Virginia Interstate 81 Corridor Update

Dave Covington, PE
I-81 Program Delivery Director
Key Messages

1. The I-81 Improvement Program is real, it is happening.

2. The Program consists of targeted improvements to enhance safety and operational reliability.
   - We are not widening the entire corridor from TN to WV.

3. Major construction is planned to begin Summer/Fall 2021.

4. Everything we do will be done with a sense of Urgency and Purpose.
How did we get here?

1. Need recognized early 2018

2. Study began in April 2018
   - Goal was to identify targeted improvements related to safety and operations (reliability)

3. Study completed December 2018

4. Senate Bill 1716 and House Bill 2718 introduced January 2019

5. After amendments by Governor, signed into law April 2019
How is the Program funded?

1. The law established the I-81 Corridor Improvement Fund and Program

2. Funding mechanisms:
   - Statewide truck registration fee increase (I-81 receives a portion)
   - 2.1% Regional fuel tax increase (100% dedicated to corridor)
   - Statewide Diesel and Road tax increase (I-81 receives a portion)

3. Includes a “kill switch”
I-81 Improvement Plan Overview

Public Outreach
- 12 Public Input Meetings
- 5 CTB Updates
- 2,000 + Comments from the Public
- 950 + Meeting Attendees

Public Input Meetings – Seeking Feedback
- **June:** Identified problems; safety, congestion, and other issues
- **August:** Proposed targeted solutions and potential funding options
- **October:** Prioritized solutions and identified potential funding options and economic impacts
# I-81 Operational Improvements Plan Summary

<table>
<thead>
<tr>
<th>Improvement</th>
<th>Estimated Implementation Cost</th>
<th>Estimated Annual O&amp;M Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand Traffic Cameras &amp; CMS</td>
<td>$10,750,000</td>
<td>$ 615,600</td>
</tr>
<tr>
<td>Enhanced Safety Service Patrols</td>
<td>$1,663,000</td>
<td>$1,744,200</td>
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<tr>
<td>Contract Emergency Clearance</td>
<td>$3,500,000</td>
<td>$3,591,000</td>
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<tr>
<td><strong>Parallel facilities Improvements</strong></td>
<td><strong>$27,100,000</strong></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$43,000,000</strong></td>
<td><strong>$5,950,800</strong></td>
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</table>
I-81 Operational Improvements Plan Summary

1. Cameras
   • 51 new cameras
   • Completion – Spring 2020

2. Changeable Message Signs
   • 31 new changeable message signs (8 feeder routes, 23 mainline)
   • Work begins this Spring

3. Flashing and Static Chevrons
   • 8 locations
   • Work completed
I-81 Operational Improvements Plan Summary

4. Safety Service Patrol (SSP)
   • 4 new routes, several routes expanded
   • 18 additional patrol trucks added for expanded operations
   • Service hours increased from 7 day x 12 hr. coverage to 7 day x 16 hr.

5. I-81 detour plans completed & distributed

6. Operational Planning Activities
   • Emergency Lane Clearance Improvements
   • Improvements along detour routes (Signal operations, minor geometric improvements at intersections, traffic re-entry strategies)
   • Traffic Operations Center staffing increase

7. Truck Parking Study – Formation of a Task Force (VTRC lead)

8. Speed Enforcement – Formation of a Task Force (VTRC lead)
## I-81 Capital Improvements Plan Summary

<table>
<thead>
<tr>
<th>District</th>
<th>Widening</th>
<th>Auxiliary Lane</th>
<th>Truck Climbing Lane</th>
<th>Acceleration Lane Extension</th>
<th>Deceleration Lane Extension</th>
<th>Curve Improvement</th>
<th>Shoulder Widening</th>
<th>Total Number of Projects</th>
<th>Total Cost (millions $)</th>
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</thead>
<tbody>
<tr>
<td>Bristol District</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>27</td>
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<tr>
<td>Salem District</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>13</td>
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<tr>
<td>Staunton District</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>23</td>
<td>$838.1</td>
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<tr>
<td><strong>Total I-81 Corridor</strong></td>
<td><strong>9</strong></td>
<td><strong>4</strong></td>
<td><strong>5</strong></td>
<td><strong>20</strong></td>
<td><strong>16</strong></td>
<td><strong>8</strong></td>
<td><strong>1</strong></td>
<td><strong>63</strong></td>
<td><strong>$1,998.8</strong></td>
</tr>
</tbody>
</table>
I-81 Capital Improvements Funding and Scheduling

- Pay-as-you-go scenario
- 19 year delivery
- Notice the project “gap.”
- Project schedule is preliminary and subject to change.
I-81 Capital Improvements Funding and Scheduling

- Bonding scenario
- 13 year delivery
- Notice elimination of the project “gap.”
- Project schedule is preliminary and subject to change.
I-81 Capital Improvements Funding and Scheduling

Pay-Go Schedule

Construction Gap

Design Gap

Bonding/TIFIA Schedule
I-81 Capital Improvements Funding and Scheduling

- Yes, the text on the previous slides is too small. Download your own copy...
  - Visit the VA CTB website at www.ctb.virginia.gov
  - At the top, click on “Projects”, then “Major Projects”
  - Select “I-81 Corridor Improvement Program”
  - Scroll down to “October 2019 Meeting in Natural Bridge”
  - Select “I-81 Study Project Prioritization”
Staunton District Project Highlights

- Add southbound auxiliary lane between Exit 221 and Exit 220
- Widen northbound and southbound to three lanes between Exit 225 and Exit 221
- Add northbound truck climbing lane between MM 234 & 237.9
- Add southbound truck climbing lane between MM 238 & 235.6
- Widen northbound and southbound to three lanes between Exit 243 and Exit 248
- Widen southbound to three lanes between MM 300.1 and 296.7
- Widen northbound and southbound to three lanes between Exit 313 & Exit 317
I-81 Exit 221 and Exit 225 – Widen to three lanes

- Through Staunton, VA
- Approximately 7 Lane-miles of widening
- Connects to System-System interchange with I-64
- Estimated value = $140M
- Currently advertised for design
I-81– Exit 243-248 – Widen to three lanes.

- Through Harrisonburg, VA
- Approximately 12 Lane-miles of widening
- Major interchange with Route 33
- James Madison University on both sides of I-81
- Estimated value = $271M
I-81– Exit 313-317 – Widen to three lanes.

- Through Winchester, VA
- Approximately 8 Lane-miles of widening
- Major interchanges at Routes 50, 7, and 11.
- Shenandoah University on both sides of I-81
- Estimated value = $204M
Salem District Project Highlights

- Widen northbound to three lanes from MM 119 to Exit 128
- Widen northbound to three lanes from Exit 128 to Exit 137
- Widen northbound and southbound to three lanes from Exit 137 to Exit 141
  - Links up with SMART SCALE funded improvements from 141 to 143
- Widen northbound and southbound from MM 144 to Exit 150
I-81– MM 116 to MM 151– Widen to three lanes.

- From Christiansburg to Troutville
- 43.1 Lane-Miles of widening
- System-System interchange with I-581
- Estimated value = $848M
Bristol District Project Highlights

- Widen southbound to three lanes between Exit 10 and Exit 7
- Add northbound truck climbing lane from Exit 32
- Add a southbound truck climbing lane between MM 34 and MM 33
- Add northbound truck climbing lane from Exit 39
- Add SB auxiliary lane between Exit 54 and Smyth Safety Rest Area
- Add SB auxiliary lane between Exit 40 on I-77 and Exit 72 on I-81 and extend acceleration lane
- Add SB auxiliary lane between Exit 73 and Exit 72
I-81–I-77 System-System Interchange Improvements

- Improve operational and safety characteristics of I-81/I-77 Interchange
- Major System-System Interchange.
- Three projects – decal extension, ramp reconfiguration, auxiliary lane improvements
- Estimated value = $75 M
So, what does this mean for us?

1. The Program is perpetual
   • This provides opportunity for technology and productivity investments

2. Labor and Material challenges
   • This program is in addition to our normal District construction program.
   • We need to enhance our labor and material resources

3. Improvements in safety and operational reliability are coming
What does the Department need from you?

1. The foundation of the Program is urgency and purpose
   • We need for the industry to respond in kind.

2. We need your help
   • We need your motivation and innovation
   • We all need to give 125% to ensure the viability and success of the Program

3. We need you to bring your A+ game.
Questions?