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:
### Cost Effectiveness:

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

Source: Nation Transit Database – FY2005
Major Recommendations of the COA

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

Multimodal Transfer Center:
- Bus
- Amtrak
- Airport
- Bike/Pedestrian
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

Crown Center
GRTC COA: Bus Rapid Transit Plan

Willow Lawn Station

Main Street Station

Intermediate Stations

Rocketts Landing
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 \( \leq \$50 \text{ million} \)
- 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

John M. Lewis, Jr.
Chief Executive Officer, GRTC Transit System
101 South Davis Avenue
Richmond, VA 23220
(804) 358-3871
Jlewis@RideGRTC.com