

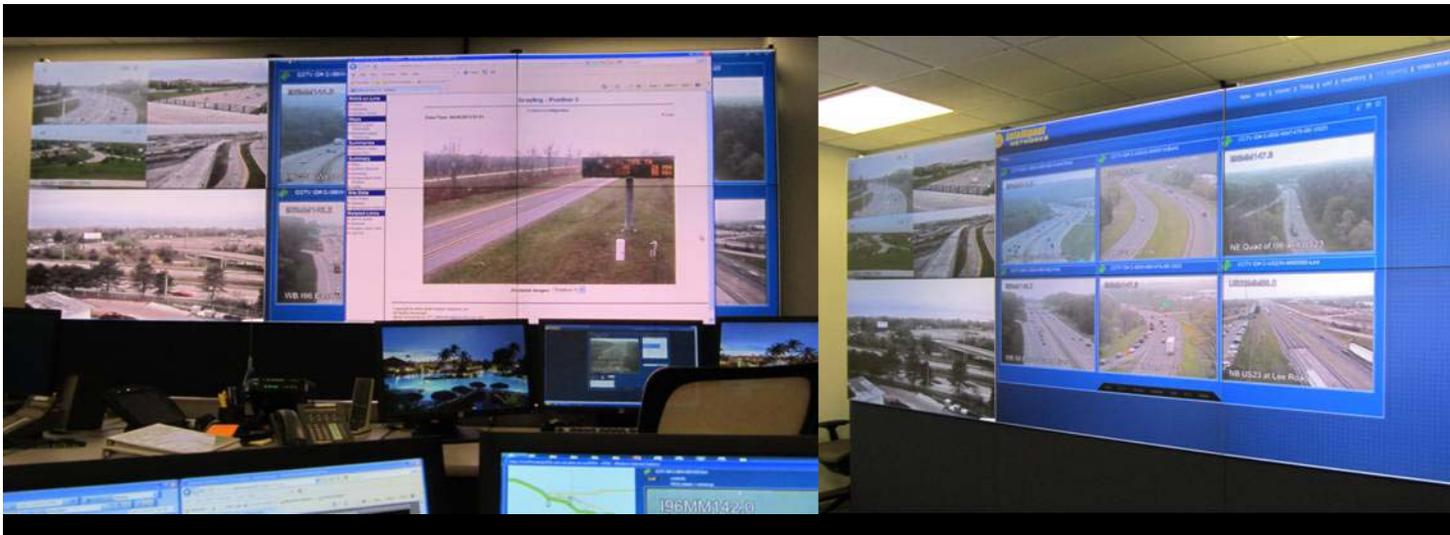
Statewide Transportation Operations Center

Serving Motorists on Michigan Freeways

www.michigan.gov/its

www.michigan.gov/drive

May 2012



In the Spotlight



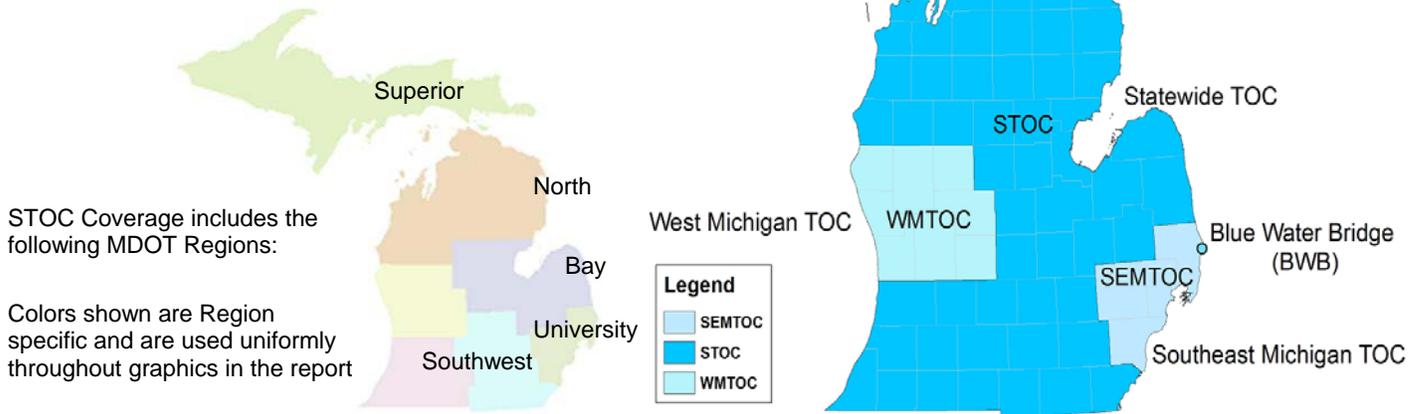
The Statewide Transportation Operations Center (STOC) celebrated its 1 year anniversary this past month. On May 23, 2011, the STOC started its 24 hour, 7 day a week, 365 days a year operation. Our operation center monitors the state trunklines outside the coverage of the other Transportation Operation Centers in Michigan.

The STOC welcomes our new part-time Operator, Cally McCain. Along with this new hire, the STOC has 5 full-time Operators, an Operations Supervisor, and an Operations Manager. We are excited about the upcoming deployment of new devices in the Ann Arbor area.

Transportation Operations Center (TOC) Coverage Areas

The Statewide TOC (STOC) is responsible for traffic operations along more than 1,300 miles of freeway in the state of Michigan along with the operations on a number of MDOT arterials, the STOC has ITS equipment along 218 miles of roadway.

Transportation Operations Centers (TOC)



ITS Equipment List

	<u>Totals</u>		
	<u>May</u>	<u>April</u>	<u>% Change</u>
Closed-circuit Television (CCTV) cameras	(In Coverage Area)		
CCTV cameras allow for pinpointing and monitoring of traffic events so that information may be disseminated quickly and accurately	16	16	0.0
Dynamic Message Signs (DMS)			
DMS allow for sending messages to motorists to inform of traffic events that may be impacting their route ahead	21	21	0.0
Vehicle Detector Stations (VDS)			
VDS allow for traffic-impacting events to be spotted, travel times to be calculated and speed maps to be generated	10	10	0.0
Environmental Sensor Stations (ESS)			
ESS, working together as part of a larger Road Weather Information System allow for road maintenance personnel to better manage approaching weather	25	25	0.0



Summary

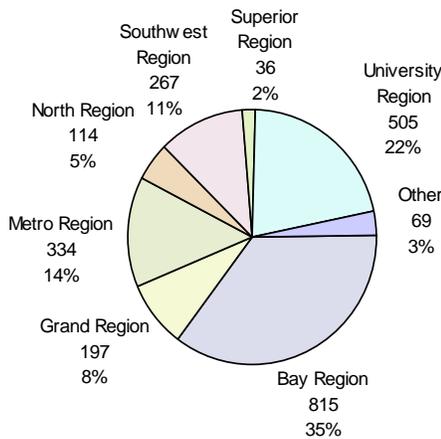
Data Key

May 2012

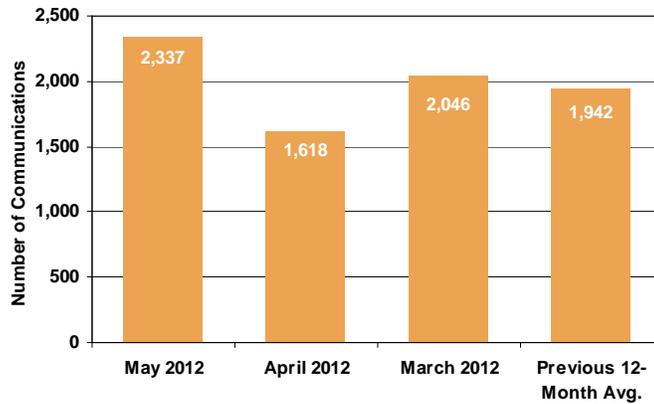
	Current Month	Previous 12-Month Average
STOC Communications Activity  <p>Operators log all incoming and outgoing control room communications, engaging various incident responders and stakeholders.</p>	Total Communication	
	Calls: 292	181
	E-mails: 2,045	1,240
Unplanned Incidents*  <p>Operators log information about each unplanned incident including date/time, location, traffic impact, duration, and associated traveler information.</p>	Total Incidents	
	208	204
Construction Activity  <p>Operators maintain a list of ongoing construction projects and contacts for these projects. This activity also includes maintenance operations.</p>	Incidents Occurring in Work Zones	
	2	2
Daily Shift Report  <p>Operators track maintenance issues for all ITS equipment, including CCTV cameras, VDS, and DMS.</p>	System Availability	
	CCTV: 89%	80%
	VDS: 76%	42%
	DMS: 100%	98%

* An **incident** is an unplanned event that impacts the shoulder, lane(s), or a ramp of a State of Michigan trunkline (a route signified with an I-, US-, or M- name). An incident will also occur in the STOC coverage area and under any of the following types: crash, debris, vehicle fire, abandoned vehicle (unless otherwise noted), or police situation.

An **event** incorporates all incidents along with other types such as planned construction projects, weather and special events such as concerts or sporting events.

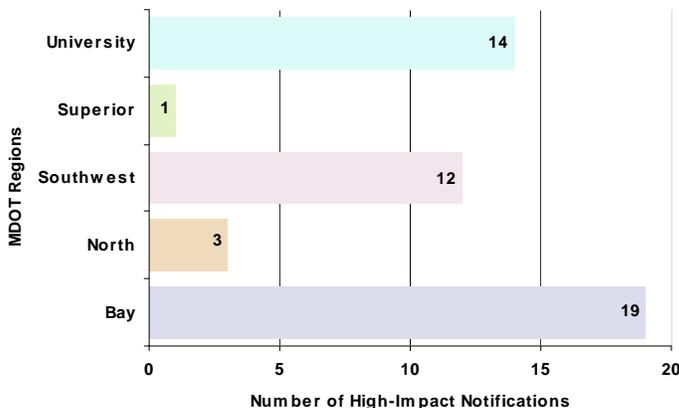


May 2012

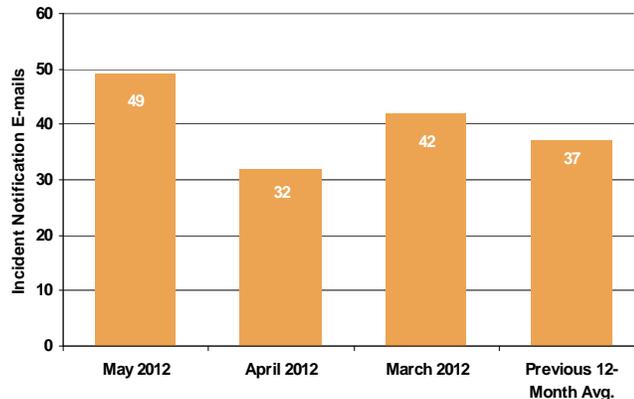


These charts segment all incoming and outgoing calls and e-mails that Control Room Operators field per MDOT region. STOC is connected to various first responder data (Nixle.com, emergency dispatch centers, Michigan State Police) especially in the Bay Region. STOC looks to use these charts to identify outreach to other regions throughout the state.

High-Impact Incident Notifications and History



May 2012

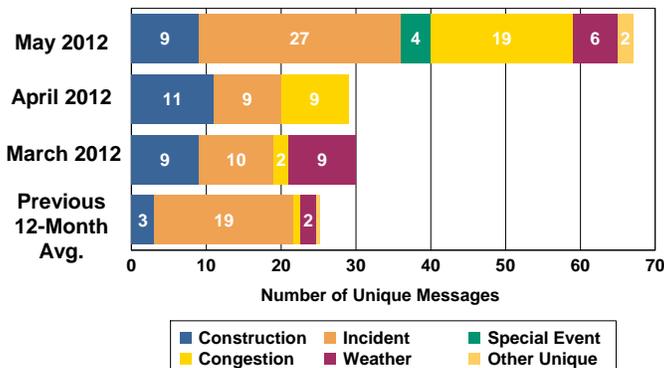


These graphs enumerate high-impact incident e-mail notifications defined as:

- > Complete closure of a freeway in one or both directions
- > Only one lane of traffic in one direction open
- > Freeway to freeway ramp closure

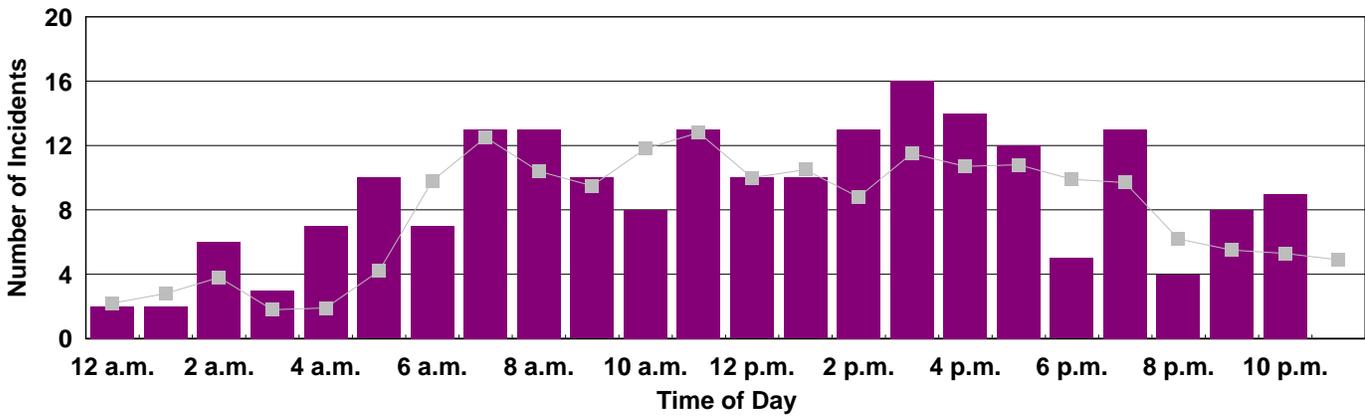
STOC Control Room Operators send e-mails to a prescribed group of stakeholders. High-impact incidents cause the highest impact to traffic congestion.

DMS Messages by Type



This graph shows unique DMS messages by type. Once a Control Room Operator receives notification from stakeholders regarding a specific event, the STOC Control Room Operator utilizes DMS to send a message specific to the event type.

Total of Unplanned Incidents per Hour

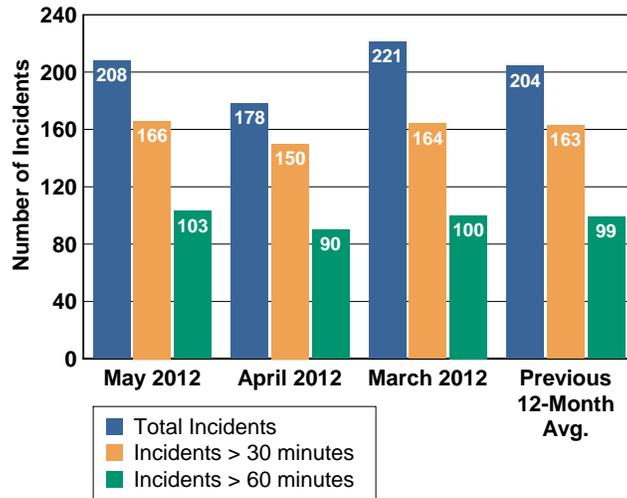


This chart segments incidents per hour. STOC management staff uses these charts to identify peak hours to properly staff Control Room Operators. The line shows the hourly incident average for the previous 12 months.

Incident Duration History



This graph shows the duration history of incidents (excluding events noted by operators as abandoned vehicles). Incident duration is the time between awareness of an incident and removal of all evidence of the incident, including debris or remaining assets



Most Utilized DMS



This list demonstrates the most utilized DMS during the month. The DMS listed are utilized most frequently with unique messages. A unique message is any message other than a travel time or Public Service Announcement

1. EB I-96 at Grand River MM146 (14 messages deployed)
2. NB US-23 at Lee Rd (9 messages deployed)
3. EB I-96 at Grand River MM143 (8 messages deployed)

Traffic Impact Types by Region



This table breaks down all incidents by type and by Region. This data informs the STOC on what type of incidents are handled and where the highest percentage of incidents occur.

	Crashes	Debris	Police Situation	Other	Fire	Total
Bay	158 82.3%	1 100.0%	2 50.0%	0 0.0%	6 75.0%	167
North	3 1.6%	0 0.0%	1 25.0%	1 50.0%	0 0.0%	5
Southwest	14 7.3%	0 0.0%	1 25.0%	0 0.0%	0 0.0%	15
Superior	1 0.5%	0 0.0%	0 0.0%	1 50.0%	1 12.5%	3
University	16 8.3%	0 0.0%	0 0.0%	0 0.0%	1 12.5%	17
Total	192	1	4	2	8	207



Incidents by Freeway

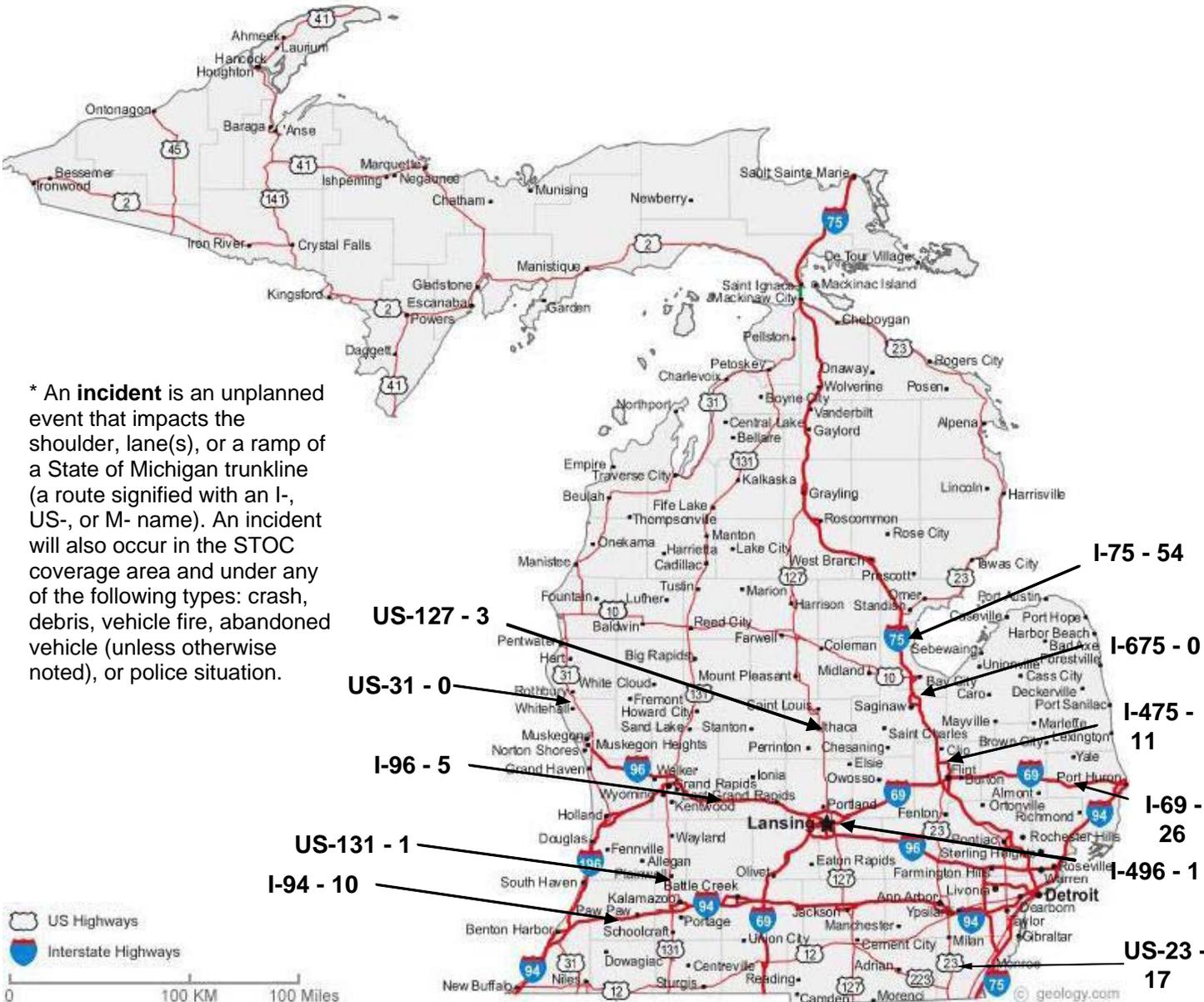


This table enumerates the number of incidents located on major freeways and the number of incidents per mile throughout the STOC's coverage area. (Only reflects incidents where STOC has received notification and in the STOC coverage area)

Below is a map of the freeways that are monitored by the STOC and lists the total number of incidents that were detected during the month.

Freeway	May 2012		April 2012		March 2012		Previous 12-Month Avg.	
	Total	per mi.	Total	per mi.	Total	per mi.	Total	per mi.
I-475 (17 mi.)*	11	0.6	9	0.5	13	0.8	10.5	0.6
I-496 (12 mi.)*	1	0.1	2	0.2	-	-	0.5	-
I-675 (7 mi.)*	-	-	-	-	-	-	0.4	0.1
I-69 (178 mi.)*	26	0.1	26	0.1	33	0.2	27.5	0.2
I-75 (288 mi.)*	54	0.2	48	0.2	71	0.2	55.6	0.2
I-94 (187 mi.)*	11	0.1	6	-	6	-	6.7	-
I-96 (76 mi.)*	5	0.1	2	-	2	-	2.5	-
US-127 (165 mi.)*	3	-	3	-	3	-	1.2	-
US-131 (91 mi.)*	1	-	1	-	4	-	1.3	-
US-23 (93 mi.)*	17	0.2	10	0.1	21	0.2	15.0	0.2
US-31 (85 mi.)*	-	-	-	-	1	-	0.4	-
Month Total	129	0.1	107	0.1	154	0.1	121.6	0.1

* Reflects freeway mileage within the current STOC coverage area.



* An **incident** is an unplanned event that impacts the shoulder, lane(s), or a ramp of a State of Michigan trunkline (a route signified with an I-, US-, or M- name). An incident will also occur in the STOC coverage area and under any of the following types: crash, debris, vehicle fire, abandoned vehicle (unless otherwise noted), or police situation.

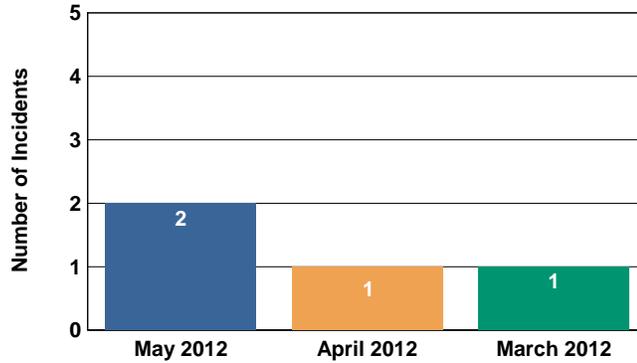
Incident Management



Incidents Occurring in Work Zones



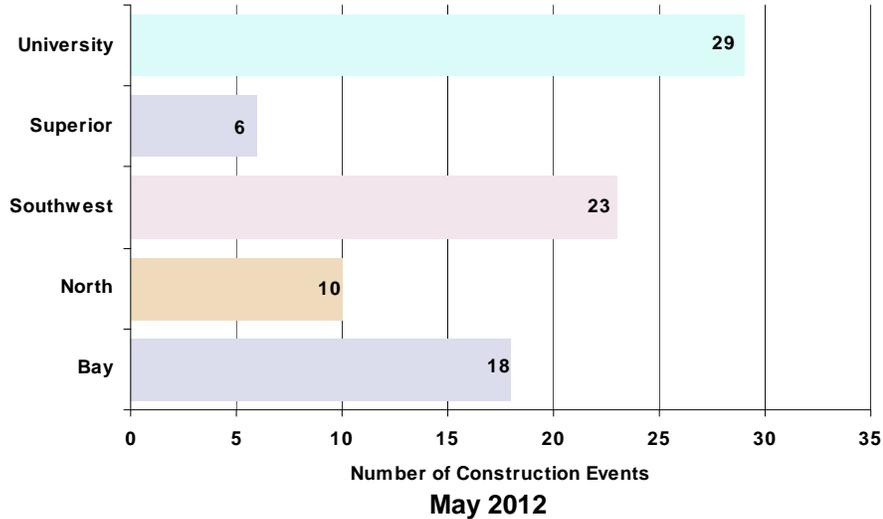
This graph indicates how many incidents took place within a work zone. With construction postings using DMS and the Mi Drive Web site, STOC strives to keep a low number of incidents in the work zones.



Construction Events per Region



This graph segments all new construction events for the month received by the STOC by Region.



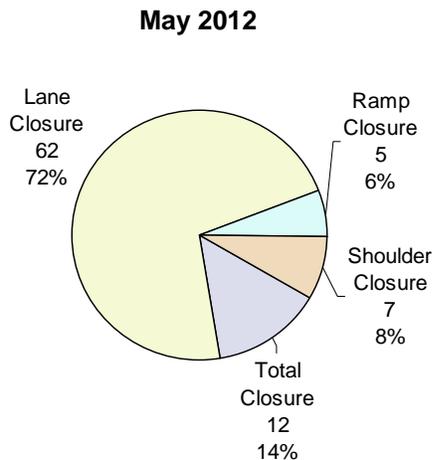
Construction Activity



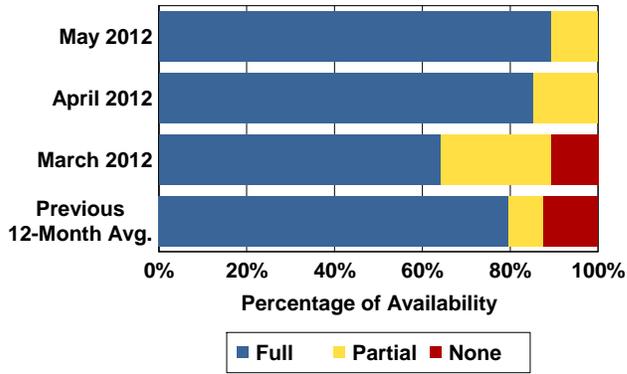
Construction Events per Closure Type



This chart breaks down the closure type for each project that the STOC receives via phone call or E-mail. A lane closure is used more than a roadway closure whenever possible to minimize motorist delays and detours.



Overall CCTV Camera Availability



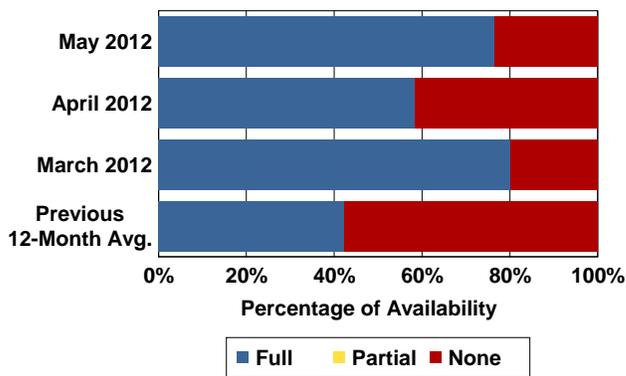
CCTV Cameras Below 95% Availability



Location	Full	Partial	None
1. C-US-23N-MM0600-Maintenance	-	100%	-
2. C-I96E-MM1510-Kensington	94%	6%	-

Percentages of availability are reported for the current month based on data reported daily

Overall Detector Availability



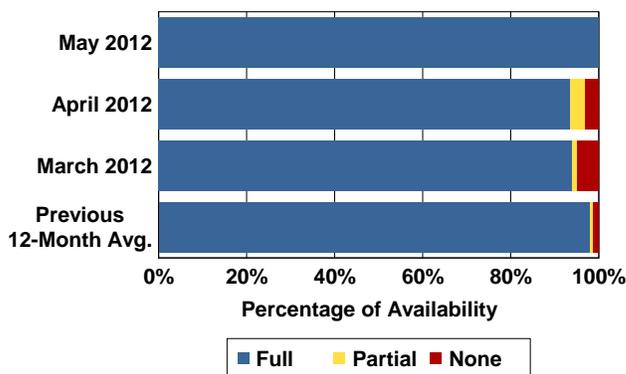
Vehicle Detectors Below 95% Availability



Location	Full	Partial	None
1. D-I96E-MM-1462-Flint	49%	-	51%
2. D-I96W-MM-1462-Flint	49%	-	51%
3. D-I96E-MM-1490-Pleasant Valley	67%	-	33%
4. D-I96W-MM-1490-Pleasant Valley	67%	-	33%
5. D-I96W-MM-1430-Grand River	68%	-	32%
6. D-I96E-MM-1430-Grand River	81%	-	19%

Percentages of availability are reported for the current month based on data reported daily

Overall DMS Availability



DMS Below 95% Availability



Location	Full	Partial	None
None.			

Percentages of availability are reported for the current month based on data reported daily

The graphs on the left show the percentage of availability of all the ITS devices (CCTV, Detector, DMS) located in the STOC coverage area. If a device is under 95 percent available for a given month, the device is listed in the tables shown on the right. STOC uses this information to be aware of the operational devices so when incidents occur, operators know which ITS devices can help alert motorists quickly and accurately.