

*January 16, 2017*



# 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





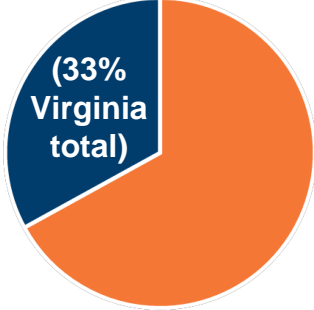
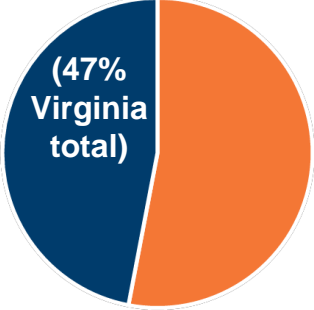
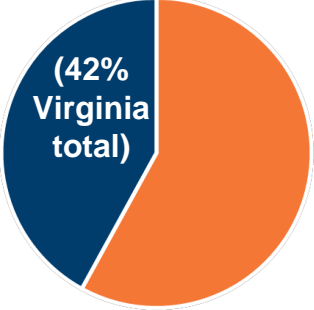






**30**  
CRASHES/YEAR  
(WITH CLEARANCE TIMES  
GREATER THAN 6 HOURS)





# Interstate 81 in Virginia

- Connects six metropolitan areas and 30 higher education institutions

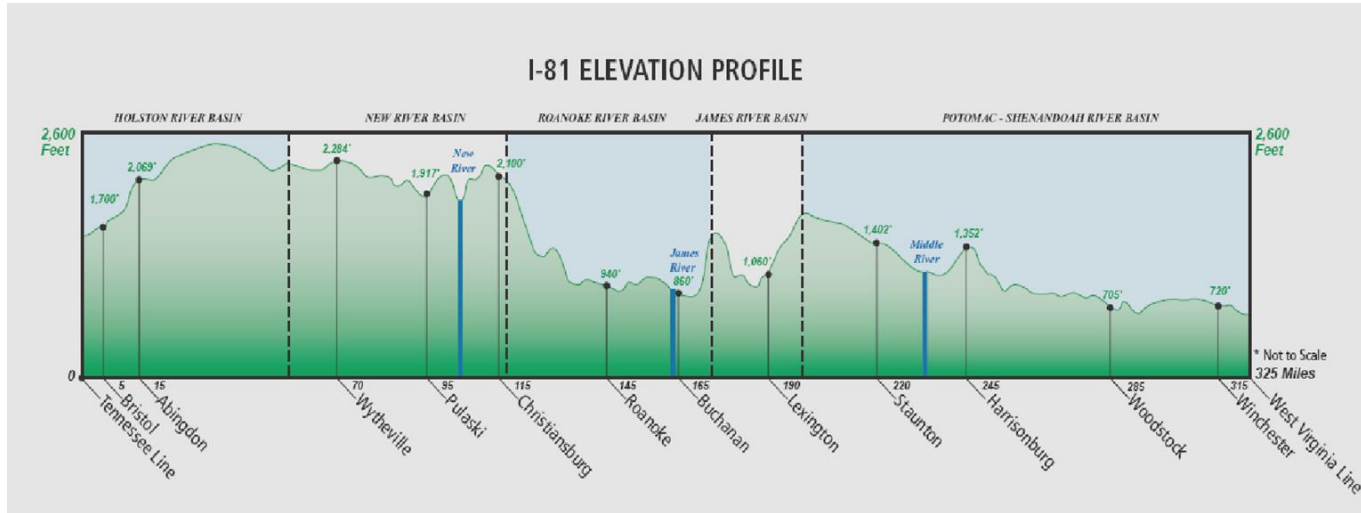
|   | Total Trucks   | Freight Value   | Truck VMT   |
|---|---|--|--|
|  | <p>11.7 million units</p>  <p>(33% Virginia total)</p> | <p>\$312 billion of freight</p>  <p>(47% Virginia total)</p> | <p>1.2 billion truck VMT</p>  <p>(42% Virginia total)</p> |

   
   
 TRUCKS MAKE UP **20-30%**  
 OF THE TRAFFIC VOLUMES ON  
 SOME SECTIONS OF I-81

LOSS OF ONE LANE  
 OF I-81 CAUSES A  
**65%**   
 REDUCTION IN HIGHWAY CAPACITY

 **48 MILES**  
 OF I-81 HAVE  
 GRADES GREATER  
 THAN 3%

# Interstate 81 in Virginia



The effect of uphill grade on trucks

Level <2% grade



Rolling 2-3% grade



Mountain 3+% grade

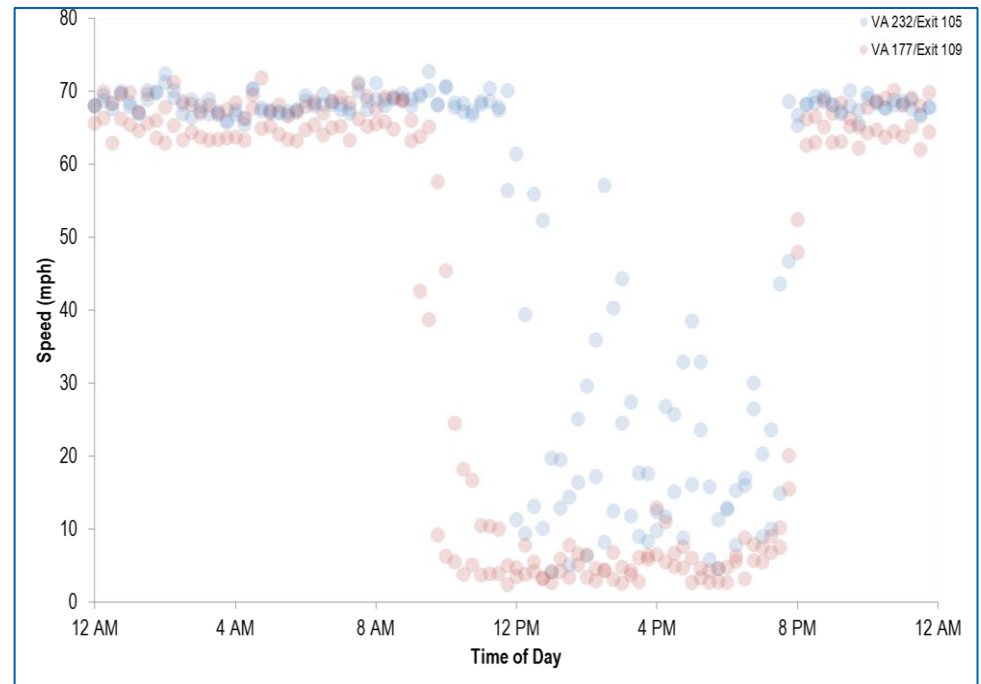


# Impact of Incidents



## 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

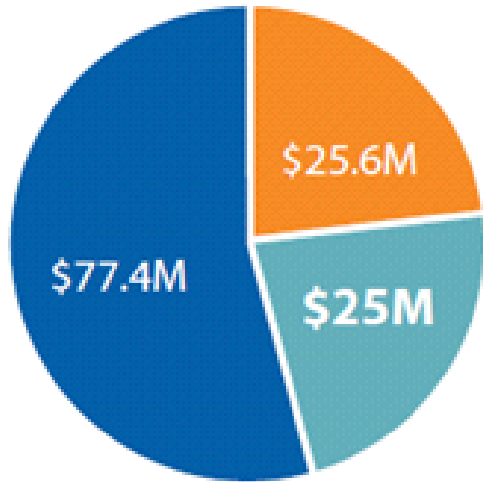


# FASTLANE II Grant



**Interstate 81**  
 Delivering Reliability  
 for our Freight and Families

*Funding Sources*



- State Assistance – 20%
- FASTLANE Grant – 20%
- Federal Assistance – 60%

**TOTAL PROGRAM: \$128 Million**

- 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

| I-81 MILEPOST | DESCRIPTION OF THE COMPONENT PROGRAM   |
|---------------|--|
| 5             | Exit 5 Ramp Widening/Route 11 Improvements (Washington County)                   |
| 17            | Exit 17 Interchange Modifications (Washington County)                            |
| 19            | Exit 19 Ramp Improvements (Washington County)                                    |
| 24            | Exit 24 Acceleration Lane Extensions (Washington County)                         |
| 29            | Exit 29 Acceleration Lane Extension (Washington County)                          |
| 72            | Exit 72 Acceleration Lane Extension (Wythe County)                               |
| 80            | I-77 North Merge Lane (Wythe County)   |
| 108           | Radford Rest Area Ramp Improvements (Montgomery County)                          |
| 129           | Ironto Rest Area Acceleration Lane Extension (Montgomery County)                 |
| 141           | Northbound Auxiliary Lane Between Exits 141 and 143 (Roanoke County)             |
| 205           | Exit 205 Ramp Improvements (Rockbridge County)                                   |
| 220           | Exits 220 and 221 Acceleration/Deceleration Lane Extensions (Augusta County)     |
| 222           | Exit 222 Acceleration and Deceleration Lane Extensions (Augusta County)          |
| 235           | Exit 235 Access Improvements (Augusta County)                                    |
| 245           | Exit 245 Ramp Realignment (City of Harrisonburg)                                 |
| 323           | Exit 323 Acceleration/Deceleration Lane Extensions (Frederick County)            |
| Corridor-Wide | Freight Safety Service Patrol (SSP)  |
|               | Innovative Incident Response (tethered drones and smartphone app for tow trucks) |
|               | Towing Response Incentive Program (TRIP)   |
|               | Instant Tow Dispatch   |
|               | Express Bus service - Virginia Tech to Carillion                                 |
|               | Truck Parking Management System  |



**Interstate 81**  
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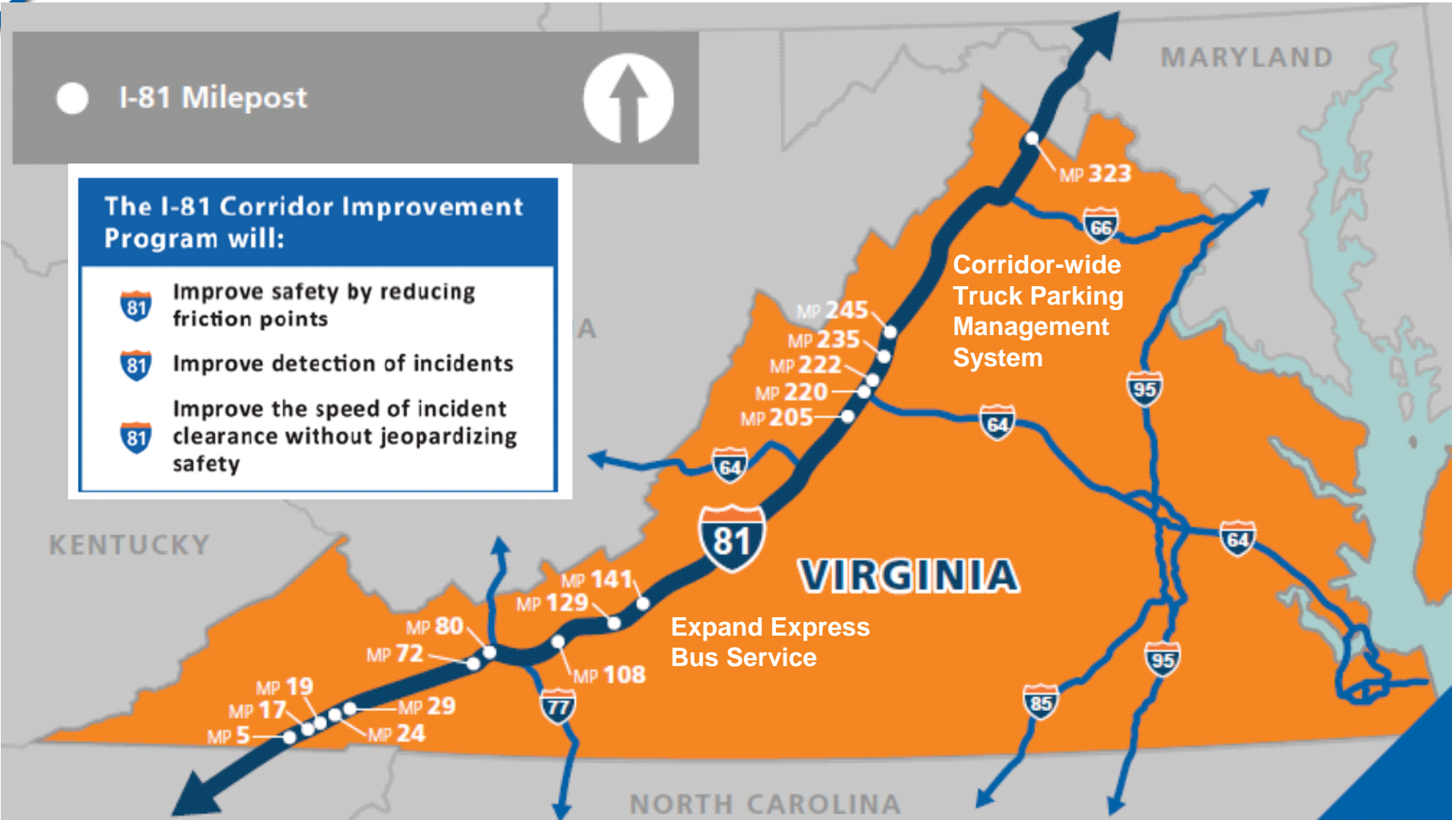
# Corridor Improvement Program Components

# FASTLANE II Grant



## Interstate 81

Delivering Reliability  
for our Freight and Families





# 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**

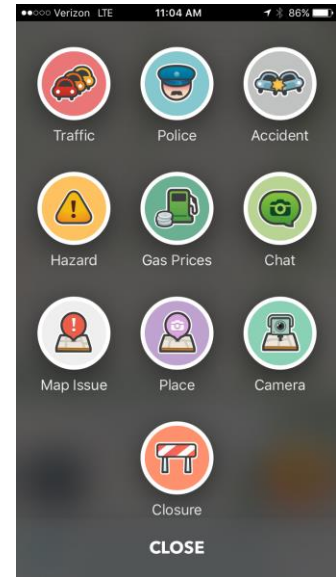
- Richmond District and Salem District (Spring 2017)

- **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





COMMONWEALTH of VIRGINIA  
*Office of the*  
SECRETARY of TRANSPORTATION

# 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

