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MTIP 2050

Chapter 5 System Performance Report

5.1

Federal Performance Measures

A performance-based planning process involves setting goals and tracking relevant data to guide future planning decisions. To support this, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) jointly issued a Planning Rule establishing performance measures for roadway safety (PM1), pavement and bridge condition (PM2), system performance and freight movement (PM3), transit asset management (TAM), and transit safety. MPOs must either set their own targets or support those of their respective state DOTs. WAMPO has chosen to support the Kansas Department of Transportation's (KDOT's) targets for PM1, PM2, PM3, and TAM. On October 8, 2024, the WAMPO Transportation Policy Body (TPB) approved supporting KDOT's federal performance measure targets in 2024, reinforcing WAMPO's commitment to state and local goals. WAMPO reflects this support through project evaluation criteria that help prioritize federal funding for regional transportation projects.

The KDOT federal performance measure targets that the WAMPO TPB has voted to support fall into four umbrella categories: Safety (PM1), Infrastructure Condition (PM2), System Performance (PM3), and Transit Asset Management (TAM). Within each of these categories, several individual metrics are considered:

PM1: Safety (5-Year Rolling Averages)

- Number of Crash Fatalities
- Rate of Crash Fatalities per 100 Million Vehicle Miles Traveled (100 MVMT)
- Number of Crash Serious Injuries
- Rate of Crash Serious Injuries per 100 MVMT
- Number of Crash Nonmotorized Fatalities and Serious Injuries

PM2: Pavement & Bridge Condition

- Percentage of Interstate Pavement in Good Condition
- Percentage of Interstate Pavement in Poor Condition
- Percentage of Non-Interstate National Highway System (NHS) Pavement in Good Condition
- Percentage of NHS Bridge Deck Area in Good Condition
- Percentage of NHS Bridge Deck Area in Poor Condition

PM3: System Performance

- Percentage of Person-Miles on Interstates that Are Reliable
- Percentage of Person-Miles on Non-Interstate National Highway System (NHS) Facilities that Are Reliable
- Truck Travel Time Reliability Index

Travel Asset Management

- Percentage of Revenue Vehicles that Exceed the Useful Life Benchmark
- Percentage of Non-Revenue Service Vehicles that Exceed the Useful Life Benchmark
- Percentage of Facilities that Are Rated Less than 3.0 on the Transit Economic Retirement Model (TERM)

PM1 - Safety

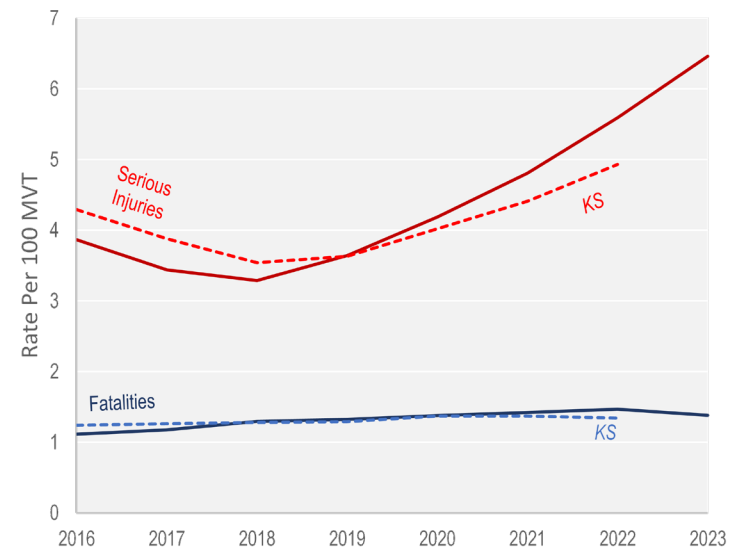
Table 5.1.1 shows historical trends of the five-year rolling averages of fatal and serious-injury crash data available from KDOT (2012-2016 through 2018-2022), both statewide and for public roads within the WAMPO region. Over the period shown, all fatality and serious-injury metrics have been increasing more quickly in the WAMPO region than statewide. In 2019, KDOT changed how serious injuries were reported, resulting in what appears to be a large single-year increase in serious injuries but is really just a change in how they are counted. Figure 5.1.1 illustrates trends in Kansas's and the WAMPO region's rates of fatalities and serious injuries.

Table 5.1.1: PM1 – Five-Year Rolling Average Safety Measures (shown by ending year of five-year period)

	2016	2017	2018	2019	2020	2021	2022	2023
Statewide								
Number: Fatalities	385	396	407	412	426	425	415	-
Rate: Fatalities / 100 MVMT	1.24	1.26	1.28	1.29	1.37	1.37	1.34	-
Number: Serious Injuries	1325	1213	1121	1160	1242	1361	1518	-
Rate: Serious Injuries / 100 MVMT	4.29	3.88	3.54	3.63	4.02	4.41	4.93	-
Number: Nonmotorized Fatalities & Serious Injuries	134	135	139	143	152	160	173	-
WAMPO Region								
Number: Fatalities	50	53	58	60	63	65	68	64
Rate: Fatalities / 100 MVMT	1.11	1.17	1.3	1.32	1.38	1.42	1.47	1.38
Number: Serious Injuries	172	154	148	165	191	221	258	299
Rate: Serious Injuries / 100 MVMT	3.86	3.44	3.29	3.64	4.19	4.81	5.59	6.46
Number: Nonmotorized Fatalities & Serious Injuries	29	28	28	32	33	35	40	47

Sources: KDOT Performance Measure Dashboard retrieved on 12/13/2024, WAMPO observed from KDOT as reported by local law enforcement Agencies

Figure 5.1.1: Regional and State Fatality and Serious Injury Rates



PM1: STATE TARGETS

KDOT’s statewide targets for the PM1 safety metrics are shown in Table 5.1.2. KDOT selected these targets after an analysis of trends, with a goal of aggressive reductions in fatal and serious-injury crashes. Memorable round numbers were selected to help keep these targets forefront in the minds of stakeholders as decisions are made that impact safety. WAMPO is committed to supporting these statewide targets by explicitly incorporating safety as a criterion in project evaluation to support project selection and monitoring regional progress in achieving the state’s safety goals.

Table 5.1.2: PM1 - State Targets

	KDOT Statewide 2023 Target	KDOT Statewide 2024 Target
Number: Fatalities	≤ 400	≤ 400
Rate: Fatalities / 100 MVMT	≤ 1.26	≤ 1.28
Number: Serious Injuries	≤ 1100	≤ 1400
Rate: Serious Injuries / 100 MVMT	≤ 3.47	≤ 4.47
Number: Nonmotorized Fatalities & Serious Injuries	≤ 160	≤ 170

*Targets in table are 5-year rolling averages
Source: Retrieved from KDOT Federal Performance Measure Dashboard 12/13/2024*

PM1: REGIONAL PROGRESS AND GOALS

To support Kansas in achieving its safety targets, WAMPO has developed regional PM1 goals derived from and aligned with the state’s targets. These goals enable WAMPO to assess its progress in relation to the state’s targets. For example, in 2023, WAMPO supported the state’s target of keeping crash fatalities at or below 400 for the year (3.6% less than the 415 actual statewide crash fatalities in 2022). A practical benchmark for WAMPO, reflecting its commitment to this target, is to monitor and aim for an equal or greater percent decrease in its own fatalities. By evaluating the percent difference between actual observed values for statewide PM1 metrics in 2022 and the corresponding 2023 statewide targets, WAMPO can establish useful goals to track its progress in supporting the state’s safety targets (see Table 5.1.3).

Table 5.1.3: PM1 - WAMPO Goals Derived from State Targets

	WAMPO Region: 2023 Observed	% Change: 2022 Kansas Statewide Observed & 2023 Targets	WAMPO Region: 2024 Goals
Number: Fatalities	64	-3.6%	≤ 62
Rate: Fatalities / 100 MVMT	1.38	-6.0%	≤ 1.3
Number: Serious Injuries	299	-27.5%	≤ 217
Rate: Serious Injuries / 100 MVMT	6.46	-29.6%	≤ 4.55
Number: Nonmotorized Fatalities & Serious Injuries	47	-7.5%	≤ 43

*Targets in table are 5-year rolling averages
Sources: WAMPO observed from Kansas Open Records Act (KORA) request, State Observed (2022) retrieved from KDOT Federal Performance Measure Dashboard 12/13/2024*

PM1: 2025 AND BEYOND

New safety performance-measure targets are established annually, but WAMPO remains dedicated to reducing fatalities and serious injuries well beyond 2024. To guide both short- and long-term transportation safety planning, WAMPO collaborated with regional stakeholders and decision-makers to develop the Comprehensive Safety Action Plan (CSAP, see Appendix H). This plan outlines a detailed list of strategies aimed at significantly reducing transportation-related fatalities and serious injuries in the years ahead.

PM2 - Pavement & Bridge Condition

The Federal Highway Administration (FHWA) classifies interstate and non-interstate pavement conditions as Good, Fair, or Poor based on metrics such as the International Roughness Index (IRI), cracking percentage, rutting, and faulting. A pavement section is rated Good if all metrics meet the ‘Good’ thresholds, Poor if at least two metrics fall below ‘Poor’ thresholds, and Fair if it doesn’t meet the criteria for either Good or Poor. Importantly, a “Poor” rating means a major reconstruction investment may be needed. NHS bridge condition is determined by the lowest rating of the deck, superstructure, substructure, or culvert, as classified by the National Bridge Inventory (NBI).

Table 5.1.4 and Figure 5.1.2 show historical trends of pavement and bridge condition data, both statewide and for the WAMPO region, over the period 2016-2023 (with some data gaps). In general, the percentages of infrastructure rated Good are lower in the WAMPO region than statewide, but have been either improving or holding steady in recent years. Percentages of WAMPO-region NHS infrastructure rated Poor are either already lower than the corresponding statewide figures or have been

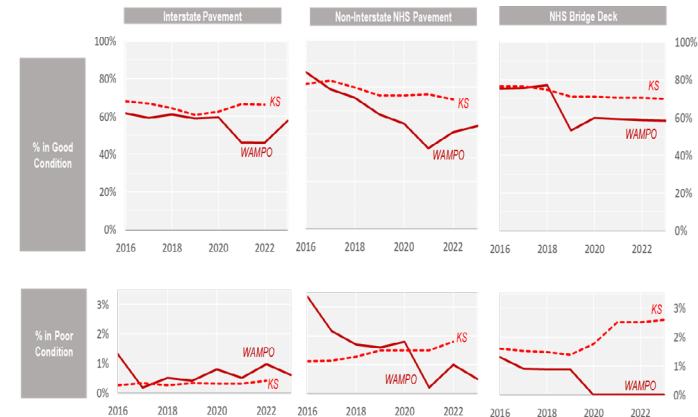
trending in that direction. 2023 WAMPO-region percentages of Interstate pavement, non-Interstate NHS pavement, and NHS bridge deck rated Poor are all below 1%. The percent of pavement rated Good or Poor condition is based on lane miles. The percent of bridges rated Good or Poor is based on deck area.

Table 5.1.4: PM2 – Pavement & Bridge Condition Measures

	2016	2017	2018	2019	2020	2021	2022	2023
Statewide								
Interstate Pavement: Good Condition	68.1%	66.7%	64.3%	60.7%	66.6%	66.5%	66.3%	-
Interstate Pavement: Poor Condition	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	-
Non-Interstate NHS Pavement: Good Condition	61.2%	62.7%	59.8%	56.3%	59.1%	56.9%	54.8%	-
Non-Interstate NHS Pavement: Poor Condition	1.1%	1.1%	1.3%	1.5%	1.8%	1.5%	1.8%	-
NHS Bridge Deck: Good Condition	76.5%	76.5%	74.8%	71.2%	71.3%	70.6%	70.6%	70.0%
NHS Bridge Deck: Poor Condition	1.6%	1.5%	1.5%	1.4%	1.7%	2.5%	2.5%	2.6%
WAMPO Region								
Interstate Pavement: Good Condition	61.7%	59.2%	61.2%	58.8%	59.6%	46.1%	46.0%	60.2%
Interstate Pavement: Poor Condition	1.3%	0.2%	0.5%	0.4%	0.8%	0.5%	1.0%	0.5%
Non-Interstate NHS Pavement: Good Condition	66.3%	59.1%	55.4%	48.3%	44.4%	33.7%	41.0%	39.3%
Non-Interstate NHS Pavement: Poor Condition	3.4%	2.2%	1.7%	1.6%	1.8%	1.9%	1.0%	0.5%
NHS Bridge Deck: Good Condition	75.5%	75.8%	77.1%	53.3%	59.8%	59.2%	58.5%	58.3%
NHS Bridge Deck: Poor Condition	1.3%	0.9%	0.9%	0.9%	0.0%	0.0%	0.0%	0.0%

Sources: Retrieved from FHWA Performance Measure Dashboard and KDOT Performance Measure Dashboard 12/13/2024, KDOT HPMS system, National Bridge Inventory

Figure 5.1.2: PM2 – Regional and State Pavement and Bridge Condition Trends



PM2: STATE TARGETS

KDOT's statewide targets for the PM2 pavement and bridge condition metrics are shown in Table 5.1.5. Whereas PM1 metrics have annual targets, PM2 targets are established for a four-year performance period, currently 2022–2025. Within this period, per FHWA guidance, biennial targets are set for 2023 and 2025. These targets are determined with consideration of a designated baseline set of PM2 observations from a specific year, which for this performance period is 2021. WAMPO supports the state's targets by including infrastructure condition and age as criteria in project evaluation to support project selection.

Table 5.1.5: PM2 - State Targets

	KDOT Baseline: 2021 Observations	KDOT Statewide 2023 Target	KDOT Statewide 2025 Target
Percent of Interstate Pavement in Good Condition	66.5%	≥ 60 %	≥ 61 %
Percent of Interstate Pavement in Poor Condition	0.3%	≤ 0.4 %	≤ 0.4 %
Percent of Non-Interstate NHS Pavement in Good Condition	56.9%	≥ 61 %	≥ 61 %
Percent of Non-Interstate NHS Pavement in Poor Condition	1.8%	≤ 1.7 %	≤ 1.7 %
Percent of NHS Bridge Deck in Good Condition	71.3%	≥ 72 %	≥ 72 %
Percent of NHS Bridge Deck in Poor Condition	1.7%	≤ 3 %	≤ 3 %

Source: Retrieved from FHWA Performance Measure Dashboard 12/13/2024

PM2: REGIONAL PROGRESS AND GOALS

To support Kansas in achieving its infrastructure-condition targets, WAMPO has developed regional PM2 goals derived from and aligned with the state's targets. Considering that 2023 observations have already been determined, 2025 goals were calculated. These were derived by analyzing KDOT's baseline PM2 observations from 2021, the year in which their 2-and 4-year goals were initially established, and calculating the absolute difference in percent between that and KDOT's 2025 targets (as opposed to percent change). By evaluating the difference between actual observed values for base year metrics from 2021 and the corresponding 2025 statewide targets, WAMPO can establish useful goals to track its progress in supporting the state's infrastructure-condition targets. Calculated WAMPO-region goals for 2025 are in Table 5.1.6.

Table 5.1.6: PM1 - WAMPO Goals Derived from State Targets

	WAMPO Region: 2021 Observed	Difference: 2021 Kansas Baseline Observations & 2025 Targets	WAMPO Region: 2025 Goals
Percent of Interstate Pavement in Good Condition	46.1%	-5.5%	≥ 40.6 %
Percent of Interstate Pavement in Poor Condition	0.5%	0.1%	≤ 0.6 %
Percent of Non-Interstate NHS Pavement in Good Condition	33.7%	4.1%	≥ 37.8 %
Percent of Non-Interstate NHS Pavement in Poor Condition	1.9%	-0.1%	≤ 1.8 %
Percent of NHS Bridge Deck in Good Condition	59.2%	0.7%	≥ 59.9 %
Percent of NHS Bridge Deck in Poor Condition	0.0%	1.3%	≤ 1.3 %

Sources: WAMPO observed provided by KDOT, State Observed and Targets retrieved from FHWA's Federal Performance Measure Dashboard 12/13/2024

PM3 - System Performance

For the purposes of federal performance measures, “system performance” refers to the reliability of the transportation system, measured as the likelihood of experiencing or not experiencing unexpected delay, regardless of what the average travel speed is. More formally, reliability is the consistency and dependability of travel times across different days and across different times of the day.

The metrics included in PM3 are:

- Level of Travel Time Reliability (LOTTR): Ratio of longer travel times (80th percentile) to the median travel time (50th percentile), according to data from the National Performance Management Research Data Set (NPMRDS). Reported for Interstates and for non-Interstates on the NHS as the percent of person-miles traveled that are reliable.
- Interstate Truck Travel Time Reliability (TTTR) index: Measures freight-transportation reliability. Reporting is divided into five periods:
 - » Weekday AM Peak Period: 6:00 AM to 10:00 AM
 - » Weekday Midday Period: 10:00 AM to 4:00 PM
 - » Weekday PM Peak Period: 4:00 PM to 8:00 PM
 - » Weekday Overnight Period: 6:00 PM to 6:00 AM
 - » Weekend Period: All hours during weekends

The TTTR index is calculated by first determining the ratio of the 95th percentile travel time to the median (50th percentile) travel time for each Interstate roadway segment in each of the five time periods, then multiplying each segment’s largest ratio of the five time periods by its length, then dividing the sum of all the roadway segments’ length-weighted ratios by the total length of the roadway. Higher numbers correspond to less reliable travel times. The lowest possible TTTR index value is one (1), which means travel times are always reliable.

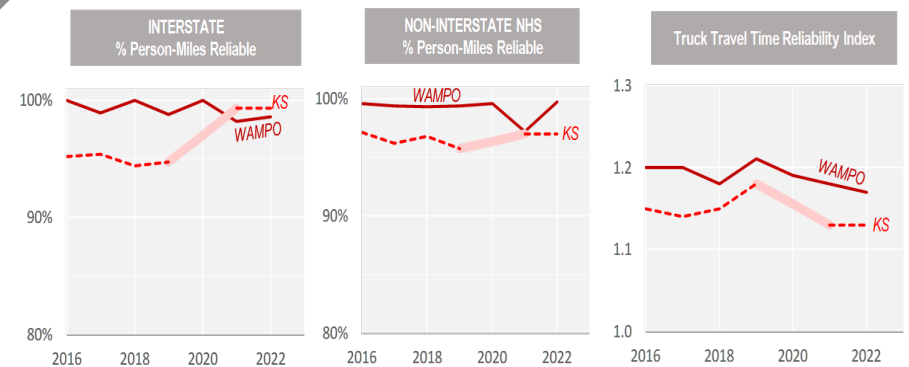
Table 5.1.7 and Figure 5.1.3 show historical trends of system-performance data, both statewide and for the WAMPO region, over the period 2016-2023 (with some data gaps). The two percentage-based LOTTR measures show the WAMPO-region portion of the NHS operating at a very high level of reliability, comparable to or better than the state of Kansas as whole. The WAMPO region’s TTTR index has been consistently higher than (i.e., worse than) the statewide TTTR index, but has been trending downward since 2019.

Table 5.1.7: PM3 – System Performance Measures

	2016	2017	2018	2019	2020	2021	2022	2023
Statewide								
% of Person-Miles on Interstates that are reliable	95.2%	95.4%	94.4%	94.7%	-	99.3%	98.6%	-
% of Person-Miles on non-Interstate NHS that are reliable	97.1%	96.2%	96.8%	95.7%	-	97.0%	97.4%	-
Truck Travel Time Reliability Index	1.15	1.14	1.15	1.18	-	1.13	1.16	-
WAMPO Region								
% of Person-Miles on Interstates that are reliable	100.0%	98.9%	100.0%	99.0%	100.0%	98.0%	99.0%	100.0%
% of Person-Miles on non-Interstate NHS that are reliable	99.6%	99.4%	99.0%	99.0%	100.0%	97.0%	99.7%	99.0%
Truck Travel Time Reliability Index	1.2	1.2	1.18	1.21	1.19	1.18	1.17	1.17

Sources: Retrieved from FHWA Performance Measure Dashboard and KDOT Performance Measure Dashboard 12/13/2024, NPMRDS INRIX (2016-2023)

Figure 5.1.3: PM3 – Regional and State System-Performance Trends



PM3: STATE TARGETS

KDOT’s statewide targets for the PM3 system-performance metrics are shown in Table 5.1.8. As with PM2 targets, PM3 targets are established for a four-year performance period, currently 2022–2025. These targets were determined with consideration of a designated baseline set of PM3 observations from 2021. Within this period, per FHWA rules, biennial targets are set for 2023 and 2025. WAMPO supports the state’s targets by including traffic congestion criteria in project evaluation to support project selection.

Table 5.1.8: PM3 - State Targets

	KDOT Baseline: 2021 Observations	KDOT Statewide 2023 Target	KDOT Statewide 2025 Target
% of Person-Miles on Interstates that are reliable	99.3%	≥ 98%	≥ 99%
% of Person-Miles on non-Interstate NHS that are reliable	97.0%	≥ 97%	≥ 98%
Truck Travel Time Reliability Index	1.13	≤ 1.1	≤ 1.1

Source: Retrieved from FHWA Performance Measure Dashboard 12/13/2024

PM3: REGIONAL PROGRESS AND GOALS

To support Kansas in achieving its system-performance targets, WAMPO has developed regional PM3 goals derived from and aligned with the state’s targets. Considering that 2023 observations have already been determined, 2025 goals were calculated. These goals were developed in similar fashion to those for PM2. They were derived by analyzing KDOT’s baseline PM3 observations from 2021, the year in which their 2-and 4-year goals were initially established, and calculating the absolute difference between that and KDOT’s 2025 targets. By evaluating the difference between actual observed values for base year metrics from 2021 and the corresponding 2025 statewide targets, WAMPO can establish useful goals to track its progress in supporting the state’s system performance targets. Calculated PM3 WAMPO-region goals for 2025 are in Table 5.1.9.

Table 5.1.9: PM3 - WAMPO Goals Derived from State Targets

	WAMPO Region: 2021 Observed	Difference: 2021 Kansas Baseline Observations & 2025 Targets	WAMPO Region: 2025 Goals
% of Person-miles on Interstates that are reliable	98.0%	-0.3%	97.7%
% of Person-miles on non-Interstate NHS that are reliable	97.0%	1.0%	98.0%
Truck Travel Time Reliability Index	1.18	-0.03	1.15

Sources: State Observed and Targets Retrieved from FHWA Performance Measure Dashboard 12/13/2024, WAMPO observed retrieved from NPMRDS INRIX (2021)

Transit Asset Management (TAM)

Table 5.1.10 shows Transit Asset Management (TAM) targets that the WAMPO TPB voted to support in 2023. These targets were established by KDOT in their 2022 TAM plan. While not strictly required by FTA guidelines, since the targets had not been updated, the TPB chose to reaffirm its support for the KDOT TAM targets in 2024.

The targets are minimum percentages of different kinds of public transit assets to be kept in a state of good repair. The Useful Life Benchmark (ULB) is the expected lifespan of a transit asset, indicating when it may require replacement or significant rehabilitation. For example, the FTA’s default ULB for a standard bus is 14 years.

The Transit Economic Requirements Model (TERM) scale is a five-point system used to assess the condition of public transit assets, with 5 = excellent or new condition and 1 = poor condition. Assets rated below 3 are considered to be in marginal or poor condition, suggesting they may need attention to restore them to a state of good repair.

Table 5.1.10: State of Kansas Transit Asset Management Targets

Federal Performance Measures	ULB	TERM	Replacement Threshold	Targets	
Rolling Stock					
% of revenue vehicles that have met/ exceeded their ULB	Over-the-Road Bus	14	NA	14 years / 750K Miles	25%
	Full-Sized Bus	14	NA	12 years / 500K Miles	25%
	Cutaway Bus	10	NA	5 years / 100K Miles	25%
	Van	8	NA	5 years / 100K Miles	25%
	Minivan	8	NA	5 years / 100K Miles	25%
	Automobile	8	NA	--	--
Equipment					
% of non-revenue vehicles that have met/ exceeded their ULB	Van	8	NA	5 years / 100K Miles	75%
	Minivan	8	NA	5 years / 100K Miles	75%
	SUV	8	NA	5 years / 100K Miles	75%
	Automobile	8	NA	5 years / 100K Miles	75%
	Cutaway Bus	10	NA	--	--
Facilities					
% of facilities (by group) that are rated less than 3.0 on the TERM Scale.	Administrative	NA	3.0	--	25%
	Maintenance	NA	3.0	--	25%
	Parking	NA	3.0	--	25%
	Passenger	NA	3.0	--	25%

5.2

Regional Performance Measures

Introduction

Regional performance measures are intended to monitor and evaluate aspects of transportation that are uniquely important to a particular metropolitan area. While not federally required, these measures complement the required federal performance measures. Recognizing the value of these additional metrics, WAMPO has chosen to track and incorporate the following regional performance measures into the MTP.

- Commuter Mode Shares
- Average Travel Time to Work
- Greenhouse Gas (GHG) Emissions
- Sidewalk/Multiuse Path Network Length

Commuter Mode Shares

Regional commuter mode shares have been derived from 1-Year American Community Survey (ACS) data for the Wichita Metropolitan Statistical Area (MSA), which encompasses Harvey, Sedgwick, Butler, and Sumner counties. While this geographic area is larger than the WAMPO region, the vast majority of its population resides within the WAMPO Planning Area Boundary, so the data still capture key transportation and commuting patterns

for the WAMPO region that can inform planning decisions. It is important to note that the year 2020 is missing from the dataset, due to nationwide challenges gathering data during the COVID-19 pandemic.

As shown in Figure 5.2.1, during 2016 to 2023, driving alone was the dominant commute mode, ranging between 79.7% and 85.5% during that time; the low point for this mode was in 2021, likely due to the COVID-19 pandemic (due to data limitations, it is unknown whether it was any lower in 2020). During the same period, the carpooling mode showed minor fluctuations, peaking at about 10.0% in 2018 before stabilizing around 9.0-9.1% in 2022-2023. The “commute mode” of working from home experienced the most significant changes, climbing from 3.3% in 2019 to 9.0% in 2021 (during the COVID-19 pandemic), then declining to 7.0% by 2023.

Figure 5.2.1: Wichita MSA Commuter Mode Shares

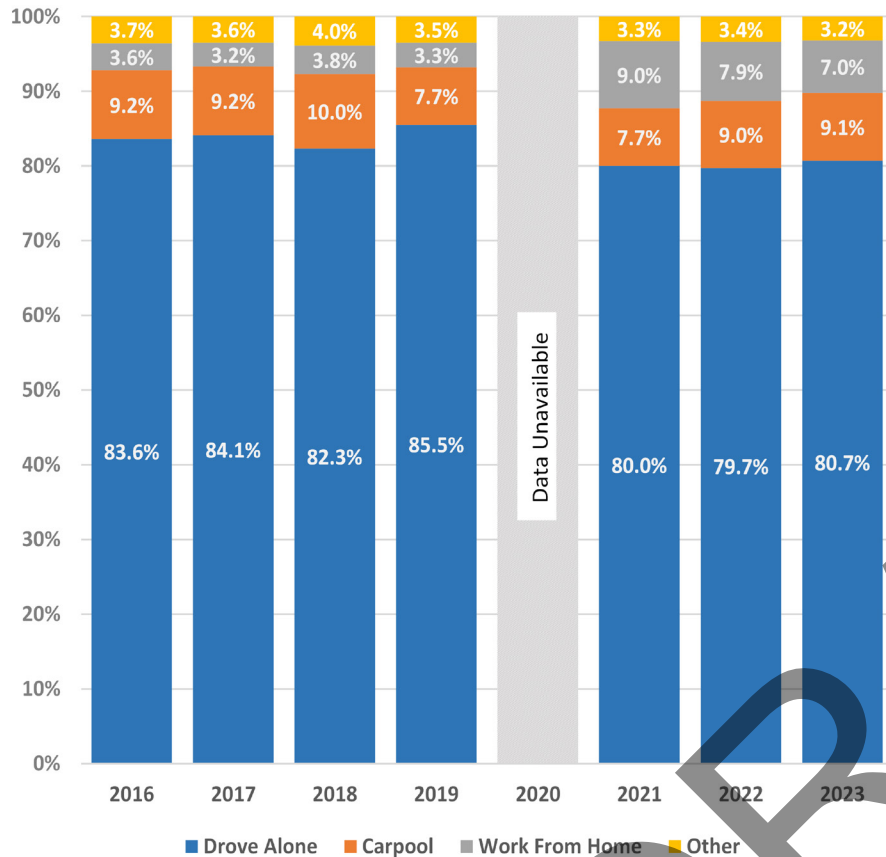
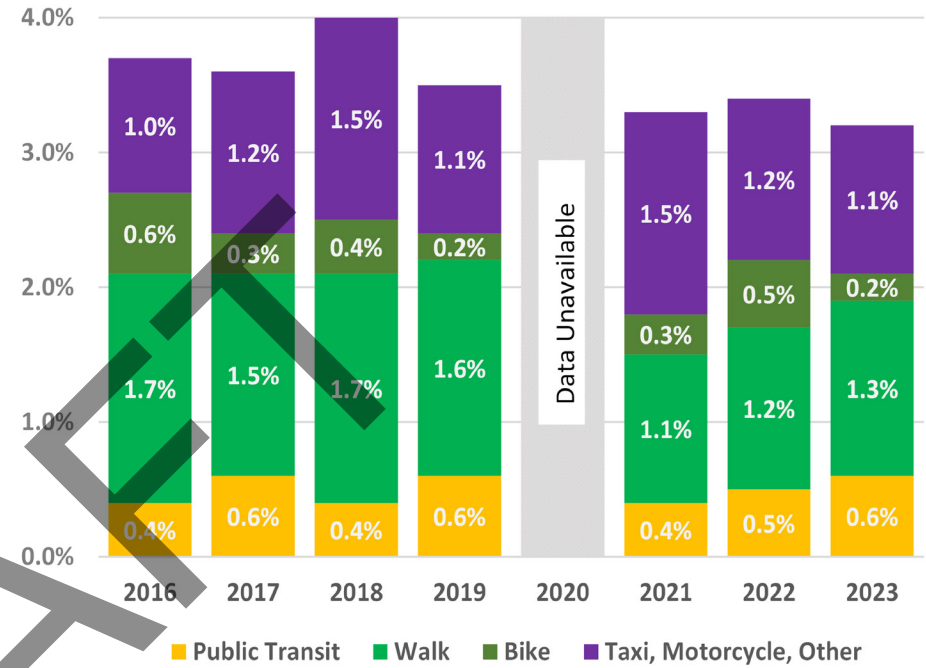


Figure 5.2.2: Wichita MSA Commuter Mode - "Other" Modes



Source: US Census 1-Year American Community Survey (ACS)

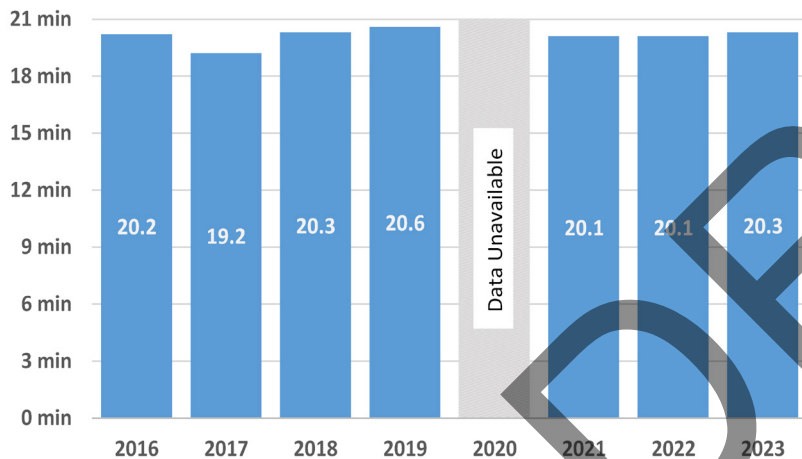
Source: US Census 1-Year American Community Survey (ACS)

The “Other” commute-mode category in Figure 5.2.1 includes public transit, walking, bicycling, taxis, and other forms of travel beside personal automobiles, consistently accounted for a small share of overall commuting, ranging between 3% and 4% during 2016-2023. Public transit and bicycle commuting have both generally remained below 0.6% of all workers, while walking to work has been between 1.1% and 1.7%. Taxis, motorcycles, and other modes similarly stayed low, at between 1.0% and 1.5%. These trends are shown in Figure 5.2.2.

Average Travel Time to Work

To evaluate work travel-time trends in the WAMPO region, 1-Year ACS estimates for the Wichita MSA were compiled from 2016 to 2023 (data were unavailable for 2020). The average travel time to work fluctuated slightly between 2016 and 2023. The average commute was 20.2 minutes in 2016, then decreased to 19.2 minutes in 2017. By 2019, it had increased to 20.6 minutes. During 2021 and 2022, the data show a slight decrease to 20.1 minutes, possibly due to pandemic-related changes in work patterns or reduced traffic. These trends can be seen in Figure 5.2.3.

Figure 5.2.3: Wichita MSA Average Travel Time to Work (Minutes)

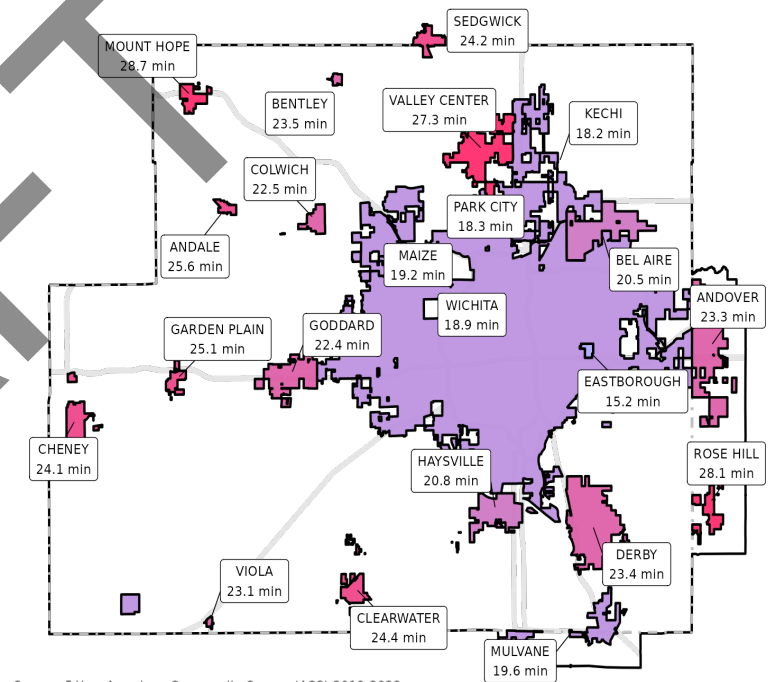


Source: US Census 1-Year American Community Survey (ACS)

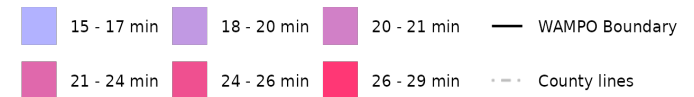
The MSA-wide average travel time to work has remained relatively stable over time, though significant variation exists across different parts of the WAMPO region. To highlight this, the most recent 5-Year ACS data (2019–2023) were compiled for each municipality within the region. 5-Year ACS data aggregates input collected over a five-year period, generating a single value that represents the entire

timeframe. By pooling data across multiple years, the 5-Year ACS offers a unique solution for obtaining reliable data, especially for less populated areas where data collection may otherwise be insufficient. Regional variations in average travel time to work are shown in Map 5.2.1.

Map 5.2.1: Average Travel Time to Work by Municipality



Source: 5-Year American Community Survey (ACS) 2019-2023



Greenhouse Gas (GHG) Emissions

The National Emissions Inventory (NEI) is a dataset released every three years by the U.S. Environmental Protection Agency (EPA). It provides detailed estimates of air emissions by source type and county, which can be filtered to reflect emissions from all mobile sources (cars, trucks, etc.). Emissions are measured in short tons (1 short ton = 2,000 pounds). The most recent NEI data for the three counties that the WAMPO Planning Area Boundary either entirely includes (Sedgwick) or partially includes (Sumner and Butler) are presented in Table 5.2.1.

Table 5.2.1: Short Tons of Greenhouse Gas Emissions from Mobile Sources by County

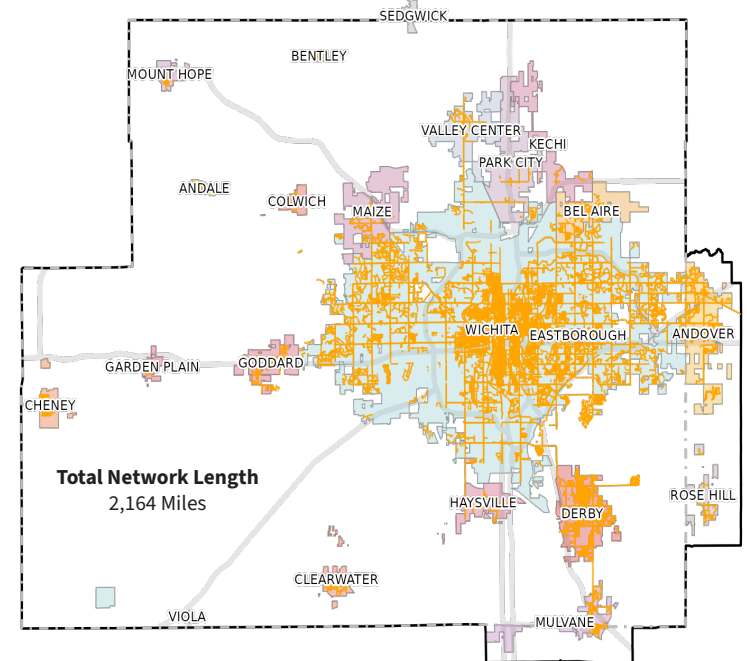
	2011	2014	2017	2020
Butler	585,173	574,229	585,573	617,203
Sedgwick	2,927,838	3,091,622	3,115,508	2,598,558
Sumner	410,085	381,284	375,570	432,065

Butler and Sumner Counties have shown slight increases in GHG emissions over time, while Sedgwick County experienced a notable decrease between 2017 and 2020, possibly due in part to pandemic-related factors. The next NEI dataset, reflecting 2023 emissions, will be available in 2026.

Sidewalk/Multiuse Path Network Length

In 2022, WAMPO staff reviewed satellite imagery to develop a comprehensive map of the region's sidewalks and multiuse paths (see Map 5.2.2). This effort is essential for understanding pedestrian network coverage, identifying infrastructure gaps, and supporting future planning initiatives aimed at enhancing walkability, accessibility, and safety throughout the region. In total, 2,164 miles of sidewalk and multiuse paths were located and mapped. In the future, WAMPO intends to update this map on a routine schedule and recalculate the number of miles of sidewalks/pedestrian facilities.

Map 5.2.2: WAMPO Sidewalk Network



Source: Compiled by WAMPO Staff from 2022 Satellite Imagery.

— WAMPO Boundary - - - County lines — Sidewalks & Multiuse Paths