RESPONSES to I-95 Corridor Coalition Survey

State Contacts, Plans & Needs related to
Connected/Autonomous Vehicles Program
March 2015

1. Current:

a. Please list any current Connected/Autonomous Vehicle initiatives and applications underway (or in the process of deployment) by your Agency. For each item, include the location of the project (i.e., local/municipal, major arterials, interstate, multi-jurisdictional facility, etc.).

Vermont	• Currently the Vermont Agency of Transportation (VTrans) has submitted an AID Grant Application on behalf of the Chittenden County Regional Planning Commission (CCRPC) for implementing a pilot Connected Vehicle project utilizing Blue Toad on a couple of selected high traffic volume corridors around Burlington, VT. • VTrans has also kicked off discussions with counterparts from Maine and New Hampshire DOT's (Tri-State), University of Vermont Transportation Research Center (UVM TRC), and New Hampshire Army Corps of Engineers ERDC Cold Regions Research and Engineering Laboratory group to develop a regional Tri-State Concept of Operations response and application for the US DOT Pilot Deployment of Connected Vehicle Road Weather Applications Solicitation.
Rhode Island	N/A
New Hampshire	None to date.
Connecticut	None at this time.
New York	• 2008 Demo/World Congress – I-495 Corridor • Commercial Vehicle Infrastructure Integration Program/Demo at 2011 Orlando WC • Pooled Fund Study – Road/Weather 5.9 GHz DSRC application development and testing (on hold) • AASHTO Connected Vehicle Group – Infrastructure Footprint Analysis
New Jersey	1. Currently, there is one connected vehicle application being developed. It falls under the Environmental section, specifically the Eco-signal Operations. It is an "eco-approach and departure at intersections" type of application. The NJDOT in conjunction with private and academic institutions is developing an algorithm to predict when the adaptive signals will allocate green time to an approach. The information will be transmitted to a vehicle wirelessly (3G or 4G) so the vehicle may be turned off and then start up 2 seconds before the green signal. This is a type of communication between signals and vehicles to reduce fuel emissions when idling at intersections. This does not include SPaT information packages being transmitted via DSRC. Location: This is taking place on US-1, an Urban Principal Arterial through multiple municipalities in Mercer and Middlesex Counties. 2. We have previously tested a connected vehicle application for Mobility. Specifically, the Dynamic Mobility Applications suite was employed with a focus on EnableATIS. We took a feed from our DMS software and wirelessly provided it to a vehicle with an in-car dash display. The DMS message was in an XML format for consumption and the variables were vehicle heading and proximity to the DMS. There was no direct communication between the DMS and vehicle, as there was no DSRC instrumentation involved. GPS coordinate tracking was sufficient for this application. Location: This took place on NJ-18, an Urban Principal Arterial Freeway/Expressway in New Brunswick City, Middlesex County. This application was showcased at the ITSNJ Annual Meeting.
Pennsylvania	• PennDOT contracted CMU to develop the "Connected and Autonomous Vehicles 2040 Vision." The report was completed in July 2014. • PennDOT supports the 11 DSRC equipped signals in Cranberry Township (DSRC installed by CMU) • PennDOT supports the 23 DSRC equipped signals being installed in the City of Pittsburgh (DSRC installed by CMU) • PennDOT is planning to install 11 DSRC equipment on 11 signals in Ross and McCandless Townships (2015 or early 2016)
Delaware	None at this time, under review.
Maryland	The Maryland State Highway Administration has not taken the lead in deploying any Connected/Automated Vehicle demonstrations or pilots, however we have participated in support of a University of Maryland demonstration RESCUME. R.E.S.C.U.M.E. or the Response, Emergency Staging, Communications, Uniform Management and Evacuation Program piloted in Columbus, Ohio and Sykesville, Maryland utilizing a dynamic mobility application bundle to demonstrate support for first responders by making incident scene information readily available.
Virginia	During the spring and summer of 2012, two test beds were developed, equipped and installed across the state of Virginia through a partnership between VDOT, VTTI, UVA and Morgan State University. This partnership was established through Connected Vehicle Infrastructure/University Transportation Center

	grant funding. These test beds are the primary research testing areas for the CVI-UTC. One of the test beds is located at the Virginia Smart Road in Blacksburg Virginia. The second test bed is located in Fairfax County in Northern Virginia along portions of I-66, I-495 and on parallel Routes US 29, US 50 and Gallows Road. Together, these test beds include over 50 roadside equipment units and utilize a fleet of highly instrumented vehicles, including automobiles, motorcycles, a motor coach and a semi-truck. VDOT does not currently have any autonomous initiatives.
North Carolina	NCDOT does not have any current initiatives or applications underway.
South Carolina	Connected vehicle pilot project with Clemson University. Project located on I-85 near the city of Greenville.
Georgia	Not any at this time.
Florida	We have been involved in the connected vehicles technology for a number of years. Since the legislation was passed in 2012, the State of Florida has been very involved in this area. Early on we realized this technology offered the potential to not only save lives but revolutionize the way we plan and build our transportation system. Right now we are planning and designing structures, roadways and bridges with a 50 to 75 year life span. It is imperative we incorporate this technology in our projects. • ITS Office Connected-Vehicle Test Bed, in Orlando beginning in 2010 • 25 Miles of roadway in Orlando, FL along portions of I-4, International Drive, and John Young Parkway are designated as a USDOT Connected Vehicle Test Bed • Leroy Selmon Expressway in Tampa (THEA) is a designated USDOT Connected Vehicle Test Bed • Florida Automated Vehicles Summits o 2013 - Tampa (265 attendees) o 2014 – Orlando (375 Attendees) • Three Stakeholder Working Groups (Policy, Infrastructure and Mobility) • Two Pilot Projects (Tampa and Miami) • University Research Partnerships (almost $500,000 underway) • Public Outreach

2. Planned:

a. Please describe the near-term and longer-term plans, if any, for the Connected/Autonomous Vehicle program within your Agency.

Vermont	VTrans is currently in the preliminary investigative stage of addressing and planning for short and long term plans for Connected/Autonomous Vehicle program.
Rhode Island	N/A
New Hampshire	None to date.
Connecticut	No definitive plans at this time.
New York	•Near term - Respond to pending USDOT Connected Vehicle solicitation •Long term - Position state and its resources/assets (including academia and private sectors) to leverage or advance connected and automated vehicle technologies and associated opportunities
New Jersey	1. Near-term plans are to partner with multiple agencies and academic institutions and submit a proposal for a FHWA grant for a Connected Vehicle Pilot Deployment. The concept is being developed, but the overall idea is to provide a Dynamic Mobility Application solution in a multimodal environment. Application packages that will be integrated are EnableATIS, MMITSS, IDTO and FRATIS. There is a lot of information being provided by disparate systems that are maintained by different agencies. The idea is to coalesce information into customized packages (Transit-specific, freight-specific, traffic, etc.) and bring it to the vehicle. This would be done via and DSRC/4G hybrid communication. The NJDOT will be heavily involved in the traffic-related information and SPaT information packages. 2. Long-term plans are to see the CV Pilot Deployment described above transform into an ongoing operation. The NJDOT will entertain feasible ideas as they are brought to our attention.
Pennsylvania	• Near Term: PennDOT is monitoring the status of connected and automated vehicles. To ensure that we are up to date on the current status of the technology, PennDOT participates in numerous pooled fund studies and working groups including the Connected Vehicle Pooled Fund Study, AASHTO Connected Vehicle Deployment Coalition, ENTERPRISE Pooled Fund Study, and the TMC Pooled Fund Study. PennDOT has also established a statewide working group that meets bi-monthly. The working group includes members of various PennDOT bureaus and districts, Pennsylvania Turnpike, DVRPC, SPC, and CMU. Additionally, PennDOT routinely presents on the topics at regional and statewide meetings (e.g., Mid-Atlantic AAA, MASITE, and Penn State's Safety Conference). • Long Term: PennDOT is examining methods for mass deployment of connected vehicle technology including potential P3 opportunities. When designing for long term projects, eventually automated vehicles will be taken into account during the design process.
Delaware	Under review.
Maryland	• Maryland SHA is exploring a pilot program to apply advanced traffic management techniques to address corridor operations issues between Baltimore and Washington. Although it is unlikely that connected vehicle technology will be applied in the first stage of this pilot, the agency is considering the elements of CV that could be applied in later stages. • Also, the SHA Office of Planning and Preliminary Engineering is assessing methodologies to analyze the short and long term effects of C/A vehicles from a travel demand and traffic analysis standpoint. SHA will conduct scenario planning analysis to understand the supply/ demand implications and evaluate the long range plans on major corridors. The Maryland Statewide Transportation Model and the Dynamic Traffic Assignment models would be used for such analysis.
Virginia	VDOT plans to expand the connected vehicle footprint in Northern Virginia to encompass high priority roadway segments such as the I-66 ATM deployment area. VDOT is in the process of transitioning the test beds from research to operations. To do this, application/system development will be undertaken to integrate connected vehicle data into VDOT's Operations Center in Northern Virginia. In the long term, VDOT will continue to expand its connected vehicle footprint along other key highways in Northern Virginia and eventually in other regions across the state.
North Carolina	NCDOT has established a team to keep abreast of CV/AV issues as they progress.
South Carolina	To work with academia and local auto manufacturers to expand connected vehicle technology using SCDOT's existing and future infrastructure.
Georgia	GDOT is looking into putting together a statewide Connected Vehicle plan for the State of Georgia to better address our needs, and to solve important issues for the entire state.

Florida	• Expanding our Pilot Projects • Supporting Working Groups • Developing an AV Industry Council • Reaching out to OEMs • Training for FDOT and Legislators • Transit applications, with a focus on last mile solutions and the transportation disadvantaged • TERL and work zone demos • Ports, freight and point of entry applications • Improving our outreach Strategy • Positioning for USDOT CV Grants • Planning for the 2015 FAV Summit

3. Internal:

a. Has your Agency's senior management inquired about or become involved with the Connected/Autonomous Vehicles Program?

Vermont	Yes - VTrans senior management has inquired about, but not yet become involved in Connected/Autonomous Vehicle Program.
Rhode Island	Yes
New Hampshire	Not yet.
Connecticut	Not at this time.
New York	Yes
New Jersey	Within the NJDOT's Transportation Systems Management section, there have been inquiries into how the NJDOT can assist in CV development projects, such as the pilot deployment mentioned above. There hasn't been as much interaction from the Executive Level Management outside of Transportation Systems Management.
Pennsylvania	Yes
Delaware	Scheduled briefings.
Maryland	Yes, the senior management at Maryland SHA is aware of the C/A Vehicles Program, and is considering how these technologies might impact our planning and development initiatives.
Virginia	Senior Leadership at VDOT is engaged and supportive of the Connected Vehicle Program in Virginia. VDOT's Commissioner and Chief Engineer are committed to investing in connected vehicle technology, and Senior Leadership committed both in-kind and hard match funds to the CVI-UTC. They see the long term benefits to traffic safety, congestion and economic growth in the Commonwealth.
North Carolina	Deputy Secretary Tennyson has inquired about this, mostly in reference to DMV type issues, or maybe vendors approaching DOT.
South Carolina	Yes. They are providing the catalyst to keep our pilot projects moving.
Florida	Our senior management has been very involved in our effort.

b. Please provide the contact information for the Connected/Autonomous Vehicles champion(s) within your agency.

Vermont	Robert T. White, 802-522-9867, Robert.T.White@state.vt.us
Rhode Island	Kazem Farhoumand, 401-222-2492 ext. 4100, kazem.farhoumand@dot.ri.gov
New Hampshire	Denise Markow, 603-271-6862, dmarkowdot.state.nh.us
Connecticut	Harold Decker, 860-594-2636, Harold.decker@ct.gov
New York	Rick McDonough, 518-457-5871, Richard.Mcdonough@dot.ny.gov
New Jersey	Jim Hadden; Kelly McVeigh, 609-530-4690 james.hadden@dot.nj.gov; kelly.mcveigh@dot.nj.gov
Pennsylvania	Mark Kopko, 717-783-1903, markopko@pa.gov
Delaware	Gene S. Donaldson, 302-659-4601, gene.donaldson@state.de.us
Maryland	Glenn McLaughlin, 410-787-5884, gmclaughlin@sha.state.md.us
Virginia	Cathy McGhee/Dean Gustafson, 434-293-1973/ 804-786-2978 cathy.mcghee@vdot.virginia.gov / dean.gustafson@vdot.virginia.gov
North Carolina	Kelly Wells, 919-825-2615, kwells@ncdot.gov
South Carolina	Dan Campbell, 803-737-1646, campbellde@scdot.org
Georgia	Troy Galloway, 404-635-2844, tgalloway@dot.ga.gov
Florida	Ed Hutchinson, 850-414-4910, ed.hutchinson@dot.state.fl.us

4. External:

a. Are there any known public inquiries directed to your Agency on the Connected Vehicles program?

Vermont	Yes - the New Hampshire Army Corps of Engineers ERDC Cold Regions Research and Engineering Laboratory group contacted VTrans senior management expressing interest to partner with VTrans on a response to the US DOT Pilot Deployment of Connected Vehicle Road Weather Application Solicitation.
Rhode Island	No
New Hampshire	None that I know of.
Connecticut	No.
New York	Not aware of any – this is still a concept/technology that is somewhat unknown to the general public.
New Jersey	N/A
Pennsylvania	Yes
Delaware	Not aware of any.
Maryland	None, that we're aware.
Virginia	VDOT serves as the lead state in the Connected Vehicle Pooled Fund Study. Other state and local agencies are directed to VDOT for more information and membership opportunities. Interviews with the Government Accountability Office have been held for both the Pooled Fund Study and the Virginia CV program.
North Carolina	I believe vendors have approached Senior Management about DMV type issues.
Georgia	N/A
Florida	We receive several inquiries a week about our program.

5. Multi-Agency Coordination:

a. Please indicate if your Agency is already working with another agency on Connected/ Autonomous Vehicle Program initiatives and/or if there are any known program elements where coordination with neighboring agencies would be helpful or necessary.

Vermont	Other than initial discussions with Tri-State to partner on the US DOT Pilot Deployment of Connected Vehicle Road Weather Application Solicitation, no other coordination has taken place.
Rhode Island	No.
New Hampshire	No action in process.
Connecticut	Not at this time.
New York	Yes.
New Jersey	Currently we are developing a connected vehicle concept with other public, private, and academic agencies that will be proposed to the USDOT for the Pilot Deployment Program. The concept elements involving traveler information will benefit from inter-agency coordination.
Pennsylvania	PennDOT is in discussions with the Pennsylvania Turnpike, DVRPC, SPC, Cranberry Township, and Carnegie Mellon University.
Delaware	Not at this time.
Maryland	At present, we are not engaged in any C/A Vehicle program or initiative that spans across jurisdictional boundaries. However, as always we see the value in coordinating, particularly in the Washington, DC area, because of the multi-jurisdictional nature of that region. While there are no current efforts that span jurisdictional boundaries, the RESCUME project noted above involved close coordination and collaboration between Maryland State Highway Administration and Maryland State Police. This was facilitated by the fact the MSP is a partner agency within Maryland SHA's CHART Program.
Virginia	VDOT partnered with the Virginia Tech Transportation Institute and UVA's Center for Transportation Studies to deploy connected vehicle technology to support the CVI-UTC. The Virginia Connected Corridor is a partnership between VDOT and VTTI. Virginia Department of Motor Vehicles facilitated a series of meetings with private sector entities to identify any barriers to autonomous vehicle research and development in Virginia.
North Carolina	N/A
South Carolina	We are working with Clemson University. We have been in contact with BMW.
Georgia	GDOT is currently working with Cobb County DOT and Cobb County Transit, Cumberland CID, and City of Atlanta on the Connected Vehicle Deployments. Having an open platform, in terms of communications, is providing us the ability to write a successful proposal. Also Fayette County has spoken with GDOT about allowing Autonomous Vehicles on state routes.
Florida	We work with FHWA, AUVSI, and Department of Economic Opportunity, Work Force Florida, Office of Insurance Regulations, Florida Highway Patrol, Florida Department of Highway Safety and Motor Vehicles, MPOs, Florida Trucking Association, Florida Chamber Foundation, FAA, UNF, UCF, USF, Embry Riddle, FSU and the University of Florida.

6. Pilot Deployment Program:

a. The USDOT's Connected Vehicle Pilot Deployment Program will begin with Phase 1: Concept Development. In brief, Phase 1 will have a needs-driven focus, and the proposals are to be related to system performance and centered on performance measures and targets. Without releasing confidential information, are there needs within your Agency that could (1) be addressed by the Connected Vehicle program, and (2) be stronger in a proposal if submitted by more than a single agency?

Vermont	Yes, telecommunications infrastructure. Vermont is a very rural state with limited telecommunications infrastructure even in urban areas. In order for Vermont to successfully implement a Connected/Autonomous Vehicle Program, Vermont will need to substantially install telecommunications infrastructure to support connected/autonomous vehicles. Given Tri-State is already working on a regional Advanced Transportation Management System (ATMS) and 511 system, it makes perfect sense for Tri-State to submit a regional proposal for Connected/Autonomous Vehicle program. A combine proposal will ensure standards and conformity are met and followed across state boundaries.
Rhode Island	No.
New Hampshire	Our department heads need to be more informed as to what exactly is Connected Vehicle and how will it benefit the Department.
Connecticut	No defined needs at this time but Connecticut would be willing to consider participation in a multi-agency Connected Vehicle program initiative.
New York	Yes and Yes.
New Jersey	1. Yes, as described above, there is a lot of disparate traveler information that is currently provided. In a connected vehicle environment, the information would be aggregated and provided to the user based on their needs. Examples could be: highway traveler, mass-transit user, freight traveler, etc. 2. Yes, this is something we are working on right now.
Pennsylvania	Yes and Yes.
Delaware	Under internal discussion, initial response would be to work on projects on a corridor basis.
Maryland	As mentioned above, Maryland is working to pilot some advanced transportation system management initiatives, and the comprehensive data sets potentially generated by connected vehicle technology could significantly enhance the performance of these systems. We also have always agreed that systems that support regional capabilities, spanning jurisdictional boundaries, are more effective than isolated projects. SHA will also test the long range planning implications of C/A on pilot corridors.
Virginia	VDOT considers Connected Vehicles as the next generation of traffic management and as such, views the pilot deployment as an opportunity to begin exploring the benefits to real operational challenges in our network. We believe that local deployments will provide a basis for future extensions to other areas of Virginia and regionally to neighboring jurisdictions.
North Carolina	We are not pursuing a Pilot Deployment.
South Carolina	We feel that bringing local research universities and local auto-related manufacturers would make for stronger teams.
Georgia	Issues to be addressed: Local mall holiday/seasonal traffic congestion, peak hour congestion affecting throughput and travel times, lack of available data that could provide a comprehensive view of the corridor performance, parking, pedestrian/bicycle activity close to the roadway in the section of Cobb Pkwy with rural cross sections. GDOT believes by having one entity submit the proposal is will be a stronger bid. This ensures that a statewide deployment is a possibility. As a lead GDOT will be able to use its current resources (critical communication infrastructure and right-of-way) and its oversight in determining the need for projects within the state of Georgia. Another reason for having one entity on this project is because the USDOT looks upon favorability at state DOTs as the focal point of a governing body made up private and public partnerships in CV test bed pilots.
Florida	FDOT's Office of Traffic Operations (ITS) is leading multiple submissions that involve multiple agencies across the state.

7. Legislation:

a. Please list any existing or proposed legislation your State has or will have pertaining to Connected/Autonomous Vehicles

Vermont	No legislation currently exists or is planned.
Rhode Island	N/A
New Hampshire	We have ongoing cell phone restrictive legislation going on.
Connecticut	None at this time.
New York	NYS, like many others, have pending legislation dealing with "autonomous" vehicles and their operation. A handful of states have passed such legislation including Calif.
New Jersey	The NJ Senate passed a bill (S-734) on 12/18/2014, 35 to 0 concerning autonomous vehicles. The purpose of the bill is to direct the Motor Vehicle Commission to establish driver's license endorsement for autonomous vehicles. On 1/12/2015 the bill was received by the Assembly and referred to the Assembly Transportation and Independent Authorities Committee.
Pennsylvania	N/A
Delaware	None at this time.
Maryland	None, that we're aware. An unsuccessful bill SB 0773 Automated Motor Vehicles - Titling, Registration, and Rules of the Road was submitted in the 2014 Legislative Session, but did not pass.
Virginia	VDOT held meetings with DMV to determine legislative actions that need to be taken. It was determined that no actions are needed in the near term. VDOT's research partners are engaged in Autonomous Vehicle research. We continue to monitor issues relating to liability.
North Carolina	N/A
South Carolina	None.
Georgia	We are not aware of any.
Florida	FL Legislation (House Bill 1207) allows for the testing of autonomous vehicles on public roadways. Florida is one of four states with the legislation in place currently. The link is provided: http://www.flsenate.gov/Session/Bill/2012/1207#1207/?Tab=BillText&_suid=142290970304307331315591398417

8. Information Sharing:

a. Are the resources, communications and coordination from FHWA sufficient at this time?

Vermont	Yes.
Rhode Island	Yes, but they are at a basic level.
New Hampshire	There are currently no department officials who are looking at this topic in NH.
Connecticut	Yes.
New York	No.
New Jersey	At this time, yes. In the event the proposal is approved by the USDOT to continue to full concept development and concept of operations, I think more direct communication and coordination will need to take place.
Pennsylvania	Work needs to done to the affiliated test bed program. The memorandum of agreement is written in such a way that it is difficult for DOTs to agree to the stipulations.
Delaware	This is an area that needs further discussion, it appears that there has been very limited or direct (one-on-one) information exchange with state transportation agencies. Appears FHWA is listing pilot projects without an integrated plan; more information from FHWA is required.
Maryland	The information being provided by the FHWA is substantial, and although there are always new subjects to address, it does seem to be sufficient at this time. The biggest questions, which will admittedly take time to address, are related to liability issues.
Virginia	VDOT has participated in the webinars hosted by FHWA regarding various elements of the Pilot Deployment program. Throughout those webinars, references were made to data available to members of the Affiliated Test Beds. VDOT does not currently have access to any of the data or resources available through the Affiliated Test Bed agreement. VDOT has not signed the Agreement as the Office of the Attorney General had some concerns regarding specific terms in the Agreement. We believe this information should be available to all.
North Carolina	I would like info on a more regular basis, maybe quarterly. If these are happening I am not receiving them.
South Carolina	Yes.
Georgia	We found the FHWA Connected Vehicle online seminars to be helpful. Also, the literature on the Connected Vehicle safety pilot website was helpful.
Florida	Yes.

b. Are there Connected/Autonomous Vehicles topic areas where an informational webcast would be helpful?

Vermont	Yes specifically on infrastructure needed to support Connected/Autonomous Vehicles.
Rhode Island	Yes, future interaction of the vehicles among themselves as well as with in place infrastructure.
Connecticut	ConnDOT will be participating in the February 19th AASHTO webinar
New York	Possibly for others - although there are plenty of existing resources and ongoing webcasts by USDOT.
New Jersey	Yes. Physical deployment of roadside equipment and how it is integrated into existing infrastructure such as traffic signal controller cabinets, DMS controller cabinets, etc.
Pennsylvania	Yes…you can never have enough information. This technology is constantly evolving and it is difficult to keep ahead of everything.
Delaware	There have been numerous FHWA webcasts open to everyone, one or more dedicated information sessions to the I95 Corridor Coalition membership would be helpful. There has been limited information on the vehicle to infrastructure program.
Maryland	Liability Issues, Managing Big Data, Cyber Security and Resiliency, Roles of Public vs. Private Sector, Driver Distraction, Long Range Planning Implications, Behavioral Changes, Geographic and Demographic Impacts (residential, business and commercial).
Virginia	USDOT provides webinars on relevant topics.
Georgia	We found the security and data management webcast helpful.
Florida	Perhaps.

9. Role for the I-95 Corridor Coalition:

a. The I-95 Corridor Coalition serves as a forum for information sharing and for project coordination, and can assist with connecting agencies, sharing best practices, developing multistate proposals, etc. Please indicate where the Coalition might help agencies become involved with or enhance participation in Connected/Autonomous Vehicles programs.

Vermont	Assist Tri-State with their proposal.
Rhode Island	It would be helpful to have a peer exchange including states that have successfully applied this new technology in their projects.
New Hampshire	Show the Department how this will be of value to them in the future.
Connecticut	No suggestions at this time.
New York	The Coalition has funded the CVII Program which was one of the leading efforts in developing, testing and demonstrating heavy vehicle based 5.9 GHz DSRC connected vehicle technology.
New Jersey	The I-95 CC would benefit agencies by pulling together lessons learned from the disparate pilot deployments and disseminating the information to other agencies. For example, there is an ongoing issue with proprietary rights to the communication protocol between roadside units and on-board equipment. Agencies involved in some pilot deployments are in lawsuits with a 3rd party vendor who owns the communication between the devices. NJDOT has learned this through listening in on conference calls held by VDOT and UVA. The I-95 CC could learn about issues such as this and let other agencies know.
Pennsylvania	The I-95 Corridor Coalition should be a key partner in the proposed Vehicle-to-Infrastructure Deployment Coalition. AASHTO is the lead on that initiative.
Delaware	As indicated above in section 8, the I-95 Corridor Coalition could help facilitate information between FHWA and the member organizations.
Maryland	• As with other similar national initiatives in the past (e.g. electronic tolling, interstate freight management, travelers information services, regional incident management, etc.) the I-95 Corridor Coalition serves a vital role in developing guidance, facilitating communication and fostering consistency/interoperability among regionally deployed systems. • There is a need for research in the area of enhanced performance measurement and management in a CV/AV environment. While third party probe data has become critical to operations and planning, the potential for truly "Big Data" resulting from CV/AV applications will enable enhanced performance-based (economic, mobility, safety, environmental, etc.) system management, decision making, and resource allocation at a relatively low cost. AASHTO is funding research through NCHRP 20-102 at $1M per year for specific CV/AV research problems identified in a CV/AV roadmap that was developed and recently published under a separate NCHRP project. The Coalition could play a role in facilitating joint collaboration/coordination on research proposals across state lines on projects that require more than a parochial perspective. • One of SHA's research partners, Morgan State University, a historically black college or university located in Baltimore, is a member of the Connected Vehicle/Infrastructure University Transportation Center (CVI-UTC). The CVI-UTC is a consortium of universities led by Virginia Tech, focused on federally funded connected vehicle research. There may be an opportunity for the region to work in partnership with the Coalition and the CVI-UTC to develop guidance and/or pilot connected vehicle technologies along the I-95 Corridor.
Virginia	The Coalition could develop and share a summary of activities in member states that could be used to identify opportunities for collaboration as each state's program moves forward.
North Carolina	Not sure. Will advise as this unfolds.
South Carolina	Provide us with links to helpful resources as well as DOT contacts from other states relevant to this technology.
Georgia	Early stage development practices, it was a cumbersome process in starting a Connected Vehicle test bed on a blank slate. It would have been nice to have any documentation or assistance in developing an idea of what could be sought after or what has already been done. With this guidance it would allow more agencies the possibility to becoming more involved. In terms of enhancement, updates on manufactures for equipment (DSRC OBU, RSU, etc) would be helpful. Also, aid in the development of forming partnerships would be extremely helpful. This is perhaps the largest aid an organization like the I-95 Coalition could provide.

10. Other Comments:

Vermont	Push for more funding to assist states lacking infrastructure to implement connected/autonomous vehicle programs from US DOT.
New York	• The documentation of the CVII Program resides on the I-95 Corridor Coalition website. • States that are serious about this technology are likely already engaged in the national forums, such as the AASHTO and PFS connected vehicle groups, and they will be responding to the pending funding opportunity. Unless partnerships are already in place, it may be difficult to develop new partnerships in time to respond to the RFP.
Pennsylvania	The key to connected and automated technology is interoperability. There is a lot of research and work to be done. It is best that I-95 does not conduct that research in a bubble. The best approach is to keep AASHTO abreast of all activities. I recommend that you contact Jim Wright.