

# Measuring Travel Time Reliability in the Miami Valley: July 2011 – June 2012



Travel Time reliability is the consistency or dependability in travel times, as measured from day to day and/or across different times of the day.

MVRPC conducted a Travel Time Reliability Analysis on ten freeway segments of the Region based on Freeway Management System data provided by the Ohio Department of Transportation. This analysis will be used to make hourly, monthly and annual travel time reliability comparisons as well as determine project impacts on travel times based on pre- and post construction data.

Some of the key travel time reliability measures are:

**95<sup>th</sup> Percentile Travel Time:** how much delay will be on the heaviest travel days

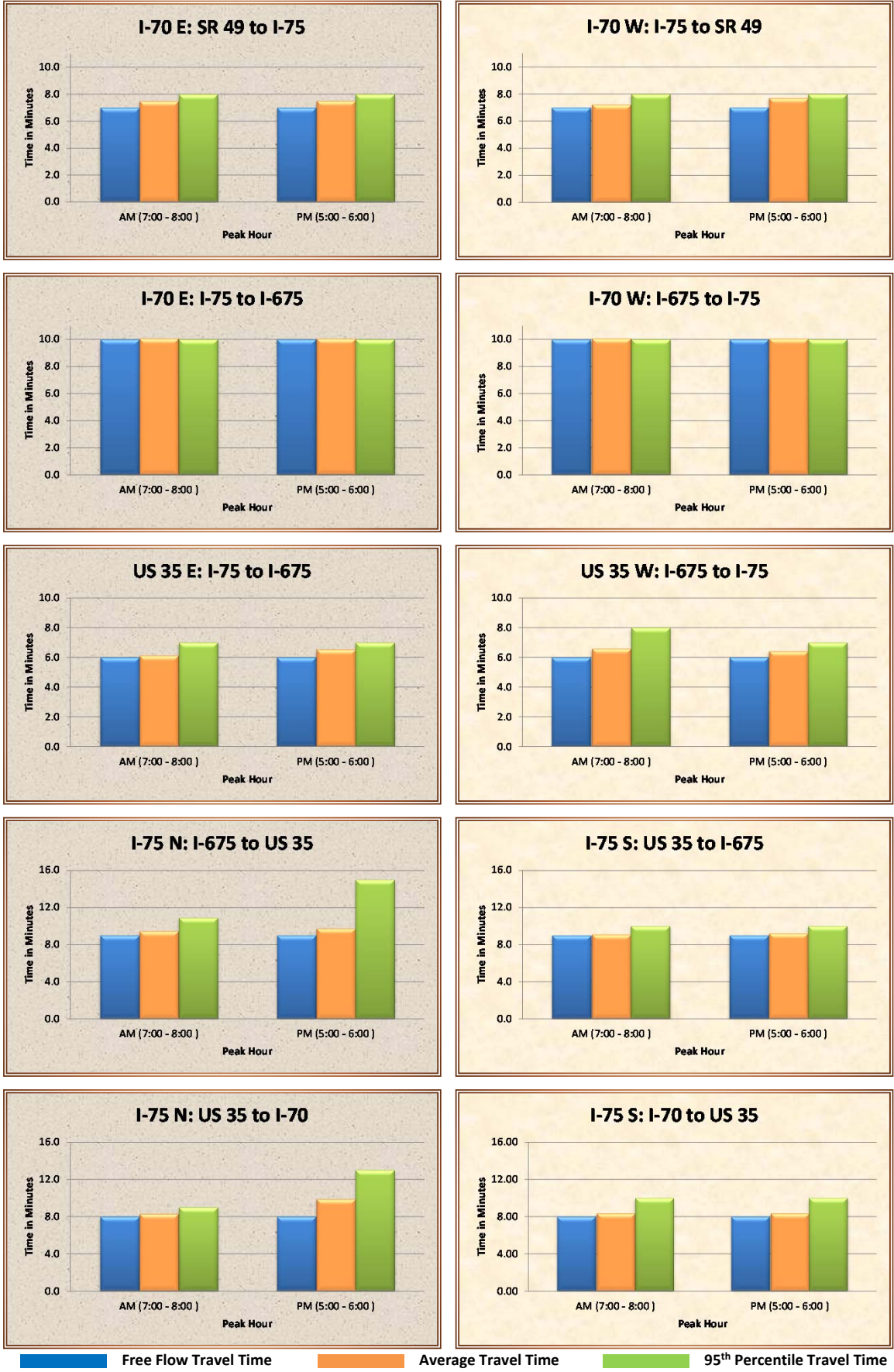
**Free Flow Travel Time:** travel time when there is no congestion delay

**Travel Time Index:** average time it takes to travel during peak hours compared to free flow conditions

**Buffer Index:** extra time so one is on time most of the time

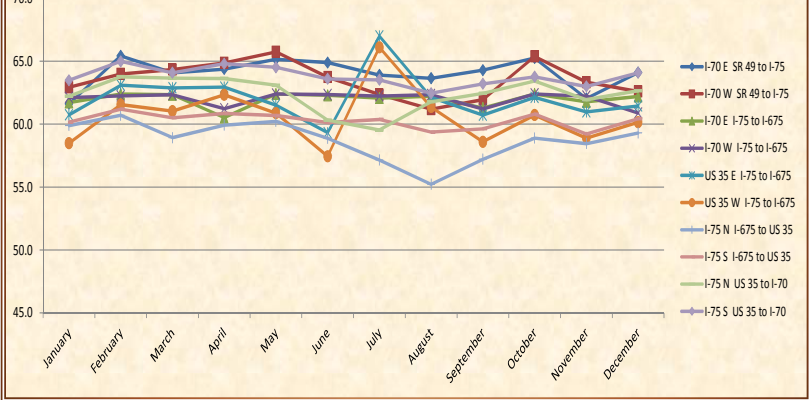
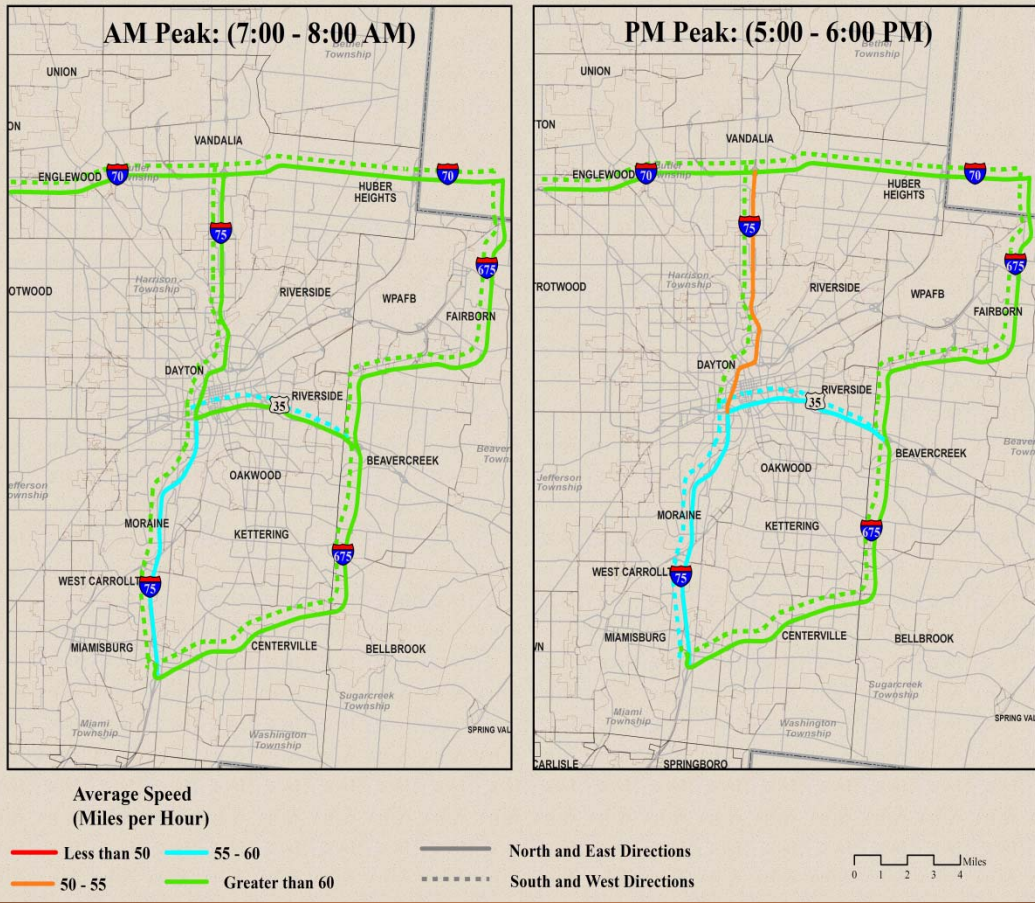
**Planning Time Index:** total time needed to plan for an on-time arrival 95% of the time

## Freeway Travel Time Reliability Analyses

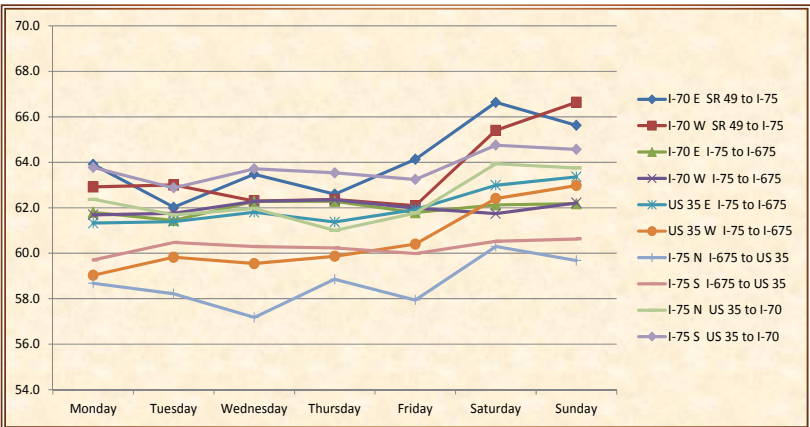


## Peak Hour Average Speeds

## Average Speed Distribution by Month



## Average Speed Distribution by Weekday



## Corridor Rankings



## Misery Index

Misery Index seeks to measure the length of delay of only the worst trips. A misery index of 0.5 implies that the slowest trips are 50% longer than the average trip.

Corridors	Misery Index
I-75: Between US 35 and I-70	0.12
I-75: Between I-675 and US 35	0.13
I-70: Between SR49 and I-75	0.15
I-70: Between I-75 and I-675	0.02
US 35: Between I-75 and I-675	0.18