Improving Richmond Area Public Transportation

Findings and Recommendations:

GRTC Comprehensive Operations Analysis (COA)

Commonwealth Transportation Board – March 20, 2008

Background

I. Short Term Operational Analysis: GRTC Comprehensive Operations Analysis (COA)

- Focus: Current GRTC Service Area
- Status: Complete

II. Long-Range Transit Plan: Richmond MPO Regional Mass Transit Study (RMTS)

- Focus: Long-Range Plan for Richmond Region
- Status: Complete May 2008

GRTC COA: *Process*

Extensive analysis of GRTC's fixed route bus service:

- **Demographics**
- **Historic GRTC trends**
- **Vehicle fleet**
- **Peer review**
- **Ridership**
- **Customer survey**
- **Route diagnostics**
- **Household survey**

Developed phased recommendations:

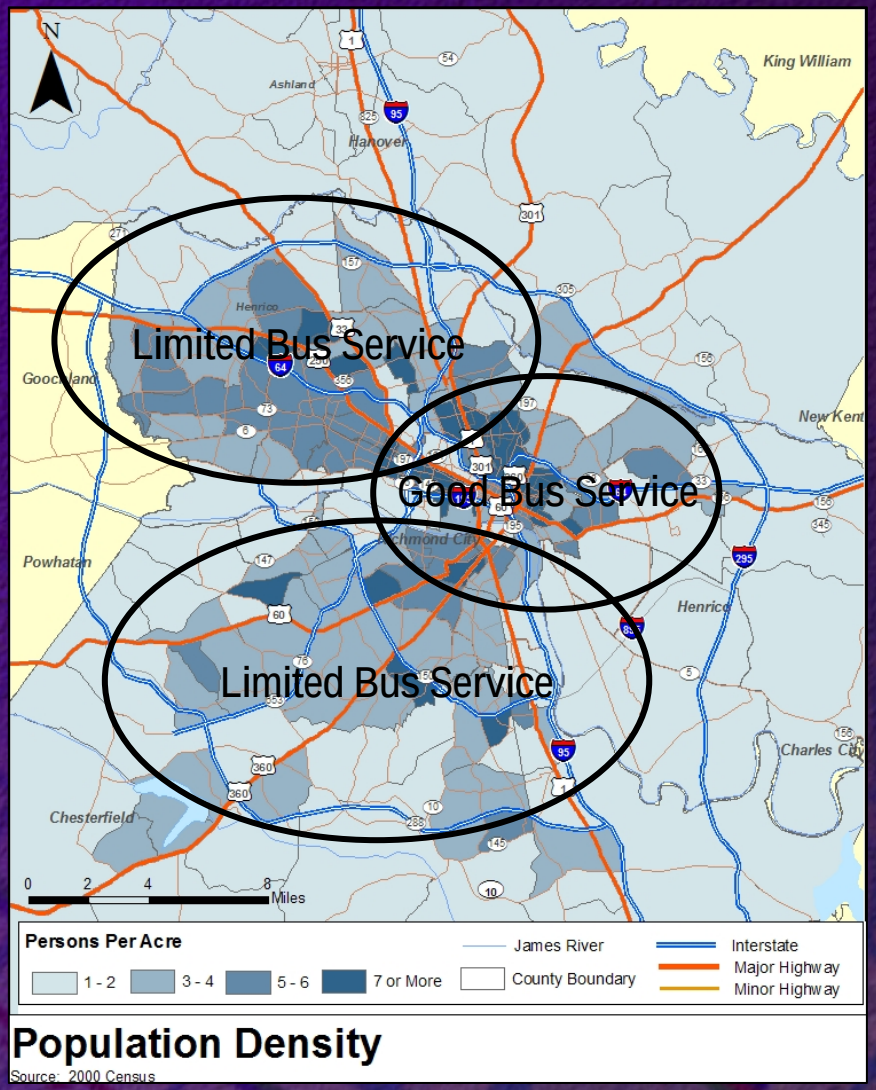
- **Phase I: Immediate routing/service improvements**
- **Phase II: Implement transfer center concept**
- **Phase III: Develop Bus Rapid Transit line**

GRTC COA: *Service Area*

- Population density greatest in Richmond
- Greatest transit demand in Richmond
- Density radiates in two corridors:

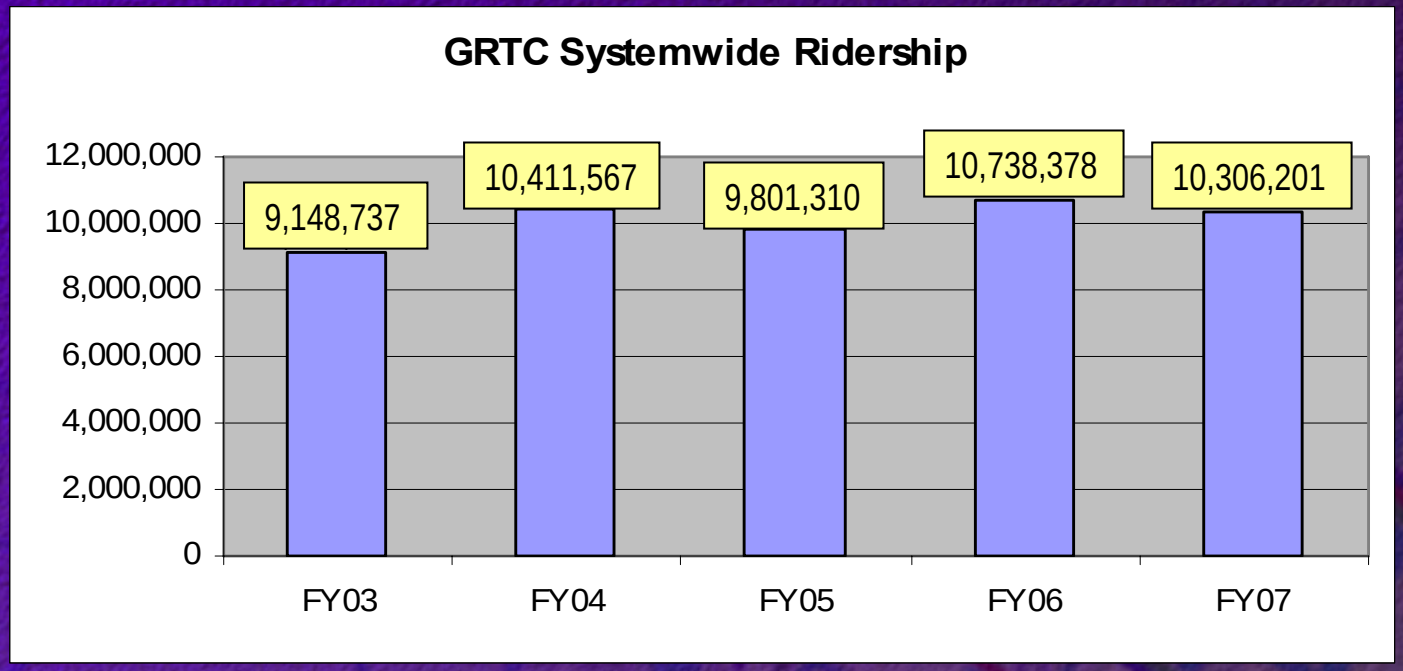
  Northwest: I-64/Broad St.

  Southwest: Hull St/Midlothian



GRTC COA: *Ridership*

- Average about 10 million rides per year
- Heaviest passenger loads occur entering or leaving the downtown area
- Broad St., Hull St., and Robinson St. lines have the highest overall ridership
- Five year system wide trend:



GRTC COA: *Peer Review*

Cost Effectiveness:

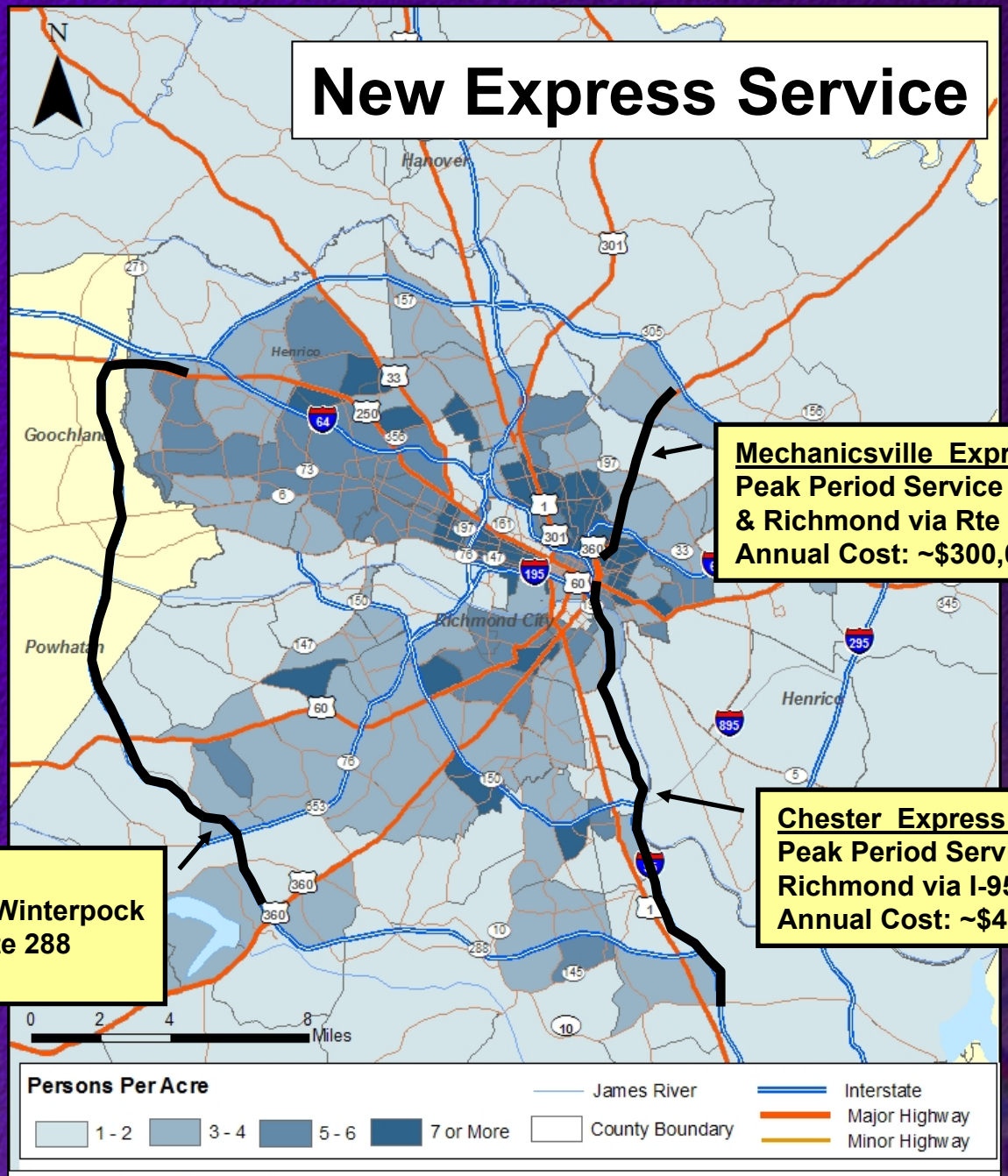
Cost Effectiveness					
Total Cost per Trip		**Total Revenue per Trip (Average Fare)**		**Subsidy per Trip**	
Tucson, AZ	$ 1.78	Hartford, CT	$ 0.85	Tucson, AZ	$ 1.31
Richmond, VA (GRTC)	**$ 2.25**	Indianapolis, IN	$ 0.85	**Richmond, VA (GRTC)**	**$ 1.53**
Lansing, MI	$ 2.43	Tampa, FL	$ 0.77	Lansing, MI	$ 2.08
Madison, WI	$ 2.87	**Richmond, VA (GRTC)**	**$ 0.71**	Madison, WI	$ 2.23
Hartford, CT	$ 3.12	Memphis, TN	$ 0.67	Hartford, CT	$ 2.27
Memphis, TN	$ 3.45	Madison, WI	$ 0.64	Memphis, TN	$ 2.77
Charlotte, NC	$ 3.46	Charlotte, NC	$ 0.60	Charlotte, NC	$ 2.86
Austin, TX	$ 3.48	Dayton, OH	$ 0.58	Indianapolis, IN	$ 2.98
Dayton, OH	$ 3.73	Tucson, AZ	$ 0.47	Tampa, FL	$ 3.07
Indianapolis, IN	$ 3.83	Albany, NY	$ 0.47	Dayton, OH	$ 3.15
Tampa, FL	$ 3.84	Lansing, MI	$ 0.35	Austin, TX	$ 3.30
Albany, NY	$ 3.91	Austin, TX	$ 0.18	Albany, NY	$ 3.44
Average	$ 3.18	Average	$ 0.59	Average	$ 2.58
GRTC	$ 3.84	GRTC	$ 0.71	GRTC	$ 1.53
Percent Difference	21%	Percent Difference	20%	Percent Difference	-41%
Rank	2 0f 12	Rank	4 of 12	Rank	2 of 12

Source: Nation Transit Database – FY2005

Major Recommendations of the COA

- **New Service**
- **Transfer Center**
- **Bus Rapid Transit**

New Express Service



Mechanicsville Express:
Peak Period Service btw Mechanicsville & Richmond via Rte 360
Annual Cost: ~$300,000

Chester Express:
Peak Period Service btw Chester & Richmond via I-95
Annual Cost: ~$450,000

Route 288 Express:
Peak Period Service btw Winterpock & Short Pump Area via Rte 288
Annual Cost: ~$860,000

Population Density

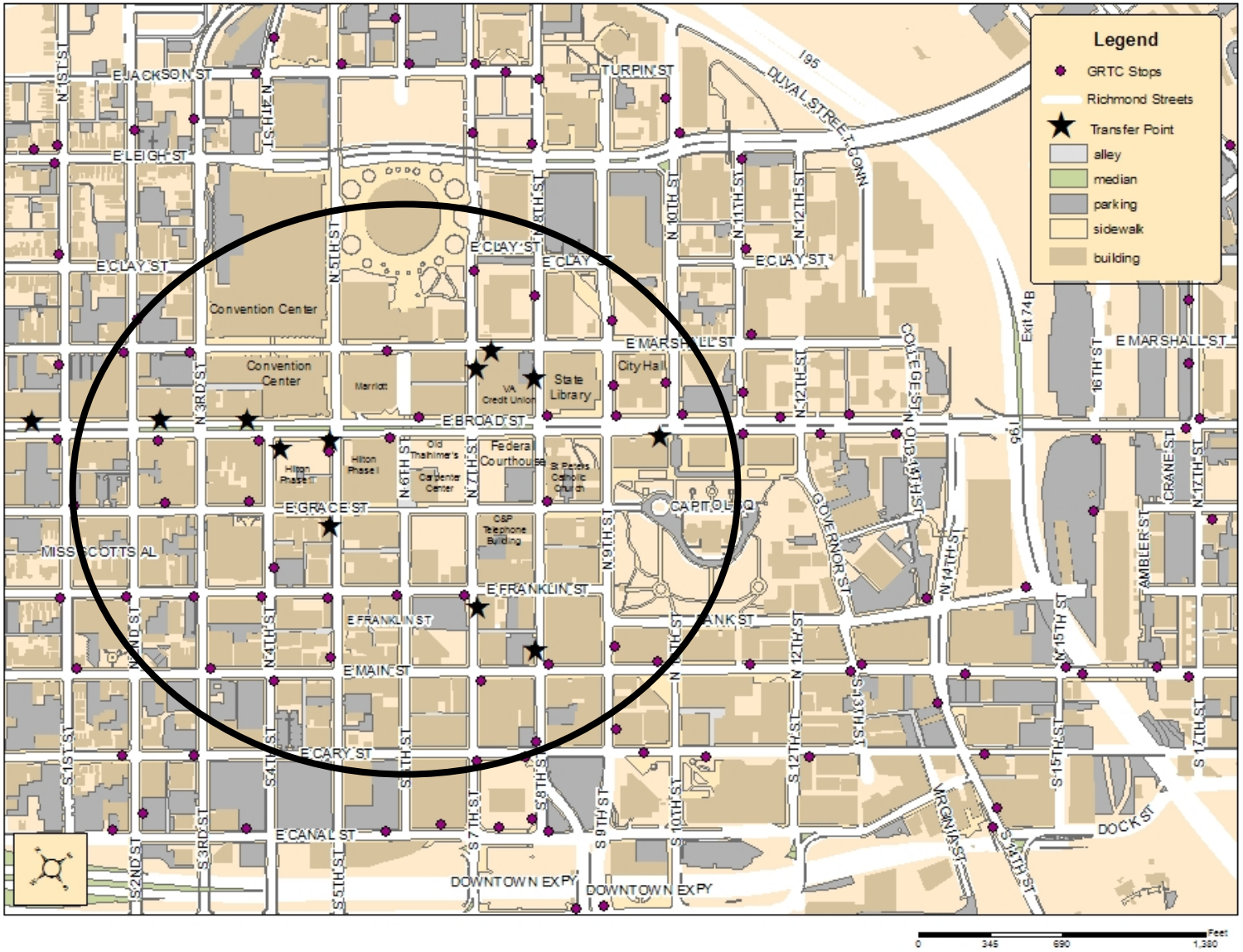
Source: 2000 Census

GRTC COA: *Transfer Center*

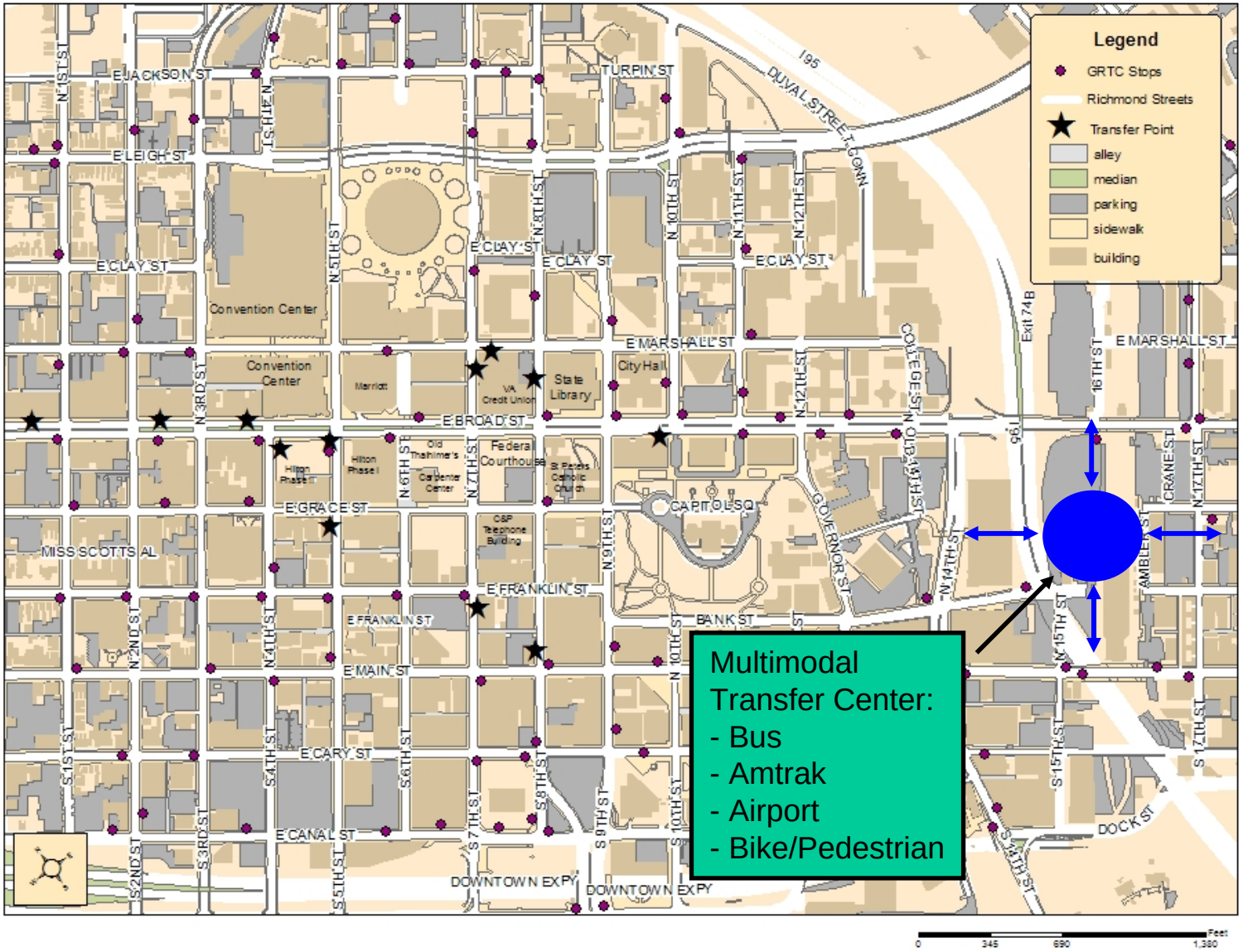
Why introduce a transfer center?

- **Many of our riders transfer:**
  - **GRTC provides about 40,000 trips per day**
  - **25% of those trips are transfers**
  - **This equals about 10,000 transfers a day**
- **A transfer center can provide:**
  - **Increased customer convenience**
  - **Economic development opportunities**
  - **Multimodal connections**

Major Downtown Transfer Locations



Transfer Center Concept



GRTC COA: *What is BRT?*

Typical Elements:

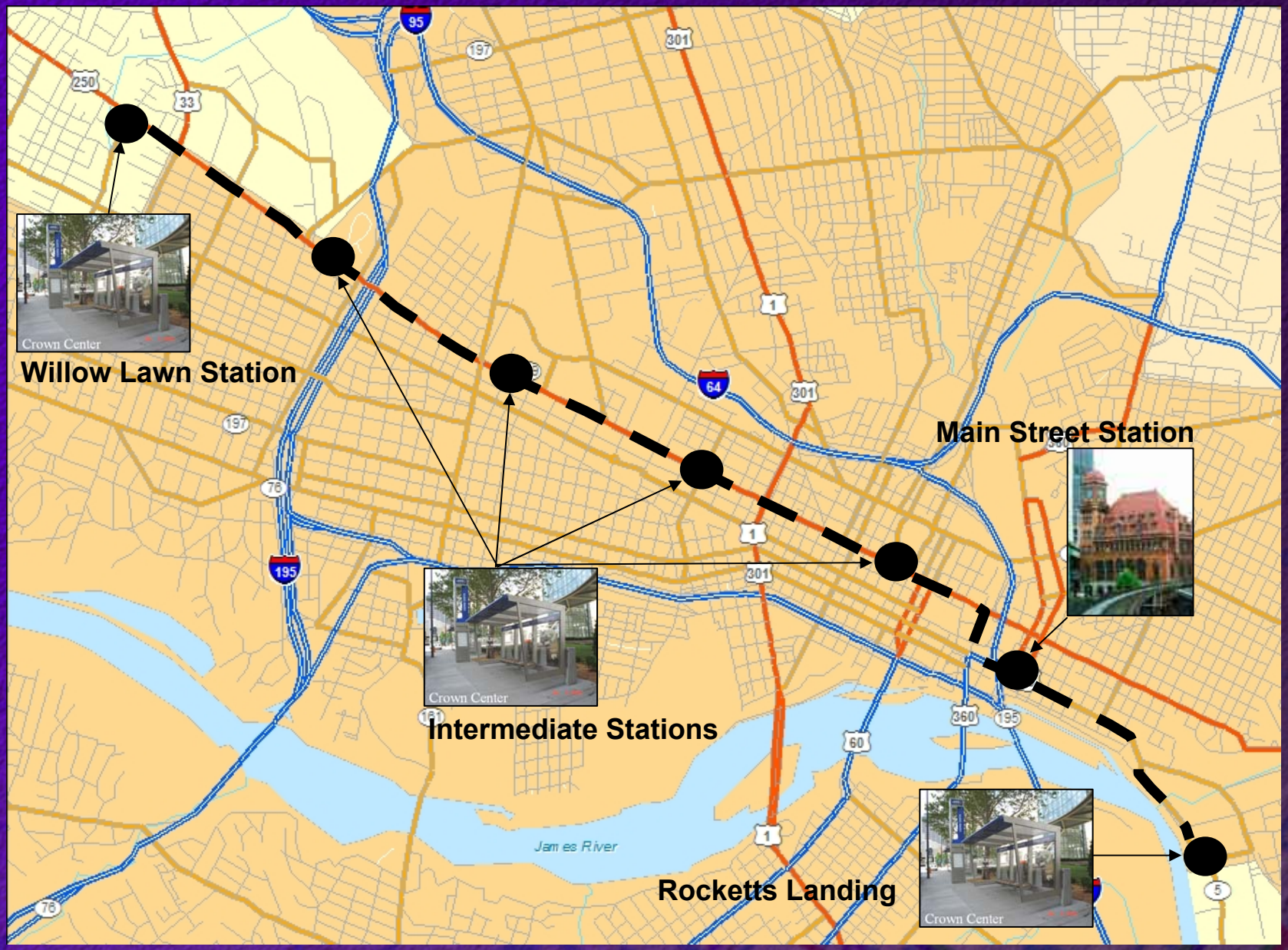
- Dedicated Running Ways
- Substantial Stations
- Efficient Fare Collection
- Intelligent Transportation System Applications
- Limited-Stop, Frequent, All-Day Service
- Strong Identity and Branding
- Modern, Low-Floor, High Capacity Rubber-Tired Vehicles

GRTC COA: *Fund Source for BRT*

Federal Transit Administration Very Small Starts Project Qualifications

- **Substantial Transit Stations**
- **Signal Priority/Pre-emption**
- **Low Floor / Level Boarding Vehicles**
- **Special Branding of Service**
- **Frequent Service - 10 min peak/15 min off peak**
- **Service offered at least 14 hours per day**
- **Existing corridor ridership exceeding 3,000/day**
- **Less then $50 million total cost**

GRTC COA: *Bus Rapid Transit Plan*



Conclusion

Future Funding Needs:

- **FY09 Planning/Design work for Broad Street BRT project:**
  - **Cost: ~$900,000**
  - **Complete in time for federal reauthorization in 2009**
- **Provide FY10 match for Small Starts funding of BRT project**
  - **Capital Cost ≤ $50 million**
- **Funds needed to support all phases of transfer center project:**
  - **NEPA & 0-30% design = funded via $1.2 million federal grant with expected completion in Fall 2008**
  - **Request FY09 state funds to support 30-100% design: ~$3.5 million with expected completion in Summer 2009**
  - **Request FY10 state funds for construction**

Thank you

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