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# **Economic Impacts of Transit (EIT) Study**

In the Commonwealth of Virginia



Virginia Department of Rail and Public Transportation

# EIT Study Purpose

- To illustrate how existing public transit services and operations generate economic value for the state
- Summarize these findings in terms of:

» *Monetized Economic and Social Benefits:*



**Congestion Relief**



**Increased/ affordable Mobility**



**Sustainability**



**Safety**



**State of Good Repair of the Roadway Infrastructure**

» *Impact on Economic Indicators:*



**Jobs**



**Income**



**GDP**



**Tax  
Revenue**

# Study Methodology

## Step 1 – Collect Input Data:

- » *Auto Travel Data: Vehicle Miles Travelled, Vehicle Hours Travelled, Avg. Delay*
- » *Transit Ridership Data by Agency:*
  - Avg. trip distance/ time,
  - Passenger Miles Travelled, Passenger Hours Travelled
  - Vehicle Revenue Miles, Vehicle Revenue Hours

## Performance:

- Transit
- Highway

**\* Study based on FY2018 Transit Agency Performance and Funding**

# EIT Study Methodology

## Step 2 – Travel Efficiency Analysis

- » *Monetize User Benefits*
- » *Monetize Social Benefits*
- » *Estimate Annual Cost Savings, by Category*



## Quantitative Benefits:

- Direct User Impacts
- Social Impacts



**Congestion Relief**



**Increased/ affordable Mobility**



**Sustainability**



**Safety**



**State of Good Repair of the Roadway Infrastructure**

# EIT Study Methodology

## Step 3: Economic Impact Analysis

- » Allocation “out-of-pocket” savings across jobs (by industry type) and households
- » Allocation savings across Industry Sectors
- » Run IMPLAN Economic Model

### Economic Impacts of:



Congestion Relief



Increased/ affordable Mobility



Enterprise Effects

On:



Jobs



Income



GSP



Tax Revenue

# Step 1: Transit Ridership in Virginia

Transit Mode	Ridership FY2018	Ridership FY2018 (%)
Bus (Non-WMATA), Paratransit (Non-WMATA), Ferry (HRT), Light Rail (HRT)	60,034,656	34.6%
VRE Commuter Rail	4,631,909	2.7%
<b>Sub-Total</b>	<b>64,666,565</b>	<b>37.3%</b>
WMATA Metrorail (VA Only)	91,116,096	52.5%
WMATA Metrobus (VA Only)	17,293,559	10.0%
WMATA Paratransit (VA Only)	339,196	0.2%
<b>Sub-Total</b>	<b>108,748,851</b>	<b>62.7%</b>
<b>Total</b>	<b>173,415,416</b>	<b>100.0%</b>

# Step 2: Monetized Benefits Findings



**Total Monetized  
Benefits of  
Transit:  
\$2.5 Billion**



## Congestion Relief

Highway Travel Time Savings: **\$624 M**

*Based on 23.5 million hours of travel time saved*

Transit Travel Time Savings: **\$66 M**

*Based on time saved using transit instead of driving*



## Increased/ Affordable Mobility

Transportation Cost Savings: **\$305 M**

*Net auto ownership savings due to transit use*

Income for Transit Riders: **\$1.5 B**

*Income foregone if transit was not an option*



## Traffic Safety

Traffic Crash Cost Savings: **\$60 M**

*Reduced crashes due to less drivers on roadways*

# Step 2: Monetized Benefits Findings



**Total Monetized  
Benefits of  
Transit:  
\$2.5 Billion**



## Sustainability

**Emissions Savings: \$12.8 M**

*Costs savings due to reduced emissions*

**Fuel Consumption Savings: \$3.5 M**

*Reduced demand for fuel leading to lower prices*



## State of Good Repair of Roadway Infrastructure

**Maintenance Savings: \$0.4 M**

*Savings due to less wear and tear on roadways*



# Annual Benefit-Cost Ratio



**Benefit-Cost  
Ratio:  
\$2.17**

Every dollar of public investment in transit generates \$2.17 dollars in direct benefits statewide.

<b>Total Benefits</b> (Monetized Direct Benefits)	<b>\$2.5 B</b>
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<b>Total Public Costs</b> (Expenses less Other Revenue)	<b>\$1.15 B</b>
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<b>Costs (Expenses)</b>	<b>\$1.54 B</b>
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<i>Capital Expenses</i>	<i>\$483 M</i>
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<i>Operating Expenses (non-payroll)</i>	<i>\$486 M</i>
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<i>Operating Expenses (payroll)</i>	<i>\$579 M</i>
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<b>Other Revenues</b> (Fares, Advertising, other)	<b>\$346 M</b>
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# Step 3: Economic Impact Findings

## Total Statewide Economic Impact:



**Transit Supports:**  
**28,940** Jobs  
Statewide



**Those jobs account for:**  
**\$1.9** Billion in labor  
income

Generating:










**\$3.5** Billion in  
Gross State  
Product











**\$607** Million in Tax  
Revenue

# Step 3: Economic Impact Findings

	 <b>Jobs</b>	 <b>Income</b>	 <b>GSP</b>	 <b>Tax Revenue</b>
 <b>Enterprise Effects</b>	18,280	\$1.3 B	\$2.4 B	\$380 M
 <b>Congestion Relief</b>	1,445	\$82 M	\$152 M	\$31 M
 <b>Increased/ Affordable Mobility</b>	9,215	\$505 M	\$968 M	\$196 M
<b>Total Economic Impact</b>	<b>28,940</b>	<b>\$1.9 B</b>	<b>\$3.5 B</b>	<b>\$607 M</b>








# Step 3: Economic Impact Findings

		 <b>Jobs</b>	 <b>Income</b>	 <b>Revenue</b>	 <b>Costs</b>	 <b>Net</b>
 <b>Enterprise Effects</b>	<b>18,280</b>	\$1.3 B				
 <b>Congestion Relief</b>	1,445	\$82 M				
 <b>Increased/ Affordable Mobility</b>	9,215	\$505 M				
<b>Total Economic Impact</b>		<b>28,940</b>	<b>\$1.9 B</b>	<b>\$3.3 B</b>	<b>\$807 M</b>	<b>\$1.1 B</b>

## Includes:

- **Direct Jobs** - Agency Employees and Contractors
- **Indirect Jobs** – Jobs Supported by Transit Agency Spending
- **Induced Jobs** – Jobs in other sectors supported spending by direct/indirect employees








# Step 3: Economic Impact Findings

	 <b>Jobs</b>	 <b>Income</b>	 <b>GSP</b>	 <b>Tax Revenue</b>
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 <b>Congestion Relief</b>	1,445	\$82 M		
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<b>Total Economic Impact</b>	28,940	\$1.9 B	\$3.5 B	\$607 M

## Includes:

- **Jobs that would be foregone due to increased highway congestion if transit was not an option**

# Step 3: Economic Impact Findings

	 <b>Jobs</b>	 <b>Income</b>	 <b>GSP</b>	 <b>Tax Revenue</b>
 <b>Enterprise Effects</b>	18,280	\$1.3 B	\$2.4 B	\$380 M
 <b>Congestion Relief</b>	1,445	\$82 M		
 <b>Increased/ Affordable Mobility</b>	9,215	\$505 M		
<b>Total Economic Impact</b>	<b>28,940</b>	<b>\$1.9 B</b>	<b>\$3.5 B</b>	<b>\$607 M</b>

## Includes:

- Jobs that would be foregone if employees did not have transit to travel to/ from work

# Annual Return on Investment



**Return on  
Investment:**  
**\$2.91**

Every dollar of public investment in transit generates \$2.91 dollars in economic activity statewide.

<b>Total Benefits</b> (Impact on GSP)	<b>\$3.5 B</b>
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<b>Total Public Costs</b> (Expenses less Other Revenue)	<b>\$1.15 B</b>
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<b>Costs (Expenses)</b>	<b>\$1.54 B</b>
<i>Capital Expenses</i>	<i>\$483 M</i>
<i>Operating Expenses (non-payroll)</i>	<i>\$486 M</i>
<i>Operating Expenses (payroll)</i>	<i>\$579 M</i>

<b>Other Revenues</b> (Fares, Advertising, other)	<b>\$346 M</b>
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# Qualitative Benefits

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- **The final report will also include content outlining the qualitative economic benefits associated with continued investment in transit:**
  - » *Property Value Benefits*
  - » *Health and Social Service Benefits*
  - » *Built Environment Benefits*
  - » *Fiscal Benefits*
  - » *Economic Development Benefits*



# Next Steps

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- This presentation summarizes the preliminary results of the EIT study, which is still under development
- More quality control checks will be performed over the coming weeks
- **Timeline for Deliverables:**
  - » *One-Page Economic Impacts Sheet: by January 10*
  - » *Final Report and Executive Summary: by early February*