CONGESTION MANAGEMENT PROCESS

Moving People, Connecting Places

2026

AAMPO

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What is AAMPO?

The Federal Highway Act of 1962 created Metropolitan Planning Organizations (MPOs) to provide a comprehensive, cooperative and continuous (3C) transportation planning process by local, state and federal officials. In 1963, the City of San Antonio, Bexar County and the Texas Department of Transportation agreed to establish the San Antonio-Bexar County Urban Transportation Study (SABCUTS). In 1977, the Governor of Texas designated SABCUTS as the San Antonio-Bexar County (SA-BC) MPO. Thereafter, due to results of the 2010 Census and extensive growth in the region, the SA-BCMPO expanded the study area to include the entirety of three counties and a portion of another. At that time, the **Alamo Area MPO (AAMPO)** was created to encompass all of Bexar County, Comal County, Guadalupe County, and a portion of Kendall County that includes Boerne. The 2020 Census identified further growth in the region, and in response the AAMPO boundary was expanded to include all of Kendall County, a portion of Medina County, and the City of Lytle. As of June 30, 2025, the expanded study area is pending the Governor's approval.

AAMPO's mission is to provide a **3C transportation planning process** for the safe and efficient movement of people and goods, consistent with the region's overall economic, social and environmental goals. The agency develops transportation plans and programs to address the needs of the **greater San Antonio area**. In general, AAMPO is responsible for conducting the urban transportation planning process that allows the planning area to receive over $200 million annually in federal and state transportation funding. This is accomplished primarily through three related activities and documents: the Metropolitan Transportation Plan (MTP), the Transportation Improvement Program (TIP) and the Unified Planning Work Program (UPWP).

The Transportation Policy Board leads AAMPO and decides how federal and state transportation funds will be allocated for the region. The Transportation Policy Board (TPB) of the Alamo Area MPO is comprised of 25 (18 elected and 7 appointed) voting members representing the Cities of New Braunfels, San Antonio, and Seguin; counties of Bexar, Comal and Guadalupe, Kendall, and Medina County Geographic Area; the Advanced Transportation District; the Alamo Regional Mobility Authority; the Greater Bexar County Council of Cities; the Northeast Partnership; the Texas Department of Transportation and VIA Metropolitan Transit. There are also ex-officio, non-voting TPB members representing the Federal Highway Administration, Federal Transit Administration, San Antonio Mobility Coalition, Texas Department of Transportation and the Alamo Area Council of Governments. AAMPO places special emphasis on **effective and meaningful public involvement** throughout the planning process and when funding projects to provide equal access to a multimodal transportation network.

1. OVERVIEW OF THE CONGESTION MANAGEMENT PROCESS

1.1. The Congestion Management Process

Congestion Management is the use of strategies, technologies, and systems to improve a region's transportation system's efficiency, performance, and reliability by reducing the impacts of congestion. The development of a Congestion Management Process (CMP) means using accurate data collection reflecting the current conditions of the transportation network to assess the current state and/or local needs. This congestion management process is meant to blueprint safe and effective approaches that ultimately become funded and implemented as projects in other short or long-range planning documents. A CMP is federally required in all metropolitan areas with a population greater than 200,000 and must be conducted by the area's regional/metropolitan planning organization.

The Federal Highway Association (FHWA) publishes a guidebook for all regional planning organizations to use in the development of their own regionally specific CMP. The guidebook outlines all relevant information pertaining to the creation, production, and adoption of a CMP in addition to a framework of eight actions considered to be the core purpose of the CMP. The methodology outlined in the guidebook is intended to be adaptable to allow regional planning organizations flexibility in developing custom approaches and processes that best meet their local needs.

A well-constructed and customized CMP offers many benefits to a region's transportation system. These include increased safety, efficiency, livability, and greater economic benefits of land use. Due to the regional influence of the CMP and its impacts, the development process of the document should be performed in coordination with the MPOs' other planning documents. The goals, actions, and performance measures identified for the CMP should ultimately support the holistic vision of several other key planning documents and regional planning objectives. AAMPO, as the region's metropolitan planning organization, is the agency responsible for developing the CMP and implements these guidelines through the methodology described below.

PURPOSE OF THE CMP

The CMP serves as a decision-making tool to:

- Define the extent and duration of congestion across the AAMPO network.
- Identify underlying causes of congestion, including physical, operational, and demand-related factors.
- Assess the effectiveness of implemented strategies and recommend improvements.
- Support long-range planning by aligning congestion mitigation strategies with the Metropolitan Transportation Plan (MTP).

FEDERAL REQUIREMENTS

Federal Regulations outlined in 23 CFR 450.322, state that "the transportation planning process in a Transportation Management Area (TMA) shall address congestion management through a process that provides for safe and effective integrated management and operation of the multimodal transportation system, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C. and title 49 U.S.C. Chapter 53 through the use of travel demand reduction (including intercity bus operators, employer-based commuting programs such as a carpool program, vanpool program, transit benefit program, parking cash-out program, shuttle program, or telework program), job access projects, and operational management strategies".

A TMA is defined as an urbanized area with a population over 200,000. In answer to the Federal Regulation, MPOs of regions whose populations exceed 200,000 are required to develop a Congestion Management Plan (CMP). Federal requirements further mandate the CMP should be developed and implemented as an integrated part of the metropolitan transportation planning process. The goal of the CMP is to mitigate and manage congestion. The multimodal system performance measures and strategies identified for the CMP should be integrated and reflected in the Metropolitan Transportation Plan (MTP), the Transportation Improvement Program (TIP), and the Unified Planning Work Program (UPWP).

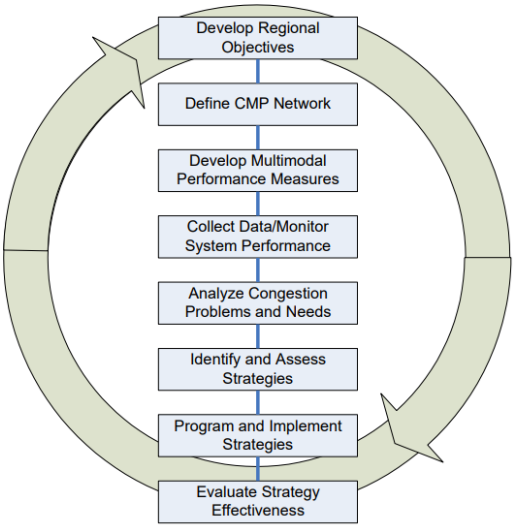
Whereas a CMP is not required in regions where populations are below 200,000, the decision-making process utilized to develop the CMP can still provide valuable congestion management strategies for smaller MPOs. This is especially true for MPOs approaching the population threshold that would mandate formation of a TMA and the resulting requirement of a CMP.

1.2. AAMPO's Process and Methodology

PROCESS

AAMPO implements a structured, data-driven workflow based on the FHWA process (Figure 1) that is aligned with regional planning efforts and Mobility 2050 to develop the CMP. As shown in Figure 2 below, the process begins by defining CMP objectives in coordination with state, regional, and local partners. The objectives are then refined through ongoing stakeholder engagement. With these objectives as a guide, AAMPO then delineates the CMP Network, which includes all Regionally Significant roadways and key multimodal facilities.

Figure 1: CMP Process (FHWA CMP Guidebook)

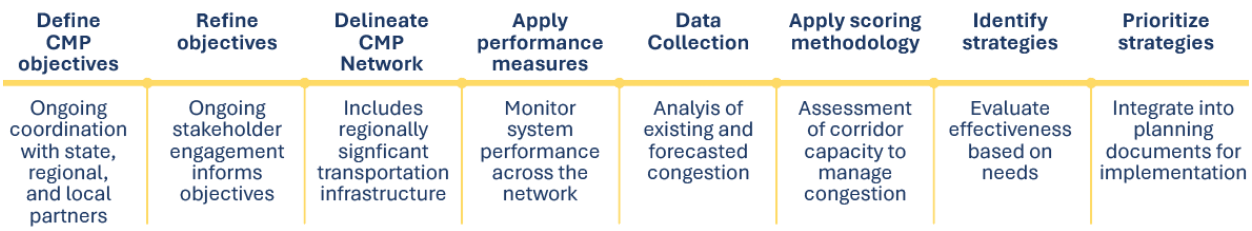


Regional performance measures, such as congestion intensity, reliability, and crash rates are applied to monitor system performance across

the network. AAMPO collects and reviews data to understand existing congestion conditions on highways, arterials, and transit services. The data is also used to analyze current and anticipated congestion needs. A corridor scoring methodology is applied to assess each corridor's capacity to manage congestion.

Strategies are identified and evaluated based on identified needs. The strategies are prioritized using performance measures and integrated into the MTP and TIP for implementation by partner agencies. Committees provide coordination to ensure consistency between CMP recommendations and programmed projects.

Figure 2: Congestion Management Plan Update Process



METHODOLOGY

AAMPO's methodology combines a corridor-level data collection framework with analysis and scoring using a 100-point, four-category system supported by advanced tools such as an enhanced regional travel demand model and ITS analytics to evaluate congestion.

1. **Data Collection Framework**: The data collection process includes conducting a corridor-level inventory of all facilities in the CMP network, compiling a database of corridor attributes, and ongoing data maintenance that reviews and validates the corridor database for accuracy during MTP update cycles.

2. **Analysis Process**: AAMPO uses the data collected to analyze existing and future congestion across the network. AAMPO applies a consistent scoring methodology to evaluate corridor performance and identify opportunities for multimodal improvement.

3. **Scoring Methodology**: Each corridor receives a score in all four attribute categories. Maximum of 25 points per category, for a total of 100 points. Higher-scoring corridors possess stronger multimodal support and have greater ability to absorb or offset congestion. Lower-scoring corridors signal potential deficiencies and become candidates for operational, capacity, or multimodal enhancements.

4. **Analytical Tools and Technical Capabilities**: AAMPO leverages advanced tools that enhance its ability to measure performance, model scenarios, and understand corridor behavior:
    - Enhanced Regional Travel Demand Model with four time-period assignment
    - Additional analytics and ITS resources (as referenced in broader CMP documentation)

OUTREACH EFFORTS

AAMPO's CMP update was carried out through a series of workshops held throughout 2025. Session activities focused on refining regional objectives, updating performance measures, confirming the CMP network, and engaging stakeholders through interactive exercises. The process supports compliance with federal requirements and alignment with regional priorities for congestion mitigation and multimodal accessibility. AAMPO engaged working group members through interactive, data-driven exercises that included collaborative reviews, strategy brainstorming and a corridor scoring and evaluation exercise. Results of the survey are provided in Appendix A.

A summary of key efforts from each workshop is discussed below.

In February 2025, a kickoff meeting was held to review federal CMP requirements and FHWA guidance. The CMP update process and objectives were introduced, and discussion was held regarding recommended performance measures such as congestion, reliability, and multimodal considerations. Updated project screening and strategy forms were presented, and partners provided feedback validating the proposed objectives and measures.

In April 2025, the team reviewed survey results on the CMP network and objectives, confirmed updates to the network and regionally significant roadways, finalized CMP objectives and performance measures for the 2025 update, and discussed congestion forecasts along with an overview of CMP scoring.

In May 2025, finalized CMP objectives and measures were shared. CMP Corridor Fact Sheets were introduced, and scoring methodology, along with mitigation strategies such as ITS, demand management, and multimodal options, were discussed. Participants engaged in interactive exercises using updated forms and suggested corridor-specific strategies.

In September 2025, the focus shifted to network evaluation and scoring, including reviewing network adjustments and refining scoring methods. Updated methodology processes for corridor analysis were presented, and a corridor analysis exercise was conducted for scoring and prioritization. Feedback was gathered to validate criteria, weighting, and strategy selection.

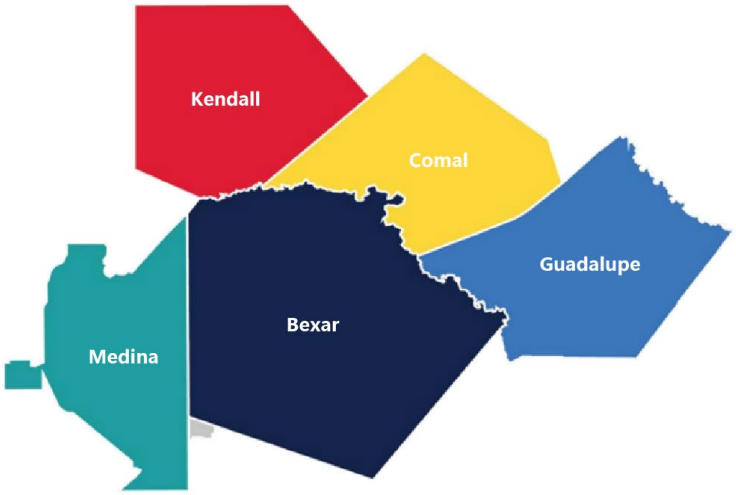
1.3. AAMPO Current Conditions Summary

Metropolitan areas with populations over 200,000, such as AAMPO, are designated as transportation management areas (TMAs). TMAs are required by the federal government to have an ongoing CMP. The study area within AAMPO's Region, highlighted below, is projected to experience considerable population increase over the next three decades that will put additional stress on the transportation system. It is imperative to continue planning efforts to help mitigate the growing mobility needs of the AAMPO area in the years to come.

The AAMPO region is home to a diverse group of residents, businesses, transportation systems, and cultural backgrounds. The region has a rich multicultural identity, with San Antonio often recognized for its majority-Hispanic population.

According to the 2020 ACS 5-year Census data, Kendall, Medina, and Comal counties have higher percentages of White non-Hispanic residents. Guadalupe and Bexar County have the lowest percentages of White non-Hispanic residents as well as the largest metropolitan area.

Figure 3 AAMPO Boundary by County



The region has a relatively young population, with a median age of approximately 34 years in Bexar County. Surrounding counties, particularly Kendall and Comal, have seen an increase in older adult populations as well as suburban development, which creates unique transportation opportunities.

Table 1: AAMPO Area Population and Growth

AAMPO Area Population and Growth Projects			
	2020	2050	% of increase
Texas	29,145,505	N/A	N/A
AAMPO Region	2,438,558	4,232,264	74%
Bexar County	2,009,324	3,353,060	67%
Guadalupe County	172,706	351,776	104%
Comal County	161,501	389,584	141%
Kendall county	44,279	137,844	211%
Medina County	50,748	59,080	16%

Source: Table P1 Total Population; Decennial Census of Population and Housing (2020) and AAMPO Mobility 2050 for 2050 projections. Statewide 2050 population projections are not included, as AAMPO population forecasts are developed specifically for the MPO planning area and are not directly comparable to statewide projections.

The AAMPO region is a key economic driver in central and south Texas, with major employment sectors influenced by military and defense sectors, healthcare and bioscience, tourism and hospitality, freight and logistics, and technology and financial services.

Transit in the region is primarily provided by VIA Metropolitan transit, with bus services in multiple counties. The region has an expanding greenway, trail, and bike/ped network connecting several green hubs to regional park assets.

REGIONAL COMPARISONS

Traffic studies show that the Alamo Area is not yet one of the most congested regions in the country or state, but it has been identified as having one of the fastest growing congestion levels. The average commuter in San Antonio spends more than 48 hours in traffic each year, burning through thousands in costs associated with congestion and an extra 15 gallons of fuel that expels ozone-forming pollutants into the air (Urban Mobility Report, Texas Transportation Institute, 2025).

Table 2 compares San Antonio's congestion with other major Texas cities using three common measures: Annual Hours of Delay per Commuter, Travel Time Index and Daily Vehicle Miles Traveled (VMT).

Table 2: Major Texas Cities Congestion Levels

Urban Area	Annual Person-Hours of Delay per Commuter*		Travel Time Index**	Daily Vehicle Miles Traveled (VMT) Freeway and Arterial		
	Hours	Hours	Hours	Hours	Miles	Miles
	2024	2023	2024	2023	2024	2023
San Antonio	48	46	1.26	1.22	43,467	42,614
Houston	77	73	1.36	1.26	121,827	118,856
Austin	64	63	1.34	1.25	35,847	34,973
Dallas-Fort Worth – Arlington	69	67	1.31	1.23	137,288	133,289

Source: Texas A&M Transportation Institute (TTI) 2025 Mobility Report.

**Yearly Delay per Auto Commuter: Extra travel time during the year divided by the number of people who commute in private vehicles in the urban area.*

***Travel Time Index: The ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.30 indicates a 20-minute free-flow trip takes 26 minutes in the peak period.*

The data in Table 2 shows an increasing trend across annual delays, travel time index and daily vehicle miles traveled. This indicates that the average driver is spending more time traveling overall. Increased delays contribute to negative economic and environmental impacts. Urban sprawl can also contribute to these trends by increasing trip lengths, dispersing travel patterns, and placing additional demand on the roadway network.

Congestion levels have increased across all major Texas regions, as reflected in the measures shown in Table 2. Rising daily vehicle miles traveled (VMT), combined with higher Travel Time Index

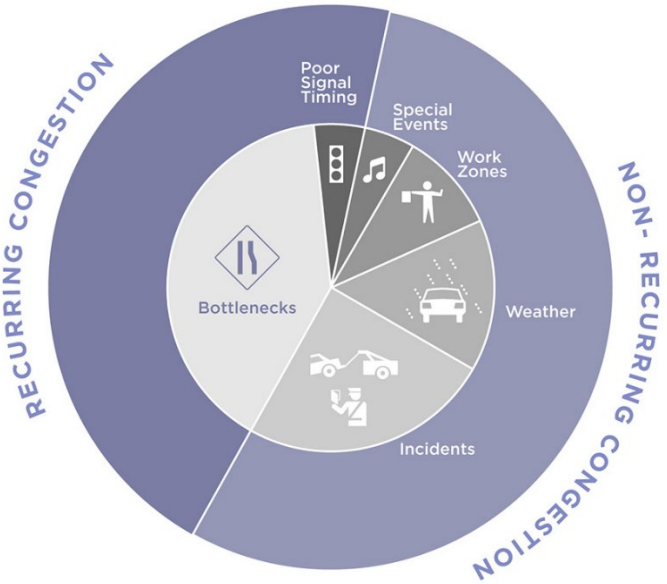
(TTI) values and annual hours of delay, indicate that drivers are spending more time on the road—both in traffic and during regular travel. These delays reduce productivity by limiting the time travelers can devote to economic and social activities. Overall, congestion has grown steadily year over year, rebounding from pre-pandemic conditions and influencing travel behavior for commuters, visitors, and freight across the regional transportation network.

SYSTEM PERFORMANCE

Congestion occurs when travel demand exceeds the available capacity of the transportation system, resulting in slower speeds, longer travel times, and reduced reliability. While congestion is often perceived as a roadway issue, it is influenced by a combination of demand, system performance, and external factors. Typical causes that can lead to exceeding roadway capacity and recurring or non-recurring congestion include:

- Bottlenecks at intersections, interchanges, and other locations where traffic signals, traffic merging or special events cause a change in traffic flow
- A higher percentage of trucks, as trucks accelerate and maneuver more slowly, take up more space, and create larger gaps, especially at bottlenecks, merges, and on grades
- Weather events, such as flash flooding
- Temporary capacity-reducing roadway conditions, such as work zones
- Crashes and other incidents that either partially block roadways or cause passing motorists to slow down

Figure 4: Traffic Congestion Causes (FHWA)

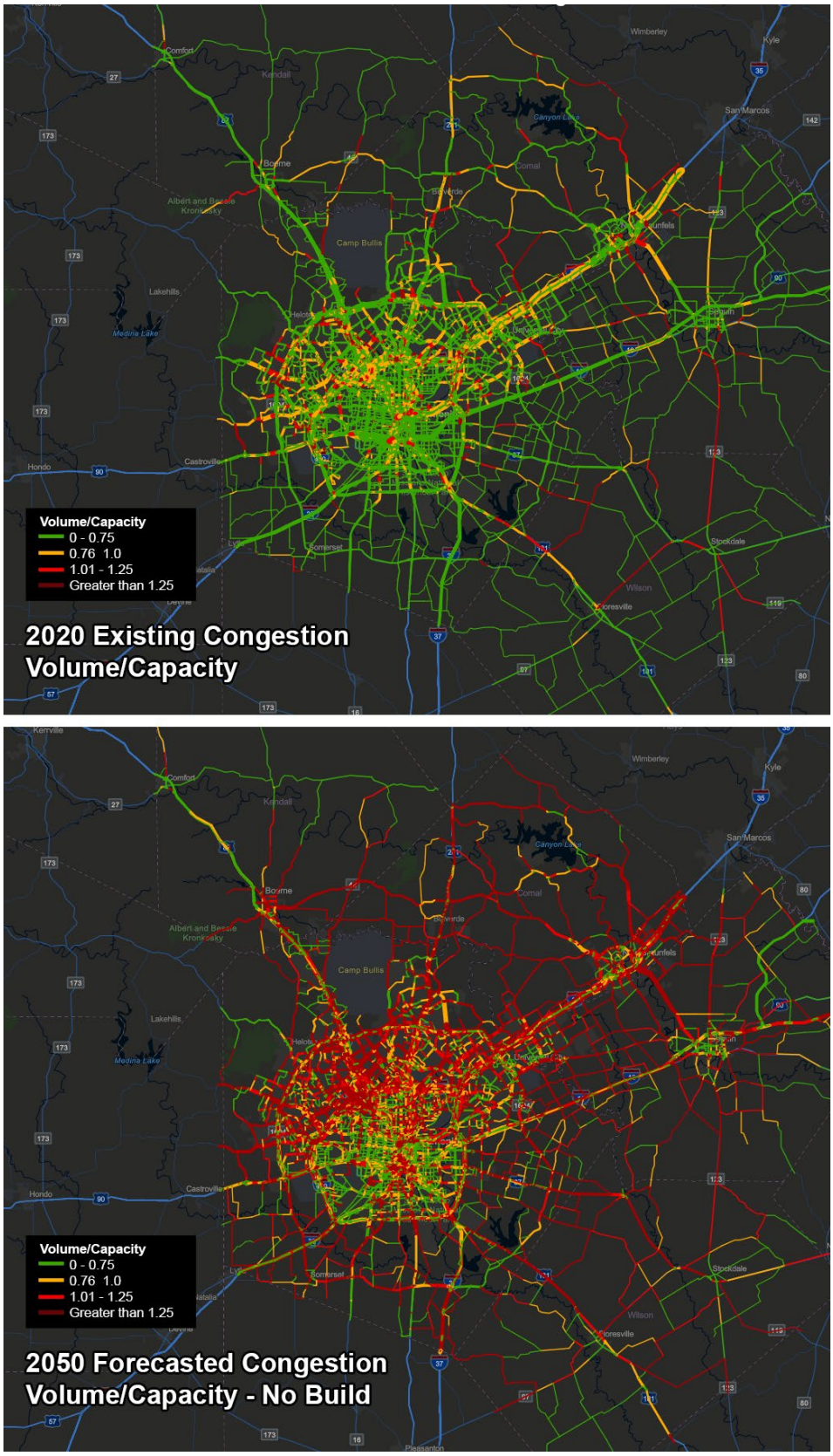


AAMPO CURRENT AND FORECASTED CONGESTION

The 2050 MTP indicates vehicle hours of delay will increase by over 200% compared to current levels under a no-build scenario. As indicated in Figure 5, daily volume-to-capacity ratios are anticipated to increase across the network.

Utilizing the CMP to identify strategies that can help mitigate this increase is critical to prioritizing impactful projects in the region.

Figure 5: AAMPO Area Congestion (Volume/Capacity)



CMP ACCOMPLISHMENTS IN THE REGION

Over the past five years, the Alamo Area has paid significant attention to reducing demand and improving the flow of the transportation system. In October 2018, AAMPO launched Alamo Commutes, a free commuter support and trip-planning program. Alamo Commutes has been operating and expanding annually, hiring new staff and creating various programs designed to encourage participation, use of services, and increase ridership. A Regional Bike Share Master Plan was also completed in 2018, identifying potential future SWell Cycle bike share station locations in Bexar County and exploring the possibility of bike share in Comal, Guadalupe and Kendall Counties. AAMPO adopted a Regional Thoroughfare Plan Study in late 2018 with the resulting product goal being a single classification system for the region's major thoroughfares. This study supports network performance and system flow, promoting effective system planning and roadway classification. A few other key initiatives include:

- The Fort Worth to Laredo High-Speed Transportation Study was adopted in April 2020. This study analyzed various high-speed modes and corridors between Fort Worth, Waco, Temple/Killeen, Austin, San Antonio, and Laredo. The findings suggest that high-speed rail or other high-speed modes of transportation are feasible and a viable solution for transportation issues throughout the state.
- The City of New Braunfels conducted a Transit Study in June 2021 which studied fixed route transit service within city boundaries and service areas. It identified potential transit routes, park and ride or carpooling facilities, street improvements, and other projects meant to increase ridership levels, those project's cost/benefit analyses and potential phases of implementation. They have since launched the new Ride the Rio! on-demand microtransit service and are conducting a new Transit Connection Study (initiated in 2025) that will establish a regional vision for transit and a path to implement it. The study will identify high demand and critical destinations and gaps in transit access.
- The Bexar County 10-year Capital Improvement Program (FY 2021-2022) includes 57 projects, 25 of which are hiking and biking trail projects, which is just shy of 50% of all projects focused on the addition of multi-use trails throughout Bexar County.
- The City of San Antonio's 2022 bond program has budgeted $11.5 million towards proposed citywide pedestrian mobility improvements and continued development of the Howard W. Peak Greenway Trail system and other hiking and cycling trails citywide. These proposed trail improvements include projects that prioritize increased connectivity, safety, mobility, and access through the use of multi-use trails.
- The AAMPO Resiliency Study was adopted with the intention to plan and develop a transportation system capable of accommodating long-term change and be able to recover from unpredictable challenges, including growth and extreme natural or human-made disruptive events.
- The AAMPO Regional Freight Study will conduct a region-wide freight study and plan encompassing the entire Alamo Area MPO Study Area, taking into account current and projected freight trends in the region and across the state. This will include an overview of previous planning efforts and their recommendations, an economic and logistical analysis of freight flow in the region, and an inventory of existing and planned assets

including as well as their condition and performance. This will help further develop a transportation system that is capable of accommodating long-term economic growth and associated challenges.

- VIA Mobility Hubs and Advanced Rapid Transit incorporate short and long-term elements to support VIA's Keep SA Moving Plan and Vision 2040 goals. The will identify sites for mobility hubs and establish guidelines to use in planning and implementing them and further public transportation services.
- TIP Project Prioritization modernization to further prioritize AAMPO priorities and streamline construction efforts.

Since approving the region's previous long-range plan, AAMPO has enhanced the regional Travel Demand Model with four time-period traffic assignment and developed a micro-model capable of better small-area analysis and active transportation planning. Additionally, all Texas MPOs gained access to the National Performance Measures Research Data Set and a suite of roadway speed analytics tools when TxDOT joined the Traffic Performance Metrics Pooled Fund Study.

The region's Intelligent Transportation System (ITS), TransGuide, celebrated its 30th anniversary in 2025. Since its start in 1995, the original 26 miles of freeway coverage by TransGuide has expanded to over 200 miles with construction on an additional 30 miles as of this year. AAMPO STP-MM funding awarded in 2018 will support major upgrades and expansion of TransGuide as well as the creation of a Safety Service Patrol (SSP) which will begin operating on controlled access highways in Bexar, Comal and Kendall Counties in 2019. The SSP will assist stranded motorists with minor emergencies and provide light-duty traffic control. In addition, as a response to the initiative to create a Safety Service Patrol (SSP), the HERO (Highway Emergency Response Operator) program was launched in September 2020, which performs safety service patrol functions in the region.

2. REGIONAL GOALS AND OBJECTIVES FOR CONGESTION MANAGEMENT

For the purpose of this document, the CMP strives to align with and achieve the goals identified in the Mobility 2050 Metropolitan Transportation Plan (MTP). Mobility 2050 goals support and advance the development of a transportation system that contributes to the AAMPO region's mobility, quality of life, system sustainability, and continued project implementation.

The Mobility 2050 MTP vision is presented below, along with goals that are applicable to the CMP.

Mobility 2050 Vision
The 2050 MTP will meet the growing needs of residents, visitors and commerce by:

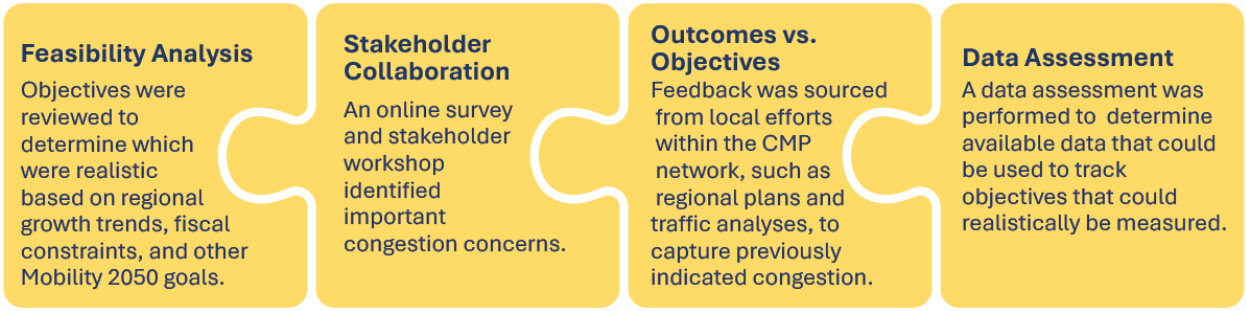
Focusing on the development of a transportation system that is easy to navigate;	Advancing alternative modes of transportation	Increasing equitable accessibility for all users.
Fostering appropriate land use patterns and prioritizing public safety for all forms of transportation;	Mitigating the region's environmental air quality issues	Ensuring impacts on the natural environment are minimized.

Mobility 2050 Goals (applicable to the CMP)			
Improve and enhance the regional transportation system by encouraging innovative partnerships, exploring emerging transportation technologies, and being stewards for the effective and efficient use of existing and future funding sources.	Invest in the existing transportation system and preserve right of way for future system improvements.	Increase the efficiency and reliability of the transportation system, encourage alternative modes of transportation and transit to reduce the use of single occupancy vehicles, and continue to manage traffic congestion.	Maintain a focus on safety, especially for the most vulnerable users, to reduce the number of fatalities and serious injuries.

2.1. CMP Objectives

The CMP objectives for AAMPO are based on the vision and goals in the 2050 MTP. The objectives reflect regional priorities such as mobility, safety, reliability, and environmental sustainability. It is important to identify desired outcomes for congestion management to facilitate the development of CMP objectives that are specific, quantifiable, and linked to overall planning horizons. CMP objectives are achievable through available resources and reflect the collaborative process across all stakeholders. The objectives were developed in coordination with the CMP Working Group as highlighted in section 1.2. Results of survey questions can be found in Appendix A.

When CMP objectives are built on informed decision-making, they can be better paired with multimodal performance measures, allowing for the effectiveness of strategies and progress to be tracked over time. The process, built on data-driven analyses, data assessments, and stakeholder workshops, provided the foundation on which to build regional objectives for the CMP.



OVERVIEW OF CMP OBJECTIVES

Seven congestion management objectives are outlined in the CMP. These objectives work toward Mobility 2050 goals to increase the efficiency of the transportation system and manage traffic congestion. As the CMP is scheduled to be updated again in 2030, this was selected to be the horizon year for each of the objectives. The matrix below presents how the CMP objectives align with and support MTP goals.

Table 3: Alignment of CMP and MTP Goals

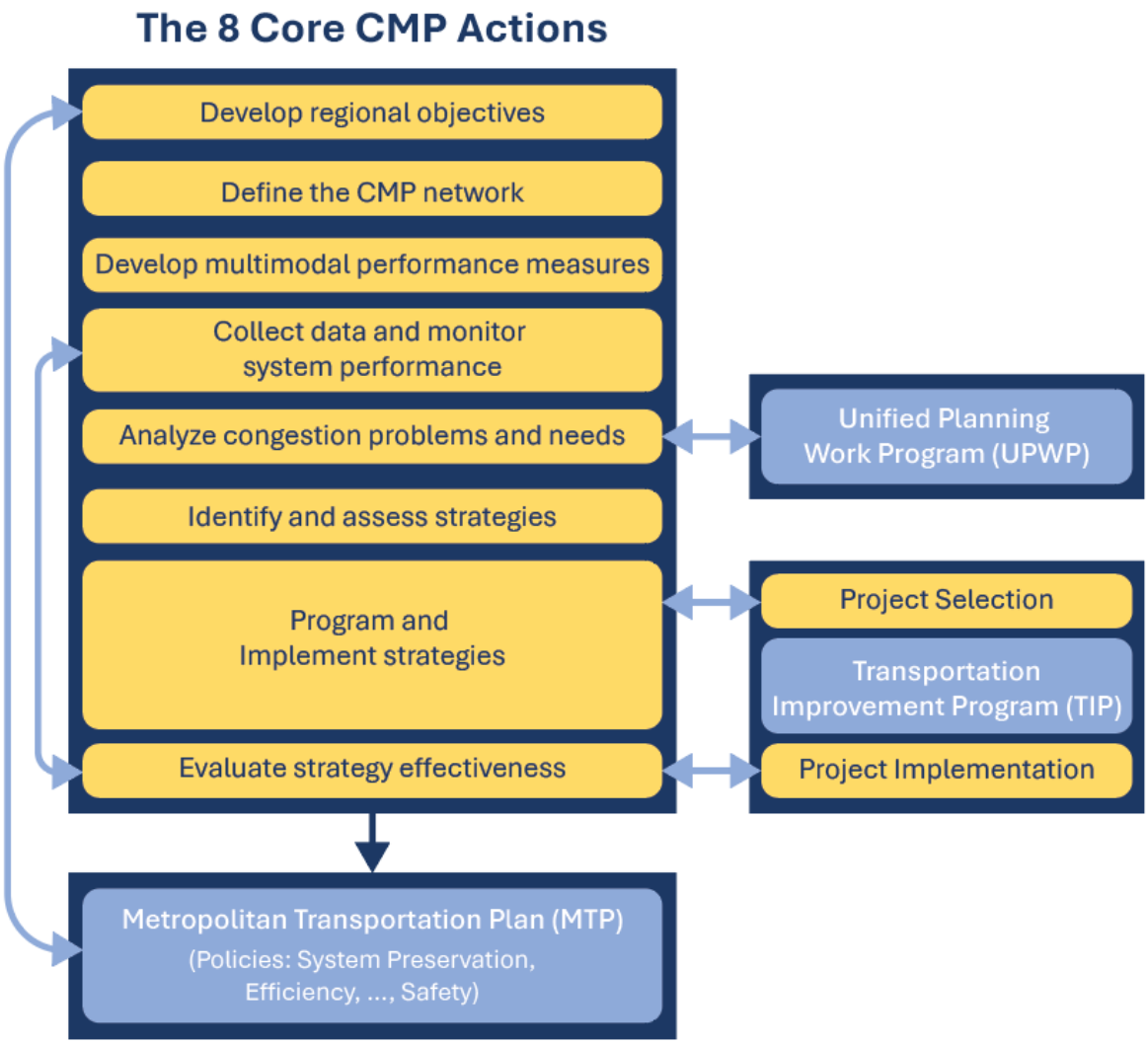
2030 was identified as the horizon year for each of the objectives.	2050 MTP Goal			
	Mobility and Congestion	Reliability and Efficiency	Multimodal Performance and Accessibility	Land Use and Accessibility
1. Maintain hours of delay per capita	✔			
2. Increase interstate reliability to 70%	✔	✔		✔
3. Increase non-interstate reliability to 50%	✔	✔		✔
4. Reduce mean incident clearance times per incident by 20%		✔		
5. Maintain truck travel time on highways	✔	✔		
6. Increase average transit on-time performance to 85%			✔	✔
7. Increase non-SOV travel mode share by 5%			✔	✔

2.2. Integration with Regional Plans, Programs, and Studies

The objectives of the CMP serve as a framework for guiding strategies that enhance mobility, reduce congestion, and promote transportation efficiency across the AAMPO region. These objectives must be integrated with broader regional plans, programs, and studies. Aligning the CMP with the MTP, Transportation Improvement Program (TIP), and other regional initiatives

ensures that congestion management strategies are coordinated, data-driven, and consistent with the region's long-term transportation goals. The following section outlines how the CMP objectives are embedded into these larger planning efforts, creating a comprehensive and cohesive approach to managing congestion and improving overall transportation performance. Figure 6 displays how the actions of the CMP integrate with the MTP, TIP, and UPWP.

Figure 6: Core CMP Actions



CMP INTEGRATION WITH MTP

Mobility 2050 was developed in response to the region's growing transportation needs and efforts with the region's partners and the public. Therefore, the MTP's vision and goals will meet the growing needs of residents, visitors, and commerce through focusing on the transportation system network, alternative modes of transportation, increasing equitable and accessible access, public safety, land use patterns, and protecting the environment and air quality. AAMPO addresses these objectives through its funding of alternative modes of transportation and multimodal planning studies.

Aligned goals, objectives, targets and study area
Informs projects and programs

Some projects include:

- City of San Antonio Multimodal Planning Study
- Bexar County Capital Improvement Program
- Alamo Commutes
- VIA's Transit Oriented Development Planning Pilot
- TxDOT's HERO Traffic Incident Management Program
- Multimodal Regional Throughfare Study Update
- Regional Safety Action Plan
- Regional Bottleneck Study
- Regional Information Technology System (ITS), Traffic Incident Management (TIM), and Traffic Systems Management and Operations (TSMO) Plan
- Guadalupe River Crossing Study Comal County Railroad Crossing Plan

CMP INTEGRATION WITH TIP

Alamo Area's FY 2025-2028 TIP program outlines the fiscal constraints of the federally assisted transportation projects that are implemented in the region over a four-year period. The TIP also includes performance management and measures, realistic estimates of project costs and revenues, priorities, and financial constraints. The TIP's objectives are to ensure implementation of the larger transportation plans and to help the MPO maintain the 3C transportation planning process. CMP strategies and performance measures help prioritize what projects get added to the TIP document. If new congestion-related corridor projects, such as those listed below, are determined to be consistent with the broader regional goals and have demonstrated a score indicating high priority and need, then the project can be reviewed for inclusion in the TIP project database.

- TxDOT's Statewide Freight Plan Update
- Active Transportation Projects and Programs
- VIA's Mobility Hub Study
- Signal Timing Upgrades
- Mobility Corridor Planning
- Congestion Mitigation and Air Quality Projects

- Transit: Advance Rapid Transit Corridor Projects
- Operational Improvement Projects

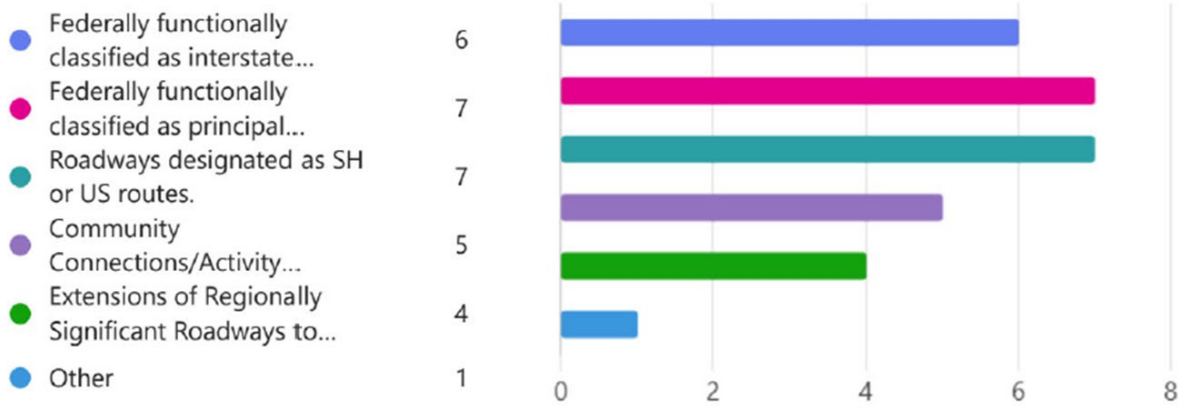
3. CMP NETWORK IDENTIFICATION

AAMPO analyzes congestion and defines its CMP network as all Regionally Significant roadways within the MPO's planning area. Over months of collaboration with state and local transportation planning partners, AAMPO defined Regionally Significant roadways as those that are:

- Federally functionally classified as interstate freeways, other freeways, expressways, or principal arterials
- Intermodal connectors included in the federally adopted National Highway System
- Designated as SH or US routes
- Community connections that provide direct, continuously signed connections between nearby or adjacent census defined urbanized areas, urban clusters and population centers with more than 5,000 people
- Between activity centers that serve as primary regional connectors to an otherwise unserved regional activity center
- Extensions of Regionally Significant Roadways to connect non-connecting termini

As indicated in section 1.2 above AAMPO coordinated with the CMP Working Group to confirm the criteria of the CMP network corridors. Results of the survey are provided in Figure 7.

Figure 7: Survey Results from CMP Working Group: CMP Network Criteria – Regionally Significant Roadways



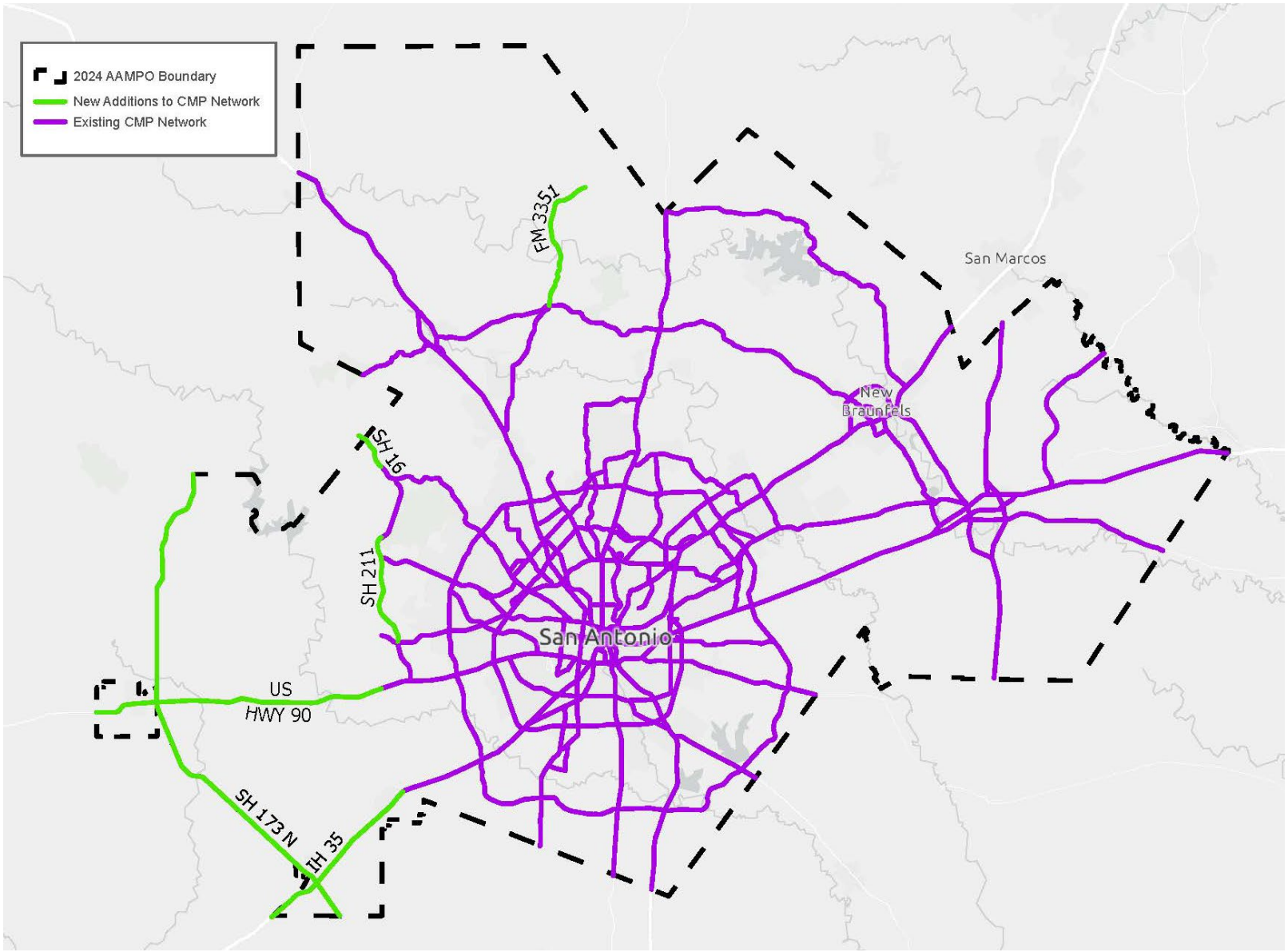
The AAMPO planning boundary was expanded to include a portion of Medina County and all of Kendall County, ensuring regional travel patterns, growth pressures, and transportation needs beyond the urban core are fully represented in long-range planning and congestion management efforts. As a result, the CMP update includes an extended network aligned with the expanded AAMPO boundary.

The CMP Network expanded to include corridors within the new AAMPO boundary. The network includes corridors that are Federally functionally classified as interstate freeways, other freeways or expressways and principal arterials. It includes intermodal connectors included in the federally adopted national highway system and roadways designated as State or US routes. These corridors

often serve as community connections that provide direct, continuously signed access between nearby or adjacent census defined urbanized areas, urban clusters and population centers with more than 5,000 people, and between activity centers that serve as primary regional connectors to an otherwise unserved regional activity center. Finally, the CMP Network also includes extensions of regionally significant roadways to connect non-connecting termini.

Based on the established criteria and expanded boundary, the updated network includes 157 corridors that are targeted for CMP analysis. Figure 8 displays the updated CMP transportation network.

Figure 8: Expanded CMP Network



4. TRANSPORTATION SYSTEM PERFORMANCE CRITERIA AND ASSET INVENTORY

4.1. System Performance

Performance measures are used to monitor the effectiveness of the CMP across the regional transportation network, helping to detect congested areas, monitor progress towards the goals identified in the MTP, and evaluate congestion mitigation strategies. These performance measures are federally mandated and provide data that informs decision-making and provides clear reasoning for why a strategy is implemented and if it is effective over time. They are integrated across AAMPO's planning documents, including the MTP and TIP to align projects with regional, state, and federal goals that will move the needle towards achieving performance targets adopted by the MPO.

To date, AAMPO has adopted performance measures for Safety (PM1), Bridge and Pavement Condition (PM2), Roadway System Performance (PM3), and Transit Asset Management (TAM). Of these targets, those pertinent to the CMP include:

- Safety (PM1)
- Roadway System Performance (PM3)

In 2018, AAMPO staff developed baseline data for eight performance measures tracking congestion at the regional level. These performance measures were updated in 2025 with stakeholder feedback. The MPO's primary role is that of collator, coordinator, and analyzer of data collected by agencies across the region. The performance measures fall under four categories identified in the Mobility 2050 MTP:

- Mobility and Congestion
- Reliability and Efficiency
- Multimodal Performance
- Land use and Accessibility

A total of 16 performance measures are established across the four performance categories (Table 4).

Table 4: AAMPO Region Congestion Performance Measures

Performance Category	Performance Measure	Definition	Source	Responsible Partner	Plan Alignment
Mobility and Congestion	Recurring Congestion (Expected)	Comparison of travel time on a road or route to the free-flow travel time using the Travel Time Index (TTI)	RITIS (NPMRDS)	AAMPO & TTI	MTP and TIP and Regional Thoroughfare Plan
	Non-Recurring Congestion (Unexpected)	Comparison of the travel time on a road or route to the free-flow travel time using non-recurring events such as collisions and response times.	RITIS (NPMRDS)	AAMPO & TTI	MTP and TIP and Regional Thoroughfare Plan
	Vehicle Hours Delay	The average amount of delay experienced by vehicles during peak hours in congested areas	Regional Model	AAMPO	MTP and TIP and Regional Thoroughfare Plan
	Peak Hour Volume to Capacity (V/C) Ratio	Congestion on a road given the traffic volume and road capacity	Regional Model	AAMPO	MTP and TIP and Regional Thoroughfare Plan
Reliability and Efficiency	Crash Rates	Number of crashes per 100,000 vehicle miles traveled (VMT) or per capita for various modes (motor vehicles, transit, bicyclists, and pedestrians)	CRIS	TxDOT	MTP and TIP
	Incident Clearance Times	Average time between the first recordable awareness of an incident and the time the last responder left the scene	TransGuide observations, RITIS	TxDOT	MTP and TIP
	Transit On-Time Performance	Percentage of buses operating on time during peak and off-peak periods.	Automated Vehicle Loading System	VIA	MTP and TIP
	Truck Travel Time Reliability on the Interstate	The measure of the variability in truck travel times across the interstate and CMP corridors using the Truck Travel Time Reliability Index	RITIS (NPMRDS)	AAMPO & TTI	MTP and TIP and Regional Thoroughfare Plan
	Intelligent Transportation Systems Coverage	Deployment of ITS Infrastructure such as traffic signal management, real-time traveler information, and incident management	TxDOT	TxDOT	MTP and TIP and Regional Thoroughfare Plan

Performance Category	Performance Measure	Definition	Source	Responsible Partner	Plan Alignment
Multimodal Performance	Transit Ridership	Number of passengers using public transit services, particularly during peak commuting hours	VIA	VIA	MTP and TIP
	Sidewalk Present	Sidewalk present along CMP corridor	Aerial Imagery, GIS Data	AAMPO and Partner Agencies	MTP and TIP
	Bicycle Facility Present	Bicycle facility present along CMP corridor	Aerial Imagery, GIS Data	AAMPO and Partner Agencies	MTP and TIP
	Park and Ride Facilities	Park and ride facility present along the CMP corridor	GIS Data	Alamo Area Commutes	MTP and TIP
	Transit Centers	Present along the CMP corridor	VIA, AAMPO, GIS Transit Data	AAMPO and VIA	MTP and TIP
Land Use and Accessibility	Population Accessibility	Population within ¼ mile of the CMP corridor	VIA	AAMPO and VIA	MTP and TIP
	Employment Accessibility	Employment within ¼ mile of the CMP corridor	VIA	AAMPO and VIA	MTP and TIP

HOW CMP OBJECTIVES RELATE TO PERFORMANCE MEASURES

The performance measures have been correlated with applicable CMP objectives in order to establish baseline regional conditions and successful evaluation of the effectiveness of proposed CMP strategies. There is an opportunity to include additional performance measures in the future, however, due to data availability and resources, AAMPO has elected not to do so at this time.

The following objectives have been identified with targets to be achieved by 2030:

- Maintain hours of delay per capita
- Increase interstate reliability to 70%
- Increase non-interstate reliability to 50%
- Reduce mean incident clearance time per incident by 20%
- Maintain truck travel time on highways
- Increase average transit on-time performance to 85%
- Increase Non-SOV Travel Mode Share by 5%

Table 5: Alignment of CMP Objectives with Performance Measures

Performance Measures	CMP Objectives						
Mobility and Congestion	Maintain hours of delay per capita	Increase interstate reliability to 70%	Increase non-interstate reliability to 50%	Reduce mean incident clearance times	Maintain truck travel time on highways	Increase average transit on-time performance	Increase non-SOV mode share
Recurring Congestion		✓	✓		✓		
Non-Recurring Congestion		✓	✓		✓		
Vehicle Hours of Delay	✓						
Peak Hour Volume to Capacity Ratio	✓						
Reliability and Efficiency							
Crash rates per 100 million Vehicles Miles Traveled				✓			
Incident Clearance Times				✓			
Transit On-Time Performance						✓	
Interstate Truck Travel Time Reliability Index					✓		
ITS Coverages	✓	✓			✓		
Multimodal Performance							
Transit Ridership						✓	✓
Sidewalk Present							✓
Bicycle Facility Present							✓
Park and Ride Facilities							✓
Transit Centers						✓	✓
Land Use and Accessibility							
Population within ¼ mile of CMP corridor						✓	✓
Employment within ¼ miles of CMP corridor						✓	✓

4.2. Asset and Data Inventory

Collecting data helps to develop an asset inventory to help efficiently monitor the transportation system. This exercise involves curating an extensive database from a variety of sources over a prolonged period of time. AAMPO collates, organizes and analyzes data collected by various transportation partners to:

- Define the extent and duration of congestion
- Help determine causes of congestion
- Evaluate the efficiency and effectiveness of implemented actions

PERFORMANCE CRITERIA

To support a clear, consistent, and multimodal evaluation of congestion across the CMP network, performance measures are organized into four evaluation categories, Alternative Roadway Infrastructure Modal Options, System Demand, And System Reliability. Each Category is assigned a defined point allocation, with a maximum combined score of 100 points. The specific performance measures and scoring methodology for each category are described in the sections that follow.

- **Alternative Roadway Infrastructure**: Alternative roadway infrastructure refers to whether a project is a parallel expressway or arterial that can help divert traffic away from congested locations. It also refers to projects including direct connections through interchanges to other highways, again helping to distribute traffic across the network and away from congested areas. Factors that influence access to/from the region, between regional activity centers, and to/from local land uses:
    - Parallel expressways (within 5 mi)
    - Parallel arterials (frontage roads, major and minor arterials within 1 mi)
    - Direct connections (interchanges) to other highways

- **Modal Options**: Modal options refer to projects offering alternatives to traditional single occupancy vehicle commuting. This includes public transportation, various forms of rideshare, managed or high occupancy vehicle (HOV) lanes, and bike or pedestrian infrastructure. Factors that influence the viability of traveling by alternative modes on the corridor include:
    - Public Transportation
    - Rideshare (Park-and-Ride, Transit Center, Park-and-Pool)
    - Managed/HOV lanes
    - Bike or pedestrian facility

- **System Demand**: System demand refers to the capacity of a roadway compared to the demand to use it. This includes the volume to capacity ratio at peak times, the percentage of this traffic catering to truck freight, excessive delay at peak times, and how regionally significant a roadway is. Factors that influence the size of demand for roadway space on the corridor include:
    - 2025 Peak volume over capacity (V/C)
    - Peak Hour Excess Delay (PHED)
    - 2025 Truck volume percentage
    - Roadway Significance

- **System Reliability**: System reliability refers to if commute times along a roadway remain consistent day to day. Causes of poor reliability can include frequent collisions and poor signal timing, among other things. Factors that influence occasional (non-recurring) traffic congestion on the corridor include:
    - Crash rates
    - Shoulders

- Safety Service Patrol coverage
- Intelligent Transportation System technology

These factors are prioritized and weighted to create a set of evaluation criteria to run the network through. Information about the CMP network and database are at https://www.alamoareampo.org/Congestion/. AAMPO staff reviews the CMP network database for accuracy during updates to the MTP.

5. ANALYSIS OF CONGESTION PROBLEMS AND NEEDS

One of the final steps in the congestion management process is to identify which corridors within the corridor network require improvements based on the performance/scoring criteria and which improvements they need. Scoring the CMP network is essential for AAMPO as it provides a transparent, data-driven way to compare corridors, identify the most critical congestion and reliability challenges, and prioritize investments across a multimodal system. By applying consistent performance criteria, corridor scoring helps align limited funding with regional goals, supports defensible project selection, and ensures congestion management strategies are targeted where they will deliver the greatest benefit.

5.1. CMP Scoring Criteria

The information collected through the corridor inventory described previously is used to score each corridor based on its capacity to handle congestion. The maximum score a corridor can receive is 100 points (25 points per category). Corridors with higher scores are equipped with more travel options to alleviate congestion from the main roadway facility. Corridors with lower scores are candidates for improvements based on the sufficiency score of each category. It's also important to score CMP corridors based on facility type as different roadway types serve distinct purposes and have different performance expectations. Evaluating them using uniform thresholds can mask true congestion issues and lead to ineffective or inappropriate strategies. Facility specific scoring provides a more accurate understanding of corridor performance.

Table 6 establishes facility-specific scoring thresholds that recognize the fundamentally different operational roles and performance expectations of expressways/freeways versus arterials, as well as the contextual differences between urban and non-urban areas. Applying a single scoring scale across all facility types would bias results, as expressways and arterials operate under different design constraints, access characteristics, and performance limitations across Land Use and Accessibility, Multimodal Performance, Mobility and Congestion, and Reliability and Efficiency.

Expressways and freeways are designed to carry high volumes of traffic at higher speeds with limited access points. They typically have fewer direct connections to adjacent land uses, fewer parallel facilities, and limited opportunities for diversion, which constrains performance under Land Use and Accessibility measures such as population and employment proximity, alternate corridors, and direct interchanges. From an operational perspective, expressways are also more sensitive to Mobility and Congestion and Reliability and Efficiency factors, including vehicle hours of delay, peak-hour excessive delay, crash rates, incident clearance times, and truck travel time

reliability. As a result, even moderate increases in delay or reliability degradation can significantly affect system performance. For this reason, lower numerical thresholds are used to define "good," "sufficient," and "poor" performance for expressways/freeways. Scores above 50 in urban areas (or 40 in other areas) indicate that the facility is functioning relatively well given its operational role, while scores below 30 (urban) or 25 (other) reflect substantial congestion, poor reliability, or recurring operational deficiencies.

In contrast, arterials serve a more complex function, balancing mobility with access to adjacent land uses, intersections, and local circulation. Arterials typically serve higher concentrations of population and employment within walking distance, have more frequent access points, and provide greater availability of parallel routes and alternate paths, resulting in stronger performance under Land Use and Accessibility measures. Arterials are also more likely to support Multimodal Performance, including transit service, transit centers or park-and-ride facilities, and bicycle and pedestrian infrastructure. Because these characteristics inherently introduce more friction and variability such as signalized intersections and turning movements arterials are expected to achieve higher composite scores to be considered high performing. Consequently, higher thresholds are used, with scores above 75 in urban areas (or 50 in other areas) indicating good performance. Scores below 50 in urban areas (or 30 in other areas) indicate poor performance, reflecting excessive delay, poor signal progression, limited multimodal effectiveness, or constrained accessibility.

Urban and non-urban contexts further influence expected performance across all CMP categories. Urban facilities typically experience higher traffic volumes, greater freight activity, denser land use patterns, and more complex multimodal interactions, which justify higher performance thresholds. In non-urban or developing areas, lower traffic volumes and less intensive land use along with limited transit and active transportation options often result in lower baseline scores, especially for Multimodal Performance. This distinction helps ensure rural or suburban corridors are not unfairly penalized when compared with dense urban facilities.

Under this approach, the "good," "sufficient," and "poor" categories represent relative performance within each facility and context type, rather than absolute comparisons across all corridors. Area Type has been removed from the Mobility and Congestion scoring inputs to avoid double-counting, as urban versus non-urban context is already reflected in the Overall Score Rating thresholds. This results in a more balanced, transparent, and context-sensitive CMP evaluation framework that aligns closely with CMP best practices and the performance measures used in Table 6.

Table 6: Facility Specific Scoring Thresholds

Overall Score Rating	Performance Level	Area Type: Urban	Area Type: Other
Expressways/Freeways	Good	> 50	> 40
	Sufficient	30 - 50	25-40
	Poor	< 30	< 25
Arterials	Good	> 75	> 50
	Sufficient	50 - 75	30 - 50
	Poor	< 50	< 30

Figure 9 provides a comprehensive summary of how the total corridor score is calculated by aggregating results from four key categories. These categories collectively assess the corridor's ability to manage congestion and maintain efficient traffic flow. Each category contributes a specific component to the overall score, ensuring a balanced evaluation of performance. For reference, the detailed scoring methodology and criteria for each category are outlined in Table 7, which explains the metrics and thresholds used in the CMP Corridor Scoring process.

Figure 9: Corridor Scoring Methodology

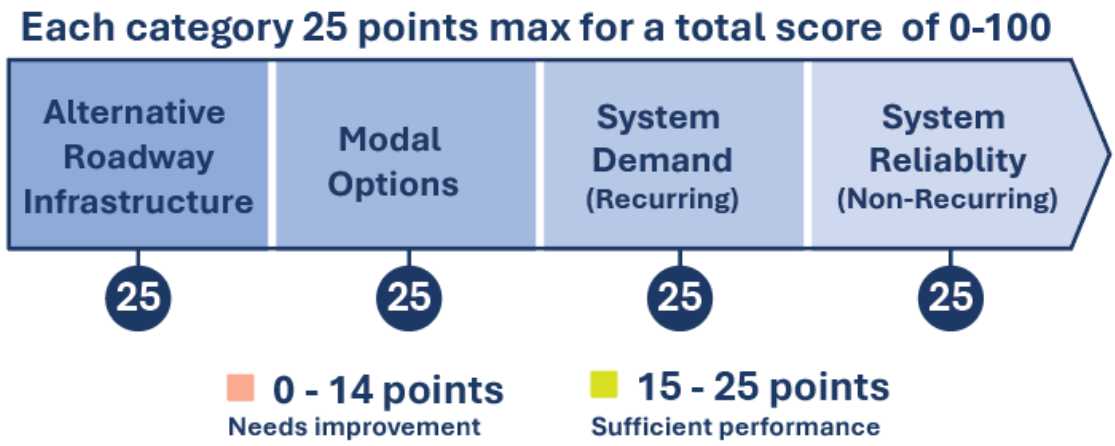
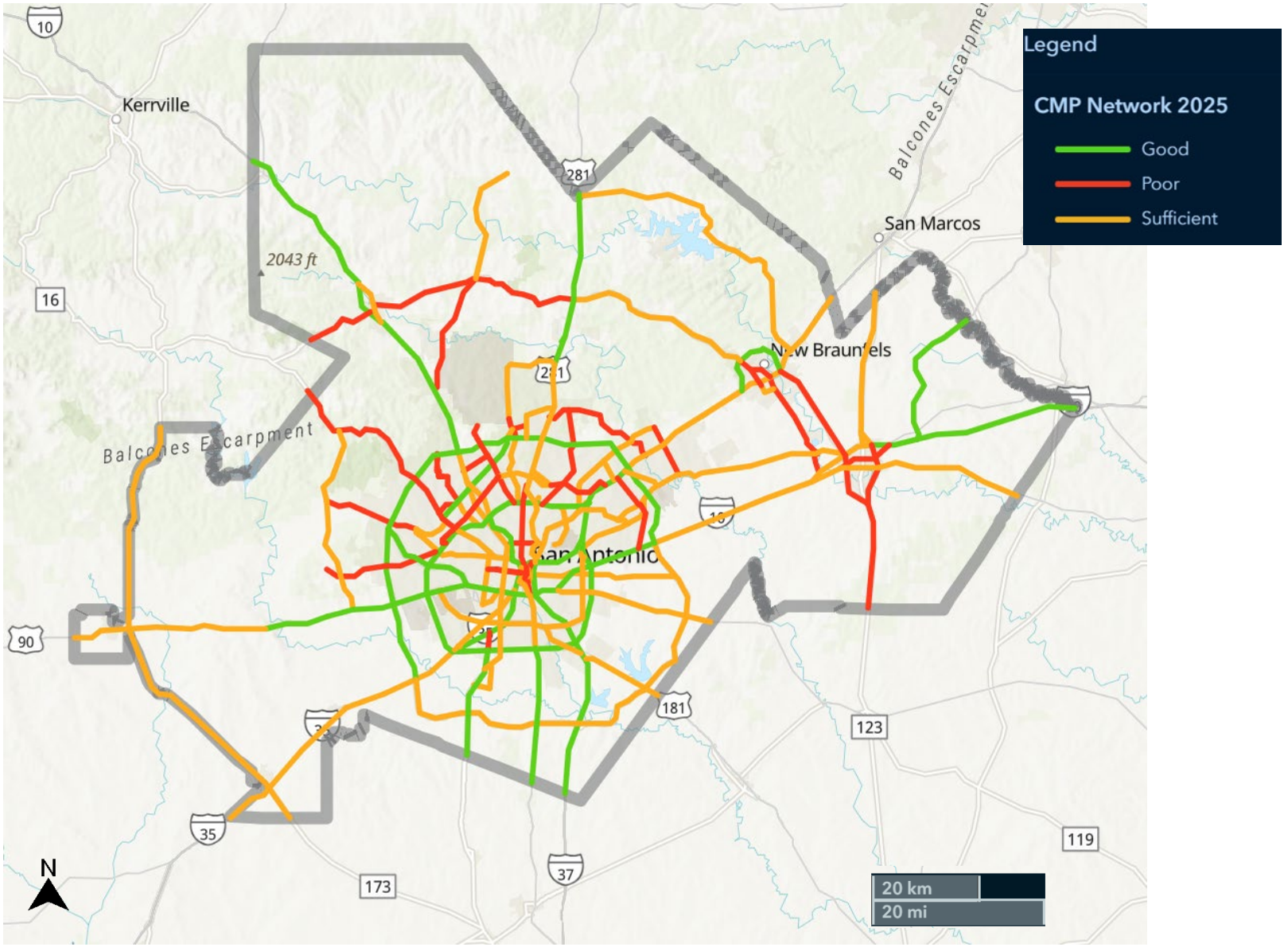


Table 7: CMP Corridor Scoring Criteria

Category	Inventory	Measure	Points	Max Points
Alternative Roadway	Parallel Expressway (within 5 miles)	Yes	10	25
		No	0	
	Parallel Arterials (frontage roads, major and minor arterials within 1 mi)	Entire Limits	10	
		Partial Limits	5	
		None	0	
	Direct Connections (Interchanges) to other highways	Yes	5	
		None	0	
Modal Options	Public Transportation	High Frequency Routes (on facility)	10	25
		High Frequency Routes (1/4 Mile)	5	
		Bus (on facility)	8	
		Bus (1/4 mile)	4	
	Rideshare (Park-and-Ride, Transit Center, Park-and-Pool)	On Facility	6	
		Walking Distance	3	
	Managed/HOV Lanes	Yes	5	
		None	0	
	Bike or Pedestrian Facility (entire corridor)	Bike Facility and Sidewalk	4	
		Bike Facility (on facility)	2	
		Bike Facility (connects to facility)	1	
		Sidewalk (both sides of the road)	2	
		Sidewalk on both sides with connecting facility	3	
		Sidewalk on one side with a connecting bike facility	2	
		Sidewalk (one side of the road)	1	
		None or Incomplete	0	
System Demand (Recurring)	2025 Peak Hour VC (avg. 0.80)	Below or Average	10	25
		Above	1	
	PHED	At or Above 60% design	5	
		Below 60% design speed	1	
	2025 Truck Volume Percentage (avg. 12%)	Below	5	
		Above	1	
	Roadway Significance	Regional Significance	1	
		Sub-Regional Significance	3	
		Local Significance	5	
System Reliability (Non-Recurring)	Crash Rates	Below the Average	10	25
		At the Average	5	
		Above Average	0	
	Shoulders	Full Outside and Inside	4	
		Full Outside or Inside	3	
		Partial Limits	1	
		None	0	
		Refuge areas (for surface streets)	1	
	Safety Service Patrol Coverage	Entire Limits	3	
		Partial Limits	1	
		None	0	
	ITS	Entire Limits	3	
		Partial Limits	1	
		None	0	

5.2. Congested Corridor Evaluation



5.3. CMP Corridor Fact Sheets

Corridor fact sheets are developed to provide a clear, consistent snapshot of performance for the CMP network corridors. Each fact sheet compiles key data, such as traffic volumes, speed and reliability measures, safety indicators, transit service, and available alternative routes into a standardized, easy-to-read format. This approach allows corridors to be compared objectively, supports data-driven scoring and prioritization, and gives policymakers and stakeholders a practical tool for understanding congestion conditions and potential improvement strategies. Appendix B provides fact sheets for the CMP network.

6. STRATEGY IDENTIFICATION

A toolbox of strategies that help to achieve the objectives of the CMP and support the goals of the 2050 MTP are outlined in the following section. These strategies were selected from a baseline set of strategies widely recognized in transportation planning. This toolbox of strategies follows FHWA guidance and MPO Best Practices and consider regional priorities across AAMPO's transportation network. The baseline set of strategies available for congestion management efforts were screened through a lens of implementation feasibility and expected benefits for each target location.

The screened list of strategies is presented in two overarching categories.

1. Policy, Program, or System Level Strategies
2. Corridor or Project Level Strategies

6.1. Policy/Program/System Level Strategies

POLICY MANAGEMENT

Policy Management includes existing and new ordinances and regulations that impact the transportation system. Policy management can be an effective strategy for congestion management because it can go beyond physical infrastructure by addressing system-level behaviors and incentives:

- **Land Use:** Adopt policies that discourage urban sprawl and promote high-density and mixed-use development that supports and encourages travel by walking, bicycling and transit.
- **Preservation of Green Space**: Preservation of undeveloped land and green space can help to limit low-density sprawl by encouraging dense, mixed-use development. Green spaces can be integrated with multi-modal travel modes, encourage non-motorized travel, improve air quality, and supports land-use policies.
- **Parking Management**: Adoption of policies that encourage more efficient use of existing public and private parking facilities. Permit shared parking where peak times for multiple land uses differ (office and restaurant), adjust parking rates to match demand, and implement use of apps or digital signage to help drivers navigate to available parking.
- **Vehicle Use Limitations**: Refers to geographic areas where travel by car is restricted; can also include implementing no-drive days.

- **Preserve Neighborhood Aesthetic**: Refers to congestion mitigation with improvements complementing and protecting the cultural and historical nature of a corridor, neighborhood or geographic area.
- **Transit-Oriented Development (TOD)**: Minimizes car dependency, thereby helping to reduce congestion, by placing housing, jobs and amenities near transit; can also encourage public transit ridership.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

ITS is a framework of interconnected hardware and software that integrates data, communications and technology to improve the safety, efficiency and reliability of a transportation network. Components of ITS include:

- **Advanced Traffic Management**: dynamically managing roadway conditions based on prevailing and predicted traffic conditions. Examples include lane assignment, dynamic speed limits, adaptive ramp metering and real-time travel information.
- **Advanced Public Transit Systems**: on-board vehicle locating system to ensure travel time reliability and communications between buses and headquarters.
- **Emergency Management**: related to disaster threats and marshalling resources.

The San Antonio District of the Texas Department of Transportation (TxDOT) has developed TransGuide, an ITS tool that helps manage traffic in the Alamo Area. This "smart highway" project provides information to motorists about traffic conditions, such as accidents, congestion and construction. With the use of cameras, message signs and fiber optics, TransGuide can detect travel times and provide that information to motorists through highway message signs through use of the Internet and a Low-Power Television Station. TransGuide helps emergency responders rapidly respond to crashes and emergencies. Partners in the TransGuide project include TxDOT, the City of San Antonio (police/fire/EMS/traffic), and VIA Metropolitan Transit.

ADVANCED TRANSPORTATION SYSTEMS

Advanced Transportation Systems are new strategies and technologies for the region including:

- **Premium Transit**: Provision of beyond-basic transit such as enhanced bus (Primo), Bus Rapid Transit (BRT), and Light Rail Transit (LRT)
- **Managed Lanes**: High Occupancy Vehicle lanes, express lanes or other special lanes
- **High Speed Rail**: TxDOT completed the first phase of a Texas-Oklahoma Passenger Rail Study in 2017 and found high speed passenger rail between San Antonio and Dallas-Fort Worth feasible.
- **Active Parking Management**: Dynamic overflow transit parking, parking reservations, wayfinding, and priced parking. Examples of active parking management technologies include parking sensors, upgraded smart meters, demand-responsive pricing, real-time parking availability information, and smartphone applications.

OPERATIONAL MANAGEMENT

Operational Management includes techniques to optimize capacity and improve safety and reliability of the roadway system. Operational Management includes the following:

- **Connected and Automated Vehicle (CAV) technology**: Connected vehicle enables vehicles to wirelessly communicate with other vehicles and infrastructure. Automated Vehicle technology enables a vehicle to operation with varying levels of automation, with or without driver input. There are five different levels of automation ranging from assisted parking to lane assistance to high automation.
- **Incident Management**: Improves traffic flow and safety by using traffic cameras, sensors, connected vehicle data, public reports via 911, mobile apps, highway patrol, and interdepartmental pre-established protocols between police, fire, EMS to clear incidents, crashes and unique/individual hazardous events.
- **Access Management**: Limits the number and placement of access points such as driveways on major roads; also includes the use of roadway medians and turning restrictions to improve safety and traffic flow.
- **Signalization and Traffic Flow Improvements**: Optimizes traffic signals, adds turn lanes or reversible lanes to improve efficiency. The Superstreet concept, or Restricted Crossing U-Turn (RCUT) is an innovative intersection design that prevents side-street traffic from crossing the major route of travel and can be applied to improve traffic flow and safety.
- **Railroad Crossing Improvements**: Installation of gates and warning signals at railroad crossings or building grade-separated crossings to improve safety.
- **Construction Coordination**: Coordination of construction with other known projects in an area and scheduling the work during non-rush hour periods; keeping the public informed and providing improved signage throughout construction zones for safer travel.
- **Freight Management**: Monitoring freight travel patterns and identifying preferred truck routes or truck lanes.

TRAVEL DEMAND CAMPAIGNS

Travel Demand Management Campaigns help reduce automobile use and congestion. AAMPO's "Alamo Commutes" and Walkable Community Programs educate employers and community members about these efforts.

- **Rideshare Programs**: Informal and employer sponsored carpool and vanpool programs. 'Alamo Commutes' offers a free mobile app and desktop website for commuters to match other nearby commuters for carpooling. Users can log trips to earn rewards at local area retailers and restaurants.
- **Flexible Work Hours**: Offers staggered schedules, flexible hours and compressed work weeks that allow employees to arrive and leave work outside the traditional rush hour.
- **Guaranteed Ride Home Program**: Assures commuters who take alternative transportation a ride home in the event of a medical or family emergency. 'Alamo Commutes' states that if someone has taken alternative transportation to work and has an emergency, the program will cover the cost of your ride home as long as you meet the eligibility criteria.
- **Telecommuting**: Working full or part-time at home, at a satellite or branch facility.
- **Walkable Community Program**: AAMPO hosts Walkable Community Workshops to help identify challenges and barriers to walking and identify potential improvements to help make walking a safer, more attractive option.

6.2. Corridor/Project Level Strategies

CORRIDOR IMPROVEMENTS

Corridor improvements are strategies for corridors that are at least one mile in length. They focus on congestion management approaches for specific locations or routes, rather than the entire regional network.

- **Capacity Improvements**: Adds more vehicle travel lanes to roads in both directions; for high demand travel flow in one direction, reversible lanes during peak hours could be considered.
- **Congestion Relief Corridors**: A designated route prioritized for improvements to reduce congestion.
- **Bottleneck Removal**: Improvements such as roadway widening that provide shoulders and improved sight lines or auxiliary lanes to improve merging and diverging. This also includes interchange modifications to decrease weaving sections on a freeway and intersection modifications such as adding dedicated turn lanes and realigning intersecting streets.
- **Roadway Rehabilitation**: Keeping roadway surfaces in prime condition optimizes performance of existing infrastructure, thereby allowing for better reliability and a lower need for major reconstruction. Regular maintenance and filling of potholes and minor resurfacing projects will help to stabilize the roadway structure.
- **Bicycle Facilities**: The addition of bicycle lanes protected or buffered bicycle lanes, multi-use paths, and end-of-ride amenities such as bicycle racks and lockers can encourage mode shift by providing a safe alternative to driving.
- **Pedestrian Facilities**: A well-connected pedestrian network provides safe accessible infrastructure and can help to make walking a viable alternative for short trips. Improving sidewalks, adding countdown and/or audible signals and crosswalks and safe refuge areas can help to improve the walking comfort of a corridor.

PUBLIC TRANSPORTATION IMPROVEMENTS

Public transportation improvements can be a highly effective congestion management strategy by providing a high-capacity, efficient alternative to the use of single-occupancy vehicles.

- **Transit Service Enhancements**: Expanding service areas and hours of service, adding new transit routes, improving service frequency on existing routes, extending routes to serve more areas, and optimizing route-times for faster transfers can individually and collectively help to increase mode share for transit.
- **Transit Facilities**: The addition of amenities such as benches, passenger shelters, and real-time bus arrival information; also includes enhancing and constructing passenger facilities such as transfer centers, park & rides, or multi-modal terminals.
- **Ridership Incentives**: includes programs that encourage transit use such as reduced fares, monthly passes and employer subsidies for the passes.

7. PROGRAM AND IMPLEMENTATION STRATEGIES

As CMP objectives and performance measures are updated, they also become part of the technical scoring process used to prioritize and select projects in the TIP and MTP. CMP corridor scoring criteria serves as an additional tool for TIP and MTP project selection during the TAC and TPB decision-making process. Strategies identified in the CMP are implemented through the actions of AAMPO transportation partners such as the Alamo Area Council of Governments, Alamo Regional Mobility Authority, cities and counties throughout the region, TxDOT and VIA Metropolitan Transit/Advanced Transportation District. During project planning and design, project sponsors are asked to consider appropriate strategies for addressing local congestion issues on the CMP network by providing key project information on a CMP Form.

7.1. Implementing the CMP into AAMPO Planning Efforts

The CMP is developed and implemented through projects programmed in the MTP, TIP and other sub-regional plans. The CMP identifies objectives, performance measures, and strategies for congestion management. These are incorporated into the MTP as fiscally constrained priorities and later programmed in the TIP with funding and schedules. The projects are ultimately refined in sub-regional and corridor plans using CMP data and recommended strategies such as ITS, demand management, and multimodal improvements.

CMP CAPACITY EXPANSION PROJECTS AND STRATEGY FORMS

For CMP analysis purposes, capacity expansion projects such as the addition of general-purpose lanes, new roadways or frontage roads, and non-safety related grade separations and interchange improvements, project sponsors are requested to complete a CMP form to ensure that key project details, congestion impacts, and proposed mitigation strategies are clearly documented and evaluated in a consistent manner. This process helps confirm that projects address identified CMP needs, encourages consideration of multimodal and operational solutions, and supports transparent, data-driven decision-making as projects advance toward funding and implementation. These forms can be found in **Appendix C**.

7.2. Public, Stakeholder and Interagency Coordination

AAMPO communicates with the public and their transportation partners through a variety of communication tools. These include virtual and in-person engagement, social media and virtual campaigns, newsletters and other digital engagement, and staff participation at public events. AAMPO's TAC meets the first Friday of every month and facilitates stakeholder engagement in MPO planning efforts, including project development discussions related to the CMP. The TPB meets every fourth Monday of the month and serves as the forum where policy makers enact decisions, such as adoption of the CMP, MTP, and TIP. In the event documents are made available for public comments, the public must be notified. Additionally, AAMPO's board and committee meetings are open to the public and provide the opportunity for community members to engage with decision-makers.

8. EVALUATING STRATEGY EFFECTIVENESS

Strategies are generally evaluated for their potential and actual success through staff-level technical analysis. New mobility data from the NPMRDS allows AAMPO to study current and historic speeds on hundreds of roadway segments within the study area by utilizing user-generated travel data.

For operational and infrastructure projects on roadways included in the NPMRDS, AAMPO can now compare before-and-aftereffects of the investment. Because projects are built or coordinated by agencies other than the MPO, it is critical that AAMPO make robust use of our own committees and those of our partner agencies to relay the effectiveness of strategies and to maintain consistency between planned/programmed projects and the CMP. Over time, AAMPO's online dashboard at www.alamoareampo.org/TPM and Performance Report chapter of the Metropolitan Transportation Plan will be a valuable tool for tracking performance toward reaching CMP goals.

8.1. System Monitoring

AAMPO will continue to monitor the corridors and the performance of strategies identified during this CMP update utilizing performance measures outlined earlier. This allows AAMPO and local jurisdictions to identify how effectively strategies are working and whether any adjustments need to be made or if an alternative approach should be implemented in the future. This process will inform other initiatives and can be consolidated with other performance measures in an AAMPO System-wide Performance Report. This can be accompanied by a digital monitoring platform, such as a performance dashboard. This report can serve the MPO as a consolidated report on progress towards state and federal initiatives across the CMP, MTP, and TIP. It will also better inform future existing conditions assessments across the MPO study area and identify transportation related trends in the region. This will lend itself to customized implementation strategies that are tailored to the AAMPO region moving forward.

8.2. Project Evaluation

In addition to monitoring systemwide performance, AAMPO will evaluate the effectiveness of individual CMP strategies by comparing conditions before and after project implementation using a standardized, repeatable process.

1. IDENTIFY APPLICABLE PERFORMANCE CRITERIA

For each implemented strategy, AAMPO will identify the relevant CMP performance measures and note any project-specific considerations. Using the established CMP criteria ensures that project-level outcomes are directly tied to regional congestion management goals and allows results to be compared consistently across projects and over time.

2. ESTABLISH EVALUATION TIMEFRAME

AAMPO will define a consistent evaluation period for each strategy to allow for meaningful comparison and to minimize seasonal or short-term variability. A two- to three-year post-

implementation monitoring period will typically be used, unless project characteristics warrant an alternative timeframe.

3. COLLECT BEFORE-AND-AFTER DATA

AAMPO will collect baseline data prior to implementation and comparable data following implementation. This before-and-after approach ensures sufficient information is available to quantify changes in congestion, reliability, safety, and multimodal performance.

4. EVALUATE PERFORMANCE CHANGES

Collected data will be analyzed to measure changes in performance relative to baseline conditions. These results will be used to determine the extent to which each strategy met its intended objectives and contributed to congestion reduction or improved system performance.

5. DOCUMENT RESULTS AND APPLY FINDINGS

Evaluation results will be documented and used to inform future CMP updates, including potential adjustments to corridor prioritization, strategy selection, or evaluation criteria. AAMPO will also track implemented strategies since the previous CMP update and assess correlations between strategy types and observed performance outcomes to strengthen future congestion management decisions.

9. CMP UPDATES AND NEXT STEPS

AAMPO strives to update the CMP on a five-year cycle to ensure the process remains current, data-driven, and aligned with evolving regional travel patterns, land use, and policy priorities. Regular CMP updates allow AAMPO to refresh the CMP network, performance measures, and evaluation methodologies to reflect changes in roadway operations, transit service, technology, and available data sources. This periodic update also ensures consistency with the other planning efforts as described previously, and federal CMP requirements, supporting defensible and transparent decision-making.

Between CMP updates, AAMPO will continue to monitor system performance using the established performance measures to track congestion trends, reliability, safety, and multimodal conditions across the region. Ongoing monitoring enables AAMPO to identify emerging congestion issues, assess system-wide impacts of growth and investment, and provide timely insights to member jurisdictions and partner agencies. This continuous performance tracking ensures that the CMP remains a living process rather than a one-time planning exercise.