Task 2: Existing Conditions Technical Memorandum

21P098: Metropolitan Council Regional Travel Demand Management Study

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Prepared for the Metropolitan Council

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1. Introduction

The Metropolitan Council (Met Council) is leading a Regional Travel Demand Management (TDM) Study for the Minneapolis-St. Paul region. The Regional TDM Study will identify strategies and policies that the Twin Cities region can implement to increase traveler choices and help people meet their travel needs while also minimizing environmental impacts, reducing congestion and delay impacts of single-occupant vehicle (SOV) travel, and improving livability of the region.

This existing-conditions technical memorandum is the first in a series of technical memos being developed as part of the Regional TDM Study. The research summarized in this memo, along with research conducted in subsequent tasks, will provide a foundation for the Metropolitan Council, the project's Technical Advisory Team, and partners to develop and prioritize TDM and mobility strategies, which the plan will ultimately recommend for implementation.

To identify existing ordinances, policies, and practices that have an impact on existing and future TDM strategy implementation, the existing-conditions research involved three primary activities:

- A review of local plans, policies, and recent travel-related studies.
- Stakeholder interviews and group discussions.
- Seven separate surveys of cities and counties, employers, developers.

The remainder of this technical memorandum is organized as follows:

- Section 2 outlines the approach for this existing-conditions study.
- Section 3 provides an overview of the state of TDM in the Twin Cities Region.
- Section 4 reviews plans, policies, and other travel-related studies.
- Detailed reviews, summaries, and findings from surveys and other sources are included in the appendices.

2. Approach

2.1. Review of Local Plans, Policies, and Travel-Related Research

The study team reviewed local plans and policies to provide an overview of existing and planned activities in the region that affect transportation, as well as other activities that impact greenhouse gas emissions, mobility, road safety, and transportation system efficiency. The following plans and policies are included in the review:

- Thrive MSP 2040/Transportation Policy Plan
- Minnesota GO 50-Year Vision for Transportation and MnDOT Statewide Multimodal Transportation Plan and Family of Plans
- Twin Cities Shared Mobility Action Plan
- Twin Cities Shared Mobility Collaborative Report: More Access and Less Traffic – TDM Recommendations for Minnesota Municipalities and Employers
- 2020 Sustainable Transportation Advisory Council (STAC) Recommendations and MnDOT Response

- Congestion Management Process Policies and Procedures Handbook
- Regional Solicitation Travel Demand Management Grant and Competitive Program
- Transportation Management Organization and Metro Transit Commuter Programs
- Minneapolis Transportation Action Plan
- Local TDM policies
- TDM ordinances, parking requirements (minimum/maximum), transit-oriented development/density incentives

2.2. Stakeholder Group Discussions

Due to the wide range of potential TDM strategies already being implemented, the study team identified a broad scope of organizations to engage and inquire about existing TDM strategies. Feedback was collected through group discussions and individual follow-up meetings, held via conference calls, and facilitated by video conferencing and a web-based whiteboard tool, Mural. Participants shared information verbally and by writing notes in the whiteboard tool. The study team shared topics and questions with the groups prior to the meetings. Appendix A provides a list of the group meetings, dates, participants, and group discussion summaries.

Table 1. Stakeholder Group Discussions

Group Discussion	Organizations	Topics Discussed
Transportation Management Organizations	• Move Minneapolis • Move Minnesota • Anoka Commute Solutions • I-494 Commuter Services	• TDM activities promoted and how they contribute to organizational goals • How employer TDM interests have changed in the last 5 years • TDM target audiences and how equity is considered • Work with other TDM programs in the region • Legal requirements that impact the ability to implement TDM strategies
Minnesota DOT	• MnDOT Metro District Multimodal Planning • MnDOT Office of Transit and Active Transportation • E-ZPass • MnDOT Office of Sustainability and Public Health	• TDM activities promoted and how they contribute to organizational goals • TDM target audiences and how equity is considered • Agency policies and tools that impact TDM implementation in the region • Legal requirements that impact the ability to implement TDM strategies • Most/least effective TDM activities
Metro Transit	• Metro Transit Commuter Programs • Metro Transit Shared Mobility Programs • Metro Pass, Metro Transit Assistance Program, Residential and Universal Programs	• Role in the regional transportation system and awareness of regional planning goals • Primary motivators for TDM activities • Challenges to implementing TDM activities • Resources used to implement TDM activities such as funding sources, staff time, etc. • How TDM activities are measured or evaluated for success
Suburban Transit Agencies	• Maple Grove Transit • Plymouth Transit	• How TDM strategies are selected to enhance core transit service • TDM target audiences and how equity is considered

Group Discussion	Organizations	Topics Discussed
	• Minnesota Valley Transit Authority (MVTA) • SouthWest Transit	• Resources used to implement TDM activities such as funding sources, staff time, etc. • Most/least effective TDM activities • Legal requirements that impact ability to implement TDM strategies
Metropolitan Planning Organization	• Met Council – Metropolitan Transportation Services (MTS)	• Role in the regional transportation system and awareness of regional planning goals • Primary motivators for TDM activities • Challenges to implementing TDM activities • Resources used to implement TDM activities such as funding sources, staff time, etc. • How TDM activities are measured or evaluated for success

2.3. Surveys of TDM Practitioners

To develop the most comprehensive inventory of existing TDM strategies, services, and programs being offered in the region, the study team identified organizations that are likely implementing TDM-related services, including transportation management organizations, employers, developers, municipalities, counties, and shared mobility providers. The study team then developed seven different questionnaires to inquire about TDM-related services offered by these various types of TDM practitioners in the region. The questionnaires were programmed into a survey tool, Survey Alchemer, and links to the survey were emailed to contacts at these organizations, requesting their participation. The surveys were open for approximately two weeks.

2.4. Other Travel-Related Data, Research and Studies

The Travel Behavior Inventory (TBI) is a program through which the Metropolitan Council collects information on day-to-day travel in the Twin Cities metro area. This information is important in helping local, county, and regional agencies plan for future transportation needs of the region. For the purposes of this study, the TBI summary gives insight to existing travel decisions and where practices and policies could potentially influence easier choices for “mode shift” from single-occupancy vehicles. A detailed summary of the findings from the 2019 and 2020 surveys is included in Appendix C.

MnDOT recently conducted an analysis to compare traffic congestion throughout the Twin Cities region prior to and during the COVID-19 pandemic, to determine what lessons could be learned from the reduction in travel. A summary of this study, “The Tipping Point – What COVID-19 Travel Reduction Tells Us About Effective Congestion Relief,” and its relevance to TDM is included in Section 4. Plans, Policies, and Travel-Related Studies.

MnDOT also commissioned a study on how teleworking has shaped the future of work in the Minneapolis Twin Cities and throughout Minnesota. The University of Minnesota conducted this study in 2021, which included a survey of employers, a survey of employees, and focus groups with human resources professionals on teleworking. A summary of these findings is included in Section 4, Plans, Policies, and Travel-Related Studies.

3. Travel Demand Management in the Twin Cities Region

3.1. TDM Services, Service Providers, Funding, and Coordination

There is great interest throughout the region to support and encourage the use of sustainable transportation; many organizations already have TDM-related goals and are already offering services that support TDM. TDM strategies and services encompass a broad range of solutions; accordingly, responsibility for implementation usually occurs on many levels of government, as well as in the private sector. The Minneapolis-St. Paul region has many organizations with a role in implementing TDM strategies and/or delivering TDM services, including public agencies at the state, regional, and local levels, as well as businesses in the private sector.

There is no regional structure or program with defined roles for organizations to deliver coordinated TDM. Many of the organizations already offering TDM-related services are already coordinating. This coordination has occurred out of necessity and therefore does not happen regularly. There are opportunities for improved coordination, which could enable organizations to define roles and responsibilities, focus on enhancing or extending services, and ultimately increase the use of sustainable and/or higher occupancy modes.

The region has prioritized funding for TDM, but the processes for administering and granting TDM funding has furthered the lack of a regional structure or program. The Metropolitan Council has established a regional competitive grant process to fund TDM services in the region. The grants have provided funding for four TMOs and one public agency to offer TDM programs and services. These organizations used the funds primarily for employer-based TDM programs; they focus on providing solutions for commute trips and work through employers to offer such services, although some of the TMOs also assist additional populations, such as universities and colleges, or focus outreach along specific corridors. These programs are each structured differently, vary in size, offer similar although not identical services, have differing program names and branding, and do not formally coordinate on a regular basis. During focus group discussions, many implementors expressed concern about efficient use of funding and current high efforts for administration of individual agencies. As a result, there is a strong desire to establish a centralized regional coordinator to improve efficient use of funds and strategically invest in a regional system that makes mode shift from SOVs easy and desirable.

There is no single program, webpage, organization, or "one-stop-shop" that exists for commuters, employers, developers, and others to learn about all options available. As a result, uncoordinated and duplicate efforts across the region occur regularly. Conversely, there are services that could be enhanced if duplication could be minimized, such as additional promotional efforts to increase awareness, or providing more support for local governments to implement services that would support their stated TDM-related goals.

The survey conducted of employers in the Minneapolis region inquired about their familiarity with TDM and whether they have worked with one of the TDM programs. Although the number of responses is not enough to be representative of all the employers in the region, most employer respondents said they are not at all familiar with TDM, nor have they worked with a

TMO or commuter services program. These employers may very well have worked with one of the TDM programs but without a cohesive program, employers may not remember the program name. The survey conducted of cities had similar findings; a small number responded that they have collaborated with one of the TDM programs. This feedback indicates the potential need for a comprehensive TDM program that could streamline smaller disparate TDM promotions, raise awareness, and ensure consistent coverage of services across the region.

Many cities and counties in the Minneapolis region have implemented TDM-related strategies and policies in their respective jurisdictions. All of the counties that responded to the survey stated that there are county plans that include specific TDM strategies and/or mention TDM specifically. Examples mentioned include supporting transit services and other travel options, utilizing TDM strategies to make more efficient use of existing infrastructure, and goals and strategies related to multimodal travel and/or transit-oriented development. A majority (62%) of cities that responded to the survey indicated that their comprehensive plan includes goals or initiatives related to transportation, land use, or development, and included examples like transitway connections, bike and pedestrian infrastructure, and support for expanding public transit expansion. However, these goals and initiatives may not have specific implementation strategies associated with them and may be an area for further exploration in subsequent tasks of this study.

Even though many organizations have identified TDM-related goals and TDM strategies to help them meet overall goals and objectives in their respective plans, there is a lack of goals and objectives for TDM at the regional level. Met Council's Congestion Management Process identifies TDM as the primary strategy for addressing congestion. Met Council's regional transportation plan, Thrive 2040, outlines numerous TDM strategies. Many cities and counties in the region have identified individual TDM strategies to address congestion, improve air quality, or improve mobility and access to services. However, there are no regional goals or objectives for TDM, resulting in a lack of performance evaluation framework to communicate TDM outcomes.

Because there are no regional goals and objectives for TDM, there is no coordinated performance monitoring, evaluation, or reporting for TDM at the regional level, resulting in confusion and a lack of understanding of outcomes. Each organization tracks progress and quantifies outcomes from individual services and promotions, such as new commuters who have converted to carpooling, vanpooling, and other sustainable modes and these data are rarely, if ever, shared across agencies. Because there is no coordinated TDM performance monitoring and evaluation, there is no common understanding amongst TDM practitioners about which strategies have had the most impact or how individual strategies support regional goals. The lack of coordinated reporting means there is no regional "picture" that summarizes the outcomes of TDM efforts, how TDM supports regional goals, or the benefits for the region's transportation network, the climate, and the economy.

For example, in the discussion groups and interviews, TDM practitioners were asked about which TDM strategies have been most effective in the Twin Cities. With no regional ongoing evaluation or report, TDM practitioners could largely only cite individual strategies implemented by their own organizations. TDM practitioners commented that the Flexpass program has been effective thus far; the Flexpass program is a parking management program that allows commuters to pay a reduced parking rate for fewer days of guaranteed parking at one of three downtown ABC Parking Ramps —an alternative to the monthly parking pass. TDM practitioners

commented that extremely inexpensive parking effectively encourages driving, making the exploration of parking management or pricing strategies like the Flexpass program of interest for expansion to other locations. All agreed that the COVID-19 pandemic has greatly influenced adoption of telework and hybrid work schedules, and drastically reduced commute trips, but there is no collective agreement on how to leverage these advancements going forward.

3.1.1. Met Council Metropolitan Transportation Services

The Metropolitan Transportation Services (MTS) is the division of the Metropolitan Council that is responsible for drafting updates to the Council's long-range regional transportation plan every four years, in compliance with federal requirements. It also prepares the list of transportation projects selected for federal funding and a four-year Transportation Improvement Program (TIP), working in collaboration with the Transportation Advisory Board (TAB). MTS is responsible for creating the TDM policy for the region, rewarding grant funds, and apprising the success of TDM initiatives.

The Metropolitan Council coordinates a regional vanpool program, Metro Vanpool, which currently operates 34 vanpools across six different employers throughout the region. Met Council provides a subsidy of about 50%–55% of the monthly lease expenses, depending on origin and destination of the vanpool and performs administrative duties, including screening and registering new vanpools, collecting ridership data, and reporting to the National Transit Database (NTD). Outreach to prospective vanpoolers is conducted through the Metropolitan Council's Metro Transit Commuter Programs division and TMOs in the region.

Informed by feedback collected during the Met Council MTS group discussion, TDM strategy selection has focused on guidance from the TPP and CMP and sharing of travel behavior and equity data to promote strategies at the local and state level. Implementation of TDM strategies is largely focused on administering Regional Solicitation grants to locals and the TMOs. Implementation is also focused on MTS collaboration and technical assistance on projects, particularly MnDOT projects. In terms of strategy measurement, lack of a centralized data system, and inconsistent reporting requirements, difficulties drawing the connection between outcomes of money allocated to Metro Transit and the TMOs have been ongoing. In other cases, federal reporting requirements are cumbersome and put smaller organizations at a disadvantage because they have less capacity and knowledge to navigate the complexities.

3.1.2. Metro Transit

Metro Transit is the primary public transportation provider in the Twin Cities metropolitan area. It is part of the Metropolitan Council and provides transit service to 188 communities in the seven-county metropolitan area. In addition to being the largest transit provider in the region, Metro Transit serves several important roles in the region's current TDM efforts. TDM-related activities and responsibilities include Commuter Programs, the Revenue and Fare Operations program, and the Shared Mobility program.

Metro Transit's Commuter Programs serves employers, institutions, developers, and commuters, and is federally funded through the Congestion Mitigation and Air Quality (CMAQ) program. Commuter Programs functions as the umbrella TDM program in the region, promoting all transportation options that reduce SOV travel to areas not served by a Transportation Management Organization (TMO). Metro Transit's Commuter Programs is often a convenient choice for the implementation of the Metropolitan Council's TDM policies, especially those that

will serve to increase transit ridership. Furthermore, Metro Transit's Commuter Programs is well-positioned to coordinate TDM services across the region and provide TDM services, since it serves as a sponsor for some of the grant recipients of the Regional Solicitation funds, provides shared tools and services (e.g., rideshare matching system, employer outreach database), and implements TDM services in areas not covered by TMO grant recipients.

However, Commuter Programs is housed under the marketing department at Metro Transit, and as such, does not achieve the autonomy it deserves because the marketing department naturally prioritizes the sale of transit passes over the promotion of all other non-transit options that reduce SOV travel. As a result, Commuter Programs staff are required to balance competing priorities, so TDM decisions are not as transparent or wide-ranging as they could be. Anecdotally, having regional TDM program staff branded under Metro Transit may also serve as a barrier for some potential partners that do not identify with transit as an opportunity for them.

Metro Transit's Revenue and Fare Operations program has developed several different pass programs, including reduced fares for seniors, youth, and Medicare card holders, as well as pass programs for employers and their employees.

Metro Transit's Shared Mobility program team coordinates with the growing industry of shared mobility providers and other emerging trends in transportation.

In the group discussion with Metro Transit, Metro Transit commented that there is a focus on improving access to transit through investing in microtransit, mobility hubs, and shared mobility. For microtransit, there is emphasis on making rider programs more accessible with streamlined applications and removal of employee minimums to participate. With respect to mobility hubs, Metro Transit has coordinated with cities and communities to identify priority areas for investments; shared mobility hubs have been focused in underserved areas and alongside planned major capital investments. It was also noted that priority investment decisions are heavily guided by public feedback to ensure stakeholder support. In terms of existing mandates or perceived barriers to implement TDM strategies, Metro Transit expressed highest frustration toward the inability to generate revenue from transit services and property funded by the state. It was also clear there is a strong desire for a regional TDM ordinance at the regional level because a regional ordinance would enable consistency and continuity rather than relying on local agencies to prioritize and pass individual ordinances as they are willing and able.

MnDOT

MnDOT provides transportation policy and planning support for all modes of transportation in Minnesota and is responsible for maintaining the state's trunk highway system, which includes state highways, U.S. highways, and interstates. MnDOT is subdivided into eight regional district areas and sub-offices to address the specialized fields within the regional transportation system. MnDOT's primary TDM efforts include management of the trunk highway system, the E-ZPass system, and a large amount of programming and funding of priorities that provide opportunities for smaller agencies to implement TDM strategies and policies.

Currently MnDOT indirectly supports TDM efforts throughout the state with multimodal investments, including projects in rural Minnesota, where congestion is rare and transit service is generally limited. MnDOT's TDM programming includes performance measures related to emissions and Vehicle Miles Traveled (VMT) reductions, rather than congestion, mode shift, or delay reductions typical of urban TDM programs. MnDOT currently supports TDM by including parallel pedestrian and bicycle infrastructure along trunk highway projects, Safe Routes to

School (SRTS) programming, the E-ZPass system, partnerships with regional transit agencies (i.e., park-and-rides along MnDOT ROW, and center-running transit lanes/stations along trunk highways).

The group discussion with MnDOT included representatives from metro offices whose efforts are mostly limited to the Metro planning district and with the same geographic boundaries as the seven-county metropolitan area. Feedback collected from the MnDOT group discussion suggests that TDM efforts are largely focused on infrastructure improvements, such as sidewalk and trail facilities, and support for bicycle and pedestrian programs. VMT reduction has historically focused on capital investments, such as implementing the E-ZPass program and building out the bus-only shoulder network. The potential for more efficient investments that could promote TDM strategies are currently limited by funding restrictions and laws, but MnDOT and Met Council began conversations about finding flexibility for funds at the outset of this study, which are ongoing.

Transportation Management Organizations

Transportation management organizations (TMOs), or transportation management associations (TMAs), are nonprofit membership organizations formed to optimize the movements of people within a specific area. TMO members, who are often employers, developers, and property managers, work together on transportation and commuting solutions within a defined area. Many TMOs are based in areas that have unique transportation demands or challenges, such as central business districts, congested corridors, or large employment hubs.

The Twin Cities region has many TMOs that provide TDM-related services and information to individuals and organizations. Metro Transit's Commuter Program serves areas not covered by other TMOs. Four TMOs currently receive CMAQ funding annually, through the Regional Solicitation process, to conduct employer outreach. These TMOs and TMAs also provide other TDM-related services and programs that they fund with other sources, since CMAQ funding cannot be used indefinitely for all TDM-related efforts. Furthermore, in some years, the TMOs and TMAs apply for project-based CMAQ funding through the Regional Solicitation process for individual projects (in contrast with ongoing services such as employer outreach).

TMOs in the region, as indicated in the interviews and survey, focus on changing individual behaviors by reducing actual or perceived barriers to non-SOV commuter trips. Survey respondents stated that the primary purpose of the TMOs is to create a more equitable transportation system, keep the area economically competitive via reductions to system congestion, and to mitigate the climate impacts of SOV commute trips.

In the group discussion, the TMOs/TMAs discussed the impacts of the COVID-19 pandemic. Before the onset of the COVID-19 pandemic, TMOs largely focused on hosting in-person educational workshops, creating educational materials, and providing other resources to help connect people with alternatives to SOV commute trips (such as car/vanpool matching and personalized travel itineraries). Since the onset of the COVID-19 pandemic and resulting increases in remote and hybrid workplaces, TMOs have adapted to focus on supporting this new normal, such as through the launch of the Twin Cities Telework project (initiated by and loosely coordinated amongst the TMOs/TMAs). However, the lag time between the move to remote work and the distribution of telework resources by TMOs was long enough that some TMOs felt the opportunity to provide meaningful resources had passed. The impacts of the

COVID-19 pandemic on TDM and the activities of TMOs cannot be understated. TMO representatives stated that since it remains to be seen what the new normal entails, employers, local governments, and TMOs are hesitant to make long-term commitments to change. As a result, most of the response to COVID has been low-cost efforts like educational materials focusing on biking or walking, how to manage remote and hybrid workplaces, and other resources. Move Minnesota mentioned that they have begun work with employers to navigate changes to long-term parking contracts and other commitments that do not mesh well with the increased share of remote and hybrid workers, indicating that some employers are moving to permanently embrace some of the changes brought on by COVID.

TMOs have also made efforts to codify TDM in the local policy environments, with varying degrees of success. Urban areas in the region have been more likely to pursue TDM policies, while suburban TMOs have struggled to get community buy-in. TMOs' ability to influence TDM policy is heavily dependent on local government interest in TDM.

3.1.3. Suburban Transit Agencies

As a result of a 1984 Minnesota statute, suburban communities within the seven-county metropolitan area have the option to decline transit service provided by the Metropolitan Council and Metro Transit in favor of establishing their own independent service. The communities that have declined Metro Transit service and instituted their own include Maple Grove Transit, Minnesota Valley Transit Authority (MVTA), Plymouth Transit, and SouthWest Transit. Suburban transit agencies are the primary alternatives to SOV commuting for trips to/from the downtown cores of the Twin Cities. As such, the service offered by the suburban transit agencies is largely oriented toward express service into downtown Minneapolis and the University of Minnesota. The demand is growing for reverse commute and suburb-to-suburb commuter service, and most agencies are exploring the use of microtransit service to replace or supplement fixed-route service. MVTA has identified on-demand services as a strategy for overcoming built environment challenges.

While the urban populations of Minneapolis and St. Paul continue to grow, the surrounding suburbs served by independent transit authorities are still a significant generator of trips between suburban communities and the central business districts of Minneapolis and St. Paul. As such, supporting alternatives to SOV commute trips in these outlying communities plays an important role in managing regional travel demand. However, as these suburban communities mature and diversify in population income, race, and industry, so too do the goals of these transit agencies who service these areas. This growth requires achieving a delicate balancing act between equity, quality of service, efficiency, and meeting legal requirements.

Feedback from the suburban transit agencies group discussion indicates that strategy selection is currently based on adapting to meet the demands of hybrid work culture, including full-time and part-time telework and focus on microtransit services. Many agencies are also investing in modernizing their stations with mobility hubs, real-time information, and electric vehicle charging stations. The agencies are also trying to get more involved in the early stages of new developments to plan for transit facilities and promote developer investment in pedestrian connections. The current lack of awareness (or being one of "the last invited to the table") is a barrier to this early opportunity for public-private collaboration. Although major investments have been made in improving lines of communication and reducing awareness barriers for all populations, it was obvious in the discussion that establishing greater transparency and

coordination between the transit providers is essential for sharing resources and successes to effectively address the needs of the region.

3.1.4 Cities

The study team distributed the TDM survey to the 188 communities in the Met Council service area. Cities with dedicated transit service often indicated they also have additional TDM strategies in place, such as requirements for TDM plans or density bonuses for new development, Complete Streets policies, parking maximums or elimination of parking minimums, traffic impact analysis requirements for developments, or promotional marketing campaigns. Survey respondents in first ring suburbs commonly said they had TDM plans or density bonuses in place for new developments, had eliminated parking minimums or set parking maximums, adopted Complete Streets policies and implementation strategies, require bike parking in new developments, and charge for auto vehicle parking. Those in outer ring suburbs varied more widely due to the different contexts (more urban to more rural environment) but were likely to have traffic management strategies. The larger outer ring suburbs had more policies like the inner ring suburbs. See Appendix A for more information and key takeaways from the metropolitan cities survey.

3.2. Mandates and Legal Requirements Affecting TDM

3.2.1. TDM Mandates

Currently, four cities in the region have TDM mandates requiring new developments to implement TDM strategies or provide TDM services. The cities of Minneapolis, St. Paul, Bloomington, and Eden Prairie mandate the adoption of a TDM plan that will encourage the use of sustainable transportation and reduce traffic generated by the site after development and based on size (square footage), number of occupants or residents, or location within specific zoning districts. The TDM ordinances implemented by the cities of Minneapolis and St. Paul were unique in their inclusion of residential development, with the remaining policies requiring TDM plans only for new nonresidential development and redevelopment. None of the ordinances reviewed included requirements for existing developments, large employers, or other trip generators to implement TDM plans or strategies.

The City of Minnetonka does not have a TDM mandate, however their 2040 Comprehensive Plan mentions that TDM strategies will be included in future developments.

Table 2. Summary of Twin Cities Metropolitan Area TDM Ordinances and Plans

City	Typology	Implementation	Impacted	Reporting	Enforcement
Minneapolis	Urban Core	Tiered, points-based plan, requires traffic study	Residential and nonresidential development	Self-reported audits every two years	Permit approval
St. Paul	Urban Core	Points-based plan	Residential and nonresidential development	Annual status reports for two years of via appointed TDM coordinator	Permit approval, two years of TDM plan implementation, with budget that

City	Typology	Implementation	Impacted	Reporting	Enforcement
					complies to the ordinance
Bloomington	Suburban	Tiered implementation, points-based plan	Nonresidential development	Annual status reports for two years	Permit approval, two years of TDM program operating funds held in escrow
Eden Prairie	Suburban	Discretionary	New office and light industrial development in TC and TOD districts	Annual status report for two years	Permit approval, two years program budget held in escrow
Minnetonka	Suburban	Tentative	Emerging based on 2040 plan	None	None

Urban TDM Policies

This policy review examined the TDM ordinances for Minneapolis and St. Paul, which comprises the urban core of the twin cities. Urban areas are generally more well suited for TDM programs, given the density of destinations and viability of transit within urban markets. The Urban TDM policies examined were generally more prescriptive in permitted strategies, and affected more developments compared with suburban policies. Minneapolis and St. Paul's TDM ordinances include requirements for large residential developments produce TDM plans, in addition to requiring TDM plans from a greater variety of smaller nonresidential developments. Both cities recently abandoned using parking as the metric for determining the need for a TDM plan, generally moving to gross floor area (GFA) or number of residents. Both Minneapolis and St. Paul use a tiered point system to help differentiate between the TDM requirements of various uses and development sizes, which in turn helps reduce the burden of creating TDM plans for developers and streamlines the assessment of TDM plans for the cities.

Minneapolis

The City of Minneapolis recently redesigned its TDM ordinance to reduce the burden of implementing a TDM plan, while also expanding the purview of TDM plan applicability. The previous ordinance placed a greater emphasis on traffic studies and only required TDM plans for nonresidential developments greater than or equal to 100,000 square feet, while providing the provision for discretionary plans as needed, which quickly took dominance as the primary means by which TDM plans were implemented. The new ordinance affects both buildings and uses and provides nine strategies for addressing TDM that can be adopted by developers in addition to allowing them to propose TDM strategies for approval by the planning director.

The new Minneapolis ordinance has a larger scope and uses a tiered approach to cover residential and nonresidential uses. Smaller developments—such as residential developments between 50- and 250-units or nonresidential development between 25,000 and 200,000 square feet—are required to make minor TDM plans, which have a smaller administrative burden and may require fewer implemented strategies. Large developments may have to conduct traffic studies and implement more TDM strategies, and the city retains the right to require TDM plans for developments that do not meet any of the criteria set in the ordinance but are believed to

present unique transportation challenges due to the nature of the use or the location. Developers may appeal the need for a TDM plan as well as propose novel TDM strategies to meet their point minimums. A TDM plan approved by the planning director is required before the city will issue a building permit, zoning certificate, or other approval. The strategies are required to be maintained for the life of the structure. However, it is not clear from the ordinance what enforcement mechanisms the city has at its disposal to address non-compliance or what should be done if an applicant falls out of compliance, such as in the case of a non-infrastructure program is discontinued.

Unlike other TDM ordinances reviewed, Minneapolis does not include a financial incentive for program compliance after the construction permit is issued. This is perhaps a reflection of the emphasis on infrastructure investments over programmatic investments, but it could result in issues with program enforcement over time, especially given the reliance on strategies such as transit fare subsidies and providing shared vehicles that require ongoing investment. Developers or property owners are required to produce a self-audit every two years to show program progress, but the ordinance does not set a standard for the document. Unlike other plans, the Minneapolis program does not set an arbitrary reporting sunset. Instead, this is left to the discretion of the planning director and city engineer as to whether the development programs are meeting city transportation goals.

St. Paul

Like Minneapolis, St. Paul has recently redesigned their TDM ordinance to streamline the process and expand program applicability. The previous process was complicated and required specialized staff to create compliant plans, was unclear about what constituted a viable TDM plan, requiring costly traffic studies, and was limited in scope. The new ordinance was approved in late 2021, but supplemental materials such as the travel demand program guide are not yet publicly available. The new St. Paul ordinance applies to any new residential development or redevelopment that has 25 or more dwelling units, and any nonresidential development or phased construction greater than or equal to 20,000 square feet. The new program follows a point-based implementation strategy like Minneapolis's policy, pairing strategies and point values to a set minimum requirements per development typology. St. Paul will be producing a program guide to help developers create compliant plans that explain the point minimums and strategies to be implemented and provide several other structures for the sake of program compliance and reporting, in addition to providing guidance for program budgets. This budget guidance plays a valuable role in program enforcement, as the city requires a financial guarantee for TDM plans to help enforce program compliance for the first two years.

St. Paul, along with Bloomington and Eden Prairie, uses a financial security agreement (i.e., a letter of credit or cash escrow) equal to the two-year TDM plan budget as the means of enforcing program compliance. St. Paul differs from other agencies in that it provides a structure for the program budget, which fits with the goals of the redesigned TDM ordinance of reducing barriers to program implementation and streamlining the process. This financial stake will be returned to the developer after the zoning administrator reviews the program follow-up surveys and determines that the developer has met the goals set in its individualized TDM plan.

Suburban TDM Policies

The Twin Cities is surrounded by dozens of suburban communities, with large portions of the population traveling into the urban core to work, shop, and recreate. These communities are

also the home to large regional employment hubs that draw employees from the urban core and fellow suburbs. As the source and destination of many trips along the regional transportation network, these communities can play a valuable role in a regional TDM policy and as such have implemented some TDM ordinances to address their role in the regional transportation network.

In contrast to the scope and reach of the urban TDM policies examined, suburban policies tend to be narrower in applicability and prescriptiveness. The suburban TDM ordinances only affected nonresidential developments or developments within specific zones of the community. While example strategies were suggested in the ordinance language, generally the content of the final TDM plan is not discussed in the ordinance or accompanying documents and is at the discretion of the agency in charge of TDM program administration to determine what constitutes an adequate TDM plan. This flexibility might reflect the larger variety in TDM plans required of suburban communities where land use patterns and trip patterns might generate a greater variety of TDM strategies.

Bloomington

Bloomington sits on the edge of the urban and suburban divide, but its TDM policies are generally more in line with the suburban policies examined for the review than with the policies of urban areas like Minneapolis or St. Paul. The TDM ordinances were last updated in 2015 and were first drafted in 2009, making it one of the longer running TDM policies examined. Bloomington's TDM policies only impact nonresidential development or redevelopment. There are two tiers of TDM plans, with Tier 1 plans only affecting nonresidential developments or redevelopments that are required by city provision to provide more than 350 parking spaces. Tier 2 TDM plans are required for new nonresidential development, nonresidential redevelopment and/or additions to existing development over 1,000 square feet in floor area, provided a Tier 1 TDM program is not required. Schools, parks, places of assembly, and other uses not typically associated with peak-hour traffic are exempt from having to develop TDM plans, even if they would otherwise meet the requirements. Tier 1 plans must produce a TDM plan that includes a TDM study prepared by a qualified traffic consultant and include a traffic study paid for by the applicant. The ordinance does not provide a minimum number of strategies that must be implemented, and program approval is left to the discretion of the director of public works to determine whether the plan is in alignment with the TDM goals set by the city.

Programs are enforced by way of a financial guarantee placed in escrow for two years, during which time the developer must submit annual status updates on program performance. After two years of good standing, the financial guarantee is released to the developer. in the amount established by the TDM program schedule set forth in the TDM policies and procedures document maintained by the director of public works.

Eden Prairie

The City of Eden Prairie is unique in that its TDM requirements are not based on development size but rather the location of the development. Any development application for office or light industrial uses in the city's transit-oriented development (TOD) or in town center districts must include a TDM plan. The plan must document TDM measures to be implemented at the development, a two-year budget, and an evaluation plan, and must meet the city's approval. This ordinance does not set specific guidelines for the development of TDM plans, and approval is at the discretion of city planning staff.

Like other TDM ordinances examined, the TDM program is enforced through a financial guarantee equal to the cost of two years of program implementation, which will be returned to the developer or property owner after two years of acceptable program performance.

Minnetonka

Unlike other TDM plan requirements reviewed, Minnetonka does not have a TDM ordinance. Rather, the community has adopted TDM goals into its comprehensive plans and identified TDM recommendations and resources available to commuters, developers, and employers. This does not have the same impact as an ordinance, as it is entirely voluntary, but it does support the city in directing funding toward TDM measures and qualifies the city for regional funding initiatives. Minnetonka coordinates with the I-494 Commuter Services to work with developers and employers to implement TDM policies.

3.2.2. Policies

The Twin Cities metropolitan area has seen positive policy changes in support of TDM, including the removal of parking minimums by a number of municipalities. Several cities in the region have traffic impact analysis (TIA) requirements in place for developments, TDM plans or density bonuses for new developments, and parking maximums or at least no parking minimums. The City Council of Minneapolis removed minimum parking requirements for apartments near high-frequency transit in 2015 and in 2021 abolished minimum parking requirements citywide. St. Paul also removed remaining minimum parking laws in 2021. Still, a number of challenges remain.

- Policy challenges to TDM identified by metro transit staff:
  - Lack of means to enforce TDM strategies among employers, cities, and others
  - Bank loaning requirements that mandate parking
  - Rules restricting revenue generation activities on transit property funded by state bonds
- Policy challenges to TDM identified by suburban transit agency staff:
  - Disconnect between real estate developments desire for transit service at new development and sparse development pattern
  - Lag between community growth and transit taxing district boundaries
  - Legal uncertainty about borders of service for microtransit
  - Lack of legislative mandate for pedestrian and transit infrastructure with new developments
  - Issues with procurement, especially with electric buses

Complete Streets

The survey conducted of cities in the Minneapolis region inquired about roadway management strategies and policies. Many cities indicated having complete streets policies in place. Many of these cities indicated they have incorporated complete streets design elements into capital improvement program criteria that elevates multimodal designs. For those cities who do not already have such policies in place, they indicated these policies are of high priority to enact.

Development Requirements

The survey conducted of cities in the Minneapolis region inquired about other development requirements that prioritize multimodal transportation. Many cities indicated that they have TIA requirements for developments and requirements for bicycle parking.

The City of Minneapolis's TDM ordinance is development-based and requires a TDM plan be developed for new residential and nonresidential developments. The requirements are scaled to the size of the development; smaller developments' TDM plans may require fewer implemented strategies while larger developments may be required to conduct traffic studies and implement one or more TDM strategies.

3.2.3. Perceived Implementor Barriers

As part of the implementor outreach efforts, including focus group discussions and surveys, each agency was asked to share any mandates that positively or negatively impact their ability to implement TDM strategies. Below is a summary of the feedback gathered from the region's implementors.

Perceived negative barriers:

- Federal funds can only be used for capital expenses and not for operations or marketing, which requires research and/or development of local fund sources for strategy implementation
- Federal reporting requirements are cumbersome, especially for smaller organizations with less capacity and knowledge to navigate the complexities
- Few employers and developers are required to implement TDM strategies and most of the TDM gains can be made through development
- Revenue cannot be generated on transit property funded by the state
- The abundance of inexpensive and free parking makes TDM strategies less effective
- Banks still require a certain number of parking spaces to receive a loan
- TDM ordinances would be stronger at a regional level as opposed to by local agencies

More efficient investments are currently hampered by funding restrictions and laws. Examples include (1) the ABC ramp parking costs, which cannot be arbitrarily set to undercut the market and require a recurring survey, and (2) low-income discounts for E-ZPass cannot be legally executed.

3.3. Land Use

Land use decisions are one of the most important influences on travel mode choices and the accessibility of destinations. Dense and mixed-use areas support access by transit, biking, and walking. Lower-density, single-use areas are harder to serve by transit, encouraging driving. Many organizations and communities in the Minneapolis region are already considering the relationships between land use and transportation, and have developed comprehensive plans, policies, and guidance documents to reinforce these connections.

Transit-Oriented Developments

TODs are served by frequent transit, designed to allow people to live and work without need of a personal automobile. TODs are often higher density, and have a mix of residential, commercial, and employment opportunities. The Met Council has a TOD Policy, which provides a framework for planning and implementation of TOD throughout the region. In 2021, the Metropolitan Council's Office of TOD facilitated FTA grants to inform and enable future development plans at station areas along two transit lines. Stakeholders commented in the

discussion groups that some of the most effective strategies implemented in the region have been TOD-related projects.

Mobility Hubs

The Metropolitan Council and Metro Transit are finalizing a planning guide for local and regional stakeholders involved in developing mobility hubs. This project is the first step to support local entities to plan and implement mobility hubs that will help people easily switch between travel options and fill the gaps between different types of travel. Several pilot projects were implemented in the City of Minneapolis, which informed this guidance document, and the City of Minneapolis has taken a lead role in advising on the development of the guide and assisting the Metropolitan Council and Metro Transit with planning for future mobility hubs in the region.

Comprehensive Plans

The survey conducted of cities in the Twin Cities region inquired about the inclusion of goals or initiatives related to increasing multimodal travel in their comprehensive plans. Most city respondents indicated their comprehensive plans prioritize land use patterns that support connections to transit and sustainable travel modes, such as sidewalks and bicycle infrastructure. Many cities indicated their plans also include goals for increased public transit and transit-oriented developments, and some indicated they have included requirements for bike parking in their development processes.

3.4. Roadway Management

Roadway management strategies can include those that reduce demand on the roadway network and those that add capacity. TDM strategies implemented in conjunction with roadway management strategies can reduce infrastructure costs and support the use of multimodal transportation.

Plans and Funding Programs Prioritizing Demand Strategies

The Metropolitan Council is responsible for developing the CMP for the Twin Cities region and has subsequently developed the CMP Policies and Procedures Handbook. The Handbook provides guidance to municipalities and counties about how to identify, screen, and select treatments for areas that experience recurring congestion within the CMP roadway network. The CMP Policies and Procedures Handbook prioritizes travel demand strategies over adding roadway capacity.

The Metropolitan Council also administers the Regional Solicitation and distributes federal transportation funds to one of 12 application categories, including TDM and two additional categories that could be used to implement TDM strategies specifically designed to manage roadways.

Pricing and Tolls

Pricing strategies can be effective in encouraging travelers to shift to higher occupancy modes, shift their time of travel, or shift the routes traveled—all of which can support reduced congestion. Currently, the Minnesota E-ZPass program is the only example in operation that includes pricing strategies in the Minneapolis region. MnDOT manages the Minnesota E-ZPass program; carpoolers and transit vehicles are allowed to travel for free in the express lanes, incentivizing travelers to choose these higher occupancy modes. MnDOT has also designed

and implemented bus-only shoulders on the interstates, to further support reduced travel times for transit riders.

3.5. Incentives, Marketing, and Communications

Creating high-quality transportation options is only one piece of the puzzle when it comes to creating lasting behavior change. To create meaningful shifts in travel patterns, the public must be aware of the array of modes and supporting tools that are available. Marketing and communications can help make TDM programs more visible and can convey the convenience, sustainability, and other favorable qualities of various modes. Agencies can also design marketing and communications strategies to reach specific populations that historically lacked access to quality transportation options. Alongside communications, incentives can play a significant role in creating lasting behavior change.

Organizations throughout the region are working to enhance communications and incentives.

3.5.1. Transportation Management Organizations

TMOs in the region engage in a variety of outreach activities, including tabling events and campaigns, to incentivize companies and their employees; they also host or support annual commuter-based campaigns including commuter challenges, Bike to Work Week, Try Transit, and Twin Cities Telework. Anoka County, for instance, conducts commuter fairs, residential fairs, and experiential learning events. TMO programs primarily focus on commuters, by hosting promotions, events, and fairs for employees and residents. TMO outreach sometimes targets specific audiences, such as travelers within a congested corridor or low-wage workers.

Communication channels include newsletters, social media, and educational resources. Most of the TMOs have a social media presence on Facebook and Twitter, with followers ranging from several hundred to several thousand. Most post several times a week about programs, incentives, and campaigns. Several of the TMOs distribute e-newsletters; for example, the 494 Corridor TMO-led Twin Cities Telework program distributes a free newsletter to employers with tips and information on teleworking. According to the survey of TMOs, conducted as part of this study, TMOs have found personalized trainings and flagship events to be most effective in influencing commuters to shift to sustainable modes. Working one-on-one with groups to develop these strategies can be more effective than traditional tabling events.

Move Minneapolis runs a Commute Ambassadors program to communicate and model sustainable commuting behavior. Downtown commuters and others who are passionate about sustainable commuting can sign up for this program to learn more about sustainable commuting and then promote Move Minneapolis events within their workplaces.

3.5.2. MnDOT

MnDOT also provides TDM incentives. MnDOT owns the ABC Ramps Mobility Hub, which has three large parking ramps, in downtown Minneapolis. MnDOT offers significant carpooling incentives—carpoolers can pay $20 per month to park at ABC Ramps, compared with $140–$160. Additionally, the Minnesota E-ZPass is free for vehicles with two or more people.

3.5.3. Metro Transit

Metro Transit offers a variety of programs to incentivize transit use. The Transit Assistance Program (TAP) provides reduced fares for lower income residents. Metro Transit also offers a

Student Pass, College Pass, and employee pass programs. At companies and organizations enrolled in Metropass, employees can get unlimited access to all regional buses and trains for $83 per month.

Metro Transit's Commuter Services program provides TDM services to commuters, by working with their employers to implement benefits and amenities that will encourage employees to make sustainable choices. Specific services include administration of a Guaranteed Ride Home (GRH) service, Bike Lockers, Bike rooms, and Carpool parking tags for employers, Regional Ridematching data base (provide potential carpool partners for people in the region), database of employer outreach activity for the region general advertising of pass programs. For example, Metro Transit distributes a quarterly newsletter, called the Inside Lane, which provides program updates, transportation news, and tips for employers, universities, property managers. Dynamic reports of pass programs have been utilized to improve employer outreach, which is tied to their regional outreach, cloud based, database. Metro Transit Commuter Programs has also implemented an employer recognition program, the Commuter Choice Awards, which publicly recognizes employers who promote transportion options to their employees,. Metro Transit also pilots new pass programs for targeted audiences, such as students, commuters, and residents. The College Pass and U-Pass programs enable currently enrolled college and university students to take unlimited rides on buses and trains at deeply discounted rates. Metro Transit's Residential Pass offers deeply discounted passes to residents of participating multi-tenant buildings along transit lines.

3.5.4. Suburban Transit Agencies

Suburban transit agencies focus on TDM strategies that incentivize and reduce barriers to using transit. Incentives include free transfers to microtransit and Guaranteed Ride Home programs. Communications strategies include outreach to transit-dependent communities and developing materials in multiple languages.

3.5.5. Property Managers

Property managers in the region offer a variety of TDM incentives and amenities. All six property managers surveyed offered on-site bike parking, and half offered on-site electric vehicle charging and on-site showers. One property manager offered preferred parking for vanpools, carpools, and/or electric vehicles.

3.5.6. Employers

More than half of employers surveyed provide commuter tax benefits. Some employers have an Employee Transportation Coordinator to assist with ongoing employee transportation needs, vanpool programs/subsidies, and access to carpool matching services. Approximately a quarter of employers surveyed provide preferred parking for vanpools, carpools, and/or electric vehicles, and a third provide on-site electric vehicle charging. The majority of employers provide employer-paid or discounted transit passes, on-site bike parking/storage, and showers/locker rooms. The majority of employers surveyed also have formal telework policies, many of which offer some flexibility with respect to location and schedule. Employers also engage in communications efforts. The majority of employers provide general information about commuting options, and many provide new employee transportation information packets, transit route information and maps, and information about TDM-related events.

The "Twin Cities Shared Mobility Collaborative Report" and "2020/2021 Sustainable Transportation Advisory Council Recommendations and MnDOT Response" both recommend enhanced employer communication strategies such as creating a commuter benefits page, regular mailings to employers, and direct outreach to a variety of stakeholders. Among cities surveyed, many were interested in promotional marketing campaigns such as Car-Free Day and Bike to Work Day.

4. Plans, Policies, and Travel Related Studies

4.1. Metropolitan Council

4.1.1. Thrive MSP 2040/Transportation Policy Plan

Thrive MSP 2040 is a legally mandated long-range planning document prepared by Metropolitan Council every ten years. Thrive MSP 2040 sets a foundation for the systems and policy plans developed by the Metropolitan Council, and it is subdivided into several specific policy plans. This memo will only focus on the 2040 Transportation Policy Plan (2040 TPP), which guides the development of the region's transportation system. The 2040 TPP focuses setting priorities for the many systems that make up the regional transportation ecosystem. The policies and strategies covered in the 2040 TPP range from setting funding priorities, developing congestion management policies, and setting long-range goals for the transportation system, amongst many other mechanisms to grow and maintain the regional transportation network. The Metropolitan Council understands the value of TDM as an effective tool to meet congestion management goals while also building a more resilient and attractive Twin Cities. For example, they increased the maximum federal award available for TDM projects starting with the 2018 Regional Solicitation. The 2040 TPP was initially adopted on May 28th, 2014. The most recent update to the 2040 TPP was adopted by the Metropolitan Council on November 18th, 2020.

Strategy Selection

The 2040 TPP selected strategies based on their ability to meet the following regional transportation goals. Each goal has between two and five objectives that were meant to better define the outcomes to influence to meet these goals. These goals are summarized in the Table 3 below.

Table 3. 2040 TPP's Performance-Based Planning Framework of Goals and Objectives

Goal	Objectives
A. Transportation System Stewardship Sustainable investments in the transportation system are protected by strategically preserving, maintaining, and operating system assets.	• Efficiently preserve and maintain the regional transportation system in a state of good repair. • Operate the regional transportation system to connect people and freight efficiently and cost-effectively to destinations

Goal	Objectives
B. Safety and Security The regional transportation system is safe and secure for all users.	• Reduce fatal and serious injury crashes and improve safety and security for all modes of passenger travel and freight transport. • Reduce the transportation system's vulnerability to natural and human-caused incidents and threats, including climate change and terrorism.
C. Access to Destinations A reliable, affordable, and efficient multimodal transportation system supports the prosperity of people and businesses by connecting them to destinations throughout the region and beyond.	• Increase the availability of multimodal travel options, especially in congested highway corridors. • Increase travel time reliability and predictability for travel on highway and transit systems. • Ensure access to freight terminals such as river ports, airports, and intermodal rail yards. • Increase the number and share of trips taken using carpools, transit, bicycling and walking. • Improve the availability and quality of multimodal travel options for people of all ages and abilities to connect to jobs and other opportunities, particularly for historically under-represented populations.
D. Competitive Economy The regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and state.	• Improve multimodal access to regional job concentrations identified in Thrive MSP 2040. • Invest in a multimodal transportation system to attract and retain businesses and residents. • Support the region's economic competitiveness through the efficient movement of freight.
E. Health and Equitable Communities The regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.	• Reduce transportation-related air emissions. • Reduce impacts of transportation construction, operations, and use on the natural, cultural, and developed environments. • Increase the availability and attractiveness of transit, bicycling, and walking to encourage healthy communities through the use of active transportation options.
F. Leveraging Transportation Investments to Guide Land Use The region leverages transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.	• Focus regional growth in areas that support the full range of multimodal travel. • Maintain adequate highway, riverfront, and rail-accessible land to meet existing and future demand for freight movement. • Encourage local land use design that integrates highways, streets, transit, walking, and bicycling. • Encourage communities, businesses and aviation interests to collaborate on limiting incompatible land uses that would limit the use of the region's airports.

The 2040 TPP is used to set priorities and goals for transportation planning in the seven-county metropolitan area and the urbanized portion of Wright and Sherburne counties. As such, it poses a significant opportunity to shape the role TDM plays at the regional level. As the long-range transportation plan for the region, the 2040 TPP builds off existing policy, and

simultaneously exerts influence on future policy downstream. With that in mind, future TDM policies should work to support objectives and goals from the 2040 TPP, including but not limited to the following:

- **Goal A: Transportation System Stewardship** – TDM policies and objectives align well with objectives set out in this goal as they relate to maximizing the effectiveness of existing infrastructure in a cost-effective way when doing asset preservation and maintenance. TDM can be integrated as an option for improving the cost-effectiveness of the existing system through operational improvements via congestion management, , focuses on cost-effective solutions for transit, and incorporating improvements to bicycle and pedestrian facilities.
- **Goal C: Access to Destinations** – TDM is explicitly mentioned in *Objective C4* as the tool by which the Metropolitan Council promotes multimodal travel, provides alternatives to SOV trips, and reduces the overall number of SOV trips in the Twin Cities. This is done by providing TDM technical assistance and funding through the Regional Solicitation. Future TDM policies can strengthen this section by directing resources to the TDM options already prioritized within the TPP. The TPP can use its regional policy making status to increase the number of TDM stakeholder by encouraging localities to develop their own TDM plans, or through increasing the number of organizations (such as large employers, developers, or property managers) to develop their own TDM plans.
- **Goal D: Competitive Economy** – Part of a well-developed TDM system is a robust multimodal transportation system that is safe, is well maintained, offers a variety of modal choices, reduces congestion, enhances communities' quality of life, and provides easy access to jobs and other destinations. Many TDM programs target large employers and business districts due to their nature as the primary driver of congestion in central business districts and other job centers. TDM policies can be used to support competitive economy objectives by making the region more appealing to employers and jobseekers through reducing travel times, increasing multimodal travel options, and increasing the talent pool for employers.
- **Goal E: Healthy and Equitable Communities** – Reductions in travel demand and SOV system expansion projects have first- and second-order health benefits for all members of the community but can specifically impact priority populations who are more likely to benefit from improvements to air quality, reductions in greenhouse gas (GHG) emissions, community re-connectivity and increased access to multimodal transportation options.
- **Goal F: Leveraging Transportation Investments to Guide Land Use** – This section already sets objectives for increasing the amount of development that supports transit, multimodal trips, and reduces dependency on personal automobiles. The greatest opportunity here is setting up TDM as a part of future land use development via requiring residential and commercial developers to include TDM plans to manage or reduce congestion as part of the permitting process. This should extend beyond the usual transit-oriented development focus of developing land use to reduce SOV use and include requirements for larger suburban development such as office parks and residential developments to include TOD plans. There is precedent for this in other cities and is covered in the Twin Cities Shared Mobility Collaborative section of this memo.

This analysis of parity between existing TPP policies and TDM policies is not meant to comprehensive but instead provide an example of how future TDM policy can be integrated into the TPP strategies and align to meet the goals set therein.

Strategy Implementation

The TPP provides strategies to guide the implementation for each goal in addition to giving some examples of performance measures to assess improvements to these goals. The following summary focuses on strategies that presented direct connections to reducing SOV trips and reliance, reducing emissions, congestion management, and those that called on Met Council to provide multi agency coordination to meet goals.

Increasing Access to Destinations – There should be a regional focus on developing a transportation system that is practical, affordable, and available to all users regardless of their socioeconomic background. Policies for transportation system should focus on providing a system that creates connections between people and jobs, activities, and opportunities. Priority should be given to plans that emphasize the importance of maintaining, improving, and expanding upon the existing investment into the multimodal system of highways, local and express bus service, the regional bicycle system, and local pedestrian improvements.

The following strategies establish TDM-related outcomes:

- Strategy C3 – Establishes congestion management processes as a coordination utility to foster cooperation between agencies and localities to increase multimodal efficiency and people-moving capacity of the regional roadway network.
- Strategy C4 – Establishes TDM as a means for regional transportation partners to address highway congestion via promoting multimodal travel options and other alternatives to single-occupant vehicle travel.
- Strategy C5 – Calls for multi-agency coordination to oversee the effective use of MnPASS lanes and transit advantages to reduce SOV usage on congested highway corridors.

These strategies are supported by strategies across several chapters in the TPP, including Chapter 5: Highway Investment Direction and Plan, Chapter 6: Transit Investment Direction and Plan, and Chapter 7: Bicycle and Pedestrian Investment Direction. Most of the investment direction is dedicated toward increasing accessibility through efficiency gains through means outside of highway expansion.

Highway system investment principles set priorities for how regional funds will be used to address the regional highway system, which includes principal arterials and A-minor arterial systems. Investment strategies clearly and explicitly state that investments into low-cost high-benefit projects should be pursued first, even if these projects do not completely resolve the existing problem. The TPP sets the priority toward TMD, CMP, and other approaches to addressing highway operational issues over capacity expansion. These funding priorities support most TDM investments.

Strategy C3 is supported through the Congestion Management Safety Plan, which finds small scale, targeted, high return-on-investment improvements that could be made on MnDOT's highway system within the region investment through safety and mobility performance

measures. CMSP locations are given priority status when applying for Regional Solicitation grants, which in turn encourages coordination between agencies.

Strategy C4 is supported by the regional mobility investment approach, which states that TDM is the region's priority when addressing mobility issues in the region. Since TDM investment can reduce the need for additional highway expansion, it is viewed as first order investment priority. TDM investment broadly dovetails into several other strategies covered in the TPP, such programmatic elements executed through TMOs, transit, bicycle, and pedestrian investments, and changes to land use characteristics.

Building and Maintaining a Competitive Economy – The regional transportation system plays a vital role in the vitality and prosperity of the Twin Cities metropolitan area. A high quality, accessible, multimodal transportation network plays a substantial role in attracting and retaining business and residents. TDM can play a role in this goal by being a cost-effective tool to maintain travel time reliability, increase access, and offer more modal choices for populations who highly value non-SOV options. This objectives and strategies for this goal cover local, regional, and interregional transportation systems, and identify the need for agency coordination to maintain the Twin Cities as a premier metropolitan area in terms of multimodal transportation, travel time reliability, and active transportation. The following strategies identify TDM-related outcomes:

- Strategy D1 **–** The Metropolitan Council and its transportation partners will work to provide the funding needed to create a multimodal transportation system that is safe, well maintained, offers modal choices, manages and eases congestion, provides reliable access to jobs and opportunities, facilitates the shipping of freight, connects and enhances communities, and shares benefits and impacts equitably among all communities and users.
- Strategy D3 **–** The Metropolitan Council and its partners will invest in regional transit and bicycle and pedestrian facilities that improve connections to jobs and opportunity, promote economic development, and attract and retain businesses and workers in the region on the established transit corridors

Commuter- and employer-based TDM services support regional economic objectives outlined in these strategies, by providing personalized information on transportation choices, such as transit and bike routes, carpool matching, or vanpool services, thereby reducing congestion, improving mobility, and increasing access to jobs and other opportunities.

The efficient and reliable movement of freight also plays a substantial role in maintaining the economic competitiveness of the region and represents an underutilized policy juncture with TDM. The current iteration of the TPP recognizes how other highway funding priorities, such as operations and maintenance funds, regional mobility improvements, spot mobility improvements, and MnPASS lanes can be used to improve freight operations, but it does not draw an explicit connection between TDM and improved freight operations. Future TDM policy should recognize where the benefits of managing travel demand can be applied to benefit the operational efficiency of the freight network. While trucking freight activity attempts to avoid operations during traditional peak hours, increased traffic activity combined with an increased demand for trucking brought on by modern supply chain management threatens to further upset this delicate situation. Future TDM policy should look to combine the benefits of reduced

congestion and peak travel demand with the present and developing technology gains in freight management. The TPP currently sets freight investment direction based on maintaining:

Creating Healthy and Equitable Communities – Policies should work toward meeting state and regional goals for reductions in transportation-related GHG emissions and empower other localities to contribute to these efforts. Policies should support a transportation system that meets users' needs while also promoting the environment and capitalizing on health benefits of transportation options like carpooling, transit, and active mobility. The following strategies contain TDM-related objectives:

- Strategy E1 – The metropolitan council will provide information and technical assistance to local governments in measuring and reducing transportation-related emissions, including via the reduction in overall automobile trips taken.
- Strategy E2 – The Metropolitan Council and MnDOT will consider reductions in transportation-related emissions of air pollutants and greenhouse gases when prioritizing transportation investments. Emissions reductions is a prioritizing criterion for regional solicitation applications.

Guiding Future Land Use – Most of the region has evolved to meet the needs of the private automobile, and part of successful TDM policy is removing the impacts of past land use choices on non-SOV modes of travel. The Guiding Future Land Use goals provide strategies and goals to increase the density and number of employment hubs along transportation corridors and emphasize the need for local governments to plan for dense development and mixed use near and along these areas. Council policies should be informed by partnerships with local governments responsible for planning and implementing land use and local infrastructure, and so too in turn should local governments prepare their comprehensive plans to address the policies set by Thrive MSP 2040 and other plans. The following strategies contain TDM-related objectives:

- Strategy F2 – Local governments should plan for increased density and a diversification of uses in job concentrations, nodes along corridors, and local centers to maximize the effectiveness of the transportation system.
- Strategy F3 – Local governments will identify opportunities for and adopt guiding land use policies that support future growth around transit stations and near high-frequency transit service. The Metropolitan Council will work with local governments in this effort by providing technical assistance and coordinating the implementation of transit-oriented development. The Metropolitan Council will also prioritize investments in transit expansion in areas where infrastructure and development patterns support a successful transit system and are either in place or committed to in the planning or development process.
- Strategy F4 – Local governments should lead planning efforts for land use in transit-oriented station areas, small-areas, or corridors, with the support of the Metropolitan Council and other stakeholders
- Strategy F5 – Local governments should adopt policies, develop partnerships, identify resources, and apply regulatory tools to support and specifically address the opportunities and challenges of creating walkable, bikeable, and transit-friendly places.

Chapter 3 of the TPP articulates upon these strategies and how they might be realized by local governments and agencies and provides a more in-depth explanation of goals and resources

available to meet them. For Strategy F2 and Strategy F3, the Metropolitan Council uses the TPP to set minimum and target densities for new residential or mixed-use development around transit stations and around high-frequency transit service. Additionally, the TPP provides guidance on minimum and target job and activity density for transit corridors. The Metropolitan Council will monitor conformance to these goals through comprehensive plan review.

Strategy F4 is supported via existing programs that support TOD in the region, helping local governments via the Livable Communities grant program. The voluntary, incentive-based approach of the Livable Communities program leverages partnerships and shared resources to help communities achieve their regional and local goals. The Metropolitan Council awards grants through four categories: Tax Base Revitalization account, Livable Communities Demonstration account, Local Housing Initiatives account, and Transit-Oriented Development grants.

The TPP provides more detail on how to meet Strategy F5 through example land use and development form controls for station areas, such as encouraging specific land uses (e.g., hotels, office space, retail, services, and restaurants) while discouraging others (e.g., large surface lots, warehouses, salvage yards). While discouraged land uses are not intrinsically bad, they are recognized as a barrier to meeting desired activity and density thresholds. potential constraints, and an abbreviated list of existing programs administered by the council to support TOD.

As this pertains to the future of Metropolitan Council's TDM policies, the TPP provides guidance on how the Metropolitan Council should understand the regional scope of TDM as being more than just mode shift or land use. Successfully managing congestion and travel demand requires balancing goals between accessibility, land use reform, and equity goals.

This implementation analysis also examined the TPP for gaps where TDM policies and strategies can be integrated into future iterations of the TPP. Freight, for example, is an investment area where TDM policies and strategies can be coordinated with existing investment priorities to increase the efficacy of investments toward both set of goals. The TPP's Freight Investment Direction sets guidelines both urban and rural investments in the critical freight corridors. The TPP draws connections between operational and maintenance funds, regional mobility improvements, spot mobility improvements, and expansion of MnPASS lanes as other highway funding priorities that can benefit freight operations. This should be expanded to consider the impact of reduced highway travel demand via TDM and its ability to support freight investment.

Strategy Measurement

The TPP incorporates a performance-based planning approach, building off the federal requirements that a metropolitan organization must establish and use as part of their performance-based approach to transportation decision-making. For the TPP, this includes a strategic vision and direction, as well as a process to evaluate the effectiveness of the plan's implementation. The plan includes measures that fulfill federally required performance metrics, as well as additional metrics that evaluate the success of regionally important objectives. While all of these reflect valuable data, their applicability to TDM policy is limited.

For the sake of this memo, the analysis of these performance measures and adopted targets of the TDM were limited to what was directly applicable to TDM outcomes. Given the broad nature

of travel demand management, this presents an issue as alternative interpretations of how particular measures lends to multiple interpretations as to which performance measures could be seen as indicative of TDM success. This analysis set constraints on what constituted TDM-adjacent performance measures by only considering metrics that reasonably pertained to reductions in SOV usage, regardless of when the reduction occurred (i.e., there was no concern paid to peak-hour/off-peak-hour usage). Metrics that included rates of transit usage, increases in accessibility for all modes, increases in shared of trips made via biking and walking, or measured access to alternatives to SOV were all included as TDM policies, and are included in Table 4 below:

Table 4. TDM-Related Performance Measures from TPP

Goal	Measure
A. Transportation System Stewardship	Condition of Transit Infrastructure Reliable speed of MnPASS lanes
B. Safety and Security	Crashes with fatal or serious injuries Fatal and serious injury crash rate Bicycle/pedestrian fatal and serious injury crashes
C. Access to Destinations	Access to Jobs MnPASS Usage Percentage of travel by modes outside of SOVs Transit ridership Mode participation rate Peak-hour excessive delay Regional bicycle transportation network implementation
D. Competitive Economy	Percentage of existing population near high-frequency transit service
E. Healthy and Equitable Communities	Miles traveled via biking and walking Vehicles-miles traveled per person Air emissions from on-road vehicles
F. Leveraging Transportation Investments to Guide Land Use	Percentage of projected population and job growth near high-frequency transit service Inclusion of transit supportive policies in local comprehensive plans

These metrics provide a robust (but not exhaustive) groundwork for the tracking and assessment of TDM policy. While this guidance does not obviate the need for the creation of a bespoke performance measurement suite for the Metropolitan Council's TDM efforts, it establishes a baseline of assessment which the Metropolitan Council can build off when rethinking the TDM policy suite. This does not address areas where performance measures should be altered, removed, or supplemented to better support and measure TDM policies. This is addressed in greater detail in the Regional Solicitation section of this memo.

4.1.2. Congestion Management Process Policies and Procedures Handbook

MPOs are mandated by federal law to develop and maintain a CMP. CMPs are meant to provide a systematized approach to congestion management that is safe, effective, and

integrated into multimodal transportation systems. Metropolitan Council is responsible for developing the CMP for the Twin Cities region, in addition to the urbanized portions of Sherburne and Wright counties. Unlike other federal planning processes, the CMP does not have a mandated timeframe for updates. However, the relationship between CMPS, Metropolitan Transportation Plans, and recertifications provide a de facto cycle of re-evaluation and updates, with most plans being updated every four to five years. The Metropolitan Council has maintained a CMP since the early 1990s; the latest version of the CMP Policies and Procedure Handbook was published in August 2020 (see Figure 1).

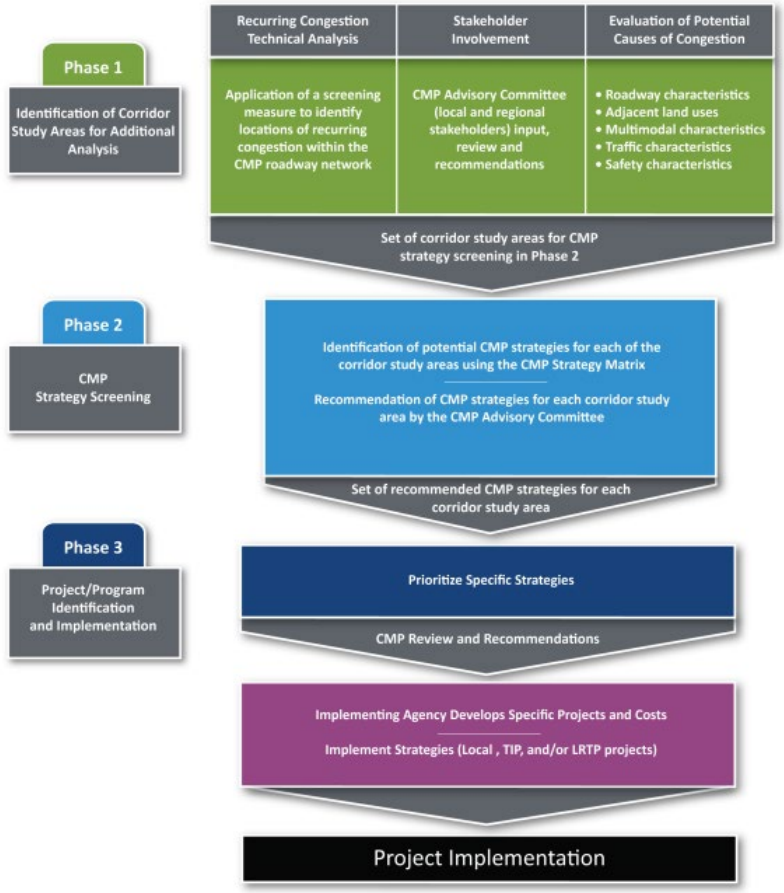

Figure 1. Congestion Management Process Evaluation Update Process

Strategy Selection

Chapters 7 and 8 of the CMP Policies and Procedures handbook provides the process tree for the implementation of congestion management projects in the Twin Cities region, starting with identification of project areas to final implementation. The update process is broken into three phases, which feed into one another sequentially. These phases are used to identify, screen, and select treatments for areas that experience recurring congestion within the CMP roadway network. Importantly, this process involves a significant amount of regional and local stakeholder engagement to ensure that CMP strategies align with locally identified congestion issues and community desires.

After the corridor study areas are selected, the CMP Advisory Committee identifies potential CMP strategies as projects and programs for the lead implementing agency. The Congestion Management Process Policies and Procedures Handbook provides multiple resources to help planners, engineers, and policy makers tailor congestion management strategies to their specific study areas. These strategies are broken into two general threads: Demand Management Strategies and Operational Management Strategies. The Congestion Management Toolbox is a strategy with multiple categories to help develop congestion mitigation strategies for selected corridor study areas and is organized to prioritize travel demand strategies over adding traditional roadway capacity. Each category from the Congestion Management Toolbox (Figure 2) has multiple sub-strategies that are meant to provide lead implementation agencies and their staff in selecting the proper approach for each project.

The strategies provided in the Congestion Management Process Policies and Procedures Handbook are too numerous to list within in this memo but should at least be mentioned since they provide a valuable resource for the development of new TDM policies within the Twin Cities. Although these strategies do not represent the totality of CMP strategies available to the Metropolitan Council and other agencies within the Twin Cities (indeed, the report from the Twin Cities Shared Mobility Collaborative even highlights where some of these strategies are underutilized in terms of TDM), it provides a well-defined outline of what strategies for TDM can be justified within the existing framework, and where there are opportunities to fill gaps in the overall strategy.

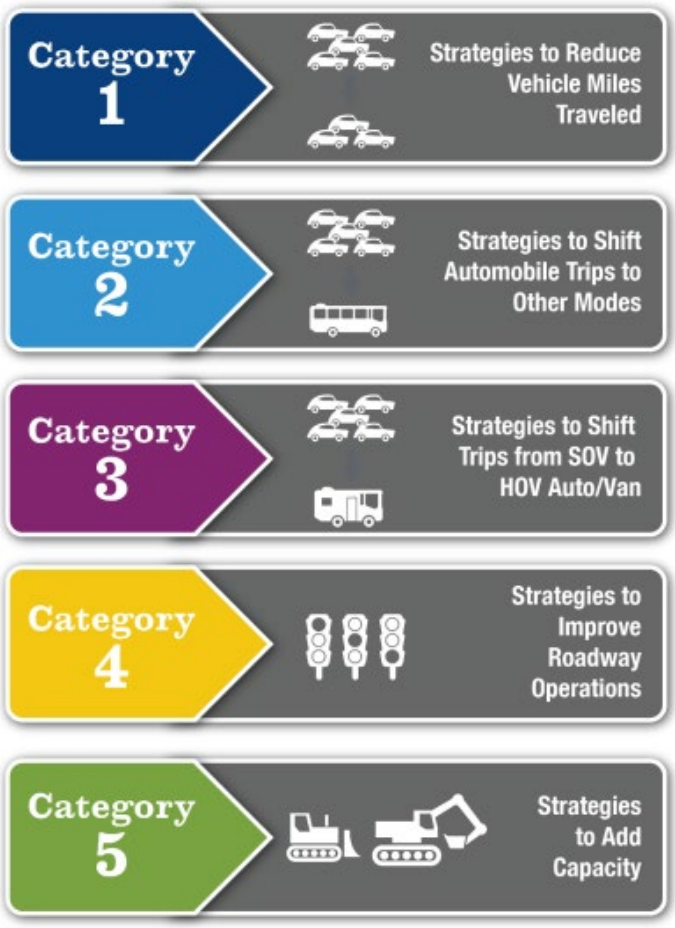

Figure 2. Congestion Management Toolbox

Strategy Implementation

The CMP project development and implementation process provides a framework to incorporate congestion management strategies into future and ongoing projects, as well as the process of selecting congestion management strategies for corridor study areas. The CMP Policies and Procedures handbook itself contains several processes designed to aid policymakers in selecting corridor study areas, treatments, and assessment strategies. After the corridor study area is identified, the CMP advisory committee identifies potential congestion management strategies and passes those recommendations along to the lead implementing agency to develop into specific projects. It is the responsibility of the lead development agency to assess projects and programs to identify costs, benefits, funding, and implementation scheduling. This framework provided by the CMP process consists for four components:

- **CMP Strategy Recommendations –** The CMP advisory committee assesses and recommends potential management strategies
- **Project Development –** The lead implementing agency evaluates the management strategies from the previous step and refines them into specific projects and/or programs
- **Project Prioritization and Selection Processes –** The projects and/or programs are then entered into standard funding process, such as the Regional Solicitation, which

serves to balance CMP projects against the TPP policy direction and ensure that policies reflect regional goals.

- **Project Programming and Implementation –** The lead implementing agency reports back to regional and local agencies through the Transportation Improvement Fund as to which projects were selected through the Regional Solicitation or other federally funded competitive grant programs. These regional and local agencies in turn identify locally funded projects in their capital improvement plans and programs.

Projects must be consistent with the TPP, and any project that adds one or more miles of highway capacity must be identified explicitly in the TPP. Supplementing the Transportation Improvement Program (TIP) and 2040 TPP, local agencies identify locally funded projects in their capital improvement plans and programs.

Strategy Measurement

CMP performance measures are selected to measure existing conditions and to help evaluate the efficacy of congestion management strategies implemented in the TMA. Generally, these performance measures fall into one of two categories: Federally required performance measures and region-specific performance measures. The former group of performance measures align with the congestion-related measures required under the MAP-21 and FAST Acts and have reporting schedules mandated by federal law. The latter set of performance measures are set in response to CMP goals and have reporting schedules established by the Metropolitan Council. The plan provides 22 performance measures grouped by CMP objectives. Key performance indicators associated with TDM include:

- Average daily number of people in MnPASS lanes
- Number of registered carpools and vanpools
- Passenger miles traveled
- Percent of non-single-occupancy vehicle travel

However, this does not represent the totality of key performance indicators for TDM, and the CMP handbook is quick to assert that performance measurements should be developed to meet the requirements set out by funding obligations, and the documents that set regional transportation priorities. As funding sources vary, so too does the performance measure by which a project is assessed. This speaks to the need for a flexible TDM policy framework that aligns with current CMP goals while also providing lead implementing agencies with greater flexibility when considering what metrics will be used to measure the efficacy of strategies.

4.1.3. Regional Solicitation Travel Demand Management Grant and Competitive Program

As the federally designated metropolitan planning organization, the Metropolitan Council is responsible for coordinating with the TAB to administer the Regional Solicitation and distribute federal transportation funds. Regional Solicitation occurs every two years, with funding amounts varying between cycles. Recent solicitations have awarded approximately $180 million in federal funds. Applicants can submit their project funding requests to one of 12 application categories. Projects are then selected based on how well they meet regional transportation needs. Projects must conform to a series of prioritizing criteria that are informed by Thrive MSP 2040 outcomes and Transportation Policy Plan goals. Below is description for the TDM category followed by description of TDM considerations within the other 11 categories.

The Travel Demand Management (TDM) Category/Project Type

Purpose: To fund lower-cost innovative TDM projects that reduce emissions and vehicle miles traveled (VMT) in congested corridors.

Definition: TDM provides residents/commuters of the Twin Cities Metro Area with greater choices and options regarding how to travel in and throughout the region. Projects should reduce congestion and emissions during the peak period. Base-level TDM funding for the Transportation Management Organizations (TMOs) and Metro Transit are not a part of the competitive process.

Example projects: Bikesharing, carsharing, telework strategies, carpooling, parking management, managed lane components.

The TDM category is unique in that nonprofits and other smaller organizations can apply for Regional Solicitation funds. These federal dollars provide employer outreach funds to TMOs in the Twin Cities metropolitan region, as well as grant funds for TDM research, carsharing initiatives, technology pilots such as the Parking FlexPass at the ABC ramps, and other projects that contribute to the greater TDM efforts in the region. Generally, the Regional Solicitation TDM awards seem to most often fund education, marketing, and community outreach projects, followed by infrastructure development/capital expense projects, and finally fund research projects.

The TDM category of the Regional Solicitation is set up to fund lower-cost, innovative projects that reduce emissions and VMT in congested corridors. Transit and TDM projects share a funding range for between 25%-35% of the overall Regional Solicitation funds. The minimum federal award for a TDM project is $100,000 and the maximum is $500,000, and the average award being around $275,000 (excluding the funds allocated to Metro Transit to fund TMOs). Between 2014 and 2020, the Metropolitan Council received 34 applications to the TDM category and awarded 18 TDM applicants a cumulative $9.9 M. The details of these projects are included below in Table 3. Total funding varies from year to year, with a peak in the 2018 Regional solicitation, which awarded five projects a cumulative $1.5 M, in addition to granting Metro Transit $5.8 M to provide funding to TMOs throughout the region.

Strategy Selection

TDM projects are scored on seven criteria, with each criteria having one to three measures. Proposals with the highest scores are selected based on available funding. Applicants provide short-form responses to explain how projects meet programming criteria. For the 2022, the seven criteria were:

1. Role in the Regional Transportation System and Economy – 200 points
2. Usage – 100 points
3. Equity and Affordable Housing – 150 points
4. Congestion Reduction / Air Quality – 300 points
5. Innovation – 200 points
6. Risk Assessment – 50 points
7. Cost-Effectiveness – 100 points

All TDM projects that receive funds through the Regional Solicitation must meet the following qualifications:

- The project must be consistent with regional goals including those identified by the Transportation Policy Plan (TPP)
- The need for the project must be previously identified in a local plan or program
- The applicant is a public agency or nonprofit organization
- The owner/operator must maintain the project year-round for the useful life of the improvement
- The project must be ADA-compliant
- The project must be open to the public
- The project must provide a new or expanded transit facility or service and not reinstation of reductions in service due to the COVID-19 pandemic.
- The project is not eligible for either capital or operating funds if the corresponding capital or operating costs have been funded in a previous solicitation
- The applicant must affirm they are able to implement a Federal Transit Administration (FTA) funded project in accordance with the grant application, Master Agreement, and all applicable laws and regulations, using sound management practices and have the technical capacity to carry out the proposed project and manage FTA grants in accordance with the grant agreement, sub recipient grant agreement (if applicable), and with all applicable laws
- The applicant must be properly categorized as a subrecipient in accordance with 2CFR200.330

The applicant must adhere to Subpart E Cost Principles of 2CFR200 under the proposed subaward.

Strategy Implementation

TDM projects funded through the Regional Solicitation are often technology- or education-oriented improvements that are intended to reduce peak-hour congestion. Past projects have focused on providing education for alternatives to SOV commutes or working with community groups and ambassadors to change perspectives on transit and/or active mobility. This preference toward educational programming might reflect the limits of the award amounts. Larger TDM projects would quickly surpass the award maximum and would be better served by other Regional Solicitation categories. On the other hand, educational programs have the potential to be an effective return on investment when implemented correctly, require little by way of capital expense to be effective, and are easily maintained after materials are created. For similar reasons, Regional Solicitation has funded efforts to evaluate TDM program success and one-off technological improvements in the TDM category (Table 5).

Table 5. Funded Projects for 2020 Regional Solicitation's Travel Demand Management Category

Year	Applicant	Project Name	City/Twp	Fed Award	Total Cost
2014	Metro Transit / TMOs	Travel Demand Management Funding*	Various	$5,800,000	$7,250,000
2014	TDM Applicants	Travel Demand Management Solicitation*	Various	$1,200,000	$1,500,000
2016	St. Paul Smart Trips	Colleges as Hubs for TDM Innovation Pilot Program	St. Paul	$132,000	$165,000
2016	Car-Free Life	Shared Mobility, Community Outreach and Development Program Demonstration	Minneapolis, St. Paul	$200,000	$250,000
2016	Nice Ride MN	Densification and Infill Initiative	Minneapolis	$300,000	$450,000
2016	Minnesota Valley Transit Authority	Transportation Management Associations for Scott and Dakota County	7 Cities	$241,600	$302,000
2016	Scott County	Scott County Multimodal Outreach and Marketing Coordinator	Countywide	$119,200	$149,000
2016	Cycles for Change	Learn to Ride a Bike Program Expansion	Minneapolis, St. Paul	$266,195	$332,744
2018	Metro Transit	Transportation Management Organization Funding	Various	$5,800,000	$7,250,000
2018	Car-Free Life	Closed Network Carshare in Minneapolis and St. Paul	Various	$160,000	$200,000
2018	MOVE Minnesota	Travel Demand Management Cultural Ambassadors	Minneapolis, Brooklyn Center	$308,166	$385,208
2018	Metro Transit	Shared Mobility Integration for the Metro Transit Mobile App	Various	$300,000	$700,000

Year	Applicant	Project Name	City/Twp	Fed Award	Total Cost
2018	University of Minnesota	Parking FlexPass at ABC Ramps	Minneapolis	$500,000	$625,000
2018	MOVE Minnesota	Transforming Renters' Transportation Choices, Green Line	Minneapolis, St. Paul	$296,614	$373,706
2020	MOVE Minnesota	Changing the School Commute: Shifting Youth to Transit Use	Minneapolis, St. Paul	$452,700	$565,875
2020	Bicycle Alliance of Minnesota	Expanding Adult Learn to Ride Bicycle Classes	13 Cities	$350,488	$498,088
2020	Cycling Without Age Twin Cities	CWA TC Short Trip Program	Minneapolis, St. Paul	$236,856	$296,070
2020	Move Minneapolis	Comprehensive Mode Share Measurement	Minneapolis	$275,000	$344,094
*2014 Regional Solicitation funded TDM applicant information was not provided in an itemized format					

The TDM Regional Solicitation provides a valuable structure within the greater Twin Cities TDM/Congestion management ecosystem by providing opportunities for small, agile organizations to address specific gaps in the regional network who would otherwise be constrained by a lack of resources. Due to the local match requirements and additional scrutiny and administrative burden that accompanies federal funding, the Metropolitan Council provides an information officer to aid smaller organizations when applying for and administering these federal grants.

Strategy Measurement

Measurement of project success is an existing gap in this process. The ability for measurement in project success should tie back to the seven response criteria and their corresponding measures that are used to evaluate a project's viability for funding. Below is a brief summation of how each response criteria is measured for selection and should also be measured for implementation successes as they align with greater TDM needs:

1. Role in the Regional Transportation System and Economy
    a. Measured by the applicant's ability to adequately identify the existing regional transportation facilities or resources that their project will utilize to reduce demand and grow regional capacity.
2. Usage – 100 points
    a. Measured by the applicant's ability to calculate and justify a reasonable estimate for the number of average direct weekday users of the project. Applicants must describe their methodology for determining the number of project users.
3. Equity and Affordable Housing – 150 points
    a. This is made up of three components: engagement, equity, and access to affordable housing. The applicant must adequately explain how the project will work with equity populations to shape the project, how it will benefit equity populations and mitigate further negative outcomes, and if it will increase access to affordable housing. Bonus points to the final score may be earned in this category for projects that are located in areas of concentrated poverty, projects that are located in census tracts with the percent of population in poverty or population of color is below or above the regional average.
4. Congestion Reduction / Air Quality – 300 points
    a. This is measured based on two responses. The applicant must first describe the congested roads that will be addressed in the project area, and how the project will address said roadways or reduce SOV trips. The second component is a calculation with justification of methodology for the total reduction in emissions and reduction in daily one-way commute trips.
5. Innovation – 200 points
    a. Applicant must describe how the project is innovative or expands the geographic area of an existing project to serve populations previously underserved.
6. Risk Assessment – 50 points
    a. Applicant must describe their organization's technical capacity of the and what makes them well suited to deliver the project.
    b. Applicant must provide a plan for how the project will continue after the initial federal funds are expending.

7. Cost-Effectiveness – 100 points
    a. Metropolitan Council staff will compare the total project score with the total project costs to determine the plan's cost-effectiveness.

The Met Council conducted a Before & After Study in 2018 and 2020 to document the Regional Solicitation's benefits and impacts to the region. This was done through a performance-based approach that evaluated the "after" conditions of projects that received federal transportation funds through the program. However, this effort primarily focused on review of roadway expansion and reconstruction projects and their ability to reduce "bottle neck congestion" and improve safety in the project area. Transit and pedestrian/bicycle connections were also evaluated but only to the extent of measuring if transit ridership projections were achieved, project contributions to building out the Regional Bicycle Transportation Network (RBTN), and miles of built pedestrian/bicycle connections to job and activity centers and areas of concentrated poverty. Through this study it was apparent that the lack of after reporting requirements, particularly for TDM, transit, and pedestrian/bicycle made it difficult, or impossible in some situations, to evaluate the effectiveness of funds allocated to these project types.

TDM Activities within Other Category/Project Types

While TDM is not specifically stated, all other modal and project categories encourage infrastructure and technology that provides for safety and accessibility of a variety of transportation modes including pedestrians and bicyclists and ADA requirements. All modal categories and their application categories are scored based on their ability to address the same strategy measurements previously listed in the TDM application category (role in regional transportation system, usage, equity and affordable housing, congestion reduction/air quality, multimodal elements and existing connections, risk assessment, and cost-effectiveness). Each additional modal category and application category are listed below. Also highlighted below are any additional scoring criteria that is specific to the modal or application category.

Roadway Including Multimodal Elements (additional criteria includes safety and infrastructure age):

- Traffic management technologies
- Spot mobility and safety
- Strategic capacity
- Roadway reconstruction/modernization
- Bridge rehabilitation/replacement

Transit Projects (additional criteria includes emissions reduction and service and customer improvements):

- Arterial bus rapid transit project
- Transit expansion
- Transit modernization
- Travel demand management (TDM)

Bicycle and Pedestrian Facilities (additional criteria includes deficiencies and safety, existing connections, and connection to SRTS programs):

- Multiuse trails and bicycle facilities

- Pedestrian facilities
- Safe routes to school (infrastructure)

Unique Projects – there is no set selection criteria beyond eligibility criteria because this category is primarily focused on projects that would not otherwise be eligible in other funding categories but provide benefit for the regional transportation system and the metro communities it serves.

4.1.4. Transportation Management Organization and Metro Transit Commuter Programs

As mentioned in the Regional Solicitation section, the Metropolitan Council provides funding to TMOs through a competitive granting process, which is then managed and administered by Metro Transit. Metro Transit also receives funding through this competitive grant process to provide similar services in the areas not covered by the TMOs, through their Metro Transit Commuter Programs. Metro Transit provided four TMO subrecipient agreements for the 2022 program year. These agreements function as a rough workplan and budget for TMO operations from January 1, 2022, through December 31, 2022. The subrecipient agreements for Anoka County Commute Solutions, I-494 Corridor Commission, Move Minneapolis, and Move Minnesota were examined to find commonality among the agreements about the selection, implementation, and measurement of TDM strategies by TMOs. As is common with federal grant funds, these TMO subrecipients must acquire matching funds on their own to qualify for the funds, typically from a local government, agencies like MnDOT, or other funding sources. This offers further insight into how local TMOs are funded and how future TDM policy might be tailored to support their existing work, or open new possibilities for TMOs.

Strategy Selection

The subrecipient agreements provide an outline of how these TMOs use the grant funds from the Metropolitan Council. The Metropolitan Council may only provide funds to organizations that meet minimum requirements, such as having a system in place to determine if the organization has met the local match requirement. Like other Regional Solicitation funding programs, Metropolitan Council funds organizations that address goals and objectives identified in previous plans. As such, the pass-through grants for TMOs are a flexible tool to meet climate action and congestion reduction goals in the Twin Cities region via addressing small but important trip generators.

Strategy Implementation

The subrecipient agreements function as a rough work plan for each TMO on a yearly basis, and includes planned programming, start and completion dates, estimated costs, and performance measurements. The following is a high-level summary of the activities funded and outlined in the 2019 and 2022 work plans. Activities and incentives have ranged to require anywhere from ten to forty percent of the funds with the remaining going toward salaries, attending conferences, and administration activities.

- Bike events including bike to work month, tune up help and classes, bike rodeos
- Commuter challenge
- Carpool month
- Earth Day celebration
- Bike share program

- Learning events including transit tours and in-person and virtual lunch and learns
- Employer and commuter outreach and education with focus on downtown and low-wage employers
- Individualized commute assistance
- College outreach
- Hosting employer roundtables for collaboration and education
- Employer assist in TDM strategies such as discounted transit pass programs
- Commuter mode split data gathering and measurement
- Assist in forming vanpools and finding new riders
- Residential and commuter fairs
- Participation in Open Streets celebrations and sustainability expos
- Chamber of Commerce partnerships
- Employer recognition for use of sustainable commute programs
- Media and social media coverage
- Being a resource by sharing of research and analysis findings for TDM work completed
- Work on innovative TDM programming, policy, and planning opportunities including assisting cities with ordinance development and review, participating in regional transportation planning processes, best practices recommendations, toolkit engagement, and determining pilot projects.
- Consumer incentives including bikes and bike racks, t-shirts, umbrellas, phone power banks, Fitbits, free bus fare, backpacks, iPads, and a variety of gift cards.

Each TMO approaches their TDM goals differently, but there are trends among them. All of the TMOs serve to ease the administrative burden on municipalities to implement TDM with private and public organizations. Anoka Commute Solutions and the I-494 Corridor Commission's Commuter Services both serve large geographic areas as their theater of operations, and tailor their programming to be applicable to the more suburban character of their charges. Move Minneapolis and Move Minnesota serve as the TMOs for Downtown Minneapolis and the City of St. Paul, respectively.

Anoka Commute Solutions provides education resources, tabling events to raise awareness, and all-day and multiday events such as bike rodeos and commuter challenges for 21 communities in the southern portion of the Metropolitan area. They broadly try to maximize the number of interactions via scheduling group events and partnering with the local Chamber of Commerce to work with organizations rather than individuals. This is different from the I-494 Commuter Services, whose programming efforts target the five cities along the Interstate 494 corridor. Commuter Services focuses on building individual capacity, such as their individualized commute assistance program and "Try It" campaigns, in addition to the efforts to work with employers and colleges to develop TDM and commuter programs. The I-494 Corridor Commission also works with municipalities to implement TDM ordinances. Starting in response to the ongoing COVID-19 pandemic, the I-494 Corridor Commission has started Twin Cities Telework, a statewide program that offers resources for employers and employees to address new challenges and issues associated with the shift to remote work.

Move Minneapolis and Move Minnesota serve as the TMOs for downtown Minneapolis and all of the city of St. Paul, respectively. Since they have a much more concentrated area of focus, their project tends more toward deep engagement with community groups, co-developing

solutions for TDM issues unique to their partners, and relationship building with employers, developers, and others to maintain the mode shift as market tastes shift and new technology emerges.

Strategy Measurement

The subrecipient agreements include activity goals and measurements provided by the TMO to measure their initiatives. These are developed by individual TMOs, and as such they vary between organizations. Most of the strategies are measured by their engagement with new clients and organizations, expansion of newsletter subscription rates, and implementation of new TDM plans or ordinances. Since these are small organizations with limited resources to focus on data collection, not typically look to measure quantitative changes in congestion and increases in non-SOV modes. Move Minneapolis sets target goals for number of meetings, new contracts, and sets specific goals for engaging with low-wage employers in addition to other marketing goals like subscription rates and social media audiences. Move Minnesota operates in a similar way to Move Minneapolis with their goals, but most of their goals are stated as broad visioning statements (e.g., “partner with community organizations on events and promote transportation options”).

Like the nonprofit TMOs, Anoka County and Interstate 494 Commuter Services TMOs mostly measure programs success via increased participation from other organizations and increased membership and subscription rates. They also both set goals to increase the number of TDM plans in the region but keep projected goals undefined.

All of these organizations are relatively small both in terms of budget and staffing, so it should come as no surprise that their strategy measurement is scaled down to level appropriate with their size. Data collection and reporting for grants in a substantial consideration for some organizations when pursuing grant funds. The Metropolitan Council perhaps recognizes this and understands that the role of a TMO is not to be a robust data collection organization, but rather an organization that increases awareness and participation in TDM programs and activism. However, this doesn’t mean that there is no place for TMOs in regional strategy measurement needs. Move Minneapolis received a Regional Solicitation grant in 2020 to create a comprehensive mode share measurement, which shows that these organizations can function as data collectors if given the resources. As stated in the Shared Mobility Center report and the Shared-Use Mobility Center (SUMC) report, a data clearinghouse established and maintained by the Metropolitan Council could reduce the administrative burden around data collection enough to make it feasible to ask more of the TMOs in terms of collecting program data.

4.2. Minnesota Department of Transportation (MnDOT)

4.2.1. Minnesota GO 50-Year Vision for Transportation and MnDOT Statewide Multimodal Transportation Plan and Family of Plans

The Minnesota GO family of plans is vision process meant to align and focus the function and development of the state’s transportation systems with the needs and goals of Minnesotans and serves as the highest-level policy plan for state’s multimodal transportation network. The family of plans provides guidance and sets priorities for the entire transportation system and meets the federal requirement for a statewide transportation plan. MnDOT’s family of plans comprises nine sub-plan documents that offer mode-specific strategies, guidance, and investment priorities (Figure 3). The family of plans covers a 50-year long-range vision for the state and was first

published in November 2011. Individual components of the plan have received updates every four years, in alignment with federal requirements.

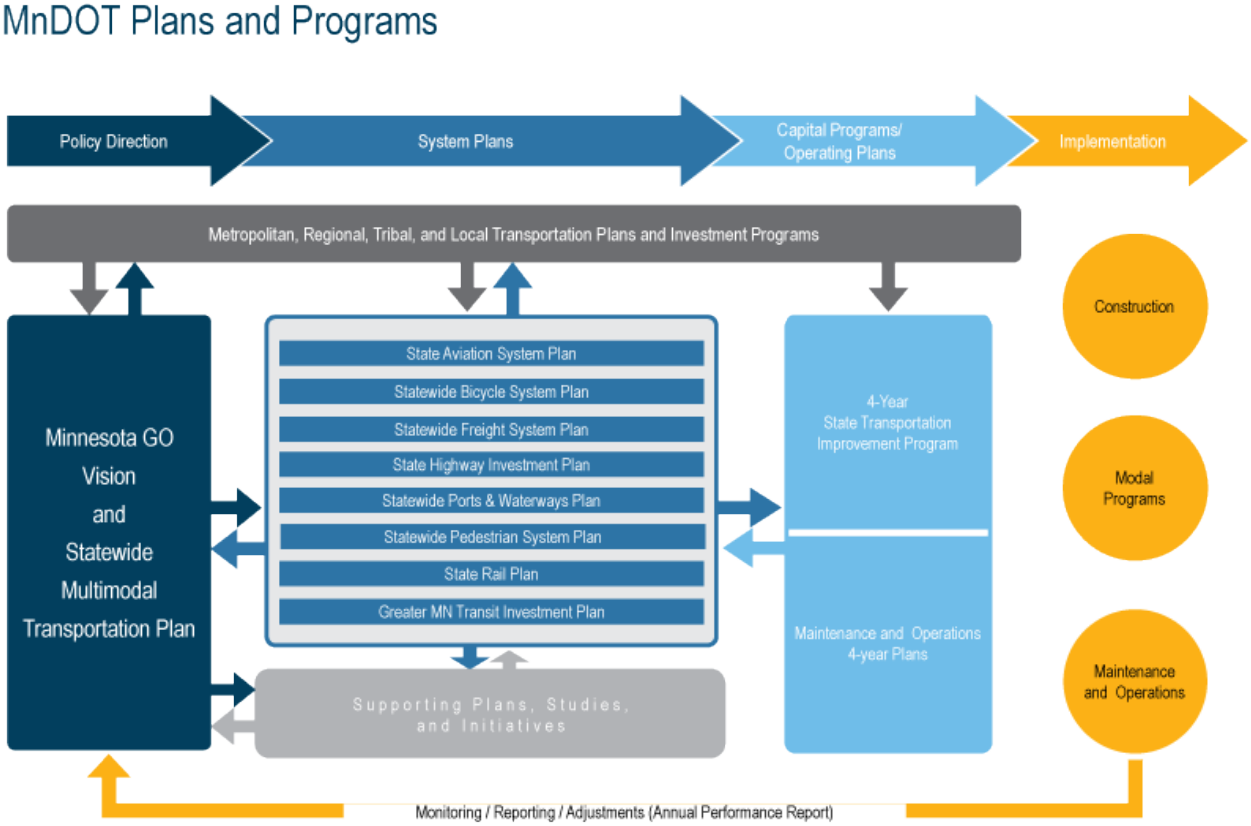

Figure 3. MnGO Family of Plans Implementation Process

The MnDOT Statewide Multimodal Transportation Plan (SMTP) serves as the framework for the entire family of plans and was examined as it contains guidance and strategies which impact the state-level TDM planning and policy. While the plan does not explicitly address TDM, its congestion management planning establishes goals and strategies that align with TDM outcomes and sets the policy direction for downstream system plans to justify TDM policies. The SMTP sets five distinct objectives for the planning of policies as they relate to multimodal transportation: Open Decision-Making, Safety, Critical Connections, Stewardship, and Building Healthy Communities. The SMTP was last updated in 2017 and is scheduled for an update in 2022.

Strategy Selection

The objectives set for the SMTP are paired with specific strategies to aid in meeting their proposed outcomes. Many of these strategies address issues that can be solved with TDM and congestion management policy. Since this plan is meant to provide direction for state, regional, and local policies, strategies are given as a generalized framework to be tailored to local contexts. The SMTP's strategy selection process is guided by five objectives: Open Decision-Making, Transportation Safety, Critical Connections, System Stewardship, and Healthy Communities. Each of these objectives have sub-strategies that are meant to guide policy makers in designing programs and policies that impact Minnesota's transportation systems.

While all these objectives can play an important role in the development of a new TDM policy suite, some are more applicable than others. TDM projects align with the goals set in SMTP through the following objectives and strategies:

Critical Connections
Identify and prioritize multimodal solutions that have a high return on investment.

Support and develop multimodal connections that provide equitable access to goods, services, opportunities and destinations

Provide transportation options that improve multimodal connections between workers and jobs

Healthy Communities
Make transportation decisions that minimize and reduce total greenhouse gas emissions

Identify and give priority to infrastructure improvements, services and education that increase the number of people who bicycle, walk and take transit.

The content of these documents represents the existing policy preference of MnDOT, the TAB, and other arbiters of federal grant monies. Since most competitive grants explicitly prefer programs that draw upon existing policy direction and documentation, like the SMTP, it is prudent to consider these objectives when developing the new face of TDM policy in the region. This provides policymakers with a usable framework for designing projects and policies, where they can ensure that a program remains viable for competitive grant funding. However, care should be taken to avoid the accidental creation of a timid policy environment in which the desire to maintain funding eligibility engenders complacency. TDM policy must work to strike a balance between meeting the broad goals already established in policy documents, while remaining informed of developments in the transportation field that can reduce travel demand and improve operations.

Strategy Implementation

The SMTP provides strategies for how project funding should be prioritized to meet the goals set for the Open Decision-Making, System Stewardship, and Healthy Communities objectives. The strategies that the SMTP provided for these objectives were examined to understand how these objectives related to the development of TDM policies and outcomes. Open Decision-Making strategies primarily relate to community engagement, transparency in funding and decision-making, and setting standards for clear performance goals, data collection, and utilizing emerging trends and research to drive development. System Stewardships provides strategies for prioritizing investments based on asset management and system resiliency. Project funding should take priority network status, alignment with statewide, regional, and local goals, and connection to larger transportation systems into account when setting funding schedules, and special care should be taken to proactively identify risks in the transportation system and their surrounding communities to mitigate negative outcomes.

Healthy Communities strategies are especially pertinent to TDM planning, since it calls for transportation decision-making and policies that minimize and reduce total greenhouse gas emissions and VMT, in addition to giving priority to infrastructure improvements, services, and education that increases the number of people who bike, walk, or take transit. Healthy Communities strategies set guidance for prioritizing investments based on health outcomes. The transportation sector is one of the largest contributors to greenhouse gas emissions and

other environmental pollutants, in addition to being the driving force in other negative health trends such as rising obesity rates and automobile crash injuries. Healthy Communities strategies call for investments to be made informed by local contexts, to focus investments on places with complementary existing or planned land use, and to coordinate land use and transportation planning to ensure that projects are consistent, minimize long-term costs, and maximize benefits.

These strategies provide direction and justification for the creation and funding of TDM policies both in the Twin Cities metropolitan region and the state at large. Future TDM policy within the Twin Cities should work to integrate and improve upon these strategies both to ensure that TDM projects and policies maintain eligibility for state funding and that they work in tandem with state transportation planning goals.

Strategy Measurement

Since many of the goals outlined within the SMTP are long-range and emerging, the plan's strategy measurement guidance is largely based on establishing baselines and reporting on trends over the 50-year planning period. Each objective has its own performance measures, which should be assessed and used to direct changes in policy. Some of these outcomes can be used to measure the efficacy of TDM policies, and are included below:

Open Decision-Making

Set a target that 80% of annual survey respondents indicate they are confident in MnDOT ability to provide alternative transportation options in the future.

Transportation Safety

Reduce the total number of fatalities and serious injuries on Minnesota roadways resulting from crashes involving a motor vehicle year over year.

Critical Connections

Percentage of on-time transit trips within the Twin Cities and Greater Minnesota.

Bring all state-owned sidewalks into compliance with ADA standards.

Transit span of service meets minimum guidelines in at least 90% of state's communities.

Track and trend average annual number of jobs accessible within a 30-minute transit commute during AM peak.

Healthy Communities

Reduce annual greenhouse gas emission from transportation sector to 29.5 million tons CO_2 equivalent by 2025.

Increase annual percentage of MnDOT survey respondents who have positive perceptions of safety of bicycling/walking on Minnesota transportation network.

These measurement strategies provide a rough outline of how TDM policy could be developed in the Twin Cities to meet the goals outlined by MnDOT. While this provides a barometer of acceptable TDM policy, these measurements are designed to meet the needs of the state writ large and should be used as guidance for form policy goals, but not restricted by them. As a relatively dense metropolitan area, the Twin Cities region is well equipped to do more with TDM

and congestion management versus what would be feasible for a smaller community in greater Minnesota.

MnSHIP Inclusion of TDM Study Recommendations

Of this family of plans, the Minnesota State Highway Investment Plan (MnSHIP) is the 20-year capital investment priorities plan. The plan prioritizes future investments to address the widening gap between highway revenues and construction costs. MnSHIP also considers federal and state laws, MnDOT policy and current and expected future conditions on the state highway system. During the implementor outreach process while developing this memo, Met Council and MnDOT staff discussed the need to include TDM recommendations, outlined by this study process, into the next MnSHIP plan update. Such recommendations are expected to be included with carbon reduction language (TDM-related activities) also provided by Met C staff. The MnSHIP update must also include an explanation on opportunities for funding flexibility to implement TDM activities and strategies. Figure 4below, summarizes opportunities anticipated in early discussions for funding flexibility between Met Council and MnDOT staff.

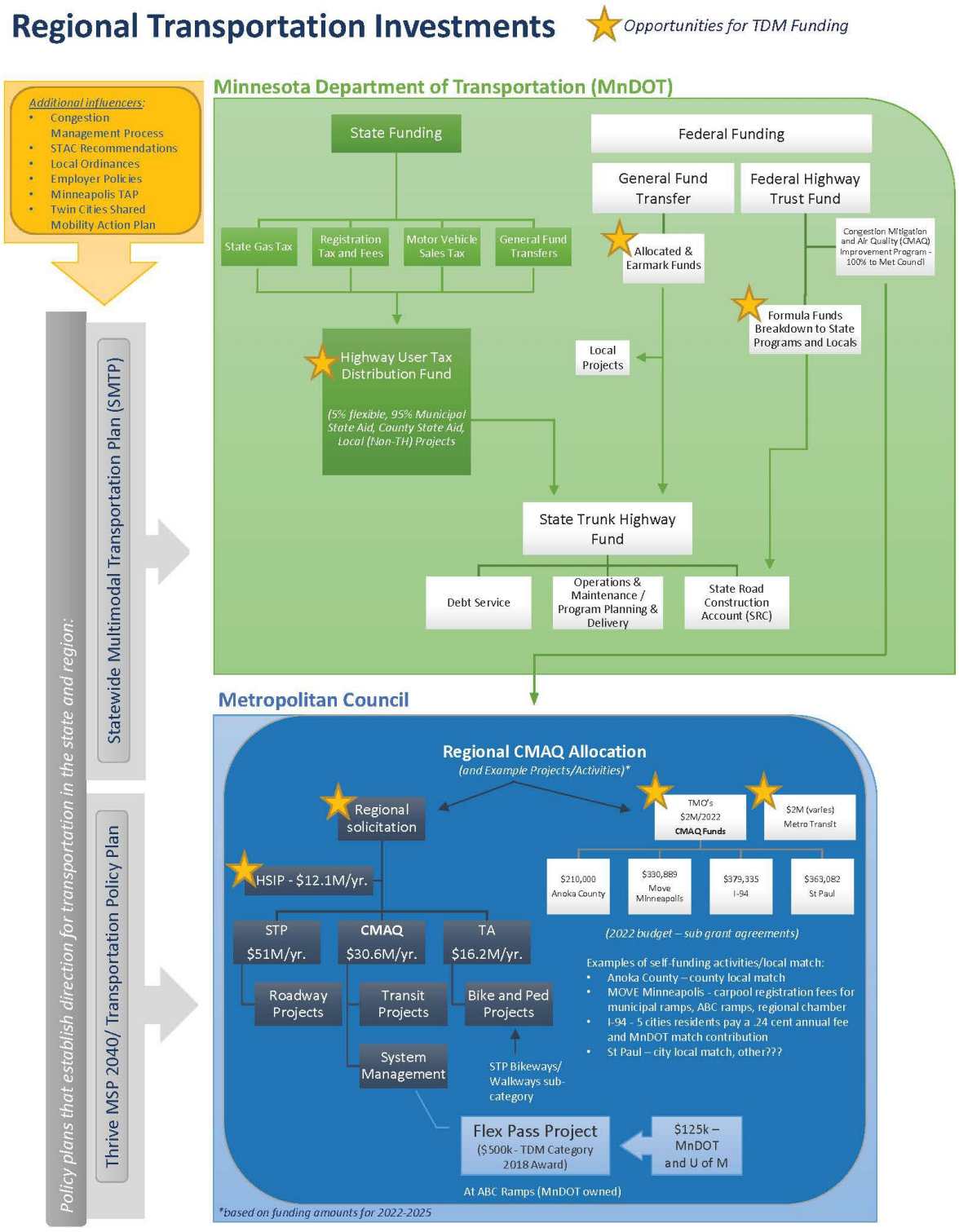

Figure 4. Anticipated MnDOT Flexible Funding Opportunities

4.2.2. The Tipping Point: What COVID-19 Travel Reduction Tells Us About Effective Congestion Relief

MnDOT recently conducted an analysis to compare traffic congestion throughout the Twin Cities region prior to and during the COVID-19 pandemic, to determine what lessons could be learned from the reduction in travel. The study also looks at the relationship between VMT and congestion at the corridor level to assess the sensitivity of congestion on specific roadways to changes in travel demand.

The study found the share of Twin Cities freeways congested increases with increases in regional VMT and the correlation between traffic volume and congestion was consistent among observations made before and during the pandemic. Furthermore, the study found that as regional VMT is reduced from pre-pandemic levels, each percent decrease in VMT results in a higher percent decrease in regional congestion. This dynamic – VMT reduction resulting in a disproportionate reduction in regional congestion – continues along the volume-to-congestion curve as it moves from pre-pandemic VMT levels to the level of VMT observed at the height of pandemic travel restrictions in the spring of 2020. Since employer-based TDM services target employees and their commutes, this finding supports the ongoing need for employer-based TDM services.

The study also found that "usually congested corridors" – those that are congested at almost any level of regional VMT – are likely to remain congested even under scenarios in which technology advancements, a shift to remote working, and TDM incentives increase telecommuting rates above current assumptions. This finding may support the need for more corridor-based TDM services, so that specific strategies may be applied to alleviate congestion to more manageable levels.

4.2.3. Telecommuting During COVID-19: How Does It Shape the Future Workplace and Workforce?

MnDOT commissioned a study on how teleworking has shaped the future of work in the Minneapolis Twin Cities and throughout Minnesota. The University of Minnesota conducted this study in 2021, which included a survey of employers, a survey of employees, and focus groups with human resources professionals on teleworking.

The survey of employees yielded the following findings:

- Twin Cities respondents were more likely to still be teleworking than respondents from outside the Twin Cities
- Twin Cities respondents indicated they telework 2-3 days a week
- Respondents with a long (46 minutes or more) and congested commute indicated they telecommute as often as possible
- Respondents with children were more likely to have returned to work, and their workplaces were more likely to have a formal telework policy
- Older respondents were more likely to telework than younger respondents
- White respondents were more likely to telework than non-white respondents
- Compared to all other respondents, those with a high school education or less and those with less than $50,000 household income had significantly fewer weekly telecommuting hours and were much more likely to telecommute no more than one day a week post-pandemic.

The survey of employers yielded the following findings:

- Nearly 40% of employers indicated they had not developed a post-pandemic telework policy
- 71% of employers indicated that most employees would return to in-person work post-pandemic but the frequency (number of days per week) varied

The focus groups yielded the following findings:

- Most participants said they predicted that "hybrid" work schedules would become commonplace in the future, and these participants grouped several different hybrid scenarios into this definition, including working remotely versus in-person a few days per week, splitting in-person days with other members of their team, and splitting the organization into groups of in-person or remote workers
- Participants mentioned the need for flexible scheduling
- Participants mentioned the need for a gradual transition back to in-person work
- Participants acknowledged there will still be a need for in-person work, and identified those needs, including the fact that some positions, due to the nature of the work, will continue to require employees to be in-person and the need to build relationships with colleagues and clients
- Two participants specified that public transportation is important to their employees, and another two mentioned their employers' deliberation on whether to continue paying for parking expenses as an employee benefit

TDM programs in the Minneapolis area could use these finding to inform their discussions with employers and to help frame more flexible policies for remote and hybrid work schedules. Specifically, TDM programs could assist employers with specific policies that could reduce vehicle trips, such as working remotely part-time, or policies that alleviate traffic congestion, such as enabling flexible start times to spread peak-hour commutes over a longer period of time. Furthermore, TDM programs in the Twin Cities could use these findings to encourage employers to refine their workplace transportation benefits in a way that encourages workers to take sustainable transportation modes on the days they commute to work, such as providing free transit passes in lieu of free parking.

4.3. City of Minneapolis

4.3.1. Minneapolis Transportation Action Plan

The Minneapolis Transportation Action Plan (TAP) is a 10-year action plan to guide future planning, design, and implementation of transportation projects for all people in all the ways they move around. This plan responds to the goal and strategies laid out by the Minneapolis 2040 Plan, the Climate Action Plan, the Vision Zero plan adopted in 2019, and Complete Streets, and serves as the transportation plan for the 2040 long-range plan. The TAP serves as a replacement for the previous citywide transportation plan, Access Minneapolis, in its entirety. Access Minneapolis was developed between 2007-2011, with updates as recently as 2017. There are six transportation goals that guide the strategies and actions developed in the TAP: climate, safety, equity, prosperity, mobility, and active partnerships. The TAP was approved by the Minneapolis City Council on December 4th, 2020. The plan presents no update schedule for

itself but will likely follow the same schedule as the long-range comprehensive planning efforts from the 2040 plan.

Strategy Selection

The TAP is guided by six goals which create the foundation of the plan and guide all transportation decisions within the city for the duration of the planning document's life (detailed in Figure 5). The plan's strategies and actions are all supported by one or more of these goals. The plan has 56 strategies and 304 actions that are meant to guide the City of Minneapolis in the process of squaring the circle when building a future transportation network that balances the sometimes-conflicting needs of multiple modes. Actions are subdivided into "do" and "support" categories, based on whether the action requires the creation of new structures to meet goals.

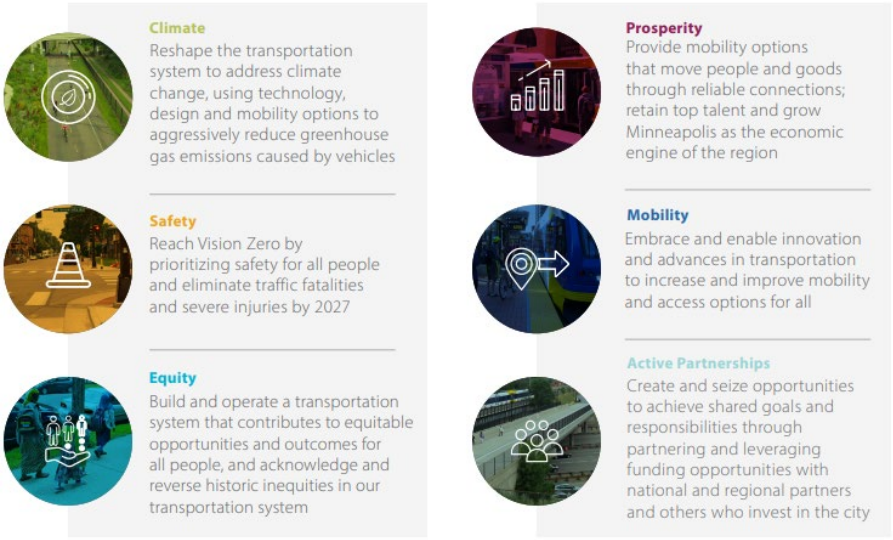

Figure 5. TAP Goals

TDM strategies are included in the "Improve Street Operations and Address Competing Demands" topic, which states that the TAP should leverage city resources and partnerships to promote, educate and encourage walking, biking, and transit as alternatives to driving. The TAP uses TDM to address climate, mobility, safety, and active partnership goals through four actions:

1. Explore efforts to contract with Move Minneapolis to expand work on mode shift to include larger employment areas outside of downtown.
2. Update the TDM Plan requirements in the zoning code to apply to more developments than they currently do, to address mode split goals and traffic growth rates, Metropass participation and mandatory self-reporting audits that occur every two years as well as any additional monitoring needed to improve safety.
3. Work with community and agency partners to enhance communication practices about the importance of walking, biking and using transit for citywide events.
4. Partner with Move Minneapolis to recruit downtown employers and property owners to increase walking, biking and transit use among employees and residents.

These TDM actions are analogous to similar recommendations seen in other planning documents reviewed for this memo, specifically the call for greater legislative framework to mandate TDM contributions from more property managers and real estate developers. While this shows that there is a promising future for a more robust TDM framework within Minneapolis, it also presents issues when moving forward with developing a regional TDM framework.

Strategy Implementation

The TAP is a 10-year plan, and the actions set out are broken out by implementation timeline and difficulty. Actions 2, 3, and 4 were proposed as short-term actions, and should be pursued in the three years after plan implementation (2020-2023). Action 1 had a slightly longer implementation timeline, with the TAP recommending that planners pursue action in the mid-term of the plan (2024-2027). These are phased to coincide with the completion of other projects that will support TDM efforts in Minneapolis, such as the completion of transit projects. TDM programs are only as effective as they are supported by land use, transit networks, and complete streets. Near term projects mostly focus on supporting the developed TDM programs that focus on downtown Minneapolis, since has already met the density, transit service, and trip generation benchmarks that warrant further TDM investments.

Additional strategies under the Street Operations banner work to build up the systems that underlie a successful TDM system, one in which alternatives to personal automobiles are safe, reliable, convenient, and accessible. This larger focus on the system places TDM in the middle of the pack in terms of policy goals and shows how it can interact with other transportation planning realms like curb management, congestion pricing, and complete streets, in addition to mechanism like congestion management.

Strategy Measurement

Measuring the progress of the strategies and plans outline in the TAP is a difficult task, given the variation in scale and complexity. Most of the TDM strategies do not have specific performance metrics tied to them within the document, but the TAP does outline goals for mode shift, safety, VMT reduction, greenhouse gas emissions reduction, increasing access to high-frequency transit, and equity goals. Additional goals are set to measure the progress on implantation of transit priority projects, milage of all ages and abilities network, and miles of pedestrian realm improvements. The broad vision of progress within the TAP might be due to its relationship to the Minneapolis 2040 Plan, the Climate Action Plan, the Vision Zero plan, and Complete Streets plan. Progress is reported annually via the “Your City, Your Streets Progress Report” and more formal progress reports every two years.

While none of these performance metrics explicitly name travel demand management as an outcome, the outcomes they measure are TDM outcomes, such as reduced VMT, increased mode share for transit, multi-occupancy vehicles, biking, and walking. It shows how success TDM policies are not siloed off efforts, but the results successfully rethinking the entirety of how the transportation system function.

4.4. City of Saint Paul

4.4.1. Climate Action and Resilience Plan

The City of Saint Paul passed their Climate Action and Resilience Plan in 2019. The plan outlines goals, objectives, and strategies the city will implement to achieve carbon neutrality by

the year 2050, Key transportation targets include a 2.5% reduction of per-person vehicle miles driven each year, a 40% increase in transit ridership, 300 miles of new bikeways built, all gaps in sidewalks closed, 300 new mobility charging hubs built, and 100% of vehicles on city streets are electric.

Strategies to reduce single occupant vehicle travel include:

- Reduce or eliminate citywide minimum parking requirements and set parking maximums for most land-use types and require developers and landlords to “unbundle” parking from rent
- Redesign parking fees to capture the full cost of parking in downtown and other high-demand commercial districts
- Provide a stable funding source to implement the recommendations of the city’s Comprehensive Plan
- Bring together various stakeholders including the city, transit agencies, and community groups to create affordable housing in the transit market areas defined by the Metropolitan Council
- Implement pricing strategies that accurately capture the cost of driving and auto-centric infrastructure on city roads
- Identify strategies to mitigate the impacts of inner-city highways including capping, conversion to boulevards, or complete removal
- Incentivize infill development by implementing smart growth strategies described in the city’s draft Comprehensive Plan
- Increase the number of communities that are mixed-use and higher-density
- Implement the “Vision Zero” program recommendation of the Comprehensive Plan to achieve zero traffic fatalities on city rights-of-way

Strategies to increase transit ridership include:

- Ensure shared mobility options are located within .25-mile of transit service to increase options for the first and last mile
- Work with city, state, regional and federal stakeholders to identify long-term sustainable funding strategies to complete the planned build-out of transit lines
- Create high-frequency rapid transit in all parts of the transit market areas defined by Metropolitan Council
- Increase transit coverage in concentrated areas of poverty to increase access to jobs and destinations in the downtown core; ensure mobility options remain public and accessible
- Support transit with last mile solutions including electric car-share, standard or e-bike share, and scooters that will become more broadly available at mobility charging hubs
- Streamline services to prevent redundancy and enable passengers to easily understand routes and schedules
- Strategically place stops to improve transit speed and reliability
- Upgrade and refurbish highly used transit stops to include amenities such as benches, shelters, trash cans, way finding signs and lighting
- Relocate stops that feel unsafe or are placed near high-speed vehicle traffic
- Invest in all-door boarding and off-board fare payment

- Improve accessibility at transit stops for those in wheelchairs or with limited mobility. Continue to add ADA-compliant pads, and prioritize improvements in neighborhoods experiencing poverty
- Create a framework where ride-hailing services reduce overall trips by combining them with other tools such as walking, biking, transit, shared rides, and compact development

Land use and mobility strategies to achieve these targets include:

- Accelerate the build-out of the full bicycle network planned in the Saint Paul Bicycle Plan to add a total of 195 miles of new bikeways; update the plan to reflect best practices prioritizing protected bicycle facilities over unprotected or shared lanes
- Invest in driver education programs to improve the visibility and acceptance of those walking and biking on city streets and enhance safety
- Outline clear policies for electric bikes, skateboards, and scooters on city bike lanes, paths, and trails
- Implement a road diet on all four-lane city streets
- Incorporate accessibility options for wheelchairs and other mobility devices in build-out of protected lanes
- Enable the ubiquitous availability of shared bicycles in all the transit market areas defined by the Metropolitan Council
- Work with stakeholders to incentivize bike usage by providing bike-share memberships and increase the availability of bike showers and lockers
- Improve bicycle access and parking at transit stations and stops and expand the number of transit routes that allow bikes to be brought on board
- Redesign roads to be safer for people by narrowing streets through four-to-three lane conversions, reduced street widths, curb extensions, and refuge medians
- Dedicate annual funding for the Bicycle, Pedestrian, and Traffic Safety Fund to move toward relative parity with investments in vehicle infrastructure
- Complete filling in the 327 miles of sidewalk gaps in the city, focusing on the high-priority areas defined in the city's Pedestrian Plan
- Prioritize safe walking to transit stops. Ensure that pedestrian facilities near transit stops feel safe, comfortable and are accessible
- Continue to support and fund the Saint Paul Safe Routes to School Policy Plan to ensure the safety of children walking to school; work with students to help plan routes
- Invest in street crossing treatments that highlight pedestrian visibility and slow drivers
- Invest in proactive sidewalk inspections after heavy snowfalls and provide city resources to clear snow where needed

Vehicle electrification strategies include:

- Continue to increase access to shared electric vehicles in partnership with car-sharing services and Xcel Energy
- Expand access to public charging infrastructure
- Ensure all residents are within a quarter mile of a mobility charging hub
- Incentivize electric vehicle sales by providing charging at city-owned parking lots and working with employers to provide workplace charging
- Provide a regulatory framework to permit charging on residential streets in front of multifamily dwellings

- Proactively encourage the safe use of non-car electric vehicles such as e-bikes and scooters on city rights-of-way
- Implement building ordinances that require new developments to have wiring capacity to charge electric vehicles and reserve a percentage of new parking spots for exclusive EV use
- Encourage electric car-sharing programs to help familiarize residents with EVs, while reducing total driving demand. Prioritize deployment of these programs in areas with low levels of car ownership

4.5. Other Agencies

4.5.1. Twin Cities Shared Mobility Action Plan

The Twin Cities Shared Mobility Action Plan was published in 2017 by the SUMC with the assistance and input from 75 regional stakeholders. The data for this document was collected through a series of workshops and interviews, as well as extensive research into the Twin Cities and peer cities' policy environments as they pertain to TDM. The plan has two core goals: first, "shift households away from single-occupant vehicles and toward transit and shared mobility as the region grows" and second "ensure that shared mobility programs are adapted to serve the same broad user base that makes up public transportation ridership." To help meet these goals of mode change in the Twin Cities, the plan provides ten guiding strategies to help focus policies and leverage existing relationships to the advantage of transit, active transportation, and shared mobility.

Unlike most of the documents reviewed in this memo, the Shared Mobility Action Plan was not created to meet legally mandated requirement for a policy document to meet federal requirements or maintain eligibility for funding. Instead, the Shared Mobility Action Plan was created as the result of a partnership between SUMC, the McKnight Foundation, and public and private agencies throughout the Twin Cities Metropolitan area. The Shared Mobility Action Plan provides a vision of how the private sector, nonprofits, and other non-governmental groups can work with public agencies to address TDM needs and meet congestion management goals in the Twin Cities. SUMC's goal was to address the Twin Cities' unique TDM and congestion management needs and environment. The document provides a survey of the shared mobility and TDM resources available to the Metropolitan Council circa 2017. Finally, the plan was an opportunity for SUMC's to weigh in on Twin Cities TDM based on their experience working with other large U.S. cities, providing an expert perspective on regional strengths, weaknesses, and opportunities.

Strategy Selection

The Shared Mobility Action Plan recommends 10 strategies to meet the goals of reducing private automobile usage and ensuring equitable development of new shared mobility programs. Strategies were selected based on their ability to expand shared mobility and public transit, reduce congestion and VMT, and address other challenges related to projected demographic changes in the Twin Cities region. The plan highlights strategies based on their ability to maintain the region's affordability, quality of life, and high level of accessibility. The SUMC document features a substantial equity component, with several strategies focused on increasing the number of transportation options within disadvantaged neighborhoods and ensuring that shared mobility investments are used to address inequitable conditions. The follow

strategies are given in the report as the guidance for reducing VMT, supporting the transit network, and increasing shared mobility usage:

5. Grow Shared Mobility in Support of the Transit Network
6. Pilot Flexible Transit that Focuses on Reverse Commute Challenges
7. Leverage the Metro Transit App to Establish a Data Clearinghouse
8. Stabilize and Grow Carsharing
9. Expand and Evolve Bikesharing
10. Elevate Vanpooling as a Viable Option for Commuters
11. Develop and Implement New Carpooling and Ride-Splitting Solutions
12. Concentrate Efforts Around Integrated Mobility Hubs
13. Realign Congestion Mitigation and Air Quality (CMAQ) Funding and Improve Travel Demand Management (TDM) Outcomes
14. Optimize Parking and Street Space to Prioritize Shared Mobility

This list is not meant to imply a hierarchy of strategies, and SUMC states that pragmatism and flexibility are essential for creating successful TDM policies. As mentioned in the introduction to this section, the utility of the SUMC Twin Cities Shared Mobility Action plan is that it is specifically tailored to the context of the Twin Cities, and draws on the experience of SUMC, a national leader in the policy realms of active mobility, micromobility, and reducing automobile dependance. These recommendations were also born of the conditions of shared mobility as they existed in the region circa 2017, when the report was authored. These conditions have changed since the onset of the COVID-19 era, with several shared mobility service providers having left the region or reworked their model in response to the new challenges of operating a shared mobility service in a pandemic.

TDM and congestion management are both yield tremendous benefits from private-public partnerships and technological innovations, something that SUMC implicitly stated in their assessment of the region's shared mobility systems. Keeping abreast of these trends in the region is vital to utilizing these relationships to maximize the impacts of TDM investments and policy.

Strategy Implementation

SUMC's action plan draws an explicit connection between the process of implementation and equity regarding TDM and congestion management policies. Equitable implementation of policy generally relies on meaningful engagement with target populations based on shared responsibility and trust, in addition to an agency's ability to follow through on promises and deliver petitioned results. SUMC's recommendations for strategy implementation follow suit by providing a framework for communication and accountability. These are as follows:

1. Create an implementation council
2. Establish a Director of Shared Mobility Programs and a Fellowship Program
3. Break Down Silos and Serve as Mobility Manager to Coordinate Shared Mobility Efforts.
4. Collaborate on Pilot Project Development

SUMC also provides guidance on the financial aspect of implementing TDM and shared mobility policies. In addition to their recommendation that CMAQ funding be retooled to better align with TDM outcomes, they also recommend that the Twin Cities explore utilizing parking revenue, the

Motor Vehicle Fee, Transit Excise Tax, and money from the Volkswagen Settle Fund to subsidize and fund TDM initiatives.

Finally, SUMC provided a draft 4-year implementation plan covering 2017-2021. The Center for Transportation Studies at the University of Minnesota is planning to conduct a post-evaluation of the SUMC implementation plan in 2022. The findings of this report should be considered when planning future TDM policies in the Twin Cities. This analysis will offer a new avenue to analyze the efficacy of shared mobility programs as means to address travel demand issues.

Strategy Measurement

Like other broad visioning documents, the Shared Mobility Action Plan provides generalized guidance for assessing strategy success, realizing that setting discrete goals would presuppose policy and outcomes. The plan does outline some general considerations for goals, including desired reductions in daily SOV trips taken for commuting, growth of investment among equity populations, and changes in jobs access, household financial impacts, and inclusivity of shared mobility services. SUMC emphasizes that these project goals should be set based on specific contexts such as land use considerations, regional growth, economic conditions, and equity goals.

The plan does place emphasis on developing a more robust data collection practices through emerging technologies, strategic partnerships with transportation network companies (TNCs) and existing assets like the Metro Transit app, as well as leveraging the Metro Transit App into a data clearinghouse, which would involve integration with various shared mobility platforms. They also recommend adopting a memorandum of understanding regarding data sharing between agencies, and following examples set in Columbus, Seattle, and cities.

Since these recommendations were created based on the specific contexts of the Twin Cities, they should be treated with some degree of deference. They offer TDM policy makers an opportunity to avoid duplicating work when looking for low-hanging fruit when considering the future of the Twin Cities TDM framework.

4.5.2. Twin Cities Shared Mobility Collaborative Report: More Access and Less Traffic – TDM Recommendations for Minnesota Municipalities and Employers

The Twin Cities Shared Mobility Collaborative is a group of transportation leaders, public agencies, private companies, city officials, and nonprofit organizations formed to implement the Twin Cities Shared Mobility Action Plan, which was previously discussed in this memo. This report was completed as part of the Center for Transportation Studies' contract for supporting the Twin Cities Shared Mobility Collaborative. Published in 2021, this report establishes connections between successful TDM policies in the Twin Cities and other municipalities with existing opportunities and shortcomings for municipal- and employer-based traffic management solutions. This report also conducted an extensive review of peer cities' TDM policies to create a list of best practices for municipal-based and employer-based TDM programs. Fittingly, the report provides separated groups of recommendations for employer-based and municipality-based recommendations, though there is a great deal of overlap in strategies linked with program success across the two typologies. The report includes a substantial number of recommendations to improve TDM efforts that are applicable to any municipality within the Twin Cities metropolitan region.

Strategy Selection

This report does not focus on specific contexts for strategy selection, and instead focuses on the commonalities between successful TDM policies. Successful TDM programs had common characteristics which align to aspects of strategy selection. In this regard, successful TDM programs typically adhere to following trends:

- **Clearly Defined Applicability of TDM Policies** – Localities should establish TDM goals with measurable outcomes, and then determine which organizations should be made responsible for helping to meet these goals. The report explicitly states that the Twin Cities has underutilized their ability to legislate employers to establish their own TDM plans.
- **Measure and Report TDM Goal Achievement** – Programs should only be pursued if they set forth goals that are both achievable and measurable. These measures should be used to quantify program efficacy and should be reported as a means to disseminate knowledge of program success.
- **Create or enhance ordinances applicable to employers –** Commute trips have a significant impact on travel demand. Around 77% of Minnesota residents drove alone to work in 2018, reflecting a pattern that has consistently held since 1990. Commuting is a large contributor to congestion and traffic, but currently there are no TDM ordinances in Minnesota that apply specifically to employers that aim to improve these patterns.

The report emphasized the importance of developing TDM policies that work to address the specific contexts of the community, and that rote application of TDM policies is seldom the best option. As with the SUMC report, this document's utility is that it provides an expert-level assessment of existing shortcomings within the TDM policy framework for the Twin Cities and offers a means to outright address these deficiencies. The white paper brings attention to the authors belief that the Metropolitan Council and other policy-making bodies are lagging regarding TDM policies, such as a lack of ordinances that require or incentivize employers to offer commute-reduction measures.

Strategy Implementation

The bulk of the report is dedicated to establishing best practices for the implementation of TDM policy. In the process they identify consistencies amongst successful TDM programs implemented by the Twin Cities and peer cities, such as Seattle, WA, Portland, OR, and San Diego, CA. The Shared Mobility Collaborative report analyzed all phases of the implementation process for TDM policies in these cities, ranging from partnerships, reporting requirements, and program assessment cycles to find commonality amongst successful programs. Their key takeaways are as follows:

- **Require Program Outreach and Promotion –** Successful programs generally require affected employers, developers, and other impacted entities to promote TDM program elements on a reoccurring basis. Commonly these occur on an annual schedule but might also be integrated with new hire orientations or move-in, or when buildings change ownership or management. Likewise, successful TDM programs from local authorities typically conduct regular promotional efforts.
- **Specify Program Requirements –** The reviewed ordinances universally specified program requirements, and three were most observed in successful TDM programs:

    - Requiring organization to appoint a program coordinator to oversee development, implementation, promotion, and monitoring
    - Requiring affected employers and developers to develop and submit a TDM plan that outlines program-implementation plans and TDM targets.
    - Requiring affected employers and developers to implement specific measures that help meet the TDM program goals. These are typically provided as a list of recommended TDM options, with a minimum number of strategies to be selected ala carte by the impacted party. Programs should always include a mechanism to allow employers, developers, or others to implement alternative measures.
- **Establish Regular Monitoring and Reporting Requirements –** Ordinances typically require impacted parties conduct surveys of commute behavior and report program progress. Data collection usually occurs on an annual basis. The ordinance should take special care to assign a party to be responsible for the maintenance of records, and in certain cases, reserve the right to conduct site visits. Ordinances should also take care to impose some sort of administrative or civil penalty in case of violations.

TDM has already been widely adopted across the nation, and as a result, there is a great deal of research and analysis that can be used to shape the future of TDM in the Twin Cities. This bounty of knowledge collected by SUMC should be considered when developing a new TDM framework for the region, reducing duplicate work and potential pitfalls.

Strategy Measurement

The report provided a broad, system-level review of the Twin Cities and other's state of TDM practice. As a broad system-level review, the report does not provide specific examples of TDM strategy measurement, instead opting to provide generalized guidance for how to best build structures for measuring policy efficacy and for ongoing assessment. The report found that successful TDM programs generally exhibit the following:

- **Establish Clear, Measurable Goals set to a Timeframe –** All TDM programs examined for this report set clear, measurable, and achievable goals. There was some variety in timelines, but again there was consistency in developing policy mechanisms to monitor progress and revise goals as needed.
- **Establish Regular Reporting and Monitoring Requirements –** While all programs set goals, there was less consistency in setting reporting standards, especially when multiple entities were responsible for administrating TDM plans. Additionally, the report recommends that TDM ordinances either set specific requirements for report content and survey administration. In the cases where TDM goals are too broad for a survey to be applicable, the report recommends that localities mandate and distribute a compliance form to groups who have set TDM policies.

While it is no surprise that all the examined policies had well-formulated data collection goals and strategies, there is something to be said for the process of creating a data clearinghouse for TDM policies, especially if the Twin Cities metropolitan area plans to expand the statutory reach of TDM policies to include more employers, buildings managers, and developers. This is similar to the recommendation from SUMC regarding turning the Metro Transit app into a data clearinghouse but instead of focusing on TNCs this applies to the as of yet nonexistent relationship between employer TDM plans and the Metropolitan Council. The success of TDM,

as with any policy, is to a degree reliant upon a unified regional vision for congestion management and demand reduction across all responsible agencies. As important, if not more so, is the ability to measure TDM outcomes such as participation, trip reduction, mode shift, et cetera. This, in turn, introduces several challenges, the foremost of which being participation and collection.

The report suggests using a variety of communication tools, such as creating a commuter benefits program page, purchase of an employer database for direct mailings, and sending out regular mailings to employers as well as promoting the program through their existing networks to keep reporting and compliance rates high. They also recommend taking advantage of technological innovations to reduce the administrative burden of supporting TDM strategies and reporting progress. These systems would require substantial investment in order to effectively enforce, gather, analyze, and disperse findings, but it is a role that the Metropolitan Council is obligated to serve as the regional planning and policy making agency.

4.5.3. 2020/2021 Sustainable Transportation Advisory Council Recommendations and MnDOT Response

The Sustainable Transportation Advisory Council (STAC) was formed to provide MnDOT with guidance and expertise to help the agency meet statutory goals outlined in Minnesota Statute 174.01, the Next Generation Energy Act, and the annual MnDOT Sustainability Report. The STAC is facilitated by MnDOT as a long-form public engagement effort to provide new ideas regarding the state's journey toward developing a low-carbon transportation sector. Recommendations from the STAC are geared toward helping MnDOT reduce carbon pollution from transportation with a specific emphasis on equity and environmental justice. MnDOT supports STAC recommendations when feasible and when they align with factors that are within MnDOT's ability to influence. The 2021 STAC recommendations focused on finding pathways to incorporating the 2020 recommendations into existing projects and investment plans currently in progress.

Strategy Selection

STAC formed multiple workgroups for developing policy recommendations. In 2020, these workgroups were the Powering and Fueling Transportation Workgroup, the Reduce VMT and Improve Transportation Options workgroup, and the Transportation Systems Resilience workgroup. The Reduce VMT and Improve Transportation Options Workgroup developed recommendations that align with TDM outcomes. As an advisory body, STAC works to encourage policy that provides alternatives to private automobile usage, encourage MnDOT to adopt planning process that elevate sustainable outcomes, and address land use policies as they relate to transportation. In both 2020 and 2021, STAC's Reducing VMT and Improve Transportation Options workgroup put forward three primary recommendations in line with their mission. The recommendations from 2020 generally addressed system-level discrepancies between MnDOT's current state of practice and STAC goals, and were as follows:

- Adopt a Statewide Goal of Reducing VMT per capita by 20% by 2050
- Stop Expanding Highway Capacity to Reduce Congestion
- Prioritize Transit and High Occupancy Vehicles on MnDOT owned right-of-way

The recommendations from the 2021 iteration of STAC were designed to build off the work of the previous year and develop those recommendations into ongoing resilient policy via

incorporation into projects and increasing the number of stakeholders and liable parties. These recommendations were released in December 2020 and included the following:

- Implement the VMT reduction goal and incorporate it into the Purpose and Need section of every major transportation project
- Partner with Metropolitan Council and other Metropolitan Planning Organizations (MPOs) to adopt a similar VMT reduction goal. Ensure that state and federal dollars coming into Minnesota are invested consistent with the VMT reduction goal
- Build public and local support for providing transportation choice for travelers and reducing VMT through MnDOT's educational programs, traditional media, social media, local units of government and extensive direct outreach to, and partnering with, multiple stakeholders
- Develop a toolkit/guide for sustainable transportation projects

In 2022, MnDOT provided a response to the 2021 STAC recommendations. MnDOT's responses to the Fueling and Powering Transportation Workgroup's recommendations include the agency's goals to transition its fleets to zero emission vehicles by 2030, its plans to conduct an EV Suitability Assessment and Infrastructure Optimization analysis, a proposed electric pick-up truck pilot in the coming years, and its plan to reduce carbon emissions from agency fleet operations through right-sizing and biofuels. In response to the Fueling and Powering Transportation Workgroup's second recommendation, MnDOT points to its work with Drive Electric Minnesota, its commitment to engaging the freight industry in discussions about electric transportation, and its plan to be submitted to the US Department of Transportation and the Federal Highways Administration to ensure eligibility for NEVI Formula Program funds. In response to the Fueling and Powering Transportation Workgroup's third recommendation, MnDOT references its participation in the MOU which created the Regional Electric Vehicle Midwest Coalition (REV Midwest) and its finalized 2021 EV Assessment which identifies strategies the state could employ to advance EVs in Minnesota.

MnDOT's responses to the VMT Reduction and Transportation Options Workgroup's first recommendation include MnDOT's development of the Minnesota's Statewide Multimodal Transportation Plan and its plans to develop information and tools to support VMT goal implementation. In response to the VMT Reduction and Transportation Options Workgroup's second recommendation, MnDOT emphasizes the importance of its collaboration with local government, MPOs and other transportation stakeholders to support community needs, meet VMT reduction goals and contribute to climate action. MnDOT's response to the VMT Reduction and Transportation Options Workgroup's third recommendation, MnDOT referenced the programs it leads and collaborates with partners to administer, including Walk! Bike! Fun!, Greater MN Shared Mobility webinars, Pedestrian Safety messaging and Complete Streets case studies.

Additionally, the 2021 recommendations include a substantial expansion upon the equity component of the previous year's recommendations, emphasizing the importance of using investment in the transportation sector as a means to address systemic inequities and inequalities.

The STAC functions as MnDOT's vanguard of sustainable transportation policy, and their recommendations to increase capacity through congestion and travel demand management might speak positively to the future support for TDM at the state level and with regard to state

funding. These goals have remained consistent for the last two recommendation cycles. If the Metropolitan Council chooses to incorporate these recommendations into future TDM policies and goals, it could provide pressure from below on MnDOT when considering these current and future recommendations for TDM and establish Metropolitan Council as willing to assist in iterating the development of a sustainable transportation sector in Minnesota.

Strategy Implementation

In their response to STAC's 2020 recommendations, MnDOT expressed support for Primary Recommendations 1 and 3, and would explore options for Primary Recommendation 2. MnDOT is already engaged in related activities that support the content of all three primary recommendations. MnDOT plans to adopt a preliminary statewide and per capita VMT target as part of the SMTP update process. Likewise, MnDOT already has plans to expand their network of MnPASS lanes, bus-only shoulders, and transit advantage programs, and will engage with STAC to develop a communication strategy and develop recommendations for MnSHIP and SMTP planning and policy. The STAC also includes guidance for how their recommendations should be used to advance equity and environmental outcomes.

Again, this indicates that the policy currents are oriented toward the need for a more robust TDM framework within the Twin Cities and Minnesota at large. While a statewide target of reducing VMT by 20% and increasing alternatives to SOV trips is admirable, urbanized areas like the Twin Cities are well equipped to surpass these targets of reducing VMT and prioritizing transit and HOV usage. When possible, implementation should be coordinated with MnDOT investments and projects to maximize utility and improve outcomes.

Strategy Measurement

Since these are policy recommendations, they are generally tied to existing programs with established metrics. The secondary recommendation to discard LOS as a measurement tool would be a substantial break from existing policy that relies heavily of LOS as a means of judging efficacy of improvements and does not account for the other costs and impacts of roadway changes. MnDOT has, however, started a pilot with the State Smart Transportation Initiative to test new means of measuring accessibility and multimodal access to community destinations and for transportation projects. Again, these spaces and policy developments should be watched as the Metropolitan Council develops their new TDM policy framework, to maintain parity between state-level planning direction and regional response.

Appendix A: Stakeholder Interviews and Group Discussions

Met Council – Metropolitan Transportation Services

The interview was held on February 10, 2022, on Microsoft Teams using an interactive digital whiteboarding tool, Mural.

Table 6. Metropolitan Transportation Services

Organization	Area of Operations
Metropolitan Transportation Services	Seven-county metropolitan area

Interview Summary

This implementer interview included five staff from the Metropolitan Council, capturing a more representative survey of their operations as they relate to TDM. While other implementer interviews focused on the relationship between the Metropolitan Council's policies and their response to it, this interview provided the study team an opportunity to examine the underlying logic of the TDM policy implementation process, and determine what barriers prevent MTS from being an effective regional TDM administrator. The interview with MTS was structured as a short presentation on the TDM study, its goals and schedule, followed by an open discussion around six questions. These questions were designed to establish the boundaries, roles, and upcoming challenges facing the MTS. Given the small group setting, meeting participants were given opportunity to voice their response to the questions posed in addition to what was contributed to the MURAL application. Members of the study team were responsible for transcribing the conversation to MURAL. The interview questions and generalized responses are included in Table 7.

Table 7. Metropolitan Transportation Services Interview Summary

Question	Response Trends/Highlights
What TDM activities does your organization promote and how do they contribute to your goals as an organization?	• Internally promotes non-SOV modes through free transit pass for employees, policies on work from home/hybrid workplace, and alternative work schedules to shift travel demand • Externally prioritizes TDM in projects and policy (e.g., TPP, regional solicitation • Funds TMOs and TDM projects through Regional Solicitation
What audiences do your TDM activities target and how do you consider equity?	• Sets equity criteria in Regional Solicitation and Travel Behavior Inventory • Serves as central coordination agency to work across jurisdictions to implement TDM and meet equity goals • Targets local governments, transportation agencies, and other implementers

Question	Response Trends/Highlights
How do you balance your role as regional TDM administrator and independent TDM implementer?	• Difficult balance to maintain, done through separation of the policy body (Metropolitan Council) from the implementer body (Metro Transit). • Attempts to maintain parity with the goals of the TPP when granting funding
How have employer TDM interests changed in the past five years?	• COVID drove/forced interest in telework, and employers have begun to understand the benefits of telework • Significant variation in interest levels across industries • Employers are beginning to ask for more support for and promote multimodal accessibility in their recruiting materials
Which TDM activities have been most effective and why?	• Telework • Anything that captures/internalizes the real cost of driving alone (i.e., E-ZPass, parking pricing) • Bus lanes and bus-only shoulders
Are there legal requirements that impact – positively or negatively – your ability to implement TDM strategies or the way TDM strategies can be implemented?	• Limitations on funding and how it can be allocated is the largest hurdle • No enforcement mechanism to require participation from private entities • Administrative requirements for federal funds overwhelming for small agencies

Strategy Selection Takeaways

- Program identification is partially driven through public engagement
- Selected strategies are intended to drive innovation at the local, regional, and state level regarding TDM, congestion management, and equity
- Guidance from the Transportation Policy Plan (TPP) and Congestion Management Process (CMP) on TDM as first line of response for congestion and capacity projects
- Staff provides information on regional travel behaviors and demand via the TBI and On-Board survey findings to promote strategies based on traveler preference and by providing this information directly to the TMOs.
- Staff provides data driven equity needs to highlight issues for the relative local agencies to address.

Strategy Implementation Takeaways

- Regional Solicitation dedicates $7 million ($3.5 million a year) to the TDM category, an additional pot of money to the Unique Projects category which can also fund TDM projects, and multimodal components are promoted in all other funding categories
- Collaborating with other agencies to promote TDM investment and provide a regional perspective, this study is an example of this in addition to ongoing technical guidance on local MnDOT projects and administering Regional Solicitation funds to local governments to implement TDM strategies.

- Internally, the Met Council has promoted telework and provides all employees with a free transit pass.

Strategy Measurement Takeaways

- There has been difficulty drawing a connection between the outcomes of money allocated to Metro Transit and the TMOs concerning investments to address regional goals
- There have been difficulties with administration of TMO pass-through grants and data collection, back to Metropolitan Council, on how the funds are used and provide benefit
- Legal mandates perceived as having a negative effect on the ability to implement TDM include federal funds can only be used for capital expenses and not for operations or marketing which forces a lot of local dollars for strategies and federal reporting requirements are cumbersome, especially for smaller organizations with less capacity and knowledge to navigate the complexities
- Perceived most effective TDM activities are telework, Flexpass, bus shoulder lanes. Perceived least effective strategies are MnPass because it encourages more SOV travel than just being a HOV lane and parking downtown is too cheap.

Met Council – Metro Transit

The interview was held on February 7, 2022, on Microsoft Teams using an interactive digital whiteboarding tool, Mural.

Table 8. Metro Transit Implementer Interview Meeting Attendees

Organization	Area of Operations
Metro Transit Commuter Programs	Functions as the TMO for the portions of the metro that are not served by their own TMO, coordinates several TDM programs
Metro Transit Shared Mobility Programs	Works with a variety of organizations to expand and improve multimodal and shared transportation options throughout the Twin Cities, such as shared mobility hubs and the upcoming North Minneapolis microtransit pilot
Metro Pass, Metro Transit Assistance Program, Residential and Universal Programs	Administers fare payment and assorted fare-subsidy programs for Metro Transit

Interview Summary

The study team interviewed representatives from three departments from Metro Transit (Table 10). These implementers provide a diverse survey of services offered by the Metropolitan Council as they relate to TDM and show how the Metropolitan Council balances the roles of implementer and administrator.

Table 9. Metro Transit TDM Implementers Interview Summary

Question	Response Trends/Highlights
What TDM activities does your organization promote and how do they contribute to your goals as an organization?	• Efforts to streamline application to Transit Assistance Program (TAP) • Services for TMOs such as carpool coordination, guaranteed ride home • Mobility hubs • Coordination with private groups like NiceRide
What audiences do your TDM activities target and how do you consider equity?	• Reduced fare programs like TAP, student rates • No minimum for access to employee pass program • Shared Mobility Strategy Guide and other documents that set priorities for investments and pilots in BIPOC communities • Using the power of the purse to encourage people into adopting TDM-friendly policies
How do you balance your roles as a regional TDM administrator and an independent TDM implementer?	• At times challenging, especially with supporting TMOs while not stepping into their territory • Using stakeholder engagement and feedback to show that programs are in response to public needs and not internal politicking • Using grant agreements with TMOs to ensure compliance to certain goals and outcomes
How have employer TDM interests changed in the past five years?	• Massive increase in telework • Pursuing new relationship in unexplored labor sectors (e.g., hotels and airports) • Unbundling of annual parking passes and increased interest in substituting with transit passes
Are there legal requirements that impact – positively or negatively – your ability to implement TDM strategies or the way TDM strategies can be implemented?	• Negative – lack of means to enforce TDM strategies among employers, cities, and others • Negative – fear of future conflict between local and regional TDM policies • Positive – Removal of parking minimums • Negative – Bank loaning requirements that mandate parking • Negative – rules restricting any revenue generation activities on transit property funded by state bonds
Which TDM activities have been most effective and why?	• Potential Development – On-demand microtransit project in North Minneapolis.
Which TDM activities have been least effective and why?	• Carpooling – should be coordinated by employers

Strategy Selection Takeaways

- Current focus on supporting shared mobility, micromobility, shared mobility hubs, and active transportation as a strategy for TDM

- Address barriers to service (e.g., streamlining the Transit Assistance Program application process which demand grew significantly from 2020-2022, and removing minimums for employee transit pass program as a result of large employers remaining teleworking)
- A lot of work has been done to examine the relationship between where people live and where they work.
- As a result of the pandemic and increase in telework; there has been great interest but limited engagements in Residential Pass because most buildings were not currently full enough to justify the investment, and Metro Transit shifted their focus to work with employers with in-person work and needing of this service.

Strategy Implementation Takeaways

- Priority projects are largely identified via stakeholder engagement
- In the last three to four years (2018-2022) investments for shared mobility hubs have been focused in areas with major planned capital investments for transit projects and in BIPOC communities.
- There is perceived grey area between Metro Transit's role as a TDM administrator and implementor (e.g., Metro Transit applying for Regional Solicitation funds)
- Staff often work with micromobility providers such as Nice Ride to help determine station locations.

Strategy Measurement Takeaways

- It is currently perceived as is difficult to quantify all of the benefits of some investments that help existing ridership, such as mobility hubs.
- Metro Transit has experienced difficulties with data collection from the TMOs and compliance with Congestion Mitigation and Air Quality (CMAQ) reporting requirements and recent efforts to collect data has been a high amount of work.
- Data sharing for trip changing between public and private partnerships has drastically improved, in large part due to the City of Minneapolis putting out bid for new bike and scooter share and now there is a lot of collaboration of data sharing between groups and agencies including Minneapolis, St Paul, University of Minnesota and others.
- Efforts for carpooling activities are perceived as the least effective and should be made by employers.
- Metro Transit was in the piloting phase of the shared mobility programs for microtransit and a follow-up is recommended.
- Legal mandates perceived as having a negative effect on the ability to implement TDM include; few employers and developers are required to implement TDM strategies and most of the TDM gains can be made through development, revenue cannot be generated on transit property funded by the state, the abundance of cheap and free parking makes TDM strategies less effective, bank loans still require a certain number of parking spaces to receive a loan, TDM ordinance would be stronger at a regional level as opposed to by local agencies.

Minnesota Department of Transportation (MnDOT)

The interview was held on February 7, 2022, on Microsoft Teams using an interactive digital whiteboarding tool, Mural.

Table 10. MnDOT TDM Implementers

Programs/Departments Represented	Area of Operations
MnDOT Metro District Multimodal Planning	Seven-county metro area, with a specific focus on transit, trail, and rail transportation services
MnDOT Office of Transit and Active Transportation	Responsible for the financial and technical support of transit services in Greater Minnesota, in partnership with the federal government and local communities
E-ZPass	Maintains the network of E-ZPass lanes throughout Minnesota, including planning for future network additions
MnDOT Office of Sustainability and Public Health	Office that connects agency policy to statutory transportation and climate goals.

Interview Summary

The group discussion with MnDOT included representatives from metro offices, whose efforts are mostly contained to the Metro planning district, having the same extents as the 7-county metropolitan area.

Table 11. MnDOT TDM Implementers Interview Summary

Question	Response Trends/Highlights
What TDM activities does your organization promote and how do they contribute to your goals as an organization?	• E-ZPass is only used a congestion pricing tool. Supports but does not directly coordinate with other TDM programs. • Statewide support for bike/ped planning • Policies that are applicable in urban and rural contexts i.e., Complete Streets/Safe Routes to School • VMT reduction targets • Policies meant to increase carpooling and average vehicle occupancy • Highway broadband projects
What audiences do your TDM activities target and how do you consider equity?	• Focus on captured transit riders • Focus on accessibility of investments • Providing equal level of service for transit/shared mobility • Attempts to develop low-income E-ZPass Discount Program • Complete Streets • Investment scoring that attempts to prioritize identify areas with latent demand for transit and active transportation
What policies/tools from your agency most impact TDM implementation in the region?	• Bus-only shoulders • ABC Parking Ramp carpooling incentives

Question	Response Trends/Highlights
	• E-ZPass Lanes, free use for carpoolers and transit • Cost sharing for active transportation and transit infrastructure • Supporting transit in greater Minnesota
Are there legal requirements that impact – positively or negatively – your ability to implement TDM strategies or the way TDM strategies can be implemented?	• - Speed limits for bus-only shoulder lanes • - Ban on automated traffic enforcement technologies • - Legal barriers to low-income E-ZPass program • - Funding restrictions and inflexibility in program funding • + ADA mandates support active transportation • + State statues that mandate maintaining bicycle and pedestrian ways, and setting state transportation goals that include emissions reductions and increased non-SOV trips
Which TDM activities have been most effective and why?	• TOD and Arterial BRT investments • Adoption of remote and hybrid workplaces • Carpool parking at ABC Ramps • Requiring employers to implement TDM strategies • E-ZPass
Which TDM activities have been least effective and why?	• Center-running transit lanes/stops

Strategy Selection Takeaways

- TDM strategy selection is not a current focus aside from goals set for statewide VMT reduction. Most TDM efforts are indirect results of investments along the trunk highway system.

Strategy Implementation Takeaways

- Urban TDM efforts aimed at VMT and emissions reduction are mostly via E-ZPass, bus-only shoulders, support for bicycle and pedestrian programs.
- Indirect statewide efforts are found in sidewalk and trail investments along trunk highway reconstruction jobs and providing funding through a statewide Safe Routes to School (SRTS) and Transportation Alternatives Program (TAP).
- Statewide support for incorporation of high-speed internet along MnDOT right-of-way
- Coordination with Metropolitan Council to address congestion management
- The ABC ramps have initiatives for carpoolers.

Strategy Measurement Takeaways

- Perceived barriers to implementing TDM strategies include more efficient investments are currently hampered by funding restrictions and laws, ABC ramp parking costs cannot be arbitrarily set to undercut the market and require a recurring survey, low-income discount for E-ZPass cannot be legally executed.

Transportation Management Organizations

The interview was held on January 24, 2022, on Microsoft Teams using an interactive digital whiteboarding tool, Mural.

Table 12. Transportation Management Organizations Implementers

Organization	Area of Operations
Move Minnesota	St. Paul, mostly focused on supporting downtown St. Paul and areas along the high-frequency transit network
I-494 Commuter Services	I-494 corridor. Provides services for Bloomington, Edina, Richfield, Eden Prairie, and others
Anoka Commute Solutions	Provides TMO services for Anoka County's 21 cities and townships
Move Minneapolis	Downtown Minneapolis

*Interviewed separately due to scheduling conflicts.

Interview Summary

Interviews with the TMOs were structed as open discussions around five questions, designed to establish the boundaries, roles, and upcoming challenges facing each organization. Given the small group setting, each implementer was given an opportunity to voice their response to the questions posed in addition to what was contributed to the MURAL application. Members of the study team were responsible for transcribing the conversation to the MURAL application. Recognizing that the TMOs have a lot of information to share, the study team also administered a follow-up survey to gather more information and allow time for more comprehensive responses than could be collected in a small group discussion. The following summarizes feedback themes and highlights. The interview questions and generalized responses are included in Table 13.

Table 13. Transportation Management Organization Interview Question Summary

Question	Response Trends/Highlights
What TDM activities does your organization promote and how do they contribute to your goals as an organization?	• Shared goal of increasing non-SOV commute trips • Efforts largely focused on individual and employer knowledge of transportation options (e.g., educational workshops, one-on-one transit education workshops, individualized travel itineraries, • TMOs maintain independent libraries of educational materials, and independent carpool/vanpooling matching services • Resources for remote and hybrid workplaces

Question	Response Trends/Highlights
How have employer TDM interests changed in the past five years?	• Greenhouse gas emissions reduction • Addressing equity issues in transportation • Reducing congestion • Support a growing economy
What audiences do your TDM activities target and how do you consider equity?	• TMOs tend to target programs toward individual groups (e.g., employees, residents) versus organizations (e.g., community groups, employers) • Equity efforts include incorporating DEI statements, working with priority populations and equity groups
How do you work with other TDM programs in the region?	• Regular collaboration between TMOs, Metropolitan Council/Metro Transit, and regional transit agencies like MVTA, SouthWest Transit • Coordination with cities and other nonprofits such as a Bicycle Alliance of Minnesota • Expressed interest in regular TMO collaboration meetings
Are there legal requirements that impact – positively or negatively – your ability to implement TDM strategies or the way TDM strategies can be implemented?	• TMOs can influence TDM policy, but this is heavily dependent on interest from municipalities. • Suburban TMOs partner communities seem less interested in developing their own TDM ordinances • Changes to parking minimum/maximum policy is a common TDM policy bellwether

The interview with TMOs was paired with a follow-up survey, which allowed respondents to give more in-depth responses to these topics and included a greater amount of detail regarding some of the aspects of their duties as a TMO. These responses were collected via Survey Alchemer, an internet-based survey distribution tool. The surveys were distributed via email on February 4, 2022 and the survey was available for two weeks. To allow for more responses, the response deadline was extended one week from February 18, 2022 to February 25, 2022. The survey was designed to give TMO representatives an opportunity to provide long-form feedback on their operations in the seven-county metropolitan area, both in terms of day-to-day operations and experience on what has been most or least effective in TMO programming. Given the small number of responses (N=6) and limited participation from regional TMOs, this memo will summarize the results of the survey in narrative form. The study received responses from three of the four TMOs, and survey findings are summarized in Table 14. These surveys were paired with an implementer interview held on January 24, 2022.

Table 14. Aggregated TMO Survey Response

Question	Responses
How do you view your role in the regional transportation system, and do you coordinate with regional planning goals?	• Respondents stated that their TMOs support climate and economic goals in the regional transportation system

Question	Responses
	• Lack of awareness of regional planning efforts due to limited opportunities to connect with other TMOs and non-transit agencies
What are the primary motivators for your TDM activities?	• Greenhouse gas emissions reduction • Addressing equity issues in transportation • Reducing congestion • Support a growing economy
What resources do you use to implement TDM activities?	• Connections made through digital, print, and social media • Transportation fairs and signature events (e.g., cycling events help by Anoka Commute Solutions)
How are your TDM activities evaluated or measured for success?	• Focus on quantitative data measures • Survey feedback • Percent changes in mode switch • New carpool registration • Number of new partnerships and clients
Which TDM activities have been most effective and why?	• Personalized small trainings for non-SOV alternatives, either one-on-one events or training employers to develop their own commuting resources for their employees • Commute Ambassadors to model sustainable commuting behavior • Flagship events, such as Carfree MSP and Anoka Commute Solutions biking events
What is the biggest challenge to implementing your TDM activities?	• Prevalence of free parking in the region • Car-first mentality held by public • Limitations by TMO budget • Lack of clearly defined goals for organization
Which TDM activities have been least effective and why?	• Telework resources, due to the lag in deployment • Surveys, due to a lack of a data standard to measure datasets against one another • Traditional tabling/outreach, due to high costs combined with low impact and impersonal nature • Vanpooling due to current restriction creating too high of a barrier to be approachable for potential users

Strategy Selection Takeaways

- Personalized trainings, often developed in collaboration with employers, and long-term engagement efforts have been some of the most effective strategies.
- In the pre-COVID era, TMOs largely focused on hosting in-person educational workshops, creating educational materials, and providing other resources to help connect people with alternatives to SOV commute trips (such as car/vanpool matching and personalized travel itineraries). Since the onset of the COVID-19 pandemic and

subsequent embrace of remote and hybrid workplaces, TMOs have adapted to focus on supporting this new normal. However, the lag time between the move to remote work and the distribution of telework resources by TMOs was too long such that employers had already made changes and the TMOs were too late to provide meaningful implementation assistance.

- TMOs felt that certain elements of traditional tabling were ineffective in facilitating modal change in populations, and that the lag time between the need for resources and being able to deploy resources was a substantial barrier.
- The impacts of the COVID-19 pandemic on TDM and the activities of TMOs cannot be understated. TMO representatives stated that since it remains to be seen what the new normal entails, employers, local governments, and TMOs are hesitant to make long-term commitments to change. As a result, most of the response to COVID has been low-cost efforts like educational materials focusing on biking or walking, how to manage remote and hybrid workplaces, and other resources. Move Minnesota mentioned that they have begun work with employers to navigate changes to long-term parking contracts and other commitments that do not mesh well with the increased share of remote and hybrid workers, indicating that some employers are moving to permanently embrace some of the changes brought on by COVID.

Strategy Implementation Takeaways

- Revenue and Fare Operations is perhaps one of the most important parts of using transit as a part of a successful TDM policy, as especially for priority populations. These groups must carefully balance their roles as implementer with its close relationship with the Metropolitan Council, the administrator for regional transportation policy.
- TMOs have also made efforts to codify TDM in the local policy environments, with varying degrees of success. Urban areas in the region have been more likely to pursue TDM policies, while suburban TMOs have struggled to get community buy-in.

Strategy Measurement Takeaways

- Due to a lack of communication between the groups, individual TMOs stated that they were generally unaware of how their work and goals related to each other and to larger regional objectives. TMOs pointed out the siloed nature of the TDM world, in which organizations work in parallel toward the same goals with minimal attempts to reduce overlap.
- Much of the work of TMOs could be shared across organizations, such as educational materials and resources, and further collaboration between TMOs could help all of them achieve their missions.
- In their survey responses, the TMOs expressed that they felt their impact on mode choice change was most hampered by the prevalence of free parking and the cultural bias that positively favors SOV commute trips as the normative ideal.
- TMO outreach and training is most effective when it is personal and pertinent to the target audience. Tabling is not as effective as working with a group overtime to identify transportation barriers and developing resources to address them.

- TMOs' ability to influence TDM policy is heavily dependent on local government interest in TDM.

Suburban Transit Agencies

The study team interviewed the four suburban transit agencies, Maple Grove Transit, Minnesota Valley Transit Authority (MVTA), Plymouth Transit, and SouthWest Transit. Facilitation questions focused on exploring how TDM factored into long-term planning and decision-making for the transit agencies in the face of these conditions, their equity considerations, available resources, evaluation criteria, program efficacy, and the impact of legal requirements on their ability to implement TDM strategies and programming. The interview was held on February 9, 2022, on Microsoft Teams using an interactive digital whiteboarding tool, Mural.

Table 15. Suburban Transit Agencies Implementer Interview Meeting Attendees

Organization	Area of Operations
Maple Grove Transit	Maple Grove, offers express commuter service to downtown Minneapolis and University of Minnesota, and My Ride, an advanced reservation shared curb-to-curb microtransit service
Plymouth Transit	Operates Plymouth Metrolink, express commuter service to downtown Minneapolis and the University of Minnesota, as well as an on-demand microtransit service for trips within the city
Minnesota Valley Transit Authority (MVTA)	Transit service for seven suburbs in the south metro, offers a mix of local and express service to downtown Minneapolis, St. Paul, and the University of Minnesota. Operates MVTA Connect, an on-demand microtransit service
SouthWest Transit*	Providing public transit service for Chanhassen, Chaska, and Eden Prairie. Express bus service to Minneapolis, and the University of Minnesota. Operates SW Prime, an on-demand microtransit service.

Interview Summary

The summary of interview questions and summary of responses are included below in Table 16.

Table 16. Suburban Transit Agencies Interview Summary

Question	Response Trends/Highlights
How do you select TDM strategies to enhance your core transit service?	• Transit service is dedicated to providing peak-hours commute service to and from downtown Minneapolis • Pursues programming that incentivizes, reduce barriers, or assuages concerns with using transit to commute (e.g., Guaranteed Ride Home programs, addressing information barriers, streamlining payment, free transfers to microtransit) •
What audiences do your TDM activities target and how do you consider equity?	• All agencies stated that this is an ongoing struggle • Outreach to transit-dependent communities (e.g., new immigrants, BIPOC, and low-income communities) • Addressing language barriers via interpreter services and translated materials • Supporting all users with ride information and rider alerts • Engagement and relationships with community groups to develop service that meets specific community needs

Question	Response Trends/Highlights
	• Efforts to bring transit information to people in inclusive and intuitive ways • Limited connections with regional TMOs
What resources do you use to implement TDM activities (e.g., funding sources, staff time)	• Most funding comes from RS, motor vehicle sales tax, and other federal grants • Limited fare box recovery • Support from city staff • Pushing developers toward TOD and pedestrian friendly infrastructure
How are your TDM activities evaluated/measured for success?	• Measures standard metrics as per federal requirements • Bus ridership and microtransit ridership • Monitoring customer satisfaction through feedback channels
Which TDM activities have been most effective and why?	• Microtransit service, especially after technology improvements streamlined booking process • Reverse commute, though this service is not efficient
Which TDM activities have been least effective and why?	• Reverse commute trips have very low ridership, but meet important equity metrics • Redirecting microtransit customers to fixed-route service
Are there legal requirements that impact – positively or negatively – your ability to implement TDM strategies/modify the way TDM strategies can be implemented?	• Disconnect between real estate developments desire for transit service at new development and sparse development pattern • Lag between community growth and transit taxing district boundaries • Legal uncertainty about borders of service for microtransit • Lack of legislative mandate for pedestrian and transit infrastructure with new developments • Issues with procurement, especially with electric buses

Strategy Selection Takeaways

- There is much focus on adapting to post-pandemic shifting of demand for a more flexible service model versus fixed routes and adapting to a hybrid commute and telework model.
- Equity work has been focused on improving communication and addressing barriers that prevent equity populations from using service (i.e., language, technology, span of service)

Strategy Implementation Takeaways

- Widespread adoption of microtransit services to supplement or replace fixed-route service for the hybrid commute model (e.g., Guaranteed Ride Home, OnDemand/Connect, MyRide, midweek peak transit patterns shift).
- Innovative station modernization efforts have been occurring such as bike rentals, on-site mobility hubs, partnerships with TNCs
- There has been a big focus for some on communication and marketing efforts by using funds to hire a social media consultant and pursuing funds for a community outreach coordinator.
- Staff capacity and resources often limit abilities for improved communications and funding pursuits.
- Some are making a push to be more involved in early stages of developments to coordinate on providing transit facilities and pedestrian improvements.

Strategy Measurement Takeaways

- Need and desire to develop greater interagency communication and transparency among the suburban transit providers and other transit providers.
- None of the suburban transit agencies were currently coordinating with any TMOs.
- All agencies create monthly reports on ridership, budget, and efficiency evaluation against the organization's performance metrics.
- In some ways the agencies face difficulties with trying to gather data, particularly when it comes to benefits of federal funds and relationship to required performance goals
- Constrained funding and performance-reporting requirements are perceived as barriers to implement more TDM strategies.

Appendix B – Survey Results

TDM Survey for Property Managers Feedback Summary

These surveys were distributed via email on March 10th, and the survey was available for two weeks. The list of developers and property managers for survey distribution was developed through the Metro Transit and Metropolitan Council. Questions were developed to discern how TDM-related policies and services drive choice for developers and property managers when siting future investment. The survey also attempted to discover what resources are heavily utilized and which are underutilized.

Table 17. Summary of Survey Distribution Methodology and General Theme of Questions for This Specific Audience

Question	Response Summary
How many buildings are in your company's portfolio in the Twin Cities? (N=11)	46% 1–10 36% 11–30 18% 30+
Approximately what is the composition of this portfolio in terms of intended use? (N=11)	18% Entirely residential 55% Mostly residential with some commercial 27% Mostly commercial with some residential
How familiar are you with TDM? (N=11)	9% Not at all familiar 18% Slightly familiar 18% Somewhat familiar 36% Moderately familiar 18% Extremely familiar
Which of the following transportation services are available for clients/tenants traveling to and from your properties? (N=11)	Most commonly available: • Public Transit (11) • Free or Paid Parking (9) • Sidewalks or other walking facilities (9) • Bikeshare (6) • Dedicated bike lanes/off-street trails (6)
If you provide parking (paid or free), are there… (N=11)	9% No available parking spaces 27% More spaces than cars 27% Equal number of cars and spaces 27% More cars than spaces 9% Other
What is the key determining factor in determining how much parking to supply for a property/development? (N=11)	Most frequent responses: • Meeting tenant demand (10) • Cost of Parking (1)
Do your clients/tenants have transportation challenges accessing your properties? (N=7)	Most frequent responses: • Locating parking near or at your property • Access to a vehicle • Long travel times

Question	Response Summary
	• Transportation expense • Finding transportation options
Are you a property manager (N=11)	55% Yes 45% No
As a property manager, which of the following TDM-related amenities do you provide for tenants at your properties? (N=6)	100% On-site bike parking/storage 50% On-site showers/changing locker room 50% On-site electric vehicle charging stations 17% Preferred parking for vanpool/carpool/electric vehicles
Are you a developer? (N=11)	91% Yes 9% No
As a developer, which of the following TDM-related amenities are your clients requesting in the development of your properties?	Most frequent responses: • On-Site bike parking/storage • On-site electric vehicle charging stations • Access to bus transit • Common spaces for remote working • Pedestrian facilities/sidewalks
Which of the following organizations do you collaborate with to address client/tenant interests in TDM-related amenities? (N=10)	40% Transit agencies 50% Shared mobility providers (e.g., car/bike/scooter sharing) 10% Transportation management organizations 60% Cities or counties 30% None of the above
How do you see client/tenant demand for TDM-related amenities evolving in the next five years? (N=11)	9% Lower 18% About the same 55% Higher 18% Much higher
How much does local policy related to TDM influence where you choose to locate future investments? (N=10)	20% Not at all 20% Slightly 20% Moderately 30% Very 10% Extremely
Additional input and questions from survey: (N=4)	Summarized responses: • Parking/traditional vehicle accessibility is heavily influenced by lending demands/requirements for both commercial and residential development. (N=2) • Commentary about the efficacy of LRT on the development along the Green Line, with specific attention drawn to the speed of service and the development zone around the LRT being too narrow (N=2)
Total Responses:	11

TDM Survey for Cities Feedback Summary

The TDM survey for cities was distributed via email by the Metropolitan Council in early March, 2022. The survey was available for two weeks. The list of counties and cities for survey distribution was developed by the Metropolitan Council. Questions were developed to first establish a baseline knowledge of TDM policies, what TDM mechanisms have already been developed by cities, and where additional support from the Metropolitan Council could be used to improve TDM outcomes. The survey of cities found that most cities in the metropolitan area have some knowledge of TDM and have set goals in their long-term planning to address congestions through land use, providing transportation options, and development in some capacity. The most common mechanisms used to support TDM were Complete Streets policies, requiring Traffic Impact Analysis for new developments and updating their capital improvement program requirements to support complete streets/multimodal options. At the same time, survey respondents stated that they need additional support to implement these very same policies. Small communities indicated that funding was one of the most significant barriers to development of larger TDM programs, and uncertainty with regards to the new normal that will emerge after the COVID19 pandemic has resulted in policy makers hesitant to pursue new TDM policies.

Table 18. Summary on How Surveys Were Distributed and the General Theme of Questions for This Specific Audience

Question	Response Summary
Familiarity with TDM? (N=86)	25.6% Not at all familiar 15.1% Slightly familiar 20.9% Somewhat familiar 32.6% Moderately familiar 5.8% Extremely familiar
What transportation services are available in your jurisdiction?	Most frequently available: • On-demand transit services (e.g., dial-a-ride, shuttle services, microtransit) • Fixed-route bus • Carshare • Bus rapid transit • Rail (other e.g., Northstar or Amtrak)
Which of the following TDM-related policies or strategies are being implemented in your city?	Most frequent being implemented: Traffic Impact Analysis (TIA) requirements for developments Complete Streets policies Other development requirements to mitigate traffic impacts Requirements for bike parking Capital improvement program criteria that elevate complete streets or multimodal options Most frequent for interested in (in order of number of responses): • Eliminate parking minimums • Complete Streets implementation plan • Complete Streets policies • Establish parking maximums • (tie) Promotional marketing campaigns (e.g., Car-Free Day, Bike to Work Day), Capital improvement program criteria that

Question	Response Summary
	elevate complete streets or multimodal options, Traffic Impact Analysis (TIA) requirements for developments
Does your city collaborate with any Transportation Management Organizations (TMOs)? (N=69)	13.0% Yes 60.9% No 26.1% Unsure
Other TDM-related initiatives supported by agency leadership?	Most frequently heard: • Parking strategies • Climate/sustainability/resilience issues, electric vehicle charging • Supporting multimodal options and data analysis • Shared mobility
Do your roadway engineering and design decisions consider any of the following strategies?	Most frequent examples considered: • Other bike/pedestrian roadway safety improvements (curb cuts, traffic control devices, signage, etc.) • Dedicated bicycle lanes • Signal retiming
Does your community's comprehensive plan include any goals or initiatives related to transportation, land use, or development? (N=64)	62.5% Yes 18.8% No 18.8% Unsure
Does your community's comprehensive plan include any goals or initiatives related to increasing travel on modes other than single-occupant vehicles? (N=63)	47.6% Yes 36.5% No 15.9% Unsure Most frequent examples shared: • Strategies relating to local connections to transitways (e.g., TOD plans, sidewalks, bike connections) • Support for public transit expansion in community • Regional trail plans or other bicycle and pedestrian infrastructure Most frequent examples shared: • Strategies relating to local connections to transitways (e.g., TOD plans, sidewalks, bike connections) • Support for public transit expansion in community • Regional trail plans or other bicycle and pedestrian infrastructure
Would your city be interested in resources from Met Council about TDM and how TDM can help local governments? (N=61)	60.7% Yes 39.3% No
Frequently heard additional input or challenges related to TDM that you would like Met Council to be aware of.	• Concerns about travel patterns in the face of COVID-19 pandemic (reduced demand for transit, increased telework) • Funding is a limitation, particularly for small communities to implement large projects • Public transit services are generally not available in a lot of communities, particularly frequent service
Total Responses:	100 (6 communities submitted twice)

TDM Survey for Counties Feedback Summary

Like cities, these surveys were distributed via email in early March 2022, and the survey was available for two weeks. The list of county officials for survey distributed was developed by the Metropolitan Council. Questions were developed to discern the current state of TDM-related policies being enacted by counties, and what barriers existed to prevent them from more comprehensive TDM policy suites. First, this survey found that while many of the counties had an awareness of TDM and included some specific policies for TDM and reduction in share of SOV trips in their comprehensive plans, very few of them included policies to reduce VMT. Survey responses indicated that there was some engineering support for non-automobile modes of travel, which was supported by CIP that included mechanism to support bicycle and pedestrian infrastructure/complete streets.

Table 19. Summary on How Surveys were Distributed and the General Theme of Questions for This Specific Audience

Question	Response Summary
Familiarity with TDM?	0.0% Not at all familiar 25.0% Slightly familiar 0.0% Somewhat familiar 68.8% Moderately familiar 6.3% Extremely familiar
Does your county have any plans (e.g., Comprehensive Plan) that include any specific TDM strategies, or mention TDM specifically? (N=16)	100.0% Yes 0.0% No Most frequent examples shared: • Existing conditions in relation to TMOs or supporting transit services • TDM discussed as a strategy for travel options, efficiency of infrastructure • Goals and strategies support of multimodal travel, transit-oriented development
Does your county have any plans (e.g., Comprehensive Plan) that include any goals or initiatives related to the reduction of vehicle miles traveled (VMT)?	11.1% Yes 22.2% Maybe, support for emissions reduction 66.7% No Most frequent examples shared: • Lower VMT to year 2000 level by 2040 and support MnDOT 20% reduction goal • Not VMT-specific, but two examples showed support for reducing emissions and supporting a healthy environment
Does your county have any plans (e.g., Comprehensive Plan) that include any goals or initiatives related to increasing travel on modes other than single-occupant vehicles?	100.0% Yes 0.0% No Most frequent examples shared: • Plans and goals for multimodal options

Question	Response Summary
	• Support for transit expansion • Transit-oriented development
Do your roadway engineering and design decisions consider any of the following strategies?	Most frequent considered: • Other bike/pedestrian roadway safety improvements (curb cuts, traffic control devices, signage, etc.) • Signal retiming • Transportation System Management (TSM) Strategies Most frequent examples shared: • Multiuse trails, shoulders for bicycle travel • Signal timing adjustments for changing traffic conditions • Pedestrian accommodations
Do your roadway engineering and design practices incorporate non-vehicle travel?	Most frequent examples shared: • Inclusion of multiuse trails, crosswalks, sidewalks, etc. • Complete streets design process, community-based
Does your capital improvement program prioritize multimodal or non-vehicle projects?	Most frequent examples shared: • Trail projects, parks coordination • Most projects happen as part of roadway projects • Projects can be prioritized if a bike/ped need exists
Does your county levy a sales tax or other local funding mechanism to fund multimodal transportation options such as transit, biking, or walking? (N=6)	83.3% Yes 0.0% No 16.6% Unsure
Other TDM-related initiatives supported by county leadership.	Most frequent examples shared: • County public health initiatives • Providing fiber optic networks • Grant writing coordination with other agencies
Would your agency be interested in resources from Met Council about TDM and how TDM can help local governments?	100.% Yes 0.0% No
Frequently heard additional input or challenges related to TDM that you would like Met Council to be aware of.	VMT reduction should be looked at per capita; county is doubling in population by 2040
Total Responses:	19 (six counties represented)

TDM Survey for Employers Feedback Summary

The employers TDM surveys was distributed via email in early March 2022, and the survey was available for two weeks. The list of employers for survey distribution was developed through the Metropolitan Council and regional TMOs (Move Minneapolis, Move Minnesota, Anoka Commute Solutions, and I-494 Commuter Services). The survey was designed to discern employer awareness of TDM, gain a better understanding of the existing efforts undertaken by regional employers to reduce SOV trips, and what barriers might exist to that disincentivize further investment in TDM policies for employers. Most employers indicated that transportation expenses and syncing transit with work schedules are the top challenges for employees. It seems that employers are attempting to mitigate this with commuter subsidies for transit, parking, or vanpools. More than half the respondents provide some sort transportation stipend. Also, over seventy percent of respondents were providing telework option too.

Table 20. Summary on How Surveys Were Distributed and the General Theme of Questions for This Specific Audience

Question	Response Summary
Which of the following best describes the industry in which you work? (N=48)	2.08% Agriculture, forestry, fishing and hunting 8.33% Manufacturing 6.25% Wholesale and retail trade 18.75% Information & Technology 6.25% Financial activities 22.92% Professional and business services 12.5% Health services 18.75% Leisure and hospitality 6.25% Public administration/government 8.33% Other – Please Specify
Organization Size – # of employees (N=48) *~50% of respondents have between 20 and 499 employees in organization*	8.3% Less than 20 employees 29.2% 20–99 employees 20.8% 100–499 employees 10.4% 500–999 employees 31.3% 1,000 or more employees
Site Size – # of employees (N=48) *~62% of respondents have between 20 and 499 employees at site*	10.4% Less than 20 employees 31.3% 20–99 employees 31.3% 100–499 employees 8.3% 500–999 employees 18.8% 1,000 or more employees
Familiarity with TDM *Majority of employers are not at all familiar with TDM. Only two respondents indicated they are extremely familiar*	45.8% Not at all familiar 16.7% Slightly familiar 20.8% Somewhat familiar 12.5% Moderately familiar 4.2% Extremely familiar
To what extent did your company consider labor market access when deciding on location? (N=44)	22.7% Significant consideration 15.9% Consideration

Question	Response Summary
	18.2% Not significant consideration 43.2% Do not know
Is your company considering relocating within the next year? (N=43)	7% Yes 83.7% No 9.3% I do not know
Companies who indicated they will be relocating – Reason? (N=3)	66.6% Due to the ongoing pandemic, more employees will be working from home and we do not need as much space 33.3% Other
Companies who indicated they will be relocating – organization's top concerns? (N=3, multiple responses)	100% Cost to company/organization for lease/building/taxes of new location 33% Size of new building/worksite 33% Employee retention 33% Commute costs for employees 66% Accessible to public transportation
Companies who indicated they will be relocating – employees' top concerns? (N=3, multiple responses)	100% Commute time/distance 66% Commute costs 66% Accessible to public transportation 33% Access to work via biking or walking 66% Ability to telework no matter the location
What transportation services are available at your workplace for employees to commute to/from work? (N=43)	53.5% Paid parking 53.5% Free parking 95.30% Public transit – Bus service (within quarter mile or approximately five-minute walk) 60.5% Public transit – Light rail (within quarter mile or approximately five-minute walk) 18.6% Public transit – Rail (other; e.g., Northstar or Amtrak) (within quarter mile or approximately five-minute walk) 11.6% Private shuttles 20.9% Carshare (within quarter mile or approximately five-minute walk) 30.2% Bikeshare (within quarter mile or approximately five-minute walk) 41.9% Dedicated bike lanes of off-street trails 83.7% Sidewalks or other walking facilities 27.9% Other shared services, such as scooters (within quarter mile or approximately five-minute walk) 7% Other – Please specify
Do your employees have any challenges accessing the current worksite(s)? (N=30) *Majority of employers say their employees have challenges related to transportation expenses;*	30% Finding transportation to/from work 23.3% Locating parking near or at your worksite 66.7% Transportation expenses 13.3% Access to vehicle 10% Not having driver's license

Question	Response Summary
second-highest reported challenge is related to syncing transit with work schedules	60% Syncing public transit schedule with work schedule 13.3% Trouble finding a carpool or vanpool 40% Long commute time 20% Other – Please specify: • Bike safety. Biking on Lake Street is dangerous – no bike lanes, difficult to make turns across traffic • Lack of transit along 169 Corridor • Not sure but there are likely others • Reduced Metro Transit schedule • Safety concerns • bus scheduled changed/eliminated since COVID
Does your company collect data from employees about how they commute to/from work? (N=44)	13.6% Yes 72.7% No 13.6% I don't know
Which of the following general commute benefits or amenities do you provide to your employees? (N=37) *More than half of employer respondents provide commuter tax benefits. Of those who do not provide an on-site Employee Transportation Coordinator or access to a carshare program, none were interested in providing such services.*	13.5% Employee Transportation Coordinator to assist with ongoing employee transportation needs 55.6% Commuter tax benefits (e.g., pre-tax benefits, post-tax employer subsidies for transit, parking, or vanpools) 11.1% Vanpool program or subsidy (e.g., through Metro Transit, other vendor) 10.8% Access to a carpool matching service (e.g., through Metro Transit, other vendor) 2.7% Carshare program (e.g., employer-owned vehicles that employees can borrow)
Which of the following other benefits or amenities that can support other commute modes do you provide to your employees? (N=38)	10.5% On-site childcare 52.6% On-site restaurant 63.2% On-site vending machines 86.1% On-site snacks/coffee 44.7% On-site ATM 21.1% On-site dry cleaning or laundry services 5.3% Shuttle services between office locations 5.4% Lunch-time shuttle service to off-site restaurants
Which of the following parking benefits or amenities do you provide to employees? (N=37)	50% Employer-paid parking 0% Parking cash-out (e.g., the ability to receive cash in lieu of a parking space if employer provides free parking) 24.3% Preferred parking for vanpool/carpool/electric vehicles 33.3% On-site electric vehicle charging stations
Which of the following transit benefits or amenities do you provide to employees? (N=37)	67.6% Employer-paid or discounted transit pass (e.g., Metro Transit Metropass)

Question	Response Summary
	5.6% Shuttle (e.g., to/from nearby transit station)
Which of the following bicycle benefits or amenities do you provide to employees? (N=38)	86.8% On-site bike parking/storage 18.4% Bicycle maintenance services 76.3% On-site showers/changing locker room 5.4% Bike rental program (e.g., employer-owned bike fleet for employees to borrow for business or personal use) 2.6% Coordinated employee bicycle commute rides (groups or pairs)
Which of the following telework benefits or amenities do you provide to employees? (N=38)	65.8% Formal telework policy 39.5% Ability to telework or work remotely all the time 73.0% Ability to telework or work remotely part of the time (2-3 days a week) 70.3% Ability to telework or work remotely occasionally (1-2 time a month) 36.8% Ability to work from alternate office locations or worksites (e.g., other company location/office or general work share location) 5.3% Ability to choose the worksite closest to the employee's home 50% Flexible work hours to avoid commuting during rush hour (e.g., compressed work week, staggered/shifted work hours) 31.6% Ability to work from alternate work locations (e.g., co-working sites, satellite offices, or telework locations) 63.2% Prioritization of virtual meetings 10.5% Employer-paid subsidy or reimbursement for internet services at-home, to support telework 57.9% At-home equipment provided to support telework (laptop, printer, mobile phone, etc.) 23.7% Allowance for at-home office furniture to support telework (desk, chair)
What barriers does your company/organization face to allowing employees to telework or work remotely for all or part of the time? (N=30)	The nature of our business requires in-person work Senior management is not supportive of telework/remote work Our employees prefer working on-site Other – Please specify:
What information or marketing communications do you provide about transportation-related services or amenities? (N=29)	75.9% General information about commuting options 51.7% New employee information packet on transportation choices and services 31% Transit routes and maps 10.3% Bike lane routes and maps 17.2% Information about Metro Transit carpool or vanpool programs

Question	Response Summary
	24.1% Information about Metro Transit Guaranteed Ride Home Program 20.7% Participation in Earth Day/Car-Free Day/Bike to Work Day/etc. 10.3% Other – Please specify: • Info on Metrocard • only on request
Does your company/organization coordinate with any of the local Transportation Management Organizations (TMOs) – Move Minneapolis, Move Minnesota, Commuter Services (I-494 Corridor Commission), or Anoka County Commute Solutions? (Please use the comment box to explain the nature of this relationship or lack thereof.) (N=37)	27% Yes 73% No Characterization: • Just started • Move Minneapolis • We have fewer than 100 employees and are located in downtown Minneapolis so transit is readily available. • We've never used these services • Financial donations to organizations that work directly with TMO orgs listed. Advocacy partnership for alternative transit infrastructure. • I-494 Commuter services • I am new in my position • Commuter Services, information sharing • Not Sure
Does your company/organization coordinate with transit agencies? (e.g., to provide MetroPass, Vanpool, information about transit routes/maps) – (Please use the comment box to explain the nature of this relationship or lack thereof.) (N=37)	48.6% Yes 51.4% No Characterization: • We offered MetroPasses to employees for a while but the program was too difficult and time consuming to use and administrate. • we offer MetroPass • MetroPass • We are a part of the MetroPass program. • We provide Metropass to employees for free. I also direct them to Metro Transit website for routes. • We did at one time, but many production workers reside in St. Paul and the commuter service does not connect effectively between the cities to get to Eden Prairie. MTS paid to put a bus shelter in place on our property; it unfortunately does not get used. • A company resource for information on transit and carshare programs and ability to affect transit development and change • Metromobility/city bus for persons served in the organization. information for transit for staff as needed

Question	Response Summary
	• We have the MetroPass program • Not Sure
If you have any questions, additional input, or challenges related to TDM that you would like Met Council to be aware of, please provide more detail below.	• There were numerous express bus routes cancelled during the pandemic. We have heard for our employees of their concern that the routes will not be re-established. • Employees have not, and probably will not, return to the office anytime soon. Part of the reason is the lack of good public transportation options from their homes and the cost of parking in downtown Minneapolis • Not at the current time. • Most of our employees live and work in the city and most public transit stuff is really geared toward large businesses that are often suburban or downtown and better bus service in non-rush hour times and on less high service routes would be really useful for a small business. • The biggest challenges/frustrations among our law firm employees are that many bus schedules have changed, making it less convenient to use the bus to get to work. • We would be open to learning more about transportation option for employees. This survey makes me realize we could be doing more. • It is understandable that bus routes were eliminated during the pandemic, but our downtown MPLS offices has been opened and staffed the entire time. The biggest complaints that I hear from staff are concerns about safety and the downsizing of bus routes. Also, to be fair, I hear daily complaints about safety concerns in the parking ramps near our building, harassment at bus stops, harassment in the skyways, etc. It seems like there are more concerns about wearing masks, from our elected officials than commuting and downtown crime and safety. • As with other agencies, Covid has impacted our riders with staff that have not been coming into the office. Although, there has been an upsurge in the last few months and we are up to 19 riders. • None • It will be great to receive more information that way we can share it with our employees.
Total Responses:	51 (3 responses from municipalities, 2 responses from same employer)

TDM Survey for Others

At the time of writing this memo, the survey administered to state agency implementers (Department of Employment and Economic Development, Pollution Control Agency and Environmental Justice, and Department of Health) has received no responses. There was also only one response received from the shared mobility providers (Bicycle Alliance of Minnesota, HOURCAR, Lyft, and Nice Ride). As such there is not enough data for the findings to be included at this time. This section will be updated if survey responses are received or additional engagement occurs as part of other study tasks.

Appendix C – Summary of Traveler Behavior Inventory

The Travel Behavior Inventory (TBI) is a program in which the Metropolitan Council collects information on day-to-day travel in the Twin Cities metro area. This information is important in helping local, county, and regional agencies plan for the future transportation needs of the region. For the purposes of this study, the TBI summary gives insight to existing travel decisions and where practices and policies could potentially influence easier choices for mode shift from single-occupancy vehicles.

Each TBI includes a household travel survey, a survey of on-board transit riders, and other travel behavior data collection. TBIs are prepared every ten years, with the most recent full report being completed in 2010. For the purposes of this summary of findings the team focused on the 2019 and 2020 surveys.

2019 Household Surveys

In total, 7,837 households participated in the survey. Driving is the main way people travel throughout the region, accounting for nearly 85% of trips, while transit use remained steady. Of those who use transit, just 7% use transit weekly and 44% only use transit when attending an event. Half of all recorded trips are not for work commute but for everyday activities like healthcare visits, shopping, errands, or picking up and dropping off family members. E-scooters and bike share are included in micromobility, but 89% of micromobility trips are made with a personal bicycle. Walking is reserved for nearby destinations, as 84% of walking trips are less than one mile and 75% are 20 minutes or less.

Impacts of COVID-19 on Travel Behavior

Due to the COVID-19 Pandemic, the Metropolitan Council decided to reach out to those who had completed the 2019 household surveys, again in 2020 to see how their travel behavior changed at the onset of the pandemic. A big change was how people shopped, as online shopping and home delivery became much more popular during the pandemic. The increase in food delivery was especially prevalent in adults who have a disability, even though a small fraction of respondents. Only 3% of this group used to have food (groceries, take-out) delivered one or two days per week, with the number increasing to 19% by 2020.

There were also significant changes to how people commuted to work. Pre-pandemic, only 5% of respondents teleworked, a number that jumped to 54% of respondents making more than $50,000 and 24% of respondents making under $50,000. Public transit dipped as unemployed or furloughed numbers skyrocketed. Figure C-1 shows more detail on how work commutes changed as a response to the pandemic.

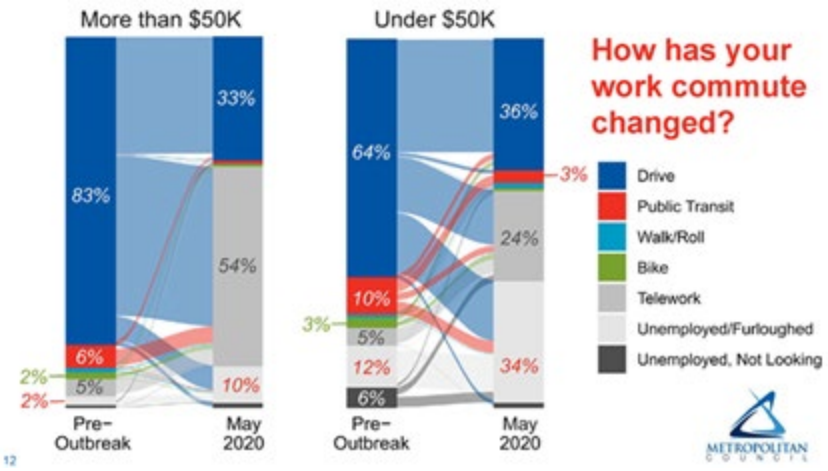

Figure C-1. Work Commute Changes (2019–2020). Source: Metropolitan Council

Transit On-Board Survey

The transit on-board survey program was currently underway, during development of this memo, and consists of three distinct parts: the pilot survey (conducted Fall 2021), a system wide on-to-off count (Spring to Fall 2022), and a system wide interview survey (September to November 2022). The final dataset will be available in March 2023.

The pilot project data has provided the Metropolitan Council with vital information about its busiest transit routes. It shows that only 46% of ridership was retained in 2021 compared with 2016. The gender gap in transit use increased from 10 percentage points to 17 percentage points, as 57% of trips are now taken by men and 40% are taken by women (compared with 55% men and 45% women in 2016). Transit trips are now more likely to be taken for errands and shopping, up to 25% in 2021 from 11% of total trips in 2016. Social/Community trips had a large decline, down to 16% from 22% of total trips, with commuting trips also declining sharply. Due to this, the number of trips no longer spike during AM/PM rush hours and are relatively even throughout the day.