ACKNOWLEDGEMENTS

The 2017 Annual Report brought to you by the Kansas Department of Transportation (KDOT).
INTRODUCTION

The WICHway Traffic Management Center (TMC) was constructed in 2010 with an initial deployment of 6 cameras and 6 message boards. In less than 10 years, WICHway has seen significant growth, providing benefits to roadway users and first responders. At the end of 2017, WICHway coverage included approximately 43 miles of highways in the Wichita Metro Area. WICHway includes text and email alerts, increased camera and sign coverage, and an interactive map to help public travel in the Wichita Region!

This is WICHway’s fifth annual report and it summarizes performance measures including incident and congestion metrics from January 1, 2017 to December 31, 2017. It includes information and contributions from the Kansas Department of Transportation (KDOT), Kansas Highway Patrol (KHP), Sedgwick County, City of Wichita, Wichita Area Metropolitan Planning Organization (WAMPO) and FHWA.

![WICHway Coverage Area](image)

### 2017 WICHway Annual Report Quick Summary

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>Page</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Number of Closed Circuit Television Cameras (CCTV)</td>
<td>iv</td>
<td>58</td>
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<tr>
<td>WICHway Benefit-Cost (B-C) Ratio</td>
<td>3</td>
<td>12:1</td>
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<tr>
<td>Number of First Responders trained in TIM</td>
<td>4</td>
<td>831</td>
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<tr>
<td>Number of Public Contacts by Motorist Assistance Unit</td>
<td>5</td>
<td>8,557</td>
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<tr>
<td>Number of Incidents Managed by WICHway</td>
<td>8</td>
<td>2,093</td>
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<tr>
<td>Number of Minutes to Clear an Incident (average)</td>
<td>11</td>
<td>47</td>
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<tr>
<td>Percentage of Major Crashes (greater than 2 hours)</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Percentage of Secondary Crashes</td>
<td>16</td>
<td>6.6</td>
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<tr>
<td>Number of Dynamic Message Signs (DMS)</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>Number of WICHway.org unique user visits</td>
<td>19</td>
<td>2,523</td>
</tr>
</tbody>
</table>
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EXECUTIVE SUMMARY

WICHway is the Kansas Department of Transportation’s (KDOT) Traffic Management Center (TMC) in the Wichita Metro Area. The TMC is co-located with Sedgwick County Emergency Communications allowing direct communication between 911 personnel, first responders, WICHway personnel and the public. This unique approach provides great opportunity to work together to improve congestion and safety in the region. The WICHway website - www.WICHway.org - provides public access to camera views, sign postings and incident information.

WICHway’s mission is to provide real-time information to:

- help coordinate interagency response to incidents
- improve safety for highway drivers and first responders
- communicate travel time reliability
- reduce congestion delays

As of December 2017, WICHway includes 25 Dynamic Message Signs (DMS), 58 traffic cameras, and 63 traffic sensors. WICHway began tracking traffic incident and congestion metrics in July 2013 and publishes the data monthly and annually.

WICHway implemented a traffic incident management training program in the fall of 2013 and has regularly worked with first responders including Sedgwick County 911, EMS, Sheriff and Fire, Wichita Police and Fire, Kansas Highway Patrol and Motorist Assist at local incident management meetings. Incident management is a key component to the mission of WICHway. Efficient and effective incident management improves safety, capacity and reliability of the roadway by reducing the risk of secondary collisions and delays to travelers.

Incident clearance time remains a primary measure of effectiveness for WICHway. Since 2013, the average incident clearance time has decreased by almost two (2) hours. Safely reducing the exposure of travelers and responders by shortening the total duration of the incident is essential to the safety of the public and first responders.
In 2016, WICHway began actively recording secondary crashes. Reducing secondary crashes is important because it reduces the risk of death or injury to drivers and emergency responders. In 2017, a total of 51 secondary crashes were recorded comprising about 6.6% of total logged crashes. 60% of the total secondary crashes were also found to occur in the first 30 minutes of the primary incident. Effective Traffic Incident Management (TIM) is a key element in reducing the occurrence of secondary crashes.

Since 2013, 831 first responders in the Wichita area have completed the 4-hour Traffic Incident Management (TIM) training course developed by the Federal Highway Administration (FHWA) as part of the Strategic Highway Research Program (SHRP2). TIM training and the voluntary adoption of TIM principles by the area first responders are the primary reasons for the observed decrease in average incident clearance time.

Beginning in 2014, WICHway started displaying travel times on the DMS offering daily commuters the ability to choose alternate routes to avoid traffic congestion if destination travel times are greater than their threshold for the commute. On average, there is 20-30% vehicle diversion during incidents when information is displayed on DMS, alerts posted on WICHway, and other communication methods are utilized.

A Benefit-Cost (B-C) analysis was conducted to estimate the monetary value of the return obtained for every $1 spent on the WICHway operations an user delay costs. In Wichita, for every $1 spent on the system there is a benefit of approximately $12 obtained through the reduction in travel time delays, roadway crashes, and crash clearance times. 

Several roadway and ITS improvement projects in Wichita include upgrades to existing WICHway sites and increasing coverage. It is anticipated that by the end of 2018, WICHway will grow by 18 additional miles of coverage area. Additional coverage is primarily along I-235 and I-135. These changes as well as area construction make benchmarking against previous years tough. In July 2017, WICHway added text and email alert features allowing subscribers to be notified of major traffic incidents.

We trust that you will find the report valuable and encourage you to read the complete 2017 WICHway Annual report on our website at www.WICHway.org.
BENEFIT-COST (B-C) RATIO

A Benefit-Cost (B-C) analysis is a good way to assess costs and benefits from the ITS program and its associated operations strategies. Life-cycle costs for the selected ITS strategies are calculated and broken down as infrastructure and incremental costs. Infrastructure costs include basic equipment needed for the functioning of the system and may include computer hardware/software, video monitors, and labor to operate the system. Incremental costs include the costs necessary for deploying one additional device and integrating it into the existing system. These costs are annualized to provide an accurate comparison based on the expected useful life of the equipment, capital/replacement costs, and annual operation and maintenance costs. The benefits estimated are primarily the savings obtained from reduction in travel time delays and improvement in safety by overall reduction in the number of crashes and crash clearance times. The analysis was completed using the latest version of the “Tool for Operations Benefit/Cost” developed by the Federal Highway Administration (FHWA) Office of Operations.\(^5\)

A comparison of pre-deployment data from a 2009 ITS pilot study in Wichita and current deployment (2015) data yielded a total of $14,351,501 in annual benefits, $1,178,766 in annual costs and a subsequent B/C ratio of 12.18/1 (approximately 12:1) for the existing ITS operations in Wichita.

\(\text{Annual Benefits} \quad $14,351,501\)

\(\text{Annual Costs} \quad $1,178,766\)

12:1

benefit-to-cost ratio

\(\$1 \text{ Spent equals approximately } \$12 \text{ in Benefits}\)
TRAFFIC INCIDENT MANAGEMENT TRAINING

Traffic Incident Management (TIM) is a comprehensive initiative focused on improving the safety, capacity and reliability of a roadway. TIM consists of coordinated efforts to restore roadway capacity as safely and quickly as possible. The course develops a common set of practices for all emergency responders working incidents.

<table>
<thead>
<tr>
<th>Responders</th>
<th>Total Trained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
</tr>
<tr>
<td>Law Enforcement</td>
<td>49</td>
</tr>
<tr>
<td>Fire/Rescue</td>
<td>379</td>
</tr>
<tr>
<td>Towing and Recovery</td>
<td>0</td>
</tr>
<tr>
<td>EMS</td>
<td>3</td>
</tr>
<tr>
<td>DOT/ Transportation</td>
<td>24</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>456</td>
</tr>
</tbody>
</table>

Since inception in 2013, **831** traffic incident responders from multiple disciplines have completed the 4-hour TIM training course in the Wichita region.

**Saves Lives**
- Faster incident response and clearance times result in fewer secondary crashes
- Training results in less exposure of responders to traffic

**Saves Money**
- Fewer freight and traveler delays
- Fewer secondary crashes saves on insurance claims
- Less exposure lead to cost savings for incident personnel injuries

**Saves Time**
- Smarter response techniques cut congestion clearance time and decrease delays
MOTORIST ASSISTANCE PROGRAM

The Motorist Assistance Program (MAP) is a partnership between the Kansas Department of Transportation and the Kansas Highway Patrol. Wichita’s Motorist Assistance Program operates Monday through Friday, 5 am to Midnight, and 7 am to 11 pm on weekends.

“Theresa was so helpful and calming and I was just amazed at how quickly she took care of things. I had two little girls in the car who were worried about what was happening and she just took such good care of us. I don't have enough good things to say. Thanks so much!”

Ruth Spencer

<table>
<thead>
<tr>
<th>Activity</th>
<th>Annual Totals</th>
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<tbody>
<tr>
<td></td>
<td>2014</td>
</tr>
<tr>
<td>Public Contacts*</td>
<td>8,951</td>
</tr>
<tr>
<td>Service Rendered</td>
<td>6,035</td>
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<tr>
<td>Unattended Vehicles**</td>
<td>1,804</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Days Worked</td>
<td>1,208</td>
</tr>
<tr>
<td>Total Hours Worked</td>
<td>10,144</td>
</tr>
<tr>
<td>Total Miles Driven</td>
<td>249,073</td>
</tr>
</tbody>
</table>

*Contact with at least one person. Multiple persons in an encounter are not counted individually

**Red tag placed on the vehicle found abandoned between the fences along a highway. Recovered stolen vehicles are excluded.

MISSION

To improve traffic safety through timely, courteous, and cost-effective assistance to motorists whose vehicles are stranded or disabled along the roadway

Theresa was so helpful and calming and I was just amazed at how quickly she took care of things. I had two little girls in the car who were worried about what was happening and she just took such good care of us. I don't have enough good things to say. Thanks so much!”

Ruth Spencer
INCIDENT SUMMARY

What is an incident? For our purposes, it’s an event occurring on the highway that affects the safety or capacity of the highway. This may be an accident, stalled vehicle, grass or vehicle fire, pedestrians on the highway, or roadway debris. Quick detection and response is essential to minimizing the incident duration, preventing secondary accidents and lessening the effects of the initial incident. Detecting incidents such as Injury/Fatality (INJ/FAT) and Property Damage Only (PDO) accidents, and organizing appropriate responses is a primary focus of the WICHway system.

2017 Incident Breakdown by Type

- STALLED VEHICLE: 58.1%
- ACCIDENT-PDO: 29.2%
- DEBRIS: 3.4%
- FIRE: 0.4%
- TOW: 0.5%
- PEDESTRIAN: 0.3%
- MEDICAL: 0.2%
- ANIMALS: 0.1%

**Graph:**
- Total Incidents by Highway
  - US-54: 977 incidents
  - K-96: 768 incidents
  - I-235: 749 incidents
  - I-135: 724 incidents

**Note:**
- The graph shows the total incidents by highway for 2015, 2016, and 2017.
Over 55% of incidents occur during peak driving times, 7-9 am and 4-6 pm.
In 2017, May had the highest number of incidents and January had the lowest.
In 2017, May had the highest number of Injury/Fatality Accidents and Property Damage Only (PDO).
Incident clearance time is an important factor to consider with traffic management. The longer an incident remains on the roadway, the more it affects traffic (including congestion and secondary collisions). Safely and quickly reducing traffic exposure to incidents by decreasing clearance time is an effective way to increase travel efficiency.

The average clearance time by month shown below excludes stalled vehicles, tow and construction incidents since these events often last multiple days and would be difficult to show in relationship to the other incidents.
The average incident clearance time for Wichita in 2017 was 47 minutes. The incident clearance time has remained relatively static since 2014 even though large construction projects have begun in the Wichita area and WICHway’s device coverage has increased significantly. Wichita’s average clearance time excludes stalled vehicles, tow and construction incidents. Kansas law (K.S.A. 8-1102) allows motorists 48 hours to remove an abandoned vehicle before it will be towed, unless it creates a traffic hazard.

KC Scout’s 36 minute clearance time is the average time it takes to clear lanes for all lane-blocking incidents. Incident clearance time as reported by WICHway includes the time all emergency personnel, equipment and vehicles have left the scene.

Houston TranStar’s 31.5 minute clearance time did not specifically mention which incidents are included and whether or not the time was for complete removal from the roadway or only for lane-blocking incidents.

**Average Incident clearance time for Wichita in 2017 was 47 minutes, DECREASED almost 2 hours since 2013**

**2013 Average Incident Clearance Time was 2 hours 30 minutes**
CRASH SUMMARY

Unlike incidents which include all events occurring on the highway, crashes involve the collision of a vehicle with another vehicle, animal, pedestrian, debris or stationary object. In 2017, there were a total of 772 crashes logged in WICHway. Reducing the time it takes to safely remove a crash from the roadway is an important goal for the Wichita area. Identifying high incident areas is valuable when determining the need for safety improvements. These heat maps illustrate distribution of logged crashes in 2017.

Crash – the collision of a vehicle with another vehicle, animal, pedestrian, debris or stationary object
Crash Clearance Times

Crash clearance time is an important factor to consider in traffic management and an improvement goal for the Wichita area. This graph illustrates the amount of time it takes to clear a percentage of all crashes. In 2017, 69% of all recorded crashes were cleared in less than 60 minutes, a small decline from 71% in 2016. This graph includes both the injury and non-injury crash clearance times as logged by the TMC operators.

In 2017, 69% of crashes were cleared in less than 60 minutes, down from 71% in 2016.
Severity Levels

Minor – duration under 30 min.
Intermediate – duration of 30 min. to 2 hrs.
Major – duration greater than 2 hrs.

<table>
<thead>
<tr>
<th>Crash Severity</th>
<th>Total Crashes</th>
<th>Avg. Duration (hh:mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor</td>
<td>259 230 275</td>
<td>0:13 0:14 0:12</td>
</tr>
<tr>
<td>Intermediate</td>
<td>507 430 468</td>
<td>1:00 0:59 1:01</td>
</tr>
<tr>
<td>Major</td>
<td>41 13 29</td>
<td>2:48 2:42 2:57</td>
</tr>
<tr>
<td>Grand Total</td>
<td>807 673 772</td>
<td>0:51 0:46 0:48</td>
</tr>
</tbody>
</table>
Secondary Crashes

A Secondary Crash is a crash that occurs within the incident scene or queue, including the opposite direction, of a primary incident.

In 2017, a secondary crash occurred on average approximately 30 minutes after the start of a primary incident. Of the secondary crashes, 18% were injury crashes.

WICHway coverage increased primarily on I-235 and I-135. Area construction and increased coverage may have impacted the number of secondary crashes recorded during 2017.

A monthly breakdown of the secondary crashes indicates that March and May had the highest number of secondary crashes while no secondary crashes were recorded in June.

In 2017, a total of 51 secondary crashes were recorded as compared to 41 secondary crashes in 2016. In 2017, Secondary crashes comprised 6.6% of logged crashes.
Reducing secondary crashes is an important part of effective Traffic Incident Management (TIM) and overall road safety for the Wichita area and in 2016, WICHway began actively recording secondary crashes. When we take steps to reduce secondary crashes, we reduce the exposure risk to first responders, increase safety for all road users, and mitigate additional congestion. In 2017, 60% of the total secondary crashes occurred within the first 30 minutes of a primary incident!

Cumulative Distribution of Secondary Crashes

In 2017, approximately 50% of the secondary crashes occurred within 15 minutes and 60% within 30 minutes of the start of a primary incident.
DYNAMIC MESSAGE SIGN (DMS)

WICHway utilizes 25 permanent DMS. In 2017, a total of 5,213 messages were posted. November had the highest number of posted messages.

Messages shown exclude travel times and test messages. Messages shown include modifications to previous messages.

*Closure messages include roadway closures for roadwork, incidents, and weather postings.
**Other Incidents include but are not limited to stalled vehicles, fire, and medical incidents.
WEBSITE – WICHWAY.ORG

Wichita’s internet gateway to the Traffic Management Center, WICHway.org, provides users, the public, media and first responders with real-time information including active incidents, camera views, posted message boards, live travel speeds and road conditions. Users can also find monthly and annual reports, contact information and links to additional websites. In July 2017, WICHway added text and email alerts allowing subscribers to be notified of major traffic incidents such as accidents, closures, roadwork, etc. in the Wichita Metro Area.

63,885 Sessions
32,523 Users

“I would like to give you kudos for the WICHway site on the web. I think it is one of the best apps ever and I am telling lots of people about it. It will come in very handy with all that will be going on this year! Thank you for providing the information that you do.”

Becky Fields, Wichita

WICHway.org Desktop Webpage

WICHway.org Mobile View

WICHway.org is desktop and mobile friendly!
CONGESTION SUMMARY

Traffic congestion affects our daily lives as we travel along the roadways. Wichita’s Intelligent Transportation System (ITS) utilizes 63 traffic sensors to detect vehicle speeds, volume, lane occupancy and direction in 15-minute intervals, all of which is stored on local TMC data servers.

When a peak period is referenced, the peak periods correspond to 7:15 to 8:15 am and 4:30 to 5:30 pm. The peak periods in this report were determined using data collected over the 12-month period.

The congestion index report informs commuters of travel time reliability on Wichita highways. The congestion indices used in this report are:

- Travel Time Index (TTI)
- Planning Time Index (PTI)
- Buffer Time Index (BTI)

All three travel time reliability indices are calculated standards used by the Federal Highway Administration (FHWA). 4

<table>
<thead>
<tr>
<th>WICHway Year</th>
<th>TTI</th>
<th>PTI</th>
<th>BTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM</td>
<td>PM</td>
<td>AM</td>
<td>PM</td>
</tr>
<tr>
<td>AM</td>
<td>PM</td>
<td>AM</td>
<td>PM</td>
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<td>PM</td>
</tr>
<tr>
<td>AM</td>
<td>PM</td>
<td>AM</td>
<td>PM</td>
</tr>
</tbody>
</table>

Travel Time Reliability Indices Summary

Travel Time Reliability compares travel times during little or no congestion to peak-hour travel times.
Traffic Speeds & Average Annual Daily Traffic (AADT) by Route

The Average Annual Daily traffic (AADT) is a measure of the average annual number of vehicles that cross a point (in both directions) on a roadway segment during a day. Based on typical peaking characteristics, the capacity of a freeway lane is generally 20,000 vehicles per lane per day.

- **I-135 Avg. 24-Hour Speed & AADT**
  - Average 24-Hour Speed
  - AADT

- **I-135 or the “Canal route” runs north-south through Wichita and links with three other major freeway and highway routes**

- **I-235 Avg. 24-Hour Speed & AADT**
  - Average 24-Hour Speed
  - AADT

- **I-235 is a north-south bypass on the west side of Wichita connecting I-135 at north and south of the Wichita metro area**

* N. Broadway East is for SB direction only
**K-96 Avg. 24-Hour Speed & AADT**

- Average 24-Hour Speed
- AADT

**US-54 Avg. 24-Hour Speed & AADT**

- Average 24-Hour Speed
- AADT

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**K-96 is a bypass route connecting East US-54 (Kellogg) with North I-135 then continuing west to Hutchinson, Kansas**

**US-54 runs east-west through the heart of Wichita and has the highest Average Annual Daily Traffic (AADT) in Wichita**

*US-54/West Street is not shown. Traffic sensor at the location was removed February 2016 for construction*
I-135 Avg. AM Peak Hour Speeds

- NB Average AM Peak Hour Speed
- SB Average AM Peak Hour Speed

Peak Traffic Hours:
7:15 - 8:15 am
4:30 - 5:30 pm

I-135 Avg. PM Peak Hour Speeds

- NB Average PM Peak Hour Speed
- SB Average PM Peak Hour Speed

Posted Speed Limit is 60 mph
K-96 Avg. AM Peak Hour Speeds

- EB Average AM Peak Hour Speed
- WB Average AM Peak Hour Speed

Peak Traffic Hours:
- 7:15 - 8:15 am
- 4:30 - 5:30 pm

Posted Speed Limit is 65 mph

K-96 Avg. PM Peak Hour Speeds

- EB Average PM Peak Hour Speed
- WB Average PM Peak Hour Speed

Posted Speed Limit is 65 mph

*K-96 at Rock missing data from July to December 2017
US-54 Avg. AM Peak Hour Speeds

US-54 Avg. PM Peak Hour Speeds

Peak Traffic Hours:
7:15 - 8:15 am
4:30 - 5:30 pm

*US-54 at West Street is not shown since the traffic sensor at the location was removed February 2016 for construction
I-235 Avg. AM Peak Hour Speeds

- NB Average PM Peak Hour Speed
- SB Average PM Peak Hour Speed

Peak Traffic Hours:
7:15 - 8:15 am
4:30 - 5:30 pm

Posted Speed Limit is 65 mph

I-235 Avg. PM Peak Hour Speeds

- NB Average PM Peak Hour Speed
- SB Average PM Peak Hour Speed

Posted Speed Limit is 65 mph

*Sensor installed in early 2017 and does not include data for the entire year; **N. Broadway East is for SB direction only
If it typically takes a driver 1 minute to drive between two points with no congestion, a TTI of 1.5 means on average, it will take the same driver 1 minute 30 seconds (1 minute x 1.5 = 1.5 minutes) to travel between the same two points during the peak periods.
If travel during times of light traffic with little congestion takes 2 minutes, a PTI of 1.5 means the same trip will take a total of 3 minutes (1.5 minutes x 2 = 3 minutes), or 1.5 times longer.

2016 vs 2017 PTI Comparison

**Morning Peak**
- 2016: 1.19 min
- 2017: 1.18 min
- **-0.8%**

**Evening Peak**
- 2016: 1.34 min
- 2017: 1.34 min
- **0.0%**

Planning Time Index Legend
- Green: 1.00 – 1.30
- Orange: 1.31 – 1.60
- Red: 1.61+

Planning Time Index (PTI) AM Peak Hour

Planning Time Index (PTI) PM Peak Hour
If travel during times of light traffic with little congestion takes 5 minutes, a BTI of 40% means the traveler should plan an additional 2 minutes (5 minutes x 40% = 2 minutes) to make their destination on time.

2016 vs 2017 BTI Comparison

**Buffer Time Index Legend**
- Green: 0% - 20%
- Yellow: 21% - 40%
- Red: 41%+

**Morning Peak**
- 2017: 17%
- 2016: 19%
- Decrease: -2.0%

**Evening Peak**
- 2017: 28%
- 2016: 30%
- Decrease: -2.0%
WICHWAY TOOLS & EQUIPMENT

WICHway utilizes an array of tools to monitor traffic, notify drivers of travel problems, assist responders at incidents and improve travel reliability in Wichita. Many of these tools are also available through the website, www.WICHway.org.

WICHway Website
Alerts and real-time information about traffic conditions and incidents available on desktop, tablets, and mobile devices.

Traffic Management Center
Control center for WICHway, Wichita’s Intelligent Transportation System.

Closed-Circuit Cameras
View live traffic and monitor incidents.

Traffic Detectors
Record live traffic data including speed, volume, lane occupancy and direction.

Dynamic Message Sign (DMS)
Alerts road users of current traffic conditions.

Live Traffic Monitoring
Operators view live traffic conditions and update devices with current information.
### APPENDICES

#### Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADT</td>
<td>Average Daily Traffic</td>
</tr>
<tr>
<td>AADT</td>
<td>Average Annual Daily Traffic</td>
</tr>
<tr>
<td>BTI</td>
<td>Buffer Time Index</td>
</tr>
<tr>
<td>CCTV</td>
<td>Closed-Circuit Television</td>
</tr>
<tr>
<td>DMS</td>
<td>Dynamic Message Sign</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>ITS</td>
<td>Intelligent Transportation System</td>
</tr>
<tr>
<td>KDOT</td>
<td>Kansas Department of Transportation</td>
</tr>
<tr>
<td>KHP</td>
<td>Kansas Highway Patrol</td>
</tr>
<tr>
<td>MAP</td>
<td>Motorist Assistance Program</td>
</tr>
<tr>
<td>MAV</td>
<td>Motorist Assist Vehicle</td>
</tr>
<tr>
<td>MIST</td>
<td>Management Information System for Transportation</td>
</tr>
<tr>
<td>MUTCD</td>
<td>Manual on Uniform Traffic Control Devices</td>
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<td>PDO</td>
<td>Property Damage Only</td>
</tr>
<tr>
<td>PTI</td>
<td>Planning Time Index</td>
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<tr>
<td>SHRP2</td>
<td>Strategic Highway Research Program</td>
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<tr>
<td>SWZ</td>
<td>Smart Work Zone</td>
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<tr>
<td>TIM</td>
<td>Traffic Incident Management</td>
</tr>
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<td>TMC</td>
<td>Traffic Management Center</td>
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<td>Travel Time Index</td>
</tr>
<tr>
<td>VMT</td>
<td>Vehicle Miles Traveled</td>
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#### Sources