



**Washington Metropolitan Area Transit Authority**

## 2012 Metrorail Passenger Survey

Office of Planning

January 25, 2013



## Purpose

- Update ridership by jurisdiction of residence for use in Metrorail's operating subsidy allocation
  - Last survey conducted in 2007
- Collect demographic, travel and access data for Title VI compliance, system planning and operations analyses
- Not a customer opinion survey, focus on ridership and travel characteristics



## Key Findings

- Overall, ridership grew by 3% since 2007 survey
  - 9% growth in the evening time period
- Mode of Access: The number of passengers walking and biking to Metrorail is up by 15% and 54% respectively. Access by Park & Ride and Metrobus declined
  - Walk access declines with more cars in household and with age
- Trip Purpose: Work trips make up 92% of the AM peak and 50% of the midday period



## Key Findings: New Data

- Demographic data (weekday trips):
  - Race: 61% White, 26% Black or African American, 6% Asian
  - Hispanic Origin: 7%
  - Income Levels: 11% with household incomes <\$30K, 22% with household incomes >\$150K
- Friday late-nights and Saturdays
  - Primary purpose for planning and Title VI compliance, not determination of residence
  - Recreation/ personal trips make up 54% of Friday late-night, 34% on Saturday



# Survey Methodology

- Similar to 2007: intercept survey with mail back & drop-box return options
  - + on-line option in 2012
- Rolling survey at 3 to 4 stations a day between April 13 and May 25, 2012
  - Follow-up surveys in June 2012 at low response stations
- Statistically controlled on a system-wide, jurisdictional and station level



# Survey Implementation

- Weekday Return Rates Similar to 2007
- Two New Survey Periods
  - Friday late-night service
  - 30 mezzanines on Saturday

Weekday Comparison		
	2007	2012
<b>Weighted Survey Total</b>	717,754	739,324
<b>Forms Distributed</b>	261,009	292,525
<b>Overall Distribution Rate</b>	36%	40%
<b>Valid Responses</b>	66,321	68,353
<b>Response Rate</b>	25%	23%



# Changes Between 2007 and 2012- Questionnaire Design

- New Questions
  - Demographics: Race, Hispanic Origin, Income, Age
  - Transfers
- Some Revisions to Existing Questions
  - Mode of Access, Type of Transit Subsidy
- Spanish Translation



## Trips Made by Time of Day

Time Period	Weekday Trips		2007 - 2012 % Change
	2007	2012	
AM Peak	240,512	243,253	1%
Midday	137,886	144,042	4%
PM Peak	257,038	262,665	2%
Evening	82,318	89,364	9%
Total	717,754	739,324	3%





## Mode of Access – AM Peak

AM Peak Mode of Access	Weekday Trips		2007 - 2012 % Change
	2007	2012	
Walk	78,460	89,860	15%
Park & Ride	68,969	61,559	-11%
Metrobus	34,952	32,672	-7%
Other Bus	17,620	19,994	13%
Shuttle	N/A	4,905	N/A
Dropped Off	21,911	18,723	-15%
Commuter Train	9,002	8,328	-7%
Ride Sharing	2,463	2,085	-15%
Bicycle	1,550	2,384	54%
<b>Total AM Peak Trips Reported</b>	<b>240,512</b>	<b>243,253</b>	<b>1%</b>



# 2012 Mode of Access – AM Peak

Mode	System	DC	Mont-gomery	Prince George's	Fairfax County	Arling-ton	Alexan-dria	Fairfax City	Falls Church	Non Compact
Walk	37%	70%	32%	11%	12%	71%	37%	8%	30%	7%
Park & Ride	26%	5%	32%	48%	44%	5%	7%	54%	29%	32%
Metrobus	14%	19%	6%	22%	9%	12%	19%	5%	13%	3%
Other Bus	8%	1%	14%	2%	18%	3%	14%	21%	1%	17%
Shuttle	2%	0.4%	1%	1%	3%	3%	15%	1%	4%	1%
Dropped Off	8%	3%	10%	12%	10%	4%	7%	10%	17%	8%
Commuter Train	3%	0.1%	1%	1%	1%	0.0%	0.0%	0.0%	0.0%	29%
Ride Sharing	1%	0.2%	1%	1%	2%	0.2%	0.3%	1%	1%	2%
Bicycle	1%	1%	2%	1%	1%	1%	1%	1%	6%	0%
<b>AM Peak Trips Reported</b>	<b>243,253</b>	<b>62,123</b>	<b>42,118</b>	<b>40,562</b>	<b>34,582</b>	<b>25,866</b>	<b>10,687</b>	<b>1,135</b>	<b>1,162</b>	<b>25,018</b>



# AM Peak Mode of Access – By Car Ownership and Age

Mode of Access	System Total	None	One	Two	Three or more
Walk	37%	62%	46%	21%	13%
Park & Ride	26%	2%	18%	41%	49%
Bus	22%	30%	21%	19%	17%
Dropped Off	8%	2%	7%	11%	11%
Bicycle	1%	1%	1%	1%	1%

- Walk declines with more cars in household, Park & Ride goes up

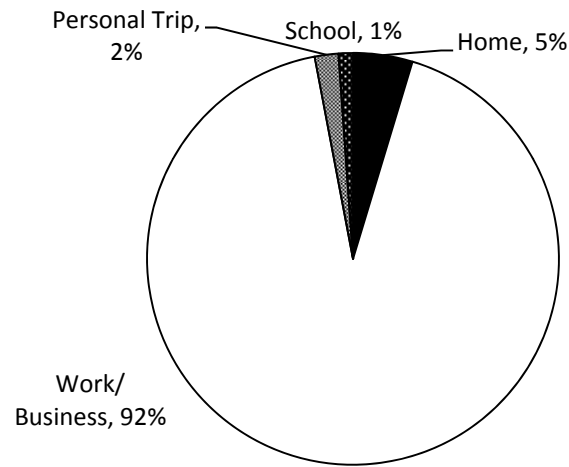
Mode of Access	System Total	18-24	25-34	35-54	55-64	65 or older
Walk	37%	58%	57%	29%	25%	30%
Park & Ride	26%	9%	13%	31%	34%	30%
Bus	22%	19%	17%	23%	25%	25%
Dropped Off	8%	9%	6%	8%	9%	9%
Bicycle	1%	1%	1%	1%	1%	1%

- Walk declines starting at 35, Park & Ride begins to increase

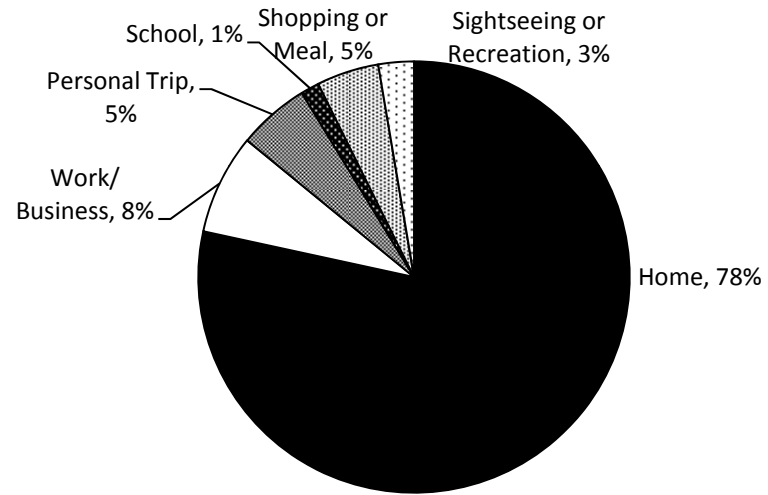


# Trip Purpose by Time of Day – Peak Periods

Trip Purpose – AM Peak



Trip Purpose – PM Peak

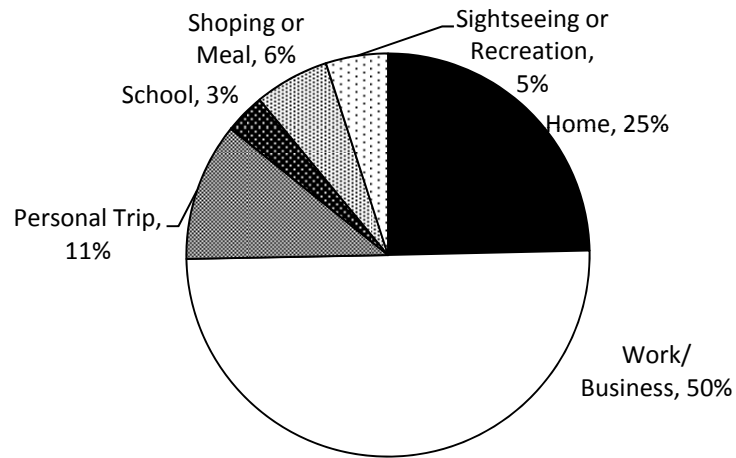


- AM Peak = 92% work trips
- PM Peak = 78% home trips, more personal and shopping trips than AM Peak

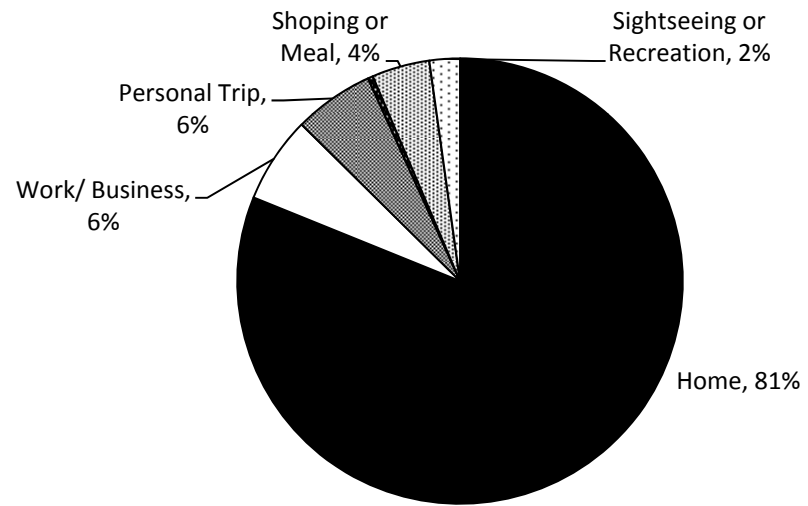


# Trip Purpose by Time of Day- Off-Peak Periods

### Trip Purpose – Midday



### Trip Purpose – Evening



- Midday = 50% work trips, 25% home, 25% other reasons
- Evening = 81% home trips



# Demographic Data: Race & Ethnicity

Race	Ridership	%
White	430,708	61%
Black or African American	183,168	26%
Asian or Pacific Islander	41,145	6%
American Indian or Alaska Native	3,768	1%
Mixed Race	18,568	3%
Other	34,288	5%
Valid Total	711,644	100%
Survey Total	739,324	

- New questions: race, ethnicity and income
- 96% response rate for race
- Used for Title VI Reporting
- Approximately 7% Hispanic
- **Minority % = 43.2% (Non-white or Hispanic)**



# Demographic Data: Income

<b>Household Income</b>	<b>Ridership</b>	<b>%</b>
Less than \$30,000	75,953	11%
\$30,000 to \$50,000	85,673	12%
\$50,000 to \$75,000	117,955	17%
\$75,000 to \$100,000	103,991	15%
\$100,000 to \$150,000	149,666	22%
\$150,000 to \$200,000	81,930	12%
\$200,000 or More	73,494	11%
<b>Valid Total</b>	<b>688,663</b>	<b>100%</b>
<b>Survey Total</b>	<b>739,324</b>	

- Approximately 11% “Low Income” at less than \$30K
- More than 22% with a household income greater than \$150K



## Other Survey Findings (Weekday)

- More than 22% of trips from households with no car
- 35% by Federal employees all day
  - 42% during the AM Peak
- 56% by someone who receives a transit benefit (pre-tax deduction or employer subsidy)
  - 67% in the AM Peak





# Late-Night Friday Survey Results

- Primary purpose for planning and Title VI compliance
- 12 AM to 3 AM on Friday late-nights at all open mezzanines with significant ridership
- Relatively low response rates, 750 surveys returned
- Trip Purpose: Returning home from work (24%) or recreation/ personal destinations (54%)
- Race: 58% White, 26% African American, 5% Asian, 11% Hispanic
- Income: 25% low income, 9% greater than \$150K



# Saturday Survey Results

- 30 of the system's 112 mezzanines representing 1/3 of typical Sat. ridership.
- 5,300 surveys returned with 51,000 distributed
- Primary purpose for planning and Title VI compliance
- Trip Purpose: Recreation/ personal trips 34%, compared to 14% work trips
- Race: 59% White, 24% African American, 7% Asian, 8% Hispanic
- Income: 24% low income, 12% greater than \$150K



Thank You

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