

VTRANS

VIRGINIA'S
TRANSPORTATION PLAN

Mid Term Needs
Assessment Regional
Workshop Summary
Richmond Area
August 14, 2019



Office of Intermodal Planning and Investment

1221 E. Broad Street

Richmond, Virginia 23219

FINAL September 23, 2019

Prepared for OIPI in support of VTrans, Virginia's Statewide
Multimodal Transportation Plan

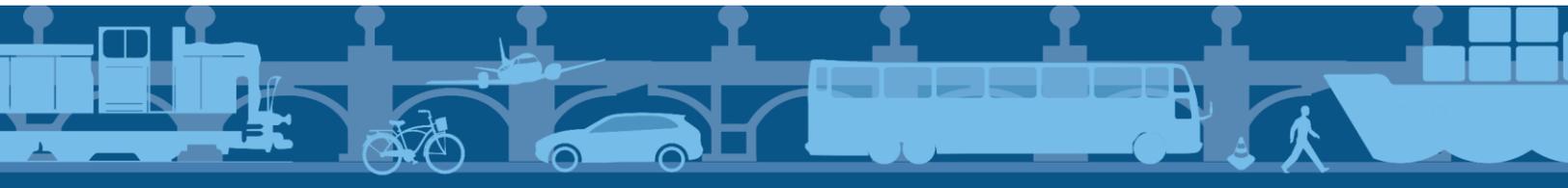
Contract Number 47082, Task Two: Agency Involvement

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1 INTRODUCTION

This report summarizes the input from a workshop conducted by the Virginia Office of Intermodal Planning and Investment (OIP) with representatives of local, regional, and state agencies that support transportation planning for the Richmond area. The purpose of the meeting was to elicit input on the analysis methods (specifically, key performance measures) and the regional results of initial analyses conducted to identify statewide transportation needs for the coming seven to ten years.

2 MEETING LOCATION AND PARTICIPANTS

The workshop was conducted in the Marriott Short Pump in Richmond, Virginia, from 10:00 a.m. to 2:00 p.m. Table 1 provides a list of participants.

Table 1: Workshop Participants and Invited Representatives

Name	Agency	Title
Regional and Local Representatives		
Barb Smith	Chesterfield County	Program Manager
Brigitte Tanner Carter	RideFinders	Account Executive
Chessa Faulkner	Chesterfield County	Senior Engineer
Chet Parsons	Richmond Regional TPO	Transportation Director
Dustin Rinehart	Port of Virginia	State and Local Government Affairs
Joe Vidunas	Hanover County	Transportation Engineer
Kelli Le Duc	New Kent County	Planning Director
Kim Hines	City of Richmond Public Works	Program Manager
Myles Busching	Richmond Regional TPO	Planner
Nora Amos	Town of Ashland	Director of Planning and Community Development

Sulabh Aryal	Richmond Regional TPO	Transportation Planning Manager
Todd Eure	Henrico County	Assistant Director of Public Works
Todd Kilduff	Goochland County	Deputy County Administrator
Von Tisdale	RideFinders	Executive Director
Additional Regional and Local Representatives Invited but Unable to Attend		
John Rutledge	Capital Region Airport Commission	
Michelle Johnson	Charles City County	
Bret Schardein & Andrew Pompei	Powhatan County	
Theresa Simmons	RMTA	
State Agency Staff		
Desmond Smallwood	VDOT - Richmond District	Planning Specialist
Emily Stock	DRPT	Manager of Rail Planning
Jasmine Amanin	VDOT - Richmond District	Planning Supervisor
Patrice Strachan	DRPT	Transit Programs Manager
Sanhita Lahiri	VDOT Central Office Traffic Engineering Division	Data and System Analysis Manager
Taylor Jenkins	DRPT	Transit Intern
Ronique Day	OIPI	Deputy Director
Jitender Ramchandani	OIPI	Transportation Planning Program Manager
Chris Wichman	OIPI	Transportation Planner
Katie Schwing	OIPI	Transportation Planner
Margie Ray	OIPI	Program Manager
Consultant Facilitators and Scribes		
Taylor Gestwick	ICF	Facilitator

Michael Stafford	CDM Smith	Scribe
Will Cockrell	EPR-PC	Scribe

3 AGENDA AND MATERIALS

Following a plenary presentation and discussion of the VTrans Needs assessment method and performance measures, the participants broke into small groups to review the information developed for the region. They regrouped at the end of the meeting to share their findings and to hear about the process and schedule for developing, reviewing, and finalizing the VTrans mid term needs assessment. Upon sign-in, each participant received a packet with the following materials, all of which are available for download from VTrans website.¹

- Agenda
- Plenary presentation slides
- VTrans Summer 2019 Newsletter
- VTrans Mid-Term Needs Frequently Asked Questions (FAQ)
- Comment Form
- Regional maps, charts, and/or tables of data developed for the region. Detailed descriptions of each measure and analysis method are included in the plenary presentation slides posted to the VTrans website.

4 SYNTHESIS OF COMMENTS

The following section provides a summary of comments about each performance measure, compiled from discussions at the workshop. The appendix includes transcripts of the sessions and sheets, including photos of the marked-up maps developed by each breakout group. After the participants have reviewed and vetted the draft report, OIPI will synthesize the comments that were associated with the maps and upload them to the online InteractVTrans map.² In addition to serving as a repository for regional workshop comments, InteractVTrans provides a publicly available resource for ongoing input from local stakeholders and the public.

OIPI will consider each comment during the process of refining the needs assessment methodology and developing the draft needs and will respond directly to specific questions posed by stakeholder. As noted in the plenary presentation, OIPI will present the initial list of needs to the Commonwealth Transportation Board in October 2019, and the final needs assessment with a request for Board action in December 2019.

¹ VTrans website: www.vtrans.org Location of workshop summaries: <http://vtrans.org/get-involved/online-meetings/VTrans-Mid-Term-Needs-Regional-Workshops>

² InteractVTrans: www.vtrans.org/mid-term-planning/InteractVTrans

Table 2 Synthesis of Comments

	Comment
Congestion: Percent Person Miles Traveled in Excessively Congested Conditions (PECC)	
1.	Hourly profiles of congestion would help identify corridors that experience significant congestion during regular intervals, as opposed to the current methodology which only identifies areas of significant congestion for the all-day 14-hour period.
2.	A stricter definition (such as percent of time spent travelling less than 20 mph) would better reflect the regional needs - issue is intensity of congestion rather than duration.
3.	Congestion measures need a component of seasonality, in order to capture additional Summer congestion associated with beach and weekend volume increases.
4.	The 90% threshold map most accurately picks up Needs in the Richmond region, however, there are many corridors that should light up but are not appearing in the data.
5.	Congestion measures need a component of directionality, in order to accurately visualize peak commute congestion.
6.	The definition of congestion needs to be established at regional rather than Statewide levels, in order to better identify regional needs.
7.	OIPI should consider adding “time of day” and “day of week” components to the congestion mapping methodology to capture unconventional peak periods like the “lunch hour rush” and weekend travel.
8.	How does this measure and other congestion measures indicate the economic impacts that congestion has on freight?
Congestion: Travel Time Index (TTI)	
9.	This measure did not pick up congestion on significant roadways, such as 288 and 360.
10.	Signalization - i.e. control delay - seems to be a factor in areas that light up under this measure.
11.	The use of segment lengths and TMCs limits the ability of this metric to illustrate systemic reliability on a corridor level. Segment lengths in particular may identify isolated issues, but will not contribute to a broader picture of delay for a particular corridor.
12.	The unreliable delay metric is not as useful to the Richmond region, because everything is lighting up as an acute problem. The actual problem is that the system is “reliably unreliable.”

	Comment
Reliability: Buffer Time Index (BTI)	
13.	Activity around the Richmond Marine Terminal will lead to an increase in what this metric will measure in the future.
14.	Users of the transportation system are aware of the buffer time needed to add to their commutes because the system is consistently unreliable.
15.	There needs to be a greater correlation between the Congestion measures and the Reliability measures. As an apparent conflict, Parham Rd is consistently unreliable and congested. However, Parham Rd lights up on the reliability measures and not the congestion measures. This suggests a need for a holistic look at what the Congestion and Reliability measures are saying.
Passenger Rail: Amtrak Station On-Time Performance	
16.	Congestion measures on the highway network can also map needs for rail and transit service, since roadway congestion is influenced by the availability of rail service and vice versa.
17.	Regular rail commuters use Amtrak's Staples Mill station over the Main Street station because the Staples Mill station is more reliable.
18.	A lot of the rail delays are systemic, caused by something external to the region. Measuring the reliability at individual stations is not as telling as the systemic story.
19.	The lack of reliability on rail is a deciding factor for many commuters in choosing a different mode. If rail could be more reliable, it would be a viable option for many commuters.
20.	Resource allocation can be focused on both rail/Amtrak improvements to increase the availability of service while also reducing the cost to the user.
Accessibility: Transit Access Deficit to Activity Centers	
21.	Park and Ride lots should be designated as Activity Centers.
22.	The 1-mile walkshed for accessibility may be too small.
23.	The purpose of this metric (demonstrating where transit access could be competitive with highway access) needs to be more clearly defined to the user. There are several Activity Centers that have good transit access but appear to have a deficit because of the abundance of highway access.
24.	Consider using a measure that includes transit capacity and potential capacity to measure accessibility.
25.	Is a low need (small relative transit deficit) still indicative of a need worth addressing?

	Comment
26.	Would a transit project servicing the area around the activity center apply towards addressing the need at that activity center?
27.	The measure should focus on the needs of the corridor surrounding the Activity Center, not just the accessibility to the Activity Center itself.
Travel Options: Disadvantaged Population Beyond ¼ Mile Access to Fixed Route Transit	
28.	This measure should include pedestrian and bicycle viability in addition to transit viability, and there should be an emphasis on pedestrian and bicycle viability.
29.	This metric could also consider zero- and single-vehicle households in its definition for disadvantaged. These populations are also in need of transit, but may not necessarily be reflected in the current criteria.
Safety: Vehicle Crashes	
30.	The emphasis on fatality accidents in this measure is not helpful, since fatalities (and injuries) are mostly randomly distributed instead of indicative of a systemic problem.
31.	Identifying clusters of fatal and injury accidents (instead of individual occurrences) would better reveal areas of systemic failure.
32.	If OIPI is shifting this metric to utilize Potential Safety Improvements (PSIs), then they need to take steps to ensure that the results for rural counties are not “watered down” due to lower throughput.
33.	OIPI can look into where crashes are occurring year-over-year to identify areas where crash rates are increasing and decreasing. The current methodology only shows where crashes are occurring but does not consider trends.
34.	There is a need to differentiate pedestrian and bicycle safety needs from general crash data.
35.	Any metric considering pedestrian and bicycle safety should identify potential risks, not just look at the number of crashes.
36.	Will OIPI coordinate with the SMART SCALE team regarding safety scoring, to make sure this metric accurately reflects areas likely to be selected for safety improvements?
Economic Development: Urban Development Areas and VEDP Business Ready Sites	
37.	When considering VDEP locations, the SMART SCALE criteria should start at Tier 3 locations, but could go as low as Tier 2.
38.	There is a fundamental “chicken and egg” problem in using VDEP sites in order to get SMART SCALE funding for transportation to a site, however there is no public/private interest in a site until there is transportation access.

5 APPENDIX: COMMENTS FROM BREAKOUT GROUPS

The following section reflects input from the two breakout discussion groups. Participants were asked to reflect broadly upon the issues addressed by the performance measures and other data associated with the topics of congestion, reliability, passenger rail on-time performance, accessibility to activity centers, travel options for disadvantaged populations, safety, and economic development. They were also asked for input on the regional applicability of each measure.

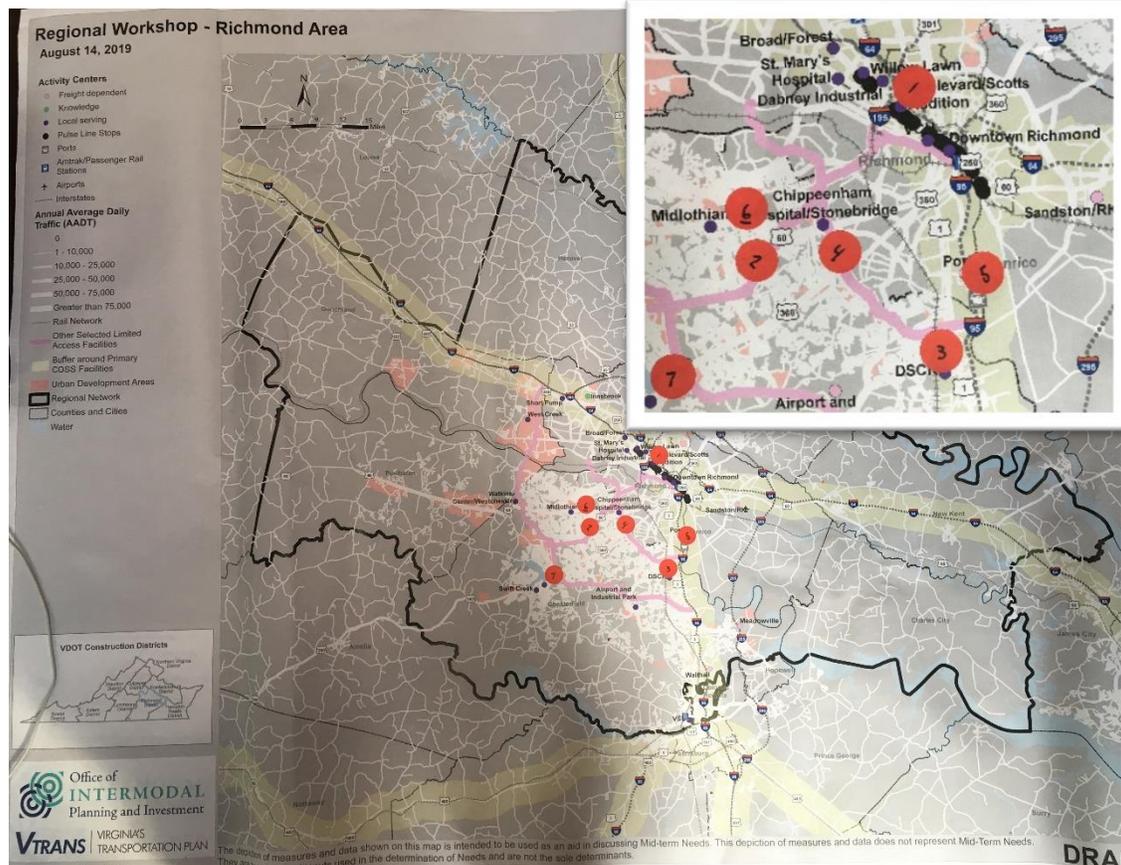


Facilitators and scribes assigned to each group recorded the input by writing notes on a flip chart and on a laptop. For comments with geographic specificity, facilitators and/ or group members placed numbered stick-on dots onto a poster-sized base map and noted the meaning of the numbered dot on the flip chart. The meaning of the numbered dots is noted in the summaries below; since the summaries are organized by topic, some of the transcriptions appear out of numerical order.

In addition to making comments during the breakout session, participants were invited to jot down notes on a Comment Form in their packet, and return it to a facilitator at the end of the meeting, or to fill it out later and email their responses to OIPI staff. No written comment forms were provided to facilitators at the workshop. Some participants planned to send comments to OIPI staff after the meeting; input from these post-meeting messages may not be captured in this meeting summary, but OIPI is considering all continued input during the development of the needs assessment.

GROUP 1 COMMENTS

Breakout Group 1 Marked Up Map



Congestion

- **Sticker #1** - Corridor where I-64 and I-95 come together - surprising that this area did not light up on the 60% threshold map.
- **Sticker #7** - Congestion on 288 and 360 is not apparent in the current measures.
- In general, there is a need to consider peak hour or worst case scenarios in the congestion maps. Hourly profiles of congestion would be more illustrative than the 6am-8pm period covered currently.
- There needs to be a stricter definition of congestion such as percent of time spent travelling at or below 20 mph, which is a larger issue in the Richmond Region.
- Tolerance of congestion is different in Richmond than in other areas such as NOVA.
- Participants were interested to see the variations in congestion on I-95 in the area of the Richmond Marine Terminal on days when barges unload.
- Participants questioned how freight factored into the congestion measures. Specifically, they wanted to know how congestion levels impacted freight movement on highways

- Participants suggested including ramps onto and off of the interstate in the congestion maps, since the ramps are where much of the congestion occurs.

Reliability

- **Sticker #2** - the TTI measure did not reflect the expectations of the practitioners in the room. The 360-60 conjunction should light up.
- **Sticker #3** - the reliability results for the route in between US-10 and VA-288 did not match participants' expectations.
- **Sticker #4** - surprised that the Chippenham corridor was not showing up in UD.
- **Sticker #6** - the BTI measure could increase over time, especially around areas that access the port.
- The TTI measure did not pick up congestion on 288 and 360.
- Generally, participants thought that segment lengths and use of TMCs limits the view of impacts on true corridor lengths. This raised the question of whether hotspots are useful for identifying Statewide needs.
 - On a similar note, participants raised the question of whether or not very small segments would be useful for identifying needs.
 - The questions stems from trying to clarify the level of measurement appropriate for broadly identified VTrans 2040 needs versus the level appropriate for micro-level analyses.
- The 2040 VTrans CoSS needs were too specific. For example, the MP to MP needs. Participants preferred the broader natures of regional needs.
- Participants voiced concerns over the performance measures and stated needs remaining static over the life of the next VTrans plan, when actual needs would be dynamic. For example, the volume in the port will fluctuate, and the response will need to be adaptable.

Safety

- Participants found the emphasis on fatality accidents to be unhelpful. The locations lighting up on the maps were not necessarily areas where intervention by decision-makers could help.
- When considering including PSI as a factor in this measure, participants voiced a concern that the analyses for rural counties would be watered down due to lower traffic volumes.

Passenger Rail On-Time Performance

- **Sticker #5** - The Richmond to Raleigh route is also seeing increased volume on rail due to activity at the port. CSX through the Richmond Region is critical to this increase in volumes, but participants raised a concern of the impact on passenger rail reliability.
- Rail needs to be a viable alternative to I-95 travel on weekends.

- Problem dollars need to be focused on rail/Amtrak improvements to increase the availability of service while also reducing the cost to the user.
- The route between DC and Richmond is two-track and shared with CSX, which can lead to issues.
 - DRPT is focusing on improving the reliability on the corridor, with solutions like a potential third track in certain locations, and is highlighting the importance of the Long Bridge project in northern VA to statewide rail reliability.
- Congestion measures on the highway network can also map needs for rail and transit service, since roadway congestion is influenced by the availability of rail service and vice versa.

Accessibility to Activity Centers

- Results of analysis for US-60 in Chesterfield makes sense regarding transit.
- On the map, Park and Ride lots should be represented as Activity Centers.
- Participants questioned whether one (1) mile was too short of a distance for a walkshed when considering non-motorized traffic.
- Participants questioned the medium transit-deficit level at Willow Lawn versus the low deficit at Short Pump. After discussion, they determined it was reflective of worker density in these areas, but that narrative was not immediately clear from how the data is presented for this metric.
 - Participants suggested looking at the capacity of available services as a measure, but noted that it would not be able to show the competitiveness of the transit.

Economic Development

- When considering VEDP locations, participants suggested including Tier 3 locations as meeting SMART SCALE criteria. One justification was that rural locations are highly unlikely to have utilities in place.

Travel Options for Disadvantaged Populations

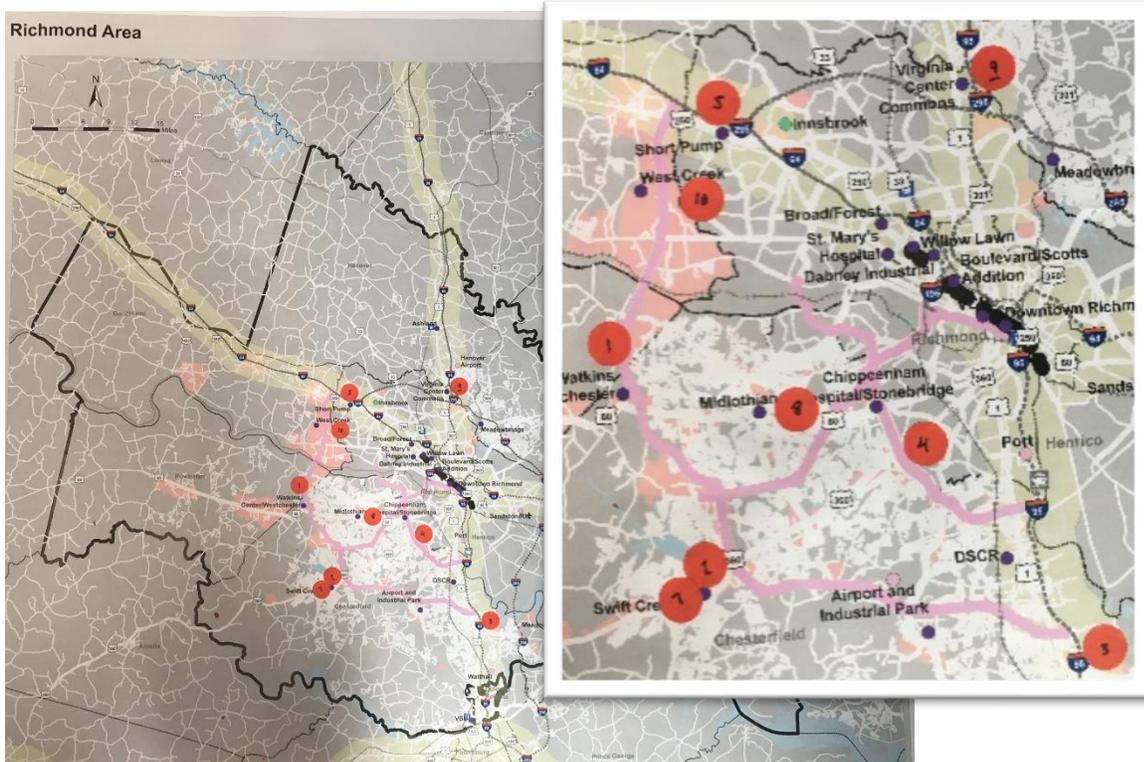
- This measure should include pedestrian and bicycle viability in addition to transit viability. There should be an emphasis on walking and biking for these groups.
 - Particular to the region, the Jefferson Davis corridor is a prime area for investing in pedestrian and bicycle infrastructure to service disadvantaged populations.

GROUP 2 COMMENTS

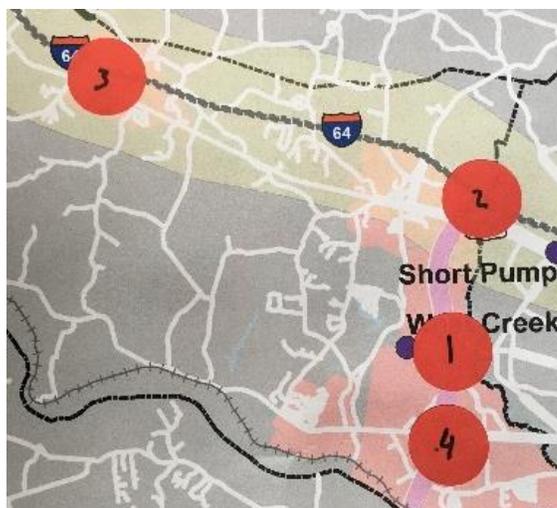
Most of Group 2's comments were specific to the individual metric in question. However, one persistent concern was the availability of data for the Chippenham corridor. Participants suggested that OIPI double check that the data exists and is accurate for all performance measures.

NOTE - Group 2 marked up two maps simultaneously. Relevant comments in the writeup are labeled to reference which of the two maps to which they refer.

Breakout Group 2 Marked Up Map (1 of 2)



Breakout Group 2 Marked Up Map (2 of 2)



Congestion

- **#1 Map 1**- the Highway 150 corridor is not showing anything when it should be. This could be caused by a lack of data.
- **#2 Map 1**- it is an issue that the 360/288 corridor does not light up until the 90% threshold map, because this area is congested most of the time
- **#3 Map 1** - the I-95 corridor around Chester frequently experiences peak congestion.
- **#4 Map 1**- the Powhite/Chippenham intersection should light up on the congestion analysis (Chippenham in general should be lighting up, but especially at this intersection).
- Other congested segments that should light up in congestion analyses include the following:
 - **#1 Map 2:** Tuckahoe Creek parkway/288
 - **#2 Map 2:** Broad Street/288 interchange
 - **#3 Map 2:** Oilville Road/64 Interchange
 - **#4 Map 2:** Patterson Avenue/288 interchange
- Two factors are important to differentiate when calculating congestion: (1) Time of Day, and (2) Day of Week. Some segments are not congested during normal AM/PM peak hours, but experience high volumes on weekends and during the “lunch rush.” The current methodology for identifying congestion does not capture these impacts. Two example locations include:
 - **#5 Map 1** - Broad Street at Short Pump
 - **#6 Map 1** - other weekend/ weekday congestion [e.g. I-95 and 295 corridors in summer season]³
- **#7 Map 1** - note congestion around Routes 360 and 288.
- The 90% Threshold map is the most reflective of the situation in the Richmond Region.
- There needs to be an element of directionality to the congestion measures; participants suggested using peak periods in the data analysis, especially regarding:
 - I-95 S
 - I-64 between I-295 and Highway 288 in both morning and afternoon peak periods
 - I-64 between I-95 and I-295

³ Note: The #6 sticker does not appear on Map 1 but is listed in the flip chart notes; it may have fallen off or been displaced when materials were collected after the workshop.

- The Highway 288 corridor through Goochland has a high potential for growth; anticipated congestion from that growth should be considered as a need.
- There was a general preference for setting thresholds for congestion at the regional level to better identify regional needs. The concern was that a blanket statewide threshold would be “washed out” by high levels of congestion in areas like Northern Virginia.
- There could be an element of seasonality added to the congestion data. Beach traffic in particular would light up the I-95 and I-295 corridors in the summer season.

Reliability

- Signalization could be a factor in the many blue areas that pop up on the TTI maps. People have to add additional time into their travel expectations because they are frequently stopped through the corridor.
- **#8 Map 1:** Parham Rd south of I-64 should light up on the TTI measure but currently does not.
- **#9 Map 1:** I-95 South ahead of I-295 exit is lighting up due to confusion over signage, especially among drivers that are unfamiliar with the road layout. The signs tell drivers to move into the leftmost lanes long before the actual exit; this slows everyone down.
- The Bryant Park interchange lights up on the TTI metric only in the northbound direction, but it should light up in the southbound direction as well.
- I-195 North has consistent afternoon (PM peak) delay in the area prior to the I-95/I-64 corridor.
- The unreliable delay metric is not as useful to the Richmond region, because everything is lighting up as an acute problem. Similarly, the BTI metric is less meaningful, because users of the transportation system are aware of the buffer time needed to add to their commutes because the system is consistently unreliable.
- Parham Rd in the area of US-1 / I-95 is reliably bad - it lights up under the reliability metrics, but it does not meet the thresholds for congestion. This suggested to participants that there needed to be a greater correspondence between the two metrics, because Parham Rd in this corridor is particularly congested.

Safety

- Participants suggested identifying clusters of fatal and injury accidents rather than looking at individual occurrences. The clusters would be able to reveal a systemic issue, rather than highlighting events which can be caused for a variety of reasons. If OIPI considered using PSIs in this metric as well, this methodology would still be applicable.
 - One suggestion was to overlay the 1-year, 3-year, and 5-year crashes to identify trends in where crashes are occurring. This could reveal systemic

failures that might otherwise be missed in just looking at 5 years' worth of crash data.

- Highway 250 and Broad Street in Short Pump has a high crash rate that is not captured in the current maps.
- OIPI should find a way of differentiating pedestrian and bicycle safety needs from the general crash data. Although these might occur in lower numbers, they are still crucial, especially for other metrics like the disadvantaged populations.
 - Any metric considering pedestrian and bicycle safety should identify potential risks, not just look at the number of crashes.
- A key takeaway from this discussion was that OIPI should discuss safety scoring and coordination with the SMART SCALE team.

Passenger Rail On-Time Performance

- Regular rail commuters use Amtrak's Staple Mill station over the Main Street station because the Staple Mill station is more reliable.
- A lot of the rail delays are systemic, caused by something external to the region. Measuring the reliability at individual stations is not as telling as the systemic story.
- The lack of reliability on rail is a deciding factor for many commuters in choosing a different mode. If rail could be more reliable, it would be a viable option for many commuters.

Accessibility to Activity Centers

- Willow Lawn is a large dot in the transit-deficit metric, indicating high potential for transit, but it already has good transit connections for the region.
 - This metric may be indicative of the lack of a regional transit network.
- Participants raised concerns about where the threshold for SMART SCALE funding would lie in relation to the size of the dots on the map. In particular, there were two questions:
 - Is a low need (small relative transit deficit) still indicative of need worth addressing?
 - Would a transit project servicing the area around the activity center apply towards addressing the need at that activity center?
- In general, the conversation steered towards the conclusion that local or regional transit priorities are not reflected by the measure IF those priorities are not identified by the activity center. In other words, the region should not just focus on the activity center, but on the full needs of the corridor surrounding it.
- The end suggestion of the participants was to try to not limit the analysis of needs to the areas around activity centers, but instead consider the impacts transit projects in the surrounding areas might have towards increasing accessibility.

Economic Development

- New UDAs include these four locations in Henrico County:
 - Libbie Mill
 - Regency Area
 - Westwood Area in Staples Mill (at I-64 and West Broad Street)
 - Willow Lawn
- During the discussion of VEDP sites, participants identified a “chicken and egg” problem. In order to get SMART SCALE funding, an agency needs to establish transportation needs for a site. However, in order to identify transportation needs, industries or individuals need to be interested in a site, which will only happen when there is viable transportation access. If no one is interested, there are no transportation needs; without access, no one is interested.
 - Participants suggested starting the criteria for SMART SCALE funding at Tier 2 sites, when there is an idea for what can be developed on the site but before specific site plans are created.

Travel Options for Disadvantaged Populations

- Participants preferred the 80% threshold.
- One factor that is not considered in this metric that should potentially be considered is the number of zero- and single-vehicle households. These populations are in need of transit, but may not necessarily be reflected in the criteria that selects disadvantaged populations.
 - There are some low-income areas (South of Downtown; East of Downtown) that are not reflected through this metric.
- **Sticker #10** - West of Henrico is a retirement community with private shuttles. This area shows up as a disadvantaged area with high transit viability, but there is no need for a transit project in this area. This highlights how the metric may not necessarily be reflective of the needs it is trying to address.