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# BART Demand Management Study



BART Planning



**EISEN | LETUNIC**  
TRANSPORTATION, ENVIRONMENTAL AND URBAN PLANNING

**Nelson | Nygaard**  
consulting associates

# 50+ Years of History, 35 Years of Service



**1946**

Bay Area Council & others begin discussions

**1957**

BART District Created

**1962**

Voters Approve BART Plan

**1964**

Construction Begins

**1970**

BART Car Prototype Created

**1972**

BART Carries First Passenger

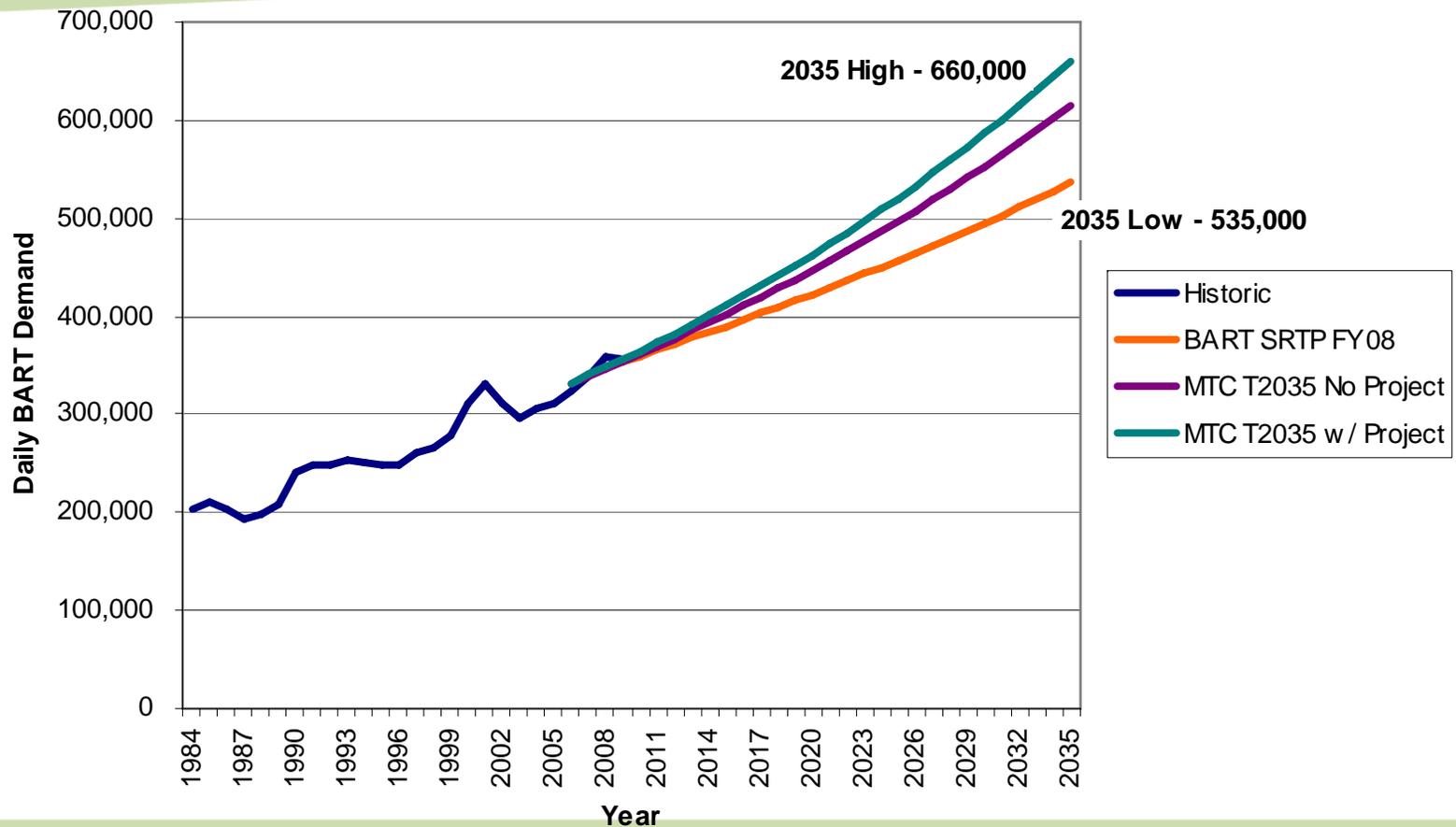
# BART's Capacity Issues



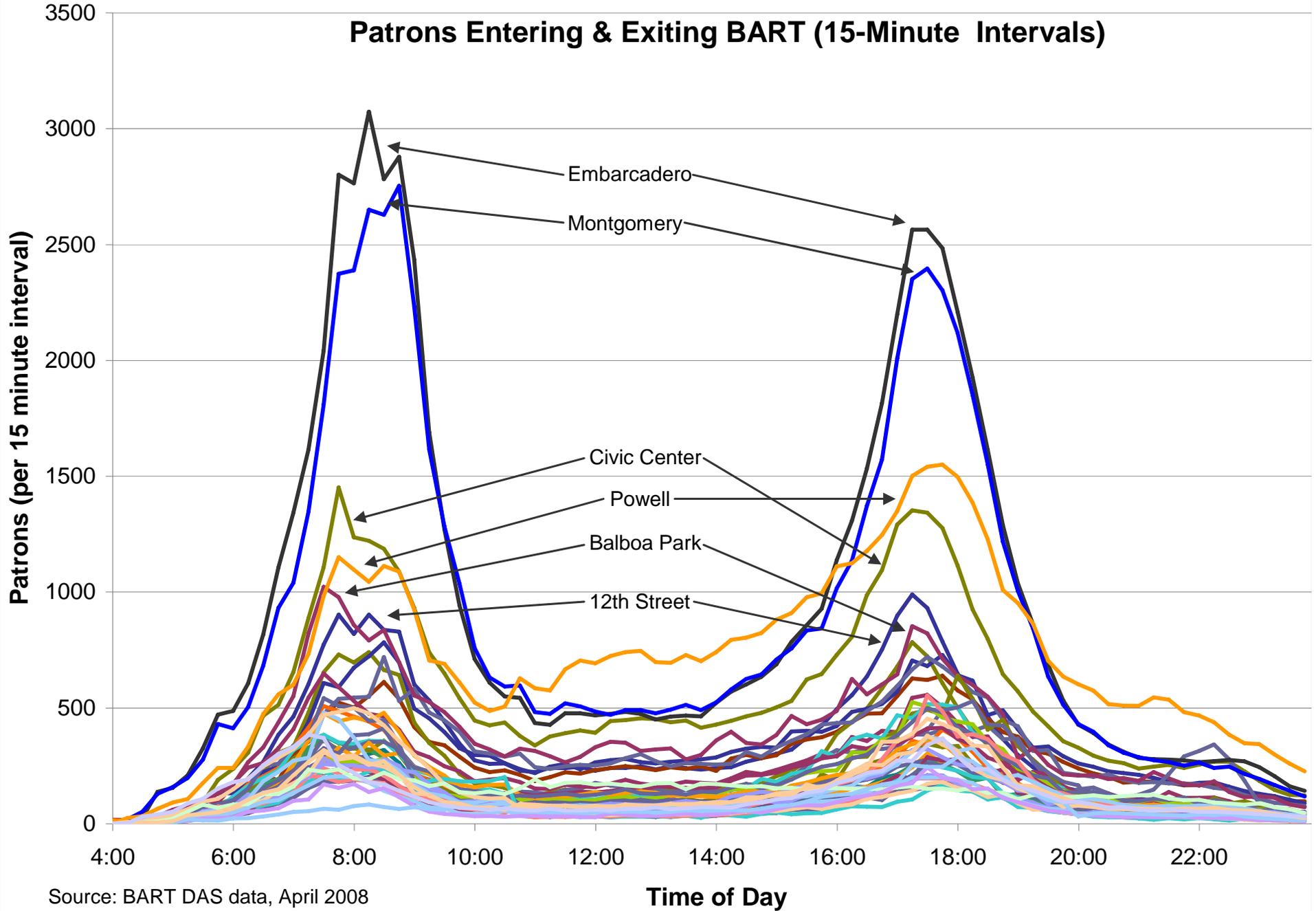
- **BART not out of capacity today**
- **Ridership will grow in coming decades**
- **Capacity constraints on horizon**
- **Capacity improvements not in MTC's RTP**



# BART Average Daily Ridership Historic Trends and Projections



# Patrons Entering & Exiting BART (15-Minute Intervals)



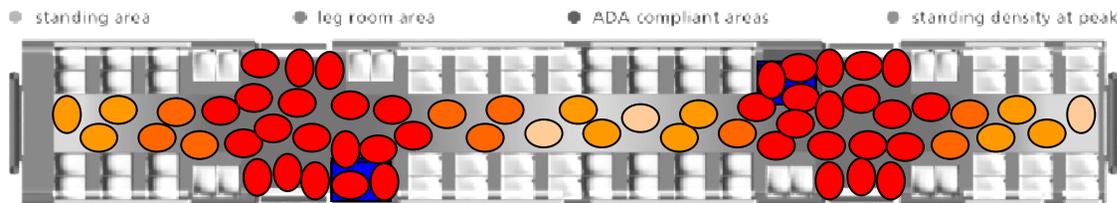
Source: BART DAS data, April 2008

## Capacity Constraints

# Where Could BART See Problems in the Future?

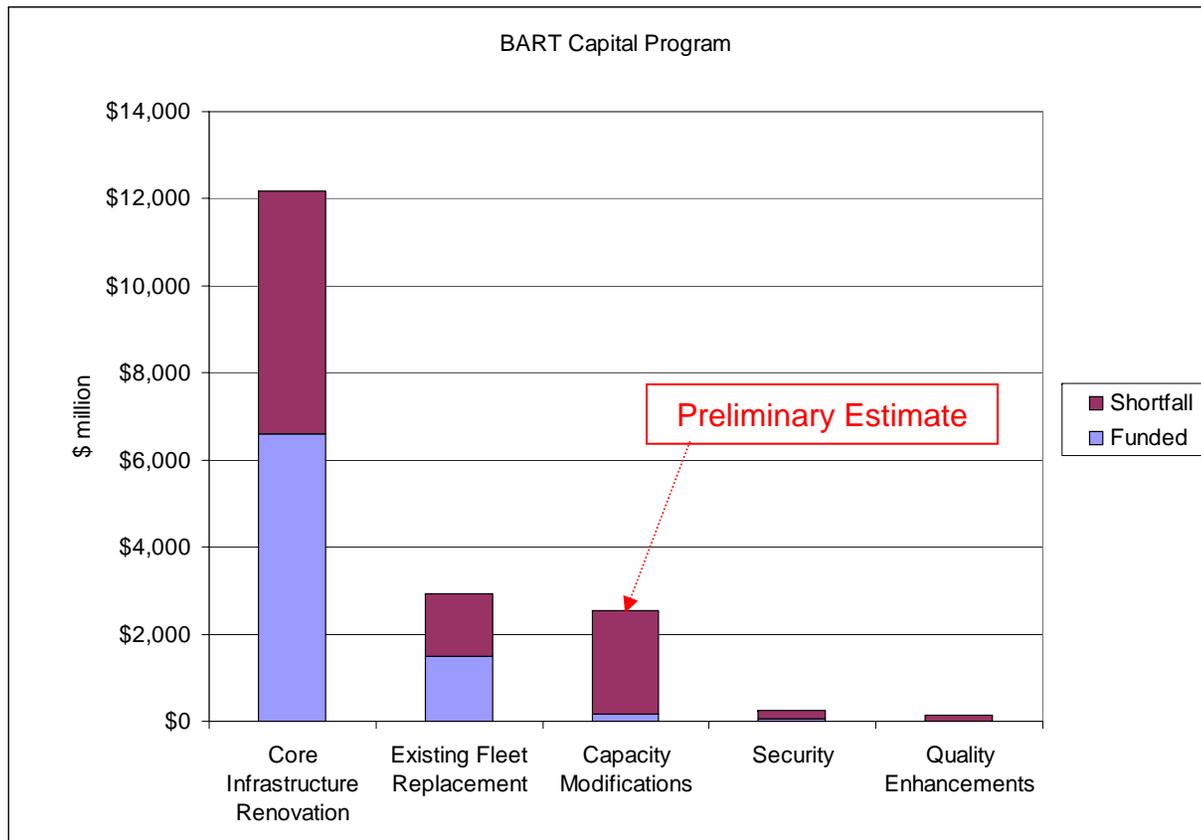


- On-Board Train Crowding
  - ❑ Passenger per Seat or per Car (Load Factors)
  - ❑ Train Control System
  - ❑ Vehicles
- SF Downtown Stations
  - ❑ Platform Crowding (PM)
  - ❑ Stair, Escalator & Faregate Queuing (AM)
  - ❑ Emergency Exiting
- Yards & Shops
- Station Access



Major Funding Shortfalls

# Why it's Important to Plan Well in Advance



# BART Policy Context



## Service Enhancements (Strategic Plan)

- Maintain and strategically enhance BART service to better serve travel markets and to maximize system utilization.

## Financial Stability Policy

- “... tie passenger revenue increases to service costs and system needs with particular consideration” of a number of factors, including “a peak premium... tied to the need to optimize off-peak system use and to fund core system capacity improvements.”

# BART Demand Management Study

## Study Purpose



### Examine strategies to:

- Manage peak transit demand
- Encourage travel to regional centers and off-peak
- Defer capacity investments to fund other priorities
- Consider revenue generation for capital needs



# JR Railway (Japan) Supply-Side Strategy



One Approach Under Study

# Potential Peak Premium

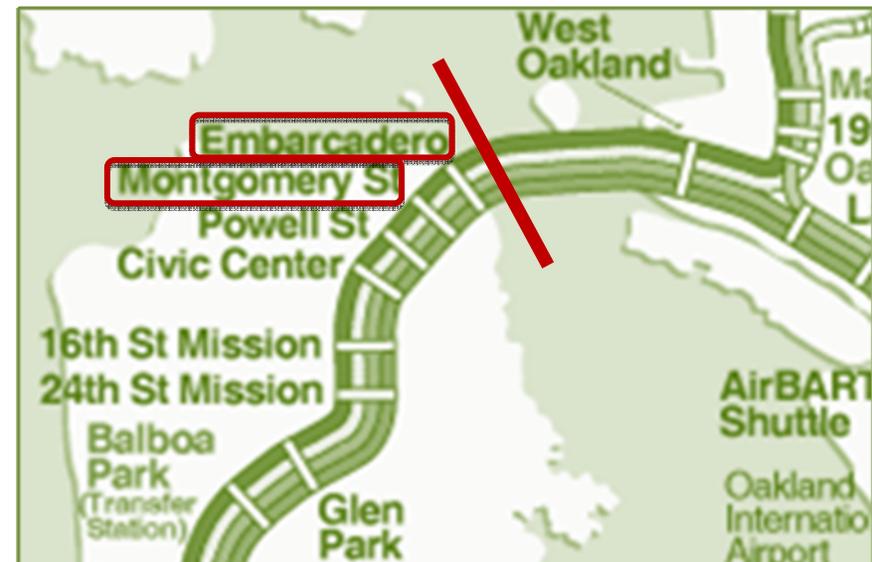


## Transbay:

- Any patron traveling through Transbay tube in a defined time period

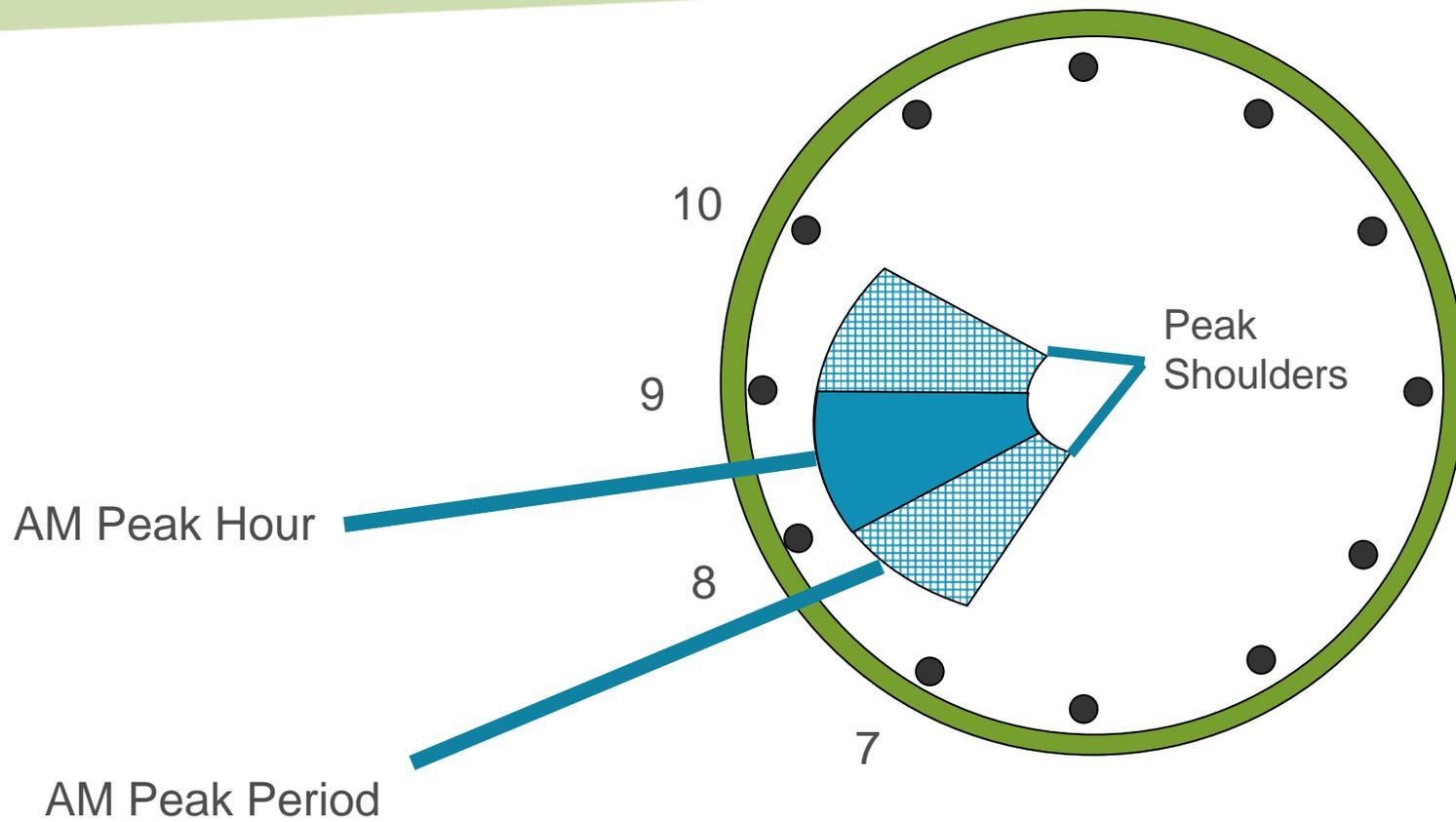
## Montgomery / Embarcadero:

- Any patron entering or exiting at the Montgomery or Embarcadero stations in a certain time period



# AM Peak (Exits)

Similar for PM Peak



BART Demand Management Study  
**Demographic Assessment**



**Assess if distribution of benefits and burdens is fair across different populations.**

# Definition

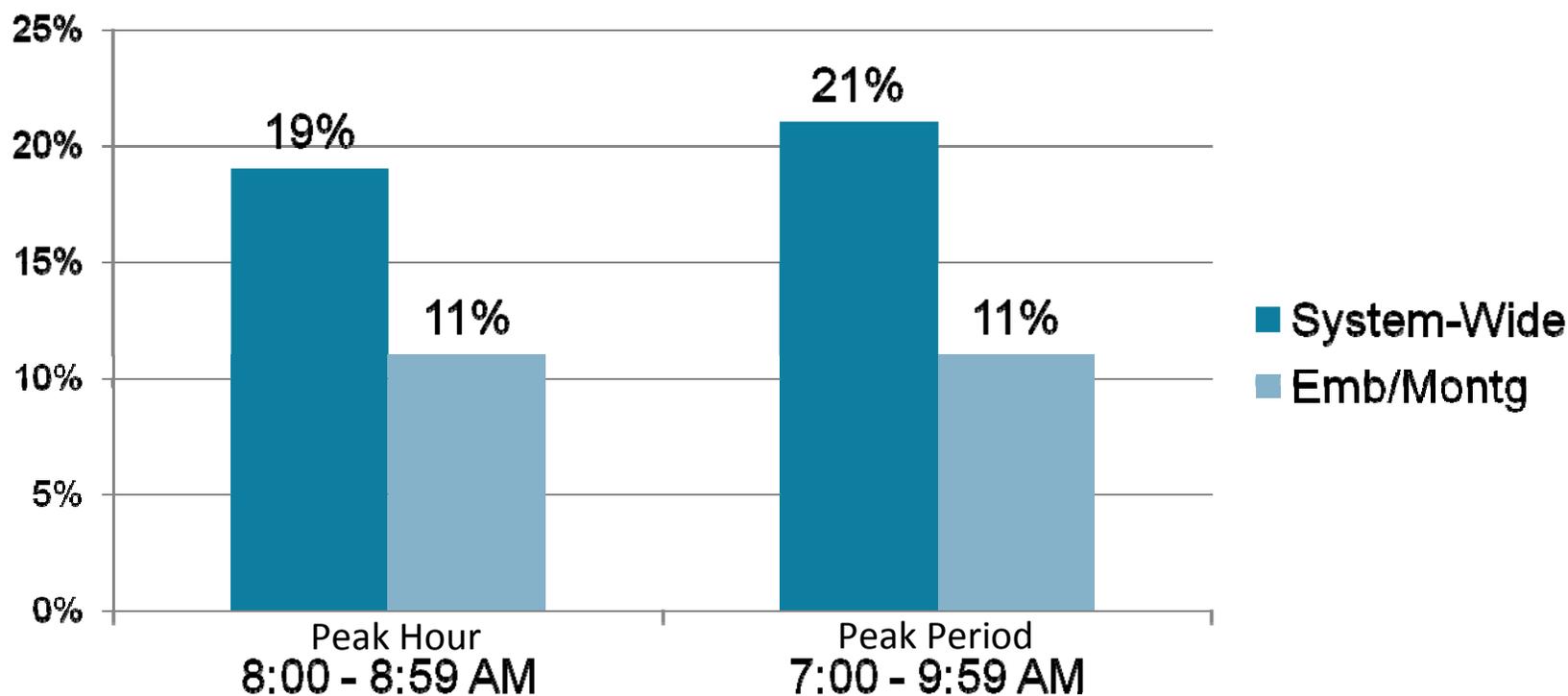


**Low-Income: Households with income less than \$50,000 (MTC: \$40,000)**

# Low-income Patrons Exiting BART in the AM



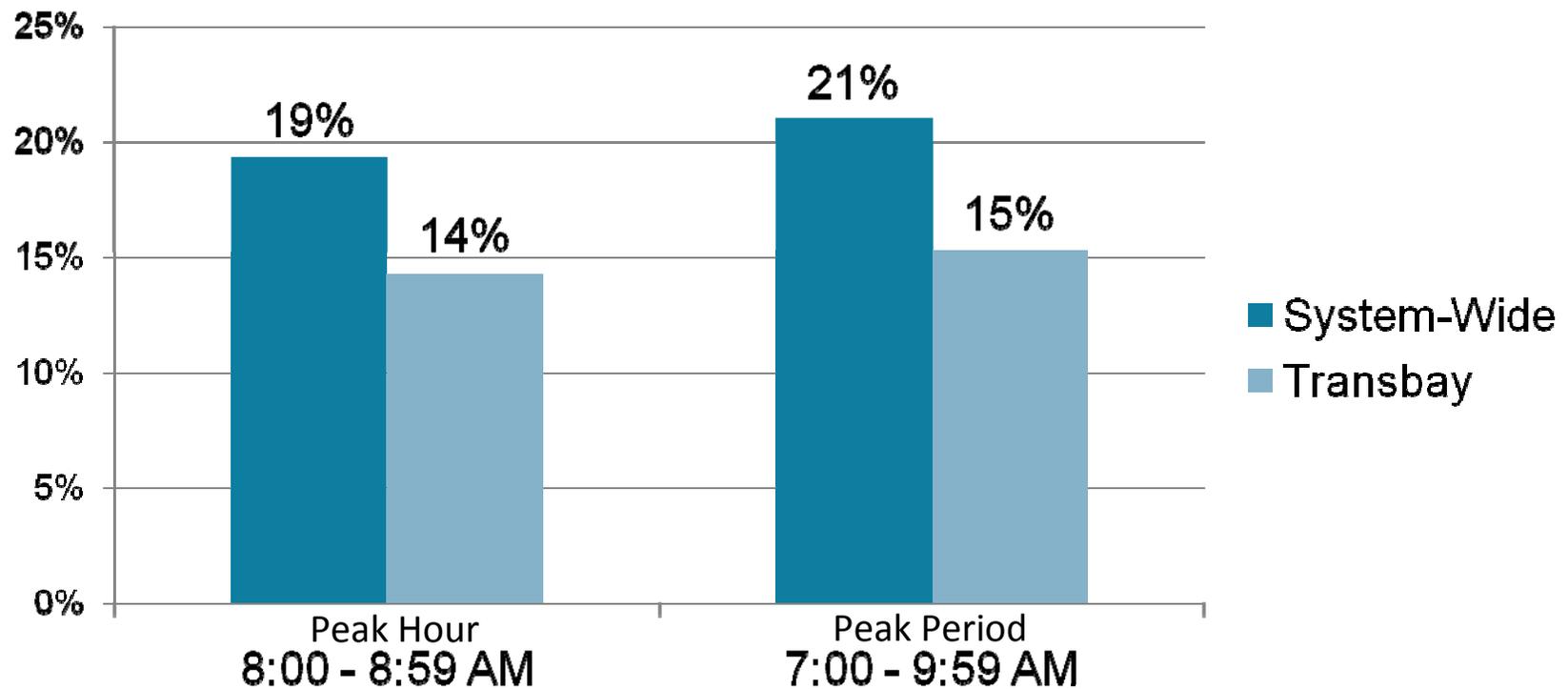
Low-Income Patrons



# Low-income Patrons Traveling on BART in the AM



Low-Income Patrons



# Capacity Outlook



- BART today meets capacity requirements
- Near-term growth can be managed:
  - service adjustments
  - station crowding management
  - targeted ticket pricing measures
- Medium- to long-term requires major capital improvements
- Investments require substantial lead time
- Capacity improvements unfunded



# Discussion



## Options to Manage Future Crowding:

- Manage extreme platform/escalator crowding
- Increase transit supply/capacity (requires funding)
- Spread demand (using pricing)

## Trade-Offs for Higher Peak Fares to Ease Congestion

- Lower fares for uncongested times / segments?
- Station capacity improvements?
- Station access improvements?

## Travel Time Flexibility

- What motivates work travel time (work hours, kids, habit, other)?