



CHANGES TO MID-TERM NEEDS MEASURES METHODOLOGY POST REGIONAL WORKSHOPS

ID	Measure	Method or Threshold Prior to Workshops	Comment Received	Source (Which Regional Workshop Comment Received)	Change to Measure following Workshops
1	Percent of Person-Miles Traveled in Excessively Congested Conditions (PECC)	Option for PECC Thresholds—60%, 75%, and 90% of Posted Speed Limited	Support for speed threshold of 75% of posted speed limited	Central Shenandoah	Draft VTrans Needs are based on speed threshold of 75% of posted speed limited.
2		Time period—weekday 6 am to 8 pm	Ensure that weekend travel is captured	Bristol, Fredericksburg, Hampton Roads, Richmond	Threshold is based on weighted average of weekday and weekend.
3		Time period—weekday 6 am to 8 pm	Ensure that the measure captures seasonality	Roanoke Valley, Hampton Roads, Bristol	The method takes into account reasonable variations. Develop future method to reflect large variations between seasonal and non-seasonal traffic and their impact on the need identification method.
4		Applied to Interstates and Select Limited Access Facilities (LAF)	Request to clarify criteria for selecting facilities as limited-access	Lynchburg, Northern Virginia, Charlottesville-Culpeper	Updated LAF list to include more segments (used a logic that allowed shorter segments of less than 10 miles if they connected to another LAF).
5	Travel Time Index (TTI)	TTI threshold of 1.5	TTI threshold of 1.5 is too high	New River Valley	TTI 1.5 or above for 1+ hours OR TTI 1.3 or above for 3+ hours.
6		Values were based on weekday average	Weekday average does not reflect peak period conditions	Richmond, Roanoke	(1) Modified period of analysis to 6 am to 8 pm. (2) Modified measure to reflect number of hours of congestion. The revised method reflects peak and non-peak conditions.
7		TTI numbers were based on weekday average	Weather-related incidents and spot issues are major contributors to unreliability	Bristol	Please see change made to ID #12 below.
8		Values were based on weekday average	Request to consider weekend travel	Roanoke	Threshold is based on weighted average of weekday and weekend.
9	Unreliable Delay (UD)	Cumulative number of hours that experience unreliable delay during weekday 6 am and 8 pm	The method does not capture peak hour or peak period delay	Northern Virginia, Winchester-Frederick	New measure, Level of Travel Time Reliability (LOTTR), reflects unreliable conditions for one or more hours. It allows the measure to capture peak-hour only traffic.
10		Time period—weekday 6 am to 8 pm	Ensure that weekend travel is captured	Fredericksburg	Threshold is based on weighted average of weekday and weekend.
11		Annual average was calculated for each hour	Consider the impacts of seasonal traffic patterns on reliability	Danville	We confirmed that the method takes into account reasonable variations. We will need more time to develop a method to reflect large variations between seasonal and non-seasonal traffic and their impact on the need identification method.
12			The method does not capture non-recurring congestion or reliability issues	Crater-Southside, Roanoke, and others	We confirmed that the method takes into account non-recurring congestion. We will need more time to develop a method to capture large variations between recurring and non-recurring congestion and their impact on the need identification method.
13	Buffer Time Index (BTI)	The method conveys time buffer required to be on time 95% of time	The method is not fully reflective of unreliable conditions in different areas	Fredericksburg	New measure, LOTTR, reflects unreliable conditions for one or more hours.
14	Passenger and Intercity Rail On-Time Performance	The measure reflects on-time performance against agency-adopted thresholds.	Consider ridership to ensure that needs are based on impacts	Charlottesville-Culpeper	We are currently limited by data availability, but would like to work with Amtrak and VRE to conduct this analysis in the future.

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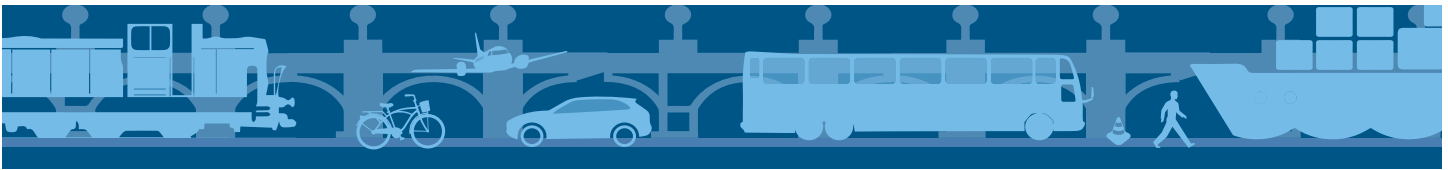




ID	Measure	Method or Threshold Prior to Workshops	Comment Received	Source (Which Regional Workshop Comment Received)	Change to Measure following Workshops
15	Competitiveness of Transit Access to Activity Center for Workers	List of existing Activity Centers	Requests to add Activity Centers	Lynchburg, Hampton Roads, others	Added several additional Activity Centers.
16		List of existing Activity Centers	Request to add airports with commercial services and regional hospitals	Winchester-Frederick, Lynchburg	Added airports with commercial services and regional hospitals.
17		Location of existing Activity Centers	Concern that the locations shown on the map might not be accurate or precise	Hampton Roads	Reanalyzed and corrected Activity Center locations.
18		Activity Center specific transit access deficit was shown in three different colors	Recommendation to portray and describe this measure differently	Roanoke	The name of this measure was changed to "Competitiveness of Transit Access to Activity Centers for Workers."
19		Access deficit was based on the total number	Recommendation to review the method – different activity centers need different number of workers	Lynchburg, Winchester-Frederick	The method was modified to normalize transit access deficit by the total employment at Activity Center.
20			Recommendation to review data as there were some unexpected results	Richmond	The analysis was redone to ensure greater accuracy.
21		Access to the nearest bus stop is limited to walk-only	Concern that the method does not reflect trip-chaining where a user might rely on micro transit or access to park and ride facilities	Hampton Roads	Additional work is required to develop tools and methods to reflect trip chains involving park and ride facilities, micro transit and other emerging mobility options.
22	Non-motorized Access to Activity Centers for Workers	Walk and bike buffer around Activity Centers	Request to include non-motorized access to transit	Northern Virginia	Non-motorized access to fixed-guideway and fixed-route transit service was included.
23	Transit Access for Equity Emphasis Areas	Disadvantaged block groups were identified where any one of the three conditions were met: (1) age; (2) income; and, (3) disability status	The term "disadvantaged" does not accurately convey the measure results	Northern Virginia	The measure name was changed to – "Transit Access for Equity Emphasis Areas."
24		Bus stop within 1/4 mile from the Block Group Centroid	The method, block group centroid, does not accurately capture transit access for irregular shaped block groups	Northern Virginia	The method for identification of such population was changed - half of the block group has to be outside the ¼-mile access to bus stop.
25		Disadvantaged populations based on the following three criteria: (1) age; (2) income; and, (3) disability status	Recommendation to: (1) include minority and Limited English Proficient (LEP) populations; and, (2) review Metropolitan Washington Council of Government's (MWCOG's) method	Northern Virginia	The method was changed to include Minority/Hispanic and LEP populations. It is now more aligned with MWCOG's method.
26		Bus stop within ¼ mile from the Block Group Centroid	Criteria for areas served does not take into account the quality of transit service offered	Fredericksburg	We are currently limited by data availability and consistency, but would like to work with DRPT and transit service providers to develop a method for future work.
27		Disadvantaged block groups were identified where any one of the three conditions were met: (1) age; (2) income; and, (3) disability status	Recommendation to include concentration, not just presence of one criteria	Charlottesville-Culpeper	The method was changed to an index that takes into account the concentration of populations.

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28	Access to Industrial and Economic Development Areas	Consider VTrans Needs for IEDAs with Readiness level Tier 4 or higher	Recommendation to consider Tier 3 and higher	Winchester-Frederick, Hampton Roads, Crater-Southside, and others	Recommendation to include Needs associated with sites Tier 3 and higher.
29			Recommendation to also include Enterprise Zones, Opportunity Zones	Winchester-Frederick, Northern Virginia, Charlottesville-Culpeper	It is a good suggestion that we will consider for future updates.
30		Office-only sites were included based on data provided by Virginia Economic Development Partnership (VEDP)	VEDP sites are useful for industrial development but it could promote sprawl by incentivizing office development in rural areas without services	Winchester-Frederick	Confirmed that VEDP's Business Ready Sites Program should not include office-only sites. VEDP will make the corrections.
31		Method was to provide access to sites with Readiness Level Tier 4 or higher	Suggestion to incorporate proximity to Surface Transportation Assistance Act and National Highway System (NHS) highways systems	Winchester-Frederick	The method has been refined to provide access from the nearest Corridor of Statewide Significance that include NHS routes.
32	No measure	No method	VTrans should include proactive system management related needs	Fredericksburg	Included Needs associated with Capacity Preservation.
34			VTrans should include reliability (on-time performance) for local transit services	Bristol, Central Shenandoah	We did not have a good statewide data source developed for this, but will consider for future updates.
34			VTrans should include needs associated with park-and-ride and other Travel Demand Management	Central Shenandoah, Charlottesville-Culpeper	Included Needs associated with Transportation Demand Management.
35			Consider scooters and emerging mobility options	Charlottesville-Culpeper	Included Needs associated with emerging mobility options.
36	Potential for Safety Improvement	The measure is based on Potential for Safety Improvement (PSI) only	VTrans Safety Needs should include consideration for non-motorized needs that may not get highlighted based on PSI-only method	Bristol, Fredericksburg	Included Needs associated with pedestrian safety (from Pedestrian Safety Action Plan).
37			DUI or crashes that are related to behavioral aspects should be included in the analysis for PSI	Northern Virginia, Charlottesville-Culpeper	It is a good suggestion and we will work towards implementing it. We were unable to complete this for this round of VTrans Mid-term Needs update.
38			Separate safety needs for bicycle crashes should be considered	Winchester-Frederick	It is a good suggestion and, while we are able to include pedestrian safety related considerations, we will need more time to develop needs related to bicycle safety.
39			Do not limit the PSI list to the top 100 locations in each district	Danville	Safety needs will not be limited to the top 100 locations within a construction district.
40			Accidents causing injuries and fatalities should carry more weight	Bristol	In addition to the risk based method or PSI, VTrans Needs will also be based on fatalities and injuries.
41			Consider severe injury similar to fatality due to impact on quality of life	Roanoke	Fatalities and severe (ambulatory) injuries will be grouped together.
42			Identify clusters of fatal and injury crashes	Richmond	Method for Intersection Safety Needs captures crashes clustered within 250 feet of intersections.
43	Urban Development Areas	Locally determined needs shared via an online survey	Request to extend survey completion data	Charlottesville-Culpeper	Deadline to complete the survey was extended to ensure that more localities can provide needs.