

# Michigan Intelligent Transportation Systems Center

Serving Motorists on Southeast Michigan Freeways

[www.michigan.gov/its](http://www.michigan.gov/its)  
[www.michigan.gov/drive](http://www.michigan.gov/drive)



Matt Smith, P.E., P.T.O.E.  
18101 W. Nine Mile Road  
Southfield, MI 48075  
SmithMatt@michigan.gov

Sandra Montes, P.E.  
1050 6th Street  
Detroit, MI 48226  
MontesS@michigan.gov

## In the Spotlight



### ITS Michigan Sponsors



The 2010 ITS Michigan Conference was held May 19-20 at the Ford Conference Center in Dearborn, Mich. This year's theme was *"Transforming Transportation through Collaboration."* Topics of discussion included: Transforming the Economy, Cost Control: Improving Performance and Profitability, Transforming the Driving Experience, and other topics, as well as student presentations from universities throughout Michigan. The MITS Center management had the opportunity to meet with vendors and view products that could possibly aid in streamlining operations. The new statewide Advanced Traffic Management System software was on display along with other advances in the ITS industry. Information-sharing at the conference was beneficial to all attendees.

### Dynamic Message Sign Display



Compiled by:



# Summary

## Data Key

## May 2010

### Call Card



#### Total Assists

Freeway Courtesy Patrol (FCP) drivers fill out information on data cards for each stop (abandoned vehicles), assist (occupied vehicles, debris, accidents, etc.), and tow.

4,591

### Call Tracking



#### Total Calls

Operators manually enter all incoming and outgoing control room calls, including two-way communications, select Michigan State Police (MSP) Computer-Aided Dispatch entries, and high-impact incident notifications.

6,898

### Mi Drive Web Site



#### Total Page Views

Operators inform media and general public about current incident information such as lane closures and road construction. Real-time camera images are also available.

210,603

### Advanced Traffic Management System



#### Total Incidents

Data is entered into the Advanced Traffic Management System in order to send messages to Dynamic Message Signs (DMS) and to post incidents on the Web site.

562

### Quality Assurance/Quality Control



#### All High-Impact Incidents

Comprehensive and systematic quality assurance/quality control audit of freeway operations including messaging and high-impact notifications (freeway closures, lane closures where only one lane is open, and freeway-to-freeway ramp closures).

98% Accurate

### MaintStar



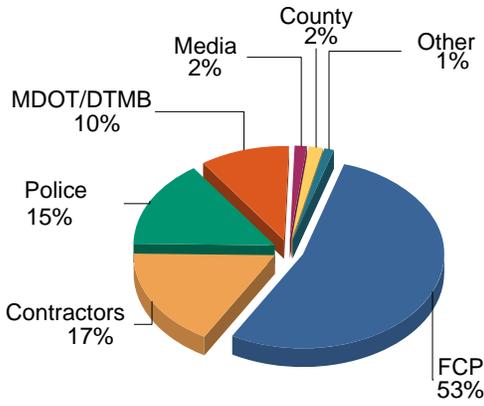
#### System Availability

MaintStar manages maintenance issues for all Intelligent Transportation System (ITS) equipment, including Dynamic Message Signs (DMS) and Closed-Circuit Television (CCTV) cameras, and tracks work orders and overall ITS performance.

DMS: 79%

CCTV: 92%

# Calls by Type

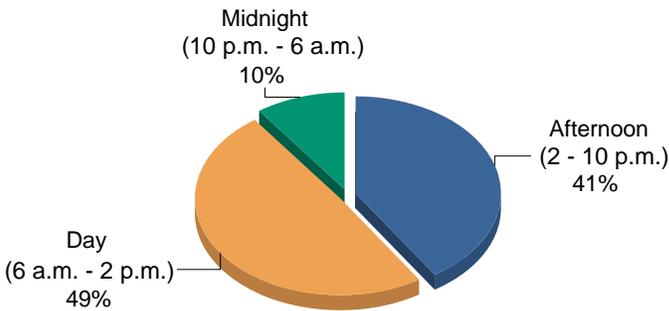


**Total Calls: 6,898**

Agency	No. of Calls
FCP	3,685
<b>Contractors</b>	<b>1,155</b>
City	6
County	103
Federal	0
Fire	1
Police	1,035
Border	19
MDOT/DTMB	702
Media	106
Special Events	7
Transit	0
State	0
Parking	0
Airport	0
Animals	0
OTHER	79
<b>Total</b>	<b>6,898</b>

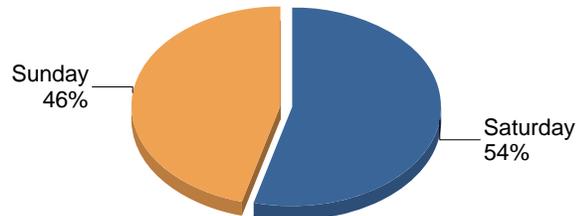
Contractors	Total
URS	582
Motor City Electric	216
J. Ranck Electric, Inc.	61
FTCH	56
Big Wireless	55
Tyme	39
HNTB	27
Transcore	24
BGL Construction	23
Posen Construction	16
AT&T	15
Tetrattech	13
Contractor	8
Somat	8
Parsons Brinkerhoff	3
POCO	3
CVS	2
Dan's Excavating	2
Ajax	1
Traffic Technologies	1
<b>Total</b>	<b>1,155</b>

# Calls by Shift



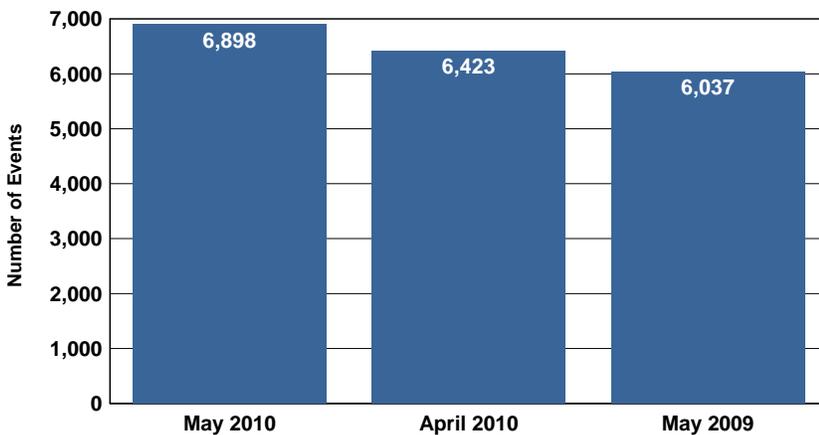
**Average Number of Calls per Weekday: 261**

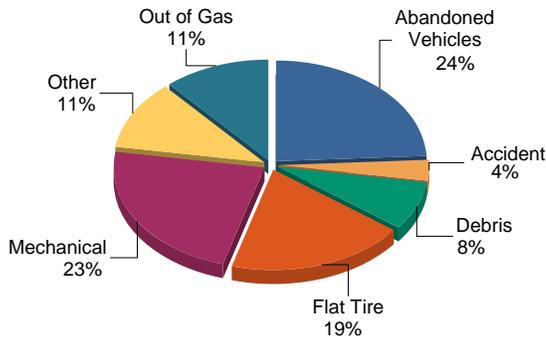
# Calls by Weekend Day



**Average Number of Calls per Weekend: 289**

# Monthly Event History

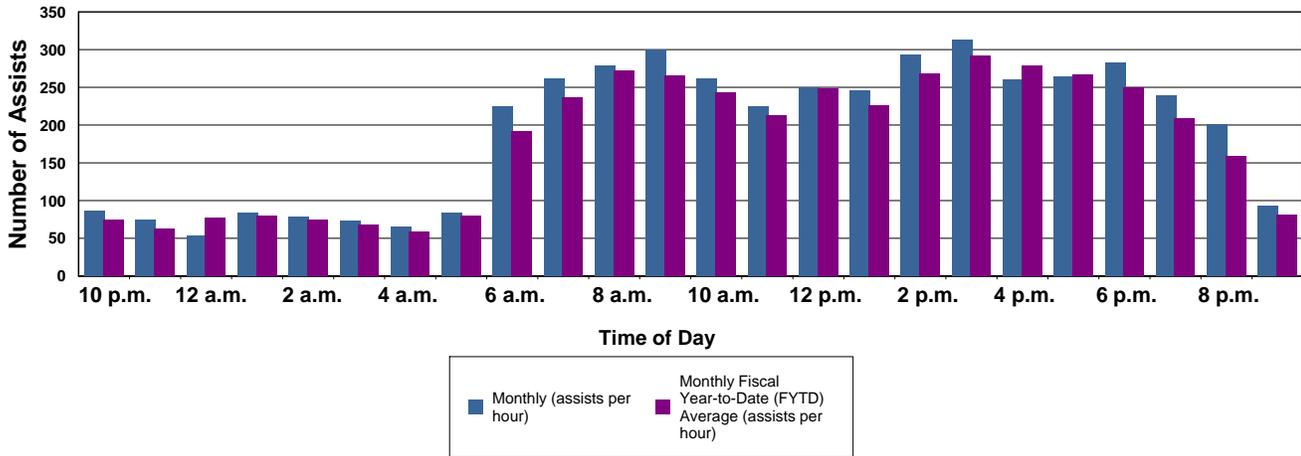




On the weekends, FCP drivers work 12-hour shifts. On Saturday, May 8, Driver 116 obtained 30 assists during his shift; on Saturday, May 29, Driver 129 also obtained 30 assists during his shift.

**May Total: 4,591**  
**3,424 Assists**  
**1,167 Abandoned Vehicle Stops**

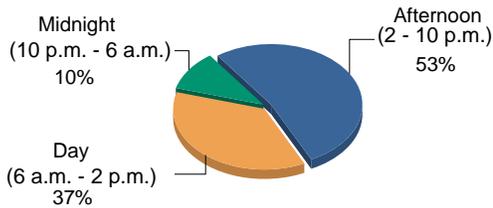
FCP Assists by Time of Day



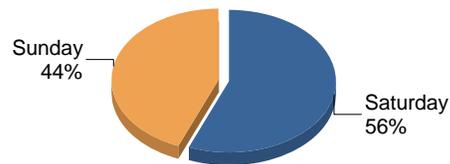
FCP Dispatches by Weekday Shift



FCP Dispatches by Weekend Day

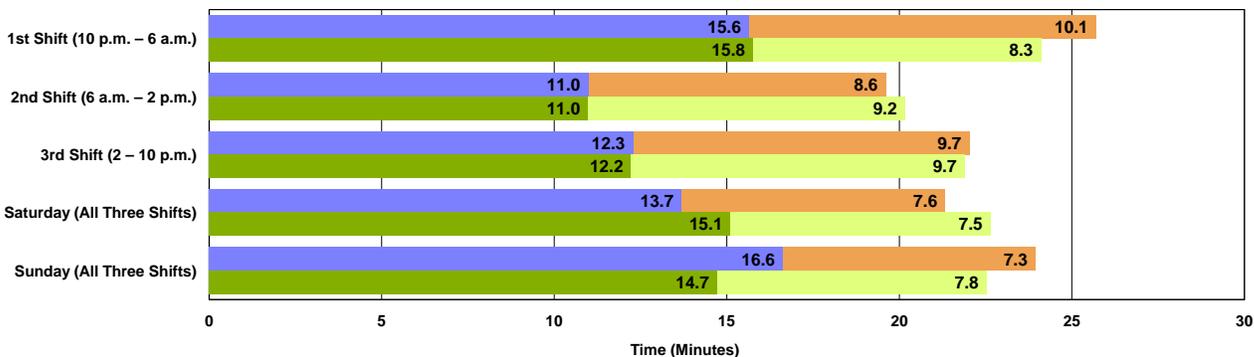


**Average Number of Dispatches per Weekday: 28**



**Average Number of Dispatches per Weekend: 38**

FCP Average Service Times



FCP Service Area and Assists per Mile



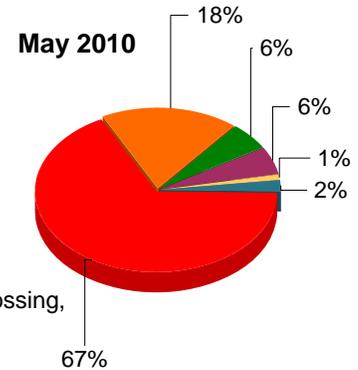
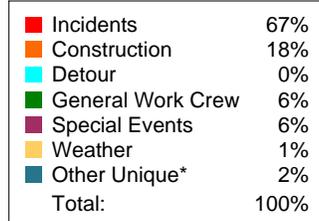
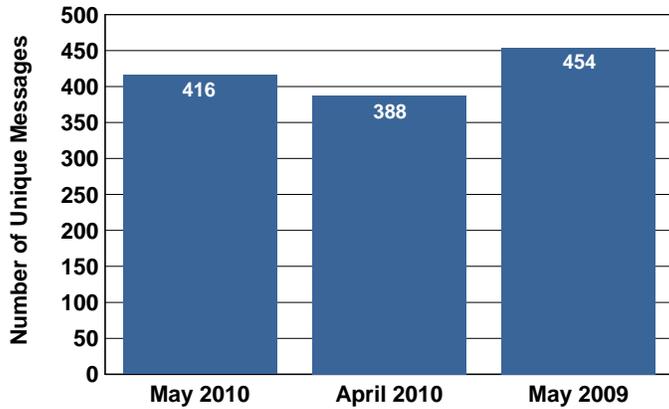
Motorist Quote of the Month:

*"My husband and I had a tire blowout on I-696 in Farmington Hills on Sunday night, May 3. We live in Kent County (Grand Rapids) and were about two hours from home in unfamiliar territory. Your courtesy patrol driver was fast, reassuring and very professional. He helped us get our spare tire on, was watchful for our safety, and waited until we pulled out into traffic before leaving. Thank you so much for having someone as calm and helpful as your courtesy patrol driver employed to assist drivers. He is a credit to MDOT."*

Courtesy Patrol

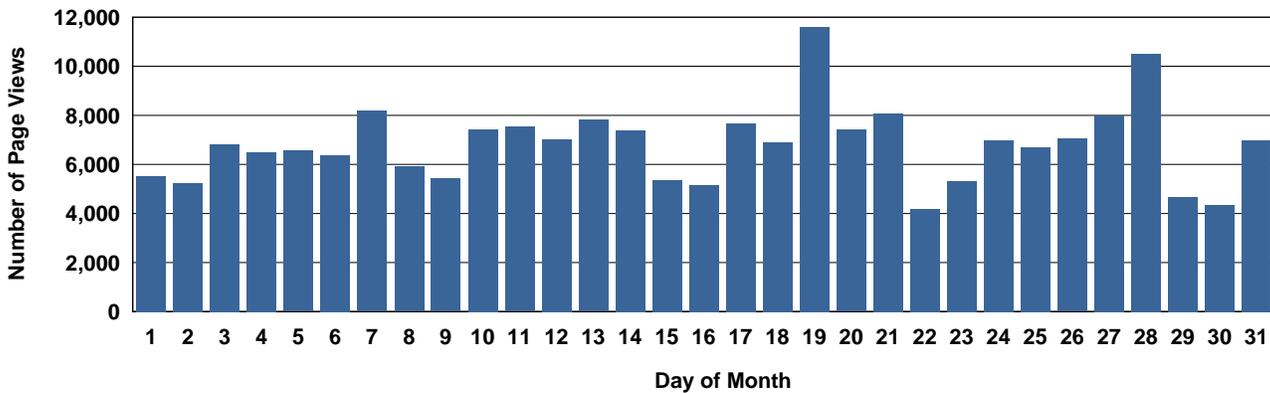
Freeway Segment	(miles)	TOTAL ASSISTS		ASSIST DENSITY		AVERAGE RESPONSE TIME (min)		AVERAGE CLEAR TIME (min)	
		May 2010	FYTD Avg.	May 2010	FYTD Avg.	May 2010	FYTD Avg.	May 2010	FYTD Avg.
<b>I-75</b>									
Oakland County Line to I-696	37.0	491	368.0	13.3	9.9	13.8	16.3	9.3	10.1
I-696 to I-94	8.0	208	244.5	26.0	30.6	9.6	10.4	10.6	10.7
I-94 to I-96	5.6	69	68.1	12.3	12.2	10.2	11.0	7.6	10.4
I-96 to I-275	37.0	284	262.1	7.7	7.1	16.2	14.5	8.0	8.4
	87.6	1,052	942.8	12.0	86.1	12.9	13.2	9.1	9.8
<b>I-94</b>									
Washtenaw County Line to M-39	20.7	361	316.8	17.4	15.3	13.0	13.2	9.8	9.0
M-39 to I-75	9.0	340	269.1	37.8	29.9	11.7	10.7	8.9	9.3
I-75 to I-696	10.0	275	271.0	27.5	27.1	11.2	12.2	8.7	9.1
I-696 to St. Clair County Line	21.0	225	220.8	10.7	10.5	11.2	13.1	7.5	8.1
	60.7	1,201	1,077.6	19.8	142.0	11.8	12.1	8.9	8.9
<b>I-96</b>									
Livingston County Line to I-275/I-696	11.0	122	111.4	11.1	10.1	19.0	17.6	8.6	8.0
I-275/M-14 to M-39	12.0	276	236.5	23.0	19.7	11.1	12.3	9.1	8.6
M-39 to I-75	11.0	326	300.0	29.6	27.3	13.7	12.0	8.7	8.1
	34.0	724	647.9	21.3	152.4	14.3	13.4	8.8	8.3
<b>I-275</b>									
I-96/I-696 to M-14/I-96	8.0	114	104.5	14.3	13.1	15.1	15.5	9.3	8.8
M-14/I-96 to I-94	12.0	151	147.9	12.6	12.3	16.0	13.9	8.9	7.9
I-94 to I-75	17.5	66	73.4	3.8	4.2	14.3	13.4	7.5	7.9
	37.5	331	325.8	8.8	69.5	15.5	14.4	8.8	8.2
<b>I-696</b>									
I-96/I-275 to M-10	9.3	139	134.9	14.9	14.5	14.4	14.4	8.9	8.5
M-10 to I-75	9.0	141	142.5	15.7	15.8	10.3	12.8	8.6	8.7
I-75 to I-94	10.4	200	200.6	19.2	19.3	14.3	11.8	8.1	8.4
	28.7	480	478.0	16.7	133.2	12.8	12.8	8.5	8.5
<b>M-59 (Veterans)</b>	24.0	36	29.0	1.5	1.2	28.0	24.3	9.9	10.2
<b>I-375</b>	1.2	8	7.4	6.7	6.1	17.3	13.2	10.4	9.7
<b>M-10 (Lodge)</b>	17.9	382	355.6	21.3	19.9	11.0	11.1	8.7	9.5
<b>M-14</b>	6.4	77	67.5	12.0	10.5	12.3	14.6	9.1	8.2
<b>M-39 (Southfield)</b>	14.2	228	259.8	16.1	18.3	10.4	12.1	10.1	9.8
<b>M-5 (Grand River)</b>	10.3	31	34.4	3.0	3.3	14.8	15.4	8.0	6.8
<b>M-8 (Davison)</b>	2.2	41	52.4	18.6	23.8	7.8	8.7	6.0	9.1
<b>Total</b>	324.7	4,591	4,278.0						

## Unique DMS Messages by Type



\* Airport, Amber Alert, Border Crossing, Location Specific, Safety, and Travel Time Unique Messages

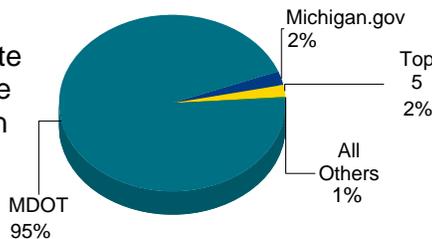
## Mi Drive Web Site May Daily Page Views



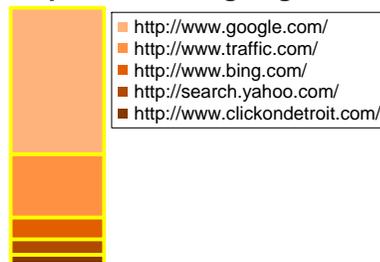
## Referring Site Requests to Mi Drive Web Site in May



In **May**, the Mi Drive Web site experienced the most activity on **Mondays**.



### Top 5 Non-Michigan.gov Sites



On an average day in **May**, the Mi Drive Web site received the most activity between **4 and 5 p.m.**

## Incident Communication Accuracy



Weekend DMS Snapshot Review	May 2010	April 2010	May 2009
All Incident Messages	100%	100%	100%
High-Impact DMS Messages	May 2010	April 2010	May 2009
All High-Impact Messages	98%	100%	96%
Freeway Closure Messages	100%	100%	100%
Lane Closure Messages	99%	100%	93%
Ramp Closure Messages	90%	100%	100%
Other Communication	May 2010	April 2010	May 2009
Advisory Text Messages	91%	93%	92%
Web Site Incident Postings	95%	100%	96%

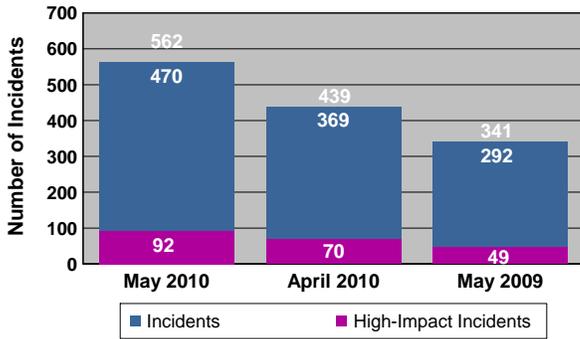
## Most Utilized DMS



1. M-10 NB at Porter
2. I-94 WB at Beaubien
3. M-10 NB at M. L. King
4. I-96 EB Local at Evergreen
5. I-75 NB at Woodward Hghts.



## Total Number of Incidents



## High-Impact Incident Activity



	May 2010	April 2010	May 2009
Freeway Closures All Lanes Closed	15	13	13
Lane Closures Only One Lane Open	68	49	30
Ramp Closures	9	8	6
Freeway-to-Freeway			
<b>Total</b>	<b>92</b>	<b>70</b>	<b>49</b>

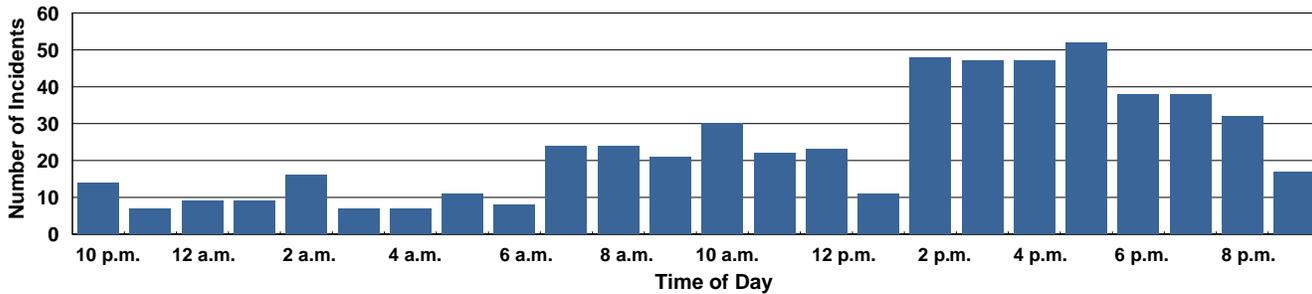
High-impact incidents account for **16%** of the total incidents in May.

## Total Incidents by Roadway

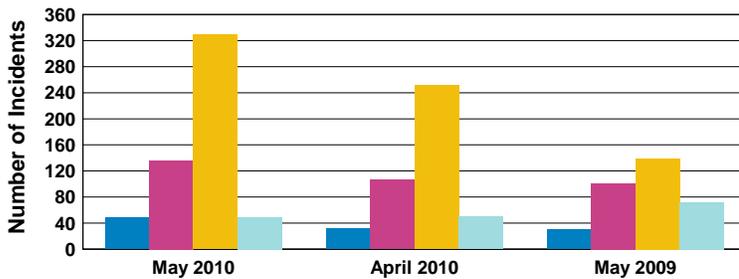


Freeway	May 2010	April 2010	May 2009
I-75 (CHRYSLER/FISHER)	138	106	73
I-94 (FORD)	134	105	80
I-696 (REUTHER)	92	70	47
I-96 (JEFFRIES)	75	52	55
M-10 (LODGE)	34	37	28
M-39 (SOUTHFIELD)	45	32	34
I-275	39	33	24
I-375	4	4	0
M-59	1	0	0
<b>Total</b>	<b>562</b>	<b>439</b>	<b>341</b>

## Total Incidents per Hour

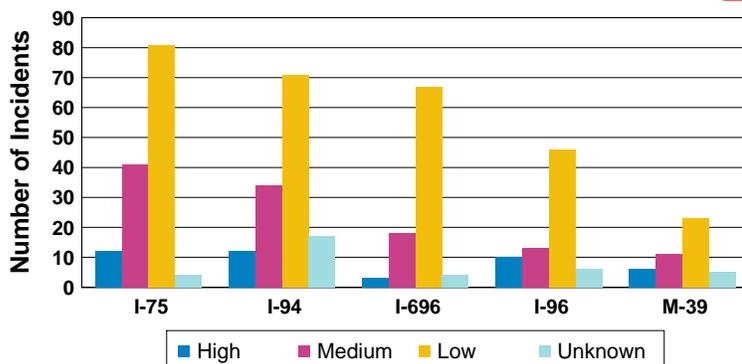


## Total Incident Severity/Duration by Month

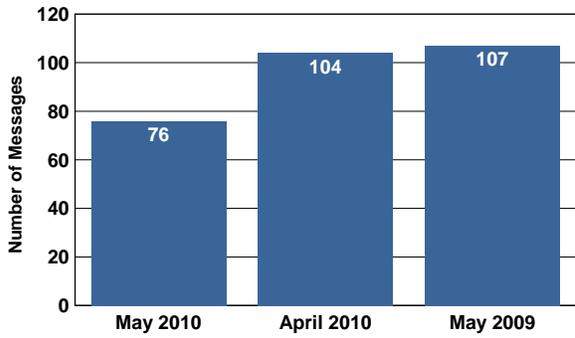


- Single-lane closures equal to 90+ minutes, partial closures (more than one lane, but not all) equal to 45+ minutes, or total closures (all lanes) 20+ minutes
- Shoulder closures equal to 90+ minutes, single-lane closures between 20 and 89 minutes, partial closures (more than one lane but not all) between 20 and 44 minutes, and total closures (all lanes) less than 20 minutes
- Shoulder closures less than 90 minutes, single-lane closures or partial closures (more than one lane, but not all) less than 20 minutes
- The duration and/or severity is unknown

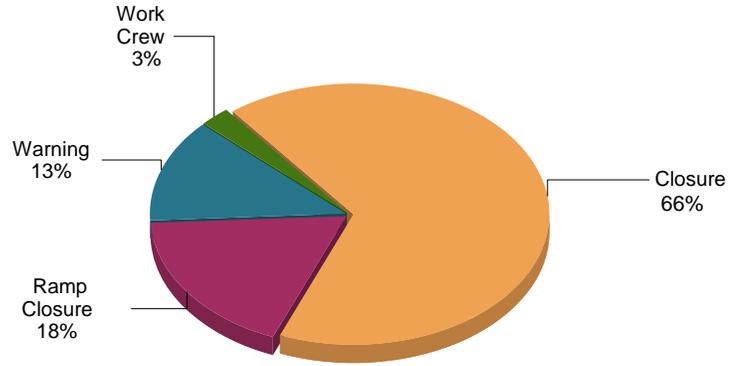
## Severity/Duration by Top 5 Freeways



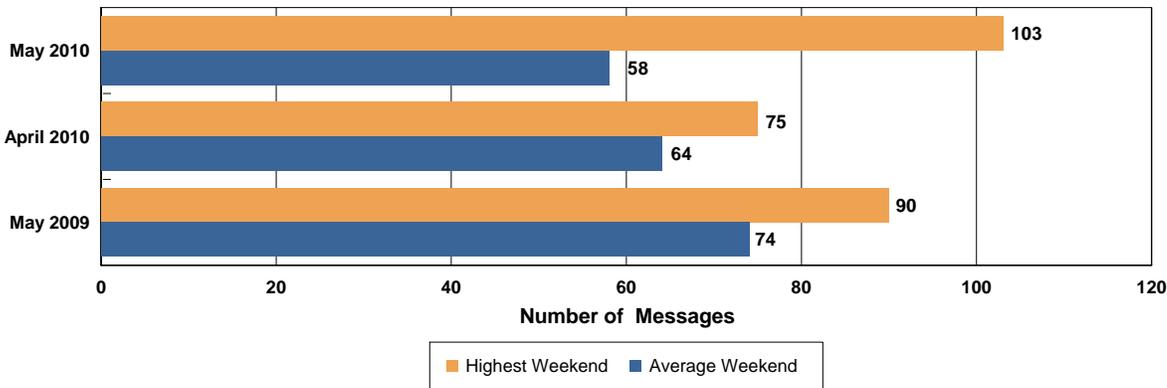
## Unique Construction Messages



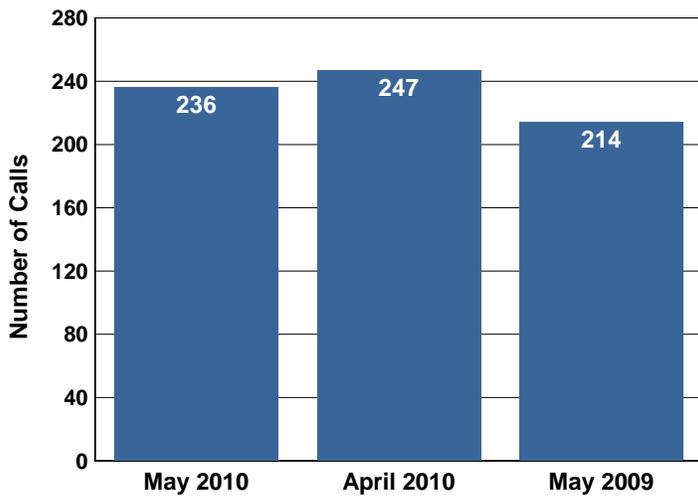
## Highest Weekend Unique Construction Messages



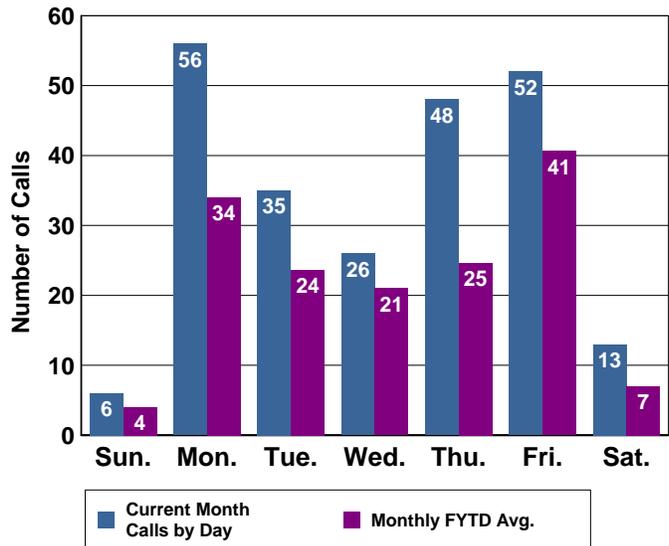
## Weekend Construction DMS Message Activity



## Total Construction Calls per Month



## Construction Calls by Day



Construction Activity



## DMS Availability

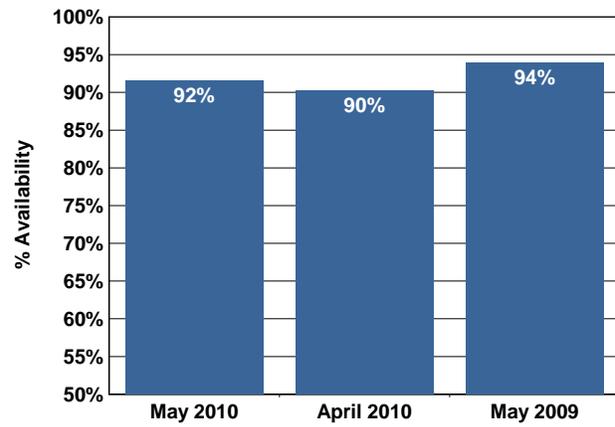
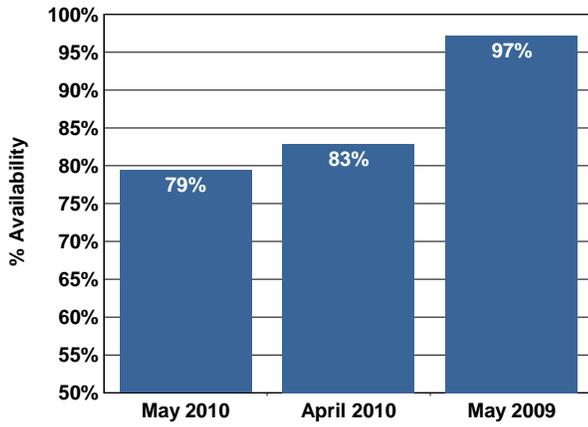


## CCTV Camera Availability



	May 2010	April 2010	May 2009
<b>Available</b>	<b>55</b>	<b>57</b>	<b>70</b>
<b>Not Available</b>	<b>14</b>	<b>12</b>	<b>2</b>
<b>Total</b>	<b>69</b>	<b>69</b>	<b>72</b>

	May 2010	April 2010	May 2009
<b>Available</b>	<b>169</b>	<b>167</b>	<b>156</b>
<b>Not Available</b>	<b>16</b>	<b>18</b>	<b>10</b>
<b>Total</b>	<b>185</b>	<b>185</b>	<b>166</b>



## Equipment Upgrades



Equipment Type	Maintenance Activity
<b>CCTV</b>	
-----	-
TOTAL	0
<b>DMS</b>	
-----	-
TOTAL	0

