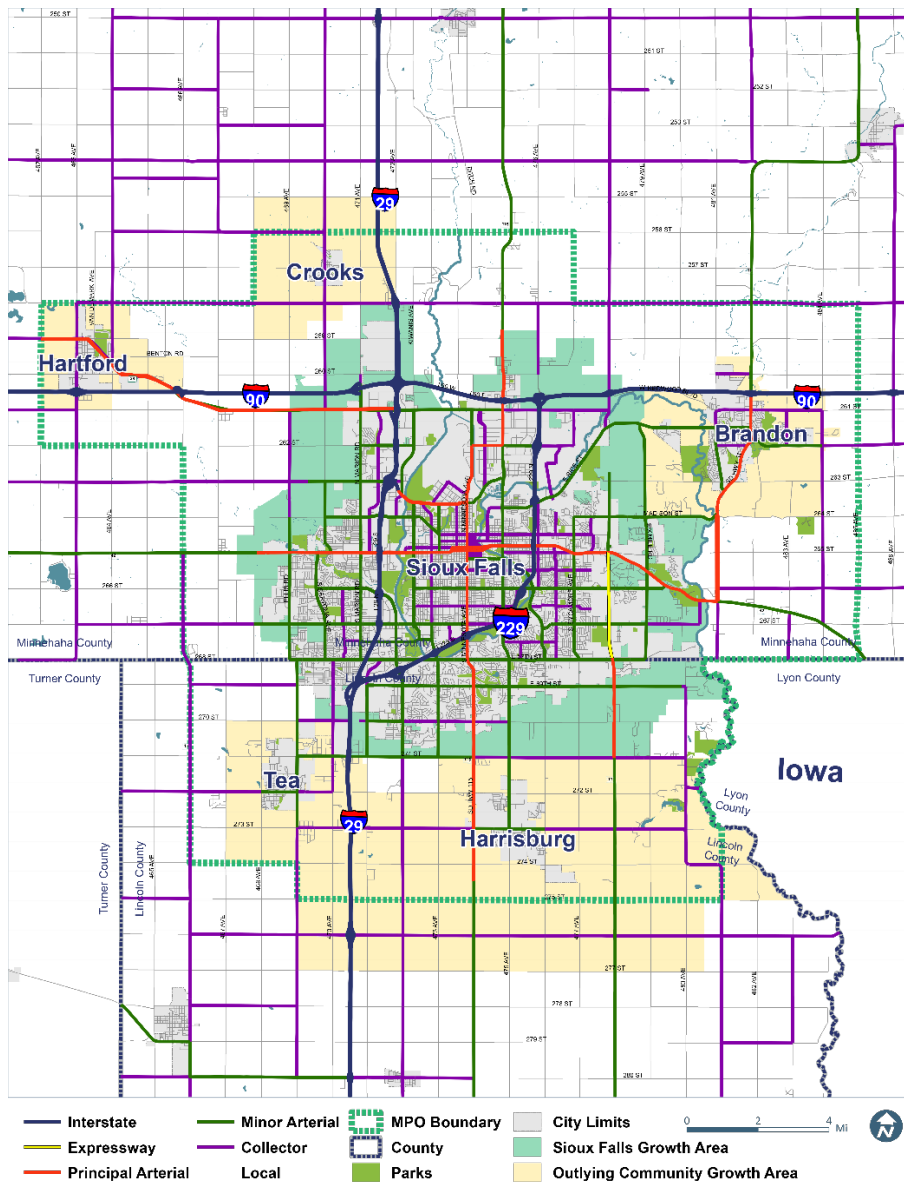
Figure 20: Work locations, Census On the Map 2016



## 6.0 CURRENT TRANSPORTATION SYSTEM

Meeting the goals of the Long-Range Plan depends in part upon the region's ability to move people and goods from place to place through a quality comprehensive transportation system. An analysis of the existing system is important in helping understand the systems current strengths, weaknesses and opportunities for improvement. This process also highlights how many different jurisdictions are involved with constructing and maintaining roads in the MPO area. Figure 21 shows the current street and highway system for the MPO area organized by federal functional classification.

Figure 22: Roadway Functional Classes Throughout the MPO Area



## 6.1 ROADWAY SYSTEM

Within the Sioux Falls MPO area there are many highway and road systems under different jurisdictions. The South Dakota Department of Transportation is responsible for maintaining the Interstate Highway System, which moves people and freight efficiently across the region, state and country. Other State, County and Township roadways support longer trips for through movements (arterials); distribute traffic to home, work, and entertainment (collectors); and provide rural roads to farms and rural residences. Depending on jurisdiction these roadways draw from different funding sources for maintenance and improvements. Within Sioux Falls MPO cities a robust system of local streets composes the traditional grid system found across the Midwest.

Street facilities within the MPO are based on the following major system descriptions:

- **Arterial streets** are the main traffic arteries through an area. They are more or less continuous across an area and act as a principal connecting street with state and federal highways;
- **Collector streets** carry traffic from local streets to arterial streets or highways. They are also the main entrance street to residential developments and the streets for circulation within such a development; and
- **Local streets** provide access to other streets from individual properties and provide right-of-way for various utilities beneath the surface but are not intended to be used for through traffic.

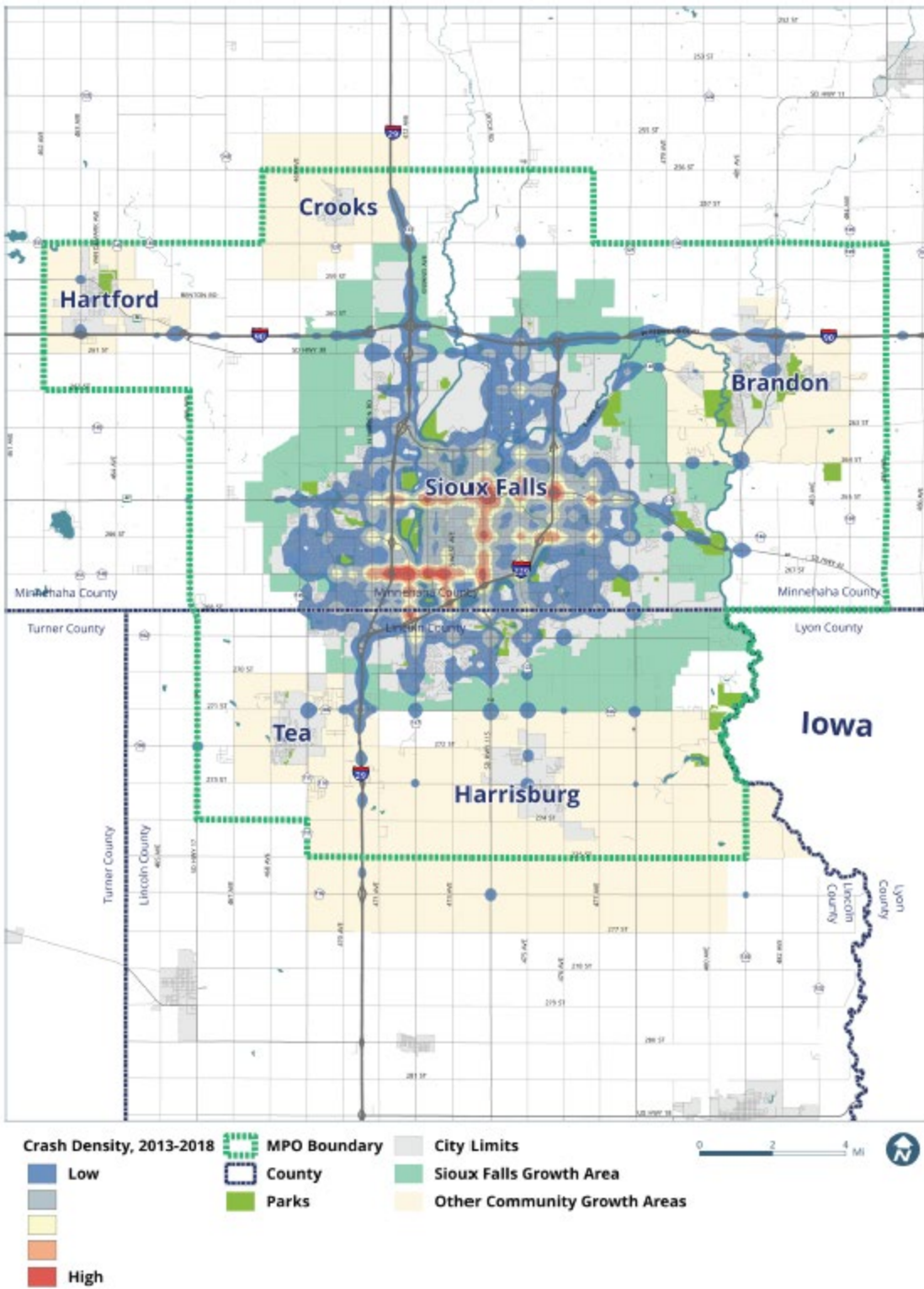
The 2019 Market Research Study found that cross-town routes (arterials) are an important component of the regional transportation system for residents and employers. Improving through movement is among the top investments that survey respondents wanted to see in the regional transportation system.

## 6.2 ROADWAY SAFETY

Crashes are concentrated along the same roadways that see the highest traffic congestion in the MPO area, as shown in Figure 22. Major east-west routes including State Highway 42 (10<sup>th</sup> & 11<sup>th</sup> Streets) and 41<sup>st</sup> Street, along with State Highway 115 running north-south, have the highest number of crashes. Interchanges along the major state and interstate highways throughout the region also have pockets of high crash instances.



Figure 23: Crash Density Across the Sioux Falls MPO Area (2013-2018)



SOURCE: SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION



### 6.3 BICYCLE SYSTEM

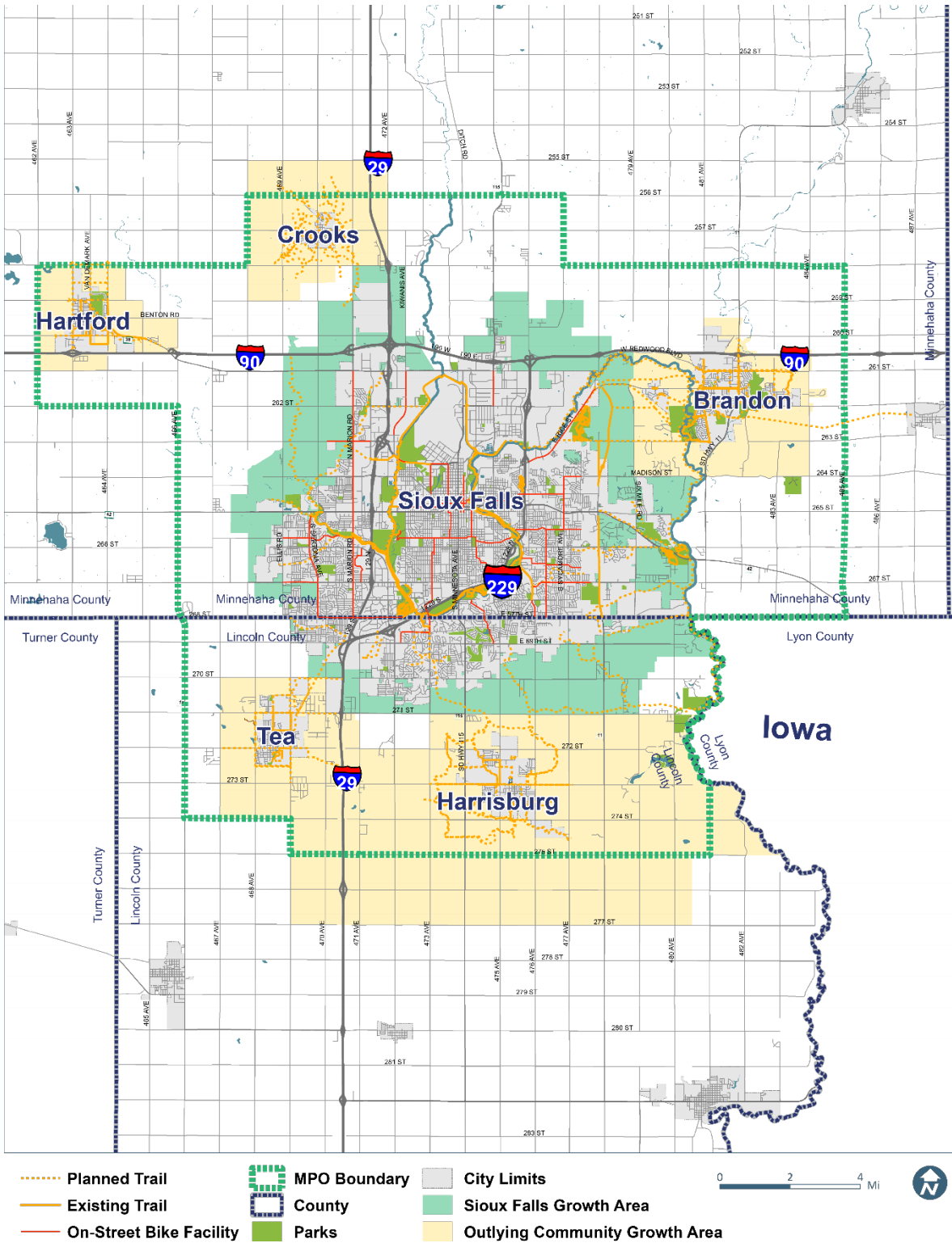
In 2009, the Sioux Falls MPO completed the first MPO Bicycle Plan for the area. The Plan provided guidelines including the identification of facility improvements, programs, and actions. The Sioux Falls MPO Bicycle Plan informs the Sioux Falls Long-Range Transportation Plan, as it identifies short-term and long-term priorities for on-road routes and future trail projects.

In 2015, the City of Sioux Falls updated its Bicycle Plan. This plan goes into greater detail than the MPO Bicycle Plan on issues such as on-street bicycle facilities, bicycle route improvements, educational projects, trail improvements, and other policies to improve bicycling. By implementing the plan, the City aims to achieve Gold level status in the Bicycle Friendly Community program from the League of American Cyclists, building off their 2009 designation as a Bicycle Friendly Community.

Figure 23 shows the current state of bicycle infrastructure in the Sioux Falls MPO area, as well as the future facilities identified in MPO and City plans.



Figure 24: Existing and Future Bicycle Facilities in the Sioux Falls MPO Area

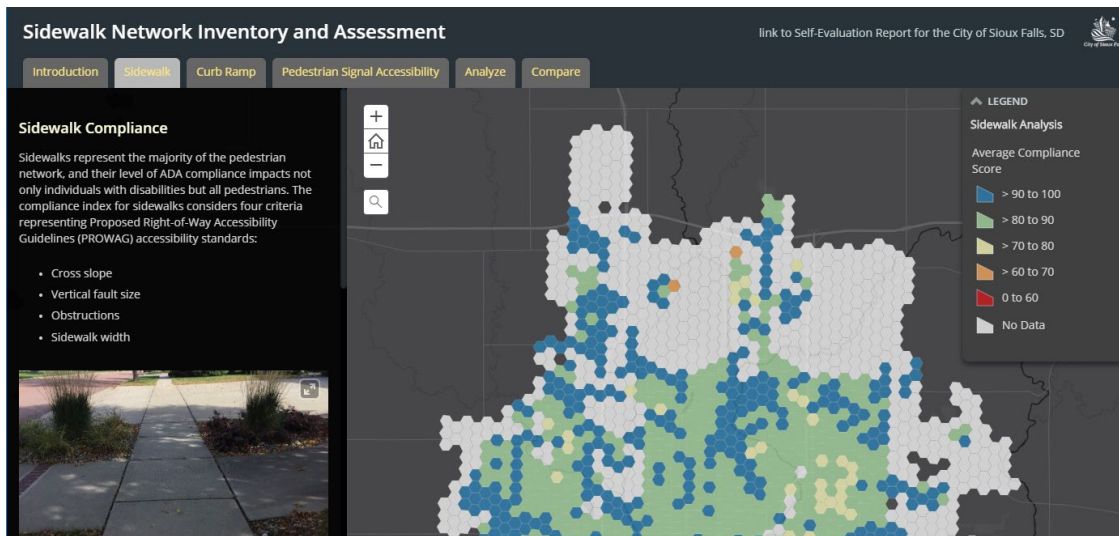


## 6.4 PEDESTRIAN SYSTEM

The Sioux Falls area does not currently have a regional pedestrian plan. Each municipality has addressed pedestrian needs independently, sometimes through their own comprehensive plan. Brandon, for example, focuses on pedestrian accessibility via trails and greenways throughout their park system, connecting to residential developments, and community facilities. Other municipalities have strong sidewalk networks through newer residential communities but lack a comprehensive network in older or more commercial parts of town. Regional sidewalk data is not available in all communities.

The City of Sioux Falls is in the process of updating the City's Pedestrian Plan. As a result of their 2018 ADA Transition Plan, Sioux Falls provides a considerable amount of sidewalk data through their online [Sidewalk Network Inventory and Assessment](#) (Figure 24). This mapping tool provides residents and decision makers with sidewalk condition and curb ramp ADA compliance information at the block and neighborhood level. This information can be used to prioritize infrastructure improvements in areas with the greatest need, which are also outlined in the ADA Transition Plan.

Figure 25: City of Sioux Falls Online Sidewalk Tool. Source: City of Sioux Falls



## 6.5 PUBLIC TRANSIT SYSTEM

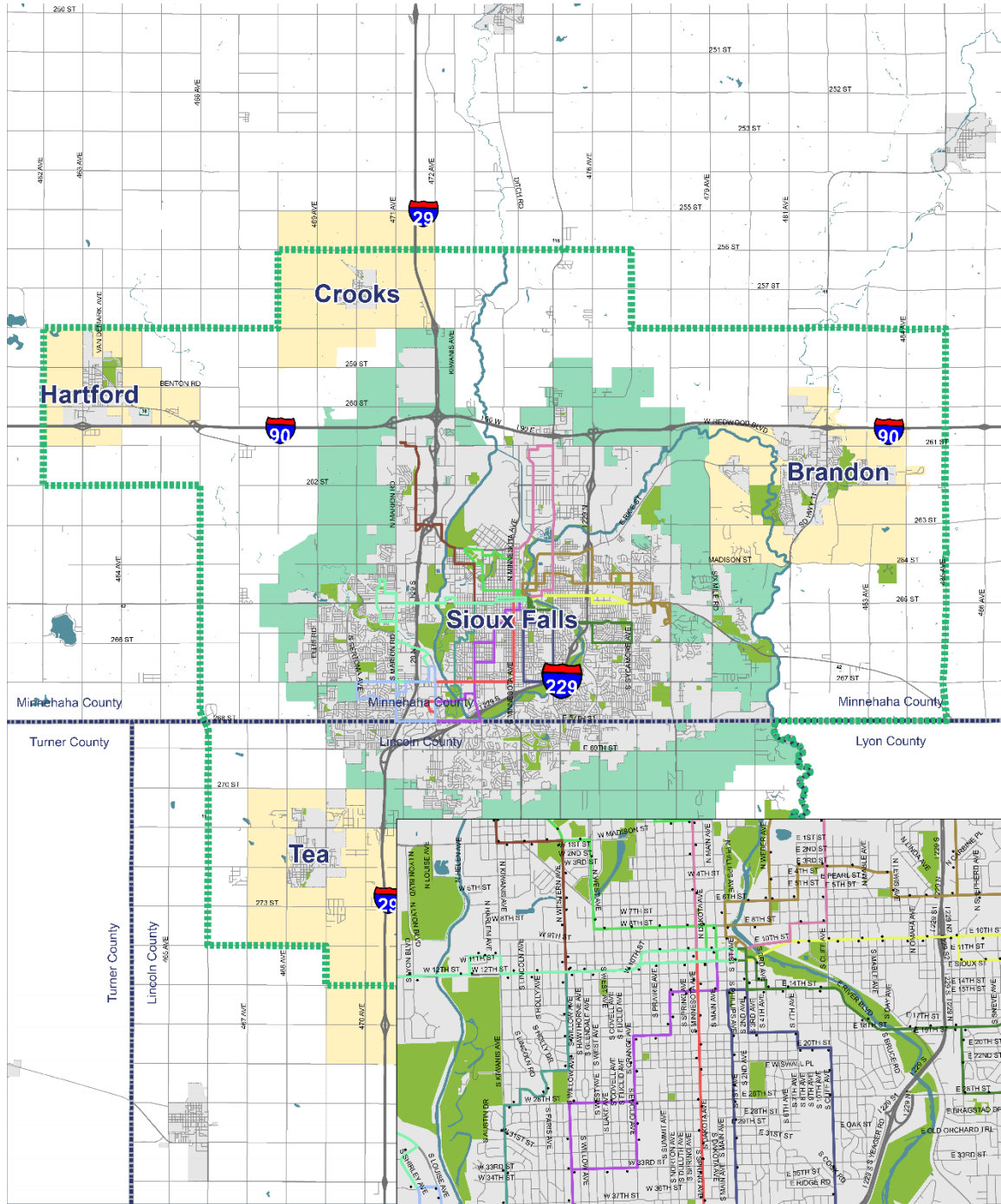
Public transit services are currently provided within the region by Sioux Area Metro, Brandon Transit, and Hartford Area transit. Sioux Area Metro, the region's largest transit provider, provides both fixed-route transit and paratransit services within the City of Sioux Falls. Current operations follow a hub and spoke pattern, with a main transfer station located in the core area of downtown. The system currently has twelve regular bus routes. Most routes operate on half-hour headways during peak periods, and hourly headways during off-peak periods and on Saturdays. No bus service is provided on Sundays.

Like many transit systems around the country, Sioux Area Metro (SAM) is experiencing reduced ridership trends, for a variety of reasons. Decreased funding has created challenges that must be addressed to ensure that SAM maintains a sustainable system. The system addressed these challenges through the creation of a Transit Core Team in 2019. With the help of Harvard-Bloomberg City Leadership Initiative, the Core Team has developed a pilot project through a human-centered design approach that will be implemented during 2020.

The Brandon and Hartford transit systems provide on-demand service to the general community. Rides must be reserved 24-hours in advance, and service is provided on weekdays only.



Figure 26: Existing Transit Routes in the City of Sioux Falls. Source: City of Sioux Falls



- |   |   |    |              |                                |
|---|---|----|--------------|--------------------------------|
| 1 | 5 | 9  | MPO Boundary | City Limits                    |
| 2 | 6 | 10 | County       | Sioux Falls Growth Area        |
| 3 | 7 | 11 | Parks        | Outlying Community Growth Area |
| 4 | 8 | 19 |              |                                |



### RESIDENT AND TRANSIT USER CHARACTERISTICS AND PREFERENCES

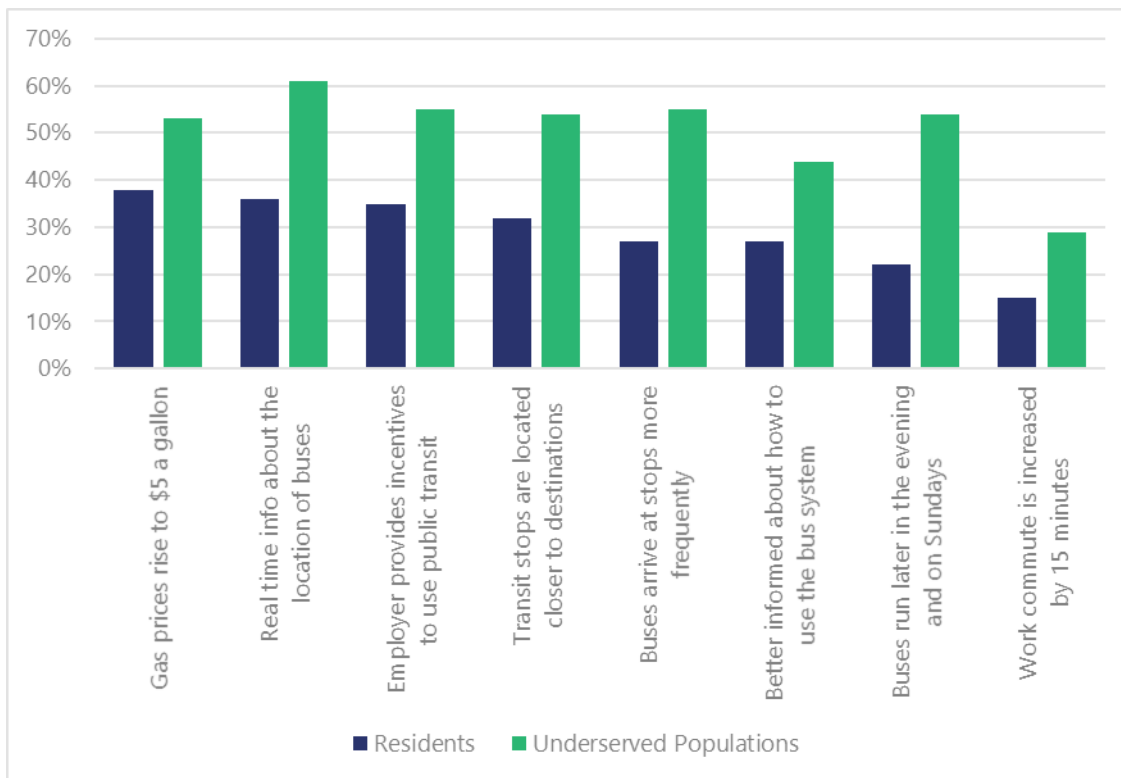
Transit users were surveyed in the fall of 2018 about public transportation in Sioux Falls. Overall, ratings were high among transit riders especially for attractiveness and safety. The services that rated lowest were weekend and evening service. Below are some example results from the survey.

- 83% of transit users rated the public transit system as good or excellent
- 71% of transit users ride the bus because it is their only alternative
- 75% of transit users live within 5 blocks of their nearest bus stop
- 38% of transit users use the bus to get to work (23% personal business)

In 2019 residents were surveyed about transportation more generally, including public transit. Of the residents surveyed, one third were either somewhat or very satisfied with the availability of public transportation inside Sioux Falls, while half as many were satisfied with transit availability outside of Sioux Falls. These figures are lower than historical ratings.

When residents and specifically underserved populations were asked about their likelihood of using public transportation, they identified similar factors as influential in their transit decisions (Figure 26: Influential Factors for Residents Choosing Public Transportation). It's worth noting that each factor was influential for a larger percentage of underserved respondents than overall resident respondents, reinforcing that this community is more vulnerable to changes in transit accessibility.

Figure 27: Influential Factors for Residents Choosing Public Transportation



SOURCE: 2019 LRTP MARKET RESEARCH STUDY

## 6.6 FREIGHT & AVIATION

### ROADWAY

The trucking industry in South Dakota is highly tied to the state's agricultural economy. According to the South Dakota Freight Plan (2017), most of the state's top commodities are related to the agriculture industry. Even though most of the grain elevators and ethanol plants that process these products are not located in the MPO area, they generate freight traffic that passes through the region on the Interstate system. Additional manufacturing in the MPO area feeds into international markets by local access points on the Interstate system.

As a result, the Sioux Falls MPO area experiences the most truck traffic on the Interstate system of any location in South Dakota, reaching over 5,000 trucks per day on some segments.<sup>5</sup> When asked whether the region's roadway system will be able to support business freight needs over the next 20 years, 54 percent of employers were confident that it would. This figure has decreased eight percentage points since the last study in 2014, and 30 percent of employers now fear that the roadway system will not be able to keep up with their needs.<sup>6</sup>

Truck traffic is expected to continue growing throughout South Dakota over the next 30 years. Much of the growth is projected to occur in urban areas such as Sioux Falls and on the Interstate Highway System. Overall, truck freight within South Dakota is projected to grow from 111.0 million tons of shipments in 2015 to 137.1 million tons of shipments per year in 2045. In 2015, trucks accounted for 67 percent of the freight movement, by weight, and are projected to account for 59 percent of the freight movement in 2045, due to increases in rail and pipeline movement.<sup>7</sup>

The South Dakota Department of Transportation (DOT) has proposed a number of strategies to manage the projected increase in freight traffic. Among these, Intelligent Transportation Systems (ITS) technology will continue to play a role in helping commercial vehicles operate more safely and securely with less idle time. ITS solutions could include electronic screening, automated commercial vehicle permitting, and travel information for commercial vehicle operators, in addition to integration with autonomous freight movement. There will likely be opportunities for the Sioux Falls MPO to get involved with these efforts in the future.

---

<sup>5</sup> South Dakota Freight Plan, 2017, pg 4-3

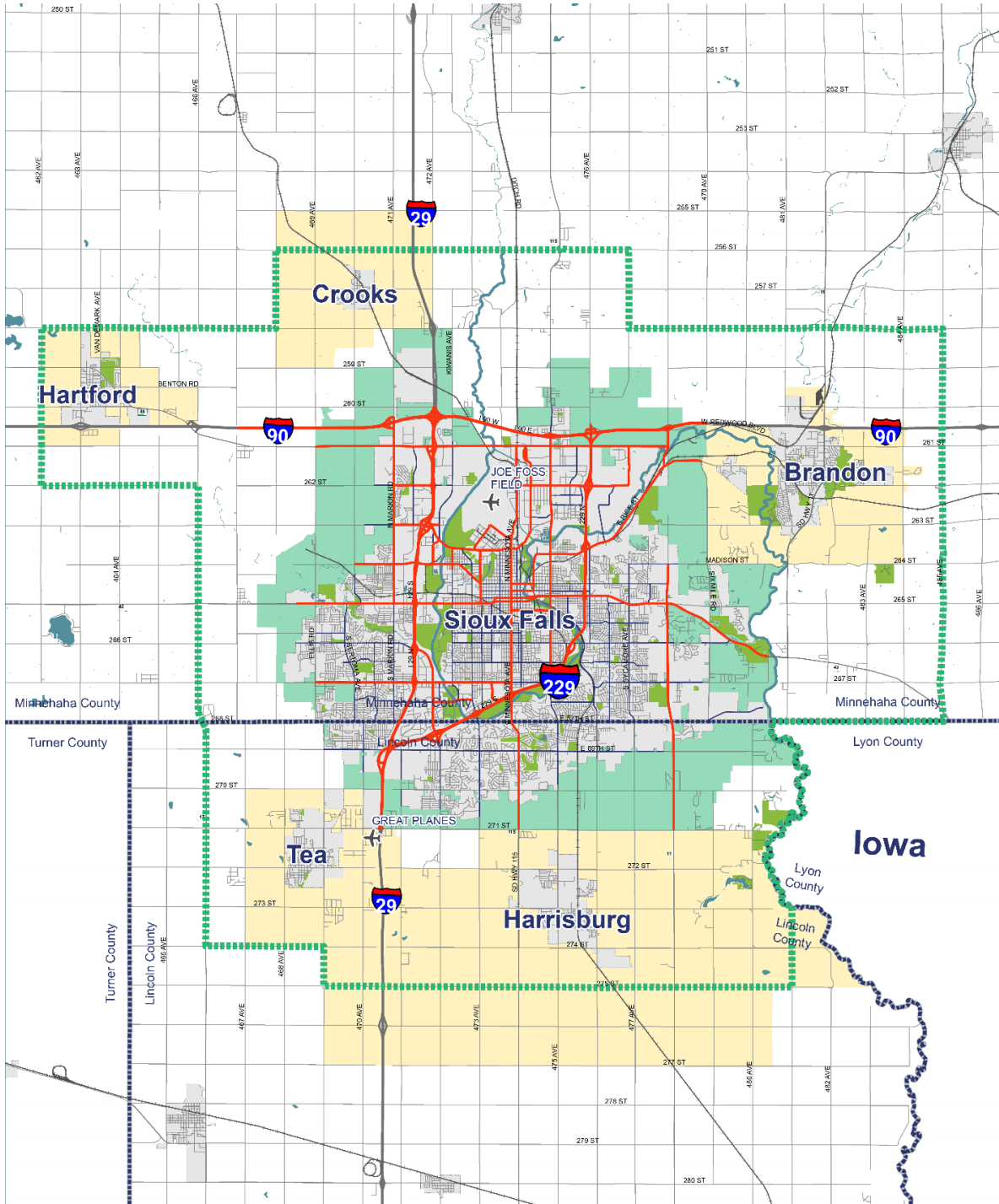
<sup>6</sup> 2019 LRTP Market Research Study

<sup>7</sup> South Dakota Freight Plan, 2017, pg 2-9





Figure 28: Freight Routes in the MPO Area. Source: SDDOT and City of Sioux Falls



- Truck Routes Primary
- Truck Routes Secondary
- Airport
- Rail
- MPO Boundary
- County
- Parks
- City Limits
- Sioux Falls Growth Area
- Outlying Community Growth Area



## AVIATION

The Sioux Falls Regional Airport (FSD) is the largest in South Dakota, with five airlines serving 13 direct destinations. Air traffic through the airport has increased steadily in recent years, with over 533,000 passengers in 2018 (see Table 5).

The SFRA is operated by a five-member Regional Airport Authority Board. This body is responsible for planning efforts at the airport, including their most recent Sioux Falls Regional Airport Master Plan Update completed in 2013. The City of Sioux Falls does not provide any financial support to the SFRA, however the Sioux Falls City Council does confirm all board members.

*Table 5: Passengers Enplaned*

Year	Passengers
2013	482,645
2014	487,127
2015	490,448
2016	510,487
2017	541,589
2018	533,614

SOURCE: 2018 SIOUX FALLS REGIONAL AIRPORT ANNUAL REPORT

## AIR FREIGHT

Like passengers, the Sioux Falls Airport handles more air freight than any other airport in South Dakota. In 2016 inbound and outbound freight traveling through the Sioux Falls Airport totaled 42.6 million pounds, with FedEx and UPS Inc. as the two largest carriers.<sup>8</sup> Freight shipments out of the Sioux Falls Airport have remained steady over the past seven years as indicated by the data in Table 6.

*Table 6: Freight Activity through the Sioux Falls Regional Airport*

Year	Pounds of Freight
2012	28,717 tons
2012	29,582 tons
2014	30,090 tons
2015	27,780 tons
2016	27,776 tons

<sup>8</sup> South Dakota Freight Plan, pg. 3-8

2017	29,224 tons
2018	27,895 tons

SOURCE: 2018 SIOUX FALLS REGIONAL AIRPORT ANNUAL REPORT

### RAILROAD

South Dakota does not have any primary national freight rail corridors, however rail plays a crucial part in commerce around the state. Five rail lines converge in the Sioux Falls MPO, radiating out through Harrisburg, Crooks, Brandon (two) and north to Dell Rapids.

In regard to railroad freight issues, the 2019 Market Research Study found that:

- 47 percent of employers believe that the region’s railroads will be able to support their business’ freight transportation needs over the next 20 years (only seven percent answered no and 46 percent indicated they did not know)
- 23 percent of residents believe that improving the area’s freight transportation system is one of the top transportation priorities for the next 20 years
- 30 percent of residents believe that reducing traffic delays cause by trains is one of the top transportation priorities for the next 20 years<sup>9</sup>

Railroad freight volumes within the state are expected to grow by over 47 percent in South Dakota over the next 30 years, from 17.1 million tons of shipments in 2015 to 25.2 million tons of shipments per year by 2045.<sup>10</sup> Additional growth will depend on whether South Dakota develops any intermodal rail facilities, which would shift freight from being trucked from Chicago or the Twin Cities, instead delivering additional consumer goods via rail.

The City of Sioux Falls purchased a former BNSF rail yard within City limits in 2015. There are major plans for redevelopment of the 10-acre site, and BNSF will retain two mainline tracks to continue their operations through the area.

<sup>9</sup> 2019 LRTP Market Research Study

<sup>10</sup> South Dakota Freight Plan, 2017, pg. 2-9

## 7.0 SYSTEM PLANS AND PROJECT PRIORITIZATION

### 7.1 PROCESS OVERVIEW

One of the key elements of the FAST Act is the focus on performance-based planning, both in terms of prioritization of projects within the Long-Range Transportation Plan and the ongoing review of regional transportation goals. A performance-based evaluation process was developed to aid in the development of the priority projects for inclusion within the financially-constrained plan.

The Go Sioux Falls 2045 LRTP makes use of a comprehensive multimodal project prioritization process in order to evaluate the benefits to all users of the system for every project. The prioritization process recognizes that every roadway improvement project has the potential to benefit not only vehicles, but also pedestrians, bicyclists, transit riders, and freight movement. As will be discussed, the projects that will serve a variety of users have the greatest potential to score higher within the evaluation framework developed, and therefore all roadway projects were advanced through the prioritization process.

Dedicated bicycle and pedestrian projects were evaluated separately, as these often do not compete with roadway projects for funding. These projects are discussed separately, and recommendations draw on the mode-specific plans previously developed and referenced in Section 3.5. These projects are presented here for reference and are also included within the financial analysis section of Chapter 8.

### 7.2 MODE-SPECIFIC PROJECTS AND STRATEGIES

The following sections provide an overview of the mode-specific projects and strategies that were not included in the multimodal prioritization process discussed in **Section 7.4**. Costs associated with these mode-specific projects are discussed in **Chapter 8**.

#### TRANSIT SYSTEM

In addition to various local comprehensive plans, the Sioux Falls Transit Development Plan and the MPO Coordinated Public Transit-Human Services Transportation Plan provide transit-specific guidance for the region. The following section presents a high-level summary of these plans, along with a list of transit-specific projects prioritized through the fiscally constrained transit planning processes already mentioned. Many of the regions' roadway-based projects have the potential to improve regional transit services. These roadway projects received points for supporting transit during the roadway project prioritization process.

#### *Transit Goals*

Several general operational strategies and policies are recommended in the Sioux Falls Transit Development Plan. These include:

- Reduce the cost of paratransit over the next five years (2016-2021) from 48 percent of the total budget to 25% of the total budget. Paratransit is the service that complements regular fixed-route transit for people who cannot ride fixed-route transit because of physical, mental, or emotional constraints.



- Increase the fixed-route services by \$1.6 million to provide reliable transit services for a majority of Sioux Falls Residents.
- Foster a community-based collaboration for funding an annual operating budget of \$500,000 per year for a coordinated nonprofit transportation effort to support agency work trips, medical trips, and event trips as a high priority of unmet needs.
- Develop a multifaceted transit travel training program that instructs at least 1,000 people each year on how to ride the bus.
- Provide a long-term financial status report to the Public Transit Advisory Board and to the City Council each year as part of the budget process.

### **Service Recommendations**

No major capital projects are recommended in the region's transit plans. However, the Sioux Falls Transit Development Plan does include several service recommendations to improve service throughout the City:

- Redesign routes to operate in a more direct manner, providing bidirectional service along the major traffic corridors.
- Increase midday frequencies on the more productive routes to provide at least 30-minute frequencies.
- Significantly reduce the number of one-way loops operated to improve system directness and simplicity.
- Extend service to currently unserved areas such as southeast and west Sioux Falls.
- Reduce service on poorly performing residential segments such as Blauvelt Avenue.
- Focus service to serve streets with snow clearance priority (snow emergency routes) to improve system reliability and consistency during snow events.
- Modify routes to eliminate left turns onto major streets at uncontrolled intersections (e.g. westbound 11<sup>th</sup> Street to southbound Westport Avenue).

### **BICYCLE SYSTEM**

The 2008 Sioux Falls MPO Bicycle Plan provides bicycle-specific guidance for the region. This section builds on and incorporates the 2008 Sioux Falls MPO Bicycle Plan in addition to providing a review of bicycle-related proposals in local plans to generate an overview of all bicycle infrastructure recommendations within the Sioux Falls MPO region. Local plans and policies reviewed include:

- Sioux Falls MPO Area LRTP Market Research Study (published October 2019)
- Lincoln County Master Transportation Plan (adopted November 2019)
- City of Harrisburg Comprehensive Plan (adopted May 2019)
- Minnehaha County 2035 Comprehensive Plan (2015)
- 2030 Tea Comprehensive Plan (adopted 2009, updated December 2011)
- Hartford Comprehensive Plan 2017 - 2037 (adopted 2017)
- Shape Sioux Falls 2040 Comprehensive Plan (adopted 2009, minor amendment September 2016, minor amendment August 2019)
- 2035 Brandon Comprehensive Plan (adopted April 2015)
- Sioux Falls Bicycle Plan (adopted August 2015)

- Sioux Falls MPO Multi-Use Trail Study (completed January 2011)
- Crooks Comprehensive Plan 2008- 2028 (adopted 2008)

The following section presents a high-level summary of these plans and policies, along with a list of bicycle trail projects not carried through the multimodal project prioritization process. While all plans and policies were reviewed, only those with bicycle-specific policy or infrastructure recommendations are included in the summary below. Roadway-based projects that have the potential to improve the regional bicycling network are discussed later in this section under *Bicycle and Pedestrian Project Recommendations*.

### ***Bicycle Needs***

The 2008 Sioux Falls MPO Bicycle Plan discusses bicycle-related issues and strategies for the region. Issues identified include:

- Trails:
  - Funding for trails is often an obstacle. Recreational trail money and DOT maintenance preservation money means less money for trails. Additionally, money for enhancements or master plans are either not available or not utilized.
  - “Rails to Trails” or “Rails with Trails” program is under-utilized.
  - Programming for trails is not comprehensive - Brandon, Harrisburg, and Hartford updated trail plans are not included in the MPO trail plan.
  - Lack of advocacy and education for trails, particularly to property owners who might benefit from future trails.
  - Ownership of bicycle infrastructure greatly impacts outcomes, and different groups have different priorities.
- On-Street/Highway Facilities:
  - Identification of regional bicycle corridors to identify locations appropriate for rumble strips and fill gaps between key trip generators.
  - Maintenance to address issues like imperfect chip seals and debris.
  - Education surrounding “Sharing the Road” and bicycle laws for both bicyclists and drivers.
  - “Complete Streets” concepts not incorporated into all designs.
  - Red signals without bicycle sensors can be a barrier to use.

Local documents provide additional details for more specific bicycle needs across the region, as well as identify some more specific bicycle needs within local communities:

- 2019 Minnehaha County Project Development and Operations Manual – include 4-foot paved shoulders with highway improvements on bike routes recognized by the Highway Department:
  - 250<sup>th</sup> Street/County Road 114 between 470<sup>th</sup> Avenue/County Road 137 and 478<sup>th</sup> Avenue/County Road 121
  - 470<sup>th</sup> Avenue/County Road 137 between 250<sup>th</sup> Street/County Road 114 and West 60<sup>th</sup> Street North/State Highway 38

- 478<sup>th</sup> Avenue/County Road 121/Timberline Avenue between 25<sup>th</sup> Street/County Road 114 and East Rice Street
- East Rice Street/West Holly Boulevard between Timberline Avenue/County Road 121 and North Splitrock Boulevard/482<sup>nd</sup> Avenue/State Highway 11
- East Madison Street between North Sycamore Avenue and South Splitrock Boulevard/State Highway 11
- 2018 City of Tea 2030 Comprehensive Plan - Linear parks or greenways need to be established to accommodate the development of a bicycle trail system.
- 2015 Sioux Falls Bike Plan - Bicycle mode share is 0.4%. “Complete Streets” concepts are not present on all Sioux Falls streets and discourages people from using bicycles.

### ***Bicycle Policy and System Recommendations***

The 2008 Sioux Falls MPO Bicycle Plan also provides guidance based on those recommendations which would improve bicycle network use and connectivity throughout the region:

- Policy
  - Roadway reconstruction projects which include rumble strips should be completed with a bicycle-friendly design.
  - Master plan is required to link the Tea, Hartford, and Harrisburg bicycle trail system to Sioux Falls.
  - Educate citizens about “Sharing the Road” through public service announcements, websites, and signage.
  - Develop and encourage bicycle advocacy for trails and on-road facilities.
- System Improvements
  - Crooks railroad line could be a good candidate for a “Rails with Trails” corridor.
  - Incorporate a side path and connection to the bicycle trail with the 60<sup>th</sup> Street North reconstruction project.
  - Incorporate a side path or trail with the 69<sup>th</sup> Street overpass project to help in linking with the future trail to Tea and the Solberg Overpass.
  - Improve on-road connections on Cliff Avenue and/or SD 115 to provide a safer connection from Harrisburg to Sioux Falls.<sup>11</sup>

The policy and system recommendations identified in the 2008 Sioux Falls MPO Bicycle Plan are echoed in local plans across the region. Some provided additional strategies and recommendations specific to their area which are listed below:

- 2019 Sioux Falls MPO LRTP Market Research Study - Expansion of the region’s biking system will ensure that residents can safely bicycle in the region.

---

<sup>11</sup> A sidepath was construction in 2020 with improvements to SD 115 from 270<sup>th</sup> Street (85<sup>th</sup> Street) to 273<sup>rd</sup> Street, establishing a bicycle connection between Sioux Falls and Harrisburg.



- 2018 City of Tea 2040 Comprehensive Plan - Work with the City of Sioux Falls to connect bicycle trails and actively participate in the Sioux Falls/MPO Bicycle Plan. Study the impacts of the West Side corridor and future bicycle path connections.
- 2017 City of Hartford Comprehensive Plan - Create greenways and linear open spaces by maintaining floodplains for open space, recreation areas, and bicycle path opportunities.
- 2015 Sioux Falls Bike Plan
  - Develop a complete bicycle network that is both comfortable and safe for all levels of bicyclists through the addition of new on-street and trail facilities. Additionally, expand the trail system so that any origin or destination in the city is located no more than one mile from a trail.
  - Incorporate bicycle routes and trails as a part of all major street corridor projects.
  - Develop and implement a priority ranking for bicycle facilities so that new greenways, commuter routes, and trails are based on priority.
- 2011 Sioux Falls Multi-Use Trail Study - Develop options for multi-use, inter-urban connections including Great Bear to Big Sioux, Sioux Falls to Harrisburg, and Sioux Falls to Tea corridors.

## PEDESTRIAN SYSTEM

Pedestrian policy in the Sioux Falls area is currently set by local plans. This section provides a review of pedestrian-related proposals in local plans to generate an overview of all pedestrian infrastructure recommendations within the Sioux Falls MPO region. Local plans and policies reviewed include:

- Sioux Falls MPO Area LRTP Market Research Study (published October 2019)
- Lincoln County Master Transportation Plan (adopted November 2019)
- City of Harrisburg Comprehensive Plan (adopted May 2019)
- Minnehaha County 2035 Comprehensive Plan (2015)
- 2030 Tea Comprehensive Plan (adopted 2009, updated December 2011)
- Hartford Comprehensive Plan 2017 - 2037 (adopted 2017)
- Shape Sioux Falls 2040 Comprehensive Plan (adopted 2009, minor amendment September 2016, minor amendment August 2019)
- 2035 Brandon Comprehensive Plan (adopted April 2015)
- Sioux Falls MPO Multi-Use Trail Study (completed January 2011)
- Crooks Comprehensive Plan 2008 - 2028 (adopted 2008)
- Sioux Falls Pedestrian Plan (adopted October 2006)

While all plans and policies were reviewed, only those with pedestrian-specific infrastructure or policy recommendations are included in the summary below. Roadway-based projects that have the potential to improve the regional pedestrian network are discussed later in this section under *Bicycle and Pedestrian Project Recommendations*.

The following types of pedestrian facilities currently exist in the region. Any or all of these facilities can be incorporated in the Go Sioux Falls roadway projects in order to support pedestrian transportation.



- Sidewalk boulevards
- Crosswalks and curb ramps
- Curb extensions
- Accessible street crossing connections through medians, islands, and free right-turn lanes
- Audible and tactile warning devices
- Sidepaths
- Pedestrian-scale lighting

### ***Pedestrian Needs***

The 2006 Sioux Falls Pedestrian Plan identifies pedestrian-specific needs for the city of Sioux Falls. Needs identified include:

- Pedestrian-oriented design is not incorporated into all roadway design or site design.
- Gaps in the sidewalk network are a barrier between residences, work, school, play, entertainment, and shopping areas, and are particularly important around parks and schools.

### ***Pedestrian Policy and System Recommendations***

The 2006 Sioux Falls Pedestrian Plan also provides guidance based on those recommendations which would improve pedestrian network use and connectivity throughout the City of Sioux Falls and in order to improve connectivity throughout the region:

- Policy
  - Find methods to create a safe, accommodating, and attractive atmosphere for all pedestrians. All transportation projects shall take into consideration the pedestrian in the design of a roadway.
  - Educate the public about pedestrian rules and standards to help them make informed decisions and input.
  - The City of Sioux Falls should foster pedestrian-oriented site design that encourages walking through the adoption of new site design guidelines, ordinances, and other measures.
  - Revise the City of Sioux Falls Subdivision Ordinance to update the pedestrian section and provide more definitive guidance. Revise the City of Sioux Falls Zoning Ordinance by looking into options for compact development and more walkable designs to be integrated into the Zoning Ordinance, including density bonus incentives for developers who provide more pedestrian options. (*Note: zoning revisions were completed in 2018.*)
- System Improvements
  - Curb extensions and median islands are effective in reducing the distance that pedestrians need to cross at intersections and should be considered where feasible. Install countdown timers where conditions warrant.
  - When an arterial urban section street is constructed or reconstructed, a sidewalk should be installed to connect residences, work, school, play, entertainment, and shopping areas. Sidewalks are expected on both sides of an arterial urban section street.

- Sidewalks around parks and schools should be a priority when required for access and circulation of the park and school site.

The policy and system recommendations identified in the 2006 Sioux Falls Pedestrian Plan are echoed in local plans across the region. Some provided additional strategies and recommendations specific to their area which are listed below:

- 2019 Sioux Falls MPO LRTP Market Research Study - Expansion of the region's walking system will ensure that residents can safely walk in the region.
- 2019 City of Harrisburg Comprehensive Plan - Ensure every residential and commercial lot must have direct access to a sidewalk system for pedestrian use, and each neighborhood within the community should have its sidewalk system tied to a community-wide pedestrian/bicycle trail system.
- 2008 City of Crooks Comprehensive Plan - Improve park and recreation opportunities for citizens by developing a bicycle/walking trail system to ease conflicts with vehicles.

#### ***Bicycle and Pedestrian Project Recommendations***

In accordance with the region's desire to improve bicycle and pedestrian accessibility, projects that include a sidewalk or trail component received additional points during the roadway project prioritization process. Roadway projects that will contribute to bicycle and pedestrian mobility are listed below. Note that projects are not listed for the City of Sioux Falls, due to the City's complete streets policy that prioritizes multimodal interests in every roadway project.

Jurisdiction		Roadway Projects with Bicycle and/or Pedestrian Component	
Brandon	Aspen Boulevard: S. Splitrock Boulevard to McHardy Road	Six-Mile Road: Rice Street to Madison Street (Brandon portion)	
	Park Street: Sioux Boulevard to Highway 11	Aspen Boulevard: McHardy Road to 484th Avenue	
	Redwood Boulevard: Chestnut Street to 484th Avenue	Holly Boulevard: Bridge to Six Mile Road	
Harrisburg - Lincoln County	Willow Street: Cliff Avenue to Railroad Street	Willow Street: SD 115 to Honeysuckle Drive	
	Willow Street: Railroad Street to Southeastern Avenue		
Hartford	Section Line Corridor 2: Mickelson Road to 1 Mile South	Western Avenue: Mickelson Road to Highway 38	
	Section Line Corridor 3: Highway 38 to 3/4 mile south - next to Sam Assam Development - East side	Western Ave: Mickelson Rd to I-90 (Section Line Corridor 1)	
	Western Avenue: Highway 38 to 258th Street		
Minnehaha County	Maple-Park Street: New Construction		
SDDOT - Sioux Falls	I-229 Mainline: 26th Street to 10th Street (MRM 5 to 7)	10th Street: 1/4 mile east Cleveland Avenue to Foss Avenue	
	SD 100: I-29 to 57th Street		
Tea	1st Street: Ceylon Avenue to Sundowner Avenue	Heritage Parkway: 1st Street to 9th Street	
	Heritage Parkway: 271st Street to 85th Street		

Bicycle and pedestrian specific projects (not included in the same scoring process as roadway projects) that will contribute to increased mobility include:

Jurisdiction	Bicycle and/or Pedestrian Project	
Brandon	Holly Boulevard: Six Mile Road to Sioux Boulevard	Highway 11 Sidewalk: Teakwood Street to Ash Street
	South Side Trail Segment	Highway 11: Bridge to Hemlock Boulevard
	Highway 11: Aspen Boulevard to Park Street	Bluffs Bike Trail: Heritage Road to Sioux Boulevard
	Sioux Boulevard from Holly Boulevard to Park Street	
Crooks	S West Ave Bike Trail – Phase 2	
Harrisburg	Cliff Avenue Trail: S. of Industrial Drive to 272nd Street	Legendary Estates Trail: Final Surfacing
	Creekside Trail	9-Mile Creek Trail System
	Westside Trail	
Hartford	Highway 38 Trail: Western Avenue to 2nd Street	Western Avenue Trail: From Turtle Creek to Highway 38
	Turtle Creek Trail: Main Avenue to Feyder Avenue	Greenway Trail Extension: Main Avenue to Western Avenue
	Western Avenue Trail: Highway 38 to 258th Street	Mickelson Road Trail: Feyder Avenue to Highway 38
Tea	Highway 106 from Ninemile to I-29	Ninemile Creek: Highway 106 to 85th Street
	Ninemile Creek Trail from Brian Street to Highway 106	468th Avenue from 1st Street to 271st Street

### FREIGHT AND AVIATION SYSTEM

Several regional and statewide plans provide freight and aviation guidance for the region. The following section presents a high-level summary of these plans.

#### *Freight Infrastructure Needs*

A review of state and regional plans, including the 2017 SDDOT Statewide Freight Plan, identified many projects on designated freight routes. The plans show that most freight improvements in the Sioux Falls region are implemented through roadway projects. Roadway projects that have the potential to benefit freight movements are discussed below.

#### Roadway Freight

The 2017 SDDOT Statewide Freight plan identifies a series of strategies to maintain and preserve the transportation system. While these strategies are written for the statewide system, the Sioux Falls MPO will coordinate with SDDOT and explore ways to implement them in the Sioux Falls region.

- Identify deficiencies that limit connectivity to freight destinations and develop proposed solutions.
- Monitor freight trends to better support freight decision making
- Use ITS technology to decrease delay and idle time for freight movers

- Use FHWA travel time data to monitor freight movements for bottlenecks and develop proposed solutions
- Conduct necessary freight corridor studies to improve freight movements
- Use the Strategic Highway Safety Plan strategies to reduce fatalities and serious injury crashes
- Identify truck parking deficiencies and improve access to truck parking facilities to reduce fatigue on freight drivers
- Use asset management to maintain rest area security cameras and lighting
- Use ITS technology to improve freight efficiency, safety and security
- Use pavement and bridge management systems and transportation asset management plan to prioritize improvements on the freight network
- Support the aviation and rail plans
- Improve data at critical freight links
- Participate in multistate freight planning
- Improve understanding of international and interstate corridor movements
- Expand long combination vehicle routes

In addition to the Statewide Freight Study, three major policy-level recommendations were identified by Freight and Agriculture Stakeholders through targeted interviews. These include:

- Continue to review truck parking needs in the region based on new driving time restrictions and as regional growth changes shipping patterns
- Consider the creation of a freight industry working group to coordinate on priority projects and communicate with area municipalities and SDDOT regarding major industry priorities
- Enhance coordination between local municipalities, SDDOT and freight stakeholders regarding construction schedules and road closures.

### **Freight Infrastructure Recommendations**

In accordance with the region’s desire to prioritize freight travel, projects on designated freight routes received points for supporting the movement of freight during the roadway project prioritization process. Roadway projects that will contribute to freight mobility include:

Jurisdiction	Roadway Project with Freight Benefits	
Brandon	Six-Mile Road: Rice Street to Madison Street (Brandon portion)	
Lincoln County	269th Street & 469th Avenue	271st Street & Western Avenue
	271st Street & Tallgrass Avenue	271st Street & 475th Avenue
	271st Street: 472nd Avenue (Louise) to 480th Avenue	271st Street (I-29 to 472nd Avenue)
	271st Street & 476th Avenue	
	I-229 Exit 6 (10th Street) Interchange	10th Street Viaduct (50-206-208)



SDDOT	I-229 Exit 7 (Rice Street) Interchange	11th Street Viaduct (50-205-209)
	I-29 Exit 83 (60th Street North) Interchange	
SDDOT - Sioux Falls	I-229 Mainline: 26th Street to 10th Street (MRM 5 to 7)	10th Street: 1/4 mile east Cleveland Avenue to Foss Avenue
	SD 100: I-29 to 57th Street	
Sioux Falls	10th Street: Lowell to 1/4 mile east of Cleveland (including interchange)	Intersection 2712: 26th Street & SD 11
	60th Street North: Kiwanis Avenue to North 4th Avenue	Intersection 2716: 57th Street & SD 11
	60th Street North: Minnesota Avenue to Veterans Parkway (Highway 100)	Intersection 2731: 26th Street & Six Mile
	60th Street North: W. Ramps of I-29 to E. Ramps	Intersection 3154: 6th Street & SD 11
	69th Street: Tea-Ellis Road to Sundowner Avenue	Intersection 3260: 10th Street & Six Mile
	Arrowhead Boulevard: Veterans Parkway to SD 11 North	Intersection 3515: Career Avenue & 60th Street N
	Arrowhead Boulevard: Foss Avenue to Veterans Parkway	Intersection: 26th Street & Sycamore Avenue
	Benson Road: I-229 to Sycamore Avenue	Kiwanis Avenue: 41st Street to 49th Street
	Benson Road: I-29 to Westport Avenue	LeMesa-Sertoma Avenue: Madison Street to 12th Street
	Benson Road: Sycamore Avenue to Rice Street	Louise Avenue: 93rd Street to County 106
	Cleveland Avenue: Rice Street to 10th Street	Madison Street: Burnside Street to Louise Avenue
	Cliff Avenue: RR Overpass 12th Street to 14th Street	Madison Street: Dubuque to Six-Mile Road
	Cliff Avenue: 49th Street to 57th Street (Northbound only)	Madison Street: LaMesa Drive to Valley View
	E. 26th Street: SD 100 to Arrowhead Boulevard	Marion Road: 41st Street to 1/2 mile S. of 57th Street
	E. 41st Street: Southeastern Avenue to 1/2 mile west of SD 11	Rice Street: Cleveland Avenue to 6 mile Road
	Ellis Road: 12th Street to Skunk Creek Bridge	Russell Street: Minnesota Avenue to Cliff Avenue
	Intersection 2119: Sertoma Avenue & 57th Street	Sertoma Avenue: 26th Street to 57th Street
	Intersection 2157: Maple Street & Marion Road	Signal: 10th Street & Cliff Avenue
	Intersection 2345: Louise Avenue & I-229 ramps	Signal: 14th Street & Cliff Avenue
	Intersection 2405: Ralph Rogers Road & Western Avenue	Six-Mile Road: Madison Street to 57th Street
	Intersection 2406: 69th Street & Western Avenue	Six-Mile Road: Rice Street to Madison Street (Sioux Falls portion)
	Intersection 2484: 69th Street & Minnesota Avenue	Southeastern Avenue: 49th Street to 57th Street
	Intersection 2541: Cliff Avenue & Rice Street	Tallgrass Avenue: 85th Street to County Road 106
	Intersection 2543: 8th Street & Cliff Avenue	Tea-Ellis Road: 26th Street to 57th Street
	Intersection 2588: 18th Street & Southeastern Avenue	W. 26th Street: Mary Beth Avenue to Sertoma Avenue
	Intersection 2616: 26th Street & Southeastern Avenue	Western Avenue: 69th Street to 85th Street

	Intersection 2675: 6th Street & Sycamore Avenue	Westport Avenue: 60th Street N to Benson Road
	Intersection 2676: 10th Street & Sycamore Avenue	Westport Ave: Benson Road to Russell Street
	Intersection 2711: Arrowhead Boulevard & SD 11	Intersection 2728: Maple Street & Six Mile Road
<b>Tea</b>	Heritage Parkway: 271st Street to 85th Street	

### Aviation Infrastructure Needs

The Sioux Falls Regional Master Plan Update defines several key infrastructure needs, including:

- Maintain some runways to allow for Boeing 767-300F airplanes to operate. Expansion is not needed, but holdline separations and other modifications are recommended.
- Expand passenger terminal to meet Passenger Activity Level (PAL) demand requirements.
- Increase air cargo space to accommodate existing and expanded UPS operations.
- Construct general cargo area with flexible development space for other carriers to utilize.
- Increase public parking spaces by 500 stalls by planning activity level 1 and expand the employee and rental car parking areas.

The City of Sioux Falls is proposing to enhance the North Minnesota Avenue corridor between the airport and downtown. Improvements would include new streetscape elements including new medians, trails, signage, lighting, and vegetation. A corridor study was completed in 2013. Any improvements along this roadway would require an Alternative Analysis to be submitted to FAA for approval and stay clear of airspace surfaces.

### Aviation Infrastructure Recommendations

The Sioux Falls Regional Master Plan Update defines several policy recommendations to improve the functionality and connectivity of its aviation system.

- Work with the Public Transit Advisory Board to complete a route evaluation process to determine the transit need and service level appropriate for the airport.
- Explore a new westward access to eliminate the requirement of those accessing the airport from the west to travel over one mile to the east to access the roadway system.
- Explore a proposed roadway alignment connecting West National Guard Drive with West 60th Street and/or North Westport Avenue.
- The City of Sioux Falls is proposing to enhance the North Minnesota Avenue corridor between the airport and downtown. Improvements would include new streetscape elements including new medians, trails, signage, lighting, and vegetation. A corridor study was completed in 2013. Any improvements along this roadway would require an Alternative Analysis to be submitted to FAA for approval and stay clear of airspace surfaces.

## 7.3 ACCESS & CONNECTIVITY

East-West Connectivity across the City of Sioux Falls emerged as the top current or emerging transportation issue among residents in the 2019 Market Research Survey. The presence of several barriers, such as the Big Sioux River and I-29 and I-229, mean that travel across Sioux Falls is often interrupted or severely congested because of



a lack of routing options. To manage or alleviate this concern, several new connections have been identified as needs through previous planning processes. These projects were included in the regional project list, and advanced through the prioritization process.

Each of the connections below were analyzed through the travel demand modeling process to analyze their potential impact on the regional network. The connections are listed below, along with the hours of highway network delay reduction anticipated if it were to be constructed. It is important to note that the anticipated delay reduction shown is for the entire network, as compared to the specific corridor listed alone.

- Veterans Parkway = 3,000 hours reduced delay
- Rice-Russell extension = 3,000 hours reduced delay
- Benson extension = 1,000 hours reduced delay
- 57<sup>th</sup> Street Extension = 1,000 hours reduced delay
- 49<sup>th</sup> St Extension = 1,000 hours reduced delay
- 69<sup>th</sup> St Bridge = 3,000 hours reduced delay
- Six Mile Road widening/extension = 2,000 hours reduced delay
- LaMesa/Sertoma = 1,000 hours reduced delay
- Sycamore Extension = 1,000 hours reduced delay

For additional information on traffic model scenarios and analysis see Appendix F.

#### **7.4 EMERGING ISSUES AND TRENDS**

The Sioux Falls region is a leader in the implementation of technology in transportation. Investing in intelligent transportation system (ITS) infrastructure began in the 1990s and a regional ITS architecture was developed in 2005. The architecture defines a framework within which an ITS system can be built. The ITS architecture functionally defines the pieces of the systems and the information that is exchanged between them. It also describes the entities responsible for the information exchange. Simply, architecture was developed to allow communication and the flow of data.

The Sioux Falls Communications Network Master Plan was also developed in 2005. The plan identifies how the communication occurs and establishes a redundancy plan. The plan includes a summary of the existing communication network, consisting of fiber optic cable, various communication wire, and wireless towers. The plan provided a list of prioritized projects subject to funding availability, to establish the communication backbone. The plan was updated in 2010.

Advancement of technology will continue to have significant impacts on the greater Sioux Falls region and the infrastructure that supports it. Preparing for additional emerging transportation technology remains critical to those tasked with municipal and regional planning. Agencies continue to need tools to assess the range of possibilities and identify the most effective implementation strategies in support of those prioritized possibilities.

The transportation industry is currently focused on three major areas in its preparation for emerging transportation technology:

## INTERNET OF THINGS

The transportation system is quickly evolving into one built on a foundation of digital infrastructure known as the Internet of Things (IoT). The IoT is an umbrella term that refers to connected physical and digital components. IoT components can send data without the assistance of human actions. Each IoT component has a Unique Identifier (UID) that makes it recognizable. Currently, there are 31 billion devices that are connected to the IoT, an average of four devices per person. By 2025, the IoT is projected to grow to 75 billion devices worldwide, an average of 9.25 devices per person

Three primary pieces of transportation infrastructure that integrate IoT devices are:

- **Smart Traffic Signals:** Smart traffic signals can monitor traffic conditions in real-time through the use of video cameras and radar. This information is used to develop a timing plan that determines the duration of the green signal phase for each approach. Through a connected network of intersections, smart traffic signals can improve travel times and help to decrease vehicle emissions.
- **Smart Light Poles:** Smart Light Poles are energy efficient streetlights that use LED lighting and motion sensors to save energy and costs. Smart light poles can be equipped with cameras and sensors that monitor parking availability on city streets, detect air quality and emissions levels, and serve as a supporting network for autonomous vehicles fleets. They can also be equipped with LED screens that provide dynamic signage and wayfinding.
- **Mobile Devices:** while traditionally not considered to be transportation infrastructure, mobile devices will be at the center of emerging transportation technology. As IoT devices interact with each other, people will experience the IoT system through mobile devices, computers, and other consumer electronics. Mobile devices can also act as a tool to communicate pedestrian activity and origin/destination data.

## CONNECTED, AUTOMATED, SHARED, AND ELECTRIC (CASE) VEHICLES

Connected, automated, shared, and electric (CASE) vehicles will play a major role in the future transportation system. Technology improvements will help to increase the feasibility of widespread adoption of these advanced vehicles. As the existing vehicle fleet is replaced with new vehicles equipped with this technology, transportation planners anticipate seeing improved safety outcomes and reductions in negative environmental impacts. CASE vehicles, and the infrastructure that supports them, will play a key role in achieving transportation goals as improved safety, reduced congestion, and sustainability.

- Connected Vehicles have the ability to communicate with other vehicles (cars, buses, and commercial vehicles), personal devices, and roadside infrastructure. The ability to communicate with other vehicles and infrastructure is critical to automated safety detection and driver alert systems. There are multiple communications connections that can be accommodated by a connected vehicle and each connection provides different benefits to drivers, passengers, and pedestrians. Overall, connected vehicles have the potential to *increase driver safety and efficiency, reduce travel times*, and assist with reaching *Vision Zero*.
- Automated vehicles can control some or all aspects of driving. Building on the systems incorporated in connected vehicles, automated vehicles are able to sense and respond to their environment. As older vehicles age out of the existing vehicle fleet and newer vehicles are introduced, vehicle automation will

become more common. The adoption of automated vehicles will impact jurisdictions and transportation providers in different ways. Benefits to adopting automated vehicles include *enhanced safety, increased efficiency and convenience, expanded mobility, and positive economic impact.*

- Shared Use Vehicles are transportation services and resources that can be shared among users. This includes cars, shuttles, bikes, and micromobility devices. Shared use vehicles can be placed into six primary categories: bike sharing, scooter sharing, car sharing, ride-sourcing, public transit, on demand public transit service, and taxis and limos. One major benefit of shared use vehicles is their ability to provide *first/last mile connectivity* to/from an origin and/or destination.
- Electric Vehicles derive all or part of their power from electricity supplied by the electric grid. As an alternative to conventional internal combustion engines, electric vehicles help to reduce emissions and reduces the United States' reliance on petroleum-based fuel sources. Using renewable fuel sources offers the opportunity to *decrease vehicle emissions* as well as emissions associated with fuel production.

Each of these vehicle technologies presents unique implementation challenges along with opportunities for Sioux Falls MPO partners. Future studies suggested in Section 9 (Work Plan and Implementation) should assess how they can be implemented to best fit the local physical and economic environment.

## OTHER EMERGING TRANSPORTATION TECHNOLOGY

### Freight

A major contributor to the future of transportation will be roadway and curb lane demand associated with the movement of goods. In 2019, U.S. online retail sales of physical goods amounted to approximately \$343 billion. Retail e-commerce sales are projected to increase to approximately \$477 billion by 2024. This will increase the number of freight vehicles that are needed to move and deliver goods. As the number of freight vehicles increases, the policies and infrastructure needed to support these vehicles will become more vital to the operation of cities.

As freight increases in automation, coordination between freight operators and jurisdictions will be critical. Roadway intersections along freight routes will need to be upgraded to a fully connected intelligent transportation system that ensures the safety of pedestrians, vehicles, and trains.

### Connected Curb Lanes

In addition to intersections equipped with intelligent transportation systems, jurisdictions are preparing curb lanes to interact with CASE vehicles. In recent years, curb lanes have transitioned from their traditional role as areas for vehicles to park to areas that provide access for multiple user groups. Curb lanes interact with CASE vehicles in various ways.

Connected curb lanes can also be equipped with sensor technology that enhances a jurisdiction's understanding of how curb lane usage varies throughout the day. Sensor technology, such as pole-mounted cameras, curb mounted sensors, or in-ground sensors, can be used to provide real-time occupancy information. Jurisdictions can use information collected through sensors to develop a curb lane management plan that allocates curb space to different user groups throughout the day.

## RIGHT-SIZING EMERGING TRANSPORTATION TECHNOLOGIES

Preparing for future technology is not a one-size-fits-all approach. Each jurisdiction will identify policies, procedures, and infrastructure that need to be updated to respond to future transportation technology. There are two foundational questions each jurisdiction will address:

- What is the agency's level of preparation to accommodate future technology?
- What practical/strategic actions can an agency take to implement a flexible and adaptable transportation system that accommodates future technologies?

Agencies benefit when assessing themselves using these two questions. As jurisdictions evaluate their preparedness to respond to future technology, it allows them to review their current practices, capture areas of success, and identify areas that need improvement. This also allows jurisdictions to identify technology enhancements that can make their day-to-day operations easier and more efficient, ultimately saving time and money.

Many jurisdictions perform a self-evaluation of their preparedness to adopt new technology using the Capability Maturity Model (CMM) Framework. The CMM Framework uses three tenets:

- Process matters: projects fail or do not achieve desired functionality for a variety of reasons unrelated to the technology.
- Prioritizing the right actions is important: is an agency ready, how do they know, and what should they do next?
- Focus on the weakest link: what is holding the agency back in becoming a leader in a particular area?

Based on the CMM Framework, agencies evaluate their ability to advance infrastructure and processes by conducting the following steps.

- **Step 1:** Self-Assessment. Work with your stakeholders to assess the agency or regional maturity level relative to defined assessment dimensions.
- **Step 2:** Identify dimensions that receive a lower maturity level thereby require a higher focus to increase the maturity.
- **Step 3:** Identify actions that can be taken to move from the current maturity level to the next.

Emerging issues and trends and the technology advancement self-evaluation framework are explored further in Appendix C, with additional detail provided on technologies, as well as a sample preparation work plan.

## 7.5 PRIORITIZATION METHODOLOGY

The Guiding Principles and Goals, as discussed in Chapter 2, were developed by the MPO based on input received through the Market Research Study as well as community outreach during the early phases of the development of this LRTP. They help to establish a long-term vision for the region—all projects should play a role in working towards achieving one or more of these goals. The goals are not necessarily quantitative in nature, however, and more specific measures are needed in order to objectively compare various projects based on their adherence to the Guiding Principles.

Through a series of meetings with the SAT, the MPO developed a set of prioritization measures to allow for the comparison of projects. Each measure was developed to be objective and easily replicated in order to remove subjectivity from the analysis and allow for a standardized methodology that could be applied to potential future projects.

In order to ensure the needs and priorities of the MPO’s rural areas were considered, roadway projects were broken down into “Urban” (those within defined city/town boundaries) and “Rural” (those outside of city boundaries but within the MPO area). Though projects in both Urban and Rural areas underwent the same scoring process, the categories of each group received a different weighting to capture differing priorities. For example, system preservation and safety are weighted highly for rural projects, while livability and environmental sustainability receives a higher weighting in urban areas.

At this time, Bike/Ped projects were kept as one singular list and were weighted consistently regardless of their location. The weighting applied to each group of projects is shown below:

Context	Safety & Security	Operational Efficiency	System Preservation	Livability & Environmental Sustainability	Multimodal Integration	Bonus Points
Urban Roadway	20	35	10	20	15	5
Rural Roadway	40	20	20	10	10	5
Bike/Ped	20	35	10	20	15	5

The prioritization measures are described in more detail below.

### SAFETY AND SECURITY

Measure	Methodology
<b>Number of Crashes</b>	The total number of crashes within proximity to the project, pulled from South Dakota Department of Transportation (SDDOT) crash data for the years 2013 to 2018. The total number of crashes was factored into the prioritization spreadsheet and normalized, with the projects receiving a score on a scale from 0 to 1.
<b>Fatalities and Injuries</b>	Pulled from the dataset above, this metric includes crashes with minor, serious or fatal injuries reported. The total number of crashes was factored into the prioritization spreadsheet and normalized, with the projects receiving a score on a scale from 0 to 1.



**OPERATIONAL EFFICIENCY**

Measure	Methodology
Existing Congestion	Measured based on the roadway's volume-to-capacity ratio from 2018 Base model results. Scores in this category were normalized, with the projects receiving a score on a scale from 0 to 1.
Future Congestion	Measured based on 2040 E+C model results. Scores in this category were normalized, with the projects receiving a score on a scale from 0 to 1.

**SYSTEM PRESERVATION**

Measure	Methodology
Immediate Need	<p><b>Roadways:</b> Determined using the Pavement Condition Index (PCI) ratings for roadways within the City of Sioux Falls. A project was marked as an immediate need if any segment along the corridor had a low enough PCI (under 55) to warrant concern. This metric is assigned a 0 (no concern) or 1 (immediate concern) in the prioritization spreadsheet. <i>Note: this data currently is not factored in for communities outside Sioux Falls.</i></p> <p><b>Bicycle/Pedestrian:</b> Immediate need for bicycle and pedestrian infrastructure includes projects that fill a current system gap or provide a facility along major roadways.</p>
Project Readiness	Scoring based on community input, with "shovel-ready" projects receiving higher scores, and projects only in the planning stage receiving lower scores.
Operates Within Existing Right-of-Way	Scoring based on community input, with projects operating with the current footprint receiving higher scores, and projects requiring additional ROW receiving lower scores.

### LIVABILITY AND ENVIRONMENTAL SUSTAINABILITY

Measure	Methodology
Schools and Community Facilities	Projects with a school or community facility nearby, or projects that serve as a major access route for a school or community facility nearby, were assigned a value in this category. This metric is assigned a 0 or 1 in the prioritization spreadsheet.
Activity Centers	Projects that directly serve commercial activity centers and employment centers were assigned value in this category. This metric is assigned a 0 or 1 in the prioritization spreadsheet.
Parks/Open Space	If a project provides direct or indirect access to a park or open space, it was assigned value in this category. This metric is assigned a 0 or 1 in the prioritization spreadsheet.

### MULTIMODAL INTEGRATION

Measure	Methodology
Bicycle or Pedestrian Element	Determined from the project description each jurisdiction provided. Projects that receive a score in this category include the construction/improvement of sidewalk, trails, or on-road bike facilities.
Bike Route	Projects on current or future bike routes were assigned value in this category.
Supports Freight	Projects on designated freight routes were assigned value in this category.
Supports Transit	Projects on current SAM fixed transit routes were assigned value in this category.

### BONUS

Measure	Methodology
Public Priority	<i>Will be determined following the final round of community engagement.</i>
Local Priority	Communities were able to assign additional points to projects they consider major local priorities.

## 7.6 ROADWAY PROJECT PRIORITIZATION RESULTS

Each community within the MPO submitted a list of projects for potential inclusion in the regional plan. To comply with federal guidance, only capacity-driven projects on the federal aid highway system were retained for evaluation. Therefore, all projects on the local roadway system or that were deemed to be routine maintenance concerns were removed from consideration. These projects will be evaluated and funded according to local



community-driven processes. Projects led by SDDOT were not prioritized through this process, deferring to the prioritization process already in place at the statewide level.

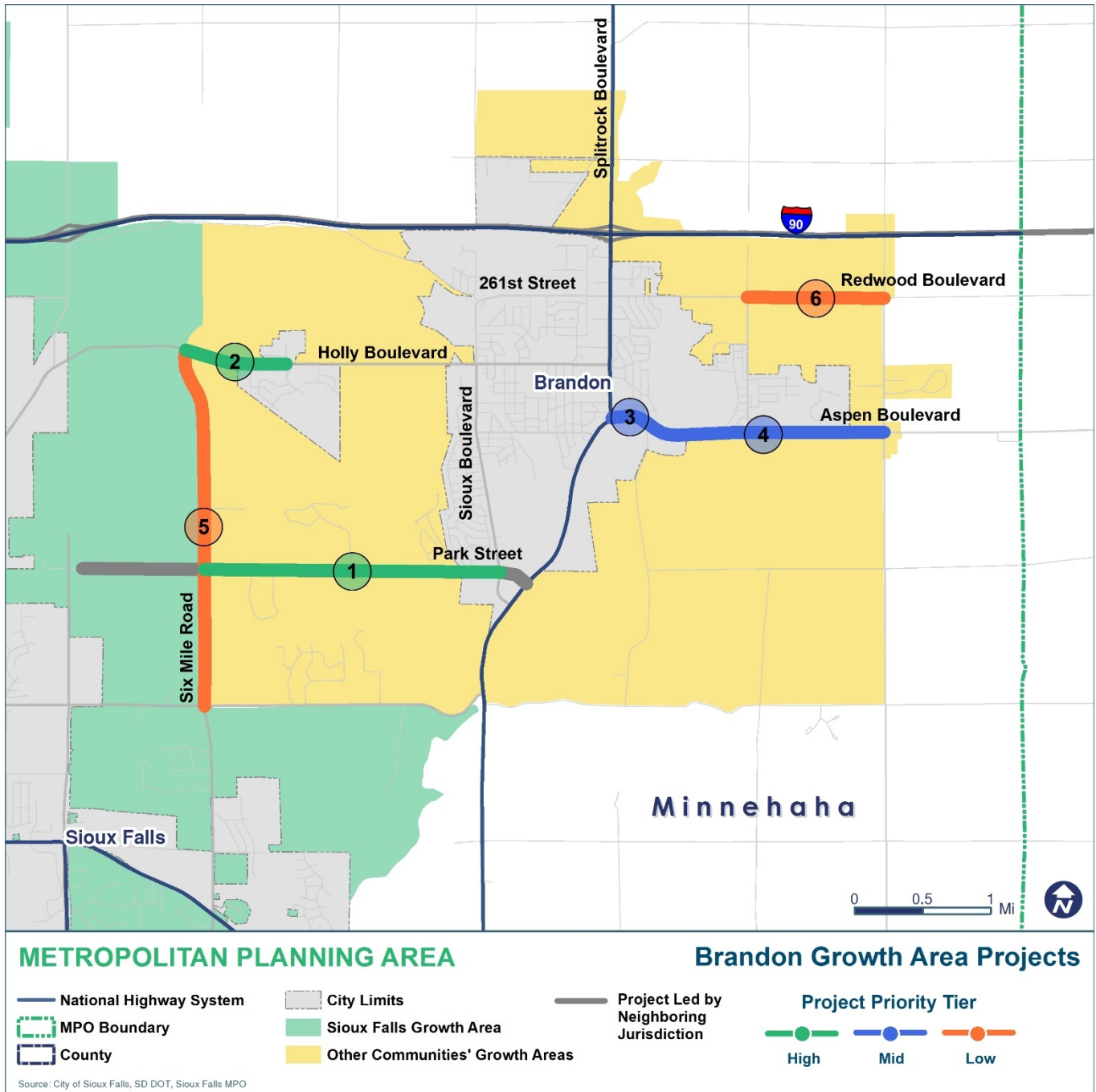
The results of the evaluation process are broken out by municipality in order to more easily correlate to the potential funding sources. Projects were therefore compared to other potential projects within each city. Projects within each community were assigned High, Mid, or Low priority based on their ranking within the community's projects. Bicycle and pedestrian projects are discussed in Section 8.3 of this report.

## BRANDON

The City of Brandon submitted six projects for evaluation. With high scores in Operational Efficiency, Connectivity and Economic Vitality, and Livability and Sustainability, Park Street between Sioux Boulevard and Highway 11 received the highest score.

Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
1	High	Park Street: Sioux Boulevard to Highway 11	Brandon	Urban	42.68
2	High	Holly Boulevard: Bridge to Six Mile Road	Brandon – Minnehaha County	Urban	30.53
3	Mid	Aspen Boulevard: S. Splitrock to McHardy Road	Brandon	Urban	25.17
4	Mid	Aspen Boulevard: McHardy Road to 484 <sup>th</sup> Avenue	Brandon – Minnehaha County	Urban	22.09
5	Low	Six Mile Road: Rice to Madison (Brandon portion)	Brandon	Urban	21.42
6	Low	Redwood Boulevard: Chestnut to 484 <sup>th</sup> Avenue	Brandon	Urban	8.04

Figure 27: Brandon Growth Area Projects





**CROOKS**

The City of Crooks did not submit any roadway projects for evaluation.

## HARRISBURG

The City of Harrisburg submitted six projects for evaluation. The reconstruction of Willow Streets between SD 115 and Honeysuckle Avenue received the highest score locally, though three projects received very high scores.

Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
1	High	Willow Street: SD 115 to Honeysuckle	Harrisburg	Urban	47.55
2	High	475 <sup>th</sup> Avenue (Cliff) & 272 <sup>nd</sup> Street	Harrisburg	Urban	46.17
3	Mid	Willow Street: Cliff Avenue to Railroad Street	Harrisburg	Urban	45.04
4	Mid	Willow Street and Creekside Avenue Intersection	Harrisburg	Urban	38.55
5	Low	Willow Street: Railroad Street to Southeastern Avenue	Harrisburg	Urban	35.47
6	Low	Signal: 272 <sup>nd</sup> Avenue and Minnesota	Harrisburg	Urban	24.43

Figure 30: Harrisburg Growth Area Projects



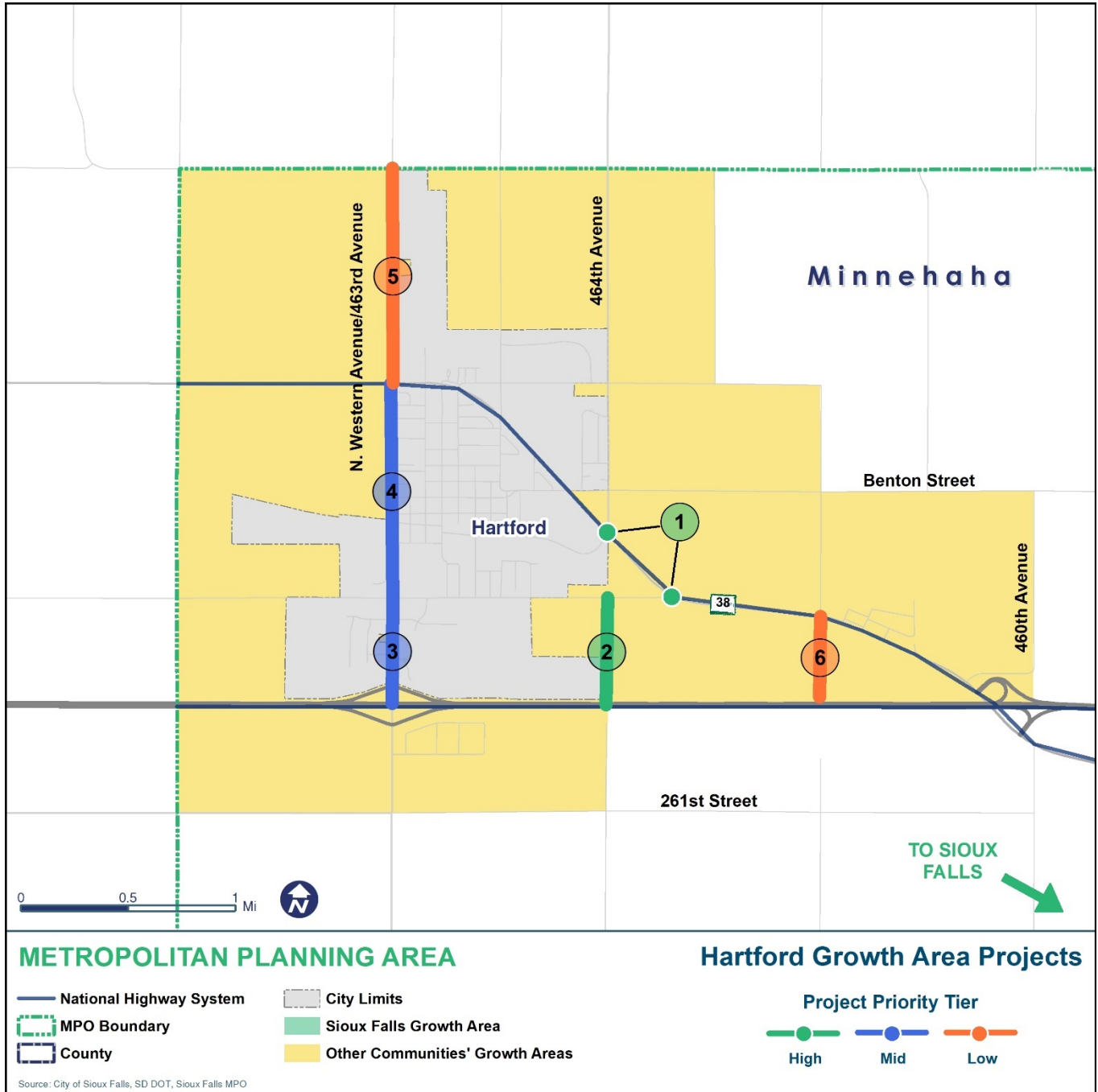
**HARTFORD**

The City of Harrisburg submitted six projects for evaluation. The top-scoring project locally was Intersection Capacity Improvements along SD 38. This project will be a joint project with SDDOT.

Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
1	High	SD 38 Intersection Capacity Improvements: Colton Road, Mickelson Road	Hartford – SDDOT	Urban	29.20
2	High	Section Line Corridor 2: Mickelson Road to 1 mile south	Hartford	Urban	25.37
3	Mid	Western Avenue: Mickelson Road to I-90 (Section Line Corridor 1)	Hartford	Urban	24.22
4	Mid	Western Avenue: Mickelson Road to Highway 38	Hartford	Urban	19.23
5	Low	Western Avenue: Highway 38 to CR 130 (258th Street)	Hartford	Urban	16.36
6	Low	Section Line Corridor 3: Highway 38 to 3/4 mile south – next to Sam Assam Development – East side	Hartford	Urban	14.96



Figure 31: Hartford Growth Area Projects



## SIoux FALLS

As the largest municipality of the region, 69 projects were evaluated for the City of Sioux Falls. Marion Road between 41<sup>st</sup> Street to 57<sup>th</sup> Street achieved the highest score. *Note that a small number of projects were removed late in the prioritization process, therefore the rankings are not continuous.*

Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
1	High	Marion Road: 41 <sup>st</sup> Street to 1/2 mile south of 57 <sup>th</sup> Street	Sioux Falls	Urban	69.79
2	High	Marion Road: 60 <sup>th</sup> Street North to Benson Road	Sioux Falls	Urban	67.71
2	High	Marion Road: Benson Road to Maple Street	Sioux Falls	Urban	67.71
2	High	Marion Road: Madison Street to 12th Street	Sioux Falls	Urban	67.71
3	High	Sertoma: 26 <sup>th</sup> Street to 57 <sup>th</sup> Street	Sioux Falls	Urban	64.99
4	High	10 <sup>th</sup> Street : 1/4 mile east Cleveland Avenue to Sycamore Avenue	Sioux Falls - SDDOT	Urban	64.47
5	High	10 <sup>th</sup> Street : Lowell Avenue to 1/4 mile east Cleveland Avenue (including interchange)	Sioux Falls	Urban	64.45
6	High	Madison Street: Burnside Street to Louise Avenue	Sioux Falls	Urban	60.29
7	High	Southeastern Avenue: 49 <sup>th</sup> Street to 57 <sup>th</sup> Street	Sioux Falls	Urban	59.23
8	High	Intersection 2675: 6 <sup>th</sup> Street and Sycamore Avenue	Sioux Falls	Urban	57.82
9	High	Cleveland Avenue: Rice Street to 10 <sup>th</sup> Street	Sioux Falls	Urban	57.34
10	High	Signal: 14 <sup>th</sup> Street and Cliff Avenue	Sioux Falls	Urban	57.07
11	High	West 26 <sup>th</sup> Street: Mary Beth Avenue to Sertoma Avenue	Sioux Falls	Urban	56.24
12	High	Intersection 2541: Cliff Avenue and Rice Street	Sioux Falls	Urban	56.20
13	High	Signal: 10 <sup>th</sup> Street and Cliff Avenue	Sioux Falls	Urban	56.15
14	High	Russell Street: Minnesota Avenue to Cliff Avenue	Sioux Falls	Urban	53.10
15	High	Kiwanis Avenue: 41 <sup>st</sup> Street to 49 <sup>th</sup> Street	Sioux Falls	Urban	53.00
16	High	Rice Street: Cleveland Avenue to 6 mile Road	Sioux Falls	Urban	50.63
17	High	Tea-Ellis Road: 41 <sup>st</sup> Street to 57 <sup>th</sup> Street	Sioux Falls	Urban	48.27
18	High	Intersection 2711: Arrowhead Boulevard and SD 11	Sioux Falls	Rural	48.02
19	High	East 26 <sup>th</sup> Street: SD 100 to Arrowhead Boulevard	Sioux Falls	Urban	46.19
20	High	East 41 <sup>st</sup> Street: Southeastern Avenue to 1/2 mile west of SD 11	Sioux Falls	Urban	45.25

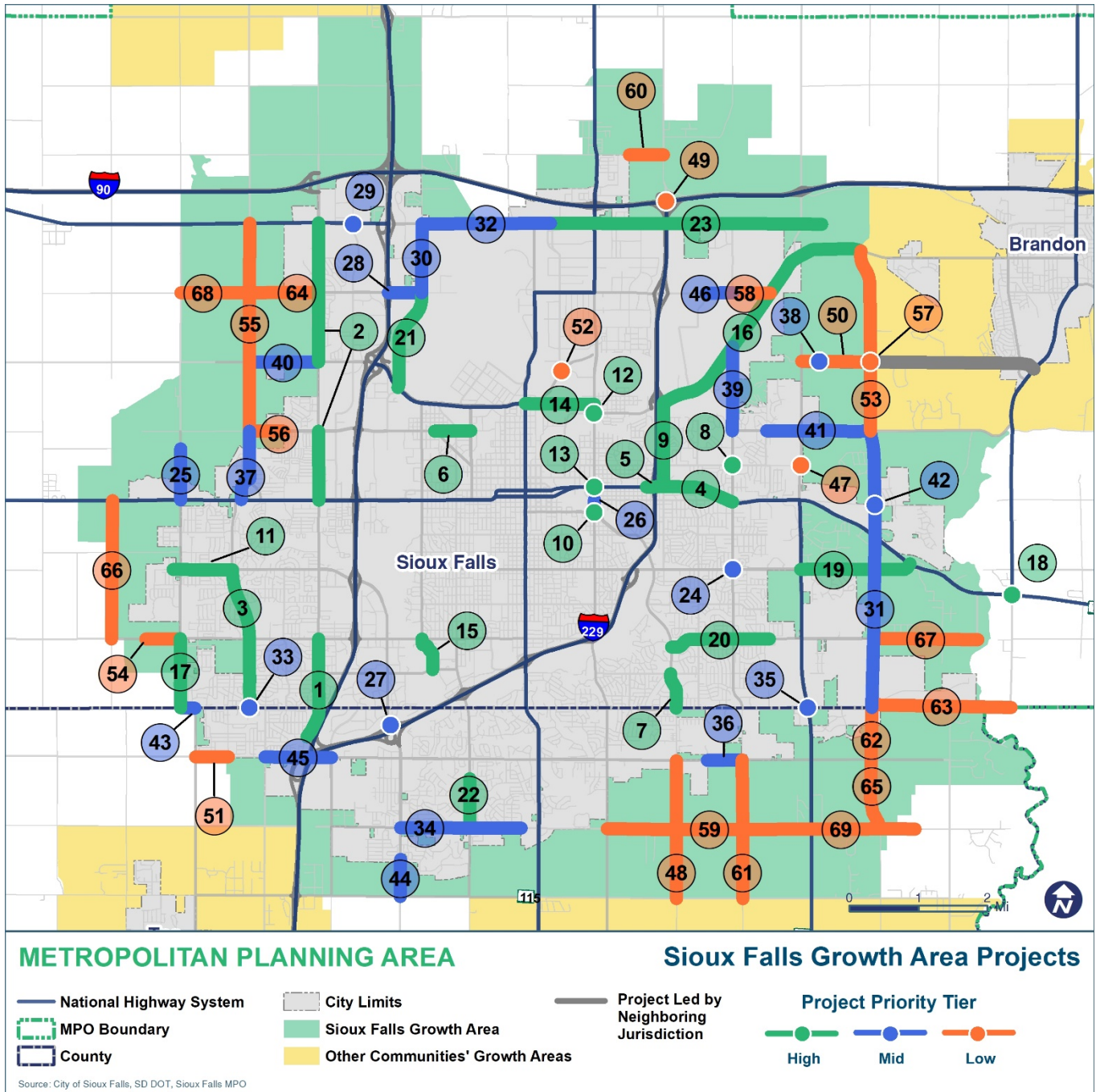


Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
21	High	Westport Avenue: Benson Road to Russell Street	Sioux Falls	Urban	44.04
22	High	Western Avenue: 74 <sup>th</sup> Street to 85 <sup>th</sup> Street	Sioux Falls	Urban	42.68
23	Mid	60 <sup>th</sup> Street North: Minnesota Avenue to Veterans Parkway (Highway 100)	Sioux Falls	Urban	42.47
24	Mid	Intersection: 26 <sup>th</sup> Street and Sycamore Avenue all directions	Sioux Falls	Urban	41.25
25	Mid	Ellis Road: 12 <sup>th</sup> Street to Skunk Creek Bridge	Sioux Falls	Urban	41.17
26	Mid	Cliff Avenue: RR Overpass 12 <sup>th</sup> Street to 14 <sup>th</sup> Street	Sioux Falls	Urban	40.23
27	Mid	Intersection 2345: Louise Avenue and I229 ramps	Sioux Falls	Urban	39.88
28	Mid	Benson Road: I-29 to Westport Avenue	Sioux Falls	Urban	39.18
29	Mid	Intersection 3515: Career Avenue and 60 <sup>th</sup> Street North	Sioux Falls	Urban	38.52
30	Mid	Westport: 60 <sup>th</sup> Street North to Benson Road	Sioux Falls	Urban	38.17
31	Mid	Six-Mile Road: Madison Street to 26 <sup>th</sup> Street	Sioux Falls	Urban	37.89
31	Mid	Six-Mile Road: 26 <sup>th</sup> Street to 57 <sup>th</sup> Street	Sioux Falls	Urban	37.89
32	Mid	60 <sup>th</sup> Street North: Kiwanis Avenue to North 4 <sup>th</sup> Avenue	Sioux Falls	Urban	37.79
33	Mid	Intersection 2119: Sertoma Avenue and 57 <sup>th</sup> Street	Sioux Falls	Urban	36.32
34	Mid	85 <sup>th</sup> Street: Louise Avenue to Audie Avenue	Sioux Falls	Urban	33.25
35	Mid	Intersection 2716: 57 <sup>th</sup> Street and SD 11	Sioux Falls	Urban	33.11
36	Mid	69 <sup>th</sup> Street: Sycamore Avenue to Veteran's Parkway	Sioux Falls	Urban	32.42
37	Mid	LaMesa Drive – Sertoma Avenue: Madison Street to 12 <sup>th</sup> Street	Sioux Falls	Urban	31.50
38	Mid	Intersection 3157: Maple Street and Veterans Parkway	Sioux Falls	Urban	29.32
39	Mid	Sycamore Avenue: Rice Street to Madison Street	Sioux Falls	Urban	28.33
40	Mid	Maple Street: LaMesa Drive to Marion Road	Sioux Falls	Urban	27.37
41	Mid	Madison Street: Veterans Parkway to Six Mile Road	Sioux Falls	Urban	26.69
41	Mid	Madison Street: Dubuque Avenue to Veterans Parkway	Sioux Falls	Urban	26.69
42	Mid	Intersection 3260: 10 <sup>th</sup> Street and Six-Mile Road	Sioux Falls	Urban	26.33
43	Mid	57 <sup>th</sup> Street: North Tea-Ellis Road to South Tea-Ellis Road	Sioux Falls	Urban	26.22



Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
45	Low	69 <sup>th</sup> Street: Sundowner Avenue to Solberg Avenue (overpass)	Sioux Falls	Urban	23.87
46	Low	Benson Road: Bahnson to Sycamore Avenue	Sioux Falls	Urban	23.71
47	Low	Intersection 3154: 6 <sup>th</sup> Street and SD 11	Sioux Falls	Urban	22.89
49	Low	60 <sup>th</sup> Street North: West ramps of I-29 to East ramps	Sioux Falls	Urban	21.71
50	Low	Maple Street: Powder House Road to Six-Mile Road	Sioux Falls	Urban	21.40
51	Low	69 <sup>th</sup> Street: Tea-Ellis Road to Sundowner Avenue	Sioux Falls	Urban	20.88
52	Low	Intersection 2501: North Drive and Ash Street	Sioux Falls	Urban	19.41
53	Low	Six-Mile Road: Rice Street to Madison Street (Sioux Falls portion)	Sioux Falls	Urban	18.97
54	Low	West 41 <sup>st</sup> Street: Tea-Ellis Road to 1/2 mile west	Sioux Falls	Urban	16.28
55	Low	LaMesa Drive: 60 <sup>th</sup> Street North to Maple Street	Sioux Falls	Urban	15.75
56	Low	Madison Street: LaMesa Drive to Valley View Road	Sioux Falls	Urban	15.57
57	Low	Intersection 2728: Maple Street and Six-Mile Road	Sioux Falls	Rural	14.98
58	Low	Benson Road: Sycamore Avenue to Rice Street	Sioux Falls	Urban	13.41
59	Low	85 <sup>th</sup> Street: Cliff Avenue to SD 11	Sioux Falls	Urban	10.77
60	Low	72 <sup>nd</sup> Street North: 476 <sup>th</sup> Avenue to 1/2 mile west	Sioux Falls	Urban	10.27
62	Low	Six-Mile Road: 57 <sup>th</sup> Street to 69 <sup>th</sup> Street	Sioux Falls	Urban	8.92
63	Low	57 <sup>th</sup> Street: Six-Mile Road to 481 <sup>st</sup> Street	Sioux Falls	Urban	7.53
64	Low	Benson Road: Marion Road to LaMesa Drive	Sioux Falls	Urban	6.36
65	Low	Six-Mile Road: 69 <sup>th</sup> Street to 85 <sup>th</sup> Street	Sioux Falls	Urban	6.12
66	Low	468 <sup>th</sup> Avenue: 12 <sup>th</sup> Street to 41 <sup>st</sup> Street	Sioux Falls	Rural	5.80
67	Low	East 41 <sup>st</sup> Street: Six-Mile Road to Riverview Avenue	Sioux Falls	Urban	4.03
68	Low	Benson Road: LaMesa Drive to Ellis	Sioux Falls	Urban	0.93
69	Low	85 <sup>th</sup> Street: SD 11 to 1 1/2 miles east	Sioux Falls	Rural	0.84

Figure 32: Sioux Falls Growth Area Projects



**TEA**

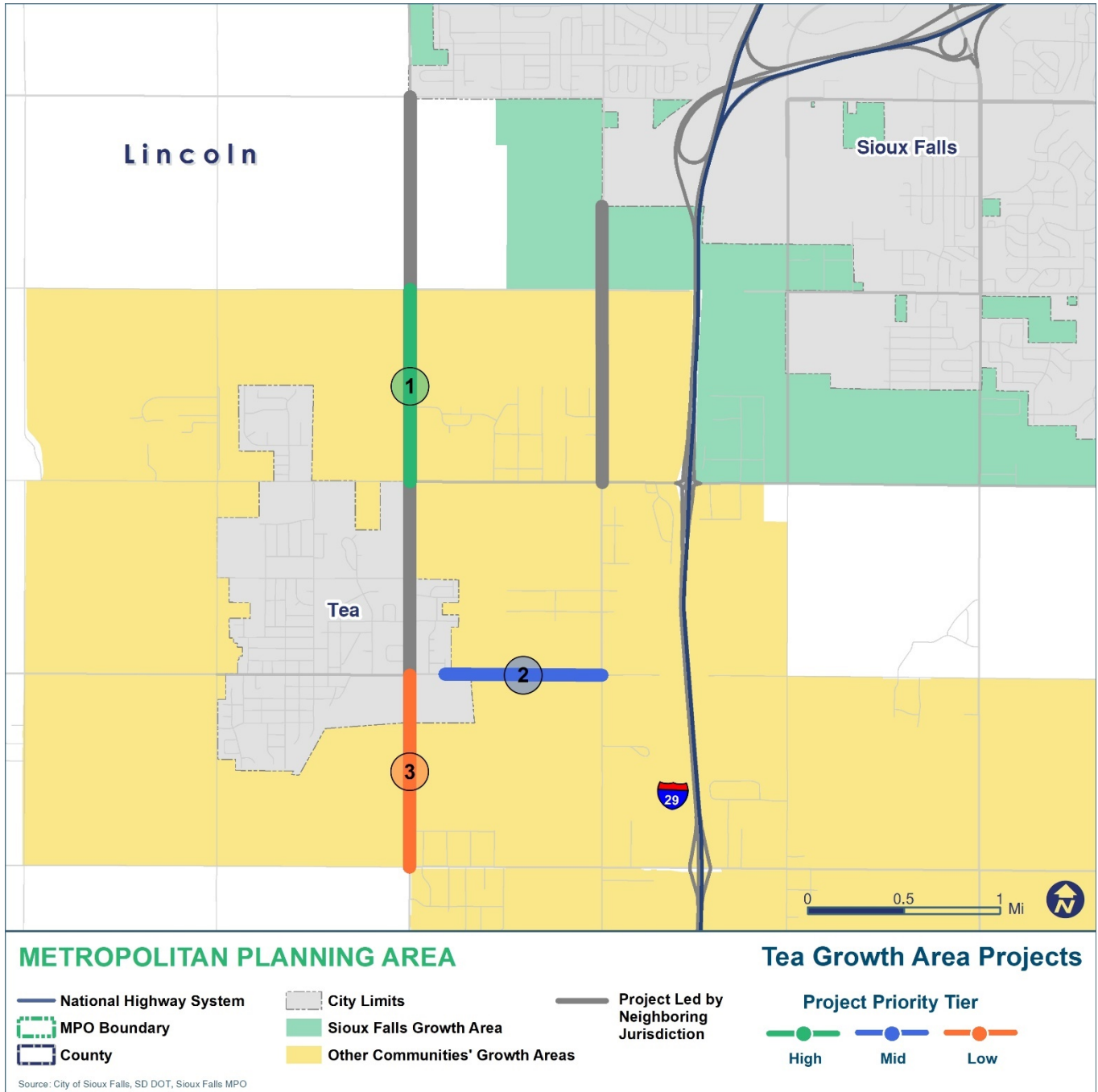
Three projects were prioritized for the City of Tea. Of these projects, Heritage Parkway between 271<sup>st</sup> Street and 85<sup>th</sup> Street scored highest. This is the City's only "rural" project submitted.

Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
1	High	Heritage Parkway: 271st St. to 85th St.	Tea - Lincoln County	Rural	27.96
2	Mid	1st St: Ceylon Ave to Sundowner Ave	Tea	Urban	21.93
3	Low	Heritage Parkway: 1st St. to 9th St.	Tea - Lincoln County	Urban	14.75





Figure 33: Tea Growth Area Projects







**LINCOLN COUNTY**

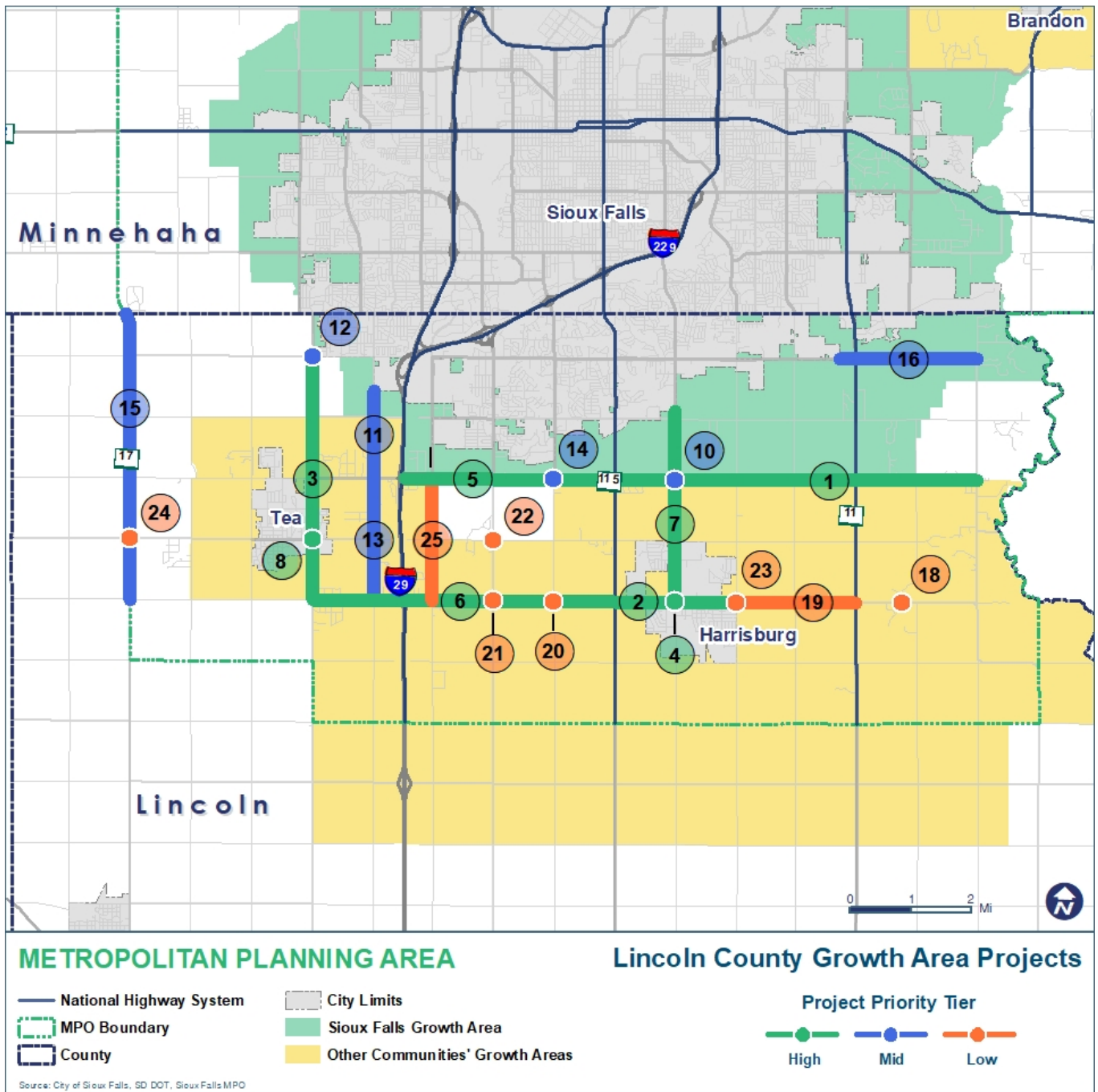
While the County is an important partner on many local roadway projects, the County also maintains and operates its own extensive roadway system. Twenty-five projects were evaluated for Lincoln County within the MPO boundary section of the County. This list includes a mix of urban and rural projects, with those listed as “urban” being within the boundaries of local communities, but on a roadway owned and maintained by the County. Of these projects, 271<sup>st</sup> Street from Louise Avenue to 480<sup>th</sup> Avenue scored the highest. *Note that a small number of projects were removed late in the prioritization process, therefore the rankings are not continuous.*

Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
1	High	271st Street: 472nd Avenue (Louise) to 480th Avenue	Lincoln County	Rural	57.49
2	High	273rd Street: SD 115 to 476th Avenue	Lincoln County - Harrisburg	Urban	49.78
3	High	469th Avenue: 273rd Street to Sioux Falls	Lincoln County - Tea	Urban	46.68
4	High	273rd Street and 475th Avenue (Cliff)	Lincoln County - Harrisburg	Urban	43.67
5	High	271st Street: I-29 to 472nd Avenue	Lincoln County	Rural	39.45
6	High	273rd Street: 469th Avenue to SD 115	Lincoln County	Rural	36.67
7	High	475th Avenue (Cliff): 273rd Street to Sioux Falls	Lincoln County - Harrisburg	Urban	36.66
8	High	469th Avenue and 272nd Street	Lincoln County - Tea	Urban	36.55
10	Mid	271st Street and 475th Avenue	Lincoln County	Urban	30.87
11	Mid	470th Avenue: 271st Street to Sioux Falls	Lincoln County - Delpre Township	Urban	22.52
12	Mid	269th Street and 469th Avenue	Lincoln County	Urban	22.30
13	Mid	470th Avenue (Sundowner): 271st Street to 273rd Street	Lincoln County - Delpre Township	Urban	19.82
14	Mid	271st Street and Western Avenue	Lincoln County	Urban	19.69
15	Mid	466th Avenue: Minnehaha County to 273rd Street	Lincoln County - Delpre Township	Rural	17.99
16	Mid	269th Street: 480th Avenue to Sioux Falls	Lincoln County	Rural	16.97
18	Low	Bridge # 42-148-050 on LC 110 3.3 miles east of Harrisburg	Lincoln County	Rural	15.56
19	Low	273rd Street: 476th Avenue to SD 11	Lincoln County	Rural	14.63
20	Low	273rd Street and 473rd Avenue	Lincoln County	Rural	14.06



Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
21	Low	273rd Street and 472nd Avenue	Lincoln County	Urban	12.96
22	Low	472nd Avenue and 272nd Street	Lincoln County	Rural	12.44
23	Low	273rd Street and 476th Avenue	Lincoln County	Urban	12.39
24	Low	272nd Street and 466th Avenue	Lincoln County	Rural	12.06
25	Low	471st Avenue (Tallgrass): 271st Street to 273rd Street	Lincoln County - Delpre Township	Rural	11.48

Figure 34: Lincoln County Growth Area Projects



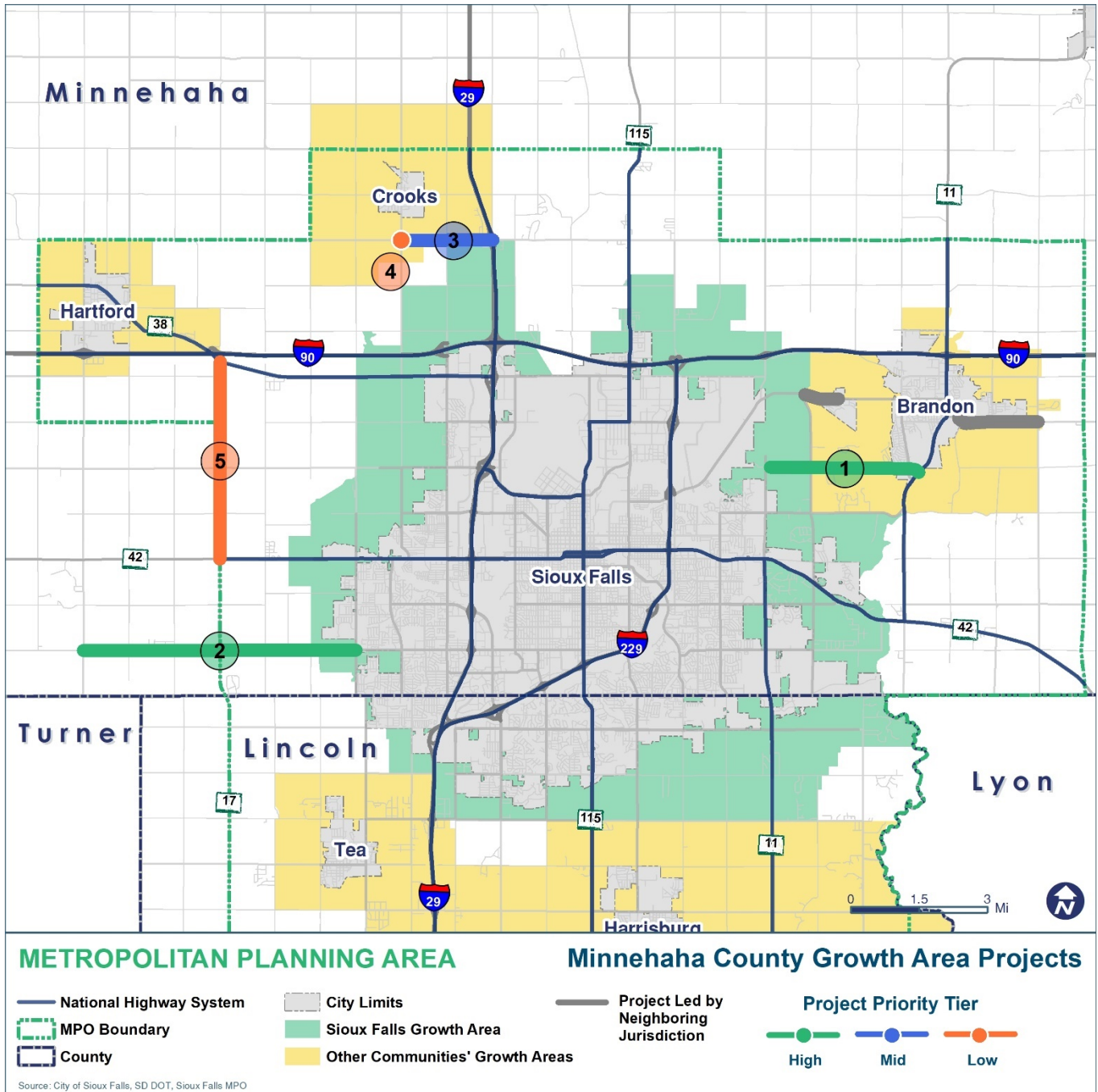
### MINNEHAHA COUNTY

While the County is an important partner on many local roadway projects, the County also maintains and operates its own extensive roadway system. Five projects were evaluated for Minnehaha County within the MPO boundary section of the County. This list includes a mix of urban and rural projects, with those listed as “urban” being within the boundaries of local communities, but on a roadway owned and maintained by the County. Of these projects, Maple-Park Street, a shared project with the communities of Brandon and Sioux Falls, scores the highest. The County has applied for a federal BUILD grant to assist with funding this project.

Rank	Priority	Project Name	Jurisdiction	Urban/Rural	Weighted Score
1	High	Maple – Park Street (New Construction)	Minnehaha County - Brandon - Sioux Falls	Urban	49.01
2	High	Highway 148 – Reconstruction	Minnehaha County	Rural	34.43
3	Mid	Highway 130 – Reconstruction	Minnehaha County	Rural	29.73
4	Low	Roundabout at 258th Street & 470th Avenue	Minnehaha County	Rural	20.87
5	Low	Highway 145 – New Construction	Minnehaha County	Rural	17.17



Figure 35: Minnehaha County Growth Area Projects



## 8.0 FINANCIAL RESOURCES AND IMPLEMENTATION

### 8.1 FINANCIAL RESOURCE ASSESSMENT

The proposed recommendations were developed in collaboration with the Sioux Falls MPO, member jurisdictions, and SDDOT. These projects and policies include roadway, freight, bicycle, pedestrian, and transit facilities and services for the life of this plan. The financial plan also reflects existing and committed projects from the regionwide Transportation Improvement Plan (TIP) and local Capital Improvement Plans (CIPs) along with the future projects recommended in this plan. These recommendations were developed through consideration of this plan's guiding principles and goals, as detailed in **Chapter 4**. Finally, these projects result from an extensive public participation process that included the statistically valid input generated through the 2019 Market Research Study, a public open house, freight & agricultural stakeholder interviews, an interactive online survey, and the participation of a Study Advisory Team. More information on the community outreach efforts can be found in **Chapter 3** and the Public Participation Plan in **Appendix B**.

Revenue forecasts were developed through a review of previous state and local expenditures, current funding trends, and likely future funding levels. The revenue forecasts involved consultation with the Sioux Falls MPO communities, including the City of Sioux Falls, and SDDOT. All dollar figures discussed in this section initially were analyzed in current year dollars (i.e. 2020) and then projects with an identified construction schedule were inflated to reflect projected year of expenditure or implementation. Based on current statewide standards and applicable local forecasts, an annual inflation rate of 2% was used to forecast costs, while revenues were inflated at a rate of 1.5%.

This chapter provides an overview of revenue assumptions, probable cost estimates, and financial strategies along with the detailed methodology used to derive these values. Since this is a planning level funding exercise, all funding programs, projects, and assumptions will have to be re-evaluated in subsequent plan updates.

**Table 7 and 8** below reflect the proposed costs and revenues for roadway projects with current funding sources. The costs and revenues are broken up between roadway capital projects and maintenance. An estimated \$3.1 billion and \$1.6 billion will be available for roadway capital and maintenance projects within the Sioux Falls MPO region, respectively, in the funded plan. The LRTP is financially constrained for all cost bands as well as the overall 2045 horizon year of the plan.

#### CAPITAL ROADWAY FUNDING

Transportation funding is a complicated patchwork of federal, state, and local revenues. In general, most of the South Dakota's transportation funding comes from the state and federal gas tax, as well as vehicle registrations and fees, both allocated by the South Dakota Department of Transportation (SDDOT). Local municipalities supplement this funding from their general funds, and through bonds, user fees, and special assessments. The state provides several statutory options to local municipalities and counties to augment this funding, most of which are currently being implemented in the Sioux Falls Metropolitan Planning Area (MPA).



- **Local Option Sales Tax:** Cities in South Dakota are allowed to implement a 2% sales tax on top of the state's 4.5%. All municipalities within the MPA have done so. There are no restrictions on the use of local sales tax revenues.
- **Wheel Tax:** Counties in South Dakota may implement a wheel tax collected at vehicle registration. Minnehaha County currently collects a \$4-wheel tax, for a maximum of \$16 per vehicle. Lincoln County collects a \$5-wheel tax, with a maximum of \$60 per vehicle. Counties must implement a wheel tax to be eligible for competitive bridge improvement funding.
- **Front-Foot Assessments:** Cities in South Dakota are authorized to implement a small fee per foot of public road frontage on all properties. The City of Sioux Falls currently assesses this fee.
- **Developer Fees:** Sioux Falls and the City of Brandon currently implements an arterials street platting fee to finance expansion of the arterial street system. This fee is assessed on all newly platted or replatted land. Brandon also has implemented a \$3,000 per acre impact fee for utility projects in certain areas.
- **Competitive Grants:** Among others, the Transportation Alternatives Program (TA) through FHWA (administered through SDDOT) provides funding yearly for active transportation projects, and the Bridge Improvement Grants (SDDOT) provide funding for bridge construction and improvements.
- **License Fees:** Local jurisdictions receive a portion of the funding from vehicles registered in each county. These funds may go to bolster locally available transportation funds.
- **BUILD Grants:** Some communities in the region have benefited from BUILD grants through FHWA, which can be used to fund multimodal projects. This revenue source is competitive and receives varying levels of funding each year, so should not be counted on in yearly projections.
- **Property Tax:** Street improvements and maintenance may be funded in part by property tax revenues. Such spending must compete with all other local budget needs to gain annual budget allocation.

Capital roadway revenues were compiled for each jurisdiction in the Sioux Falls MPO area. At the municipal level, capital roadway revenues are derived from a combination of general fund monies, assessments, bond funds, state and federal funds, user fees, intergovernmental revenue, and other miscellaneous revenue. The City of Sioux Falls revenues are a combination of City Capital Improvements Program (CIP) funds, DOT funds for projects being managed by the City, and Surface Transportation Program (STP) funds. Revenues were adjusted to increase with inflation beginning in the year 2026. These funds include dollar values currently allocated to SDDOT projects through 2021-2024 TIP. Over the life of the LRTP, the estimated roadway capital revenues for the Sioux Falls MPO region total approximately \$2.8 billion, or approximately \$550-600 million per 5-year time band.

Table 7 Roadway Capital Revenues Through 2045

Agency	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	Total
Brandon	\$5,792,958	\$6,062,079	\$6,445,236	\$6,849,123	\$7,274,416	\$32,423,811
Harrisburg	\$3,100,000	\$3,292,070	\$3,933,600	\$4,689,507	\$5,579,277	\$20,594,455
Hartford	\$4,955,000	\$5,151,000	\$5,493,000	\$5,855,000	\$6,238,000	\$27,692,000
Tea	\$12,602,000	\$3,394,443	\$3,557,211	\$3,722,195	\$3,888,488	\$14,562,338
Crooks	\$631,000	\$654,000	\$694,000	\$736,000	\$780,000	\$3,495,000



Lincoln County*	\$5,509,000	\$4,564,000	\$4,096,000	\$3,506,000	\$2,776,000	\$20,451,000
Minnehaha County*	\$13,641,361	\$12,134,592	\$10,341,843	\$8,211,199	\$5,699,778	\$50,028,776
SDDOT	\$398,541,518	\$375,734,029	\$315,368,737	\$285,507,702	\$295,924,252	\$1,671,076,238
Sioux Falls	\$150,740,000	\$177,147,067	\$200,663,417	\$227,925,312	\$259,529,319	\$1,016,005,115
<b>Total</b>	<b>\$595,512,837</b>	<b>\$588,133,280</b>	<b>\$550,593,044</b>	<b>\$547,002,038</b>	<b>\$587,689,530</b>	<b>\$2,856,328,733</b>

\* Capital revenues are estimated for the whole county, though only a portion of the county is within the MPO area. The amount expended within the MPO area is at the discretion of the respective County Highway Department and County Commission.

### ROADWAY MAINTENANCE FUNDING

Maintenance funding in the Sioux Falls MPO region primarily is used for roadway maintenance and preservation, though on-road pedestrian and bicycle facilities also are maintained with these funds. The individual municipalities and counties allocate revenue from the above-mentioned sources for maintenance and preservation of their local roadway system and facilities. In addition, SDDOT allocates maintenance and preservation funding for both resurfacing and structures managed by the agency. SDDOT has designated maintenance and preservation of its network as the highest priority for the agency.

**Table 8.** shows the estimated roadway maintenance numbers for each agency. Through the 2045 horizon year of the LRTP, there is estimated to be approximately \$1.7 billion allocated throughout the region for maintenance and preservation. It is assumed that maintenance costs will be equal to the available revenue.

*Table 8 Roadway Maintenance Costs Through 2045*

Agency	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	Total
Brandon	\$3,000,000	\$3,185,000	\$3,516,000	\$3,882,000	\$4,286,000	\$17,869,000
Harrisburg	\$2,000,000	\$2,123,248	\$2,344,237	\$2,588,227	\$2,857,612	\$11,913,327
Hartford	\$1,994,000	\$2,117,000	\$2,337,000	\$2,581,000	\$2,849,000	\$11,878,000
Tea	\$3,000,000	\$3,715,684	\$4,102,416	\$4,529,398	\$5,000,822	\$20,348,000
Crooks	\$375,000	\$398,000	\$440,000	\$485,000	\$536,000	\$2,234,000
Lincoln County*	\$27,755,000	\$30,644,000	\$33,833,000	\$37,355,000	\$41,243,000	\$170,830,000
Minnehaha County*	\$16,100,000	\$17,800,000	\$19,700,000	\$21,700,000	\$24,000,000	\$99,300,000
SDDOT	\$8,126,482	\$36,031,838	\$105,372,729	\$144,903,034	\$144,903,034	\$439,337,117
Sioux Falls	\$169,500,000	\$185,379,095	\$214,905,179	\$249,134,002	\$288,134,002	\$1,017,732,866
<b>Total</b>	<b>\$231,850,482</b>	<b>\$281,393,865</b>	<b>\$386,550,561</b>	<b>\$467,157,661</b>	<b>\$513,809,470</b>	<b>\$1,791,442,310</b>

\* Maintenance costs are estimated for the whole county, though only a portion of the county is within the MPO area. The amount expended within the MPO area is at the discretion of the respective County Highway Department and County Commission.

### BICYCLE AND PEDESTRIAN FUNDING

In keeping with the complete streets concept embraced by the MPO, bicycle and pedestrian accommodations are considered as a part of all roadway projects. In addition, there are a combination of on-street and off-street independent bicycle and pedestrian projects that are implemented throughout the region. These projects are often funded through the successful application for Transportation Alternatives (TA) funding. Approximately \$2.1 million is available through a competitive project selection process administered by SDDOT with \$1.15 million for cities over 5,000 population and \$1.05 million for cities under 5,000 population. Each individual project may be approved for a maximum of \$400,000 in Federal funds, although SDDOT may approve a larger amount for phased projects. The minimum for infrastructure projects will be \$50,000. There is no minimum for non-infrastructure projects.

Moving forward, approximately \$230,000 per year of TA funds have been assumed to come to the region, increasing with inflation past 2021.

The City of Sioux Falls does not typically receive TA funds. Instead, independent on-road bicycle and pedestrian projects are most often funded through the City's CIP. An annual allocation of funds is set aside for this type of project. The Sioux Falls Parks and Recreation department funds the majority of multi-use trail construction in the City. That funding is considered separately from the LRTP.

**Table 9** documents the estimated bicycle and pedestrian revenues for the region.

*Table 9 Bicycle and Pedestrian Revenue. Source: SDDOT and City of Sioux Falls*

Fiscal Year	SDDOTTA	Sioux Falls	Total
2021-2025	\$1,230,900	\$2,500,000	\$3,731,000
2026-2030	\$1,427,000	\$2,374,200	\$4,161,200
2031-2035	\$1,654,300	\$3,169,700	\$4,824,000
2036-2040	\$1,917,800	\$3,674,500	\$5,592,300
2041-2045	\$2,190,400	\$4,259,800	\$6,450,235
<b>Total</b>	<b>\$8,420,400.00</b>	<b>\$13,441,000</b>	<b>\$24,758,700</b>

### PUBLIC TRANSPORTATION

Public transportation funding takes the form of federal, state, and local sources. Revenue sources for capital public transportation projects are available primarily through Federal Transit Administration (FTA) funds that are distributed by the state, and by locally generated funding options. The Cities of Brandon and Hartford receive capital funding through each city's general fund and through FTA funds. The City of Sioux Falls uses these two funding sources along with local sales tax revenues.

Similar to the capital revenues, a combination of federal, state, and local sources are used to fund the operations and maintenance expenses for the Sioux Falls MPA. All of the region's municipalities with public transportation

systems use a blend of City general funds and FTA funds. The City of Sioux Falls receives its operations FTA funding directly from FTA, while other communities receive federal pass-through funding from SDDOT.

**City of Sioux Falls**

**Funding, 2021-2045**

The City of Sioux Falls (through Sioux Area Metro)

<b>Total Revenues</b>	\$334,439,374
<b>Total Expenditures</b>	\$390,499,610

identified approximately \$335 million available for capital and operations & maintenance (O&M) expenditures between 2021-2045, based on current “business-as-usual” assumptions. It is important to note that the system received monies from the Coronavirus Aid, Relief, and Economic Security Act (CARES Act) to assist with preparing and responding to the COVID-19 pandemic. Agencies can use this money for capital or O&M expenditures that are forthcoming from the system. Local match requirements that were previously required for apportioned urbanized area formula funds and rural formula funds are waived for this funding source.

Sioux Falls was awarded \$7,738,249 in CARES funding based on the 5307 urbanized area formula.

**City of Hartford**

**Funding, 2021-2045**

The Inter-Lakes Community Action Partnership

<b>Total Revenues</b>	\$1,883,378
<b>Total Expenditures</b>	\$2,123,548

(ICAP) operates the City of Hartford’s transit system. ICAP identified approximately \$2 million available for capital and operations & maintenance (O&M) expenditures between 2021-2045, based on current “business-as-usual” assumptions.

**City of Brandon**

**Funding, 2021-2045**

The City of Brandon identified approximately \$6

<b>Total Revenues</b>	\$6,066,877
<b>Total Expenditures</b>	\$6,066,877

million available for capital and operations & maintenance (O&M) expenditures between 2021-2045, based on current “business-as-usual” assumptions.

## 8.2 FINANCIALLY CONSTRAINED PLAN

### FUNDED AND COMMITTED PROJECTS

A list of currently funded and committed capital projects was drawn from the Sioux Falls MPO 2021-2024 TIP and the 2020-2025 Sioux Falls CIP. These projects are detailed in Table 10 and Table 11. Costs are shown in year of expenditure (YOE) dollars. Funded and committed projects were not prioritized through the process documented in Chapter 7 of this report.

The following table documents the projects of regional significance documented in the SECOG 2021-2024 TIP.

Table 10 Sioux Falls MPO 2021-2024 Transportation Improvement Program Projects

Lead Agency	Project Name	Type	Year	YOE Cost
Brandon*	Redwood Boulevard: Bridge to Chestnut	Urban Paved - 2 lanes		
Brandon*	Redwood Boulevard: Holly Boulevard to Splitrock Boulevard / Highway 11	Urban Paved 3 to 4 lane		
Brandon*	Redwood Boulevard / Sioux Boulevard Intersection	Capacity and Safety		
Brandon*	Intersection of Aspen Boulevard / Splitrock Boulevard	Capacity		
Brandon*	Chestnut: City Limits to Redwood Boulevard	Urban 3 Lane		
Crooks	Sunset Trails Sunset Park Phase 3	Trail Construction	2021	\$105,000
Crooks	East 4th Street Phase 3	Sidewalk	2023	\$400,000
Hartford	Hartford Recreational Trail Expansion to Main Street	Trail Construction	2022	\$247,100
Hartford	Western Avenue: Mickelson Road to I-90	Urban Paved Road	2024	\$4,262,200
Harrisburg	Cliff Avenue & Willow Street Intersection	Signalized Urban Section	2021	\$2,500,000
Harrisburg	Cliff Avenue & Industrial Drive Intersection	Signalized Rural Section	2022	\$600,000
Harrisburg	Legendary Estates Trail: Interim Connection	Trail		Developer Funded
SDDOT	I229 - 10th St Interchange	Preliminary Engineering	2021	\$285,000
SDDOT	I29 - 85th St Interchange	Interchange Improvements	2021	\$49,050,000
SDDOT	I229 - Exit 3 (Minnesota Ave) in Sioux Falls	Preliminary Engineering	2021	\$52,000
SDDOT	I229 - Exit 4 (Cliff Ave) in Sioux Falls	Preliminary Engineering	2021	\$52,000
SDDOT	I90 - Exit 387 (Hartford)	Preliminary Engineering	2021	\$52,000
SDDOT	I29 - Exit 77 (41st Street Interchange)	Interchange Improvements	2022	\$42,582,000



Lead Agency	Project Name	Type	Year	YOE Cost
SDDOT	I90 - Exit 406 (Corson/ Brandon)	Interchange Improvements	2023	\$31,176,000
SDDOT	I229 Exit 9 (Benson Rd) in Sioux Falls	Interchange Improvements	2023	\$41,571,000
SDDOT	I229 - Exit 2 (Western Ave) in Sioux Falls	Ramp improvements	2024	\$712,000
SDDOT	I229 - for Cliff Ave	Modify Crossovers	2024	\$3,496,000
SDDOT	Interstate Maintenance	Various	2021-2024	\$74,577,000
SDDOT	Minor Arterial Projects	Various		\$2,862,000
SDDOT	SD42 - Fm the Big Sioux River Bridge to the IA State Line	Corridor Improvements	2022	\$29,068,000
SDDOT	Six Mile Rd/Arrowhead Parkway	Pavement Improvements, Curb & Gutter, Signals & Lighting	2021	\$17,481,000
SDDOT	Veterans Parkway/Arrowhead Parkway	Pavement Improvements, Curb & Gutter, Signals & Lighting	2022	\$12,759,000
SDDOT	SD42 - Willow Run to Big Sioux River in Sioux Falls	Corridor Improvements	2023	\$22,496,000
SDDOT	Bridge Projects	Various	2024	\$552,000
SDDOT	Railroad Crossings	Various	2021-2024	\$2,180,000
SDDOT	Highline Avenue/Place	Shared Use Path	2021	\$445,000
SDDOT	60th St. N from I29 to N 4th Ave in Sioux Falls	Preliminary Engineering	2022	\$200,000
SDDOT	Roadway Safety Improvements	Various	2021-2024	\$11,647,000
SDDOT	County Pavement Marking	Various	2021-2024	\$3,529,000
SDDOT	Local Bridge Replacement Projects	Various	2021-2024	\$2,083,000
SDDOT	Crooks: West Avenue	Shared Use path	2021	\$394,000
SDDOT	Tea: Athletic Complex	Shared Use Path	2021	\$275,000
Tea	272nd Street from 1200' east of Heritage Parkway to Sundowner Avenue	Capacity - 3 Lanes Rural	2021	\$1,400,000
Tea	271st Street from Heritage Parkway to I-29	Capacity - 5 Lanes Urban	2021	\$12,202,000
Tea	Sundowner Avenue: 271st Street to 85th Street	Capacity - 4 Lanes Urban	2023	\$1,400,000
Tea	85th Street: Sundowner Avenue to Ellis Road	Urban Paved Road	2023	\$4,000,000
Tea	271st Street (CR 106): Heritage Parkway to I-29	Urban 4-lane	2023	\$3,400,000



Lead Agency	Project Name	Type	Year	YOE Cost
Lincoln County	CR 110 from 476th to 480th	Mill/Overlay	2021	\$400,000
Lincoln County	CR 106 from 480th to I-29	Mill/Overlay	2021	\$1,200,000
Lincoln County	CR 123 from 270th to 273rd	Mill/Overlay	2021	\$450,000
Lincoln County	CR 110 3.3 East of Harrisburg	Bridge Replacement	2023	\$2,000,000
Lincoln County	CR 111 from 268th to 271st	Mill/Overlay	2024	\$500,000
Minnehaha County	Maple/Park Street Corridor – Veteran’s Parkway to SD 11	New Construction – Utilities and R/W	2022	\$150,000
Minnehaha County	Highway 130 & 137 south of Crooks	Intersection w/ Turn Lanes	2022	\$810,000

\* Brandon projects are identified in the most recent CIP, not the regional TIP.

Table 11 Sioux Falls Capital Improvement Program 2021-2025: Highway and Street Projects (selected projects)

Project Name	Year	YOE Cost
Arterial Intersection Improvements	2021-25	\$5,320,000
Major Street Reconstruction Program	2021-25	\$58,034,884
Arterial Street Improvements	2021-25	\$73,321,830
Downtown Area – Street & Utility Improvements	2021-25	\$10,612,000
Arrowhead Parkway Improvements	2021-24	\$11,370,000
41st Street Improvements	2021-22	\$2,610,000
Veterans Parkway Construction	2021-25	\$450,000
85th Street & I-29 Improvements	2021	\$500,000
49th Street Extension	2022-25	\$4,020,000
Pedestrian & Bicycle Improvements	2021-25	\$3,950,000
Benson Road and I-229 Area Improvements	2021-23	\$450,000
Cliff Avenue and I-229 Area Improvements	2023-24	\$770,000
Minnesota Avenue and I-229 Area Improvements	2023-24	\$760,000

## CAPITAL ROADWAY PROJECTS

For the MPO communities that do not utilize federal funding, a revised version of financial constraint was calculated. This constrained list of projects considers the community's existing committed projects, the amount of funding anticipated to be available for 2025-2045 (the time period outside the current TIP), and the total needs identified. These project lists were then used to identify the total amount of unmet needs based on current funding assumptions. Overall, the region is anticipated to be approximately **\$500 million** short to fund total transportation needs between 2025 and 2045.

The prioritization in this chapter is a tool for communities to use as they fund and implement projects, but is not a strict set of rules meant to be adhered to.

Notably, this report includes only capacity-driven projects on the federal aid system. Many communities have local roadway needs beyond the scope of this planning process. Therefore, the anticipated capital roadway needs are much higher than what is shown.

Additionally, many projects are shown under a single jurisdiction, though they are likely to be inter-jurisdictional projects, or may in fact be ultimately funded and managed by another municipalities. Identifying the correct roles and funding partners for these projects will be increasingly important as the region grows, and municipalities continue to expand.

**Figure 35** shows the funded and unfunded projects for the time period of 2025-2045 based on this plan's fiscal constraint process.

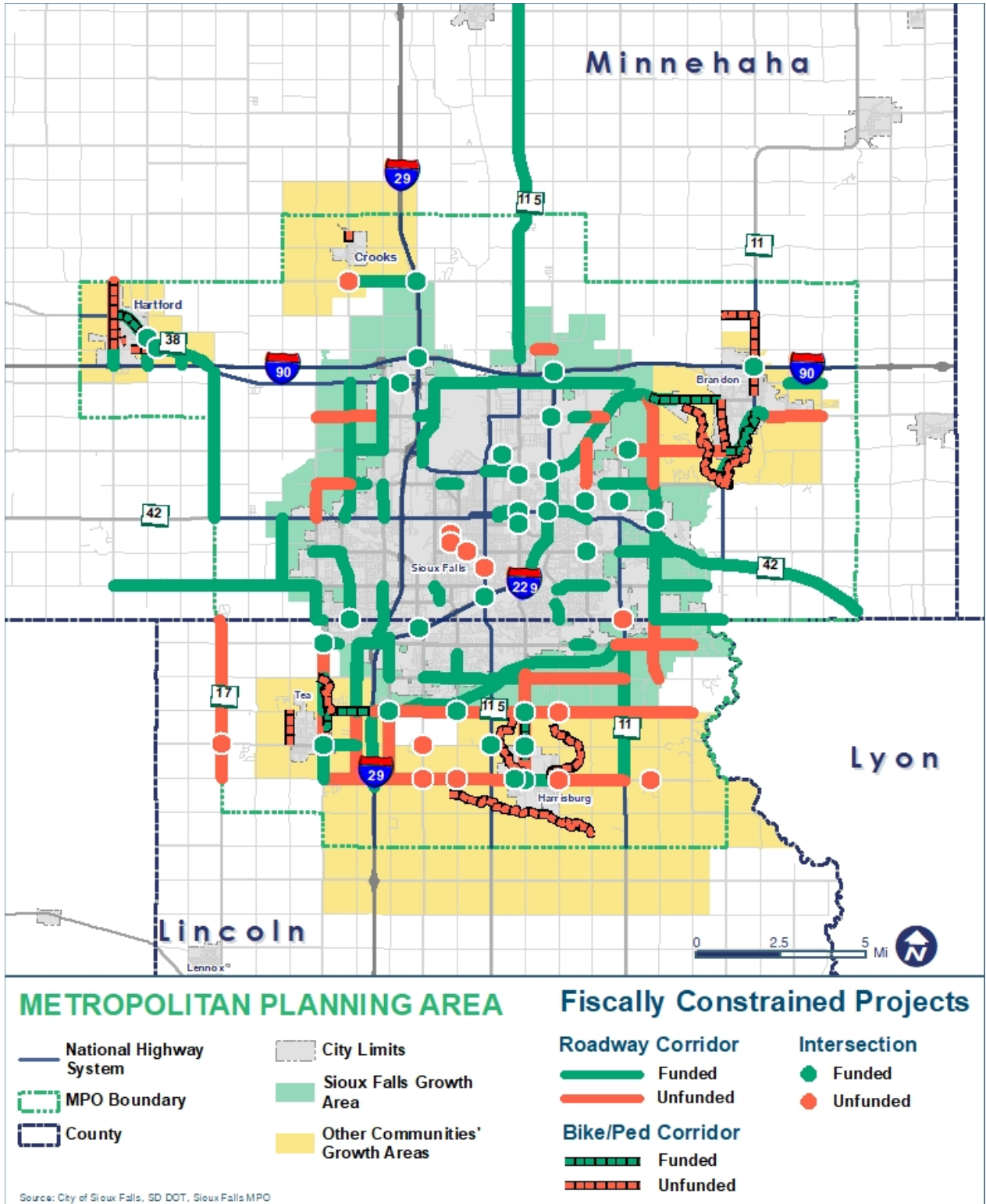




# SIoux FALLS

Metropolitan Planning Organization  
2045 Long Range Transportation Plan

Figure 36: Funded and Unfunded MPO Projects





**Brandon**

**Funding, 2025-2045**

The City of Brandon identified approximately \$28 million available for capital projects between 2025-2045, based on current City assumptions.

Total Revenues	\$43,269,055
Operations & Maintenance	\$15,469,990
Total Capital	\$27,799,064

**Unmet Needs**

The City of Brandon identified six roadway projects to put forward for prioritization in the 2025-2045 timeframe. In total, the City of Brandon identified approximately **\$80.4 million in capital roadway needs**, leaving the City with approximately **\$62.2 million in unmet needs**. Two of these projects share jurisdiction with Minnehaha County, and funding may be a joint venture. Thus, Brandon may pay a lower cost for these projects than that shown below.

Funded/Unfunded	Project Name	Jurisdiction	Time Band	Weighted Score	Cost (YOE)
Funded	Park Street: Sioux Boulevard to Highway 11	Brandon	2026-2030	42.68	\$2,531,150
Funded	Holly Boulevard: Bridge to Six Mile Road	Brandon – Minnehaha County	2026-2030	30.53	\$6,969,762
Funded	Aspen Boulevard: S. Splitrock to McHardy Road	Brandon	2031-2035	25.17	\$2,761,397
Funded	Redwood Boulevard: Chestnut to 484 <sup>th</sup> Avenue	Brandon	2036-2040	8.04	\$3,789,394
Unfunded	Aspen Boulevard: McHardy Road to 484 <sup>th</sup> Avenue	Brandon – Minnehaha County	Illustrative	22.09	\$23,053,843
Unfunded	Six Mile Road: Rice to Madison (Brandon portion)	Brandon	Illustrative	21.42	\$41,161,949
<b>Total</b>					<b>\$ 80,422,424</b>
<b>Unmet Needs</b>					<b>-\$ 64,215,794</b>



*Crooks*

**Funding, 2025-2045**

The City of Crooks identified approximately \$3 million available for capital projects between 2025-2045, based on current City assumptions.

Total Revenues	\$4,924,692
Operations & Maintenance	\$1,933,748
Total Capital	\$2,990,943

**Available funds**

The City of Crooks only identified bicycle and pedestrian projects for prioritization in 2025-2045. With support for these projects coming from TAP funding, the City of Crooks has approximately **\$3 million in available funding** for roadway improvements.



**Harrisburg**

**Funding, 2025-2045**

The City of Harrisburg identified approximately \$17.5 million available for capital projects between 2025-2045, based on current City assumptions.

Total Revenues	\$27,807,782
Operations & Maintenance	\$10,313,327
Available Capital Funding	\$17,494,455

**Identified Needs**

The City of Harrisburg identified five roadway projects to put forward for prioritization in the 2025-2045 timeframe. In total, the City of Harrisburg identified approximately **\$14.3 million in capital roadway needs**, leaving the City with suitable funding based on current estimates. The City is currently under discussions with Lincoln County to take control of approximately 3.5 miles of roadway. Those estimates are not included in these totals.

Funded/Unfunded	Project Name	Time Band	Category	Weighted Score	Cost (YOE)
Funded	Willow Street: SD 115 to Honeysuckle	2026-2030	Roadway	47.55	\$1,598,576
Funded	475th Avenue (Cliff) & 272nd Street	2026-2030	Intersection/Interchange	46.17	\$1,757,489
Funded	Willow Street: Cliff Avenue to Railroad Street	2026-2030	Roadway	45.04	\$2,688,779
Funded	Willow Street and Creekside Avenue Intersection	2031-2035	Intersection/Interchange	38.55	\$1,293,607
Funded	Willow Street: Railroad Street to Southeastern Avenue	2031-2035	Roadway	35.47	\$3,199,208
Funded	Signal: 272nd Avenue and Minnesota	2036-2040	Intersection/interchange	24.43	\$714,123
<b>Total</b>					<b>\$14,351,783</b>
<b>Total Available (Funding – Needs)</b>					<b>\$ 3,142,672</b>



**Hartford**

**Funding, 2025-2045**

The City of Hartford identified approximately \$23.7 million available for capital projects between 2025-2045, based on current City assumptions.

Total Revenues	\$34,010,599
Operations & Maintenance	\$10,283,150
Total Capital	\$23,727,449

**Unmet Needs**

The City of Hartford identified six roadway projects to put forward for prioritization in the 2021-2045 timeframe. One of these projects shares jurisdiction with SDDOT, and funding may be a joint venture. In total, the City of Hartford identified approximately **\$46.5 million in capital roadway needs**, leaving the City with approximately **\$22.8 million in unmet needs**.

Funded/Unfunded	Project Name	Time Band	Category	Weighted Score	Cost (YOE)
Funded	SD 38 Intersection Capacity Improvements: Colton Road, Mickelson Road	2026-2030	Intersection/Interchange	29.20	\$3,514,978.14
Funded	Section Line Corridor 2: Mickelson Rd to 1 Mile South	2026-2030	Roadway	25.37	\$4,796,083
Funded	Western Avenue: Mickelson Road to I-90 (Section Line Corridor 1)	2031-2035	Roadway	24.22	\$5,562,509
Funded	Section Line Corridor 3: Highway 38 to 3/4 mile south	2036-2040	Roadway	14.96	\$4,390,704
Unfunded	Western Avenue: Highway 38 to CR 130 (258th Street)	Illustrative	Roadway	16.36	\$13,617,029
Unfunded	Western Avenue: Mickelson Road to Highway 38	Illustrative	Roadway	19.23	\$13,617,029
<b>Total</b>					<b>\$45,498,333</b>
<b>Unmet Needs</b>					<b>-\$27,234,060</b>



**Sioux Falls**

**Funding, 2025-2045**

Sioux Falls identified approximately \$898 million available for capital projects between 2025-2045, based on current City assumptions.

<b>Total Capital</b>	\$898,165,115
----------------------	---------------

**Identified Needs**

Sioux Falls identified 70 roadway projects to put forward for prioritization in the 2025-2045 timeframe. In total, Sioux Falls identified approximately **\$1.01 billion in capital roadway needs**, leaving approximately **\$112 million in unmet needs**.

Funded/Unfunded	Project Name	Jurisdiction	Time Band	Weighted Score	Cost (YOE)
Funded	Marion Road: 41st Street to 1/2 mile south of 57th Street	Sioux Falls	2026-2030	69.79	\$5,786,080
Funded	Marion Road: 60th Street North to Benson Road	Sioux Falls	2026-2030	67.71	\$8,679,120
Funded	Marion Road: Benson Road to Maple Street	Sioux Falls	2026-2030	67.71	\$8,679,120
Funded	Sertoma: 26th Street to 57th Street	Sioux Falls	2026-2030	64.99	\$15,899,250
Funded	10th Street: Lowell Avenue to 1/4 mile east Cleveland Avenue (including interchange)	Sioux Falls	2026-2030	64.45	\$7,232,600
Funded	Madison Street: Burnside Street to Louise Avenue	Sioux Falls	2026-2030	60.29	\$5,786,080
Funded	Southeastern Avenue: 49th Street to 57th Street	Sioux Falls	2026-2030	59.23	\$4,339,560
Funded	Intersection 2675: 6th Street and Sycamore Avenue	Sioux Falls	2026-2030	57.82	\$2,893,040
Funded	Cleveland Avenue: Rice Street to 10th Street	Sioux Falls	2026-2030	57.34	\$11,559,690
Funded	Signal: 14th Street and Cliff Avenue	Sioux Falls	2026-2030	57.07	\$361,630
Funded	Intersection 2541: Cliff Avenue and Rice Street	Sioux Falls	2026-2030	56.20	\$1,446,520
Funded	Signal: 10th Street and Cliff Avenue	Sioux Falls	2026-2030	56.15	\$723,260
Funded	Madison Street: Dubuque Avenue to Veterans Parkway	Sioux Falls	2026-2030	26.69	\$7,232,600
Funded	69th Street: Sycamore Avenue to Veteran's Parkway	Sioux Falls	2026-2030, 2036-2045	32.42	\$19,947,360
Funded	Benson Road: I-29 to Westport Avenue	Sioux Falls	2026-2030	39.18	\$7,232,600
Funded	85th Street: Louise Avenue to Audie Avenue	Sioux Falls	2026-2030	33.25	\$14,452,730
Funded	60th Street North: Kiwanis Avenue to North 4th Avenue	Sioux Falls	2026-2030	37.79	\$35,389,860
Funded	10th Street: 1/4 mile east Cleveland Avenue to Sycamore Avenue	Sioux Falls - SDDOT	2031-2035	64.47	\$14,622,860
Funded	Marion Road: Madison Street to 12th Street	Sioux Falls	2031-2035	67.71	\$9,757,920
Funded	West 26th Street: Mary Beth Avenue to Sertoma Avenue	Sioux Falls	2031-2035	56.24	\$6,830,544
Funded	Russell Street: Minnesota Avenue to Cliff Avenue	Sioux Falls	2031-2035	53.10	\$32,505,370
Funded	Tea-Ellis Road: 41st Street to 57th Street	Sioux Falls	2031-2035	48.27	\$14,622,860
Funded	East 26th Street: SD 100 to Arrowhead Boulevard	Sioux Falls	2031-2035	46.19	\$14,622,860
Funded	East 41st Street: Southeastern Avenue to 1/2 mile west of SD 11	Sioux Falls	2031-2035	45.25	\$19,501,820
Funded	Western Avenue: 74th Street to 85th Street	Sioux Falls	2031-2035	42.68	\$9,757,920



Funded/Unfunded	Project Name	Jurisdiction	Time Band	Weighted Score	Cost (YOE)
Funded	Intersection: 26th Street and Sycamore Avenue all directions	Sioux Falls	2031-2035	41.25	\$1,626,320
Funded	Westport: 60th Street North to Benson Road	Sioux Falls	2031-2035	38.17	\$9,757,920
Funded	Six-Mile Road: Madison Street to 26th Street	Sioux Falls	2031-2035	37.89	\$19,501,820
Funded	Madison Street: Veterans Parkway to Six Mile Road	Sioux Falls	2031-2035	26.69	\$16,249,180
Funded	57th Street: North Tea-Ellis Road to South Tea-Ellis Road	Sioux Falls	2031-2035	26.22	\$6,505,280
Funded	Westport Avenue: Benson Road to Russell Street	Sioux Falls	2036-2045	44.04	\$14,069,110
Funded	Benson Road: Bahnson to Sycamore Avenue	Sioux Falls	2026-2030	23.71	\$4,339,560
Funded	Intersection 3154: 6th Street and SD 11	Sioux Falls	2026-2030	22.89	\$1,446,520
Funded	Southeastern Avenue: 85th to Co 106 (271st)	Sioux Falls	2026-2030	22.45	\$7,232,600
Funded	Sycamore Avenue: 85th Street to County Road 106 (271st Street)*	Sioux Falls	2026-2030		\$4,701,190
Funded	Marion Avenue: Foundation Court to 258th Street*	Sioux Falls	2031-2035		\$6,395,812
Funded	West 41st Street: Tea-Ellis Road to 1/2 mile west	Sioux Falls	2031-2035	16.28	\$8,131,600
Funded	Kiwanis Avenue: 41st Street to 49th Street	Sioux Falls	2036-2045	53.00	\$9,390,200
Funded	Rice Street: Cleveland Avenue to 6 mile Road	Sioux Falls	2036-2045	50.63	\$46,918,620
Funded	60th Street North: Minnesota Avenue to Veterans Parkway (Highway 100)	Sioux Falls	2036-2045	42.47	\$46,918,620
Funded	Intersection 2119: Sertoma Avenue and 57th Street	Sioux Falls	2036-2045	36.32	\$939,020
Funded	Cliff Avenue: RR Overpass 12th Street to 14th Street	Sioux Falls	2036-2045	40.23	\$37,544,610
Funded	Intersection 2345: Louise Avenue and I229 ramps	Sioux Falls	2036-2045	39.88	\$939,020
Funded	Intersection 3515: Career Avenue and 60th Street North	Sioux Falls	2036-2045	38.52	\$1,878,040
Funded	Six-Mile Road: 26th Street to 57th Street	Sioux Falls	2036-2045	37.89	\$15,008,130
Funded	LaMesa Drive – Sertoma Avenue: Madison Street to 12th Street	Sioux Falls	2036-2045	31.50	\$22,520,290
Funded	Intersection 3157: Maple Street and Veterans Parkway	Sioux Falls	2036-2045	29.32	\$1,878,040
Funded	Maple Street: LaMesa Drive to Marion Road	Sioux Falls	2036-2045	27.37	\$20,642,250
Funded	Intersection 3260: 10th Street and Six-Mile Road	Sioux Falls	2036-2045	26.33	\$1,878,040
Funded	69th Street: Sundowner Avenue to Solberg Avenue (overpass)	Sioux Falls	2036-2045	23.87	\$28,154,410
Funded	60th Street North: West ramps of I-29 to East ramps	Sioux Falls	2036-2045	21.71	\$5,634,120
Funded	Maple Street: Powder House Road to Six-Mile Road	Sioux Falls	2036-2045	21.40	\$11,268,240
Funded	69th Street: Tea-Ellis Road to Sundowner Avenue	Sioux Falls	2036-2045	20.88	\$14,069,110
Funded	Intersection 2501: North Drive and Ash Street	Sioux Falls	2036-2045	19.41	\$939,020
Funded	LaMesa Drive: 60th Street North to Maple Street	Sioux Falls	2036-2045	15.75	\$18,764,210
Funded	Madison Street: LaMesa Drive to Valley View Road	Sioux Falls	2036-2045	15.57	\$469,510
Funded	468th Avenue: 12th Street to 41st Street	Sioux Falls	2036-2045	5.80	\$22,520,290
Funded	East 41st Street: Six-Mile Road to Riverview Avenue	Sioux Falls	2036-2045	4.03	\$7,512,160
Funded	57th Street: Six-Mile Road to 481st Street	Sioux Falls	2036-2045	7.53	\$65,682,830
Unfunded	Ellis Road: 12th Street to Skunk Creek Bridge	Sioux Falls	Illustrative	41.17	\$24,575,436





Funded/Unfunded	Project Name	Jurisdiction	Time Band	Weighted Score	Cost (YOE)
Unfunded	Intersection 2716: 57th Street and SD 11	Sioux Falls	Illustrative	33.11	\$36,873,756
Unfunded	Sycamore Avenue: Rice Street to Madison Street	Sioux Falls	Illustrative	28.33	\$1,971,972
Unfunded	Six-Mile Road: Rice Street to Madison Street (Sioux Falls portion)	Sioux Falls	Illustrative	18.97	\$18,426,276
Unfunded	Benson Road: Sycamore Avenue to Rice Street	Sioux Falls	Illustrative	13.41	\$65,028,166
Unfunded	85th Street: Cliff Avenue to SD 11	Sioux Falls	Illustrative	10.77	\$24,575,436
Unfunded	72nd Street North: 476th Avenue to 1/2 mile west	Sioux Falls	Illustrative	10.27	\$7,378,992
Unfunded	Six-Mile Road: 57th Street to 69th Street	Sioux Falls	Illustrative	8.92	\$49,172,076
Unfunded	Benson Road: Marion Road to LaMesa Drive	Sioux Falls	Illustrative	6.36	\$6,149,160
Unfunded	Six-Mile Road: 69th Street to 85th Street	Sioux Falls	Illustrative	6.12	\$7,378,992
Unfunded	Benson Road: LaMesa Drive to Ellis	Sioux Falls	Illustrative	0.93	\$7,378,992
<b>Total</b>					<b>\$1,010,198,200</b>
<b>Unmet Needs</b>					<b>\$211,446,288</b>

\*A small number of projects were added late in the prioritization process based on City processes outside the scope of this project and were not prioritized through the LRTP process.

## Tea

### Funding, 2025-2045

The City of Tea identified approximately \$14.5 million available for capital projects between 2025-2045, based on current City assumptions.

Total Revenues	\$31,610,660
Operations & Maintenance	\$18,048,322
Total Capital	\$14,562,338

### Available funds

The City of Tea identified four roadway projects to put forward for prioritization in the 2021-2045 timeframe. Some of these projects share funding with Lincoln County and will be a joint venture. Tea is a partner on additional projects listed in this document under Lincoln County and under Sioux Falls, but those projects are not listed here to avoid redundancy. In total, the City of Tea identified approximately **\$13.6 million in capital roadway needs**. Note that additional funding will be used to support interjurisdictional projects as well as capacity-driven projects in the City of Tea.

Funded/Unfunded	Project Name	Jurisdiction	Time Band	Weighted Score	Cost (YOE)
Funded	Heritage Parkway: 271st Street to 85th Street	Tea - Lincoln County	2026-2031	27.96	\$7,498,620
Funded	1st Street: Ceylon Avenue to Sundowner Avenue	Tea	2036-2040	21.93	\$1,428,246
Funded	Heritage Parkway: 1st Street to 9th Street	Tea	2041-2045	14.75	\$3,311,488
Funded	468 <sup>th</sup> Street: 1st Street to 9th Street*	Tea-Lincoln County	2036-2040		\$1,428,246
<b>Total</b>					<b>\$13,666,601</b>
<b>Available Funding</b>					<b>\$895,737</b>

\*A small number of projects were added late in the prioritization process based on City processes outside the scope of this project, and were not prioritized through the LRTP process.



*Lincoln County*

**Funding, 2025-2045**

Lincoln County identified approximately \$15.9 million available for capital projects between 2025-2045, based on current County assumptions.

Total Revenues	\$164,748,195
Operations & Maintenance	\$148,847,539
Total Capital	\$15,900,656

**Unmet Needs**

Lincoln County identified 25 roadway projects in the County’s Master Transportation Plan to put forward for prioritization in the 2025-2045 timeframe. Many of these projects may share jurisdiction with cities within the County (Tea and Harrisburg), and funding may be a joint venture. In total, Lincoln County identified approximately **\$185 million in capital roadway needs**, leaving the County with approximately **\$169 million in unmet needs**. Importantly, the identified projects are only those within the MPO borders, meaning additional funding will be necessary to construct capital projects throughout the rest of the county.



Funded/Unfunded	Project Name	Jurisdiction	Time Band	Weighted Score	Cost (YOE)
Funded	273 <sup>rd</sup> Street and 475 <sup>th</sup> Avenue (Cliff)	Lincoln County - Harrisburg	2021-2025	43.67	\$1,757,489
Funded	469 <sup>th</sup> Avenue and 272 <sup>nd</sup> Street	Lincoln County - Tea	2026-2030	36.55	\$1,757,489
Funded	271 <sup>st</sup> Street and 475 <sup>th</sup> Avenue	Lincoln County	2031-2035	30.87	\$1,940,410
Funded	470 <sup>th</sup> Avenue: 271 <sup>st</sup> Street to Sioux Falls	Lincoln County - Delpre Township	2031-2035	22.52	\$3,880,819
Funded	269 <sup>th</sup> Street and 469 <sup>th</sup> Avenue	Lincoln County	2036-2040	22.30	\$2,142,369
Funded	271 <sup>st</sup> Street and Western Avenue	Lincoln County	2041-2045	19.69	\$2,365,349
Unfunded	271 <sup>st</sup> Street: 472 <sup>nd</sup> Avenue (Louise) to 480 <sup>th</sup> Avenue	Lincoln County	Illustrative	57.49	\$32,812,119
Unfunded	273 <sup>rd</sup> Street: SD 115 to 476 <sup>th</sup> Avenue	Lincoln County - Harrisburg	Illustrative	49.78	\$22,968,483
Unfunded	469 <sup>th</sup> Avenue: 273 <sup>rd</sup> Street to Sioux Falls	Lincoln County - Tea	Illustrative	46.68	\$12,140,484
Unfunded	271 <sup>st</sup> Street: I-29 to 472 <sup>nd</sup> Avenue	Lincoln County	Illustrative	39.45	\$17,226,362
Unfunded	273 <sup>rd</sup> Street: 469 <sup>th</sup> Avenue to SD 115	Lincoln County	Illustrative	36.67	\$16,406,060
Unfunded	475 <sup>th</sup> Avenue (Cliff): 273 <sup>rd</sup> Street to Sioux Falls	Lincoln County - Harrisburg	Illustrative	36.66	\$16,241,999
Unfunded	470 <sup>th</sup> Avenue (Sundowner): 271 <sup>st</sup> Street to 273 <sup>rd</sup> Street	Lincoln County - Delpre Township	Illustrative	19.82	\$3,937,454
Unfunded	466 <sup>th</sup> Avenue: Minnehaha County to 273 <sup>rd</sup> Street	Lincoln County - Delpre Township	Illustrative	17.99	\$11,566,272
Unfunded	269 <sup>th</sup> Street: 480 <sup>th</sup> Avenue to Sioux Falls	Lincoln County	Illustrative	16.97	\$6,562,423
Unfunded	271 <sup>st</sup> Street and 476 <sup>th</sup> Avenue	Lincoln County	Illustrative	15.73	\$2,460,908
Unfunded	Bridge # 42-148-050 on LC 110 3.3 miles east of Harrisburg	Lincoln County	Illustrative	15.56	\$3,281,211
Unfunded	273 <sup>rd</sup> Street: 476 <sup>th</sup> Avenue to SD 11	Lincoln County	Illustrative	14.63	\$6,562,423
Unfunded	273 <sup>rd</sup> Street and 473 <sup>rd</sup> Avenue	Lincoln County	Illustrative	14.06	\$2,460,908
Unfunded	273 <sup>rd</sup> Street and 472 <sup>nd</sup> Avenue	Lincoln County	Illustrative	12.96	\$2,460,908
Unfunded	472 <sup>nd</sup> Avenue and 272 <sup>nd</sup> Street	Lincoln County	Illustrative	12.44	\$2,460,908
Unfunded	273 <sup>rd</sup> Street and 476 <sup>th</sup> Avenue	Lincoln County	Illustrative	12.39	\$2,460,908
Unfunded	272 <sup>nd</sup> Street and 466 <sup>th</sup> Avenue	Lincoln County	Illustrative	12.06	\$1,312,484
Unfunded	471 <sup>st</sup> Avenue (Tallgrass): 271 <sup>st</sup> Street to 273 <sup>rd</sup> Street	Lincoln County - Delpre Township	Illustrative	11.48	\$6,398,363
<b>Total</b>					<b>\$185,695,775</b>
<b>Unmet Needs</b>					<b>-\$169,795,118</b>

### Minnehaha County

#### Funding, 2025-2045

Minnehaha County identified a deficit of almost \$23 million between 2025-2045, based on current

Total Revenues	\$333,443,648
Operations & Maintenance	\$86,516,944
Total Capital	\$39,002,483

County assumptions. These funding assumptions are for the whole county, not just the MPO area. The maintenance funding shown here includes the dedicated pavement preservation project funding, which excludes bridge, guardrail, and culvert maintenance. Accounting for total operations and maintenance costs provides the total capital budget for this period.

#### Identified Needs

Minnehaha County identified five roadway projects within the MPO area to put forward for prioritization in the 2025-2045 timeframe. One of these projects shares jurisdiction with Brandon and Sioux Falls, and funding may be a joint venture. Minnehaha County identified approximately **\$43 million in capital roadway needs**, including a \$9 million project that is dependent on receipt of a federal BUILD Grant. This leaves the County with a **deficit of approximately \$7 million** during this time period. This figure illustrates the importance of the County's BUILD Grant application for the Maple-Park Street project. If the BUILD Grant is awarded, the County's funding will be sufficient between 2025 and 2045.

Priority	Project Name	Jurisdiction	Anticipated Year of Construction	Weighted Score	Cost (YOE)
Funded	Roundabout at 258 <sup>th</sup> Street & 470 <sup>th</sup> Avenue	Minnehaha County	2023-2024	20.87	\$738,000
Funded	Highway 130 – Reconstruction	Minnehaha County	2026	29.71	\$2,250,000
Funded	Highway 148 – Reconstruction	Minnehaha County	2032	34.43	\$6,800,000
Funded	Highway 145 – New Construction	Minnehaha County	2040	17.17	\$6,000,000
Unfunded	Maple – Park Street (New Construction)	Minnehaha County	2024 (Depending on grant funding)	49.01	\$2,000,000 local match (\$9 mil total)
Outside MPO Needs (Funded)					\$18,300,000
<b>Total</b>					<b>\$43,088,000</b>
<b>Unmet Needs</b>					<b>-\$7,000,000 (depending on BUILD Grant)</b>

## SDDOT

### Funding, 2025-2045

The South Dakota Department of Transportation is a major partner in regional transportation, and the primary agency responsible for maintaining mobility on the region's interstate and state highway systems. Based on predictive estimates, between 2025 and 2045 SDDOT will spend approximately **\$463 million on maintenance and preservation** projects within the region. **\$1.2 billion is slated for capital improvement projects**, including interstate improvements, minor arterials, railroad crossing improvements, safety improvements, and transportation alternatives. The **\$706 million programmed** in this document account only for specific regionally significant capital projects.

Operations & Maintenance	\$431,210,635
Total Capital	\$1,272,534,720

Projects managed by SDDOT were not prioritized through the community prioritization process laid out in this chapter. This plan recognizes that state funding resources are prioritized through a separate process, and that projects within the Sioux Falls MPO region must compete with other statewide priorities for limited resources. Instead, a set of priority projects were identified based on previous planning efforts and known needs.

### SDDOT Priority projects:

- **Highway 100 from I-29 to 57<sup>th</sup> Street:** This project is a major regional priority and will likely be constructed in several stages as funding becomes available.
- **I-229 Major Investment Study Priorities:** This study, completed in 2017, identified several major investments to be made throughout the region. The projects below are in various stages of the project development or planning process, and some recommendations from this plan are identified for committed funding in the 2021 STIP.
  - I-229 Mainline improvements (29<sup>th</sup> Street to 10<sup>th</sup> Street)
  - Exit 3 (Minnesota Avenue) Interchange improvements
  - Exit 4 (Cliff Avenue) Interchange Improvements
  - Exit 6 (10<sup>th</sup> Street) Interchange Improvements
  - Exit 7 (Rice Street) Interchange Improvements
  - Exit 9 (Benson Road) Interchange Improvements
- **SDDOT Major Bridge Investment Study Improvements:**
  - 10<sup>th</sup> Street Viaduct
  - 11<sup>th</sup> Street Viaduct
- **Other Priority Improvements:**
  - I-29 Exit 77 (41<sup>st</sup> Street) Interchange Improvements
  - I-29 Exit 83 (60<sup>th</sup> Street North) Interchange Improvements
  - SD Highway 115: 67<sup>th</sup> Street to Renner Road
  - SD Highway 38: I-90 to 463<sup>rd</sup> Avenue
  - SD Highway 42: Six Mile Road to 26<sup>th</sup> Street
  - SD Highway 11: SD 42 to I-90



Funded/Unfunded	Project Name	Jurisdiction	Time Band	Cost (YOE)
Funded	I-229 60 <sup>th</sup> Street North Over I -229 South of I-90	SDDOT	2021-2025	\$ 4,125,000
Funded	I-90 Exit 406 (SD 11 Brandon): I-90/SD11 in Brandon	SDDOT	2021-2025	\$ 31,176,000
Funded	SD 42: Big Sioux River to the Iowa State Line	SDDOT	2021-2025	\$ 29,068,000
Funded	SD 42 (Arrowhead Parkway): Six Mile Road to Willow Run Entrance	SDDOT	2021-2025	\$ 9,702,000
Funded	I-229 Exit 9 (Benson Road)	SDDOT	2021-2025	\$ 26,992,000
Funded	I-229 Exit 4 (Cliff Avenue)	SDDOT	2021-2025	\$ 24,807,000
Funded	Veteran's Parkway (Highway 100) Western Ave to Cliff Avenue	SDDOT	2021-2025	\$ 49,858,000
Funded	Veteran's Parkway (Highway 100) I-29 to Western Ave	SDDOT	2021-2025	\$ 44,492,000
Funded	Veteran's Parkway (Highway 100) Cliff Avenue to Sycamore Ave	SDDOT	2021-2025	\$ 39,843,000
Funded	SD 42 - Willow Run Entrance to Big Sioux River	SDDOT	2021-2025	\$ 17,481,000
Funded	I-229 Exit 3 (Minnesota Avenue)	SDDOT	2026-2030	\$ 46,898,000
Funded	I-229/10 <sup>th</sup> Street Interchange and Mainline Exits 5-6	SDDOT	2026-2030	\$ 37,045,000
Funded	Veteran's Parkway (Highway 100) Sycamore Avenue to 57 <sup>th</sup> St	SDDOT	2026-2030	\$ 40,716,000
Funded	I-229/Rice	SDDOT	2026-2030	\$ 25,600,000
Funded	SD 38 – I-90 to 463rd Avenue (Western Avenue, Hartford)	SDDOT	2026-2030	\$ 15,400,000
Funded	SD 11 North - East Madison Street to East Aspen Boulevard	SDDOT	2026-2030	\$ 23,100,000
Funded	SD 11 South - Harrisburg Corner to 69 <sup>th</sup> Street	SDDOT	2026-2030	\$ 49,501,000
Funded	I-29 - From South of Exit 71 (Harrisburg) to South Exit 73 (Tea)	SDDOT	2026-2030	\$ 32,659,000
Funded	SD 115 - 67 <sup>th</sup> Street North to Renner Road	SDDOT	2031-2035	\$ 9,800,000
Funded	I-29/69 <sup>th</sup> Street Overpass (Tallgrass Avenue to Sundowner Avenue)	SDDOT	2031-2035	\$ 7,986,000
Funded	I-29 Exit 86 (Renner Crooks)	SDDOT	2031-2035	\$ 15,000,000
Funded	10th St Viaduct Downtown Sioux Falls	SDDOT	2031-2035	\$ 11,580,000
Funded	11th St Viaduct Downtown Sioux Falls	SDDOT	2031-2035	\$ 20,763,000
Funded	I-29/I-90 - System Interchange	SDDOT	2041-2045	\$ 50,000,000
Funded	SD 115 Renner Road to Dell Rapids	SDDOT	2041-2045	\$ 20,500,000
Funded	I-90/I-229	SDDOT	2041-2045	\$ 22,000,000
	<b>Total Planned</b>			<b>\$706,092,000</b>



### 8.3 BICYCLE AND PEDESTRIAN PROJECTS

#### Funding, 2025-2045

Total Revenues

\$7,189,510

The region identified approximately \$7.2 million available for bicycle and pedestrian capital projects between 2025-2045, based on current assumptions.

#### Projects

Cities and counties in the region identified 23 bicycle and pedestrian projects to put forward for prioritization in the 2021-2045 timeframe. In total, the region identified approximately **\$37 million in capital needs** for bicycle and pedestrian projects, leaving the area with approximately **\$30 million in unmet needs**. Sioux Falls bicycle and pedestrian projects were not prioritized through this process, as the 2015 Sioux Falls Bike Plan has identified priority improvements.

Funded/ Unfunded	Project Name	Jurisdiction	Anticipated Year of Construction	Weighted Score	Cost (YOE)
Funded	Highway 106 from Nine Mile to I-29	Tea	2026-2030	53.09	\$234,332
Funded	Cliff Avenue Trail: south of Industrial Drive to 272 <sup>nd</sup> Street	Harrisburg	2026-2030	68.68	\$1,151,566
Funded	Holly Boulevard: Six Mile Road to Sioux Falls	Brandon	2031-2035	59.23	\$1,907,724
Funded	Highway 38 Trail: Western Avenue to 2 <sup>nd</sup> Street	Hartford	2036-2040	58.94	\$1,693,430
Funded	Highway 11: Aspen Boulevard to Park Street	Brandon	2041-2045	49.08	\$2,117,023
Funded	9-Mile Creek Trail from Brian Street to Highway 106	Tea	2041-2045	47.90	\$201,843
Unfunded	South Side Trail Segment	Brandon	Illustrative	55.25	\$4,599,464
Unfunded	Sioux Boulevard from Holly Boulevard to Park Street	Brandon	Illustrative	47.27	\$1,733,696
Unfunded	Creekside Trail	Harrisburg	Illustrative	45.60	\$806,087
Unfunded	Westside Trail	Harrisburg	Illustrative	45.24	\$1,943,211
Unfunded	Highway 11 Sidewalk: Teakwood to Ash	Brandon	Illustrative	43.92	\$741,730
Unfunded	Turtle Creek Trail: Main Avenue to Feyder Avenue	Hartford	Illustrative	42.72	\$303,512
Unfunded	9-Mile Creek: Highway 106 to 85th Street	Tea	Illustrative	39.63	\$511,869
Unfunded	Highway 11: Bridge to Hemlock Boulevard	Brandon	Illustrative	36.07	\$2,951,864
Unfunded	Bluffs Bike Trail: Heritage Road to Sioux Falls	Brandon	Illustrative	32.36	\$1,692,062
Unfunded	468th Avenue from 1st Street to 271st Street	Tea	Illustrative	30.56	\$820,303
Unfunded	Western Ave Trail: From Hwy 38 to 258th Street	Hartford	Illustrative	30.34	\$1,492,951

Unfunded	Western Ave Trail: From Turtle Creek to Highway 38	Hartford	Illustrative	29.22	\$1,985,133
Unfunded	Greenway Trail Extension: Main Avenue to Western Avenue	Hartford	Illustrative	28.18	\$442,964
Unfunded	Legendary Estates Trail: Final Surfacing	Harrisburg	Illustrative	27.33	\$1,788,749
Unfunded	9-Mile Creek Trail System	Harrisburg	Illustrative	24.24	\$5,785,443
Unfunded	South West Avenue Bike Trail – Phase 2	Crooks	Illustrative	22.69	\$393,032
Unfunded	Mickelson Road Trail: Feyder Avenue to Highway 38	Hartford	Illustrative	18.80	\$1,985,133
<b>Total</b>					<b>\$37,283,121</b>
<b>Unmet Needs</b>					<b>\$29,977,203</b>

### 8.4 ALTERNATIVE FUNDING OPTIONS

Based on the needs and funding identified in this Plan, approximately **\$500 million** of necessary improvements will not be funded between 2025 and 2045. This shortfall is felt most acutely in Lincoln County, Brandon, and Hartford. These communities are able to fund less than 50% of their needs over the life of this plan. A deficit of this magnitude has many implications for the region’s fiscal sustainability, including a likely dependency on competitive grants and bonding to fund continuing improvements. Throughout the region, maintenance and construction costs are rising faster than revenues, meaning this deficit is expected to grow unless alternative funding is obtained.

#### FUNDING OPTIONS

The following funding options may provide high utility to the Sioux Falls region. Some of the fees outlined below are within local control to implement and manage, while others have substantial legislative hurdles to clear. Any of the fees listed below may be deemed politically and practically feasible if these obstacles can be overcome. Not all are new or unknown to the region, but their use may be increased if revenue from current sources cannot meet the needs of the region.

Funding Option	Geography	Benefits	Challenges
<b>Road Improvement Districts</b> Creates special geographic districts (similar to Business Improvement Districts) where residents pay into a fund dedicated to roadway maintenance and construction.	Local	Funding is set aside in special account and used only for projects located within the district and identified in a plan.	No legislative authority currently in South Dakota.



Funding Option	Geography	Benefits	Challenges
<p><b>Third Penny Local Sales Tax</b> Dedicates an additional sales tax to local transportation projects</p>	Local, County, Regional	Typically, a transportation penny tax is approved by voters, and dedicated to a set list of projects. The tax is allowed to expire after a certain number of years, or when the necessary funding has been raised.	Currently, all municipalities in the region are utilizing maximum local sales tax allowed by state law. A proposal to allow a “third penny” has been defeated before in state legislature.
<p><b>Development Impact</b> Fees charged to developers based on traffic impacts expected</p>	Local, County	Fees are often collected based on development size or the results of a traffic study, and used to fund specific mitigation improvements. Fee structure is typically pre-defined.	Fees sometimes challenged by developers, and funding may only be used for certain projects.
<p><b>Negotiated Exactions</b> Requires developers to pay for transportation improvements needed due to incremental development</p>	Local, County	Similar to Development Impact Fees, Negotiated Exactions push some of the cost of transportation improvements onto developers. Details are negotiated each time based on the specifics of the development.	No pre-defined fee structure can leave municipalities vulnerable.
<p><b>Transportation Utility Fees</b> Treats the transportation system like a utility which one must pay a fee to use.</p>	Local	Fees are typically assessed on properties, and may be based on the land use, number of parking spaces, square footage, or other factors. This links the cost of maintaining infrastructure with the “strain” each property places on the system. Typically paid on an ongoing monthly basis similar to a utility bill.	Have been legally challenged in some areas, authority in South Dakota is unclear.
<p><b>Naming Rights</b> Raising revenue via selling naming rights to bridges, highways, transit facilities, etc.</p>	Local, County, State	Provides a simple way to raise revenue dedicated to the maintenance or operation of specific facilities. Likely publicly and politically feasible.	Should be viewed as an “additional” source of revenue rather than relying on private contributions.

Funding Option	Geography	Benefits	Challenges
<b>Transportation Bonds</b> A familiar source of transportation financing that is frequently approved by taxpayers.	Local, County, Region	Bonds typically specify a set of projects, payoff schedule, and are accompanied by educational campaigns to inform the public why the additional funding is necessary. Voters are more likely to approve bond packages for specific projects.	Typically requires voter approval, which may risk the funding source.
<b>Transportation Network Company (TNC) Fees</b> Assessed to TNC companies (such as Uber or Lyft) per ride or a flat fee.	Local	Provides a direct source of revenue based on usage of the transportation system. Fees around the country vary from \$.20 per trip to a flat fee of over \$100,000 per company.	Likely to be opposed by ridesharing companies. Data should be gathered to assess how much revenue such a fee would bring in.
<b>Electric Vehicle Fees/Taxes</b>	State	Creates a revenue source for electric vehicles to contribute to highway funding, since they don't contribute to gasoline taxes.	Likely needs to be implemented on a statewide scale by legislative action.
<b>Curb Lane Revenues</b>	Local, State	Creates a local revenue source such as metered on-street parking or loading zone permits to address local needs	Typically sees public push-back, and may only be feasible where no free parking options exist.

A variety of other revenue options have been used successfully around the country. However, these funding sources may be less politically or practically feasible for the Sioux Falls region. Many of these require state legislative approval or rely on wholesale changes in funding structure (long-term fixes). Others may not be feasible in Sioux Falls due to the region's size, though conditions may change in the future.

- **Gas Tax Rate Indexing:** Rather than relying on infrequent increases, index the gas tax to inflation or the Consumer Price Index. Since the gas tax increase was relatively recently approved, may not have the political will necessary to make this amendment.
- **Mileage User Fee:** Charges roadway users a fee per mile driven as a replacement to or in addition to a traditional gas tax. Many have privacy concerns regarding VMT fees, and this relies on a wholesale change in the state funding structure



- **Tolling:** User fees to drive on certain roadways or bridges. No statutory authority exists to authorize and manage tolling, and current traffic levels likely make this option infeasible. Likely politically infeasible as well.
- **Managed Lanes:** Sets a toll for the use of express lanes. Tolls may be static or dynamic (based on congestion). Congestion in the region is likely not high enough to make managed lanes attractive. Managed lanes must be new facilities rather than converting existing lanes, meaning managed lanes can only pay for themselves, rather than augment existing transportation revenue.
- **Public-Private Partnerships:** Contract agreement between state or municipality to allow a private company to build, operate and/or maintain a facility for a certain period of time. South Dakota has no state enabling legislation for this option. Partnerships have been controversial where adopted, and potential in South Dakota is limited due to low traffic volumes (limited revenue possibility).
- **Rental Car Fees:** Adds fee to all car rentals initiated in the region, dedicated to transportation improvements. Typically receives pushback from rental car companies, airports and tourist bureaus, and the revenue received is relatively small in a small metro area.

## 9.0 WORK PLAN AND IMPLEMENTATION

The Sioux Falls Area MPO will carry out or participate in many studies and plans over the next four years leading to the next update of the long-range metropolitan transportation plan. This is not an exhaustive list of all work to be completed, but rather a list of projects that will contribute to the work of the Sioux Falls Area MPO and will likely require coordination among agencies.

Ongoing work items that are regularly conducted by the Sioux Falls MPO are not included here, such as annual development of the Transportation Improvement Program and Unified Planning Work Program. The studies listed here will be used to gather additional information and perform further analysis to inform future revisions to this long range transportation plan. The next scheduled update of the Sioux Falls LRTP, as required by state and federal law, is due in 2025.

### 9.1 COVID-19 (CORONAVIRUS)

In spring 2020, as this plan was being drafted for public comment, the COVID-19 (coronavirus) outbreak was having intense impacts on society around the world and in the Sioux Falls region. Transportation related behavior and finances were profoundly impacted, at least in the short term. It is too soon to understand fully those short-term impacts, and any possible longer-term impacts to transportation behavior and finances and how any of these changes may impact different population groups. This plan does not reflect the results of these changes and so several work program items are listed here so that they can be considered in the future in terms of behavior and how that change in behavior affects transportation finances and safety.

#### FINANCIAL IMPACT OF COVID-19

This update takes some steps to account for the short-term impacts of the COVID-19 (coronavirus) outbreak and its impacts on transportation revenue. It is clear that some of the region's most important revenue sources for transportation saw, at a minimum, severe near-term shortfalls from those that were initially anticipated in this planning process. As travel has greatly decreased, so have federal and state gas tax revenues and transit fares, for example.

This analysis of the short- and long-term financial impacts of COVID-19 on transportation will consider relevant data and various projections of transportation revenues, and potential program level impacts to construction and operation of the highway and transit systems. This work will be done in cooperation with SDDOT and the region's transit providers. This work will support an amendment to this plan or the next regular replacement of it.

#### TRAVEL BEHAVIOR IMPACTS OF COVID-19

In response to the COVID-19 (coronavirus) outbreak, the region is following state, national and worldwide guidance on creating social distance between people by asking them to stay home. This action has had, and will continue to have, an influence on travel behavior. During, and in the aftermath of the outbreak, Sioux Falls MPO Area partners will use available data sources, including household survey data, roadway traffic counts, and passive origin-destination travel data to study the short- and long-term effects of COVID-19.

During the outbreak, travel went down substantially with school and workplace closures reducing the number of people commuting. In addition, people took fewer non-essential retail, social, and cultural trips. This has had significant impacts on transit ridership and highway congestion. Traffic models for this 2045 LRTP modeled a 10 percent and 20 percent trip reduction, resulting in 29 percent and 50 reduction in congestion delays, respectively.

At this time, it is unknown how and to what extent long-term travel behavior will be affected, and whether or not there will be permanent increases in telecommuting and on-line commerce. The Sioux Falls Area MPO will study and monitor these long-term effects for different population groups and on all modes of passenger transportation and on freight moving over the region's highways, for possible application in future travel forecasts.

### **AVIATION IMPACTS OF COVID-19**

In response to the COVID-19 (coronavirus) outbreak, the region is following state, national and worldwide guidance on creating social distance between people by asking them to stay home. This action has had and will continue to have an influence on air travel. The Sioux Falls Area MPO will assess the impact of the outbreak on the regional aviation system, including travel to and from the airport, employment, and airline passenger demand and capacity. The outbreak will have at minimum a short-term impact on business travel, and the study will analyze the impacts that will have on the regional aviation system.

This outbreak has had significant impacts on all aspects of the aviation system, including airport and airline revenues, capital improvement projects, and airport operations. At this time, it is unknown how and to what extent long-term travel behavior will be affected, and whether or not there will be permanent increases in telecommuting and on-line commerce. The Sioux Falls Area MPO will study and monitor these long-term effects on the aviation system for passenger transportation and the movement of air freight in and out of the region.

## **9.2 HIGHWAY RELATED STUDIES**

### **MPO PARTNER AGENCY SPECIFIC LONG-RANGE PLANNING ELEMENTS**

Being inclusive of all MPO partners was a key theme in the 2045 Long Range Transportation Plan update process, and the region is committed to continuing to strengthen these important and healthy relationships. This effort will help each MPO partner – city, county, and state – prepare materials to be incorporated into the long-range metropolitan transportation planning process before the plan update process formally begins.

Specific data that will be prepared for each partner includes MPO-specific: national highway system pavement condition information; federal aid eligible street and highway, bicycle, and pedestrian project definitions, cost estimates, and estimated year of construction through 2050; annual operating and maintenance cost estimates; and available revenues through 2050, especially in the context of other public works investment needs.

The 2045 plan update process was more comprehensive and meaningful because some MPO partners leveraged content from their recently completed agency-specific long-range transportation plans; this was an outstanding contribution to the 2045 long-range metropolitan transportation planning process. Supporting all MPO partners



in being prepared for the region's long-range plan update will support the region in comprehensively and more accurately identifying mid- and long-range transportation needs, and in identifying effective strategies and tactics to address the needs.

### **ACCESS MANAGEMENT TOOLBOX**

Effective street and highway access management is critical to achieving the region's safety, mobility, and accessibility goals for all modes of transportation. In this effort, MPO partners will work together to identify a toolbox of feasible access management strategies for use in the greater Sioux Falls MPO Area. Partners will also create guidance for applying the tactics, including a series of conceptual diagrams outlining potential application on various types of streets and highways, ranging from rural gravel roads to multilane Interstate highways.

## **9.3 EMERGING TRANSPORTATION TECHNOLOGY**

### **REGIONAL ITS ARCHITECTURE AND PLANS**

Sioux Falls has a long history of acting as an intelligent transportation system (ITS) leader in the United States. Since the 1990s, Sioux Falls and SDDOT have worked together to develop a well-integrated and technologically-savvy ITS system. Other MPO partners are now becoming ready to link into the ITS system and make it regional. Individual jurisdictions should perform a self-evaluation of their preparedness to adopt new technology using the Capability Maturity Model (CMM) Framework.

### **VEHICLE FLEET CHANGES**

As metropolitan regions begin to shift to connected and automated vehicles and implement shared mobility options, there is a general consensus that public and private vehicle fleets will be electrified. Electric vehicles widely exist in the market today. Although currently few in numbers, widespread use may have positive environmental benefits including public health but may also require substantial changes in the region's electric grid and vehicle charging infrastructure.

This study on vehicle electrification will outline a network of charging stations to support electric vehicle (EV) purchase and use in the Sioux Falls Region. This study would address:

- The role EVs can play in public health
- Hurdles to widespread EV adoption
- Current and planned energy production capacity and greenhouse gas mix
- Capital and operating costs of EVs as compared to internal combustion engine vehicles
- Funding impacts from loss of gas revenues
- Local and national best practices and resources

## **9.4 REGIONAL TRANSPORTATION RESEARCH AND MODELING**

The Sioux Falls MPO has historically, in coordination with SDDOT and regional partners, conducted a battery of data collection to learn about where, how, when, and why people in the region travel. A Travel Behavior Inventory (TBI) is used to provide policymakers and researchers current data about travel in the region and to develop updates to the region's travel demand forecasting models.

### **TRANSPORTATION MARKET RESEARCH STUDY**

Prior to each long-range metropolitan transportation plan update since 1999, the region has surveyed the greater Sioux Falls area to rate the condition of the existing transportation system, identify investment priorities, and travel behavior. The study collects statistically valid survey results from residents, business owners, and disadvantaged populations and enriches the survey results through focus group meetings and stakeholder interviews. The region will perform a transportation market research study prior to the 2025 LRTP update. The study will continue to work on identifying key changes in travel behavior and preferences to be incorporated into the next updates of the Regional Travel Demand Model and the LRTP.

### **REGIONAL TRAVEL DEMAND MODEL**

In coordination with each long-range metropolitan transportation plan update since 2005, the region has developed and leveraged a regional travel demand model to inform a variety of planning and design processes and communicate anticipated outcomes. The Sioux Falls MPO will continue to work on implementing and enhancing the modified Tour Based Model prepared and released as part of the 2019-2020 long-range metropolitan transportation planning effort. Anticipated enhancements include the following:

- Updating model data from the National Highway Travel Survey
- Inclusion of a transit network
- Adding a commercial vehicle counts
- Adding more reliable truck data
- Improving the run time of the model

For more complete information about traffic model enhancement see the Traffic Model Report in Appendix F.

## **9.5 MULTIMODAL STUDIES**

### **REGIONAL SAFETY AND SECURITY**

The greater Sioux Falls MPO will continue to proactively prevent and manage traffic crashes and security on its street, highway, bicycle, and pedestrian systems. To advance this approach, the MPO partners will work together to analyze MPO area-specific crash data and identify and prioritize the locations most in need of mitigation and improvement. The methods will respond to SDDOT performance measures and targets, and will leverage the South Dakota Strategic Highway Safety Plan and national multimodal best practices. Recommended safety improvements will be presented in descriptive as well as visual form; project deliverables will also include project sheets, construction costs, and potential year of implementation. The project may also include a short list of recommended policy measures, such as a regional complete streets policy.

The study will also review and update the region's high-priority emergency response corridors and network. The analysis will identify gaps in the multimodal emergency response network, as well as potential strategies, tactics, and conceptual capital and operating cost estimates for addressing the gaps. Strategies and tactics may include expanding the ITS network or extending travel demand strategies throughout the region. The project may also include a short list of recommended policy measures.

## 9.6 TRANSIT RELATED STUDIES

### TRANSIT DEVELOPMENT PLAN UPDATE

This plan is required by federal transportation legislation. The current plan was adopted in 2016 and needs to be updated. This plan update will identify currently available public transit services; current and anticipated public transit needs for all people, including people with disabilities, older adults, and people with low incomes; identify and prioritize strategies, activities, or projects to address identified gaps between current services and needs; and present a fiscally constrained plan to maintain existing service and implement the highest priority public transit improvements.

### PUBLIC TRANSIT AND HUMAN SERVICES TRANSPORTATION COORDINATED ACTION PLAN UPDATE

This plan is required by federal transportation legislation. The current plan was adopted in 2019 and will be updated in 2024. This plan update will assess currently available services from public, private, and non-profit providers; assess current transportation needs for people with disabilities, older adults, and people with low incomes; and identify and prioritize strategies, activities, or projects to address identified gaps between current services and needs.

## 9.7 BICYCLE AND PEDESTRIAN RELATED STUDIES

### REGIONAL BICYCLE AND PEDESTRIAN SAFETY ACTION PLAN

The last update of the Sioux Falls MPO area's bicycle plan was completed in 2008, and the MPO partners have not developed a regional pedestrian plan. The greater Sioux Falls area has grown significantly since 2008 and stakeholders have expressed desire for a more comprehensive and practical all-season bicycle and pedestrian system. In addition, the Sioux Falls MPO area had almost 16 percent of South Dakota's pedestrian fatalities from 2014-2018 compared to 8 percent of all traffic fatalities in the state. 13.5 percent of traffic fatalities in the MPO area are pedestrians.

An update to the regional bicycle plan should be accompanied by a regional pedestrian plan. This effort would look at bicycle and pedestrian crash data for the Sioux Falls region to identify common contributing factors for high-severity bicycle and pedestrian crashes in the region and potential countermeasures. This analysis would also include looking at crashes in areas with higher percentages of people of color or people with low incomes; other studies done throughout the nation show disproportionate numbers of high-severity crashes in neighborhoods with environmental justice populations. Through this work, stakeholders would also update GIS data for existing and planned active transportation infrastructure.

### BICYCLE AND PEDESTRIAN COUNT PROGRAM

Sioux Falls MPO partners will procure automated counters for pedestrians and bicyclists to use with local partners to collect standard count data and develop a regional count program for use in regional pedestrian and bicycle planning. Program activities will include institutionalizing bicycle and pedestrian counts by providing annual training for local partners in how to conduct counts; installing permanent monitoring stations throughout the Sioux Falls MPO area; and a portable counting equipment loan program to support local partners in

conducting bicycle and pedestrian counts. This program will support MPO partners in identifying and focusing on bicycle and pedestrian locations of interest to regional planning.

### **REVIEW OF BEST PRACTICES FOR WALKABLE NEIGHBORHOODS, CONNECTIONS TO TRANSIT, AND COMPLETE STREETS**

Sioux Falls MPO partners will review best practices for infrastructure treatments supporting walkable neighborhoods and a process to enable better pedestrian, bicycle and transit connections to destinations in different types of communities. Identifying best practices can help to address gaps in the pedestrian and bicycle system and its connection to transit. With additional complete streets review, the region can build off the existing Sioux Falls complete streets policy adopted in 2015.

## **9.8 FREIGHT RELATED STUDIES**

### **REVIEW TRUCK PARKING NEEDS**

Major changes to the freight industry in the last several years have increased the need for truck parking nationwide. Restrictions on driving hours and electronic logging to monitor compliance have created challenges with drivers needing to find safe places to stop at short notice. In areas without sufficient rest areas or designated parking areas, it may leave drivers parked unsafely on interstate ramps or in residential areas. The MPO should monitor the affect on the region, and coordinate with SDDOT to designate additional parking areas or expand local rest stops if necessary.

## **9.9 OTHER PLANNING STUDIES**

### **MPO BRAND**

At the outset of this 2019-2020 planning process, MPO partners expressed that they would like to see the MPO develop and use a more inclusive brand to characterize the greater Sioux Falls area. Examples of a more inclusive brand include basing it in phrases like Greater Sioux Falls, Southeast South Dakota, Greater Southeast Dakota, or GO GSD. This brand study will develop, test, establish, and provide visual and language style guides for implementing an updated MPO brand for use in all MPO documents, including the MPO committee and policy board meeting materials, annual Unified Planning Work Program (UPWP), Transportation Improvement Program (TIP), long-range metropolitan transportation plan, and the web page(s) hosting MPO materials.

### **FEDERAL TRANSPORTATION MANAGEMENT AREA (TMA) TRANSITION**

The population of the Sioux Falls MPO area is approaching 200,000, the point at which the federal government will designate it a Transportation Management Area (TMA) and the Sioux Falls MPO will begin receiving and awarding federal funding for local transportation projects. The Sioux Falls MPO has made important progress toward preparing for the TMA transition, especially through its efforts to develop and apply a transparent, data-driven, and understandable project selection process in the long-range metropolitan transportation plan updates.

The Sioux Falls Region TMA Transition Study will identify additional efforts to position the region for a smooth transition to this new status. Study efforts will include expanding the region's transportation policy framework

(i.e., goals and objectives) and the list of project selection performance measures. These updates will communicate the economic and quality of life outcomes that local policy-makers, business owners, developers and property owners, transportation stakeholders, and the public want and planned projects will deliver.

The study will also identify the performance data collection and reporting program requirements mindful of TMA congestion management process requirements, including transit use and transit traveler behaviors and preferences. The data collection and program requirements will include annual estimates of staff expertise, time, and computing resources. A final element of the study will focus on funding, specifically identifying the types of funding changes (funding programs and amounts) that will likely occur with the TMA transition and tactics that other MPOs have used to successfully transition into a TMA.



**SIoux FALLS**

Metropolitan Planning Organization  
2045 Long Range Transportation Plan