



West Michigan Transportation Operations Center



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

2013

MAY

MONTHLY
PERFORMANCE
MEASURES



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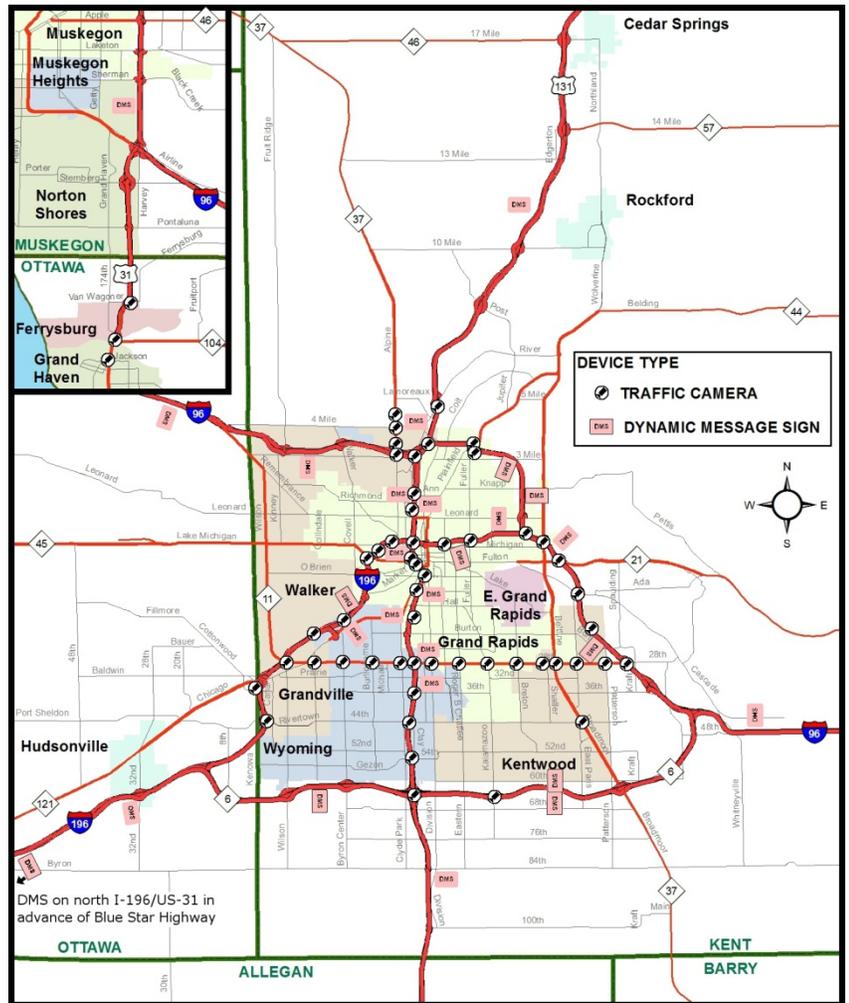
Report Compiled By **URS**

Several crash hot spots occurred on US-131 during the month of May, with a total of 30 crashes attributed to them. Crash hot spots occur on US-131 often, as it is the most traveled roadway in the West Michigan Transportation Operations Center (WMTOC) coverage area, and the hot spot locations this month are consistent with those from May 2012. Approximately half of these crashes occurred on northbound US-131, generally in long lines of congestion during peak travel times in the Leonard Street work zone.

WMTOC operators have been actively monitoring congestion during the afternoon peak periods and regularly update messages on the 28th Street and 36th Street dynamic message signs (DMS) to alert motorists to real-time congestion conditions. Control Room Operators (CROs) can quickly inform motorists of changing traffic conditions to improve safety and decrease the likelihood of crashes. In addition, CROs can set DMS that regularly run travel-time information, to alternate between travel-time messages and work zone messages, in order to help motorists make informed routing decisions.

During the busy construction season, motorists can log on to www.michigan.gov/drive to obtain up-to-date construction information and closures, average speeds and incidents along their planned routes.

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.

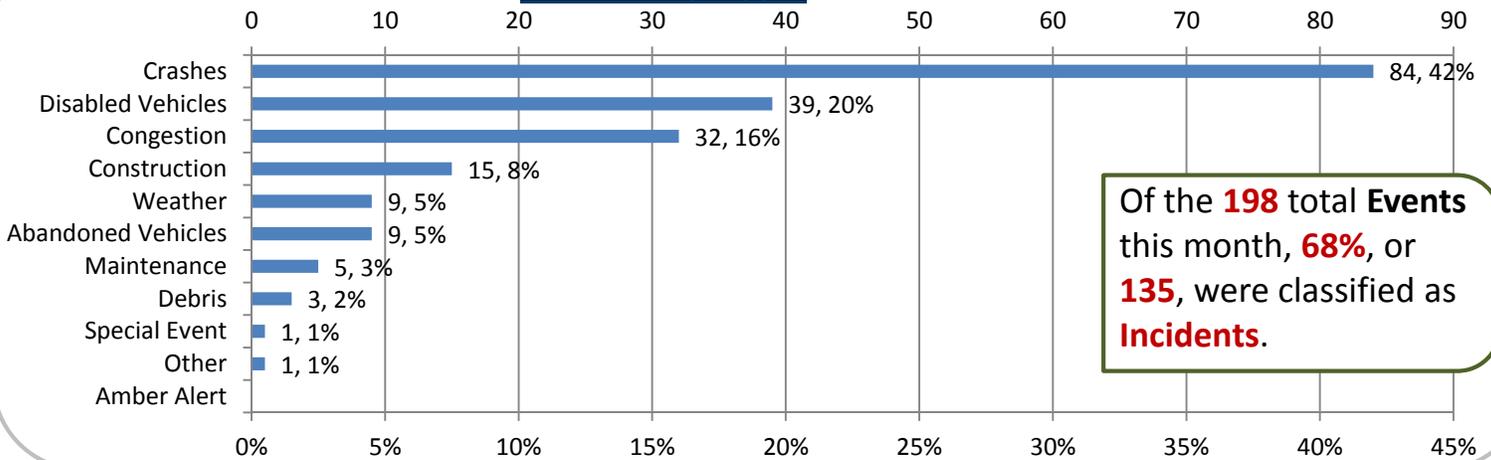
The WMTOC has camera/device coverage on approximately 45 freeway miles and 18 non-freeway trunkline miles in the greater Grand Rapids area and Grand Haven.

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 that has 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.

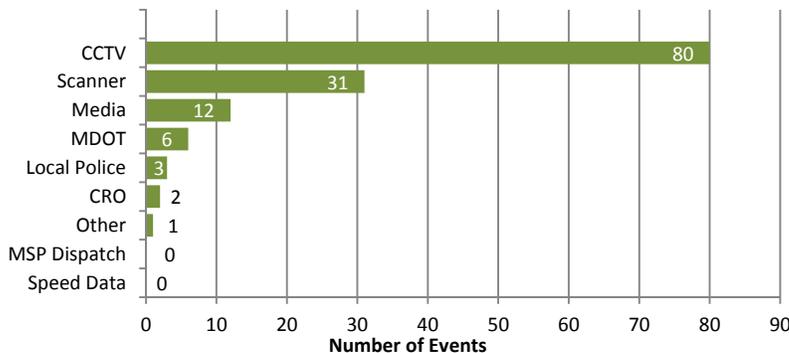
Events by Type



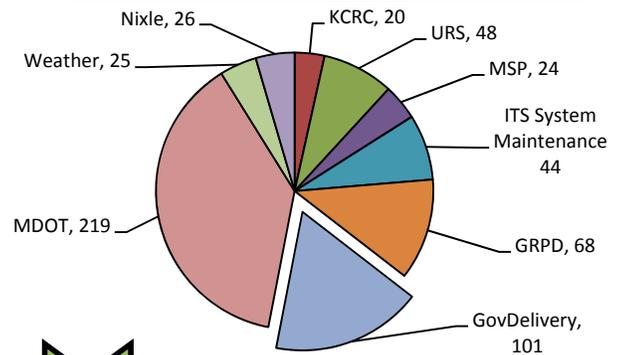
Of the **198** total Events this month, **68%**, or **135**, were classified as **Incidents**.

Control Room Operators (CROs) 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



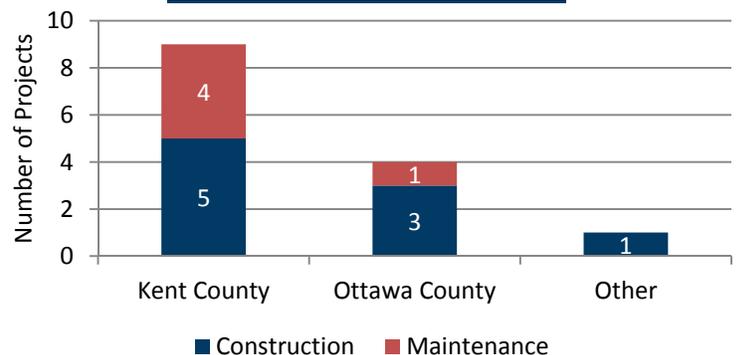
Communication by Agency



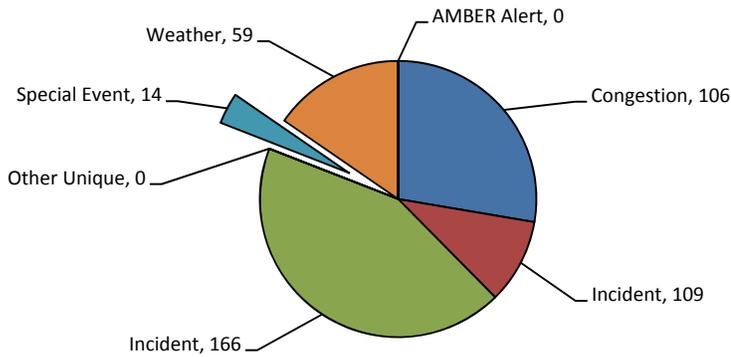
CROs managed **786** Communications this month. This included **308 (39 percent)** Calls and **478 (61 percent)** E-mails. The highest source of **Communication, 28 percent**, was between the control room and **MDOT**. "Other" includes Media, Contractors and Service Providers, as well as the City of 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 ensures that the CROs are kept 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



DMS and VSS Messages by Type



There were **383** unique messages displayed throughout the ITS network this month on Dynamic Message Signs (DMS) and Variable Speed Signs (VSS). A "unique message" may be an **Incident**, Special Event, Congestion, Weather, Construction, AMBER Alert, or other unique message.

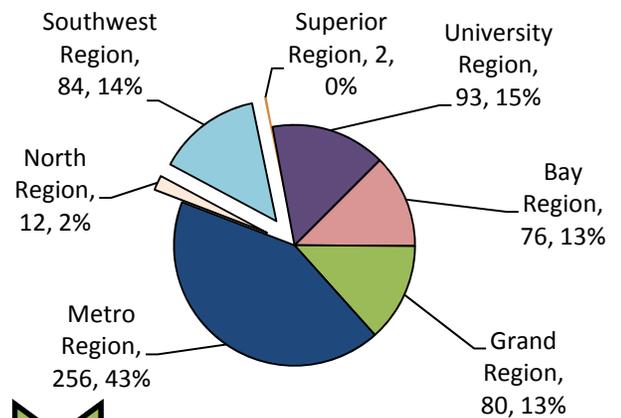
Travel time messages are routinely displayed when unique messages are not active. Travel times are updated every six minutes.

Field Device Availability

Device Type	Number of Devices	Percent of Time Available
CCTV Cameras	40	79%
Microwave Vehicle Detectors	43	79%
Dynamic Message Signs (DMS)	27	94%
Variable Speed Signs (VSS)	4	100%

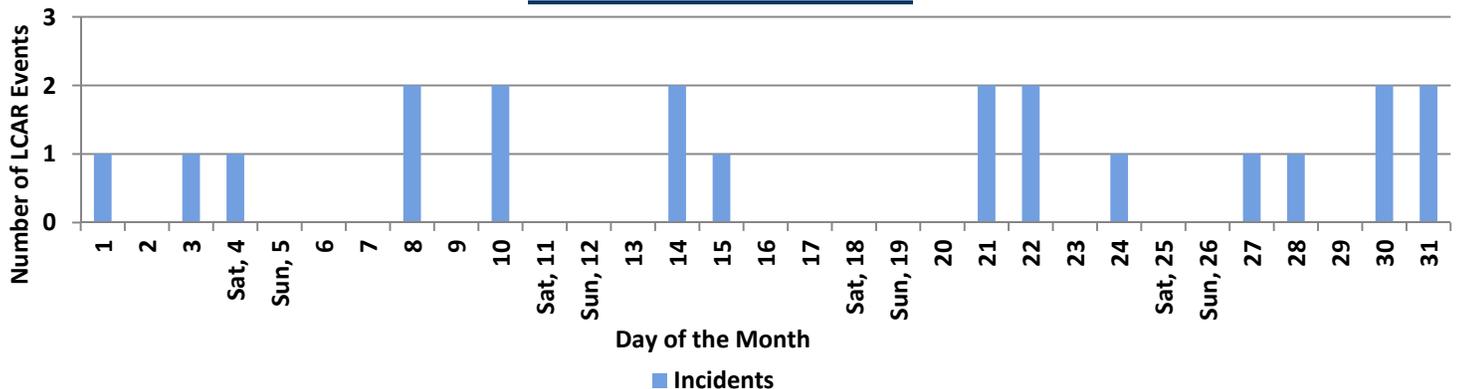
CROs track the availability of all system devices so that timely maintenance can occur. The reliability of the devices in turn ensures that CROs have tools available to accurately provide traffic conditions to the motoring public.

Stuck in Traffic Notifications



Travelers with smartphones or Web-enabled mobile devices can go to the Mi Drive Web site (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

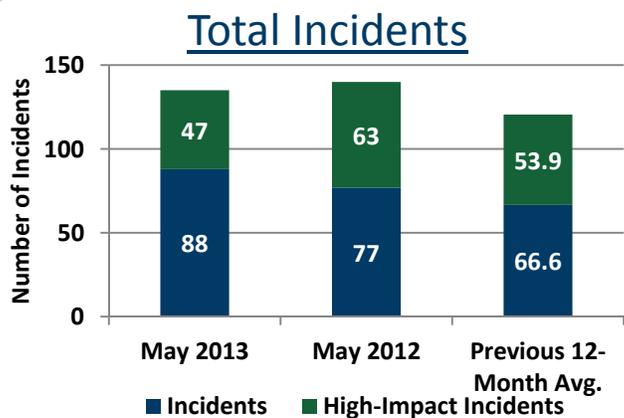


CROs are able to post **Incident** information to the Mi Drive Web site using the Lane Closure and Restrictions (LCAR) tool. Each post that was sent to the Web site this month is shown in the chart above.

Incidents in Camera Coverage Area by Freeway

Freeway	Miles	May 2013			May 2012			Previous 12-Month Avg.		
		Total Incidents	Incidents per Mile	Average Duration (min)	Total Incidents	Incidents per Mile	Average Duration	Total Incidents	Incidents per Mile	Average Duration
I-96	10.6	19	1.8	44	11	1.0	59	15.3	1.4	71
I-196	12.1	25	2.1	85	31	2.6	43	28.3	2.3	63
US-131	15.2	70	4.6	55	54	3.6	57	53.8	3.5	79
US-31	1.7	2	1.2	23	1	0.6	10	1.8	1.1	79
M-6	4	1	0.2	70	1	0.2	31	3.3	0.8	72
M-11	11.5	1	0.1	4	0	0.0	0	0.7	0.1	35
Total	55.1	118	2.1	59 min	98	1.8	52 min	103.2	1.9	73 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 **I-196**. Abandoned vehicles are excluded from this table.



The majority of the high-impact **Incidents** this month, **50 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.

There were a total **135 Incidents** this month, **35 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.

High-Impact Incidents

	May 2013	May 2012	Previous 12-Month Avg.
Freeway Closures	5	7	4
Lane Closures	37	52	46.6
Ramp Closures	5	4	3.3
Total	47	63	53.9

Top Duration Incidents

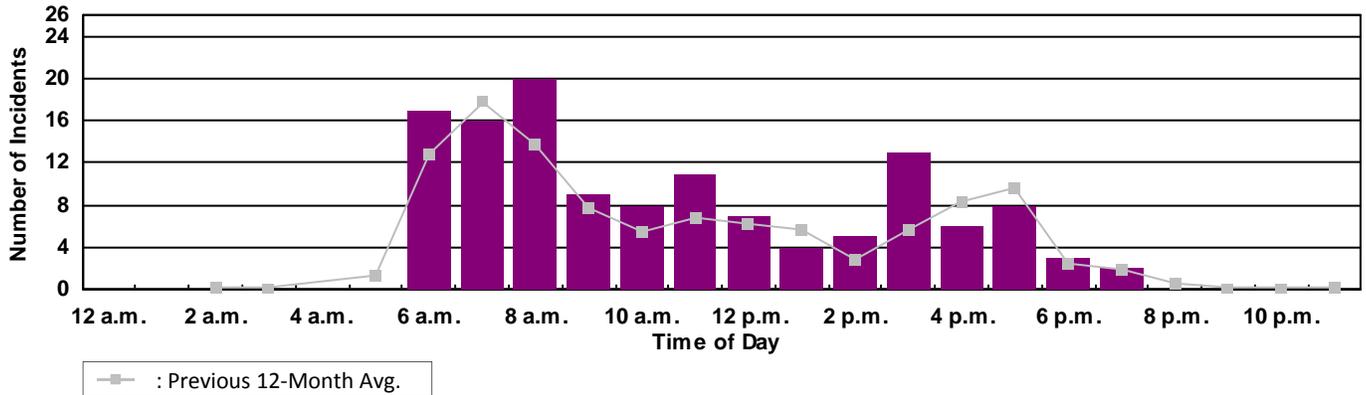
Location	Date	Duration	Details
NB US-131 @ I-196	5/8/2013	208 min.	Single tractor-trailer crash
NB US-131 @ 84th Street	5/28/2013	138 min.	Six vehicle, 3 tractor-trailer crash
NB US-131 @ I-96	5/15/2013	108 min.	Debris from tractor-trailer losing part of its load
M-21 east of Spaulding Avenue	5/28/2013	93 min.	Three vehicle crash
EB I-196 on ramp @ College Avenue	5/10/2013	90 min.	Single vehicle crash

The longest-duration **Incident** this month occurred along **NB US-131** and lasted **208** minutes, compared to the average incident duration of **59** minutes for May incidents and **79** minutes for incidents on US-131 in the past year.

Incidents in Work Zones

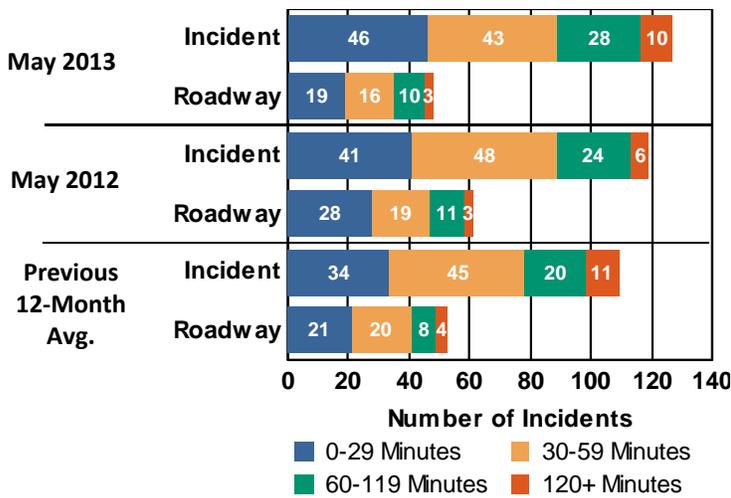
During the month of May, 14 incidents were identified by operators as being within work zones. The majority, 13 crashes, occurred within the northbound US-131 auxiliary lane work zone.

Total of Unplanned Incidents per Weekday Hour



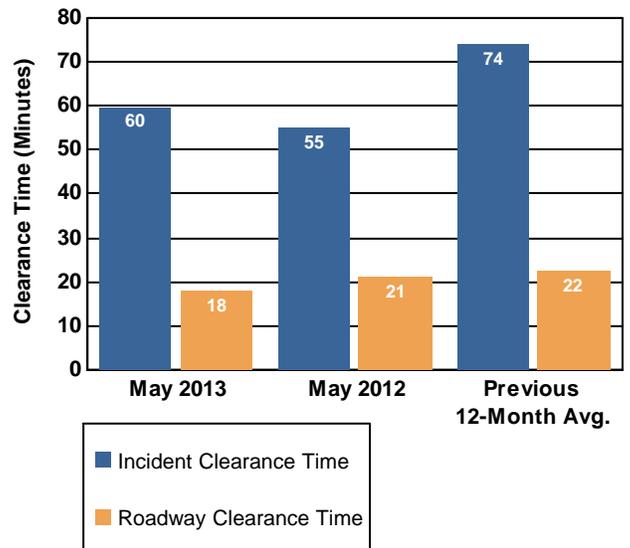
The largest hourly number of **Incidents** this month occurred during the hour starting at **8 a.m.**; historically the largest hourly number of incidents occur during the hour starting at 7 a.m.

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.

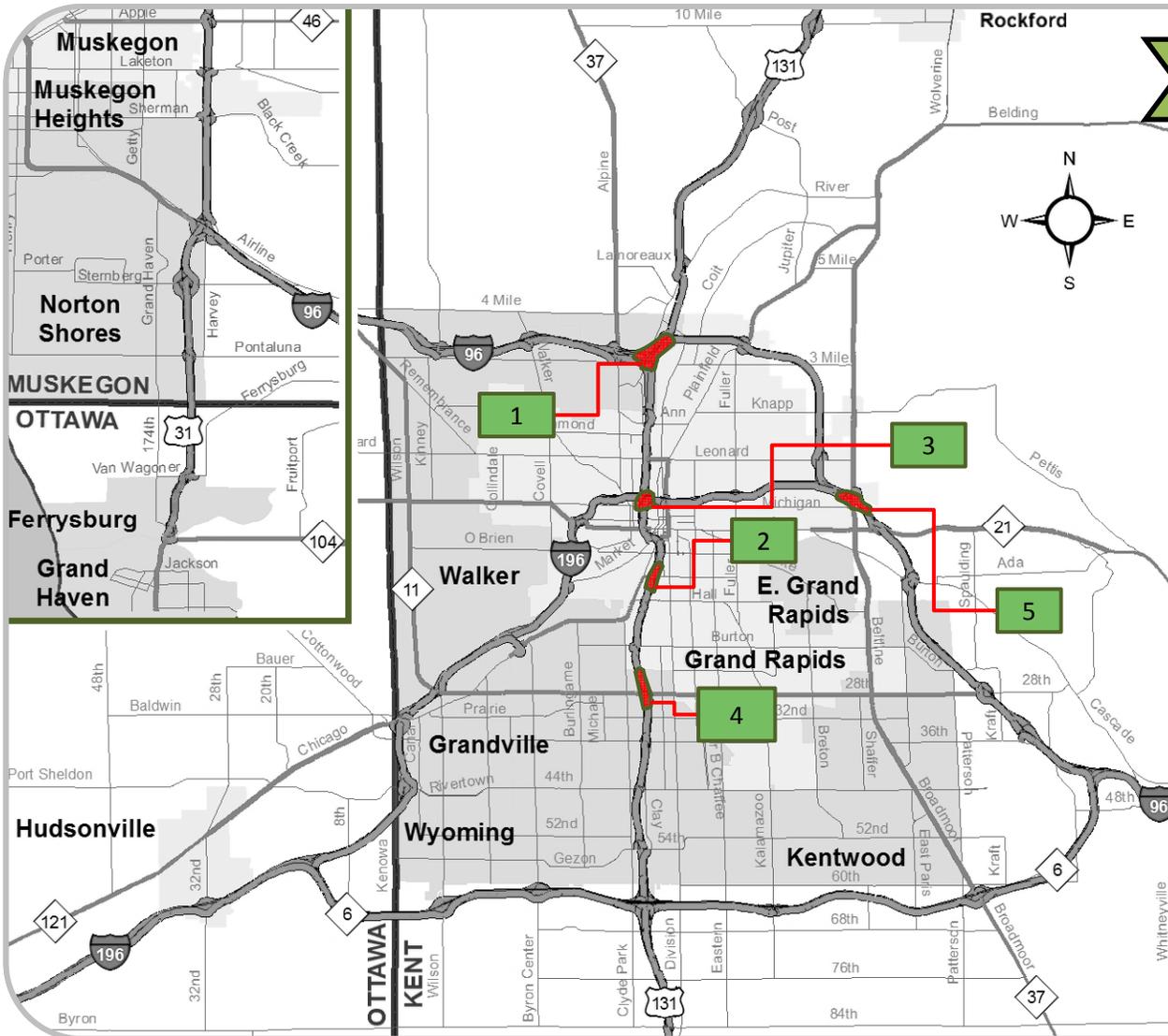
Incident/Roadway Average Clearance Times



“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 available for traffic flow. MDOT’s goal is to minimize delays caused by incidents as well as the occurrences of secondary incidents.

Secondary Crashes

Out of the **84** total crashes this month, **five (6 percent)** were **Secondary Crashes**.



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
1	US-131 at I-96	9	11%	4
2	US-131 at Franklin Street (I-196 BS)	8	10%	4
3	US-131 at I-196	7	8%	6
4	US-131 at 28th Street (M-11)	6	7%	1
5	I-96 at M-37/M-44 East Beltline Avenue	4	5%	0