WHERE WE STAND

Where We Stand ***tracks the health of the St. Louis region among the 50 most populous MSAs.[1] These metro areas, known as the peer regions, are our domestic competition and provide a consistent yardstick to gauge "Where We Stand."***

This update looks at how St. Louis compares with peer regions on several measures of roadway congestion and system reliability.

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Roadway Congestion & System Reliability

Roadway congestion occurs in all urban areas. Over the past 20 years congestion in a vast majority of large metropolitan regions has increased, despite increases in roadway miles per capita (Puentes 2015). Current trends indicate that congestion will continue to increase as will the associated costs (Schrank 2015). Nationwide, it is estimated that in one year 6.9 billion hours are spent on congestion, burning 3.1 billion gallons of fuel. This works out to an estimated $160 billion in costs to U.S. residents and businesses. On average, in one year each person commuting to work in urban areas of the United States spends an extra 42 hours travelling due to congestion and uses an extra 19 gallons of gas, an estimated value of $960 per commuter (Schrank 2015).[2]

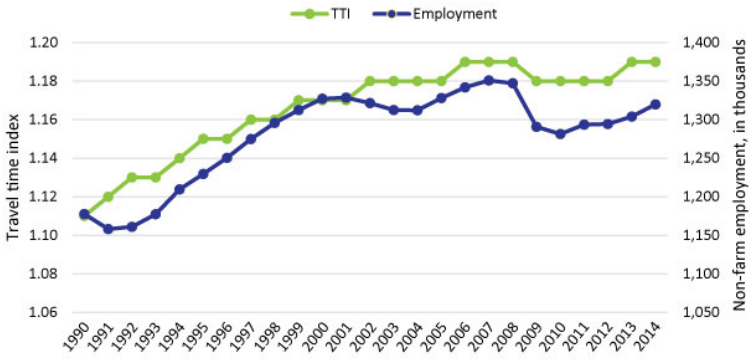
Although congestion is usually thought of as a problem that needs to be eradicated, there are positive aspects to congestion. First, congestion is an indication of a prosperous economy. As population and jobs increase, so does congestion. Figure 1 shows this by charting one measure of congestion[3] along with employment for the St. Louis MSA from 1990 to 2014. Congestion closely mirrors the change in employment over the time period. Second, congestion can lead people and businesses to make more environmentally friendly decisions such as locating businesses closer to workers, taking public transportation, or allowing workers to telecommute. Third, in business corridors congestion can be a sign of a place where people want to be. Great streets, such as the Delmar Loop in University City, Missouri, can use lower traffic speeds as a tool to make the area friendlier to other travel modes, such as walking, and to accommodate destination traffic by deterring through-traffic.[4]

Even so, high levels of congestion, particularly on freeways and major arterials, can impose costs on businesses, detract from a region's quality of life, and diminish air quality. Conversely, low congestion levels can potentially help market the region and attract new businesses.

This Where We Stand (WWS) update includes several measures that are used to gauge roadway congestion and reliability of transportation systems. One measure, the travel time index, focuses on recurring congestion, which accounts for less than half of all congestion. Most of the other measures focus on the reliability of the system, accounting for recurring as well as non-recurring congestion. Non-recurring congestion - delays due to incidents such as construction, accidents, and weather - accounts for an estimated 55 percent or more of congestion in large urban areas (Falcocchio, 2015).

This report compares data for the 50 most populous U.S. Metropolitan Statistical Areas (MSAs), referred to as "the peer regions." The data show that St. Louis is one of the least congested regions in the nation. As discussed in the report, the region's long-range transportation plan and congestion management process outline ways agencies in St. Louis are working together to alleviate some of the congestion in the region. But in a thriving metropolitan area, congestion will never be completely eliminated.

Figure 1: Travel Time Index (TTI) and Employment
St. Louis MSA, 1990 to 2014



Source: Urban Mobility Report, 2015 and Bureau of Labor Statistics

1 MSAs (Metropolitan Statistical Areas) are geographic entities delineated by the Office of Management and Budget (OMB). MSAs are areas with "at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties."
2 Estimates are for 2014.
3 See Page 3 for a definition and discussion of the travel time index (TTI).
4 For more on the St. Louis Great Streets Initiative, visit http://www.ewgateway.org/transportation-planning/great-streets-initiative/.

Revised on 2/13/2018 with corrections to Figure 3.

Federal Requirements for Transportation Performance Management

The two most recent federal transportation bills, Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation (FAST) Act, established new requirements that state departments of transportation and metropolitan planning organizations, as well as transit agencies, use data to focus on specific outcomes related to national transportation goals in the areas of safety, infrastructure condition, congestion reduction, system reliability, freight movement and economic vitality, environmental sustainability, and reduced project delivery delays.

The Federal Highway Administration (FHWA) is in the process of establishing rules for how these goals will be measured as well as how the performance measures will be evaluated and reported. The region's Long-Range Transportation plan and Congestion Mitigation Process already incorporate many of these goals into regional decision-making. For more information on both, see http://www.ewgateway.org/transportation-planning/ .

This WWS Update includes data on the following four measures that have been chosen to measure traffic congestion, the efficiency of the system and freight movement, and protecting the environment:

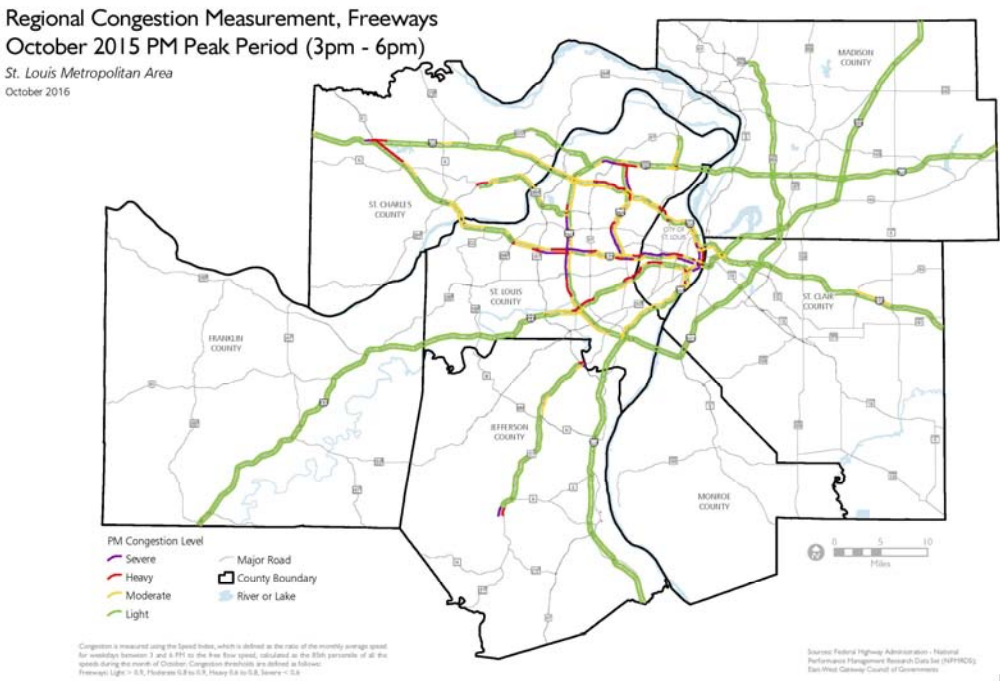
- Percent of travel that is non-single occupancy vehicle (SOV)
- Percent of person-miles traveled on the interstate that are reliable
- Percent of person-miles traveled on the non-interstate that are reliable
- Truck travel time reliability index

Note, the planning area for East-West Gateway is eight counties while this report provides data for the larger 15-county Metropolitan Statistical Area or the U.S. Census designated Urban Area, as indicated.

Although the St. Louis region has less congestion than many of the peer regions, there are congested locations on the regions' transportation system. Data in this report are for freeways only, except where indicated, and are averages for the entire MSA. The amount of congestion experienced by individuals throughout the region will vary from person to person.

Figure 2 shows highly congested roadways in purple. These are road segments where the average speed during rush hour is less than 60 percent of the average free flow speed. To see maps of AM and PM congestion for the St. Louis region, see the 2015 Annual Regional Congestion Report at www.ewgateway.org/transportation-planning/transportation-systems-management-operations/congestion-management-process/ .

Figure 2:



Travel Time Index (TTI) is a measure of the average congestion that a person can expect to encounter during the periods of heaviest traffic volume. Thus, TTI measures the recurring congestion caused by traffic volumes that exceed roadway capacity. This kind of congestion is predictable and influences choices that people and businesses make about where to live, work, and locate a business. It also affects individual decisions about when to drive, as well as business decisions about when to move freight. TTI is the ratio of travel time in the peak period (rush hours)[5] to the travel time in free-flow conditions.

Among the peer regions, St. Louis has one of the lowest levels of congestion on interstates in both the morning and evening rush hours. Residents and truck drivers in St. Louis can expect a trip to take 15 percent longer during morning rush hours than it would during a non-congested time of the day and 22 percent longer in evening rush hours. A trip that would take 30 minutes when there is no traffic, will take about 35 minutes when travelling between 6 and 9 AM and about 37 minutes when travelling between 4 and 7 PM.

Figure 3 shows a comparison of the TTI for St. Louis with that of Los Angeles, the most congested region, and with Chicago, the most congested among the peer Midwest regions. During PM rush hours (4 to 7 PM), a drive that would take 30 minutes during free flow time will take an additional 6.6 minutes in St. Louis, 13.5 minutes in Chicago, and 40.2 minutes in Los Angeles. St. Louis is the 20th most populous region in the country, but it has one of the lowest rates of congestion.

Travel Time Index

Morning Rush Hour (6 to 9 am), 2016

1	**Los Angeles**	**1.88**
2	San Francisco	1.64
3	San Jose	1.57
4	Boston	1.50
5	Seattle	1.48
6	Washington, D.C.	1.46
7	New York	1.44
7	Philadelphia	1.44
7	San Diego	1.44
10	Miami	1.42
10	Portland	1.42
12	Orlando	1.41
13	Austin	1.39
14	Baltimore	1.38
14	Houston	1.38
16	Denver	1.36
16	Virginia Beach	1.36
18	Chicago	1.31
Peer Average		**1.30**
19	Atlanta	1.30
20	Dallas	1.29
21	Pittsburgh	1.28
21	Tampa	1.28
23	Detroit	1.27
23	Milwaukee	1.27
23	Minneapolis	1.27
23	Riverside	1.27
27	Raleigh	1.25
27	Sacramento	1.25
29	Jacksonville	1.24
29	Nashville	1.24
31	Buffalo	1.23
31	Charlotte	1.23
31	Hartford	1.23
31	Providence	1.23
35	New Orleans	1.22
35	Phoenix	1.22
37	Las Vegas	1.21
37	San Antonio	1.21
39	Cleveland	1.19
40	Cincinnati	1.17
40	Kansas City	1.17
40	Oklahoma City	1.17
40	Salt Lake City	1.17
44	Louisville	1.16
44	Memphis	1.16
46	Birmingham	1.15
46	Columbus	1.15
46	Richmond	1.15
46	**St. Louis**	**1.15**
50	**Indianapolis**	**1.13**

Source: Federal Highway Administration, National Performance Management Research Data Set

Data is for truck and passenger vehicles. For weekdays only.

Travel Time Index

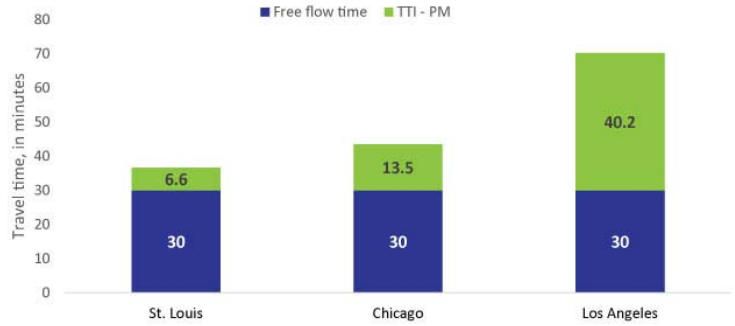
Evening Rush Hour (4 to 7 pm), 2016

1	**Los Angeles**	**2.34**
2	San Jose	2.23
3	San Francisco	2.04
4	Orlando	1.85
5	Portland	1.80
6	Seattle	1.74
7	Austin	1.71
8	San Diego	1.69
8	Washington, D.C.	1.69
10	Boston	1.66
11	Philadelphia	1.64
12	Miami	1.61
13	Houston	1.60
14	New York	1.59
15	Virginia Beach	1.57
16	Baltimore	1.48
17	Denver	1.47
18	Atlanta	1.46
Peer Average		**1.45**
19	Chicago	1.45
20	Dallas	1.42
20	Minneapolis	1.42
22	Tampa	1.41
23	Charlotte	1.36
23	Detroit	1.36
23	Pittsburgh	1.36
26	Hartford	1.35
26	Milwaukee	1.35
28	New Orleans	1.34
29	Nashville	1.33
29	Raleigh	1.33
29	Sacramento	1.33
32	Providence	1.32
33	Buffalo	1.31
33	Riverside	1.31
33	San Antonio	1.31
36	Jacksonville	1.30
37	Las Vegas	1.28
38	Cincinnati	1.25
38	Columbus	1.25
38	Louisville	1.25
38	Phoenix	1.25
42	Oklahoma City	1.24
42	Salt Lake City	1.24
44	Cleveland	1.22
44	**St. Louis**	**1.22**
46	Kansas City	1.21
46	Memphis	1.21
48	Birmingham	1.19
49	Indianapolis	1.17
49	**Richmond**	**1.17**

Source: Federal Highway Administration, National Performance Management Research Data Set

Data is for truck and passenger vehicles. For weekdays only.

Figure 3: Travel Time in PM Rush Hour (4 to 7 PM)
St. Louis, Chicago, & Los Angeles MSAs, 2016



Source: Federal Highway Administration, National Performance Management Research Data Set

5 Peak travel times vary some from region to region. For comparison purposes, the same three hour period for the morning (6 to 9 AM) and evening (4 to 7 PM) rush hours was used for all regions.

Planning Time Index (PTI) is similar to TTI but in addition to typical delays, it is also accounts for inconsistent traffic delays. Thus, in addition to recurring congestion levels, PTI measures non-recurring congestion caused by unforeseen incidents including accidents, construction, and other variations from typical system performance. PTI considers non-everyday congestion to determine the amount of time a person should allow in order to be on time at least 95 percent of the time. It indicates the consistency and dependability of a region's highway system as well as how quickly incidents are addressed. For St. Louis, the PTI is not much different than the TTI, meaning that people and companies do not encounter many unexpected traffic delays relative to people in other large metropolitan regions.

For both morning and evening rush hours, St. Louis has one of the lowest levels of congestions on interstates based on the PTI. A resident in St. Louis whose drive to work is 30 minutes when traffic is free-flowing, should plan on 43 minutes to get to work on time in the morning and 48 minutes to be on time to relieve the babysitter in the evening. St. Louis is among the regions with the least amount of atypical congestion delays.

Most of the peer Midwest regions have lower levels of congestion than the average of all of the peers. Minneapolis and Chicago are the exceptions. Both regions have slightly higher PTI scores than the average of the peers. To be on time, a resident in Minneapolis should plan on a 30 minute trip taking 56 minutes in the morning and 72 minutes in the evening.

A resident in St. Louis whose drive to work is 30 minutes when traffic is free-flowing, should plan on 43 minutes to get to work on time in the morning and 48 minutes to be on time to relieve the babysitter in the evening.

Planning Time Index

Morning Rush Hour (6 to 9 am), 2016

1	**Los Angeles**	**3.25**
2	San Francisco	2.79
3	San Jose	2.73
4	Boston	2.51
5	Seattle	2.33
6	Washington, D.C.	2.28
7	Portland	2.22
8	Miami	2.18
8	New York	2.18
10	San Diego	2.16
11	Orlando	2.15
11	Philadelphia	2.15
13	Baltimore	2.08
14	Houston	2.04
14	Virginia Beach	2.04
16	Austin	1.98
17	Denver	1.96
18	Minneapolis	1.87
19	Chicago	1.86
20	Dallas	1.83
Peer Average		**1.83**
21	Milwaukee	1.82
22	Atlanta	1.76
22	Detroit	1.76
24	Raleigh	1.71
24	Riverside	1.71
24	Tampa	1.71
27	Pittsburgh	1.70
28	Buffalo	1.67
28	Nashville	1.67
30	Charlotte	1.65
30	Hartford	1.65
32	Jacksonville	1.64
33	Providence	1.63
34	Sacramento	1.62
35	San Antonio	1.59
36	New Orleans	1.57
37	Cleveland	1.55
38	Cincinnati	1.48
38	Phoenix	1.48
40	Las Vegas	1.47
41	Columbus	1.44
41	Kansas City	1.44
43	Louisville	1.43
44	**St. Louis**	**1.42**
45	Salt Lake City	1.41
46	Oklahoma City	1.39
47	Memphis	1.38
48	Birmingham	1.37
49	Richmond	1.33
50	**Indianapolis**	**1.32**

Source: Federal Highway Administration, National Performance Management Research Data Set

Data is for truck and passenger vehicles. For weekdays only.

Planning Time Index

Evening Rush Hour (4 to 7 pm), 2016

1	**Los Angeles**	**4.17**
1	San Jose	4.17
3	San Francisco	3.57
4	Orlando	3.53
5	Portland	3.33
6	Seattle	3.12
7	Boston	2.98
8	Washington, D.C.	2.87
9	San Diego	2.85
10	Philadelphia	2.77
11	Virginia Beach	2.74
12	Austin	2.67
13	Houston	2.65
14	Miami	2.63
15	New York	2.54
16	Baltimore	2.41
17	Minneapolis	2.39
18	Chicago	2.27
19	Denver	2.26
Peer Average		**2.25**
20	Dallas	2.22
21	Atlanta	2.21
22	Tampa	2.18
23	Detroit	2.13
24	Milwaukee	2.08
25	Pittsburgh	2.04
26	Charlotte	2.03
27	Hartford	2.02
28	New Orleans	1.99
29	Buffalo	1.96
30	Providence	1.95
30	Raleigh	1.95
32	Nashville	1.92
33	Sacramento	1.86
33	San Antonio	1.86
35	Riverside	1.82
36	Jacksonville	1.81
37	Louisville	1.80
38	Columbus	1.79
39	Cincinnati	1.74
40	Oklahoma City	1.69
41	Las Vegas	1.67
42	Cleveland	1.64
42	Salt Lake City	1.64
44	Kansas City	1.59
44	**St. Louis**	**1.59**
46	Phoenix	1.58
47	Memphis	1.54
48	Indianapolis	1.50
49	Birmingham	1.49
50	**Richmond**	**1.43**

Source: Federal Highway Administration, National Performance Management Research Data Set

Data is for truck and passenger vehicles. For weekdays only.

Travel Time Reliability is the percent of person-miles traveled on roads that are considered reliable.

"Person-miles" are the users of the highway system and includes bus, auto, and truck occupancy levels. Roadways are considered reliable when travel time varies little between free-flow and congested times of the day, the ratio of the 80th percentile travel time of a reporting segment to a normal/50th percentile travel time (FHWA, 2017).

The travel time reliability tables provide data for the 50 most populous regions for which data are available. For both interstate and non-interstate roadways, the St. Louis region ranks among the least congested regions. On interstates in the St. Louis region, a majority of travel (82.4 percent) is taken on roads that have high reliability. This indicates that congestion is low on many of the region's highways, even in the more dense areas of the region. People and businesses move efficiently throughout the region.

Figure 4 shows that on both interstates and non-interstates, a larger proportion of miles traveled are done so on reliable roads in St. Louis than on average for the peer regions.

Interstate Travel Time Reliability

Percent of person-miles traveled on interstates that are reliable, 2016

1	**Kansas City**	**88.6**
2	Cleveland	88.3
3	Pittsburgh	88.1
4	Memphis	87.2
5	Virginia Beach	83.7
6	Providence	83.0
7	**St. Louis**	**82.4**
8	Milwaukee	77.9
9	Columbus	77.0
10	Cincinnati	76.8
11	Las Vegas	75.7
12	San Antonio	72.7
12	Tampa	72.7
14	New York	72.2
15	Salt Lake City	71.9
16	Charlotte	71.1
17	Riverside	69.8
18	Philadelphia	69.3
19	Detroit	68.8
20	Jacksonville	68.7
21	Miami	68.3
Peer Average		**67.0**
22	Atlanta	66.9
23	Sacramento	65.3
24	Baltimore	64.5
25	Minneapolis	64.2
26	Chicago	63.5
27	Orlando	63.1
28	Dallas	62.9
29	San Diego	61.1
30	Austin	59.0
31	Boston	58.7
32	Denver	56.0
33	Washington, D.C.	54.1
34	San Francisco	49.2
35	Houston	48.7
36	Portland	48.4
37	Seattle	47.5
38	Phoenix	47.2
39	San Jose	45.7
40	**Los Angeles**	**41.1**

Source: Federal Highway Administration, National Performance Management Research Data Set. Data is for urbanized areas.

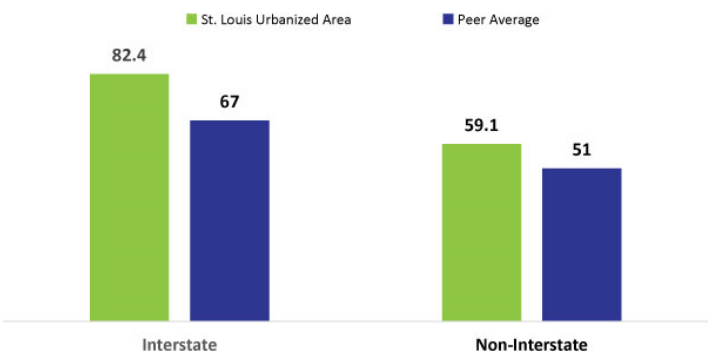
Non-Interstate Travel Time Reliability

Percent of person-miles traveled on non-interstates that are reliable, 2016

1	**Kansas City**	**71.5**
2	Minneapolis	69.6
3	Orlando	64.3
4	Providence	60.0
5	Memphis	59.6
6	**St. Louis**	**59.1**
7	Jacksonville	58.8
7	Riverside	58.8
9	Tampa	58.6
10	Virginia Beach	58.4
11	Milwaukee	57.7
12	Columbus	56.1
13	Baltimore	55.7
14	Philadelphia	55.5
15	Phoenix	55.2
16	New York	54.8
17	Las Vegas	53.3
18	San Diego	53.0
19	Atlanta	52.9
20	Chicago	51.7
21	Washington, D.C.	51.6
Peer Average		**51.0**
22	Cincinnati	50.9
23	Pittsburgh	49.7
24	Boston	49.6
25	Denver	48.5
26	Charlotte	47.2
27	San Antonio	46.7
28	Cleveland	46.6
29	Houston	46.2
30	Sacramento	45.2
31	San Jose	44.4
32	Austin	44.0
33	Portland	41.9
34	Detroit	41.3
35	Miami	39.1
36	Dallas	38.6
37	Seattle	38.3
38	Salt Lake City	37.7
39	San Francisco	37.4
40	**Los Angeles**	**30.2**

Source: Federal Highway Administration, National Performance Management Research Data Set. Data is for urbanized areas.

Figure 4: Percent of Miles Traveled on Reliable Roads
St. Louis Urbanized Area & Peer Average, 2016



Source: Federal Highway Administration, National Performance Management Research Data Set

Truck Travel Time Reliability Index is a measure that indicates the efficiency of moving freight on interstates in a region. While most congestion is experienced during rush hours, it is estimated that 41 percent of congestion in the United States is during non-peak times (Schrank 2015). These non-peak times are an important element to the freight industry, therefore this measure takes non-peak time congestion into account by factoring in the use of the system during all hours of the day. Additionally, it sets a higher threshold for planning on-time arrivals, which can also be important for businesses. Generally, it is the average performance of the system for an entire area.

This measure is unlike the other metrics discussed so far in that it does not provide an estimate of how long trips will take but rather it is a relative measure. For the federally required measurement, regions will be able to compare the index score from year to year to determine if the reliability of the system has improved. Data is available for this measure for 2012 through 2016. Over this time period the index score for the urbanized area of St. Louis increased from 1.80 to 2.13. It is not surprising that as the economy recovered from the recession, congestion increased and caused the system to be less predictable.

The index can also be used to indicate the performance of the system relative to the performance in other regions. The St. Louis region ranks 33rd among the peer regions, indicating that the highway system is reliable for moving freight relative to other regions.

This can be an attractive aspect of the St. Louis region since congestion inflicts additional costs on companies. Nationwide, trucks comprise approximately 7 percent of the "traffic" but account for 17 percent of the estimated U.S. congestion costs. This amounts to $28 billion in costs to companies that can be reduced by traveling in less congested areas (Schrank 2015).

While most congestion is experienced during rush hours, it is estimated that 41 percent of congestion in the United States is during non-peak times (Schrank 2015).

Truck Travel Time Reliability Index

2016

1	**Seattle**	**3.99**
2	Houston	3.81
3	Portland	3.71
4	Los Angeles	3.70
5	Washington, D.C.	3.64
6	San Francisco	3.44
7	Phoenix	3.29
8	San Jose	3.20
9	Minneapolis	3.01
10	New York	2.99
11	Salt Lake City	2.96
12	Riverside	2.95
13	Virginia Beach	2.94
14	San Diego	2.82
15	Las Vegas	2.81
16	Boston	2.78
17	Dallas	2.77
18	Baltimore	2.73
19	Orlando	2.71
Peer Average		**2.65**
20	Denver	2.64
21	Miami	2.59
22	Sacramento	2.55
23	Milwaukee	2.43
24	Atlanta	2.36
25	Jacksonville	2.34
26	Austin	2.29
27	San Antonio	2.29
28	Philadelphia	2.28
28	Providence	2.28
30	Chicago	2.26
31	Detroit	2.25
32	Pittsburgh	2.20
33	**St. Louis**	**2.13**
34	Columbus	2.11
35	Charlotte	2.09
36	Tampa	2.08
37	Cincinnati	2.06
38	Memphis	1.94
39	Kansas City	1.86
40	Cleveland	1.74
41	**Indianapolis**	**1.68**

Source: Federal Highway Administration, National Performance Management Research Data Set. Data is for urbanized areas.

Travel that is non-single occupancy vehicle (SOV) is a measure of the percentage of travel that is taken via public transportation, walking, bicycling, or carpooling as well as working from home. This is a strategy for reducing congestion as well as one of the performance measures required by federal legislation. The federal legislation on performance measures considers this to be one measure for how the region is performing on the Congestion Mitigation and Air Quality Improvement (CMAQ) Program (see Page 8 for more on CMAQ) since decreasing the number of trips made by single-occupancy vehicles can have positive effects on air quality by reducing emissions.

The best available data for this measure is from U.S. Census Bureau. It provides estimates of the modes of travel people use for commuting to work, but does not include data on modes used for other types of trips. This data is allowed under federal legislation as an option for calculating the region's performance on this metric.

In 2016, the St. Louis region had one of the lowest proportions of travel by non-SOV. The region ranked 41st among the peer regions with 16.6 percent of commute trips taken by other modes. This is 5.9 percentage points lower than the United States as a whole. Regions with the largest proportions of non-SOV commutes are those with extensive public transportation systems, including New York, Boston, and San Francisco. The percentage of trips taken via public transportation in these regions are 31.4, 17.2, and 13.4 percent, respectively. In St. Louis, 2.6 percent of trips are taken via public transit. These regions also have over 5 percent of trips via walking, compared to 2.3 percent for the peer average and 1.6 percent for St. Louis.

Figure 5 shows the percent of trips taken by non-single occupancy vehicles for the St. Louis MSA for 2000 to 2016. The largest proportion of these trips are carpool trips, comprising 7.1 percent of all commute trips in 2016. This is down from 9.9 percent of trips in 2000. The percent of workers working from home has also changed, from 2.9 percent in 2000 to 5.0 percent in 2016. The other modes have remained about the same over time, around 2.6 percent for public transit, 1.7 percent for walking, and 0.23 percent for bicycling.

Non-Single Occupancy Vehicle Travel

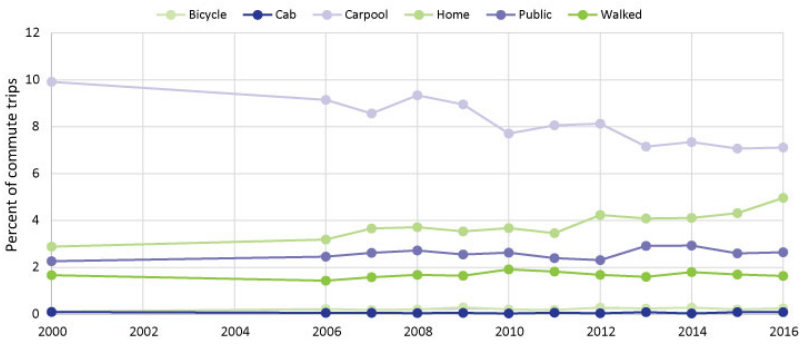
Percent of workers walking, biking, carpooling, working from home, or taking public transit to work, 2016

1	**New York**	**49.1**
2	San Francisco	40.0
3	Washington, D.C.	32.6
4	Boston	32.0
5	Seattle	30.6
6	Chicago	28.5
7	Portland	28.1
8	Philadelphia	26.4
9	Salt Lake City	24.3
10	San Jose	24.2
11	Denver	23.7
12	Los Angeles	23.6
13	San Diego	22.8
14	Austin	22.8
15	Pittsburgh	22.5
United States		**22.5**
16	Baltimore	22.3
17	Phoenix	22.0
18	Sacramento	22.0
19	Minneapolis	21.5
20	New Orleans	21.3
21	Atlanta	20.9
22	Miami	20.9
23	Riverside	20.4
24	San Antonio	19.7
25	Tampa	19.6
26	Las Vegas	19.1
27	Milwaukee	18.8
28	Virginia Beach	18.8
29	Hartford	18.6
30	Raleigh	18.5
31	Providence	18.5
32	Orlando	18.2
33	Charlotte	18.1
34	Dallas	18.1
35	Houston	17.9
36	Cleveland	17.8
37	Jacksonville	17.6
38	Cincinnati	17.6
39	Nashville	17.2
40	Richmond	16.7
41	**St. Louis**	**16.6**
42	Buffalo	16.6
43	Columbus	16.4
44	Louisville	16.3
45	Memphis	15.8
46	Oklahoma City	15.6
47	Kansas City	15.5
48	Detroit	14.9
49	Indianapolis	14.7
50	**Birmingham**	**13.4**

Source: U.S. Census, American Community Survey, 1-Year Estimates

Figure 5: Percent of Commute Trips by Non-Single Occupancy Vehicle Modes

St. Louis MSA, 2000 to 2016



Source: U.S. Census Bureau, American Community Survey, 1-Year Estimates

Conclusion

Relative to other large metropolitan regions, St. Louis has low levels of congestion. While this is a positive aspect of life in the region, congestion still has real and negative consequences to individuals, businesses, and the environment. Therefore, East-West Gateway works with partners throughout the region to reduce congestion through multiple avenues, including improving the performance of the existing system by monitoring traffic and responding to incidents quickly, promoting non-single occupancy vehicle travel in order to reduce the number of vehicles on roadways, and increasing roadway capacity where bottlenecks exist.

Intelligent transportation system (ITS) technology supports many of the region's strategies for optimizing the performance of the existing system. ITS includes regularly evaluating the coordination of traffic signals to ensure they are working as efficiently as possible and using traffic cameras to monitor and record traffic flow.

Emerging technologies are being integrated into the region's transportation planning, some of which have the potential to increase reliability and decrease congestion. Autonomous and connected vehicles could reduce driver error, leading to a decrease in the number of traffic accidents that cause non-recurring congestion. New vehicle technology also may allow cars to drive closer together which would improve the performance of the existing system by allowing more vehicles on a road segment at one time (ICF, 2017).

Congestion Management Process (CMP)

As the metropolitan planning organization (MPO) for St. Louis, East-West Gateway (EWG) is required by federal law to conduct a CMP as part of long- and short-range transportation planning.

The agency meets bi-monthly with Missouri and Illinois departments of transportation, Bi-State Development, and other local partners to discuss mobility in the region. These discussions help inform the CMP, which accompanies the long-range transportation plan that is produced every four years, and an annual report on congestion, which provides an update on the progress on the CMP.

Both documents can be found at www.ewgateway.org/transportation-planning/ .

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