

9. 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.



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Metropolitan Planning Organization
2045 Long Range Transportation Plan