



METROPOLITAN  
TOPEKA PLANNING  
ORGANIZATION

## TECHNICAL ADVISORY COMMITTEE

## TAC AGENDA

**June 13, 2019, 2:00PM**

**Holliday Building, 620 SE Madison  
1st floor, Holliday Conference Room**

### Call to Order/Opening Business

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- Roll Call
- Approval of Minutes for May 9, 2019
- Public Comment

### Action Items

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- 2019-2022 TIP Amendment #4 (Attached) Carlton
  1. Addition of Performance measures and targets for PM2 (System Condition) and PM3 (System Performance)

Requesting approval to post for 14-day public review and comment

### Presentations

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- None

### Discussion/Non-Action Items

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- None

### Quick Updates

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- Bikeways Master Plan Update
- Transportation Safety Plan

### Other Items/New Business

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### Adjournment

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**ADA Notice:** For special accommodations for this event, please contact the Planning Department at 785-368-3728 at least three working days in advance.

CITY OF TOPEKA  
**METROPOLITAN TOPEKA PLANNING ORGANIZATION  
TAC**



**Technical Advisory Committee**

M I N U T E S

THURSDAY, May 9, 2019

**Voting Members present:** Curt Niehaus, SNCO Public Works; Kristi Wilson, KDOT; Edwin Rothrock, TMTA; Carlton Scroggins, COT/MTPO; Bill Fiander, COT Planning; Anna Ortega, SNCO Planning (6)

**Voting Members Absent:** Jason Peek, COT Public Works (1)

**City of Topeka Staff Present:** Taylor Ricketts & Kris Wagers, Topeka Planning & Development

**Roll Call**

The meeting was called to order by Chairman Curt Niehaus with 6 members present for a quorum.

**Approval of minutes for April 11, 2019**

**Motion** by Ms. Ortega to approve; **second** by Ms. Wilson. **APPROVED** (5-0-1 with Mr. Niehaus abstaining)

**Public Comment – none**

**Action Items**

**2019-2022 TIP Amendment #4**

The proposed amendment and targets were discussed at length. Mr. Scroggins reminded everyone that the inclusion of performance measures in the TIP is now required. Targets can be updated in future TIPs.

**Safety** – this measure has already been approved and included into the TIP.

**Infrastructure** (Pavement and Bridge Conditions)

This is applied to state highways/non-state highways, and functionally classified streets. Local streets do not have to adhere to the index.

**Pavement Conditions/PCI/Bridge Conditions**

There was discussion about the low rating on PCI, with most stating they would have expected them to be higher for Kansas. Dave Swartz, KDOT Performance Measure Manager, was present and stated that the numbers have changed since the data was gathered for this document. KDOT has adopted the federal rating system and numbers have dropped. In KDOT's previous scoring system, you didn't have to score high in each of the pavement categories for that section to be rated "good", but in the federal scoring system, you do. Categories include IRI (international roughness index), rutting or faulting, cracking, joint distress (or some combination of those 4) and again - you have to be rated "good" in all of the categories in order for that section of road to be rated "good".

Recommendations were given to Mr. Scroggins regarding how to modify this section of the TIP document to make it clearer. Paul Fondoukis (KDOT) encouraged the Committee to have MTPO Policy Board set the

DRAFT

targets. There are no prescribed penalties for MPOs if targets are not met, but there are penalties for states not meeting their targets. Mr. Fondoukis encouraged setting realistic goals and erring on the side of caution.

### **Freight and Economic Vitality**

Mr. Swartz suggested the target support the state's goal, e.g. 95%(?) of all vehicle miles are reliable. He will confirm the numbers and get them to Mr. Scroggins.

### **Congestion Reductions/Modes...**

Recommendations were made for additions and changes, including adding an additional map and replacing the proposed ½ mile radius with ¼ mile radius.

It was agreed by all the Mr. Scroggins would make changes to the amendment, get feedback from the Policy Board regarding what the goals should be, and bring it back to the June TAC meeting for approval to go out for public comment. There cannot be any further amendments to the 2019-2022 TIP Amendment until the Performance Measures are added, but Mr. Scroggins explained that there is nothing pending that would be held up by waiting until June.

### **2019 UPWP Amendment #1**

#### **Addition of Carryover of the Transportation Safety Plan tasks and 12% increase in budget**

Mr. Scroggins explained that this will put the Transportation Safety Plan into the 2019 UPWP. The project was in the 2018 UPWP and expected to be complete in 2018, but it is still underway. The scope increased and the contract was re-negotiated. It will be complete this year. Mr. Scroggins shared exact numbers from final contract negotiations (\$12,000 rather than \$12,900) and will make those changes to the document. Ms. Wilson pointed out that the UPWP narrative also needs to be updated to include the project.

**Motion** by Mr. Fiander to allow the amendment proposal to go out for public comment; **second** by Ms. Ortega.  
**APPROVED** (6-0-0)

### **Discussion/Non-Action Items**

#### **2019-2022 TIP Administrative Revisions**

Mr. Scroggins reviewed the 2019-2022 TIP amendment that was approved administratively, explaining that it was due to fluctuation in costs and the fact that the original amount was an estimate. There is no increase in the scope of the project.

### **Quick Updates**

#### **Bikeways Master Plan Update**

Mr. Fiander noted that Toole Design Group has been chosen as the consultant to work on the plan update. The kick-off meeting will be held within the next month or so and the project will be completed in 2019.

### **Other/New Business**

#### **Bikeways Master Plan**

Ms. Ricketts reminded everyone that May is Bike Month. May 13-19 is Bike Week, May 13 is Bike with Your County Commissioner event, and May 17 is Bike to Work Day.

**The meeting adjourned at 3:23PM**

## **Summary of TIP Amendment 4 Changes**

Below is a summary of the 2019-2022 TIP Amendment #4 changes that were addressed after receiving feedback from the Policy Board, KDOT, and FHWA. The enclosed packet will include the Amendment in its entirety.

### **\*Performance Measure #2, "Infrastructure/Pavement and Bridge Conditions"**


- 1) City and County Pavement Condition monitoring measures were further verified with City and County officials. Targets were adjusted accordingly.
- 2) Interstate and Non-Interstate Highway standards were clarified by KDOT and adjustments were made to both current conditions and to targets. Targets for "Poor" condition allowances were also added. Graphics and tables were updated accordingly.
- 3) Bridge condition targets were adjusted to reflect the targets of the State for both "Good" and "Poor" targets.

### **\*Performance Measure #3, "Freight and Economic Vitality, Intermodal Connectivity"- "Congestion Reduction"**

- 1) Adopted State's Target for Truck Travel Time Reliability Index (TTTRI) and for Level of Travel Time Reliability LOTTR.
- 2) Set new Targets for Bicycle and Pedestrian Infrastructure for both "Infrastructure growth" and "Persons with Access to Bike and Ped. Facilities."
- 3) Transit analysis was slightly adjusted, however, targets remained the same.

**\*An Index of Road/Bridge and Transit Projects was added that now includes which projects satisfy which of the recognized Performance measures.**

## 2019-2022 Transportation Improvement Program

Measure	2018 Projection	Initial % below Projection	2022 HSP/HSIP Target 
Number of Fatalities (FARS)	364	0%	364
Number of Serious Injuries (KCARS)	1202	1%	1190
Serious Injury Rate (KCARS/FHWA)	3.851	2%	3.774
Fatalities/VMT (FARS/FHWA)	1.17	1%	1.16
Non-Motorized (FARS/KCARS)	139	1%	138

The MTPO will plan and program projects to assist in achieving these State numeric targets, coordinating with both the State and public transportation providers to ensure that the targets set are consistent as much as is practical. The information contained in the above table represents 5-year averages.

### ***All Potential Safety Factors to be considered with respect to TIP project evaluations:***

To improve the safety of the transportation system component networks

- Number of fatalities on roadways.
- Rate of fatalities on roadways.
- Number of serious injuries on roadways.
- Rate of serious injuries on roadways.
- Number of bicycle fatalities.
- Number of railroad fatalities.
- Number of pedestrian fatalities.
- Number of drivers under the age of 21 involved in fatal crashes.
- Number of drivers over the age of 75 involved in fatal crashes.
- Number of fatalities in crashes involving blood alcohol levels of .08 or higher.

## **2- Infrastructure : Pavement and Bridge Conditions (Goal- Maintain Existing Infrastructure)**

A quality transportation network ensures efficient performance and reliability in moving users from place to place. A system that is not well maintained can pose barriers to performance and safety. The Futures 2040 Plan supports maintaining the good condition of the region's transportation infrastructure in order to improve performance and avoid higher maintenance costs associated with deterioration.

In 2012, the MTPO adopted the 2040 Long Range Transportation Plan which continued the long-standing practice of identifying roadways needing additional mainline capacity and new major thoroughfares that needed to be built. Much of the region's transportation dollars were allocated to building new roads and widening existing roads.

The classification of this performance measure is based on National Bridge Inventory (NBI) condition ratings for items 58 (deck), 59 (superstructure), 60 (substructure) and 62 (culvert). Condition is

MTPO 2019-2022 TIP Approved 11-29-18: Amendments 1 & 2: 2/28/2019 Amend.3: 4/25/19

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determined by the lowest rating of deck, superstructure, substructure or culvert. If the lowest rating is greater than or equal to 7, the bridge is classified as good; if it is less than or equal to 4, the classification is poor. (Bridges rated below 7 but above 4 will be classified as fair; there is no related performance measure.)

**State Highways:** Highway pavement conditions are monitored in the spring of each year, for both Interstate Highways, and Non-Interstate Highways. Targets have been established by the Kansas Department of Transportation (KDOT) for the percent of pavement in good condition: 65% for interstate highways and 55% for non-interstate highways. Figures 2-1 thru 2-4 display the performance data and targets chosen for the Metropolitan Planning Area (MTP) for the years 2016 and 2017. Both "Good" and "Poor" pavement conditions are recorded and monitored. The State Highway uses the International Roughness Index (IRI) standards for rating the condition of Interstate and Non-Interstate Highways:

<file:///E:/Performanc%20Measures/Acceptable%20International%20Roughness%20Index%20Thresholds%20based%20on%20Present%20Serviceability%20Rating.html>

Figure 2-1

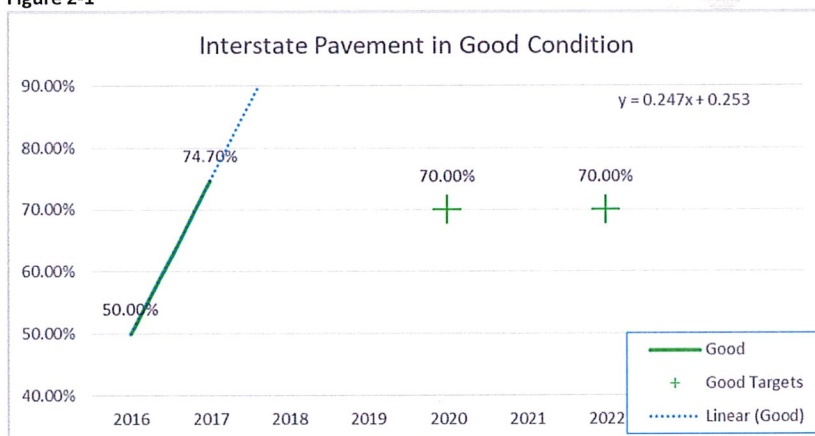
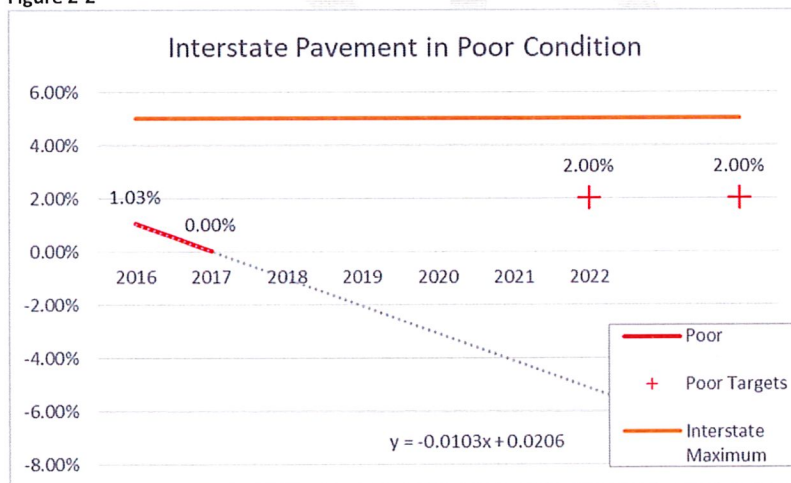


Figure 2-2



## 2019-2022 Transportation Improvement Program

Figure 2-3

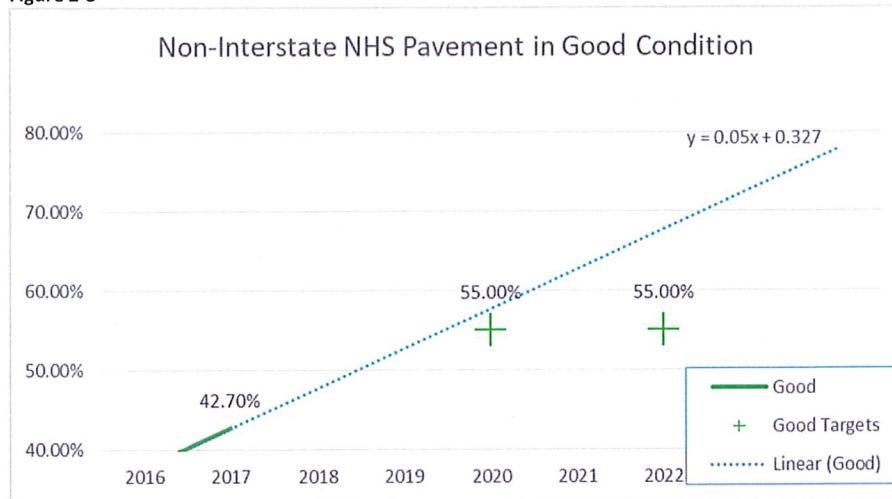
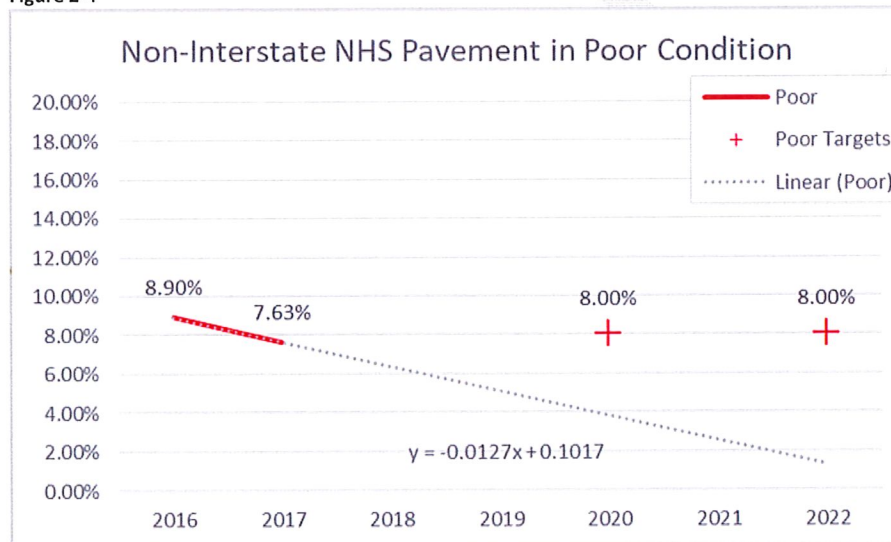


Figure 2-4



**City Streets:** In 2016, Topeka completed the inspection and evaluation of all city streets as the first phases of a pavement management program process. A Pavement Condition Index (PCI) score (rating scale 0-100) was determined for each street's condition based on surface condition distresses. The PCI scale provides an objective and rational basis for determining maintenance and repair needs and priorities.

Accurate and timely data on pavement condition is used to assess system performance and deterioration, identify maintenance and reconstruction needs and determine financial needs.

PCI is a rating scale that measures the condition of pavements through systematic measurement of surface distresses, like cracking, rutting, joint failure, roughness, oxidation and other factors, much the same as the State Highway process. The PCI scale ranges from 0 -100 and is an indicator of the maintenance strategy needed. The PCI is grouped into seven categories corresponding to the most cost effective maintenance strategies:

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- **Good (PCI 85-100):** Pavement has minor or no distresses and requires only routine preventative maintenance.
- **Satisfactory (PCI 70-84):** Pavement has scattered, low- severity distresses that need only routine preventative maintenance.
- **Fair (PCI 55-69):** Pavement has a combination of generally low-and medium-severity distresses. Maintenance needs are minor to major rehabilitation.
- **Poor (PCI 40-54):** Pavement has low-, medium- and high-severity distresses. Near-term maintenance and repair needs may range from rehabilitation up to reconstruction.
- **Very poor (PCI 25-39):** Pavement has predominantly medium- and high-severity distresses that require considerable maintenance. Near-term maintenance and repair needs will be intensive in nature, requiring major rehabilitation and reconstruction.

Currently, the 2018 PCI data reveals that the average PCI score for functionally classified streets in Topeka is approximately 60, about the midrange of the “Fair” category. The PCI for all city streets is 57.7. Topeka has committed to investing an average of \$24 million annually over the next 10 years to improve this score of all streets. Figure 2.5 shows the current PCI scores and lane miles for the City of Topeka’s functionally classified streets.

FIGURE 2-5: Pavement Condition for City Streets

<u>Street Type</u>	<u>Average PCI</u>	<u>Lane Miles</u>	<u>% of Street Network</u>	<u>Weighted Avg. PCI</u>
Principal Arterials	65.5	38.8	6.7%	4.38
Minor Arterials	62.7	368.2	63.4%	39.75
Collectors	51.5	<u>173.8</u>	29.9%	<u>15.41</u>
<b>Total:</b>		<b>570.8</b>		<b>59.54</b>

**County Pavement Condition:** There are 142 miles of functionally classified roads in the MPA for which performance measures are applied (there are 287.5 county lane miles in total). Based on KDOT’s pavement ratings, 121 miles (85%) are in “Good” condition, with 21 miles (15%) rated as “Fair”. The County annually inspects roadway conditions in the spring.

The County actually relies on an in-house pavement evaluation process known as the Pavement Surface Evaluation and Rating (PASER) method. This method was developed by the University of Wisconsin-Madison Transportation Information Center, it is used in conjunction with an internally-developed spreadsheet/database. This pavement management system is fairly simple and expedient in its method of evaluation and, since it has been developed internally, can be implemented at no cost, with the exception of labor and travel costs to conduct the inspections.

Figure 2-6 shows the PASER 1-10 rating scale and how the ratings are related to needed maintenance. This rating is separate from the KDOT attributed ratings used for performance measure purposes. The County’s goal is to maintain all pavements such that a rating of at least 6 (good condition) is achieved. Roads with a rating equal to or less than 5 receive treatment. The County understands that the long-term costs of maintaining pavements in good condition is less than the cost of letting pavements deteriorate to a point where they need replacement.

Figure 2-6: PASER ratings related to needed maintenance or repair:

- **1 (Failed)** Total Reconstruction
- **2 (Very Poor)** Reconstruct
- **3 (Poor)** Patching, Mill & Overlay
- **4 (Fair)** Overlay
- **5 (Fair)** Thin Overlay or Chip/Seal
- **6 (Good)** Chip/Seal
- **7 (Very Good)** Crack Sealing
- **8 (Very Good)** Little Maintenance Required
- **9 (Excellent)** Like New – No Maintenance Required
- **10 (Excellent)** New Construction – No Maintenance Required

**The Process:** On an annual basis, typically during the February-April timeframe, SCDPW staff will drive all of Shawnee County's roads and assign each roadway segment a PCI rating of 1-10, as listed above. The individual PCI ratings for each roadway segment will be integrated into a spreadsheet and depicted graphically on a roadway system map.

Depending upon the PCI rating and the roadway surface type, a Remaining Service Life (RSL) value, in years, will be assigned for each roadway segment. A sum of all of the roadway segment RSL values will be tabulated and then divided by the total number of roadway miles (287.5) to determine an overall "Roadway Network Health" number (e.g., if the sum of all of the individual roadway segment RSL values was 2,160 years, the resulting Roadway Network Health number would be 7.5 years, i.e.,  $2,160/287.5$ )

An estimated cost of maintenance/repair per mile will be assigned to each rating value listed above (For example, a roadway having a condition of 8 may have an estimated cost of maintenance of \$1,000/mile while a roadway segment having a condition rating of 1-2 may have a cost of repair totaling \$125,000-\$500,000/mile, or more, depending on the type of roadway, i.e., rural section or urban section, and surface type.)

It is the current goal of SCDPW to maintain a minimum PCI rating of 6 for each mile of Shawnee County's roadway system, as well as work towards, and maintain, a minimum average Roadway Network Health number of 7.75 annually (Average RSL of 10 for asphalt-paved roads and average RSL of 5 for chip/seal roads).

By utilizing the Pavement Management System, we will be able to easily identify and compare each roadway segment's condition. This will then assist SCDPW in planning where, and how, to spend its budgeted allotment for road maintenance in the most cost-effective manner in an effort to increase, or maintain, the overall health of the roadway network.

**Strategy:**

- Continue current levels of funding to maintain highway and City and County functionally classed road pavements beyond 2019, with frequent monitoring of the process.



**Target Pavement Conditions:**

**2022 Target for Interstate Highways 70% (Good): 2% (Poor)**

**2022 Target Non-Interstate Highways 55% (Good): 8% (Poor)**

**2022 Average PCI Target for all roads: 60**

**2022 County Roads Target: Increase "Good" roads in the MPA to 90%**

### **Bridge Conditions**

In accordance with state and federal requirements, KDOT, KTA, Shawnee County and the City of Topeka conducts biennial inspections of the bridge inventory for load capacity and maintenance needs. This includes looking at the condition of their deck (riding surface), super structure (supports immediately beneath the driving surface), and substructure (foundation and supporting posts and piers). Based upon this evaluation, bridges are assigned an overall sufficiency rating and a capital improvement program for new bridge construction and major rehabilitation is developed and administered.

Figure 2-7 shows the number of bridges in Good, Fair, and Poor Condition in Topeka, Shawnee County (outside Topeka), on state highways, and on the Kansas Turnpike.

Overall, 62.3 percent of the total bridges are in Good Condition, 34.1 percent are in Fair Condition, and 3.6 percent are in poor condition. Shawnee County has the lowest percentage of bridges in good condition (52.8 percent), followed by Topeka (54.5 percent). Meanwhile, KDOT and KTA have 77.9 percent and 78.9 percent bridges in good condition, respectively. Shawnee County also has the highest percent of bridges in poor condition (6.3 percent), followed by KTA (5.3 percent) and Topeka (2.0 percent).

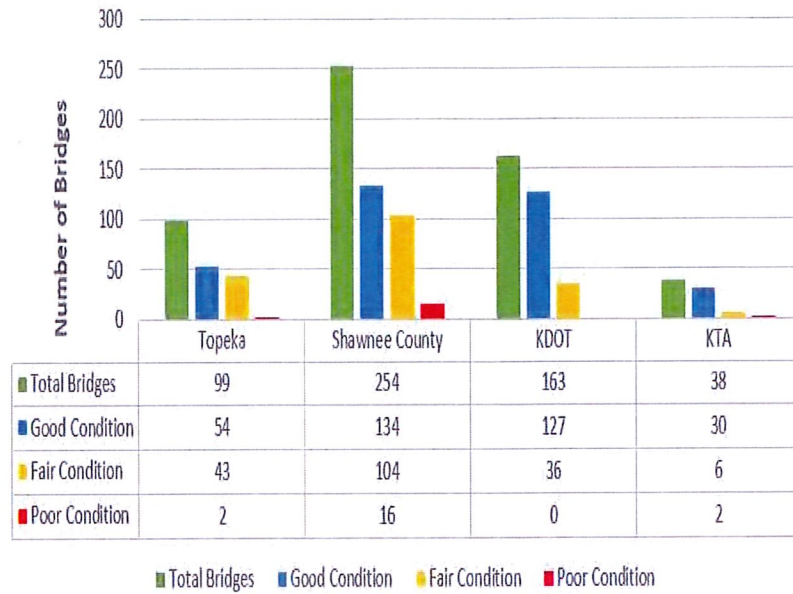
Figure 2-8 shows the number of Structurally Deficient, Functionally Obsolete, and Not Deficient bridges in Topeka, Shawnee County (outside Topeka), on state highways (KDOT), and on the Kansas Turnpike. Definitions for these are as follows:

- **Structurally Deficient:** Means there are elements of the bridge that need to be monitored and/or repaired. The fact that a bridge is "structurally deficient" does not imply that it is likely to collapse or that it is unsafe. A "deficient" bridge typically requires maintenance and repair and eventual rehabilitation or replacement to address deficiencies.
- **Functionally Obsolete:** Means a bridge was built to standards that are not used today. These bridges are not automatically rated as structurally deficient, nor are they inherently unsafe. Functionally obsolete bridges are those that do not meet current standards for lane widths, shoulder widths, or vertical clearances to serve current traffic demand, or those that may be occasionally flooded.
- **Not Deficient:** Means that a bridge meets current safety standards.

For the 2040 Metropolitan Transportation Plan update, ratings were available for state highway and non-state bridges. Of the 554 bridges, 71 (12.8%) were functionally obsolete and 22 (4.0%) were structurally deficient. Progress is being made to improve the overall condition of bridges in the region, as 44 bridges were noted as structurally deficient the previous plan.

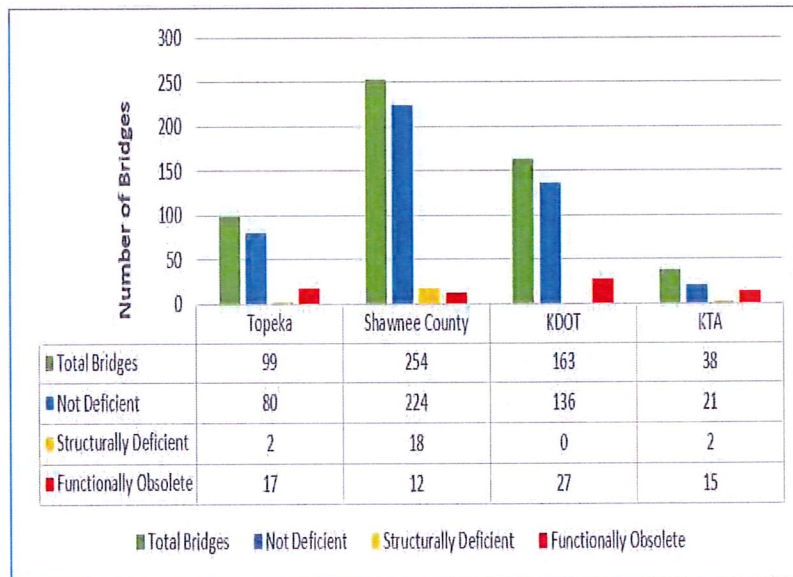
Figure 2-7: Bridge Conditions

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Source: Kansas Dept. of Transportation

Figure 2-8: Bridge Deficiency

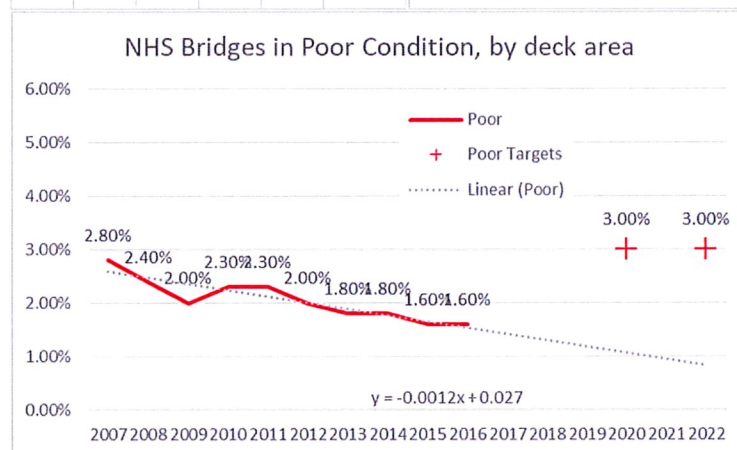
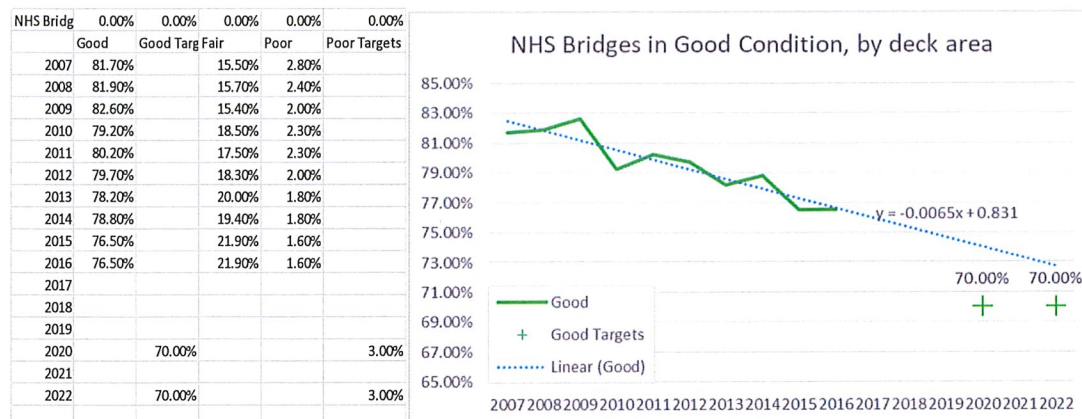


Source: Kansas Dept. of Transportation

Figure 2-9 shows ten year averages for overall bridge conditions at the state level. The bridges in “Good” condition are similar to those reflected in the MTPO. The MTPO will therefore be adopting the state NHS Bridge condition targets for both “Good” and “Poor” percentages.

Figure 2-9 State Bridge Targets

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**Target 2022 Bridge Conditions: -Supporting KDOT's Targets: 70% (Good): 3% (Poor)**

### **3- Freight and Economic Vitality, Intermodal Connectivity (Goal- Improve Mobility)**

The increasing economic competitiveness among regions within the United States and globalization of the economy has amplified the importance of a metropolitan freight transportation infrastructure. The deregulation of freight transportation dramatically changed business practices and created new competitive opportunities across modes. The changing nature of business practices, with an emphasis on reliable, just-in-time delivery, places a premium on the efficient operation of the freight transportation system. At the same time, the safe and efficient movement of goods increases the burden on the regional infrastructure making maintenance and safety a priority.

Comments from local businesses suggest their primary concern is maintaining the existing transportation infrastructure to support the safe and efficient movement of goods within and through the region.

Globalization of the economy has also changed the transportation and service requirements of shippers, and receivers. Manufacturers can serve markets globally, but this requires a greater reliance on, and

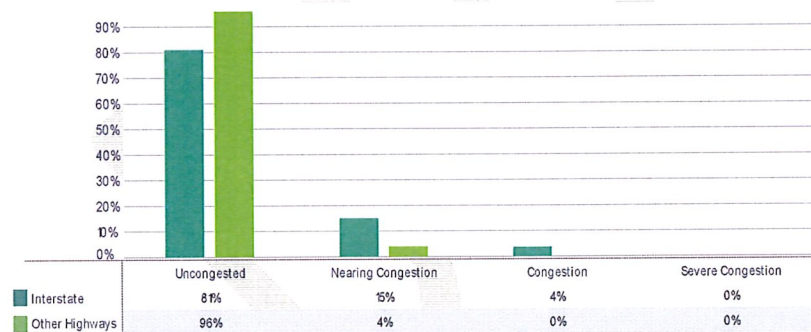
greater efficiencies in, the transportation system. The following section highlights the current Trucking freight transportation environment within the region.

**Truck Flows** I-70 is the major freight highway in the Metropolitan Topeka Region. The FHWA Freight Performance Measurement: Travel Time in Freight-Significant Corridors report notes that I-70 runs a total of 2,153 miles connecting ten states through the midsection of the continental United States from Cove Fort, Utah to Baltimore, Maryland. I-70 passes through Denver, CO; Topeka, KS; Kansas City and St. Louis, MO; Indianapolis, IN; Dayton and Columbus, OH; Wheeling, WV; and Hagerstown and Frederick, MD. The western half of I-70, including Topeka, is overwhelmingly rural except for Denver. By contrast, the eastern half, stretching from Kansas City to Baltimore has more closely spaced urban areas and is part of a relatively dense network of Interstates and other major highways. Here traffic volumes and problems caused by intersecting highways are more likely to slow trucks. The stretch of I-70 between Denver and Kansas City, including Topeka, has none of these problems and, therefore, relatively high average truck speeds, averaging between 55 and 60 mph.

The 2040 projections anticipate growth in the I-80 and I-40 corridors while I-70 is projected to see a slightly lower growth. Furthermore, I-70 west of Topeka toward Denver is not anticipated to see as significant an increase in truck volumes as most of the growth in east-west freight movement is accommodated in the I-80 corridor.

Within Topeka and Shawnee County, I-70 carries the heaviest truck volumes. The highest truck volumes on I-70 occur between I-470 and US-75 with over 6,200 heavy commercial vehicles per day. Through downtown Topeka, over 4400 trucks per day travel I-70; similar truck volumes are seen on I-70 east and west of Topeka. The Kansas Turnpike (I-335) south of Topeka carries 1,570 commercial vehicles per day while 1,720 trucks per day travel US-75 north of Topeka.

Congestion on the highway routes used by commercial vehicles is minor and limited to the peak hour (commuting) periods of the day. Travel time reliability is not an issue for the Topeka Metropolitan Area. See Figure 3-1 for congestion within Topeka's highways.



**Figure 3-1: Freight Movement on Topeka's Interstate and other Highways**

Freight movement will be assessed by the TTTR Index. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends 6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.). The TTTR ratio will be generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. The TTTR Index will be generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate. State DOTs and MPOs will have the data they need in FHWA's National Performance Management Research Data Set (NPMRDS) as data set includes truck travel times for the full Interstate System. State DOTs and MPOs

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may use an equivalent data set if they prefer. Figure 3-2 shows the 2016 and 2017 State TTTR Index numbers and future targets. The MTPO will be supporting these targets.

Figure 3-2: State Travel Time Reliability Index and Targets

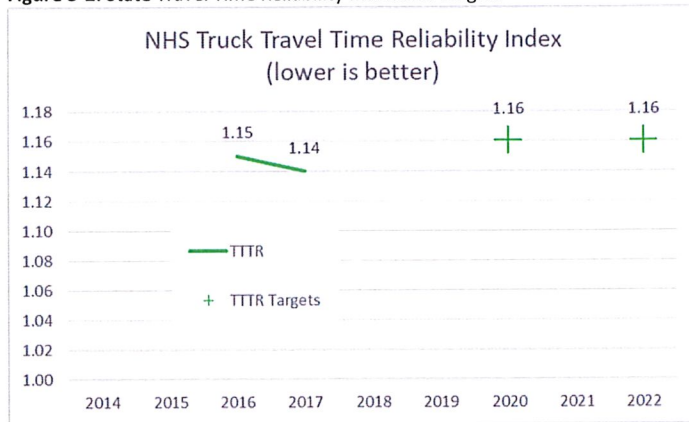


Figure 3-3

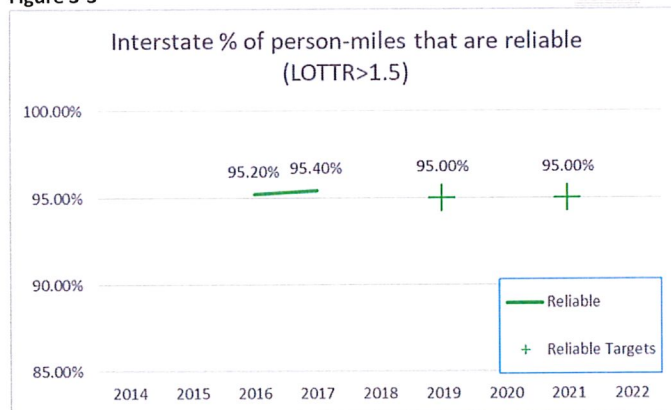
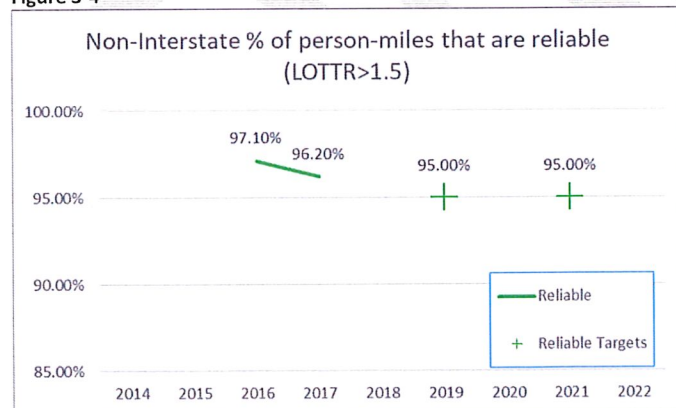


Figure 3-4



In the future, more significant congestion will begin to develop along I-70, especially between I-470 and US-75, as well as near downtown. A more detailed study for the area along I-70 between I-470 and US-75, including US75 north across the Kansas River, is needed to determine recommended actions. The I-

70 Polk-Quincy Viaduct Corridor project, when constructed, will address future congestion near downtown.



**2022 Travel time & Congestion Target: Adopting State Target: TTTRI  
1.16: LOTTR 95%**

#### **4- Congestion Reduction\Modes: Active Transportation Projects, Bike-Ped. (Goal-Community Health & Wellness-Enhance Quality of Life)**

**TOPEKA BIKEWAYS MASTER PLAN** In 2012 the MPTO adopted the Topeka Bikeways Master Plan which outlines a five-phase plan for the city to establish bike lanes on specific routes and develop a Topeka Bikeway System over a 15-year period. Built of eight trails and 25 “routes,”

**Topeka’s Bikeways Plan sought to accomplish six goals:**

1. Increase the number of people who use the bicycle for transportation as well as recreation. Topeka’s multi-use trails are well-utilized and provide transportation, but they are largely used for recreation. Increasing the percentage of trips for other purposes would indicate success.
2. Improve bicycle access to key community destinations. A bicycle transportation system should get people comfortably and safely to where they want to go, so Topeka’s system is destination-based, providing clear and direct connections to key community features.
3. Improve access to the city’s pathway system by connecting trails to neighborhoods. Topeka’s trails serve most bicycle trips, but the city’s emerging trail system can connect to more neighborhoods using streets and other development opportunities as linkages.
4. Use bicycling to make Topeka more sustainable. Bicycling promotes sustainability at three levels. Globally, bicycle travel reduces fossil fuel use and greenhouse gas emissions. Community-wide, bicycle transportation systems can decrease road maintenance costs, promote a healthier environment, and build community. Individually, physical activity as a daily routine makes people healthier, reducing obesity, improving wellness, and lowering health care costs.
5. Increase roadway safety for motorists, bicyclists, and pedestrians. Good infrastructure reduces crashes and increases comfort for all users of the transportation network with research indicating that more cyclists leads to fewer bicycle crash rates. Infrastructure must be supported by education, enforcement, and encouragement, as measured by regular evaluation.
6. Capitalize on economic development benefits of a destination-based bicycle transportation system. Topeka has many attractive features: Brown v. Board of Education historical site, Gage Park with its zoo and Discovery Center, the Kansas History Center, the State Capitol, and distinctive commercial districts, among others. As a bicycle-friendly community, Topeka can add to visitors’ experiences, attracting new residents and investment.

To measure the success of its goals and evaluate the components and effectiveness of the network, criteria were developed from the Netherlands’ Centre for Research and Contract Standardization in Civil

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and Traffic Engineering, one of the world's leading authorities in the design of bicycle-friendly infrastructure. Using these standards, Topeka's bicycle network should generally fulfill six requirements:

- **Integrity:** Topeka's bikeway network should form a coherent system throughout its evolution, linking starting points with destinations, being understandable to its users, and fulfilling a responsibility to convey them continuously on their paths.
- **Directness:** Topeka's bikeway network should offer cyclists as direct a route as possible with minimum detours or misdirection.
- **Safety:** Topeka's bikeway network should maximize bicycle safety, minimize or improve hazardous conditions and barriers, and improve safety for pedestrians and motorists.
- **Comfort:** Most bicyclists should view the network as within their capabilities without mental or physical stress. As the system grows, it will comfortably meet more types of users' needs.
- **Experience:** The Topeka bicycle network should offer its users a pleasant and positive experience that capitalizes on the city's built and natural environments.
- **Feasibility:** The Topeka bicycle network should provide more benefits than costs and should be a wise investment of resources, capable of developing in phases and growing over time.

A phased plan was developed to ensure that it could be carried out as funding became available. A pilot system comprised of approximately 30 miles of adapted streets, 2.7 miles of route-related pathways, and 1.8 miles of trails could be developed for \$2.5 million. So far Phase I and Phase II are complete and Phase 3 is in the process of being completed. These phases were funded from the Countywide ½ Cent sales tax, allocated every other year, three Transportation Alternative Grants, and locally raised funds. This has resulted in approximately 71.7 miles of bicycle infrastructure. Funding is programmed at \$500,000 in FY20 and every other year until 2030. Adding another bicycle connection across the Kansas River will require partnering with KDOT on the US-75 bridge, including connections on both sides of the river. Figure 4-1 is a map of the current Bicycle and trail system.



### **Topeka Pedestrian Master Plan**

In 2016 the City adopted the Topeka Pedestrian Master Plan to make “Topeka...a walkable city where people of all ages and abilities can safely and comfortably travel on foot.” The plan outlines the development of the area’s pedestrian network that was not planned consistently despite being part of the city since its inception. Following public involvement efforts, the plan recommended **four goals**:

- **A Complete Pedestrian Network Connecting All Neighborhoods.** Sidewalks improve the safety and comfort of Topekans who walk, and a complete pedestrian network connecting all parts of the city will better facilitate the ability of people to travel by foot, especially to schools, bus stops, community centers, senior centers, parks and trails.
- **Maintained Sidewalks.** Sidewalks are a major infrastructure investment and maintenance can prevent expensive reconstructions. Maintained sidewalks also safely facilitate the mobility of pedestrians including children, the elderly, and people using assistive devices to travel. .
- **Safety and Comfort.** Sidewalks are enhanced by features that improve the safety and comfort of pedestrians. Whether it’s a crosswalk, a bench, or a curb ramp, the details matter, allowing sidewalks to be friendly to everyone who uses the system. .
- **A Culture of Walking.** The value that a community places on walking plays a role in determining how likely it is someone will travel as a pedestrian. The more perceptions and the physical environment supports and allows walking, the more walking becomes a part of everyday life.

To focus resources on the most important areas for pedestrians, projects were prioritized based on community input. Eighteen focus areas received field inventories to examine the presence and condition of sidewalks, the quality of corner curb ramps, and the need for crosswalks. Proximity to bus routes, “Intensive Care” neighborhoods, parks and trails, public and private elementary and middle Schools, and streets without sidewalks were most important. Factors considered less important included proximity to arterial and collector streets, commercial areas, community and senior centers, high density residential areas, major destinations, and “At Risk” neighborhoods. These several “high pedestrian demand” neighborhoods were delineated and their improvement costs were compared with available funding. These neighborhoods were further sorted by whether they contained schools. Groups included:

**Group A:** High pedestrian demand with schools funding from 2016-2020

**Group B:** High pedestrian demand without schools funding from 2021-2023

**Group C:** Low pedestrian demand with schools funding from 2024-2025

**Group D:** Low pedestrian demand without schools funding beyond 2025

A fifth group (Group E) also consisted of corridors, complete street linkages, and future areas to complete the network to be improved throughout the process connecting different neighborhoods. The overall pedestrian plan funding goal is 10 years from adoption, or 2025, including approximately 47 miles of sidewalks, 1,800 curb ramps, and 350 crossings. Funding for pedestrian improvements is expected to come from \$7.7 million in the Capital Improvement Program funds, \$9 million in ½ cent sales tax funds starting in 2020, and \$4.5 million in other local and State grant funds. Upon the complete of the Pedestrian Master Plan, Topeka has begun funding proactive sidewalk repair in the highest priority areas of the city.

The city’s focus on implementing the Pedestrian Master Plan includes a goal of lining arterials with sidewalks to promote transportation between areas of the City and into the county which will space sidewalks at approximately 1-mile distances across the City. This includes the reconstruction of some

## 2019-2022 Transportation Improvement Program

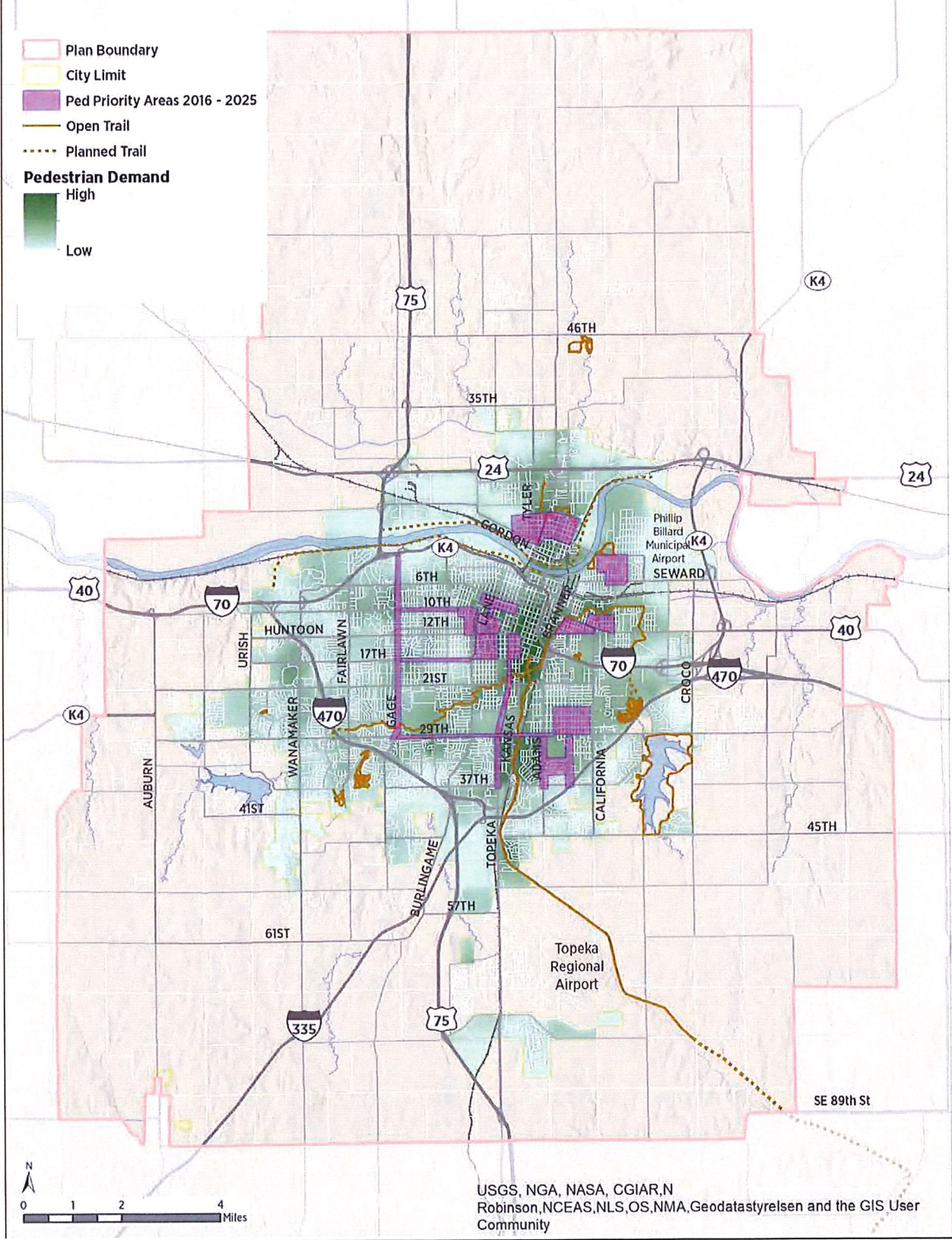
arterials that extend into the county which has begun creating the backbone of an MPA-wide active transportation network, as seen south on Wanamaker Street.

Overall, the hope is to provide a bicycle and pedestrian system that provides safe routes to schools, parks, jobs, shopping, and service. Figure 4-2 illustrates the Pedestrian Demand areas of the MPA.



2019-2022 Transportation Improvement Program

Figure 4-2: Pedestrian Demand Map



**Coverage Pedestrian Infrastructure:** Overall, about 40 percent of city streets and most rural subdivisions lack sidewalks. Within the City itself, approximately 70 percent of major thoroughfares have sidewalks on both sides of the street, which will increase to 78 percent by 2031 as current road reconstruction projects add sidewalks. The goal for major thoroughfares is to have 95 percent built with sidewalks on both sides. Meanwhile, approximately 48 percent of all streets have sidewalks on both sides, which should increase to 51 percent with currently planned projects by 2025.

Regarding the number of people with access to sidewalks, about 116,353 people or 69.2 percent of the population has access to sidewalks on their block. Within EJ areas, 72,073 or 83.4 percent have a sidewalk on their block. While these numbers do not speak to the coherency, distribution, or ease of use of the sidewalk system, it does indicate that many people can reach sidewalks.

**Bicycle Infrastructure:** The MPA contains approximately 62.7 miles of bicycle infrastructure and 49.3 miles of trails. To determine access to the bicycle system, buffers of  $\frac{1}{4}$  and  $\frac{1}{2}$  miles are used to determine proximity to the on-street bicycle system and to trails. For the purposes of this section, trails are considered part of the bicycle system. Within the MPA, approximately 71,200 residents are within  $\frac{1}{4}$  mile or 3-4 minute bike ride from the bicycle system.

This amounts to 42 percent of the MPA's population. When the distance is increased to  $\frac{1}{2}$  mile or a 6-8 minute bike ride, approximately 105,100 people are within range of bicycle facilities. This amounts to 63 percent of the MPA's population. EJ areas tend to have better access to the bicycle system. 58 percent of EJ areas are within  $\frac{1}{4}$  mile of a bike route or trail and 82 percent of EJ areas are within a  $\frac{1}{2}$  mile.

Because of the large number of people who bicycle recreationally, the trails have also been separated from the general bicycle system in order to understand their coverage. Within the MPA, approximately 27,200 residents are within  $\frac{1}{4}$  mile or 3-4 minute bike ride from a trail. This amounts to 16 percent of the MPA's population. When the distance is increased to  $\frac{1}{2}$  mile or a 6-8 minute bike ride, approximately 54,400 people are within range of a trail. This amounts to 32 percent of the MPA's population. EJ areas tend to have better access to trails. 23 percent of EJ areas are within  $\frac{1}{4}$  mile of a bike route or trail and 45 percent of EJ areas are within a  $\frac{1}{2}$  mile. Figure 4

This analysis suggests that there are no outstanding EJ issues regarding sidewalks, trail, or the bicycle system as many EJ areas tend to be older and denser. That means on one hand, they were built with sidewalks, and on the other, that providing bicycle and trails is often easier to reach more people. While sidewalk facilities in historic areas tend to be older, and therefore require more improvements, they have better overall coverage. Overall, this will continue to have a positive effect on EJ populations. The following tables from the Topeka Pedestrian Master Plan show the current pedestrian facilities coverage for the Metropolitan Planning Area with Figure 4-6 displaying the current bikeways system with a  $\frac{1}{4}$  - mile buffer:

**Figure 4-3: Sidewalk Coverage**

	No.	Pct.
Total Population with Sidewalks on Block	116,353	69.2%
EJ Population with Sidewalks on Block	72,073	83.4%

## 2019-2022 Transportation Improvement Program

**Figure 4-4: Distance from the Bicycle System**

	Total Population		EJ Population	
	No.	Pct.	No.	Pct.
¼ mile of bicycle System	71,184	42.3%	50,406	58.4%
½ mile of bicycle system	105,076	62.5%	71,110	82.3%

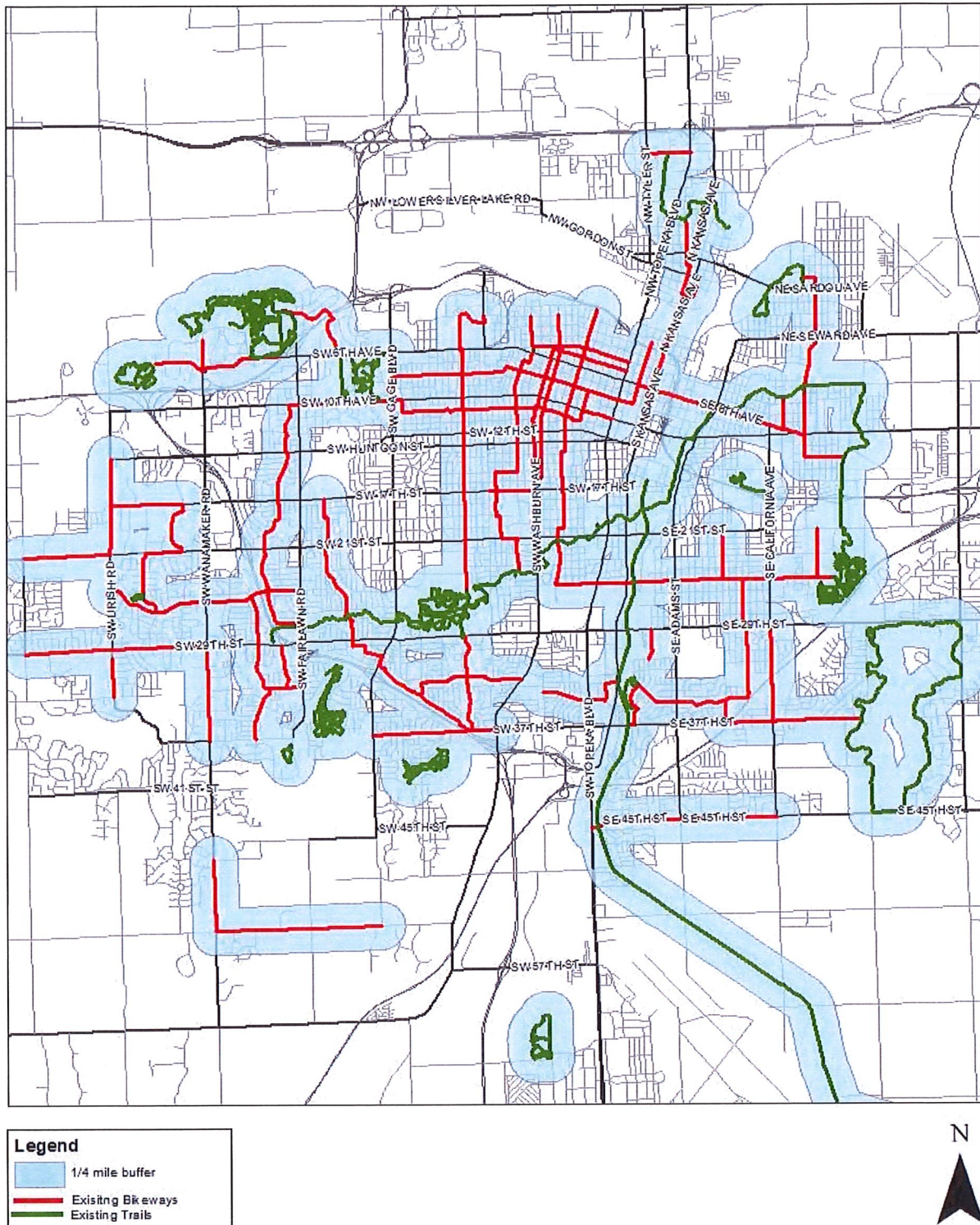
**Figure 4-5: Distance from Trails**

	Total Population		EJ Population	
	No.	Pct.	No.	Pct.
¼ mile of trail	27,168	16.1%	19,815	22.9%
½ mile of trail	54,353	32.3%	39,231	45.4%

Topeka Pedestrian Master Plan, adopted 2016

Figure 4-6: Current Bikeways System Access Map (1/4-mile access area)

## 1/4 Mile Buffer around Existing Bikeways & Trails





**Target 2022 Bicycle and Pedestrian Infrastructure additions: 5% Increase in Total MPA population have access to sidewalks (from 69%-74%): 5% Increase in Total MPA population have access (within ¼ -mile) to Bike System (From 42.3% to 47.3%)**

## **5- SYSTEM Reliability/Congestion Reduction: Transit (Goal-Maintain Existing Infrastructure)**

### **Transit Use and Efficiency**

#### **Annual Ridership**

In 2008, transit ridership reached a record annual total for Topeka Metro with almost 1.8 million trips. 2008 coincided with fuel costs in the United State near, or above \$4.00 per gallon. Much like Topeka Metro, transit systems across the United States experienced similar increased ridership trends in 2008 as citizens looked for ways to save money and limit their personal transportation costs. As the Great Recession began in late 2008 and into 2009, two events happened to Topeka Metro that led to a steep drop in annual transit ridership.

1. Operational budget cuts for Topeka Metro caused significant transit service reductions. These service cuts had the greatest impact on Topeka residents that had limited means of transportation other than public transit.
2. Unemployment grew because of the recession.

Since transit service reductions in 2009 and 2010, annual ridership totals have generally stabilized and have begun to grow again after 2012. In 2018, TMTA provided 1,280,610 trips on public transit. Figure 5-1 shows the upward trend in ridership over the last seven years for TMTA fixed route services.

Topeka Metro's Reduced Income pass has been highly successful. In 2018, the Reduced passes based on income, age, and disability accounted for nearly 460,000 trips on the system. Another program called the 'Freedom Pass' is used by ambulatory ADA passengers who can ride on the fixed route TMTA system at no cost. The

## 2019-2022 Transportation Improvement Program

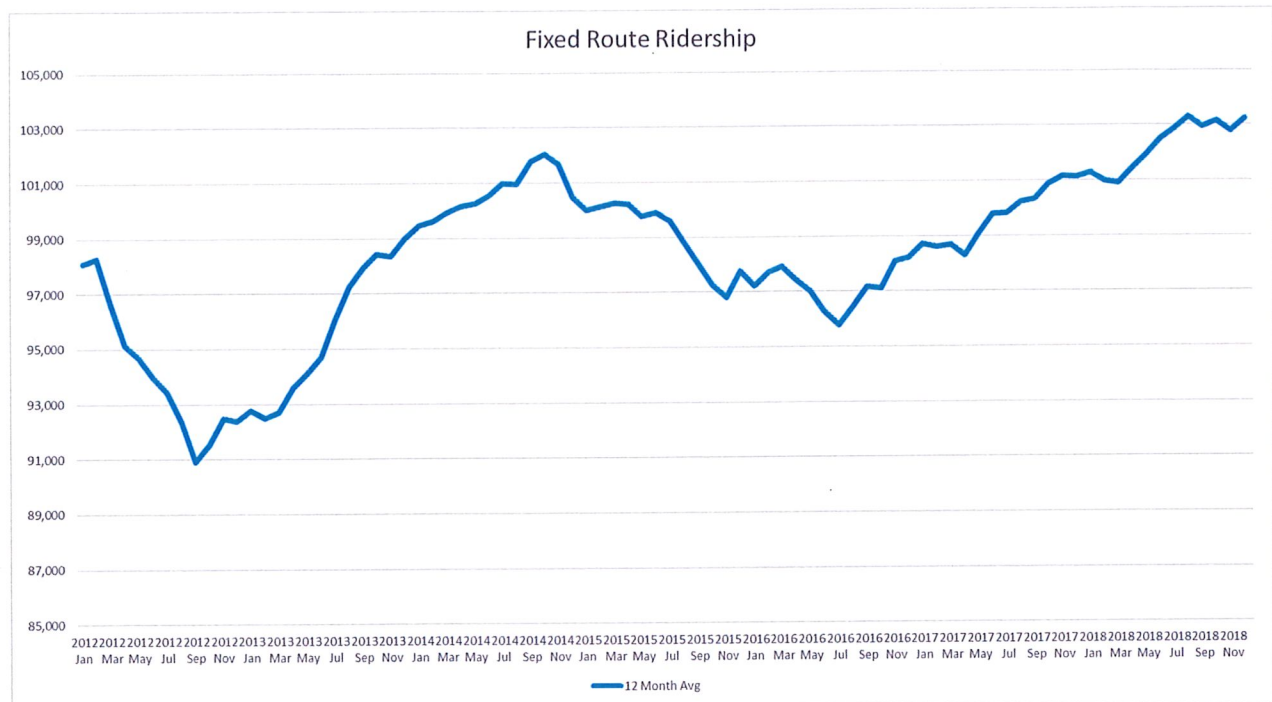


Figure 5-1: TMTA Monthly ridership trends 2012-2018

Freedom Pass was used for nearly 8,900 trips in 2018. TMTA has established pass programs with both USD 501 and Washburn University to allow students access to bus routes using their student identification cards. These two partnerships saw over 185,000 trips taken on TMTA routes in 2018. TMTA also provides a free summer transit pass for kids, which has been very successful in providing mobility for kids in the Topeka area. The Kids Ride Free program was used to make over 41,000 trips in the summer of 2018.

Unlike fixed route services, Paratransit Ridership has continued to decline dramatically since the cuts in 2009. Declining every year, paratransit ridership has dropped by some 37 percent. The ridership decline is attributable to many coinciding issues. In October 2011, TMTA raised the fare for paratransit service to \$4.00, and in November they reduced the paratransit area to the required  $\frac{3}{4}$  mile area around a fixed transit route, excluding route 29S. In October 2012, they expanded paratransit coverage to the city limits for a \$15 premium fee. A final issue decreasing paratransit ridership was the provision of Medicaid trips provided by the State of Kansas to reach medical services and new paratransit service providers in the region. Fortunately, as fixed route stops continue to become more handicap accessible, those who previously used paratransit services can shift to fixed-route bus service.

### **ON-TIME PERFORMANCE (OTP)**

TMTA will soon be purchasing and installing Automatic Vehicle Location (AVL) devices to track OTP on a regular basis. The AVL devices will be on all fixed route buses in its fleet giving the agency the ability to monitor OTP down to the route level of detail.

Since September 2016, TMTA has conducted a quarterly OTP sampling to check and measure schedule adherence. Over the course of five operational days of fixed route service a TMTA staff member recorded the arrivals and departures of buses/routes at the Quincy Street Station transit center. The survey arrivals and departures and has found that over 95% of trips were considered 'on time'. For a trip to be considered 'on time' the bus cannot arrive more than five minutes late and must depart at the

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scheduled time or at most one minute later. Through this survey of arrivals and departures, TMTA showed that the fixed route system has excellent service reliability for its riders. In future years, TMTA will have this accuracy validated through the use of the new AVL devices.

### **SERVICE COVERAGE**

The City of Topeka has good coverage from fixed route public transit services. The 2010 US Census places the total population of the City of Topeka at 127,473. Studies have shown that most people are willing to walk 5 minutes or ¼ mile to reach a bus stop. Overall, approximately 93,510 residents live within a ¼ mile from a bus route, or about 73.4 percent of Topeka's 2010 population.

While most people will walk 5 minutes, 10 minutes or a ½ mile is typically the furthest most people will walk to access a transit route. Approximately 108,673 of Topeka's residents live within a ½ mile of a fixed transit route. This means that TMTA's current fixed route transit network's ½ mile transit-shed includes about 85.3% of Topeka's population.

### **Environmental Justice Populations**

Because the MTPo plans for transportation and mobility for all members of the region, it is important to assess the proximity of the current transit system to Environmental Justice (EJ) populations. For EJ analyses, block groups with the following characteristics are considered EJ areas:

1. With more than the County average of non-white/Hispanic population (25.2%) – 2015 ACS
2. With more than twenty percent of families in poverty –2015 ACS
3. With more than 50 percent of the population in LMI households – 2015 HUD standards

Using 2010 Census block data, the number and percentage of people living within ¼ and within ½ mile of bus routes could be identified for the entire MPA. This was compared to the number and percentage of people living within ¼ and within ½ mile of bus routes for EJ areas further evaluate transit coverage (Figure 5-2).

Within the MPA, approximately 57 percent of the population can walk 5 minutes to reach a fixed bus route. Meanwhile, approximately 80 percent of those living within EJ areas can reach a bus route in 5 minutes. When the range is increased to a 10-minute walk, approximately 66 percent of the population can reach a bus route, compared to 89 percent of those living within EJ areas.

The better coverage of bus routes in EJ areas represents the fact that EJ areas tend to be in older parts of the City. In addition, many higher income individuals tend to live further from the City center. The fact that transit routes serve EJ areas better than non-EJ areas is fitting as transit drastically improves mobility for low income populations who may not be able to afford a car. EJ areas that do not have access to fixed-route bus service within a 10-minute walk include areas to the south (such as Montara), areas to the northwest (primarily industrial land), areas to the northeast, and around Lake Shawnee.

**Figure 5-2:** Percentage of Population Within ¼ and ½ mile of Fixed Bus Routes

	<u>MPA</u>	<u>EJ Areas</u>
Persons Within ¼ mile of bus routes	93,510	68,974
Persons Within ½ mile of bus routes	108,673	76,929
Total Population within Areas	168,235	86,371
Percent of Population within ¼ of Bus Routes	55.6%	79.9%
Percent of Population within ½ of Bus Routes	64.6%	89.1%

Source: 2010 Census Block Data



**Target for Transit On-Time Performance: 90% or greater**

**Target for Transit Service Availability: 70% of all residents of the City of Topeka live within ¼ mile of a fixed route.**

### TIP Amendment Process

The TIP amendment process described below details procedures that are to be used to update an existing approved TIP. A key element of the amendment process is to assure that funding balances are maintained in order to maintain fiscal constraint.

### TIP Administrative Revisions

The following actions are eligible as administrative revisions to the TIP:

- Obvious minor data entry errors
- Splitting or combining projects, provided that there is no change in scope or cost as a result of the split or combining
- Changes or clarifying elements of a project description (with no change in funding or scope)
- Program additional funding limited to the lesser of 25 percent of the total project cost or \$5 million (of the originally approved funding amount)
- Project cost decreases
- Change in program year of project within the first four (4) years of the fiscally constrained TIP
- Change in sources of federal funds
- Program federal funds for advance construction conversion (changing from already obligated advance construction to regular federal funds)

The administrative revisions process consists of notification from the MTPO to all other involved parties, KDOT, FTA and FHWA, as well as to the MTPO advisory bodies. The MTPO must verify with KDOT that funds are available for the cost estimate changes. Any changes made through an Administrative Revision will be incorporated with the next TIP Amendment.

# Index of Highway and Bridge Projects by TIP# & Relationship to Performance Measures (PM)

TIP #	KDOT#	Juris.	Location	Project Type
3-18-01-6	T-141024.00	Topeka	Various	Traffic Signal Replacement
Project Total Cost	\$3,292,000			
1-19-04-7	T-141025.00	Topeka	Downtown Topeka	Traffic Signal Coordination
Project Total Cost	\$290,000			
3-11-01-6	T-241049.00	Topeka	Street/Curb improvements (various locations)	ADA Street Curb Program
PM1 Safety/Intersection Improv.				
Project Total	\$1,200,000			
3-19-02-7	T-601095.00	Topeka	Traffic Safety Projects	Roadway Projects
PM1 Safety/Intersection Improv.				
Project Total	\$880,000			
3-17-03-1	T-601096.00	Topeka	Complete Streets Components	Complete Streets Components
PM1 Safety/Intersection Improv.				
Project Total	\$400,000			
3-17-06-1	T-701015.00	Topeka	SW 10th Ave Fairlawn to SW Wanamaker Rd.	Roadway/Street Widening
PM3 System Delivery				
Project Total	\$3,377,652			
3-19-02-1	T-701016.00	Topeka	12th Street; Gage to Kansas	Roadway/repair/replace
PM2 Pavement/Bridge				
Project Total	\$13,580,000			
3-20-01-1	T-701019.00	Topeka	NW Tyler St.; Lyman to Beverly	Roadway/Street Widening
PM3 System Delivery				
Project Total	\$1,800,000			
3-18-03-1	T-701021.00	Topeka	SE California Ave.; 37th to 45th	Roadway/Street Widening
PM3 System Delivery				
Project Total	\$5,600,000			
3-21-01-1	T-701023.00	Topeka	SW 10th St. from Wanamaker Rd. to Gerald Ln.	Roadway/Street Widening
PM3 System Delivery				
Project Total	\$1,565,000			
3-20-02-1	T-701024.00	Topeka	S. Kansas Ave. from 1st to 6th St.	Roadway/Street Widening
PM2 Pavement/Bridge				
Project Total	\$7,685,000			
3-19-03-1	T-701025.00	Topeka	SW 17th St. from MacVicar to I-470 Int.	Roadway/Street Widening
PM2 Pavement/Bridge				

# Index of Highway and Bridge Projects by TIP# & Relationship to Performance Measures (PM)

TIP #	KDOT#	Juris.	Location	Project Type
Project Total	\$7,685,000			
3-19-04-1	T-701033-00	Topeka	SW29th St. from Fairlawn thru I-470	Roadway/Street Widening
PM2 Pavement/Bridge				
Project Total	\$1,445,000			
3-19-05-1	T-861017-00	Topeka	Bikeways Master Plan Implementation projects 1/2-cent sales tax	Bikeways Master Plan Implementation
PM2 Pavement/Bridge				
Project Total	\$1,000,000			
3-18-05-6	TE-0465-01	Topeka	Bikeways Phase III Implementation	Transportation Alternatives Grant
PM3 System Delivery/Bikeways				
Project Total	\$1,821,735			
3-18-04-6	TA-U2338-01	Topeka	Quincy Elementary School Veicinity SRTS Phase II	Pedestrian/ADA enhancements and crossing improv.
PM3 System Delivery/SRTS				
Project Total	\$350,000			
2-16-02-1	T-121005-00	County	SE 29th Bridge over Butcher Creek	Bridge Replacement and Grading
PM2 Pavement/Bridge				
Project Total	\$8,621,000			
2-18-01-6	TE-0464-01	County	Deer Creek Trail Extension	Transportation Alternatives Grant
PM3 System Delivery SRTS				
Project Total	\$2,722,000			
2-19-01-1	S-701006-00	County	SE 45th St. at Berryton Rd. widen to 3-lanes and construct a roundabout and Bridge	Intersection/Roadway/Bridge
PM1 Safety Intersection Improv.				
Project Total	\$12,028,000			
1-19-08-1	KA-3235-01	KDOT	US-24 from E. City lim. Of Silv. Lk. E. to 400ft. E of US24/Countryside Rd. Int.	Mill & Overlay Roadway
PM2 Pavement/Bridge				
Project Total	\$2,682,306			
1-16-01-1	KA-3236-01	KDOT	US-24 from Topeka Blvd E. to SN.Co. Line	Roadway Resurfacing/Bridge Replacements
PM2 Pavement/Bridge				
Project Total	\$17,740,507			
1-18-01-1	KA-4118-02	Topeka	SW Arvonla Place/Huntoon St./I-470 Ramps	Roadway/Repair/Replace
PM1 Safety/Intersection Improv.				
Project Total	\$3,831,500			
1-17-02-1	KA-4697-01	KDOT	I-470 from I-70 to KTA	Roadway Resurfacing
PM2 Pavement/Bridge				
Project Total	\$9,383,204			

# Index of Highway and Bridge Projects by TIP# & Relationship to Performance Measures (PM)

TIP #	KDOT#	Juris.	Location	Project Type
1-17-05-1	KA-4697-02	KDOT	I-470 from I-70 to KTA	Guardrail Safety Improvements
PM1 Safety/Guardrails Improv.				
Project Total	\$1,895,875			
1-18-05-1	KA-4729-01	KDOT	Bridge Resurfacing: US-75 Begin. .45 mi. S. of NW 46th St.	Roadway/Bridge
PM2 Pavement/Bridge				
Project Total	\$748,020			
1-18-03-1	KA-4730-01	KDOT	US75 Begin. 7mi. S. of NW 62nd St. Thence N. to SN./Jax Co.	Roadway resurfacing
PM2 Pavement/Bridge				
Project Total	\$1,951,155			
1-19-07-1	KA-4730-02	KDOT	Roadways, Guardrail Upgrades (Safety)	Upgrade guardrails along US75 Hwy.
PM1 Safety/Guardrails Improv.				
Project Total	\$60,349			
1-18-04-1	KA-4754-01	KDOT	US-75 Bridges 279 & 280 (NB) ovr. 46th St. SN CO.	Bridge Resurfacing
PM2 Pavement/Bridge				
Project Total	\$363,785			
1-19-01-3	KA-4879-01	KDOT	Bridge Repair: Bridge #111 &112 (Wakaruse River) on US75	Bridge Repair
PM2 Pavement/Bridge				
Project Total	\$695,000			
1-19-02-3	KA-4880-01	KDOT	Bridge Repair: Bridge #240 (KTA) located 8.3miles N. of the Osage Co.	Bridge Repair
PM2 Pavement/Bridge				
Project Total	\$219,000			
1-19-04-3	KA-4942-01	KDOT	Bridge Repar: Bridge # 046 located 0.21 mi. NW of 10th St.	Applying 3-inch asphalt overlay
PM2 Pavement/Bridge				
Project Total	\$225,000			
1-19-03-3	KA-4943-01	KDOT	Bridge Repair: Bridge #161 Located at E. junction I-70/US-75 in Sn Co.	Patch Deck, replace expansion joints & approach joint
PM2 Pavement/Bridge				
Project Total	\$354,998			
1-19-05-1	KA-5047-01	KDOT	US-40 begin. .44mi. E. of junc. US-40/K4 thence E. to SN/DG Co. Line.	Mill & Overlay Roadway
PM2 Pavement/Bridge				
Project Total	\$1,156,000			
1-19-06-3	KA-5077-01	KDOT	Bridge Repair: Bridge #275	Bridge Repair
PM2 Pavement/Bridge				
Project Total	\$235,000			

# Index of Highway and Bridge Projects by TIP# & Relationship to Performance Measures (PM)

TIP #	KDOT#	Juris.	Location	Project Type
1-19-07-3	KA-5164-01	KDOT	Bridge Path and Polymer Overlay Bridge #014 located 2.01 Mi. E. of K-4 (Urish Rd.)	Bridge Repair
PM2 Pavement/Bridge				
Project Total	\$774,700			
1-17-03-1	U-2316-01	KDOT	Gage St. from Emiland Dr. to I-70 EB Exit ramp	Extend two-way left turn lanes
PM1 Safety/Intersection Improv.				
Project Total	\$501,600			
1-17-04-2	U-2317-01	KDOT	Intersection of 29th & McClure	Intersection Improvements
PM1 Safety/Intersection Improv.				
Project Total	\$1,412,514			
1-16-1-3	T-121001.00	KDOT	SW Cherokee St. over Ward Creek	Bridge Replacement
PM2 Pavement/Bridge				
Project Total	\$850,000			
1-17-01-3	T-121003.00	KDOT	SW 3rd St. over Ward Creek	Bridge Replacement
PM2 Pavement/Bridge				
Project Total	\$875,000			
1-19-08-1	X-3066-01	KDOT	RR Crossing Project @ Union Pacific RR at Winter St. (Crossing #605296A)	RR-Hwy Signals Flashing light straight post s/Gates
PM1 Safety/Intersection Improv.				
Project Total	\$381,000			
PM3 Transit Projects				
			5339 Paratransit Vehicles....Service Vehicles	
			Mill Levy New Mini-Transfer Station, New Bus Tecnology	
			5307 Construction of Bikeshare stations at various high-traffic bicycle locations	