MAY 2014
PUBLIC MEETINGS

May 20 & 21, 2014
Meeting Agenda

- Review of Process & Recommended Alternative
- Impacts & Benefits of the Recommended Alternative
- Costs & Funding of the Recommended Alternative
- Next Steps
What is the Process?

Alternatives Screening

Scoping and Problem Definition
Alternatives Development
Analyze and Refine Alternatives
Adopt a Locally Preferred Alternative

Environmental Impacts Analysis

Scoping
Alternatives Definition
Impact Assessment
Environmental Documentation

We Are Here
Design & Construction
What is the Recommended Alternative? What is BRT?
**Broad Street Bus Rapid Transit Key Features**

- **Route length**: 7.6 Miles
- **Vehicles**: Dedicated BRT vehicles
- **Dedicated Bus Lanes**: Thompson to Adams (Median Lanes), 4th to 14th (Curb Lanes Widened)
- **Number of Stations**: 14 stations (4 center, 4 consolidated, 6 curbside)
- **Frequency**: 10 Minutes (Peak) / 15 Minutes (Off-Peak)
- **Hours of Operation**: Weekdays: 5:30 a.m. – 11:30 p.m., Weekends 6 a.m. – 11:30 p.m.

**Proposed Fare**: Same as local bus fare (Currently $1.50)

**Travel Speeds**: 65% Increase in Bus Speed

**Estimated Ridership**:
- Over 3,000 daily boardings
- About 500 new daily riders

**Estimated Cost**:
- $53.8 Million Capital
- $2.7 Million Annual Operating
- $400,000 Net Annual Operating

*Updated in 2014 analysis.*
Bus Rapid Transit (BRT) is a high quality, high capacity rapid transit system.

BRT invests in improvements to vehicles, stations, operations, roadways, rights-of-way, intersections and traffic signals to speed up bus transit service.

BRT is not a uniform, turn-key transit technology.
Example BRT Improvements

- Streamlined transfers
- Low floor buses
- Sidewalk & crosswalk improvements
- Signal priority
- Off-board ticketing
- Dedicated lanes
New Service Features
• 10 Minute Peak Period Service
• New BRT Vehicles
• 14 Stations and Park & Ride
• Branding and Off-Board Fare Collection

Route Length: 7.6 Miles
Dedicated Bus Lanes: Thompson to Adams (Median)
4th to 14th (Curb, widened)
Travel Speeds: 8.0 MPH Local Bus (No Build)
13.2 MPH BRT
Local Bus Improvements: Curb Lane and Consolidated Stops Downtown
Ridership: Over 3,300 daily boardings, Approx. 500 new riders
West End

Conditions
- Lower volumes of bus traffic (21 buses/hr AM)
- Traffic LOS A-C
- Lower density land uses

Solutions
- Use general travel lanes
- Limit number of stations to improve travel times
- Consider Park and Rides

Museum/VCU

Downtown

East End
**West End**

- Moderate volumes of bus traffic (20-29 buses/hr AM)
- Traffic LOS A-C
- Local buses cannot pass one another

**Museum/VCU**

- Median lane to bypass local buses
- Split platforms to minimize ROW impacts
- Stations closer together than West End
Illustration of Median Guideway Station
**Conditions**

- High volumes of bus traffic (36-48 buses/hr AM)
- Traffic LOS A-C
- Increased auto-bus conflicts
- One bus at a time boards at stations

**Solutions**

- Widen shoulder bus lane to improve speeds, minimize conflicts
- Use fewer stations with longer platforms
- Spread user benefits for all routes on Broad St.
Illustration of Curb Guideway Section
East End

Conditions
• Low volumes of bus traffic (0-12 buses/hr AM)
• Traffic LOS A-C
• Constrained ROW (4 lanes)

Solutions
• Use general travel lanes and on-street bus stops
• Limit number of stations to improve travel times
• Consider Park and Ride at Rocketts Landing
What are the impacts of BRT?
## Environmental Impacts Matrix

<table>
<thead>
<tr>
<th>Environmental Resource</th>
<th>Build Alternative Impact Summary</th>
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<tbody>
<tr>
<td>Land Use, Zoning, and Economic Development</td>
<td>Likely Positive Impacts</td>
</tr>
<tr>
<td>Social Impacts and Community Facilities</td>
<td>Likely Positive Impacts</td>
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<tr>
<td>Displacements and Relocations</td>
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<td>Environmental Justice</td>
<td>No Disproportionate Negative Impact Likely Positive Effects</td>
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<tr>
<td>Historic Properties</td>
<td>No Adverse Effect*</td>
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<td>Visual and Aesthetic Resources</td>
<td>No Impacts</td>
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<td>Floodplains</td>
<td>No Substantial Effects</td>
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<td>Air Quality</td>
<td>No Adverse Impact Possible Positive Effects</td>
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<tr>
<td>Noise and Vibration</td>
<td>No Severe or Moderate Noise Impacts No Vibration Impacts</td>
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<tr>
<td>Indirect and Cumulative</td>
<td>Likely Positive Impacts</td>
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</tbody>
</table>

* Ongoing coordination through design.
Environmental Process

- Environmental Analysis Completed in March 2014
- FTA Issued Categorical Exclusion Letter
  - April 10, 2014
- Coordination will continue on some issues
- Historic resources

Mr. David Green
Chief Executive Officer
GRTC Transit System
301 East Belt Blvd
Richmond, VA 23224

Re: GRTC Richmond - Broad Street Bus Rapid Transit Project NEPA Determination
NEPA Determination – Categorical Exclusion – D(x)

Dear Mr. Green:

The Federal Transit Administration (FTA) has completed its review of the Greater Richmond Transit Company (GRTC) Broad Street Bus Rapid Transit project. This 7-mile corridor situated along Broad and Main Streets spans the City of Richmond and is anchored at both ends by urban mixed-use redevelopment areas in surrounding Henrico County. The FTA understands that the proposed project would introduce a premium transit service, using specialized vehicles, distinctive branding, limited stops, dedicated rights-of-way and/or other transit vehicle priority measures.

Based upon our review, the FTA has determined that the project meets the criteria of a Class II documented Categorical Exclusion as set forth in 23 CFR 771.118(d). This determination is subject to review should the nature and/or scope of the Broad Street Bus Rapid Transit project change in a manner requiring the FTA to conduct a re-evaluation of the Categorical Exclusion designation. 23 CFR 771.129(c).

Thank you for your cooperation in meeting the requirements of the National Environmental Policy Act. Mr. Ryan Long, Community Planner, is available at (215) 656-7051 or by email at ryan.long@dot.gov if you have any questions on this subject.

Sincerely,

[Signature]
Brigid Hynes-Cherin,
Regional Administrator

cc: Gartland Williams, GRTC
Amy Inman, DRPT
What are the benefits of BRT?
Project Benefits

Current riders who switch from buses to BRT will save 36 hours per Year.

Increases Property Values by 12% or $1.1 Billion over 20 Years.

New riders who switch from driving to BRT will save $816 per Year in Transportation Costs.

A trip between Downtown and Willow Lawn
Travel time in minutes

Reduces Crash Rates by 8%-31% during Design and Construction.

BRT is faster than regular buses

- Local Bus: 8.0 mph
- BRT: 13.2 mph
How much will BRT cost?
Key Cost Considerations

Capital Costs –
- Number of buses to meet peak period service plan of BRT

Operating Costs
- Number of peak and off-peak drivers
- Fuel costs
- Redundant service with existing Route 6
Updated Costs and Project Schedule

2014  2015  2016  2017  2018

Preliminary Engineering ($4.0 million)  Final Design and Construction ($49.8 million)  Planned Opening

Status: Fully Funded  Status: Expected

Capital Costs
Total Operating Cost of BRT: $2.7 Million/Year

- Offset largely by efficiency gains and adjustments to other routes.

Net Annual Operating Cost Increase: $400,000
- ≈20% Covered by Fares
- Remaining $320,000 funded by state and locals.
How will BRT be funded?
Capital Funding Plan

- Capital Funding Covers
  - Design and Engineering
  - Purchase of new buses
  - Construction of
    - 14 New Stations
    - Median and curb lanes
    - Associated utility or streetscape improvements

Anticipated Capital Funding Contributions (2015 $ in millions)

- Federal TIGER or Small Starts 50% ($24.9M)
- DRPT 34% ($16.9M)
- City of Richmond 15% ($7.6 M)
- Henrico County 1% ($0.4M)
TIGER Grant Application

- USDOT Discretionary Grant Program
- Submitted April 27
- Requested $24.9 M
  - 50% of Final Design and Construction
- Received 24 Letters of Support
- Announcement of awards likely in September
  - Approximately 5% of applications are funded
FTA Small Starts

- Federal Transit Administration Formula Grant Program
  - Must complete Preliminary Engineering to submit application.
  - Requires meeting specific criteria for
    - Cost effectiveness
    - Mobility Benefits
    - Local Financial Commitments
- Recommended Alternative is well positioned to fund 50% of costs through FTA Small Starts Grant.
Operating Funding Plan

- Covers net increase in
  - Staffing: bus drivers, fare enforcers, maintenance staff
  - Fuel costs
  - Regular maintenance needs for BRT vehicles and stations

Anticipated Annual Operating Funding Contributions (2015 $)

- Farebox 20% ($80,000)
- City of Richmond 54% ($216,000)
- DRPT 24% ($96,000)
- Henrico County 2% ($9,000)
Non-Federal Funds: DRPT

- DRPT expected to fund
  - 34% of Capital Costs ($16.9 Million)
    - Commonwealth Mass Transit Trust Fund
  - 24% of Operating Costs ($96,000 annually)
    - Regular annual operating assistance funds
Non-Federal Funds: Local

- City of Richmond expected to fund
  - 15% of Capital Costs ($7.6 Million)
    - Possible combination of capital or general funds
  - 54% of Operating Costs ($216,000 annually)
    - Regular annual operating assistance fund

- Henrico County expected to fund
  - 1% of Capital Costs ($400,000)
    - Likely from general funds
  - 2% of Operating Costs ($9,000 annually)
    - Regular annual operating assistance funds
What’s next for BRT?
Selecting a Locally Preferred Alternative (LPA)

- Officially Documenting the Locally Preferred Alternative (LPA)
  - PAC & TAC Selected the “Recommended Alternative”
    - May 1
  - GRTC Board Approval
    - June 17
  - MPO Board Adoption and Revision of LRTP
    - July or August Board Meeting
Continued Outreach

- Team will continue coordination with
  - City and County
    - Solidify funding commitments
    - Approve designs (UDC and Planning Commission)
  - VCU, Anthem, other key corridor stakeholders
    - Address specifics of design, connections to major institutions
- Public and others during implementation
  - Design review
  - Branding
Project Phasing

<table>
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<tr>
<th>Tasks</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tbody>
<tr>
<td>Preliminary Engineering</td>
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<td>Final Design</td>
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<td>Construction</td>
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- **Preliminary Engineering**
  - Initial design plans, finalize station locations, station features, detailed cost estimates.

- **Final Design**
  - Final design of all individual station elements, approval of design elements, bus procurement begins.

- **Construction**
  - Construction of stations, median lanes, curb lanes.
DISCUSSION

Questions or Comments?