West Michigan Transportation Operations Center

2015

September

MONTHLY PERFORMANCE MEASURES

MDOT'S MISSION:
Providing the highest quality integrated transportation services for economic benefit and improved quality of life.

MDOT
Michigan Department of Transportation

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Report Compiled By AECOM

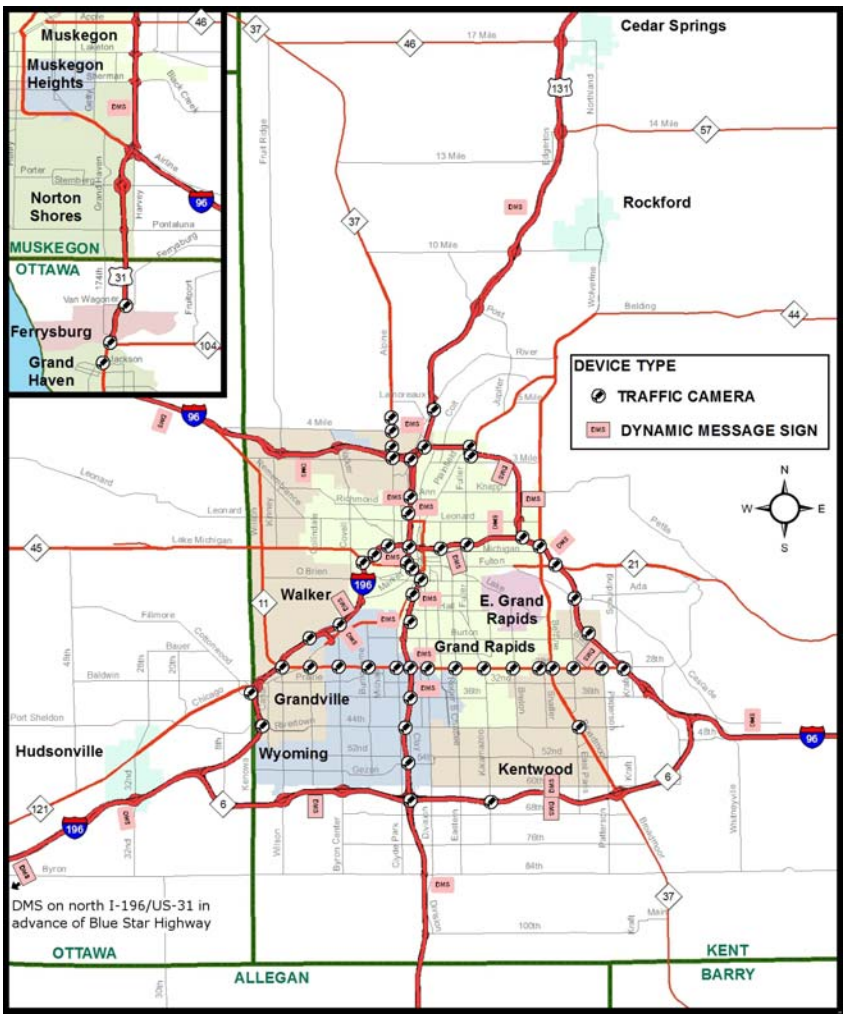
WMTOC Spotlight

The WMTOC staff has been busy preparing for the changes due to the Governor's Regional Prosperity Initiative (RPI). The RPI is designed to help local and state agencies provide a more consistent and coordinated delivery of services to our customers by aligning agency boundaries with one another. As a result, the MDOT Grand Region boundaries changed on Oct. 1 to include five new counties: Mason, Lake, Osceola, Allegan and Barry. WMTOC operators have been growing familiar with the interstate and state routes in each new county, while also adding contacts for incident response and maintenance.

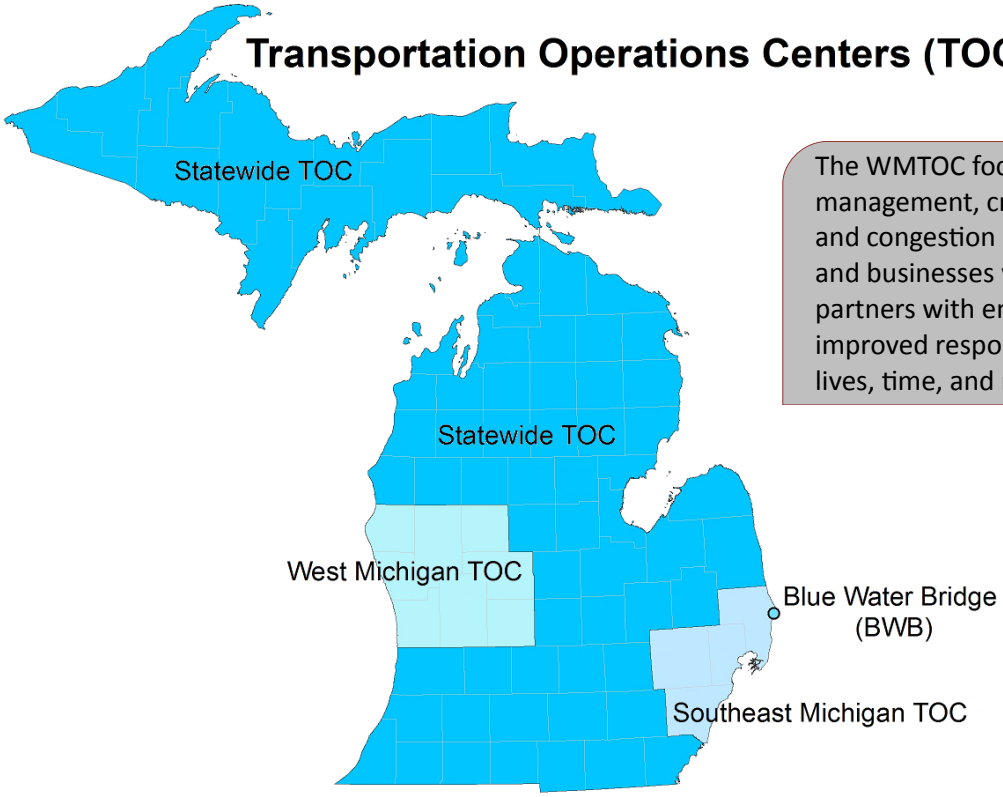
Sept. 14 was a busy day for incidents at the WMTOC, with five of the seven crashes documented by control room operators being high-impact crashes. One crash lasted for more than 90 minutes and required westbound I-96 to be closed at US-131 for more than an hour. The WMTOC assisted motorists by communicating crash information through dynamic message signs, e-mails, Twitter and Mi Drive. No remarkable conditions were noted contributing to the crashes as it was a warm, dry day.

The WMTOC also assisted with special event traffic in September and would like to offer congratulations to the West Michigan Whitecaps, the Class A 2015 Midwest League Champions. The WMTOC has displayed congestion messages informing motorists of sporting event-related traffic delays throughout the season.

Device Locations



Transportation Operations Centers (TOC)



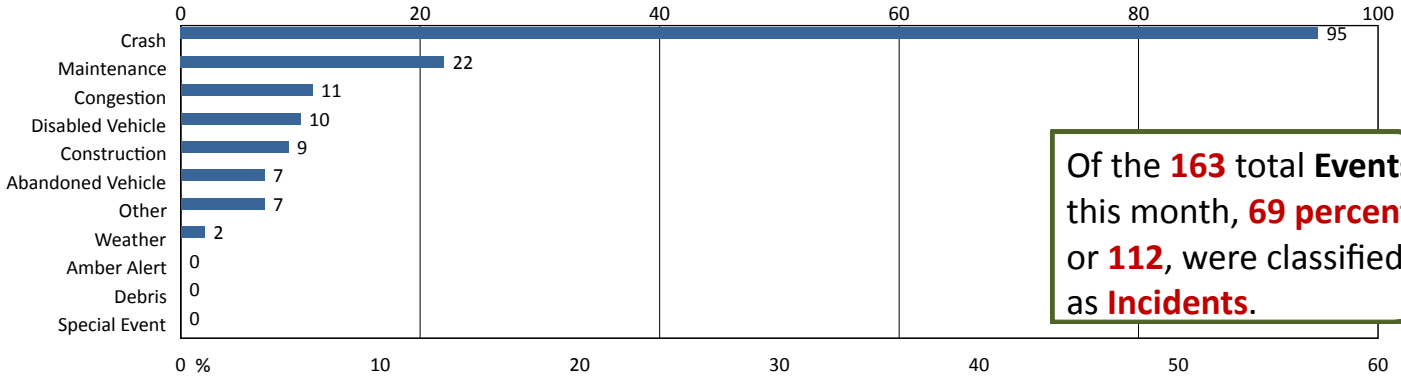
The WMTOC focuses on MDOT's goals of incident management, crash reduction, customer information, and congestion reduction. The TOC provides motorists and businesses with real-time traffic information, and partners with emergency response agencies to provide improved response services to traffic crashes, saving lives, time, and money.

The WMTOC has camera/device coverage on approximately 45 freeway miles and 18 non-freeway trunkline miles in the greater Grand Rapids area and Grand Haven.

Control Room Activity

Event: An occurrence within the TOC coverage area that results in TOC involvement or tracking. Several different types of events recur, including: Crash, Disabled Vehicle, Abandoned Vehicle, Debris, Congestion, Construction, Maintenance, AMBER Alert, Weather, and Special Event types. Any other occurrence with TOC involvement is classified as "Other."
Incident: An unplanned event that directly affects a state trunkline. These are primarily crashes, disabled and abandoned vehicles, and debris in the roadway but occasionally include police situations and fires.
Communication: Any phone call, e-mail, etc., that comes into or goes out of the control room.

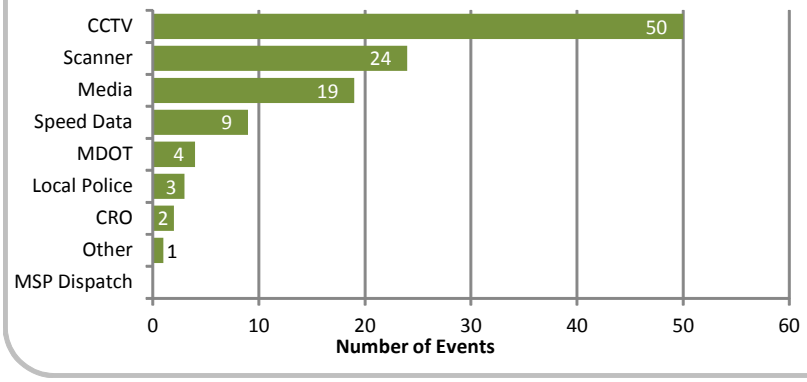
Events by Type



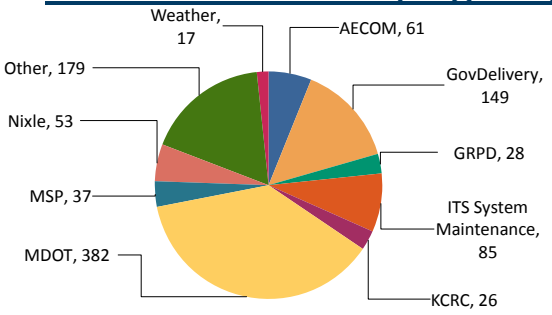
Of the **163** total **Events** this month, **69 percent**, or **112**, were classified as **Incidents**.

Control room operators (CRO) rely on various sources to detect **Incidents** that occur along the freeways. Noting the source not only ensures that the **Incident** was detected by a reliable source, but also provides insight as to which sources are utilized most frequently. "Other" includes any source that is infrequent, such as responders on scene or third party notifications.

Incidents by Detection Source



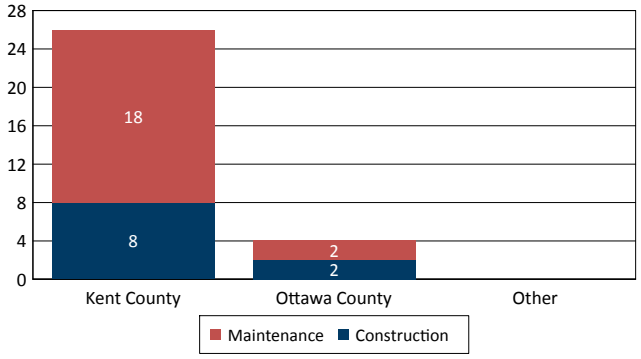
Communication by Agency



CROs managed **1,017** **Communications** this month. This included **300 (29 percent)** Calls and **717 (71 percent)** E-mails. The highest source of **Communication**, **38 percent**, was between the control room and **MDOT**. "Other" includes Media, Contractors and Service Providers, as well as the City of Grand Rapids.

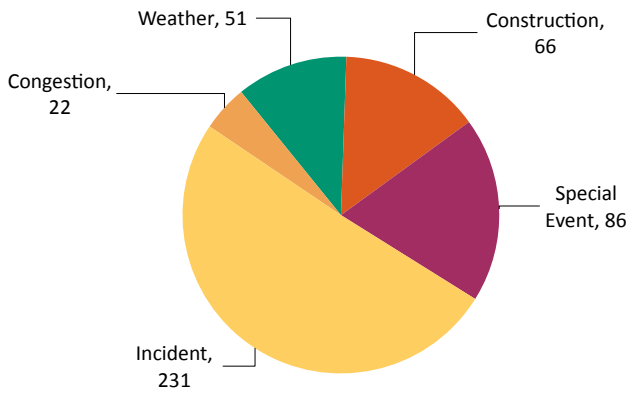
Since CROs are responsible for monitoring and managing traffic operations along the freeways, it is critical to know where work zone activities are taking place and the impact that they may have on freeway operations. Frequent communication with MDOT staff and contractors allows CROs to stay up-to-date on the locations and impacts of construction and maintenance projects. Work zone activities which are messaged for or are within the camera/device coverage area of the WMTOC are logged. "Other" includes Oceana, Newaygo, Mecosta, Muskegon, Montcalm, and Ionia counties.

Work Zone Activities



Traveler Information

DMS and VSS Messages by Type



There were **456** unique messages displayed throughout the ITS network this month on Dynamic Message Signs (DMS). A "unique message" may be an **Incident**, Special Event, Congestion, Weather, Construction, AMBER Alert, or other unique message.

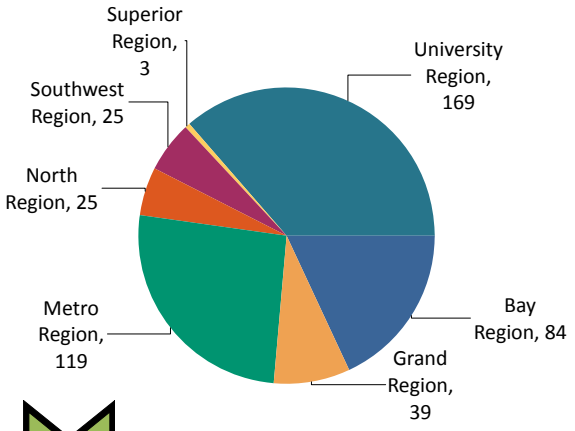
Travel time messages are routinely displayed when unique messages are not active. Travel times are updated every three minutes.

Field Device Availability

Device Type	Number of Devices	Percent of Time Available
CCTV Cameras	40	99%
Dynamic Message Signs (DMS)	27	96%
Microwave Vehicle Detectors	43	89%

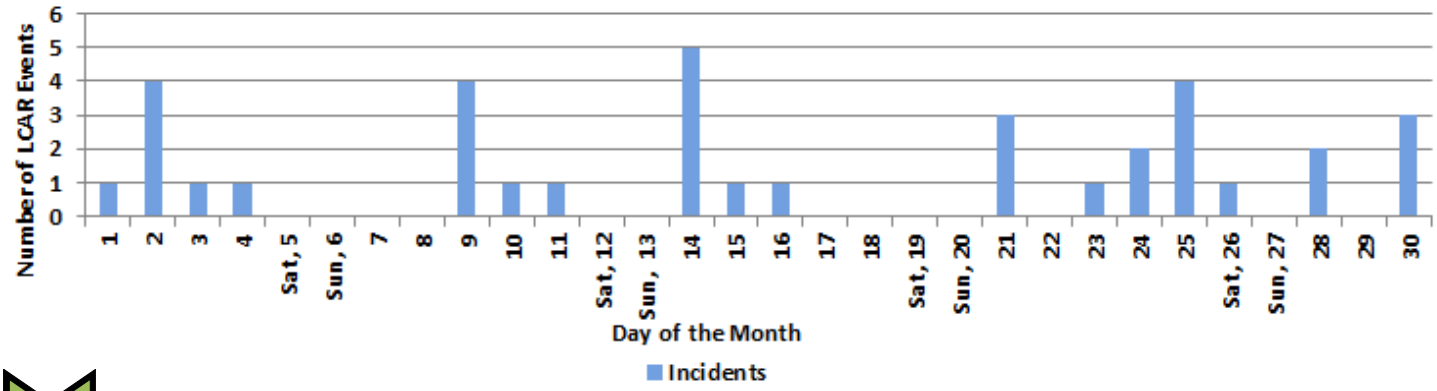
CROs track the availability of all system devices so that timely maintenance can occur. The reliability of the devices in turn ensures that CROs have tools available to accurately provide traffic conditions to the motoring public.

Stuck in Traffic Notifications



Travelers with smartphones or Web-enabled mobile devices can go to the Mi Drive website (www.michigan.gov/drive) and click on the "Stuck in Traffic?" link to report traffic delays or incidents. The graph above shows how many were reported per MDOT region.

WMTOC LCAR Posts



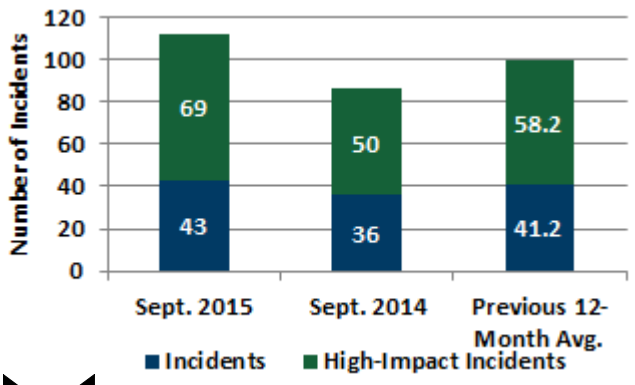
CROs are able to post **Incident** information to the Mi Drive website using the Lane Closure and Restrictions (LCAR) tool. Each post that was sent to the website this month is shown in the chart above.

Incidents in Coverage Area by Roadway

		Sept. 2015			Sept. 2014			Previous 12-Month Avg.		
Freeway	Miles	Total Incidents	Incidents Per Mile	Average Duration (min)	Total Incidents	Incidents Per Mile	Average Duration (min)	Total Incidents	Incidents Per Mile	Average Duration (min)
I-96	10.6	11	1.0	52	9	0.8	**128**	12.9	1.2	**74**
I-196	12.1	19	1.6	29	18	1.5	59	26.9	2.2	51
US-131	15.2	**54**	**3.6**	47	**36**	**2.4**	40	**44.9**	**3.0**	57
US-31	1.7	1	0.6	20	2	1.2	23	1.6	0.9	47
M-6	4.0	3	0.8	41	1	0.2	31	2.0	0.5	51
M-11	11.5	3	0.3	**70**	2	0.2	116	0.8	0.1	69
Total	55.1	91	1.7	44 min	68	1.2	58 min	89.1	1.6	57 min

US-131 experienced the most total **Incidents** this month; additionally, US-131 had the greatest incident-per-mile rate for the month. The longest average incident duration during the current month occurred along M-11. Abandoned vehicles are excluded from this table.

Total Incidents



There were a total of 112 **Incidents** this month, 62 percent of which were high-impact incidents.
A high-impact incident is one that results in a total freeway closure, a ramp closure or a lane closure.

The majority of the high-impact **Incidents** this month, 57 percent, occurred along US-131. For most high-impact incidents, CROs are required to provide e-mail notification to a pre-defined distribution list of individuals and organizations. The notification includes the location of the incident, the degree of closure, the reason for the closure, the source that verified the incident and any other pertinent information related to traffic operations.

High-Impact Incidents

	Sept. 2015	Sept. 2014	Previous 12-Month Avg.
Freeway Closure	5	8	4.2
Lane Closure	60	39	51.0
Ramp Closure	4	3	3.0
Total	**69**	**50**	**58.20**

Top Duration Incidents

Location	Date	Duration	Details
M-46 @ Crystal Rd	9/28/2015	6 hrs. 35 min.	HAZMAT Spill
WB I-96 @ M-37 (Alpine Ave)	9/14/2015	2 hrs. 9 min.	Multi-vehicle crash
EB I-96 @ Grand River Ave	9/28/2015	2 hrs. 2 min.	Single vehicle crash
EB M-11 @ Patterson Ave	9/11/2015	2 hrs. 0 min.	Multi-vehicle crash
SB US-131 @ 36th St	9/2/2015	1 hr. 44 min.	Single vehicle crash

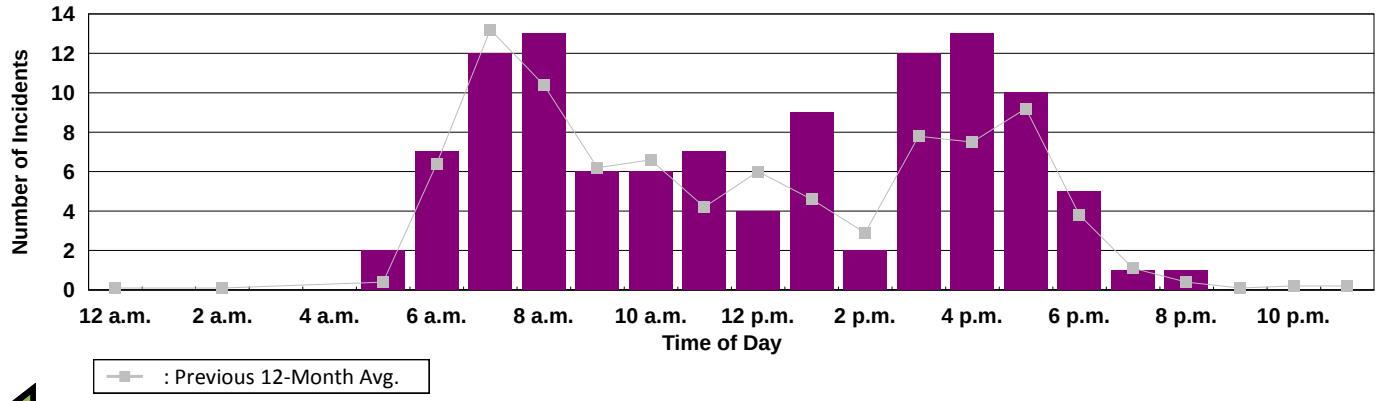
The longest-duration **Incident** this month occurred on M-46 and lasted 6 hours 35 minutes, compared to the average incident duration of 44 minutes for September incidents and 57 minutes for incidents in the past year.

Incidents in Work Zones

During the month of September, two incidents were identified by operators as being within a work zone.

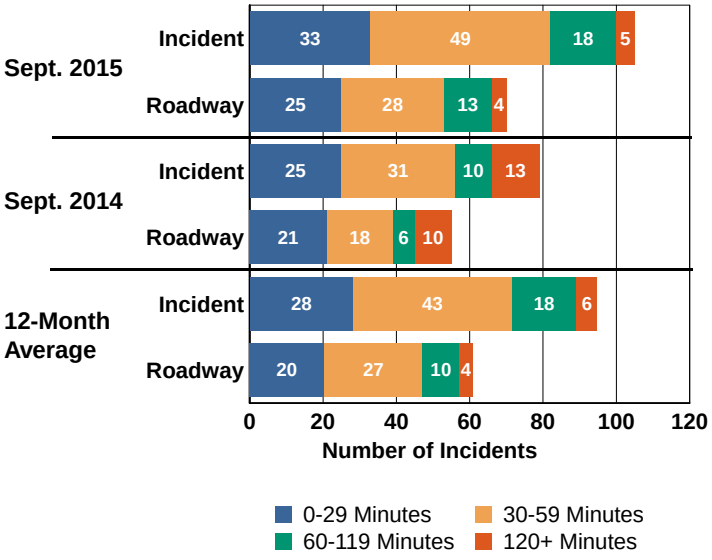
Incident Management

Total of Unplanned Incidents per Weekday Hour



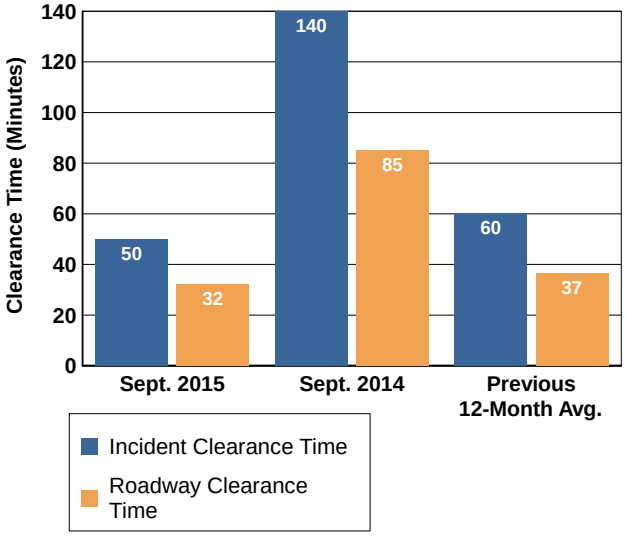
The largest hourly number of Incidents this month occurred during the hours starting at **8 a.m. and 4 p.m.**, historically the largest hourly number of incidents occur during the hour starting at 7 a.m.

Incident Clearance Details



First responders and MDOT share a goal of clearing **Incidents** from the roadway and reducing incident clearance times to limit the risk to the incident site and responders, and safely restore normal traffic flow. Effective response and clearance improves safety for motorists as well as first responders.

Incident/Roadway Average Clearance Times

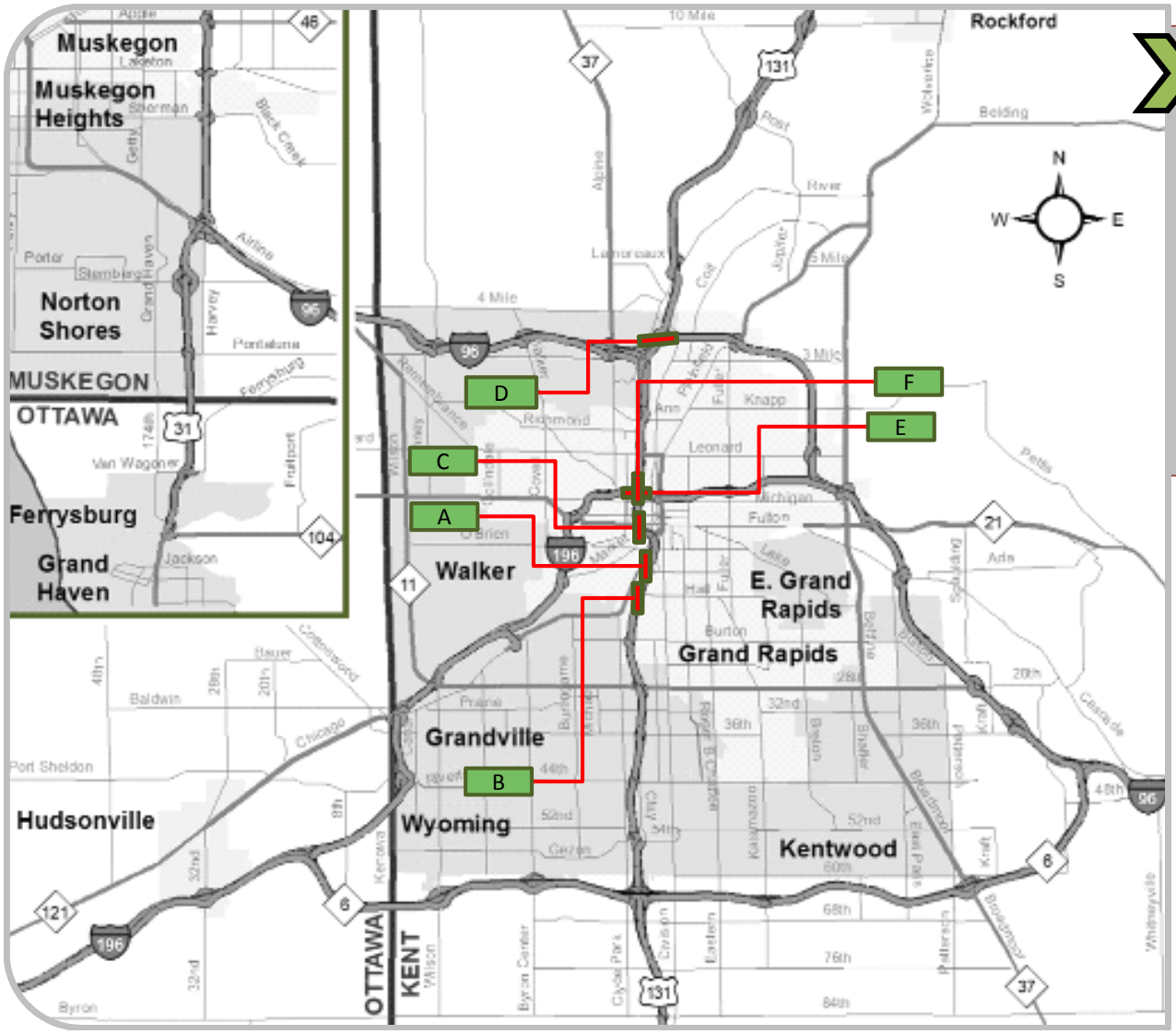


"Incident clearance time" is defined as the time between the awareness of an **Incident** and the time when all vehicles are removed from the scene. "Roadway clearance time" is defined as the time between the awareness of an incident and confirmation that all lanes are open to traffic. MDOT's goal is to minimize delays caused by incidents as well as the occurrences of secondary incidents.

Secondary Crashes

Out of the **95** total crashes this month, **one (1 percent)** were **Secondary Crashes**.

Freeway Hot Spots



The top **Crash** locations for the month are identified on the map. Each month the locations may change. Details for each location depicted on the map can be found in the "Hot Spot Activity" table below.

The hot spots depicted on the map are described in this table. The number of hot spot **crash** locations may vary each month depending on incident activity. The minimum threshold used for categorizing a location as a "top" hot spot is **four Crashes**. This threshold is set based on historical data for the WMTOC coverage area.

Crash Hot Spot Activity

Hot Spot	Freeway and Cross Street	Count	% of Total Crashes	Appearances in Previous 12 Months
A	US-131 at I-196 BS (Franklin Street)	7	7%	5
B	US-131 at Hall Street	6	6%	2
C	US-131 at Market Avenue	5	5%	1
D	I-96 at US-131	5	5%	4
E	I-196 at US-131	5	5%	8
F	US-131 at I-196	5	5%	8