

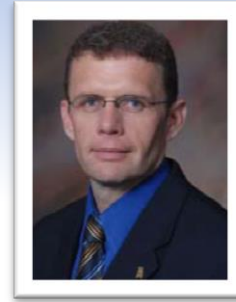


# ST. LOUIS DISTRICT MOBILITY

SEPTEMBER/OCTOBER 2017

## GUIDEPOST

- OVERALL FREEWAY MOBILITY HAS INCREASED SLIGHTLY FOR THE AM PEAK AND DECREASED FOR THE PM PEAK
- AVERAGE INCIDENT / LANE CLEARANCE TIMES SLIGHTLY INCREASED FOR BOTH MONTHS
- MAJOR AND MODERATE WORK ZONE IMPACTS CONTINUED ON THE EASTBOUND POPLAR STREET BRIDGE, AND WESTBOUND I-44 AT ROUTE 109 TO ROUTE 141 PROJECTS
- INCIDENTS INVOLVING POLICE ACTIVITY AND FATAL CRASHES CONTINUE TO NEGATIVELY IMPACT THE REGION'S MOBILITY AND ARE NOTED AMONG THE MAJOR INCIDENTS
- ER RESPONSES WERE HAMPERED BY CIVIL DISTURBANCES



THE MISSOURI DEPARTMENT OF TRANSPORTATION ANNOUNCED THE APPOINTMENT OF TOM BLAIR AS THE NEW DISTRICT ENGINEER FOR THE ST. LOUIS DISTRICT. BLAIR HAS SERVED AS ASSISTANT DISTRICT ENGINEER IN MoDOT'S ST. LOUIS DISTRICT SINCE 2006. BLAIR HAS PLAYED A CRUCIAL ROLE IN CREATING EFFECTIVE PARTNERSHIPS TO MANAGE TRAFFIC INCIDENTS, IMPROVE MOBILITY, FREIGHT AND SAFETY INITIATIVES THROUGHOUT THE ST. LOUIS METROPOLITAN REGION. CONGRATULATIONS TOM!

## MOBILITY SNAPSHOT



### **FREEWAY MOBILITY**

SEPTEMBER TO OCTOBER COMPARISON:

AM MOBILITY INCREASED SLIGHTLY

PM MOBILITY DECREASED



### **MAJOR INCIDENTS**

SEPTEMBER 2017: 7 → OCTOBER 2017: 4



### **AVERAGE INCIDENT DURATION SEP → OCT**

LANE CLEARANCE: 25:14 → 26:41

INCIDENT CLEARANCE: 29:52 → 31:25  
(MIN: SEC)



### **MAJOR IMPACT WORK ZONES**

SEPTEMBER → 10 OCTOBER → 12

### **MODERATE IMPACT WORK ZONES**

SEPTEMBER → 23 OCTOBER → 25

## ZONING IN

### **TMS WORK ZONES**

◆ SEPTEMBER 2017: 335

◆ OCTOBER 2017: 408

### **WORK ZONE BREAKDOWN:**

◆ MAJOR: 22 - 3.9%

◆ MODERATE: 48 - 8.8%

◆ MINOR: 481 - 87.3%

WORK ZONE CRASHES: 7





# WORK ZONES

TMC Observed Work Zones September - October 2017			
September		October	
Level of Travel Time Impact	Number of Work Zones	Level of Travel Time Impact	Number of Work Zones
Major Impact	10	Major Impact	12
Moderate Impact	23	Moderate Impact	25
Minor Impact	228	Minor Impact	253
Total	261	Total	290

\*Impact Levels described in Data Key

#### SL Mobility Rating:

- ◆ Sep 2017: 92%
- ◆ Oct 2017: 91%
- ◆ Goal: 91%

#### SL Visibility levels:

- ◆ Sep 2017: 93%
- ◆ Oct 2017: 92%
- ◆ Goal: 91%

### ***Additional Travel Time Impacts through Work Zones***

#### **Major Impact (15 Minutes or Above)**

#### **Moderate Impact (10-14 Minutes)**

#### **9/1 – 10/31 (Daily) Eastbound I-64 – Poplar Street Bridge right lane (21 Major 46 Moderate)**

- Closed leaving one lane of traffic open eastbound before Poplar Street Bridge daily
- All mitigation efforts were in use
- RITIS data recorded additional travel times up to 25 minutes during non-peak hours

#### **10/20 (Friday) Westbound I-44 — Route 109 to Route 141 right lanes (1 Major 2 Moderate)**

- Traffic reduced to one lane during overnight hours
- Hours were adjusted to 10:00 pm start time to mitigate impact
- RITIS data recorded additional travel times up to 35 minutes

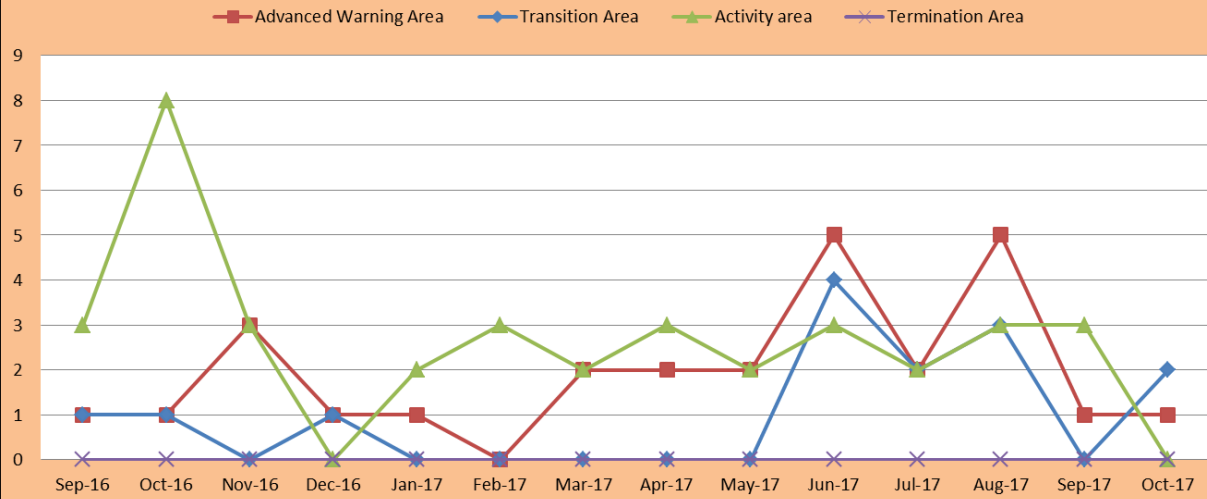
#### **Work Zone Related Crashes with Mobility Impact**

\*\*\*None\*\*\*

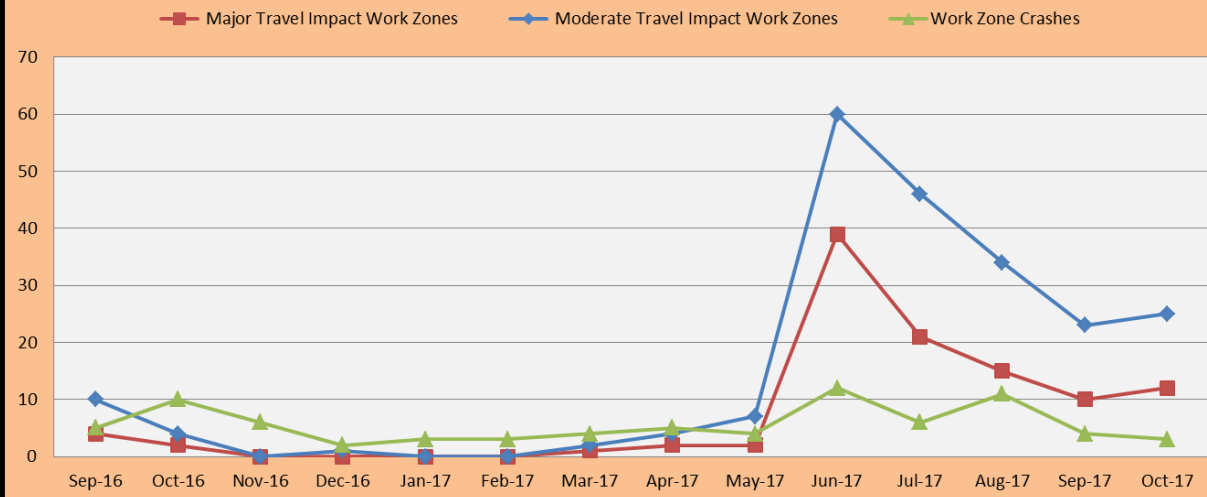


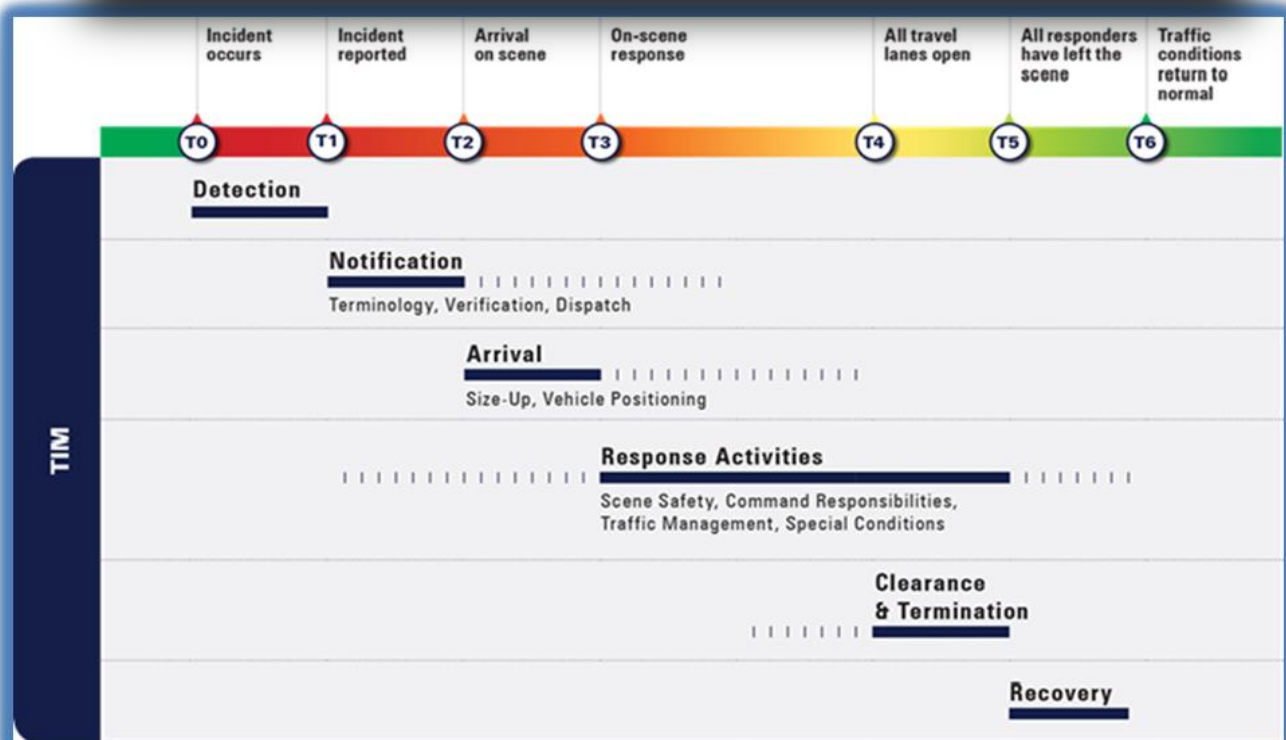
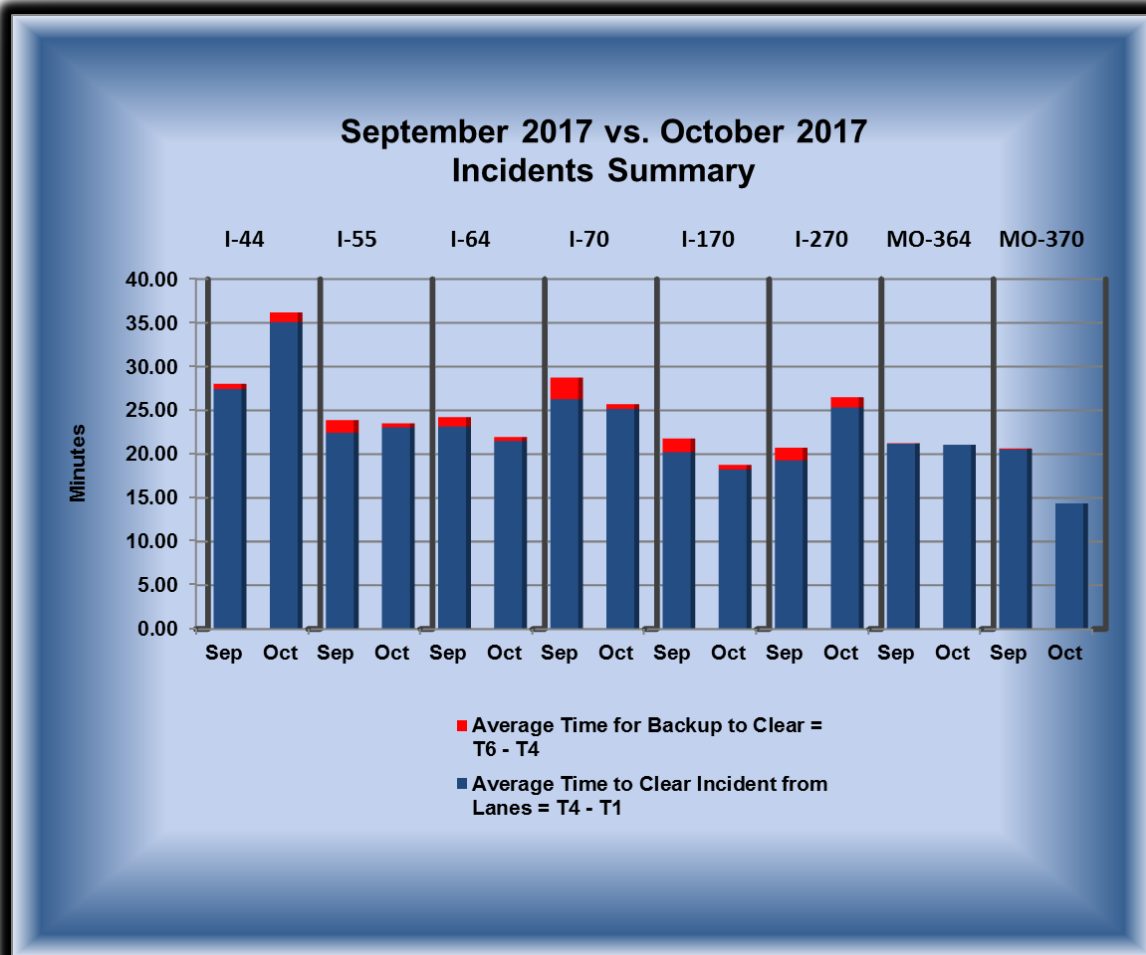
# WORK ZONES

## YTD Work Zone Crashes Relative to Work Zone



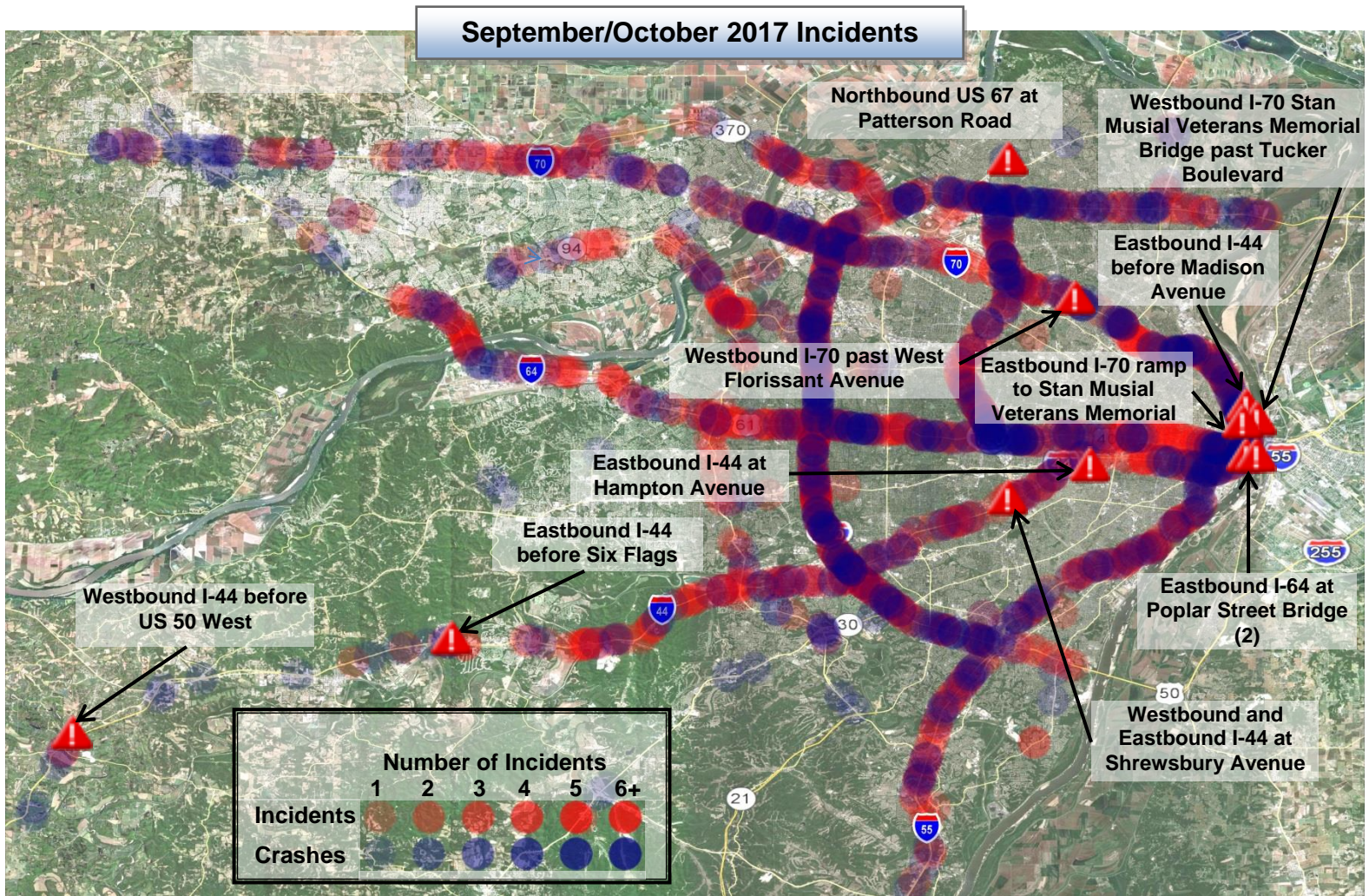
## YTD Work Zone History





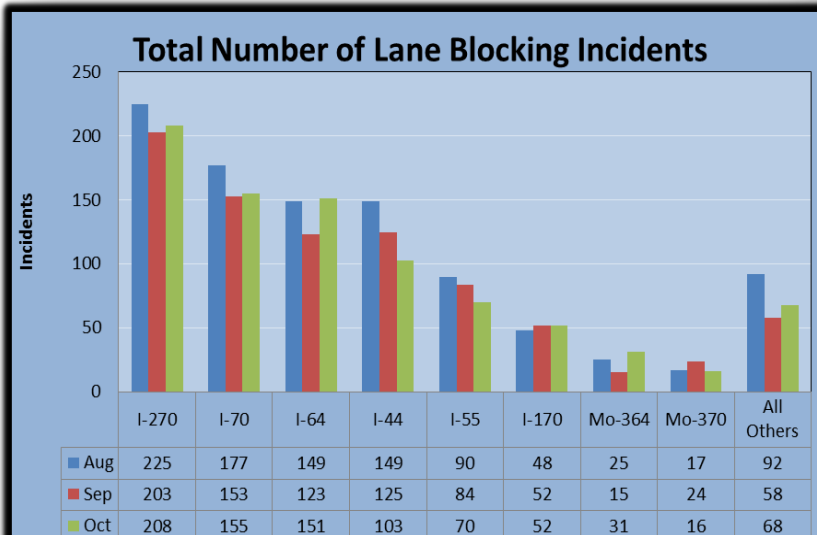


# FREEWAY MANAGEMENT



Denotes Location of Major Impact Traffic Incidents

**Total Number of Incidents: August: 972 / September: 837 / October: 854**



**Major Impact Incidents**  
September 2017 vs. October 2017  
(7) (4)

**Fatal Incidents**  
September 2017 vs. October 2017  
(2) (4)

**Tractor Trailer Incidents**  
September 2017 vs. October 2017  
(43) (45)

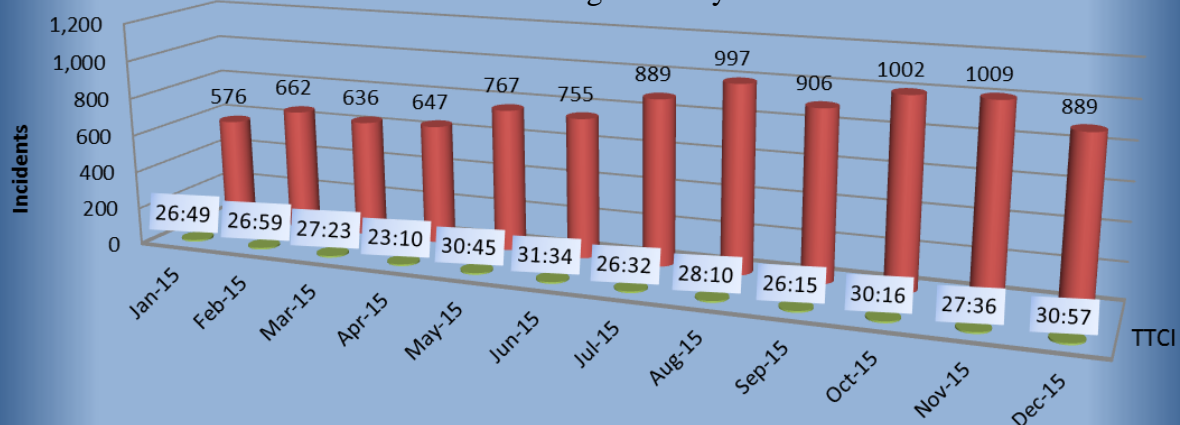
# FREEWAY MANAGEMENT

## Lane Blocking Incidents by Freeway September and October 2017

Interstate	Month	Number of Incidents	Average Time to Clear Incident from Lanes = T4 - T1	Average Time for Backup to Clear = T6 - T4	Freeway Miles	Incidents per Mile
I-44	Sep	125	22:07	01:14	33	3.79
I-44	Oct	103	23:56	00:52	33	3.12
I-55	Sep	84	35:58	00:34	23	3.65
I-55	Oct	70	39:50	00:47	23	3.04
I-64	Sep	123	21:08	02:12	40	3.08
I-64	Oct	151	19:53	00:47	40	3.78
I-70	Sep	153	19:38	00:33	38	4.03
I-70	Oct	155	28:50	00:55	38	4.08
I-170	Sep	52	23:53	00:33	11	4.73
I-170	Oct	52	16:31	00:52	11	4.73
I-270	Sep	203	18:47	01:05	36	5.64
I-270	Oct	208	31:25	01:16	36	5.78
MO-364	Sep	15	19:57	00:00	11	1.36
MO-364	Oct	31	25:26	01:07	11	2.82
MO-370	Sep	24	24:15	00:00	13	1.85
MO-370	Oct	16	24:43	00:00	13	1.23
Total	Sep/Oct	1565	24:46	00:48	410	3.82

## 2015 Number of Incidents and Time to Clear Lanes

\*Note changes in Incident reporting data began in July 2015

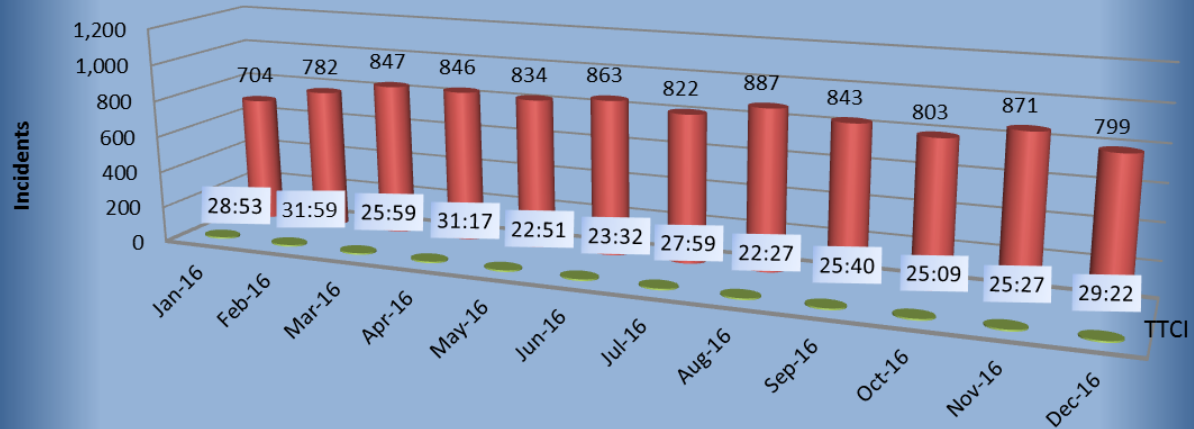


	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
TTCI	26:49	26:59	27:23	23:10	30:45	31:34	26:32	28:10	26:15	30:16	27:36	30:57
Incidents	576	662	636	647	767	755	889	997	906	1002	1009	889



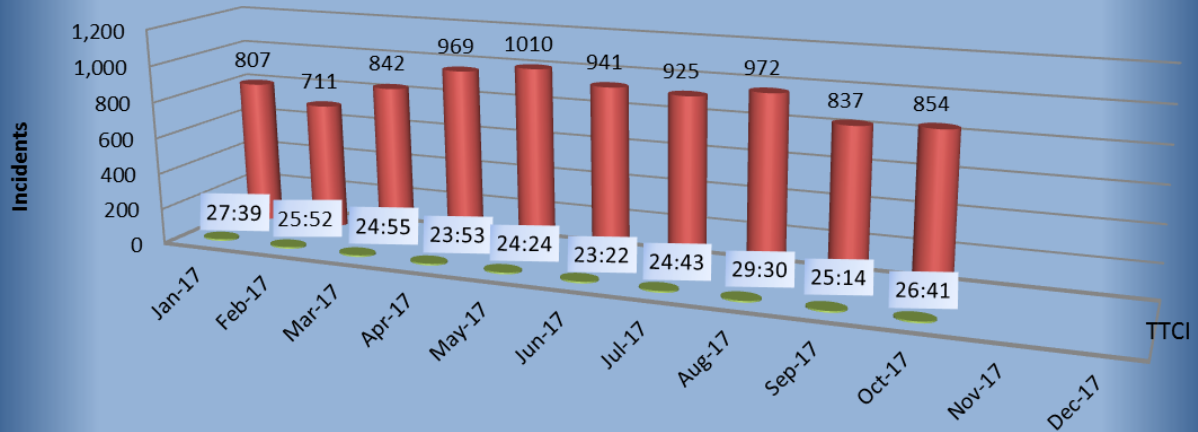
# FREEWAY MANAGEMENT

## 2016 Number of Incidents and Time to Clear Lanes



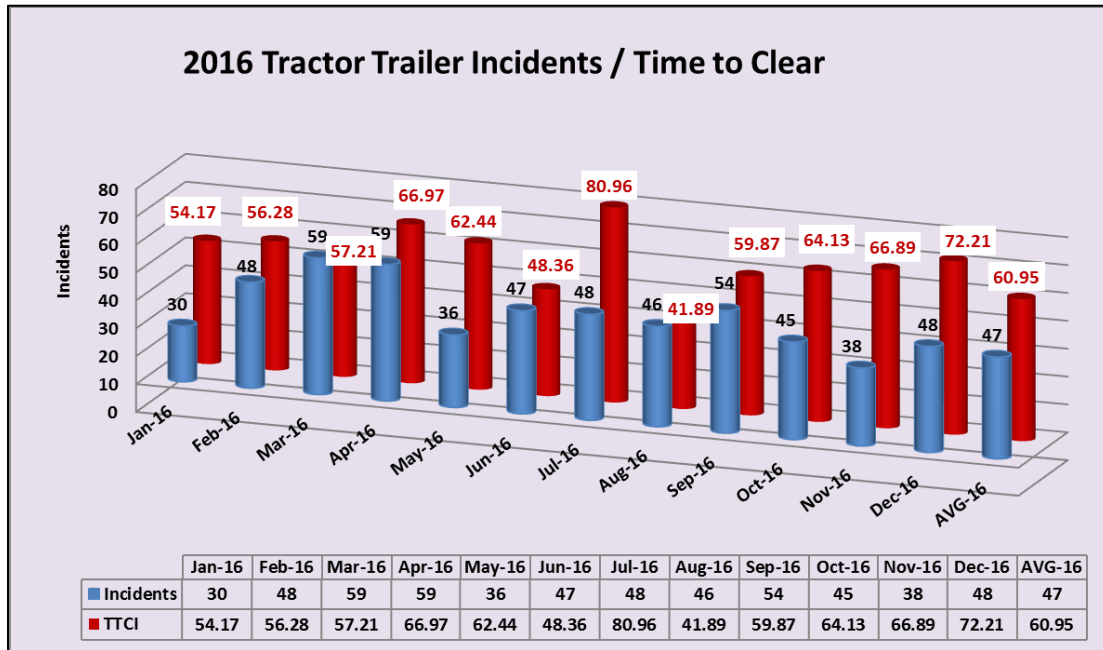
	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16
TTCI	28:53	31:59	25:59	31:17	22:51	23:32	27:59	22:27	25:40	25:09	25:27	29:22
Incidents	704	782	847	846	834	863	822	887	843	803	871	799

## 2017 Number of Incidents and Time to Clear Lanes



	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17
TTCI	27:39	25:52	24:55	23:53	24:24	23:22	24:43	29:30	25:14	26:41		
Incidents	807	711	842	969	1010	941	925	972	837	854		

# FREEWAY MANAGEMENT



2016	I-44	I-55	I-64	I-70	I-170	I-255 / I-270	Route 364	Route 370	Other	Total
Jan	7	3	4	5	1	10	0	0	0	30
Feb	10	3	10	15	2	5	0	1	2	48
Mar	14	6	6	22	2	8	0	0	1	59
Apr	14	7	6	16	1	11	0	2	2	59
May	7	4	5	9	0	7	0	2	2	36
Jun	14	3	8	12	0	7	0	1	2	47
Jul	16	3	5	13	0	6	0	2	3	48
Aug	16	3	4	9	2	11	0	0	1	46
Sep	12	3	5	18	1	13	0	0	2	54
Oct	10	4	5	11	0	10	0	3	2	45
Nov	18	6	1	6	0	4	0	2	1	38
Dec	5	7	7	14	1	11	0	1	2	48
YR Totals	143	52	66	150	10	103	0	14	20	558

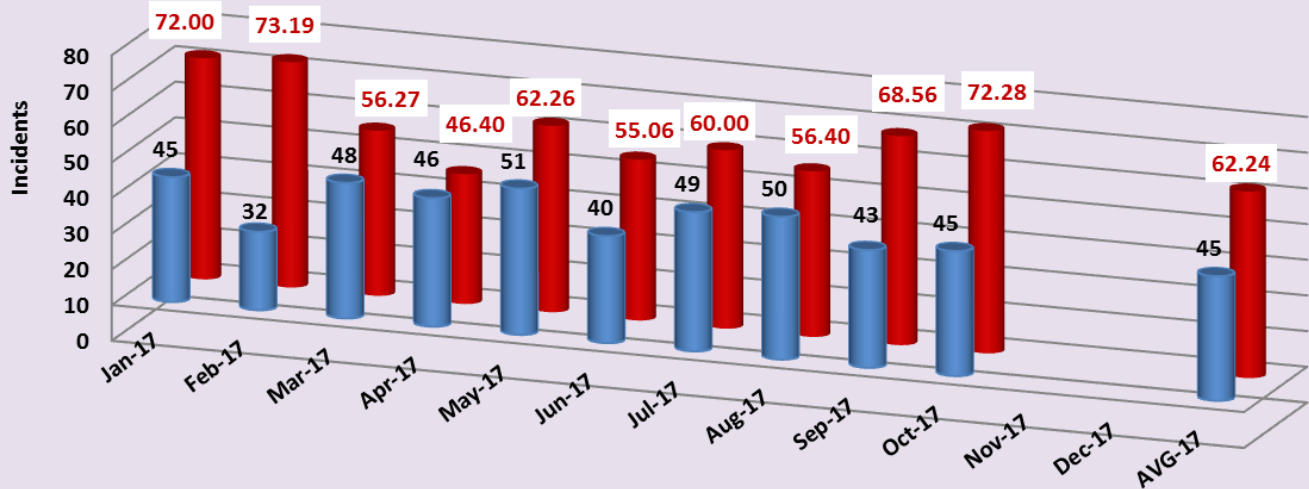
\*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015





# FREEWAY MANAGEMENT

## 2017 Number of Tractor Trailer Incidents / Time to Clear



	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	AVG-17
Incidents	45	32	48	46	51	40	49	50	43	45			45
TTCI	72.00	73.19	56.27	46.40	62.26	55.06	60.00	56.40	68.56	72.28			62.24

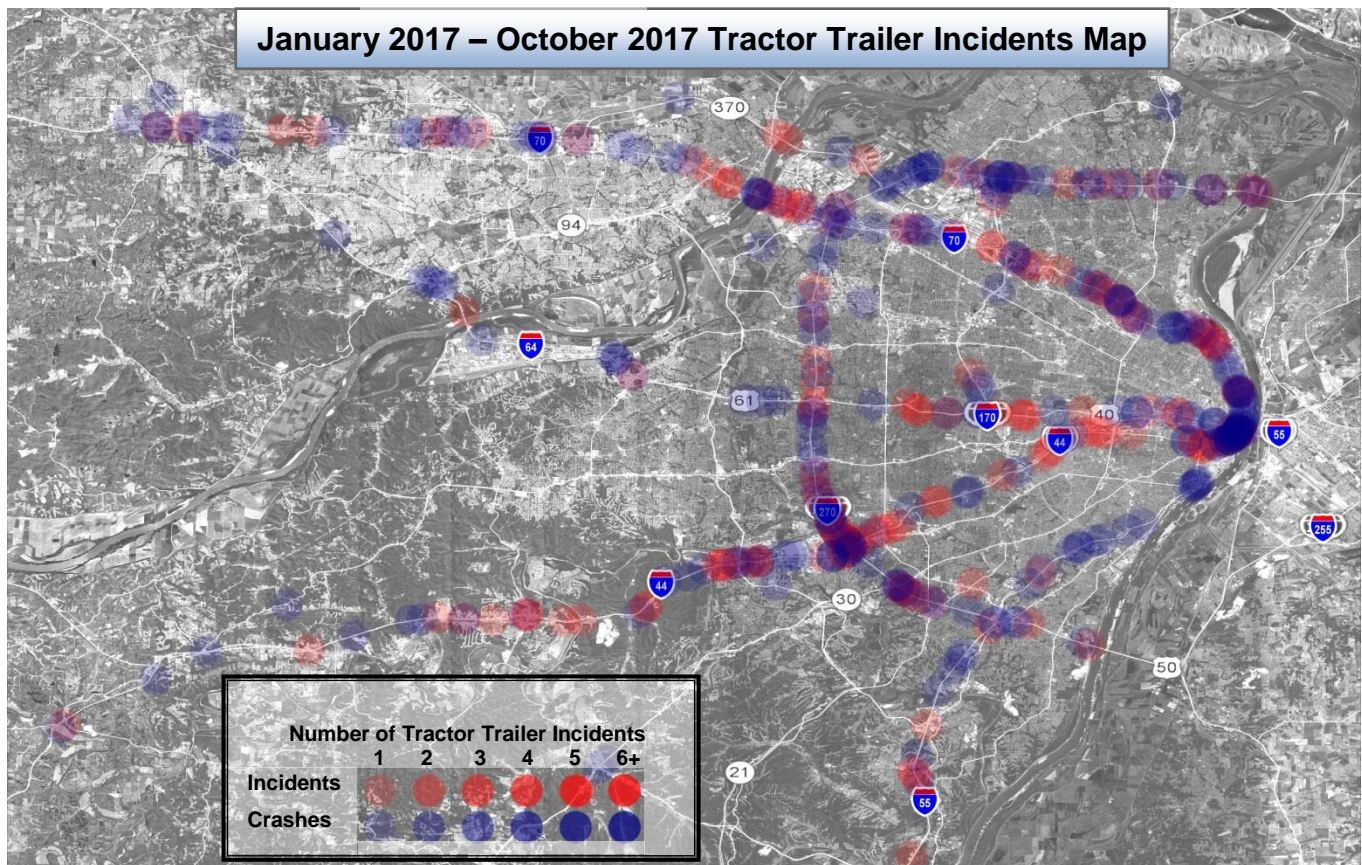
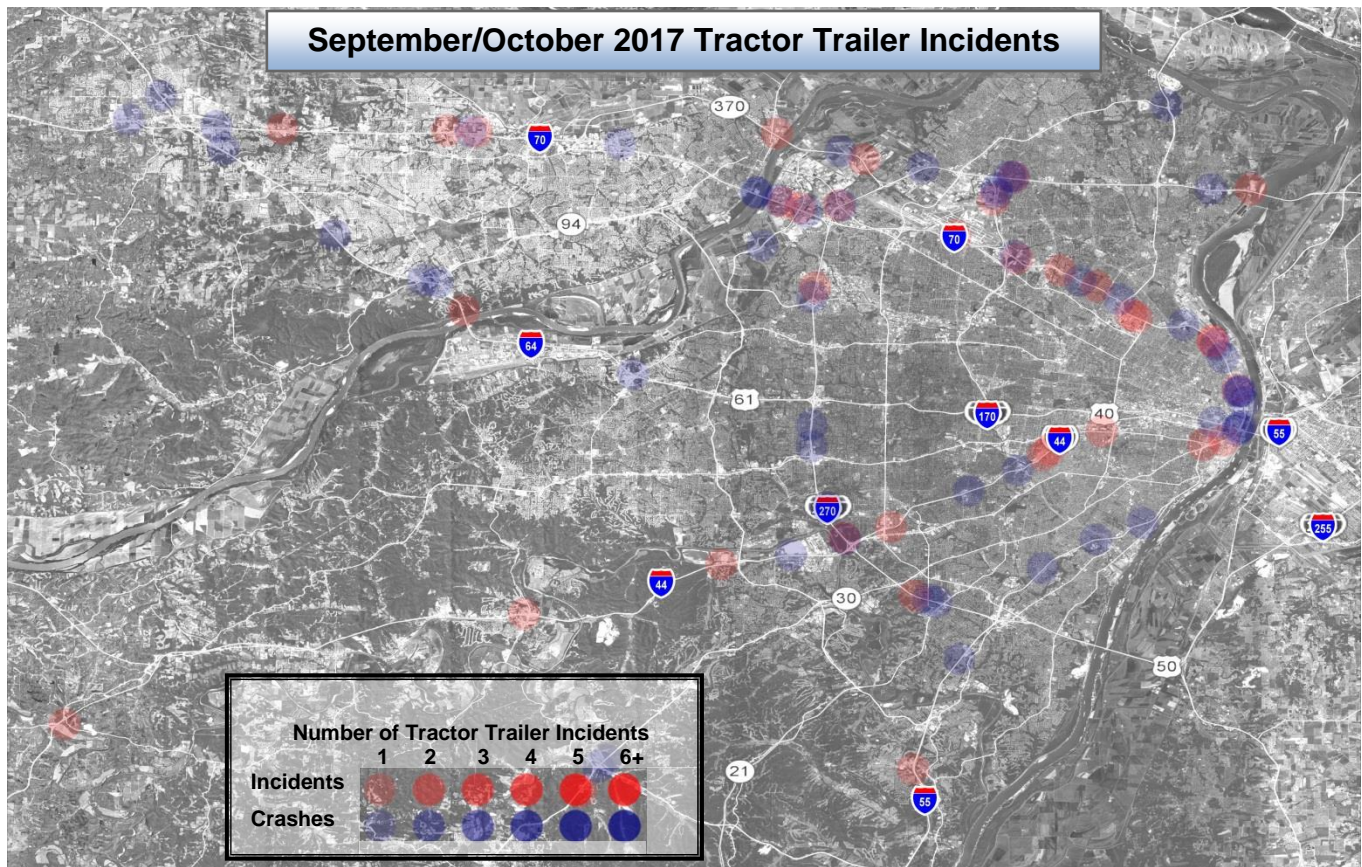


2017	I-44	I-55	I-64	I-70	I-170	I-255 / I-270	Route 364	Route 370	Other *	Total
Jan	11	4	4	11	0	15	0	0	0	45
Feb	10	2	4	6	1	9	0	0	0	32
Mar	12	7	7	12	1	7	0	0	2	48
Apr	16	3	5	10	1	7	0	1	3	46
May	11	8	2	15	0	12	0	0	3	51
Jun	15	3	1	6	1	11	0	1	2	40
Jul	19	5	7	11	1	6	0	0	0	49
Aug	7	4	9	11	1	13	0	1	4	50
Sep	9	1	6	11	2	11	0	1	2	43
Oct	6	6	2	20	1	6	0	2	2	45
Nov										0
Dec										0
YR Totals	116	43	47	113	9	97	0	6	18	449

\*Other Routes are MoDOT maintained non-freeway routes and were not included on system until July 2015



# FREEWAY MANAGEMENT






## Major Impact Traffic Incidents and Mitigation

09/01/2017 (Friday)

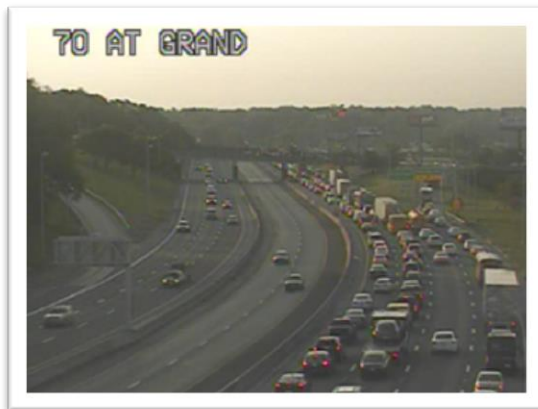
- **Time:** 5:42 pm - 7:52 pm \*\*\*Fatality\*\*\*
- **Location:** St. Louis City, Westbound I-70 past West Florissant Avenue
- **Event Type:** Single Vehicle Accident / Police Investigation
- **Estimated Initial Impact:** Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** A vehicle struck a street light pole at a high rate of speed during a police pursuit. The vehicle/occupants were being pursued as a suspected carjacking. All three occupants were transported in critical condition and one pronounced at the hospital.
- **Action Taken:** The TMC operators monitored the pursuit as it left downtown St. Louis. St. Louis City PD closed all lanes at West Florissant following the crash and St. Louis City FD and EMS responded. The TMC immediately activated appropriate message boards, and dispatched two MoDOT Emergency Response units to assist with traffic control. A MoDOT Signal Electrician was dispatched to secure the downed light pole. Notifications were made to the EOC, Motor Carriers, AE, and Communications. The signals along West Florissant near I-270 (Pershall, Eastbound, and Dunn) were set to remain in plan 30 to keep green time priority on northbound to westbound traffic travelling up on West Florissant to Westbound I-270. Traffic signals at Westbound I-70 at Grand and Broadway as well as I-70 at Adelaide were set to plan 77 to increase green times for the westbound exit ramps. Once the PM rush hour passed plan 94 was set to dedicate even more time to the exiting movements. The extended duration was due to the police investigation and accident reconstruction. Traffic queued 3 miles at its peak and took approximately 7 minutes to return to normal once all lanes were reopened.
- **Result:** The selected plans on West Florissant were observed to handle the perceived increase in traffic Northbound on W Florissant and effectively get diverted traffic to I-270 Westbound. Due to the volumes of exiting traffic the AMI plans were not completely able to clear queues each cycle, but did effectively move traffic off of the highway to select alternative routes around the closure.
- **Event Duration:** 2 hours 10 minutes

Westbound I-70 past West Florissant Avenue	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
					
Closed Hours/Minutes	2:10	2:10	2:10	2:10	2:10



# FREeway MANAGEMENT

## Major Impact Traffic Incidents and Mitigation






## Major Impact Traffic Incidents and Mitigation

09/04/2017 (Monday)

- **Time:** 12:51 pm – 3:43 pm
- **Location:** St. Louis County, Eastbound I-44 before Six Flags Road
- **Event Type:** Single Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- **Incident Details:** A pickup truck pulling a trailer began to skid after applying the brakes. The pickup truck struck the guardrail and came to a rest on top of the guard rail. Both occupants were transported to a local hospital for their injuries.
- **Action Taken:** MSHP, Eureka Police, Fire and EMS responded. The TMC dispatched a MoDOT Emergency Response unit, and immediately activated the appropriate message boards. They were unable to monitor the accident scene as the traffic camera in that area was off-line. Duration was extended due to the trailer falling apart while being removed from the guardrail. The traffic queue was observed and estimated to be 7.3 miles.
- **Event Duration:** 2 hours 58 minutes


Eastbound I-44 before Six Flags Road	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
					
Closed Hours/Minutes	0:16	0:16	1:47	1:47	1:47



## Major Impact Traffic Incidents and Mitigation

09/10/2017 (Sunday)


- **Time:** 4:35 pm – 9:22 pm
- **Location:** St. Louis City – Eastbound I-64 at Poplar Street Bridge
- **Event Type:** Roadway Hazard
- **Estimated Initial Impact:** Non-Rush Hour: 1 of 2 travel lanes affected equals (=) 50%
- **Incident Details:** The TMC was contacted by IDOT who advised they were receiving complaints from motorist advising a large steel plate on the Poplar Street Bridge was loose, causing a traffic hazard. The steel plate was on the roadway due to ongoing road construction.
- **Action Taken:** The TMC checked the traffic cameras to see if they could locate the issue to no avail. The TMC dispatched a MoDOT Emergency Response Unit who located the plate which was in the left lane and had several large steel bolts sticking up out of it. The ER unit set up cones and remained in the left lane with a large truck mounted arrow board, forcing traffic to transition to lane 2. Lanes 3 and 4 on the Poplar Street Bridge were already closed due to ongoing road construction. The TMC activated DMS boards back to McCausland to advise motorists of the additional lane closure. They also notified the Resident Engineer who in turn contacted the contractor for the road construction. The contractor arrived and inspected the area. He advised the ER unit that he would have to leave to get additional equipment and that the work would require a lane drop. The contractor estimated the repairs would take 2 hours to complete. The RE was updated and he notified the contractor that it would be their responsibility to get traffic control in place. The contractor returned at approximately 5:42 pm. The lane drop was not set up until 9:20 pm. MoDOT Emergency Response remained on scene providing traffic control the entire time until the lane drop was in place. Notifications were made to the City AE and EOC and the SLAdmin text was sent out. Traffic queued 1.5 miles.
- **Event Duration:** 4 hours 46 minutes

Eastbound I-64 at I-44	Lane 1	Lane 2	Lane 3	Lane 4
			Closed Due to Ongoing Road Construction	Closed Due to Ongoing Road Construction
Closed Hours/Minutes	4:46	0:00	0:00	0:00

## Major Impact Traffic Incidents and Mitigation

09/12/2017 (Tuesday)

- **Time:** 6:53 pm – 9:57 pm
- **Location:** St. Louis City – Eastbound I-70 ramp to Stan Musial Veterans Memorial Bridge
- **Event:** Single Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- **Incident Details:** The TMC received a phone call from a passing motorist who advised there was an overturned tractor trailer blocking the eastbound ramp to the Stan Musial Bridge. It was discovered that an oversized tractor trailer traveled off the right side of the road while negotiating a curve and struck the concrete barrier causing the vehicle to overturn.
- **Action:** St. Louis City PD responded and blocked the exit lanes. The MSHP arrived and took command of the scene. Two MoDOT Emergency Response units were dispatched and assisted with traffic control, blocking the right lane of Eastbound I-70 at I-44 along with the ramp. Traffic was diverted onto Tucker Boulevard and was able to turn around at Cass Avenue to travel Northbound on Tucker over the bridge. The EOC and Motor Carriers were notified. The TMC messaged for the event and entered it into TMS to notify the public of the closure. Traffic queued approximately 2 miles, but quickly returned to normal once the ramp was reopened.
- **Event Duration:** 3 hours 4 minutes

Eastbound I-70 Ramp to Stan Musial Veterans Memorial Bridge	Lane 1	Lane 2	Right Shoulder
			
Closed Hours/Minutes	3:04	3:04	3:04

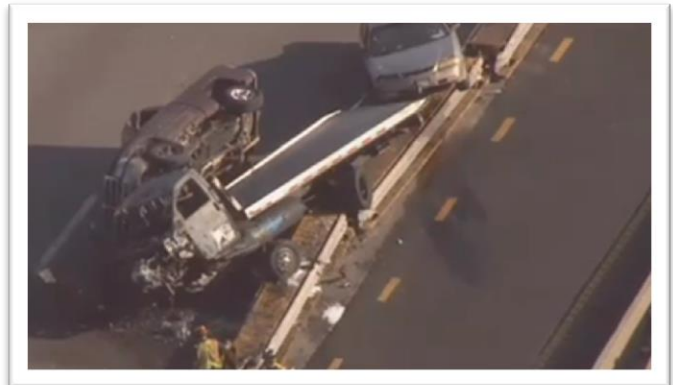
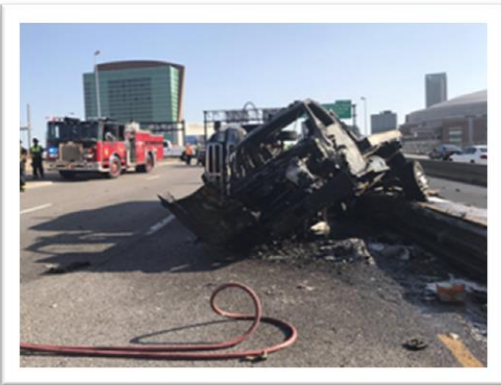


## Major Impact Traffic Incidents and Mitigation

**09/14/2017 (Thursday)**

- **Time:** 4:26 pm – 7:21 pm
- **Location:** St. Louis City – Eastbound I-44 before Madison Avenue
- **Event:** Single Vehicle Accident
- **Estimated Initial Impact:** Rush Hour: 4 of 4 travel lanes affected equals (=) 100%
- **Incident Details:** The driver of a large flatbed truck towing two vehicles failed to see traffic had stopped ahead of him. He abruptly braked and steered to the left to avoid a crash with the stopped traffic. The vehicle traveled off the left side of the road where it struck the concrete barrier wall, knocking pieces into the express lanes. After colliding with the barrier, the vehicle then caught fire.
- **Action:** St. Louis City Police, Fire and EMS responded, as did the MSHP who took command of the scene. TMC personnel immediately entered the event into ATMS, which populated an incident in the Traveler Map and activated all available message boards. Two MoDOT Emergency Response units were dispatched to set up traffic control. IDOT was notified and it was requested they activate message boards to notify Missouri bound drivers of the closure. The EOC, Motor Carriers, Community Relations, the maintenance supervisor, and the AE were all notified. Duration was extended due to lanes being blocked by pieces of the barrier wall.
- **Event Duration:** 2 hours 55 minutes

Eastbound I-44 before Madison Avenue 	Left Shoulder	Lane 1	Lane 2	Lane 3	Right Shoulder
Closed Hours/Minutes	2:55	2:55	2:55	1:32	1:32

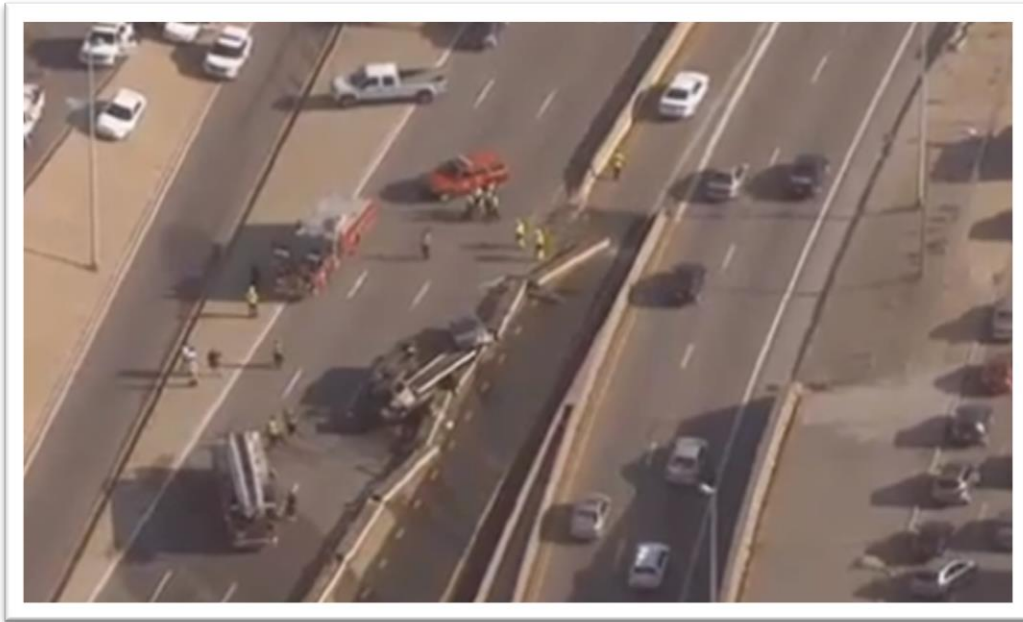






# FREEWAY MANAGEMENT

## Major Impact Traffic Incidents and Mitigation



## Major Impact Traffic Incidents and Mitigation


09/27/2017 (Wednesday)

- **Time:** 6:52 pm – 10:30 pm
- **Location:** St. Louis City – Eastbound I-64 at Poplar Street Bridge
- **Event Type:** Roadway Hazard
- **Estimated Initial Impact:** Non-Rush Hour: 1 of 2 travel lanes affected equals (=) 50%

**Incident Details:** The TMC was contacted by IDOT who advised they were receiving complaints from motorist with regard to a large steel plate on the Poplar Street Bridge that was loose, causing a traffic hazard. The steel plate was on the roadway due to ongoing road construction.

**Action Taken:** The TMC dispatched a MoDOT Emergency Response Unit who located the plate in lane 1 and blocked the area, pushing traffic into lane 2. The Resident Engineer was notified and he contacted the contractor for the road construction. According to the RE, the contractor gave an ETA of one hour to respond and assess the issue. It was determined a welding crew was needed to stabilize the steel plate, which contributed to the duration of the incident. Contractors started the lane drop to begin the repairs at 9:22 pm. MoDOT Emergency Response remained on scene providing traffic control the entire time until the lane drop was in place. Notifications were made to the City AE, Communications, and the SLAdmin text was sent out to district leadership. Traffic queue was estimated at 2.0 miles due to this additional lane restriction in the construction zone.


**Event Duration:** 3 hours 38 minutes

Eastbound I-64 at Poplar Street Bridge	Lane 1	Lane 2	Lane 3	Lane 4
			Closed Due to Ongoing Road Construction	Closed Due to Ongoing Road Construction
Closed Hours/Minutes	3:38	0:00	0:00	0:00

## Major Impact Traffic Incidents and Mitigation

09/30/2017 (Saturday)

- **Time:** 7:42 pm – 4:54 am
- **Location:** Franklin County – Westbound I-44 before US 50 West
- **Event:** Vehicle Fire
- **Estimated Initial Impact:** Non-Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- **Incident Details:** While monitoring scanner traffic, TMC operators overheard emergency units being dispatched to a vehicle fire on Westbound I-44 at mile marker 247. Operators checked traffic cameras and located police out with a tractor trailer in the right lane. An axle and wheel of the tractor trailer had caught fire, which then fully engulfed the vehicle.
- **Action:** The Franklin County Sheriff's Department responded along with the Bowles Fire Protection District. The TMC immediately entered the incident into ATMS, which populated the incident on the Traveler's Map. DMS boards were also activated back to Lewis Road to alert motorists. EOC, Motor Carriers, and Communications were notified, and the SLAdmin text was sent to district leadership. The tractor trailer was hauling 42,000 pounds of frozen pies. I-44 Towing responded to the scene to assist with cleanup. The Area Maintenance Superintendent was notified and sent crews to assist with traffic control as well as cleanup. Due to slick pavement from pie filling, the fire department had to return to complete a wash down of the right lane. That along with the overall cleanup of the scene contributed to the duration. Traffic queued approximately 5 miles at the height of the fire.
- **Event Duration:** 9 hours 12 minutes

Westbound I-44 before US 50 West	Left Shoulder	Lane 1	Lane 2	Right Shoulder
				
Closed Hours/Minutes	0:53	0:53	9:12	9:12





## Major Impact Traffic Incidents and Mitigation

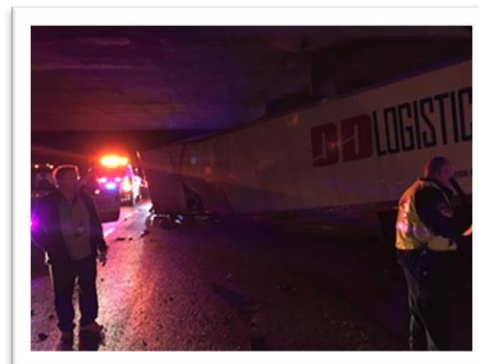
10/23/2017 (Monday)

- **Time:** 1:59 am – 11:26 am
- **Location:** St. Louis County – Westbound and Eastbound I-44 at Shrewsbury Avenue
- **Event:** Single Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 3 of 3 available westbound travel lanes affected equals (=) 100% and 2 of 3 available eastbound travel lanes affected equals (=) 67%
- **Incident Details:** The TMC was contacted by Shrewsbury PD requesting assistance for a tractor trailer accident with guardrail damage. Upon checking the CCTV's, TMC operators discovered that the tractor trailer was actually laying across the center median barrier wall and against the bridge pillars of I-44 at Shrewsbury Avenue.
- **Action:** The TMC immediately dispatched the only on duty Emergency Response Unit to the area. Initially, the exact location of the accident was unclear as TMC operators observed numerous vehicles, including emergency vehicles, on both eastbound and westbound shoulders. With further search of the area using the cameras, operators located an additional emergency vehicle in the left lane of Westbound I-44 east of Shrewsbury on a curve. Once the tractor trailer was located on camera, the extent/severity of the incident was relayed to ER. Upon arrival, ER closed the two left lanes of Eastbound I-44 as the vehicle had actually broke completely through the barrier wall, with the cab portion blocking the two left lanes, and concrete debris in all lanes. The two left lanes of Westbound I-44 were already being blocked by PD, as the trailer portion of the vehicle was sticking out into those lanes. The right lanes of both Eastbound and Westbound I-44 at Shrewsbury Avenue were already closed due to ongoing road construction. ER reported one of the tractor trailer's fuel tanks had been completely ripped off, while the other had been ruptured and the vehicle had leaked approximately 100 gallons of diesel fuel onto the interstate. ER placed damming material around the fuel spill in an attempt to prevent it from flowing down any median wall drains. ER was also able to blow the concrete debris out of traffic lanes. Given the seriousness of the scene it was decided to notify Bridge Maintenance, who responded to the scene in just over an hour. Over two hours into the incident, Shrewsbury dispatch contacted the TMC and requested a sand truck be dispatched to address the fuel spill. It was then that TMC personnel discovered DNR had not been contacted by the police or fire department. TMC contacted DNR in an effort to have an environmental restoration team dispatched. DNR requested additional information regarding the driver and company that owned the tractor trailer. PD was contacted to obtain the necessary information, however they stated the driver had already been released, and he had advised them that he did not have an emergency contact number for his employer. The TMC was able to locate a phone number for the trucking companies dispatch center and then connected DNR with the supervisor. With the AM Rush Hour quickly approaching and no real progress on cleanup being made, the TMC notified Communications at 4:51 am. At approximately 5:30 am, an additional tractor trailer arrived on scene and crews began to transfer the cargo from one trailer to another. Due to the required placement of the second tractor trailer, the remaining Westbound I-44 lane had to be closed. The closure was entered into TMS to notify the public. After the truck was removed, extensive cleanup was required for excess fuel on the roadway, the destroyed barrier wall, bridge inspection, and debris cleanup. Westbound I-44 was reopened at 10:43 am, with Eastbound I-44 reopening at 11:14 am. During morning rush hour, westbound traffic queued 4 miles back to Hampton Avenue, and eastbound traffic queued 3.2 miles.
- **Event Duration:** 8 hours 44 minutes Westbound / 9 hours 4 minutes Eastbound



## Major Impact Traffic Incidents and Mitigation

Westbound I-44 at Shrewsbury Avenue 	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
					Closed Due to Ongoing Road Construction	Closed Due to Ongoing Road Construction
Closed Hours/Minutes	8:44	8:44	8:44	2:52	0:00	0:00
Eastbound I-44 at Shrewsbury Avenue 	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
					Closed Due to Ongoing Road Construction	Closed Due to Ongoing Road Construction
Closed Hours/Minutes	9:04	9:04	8:56	0:00	0:00	0:00





# FREeway MANAGEMENT


## Major Impact Traffic Incidents and Mitigation

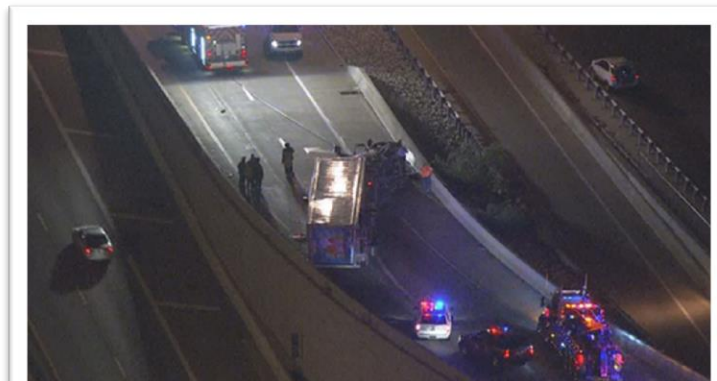


## Major Impact Traffic Incidents and Mitigation

10/24/2017 (Tuesday)

- **Time:** 5:17 am – 8:46 am
- **Location:** St. Louis City – Westbound I-70 Stan Musial Veterans Memorial Bridge past Tucker Boulevard
- **Event:** Single Vehicle Accident
- **Estimated Initial Impact:** Rush Hour: 1 of 1 travel lanes affected equals (=) 100%
- **Incident Details:** The TMC was notified by the St. Louis City Police Department that they were responding to a report of an overturned tractor trailer. Operators were able to locate the incident on CCTV and observed a tractor trailer that appeared to have overturned while negotiating a curve on the entrance ramp from Westbound I-70/Stan Musial Veterans Memorial Bridge to the Westbound I-70 mainline past Tucker Boulevard
- **Action:** St. Louis City Police, Fire and EMS responded as did Emergency Response who provided assistance with traffic control. The incident was immediately entered into ATMS and IDOT was contacted and asked to activate DMS boards in Illinois to alert westbound drivers heading to Missouri. Traffic was diverted off onto Tucker Boulevard. An additional ER Unit responded with oil dry and oil absorbent socks to clean up a small diesel fuel and engine oil spill. St. Louis City Fire Department also hosed down the area after some milk from the trailer cargo spilled onto the roadway. The TMC notified Motor Carriers, the EOC, AE, and Community Relations, and the incident was entered into TMS to notify motorists. Duration was extended due to the difficulty of up-righting the tractor trailer, as it was dropped on the first attempt. The exact queue is unknown, though maps indicated it stretched passed Illinois Route 3.
- **Event Duration:** 3 hours 27 minutes


Westbound I-70 Stan Musial Veterans Memorial Bridge past Tucker Boulevard 	Left Shoulder	Entrance Lane 1	Right Shoulder
Closed Hours/Minutes	3:21	3:21	3:27



## Major Impact Traffic Incidents and Mitigation

10/27/2017 (Friday)

- **Time:** 4:28 pm – 8:32 pm \*\*\* Fatality \*\*\*
- **Location:** St. Louis County – Northbound US 67 at Patterson Road
- **Event:** Single Vehicle Accident
- **Estimated Initial Impact:** Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- **Incident Details:** The TMC was notified by the Florissant Police Department of a serious accident that closed Northbound US 67. A vehicle traveling at a high rate of speed struck a red light camera pole. The driver was later pronounced at the hospital.
- **Action:** Florissant Police, Fire and EMS responded. TMC operators immediately entered the incident into ATMS and activated all available DMS boards. At the start of the incident traffic was diverted to westbound Patterson Road. The detour was later moved downstream onto Charbonier. Florissant Police initially refused MoDOT assistance, but later called to ask for help with traffic control and Emergency Response was dispatched. Notifications were made to MoDOT EOC, Motor Carriers, AE, and Communications. A traffic signal engineer looked into the possibility of adjusting signals on US 67 to assist with traffic flow around the detour. However, it was not required as Florissant PD had the detours under control. Duration of the incident was extended due to the fatality, which required an accident reconstruction. Traffic queued approximately 2.5 miles back to I-270.
- **Event Duration:** 4 hours 4 minutes

Northbound US 67 at Patterson Road	Lane 1	Lane 2	Right Shoulder
			
Closed Hours/Minutes	3:14	4:04	4:04




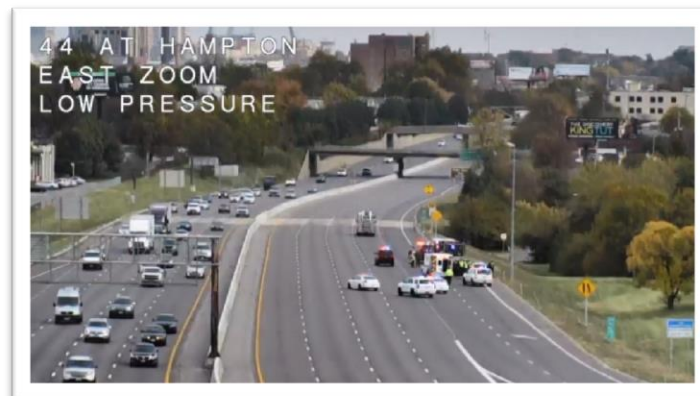


## Major Impact Traffic Incidents and Mitigation

10/31/2017 (Tuesday)

- **Time:** 1:45 pm – 3:43 pm \*\*\* Fatality \*\*\*
- **Location:** St. Louis City – Eastbound I-44 at Hampton Avenue
- **Event:** Vehicle Accident
- **Estimated Initial Impact:** Non-Rush Hour: 3 of 4 travel lanes affected equals (=) 75%
- **Incident Details:** The TMC was notified by St. Louis City Police dispatch of a two vehicle accident with a confirmed fatality. A tractor trailer was stalled on the right shoulder at the end of the entrance ramp from Hampton Avenue and it was struck from behind by a passenger vehicle. The driver of the passenger vehicle was pronounced at the scene.
- **Action:** St. Louis City Police, Fire and EMS responded and closed the interstate down to complete a reconstruction. The TMC dispatched two Emergency Response Units to assist with traffic control. The event was entered into ATMS and DMS boards were activated and pushed out to a level 3 notifying motorists to use an alternate route. The accident reconstruction team was already on scene when the ER Units arrived. Traffic was diverted off onto Hampton Avenue. Notifications were made to EOC, MCS and Communications. An I-44 page was also sent notifying district leadership. The traffic engineer adjusted signal timing at Hampton and Eastbound I-44 ramps to assist with the flow of traffic. Lanes #1 and #2 were opened shortly after tow removed the passenger vehicle. Traffic queue was estimated at one mile and traffic returned to normal within five minutes of the lanes being reopened.
- **Event Duration:** 1 hour 58 minutes

Eastbound I-44 at Hampton Avenue 	Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Right Shoulder
Closed Hours/Minutes	1:02	1:02	1:02	1:53	1:53	1:53



## AM PEAK PERIOD MOBILITY SEPTEMBER 2017

6 am – 7 am

### LEGEND (Speed Index)

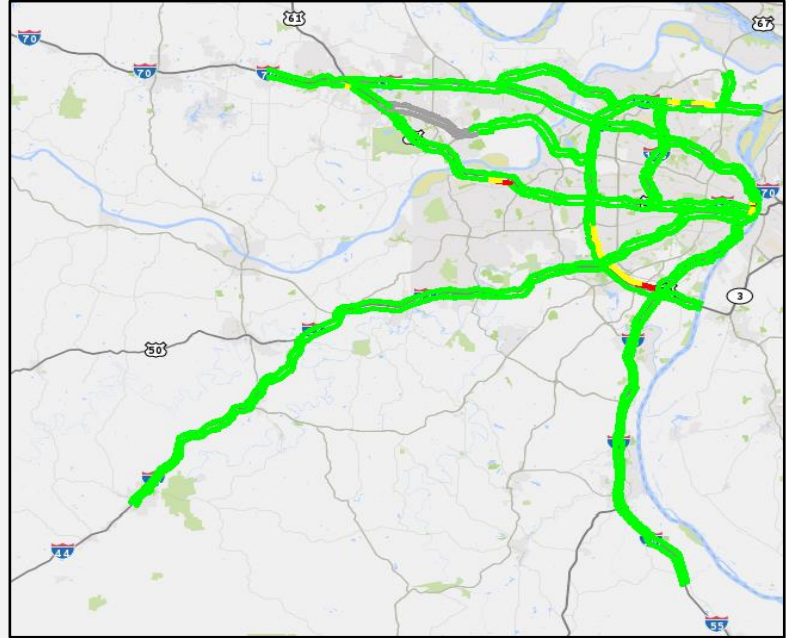
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Overall AM Mobility from September to October:

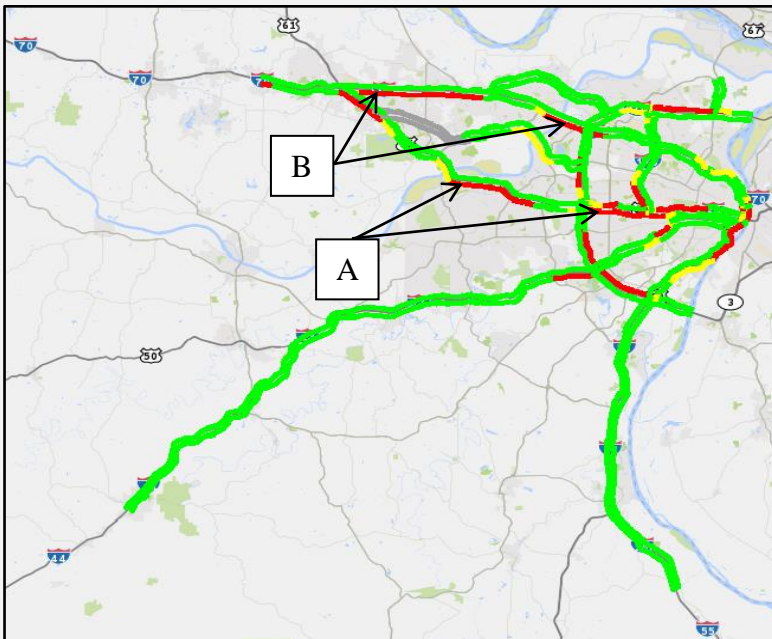
### SLIGHT IMPROVEMENTS

#### Highlighted Heat Map Locations

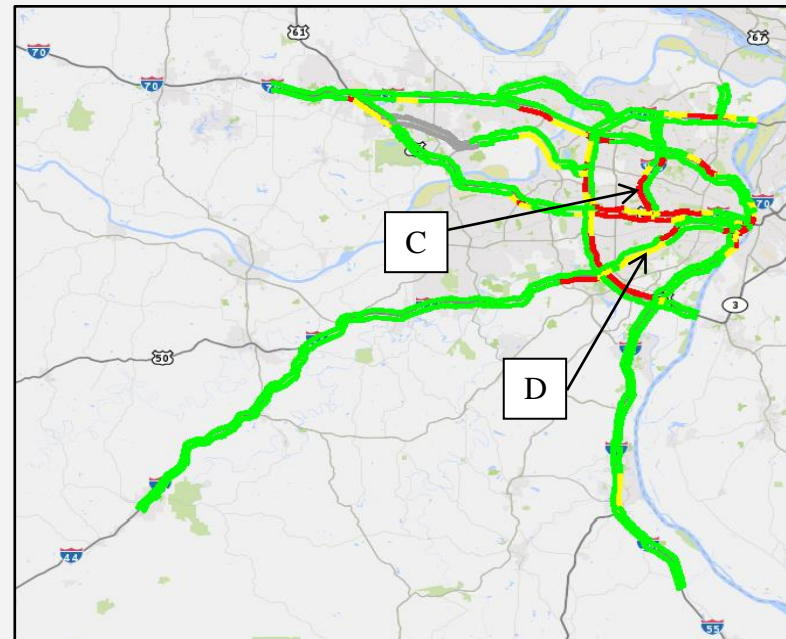
- A. EB I-64 from I-70 to I-55/I-44 (Downtown) (p. 29)
- B. EB I-70 from I-64/US-40/US-61 to I-270 (p. 30)
- C. SB I-170 from I-270 to I-64 (p. 31)
- D. EB I-44 from Route 141 to Shrewsbury (p. 32)



7 am – 8 am



8 am – 9 am





## AM PEAK PERIOD MOBILITY OCTOBER 2017

6 am – 7 am

### LEGEND (Speed Index)

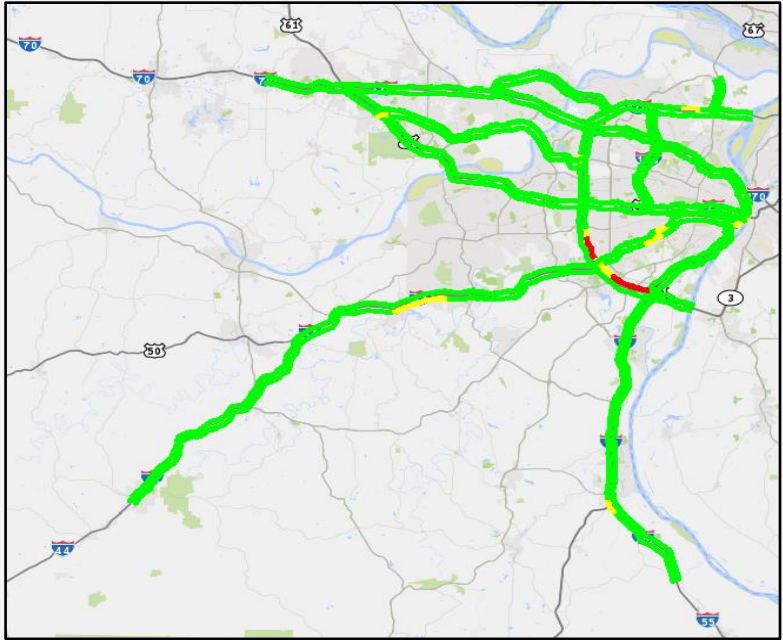
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Overall AM Mobility from September to October:

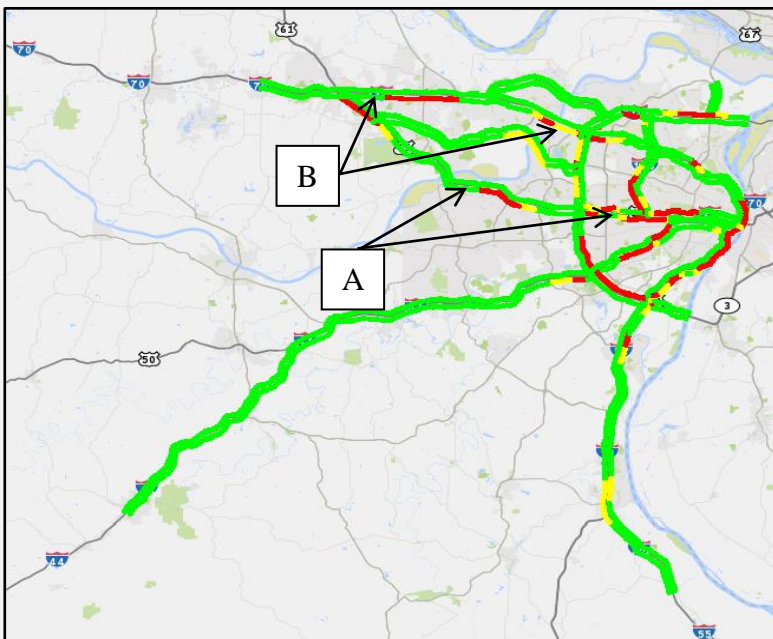
### SLIGHT IMPROVEMENTS

#### Highlighted Heat Map Locations

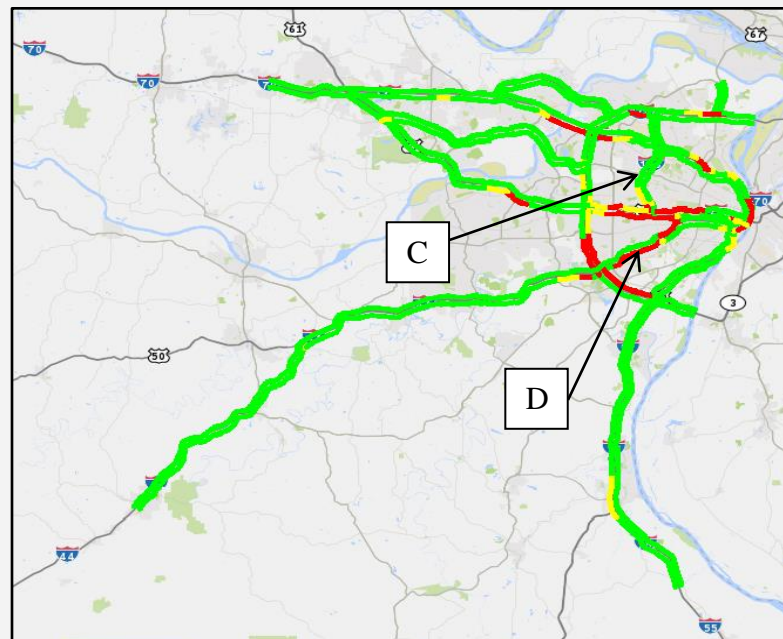
- A. EB I-64 from I-70 to I-55/I-44 (Downtown) (p. 29)
- B. EB I-70 from I-64/US-40/US-61 to I-270 (p. 30)
- C. SB I-170 from I-270 to I-64 (p. 31)
- D. EB I-44 from Route 141 to Shrewsbury (p. 32)



7 am – 8 am



8 am – 9 am

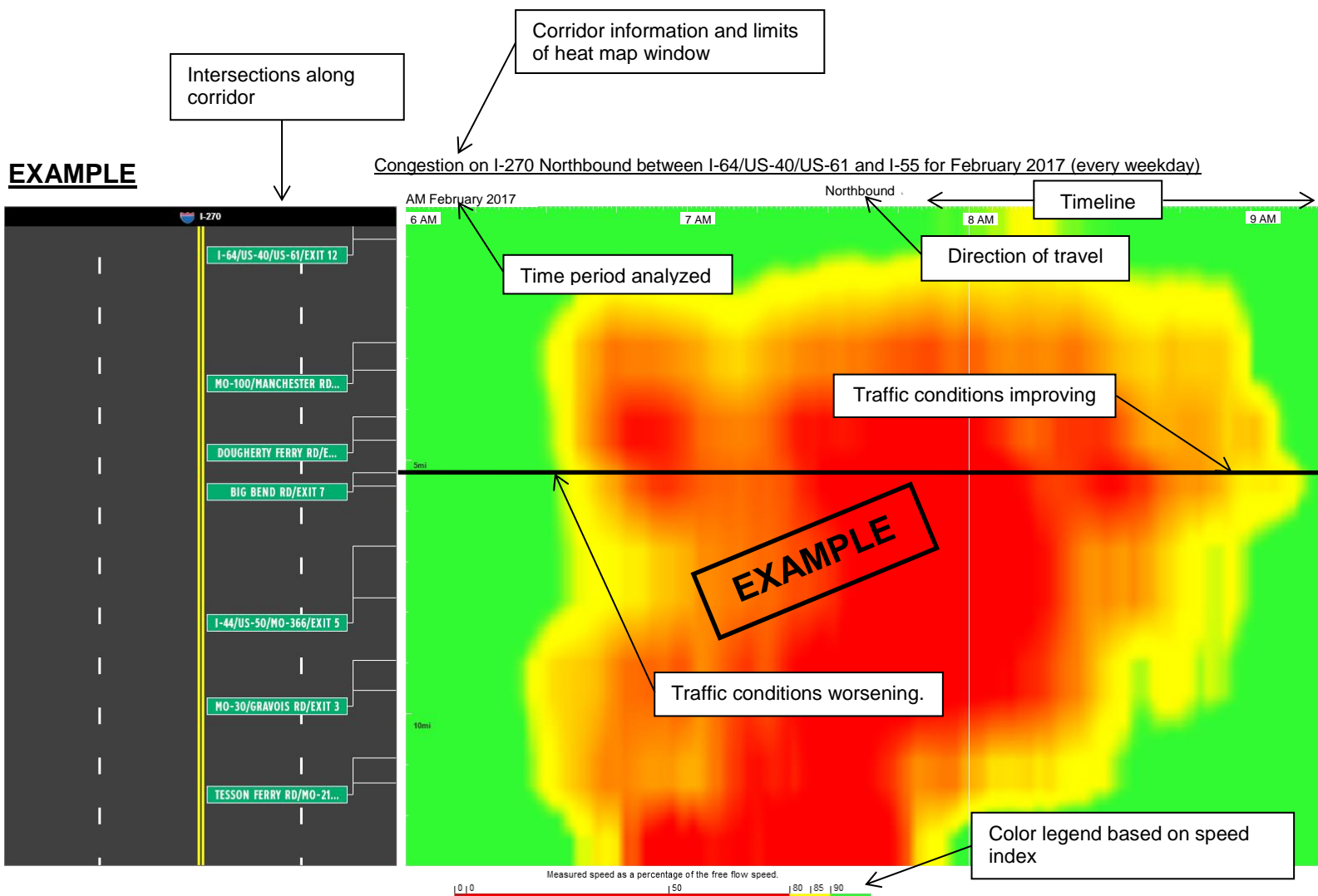


# FREEWAY MANAGEMENT

## How to read the Congestion Scan Heat Maps

- The heat maps depict congestion along a corridor over a set time period.
- The map below shows Northbound I-270 from I-55 to I-64 during the hours of 6am – 9am for the month of February 2017.
- Following a horizontal line across the heat map at a given intersection will show traffic conditions at that location over time. Using the intersection of Big Bend Road as an example the heat map depicts conditions worsening around 6:30am, starting to improve around 8:45am and near free flow speeds by 9:15am.
- Alternatively, tracing the heat map vertically depicts traffic conditions along the corridor at that moment in time.

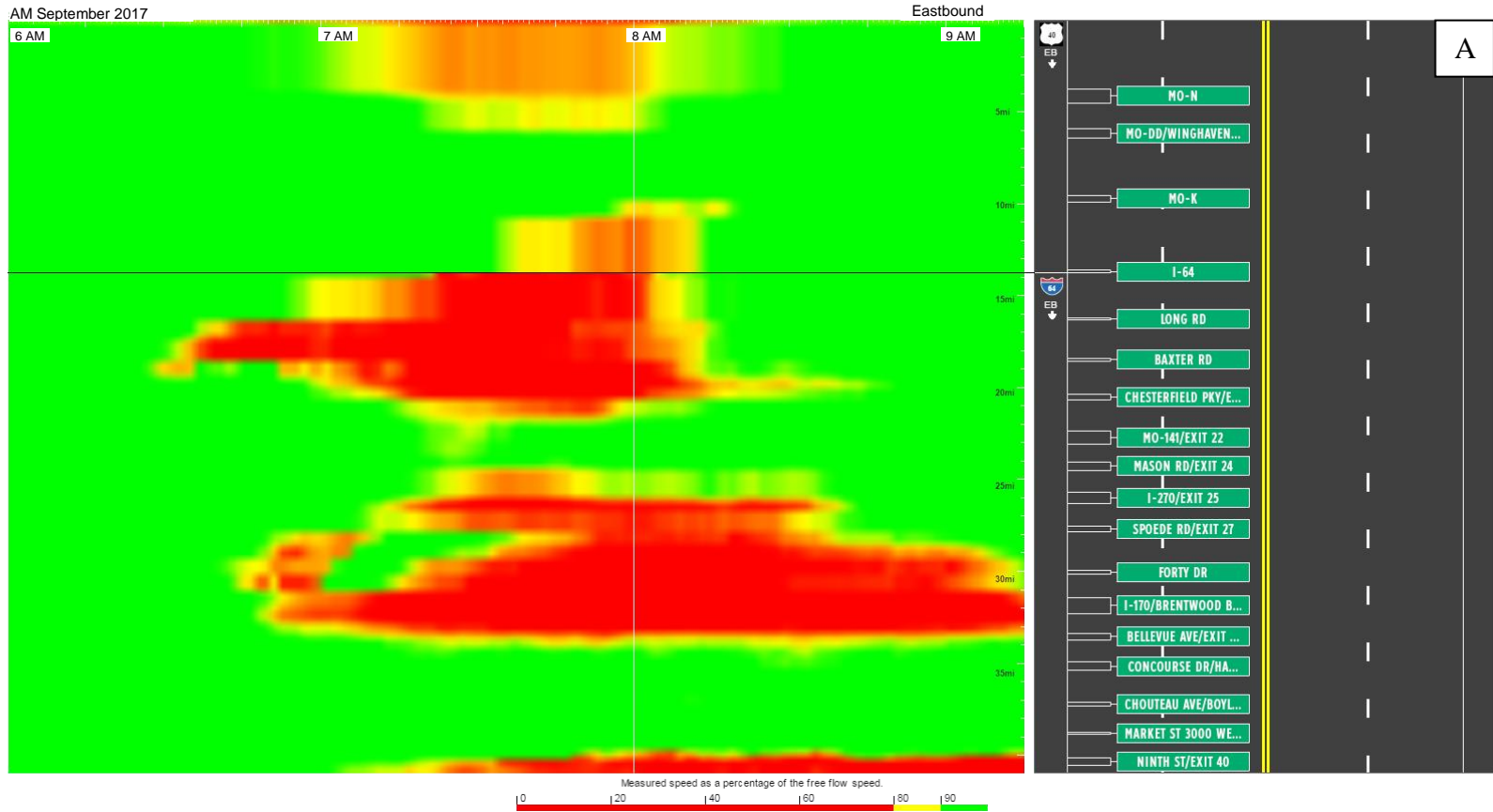
### EXAMPLE



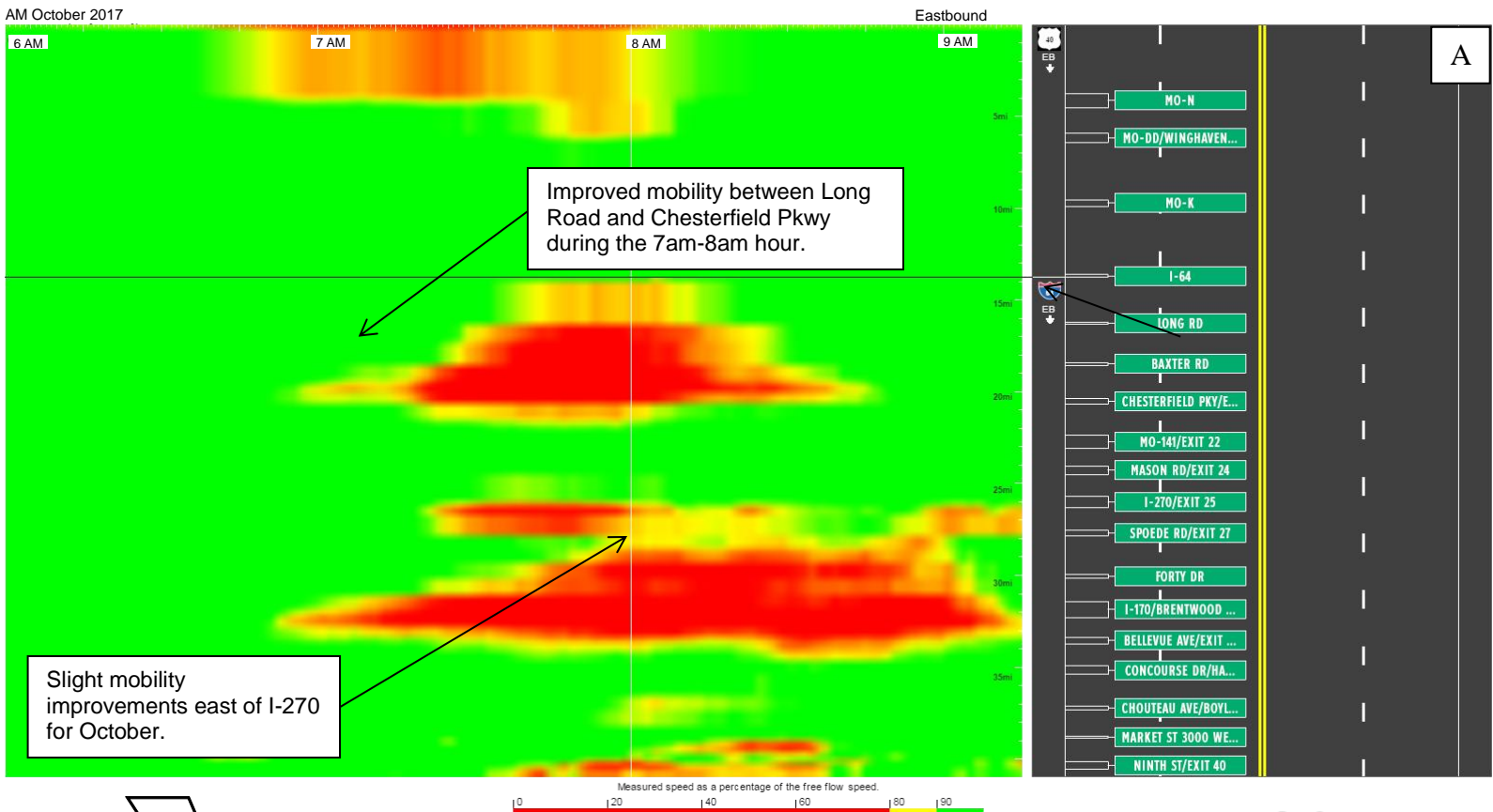


# FREEWAY MANAGEMENT

Congestion on I-64 Eastbound between I-70 and I-55/I-44 (Downtown) for September 2017 (every weekday)

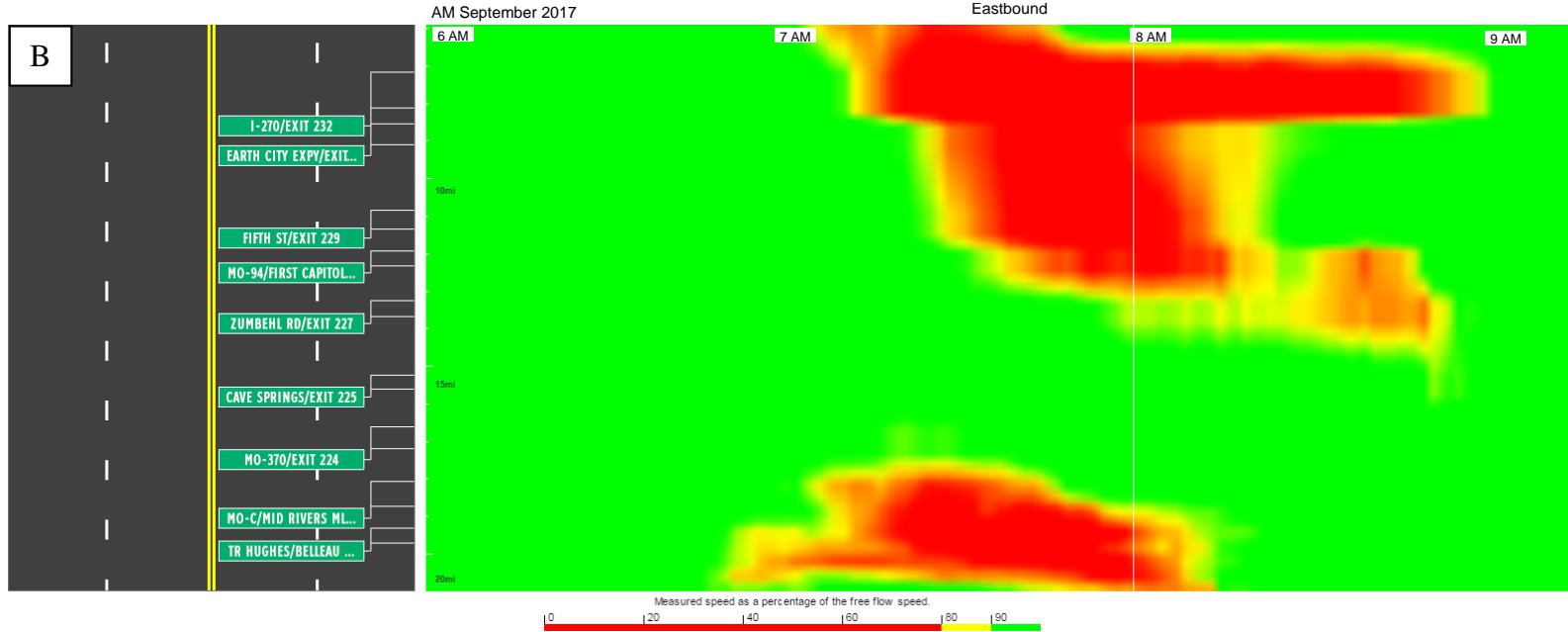


Congestion on I-64 Eastbound between I-70 and I-55/I-44 (Downtown) for October 2017 (every weekday)

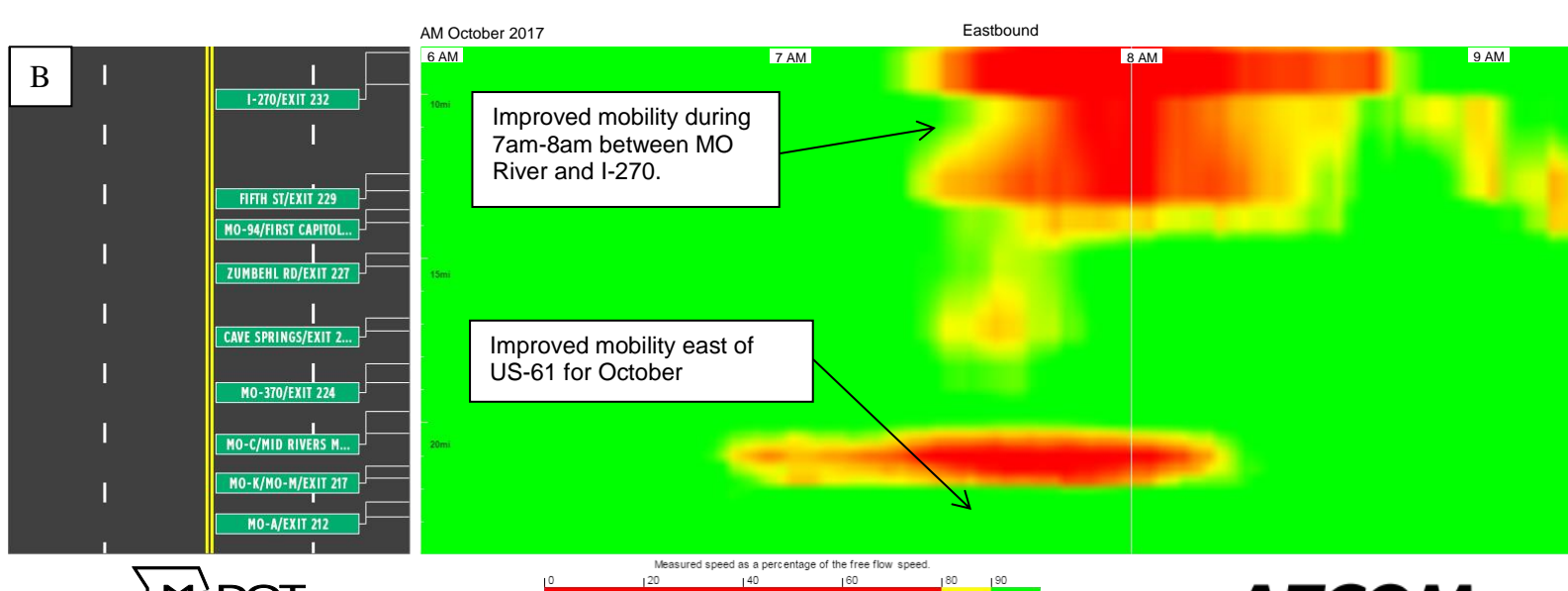


# FREEWAY MANAGEMENT

Congestion on I-70 Eastbound between I-64/US-40/US-61 and I-270 for September 2017 (every weekday)



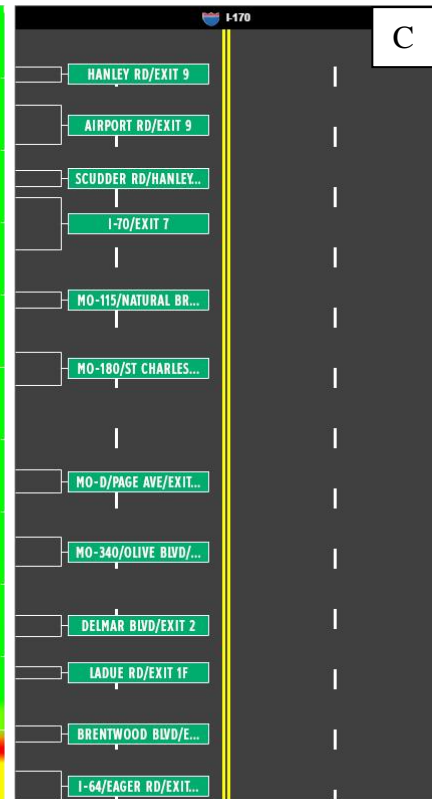
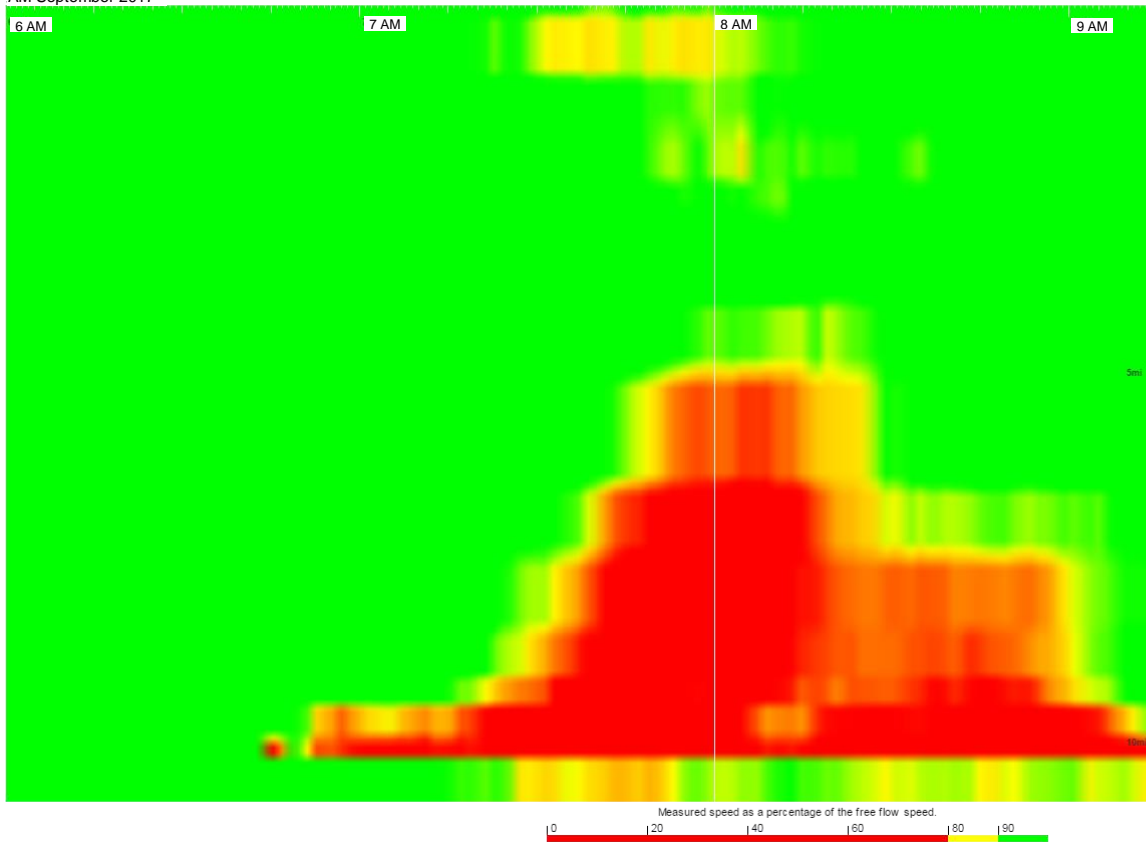
Congestion on I-70 Eastbound between I-64/US-40/US-61 and I-270 for October 2017 (every weekday)



# FREeway MANAGEMENT

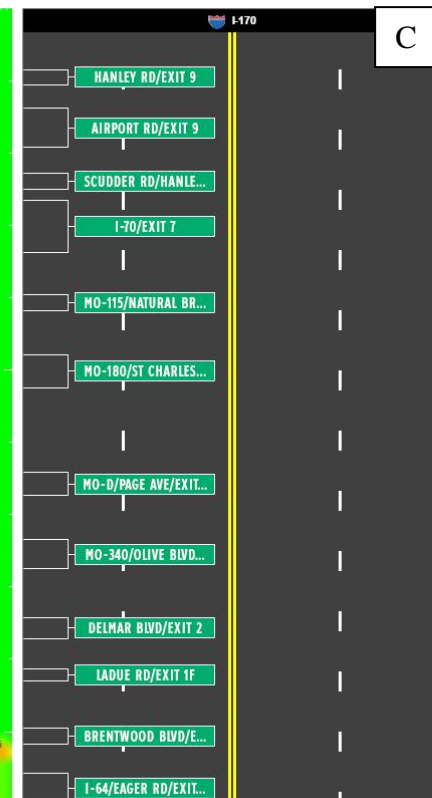
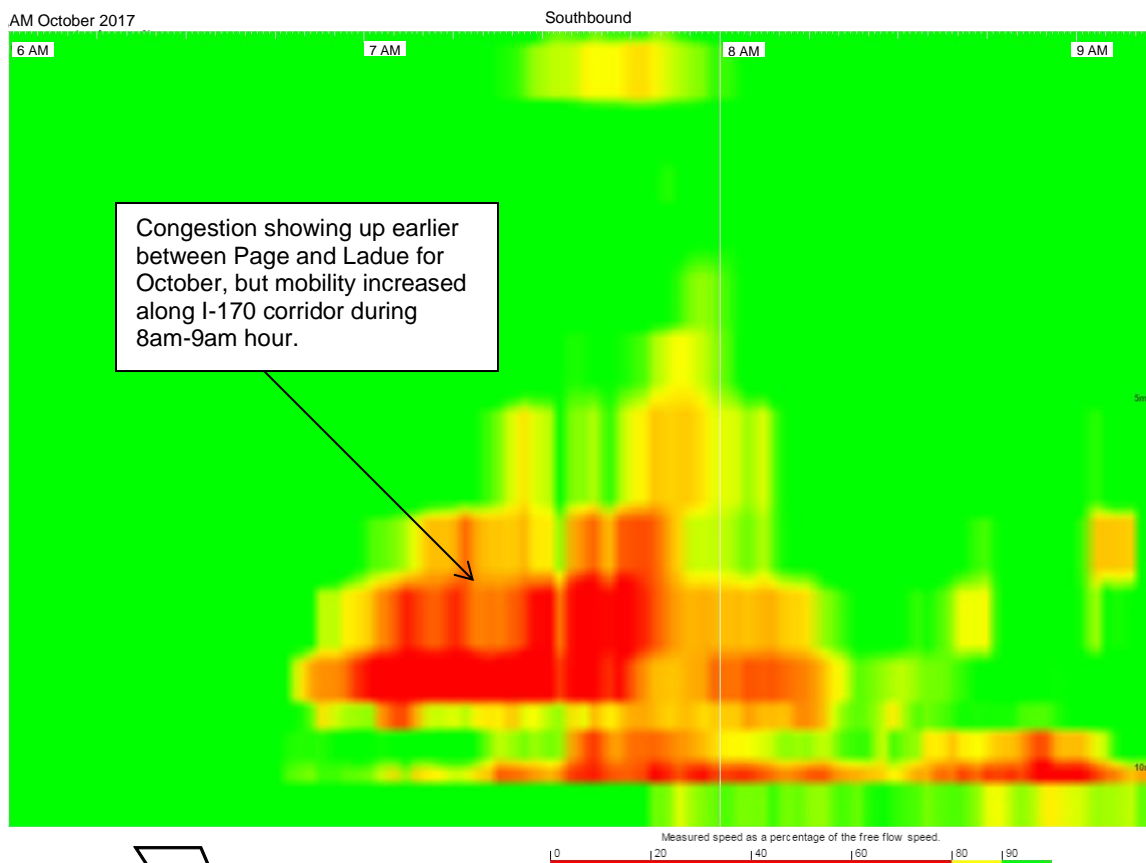
Congestion on I-170 Southbound between I-270 and I-64 for September 2017 (every weekday)

AM September 2017



Congestion on I-170 Southbound between I-270 and I-64 for October 2017 (every weekday)

AM October 2017

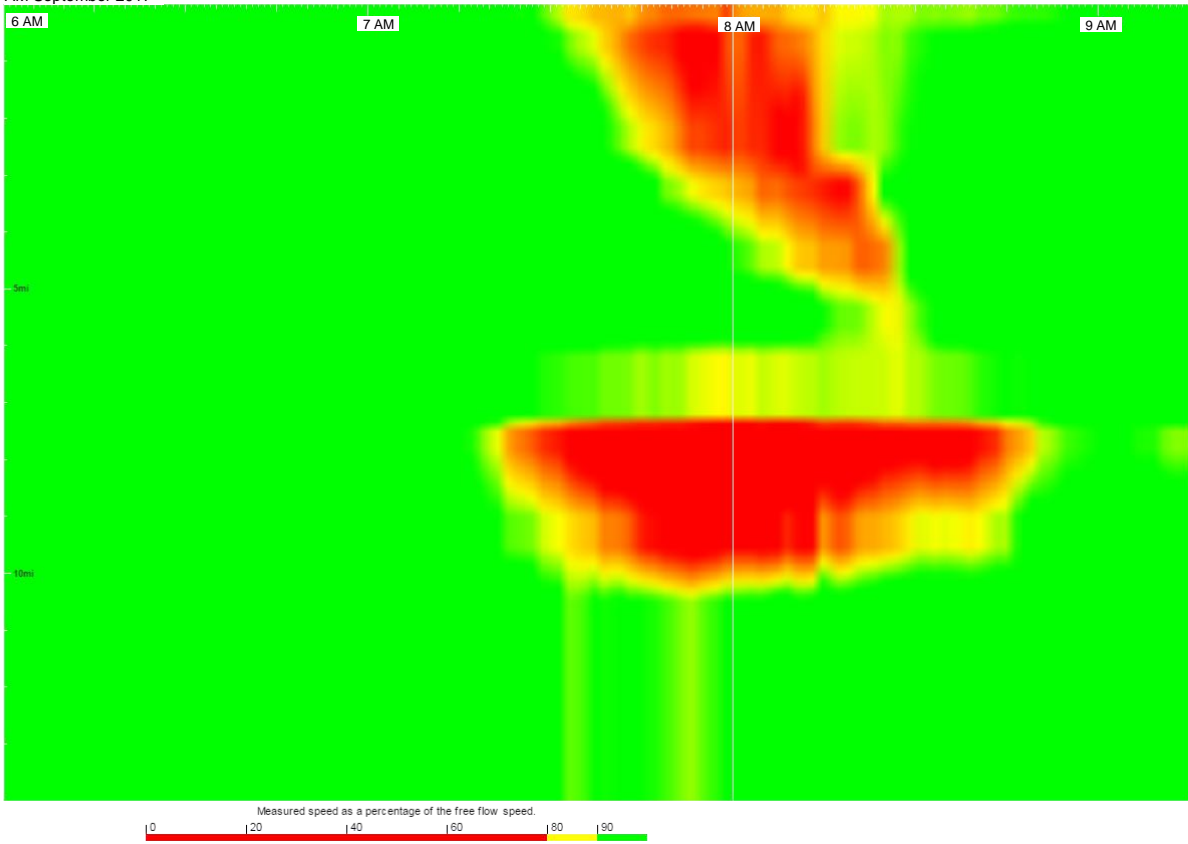
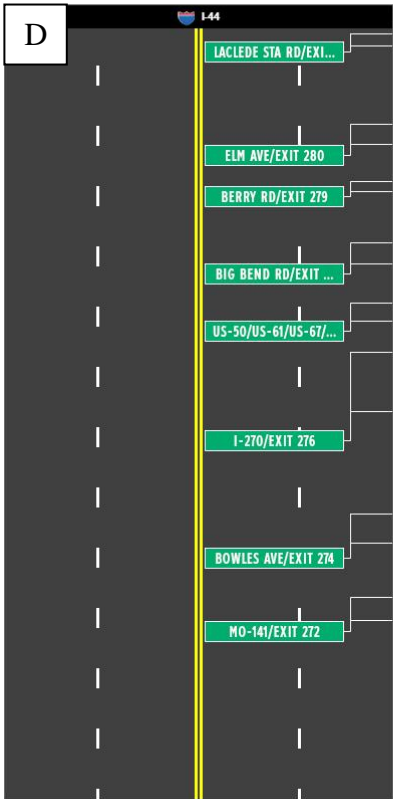


# 

Congestion on I-44 Eastbound between Route 141 and Shrewsbury for September 2017 (every weekday)

AM September 2017

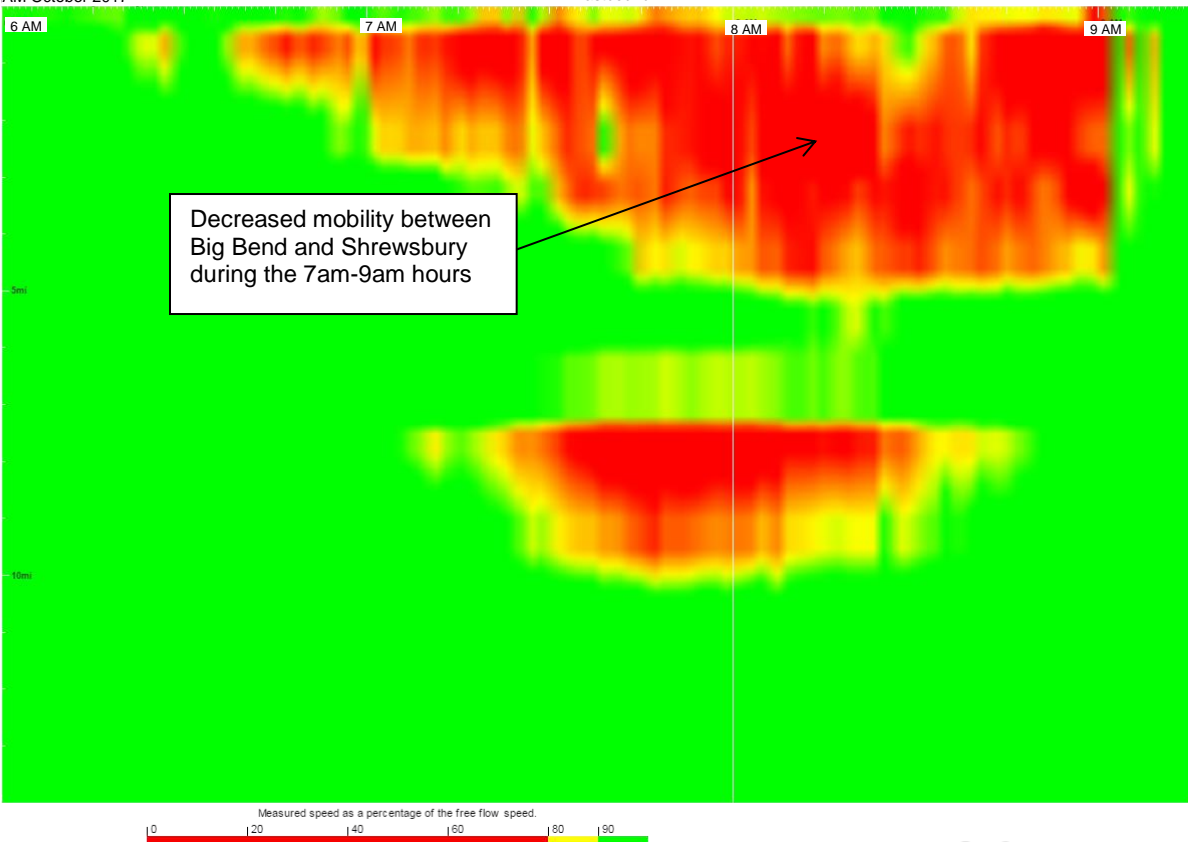
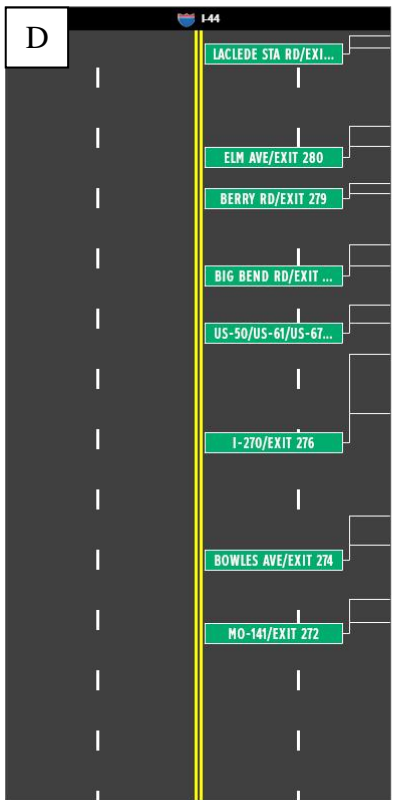
Eastbound



Congestion on I-44 Eastbound between Route 141 and Shrewsbury for October 2017 (every weekday)

AM October 2017

Eastbound







# FREEWAY MANAGEMENT

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## PM PEAK PERIOD MOBILITY SEPTEMBER 2017

4 pm – 5 pm

### LEGEND (Speed Index)

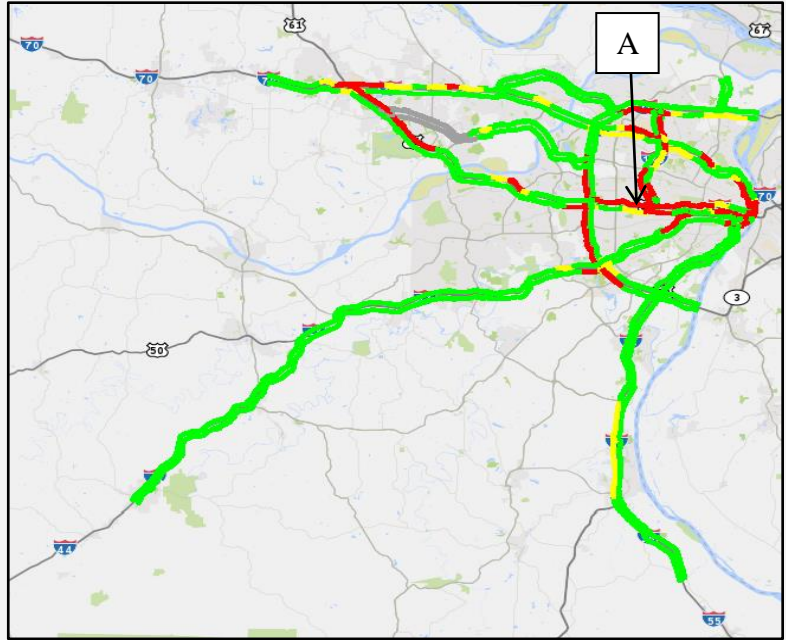
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Overall PM Mobility from September to October:

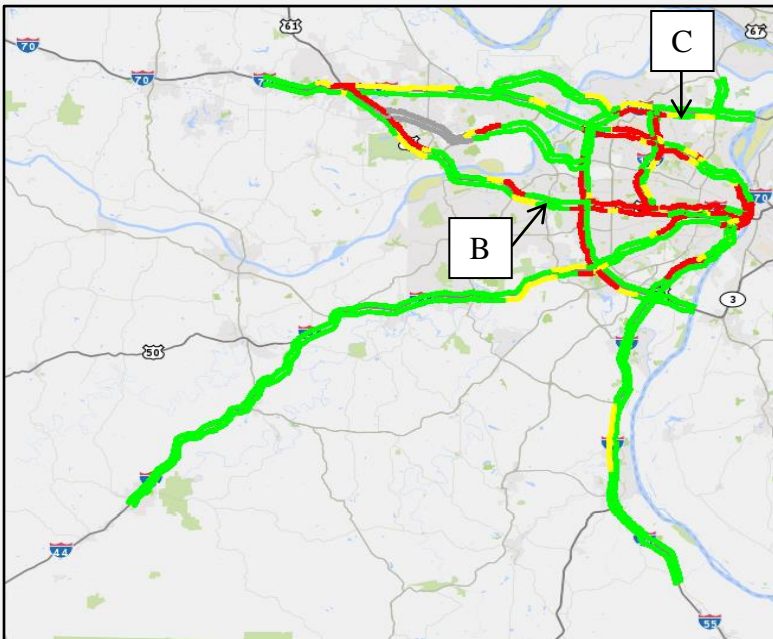
**DECREASED**

### Highlighted Heat Map Locations

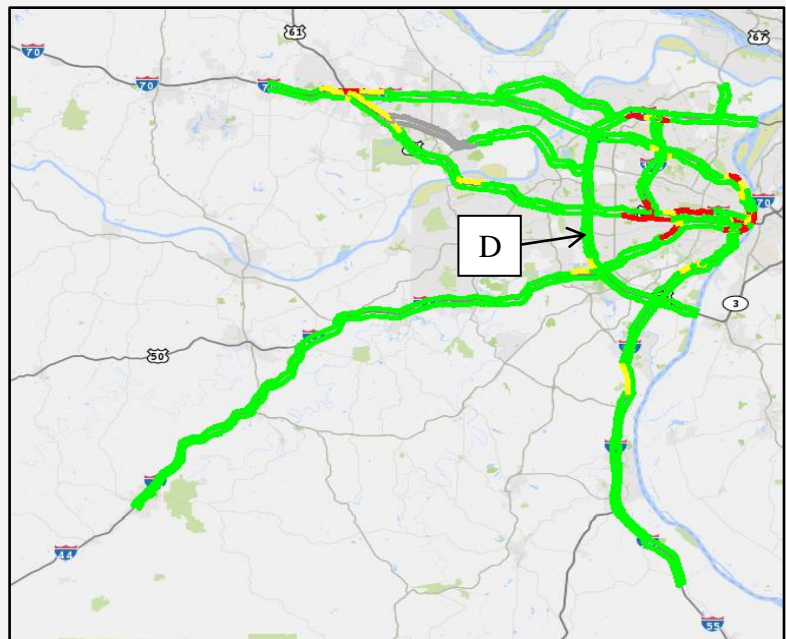
- A. WB I-64 from I-55/I-44 (Downtown) to I-270 (p. 36)
- B. EB I-64 from Olive Blvd. to I-55/I-44 (Downtown) (p. 37)
- C. WB I-270 from Route 367 to I-70 (p. 38)
- D. SB I-270 from Olive Blvd. to I-55 (p. 39)



5 pm – 6 pm



6 pm – 7 pm



## PM PEAK PERIOD MOBILITY OCTOBER 2017

4 pm – 5 pm

### LEGEND (Speed Index)

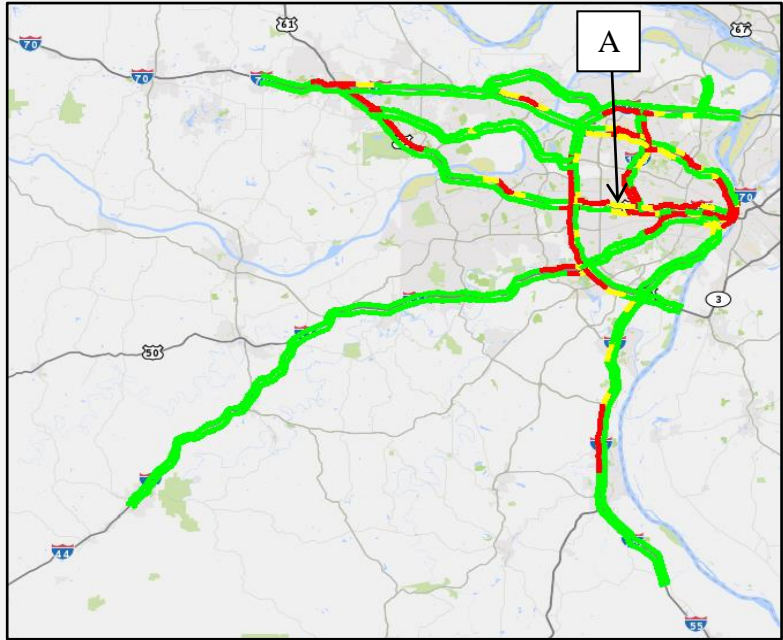
- High Mobility (.90+)
- Medium Mobility (.80-.90)
- Low Mobility (< .80)

Overall PM Mobility from September to October:

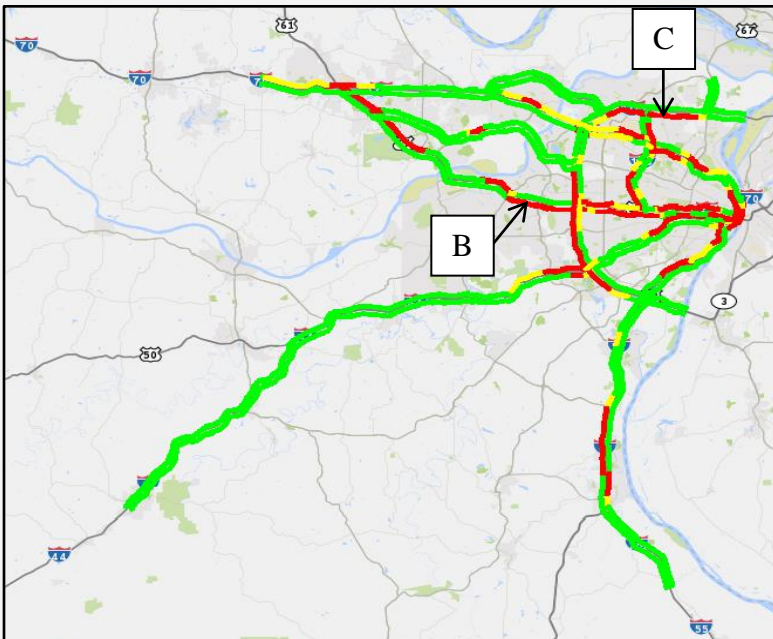
**DECREASED**

### Highlighted Heat Map Locations

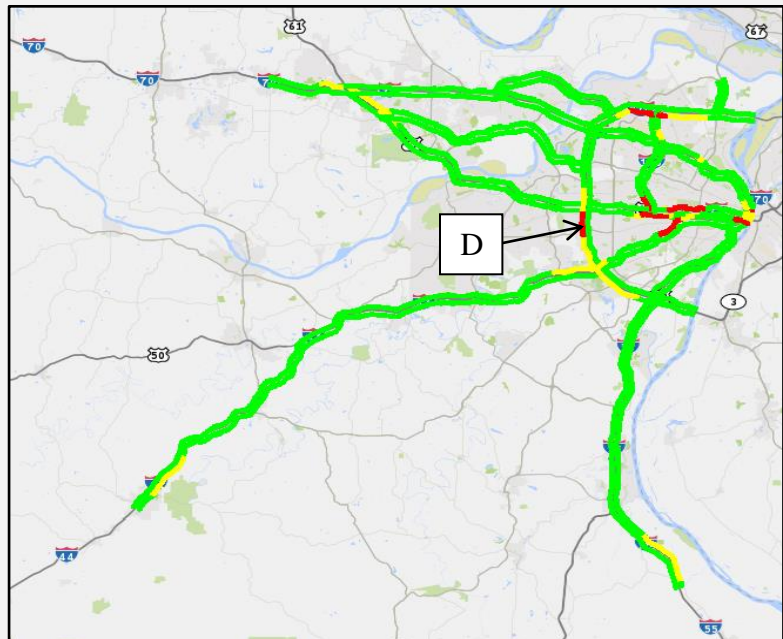
- A. WB I-64 from I-55/I-44 (Downtown) to I-270 (p. 36)
- B. EB I-64 from Olive Blvd. to I-55/I-44 (Downtown) (p. 37)
- C. WB I-270 from Route 367 to I-70 (p. 38)
- D. SB I-270 from Olive Blvd. to I-55 (p. 39)



5 pm – 6 pm



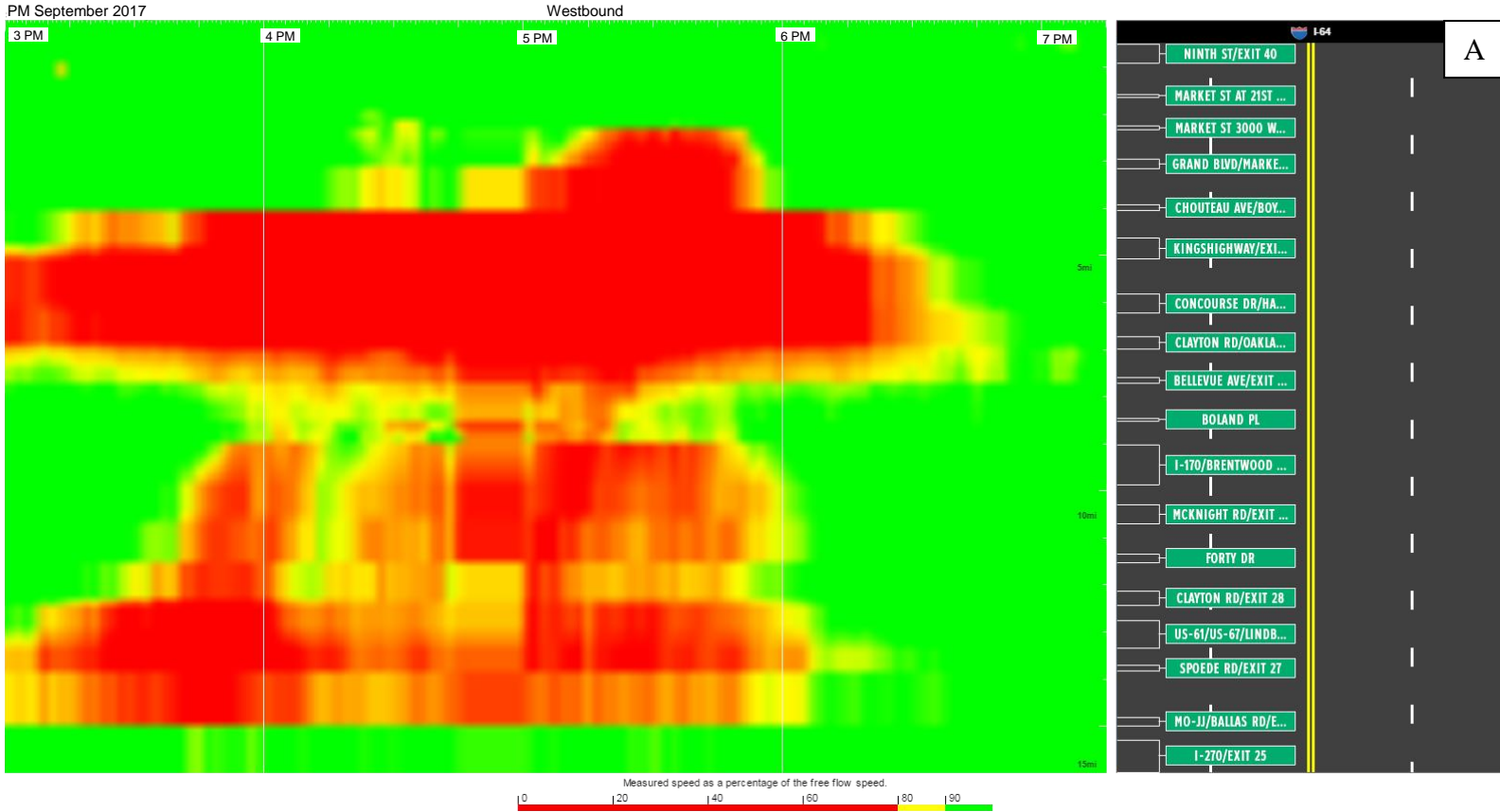
6 pm – 7 pm



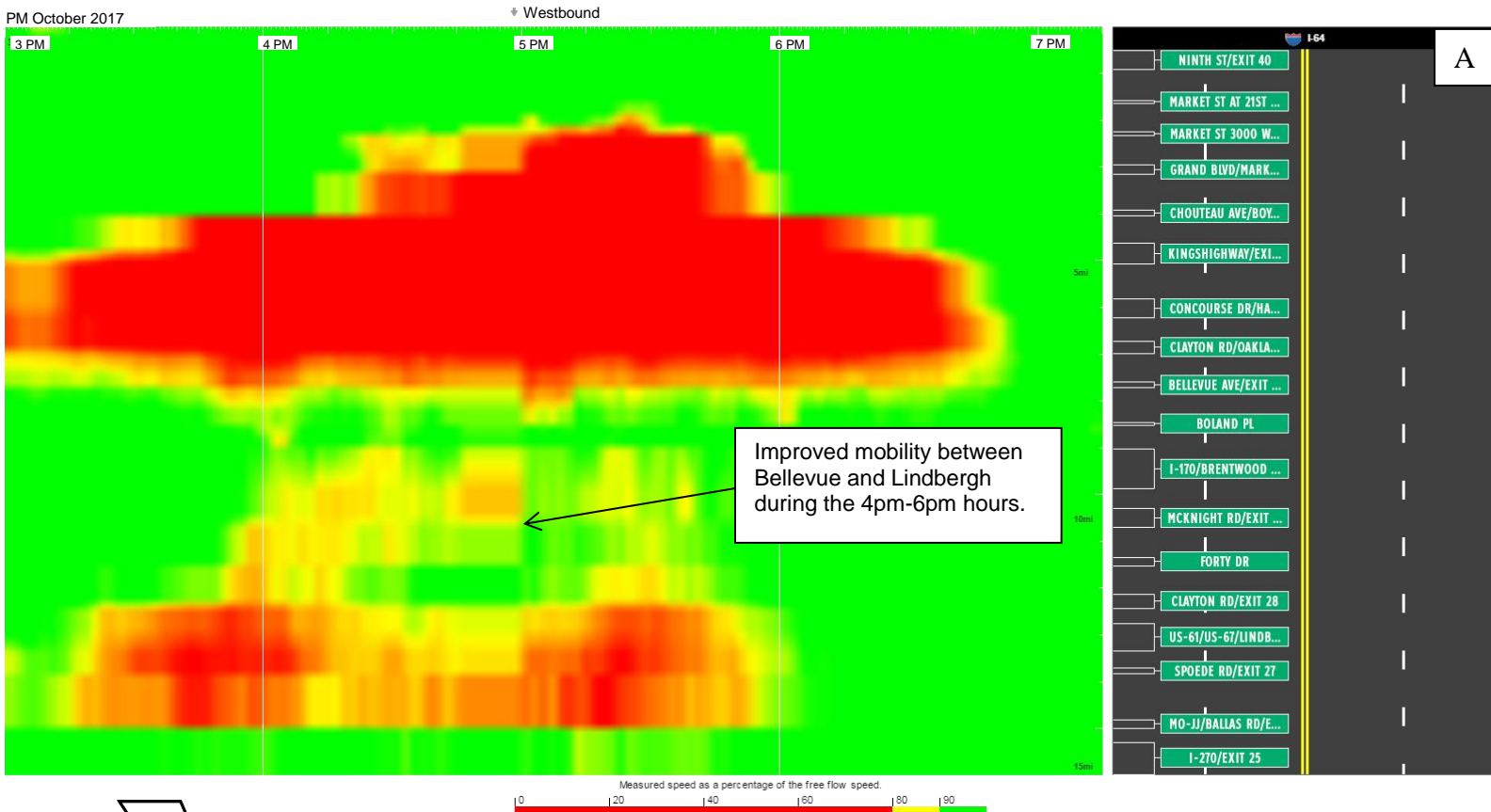


# 

Congestion on I-64 Westbound between I-55/I-44 (Downtown) and I-270 for September 2017 (every weekday)



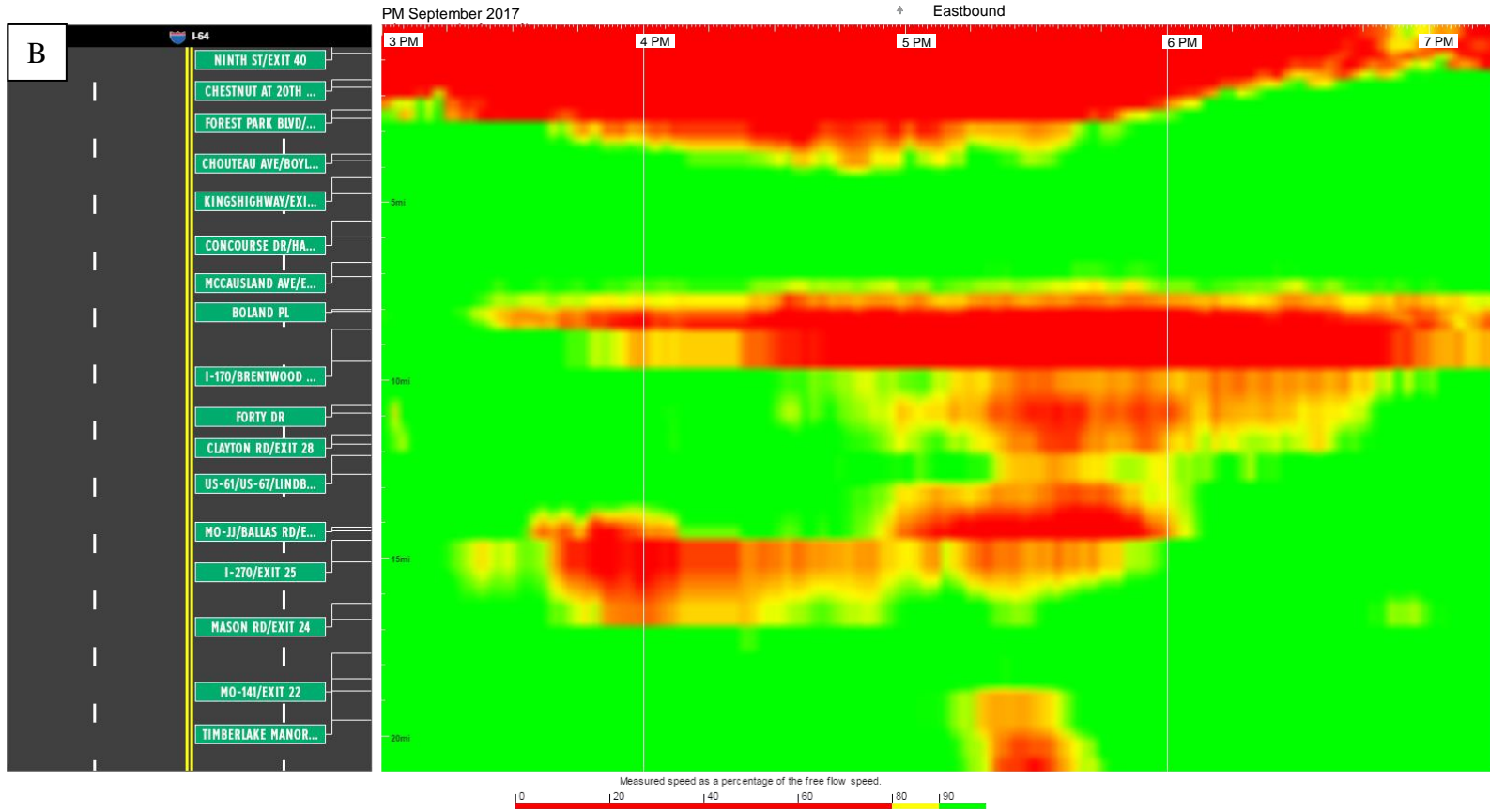
Congestion on I-64 Westbound between I-55/I-44 (Downtown) and I-270 for October 2017 (every weekday)



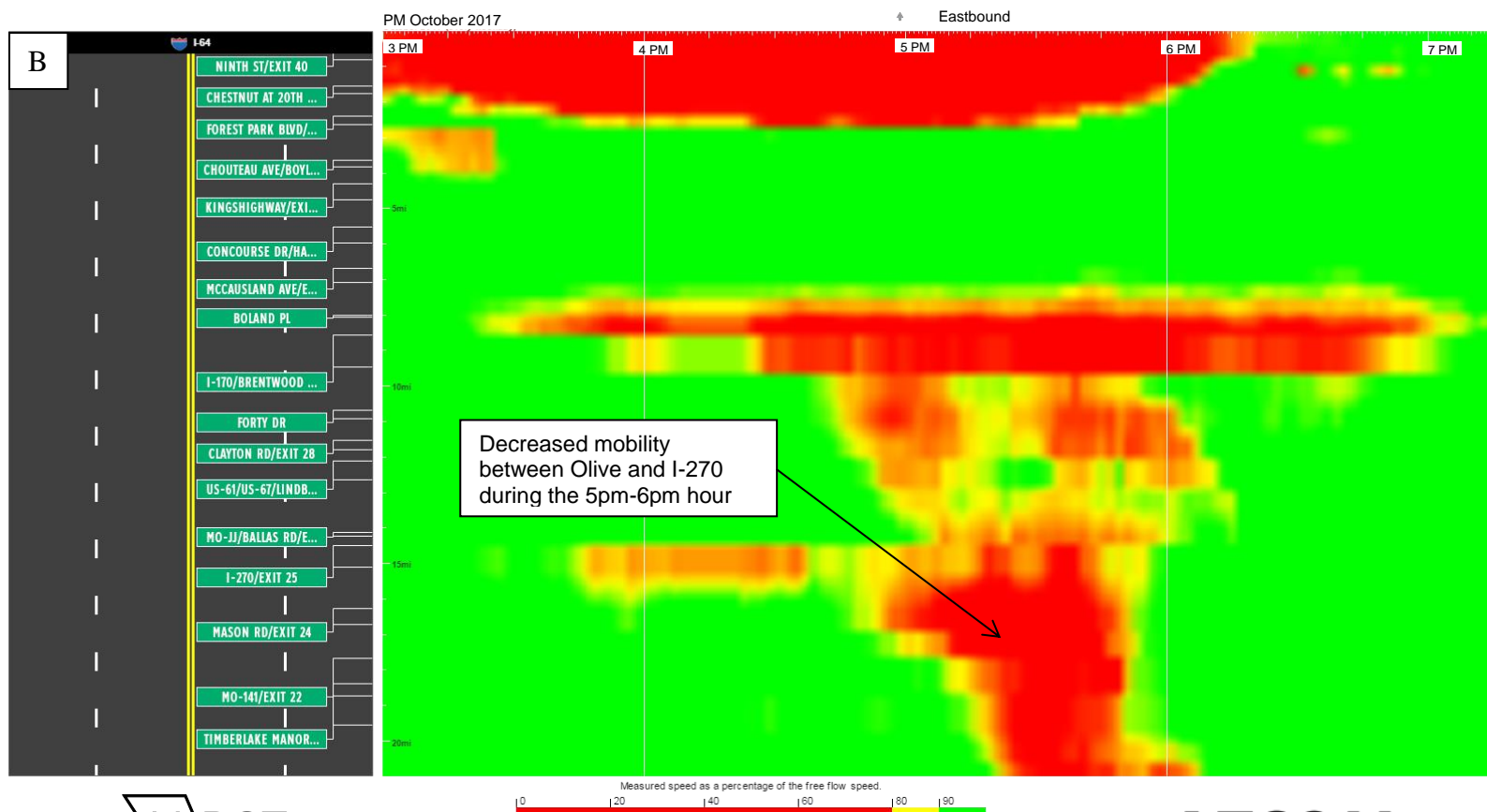


# FREEWAY MANAGEMENT

Congestion on I-64 Eastbound between Olive Blvd. and I-55/I-44 (Downtown) for September 2017 (every weekday)



Congestion on I-64 Eastbound between Olive Blvd. and I-55/I-44 (Downtown) for October 2017 (every weekday)

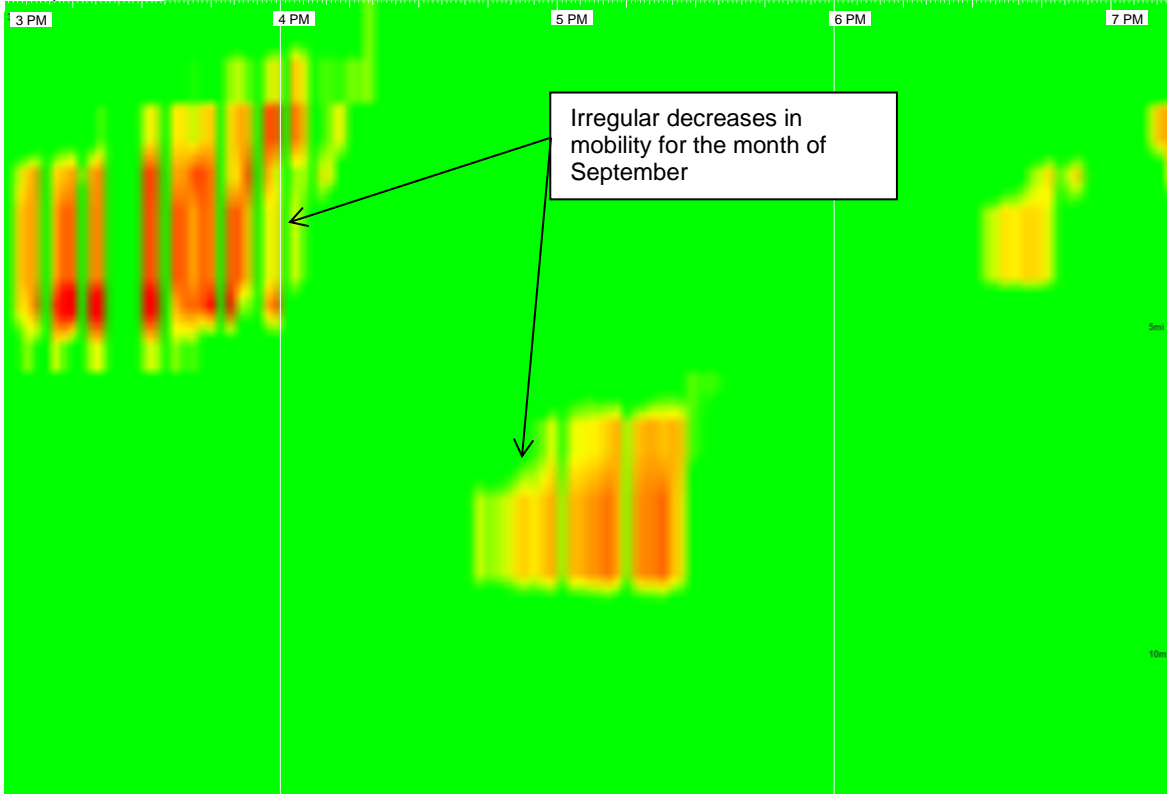


# FREEWAY MANAGEMENT

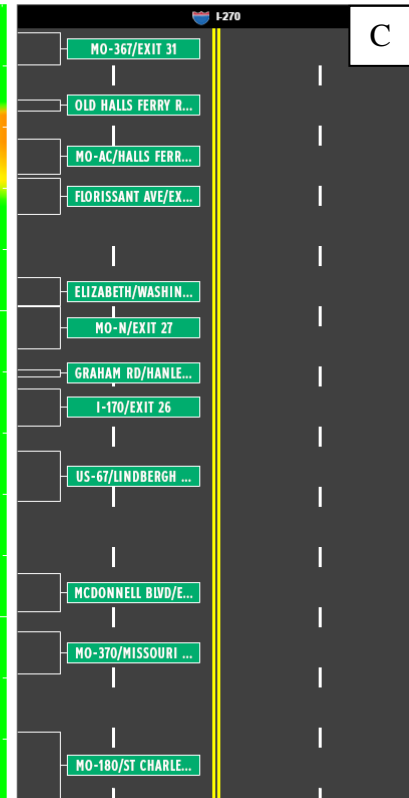
Congestion on I-270 Westbound between Route 367 and I-70 for September 2017 (every weekday)

PM September 2017

Westbound



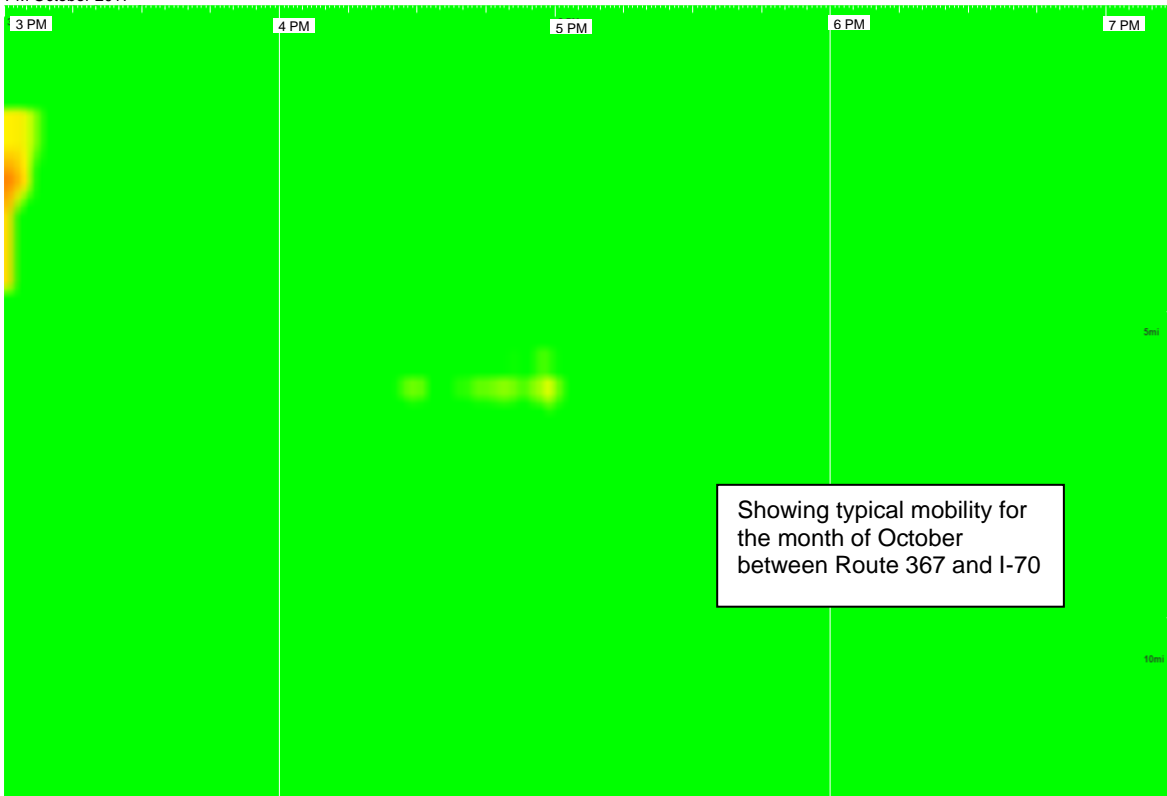
Measured speed as a percentage of the free flow speed.



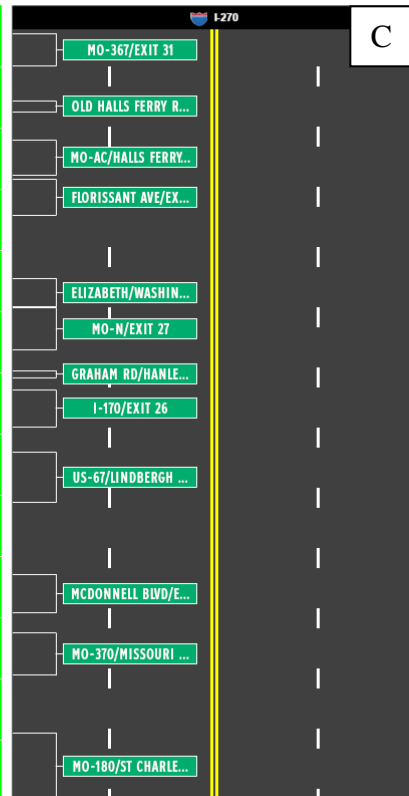
Congestion on I-270 Westbound between Route 367 and I-70 for October 2017 (every weekday)

PM October 2017

Westbound

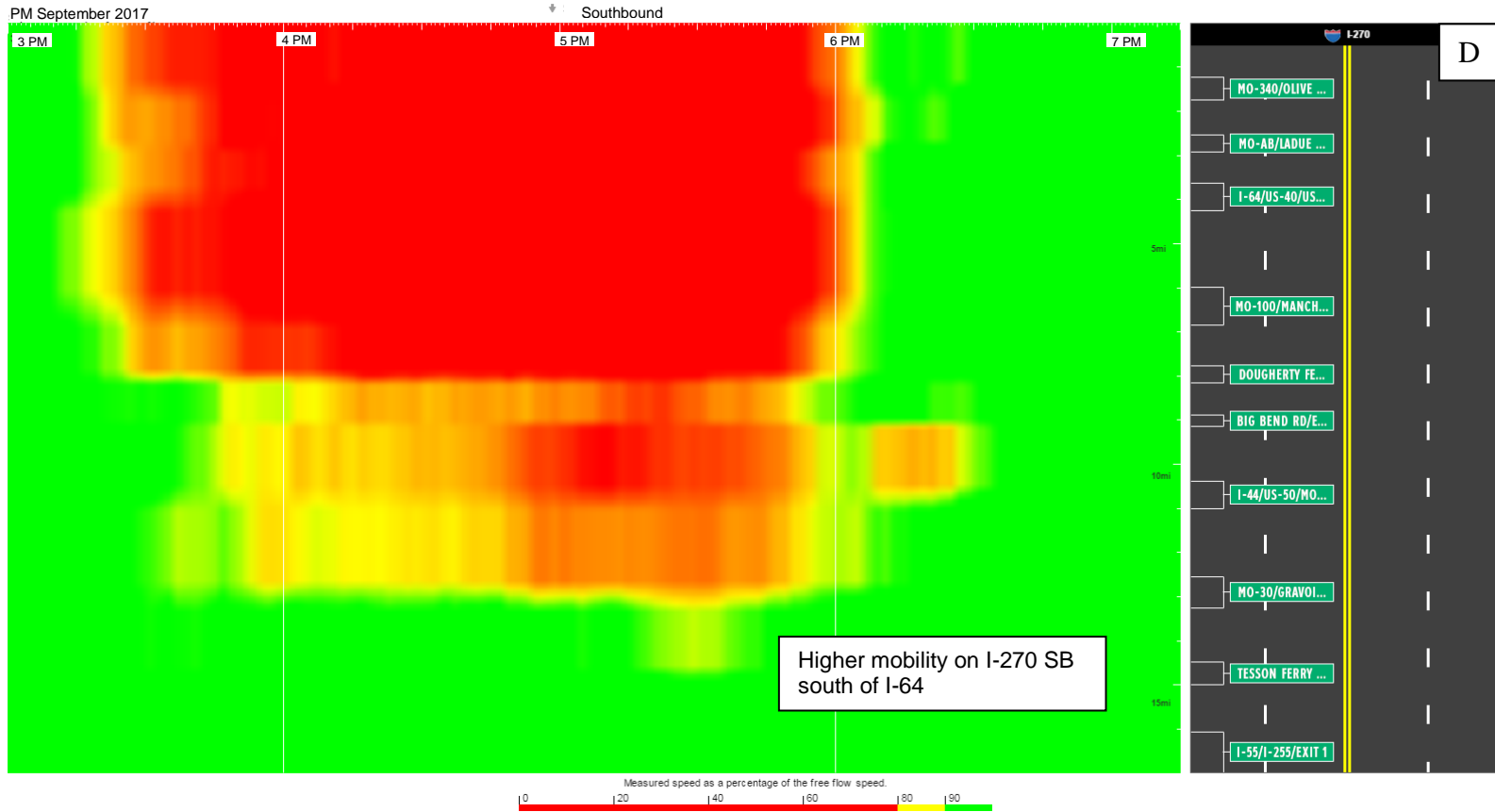


Measured speed as a percentage of the free flow speed.

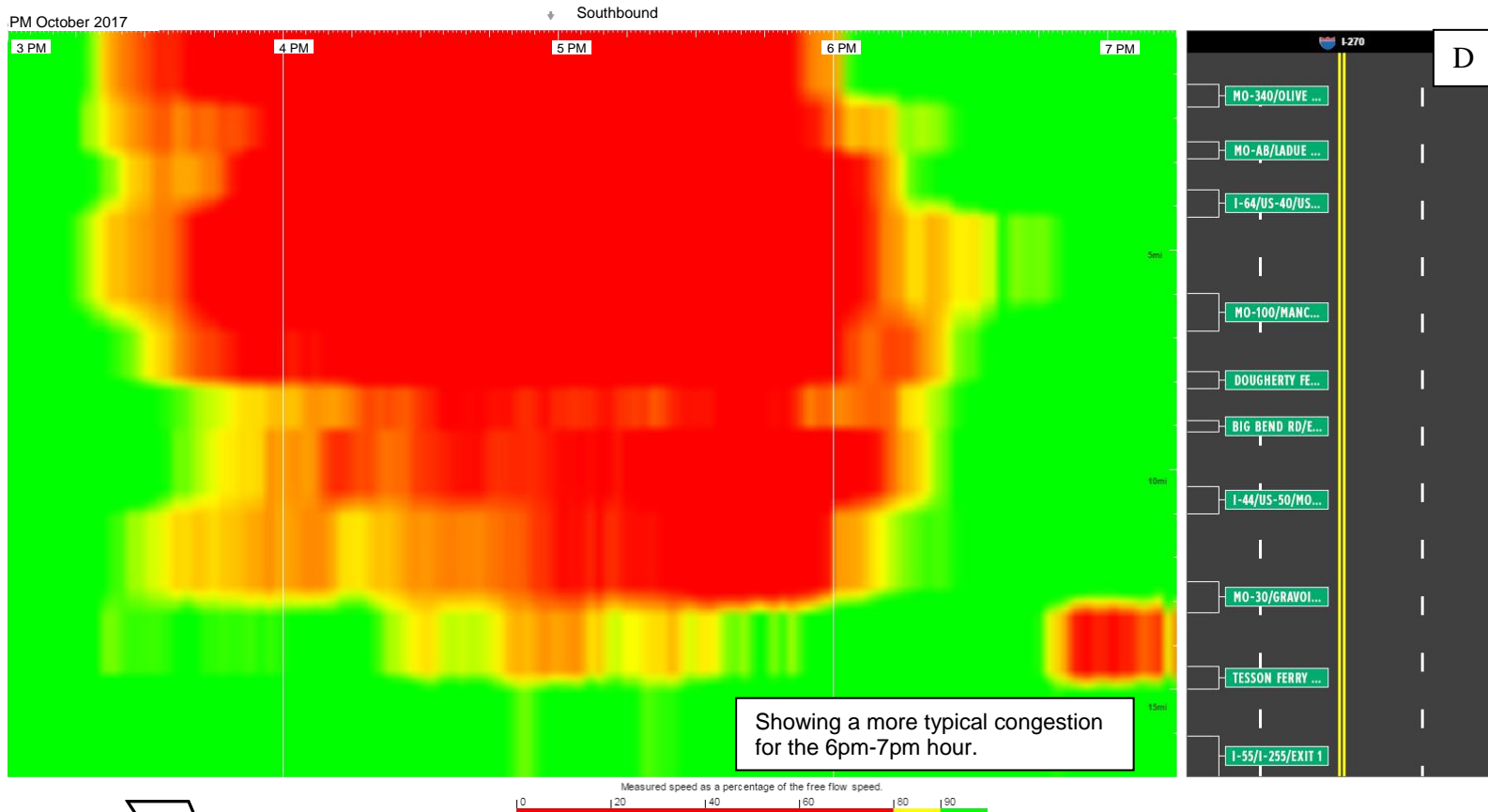


# FREEWAY MANAGEMENT

Congestion on I-270 Southbound between Olive Blvd. and I-55 for September 2017 (every weekday)



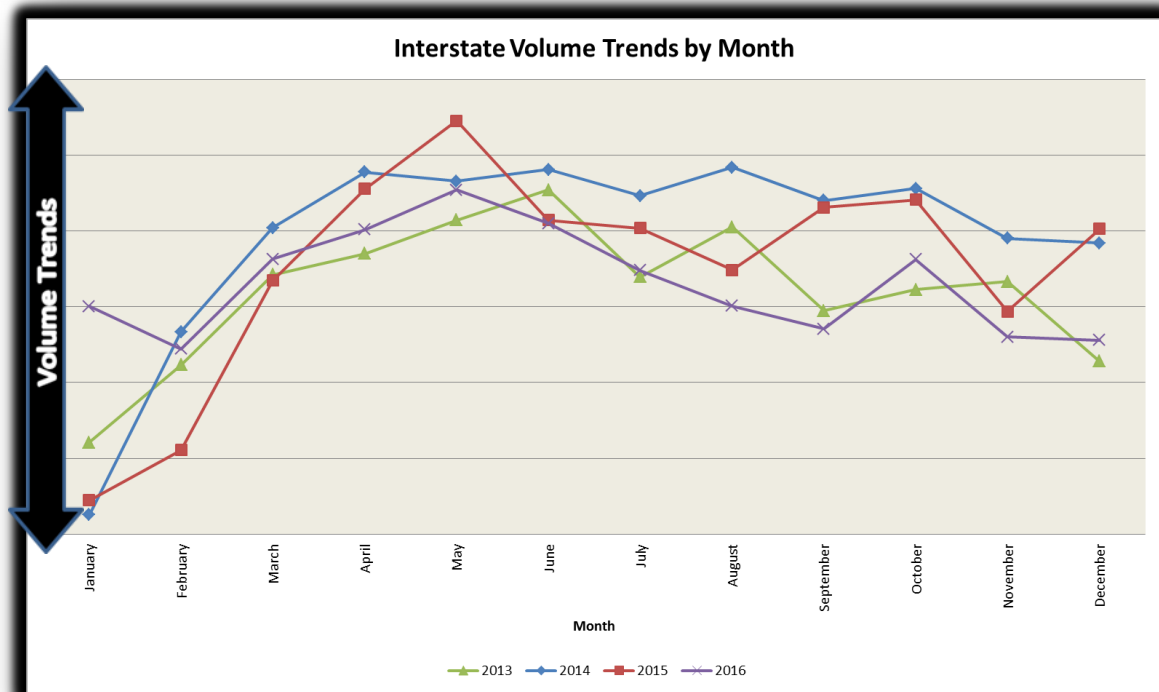
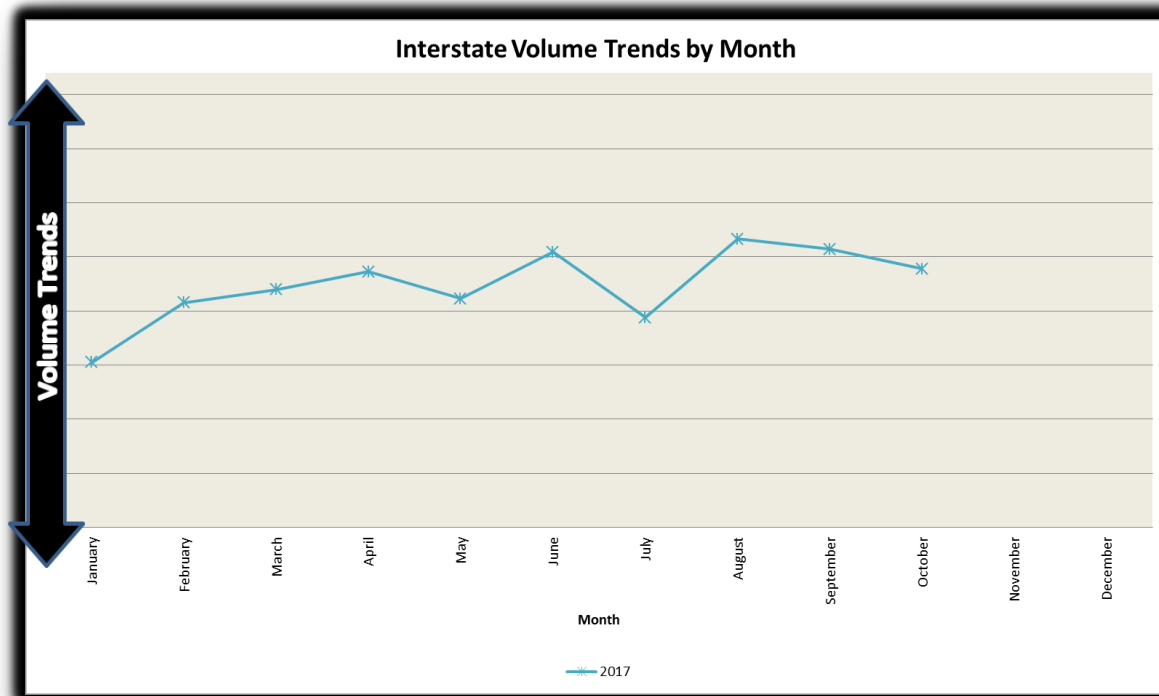
Congestion on I-270 Southbound between Olive Blvd. and I-55 for October 2017 (every weekday)







# FREEWAY MANAGEMENT

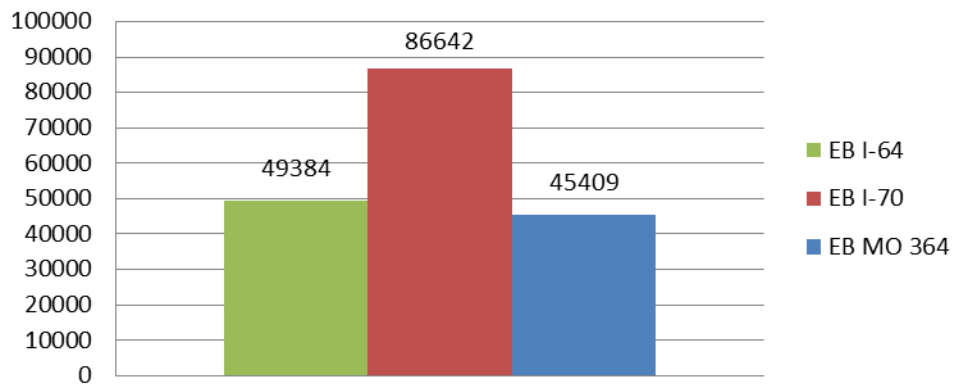


NEW for 2017! The focus area for calculating the average 24 hour volumes was revisited to include all SL District Urban Freeways including Route 364 from I-64 to I-270, Route 367 from I-270 to Route 67, and Route 370 from I-70 to I-270. These freeways are now included in this calculation while the loss of probe data sensors will cause some routes to be excluded. 2017 volumes will be reported for trending purpose only as actual volumes are not comparable to previous years.

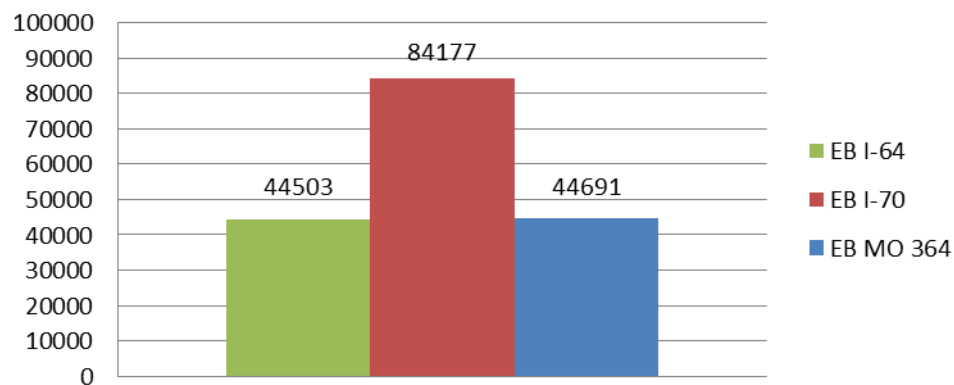


# FREEWAY MANAGEMENT

**Sep 2017 EB MO River Crossings**  
**Total = 181,434**



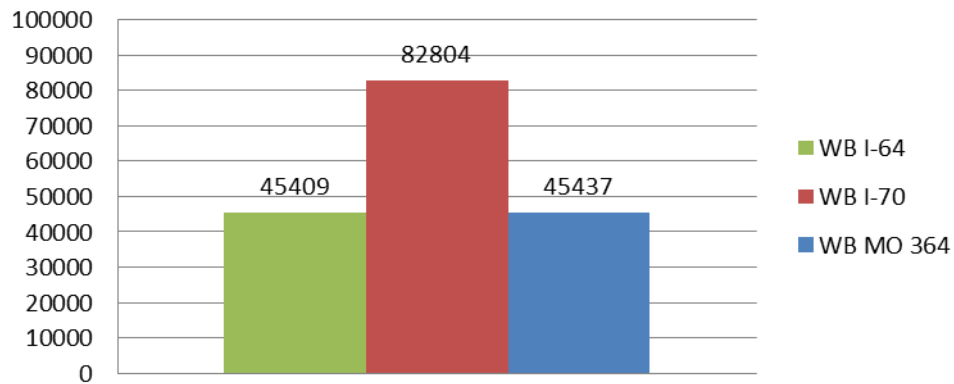
**October 2017 EB MO River Crossings**  
**Total = 173,371**



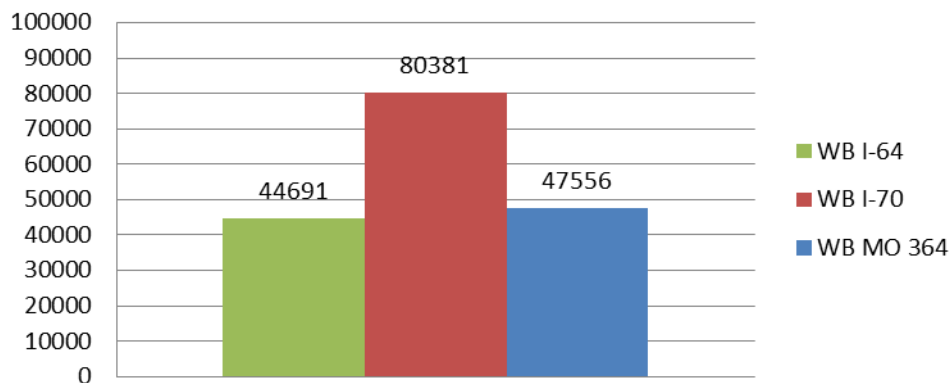


# FREEWAY MANAGEMENT

**Sep 2017 WB MO River Crossings**  
**Total = 173,650**



**October 2017 WB MO River Crossings**  
**Total = 172,628**

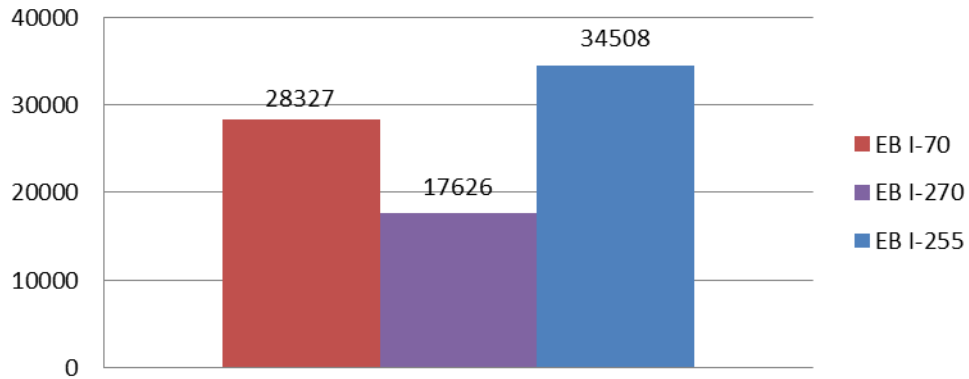




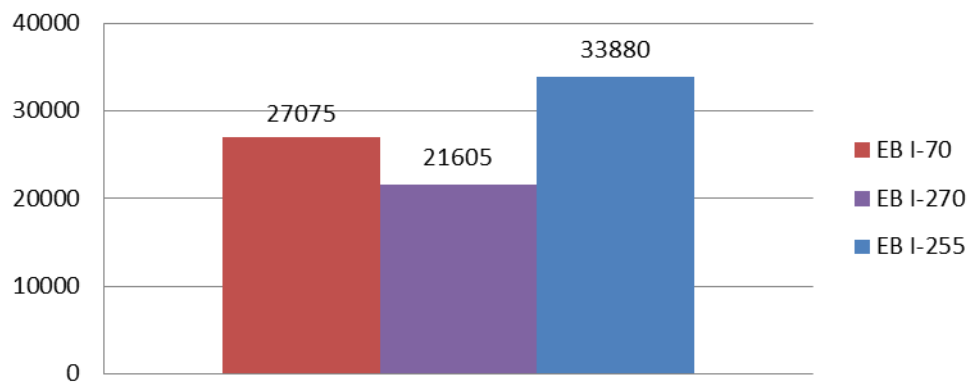


# FREEWAY MANAGEMENT

**September 2017 EB MS River Crossings  
Total = 80,461**



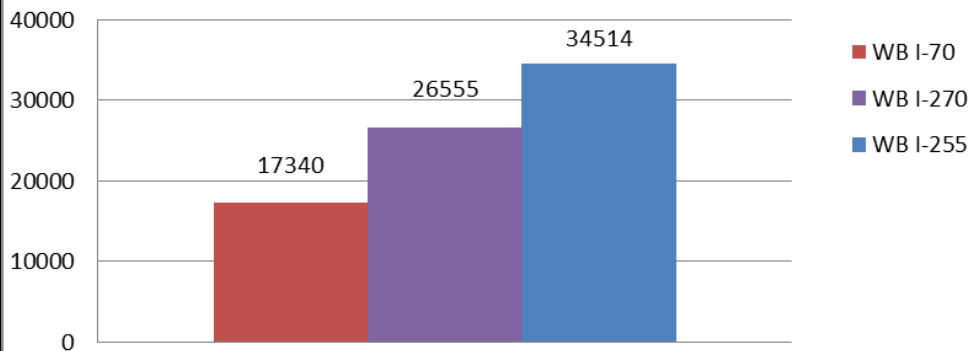
**October 2017 EB MS River Crossings  
Total = 82,561**



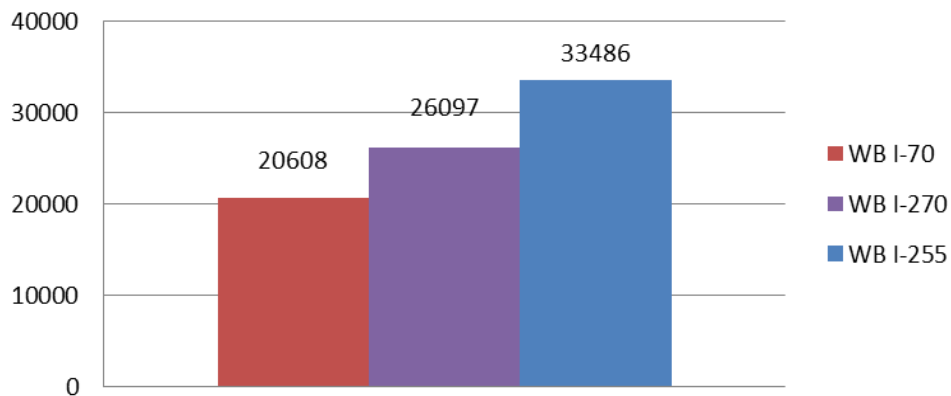


# FREEWAY MANAGEMENT

**September 2017 WB MS River Crossings**  
**Total = 78,409**



**October 2017 WB MS River Crossings**  
**Total = 80,192**





## Work Zones

Whenever additional travel time is reported, this additional time shall be evaluated using this chart and adequate mitigation measures should begin within the parameters of this chart. TMC and field personnel are partners in the mitigation of traffic and notification of additional travel times should trigger the appropriate response from both parties.

Chart is designed to be an additional travel time reference to establish parameters for gauging the travel impact through work zones and to provide guidance for taking mitigation actions. Travel times can be collected or reported via Blue Toad technology, field personnel, call reports, ITS, TMC cameras, etc.

Major and Moderate impacts trigger an IAR (Immediate Action Required) event. IAR means work zone user and TMC partner together to take immediate actions to reduce or eliminate distress. During an IAR event mitigation procedures can range from increased driver notification up to and including removal of work zone. Additional mitigation procedures may require involvement of administration through use of the work zone resolution ladder.

Level of Impact	Additional Travel Time Expected	Mitigation Actions
<p><b>Major (Red)</b> <b><u>IAR Event</u></b></p> <p>SEVERE DISTRESS PRESENT</p> <p><b>Return of roadway to free flow traffic is Priority #1</b></p>	<p>15 minutes or above</p> <p>TMC and field personnel take all steps possible up to and including removal of lane closure to achieve free flow threshold</p>	<p><b>Immediate Action Required</b></p> <p>Supervisory mitigation assistance is required using the St. Louis District Work Zone Resolution Ladder as a tool to restore free flow traffic threshold</p>
<p><b>Moderate (Yellow)</b> <b><u>IAR Event</u></b></p> <p>CAUTIONARY STAGE:</p> <p><b>Action required by Field/ TMC to prevent escalation to a major event</b></p>	<p>10 – 14 minutes</p> <p>TMC increases driver messaging. Field begins efforts to restore free flow traffic</p>	<p>TMC and field shall reach a consensus on mitigation success within 15 minutes or less. If a consensus cannot be reached, mitigation should be scaled upwards in accordance with the St. Louis District Work Zone Resolution Ladder</p>





## Incident Levels

### **Major Impact Traffic Incident – Road closure > 2 hours**

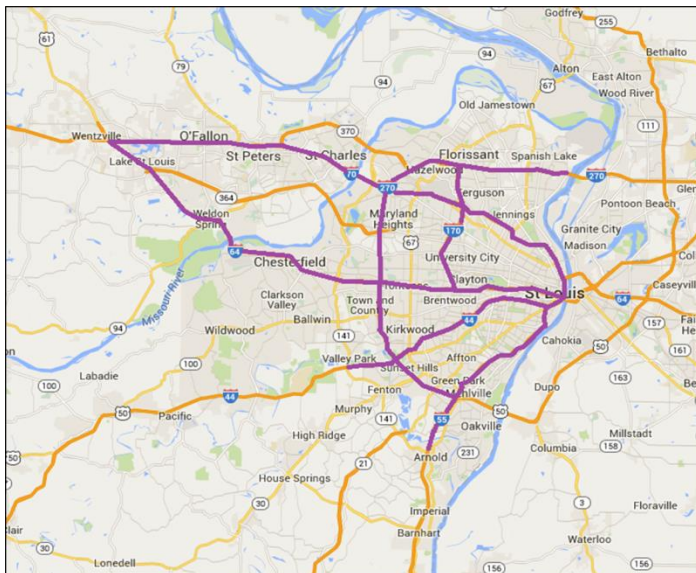
Major traffic incidents are typically traffic incidents involving hazardous materials, fatal traffic crashes involving numerous vehicles, and other natural or man-made disasters. These traffic incidents typically involve closing all or part of a roadway facility for a period exceeding 2 hours.

### **Moderate Impact Traffic Incident – Blocked travel lanes/closure 30 min – 2 hours**

Moderate traffic impact incidents typically affect travel lanes for a time period of 30 minutes to 2 hours, and usually require traffic control on the scene to divert road users past the blockage. Full roadway closures might be needed for short periods during traffic incident clearance to allow traffic incident responders to accomplish their tasks.

### **Minor Impact Traffic Incident – Lane closures < 30 minutes**

Minor traffic incidents are typically disabled vehicles and minor crashes that result in lane closures of less than 30 minutes. On-scene responders are typically law enforcement and towing companies, and occasionally highway agency service patrol vehicles.



**NEW for 2017! The focus area for calculating the average 24 hour volumes was revisited to include all SL District Urban Freeways including Route 364 from I-64 to I-270, Route 367 from I-270 to Route 67, and Route 370 from I-70 to I-270. Starting in 2017, these freeways will be included in this calculation while 2013-2016 will be based on the original urban interstate calculation.**



## **Definitions**

**ACTRA** – Traffic signal management software program

**Alert** – Email message sent regarding an incident or event on the roadway

**Arterial** – Missouri State Highway Numbered Routes, not fully access controlled

**Arterial Device** – ITS equipment located along MoDOT arterials

**Defined Sensor** – A single sensor with an individual ID focused on a particular roadway; multiple defined sensors may be located at one physical sensor location

**DMS** – Dynamic Message Signs along highway displaying incident and travel time information

**DNR** – Department of Natural Resources

**Driver messaging** – Messages placed on DMS boards to alert drivers of incidents ahead of their direction of travel

**EOC** – Emergency Operations Center operated by MoDOT in Jefferson City

**EMS** – Emergency Medical Services

**ER** – MoDOT's Emergency Response units that provide emergency assistance, incident management and traffic control to mitigate incidents and restore free flow traffic within the St. Louis region

**Freeway Device** – ITS device located along a MoDOT freeway, such as interstates and other fully access controlled highways

**Gatewayguide.com** – Gateway Guide's website for local St. Louis area traffic information

**GGL** – Gateway Green Light is the St. Charles County regional integrated corridor management for a cooperative multi-jurisdictional effort to better manage and coordinate travel on the interstates (I-70, I-64), state routes (MO 94, MO 364, MO 370, US 61) and local arterials through the installation of Intelligent Transportation Systems (ITS) in Cottleville, Dardenne Prairie, Lake St. Louis, O'Fallon, St. Charles, St. Peters, and Wentzville.

**GuidePost** – Area of report highlighting important mobility topics for the month

**IDOT** – Illinois Department of Transportation

**KC Scout** – Gateway Guide's counterpart for the greater Kansas City Metropolitan area, a collaboration involving both MoDOT and the Kansas DOT

**Mobility** – Ease of movement over roadway, through system, and or work zone

**MRB** – Mississippi River Bridge under construction north of downtown St. Louis

**MSHP** – Missouri State Highway Patrol

**Observed Work zone** – Work zone tracked by traffic cameras at the TMC



## DATA KEY

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**Peak Average** – Daily speed sensor readings over an entire weekday average commute period averaged for an entire month

**PSB** – Poplar Street Bridge

**Regional Mobility Overview** – Map depicting congestion areas based on speed index ratings derived from speed sensor readings

**SL** – Designation for the St. Louis District

**Speed Index** – a ratio of the speed at which vehicles travel during a period to the speed at free-flow conditions

**Stats to Watch** – Area of report highlighting interesting trends for the report month, or data to be closely followed

**STLtraffic** – Email group consisting of Gateway Guide personnel and Gateway Guide's media partners, messages sent to the group are also posted on Twitter

**TMC** – Traffic Management Center (also referred to as Gateway Guide)

**TMC Alert** – Email alert sent to an internal group of Gateway Guide personnel

**TMS** – Traveler Map System is MoDOT's internal software for entering work zones and road conditions to populate the Traveler Information Map at [www.traveler.modot.org/map](http://www.traveler.modot.org/map)

**Travel Time Index** – A ratio of the actual time to travel a corridor compared to travel time at posted speed limit without stops used

**User Delay Costs** – Puts a dollar amount on how much a road's performance impacts its users. Combines probe speed data with volume data provided by the Texas Transportation Institute to estimate the cost of delay experienced by drivers as a result of congestion. Vehicle costs used are Passenger Vehicle = \$17.67 and Commercial Vehicle = \$68.09.

**Visibility** – Concerning placement of traffic signs, signals, devices, barricades and warning lights for safety within work zone or construction area to help motorist and workers move within a work zone safely; Clearly visible and legible, distinguishable to approaching traffic during day and night, aligned with road user's line of vision, and positioned as to not obstruct other applicable traffic control devices. Must meet MUTCD standards for condition and must be covered, turned or properly stowed when not in use.

**Zoning In** – section of report highlighting important construction topics for the report month



## I-70 Mile Markers

ST. CHARLES COUNTY		I-70 DISTRICT 6 WESTBOUND	I-70 DISTRICT 6 EASTBOUND	ST. CHARLES COUNTY	
5TH ST SOUTH (ST. CHARLES)	229A			229A	5TH ST SOUTH (ST. CHARLES)
5TH ST NORTH (ST. CHARLES)	229B			229B	5TH ST NORTH (ST. CHARLES)
ST. LOUIS COUNTY				ST. LOUIS COUNTY	
BLANCHETTE BRIDGE	230			230	BLANCHETTE BRIDGE
EARTH CITY EXPRESSWAY SOUTH	231A			231A	EARTH CITY EXPRESSWAY SOUTH
EARTH CITY EXPRESSWAY NORTH	231B			231B	EARTH CITY EXPRESSWAY NORTH
I-270	232			232	I-270
MCKELVEY RD OVERPASS (BRIDGETON)	233			233	MCKELVEY RD OVERPASS (BRIDGETON)
RTE 180/ST. CHARLES ROCK RD (BRIDGETON)	234			234	RTE 180/ST. CHARLES ROCK RD (BRIDGETON)
US 67 SOUTH (BRIDGETON)	235A			235A	US 67 SOUTH (BRIDGETON)
US 67 NORTH (BRIDGETON)	235B			235B	US 67 NORTH (BRIDGETON)
CYPRESS RD (BRIDGETON)	235C			235C	CYPRESS RD (BRIDGETON)
AIRFLIGHT (ST. ANN)	236			236	AIRFLIGHT (ST. ANN)
MCDONNELL OVERPASS (BERKELEY)	237			237	MCDONNELL OVERPASS (BERKELEY)
LAMBERT AIRPORT (BERKELEY)	238A			238A	LAMBERT AIRPORT (BERKELEY)
I-170 NORTH (BERKELEY)	238B			238B	I-170 NORTH (BERKELEY)
I-170 SOUTH (BERKELEY)	238C			238C	I-170 SOUTH (BERKELEY)
NORTH HANLEY (BERKELEY)	239			239	NORTH HANLEY (BERKELEY)
RTE N/FLORISSANT RD (COOL VALLEY)	240A			240A	RTE N/FLORISSANT RD (COOL VALLEY)
BERMUDA DR (NORMANDY)	240B	240B	BERMUDA DR (NORMANDY)		
RTE U/LUCAS AND HUNT RD	241B	241B	RTE U/LUCAS AND HUNT RD		
JENNINGS STATION RD (PINE LAWN)	242C	242C	JENNINGS STATION RD (PINE LAWN)		
ST. LOUIS CITY		ST. LOUIS CITY			
GOODFELLOW (ST. LOUIS)	243A	243A	GOODFELLOW (ST. LOUIS)		
RIVERVIEW/BIRCHER (ST. LOUIS)	243B	243B	RIVERVIEW/BIRCHER (ST. LOUIS)		
UNION (ST. LOUIS)	244A	244A	UNION (ST. LOUIS)		
KINGSHIGHWAY (ST. LOUIS)	244B	244B	KINGSHIGHWAY (ST. LOUIS)		
SHREVE (ST. LOUIS)	245A	245A	SHREVE (ST. LOUIS)		
WEST FLORISSANT AVE (ST LOUIS)	245B	245B	WEST FLORISSANT AVE (ST LOUIS)		
NORTH BROADWAY (ST. LOUIS)	246A	246A	NORTH BROADWAY (ST. LOUIS)		
ADELAIDE (ST LOUIS)	246B	246B	ADELAIDE (ST LOUIS)		
GRAND (ST. LOUIS)	247	247	GRAND (ST. LOUIS)		
SALISBURY (ST LOUIS)	248A	248A	SALISBURY (ST LOUIS)		
BRANCH (ST LOUIS)	248B	248B	BRANCH (ST LOUIS)		
MADISON (ST LOUIS)	249A	249A	MADISON (ST LOUIS)		
PINE ST OVERPASS (ST LOUIS)	250	250	PINE ST OVERPASS (ST LOUIS)		
CHESTNUT ST OVERPASS (ST LOUIS)	250	250	CHESTNUT ST OVERPASS (ST LOUIS)		
MARKET ST OVERPASS (ST. LOUIS)	250	250	MARKET ST OVERPASS (ST. LOUIS)		
WALNUT ST OVERPASS (ST LOUIS)	250	250	WALNUT ST OVERPASS (ST LOUIS)		



# DATA KEY

## I-70 St. Charles County Mile Markers

RTE A (WENTZVILLE)	212	I-70 DISTRICT 6 EASTBOUND	I-70 DISTRICT 6 WESTBOUND	212	RTE A (WENTZVILLE)
LAKE ST. LOUIS BLVD (LAKE ST. LOUIS)	214			214	LAKE ST. LOUIS BLVD (LAKE ST. LOUIS)
BRYAN RD (O'FALLON)	216			216	BRYAN RD (O'FALLON)
RTE K/RTE M (O'FALLON)	217			217	RTE K/RTE M (O'FALLON)
T.R. HUGHES BLVD (O'FALLON)	218			218	T.R. HUGHES BLVD (O'FALLON)
RTE 79 (ST. PETERS/O'FALLON)	220			220	RTE 79 (ST. PETERS/O'FALLON)
RTE C/MID RIVERS MALL DR (ST. PETERS)	222			222	RTE C/MID RIVERS MALL DR (ST. PETERS)
SPENCER RD OVERPASS (ST. PETERS)	223			223	SPENCER RD OVERPASS (ST. PETERS)
RTE 370 (ST. PETERS)	224			224	RTE 370 (ST. PETERS)
CAVE SPRINGS (ST. CHARLES)	225			225	CAVE SPRINGS (ST. CHARLES)
ZUMBEHL RD (ST. CHARLES)	227			227	ZUMBEHL RD (ST. CHARLES)
HAWK'S NEST OVERPASS (ST. CHARLES)	227			227	HAWK'S NEST OVERPASS (ST. CHARLES)
RTE 94 (ST. CHARLES)	228			228	RTE 94 (ST. CHARLES)
5TH ST SOUTH (ST. CHARLES)	229A			229A	5TH ST SOUTH (ST. CHARLES)
5TH ST NORTH (ST. CHARLES)	229B			229B	5TH ST NORTH (ST. CHARLES)

## I-270 Mile Markers

3	KOCH RD	I-255 WESTBOUND I-255 EASTBOUND I-270 DISTRICT 6 COUNTER CLOCKWISE FROM RIVERVIEW DR. TO I-55 I-270 DISTRICT 6 CLOCKWISE FROM I-55 TO RIVERVIEW DR.	KOCH RD	3
2	SR 231 (TELEGRAPH RD)		SR 231 (TELEGRAPH RD)	2
1C	US61-67		US61-67	1B
1B	I-55 NORTH		I-55 NORTH	1B
1	I-55 SOUTH		I-55 SOUTH	1A
2	SR 21 (TESSON FERRY RD.)		SR 21 (TESSON FERRY RD.)	2
3	SR 30 (GRAVOIS RD.)		SR 30 (GRAVOIS RD.)	3
5	I-44 EAST/SR 366 (WATSON RD.)		I-44 EAST	5
5	I-44 WEST		I-44 WEST	5
			BIG BEND RD.	7
8	DOUGHERTY FERRY RD.		DOUGHERTY FERRY RD.	8
10	SR 100 (MANCHESTER RD.)		SR 100 (MANCHESTER RD.)	10
12	I-64 EAST/WEST/US 40-61 NORTH/SOUTH		I-64 EAST/WEST/US 40-61 NORTH/SOUTH	12 A/B
13	SR AB (LADUE RD)		SR AB (LADUE RD)	13
14	SR 340 (OLIVE BLVD)		SR 340 (OLIVE BLVD)	14
16	SR D (PAGE AVE.) EAST		SR D (PAGE AVE.) EAST	16A
16	SR 364 WEST		SR 364 WEST	16B
17	DORSETT RD		DORSETT RD	17
20	I-70 WEST/EAST		I-70 WEST	20B
			I-70 EAST	20A
20C	SR 180 (ST. CHARLES ROCK RD)		SR 180 (ST. CHARLES ROCK RD)	20C
22	MISSOURI BOTTOM RD/370 WEST		SR 370 WEST	22D
23	MCDONNELL BLVD		MCDONNELL BLVD	23
25A	US 67 SOUTH		US 67 NORTH	25A
25B	US 67 NORTH		US 67 SOUTH	25B
26	HANLEY/GRAHAM RD.		I-170 SOUTH (EXIT LEFT)	26A
26	I-170 SOUTH		HANLEY/GRAHAM	26B
27	NEW FLORISSANT RD		NEW FLORISSANT RD	27
28	WASHINGTON/ELIZABETH RD.		ELIZABETH/WASHINGTON	28
29	WEST FLORISSANT RD		WEST FLORISSANT RD	29
30	SR AC HALLS FERRY RD		SR AC NEW HALLS FERRY RD	30
			NEW HALLS FERRY RD.	30A
31A	SR 367 SOUTH		SR 367 SOUTH	31A
31B	SR 367 NORTH		SR 367 NORTH	31B
32	BELLEFONTAINE RD		BELLEFONTAINE RD	32
33	LILAC AVE.		LILAC AVE.	33
34	RIVERVIEW DR.		RIVERVIEW DR.	34





# DATA KEY

## I-64 Mile Markers

<b>I-70 WEST EXIT RIGHT/EAST EXIT LEFT</b>	1		1A	<b>I-70 WEST</b>
			1B	<b>I-70 EAST</b>
PROSPECT RD	1C		1C	PROSPECT RD
LAKE ST. LOUIS BLVD	2		2	LAKE ST. LOUIS BLVD
SR N	4		4	MO N
SR DD/WINGHAVEN	6		6	MO DD/Winghaven
SR K/SR 94	9		9	MO K
			10	MO 94
MISSOURI RESEARCH PARK/TECHNOLOGY DR	12		11	RESEARCH PARK CRL
DANIEL BOONE BRIDGE	13		13	DANIEL BOONE BRIDGE
CHESTERFIELD AIRPORT RD	14		14	SPIRIT OF ST LOUIS BLVD
			16	LONG RD
BOONE'S CROSSING	17		17	BOONE'S CROSSING
CHESTERFIELD PKWY	19A		19A	CHESTERFIELD PKWY
SR 340 (OLIVE/CLARKSON)	19B		19B	MO 340 (OLIVE/CLARKSON)
			20	CHESTERFIELD PKWY
TIMBERLAKE MANOR PKWY	21		21	TIMBERLAKE MANOR PKWY
SR 141	22		22	MO 141 (WOODS MILL RD)
MASON RD	23		23	MARYVILLE CENTRE DR
			24	MASON RD
<b>I-270 SOUTH</b>	25A		25A	<b>I-270 SOUTH</b>
<b>I-270 NORTH</b>	25B		25B	<b>I-270 NORTH</b>
SR JJ (BALLAS RD)	26		26	MO JJ (BALLAS RD)
SPOEDE RD	27		27	SPOEDE RD
US 61-67	28A		28A	US 61-67
			28B	CLAYTON RD
MCKNIGHT RD	30		30	MCKNIGHT RD
BRENTWOOD/HANLEY RD	31B		31A	<b>I-170 NORTH</b>
<b>I-170 NORTH</b>	31A		31B	HANLEY RD/BRENTWOOD BLVD
BELLEVUE AVE	33B			
BIG BEND	33A		33A	BIG BEND BLVD
MCCAUSLAND	33C			<b>ST. LOUIS CITY</b>
<b>ST. LOUIS CITY</b>			33C	MCCAUSLAND AVE
HAMPTON AVE/OAKLAND AVE	34B		34A	CLAYTON RD/SKINKER BLVD
			34B	HAMPTON AVE
KINGSHIGHWAY	36A		36A	KINGSHIGHWAY
VANDEVENTER AVE	36C		36B	BOYLE
MARKET ST/BERNARD ST	37A			
GRAND AVE	37B			
JEFFERSON AVE	38A		38A	FOREST PARK AVE/GRAND BLVD
CHESTNUT AT 20TH ST	38B		38B	MARKET ST AT 3000 WEST
14TH ST	39B		39A	MARKET ST AT 21ST
11TH ST EXIT LEFT	39C		40A	STADIUM/9TH ST/ TUCKER BLVD
BROADWAY/7TH ST (LAST MISSOURI EXIT)	40B		40C	<b>I-44 WB/I-55 SB/ I-70 WB</b>

I-64 DISTRICT 6 WESTBOUND  
I-64 DISTRICT 6 EASTBOUND

## I-55 Mile Markers

JEFFERSON COUNTY		I-55 DISTRICT 6 NORTHBOUND I-55 DISTRICT 6 SOUTHBOUND	JEFFERSON COUNTY	
RTE M	185		185	RTE M
MAIN ST(IMPERIAL)	186		186	MAIN ST(IMPERIAL)
RICHARDSON RD (ARNOLD)	190		190	RICHARDSON RD (ARNOLD)
RTE 141 (ARNOLD)	191		191	RTE 141 (ARNOLD)
ST. LOUIS COUNTY			ST. LOUIS COUNTY	
MERAMEC BOTTOM RD	193		193	MERAMEC BOTTOM RD
BUTLER HILL RD	195		195	BUTLER HILL RD
I-255 EAST	196A		196A	I-255 EAST
I-270 NORTH	196B		196B	I-270 NORTH
US67/LINDBERGH	197		197	US67/LINDBERGH
REAVIS BARRACKS RD	199		199	REAVIS BARRACKS RD
UNION RD	200		200	UNION RD
BAYLESS	201A		201A	BAYLESS
WEBER RD	201B		201B	WEBER RD
ST. LOUIS CITY			ST. LOUIS CITY	
GERMANIA (ST. LOUIS)	202B		202B	GERMANIA (ST. LOUIS)
LOUGHBOROUGH AVE (ST. LOUIS)	202C		202C	LOUGHBOROUGH AVE (ST. LOUIS)
BATES (ST. LOUIS)	203		203	BATES (ST. LOUIS)
BROADWAY (ST. LOUIS)	204		204	BROADWAY (ST. LOUIS)
GASCONADE (ST. LOUIS)	205		205	GASCONADE (ST. LOUIS)
ARSENAL (ST. LOUIS)	206C		206C	ARSENAL (ST. LOUIS)
SIDNEY OVERPASS	206		206	SIDNEY OVERPASS
GRAVOIS AVE OVERPASS	207		207	GRAVOIS AVE OVERPASS
I-44 WEST (ST. LOUIS)	207		207	I-44 WEST (ST. LOUIS)
7TH ST/PARK AVE (ST. LOUIS)	208		208	7TH ST/PARK AVE (ST. LOUIS)

## I-44 Mile Markers

FRANKLIN COUNTY		I-44 DISTRICT 6 WESTBOUND I-44 DISTRICT 6 EASTBOUND	FRANKLIN COUNTY	
PACIFIC	257		257	PACIFIC
ST. LOUIS COUNTY			261	ALLENTON/SIX FLAGS
ALLENTON/SIX FLAGS	261		ST. LOUIS COUNTY	
RTE 109/RTE W	264		264	RTE 109/RTE W
WILLIAMS RD	265			
LEWIS RD	266		266	LEWIS RD
			269	ANTIRE
RTE 141	272		272	RTE 141
BOWLES	274		274	BOWLES
MRAZ	274			
			275	SOCCER PARK
I-270 NORTH	276B		276B	I-270 NORTH
I-270 SOUTH	276A		276A	I-270 SOUTH
RTE 366/WATSON	277A			
US 67/LINDBERGH	277B		277B	US 67/LINDBERGH
BIG BEND	278		278	BIG BEND
			279	BERRY
ELM	280		280	ELM
LACLEDE STATION	282			
ST. LOUIS CITY			283	SHREWSBURY
JAMIESON	284A		ST. LOUIS CITY	
			284B	ARSENAL
			285	SOUTHWEST
HAMPTON	286		287	KINGSHIGHWAY
KINGSHIGHWAY	287		288	GRAND AVE
GRAND AVE	288		289	JEFFERSON AVE
JEFFERSON AVE	289			
I-55 SOUTH	290A			
18TH ST	290B		290C	12TH ST./GRAVOIS

## I-170 Mile Markers

I-64 WEST/US 40-61	1A	I-170 DISTRICT 6 SOUTHBOUND	I-170 DISTRICT 6 NORTHBOUND	
I-64 EAST/US 40-61	1B			
				1C GALLERIA PARKWAY
BRENTWOOD BLVD	1D			
FOREST PARK PARKWAY	1E			1E FOREST PARK PARKWAY
LADUE RD	1F			1F LADUE RD
DELMAR	2			2 DELMAR
EAST/3B WEST SR 340 (OLIVE BLVD)	3A			3 SR 340 (OLIVE BLVD)
SRD/SR 364 (PAGE AVE)	4			4 SR D/SR 364 (PAGE AVE)
SR 180 (ST. CHARLES ROCK RD)	5			5 SR 180 (ST. CHARLES ROCK RD)
SR 115 (NATURAL BRIDGE RD)	6			6 SR 115 (NATURAL BRIDGE RD)
I-70 EAST (EXIT LEFT)	7A			7A I-70 EAST (EXIT RIGHT)
I-70 WEST (EXIT RIGHT)	7B			7B I-70 WEST (EXIT LEFT)
				7C LAMBERT ST. LOUIS AIRPORT
SCUDDER	8			8 SCUDDEN/N. HANLEY RD
AIRPORT RD	9A			9A AIRPORT
				9B BOEING (EXIT LEFT)
				9C N. HANLEY RD
				10A I-270 WEST (EXIT RIGHT)
				10B I-270 EAST (EXIT LEFT)

## SR 364 Mile Markers

		SR 364 WESTBOUND	SR 364 EASTBOUND	11B	HARVESTER RD
				12	HERITAGE CROSSING/JUNGS STATION RD
SR94 EAST/ST. CHARLES	13			13	SR 94 EAST/MUEGGE RD
ARENA PKWY/UPPER BOTTOM RD	14			14	UPPER BOTTOM/ARENA
MARYLAND HEIGHTS EXPRESSWAY	17			17	MARYLAND HEIGHTS EXPRESSWAY
BENNINGTON PL	19				
				21	BENNINGTON PL
I-270 SOUTH	22A				
I-270 NORTH	22B				



## SR 370 Mile Markers

		SR 370 WESTBOUND SR 370 EASTBOUND	1A	I-70 WESTBOUND
			1B	I-70 EASTBOUND
			1C	SPENCER RD
TRUMAN/CAVE SPRINGS RD	2		2	TRUMAN/CAVE SPRINGS RD
ELM/NEW TOWN BLVD	5		5	ELM/NEW TOWN BLVD
N 3RD ST/SR 94	7		7	N 3RD ST/SR 94
DISCOVERY BRIDGE ST. CHAS CO/ ST. LOUIS CO	8		8	DISCOVERY BRIDGE ST. LOUIS CO/ ST. CHAS CO
EARTH CITY EXPRESSWAY	9		9	EARTH CITY EXPRESSWAY
ST. LOUIS MILLS BLVD	11		11	ST. LOUIS MILLS BLVD
MISSOURI BOTTOM RD	12			
I-270 WEST BOUND	12			
I-270 EAST BOUND	12			

## SR 21 Mile Markers

RT B	164.8	SR 21 NORTHBOUND SR 21 SOUTHBOUND	164.8	RT B
RT BB	165.4		165.4	RT BB
STADIUM DR UNDERPASS	166.4		166.4	STADIUM DR UNDERPASS
RTE A	167.8		167.8	RTE A
SAND CREEK	169		169	SAND CREEK
HAYDEN RD	169.2		169.2	HAYDEN RD
GLADE CHAPEL RD OVERPASS	171.4		171.4	GLADE CHAPEL RD OVERPASS
OLD HWY 21 (GOLDMAN)	172.6		172.6	OLD HWY 21 (GOLDMAN)
KLABLE RD OVERPASS	174.2		174.2	KLABLE RD OVERPASS
SCHENK RD OVERPASS	175.2		175.2	SCHENK RD OVERPASS
HEADS CREEK	176.4		176.4	HEADS CREEK
RT MM	177.7		177.7	RT MM
W. FOUR RIDGE RD OVERPASS	179		179	W. FOUR RIDGE RD OVERPASS
OLD HWY 21 (SHADY VALLEY)	180.4		180.4	OLD HWY 21 (SHADY VALLEY)
OLD HWY 21 UNDERPASS	182		182	OLD HWY 21 UNDERPASS
WEST ROCK CREEK RD OVERPASS	182.8		182.8	WEST ROCK CREEK RD OVERPASS
OLD HWY 21 OVERPASS	183.2		183.2	OLD HWY 21 OVERPASS
LONDELL RD	184.2		184.2	LONDELL RD
OLD HWY 21	184.5		184.5	OLD HWY 21
SR 141	185.6		185.6	SR 141