Virginia Interstate 81 Corridor Overview
Interstate 81- 325 miles in Virginia

I-81 Corridor Significance:

- 11.7 million trucks/year
- $312 billion in goods/year
- 42% of statewide truck traffic
- 2,000 crashes/year
- 30 crashes/year (with clearance times greater than 6 hours)
**Interstate 81 in Virginia**

- Connects six metropolitan areas and 30 higher education institutions

<table>
<thead>
<tr>
<th>Total Trucks</th>
<th>Freight Value</th>
<th>Truck VMT</th>
</tr>
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<tbody>
<tr>
<td>11.7 million units</td>
<td>$312 billion of freight</td>
<td>1.2 billion truck VMT</td>
</tr>
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</table>

- (33% Virginia total)
- (47% Virginia total)
- (42% Virginia total)

**Source:** Parsons Brinckerhoff analysis of Commonwealth of Virginia Transearch Data
Interstate 81 in Virginia

The effect of uphill grade on trucks

- **Level <2% grade**
  - ![Truck Level](image)
  - ![Cars Level](image)

- **Rolling 2-3% grade**
  - ![Truck Rolling](image)
  - ![Cars Rolling](image)

- **Mountain 3+% grade**
  - ![Truck Mountain](image)
  - ![Cars Mountain](image)
Impact of Incidents

I-81 Example Crash

• Incident involving tractor-trailer
• Duration: 12 hours
• Est. queue length: 8 miles
• Vehicle hours of delay: 16,355
• Est. delay cost: $612,000
Statewide Traffic Incident Management (TIM) Committee created by Exec. Order

• Executive Order 15 continued Statewide TIM Committee

• Chaired by State Police Superintendent

• 16 Member organizations
  • 6 State Agencies
  • 10 Associations

• 3 Standing Subcommittees
  • Communications, Best Practices and Safety
Common Recovery Issues
Incident Management Omnibus Bill

Purpose

Improve traffic incident response and management by updating five sections of the *Code of Virginia* to:

- Shorten the response times to incidents
- Reduce lane closure times due to an incident
- Reduce the impact highway incidents have on public safety, responder safety, and our economy
Incident Management Omnibus Bill
Response Time -§46.2-808.1 & §46.2-920.1

• The Code change will allow VDOT contracted vehicles for TIM services to use crossovers (808.1) and shoulders (920.1) to respond to incidents

• Bypassing traffic queues will reduce response times
Incident Management Omnibus Bill
Roadway Clearance - §46.2-888

- The Code change will require drivers to move their vehicles involved in non-fatal, non-injury crashes if it is safe to do so
- Five states use “shall” in their “Clear It” law
- A South Carolina study showed an estimated 11% reduction in total delay for minor incidents with one lane blocked
Incident Management Omnibus Bill
Roadway Clearance – 46.2-1210 & §46.2-1212.1

• The Code change (46.2-1210) allows VDOT and contractors for TIM services to move or push vehicles out of the travel lane when no injury or fatality is involved.

• The Code change (46.2-1212.1) clarifies the VDOT contractors for TIM service operators are protected from liability (no duty) for choosing not to exercise removal, but may recover costs for doing so.

• This Code change compliments the changes to §46.2-888 which requires motorists capable of driving vehicles to clear the travel lane.

A South Carolina study showed an estimated 11% reduction in total delay for minor incidents with one lane blocked.
Incident Management Omnibus Bill Summary

• Over 24 million vehicle hours of delay occurred in FY16 on Virginia’s interstates alone

• A national estimate states that roadway incidents contribute to 25% of congestion

• The Incident Management Omnibus Bill offer low cost solutions to reduce incident durations

• Statewide TIM Committee supports these changes

• VDOT has collaborated with the Virginia State Police, Virginia Association of Towing & Recovery Operators, Virginia Trucking Association, Insurance Industry and others to develop solutions to quickly clear roads from major crashes
FASTLANE Grants:
• Nationally Significant Freight and Highway Project Program
• $4.5 B authorized through 2020 (approx. $800M/year)

Anticipated Schedule:
• December 15, 2016 Application Deadline
• January 2017 est. USDOT Application Review
• Spring 2017 est. Grant Awards
• Interstate 81 experiences delay from over 2,000 crashes annually, 22% involving heavy trucks
• Average of 30 major truck crashes a year that take 6+ hours to clear
• Major impacts to reliability and lost revenue
• FASTLANE Grant would fund approximately $25M or 20% of the total $128M program cost.

If Grant Awarded:
• All construction projects underway before September 2020
• All non-construction projects underway by 2018
Focus on Improving Safety, Reliability and Operations

• Reduces Friction Points
  • Addresses 15 interchanges and two rest areas
    – Extends acceleration and deceleration lanes
    – Improves ramp junctions

• Improves Incident Detection
  • Institutes freight safety service patrol
  • Incorporates new technologies- drones and smartphone app

• Decreases Incident Response Time
  • Towing Response Incentive Program (TRIP)
  • Instant Tow Dispatch
FASTLANE II Grant would also:

- **Implement a Truck Parking Management System**
  - Provides up to date information on available spaces at public rest areas
  - Partner with private truck parking along the corridor

- **Expand Express Bus Service**
  - Provides additional express bus service between the Virginia Tech campus and downtown Roanoke (Carillion)
  - Reduces commuter traffic on the Blacksburg/Christiansburg/Roanoke corridor
  - Feeds expanded Amtrak service
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<th>I-81 MILEPOST</th>
<th>DESCRIPTION OF THE COMPONENT PROGRAM</th>
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<td>Corridor-Wide</td>
<td>Freight Safety Service Patrol (SSP)</td>
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<td>Innovative Incident Response (tethered drones and smartphone app for tow trucks)</td>
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<td>Towing Response Incentive Program (TRIP)</td>
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<td>Instant Tow Dispatch</td>
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<td>Express Bus service - Virginia Tech to Carillion</td>
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<td>Truck Parking Management System</td>
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The I-81 Corridor Improvement Program will:

- Improve safety by reducing friction points
- Improve detection of incidents
- Improve the speed of incident clearance without jeopardizing safety

Corridor-wide Truck Parking Management System

Expand Express Bus Service
VDOT contracts wrecker services and is piloting quick clearance strategies

- Emergency tow contract during weather events
  - All 9 Districts, costs about $1-2 M per year
- Instant Tow Dispatch
  - Northern Virginia, Southwest Virginia and Hampton Roads Districts
- Incentive Tow Program
  - Richmond District and Salem District (Spring 2017)
- On-call heavy duty wrecker
  - Staunton District
  - Hampton Roads Tunnels
Innovation and Technology will improve incident response

- Unmanned Aerial Vehicles
- Field Commander mobile app
- Photogrammetry
- Connected and Automated Vehicles
SMART SCALE Update

Nick Donohue
Deputy Secretary of Transportation
January 16, 2017
I-81 Projects Funded
Round 1

1 - App ID 553 - I-81 Exit 323 Accel/Decel Lane Extension
2 - App ID 565 - I-81 Exit 245 Improvements
3 - App ID 504 - I-81 Exit 222 Improvements
4 - App ID 502 - I-81 Exit 220 and 221 Accel/Decel Lanes
5 - App ID 607 – I-81 Exit 213 Acceleration Lanes
6 - App ID 525 - I-81 Exit 141-143 Northbound Auxiliary Lane
7 - App ID 474 – I-81 Exit 81 Construct Auxiliary Lane I-77 North Exit 32 onto I-81 South
8 - App ID 667 – I-81 Exit 19 Modifications
9 - App ID 606 - I-81 Exit 17 at State Route 75 Interchange Modifications
I-81 Projects
Round 2

1 - App ID 1610 – I-81 Exit 315 Northbound Deceleration Lane Extension
2 - App ID 1643 – I-81 Exit 300 Southbound Acceleration Lane Extension
3 - App ID 1656 – I-81 Exit 296 Accel/Decel Lanes
4 - App ID 1268 – I-81 Exit 235 Access Improvements
5 - App ID 1039 – I-81 Exit 140-141 Northbound Auxiliary Lane
6 - App ID 1047 - I-81 Exit 140-141 Southbound Auxiliary Lane
7 - App ID 1644 – I-81 Exit 35 Interchange Modifications