



**MINUTES**

The May meeting of the Transportation Technical Committee was held virtually on Thursday, May 13, 2021 at 1:30 p.m. via Zoom.

**VOTING MEMBERS PRESENT**

David Givens	County of Botetourt
Isaac Henry	County of Roanoke
Will Crawford	County of Roanoke
Chris Chittum	City of Roanoke
Mark Jamison, <i>Vice Chair</i>	City of Roanoke
Ben Tripp, <i>Chair</i>	City of Salem
Anita McMillan	Town of Vinton
Nathan McClung	Town of Vinton
Dorian Allen	Greater Roanoke Transit Company (Valley Metro)
Nathan Sanford	Unified Human Serv. Transp. System (RADAR)
Daniel Sonenklar	Virginia Dept. of Rail and Public Transportation
Michael Gray	Virginia Dept. of Transportation - Salem District

**VOTING MEMBERS ABSENT**

Mariel Fowler	County of Bedford
Dan Brugh	County of Montgomery
Megan Cronise	County of Roanoke
Liz Belcher	Roanoke Valley Greenway Commission

**NON-VOTING MEMBERS ABSENT**

Kevin Jones	Federal Highway Administration
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**Others Present Remotely:** Wayne Leftwich, City of Roanoke; Renee Powers, City of Roanoke; David Jackson, Cambridge Systematics; Peng Xiao, Virginia Department of Transportation- Central Office; Ying Su, Virginia Department of Transportation - Central Office; Pat Coleman, AECOM; Nagaraju Kashayi, AECOM.

**RVARC Staff Present:** Cristina Finch, Bryan Hill, Rachel Ruhlen, Jeremy Holmes, Eddie Wells and Virginia Mullen.

**1. WELCOME, CALL TO ORDER, ROLL CALL**

Chair Tripp called the meeting to order at 1:30 p.m. A quorum was present.

Chair Tripp read the following opening statement..." Pursuant to the City of Roanoke Emergency Ordinance adopted by the RVTPO Policy Board on April 23, 2020 and 2021 Virginia General Assembly legislation SB1271 passed February 27, 2020, the May meeting of the Transportation Technical Committee (TTC) will be held virtually on Thursday, May 13, 2021 at 1:30 p.m. via Zoom. Under the current State of Emergency, and until further notice, it

*has been deemed unsafe to assemble a quorum of a public body in one place. Any members of the public may view and participate in the meeting through electronic means. Meeting details are listed on the second page of the agenda. All materials made available to the Members will be made available to the public at the same time by posting on the RVARC website.”*

**2. APPROVAL OF CONSENT AGENDA ITEMS**

The following consent agenda items were distributed earlier:

- (A) May 13, 2021 Transportation Technical Committee Meeting Agenda;
- (B) April 8, 2021 Transportation Technical Committee Minutes;
- (C) April 20, 2021 Special Called TTC Minutes;
- (D) Public Participation Plan;
- (E) Amendment #1 to the FY21-24 Transportation Improvement Program (TIP).

**Motion:** by Mark Jamison to approve items A, B, C, D & E under the Consent Agenda, as distributed; seconded by Wayne Leftwich.

**TTC Action:** Roll Call Vote: Ayes – 10 (Givens, Henry, Leftwich, Jamison, Tripp, McClung, Allen, Sanford, Sonenklar, Gray); Nays – 0; Abstentions – 0. Motion carried unanimously.

**3. CHAIRMAN'S REMARKS**

Chairman Tripp noted today's agenda is long but will try to move through it as quickly as possible.

**4. CONTINUED DEVELOPMENT OF ROANOKE VALLEY TRANSPORTATION PLAN**

Cristina Finch reported the RVTPO Policy Board endorsed the region's first Transportation Needs Assessment Plan at their April Meeting. Ms. Finch thanked the TTC members for the input provided in the process. Ms. Finch introduced the two consultants who gave presentation on different elements of the plan's development.

**A. Presentation on the Updated Travel Demand Model**

Mr. Nagaraju, AECOM consultant, presented a PowerPoint presentation on the updated travel demand model (the presentation is included with the Minutes). A travel demand model predicts how many trips will be made in a region, where they will travel, what modes they will use, and what routes they will choose to assess the potential impact of capacity changing highway projects for evaluating SMART SCALE projects, decision making, and scenario testing. It is based on existing (2019) and projected population and employment and anticipated projects (2045). The model is validated with real time traffic data and transit boardings. In tested scenarios, I-81 traffic volumes are predicted to increase if additional lanes are added from mile markers 128 to 137 and vehicle miles traveled to increase on arterials and collectors and to decrease on freeways if connected and automated vehicles become prevalent.

**B. Presentation on the Future Factors, Vision, Goals, and Needs Prioritization**

Mr. David Jackson, Principal with Cambridge Systematics, Inc. presented a PowerPoint presentation on the future factors, vision, goals and needs prioritization (the presentation is included with the Minutes). Mr. Jackson discussed the draft future factors document (previously distributed in the agenda packet) and shared the TTC's input from the survey on the draft vision and goals along with suggested language changes. He asked the TTC for any additional input on the future factors, vision, or goal statements before moving on to the next topic to which there was no additional feedback. Mr. Jackson then went on to describe the general process to be undertaken for prioritizing needs and noted an initial draft of the priority needs would be shared in June.

5. **RECOMMENDATION ON THE FY 2022-2027 SURFACE TRANSPORTATION BLOCK GRANT (STBG) FINANCIAL PLAN**

Ms. Finch went over the draft STBG financial plan for FY 22-27 previously distributed with the agenda packet's STBG staff report (pages 40-42 of the agenda). Table 1 of the staff report shows the most recently approved plan and table 2 is a draft FY22-27/28 financial plan that includes updated information received from VDOT on 5-6-21 on the six-year financial forecast. Ms. Finch noted the new financial forecast indicated available funding decreased slightly in FY22 but increased in the other five years for a total increase of \$2,014,618. Ms. Finch also noted that funding of Explore Park in FY22, FY23 and FY24 had also been adjusted in the draft compared to the last approved financial plan.

**Motion:** by Anita McMillan to recommend to the Policy Board the approval of the FY22-27/28 STBG Financial Plan, as presented; seconded by Isaac Henry.

**TTC Action:** Roll Call Vote: Ayes – 11 (Givens, Crawford, Henry, Chittum, Jamison, Tripp, McClung, McMillan, Sanford, Sonenklar, Gray); Nays – 0; Abstentions – 0. Motion carried unanimously.

6. **REGIONAL STUDY ON TRANSPORTATION PROJECT PRIORITIZATION FOR ECONOMIC DEVELOPMENT AND GROWTH-SOLUTIONS AND PROJECT DEVELOPMENT**

Eddie Wells presented the staff report on the Regional Study on Transportation Project Prioritization for Economic Development and Growth, previously distributed with the agenda packet (pages 43-45 of the agenda). Mr. Wells reported that staff conducted a review of the 2040 LRTP Constrained and Vision to identify projects that address the 18 identified Economic Development needs for the TED Study update. The needs were shown in the spreadsheet, distributed with the agenda. Mr. Wells went over each need and updated the spreadsheet with the input provided from the TTC members (the updated spreadsheet is included with the Minutes).

Ms. Finch noted that staff is looking for suggestions from the TTC on specific projects that will help inform project applications in the next year. Mr. Wells noted that no action is needed today. Mr. Wells noted the next step would be to prioritize the projects.

7. **OTHER BUSINESS**

No other business was discussed.

8. **COMMENTS BY MEMBERS AND / OR CITIZENS**

No comments were made.

**Adjournment**

The meeting was adjourned at 3:04 p.m.



Cristina D. Finch, AICP, LEED AP, Secretary,  
Transportation Technical Committee



**Roanoke Valley Transportation Planning Organization  
Travel Demand Model Update**

**May 13, 2021**



**Overview**

- **What is a Travel Demand Model (TDM)?**
- **What's in the model?**
- **How can we use the model?**



## What is a Travel Demand Model?

- **Tool that:**

- Predicts how many trips would be made by people in a region
- Where they would go
- What modes (auto or transit) would they use
- How they would travel (what routes they would choose)

- **What's it used for?**

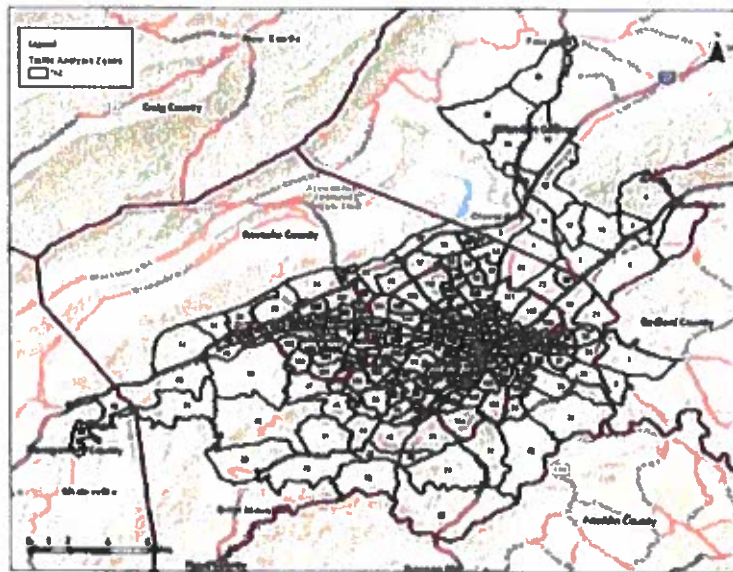
- Assess potential impact of highway projects (with capacity changes) in region
- Evaluate SMART SCALE scoring



## What's in the Model ?

- **Small units of geography called Traffic Analysis Zones (TAZ)**

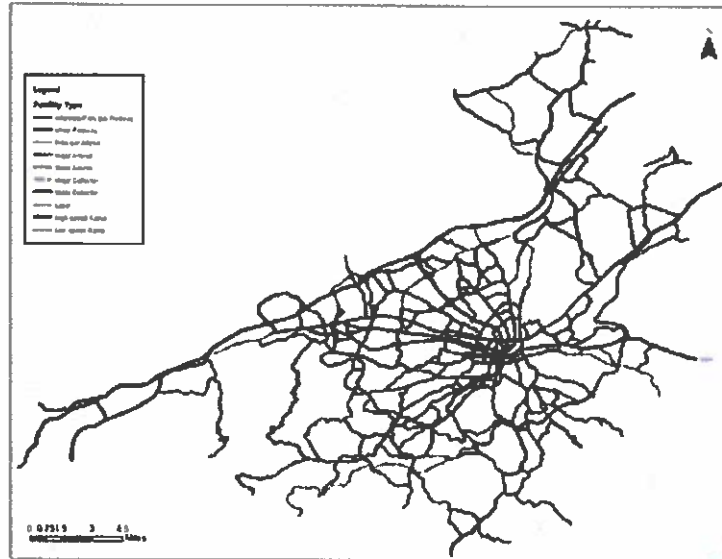
- **RVTPPO uses 2019 existing (and future forecast 2045) population and employment data to generate trips in the model at the TAZ level**



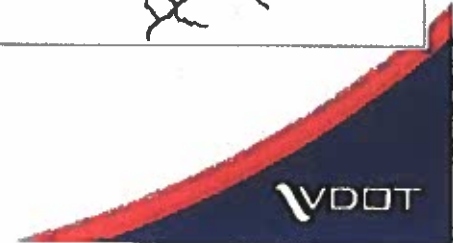
## What's in the Model ?

- **“Networks” of roadway segments and transit routes for the trips to be assigned to**

- **Future networks include funded (“constrained”) projects as in the Vision 2040 plan**



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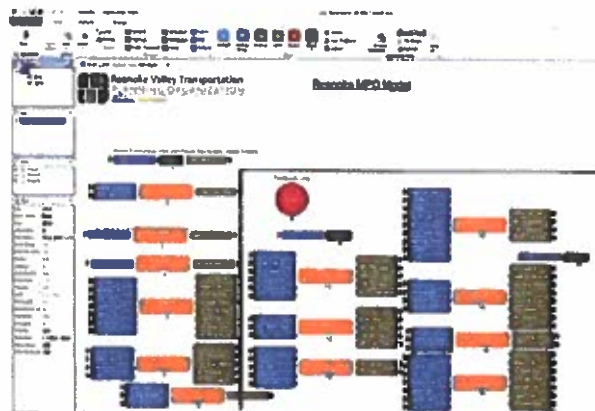


## What's in the Model ?

- **Model compared to reality or “validated” with observed data source including StreetLight Insight real time traffic data and transit boardings**

- **Validation in accordance with VDOT's Policy and Procedures Manual (PPM) guidelines**

- **Model runs in Cube software and maintained by VDOT and the RTTPO**



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## How can we use the model?

- Important for the RTVPO to know current and forecast congestion

- Analyze various future scenarios besides what's in 2040 plan (including upcoming 2045 plan)

- Opportunity to test scenarios to inform region's 2045 transportation/land development plans



## How can we use the model?

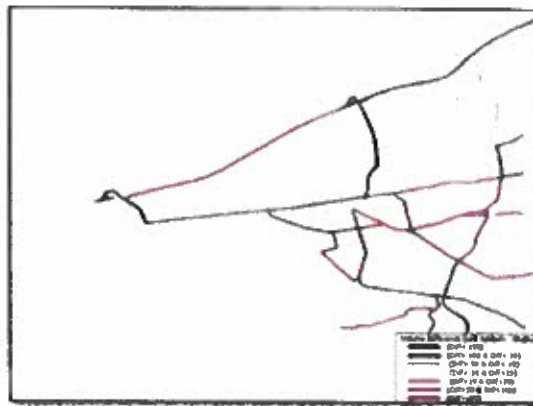
- Some scenarios already tested

- **I-81 Improvements**

- Added additional lanes between MP 128 and MP 137
- Increase in I-81 traffic volumes

- **Connected and Automated Vehicles Test**

- VMT increases by about 0.4% due to increased capacity, and shorter travel times
- Arterials and collectors see an increase in VMT while the Freeways see a slight decrease



Functional Class	2045 Model VMT			
	Original	CAV	Difference	% Difference
Freeways	909,108	908,094	-1,014	-0.1%
Major Arterial	175,104	178,580	3,476	2.0%
Minor Arterial	214,141	217,151	3,010	1.4%
Collectors	71,779	71,907	128	0.2%
Total	1,370,132	1,375,732	5,600	0.4%





## How can we use the model?

- *Upcoming opportunity to test scenarios to inform region's 2045 transportation/land development plans*
- **Changes in land use and population densities**
- **New roadway projects**
- **Improvements in roadway capacities**

9



Questions?

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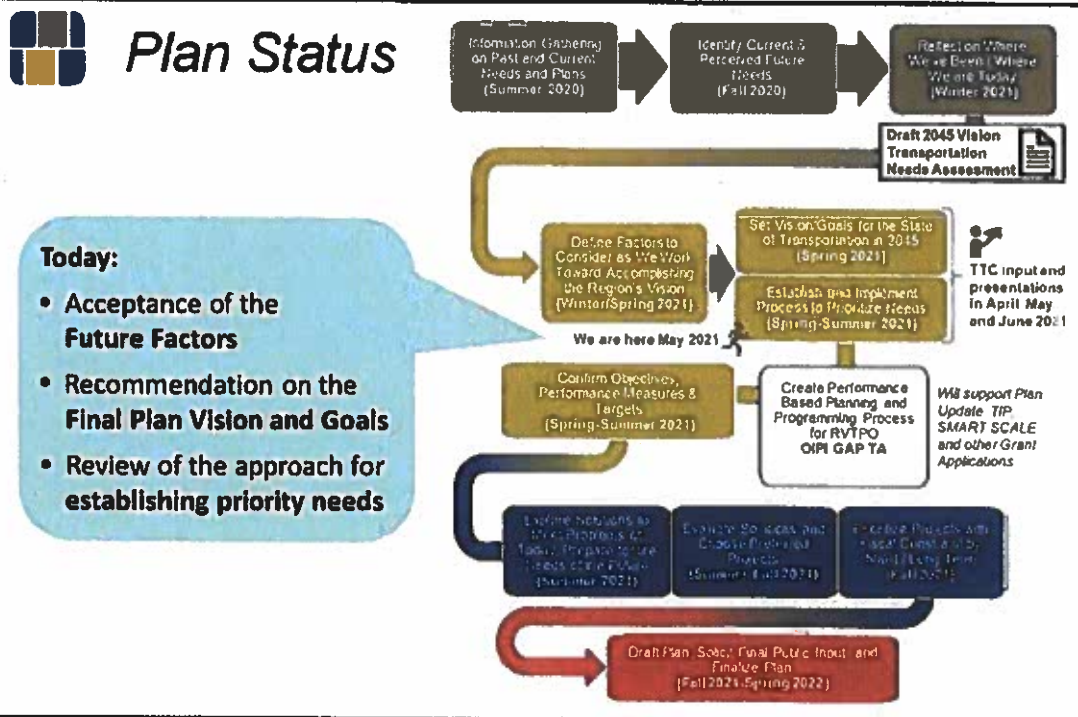
# Roanoke Valley Transportation Plan Update

Follow-up on Future Factors and Draft Regional Goals and Introduction to Priority Needs

presented to  
Transportation Technical Committee

presented by  
Cambridge Systematics, Inc.

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## Emerging Trends and Futures



### Technology

Connected and automated vehicles, drone deliveries, freight automation, broadband, on-demand transit



### Society

Demographic transition, equity considerations, shift to remote work and services, long-term impacts on travel behavior due to COVID pandemic



### Economy

Population growth and impact on labor force, job types and skills, retail shifts, tourism and entertainment



### Sustainability

Electrification, climate change mitigation, natural resource management, alternative energy sources



### Funding & Finance

Project costs, impact of technology changes on transportation revenue, potential for new revenue

#### How Do We Use This?

- How might the future factors impact system performance?
- What needs may become more or less important in the future?
- What solutions will be effective regardless of what the future holds?

3



## Plan Vision Survey Responses – Potential Changes

The Roanoke Valley **enjoys** a seamless regional multimodal transportation system that is **safe, cost-effective, environmentally conscious, maintainable, inclusive of all users, and conducive** to the economic vitality of the community.

Highlighted words received the most input from survey:

- **Enjoy.** Suggested “strives to support”
- **Maintainable.** Unclear term. Suggested “high quality” or “in a state of good repair”
- **Inclusive of all users.** Suggested “accessible for all users”
- **Conducive.** Prefer “foster” or “promote”

4



## Plan Vision Draft Rewrite

**The Roanoke Valley's seamless regional multimodal transportation system is safe, cost-effective, environmentally conscious, well maintained and reliable, accessible for all users, and promotes the economic vitality of the community.**

***Vision** describes the desired future state*

***Goals** describe what guides us toward attaining the vision*

***Objectives** describe how we are going to attain the vision*

***Measures** help us make decisions and track performance*

5



## Plan Goals Survey Responses

- ★  Provide a safe and secure transportation system
- ★  Enable reliable mobility
- Enable everyone to access destinations by their preferred mode
- ★  Foster environmental sustainability
- ★  Maintain and operate an efficient and resilient transportation system
- ★  Support economic vitality
- Ensure equitable transportation investments

General issue is with the phrase "by their preferred mode"

Option – "Facilitate convenient and affordable access to destinations"

General issue – What does "equitable transportation investment" mean in a long-range plan?

Approach – Develop definitions to explain equitable investments during Plan development

Option – "Promote equitable transportation investments"

6



## Plan Goals Draft Rewrite

- Provide a safe and secure transportation system
- Enable reliable mobility
- Facilitate convenient and affordable access to destinations
- Foster environmental sustainability
- Maintain and operate an efficient and resilient transportation system
- Support economic vitality
- Promote equitable transportation investments

*Goals are action focused*

*Goals create the platform for objectives, which operationalize how the RVTPO will follow-through on these actions*

7



## Priority Needs

### Framework for Prioritization



### Why Prioritize Needs?

1. The Plan must be fiscally constrained (Federal law)
2. Needs exceed revenues
3. New revenue sources create opportunities
4. Priority needs help identify candidate existing projects for inclusion in the Plan
5. Priority needs help prioritize planning resources to develop new solutions

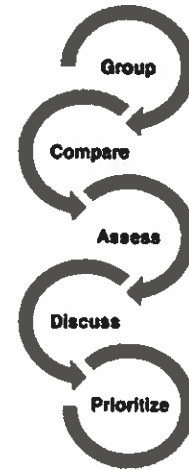
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## Priority Needs

### Five general steps:

1. Consolidated needs will be grouped
2. Grouped needs are mapped and will be compared with transportation and land use data
3. Assess the extent to which each need aligns with existing data and future factors
4. Staff and the TTC will review the analysis results and discuss how to reach priority decisions
5. Staff and the TTC reach final prioritized group needs decisions

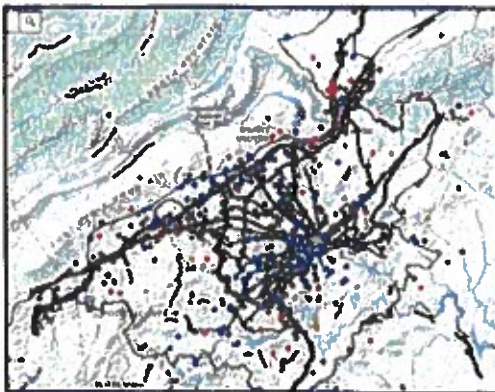


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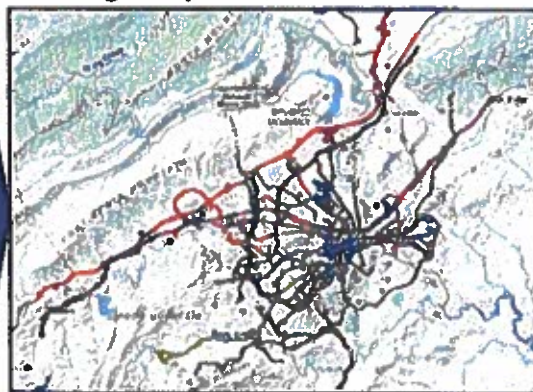


## Priority Needs

Needs Assessment Results



Working Grouped Needs



All needs are retained – nothing disappears

Groups based on location/corridors/modes

*Example: 21 traffic management and safety needs along US 460/Main Street from Elliston area (Montgomery County) to Route 419 (Salem)*

10

