Agenda

• Introduction & Safety Briefing
• Study Scope
• Site Selection
• Cost Estimates
• Ridership Methodology
• Traveler Surveys
• Rail Operations Modeling
• Next Steps

Photo courtesy of http://www.oldlibertystation.com/ols_history.asp
Welcome

- Please wear a face covering and practice social distancing.
- There will be a designated public comment/question period at the conclusion of the presentation.
- Those attending in person are asked to hold questions until the end.
- Throughout the presentation, the Virtual audience is encouraged to type their questions into the Question Panel in the GoToWebinar Dashboard.
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Virginia Department of Rail and Public Transportation

- The mission of the Virginia Department of Rail and Public Transportation (DRPT) is to **facilitate and improve the mobility** of the citizens of Virginia and to promote the efficient transport of goods and people in a safe, reliable, and cost-effective manner.

- We are the Commonwealth’s advocate for **promoting transportation options** to the general public, businesses, and community decision makers.

- As an agency entrusted with public dollars, we seek the **highest possible return on investment** to maximize limited funding and strive to implement best practice management tools and techniques.
Study Scope

Planning-Level Conceptual Design
• Develop potential station locations and layouts consistent with Amtrak, Norfolk Southern, DRPT and Bedford standards

Planning-Level Opinion of Probable Construction Costs
• Develop probable capital costs of station alternatives

Traveler Survey
• Develop and conduct a traveler survey and report results to inform a ridership forecast

Ridership Analysis
• Develop revenue and ridership methodology and forecasts for the station concepts

General Assembly Study → Rail operations modeling conducted to assess any infrastructure or network costs needed to service a rail station in Bedford, Virginia
Background

2014  Signed agreement
- Extend passenger rail service from Lynchburg to Roanoke
- Between Commonwealth of Virginia, Amtrak, Norfolk Southern Railway and City of Roanoke

2014  Bedford/Franklin Regional Rail Initiative (BFRRI) Formed

2016  Town of Bedford Passenger Rail Station Feasibility Study and Conceptual Plan
- Prepared by Wendel in March 2016
- Prepared for the Town of Bedford, VA

2016  DRPT Intercity Passenger Rail Service Study
- Prepared by WSP/Parsons Brinkerhoff in December 2016
- Prepared for DRPT
Site Location Analysis - Considerations

Level-boarding (high level) platform criteria
• 49 C.F.R. Parts 27, 37, and 38

Norfolk Southern Passenger Station Requirements
• “…(high level platform) not allowed adjacent to freight tracks.”
• “…(high level platform) may only be placed adjacent to tracks used exclusively by passenger trains.”
• “…side platforms shall NOT be located near public at-grade crossings…”
• “Adjustments to the minimum horizontal clearance will be made for any portion of the platform that is not located in tangent track.”

Amtrak Station Program and Planning Guidelines
• “Plan the station where tangent (straight) tracks are available to accommodate the full required platform lengths.”
• “Note, however, that most host railroads will only permit new platforms on tangent track.”
Site Programming

- Amtrak station size category 1st step in site selection
- “Caretaker Station” based on early projected ridership and growth
Site Alternatives

Study Limits

Green – Tangent (straight) track
Yellow – Slightly curved track
Red – Curved track and turnouts

Site Alternatives

[Map showing various streets and locations with site alternatives indicated by colors]
## Site Alternatives Analysis Criteria

<table>
<thead>
<tr>
<th>Amtrak Criteria</th>
<th>Other Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Multi-Modal Services</td>
<td>Safety and Security (Visibility)</td>
</tr>
<tr>
<td>Adequate Length Side Platforms</td>
<td>Sustainable Design</td>
</tr>
<tr>
<td>Parking</td>
<td>Universal Design (ADA Accessible)</td>
</tr>
<tr>
<td>Adequate Space for Functional Requirements</td>
<td>Utilities</td>
</tr>
</tbody>
</table>
Intertrack fence to discourage trespassing between station & freight tracks

Station track to clear freight traffic and allow high-level platform

15’ wide by 1000’ long high-level platform to provide level boarding

Minimum 170 parking spaces

Auto drop-off lane with bypass

Bus drop-off

Ped/bike access

Potentially 7 affected parcels
Bedford Preferred Sites

- Courthouse Site originally preferred by Bedford/Franklin Regional Rail Initiative.
- Macon Street East Site developed based on feedback from NS.
- Sites are less than 1 mile apart.
Macon Street East Site (aka Merchants Site)

- Alternate site is a combination of two sites considered in early screening.
- Located south of tracks on Macon Street ~ 1 mi. trip from CBD.
- Cost to Construct: $10,946,000 in 2025, includes 40% contingency, and the cost of signals and communications (approx. $400K).
- Site cost includes all station- and track-side improvements, but not property acquisition.
## Opinion of Probable Construction Costs

### Macon Street East Site (aka Merchants Site)

<table>
<thead>
<tr>
<th></th>
<th>Construction Cost</th>
<th>Contingency (40%)</th>
<th>Total Construction Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track, Turnouts, Fencing, platform, signals, building, parking, paving, walls</td>
<td>$7,818,000</td>
<td>$3,128,000</td>
<td>$10,946,000</td>
</tr>
</tbody>
</table>
Ridership Forecasting Methodology

INTERCITY PASSENGER RAIL FORECASTING MODEL

- **Demographics** → population, employment, income
- **Service Characteristics by Mode** → travel time, frequency, fares/trip costs
- **Existing Trip Tables** → auto, air, rail
- **Travel Survey Data** → calibrate trip flows, define station catchment areas

**RESULTS**

Virginia station boardings/alightings
baseline + build scenario
Ridership Study Area
Traveler Surveys

- Offered 10/29/2019 – 2/5/2020
- 1,318 respondents, 82% completion rate
- Residents, visitors, and rail riders (sample of Lynchburg/Roanoke station customers)

Questions

- Home location
- Trip purpose
- Typical mode
- If Amtrak, what were the boarding/alighting stations and access/egress modes?
- How likely they would be to use a new Bedford passenger rail stop?
- Top 3 factors influencing respondent to take the train?
Traveler Survey Results

Responses by Zip Code

94% of zip codes provided were in Virginia or Maryland
Traveler Survey Results – Trip Purpose

- **Residents**
  - Other purpose: 9%
  - Personal business: 41%
  - Visiting family: 35%
  - Commuting to work: 4%
  - Social, recreation or leisure: 4%
  - Business travel: 9%

- **Visitors**
  - Other purpose: 4%
  - Personal business: 32%
  - Visiting family: 3%
  - Commuting to work: 4%
  - Social, recreation or leisure: 55%
  - Business travel: 1%
Traveler Survey Results
Frequent Destinations for Residents
Traveler Survey Results

Top Factors Influencing Respondents to Take the Train

- **Residents**
  - Novelty of taking the train: 20%
  - Convenience of schedule: 30%
  - Parking availability: 51%
  - Ability to work/relax: 80%
  - Ease of accessing station: 58%

- **Visitors**
  - Novelty of taking the train: 33%
  - Convenience of schedule: 37%
  - Parking availability: 22%
  - Ability to work/relax: 50%
  - Ease of accessing station: 58%
Ridership Forecasting Methodology

- **Service characteristics by mode →**
  - travel time, frequency, fares/trip costs

- **Existing trip tables →**
  - auto, air, rail

- **Demographics →**
  - population, employment, income

- **Travel survey data →**
  - calibrate trip flows, define station catchment areas

**RESULTS**

Virginia station boardings/alightings
baseline + build scenario
### Final Ridership Model Results

#### Base Forecast – Annual Ons & Offs

<table>
<thead>
<tr>
<th></th>
<th>South of Washington (including to/from Washington)</th>
<th>Through Washington</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynchburg</td>
<td>35,800</td>
<td>8,700</td>
<td>44,500</td>
</tr>
<tr>
<td>Bedford</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Roanoke</td>
<td>33,500</td>
<td>24,800</td>
<td>58,300</td>
</tr>
<tr>
<td>Total</td>
<td>69,300</td>
<td>33,500</td>
<td><strong>102,800</strong></td>
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</tbody>
</table>

#### Build Forecast – Annual Ons & Offs

<table>
<thead>
<tr>
<th></th>
<th>South of Washington (including to/from Washington)</th>
<th>Through Washington</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynchburg</td>
<td>40,600</td>
<td>8,700</td>
<td>49,300</td>
</tr>
<tr>
<td>Bedford</td>
<td>19,800</td>
<td>5,600</td>
<td>25,400</td>
</tr>
<tr>
<td>Roanoke</td>
<td>30,300</td>
<td>17,900</td>
<td>48,200</td>
</tr>
<tr>
<td>Total</td>
<td>90,700</td>
<td>32,200</td>
<td><strong>122,900</strong></td>
</tr>
</tbody>
</table>

Incremental Route Ridership = (build – base)/2

10,050
## Final Ridership Model Results Comparison

### FY 18 Virginia Station Boardings and Alightings

<table>
<thead>
<tr>
<th>Station</th>
<th>State-Supported</th>
<th>Long-Distance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandria</td>
<td>141,000</td>
<td>46,000</td>
<td>187,000</td>
</tr>
<tr>
<td>Manassas</td>
<td>13,000</td>
<td>10,000</td>
<td>23,000</td>
</tr>
<tr>
<td>Culpeper</td>
<td>9,000</td>
<td>6,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Charlottesville</td>
<td>79,000</td>
<td>52,000</td>
<td>131,000</td>
</tr>
<tr>
<td>Lynchburg</td>
<td>44,000</td>
<td>13,000</td>
<td>57,000</td>
</tr>
<tr>
<td>Roanoke</td>
<td>52,000</td>
<td>0</td>
<td>52,000</td>
</tr>
</tbody>
</table>

### Bedford Forecast

<table>
<thead>
<tr>
<th>Description</th>
<th>Bedford Riders</th>
<th>Total VA Riders</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 18 VA Riders on Route 46 State-Supported Service</td>
<td>-</td>
<td>169,125</td>
<td></td>
</tr>
<tr>
<td>With Bedford Station - Incremental Riders</td>
<td>10,050</td>
<td>179,875</td>
<td>6%</td>
</tr>
<tr>
<td>With Bedford Station - Total Bedford Riders</td>
<td>25,400</td>
<td>179,875</td>
<td>14%</td>
</tr>
</tbody>
</table>
Virginia Passenger Rail Authority and Norfolk Southern agreed to evaluate, for informational purposes only, collateral track and signal improvements that would enable the addition of an Amtrak station stop at Bedford, Virginia to its existing and proposed future 2nd roundtrip service between Washington, D.C. and Roanoke, VA.

This evaluation does not constitute an offer or an agreement to permit the construction or institute new service.
Rail Operations Modeling Conclusions

- Addition of Bedford Station stop creates non-material new delay to Norfolk Southern operations
- This assumes that Amtrak schedules do not deviate from those given in this study and that Amtrak does not add service on any part of the study area above what is included in this study
- No “Improved Case (year 2040)” scenario is needed for analysis as the assumed 2040 infrastructure (as defined in this document) results in no material increase in fluidity impairment.
Next Steps

- General Assembly Study Due 11/15/21
- Determine NEPA Class of Action with FRA
- CRISI Planning Grant Application Due 11/29/21
- Continued coordination with Virginia Passenger Rail Authority, BFRRI, Amtrak, and Norfolk Southern
- Amtrak Thruway Bus to serve Bedford in spring 2022
Questions/Comments

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