

Baltimore Region **Vehicle Operating Cost** **Analysis**

Presentation to the Technical Committee

August 5, 2008

Baltimore Region Vehicle Operating Cost Analysis

The Issue – Gas Prices

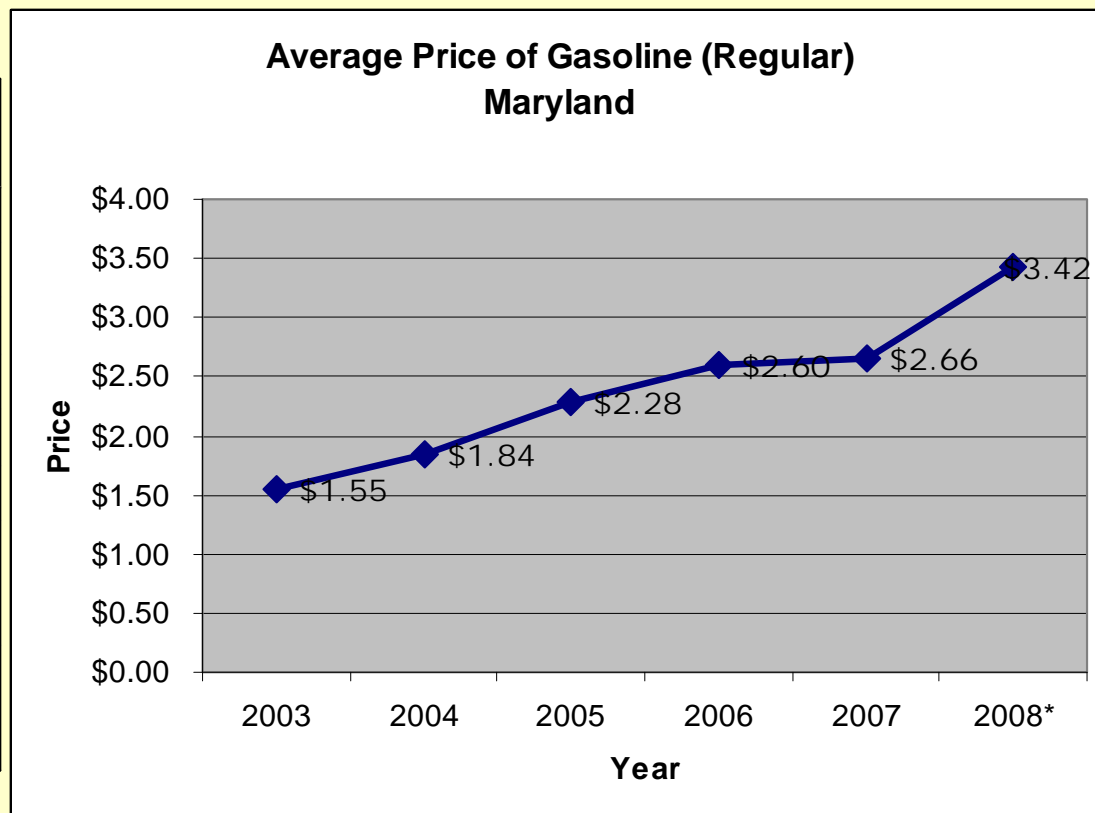


CURRENT AND PAST GAS PRICE AVERAGES

Regular Unleaded Gasoline

	8/03/08	Week Ago	Year Ago
National	\$3.89	\$3.97	\$2.85
Maryland	\$3.86	\$3.94	\$2.84
Baltimore	\$3.83	\$3.92	\$2.82
Cumberland	\$3.68	\$3.78	\$2.84
Hagerstown	\$3.83	\$3.88	\$2.82
Salisbury	\$3.77	\$3.85	\$2.77
Washington Suburbs (MD only)	\$3.90	\$3.99	\$2.89
Crude Oil	\$125/barrel (close on Friday)	\$123/barrel	\$77/barrel

AAA's Daily Fuel Gauge Report



*Note: Price as of July 1, 2008

<http://www.aamidatlantic.com/Outreach/GasInfo>

Baltimore Region Vehicle Operating Cost Analysis

The Analysis

- Most recent Travel Data for:
 - United States
 - Maryland
 - Metropolitan Baltimore
- Model Output with 3 different Vehicle Operating Costs:
 - 9.9 cents per mile
 - 19.8 cents per mile
 - 29.7 cents per mile
- Analyzed Model Output with real-world Travel Data using:
 - Traffic Volume & Transit Ridership
 - Mode Choice
 - Auto Occupancy

Baltimore Region Vehicle Operating Cost Analysis

Traffic Volume – VMT

Nationwide

-3.7%

Period	Vehicle Miles Traveled*
May 2007	264,329,000,000
May 2008	254,667,000,000

*Collected at approximately 4,000 continuous hourly traffic count data locations nationwide.

Maryland

-4.2%

Period	Vehicle Miles Traveled*
May 2007	5,144,000,000
May 2008	4,926,000,000

*Collected at 53 continuous hourly traffic count data locations statewide.

Metropolitan Baltimore

+0.6%

Year	Vehicle Miles Traveled
2003	21,267,000
2004	24,638,000
2005	25,033,000
2006	25,006,000
2007	25,146,000

<http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.htm>

Baltimore Region Vehicle Operating Cost Analysis

Transit Ridership – Passenger Trips

Nationwide
+3.4%

Period	Trips*
1 st Quarter 2007	2,515,000,000
1 st Quarter 2008	2,600,000,000

**Unlinked Passenger Trips*

**Maryland
Transit
Administration**
+4.5%

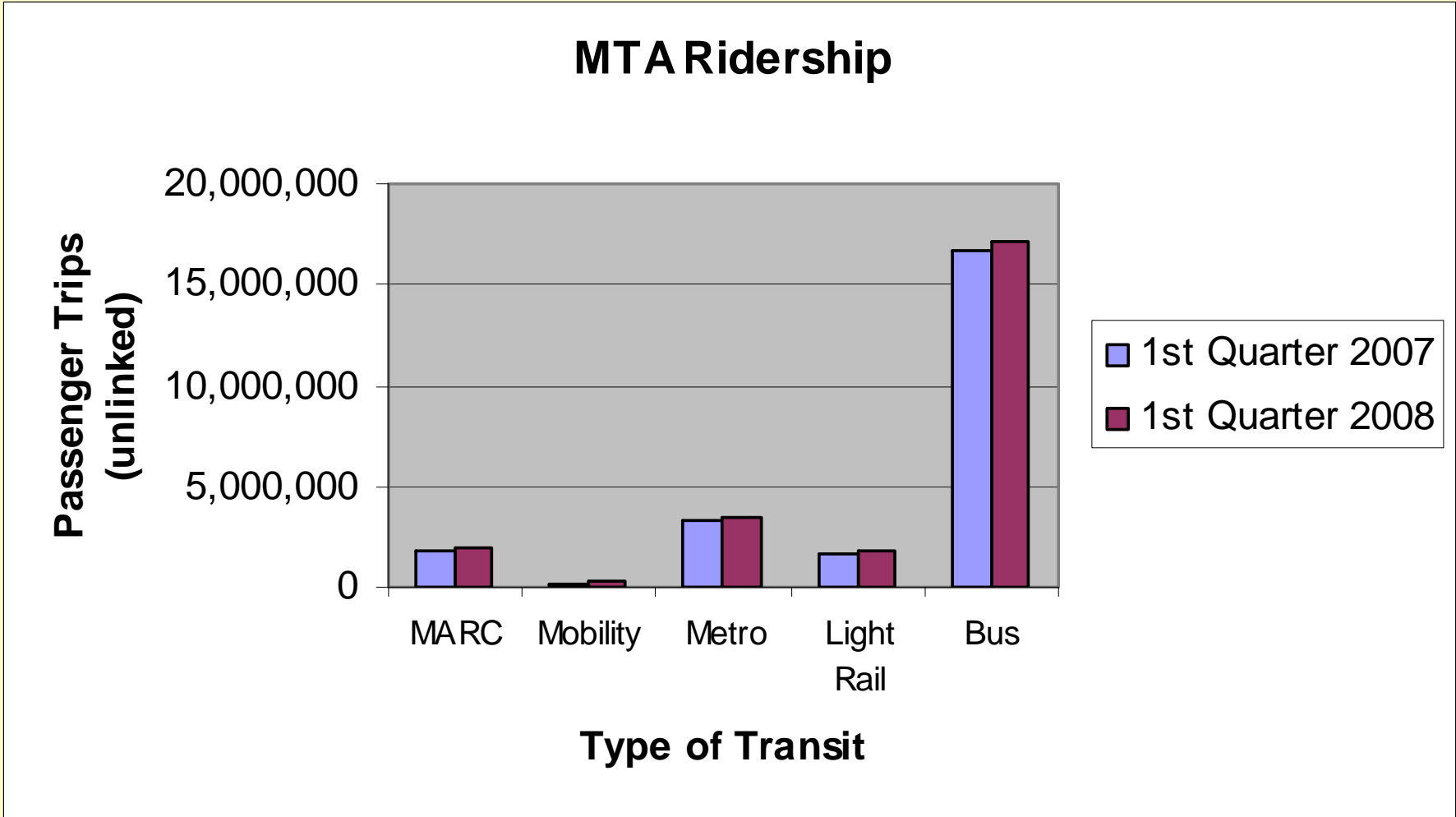
Period	Trips*
1 st Quarter 2007	23,577,700
1 st Quarter 2008	24,644,800

**Unlinked Passenger Trips*

<http://apta.com/research/stats/ridership>

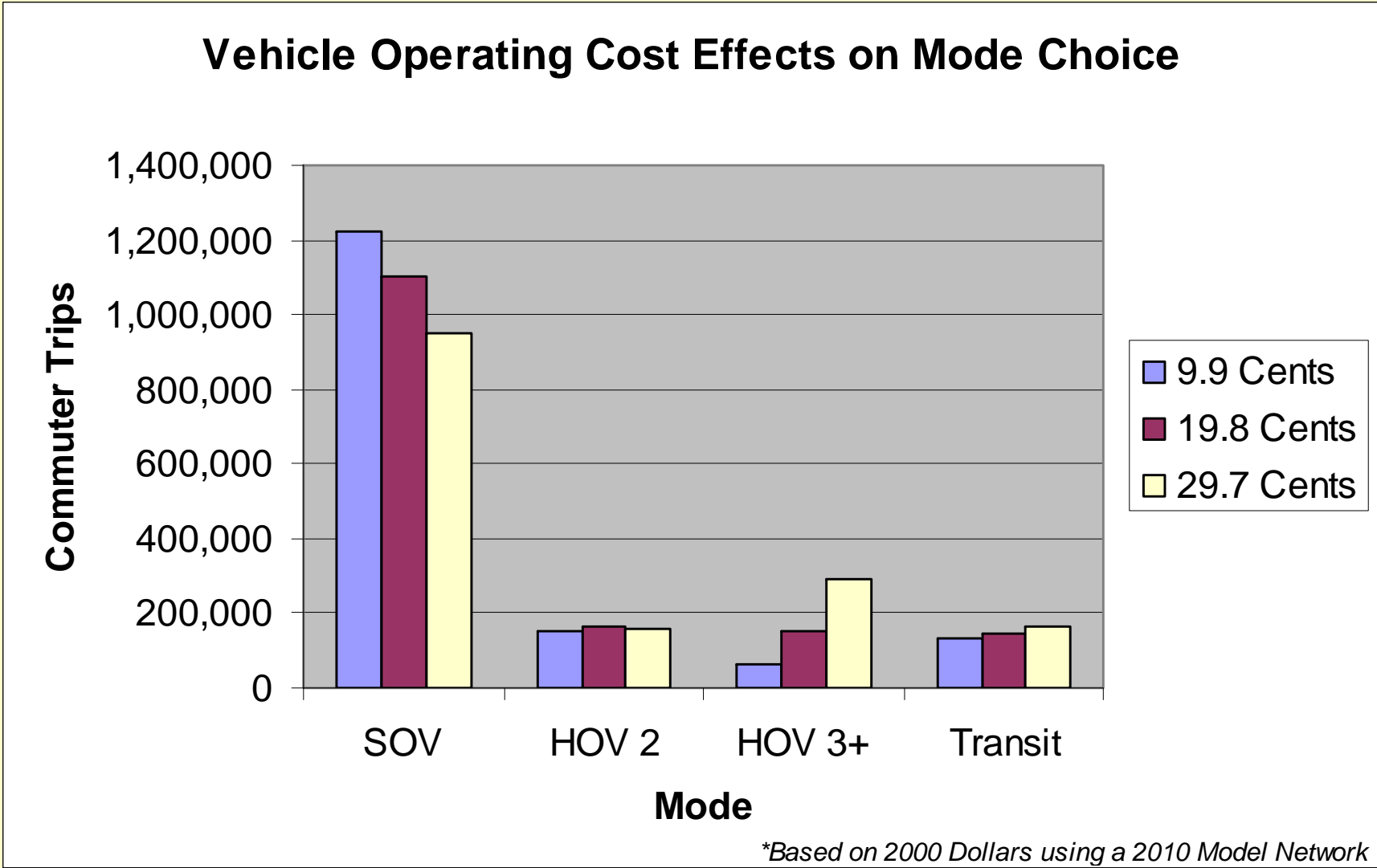
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Transit Ridership – Type of Transit



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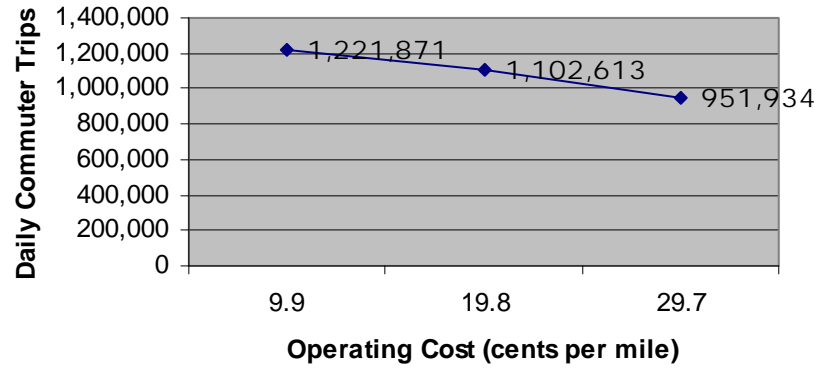
Model Results – Mode Choice



Baltimore Region Vehicle Operating Cost Analysis

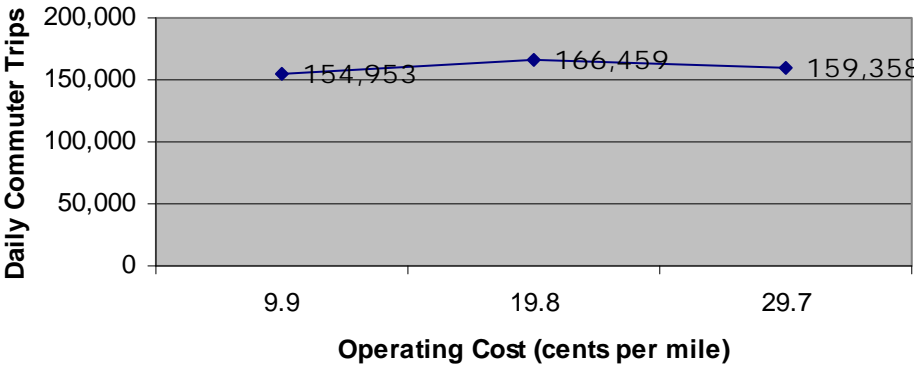
Model Results – Mode Choice

**Single Occupant Vehicle (SOV)
Commuter Trips**



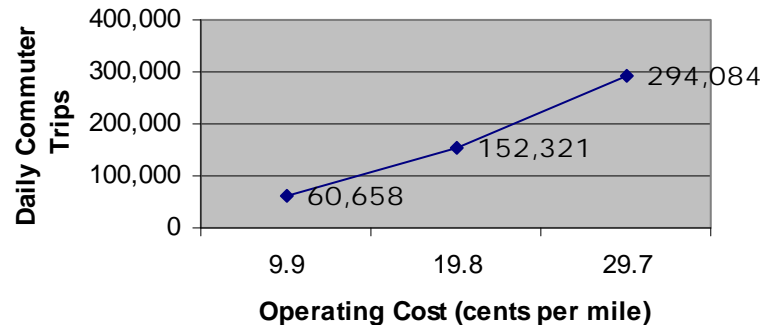
**Based on 2000 Dollars using a 2010 Model Network*

**High Occupancy Vehicle (HOV), 2 Occupants
Commuter Trips**



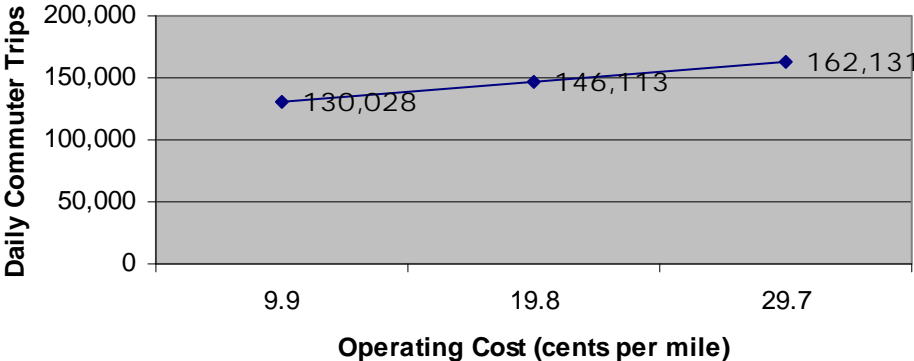
**Based on 2000 Dollars using a 2010 Model*

**High Occupancy Vehicle (HOV), 3 + Occupants
Commuter Trips**



**Based on 2000 Dollars using a 2010 Model*

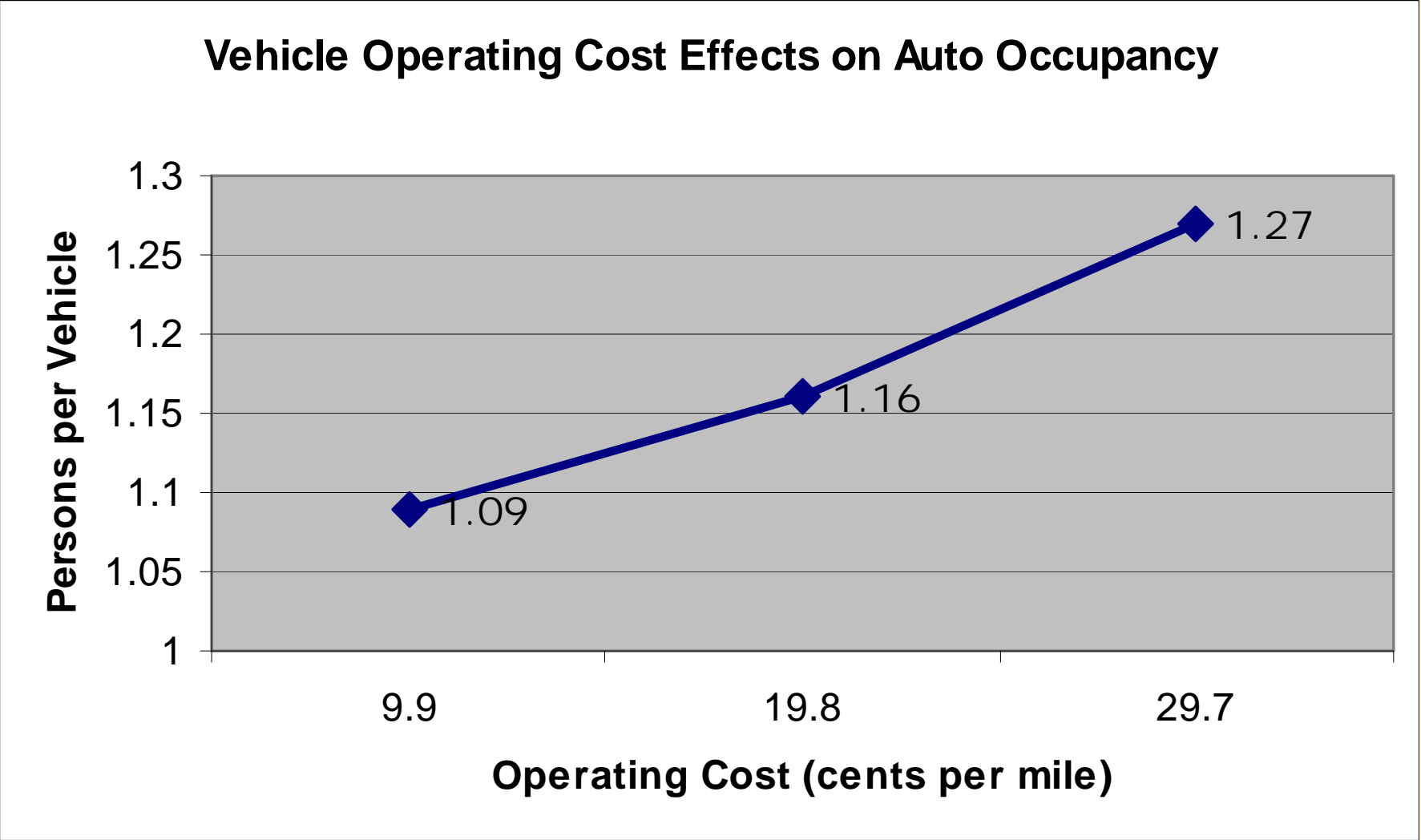
**Transit Ridership
Commuter Trips**



**Based on 2000 Dollars using a 2010 Model Network*

Baltimore Region Vehicle Operating Cost Analysis

Model Results – Auto Occupancy



Baltimore Region Vehicle Operating Cost Analysis

Model Enhancements

- Research what other **MPO's** are doing
 - Travel Model Improvement Program/FHWA

“Modeling effects of the cost of driving has not been adopted because large scale changes in response to fuel price changes have never occurred and therefore, the true effects are hard to establish.”

TMIP Technical Synthesis: Travel Model Considerations – Fuel Prices
- Keep a close eye on **Travel Data**
 - SHA Automatic Travel Recorders
 - MTA Transit Ridership
 - Carpool Data

Baltimore Region Vehicle Operating Cost Analysis

Next Steps

- Analyze Additional Travel Data
- Investigate Model Enhancements
- Draft Report of Travel Trends