ST. LOUIS DISTRICT MOBILITY

BI-MONTHLY REGIONAL MOBILITY REPORT JANUARY / FEBRUARY 2018 | EDITION NO. 02

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User Delay Cost: Passenger Vehicle \$17.67 Commercial Vehicle \$68.09 Sources Texas Transportation Institute & American Transportation Research Institute

January thru February 2017 Gr	and Total and Average	January thru February 2018 Grand Total and Average			
Delay cost:	Vehicle Miles traveled (VMT)	Delay cost:	Vehicle Miles traveled (VMT)		
Total \$6,563,832.43 Per VMT \$0.00	Total: 1,414,303,554 miles	Total \$7,554,056.37 Per VMT \$0.01	Total: 1,416,925,025 miles		
Hours of delay:	Passenger: 1,272,873,198 miles	Hours of delay:	Passenger: 1,275,232,522 miles		
Person-hours: 301,287h 50m 48s	Commercial: 141,430,355 miles	Person-hours: 346,740h 19m 22s	Commercial: 141,692,502 miles		
Vehicle hours: 245,949h 15m 45s	Delay per VMT: 0.0104 mins/mile	Vehicle hours: 283,053h 19m 29s	Delay per VMT: 0.012 mins/mile		



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EXECUTIVE SUMMARY

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ST. LOUIS	ZONING IN
GUIDEPOST	
New Freeway Mobility Reporting Detailed For I-270 Corridor	TMS Work Zones: January 2018: 203
Average Time To Clear Lanes Increased From A Year Ago	February 2018: 228
There Were 13 Fatal Crashes In January and 1 In February	Work Zone Impact Breakdown: Major: 8 – 0.9% Moderate: 20 – 7.3%
Work Zone Delays Confined To Poplar Street Bridge work	Minor: 343 – 91.8%
EB I-64 @ I-70/I-55/US 40 Moved Up A Spot From # 2 in 2017 To # 1 On Top 5 Congestion Spots For January/February 2018	WORK ZONE CRASHES: 5

Most Significant Impact Events

Planned Event							
Dates:1-1 – 2-28 Location: Eastbound I-64 – Poplar Street Bridge Event Detail: Bridge work 3 right lanes closed 25 minutes o time during non-peak period							
	Unplann	ed Event					
Date:1-23 Location: Eastbound I-64 before I- 270 Event Detail: Fatal Multi-vehicle crash involving a small car cutting in f of a tractor trailer causing a 6 car chain reaction crash Event Detail: Fatal Multi-vehicle crash involving a small car cutting in f							







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Top 5 Congestion Locations / January – February 2017 vs. 2018

	Congestion Locations 2017	*Base Impact	Average Queue Length Miles	Average Daily Duration	Total Duration
1	SB I-170 @ Galleria Parkway	<mark>11,684.09</mark>	1.47	2h 04 m	5d 02h 29m
2	EB I-64 @ I-70/I-55/US40	<mark>11,369.74</mark>	2.04	1h 36m	3d 22h 44m
3	SB I-270 @ MO100 Manchester Road	<mark>11,161.38</mark>	1.45	2h 07m	5d 05h 36m
4	EB I-64 @ Big Bend Boulevard	<mark>10,419.55</mark>	2.91	0h 55m	2d 06h 49m
5	WB I-64 @ Clayton Ave / Oakland Ave	<mark>10,292.54</mark>	2.29.	1h 17m	3d 04h 31m

Locations ranked on *Base Impact (The aggregation of Queue Length over time for congestion originating at each location in mile minutes)

	Congestion Locations 2018	*Base Impact	Average Queue Length Miles	Average Daily Duration	Total Duration
1	EB I-64 @ I-70/I-55/US40	<mark>21,484.02</mark>	1.32	4h 29m	11d 00h 39m
2	WB I-64 @ Clayton Ave / Oakland Ave	<mark>9,960.02</mark>	2.11	1h 23m	3d 09h 57m
3	EB I-64 @ Big Bend Boulevard	<mark>9,540.95</mark>	2.95	0h 51m	2d 02h 33m
4	SB I-170 @ I-64/US 40/Eager Road	<mark>7,630.57</mark>	1.20	2h 12m	5d 09h 58m
5	EB I-270@ US 67/Lindbergh Boulevard	<mark>7,612.99</mark>	0.74	2h 53m	7d 02h 58m

Locations ranked on *Base Impact (The aggregation of Queue Length over time for congestion originating at each location in mile minutes)

Average Incident Duration Comparison / 2017 vs. 2018

Month	Average Incident Duration (Minutes : Seconds)	2017	2018
January	Lane Clearance	27:39	28:41
February	Lane Clearance	25:52	26:17
January	Incident Clearance	32:06	33:20
February	Incident Clearance	29:06	31:35





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Overall AM Regional Mobility DECREASED

AM Peak Period Mobility January/February 2017



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Highlighted Corridor

I-270 Comparing AM January/February 2017 to AM January/February 2018

AM Northbound I-270 Mobility DECREASED 2017 → 2018

AM Southbound I-270 Mobility INCREASED 2017 → 2018





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) |20 |40 |60 |80 |90



Minute Contractory



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Overall PM Regional Mobility DECREASED SLIGHTLY

PM Peak Period Mobility January/February 2017







Highlighted Corridor

I-270 Comparing PM January/February 2017 to PM January/February 2018

PM Northbound I-270 Mobility DECREASED 2017 → 2018

PM Southbound I-270 Mobility INCREASED 2017 \rightarrow 2018







20 |40 |60 |80 |90





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PM Westbound/Southbound 2017

Congestion on I-270 Westbound and I-270 Southbound using HERE data Averaged by 2 minutes for January 2017 through February 2017 (every weekday)







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WORK ZONE MANAGEMENT

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	TMC Observ	ved Work Zones		
January	2018	February	2018	
Level of Travel Time Impact	Number of Work Zones	Level of Travel Time Impact	Number of Work Zones	
Major Impact	2	Major Impact	6	
Moderate Impact	6	Moderate Impact	14	
Minor Impact	162	Minor Impact	181	
Total	170	Total	201	
	*Impact Levels	described in Data Key:		
SL N	lobility Rating:	SL Visib	ility levels:	
	an 2018: 92%	🔶 Jan 20	•	
♦ F	eb 2018: 91%	Feb 20	018: 93%	
♦ G	ioal: 91%	♦ Goal:	91%	



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January 2018 vs. February 2018 Incidents Summary

Average Time for Backup to Clear = T6 - T4

Average Time to Clear Incident from Lanes = T4 - T1







Total Number of Incidents: / December: 906 / January: 800 / February: 726







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Lane Blocking Incidents by Freeway January and February 2018

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	Jan	114	17:37	00:17	33	3.45
I-44	Feb	111	34:53	00:46	33	3.36
I-55	Jan	68	19:16	00:38	23	2.96
I-55	Feb	76	24:07	00:33	23	3.30
I-64	Jan	96	25:42	01:28	40	2.40
I-64	Feb	122	22:02	01:05	40	3.05
I-70	Jan	179	29:51	02:16	38	4.71
I-70	Feb	142	29:55	01:06	38	3.74
I-170	Jan	60	25:40	00:42	11	5.45
I-170	Feb	32	21:54	01:22	11	2.91
I-270	Jan	176	25:11	02:53	36	4.89
I-270	Feb	159	26:25	01:41	36	4.42
MO-364	Jan	20	26:30	01:00	11	1.82
MO-364	Feb	20	14:36	00:48	11	1.82
MO-370	Jan	5	2:29:48	01:24	13	0.38
MO-370	Feb	8	18:37	00:00	13	0.62
Total	Jan/Feb	1388	32:00	01:07	410	3.39



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2017 - 2018 Number of Incidents and Time to Clear Lanes

Time to Clear Incidents







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2018	I-44	I-55	I-64	I-70	I-170	I-255/I- 270	Route 364	Route 370	Other	Total
Jan	10	2	8	15	3	16	0	1	1	56
Feb	9	3	4	12	1	11	0	0	3	43
Mar										
Apr										
May										
Jun										
Jul										
Aug										
Sep										
Oct										
Nov										
Dec										
Yearly	19	5	12	27	4	27	0	1	4	99

2018 Tractor Trailer Incidents by Route



Total





January 2018 – February 2018 Tractor Trailer Incidents Map







January 2017 – December 2017 Tractor Trailer Incidents Map







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	Incidents over Two Hours January / February 2018 Incidents in red denote high mobility impact									
		Day of				Duration				
#	Date & Time	Week	Route	Location	Description	HH/MM				
1	1/5/2018 11:08	Friday	MO 370 EB	TO MISSOURI BOTTOM RD	Single Vehicle Overturned Tractor Trailer	11:03				
2	1/8/2018 19:24	Monday	Route A	TO MO 21 NB Ramp	Fatal Crash	2:29				
3	1/9/2018 6:45	Tuesday	I-44 EB	AT PARK AVE	Pedestrian Struck By Hit And Run Driver	2:53				
4	1/9/2018 16:27	Tuesday	MO 94 WB	BEFORE I-64	Multi-Vehicle Medical Emergency Fatal Crash	3:00				
5	1/9/2018 19:13	Tuesday	30 SP	LOCAL HILLSBORO RD CRD	Two-Vehicle Double Fatal Crash	3:35				
6	1/13/2018 2:19	Saturday	I-70 WB	AT SALISBURY	Fatal Crash With Ejection	2:55				
7	1/14/2018 10:34	Sunday	US 67 SB	PAST OLD LEMAY FERRY RD	Fatal Crash	3:17				
8	1/15/2018 7:39	Monday	I-70 EB/WB	PAST ROUTE T/W	Fatal Crossover Crash	3:08				
9	1/19/2018 19:33	Friday	MO 364 EB	ТО МО 94 WB	Single-Vehicle Crash	2:21				
10	1/20/2018 14:09	Saturday	61 US	ROUTE W NB RT	Two-Vehicle Fatal Crash	2:42				
11	1/21/2018 5:01	Sunday	I-44 WB	BEFORE I-64	Two-Vehicle Medical Emergency Crash	2:13				
12	1/22/2018 8:27	Monday	I-70 EB	AT I-270	Tractor Trailer Crash With State Damage	2:00				
13	1/23/2018 6:15	Tuesday	I-170 NB	BEFORE I-270	Rollover Crash With Serious Injuries	2:34				
14	1/23/2018 8:19	Tuesday	I-64 EB/WB	BEFORE I-270	Multi-Vehicle Fatal Crash TT Vs. Car	3:41				
15	1/23/2018 12:13	Tuesday	US 67 SB	PAST MO 94	Stolen Vehicle Police Chase Crash	2:18				
16	1/24/2018 15:42	Wednesday	I-270 EB	AT MO 367	Multi-Vehicle Chain Reaction Crash	2:00				
17	1/24/2018 20:08	Wednesday	50 US	DENMARK RD CRD	Fatal Crash	4:05				
18	1/27/2018 11:51	Saturday	EB/WB 100 MO	OO RT	Motorcycle Vs Car Head-On Fatal Crash	2:42				
19	1/27/2018 17:45	Saturday	I-64 WB	AT TIMBERLAKE MANOR PKWY	High Speed Crash With Serious Injuries	4:50				
20	1/29/2018 5:34	Monday	ST CHARLES ROCK RD	PENNRIDGE DR CST	Two-Vehicle Fatal Crash	3:45				
21	2/1/2018 23:34	Thursday	I-55 SB	PAST POTOMAC ST	Non-Hazmat Chemical Spill Cleanup	2:21				
22	2/4/2018 3:29	Sunday	I-170 NB	BEFORE AIRPORT RD	Crash Involving A MSHP Vehicle Struck	2:27				
23	2/8/2018 21:13	Thursday	I-44 WB	TO VANDEVENTER AVE	Wrong-Way Driver Tractor Trailer Vs. Car	2:14				
24	2/10/2018 21:32	Saturday	I-44 WB	PAST EXIT 225 MO 185/ROUTE D	Tractor Trailer Crash Into Bridge Structure	4:54				





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						Duration
#	Date & Time		Route	Location	Description	HH/MM
25	5 2/11/2018 3:57	Sunday	I-70 EB	BEFORE BRYAN RD	Tractor Trailer Slid Off Roadway	6:48
26	3 2/13/2018 17:42	Tuesday	E MANCHESTER RD	S SAPPINGTON RD CST	Sewer Grate Collapsed	2:53
27	2/14/2018 4:57	Wednesday	340 MO	EMERSON RD CST	Power Lines Down Alongside Roadway	7:18
28	3 2/14/2018 8:43	Wednesday	AC RT	PARKER SPUR CST	School Bus Crash With Injuries	2:59
29	2/17/2018 8:21	Saturday	I-44 WB	AT BOWLES AVE	Tractor Trailer Crash	2:08
30	2/19/2018 10:57	Monday	I-270 NB	BEFORE DOUGHERTY FERRY RD	Multi-Vehicle Crash	4:17
3′	2/19/2018 13:48	Monday	I-64 EB	BEFORE GRAND BLVD	Single-Vehicle Crash	3:55
32	2 2/20/2018 21:08	Tuesday	I-44 WB	AT I-64	Roadway Flooded Clogged MSD Drain	4:06
33	3 2/23/2018 7:08	Friday	I-70 WB	PAST MO 370	A Tractor Trailer vs Car Crash TT Hit Barrier Wall Broke Both Axles	2:33

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January / February 2018 Incidents with Mobility Impact Map

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Denotes Location of Major Impact Traffic Incidents





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Major Impact Traffic Incidents and Mitigation

INCIDENT MANAGEMEN

1/9/2018 (Tuesday)

- Time: 6:45 am 9:38 am *** Fatality ***
- Location: St. Louis City Eastbound I-44/Northbound I-55 at Park Avenue
- Event Type: <u>Pedestrian Struck/Hit and Run</u>
- Estimated Initial Impact: : Rush Hour: 3 of 3 travel lanes affected equals (=) 100%
- Incident Details: The TMC received a call from the St. Louis City Police Department advising them of an accident in which a pedestrian was struck. The vehicle involved had fled the scene without stopping.
- Action Taken: St. Louis City Police, Fire, and EMS responded, as did the MSHP who took command of the scene. The TMC immediately entered the incident into ATMS and activated all available DMS boards within one minute. This also created an event in TMS to notify the public of the closure. MoDOT Emergency Responders were dispatched and assisted with traffic control. All lanes of traffic were closed and drivers were diverted off onto Park Avenue as well as Truman Parkway with city streets used as a detour. A MoDOT Traffic Engineer was notified and began to adjust necessary signal timing for traffic. The ER Supervisor, Communication Staff, Maintenance Superintendent and the MoDOT Incident Management Coordinator were all notified. An incident alert was sent, updated and cleared to keep management informed of the closure. Reconstruction had a delayed response, which contributed to the extended duration of the incident. Emergency crews were able to get the right and exit lanes opened within 42 minutes to relieve some congestion. However, traffic queued approximately 5.2 miles on Northbound I-55 and approximately 1.1 miles on Eastbound I-44. It quickly returned to normal once all lanes were reopened.
- Event Duration: 2 hours 53 minutes

Eastbound I-44/NB I-55 at Park Avenue	Left Shoulder	Lane 1	Lane 2	Lane 3	Exit Lane	Right Shoulder
Closed Hours/Minutes	2:53	2:53	2:53	0:42	0:42	0:42









Major Impact Traffic Incidents and Mitigation

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1/15/2018 (Monday)

- Time: 7:39 am 10:48 am *** Fatality ***
- Location: St. Charles County Eastbound/Westbound I-70 past Route T
- Event: <u>Two-Vehicle Crash</u>
- Estimated Initial Impact: Rush Hour: 2 of 2 travel lanes affected equals (=) 100%
- Incident Details: The driver of a vehicle traveling westbound on I-70 fell asleep at the wheel causing the vehicle to travel off the left side of the roadway, over the cable barriers and onto Eastbound I-70. A second vehicle traveling eastbound struck the right side of the first vehicle. The front seat passenger of the first vehicle was pronounced on scene by Wentzville EMS. The driver and five additional passengers in the first vehicle were transported to a local hospital with injuries. This included 3 children ages 5 and under who were not in child safety seats. The driver of the second vehicle was transported with serious injuries.
- Action: Wentzville PD, Wright City PD, Fire, and St. Charles County and Warren County EMS responded, as did the MSHP who took command of the scene. Both lanes of Eastbound I-70 were closed and the #1 lane of Westbound I-70 was also closed for emergency vehicles. MoDOT Emergency Response assisted with traffic control, diverting drivers onto Veterans Memorial Parkway and the North Outer Road. The detour took drivers to Wentzville Parkway and back onto I-70. An Engineer was notified and began to adjust necessary signal timing for traffic. The ER Supervisor, Communication Staff, Maintenance Superintendent, EOC, Motor Carriers and the MoDOT Incident Management Coordinator were all notified. The TMC messaged for the event and entered it into TMS to notify the public of the closure. KC Scout was advised of the closure and helped message for eastbound traffic. An incident alert was sent to notify management of the closure. Reconstruction had a delayed response which contributed to the extended duration. Traffic queued approximately 4.8 miles on I-70 eastbound and approximately 2 miles on I-70 westbound. However, traffic returned to normal approximately 8 minutes after all lanes were opened.
- Event Duration: 3 hours 8 minutes

MISSOURI TO C	Eastbound I-70 past Route T osed Hours/Minutes	Left Shoulder 3:08	Lane 1 3:08	Lane 2 3:08	Right Shoulder 3:08
TO T	Westbound I-70 before Route T	Left Shoulder	Lane 1	Lane 2	Right Shoulder
Closed Hours/Minutes		2:42	2:42	0:00	3:04





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Major Impact Traffic Incidents and Mitigation

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INCIDENT MANAGEMEN

1/23/2018 (Tuesday)

- Time: 8:19 am 12:07 pm *** Fatality ***
- Location: St. Louis County Eastbound I-64 before I-270
- Event: Multi-Vehicle Crash
- Estimated Initial Impact: Rush Hour: 5 of 5 travel lanes affected equals (=) 100%
- Incident Details: The TMC operators overheard units being dispatched to a multi-vehicle crash while monitoring police scanners. It was determined to be a chain reaction accident involving six vehicles including a tractor trailer. The driver of a small passenger vehicle cut in front of the tractor trailer who was unable to stop and rear ended the vehicle. The tractor trailer and passenger vehicle immediately burst into flames, fatally injuring the driver of the passenger vehicle. Three others were transported to a local hospital for treatment.
- Action: The MSHP, Town & Country Police, Des Peres Police, Creve Coeur Police, and West County Fire and EMS responded to work the scene. The TMC entered the incident into ATMS and activated available DMS boards within one minute. This also created an entry into TMS to notify the public. MoDOT Emergency Response Units were dispatched to assist with traffic control. All lanes of Eastbound I-64 were closed as were the two left lanes of Westbound I-64 to allow emergency responders additional room to work. Eastbound traffic was diverted onto MO 141 giving drivers several detour options. MoDOT Traffic Engineers were notified and began to adjust necessary signal timing to assist with the flow of the detoured traffic. The ER Supervisor, Communication Staff, Maintenance Superintendent, EOC, Motor Carriers and the MoDOT Incident Management Coordinator were all notified. Further, an incident alert and updates were sent to keep MoDOT management apprised as the incident progressed. Reconstruction had a delayed response and with maintenance sweeper down from Special Ops, SWAT was dispatched to manually sweep up the large amounts of debris. This contributed to the extended duration of the incident, as well as the number of vehicles involved and extent of damage. All vehicles had to be towed from the scene. Traffic queued approximately 5 miles on I-64 eastbound and approximately 1 mile on I-64 westbound, but returned to normal approximately 7 minutes after all lanes were opened
- Event Duration: 3 hours 48 minutes

Eastbound I-64 befor I-270	e Left Shoulder	Lane 1	Lane 2	Lane 3	Exit Lane 1	Exit Lane 2	Right Shoulder
Closed Hours/Minutes	3:41	3:41	3:41	3:41	3:41	3:41	3:41
Westbound I-64 pas I-270	t Left Shoulder	Lane 1	Lane 2	Lane 3	Lane 4	Exit Lane 1	Right Shoulder
Closed Hours/Minutes 1:57		1:57	1:48	0:00	0:00	0:00	0:00





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