

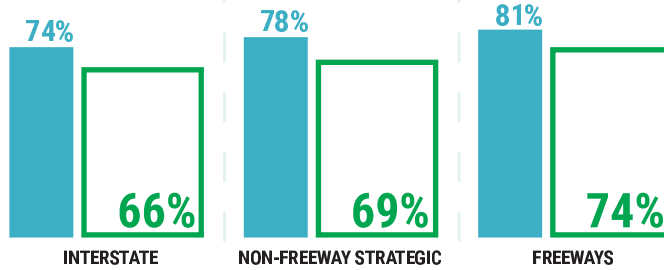
# Broward

## MPO Boundary - 2016

Planning Time Index



On-Time Arrival: Truck Vehicle



Travel Time Reliability

Average Travel Speed



Travel Meeting LOS Criteria



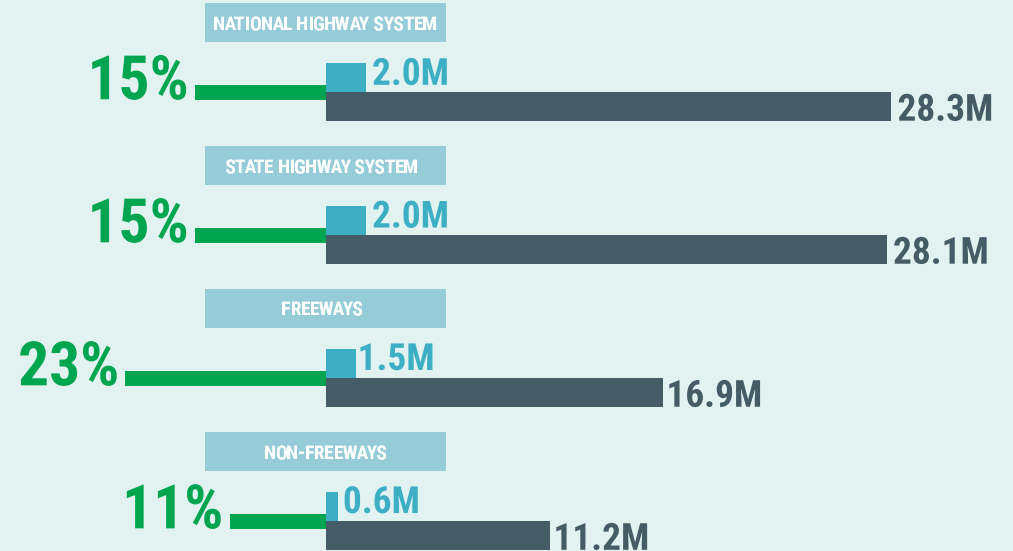
Person Miles Traveled



### Daily Vehicle Hours of Delay



### Percent Miles Heavily Congested Daily Truck Miles Traveled



# Definitions

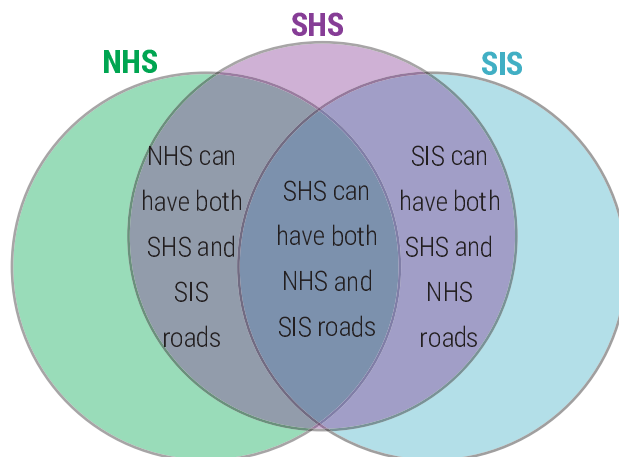
**Travel Time Reliability:** (1) the percent of trips that succeed in accordance with a predetermined performance standard for time or speed; and/or (2) the variability of travel times that occur on a facility or a trip over a period of time.

**On-Time Arrival:** The percentage of freeway trips traveling at greater than or equal to five mph below the posted speed limit. In the urbanized areas of the seven largest MPOs, on-time arrival is defined as the percentage of freeway trips traveling at least 45 mph. For arterials, travel time reliability is defined as the percentage of trips traveling greater than or equal to 20 mph.

**Planning Time Index:** The 95th percentile travel time divided by free flow travel time. A planning time index of 1.5 means a 20-minute trip at free flow speed takes 30 minutes - an informed traveler should plan for the extra 10 minutes to arrive on time.

**Daily Vehicle Hours of Delay:** Delay is the product of directional hourly volume and the difference between travel time at “threshold” speeds and travel time at the average speed. The thresholds are based on LOS B as defined by FDOT.

**Truck On-Time Arrival:** The percentage of freeway trips by combination trucks traveling at greater than or equal to 5 mph below the posted speed limit. In the urbanized areas of the 7 largest MPOs, on-time arrival is defined as the percentage of freeway trips by combination trucks traveling at least 45 mph.



**Percent of Travel Meeting LOS Criteria:** The percentage of travel meeting FDOT’s LOS standards is determined by summing the vehicle miles traveled on roadways operating acceptably and then dividing by the total system vehicle miles traveled.

**Average Travel Speed:** The length of the highway segment divided by the average travel time of all vehicles traversing the segment, including all stopped delay times.

**Person Miles Traveled Daily:** Person miles traveled consists of the total number of miles traveled by people using the SHS or other components of it. This is calculated by adding each roadway segment’s vehicle miles traveled multiplied by average vehicle occupancy.

**Percent Miles Heavily Congested:** Heavy congestion is a situation in which average travel speeds are in the range from 20-44 mph for freeways and equal to or worse than the LOS standards for arterials and highways.

**Daily Truck Miles Traveled:** (for all trucks class 4 through 12): The total number of miles traveled by trucks using a highway system.

**Daily Vehicle Miles Traveled:** The total number of miles traveled by vehicles using a highway system.

**Three roadway systems are reported:** National Highway System (NHS), State Highway System (SHS), and Strategic Intermodal System (SIS)

**FDOT Supplied MPO Mobility Performance Measure Analyses for 2016 (Broward MPO)**

Date: 11/26/2018

Broward (MPO Boundary)	Annual Measures <sup>1</sup>						Rotating Measures <sup>2</sup>			
	A: Daily vehicle miles traveled (Millions)	B: Daily truck miles traveled (Millions)	C: On-Time Arrival (Vehicle) <sup>3</sup>	D: Planning Time Index <sup>3</sup>	E: Daily vehicle hours of delay (Thousands)	F: Percent miles heavily congested	G: Person miles traveled (Millions)	H: On-Time Arrival (Truck) <sup>3</sup>	I: Average Travel Speed	J: Percent Travel Meeting LOS Criteria <sup>3</sup>
A: National Highway System	28.3	2.0			85.8	15%	44.0		42	63%
B: State Highway System	28.1	2.0			99.2	15%	43.6		42	63%
C: Strategic Intermodal System <sup>4</sup>	17.7	1.6	69%	1.75	37.0	21%	27.5	78%	53	47%
D: Freeways	16.9	1.5	74%	1.73	32.3	23%	26.2	81%	53	45%
E: Interstate	11.4	1.0	66%	1.86	27.6	30%	17.7	74%	50	30%
F: Non-Freeways (SHS)	11.2	0.6			66.9	11%	17.4		25	88%

**Broward (Urbanized Area)**

Broward (Urbanized Area)	A: Daily vehicle miles traveled (Millions)	B: Daily truck miles traveled (Millions)	C: On-Time Arrival (Vehicle) <sup>3</sup>	D: Planning Time Index <sup>3</sup>	E: Daily vehicle hours of delay (Thousands)	F: Percent miles heavily congested	G: Person miles traveled (Millions)	H: On-Time Arrival (Truck) <sup>3</sup>	I: Average Travel Speed	J: Percent Travel Meeting LOS Criteria <sup>3</sup>
	A: National Highway System	27.4	1.9			85.3	16%	42.6		42
B: State Highway System	27.2	1.9			98.7	16%	42.3		41	61%
C: Strategic Intermodal System <sup>4</sup>	16.8	1.5	65%	1.95	36.5	27%	26.2	69%	52	45%
D: Freeways	16.1	1.4	73%	1.78	31.9	28%	25.1	80%	53	43%
E: Interstate	10.7	0.9	63%	1.96	27.2	43%	16.6	73%	49	26%
F: Non-Freeways (SHS)	11.1	0.5			66.8	12%	17.2		24	88%

**Broward (County Boundary)**

Broward (County Boundary)	A: Daily vehicle miles traveled (Millions)	B: Daily truck miles traveled (Millions)	C: On-Time Arrival (Vehicle) <sup>3</sup>	D: Planning Time Index <sup>3</sup>	E: Daily vehicle hours of delay (Thousands)	F: Percent miles heavily congested	G: Person miles traveled (Millions)	H: On-Time Arrival (Truck) <sup>3</sup>	I: Average Travel Speed	J: Percent Travel Meeting LOS Criteria <sup>3</sup>
	A: National Highway System	28.3	2.0			85.8	15%	44.0		42
B: State Highway System	28.1	2.0			99.2	15%	43.6		42	63%
C: Strategic Intermodal System <sup>4</sup>	17.7	1.6	69%	1.75	37.0	21%	27.5	78%	53	47%
D: Freeways	16.9	1.5	74%	1.73	32.3	23%	26.2	81%	53	45%
E: Interstate	11.4	1.0	66%	1.86	27.6	30%	17.7	74%	50	30%
F: Non-Freeways (SHS)	11.2	0.6			66.9	11%	17.4		25	88%

<sup>1</sup>These six Annual Measures are reported each year.

<sup>2</sup>These four Rotating Measures change every other year. Odd year measures consist of 1) Percent Sidewalk Coverage, 2) Percent Bicycle Lane Coverage, and 3) Average Job Accessibility within a 30-minute car trip and 4) within a 30-minute transit trip.

<sup>3</sup>Measures C, D, H, and J are captured in the PM peak period (4:00-6:00).

<sup>4</sup>SIS On-Time Arrival and Planning Time Index exclude freeways.

# Annual MPO Performance Measures by MPO Population Size

**Broward MPO 2016 Population: 1,854,500**

Florida Department of Transportation Mobility Measures Program provides valuable information on performance measures for all 27 MPOs in Florida. On an annual basis the MPOs receive reports on ten measures, six measures annually and four rotating measures biennially for the entire MPO boundary, urbanized area within the MPO, and for counties within the MPO. The annual measures, in combination with the rotating biennial measures, cover the spectrum of mobility dimensions and multiple modes. These measures can be used however each MPO sees fit such as in the development of an MPO's Long Range Transportation Plan, Congestion Management Process, or State of the System Report. The following tables provide high, median, and low ranges for the State Highway System within the MPO boundary. MPOs are categorized as large, medium and small based on their population. The MPOs were distributed into the seven largest, nine medium, and eleven small-sized MPOs. For more information, please contact Monica Zhong at [Monica.Zhong@dot.state.fl.us](mailto:Monica.Zhong@dot.state.fl.us) or (850) 414-4808.

**SHS Daily Vehicle Hours of Delay in Thousands, 2016:**  
Broward MPO 99.2

Vehicle Hours of Delay (Thousands)	Low	Median	High
<b>Small-Sized MPO</b> (Population <sup>1</sup> below 367,800)	1.4	3.5	6.1
<b>Medium-Sized MPO</b> (Population <sup>1</sup> 367,800 to 757,100)	3.5	7.3	16.3
<b>Large MPO<sup>2</sup></b> (Population <sup>1</sup> over 757,100)	18.5	51.4	197.7

**SHS Percent Miles Heavily Congested, 2016:**  
Broward MPO 15%

Percent Miles Heavily Congested	Low	Median	High
<b>Small-Sized MPO</b> (Population <sup>1</sup> below 367,800)	<1%	<1%	6%
<b>Medium-Sized MPO</b> (Population <sup>1</sup> 367,800 to 757,100)	<1%	<1%	1%
<b>Large MPO<sup>2</sup></b> (Population <sup>1</sup> over 757,100)	4%	12%	37%

<sup>1</sup>2016 MPO Population is derived from FDOT Forecasting and Trends Office

<sup>2</sup>Seven Largest MPOs include Broward MPO, Hillsborough MPO, MetroPlan Orlando, Miami-Dade TPO, North Florida TPO, Palm Beach TPA, and Forward Pinellas

**SHS Daily Vehicle Miles Traveled in Millions, 2016:**  
Broward MPO 28.1

Vehicle Miles Traveled (Millions)	Low	Median	High
<b>Small-Sized MPO</b> (Population <sup>1</sup> below 367,800)	1.7	4.0	6.0
<b>Medium-Sized MPO</b> (Population <sup>1</sup> 367,800 to 757,100)	6.2	8.0	12.3
<b>Large MPO<sup>2</sup></b> (Population <sup>1</sup> over 757,100)	10.4	28.1	32.6

**SHS Daily Truck Miles Traveled in Millions, 2016:**  
Broward MPO 2.0

Truck Miles Traveled (Millions)	Low	Median	High
<b>Small-Sized MPO</b> (Population <sup>1</sup> below 367,800)	0.1	0.4	0.9
<b>Medium-Sized MPO</b> (Population <sup>1</sup> 367,800 to 757,100)	0.5	0.9	1.3
<b>Large MPO<sup>2</sup></b> (Population <sup>1</sup> over 757,100)	0.4	1.9	2.6

**Freeway On-Time Arrival, 2016:**  
Broward MPO 74%

On-Time Arrival	Low	Median	High
<b>Small-Sized MPO</b> (Population <sup>1</sup> below 367,800)	90%	97%	>99%
<b>Medium-Sized MPO</b> (Population <sup>1</sup> 367,800 to 757,100)	66%	93%	98%
<b>Large MPO<sup>2</sup></b> (Population <sup>1</sup> over 757,100)	50%	78%	84%

**Freeway Planning Time Index, 2016:**  
Broward MPO 1.73

Planning Time Index	Low	Median	High
<b>Small-Sized MPO</b> (Population <sup>1</sup> below 367,800)	1.10	1.15	1.21
<b>Medium-Sized MPO</b> (Population <sup>1</sup> 367,800 to 757,100)	1.10	1.19	1.65
<b>Large MPO<sup>2</sup></b> (Population <sup>1</sup> over 757,100)	1.48	1.69	2.32

<sup>1</sup>2016 MPO Population is derived from FDOT Forecasting and Trends Office

<sup>2</sup>Seven Largest MPOs include Broward MPO, Hillsborough MPO, MetroPlan Orlando, Miami-Dade TPO, North Florida TPO, Palm Beach TPA, and Forward Pinellas