

7. Freight Operational Strategies, Conditions, and Technologies

KYTC employs a myriad of operational strategies and technologies to help meet its goals and, by extension, the National Multimodal Freight Policy goals, and National Highway Freight Program goals. Multiple strategies are used to maintain a transportation system that is as safe, efficient, environmentally sound, and fiscally responsible as possible. Using innovation, KYTC will adapt to increasing demands on the freight system and continue to link users of the system to job opportunities and a growing economy. The following sections highlight some of the innovative strategies and technologies Kentucky employs to keep up with the changing freight landscape.

7.1. Classification Counts

KYTC collects continuous weigh-in-motion (WIM) data from 25-30 sites statewide. WIM data includes volume, direction, speed, vehicle classification, gross vehicle and axle weights, overall vehicle lengths, and individual axle spacing. Some WIM stations are also equipped with tire pressure anomaly detection, thermal cameras that can check motor carriers brake operation, as well as night vision cameras that are able to detect whether truck drivers are wearing their seatbelts. KYTC collects vehicle volume data on a three-year schedule from about 17,000 count locations statewide. Of those, KYTC collects FHWA vehicle classification data on at least 25% of the sites on roadways functionally classified Minor Collectors and above. It is these locations that provide commercial vehicle volume data by truck type. KYTC vehicle count station locations can be viewed [here](#).

7.2. Overweight / Over-Dimensional Surveys

All loads are considered for a “Physical Route Overweight Over-Dimensional Survey” if the dimensions or weights could potentially cause damage to property or that may be detrimental to public safety. A Physical Route Overweight Over-Dimensional Survey is mandatory for loads exceeding 15’6” high or any load that has excessive width for the proposed route.⁷² Excessive width may be defined as any width greater than the narrowest point of any lanes of travel on the proposed route that would result in the vehicle or load traveling on shoulders or in emergency lanes. Route surveys older than 10 days are not considered due to changing construction zone dynamics. More information about KYTC’s [Overweight Over-Dimensional Services](#) can be viewed on the Motor Carriers’ webpage. The [Overweight Over-Dimensional Route Survey Form TC 95-625](#) is accessible and available for download, and an excerpt can be seen in **Figure 7-1**.

⁷² Kentucky General Assembly. Kentucky Administrative Regulations (Title 601 Chapter 001 Regulation 018). <https://apps.legislature.ky.gov/law/kar/titles/601/001/018/>. Accessed April 2022.

Figure 7-1. Overweight - Dimensional Route Survey Form TC 95-625 Excerpt

SECTION 2: ROUTE DETAILS - For additional route details attach a separate sheet.

The following must be considered while physically performing the survey.

- All vertical/horizontal clearance must be checked at the highest/widest point of the load and lowest/narrowest of the area where the load will be traveling insuring that all obstructions can be traveled under, over, or ramped safely
- No obstruction can be moved or removed without written permission from the owner.
- A manufacturer's specification drawing must be attached.
- Insure that the weight does not exceed any highway or bridge posted limit.
- All loads over 200,000 lbs must attach a side & rear view drawing with axle spacing & weights.
- Identify all locations where bucket trucks may be needed.

ROUTE (Name / Number)	DIRECTION (N S E W)	LANE OF TRAVEL (Right, Left, Center, Straddle)	NOTES: INCLUDE ALL OBSTRUCTIONS WITH MILE POINTS (i.e. bridges, lights, wires, mast arms, trees, signs, poles, guardrail, railroad, owner of obstruction & contact information if applicable, etc.)

7.3. Notify Every Truck (NET) System⁷³

The TRIMARC Notify Every Truck Service (NET) alerts commercial vehicle operators of conditions that may interrupt travel on Kentucky's interstates and parkways. The free service is designed to advise drivers via SMS Text and/or email of route specific traffic information regarding closures expected to exceed two hours on interstates or parkways statewide. Alerts are managed from the TRIMARC Regional Traffic Operations Center in Louisville to provide current information on road closures due to unexpected events or planned community activities.

The objectives of NET are to:

- Restore normal flow of vehicular traffic on interstate highways as rapidly as possible, following major incidents, in compliance with Quick Clear Laws
- Reduce the time required to clear the interstate highway system
- Decrease the time emergency responders are required at an incident on the interstate highways
- Reduce secondary accidents
- Reduce pollutants
- Obtain quicker notifications for commercial carriers
- Send a second notice once the incident has been cleared
- Allow commercial carriers to alert their drivers of the delay
- Reduce the total number of vehicles trapped in the queue of major incidents
- Allow commercial carriers to dispatch the necessary assets to clean up incidents

⁷³ TRIMARC Notify Every Truck, <http://www.notifyeverytruck.com>. Accessed February 2022.

7.4. Traffic Operations/Management Centers

The Traffic Response and Incident Management Assisting the River Cities (TRIMARC)⁷⁴ is the largest Traffic Operations Center (TOC) in the state. TRIMARC monitors traffic in the Louisville Metro and the Northern Kentucky regions. It also provides Freeway Service Patrols (FSP) in these areas, oversees the TPIMS statewide and administers the Notify Every Truck (NET) program. Additionally, TOC operators analyze traffic conditions and provide real-time information to motorists in the occurrence of incidents that may negatively affect interstate travel. They use dynamic messaging signs, cameras, and other technologies, to detect, respond to, and clear incidents in a timely with the purpose of improving safety and reducing congestion on the interstates. As part of their Louisville traffic monitoring, TRIMARC holds quarterly Freeway Incident Management (FIM) meetings to review major incidents which required total closures of the interstate within KYTC District 5 (Louisville area). This effort involves representatives from KYTC, FHWA, law enforcement, emergency management, fire, and rescue, towing and recovery, and other emergency responders. The main objective of the team is to mitigate the effects of planned and unplanned events in the future, ensure the safety of travelers and secure peak efficiency on the state's interstate system. Additional information about the TRIMARC Freeway Incident Management (FIM) service can be viewed [here](http://trimarc.org/fim.html)<http://trimarc.org/fim.html>.

TRIMARC's Louisville TOC also monitors, manages, and reports on traffic conditions for Boone, Campbell, Gallatin, and Kenton Counties in northern Kentucky. This includes operating dynamic message signs, and cameras as well as monitoring incidents and traffic.

In addition, there is a Statewide Traffic Operations Center operated by KYTC's Office of Highway Safety in Frankfort, KY. This TOC monitors and reports on highway traffic conditions statewide (<https://goky.ky.gov/>).

The Cumberland Gap Tunnel⁷⁵ Authority, located in Middlesboro, KY, operates as a remote Traffic Operations Center for KYTC, but is independent of the Statewide Traffic Operations Center. It uses a variety of technology to monitor, direct, and respond to traffic, locating any potential problems which may arise outside or within the tunnels.

The Lexington Traffic Management Center, called "Real-time Traffic Ticker", operates independently in Lexington, KY. The TOC reports daily on scheduled lane closures. The Lexington-Fayette Urban County Government also operates CCTV cameras and accordingly provides a traffic website⁷⁶ to help motorists make more informed travel decisions when traveling Lexington's roadways.

7.5. Truck Parking Information Management System

Kentucky is one of eight states participating in the Mid America Association of State Transportation Officials' (MAASTO) Truck Parking Information Management System (TPIMS). The system uses existing intelligent transportation systems (ITS) infrastructure and capabilities, along with emerging vehicle detection and data collection technologies, to monitor the availability of truck parking at over 150 sites

⁷⁴ Traffic Response and Incident Management Assisting the River Cities (TRIMARC). <http://www.trimarc.org/site/pages/About.html>. Accessed April 2022.

⁷⁵ Cumberland Gap Tunnel. <http://www.cgtunnel.com/about.html>. Accessed April 2022.

⁷⁶ LFUCG Traffic Cameras. <https://trafficvid.lexingtonky.gov/publicmap/>. Accessed April 2022.

across the MAASTO region. This includes 13 parking sites in Kentucky. The real-time truck parking information is shared directly with truck drivers through multiple platforms, including dynamic message signs, navigation tools, and 511 systems.

In Kentucky, the system shares truck parking availability via dynamic messaging signs. While TPIMS can be used to share truck parking availability for public and/or private sector facilities, in Kentucky, the system focuses mainly on public facilities - typically rest stops, but also weigh stations. Overall, the Kentucky Truck Parking Action Plan estimated that there are 747 truck parking spaces covered by Kentucky's TPIMS system.

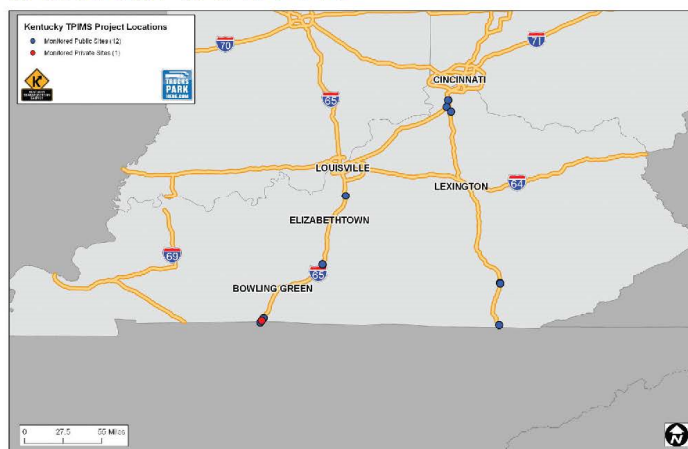
Table 7-1. TPIMS Locations⁷⁷

Highway	Lot Location	Number of Spots
I-65 NB	Rest Area @ MP 0.2	21
I-65 NB	Weight Station @ MP 3.4	50
I-65 NB	Rest Area @ MP 59	135
I-65 SB	Rest Area @ MP 114	26
I-65 SB	Rest Area @ MP 59	135
I-65 NB/SB	Marathon Exit 2 (private property)	43
I-71 SB	Weight Station MP 75	45
I-75 NB	Welcome Center @ MP 1.5	20
I-75 NB	Weigh Station @ MP 33	50
I-75 NB	Rest Area @ MP 177	53
I-75 SB	Rest Area @ MP 177	69
I-75 SB	Weigh Station @ MP 168	50
I-75 SB	Weigh Station @ MP 34	50




Source: TRIMARC, 2022.

Figure 7-2. Kentucky TPIMS Lot Locations

KENTUCKY TPIMS LOTS



Lot locations by highway and mile marker.

	113	SB	26 spots	4	NB	50 spots
	60	NB	135 spots	2	NB	43 spots
	60	SB	135 spots	1	NB	21 spots
	75	SB	45 spots			
	177	NB	53 spots	33	NB	50 spots
	177	SB	69 spots	34	SB	50 spots
	168	SB	50 spots	2	NB	20 spots

TPIMS sites and number of parking spots shown may change periodically based on parking needs, operational requirements and funding availability.

⁷⁷ Kentucky Truck Parking, TRIMARC, <http://www.trimarc.org/site/pages/TruckParking.html>.