I-81/I-64 Inter-Regional Public Transportation Study

Presentation to
SHRP2 I-64 Corridor Working Group
March 30, 2017
Study Scope

• Assess potential need and demand for regional transit service connecting Harrisonburg, Staunton, Waynesboro and Charlottesville
• Develop service alternatives appropriate to the need and demand
• Estimate ridership, revenue, and costs
• Develop organizational options for implementation of the regional service
Challenges, Needs and Opportunities

• Bi-directional demand, with Charlottesville serving as the primary destination
• Afton Mountain is a significant travel barrier
• Significant Charlottesville area medical destinations, specifically the UVA Medical Center and Sentara Martha Jefferson Hospital
• Parking concerns on both the JMU campus and the UVA campus
Challenges, Needs and Opportunities - continued

• JMU students need access to an airport – either Dulles or Charlottesville – Dulles will soon have limited service via a new route, to be implemented in FY18
• First mile/last mile concerns
• Connections to Greyhound, Amtrak, and local bus services are needed
• Park and ride lots are needed in Harrisonburg and Staunton, and a need for improvements to the lot in Waynesboro
• Service needs to be accessible for people with disabilities, with relatively low fares
Previous Plans and Studies

- Albemarle County Comprehensive Plan (rail)
- CSPDC TDP
- SAW MPO 2040 LRTP
- HDPT TDP- intercity bus service along I-81
- JMU Transportation Department Surveys
- JAUNT TDP
- Virginia Intercity Bus Plan
Survey Highlights

• Commuter survey conducted in April, 2016
• On-line, 609 responses
• 96% reported a need for service between the Shenandoah Valley and Charlottesville
  • 40% would use
  • 56% might use
• 81% of respondents currently drive alone
• Travel purposes
  • Work – 63%
  • Errands – 11%
  • Medical -6%
  • School – 5%
• Primary destinations
  • UVA Medical- 19%
  • UVA – 14%
  • Downtown Charlottesville – 5%
  • JMU- 15%
• Low fare desired
• Amenities: Guaranteed ride home, Wi-Fi, comfortable seats, lighting
Demand Methodology

- Survey Responses
- Census LEHD Data
- Intercity Bus Demand Model
- UVA and JMU Employment Data
Commuting Patterns

1,257 Commuters to Downtown and UVA Medical from the Shenandoah Valley

- Harrisonburg
- Stuarts Draft
- Fishersville
- Staunton
- Waynesboro

237 Commuters to Martha Jefferson Hospital area from the Shenandoah Valley

- Harrisonburg
- Stuarts Draft
- Staunton
- Waynesboro
Commuting Patterns

556 commuters through the corridor to Harrisonburg

- Staunton
- Weyers Cave
- Charlottesville
- Waynesboro
- Verona
- Fishersville
Projected Demand

- Total projected annual demand: 44,620

- Based on 255 annual service days, average daily ridership would be 175 passenger trips, including both directions
- Would require (at least) three round-trips (six one-way vehicle trips if demand is bi-directional over the corridor
- Peak demand would require more capacity
- Demand would likely start smaller and build to this level
Service Alternatives Considered

• Option 1: Full Corridor, Bi-Directional service
• Option 2: Full Corridor, Bi-Directional service, No Martha Jefferson
• Option 3: Full Corridor, Peak direction only
• Option 4: Originate service in Weyers Cave
Proposed Route
Preferred Alternative: Full Corridor, Bi-Directional Service

- 23 revenue hours per weekday
- 5,865 annual revenue hours
- 193,300 annual revenue miles
- Projected demand: 44,620 annual passenger trips
- Three vehicles required (plus 1 spare/backup)
Purposes of the Service

As designed, the inter-regional service will provide:

• A public transportation connection between two major state universities – James Madison University and the University of Virginia.

• Commuter bus service for residents of the Shenandoah Valley who work in Charlottesville, including those who work hospital shifts at UVA Hospital (7:00 a.m. to 3:00 p.m. and 7:00 a.m. to 7:00 p.m.) and those who work a more traditional office schedule.

• Commuter bus service between Staunton and JMU.

• A connection between Augusta Health, UVA Hospital, Martha Jefferson Hospital.

• A public transportation option for area residents who do not drive to access medical appointments in Charlottesville.

• A meaningful connection to both Greyhound and Amtrak. These connections would allow Shenandoah Valley residents to connect to Richmond and the Northeast corridor. A meaningful connection to Greyhound is important, as it could allow for 100% federal funding for the trips that provide this connection.
# Sample Schedule – For Planning Purposes

<table>
<thead>
<tr>
<th>Eastbound Stops</th>
<th>a.m. service</th>
<th>p.m. service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bus 1</td>
<td>Bus 2</td>
</tr>
<tr>
<td>James Madison University- Godwin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harrisonburg - Park and Ride, TBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weyers Cave - Park and Ride, TBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staunton - transit hub</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Staunton - Park and Ride, TBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Augusta Health - Fishersville</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Waynesboro Park and Ride</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waynesboro transit hub</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>University of Virginia - University Drive, Charlottesville</td>
<td>6:45</td>
<td>8:00</td>
</tr>
<tr>
<td>University of Virginia Medical Center, Charlottesville</td>
<td>6:47</td>
<td>8:02</td>
</tr>
<tr>
<td>Downtown Charlottesville - Greyhound</td>
<td>6:51</td>
<td>8:06</td>
</tr>
<tr>
<td>Martha Jefferson</td>
<td>n.s.</td>
<td>8:20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Charlottesville</th>
<th>a.m. service</th>
<th>p.m. service</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>Short Break</td>
<td>Short Break</td>
</tr>
<tr>
<td>University of Virginia Medical Center, Charlottesville</td>
<td>2:19</td>
<td>3:19</td>
</tr>
<tr>
<td>University of Virginia - University Drive, Charlottesville</td>
<td>2:19</td>
<td>3:19</td>
</tr>
<tr>
<td>Waynesboro transit hub</td>
<td>7:40</td>
<td>9:25</td>
</tr>
<tr>
<td>Waynesboro Park and Ride</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Augusta Health - Fishersville</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Staunton Park and Ride</td>
<td>7:30</td>
<td>3:15</td>
</tr>
<tr>
<td>Staunton Transit Center</td>
<td>7:40</td>
<td>8:15</td>
</tr>
<tr>
<td>Weyers Cave Park and Ride</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>Harrisonburg Park and Ride</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>JMU- Godwin</td>
<td>8:15</td>
<td>9:00</td>
</tr>
<tr>
<td>Harrisonburg</td>
<td>Short Break</td>
<td>Short Break</td>
</tr>
</tbody>
</table>

**Bold Yellow shading denotes connection with Greyhound and Bold Green denotes connection with Amtrak service within 2 hours.**
Service Considerations

• Need to limit stops to provide express service

• Riders desire amenities- guaranteed ride home, Wi-Fi, comfortable seats, lighting, power

• Need for stop(s) in non-urbanized area to permit access to Section 5311 funding (Weyers Cave)

• Need for schedules connecting to Greyhound within two-hour window for Greyhound in-kind match

• Schedules will need to consider needs of three markets – commuters, intercity travelers, and day-trippers

• Potential to break at Capital Area Transit

• Need for new park and ride lots
Fares

- Comparable services in Virginia
  - Smartway fare Blacksburg-Roanoke is $4.00 each way,
  - JAUNT service Nelson-Wintergreen is $4.00 each way
- Proposal is $5.00 Harrisonburg/Weyers Cave-Charlottesville, $4.00 Staunton/Waynesboro-Charlottesville. Lower fare for trips within the Shenandoah Valley
- Multi-trip discounts for commuters
Operating Costs—Preferred Option:

- Operating Expenses – Labor, fuel, insurance, etc.
- Leased or contractor capital in recognition of guidance from DRPT with regard to the near-term availability of capital funds
- Estimate of $444,590 annually, using a smaller vehicle
Vehicles
—Preferred Option

Leased or contractor-owned

- Smaller 25-30 seat truck-bus: approximately $185,000 (seven to ten-year vehicle) — startup
- Over-the-road coach (55 seat): $600,000 (12 year vehicle) — future years

- Each option would include passenger amenities
## Potential Funding

<table>
<thead>
<tr>
<th>Operating Costs, Including the Cost of Vehicles</th>
<th>Estimated Annual Operating Parameters</th>
<th>Estimated Funding Splits</th>
<th>Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Corridor, Bi-Directional Service</td>
<td>Service Hours 5,865</td>
<td>Revenue Miles 193,300</td>
<td>Cost estimates assume smaller vehicles, leased or owned by the service provider.</td>
</tr>
<tr>
<td></td>
<td>Operating Costs $444,590</td>
<td>Operating Costs $133,860</td>
<td>Per unit cost is $2.30 a mile, referenced from the low end of costs from the Virginia Intercity Bus Plan.</td>
</tr>
<tr>
<td></td>
<td>Farebox Revenue $49,717</td>
<td>Federal S.5311 $155,365</td>
<td>The low end was used to reflect the smaller, less expensive vehicles.</td>
</tr>
<tr>
<td></td>
<td>State Assistance $105,648</td>
<td>Local Assistance 44,620</td>
<td>A fare of $3.00 each way was used to estimate farbox revenue.</td>
</tr>
<tr>
<td></td>
<td>Estimated Annual Ridership 44,620</td>
<td>Cost Per Trip $9.96</td>
<td>This is lower than the proposed fare and was used to account for multi-trip discounts that may potentially be offered.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>In-kind match for S.5311 may be an option for trips that connect with Greyhound, if this project is part of the Intercity Bus Program.</td>
</tr>
</tbody>
</table>
Park and Ride Needs

Harrisonburg
• JMU Lots R11 and R10 adjacent to I-81 Exit 245
• Future use of state park and ride when intersection is reconfigured

Weyers Cave
• Augusta County Weyers Cave Road widening Smart Scale grant application includes construction of a 50-60 space lot – Exit 235
• Short-term options include lease of space or BRCC

Staunton
• Staunton Crossing Area – Smart Scale application submitted
• Short-term options include leasing space from retailers on Route 250

Waynesboro
• Improvements to current lot - Smart Scale application submitted
Organizational Options

- **CSPDC as grant applicant/contracting entity**
  - Operation by contracted operator
  - Vehicles leased or owned by operator

- **Regional provider as grant applicant/administrator and service operator**
  - Leased vehicles

For both options: A regional stakeholder advisory committee would be formed
Next Steps

• Development of final service and organizational plan
• Development of implementation plan