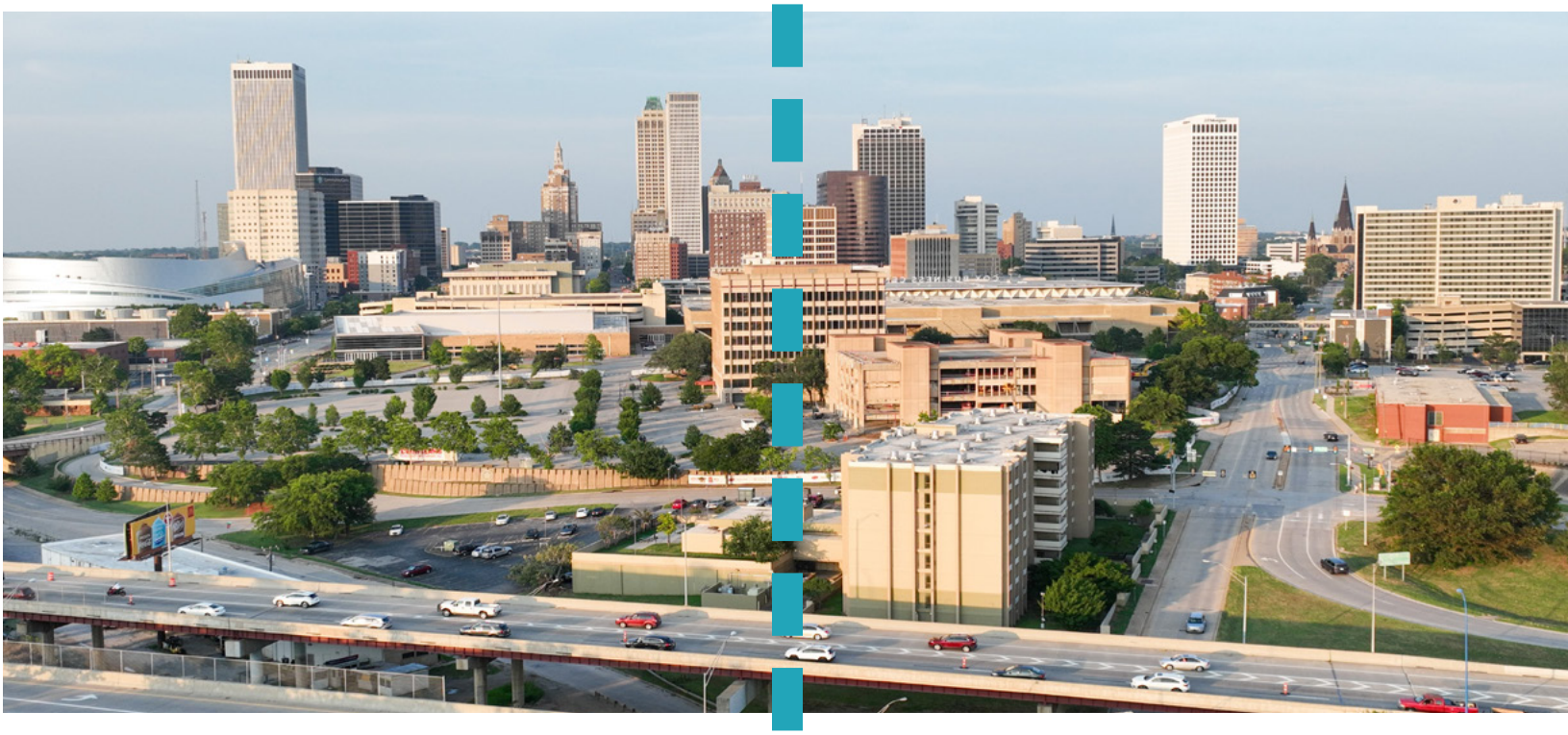


CONGESTION MANAGEMENT PROCESS PLAN

SEPTEMBER 2026
DRAFT

INCOG

TABLE *of* CONTENTS

CHAPTER 1: Why Congestion Matters 6

CHAPTER 2: Understanding Congestion in the Tulsa Region 8

CHAPTER 3: What Causes Congestion? 10

CHAPTER 4: What We Heard 12

CHAPTER 5: The CMPP Focus Network 18

CHAPTER 6: Toolbox for Managing Congestion 22

CHAPTER 7: Corridor Investment Approach 26

CHAPTER 8: Measuring Success 28

ACRONYMS

INCOG	Indian Nations Council of Governments
MPO	Metropolitan Planning Organization
TMA	Transportation Management Area
PBP	Performance Based Planning
V/C	Volume-to-Capacity
TTI	Travel Time Index
ITS	Intelligent Transportation Systems
CMP	Congestion Management Process

ACKNOWLEDGMENTS

The Congestion Management Process Plan was developed through collaboration among INCOG, regional transportation partners, local governments, transit providers, emergency responders, freight stakeholders, tribal partners, and people who travel throughout the Tulsa region.

COMMITTEE TYPES

ADVISORY COMITTEE - (AC) - **SERVES AS THE GUIDING FORUM FOR THIS CONGESTION MANAGEMENT PROCESS PLAN**

TRANSPORTATION TECHNICAL COMMITTEE - (TTC) - **SERVES IN AN ADVISORY CAPACITY ON ALL TECHNICAL MATTERS**

TRANSPORTATION POLICY COMMITTEE - (TPC) - **SERVES AS THE FORUM FOR POLICY DEVELOPMENT AND ADOPTION**

INCOG STAFF

Rich Brierre (TPC)
Kenneth Corn
Thomas Dow (TTC)
Henry Wilson
Braden Cale
Patricia Dinoa
Mahathi Akella
Rachel Moore

COMMITTEE MEMBERS

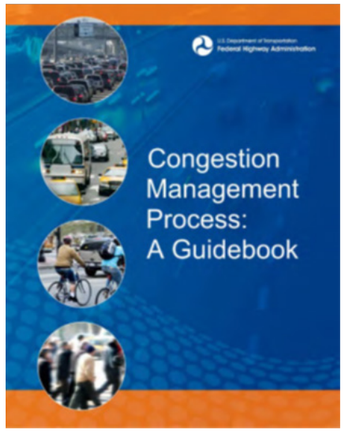
Alex Mills, Tulsa County (TPC)
Alexa Beemer, City of Owasso (AC)
Anthony Wilkins, City of Jenks (TPC)
Brad White, City of Skiatook (TTC) (TPC)
Brad White, City of Skiatook (TPC)
Brent Stout, City of Broken Arrow (TTC)
Brian Bigbee, Tulsa Ports (AC) (TTC)
Chris Wallace, OTC, District 1 (TPC)
Chuck Ralls, City of Collinsville (TPC)
Cody Blair, City of Sand Springs (TTC)
Craig Stokes, City of Collinsville (TTC) (TPC)
David Agbetunsin, City of Glenpool (AC) (TTC)
David Ford, Muscogee (Creek) Nation (TTC) (TPC)
David Tillotson, City of Glenpool (TPC)
David Yarbrough, Tulsa Ports (TPC)
Derek Campbell, City of Sand Springs (TTC)
Dylan Warner, City of Bixby (AC) (TPC)
Dwayne Henderson, City of Owasso (AC) (TTC)
Elliot Stiles, City of Tulsa (TTC)
Frank Relja, Tulsa Airport Authority (TPC)
Harold Lasarge, Osage Nation (TTC) (TPC)
Jacob Hoover, ODOT (TTC)
Jared Schwennesen, ODOT (TPC)
Jeff Edwards, River Parks Authority (TTC) (TPC)
Jerret Denton, City of Jenks (TTC)
Joan Riley, City of Sapulpa (TPC)
Jody King, City of Catoosa (TTC)
Joe Echelle, OTA (TTC) (TPC)
Joe Echelle, OTA (TPC)
John Tankard , Partner Tulsa (AC)
Josh Brown, City of Catoosa (TPC)
Kendal Davis, Tulsa County (AC)
Kristine Reed, ODOT (AC)
Levi Hix, City of Claremore (AC)
Marc Oliphant (TTC) (TPC)
Matt VanAuken, ODOT (TPC)
Mattie Abbott, ODOT (TTC)
Naaja Jefferies, Metrolink Tulsa (AC)
Nathan Foster, City of Tulsa (AC)
Nathan Radach, City of Bixby (AC) (TTC)
Newt Stephens, Creek County (TTC) (TPC)
Paul Zachary, City of Tulsa (TPC)
Rachael Cooper, Wagoner County (AC) (TTC) (TPC)
Robert Endicott, Cherokee Nation (TTC) (TPC)
Roger Hughes, Tulsa County (TTC)
Roger Stevens, City of Owasso (TPC)
Ron Burrow, Rogers County (TTC) (TPC)
Sarah McElroy, ODOT (TTC)
Scott Marr, Metrolink Tulsa (TPC)
Steve Hardt, City of Sapulpa (TTC)
Steve Talburt, Osage County (TTC) (TPC)
Terry Ball, City of Tulsa (TPC)
Tracy Nyholm, City of Tulsa (AC) (TTC)
Trapper Parks, OTC, District 8 (TPC)
Travis Small, City of Broken Arrow (AC) (TPC)
Valerie Courchesne, Metrolink Tulsa (TTC)
Viplav Reddy, FHWA (TTC) (TPC)

COMMUNITY MEMBERS

INCOG thanks the residents, workers, students, business owners, and travelers across the Tulsa region who shared their experiences and perspectives throughout the planning process. Feedback recieved through the online map, quick polls, open-ended responses, and subsequent engagement activities helped shape and validate the CMP's findings and recommendations.

FEDERAL POLICY FOUNDATION

The Congestion Management System (CMS) was established by ISTEA in 1991 to help MPOs and state DOTs monitor system performance and identify strategies to improve mobility and reduce congestion.



In 2005, SAFETEA-LU renamed the CMS as the Congestion Management Process (CMP), reinforcing its role as an ongoing part of regional transportation planning. MAP-21 later strengthened the performance-based approach and required TMAs with populations of 200,000 or more, including the Tulsa region, to maintain a CMP.

As the MPO for the Tulsa region, INCOG is responsible for developing and maintaining the CMP, coordinating with regional partners, monitoring system performance, and using CMP findings to inform transportation priorities, the MTP, and TIP.

Under 23 CFR Part 450, the CMP must support safe and effective multimodal system management, emphasizing demand reduction, system management, and operational improvements before added roadway capacity. It must also include defined objectives, performance measures, and ongoing monitoring of recurring and non-recurring congestion

The CMP must:

- Analyze congestion problems
- Identify and assess appropriate mitigation strategies
- Evaluate the effectiveness of implemented actions over time

These elements support a performance-based framework linking system conditions to strategy selection and investment decisions.

Federal regulations require CMP findings to inform the Metropolitan Transportation Plan (MTP) and the Transportation Improvement Program (TIP). In applicable non-attainment or maintenance areas, projects that significantly increase Single Occupant Vehicle (SOV) capacity must be addressed through the CMP, including consideration of travel demand management, operational strategies, and complementary measures where capacity expansion is warranted.

INCOG uses the term Congestion Management Process Plan (CMPP) for the Tulsa region; CMP is used when referencing federal regulations.

TECHNICAL FOUNDATION

Technical Memoranda 1 through 4 contain the detailed data, methods, maps, performance framework, strategy toolbox, and corridor profiles supporting this report.

TECHNICAL MEMORANDUM 1

Purpose: Establish the federal and regional framework for the CMPP, define the CMPP Network, review existing plans and data sources, and assess baseline transportation system performance across the Tulsa region.

Key Takeaways:

- Defined the CMPP Network and performance-based planning framework.
- Identified 7AM and 5PM as regional peak periods.
- Established baseline congestion, reliability, safety, and multimodal conditions.

TECHNICAL MEMORANDUM 2

Purpose: Identify priority congestion corridors and evaluate transit, freight, bicycle, pedestrian, and land use influences.

Key Takeaways:

- Defined the CMPP Focus Network.
- Identified key congestion corridors and growth areas.
- Evaluated multimodal network gaps and opportunities to improve mobility.

TECHNICAL MEMORANDUM 3

Purpose: Establish congestion management objectives, performance measures, and identify the causes of congestion.

Key Takeaways:

- Established CMPP goals and performance measures.
- Identified baseline system performance metrics.
- Identified common causes of congestion.
- Developed the foundation for strategy evaluation.

TECHNICAL MEMORANDUM 4

Purpose: Develop systemwide and corridor-specific congestion mitigation strategies.

Key Takeaways:

- Developed a regional congestion mitigation toolbox.
- Linked congestion causes to mitigation strategies.
- Established an implementation and evaluation framework.
- Developed specialized profiles for each of the 25 focus segments.

CHAPTER 1

Why Congestion Matters

Congestion affects more than travel time. It shapes whether people arrive when expected, whether goods move efficiently, whether transit stays on schedule, and whether emergency responders can rely on the transportation network. The INCOG transportation management area (TMA) is growing and changing. Population and employment growth, new development and redevelopment, school activity, and freight movement are reshaping travel demand across the region. These changes underscore the need for a proactive, data-driven approach to managing congestion and maintaining reliable mobility.

WHY

RELIABILITY

Unexpected delay forces travelers and businesses to build extra time into every trip.

SAFETY

Crashes create sudden congestion, and stop-and-go conditions can introduce additional conflicts.

FREIGHT

Unreliable delivery times affect ports, manufacturers, distribution centers, and local businesses.

TRANSIT

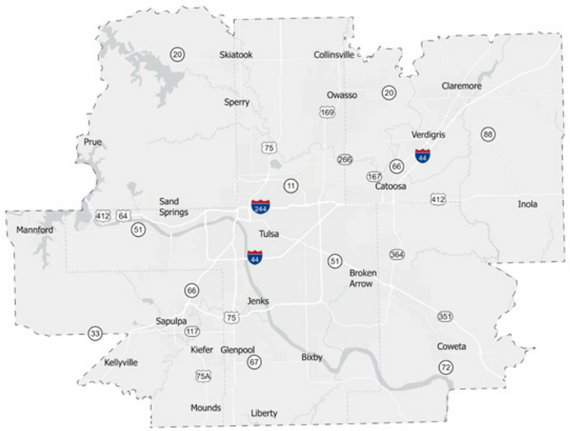
Buses operating in mixed traffic can experience the same delays as other vehicles.

HOUSEHOLDS

Longer and less predictable trips consume time and transportation resources.

LOCAL GOVERNMENT

Congestion can affect emergency response, street operations, maintenance, and investment decisions.



CMP PROCESS

The CMPP should be revisited as new data, projects, growth patterns, and community priorities emerge. It informs long-range planning, the Transportation Improvement Program, corridor studies, and local implementation.

ONGOING PROCESS

Federal guidance requires transportation management areas (TMA) to maintain a congestion management process that emphasizes demand reduction, system management, and operational improvements before adding general-purpose roadway capacity. INCOG uses the term CMPP to identify this regional planning process and its documented framework.

GOALS FOR CONGESTION MANAGEMENT LOCALLY AND NATIONWIDE

NATIONAL GOALS:
Provide a framework for all MPOs like INCOG.

REGIONAL GOALS:
The CMPP connects congestion management to the broader transportation goals established in Connected 2050. The goals below guide what congestion management should accomplish for the region.

SHARED GOALS

SAFETY IMPROVEMENTS
Improve Safety for All Transportation Users

INFRASTRUCTURE CONDITION
Preserve and Modernize Transportation Infrastructure

CONGESTION REDUCTION
SYSTEM RELIABILITY
Reduce Congestion and Improve System Reliability

FREIGHT MOVEMENT AND ECONOMIC VITALITY
Strengthen Regional Freight and Economic Competitiveness

ENVIRONMENTAL SUSTAINABILITY
Promote Environmental Stewardship and Resilience

REDUCED PROJECT DELIVERY DELAYS
Promote Collaboration and Effective Implementation

ADDITIONAL REGIONAL GOALS

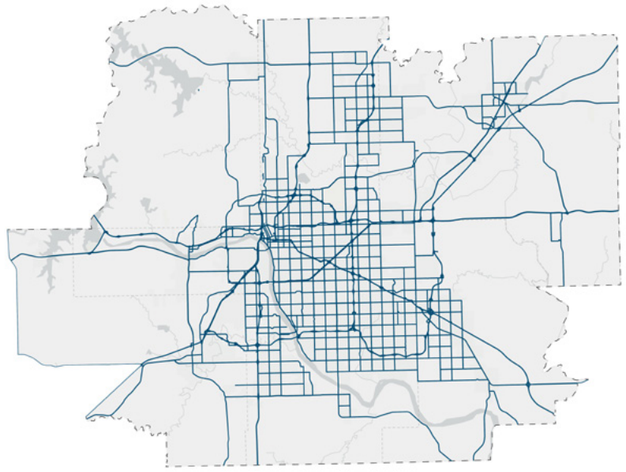
Advance Technology, Innovation, and System Operations

Expand Transportation Choice and Regional Mobility

CHAPTER 2

Understanding Congestion in the Tulsa Region

CMPP NETWORK



The CMPP Network includes freeways, expressways, principal and minor arterials, and a few major collectors with known regional significance. These roads carry a large share of regional travel, connect communities and activity centers, and provide a consistent basis for monitoring congestion across the TMA. This CMPP Network was then used to develop the Focus Network which is more clearly defined in **Chapter 5**.

The CMPP uses several measures because congestion is not one single condition. Some roads are slow every weekday. Others work acceptably most days but become unpredictable when demand spikes, a crash occurs, or weather and construction disrupt normal operations. The causes of congestion are further explored in **Chapter 3**.

1 VOLUME-TO-CAPACITY RATIO

Whether modeled traffic demand approaches or exceeds the estimated capacity of a roadway.

2 TRAVEL TIME INDEX

How much longer a trip takes during a busy period than under free-flow conditions.

3 UNRELIABLE SEGMENTS

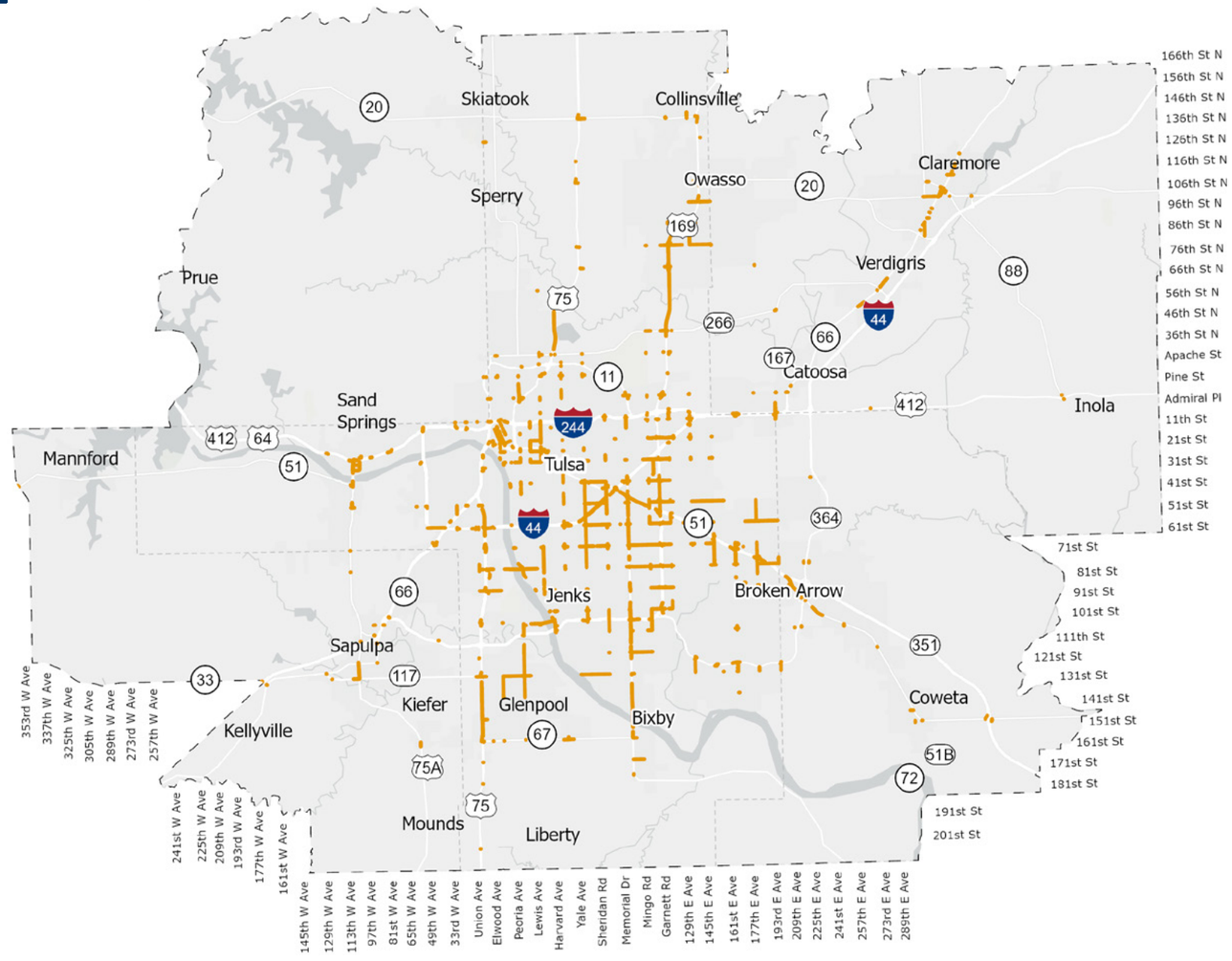
Where travel times vary greatly from one day to another during the morning or afternoon peak.

KEY OBSERVATIONS

1. The 5:00 PM hour is generally more congested and less reliable than morning travel, reflecting overlapping commute, shopping, service, and cross-town trips.
2. Major destinations, freeway connections, arterial grids, and activity centers create overlapping travel demand.
3. Ramps, merging, weaving, and downstream intersections can affect both freeway and local-street travel.
4. Growth corridors and regional connections require coordination beyond a single city.
5. Many problems are operational rather than a simple shortage of lanes.

UNRELIABLE SEGMENTS

The map below combines morning and afternoon unreliable segments into one regional picture. These segments became the consistent screening basis for identifying corridors where delays are both meaningful and unpredictable.



***RELIABILITY MATTERS** | A trip that takes 25 minutes every day is easier to plan than a trip that takes 20 minutes one day and 40 minutes the next.*

CHAPTER 3

What Causes Congestion?

Understanding where congestion occurs is only part of the story. Equally important is understanding why it occurs. Two corridors may experience similar delays but for very different reasons. One may be affected by rapid growth and heavy traffic volumes, while another may struggle with closely spaced traffic signals, recurring crashes, school traffic, or limited transportation options. Identifying the underlying causes of congestion helps ensure the right solutions are matched to the right locations, rather than applying the same approach everywhere.

Throughout the CMPP process, congestion was evaluated alongside roadway operations, safety conditions, freight activity, land use patterns, multimodal transportation networks, future growth projections, and public feedback. This analysis found that congestion is rarely caused by a single issue. Instead, multiple factors often work together to create delay and unreliable travel conditions.

CATEGORIES OF CONGESTION

Not all congestion is the same. Some traffic delays occur predictably every day, while others are caused by unexpected events. Understanding the difference helps identify the most effective solutions.

CAUSES OF CONGESTION

The seven causes identified on the next page provide a framework for understanding the primary drivers of congestion across the Focus Network and serve as a bridge to the toolbox of potential solutions presented in Chapter 6.

Diagnose First

A congested roadway does not automatically need more lanes. The most effective response begins by identifying the cause, considering several strategy categories, and testing how the options work together.



RECURRING CONGESTION

Regularly, predictably throughout the day, related to volume/capacity/signals/access/demand



HWY 412 NEAR VIRDIGRIS RIVER - ROGERS COUNTY, OK

NON-RECURRING CONGESTION

Unexpected disruptions, any time, related to crashes/incidents/weather/work zones/ special events



Ramp Backups

Queues extend beyond the available ramp space and affect the freeway or nearby streets.

WESTERN LEG OF THE IDL, DOWNTOWN TULSA - TULSA, OK



Volume Exceeds Capacity

The number of vehicles approaches or exceeds what the roadway can accommodate.

OLYMPIA AVENUE - TULSA, OK



Intersection / Signal Density

Frequent intersections, stops, and turning movements interrupt traffic flow.

MEMORIAL DRIVE SOUTH - BIXBY, OK



Traffic Incidents / Crashes

Unexpected events reduce capacity and make travel times less predictable.



Poor Signal Timing / Coordination

Signals do not provide efficient progression, causing repeated stops and unnecessary delay.

HWY 169 NEAR MINGO MARKETPLACE - TULSA, OK



Closely Spaced Interchanges

Drivers merge, exit, and weave across lanes within a short distance.

EAST SIDE OF DOWNTOWN TULSA- TULSA, OK



Limited Multimodal Options

Travelers have few practical alternatives to driving for some trips.

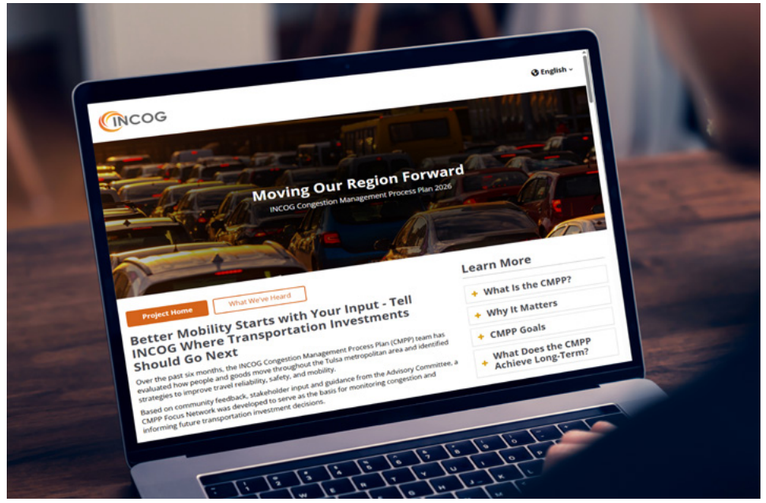
AERO BRT STOP ON PEORIA AVENUE - TULSA, OK

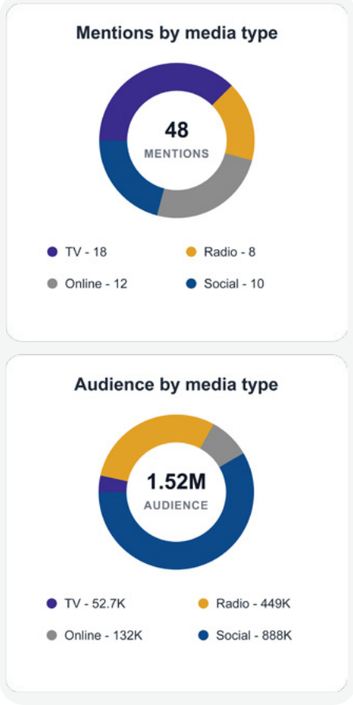
CHAPTER 4

What We Heard

PROJECT WEBSITE

Thank you to the residents, businesses, and stakeholders who participated in the CMPP process. Your input played an important role in helping identify transportation challenges, validate analysis findings, and shape a shared vision for improving mobility across the region.





ROUND 1 ENGAGEMENT

Public input adds context that cannot be captured by regional datasets alone. The first round of engagement asked travelers where they experience congestion, when it occurs, and what types of problems affect their trips.

WHAT PARTICIPANTS EMPHASIZED

1. Daily and recurring congestion on major corridors
2. Crashes, incidents, and other unpredictable disruptions
3. Afternoon and evening travel challenges
4. Roadway maintenance, safety, and selected capacity needs
5. The importance of preserving the existing transportation system



STAKEHOLDER THEMES

Interviews and working discussions with local governments, transportation agencies, emergency responders, transit providers, freight interests, and state and tribal partners added operational knowledge and information about planned improvements.

Table 3.1- Stakeholder Themes

Theme	What Stakeholders Described
Daily congestion	Recurring challenges on US-169, US-75, Memorial Drive, the Broken Arrow Expressway, SH-67, and other major corridors.
Safety and incidents	Crashes and incident clearance can create substantial non-recurring delay.
Signal timing	Corridor coordination and modern signal systems are recurring needs.
Freight mobility	Truck access, rail activity, port connections, and first/last-mile reliability are regional economic concerns.
Multimodal options	Transit, walking, and bicycling can provide alternatives where service and networks are practical and connected.
Regional coordination	Congestion crosses jurisdictional boundaries and requires shared data, operations, and project planning.
School traffic	Arrival and dismissal create intense, localized congestion at a different time than the regional PM peak.

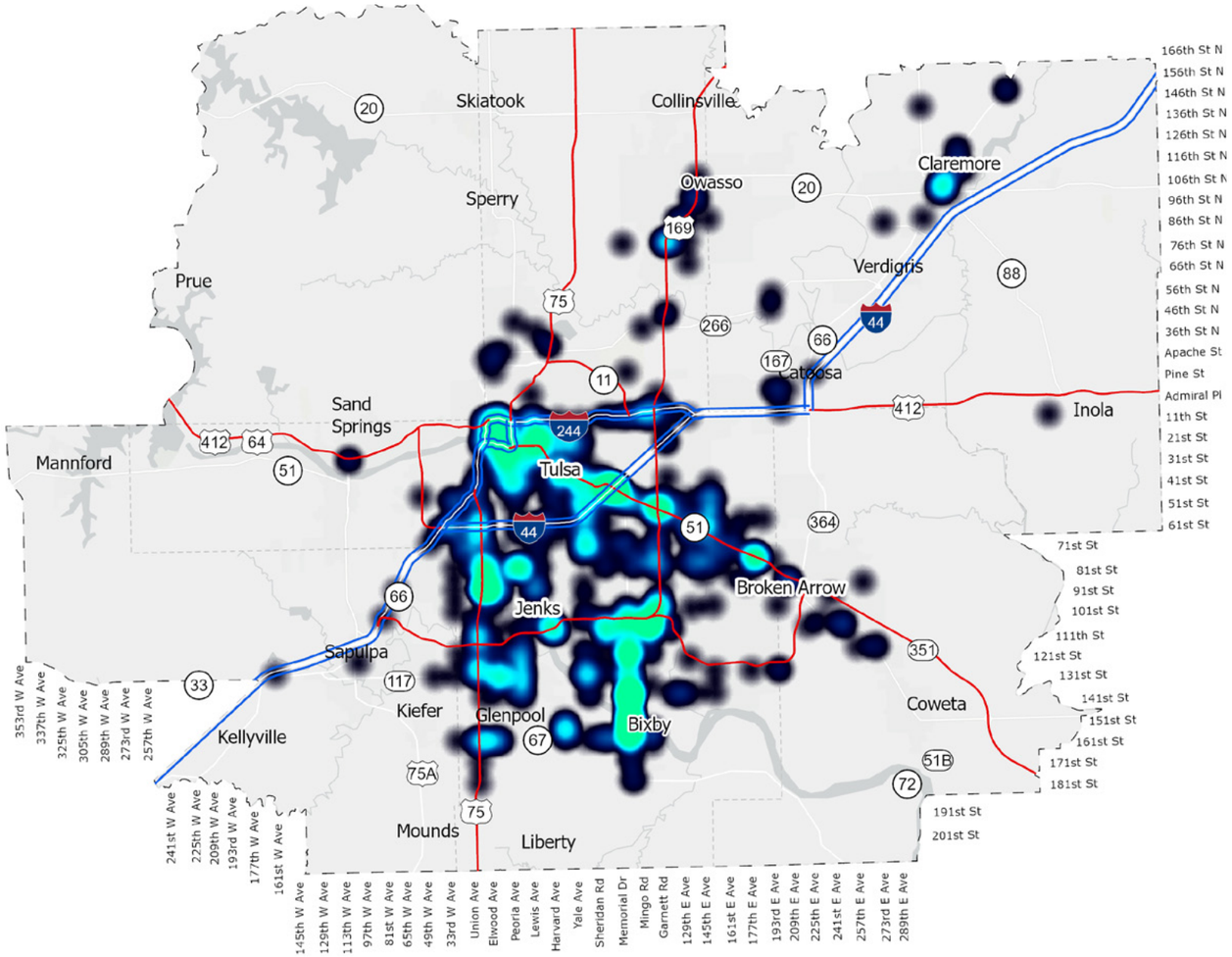


***SPOTLIGHT:* SCHOOL TRAFFIC IS DIFFERENT**

School congestion is highly concentrated in place and time, often peaking around 3:00-4:00 PM. Solutions may involve circulation, access, walking and bicycling, arrival management, crossing safety, and coordination with school districts.

PHASE 1 ENGAGEMENT

Mapped comments were concentrated in Tulsa and surrounding communities including Bixby, Broken Arrow, Jenks, Owasso, and Claremore. The pattern generally reinforced key commuter corridors and locations identified through the technical analysis.



CHAPTER 5

The CMPP Focus Network

The CMPP Focus Network is a targeted set of corridors where congestion and unreliable travel have the greatest regional significance. It converts thousands of individual roadway segments into a manageable set of corridors for monitoring, coordination, and strategy development.

WHY FOCUS ON SPECIFIC CORRIDORS?

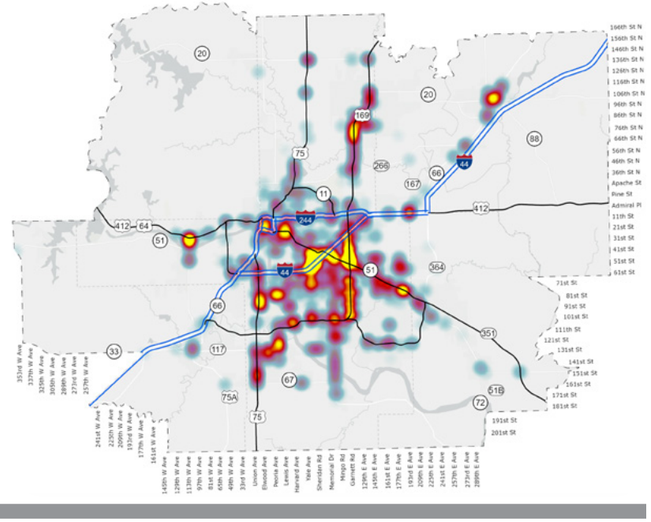
The Focus Network helps turn a large regional transportation system into a manageable set of priority corridors for analysis and action. These corridors were selected using a combination of transportation performance data, multimodal network analysis, land use and growth patterns, and community input to determine which corridors warranted regional prioritization and further evaluation. The analysis identified additional corridors experiencing congestion. However, the Focus Network represents those corridors determined to have the greatest regional significance based on the CMP evaluation criteria. Key context mapping themes included safety and operations, transit, walking, bicycling, freight and economic activity, future growth, and public input.

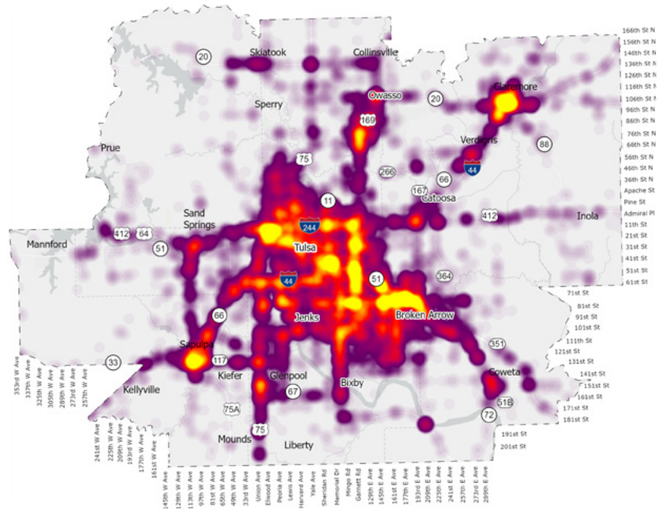
> ***If everything is important, then nothing is."***
> *—Patrick Lencioni*

Concentrating on these locations allows INCOG and its partners to focus efforts where improvements can have the greatest impact on reliability, safety, and mobility at the regional scale.Importantly, focusing on these corridors does not mean other roads are unimportant. Instead, it recognizes that when every corridor is treated as a top priority, it becomes difficult to determine where limited resources can do the most good. The Focus Network provides a clear starting point for making strategic, data-driven transportation investments.

CONGESTION SEVERITY

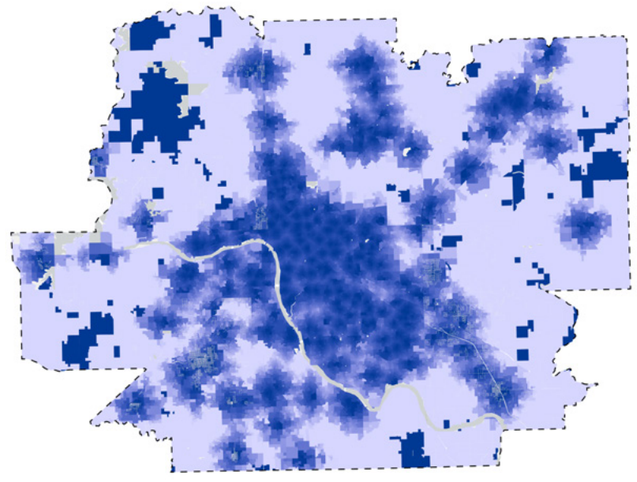
Congestion severity identifies where travel conditions are currently most difficult or unpredictable. This map shows the hot spots of congestion and unreliable segments.





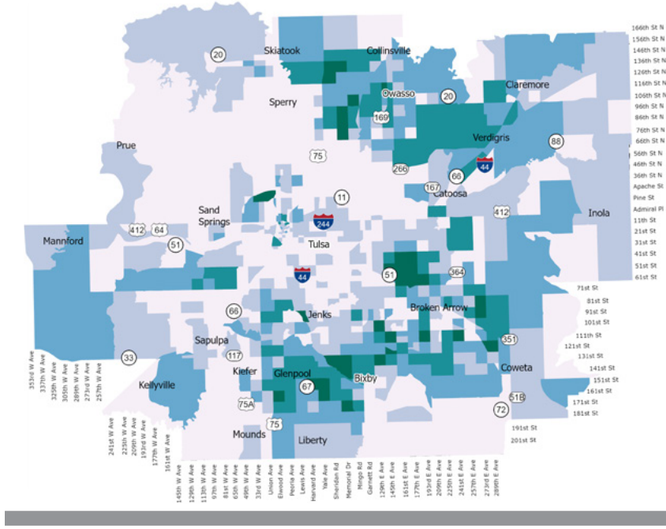
SAFETY

Safety mapping shows where irregular interruptions to traffic occur. While crash severity plays a societal role and can increase the scope of congestion impacts, even fender-benders often result in localized congestion. This map shows crash density in the most recent data.



SCHOOL TRAFFIC

School traffic explains short, intense peaks that may occur before the broader evening commute. It also highlights areas where less experienced drivers may concentrate, or where Safe Routes to School needs exist. This map shows proximity to school parcels.



FUTURE GROWTH

Growth maps, both population and employment, identify areas where future trips will bring additional pressure on corridors and interchanges. This map shows projected population growth in the region.

A NETWORK OF DIFFERENT CORRIDOR TYPES

The 25 corridors include freeways, interchanges, arterials, regional connections, and downtown Tulsa streets. The table of typology below is intended to help communicate the different settings represented in the network, but was not used to define or identify any analysis associated with the Focus Network.

Table 4.1- Corridor Types

Corridor Type	Number	Characteristics
Freeway / Expressway / Interchange	**9**	Ramps, weaving, incidents, bottlenecks, capacity, inter-agency operations
Non-Freeway Arterial	**7**	Signals, access, turning movements, transit, crossings, commercial frontage
Regional connector / Growth corridor	**6**	Growth, connectivity, cross-jurisdiction travel, limited alternatives, multiple street functions
Downtown / Central corridor	**3**	Signals, parking, transit, pedestrian access, multiple street functions

FOCUS NETWORK

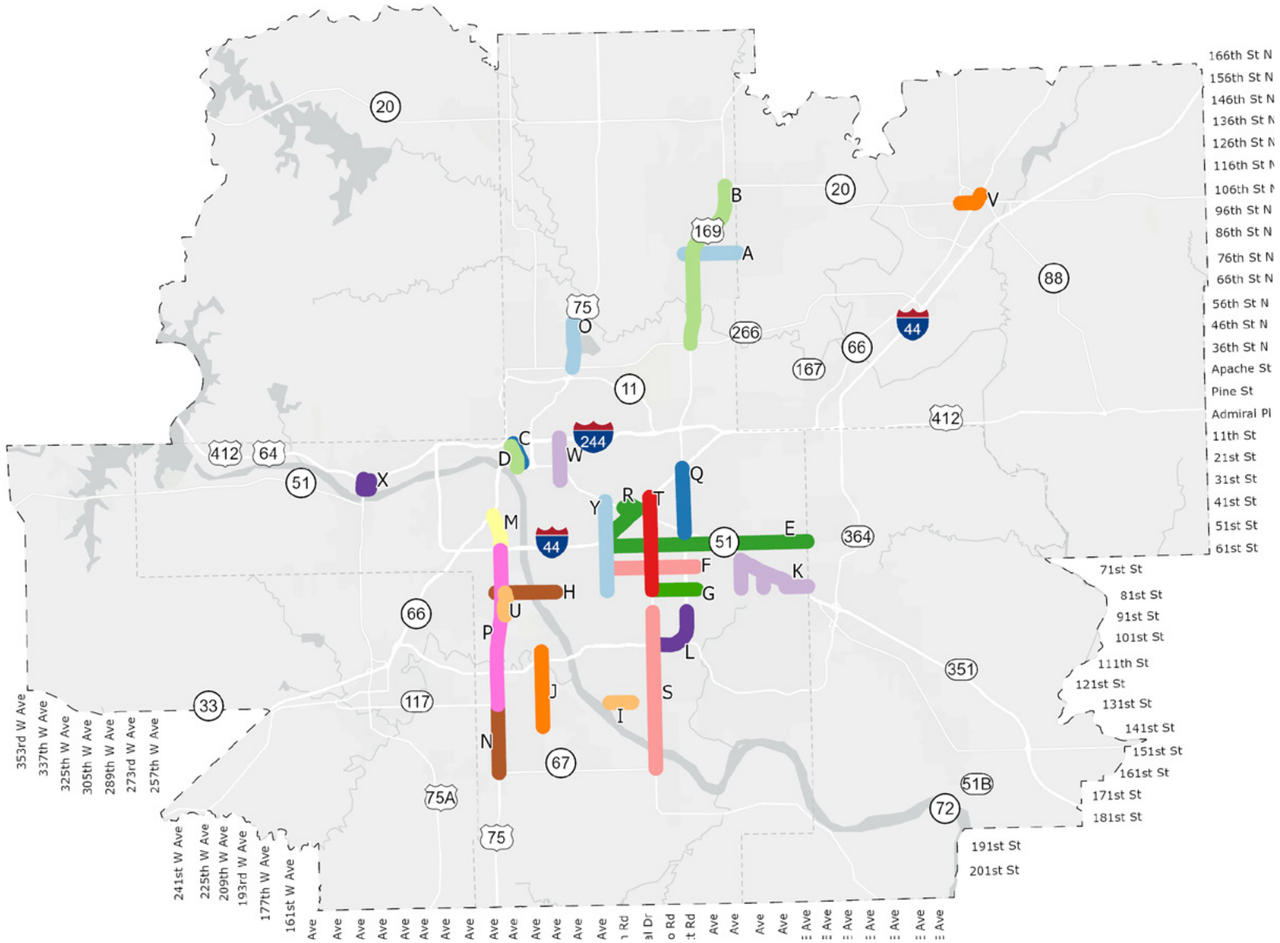
Below is the list of corridors, corresponding to the map on page 17.

A. 86th St. Owasso
B. Hwy 169 to Owasso*
C. Boulder Ave.*
D. Denver Ave.*
E. E. 51st St.
F. E. 61st St.
G. E. 71st St.
H. W. 71st St.
I. E. 121st St. South
J. Elm St.
K. Hwy 51 to Broken Arrow
L. Creek Turnpike
M. Hwy 75 at I-44*
N. Hwy 75 to Glenpool*
O. Hwy 75 North*
P. Hwy 75 from I-44 to 121st St.*
Q. Hwy 169 from I-44 and Hwy 64*
R. I-44 / Hwy 64
S. Memorial Dr. north of Arkansas River
T. Memorial Dr. south of Hwy 51
U. Olympia Ave.
V. Route 66 in Claremore
W. S. Lewis Ave.
X. Hwy 412 in Sand Springs*
Y. Yale Ave.

Focus segments that are marked with an asterisk (*) were under construction during the study period. These projects may address or reduce some of the congestion issues identified through the analysis.

CMPP FOCUS NETWORK

The selected Focus Network is dispersed across the region, with concentrations of corridors in the center of the region around the confluence of Interstate 44 and Highway 51.



***KEY CORRIDORS** | Public Feedback from Phase 1 fully encapsulated all Focus Network Corridors, indicating the validity behind the public comments received.*

ROUND 2 ENGAGEMENT

The second round of engagement shifts the conversation from identifying problems to considering solutions. Feedback should be summarized around which strategy categories participants view as most useful, where specific tools may fit, and what implementation considerations the public wants INCOG and partner agencies to address.

PROJECT WEBSITE

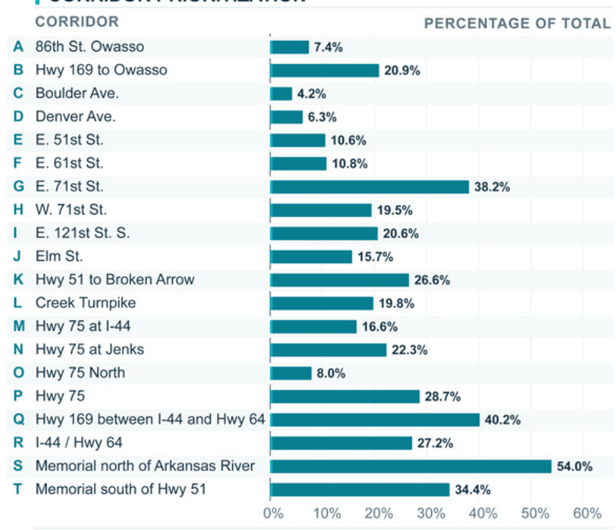
The second round of engagement gave community members an opportunity to review and respond to the emerging Focus Network through a survey on the project website. Participants identified the corridors that affect them, the congestion issues they experience, and the transportation outcomes they value most. Their responses highlighted concerns such as long and unpredictable travel times, intersection delay, and safety, while also showing strong interest in improved safety, shorter trips, and more reliable travel.

This feedback added lived experience to the technical analysis. It helped the project team assess whether the identified corridors reflected conditions experienced across the region, refine the network, and confirm the top 25 focus corridors. The responses will also inform the strategies considered for each corridor by connecting measured congestion conditions with the issues people encounter in daily travel.

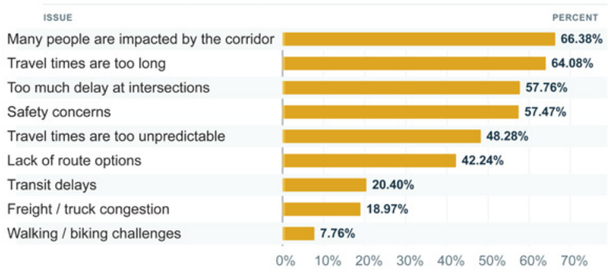
WHAT PARTICIPANTS EMPHASIZED

Growth Areas *emerged as the strongest anticipated driver of future congestion, followed closely by land use decisions. This reinforces the critical connection between development patterns and transportation system performance.*

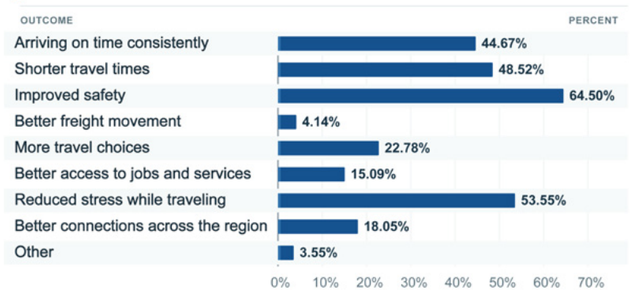
FOCUS NETWORK CORRIDOR PRIORITIZATION



CORRIDOR CONCERNS



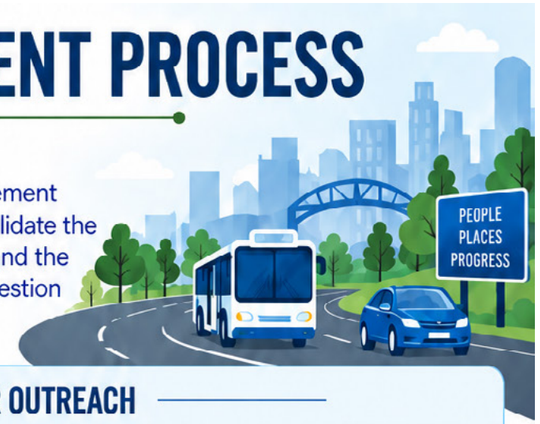
OUTCOMES THAT MATTER MOST



CMP ENGAGEMENT PROCESS

PHASE 2

Round 2 stakeholder and public engagement brought together community input to validate the final Focus Network and better understand the perceived and lived experiences of congestion across the region.



TARGETED STAKEHOLDER OUTREACH

5
STAKEHOLDER FOLLOW-UP MEETINGS
Continued conversations to review findings and refine strategies.

15
AGENCY MEMBERS ENGAGED
Representatives from the INCOG advisory committee, local governments, transportation agencies, transit providers, freight interests, tribal partners, and regional organizations participated in follow-up meetings.

BROAD PUBLIC PARTICIPATION

348
COMMENTS
Total contributions to the Corridor Prioritization Exercise collected through the participation tool.

+

24
TOTAL RESPONSES
Total feedback on strategies and solutions through the participation tool.

+

7
WHAT WE HEARD RESPONSES
Total responses to the question "What does congestion mean to you?"

=

394
TOTAL ENGAGEMENT TOUCHPOINTS
Across meetings, comments within the participation tool exercise and What We Heard responses.

This feedback helped align the findings with community needs while also refining the understanding of congestion causes on each Focus Network segment. Input from this round was used to help narrow and better inform the strategies and transportation improvements best suited to each segment, supporting a safer, more reliable, and more connected transportation system.

Thank you to everyone who participated and helped shape the future of our region's transportation system.

CHAPTER 6

Toolbox for Managing Congestion

THE TOOLS

Travel Demand Management | Traffic Operations | Public Transportation Improvements | Technology & Systems Management | Bike/Ped & Land Use | Roadway Design & Capacity Improvements

NO ONE-SIZE FITS ALL

Congestion cannot be solved with one strategy. The appropriate response depends on why congestion occurs, who is affected, the corridor setting, what projects are already planned, and which agency or partner can act. These factors were variables in defining the Focus Network, and sensibly play a role in what tool is appropriate for managing congestion. For more details and information on the toolbox of congestion management strategies, see Technical Memorandum 4.



TRAVEL DEMAND MANAGEMENT

WHAT IS IT?

Travel Demand Management strategies reduce the number of vehicle on the road or shift trips to different times, routes, or travel options.

WHEN WOULD YOU USE IT?

These strategies are often used when congestion is concentrated during rush hour and there is an opportunity to reduce peak-period traffic without building new roads.

- Volume Exceeds Capacity

EXAMPLES

- Flexible Work/Telework
- Carpool/Vanpool
- Park-and-Ride
- Ridesharing
- Commuter Incentives
- Fixed Route Transit



THE ROSE DISTRICT - BROKEN ARROW, OK

TRAFFIC OPERATIONS

WHAT IS IT?

Traffic Operations strategies improve how existing roads function by making traffic move more smoothly and efficiently.

WHEN WOULD WE USE IT?

These solutions are often used when congestion is caused by busy intersections, turning movements, closely spaced driveways, or other roadway operations issues rather than a lack of roadway capacity.

- Intersection / Signal Density
- Poor Signal Timing
- Ramp Backups

EXAMPLES

- Improved traffic signal timing
- Traffic Signal Spacing
- Turn lanes at intersections
- Roundabouts
- Bottleneck removal projects
- Access management along commercial corridors
- Freeway Interchange Spacing
- Medians



AERO BUS RAPID TRANSIT SERVICE - TULSA, OK

PUBLIC TRANSPORTATION IMPROVEMENTS

WHAT IS IT?

Public transportation strategies improve transit service and make it easier for people to choose transit for some of their trips. It is also more efficient use of a roadway within the right-of-way space.

WHEN WOULD WE USE IT?

These solutions are most effective in areas with concentrations of jobs, housing, shopping, or community destinations where more people could reasonably use transit.

- Limited Multimodal Options
- Volume Exceeds Capacity

EXAMPLES

- More frequent bus service
- Expanded transit routes
- Bus Rapid Transit (BRT)
- Provide real-time transit information
- Improved bus stops and shelters



TRANSPORTATION TECHNOLOGY & SYSTEM MANAGEMENT

WHAT IS IT?

These strategies use technology, real-time information, and coordinated operations to manage traffic more efficiently and respond to changing conditions.

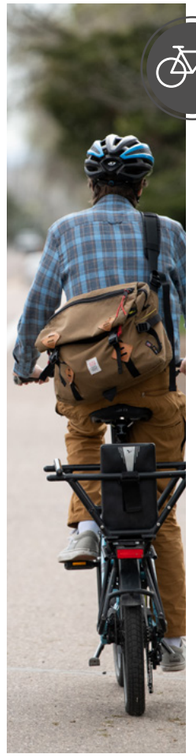
WHEN WOULD WE USE IT?

These solutions are often used where crashes, special events, construction, or unpredictable traffic conditions create delays. They can often improve reliability without expanding roadways.

- Poor Signal Timing
- Traffic Incidents / Crashes
- Ramp Backups

EXAMPLES

- Coordinated traffic signals
- Real-time traffic monitoring
- Dynamic message signs
- Crash and incident management programs
- Work zone management
- Phone Applications



BICYCLE/PEDESTRIAN, LAND USE, & REGIONAL COORDINATION

WHAT IS IT?

These strategies improve travel options and reduce the need for longer vehicle trips by creating more connected communities and transportation networks.

WHEN WOULD WE USE IT?

These solutions are often long-term investments that help people walk, bike, take transit, or reach destinations more easily while supporting future growth.

- Limited Multimodal
- Intersection/ Signal Density

EXAMPLES

- Sidewalk and trail connections
- Transit and trail oriented development
- Bicycle facilities
- Enhanced visibility crossings and mid-block crossings
- Infill development incentives
- Mixed-use development and zoning reform
- Better connections between neighborhoods, schools, jobs, and services

Scenario A: Traffic managed with bike/ped, land use, and coordination

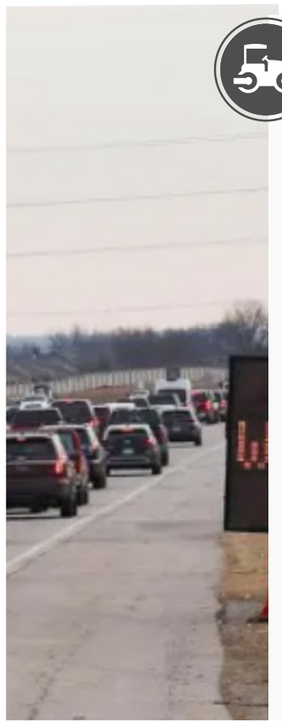


Mixed and complementary land uses, with a connected road network. This pattern allows for a variety of modes alongside providing flexibility for what future uses buildings can accommodate.

Scenario B: Traffic managed with roadway and capacity improvements



Variety of land uses with no cross-access, but a primary arterial street. This pattern requires certain roads to "do it all" which leads to capacity constraints, limited options, and restricts future uses due to single purpose buildings.



HWY 75 NEAR 81ST STREET SOUTH - TULSA, OK

ROADWAY DESIGN & CAPACITY IMPROVEMENTS

WHAT IS IT?

These strategies involve physical changes to the roadway network to reduce bottlenecks or accommodate growing travel demand.

WHEN WOULD WE USE IT?

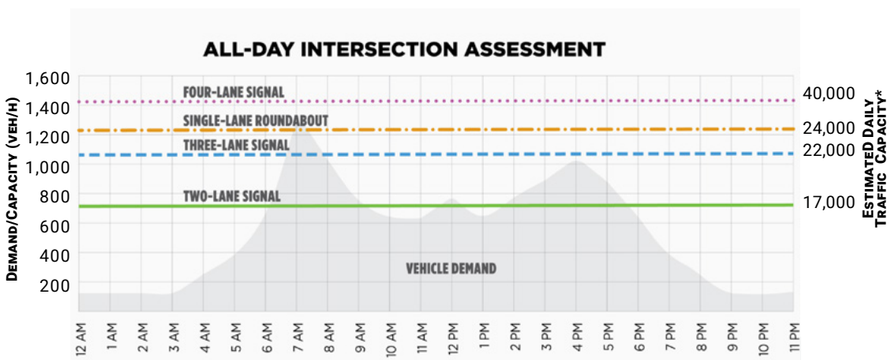
These solutions are generally considered when other strategies alone cannot adequately address congestion, safety concerns, or growth-related transportation needs.

- Closely Spaced Interchanges
- Traffic Incidents / Crashes
- Intersection / Signal Density
- Volume Exceeds Capacity
- Ramp Backups

EXAMPLES

- Intersection improvements
- Additional turn lanes
- New roadway connections
- Improved signage and wayfinding
- New bridge crossings

Heavy traffic during a single hour does not automatically mean a road needs to be widened. Roadway capacity is heavily influenced by context, such as intersection control type and presence of other access points such as driveways. It is important to identify when congestion is severe and long-lasting enough to consider capacity improvements, while also recognizing opportunities to improve travel through operations, technology, transit, walking, bicycling, and other strategies.



Source: NCHRP 1036, Figure 6.9

** Approximate Level of Service (LOS) D and practical capacity thresholds based on assumed peak hour factor (K) of 10% and directional factor (D) of 60%, provided in two-way AADT. An additional resource for LOS & Volume guidance is Florida DOT Generalized Service Volume Tables (2023).*

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
1. DEMAND MANAGEMENT					
1.1 FLEXIBLE WORK ARRANGEMENTS	LOW	MODERATE	HIGH	HIGH	TELECOMMUTING; EMPLOYER INCENTIVE PROGRAMS; PRICING STRATEGIES
1.2 RIDESHARING	LOW-MEDIUM	MODERATE	HIGH	HIGH	EMPLOYER INCENTIVE PROGRAMS; GUARANTEED RIDE HOME PROGRAMS; PRICING STRATEGIES
1.3 ALTERNATIVE MODE EVENTS	LOW	LOW-MODERATE	LOW	HIGH	RIDESHARING; IMPROVING BUS STOPS; BIKE-SHARE SYSTEMS; SECURE BICYCLE PARKING
1.4 EMPLOYER INCENTIVE PROGRAMS	LOW-MEDIUM	MODERATE	HIGH	HIGH	RIDESHARING; TELECOMMUTING; VANPOOL PROGRAMS AND/OR EMPLOYER SHUTTLE SERVICES
1.5 CARSHARING	MEDIUM	LOW-MODERATE	LOW	HIGH	MOBILITY HUBS IN MIXED USE AREAS; MIXED-USE DEVELOPMENT / ZONING REFORM; SHARED PARKING POLICIES
1.6 GUARANTEED RIDE HOME PROGRAMS	LOW	LOW-MODERATE	HIGH	HIGH	RIDESHARING; EMPLOYER INCENTIVE PROGRAMS; VANPOOL PROGRAMS AND/OR EMPLOYER SHUTTLE SERVICES
1.7 PRICING STRATEGIES	MEDIUM	MODERATE-HIGH	HIGH	HIGH	PARKING MANAGEMENT PROGRAM; EMPLOYER INCENTIVE PROGRAMS; MANAGED LANES (HOV, HOT, REVERSIBLE LANES, ETC.)

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
2. TRAFFIC OPERATIONS					
2.1 ACCESS MANAGEMENT	MEDIUM	HIGH	LOW	HIGH	SIGNAL SPACING; ACCESS MANAGEMENT IMPROVEMENTS/CONSOLIDATION; TRANSPORTATION IMPACT MITIGATION PROGRAM
2.2 SIGNAL SPACING	LOW-MEDIUM	MODERATE-HIGH	NONE	HIGH	ACCESS MANAGEMENT; TRAFFIC SIGNAL COORDINATION AND MODERNIZATION; TURN RESTRICTIONS
2.3 INTERSECTION CONTROL EVALUATION *(ROUNDABOUT, RCUTS, MEDIAN, U-TURN, ETC.)*	MEDIUM-HIGH	HIGH	LOW	HIGH	ACCESS MANAGEMENT; TURN LANE ADDITIONS; GEOMETRIC DESIGN IMPROVEMENTS TO INTERSECTIONS AND INTERCHANGES
2.4 TURN LANE ADDITIONS	MEDIUM	MODERATE	LOW	HIGH	SIGNAL SPACING; INTERSECTION CONTROL EVALUATION (ROUNDABOUT, RCUTS, MEDIAN U-TURN, ETC.); TURN RESTRICTIONS
2.5 FREEWAY RAMP METERING	MEDIUM	HIGH	HIGH	LOW	INCIDENT MANAGEMENT SYSTEM; DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS; REGIONAL TRAFFIC MANAGEMENT CENTER (TMC)
2.6 INTERAGENCY CORRIDOR MANAGEMENT AGREEMENTS	LOW-MEDIUM	MODERATE	HIGH	HIGH	INTEGRATED CORRIDOR MANAGEMENT; REGIONAL TRAFFIC MANAGEMENT CENTER (TMC); COMMUNICATIONS NETWORKS AND ROADWAY MONITORING COVERAGE
2.7 BOTTLENECK REMOVAL PROJECTS	MEDIUM-HIGH	HIGH	HIGH	HIGH	AUXILIARY LANES; GEOMETRIC DESIGN IMPROVEMENTS TO INTERSECTIONS AND INTERCHANGES; INCIDENT MANAGEMENT SYSTEM
2.8 MANAGED LANES *(HOV, HOT, REVERSIBLE LANES, ETC.)*	HIGH-VERY HIGH	HIGH	HIGH	MEDIUM	PRICING STRATEGIES; DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS; REGIONAL TRAFFIC MANAGEMENT CENTER (TMC)

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
3. PUBLIC TRANSPORTATION IMPROVEMENTS					
3.1 INCREASING FIXED BUS ROUTE COVERAGE OR FREQUENCY	MEDIUM	MODERATE	MEDIUM	HIGH	IMPROVING BUS STOPS; INCREASING SERVICE HOURS; PROVIDE REAL-TIME TRANSIT INFORMATION
3.2 INCREASING SERVICE HOURS	MEDIUM	MODERATE	MEDIUM	HIGH	INCREASING FIXED BUS ROUTE COVERAGE OR FREQUENCY; EMPLOYER INCENTIVE PROGRAMS; MOBILITY HUBS IN MIXED USE AREAS
3.3 IMPROVING BUS STOPS	LOW-MEDIUM	LOW-MODERATE	LOW	HIGH	CONSTRUCTING NEW SIDEWALKS / SIDEWALK GAP ELIMINATION; ENHANCED VISIBILITY CROSSINGS & MID-BLOCK CROSSINGS; PROVIDE REAL-TIME TRANSIT INFORMATION
3.4 IMPLEMENTING BUS RAPID TRANSIT (BRT) SERVICE	HIGH	HIGH	MEDIUM	HIGH	TRANSIT SIGNAL PRIORITY; DEDICATED TRANSIT RIGHTS-OF-WAY; OR QUEUE JUMPS; MOBILITY HUBS IN MIXED USE AREAS; MIXED-USE DEVELOPMENT / ZONING REFORM
3.5 INSTALL TRANSIT ASSISTING TRAFFIC CONTROL ELEMENTS *(SUCH AS TRANSIT SIGNAL PRIORITY, DEDICATED TRANSIT RIGHTS-OF-WAY, OR QUEUE JUMPS)*	MEDIUM-HIGH	MODERATE-HIGH	LOW	HIGH	TRAFFIC SIGNAL COORDINATION AND MODERNIZATION; IMPLEMENTING BUS RAPID TRANSIT (BRT) SERVICE; INCREASING FIXED BUS ROUTE COVERAGE OR FREQUENCY
3.6 PROVIDE REAL-TIME TRANSIT INFORMATION	LOW-MEDIUM	LOW-MODERATE	LOW	HIGH	IMPROVING BUS STOPS; MOBILITY HUBS IN MIXED USE AREAS; PARTNERSHIP WITH PRIVATE COMMERCIAL TRAFFIC/TRAVEL APPS
3.7 CONSTRUCT MOBILITY HUBS IN MIXED-USE AREAS	MEDIUM-HIGH	MODERATE	MEDIUM	HIGH	CARSHARING; BIKE-SHARE SYSTEMS; SECURE BICYCLE PARKING; MIXED-USE DEVELOPMENT / ZONING REFORM
3.8 VANPOOL PROGRAMS AND/OR EMPLOYER SHUTTLE SERVICES	MEDIUM	MODERATE	HIGH	HIGH	EMPLOYER INCENTIVE PROGRAMS; GUARANTEED RIDE HOME PROGRAMS; RIDESHARING

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
4. ITS TECHNOLOGIES & TSM&O					
4.1 TRAFFIC SIGNAL COORDINATION AND MODERNIZATION	MEDIUM	HIGH	NONE	HIGH	SIGNAL SPACING; COMMUNICATIONS NETWORKS AND ROADWAY MONITORING COVERAGE; INSTALL TRANSIT ASSISTING TRAFFIC CONTROL ELEMENTS SUCH AS TRANSIT SIGNAL PRIORITY, DEDICATED TRANSIT RIGHTS-OF-WAY, OR QUEUE JUMPS
4.2 INTEGRATED CORRIDOR MANAGEMENT	MEDIUM-HIGH	HIGH	HIGH	HIGH	INTERAGENCY CORRIDOR MANAGEMENT AGREEMENTS; REGIONAL TRAFFIC MANAGEMENT CENTER (TMC); DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS
4.3 PARTNERSHIP WITH PRIVATE COMMERCIAL TRAFFIC/TRAVEL APPS	LOW-MEDIUM	LOW-MODERATE	HIGH	HIGH	DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS; INCIDENT MANAGEMENT SYSTEM; WORK ZONE MANAGEMENT
4.4 ENHANCED ENFORCEMENT	LOW-MEDIUM	LOW-MODERATE	HIGH	HIGH	INCIDENT MANAGEMENT SYSTEM; WORK ZONE MANAGEMENT; SPEED HARMONIZATION
4.5 INCIDENT MANAGEMENT SYSTEM	MEDIUM	HIGH	HIGH	MEDIUM	REGIONAL TRAFFIC MANAGEMENT CENTER (TMC); DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS; ENHANCED ENFORCEMENT
4.6 WORK ZONE MANAGEMENT	LOW-MEDIUM	MODERATE	HIGH	HIGH	PARTNERSHIP WITH PRIVATE COMMERCIAL TRAFFIC/TRAVEL APPS; DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS; INCIDENT MANAGEMENT SYSTEM
4.7 COMMUNICATIONS NETWORKS AND ROADWAY MONITORING COVERAGE	MEDIUM-HIGH	MODERATE-HIGH	HIGH	HIGH	REGIONAL TRAFFIC MANAGEMENT CENTER (TMC); TRAFFIC SIGNAL COORDINATION AND MODERNIZATION; DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS
4.8 DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS	MEDIUM	MODERATE	HIGH	MEDIUM	INCIDENT MANAGEMENT SYSTEM; WORK ZONE MANAGEMENT; PARTNERSHIP WITH PRIVATE COMMERCIAL TRAFFIC/TRAVEL APPS

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
4. ITS TECHNOLOGIES & TSM&O (CONTINUED)					
4.9 REGIONAL TRAFFIC MANAGEMENT CENTER (TMC)	HIGH	HIGH	HIGH	HIGH	COMMUNICATIONS NETWORKS AND ROADWAY MONITORING COVERAGE; INCIDENT MANAGEMENT SYSTEM; INTEGRATED CORRIDOR MANAGEMENT
4.10 PARKING MANAGEMENT PROGRAM	LOW-MEDIUM	MODERATE	LOW	HIGH	PRICING STRATEGIES; SHARED PARKING POLICIES; MIXED-USE DEVELOPMENT / ZONING REFORM
4.11 SPEED HARMONIZATION	MEDIUM-HIGH	MODERATE-HIGH	HIGH	LOW	DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS; REGIONAL TRAFFIC MANAGEMENT CENTER (TMC); INCIDENT MANAGEMENT SYSTEM

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
5. ROADWAY DESIGN IMPROVEMENTS & CAPACITY EXPANSTION					
5.1 IMPROVED SIGNAGE AND WAYFINDING	LOW-MEDIUM	LOW-MODERATE	MEDIUM	HIGH	DYNAMIC MESSAGE SIGNS AND TRAFFIC COMMUNICATIONS; ACCESS MANAGEMENT IMPROVEMENTS/CONSOLIDATION; CONSTRUCT MOBILITY HUBS IN MIXED USE AREAS
5.2 TURN RESTRICTIONS	LOW-MEDIUM	MODERATE	LOW	HIGH	SIGNAL SPACING; ACCESS MANAGEMENT IMPROVEMENTS/ CONSOLIDATION; INTERSECTION CONTROL EVALUATION (ROUNDABOUT, RCUTS, MEDIAN U-TURN, ETC.)
5.3 AUXILIARY LANES	HIGH	HIGH	HIGH	MEDIUM	BOTTLENECK REMOVAL PROJECTS; INCIDENT MANAGEMENT SYSTEM; INTERCHANGE MODERNIZATION
5.4 ADOPTING LOCAL COMPLETE STREETS POLICIES	LOW	LOW-MODERATE	LOW	HIGH	CONSTRUCTING NEW SIDEWALKS / SIDEWALK GAP ELIMINATION; PROTECTED BICYCLE LANES; MIXED-USE DEVELOPMENT / ZONING REFORM
5.5 GEOMETRI DESIGN IMPROVEMENTS TO INTERSECTIONS AND INTERCHANGES	HIGH	HIGH	HIGH	HIGH	BOTTLENECK REMOVAL PROJECTS; TURN LANE ADDITIONS; INTERSECTION CONTROL EVALUATION (ROUNDABOUT, RCUTS, MEDIAN U-TURN, ETC.)
5.6 ADDING CAPACITY THROUGH RESTRIPING ACTIVITES OR WIDENING (IF APPROPRIATE)	MEDIUM-HIGH	MODERATE-HIGH	HIGH	HIGH	ACCESS MANAGEMENT IMPROVEMENTS/ CONSOLIDATION; TRAFFIC SIGNAL COORDINATION AND MODERNIZATION; ADOPTING LOCAL COMPLETE STREETS POLICIES
5.7 CONSTRUCTION OF NEW ARTERIALS OR FREEWAYS	VERY HIGH	HIGH	HIGH	HIGH	REGIONAL GROWTH MANAGEMENT POLICIES; STREET CONNECTIVITY REQUIREMENTS; TRANSPORTATION IMPACT MITIGATION PROGRAM

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
5. ROADWAY DESIGN IMPROVEMENTS & CAPACITY EXPANSTION (CONTINUED)					
5.8 CONSTRUCTION OF NEW BRIDGE CROSSINGS	VERY HIGH	HIGH	HIGH	HIGH	CONSTRUCTION OF NEW ARTERIALS OR FREEWAYS; REGIONAL GROWTH MANAGEMENT POLICIES; INTEGRATED CORRIDOR MANAGEMENT
5.9 ROAD RECONFIGURATION	HIGH	HIGH	LOW	HIGH	TRAFFIC SIGNAL COORDINATION AND MODERNIZATION; PROTECTED BICYCLE LANES; ENHANCED VISIBILITY CROSSINGS & MID-BLOCK CROSSINGS

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
6. BICYCLE & PEDESTRIAN, LAND USE, AND REGIONAL COORDINATION					
6.1 MIXED-USE DEVELOPMENT/ZONING REFORM	LOW-MEDIUM	MODERATE	LOW	HIGH	TRANSIT/TRAIL-ORIENTED DEVELOPMENT; ACTIVITY CENTER PLANNING; SHARED PARKING POLICIES
6.2 TRANSIT/TRAIL-ORIENTED DEVELOPMENT	MEDIUM	MODERATE	LOW	HIGH	MIXED-USE DEVELOPMENT / ZONING REFORM; CONSTRUCT MOBILITY HUBS IN MIXED USE AREAS; SHARED-USE PATHS
6.3 ACTIVITY CENTER PLANNING	LOW-MEDIUM	MODERATE	LOW	HIGH	MIXED-USE DEVELOPMENT / ZONING REFORM; PARKING MANAGEMENT PROGRAM; INCREASING FIXED BUS ROUTE COVERAGE OR FREQUENCY
6.4 INFILL DEVELOPMENT INCENTIVES	LOW-MEDIUM	MODERATE	LOW	HIGH	MIXED-USE DEVELOPMENT / ZONING REFORM; ACTIVITY CENTER PLANNING; SHARED PARKING POLICIES
6.5 STREET CONNECTIVITY REQUIREMENTS	LOW-MEDIUM	MODERATE	LOW	HIGH	CONSTRUCTION OF NEW ARTERIALS OR FREEWAYS; CONSTRUCTING NEW SIDEWALKS / SIDEWALK GAP ELIMINATION; LOW-STRESS BICYCLE NETWORK DEVELOPMENT
6.6 TRANSPORTATION IMPACT MITIGATION PROGRAM	LOW-MEDIUM	MODERATE-HIGH	MEDIUM	HIGH	ACCESS MANAGEMENT IMPROVEMENTS/ CONSOLIDATION; STREET CONNECTIVITY REQUIREMENTS; REGIONAL GROWTH MANAGEMENT POLICIES
6.7 REGIONAL GROWTH MANAGEMENT POLICIES	LOW-MEDIUM	LOW-MODERATE	HIGH	HIGH	CONSTRUCTION OF NEW ARTERIALS OR FREEWAYS; ACTIVITY CENTER PLANNING; MIXED-USE DEVELOPMENT / ZONING REFORM
6.8 SHARED PARKING POLICIES	LOW	LOW-MODERATE	LOW	HIGH	PARKING MANAGEMENT PROGRAM; MIXED-USE DEVELOPMENT / ZONING REFORM; ACTIVITY CENTER PLANNING
6.9 CONSTRUCTING NEW SIDEWALKS/ SIDEWALK GAP ELIMINATION	LOW-MEDIUM	LOW-MODERATE	NONE	HIGH	IMPROVING BUS STOPS; ENHANCED VISIBILITY CROSSINGS & MID-BLOCK CROSSINGS; SAFE ROUTES TO SCHOOL

STRATEGY	COST	EXPECTED CONGESTION BENEFIT	FREEWAY SUITABILITY	NON-FREEWAY SUITABILITY	COMPLEMENTARY STRATEGIES
6. BICYCLE & PEDESTRIAN, LAND USE, AND REGIONAL COORDINATION (CONTINUED)					
6.10 ENHANCED VISIBILITY CROSSINGS & MID-BLOCK CROSSINGS	LOW-MEDIUM	LOW-MODERATE	NONE	HIGH	CONSTRUCTING NEW SIDEWALKS / SIDEWALK GAP ELIMINATION; LEADING PEDESTRIAN INTERVALS; ROAD RECONFIGURATION
6.11 BICYCLE & PEDESTRIAN, LAND USE, AND REGIONAL COORDINATION	LOW-MEDIUM	LOW-MODERATE	NONE	HIGH	CONSTRUCTING NEW SIDEWALKS / SIDEWALK GAP ELIMINATION; ENHANCED VISIBILITY CROSSINGS & MID-BLOCK CROSSINGS; NEIGHBORHOOD GREENWAYS
6.12 LEADING PEDESTRIAN INTERVALS	LOW	LOW	NONE	HIGH	TRAFFIC SIGNAL COORDINATION AND MODERNIZATION; ENHANCED VISIBILITY CROSSINGS & MID-BLOCK CROSSINGS; CONSTRUCTING NEW SIDEWALKS / SIDEWALK GAP ELIMINATION
6.13 CONSTRUCTING LOW-STRESS BICYCLE NETWORK	MEDIUM	MODERATE	NONE	HIGH	PROTECTED BICYCLE LANES; NEIGHBORHOOD GREENWAYS; SECURE BICYCLE PARKING
6.14 SHARED-USE PATHS	MEDIUM-HIGH	MODERATE	LOW	HIGH	TRANSIT/TRAIL-ORIENTED DEVELOPMENT; CONSTRUCT MOBILITY HUBS IN MIXED USE AREAS; SECURE BICYCLE PARKING
6.15 PROTECTED BICYCLE LANES	MEDIUM	MODERATE	NONE	HIGH	ROAD RECONFIGURATION; SECURE BICYCLE PARKING; BIKE-SHARE SYSTEMS
6.16 NIGHBORHOOD GREENWAYS	LOW-MEDIUM	LOW-MODERATE	NONE	HIGH	SAFE ROUTES TO SCHOOL; CONSTRUCTING LOW-STRESS BICYCLE NETWORK DEVELOPMENT; ENHANCED VISIBILITY CROSSINGS & MID-BLOCK CROSSINGS
6.17 BIKE-SHARE SYSTEM	MEDIUM	LOW-MODERATE	NONE	HIGH	CONSTRUCT MOBILITY HUBS IN MIXED USE AREAS; SECURE BICYCLE PARKING; PROTECTED BICYCLE LANES
6.18 SECURE BICYCLE PARKING	LOW-MEDIUM	LOW	NONE	HIGH	BIKE-SHARE SYSTEMS; CONSTRUCT MOBILITY HUBS IN MIXED USE AREAS; PROTECTED BICYCLE LANES

CHAPTER 7

Corridor Investment Approach

CALL TO ACTION

These corridors represent key transportation network segments across the INCOG TMA that have significant impacts on the general traveling public. Congestion does not stop at city limits. Delays on a single corridor can affect travel, freight movement, transit operations, and economic activity across the region. The CMPP Focus Network identifies corridors where local investments can provide regional benefits, helping communities target resources where they will have the greatest impact on mobility, reliability, and safety.

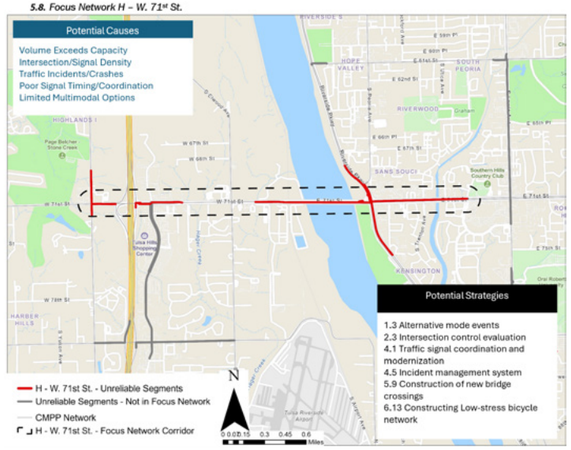
INTEGRATING REGIONAL INVESTMENT DECISIONS

The CMPP is designed to support existing planning and investment processes. Its findings can help inform Connected 2050, corridor studies, Transportation Improvement Program (TIP) funding decisions, local transportation plans, capital improvement programs, and project prioritization efforts. Using a common set of regional priorities helps agencies coordinate investments and maximize transportation benefits.

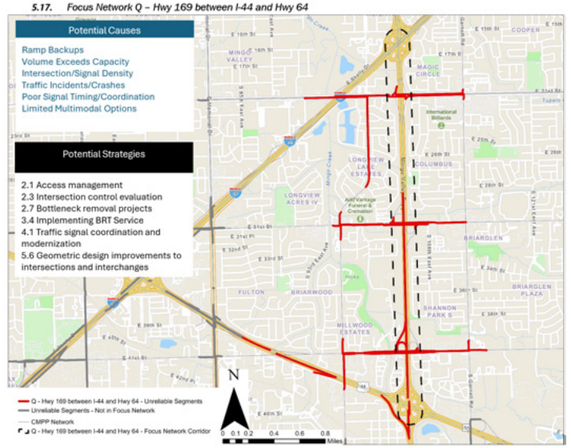
FOCUS CORRIDOR EXAMPLES

No two corridors experience congestion in exactly the same way. A school-area corridor may benefit from circulation improvements, safer crossings, and coordination with school districts, while a regional freeway corridor may require operational, technology, freight, and infrastructure investments. These examples demonstrate how the CMPP uses data and context to match solutions to the underlying causes of congestion, which are described in Chapter 3 above. For more details on all 25 focus segment profiles, refer to Technical Memorandum 4.

5.8. Focus Network H – W. 71st St.



5.17. Focus Network Q – Hwy 169 between I-44 and Hwy 64



FOCUS CORRIDOR ANALYSIS

While the Focus Network was developed by looking beyond congestion alone and corridors were evaluated through multiple lenses, this analysis was conducted at a regional level. These factors provide a baseline understanding of corridor performance and help identify the most appropriate solutions, however each corridor should be further evaluated with more robust data to identify the specific set of solutions to address corridor issues. Below is an example process that each corridor should follow.

Step	Application
1. Confirm the corridor	Define limits, responsible agencies, planned projects, and the specific problem to solve.
2. Diagnose causes	Use regional measures, local traffic data, safety information, school and land-use context, and stakeholder knowledge.
3. Build alternatives	Select strategies from multiple toolbox categories and combine complementary actions.
4. Evaluate	Compare congestion, reliability, safety, multimodal, freight, cost, feasibility, and community outcomes.
5. Identify the pathway	Determine whether the next step is an operations change, policy action, corridor study, project development, or long-range investment.
6. Monitor	Establish a baseline and evaluate performance after implementation.

CHAPTER 8

Measuring Success

CMPP OBJECTIVES

The CMPP is intended to improve transportation system reliability, efficiency, and accessibility while making the best use of existing infrastructure. Key objectives include:

Improve safety and travel reliability. Reduce crashes and unexpected delays to create safer, more predictable trips across the transportation network.

Expand transportation choices and connectivity. Strengthen connections between driving, transit, walking, and biking to provide more ways to reach destinations.

Reduce recurring congestion. Address routine bottlenecks and delay through targeted operational, multimodal, and infrastructure strategies.

Improve system operations and coordination. Use technology, operational improvements, and agency coordination to make the transportation system work more efficiently.

Support freight movement and economic activity. Improve the reliable movement of goods and access to key employment and commercial areas.

Monitor performance and adapt over time. Track transportation conditions and outcomes to identify changing needs and refine strategies as the region evolves.

COORDINATION

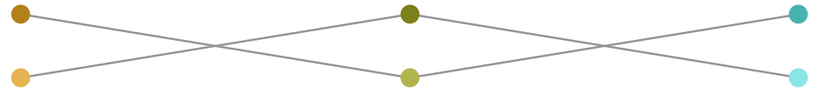
Many Focus Network corridors cross jurisdictional boundaries and serve regional travel markets. Continued coordination among INCOG, local governments, ODOT, transit providers, school districts, freight stakeholders, tribal governments, and other partners will be essential for identifying priorities, sharing information, and advancing effective solutions.

IMPLEMENTATION

CMPP findings are intended to guide future transportation investments and project development. The Focus Network, corridor analyses, and toolbox strategies can be incorporated into Connected 2050, TIP development, corridor studies, local transportation plans, and capital improvement programs, helping ensure that transportation funding supports regional mobility goals.

REASSESS

Congestion management is an ongoing process. Conditions should be regularly monitored to understand how travel patterns are changing and whether implemented projects are producing desired results. The CMPP recommends tracking performance at three levels:



REGIONAL

Monitor broad transportation trends across the Tulsa metropolitan area.

FOCUS NETWORK

Track conditions on priority corridors and identify emerging congestion hotspots.

PROJECT

Compare before-and-after performance to measure the effectiveness of specific investments.

Together, these measures create a continuous feedback loop that helps agencies evaluate progress, refine priorities, and guide future transportation decisions.
Technical Memorandum 3 defines all the performance measures, sources, cadence, and further details.

Measure	Baseline	Desired Trend
Unreliable roadway mileage	17.5% of CMPP Network at 7 AM; 22.1% at 5 PM	Down
TTI above 1.45	11.7% of CMPP Network at 7 AM; 15.1% at 5 PM	Down
V/C above 1.15	1.10% of modeled centerline miles	Down
Transit on-time performance	92.3% (Fixed Route Only)	Up
Transit ridership	2,376,768 total rides; 2,197,793 unlinked passenger trips	Up
Low-stress bicycle network	585.6 miles	Up
Sidewalk network	2,662.4 miles	Up
	500 miles of Arterial Sidewalk Gaps	Down
Fatalities and serious injuries	375 in 2022; 468 in 2021; 427 in 2020	Down

The CMPP follows a simple cycle: ***understand conditions, focus resources, implement solutions, measure results, and adapt over time.*** *By working together and investing in corridors with the greatest regional impact, transportation partners can build a safer, more reliable, and more connected transportation system for the Tulsa region.*