VTrans Needs Assessment Overview Webinar – Thursday May 30th 2019
Transcript
Video Recording file can be found at www.VTrans.org

Slide 1: My name is Jitender Ramchandani, I'm with the Office of Intermodal Planning and Investment, or OIPI. Our office is assisting the Commonwealth Transportation Board, or CTB with the update of VTrans, Virginia's transportation plan.

For a quick overview, VTrans is Virginia's statewide multimodal transportation plan that is updated every four years. The CTB kicked-off the current update in October 2018.

The topic today is the VTrans Needs Assessment process. Our intended audience are local representatives who do not attend MPOs meetings, as this webinar will mirror presentations already occurring at MPOs in May and June.

Slide 2: Our goal today is to share more information about the Needs Identification process, including performance measures. We will reintroduce the concept of Activity Centers and Urban Development Areas and explain how they relate to the needs identification.

Our goal is to make sure local and regional entities have time to provide feedback prior to the Needs being drafted.

Slide 3: Before we go through the Needs Assessment process, I would like to highlight some work that has been done in order to provide some context and purpose to our work. One of the VTrans Goals is to help support Economic Competitiveness and Prosperity in the Commonwealth. In order to understand how to do this, we looked at population and employment data around the state.
In general, we know from prior work that...

- The economic model is changing. We have seen that some businesses are choosing locations based on quality of life as a factor in location choice. And that workers in certain industries are showing preference to walkable places to live and work.
- We have seen that different industry clusters have different transportation needs. For example, freight-based industries have different needs than knowledge-based industries such as an education institute.
- And that the transportation choices and modes available can play an important role in attracting future workforce.

Slide 4: To better understand how Virginia is growing and changing, we have worked with the Virginia Transportation Research Council to look into historical and forecasted population and employment trends in the Commonwealth. The next few slides include key demographic trends and projections - each of which impact transportation needs that VTrans will explore.

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One key finding, which you may not find too surprising, is that Population in Virginia is concentrated and becoming more concentrated. Our analysis found that for 2017 population estimates:

- Two of Virginia's nine construction districts, Northern Virginia and Hampton Roads, account for nearly half of the statewide population.
- Additionally, only 10 of Virginia's 134 cities and counties make up one-half of the statewide population.

Slide 5: In terms of growth rates, a similar concentration around the urbanized PDC's emerges:

- As the figure shows, the highest growth rates over 2000 to 2017 time period occurred in Northern and Central Virginia along the I-95, I-64 and I-81 corridors.

Slide 6: Population growth forecasts to 2045 indicate that the concentration trend will continue:

- Virginia's population overall is forecast to grow around 24% between 2017 and 2045
- Four of Virginia's 21 PDCs, clustered along the I-95 Corridor and the eastern portion of the I-64 corridor are expected to account for 83%-85% of this growth.

As you can see, the possibility for population decline is also part of this story. The 2045 population forecast shows a decline in population for some PDCs.

To better understand how transportation can be a part of the solution, we asked VTRC to look what role transportation investment can play as a tool to stem population and job decline. They found that transportation investments have the potential to support population growth and economic development -- but only if other conditions which are also indicated to have influence over growth are present -- for example, other factors such as immigration, economic incentives, school and workforce availability, and competing employment centers in close proximity also affect location choice of people and businesses. In short, transportation investment can be part of the solution -- but may not be the silver bullet.

Slide 7: In addition to population change, we looked at changes in age distribution among the population. Statewide, those over age 65 are expected to grow from 15% of the population in 2017 to 19% of the population in 2045. So in general 1 in 5 Virginians will be 65 or above in the year 2045 if the current projections hold true. As you can see, the relative proportion of aging population to working age population will vary by area, and here on the slide we show two examples.

Related to VTrans, the aging population will present a specific set of challenges and strategies to meet transportation needs of older persons. With this trend in mind, VTrans will explore the transportation implications of an aging population.

Slide 8: Employment growth has also been uneven around the state. This graphic depicts the concentration of jobs, with the y-axis showing number of jobs. This scale primarily shows the statewide number and three larger PDCs, the rest are at the bottom of the chart.

And obviously we forecasting employment forward, there many more assumptions made - but overall the projections seem to indicate an across the board increase in total employment out to 2045.
Slide 9: At this scale, you can now see historical and forecasted employment growth for all other PDCs. The total of employment is an important data point to consider (next slide)
Slide 10: But, more relevant to the analysis for VTrans is to understand what industries or sectors of the economy are growing and how that relates to specific transportation needs.

As you can see in this figure, growth will be uneven statewide amongst employment industries. The four industry sectors with the greatest number of jobs, which together make up about 40% of jobs, are professional and technical services, retail trade, state and local government, and health care and social assistance. These four industry sectors are also expected to have the most significant growth. Others, such as Manufacturing and Farm employment are forecast to decrease toward 2045.

Slide 11: Looking at individual regions, the trends in employment by industry become more meaningful for the VTrans Needs assessment. As will be discussed in later slides, the VTrans Needs Assessment considers how particular industries in each region cluster and what that means for transportation. Here is the forecasted composition of the Northern Virginia PDC economy as an example.

Slide 12: We recognize that each region's economy is unique. Now showing the Lynchburg area as an example, there are relatively fewer jobs in the governmental sector and more in the manufacturing sector as a share of overall employment than the state as a whole and compared to the Northern Virginia area shown on the previous slide. This very well may indicate unique characteristics of the Lynchburg regional economy that should be considered and will be considered in assessing this area's transportation needs.

Slide 13: In terms of how this connection was made for the last update of VTrans, the Needs Assessment considered the unique needs of particular industries. The industry types shown on the previous slides were grouped into three categories as a framework to define core economic clusters.

- The categories shown on this slide were used to define a region's mix of clusters, which were used to identify unique needs, opportunities and constraints related to transportation

- The three industry clusters are fairly self-explanatory:

  o Knowledge-based or "Combined Economic Sectors" - those industries that tend to rely on skilled labor and serve a broader market than Virginia
  o Local Serving - generally those industries that serve the local population

- o Freight-based or "Traded Economic Sectors" - those industries for which the majority of industry output is dependent on freight transportation (also referred to as freight-dependent)

Slide 14: Each of these clusters has different transportation needs, for both transportation of goods and the workforce. For example, the share of peak hour commuters in heavy knowledge-based employment areas may present a unique set of challenges compared to an area with predominantly local-serving industries that rely less on the nine-to-five peak hour commute. Additionally, demand for rail, port and truck related trips may take priority in clusters of freight dependent employment.

This conceptual framework and tying economic condition to transportation is foundational to VTrans and will be carried forward in the update.

Slide 15: Part of this work is to characterize each regional economy and activity centers within this framework. Here you see that the relative concentration of these job clusters can vary greatly by region. For example, in the Accomack-Northampton area on the Eastern Shore, there are more jobs in the freight-dependent cluster, relatively fewer jobs in the knowledge-based cluster. Whereas Northern Virginia is the opposite. An understanding of unique economic conditions is key to VTrans needs assessment.

At this time I would like to pause here to see if there are any questions about the demographic data in particular. Hannah, is there anything of note?

Hannah: I haven't seen any questions posted in the chat pod yet, so I would encourage folks to, it does look like there may be one coming in. So let's pause for a moment. And I'll double check the questions that were sent with registration, just to see if we're starting to address those. I think you have talked a little about the organizing framework of the process and issues. I think some people will be interested in hearing more about perhaps is how safety and transit refer to these demographic and industrial trends and that may come out later. There's one question coming in about why there was such a huge jump in the employment projections after 2017.

Jitender: So, the question is referring to slide 8, that is indicating a 44% growth in employment statewide. there are several factors. As I pointed out, there are some regions that already have had significant growth and employment, and the trends are expected to continue, or in some instances accelerate. Most of the growth, as you can see, is coming from Northern Virginia, that is expected to have 56% growth. So when we combine two factors, one is the existing employment in Northern Virginia, with the growth rate, that pretty much is the major driver. Then it includes/is followed by Hampton Roads and the Richmond Region. But the base number for Northern Virginia is so high, growth of 56% results in a higher number statewide. Which is great news, and it does pose some unique transportation challenges that we will be examining as part of VTrans. I hope that addresses the question. I will switch back to where we were and maybe we can wait towards the end to see if there are more questions.

Slide 16: So transitioning back to the Needs, before we do that, I wanted to take a minute to explain the Travel Markets to make sure everyone is familiar. These were also used in the previous version of VTrans.

By State Code, the Needs Assessment includes three different travel markets, or parts of the transportation system that serve different purposes. The three travel markets are:
- The Corridors of Statewide Significance (CoSS)
- The Regional Networks (RN), and
- The Urban Development Areas or UDAs.
- In addition to these travel markets, safety is a market that will be looked at for the entire state.

Slide 17: There are currently 12 Corridors of Statewide Significance identified across the Commonwealth. The colored lines show the center of these corridors. These corridors handle inter-city, inter-region, and inter-state travel, and are important travel and freight networks. They are multimodal in nature, and encompass highways, rail lines, transit networks, and other intermodal connections such as ports and airports.

Slide 18: Regional Networks mostly follow the urbanized areas in the state, roughly with the MPO areas. In most instances they are larger. The focus for the Regional Networks is travel generated by commuters, economic activity (such as shopping) and local freight travel as well as regional travel. Some of the Corridors of Statewide Significance overlap into Regional Networks.

Slide 19: Urban Development Areas or UDAs are locally-designated areas that are intended to be more walkable, bikeable, or transit-oriented areas where growth occurs in a more traditional manner, with more compact land use and transportation-efficient development.

Slide 20: As far as the Mid-term Needs methodology and measures are concerned:

Mid-term needs are for 6 to 10 year planning horizon. These are meant to help the development of Six-Year Improvement Programs.

Long-term needs are beyond the first 10 year planning horizon. These will be developed starting next year and will be used to inform policy considerations.

At this point our focus is on the mid-term needs that will be utilized for the next round or Round 4 of SMART SCALE.

The approach to identify the Mid-Term Transportation Needs is to use the previous listing of Needs identified for VTrans2040 (the previous version of the plan) and build upon that.

We are currently collecting updated transportation system data, and making sure our measures are consistent with the new Federal performance reporting requirements.

We are also working to ensure that the Needs Assessment aligns with the VTrans Goals and Objectives.

Finally, we will continue to coordinate this process with our regional and local stakeholders, including everyone on this call.

Slide 21: The approach will vary by travel market:

For example, with the Corridors of Statewide significance the process will be more data driven similar to the process followed for VTrans2040, however, an opportunity for improvement will be to look at smaller segments of each corridor to refine the needs identified.

For the Regional Networks, the process will build upon the needs identified in VTrans2040 and verify, update, confirm and revise them as needed.

Similarly, for the UDAs the objective will be to verify, update, confirm and revise rather than start from scratch.

Finally, the Safety analysis will follow a similar method as what has been done previously, relying on a data driven assessment of Potential for Safety Improvement or PSI locations. A later slide will go into some detail on this process.

Slide 22: To summarize, this table shows how the approach will vary by travel market.

For the Corridors of Statewide Significance, stakeholders will be requested to review the analysis and ensure that the Needs identified make sense according to their local knowledge.

For the Regional Networks, we will require more input from the regional and local partners.

For the Urban Development Areas, localities will be expected to fill out an online survey to determine their UDA Needs.

Finally, Safety Needs will be identified Statewide, not just within the travel markets. Safety Needs will mostly be identified by a PSI analysis. PSI's are intersections or segments with a higher than average crash risk. Stakeholders will also be requested to review and comment on these Needs.

Slide 23: A reminder, five Goals were established in VTrans2040. At this time, the recommendation to the CTB is to retain these goals and to more closely tie them to the Needs assessment process. The Board may make changes.

The goals will be used as a framework for Needs Identification by tying each performance measure back to one or more VTrans goals.

Slide 24: Our intent is to ensure more data-driven decision-making. Performance measures are one of the many tools that allow us to objectively identify and characterize transportation needs.

The objective is to identify multimodal needs that when addressed, will help us meet our transportation goals.

This table shows the proposed Needs Identification Measures at this time.
- The first measure, Throughput, relates to Goal A. This measure will be applied to Corridors of Statewide Significance to understand the magnitude of travel, i.e. the volume of people and goods moving through the network.
- Other Goal A measures relate to reliability:
  - Travel Time, generally reported as an index of actual to expected travel time will be used as one indicator of reliability - the exact measure and how it will be applied is still under development.
  - A new measure, known as Person Delay During Unreliable Conditions is also under consideration for identifying locations with reliability issues. This measure is a sort of hybrid congestion/delay and reliability measure.
- Finally, related to Goal A - consideration of truck delay by applying Interstate heavy/medium truck vehicle hours of delay per lane mile as a measure for CoSS hot spots of freight delay.
- Related to Goal B - a process to apply Accessibility measures is currently under development. More to come on that.
- Another measure that will be used for Goal B, is the Disadvantaged communities beyond ¼ access to transit
- Finally, related to Goal C we will be applying the PSI - Potential for Safety Improvements as a measure to identify locations with a higher than expected number of observed crashes.
- Other measures will be developed for Goals D and E, however, these will likely be applied as measures to track trends over time rather than for identification of needs.
- I should add that everything is under development and is likely to be modified and refined.

So with that I will take a quick pause and see if there is anything else that we have received.

Hannah: We do have one more question that has come in asking about the Corridors of Statewide Significance designations. Are we going to be reviewing those, is it possible for new corridors to be added?

Jitender: That's a good question. We have received a similar question with our outreach at the Spring Transportation Meetings. Our intent at this point is to use the Corridors that are designated but we will also make a point to share the comments we are receiving to the Commonwealth Transportation Board

and see if they desire any action. I would encourage anyone, if they have particular thoughts or a particular site, to share those thoughts either via the VTrans website or with the contact details that we will have at the end of the slide show. Ok, so I only have a handful of slides left, so hopefully we will be able to wrap this up quickly and leave more time for Q&A.

Slide 25: Activity Centers are areas that will be critical to the Regional Networks Analysis. These are areas of concentrated population, employment, or economic activity that may have particular travel needs. Our initial set of activity centers were identified as part of the VTrans2040 process and we need to make sure they are up-to-date for the updated Needs Identification.

We ask that you review the activity centers and provide OIPI with comments on changes. We will make sure to coordinate with regional stakeholders later this summer to assist with this process.

In the slide deck posted to the webinar events page on VTrans.org - a series of supplemental slides include all activity center for each PDC area.

Slide 26: As you can see, the Activity Centers will vary by region. For example, in the Charlottesville area, some activity centers were identified that are actually just outside the Regional Network area.

Slide 27: We are also looking to make sure the Urban Development Areas are up-to-date for this process. We are currently working from the UDAs we know of from VTrans2040 and those that we know have been designated since the last update but we haven't been informed.

Here is an example of UDA locations in the Northern Virginia PDC area.

Slide 28: And another example for the Middle Peninsula PDC area.

In the slide deck posted to the webinar events page on VTrans.org - a series of supplemental slides include all graphics and maps for each PDC area that have been shown today.

Slide 29: We will be reaching out to localities soon to make sure we have the proper contact people for UDA's. We will then work with the local point of contact to verify:
1.   That we know of all the designated UDAs in a particular locality
2.   That we have the correct boundaries
3.   To complete a Needs questionnaire for each designated UDA

This process will be further defined in a Webinar scheduled for June 14th -- see the events page on VTrans.org for more information and for a link to register for this upcoming webinar.

Slide 30: The final unit of analysis will be the statewide assessment of safety needs, relying on a Potential for Safety Improvement or PSI-based approach. The PSI method should be familiar to those who have applied for Smart Scale under safety needs in the past.

We are currently working with VDOT on an approach that will apply threshold measures that can lead to identification of the 'worst of the worst' locations. More to come on this as the exact methodology is still under development.

Slide 31: The schedule will follow based on the schedule in the following table.
As mentioned earlier, this webinar mirrors presentations occurring at MPO meetings around the Commonwealth.

In about two weeks, on June 14th, there will be another webinar to go over the process for updating UDA Needs in much more detail. The link is to register is available in the chat pod on your screen and also on vtrans.org website under events.

We will be looking for feedback on the approach to the Needs process, including any proposed updates on the Activity Centers and UDA's, in June as well.

In July and August, OIPI staff will be meeting again with localities, MPO's, PDCs, and other regional stakeholders to go over the Needs Identification in a more detailed workshop.

Slide 32: We will once again update those who cannot attend the in-person meetings with a webinar presentation.

At this time, our goal is to release a Draft list of Transportation Needs around September via VTrans.org. This Fall, we will be looking for feedback on the draft Needs before they go for final approval to the Commonwealth Transportation Board. That is scheduled for December, 2019.

Slide 33: As of this presentation, we can now check one item off of our to-do-list, but we will need to continue coordination on the Regional Network analysis and identification of activity centers, and the UDA contact identification and process to complete needs surveys.

If you have any information to share on these or other items…

Slide 34: Our team is available to assist you. Katie Schwing and Chris Wichman, members of the VTrans team, are serving as points of contact for regions and localities.. This map shows the areas that Katie and Chris are covering, please feel free to reach out to them directly.

Slide 35: Their contact information as well as mine is shown on this slide. Additionally, our website VTrans.org serves as the best resource for accessing information -- particularly the Events and What's Happening sections are routinely updated to keep visitors up to date on project progress and opportunities to attend agency and public meetings. We also have a presence on social media on Facebook and Instagram.

Slide 36: That concludes the formal presentation. We will now take the remainder of the time to answer any questions from the audience.

And now I will turn the audio over to Hannah Twaddell to see if she has received anything.

Hannah: we have gotten a couple more questions in the chat pod. One was about the PDDUC – Person Delay Measure – and I don't remember exactly which slide that was one – in regards to recurring congestion, regular congestion which in placed like Northern Virginia can be a big issue, can the PDDUC measure recurring congestion and well as recurring.

Jitender: That's a good question. As we know, non-recurring congestion is a much trickier subject to handle; there are many factors that influence non-recurring congestion – weather, incidents, and work zones. Nonrecurring congestion can point to systematic issues or temporary issues, so we are looking at a way to differentiate the two. What we may end up doing is identifying a set of issues, and then doing a deeper analysis to determine the type of issue.

Hannah: Different topic; what are the criteria for developing activity centers, how do those get designated and updated.

Jitender: Our starting point is – and I emphasize the word starting point – is activity centers that were designated at the last update. At that time, several different methods were used. For example, some PDC's had comprehensive economic development strategies (CEDS) with activity centers identified. Where those did not exist, they were identified through regional workshops that were conducted. Our goal at this time is to have some framework for activity centers, to capture as many as we can through outreach and then maybe develop some criteria. There are two ways we can address this: one way is to develop criteria and see what meets that criteria. In this case our goal is to see what is out there and then what meets the criteria. We would love to hear thoughts and comments, but it is a work in progress and we hope to share more on that during our July workshops.

Hannah: I'm checking through the questions that were submitted before the webinar. Related to measures, is there an opportunity to look at safety measures that relate to rural areas, compared to urban areas?

Jitender: Safety is a measure that is looked at across the state, including rural areas. We are using the tried and tested method (PSI), what we are looking at is the threshold. We want to be mindful of a location that has a particular safety issue for a region, while keeping in mind the limited resources that we have for the entire state. So we are playing with different thresholds and hope to establish one that does the trick for most if not all.

Hannah: that is always a challenge in the statewide planning process, trying to find that happy medium where you have something that rolls up to the statewide scale and yet recognizes the variations in regions and subareas.

Jitender: If you have a particular location in mind, I suggest that you reach us and share that so we can be mindful of that.

Hannah: Question about SMART SCALE criteria and the geographic area that's defined for economic development, when you're looking at how a proposed project in smart scale affects economic development, can we expand that area? I don't know how far you want to dive into that, but perhaps you could talk to the relationship between the Needs Assessment and the SMART SCALE decision process?

Jitender: The economic measure, from what I gather, I think part of this question was SMART SCALE policy specific, so I will make a point to communicate that to Chad Tucker, our SMART SCALE manager. As far as the relationship between VTrans Measures and SMART SCALE measures, you will see underlying similarities. They may not necessarily be the same because the purpose is different. SMART SCALE seeks to identify the impacts of a project, whereas VTrans looks at underlying conditions that may require some sort of improvement. We have tried to ensure consistency for the same of communication and to make everything simpler.

Hannah: One last question: how do we see growth projections based on low birthrates across the US, is that having any impact in Virginia?

Jitender: I am also intrigued and don't have an answer to that question. If there is a way to get back to you, hopefully we can find a more detailed answer to that question, which could inform our work.

Thank you again for joining the webinar today. Hopefully you found some information that you can utilize and information that piqued your interested and that you would like to know more about. Our hope is that this is a starting point to continue your interest in VTrans, and please do sign up for updates on our website. With that said, Katie and Chris are a great resource, please feel free to reach out to them at any time, we hope to capture as many callers at the workshops later this summer. We look forward to your continued involvement in the future.