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rvtpo.org

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 Isaac Henry

Will Crawford Chris Chittum

Mark Jamison, Vice Chair Ben Tripp, Chair

Anita McMillan Nathan McClung

Dorian Allen Nathan Sanford Daniel Sonenklar Michael Gray **County of Botetourt**

County of Roanoke

County of Roanoke City of Roanoke

City of Roanoke City of Salem

Town of Vinton
Town of Vinton

Greater Roanoke Transit Company (Valley Metro) Unified Human Serv. Transp. System (RADAR) Virginia Dept. of Rail and Public Transportation Virginia Dept. of Transportation - Salem District

VOTING MEMBERS ABSENT

Mariel Fowler Dan Brugh Megan Cronise

County of Bedford County of Montgomery County of Roanoke

Liz Belcher

Roanoke Valley Greenway Commission

NON-VOTING MEMBERS ABSENT

Kevin Jones

Federal Highway Administration

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).

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

<u>TTC Action</u>: 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.

<u>Motion</u>: 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.

<u>TTC Action</u>: 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-SOUTIONS 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)

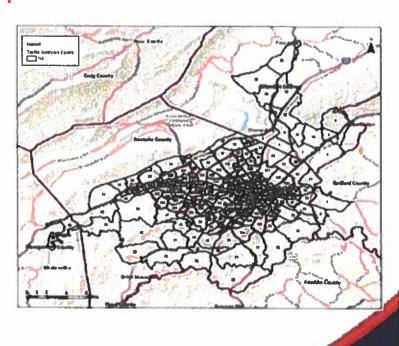
What's it used for?

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



What's in the Model?

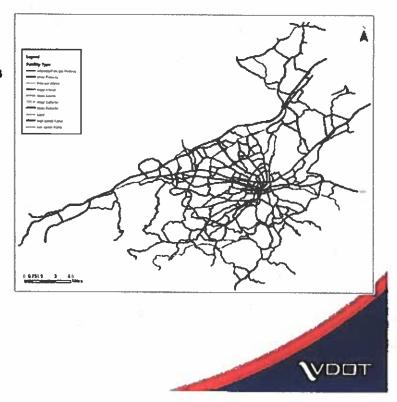
- Small units of geography called Traffic Analysis Zones (TAZ)
- RVTPO uses 2019 existing (and future forecast 2045) population and employment data to generate trips in the model at the TAZ level





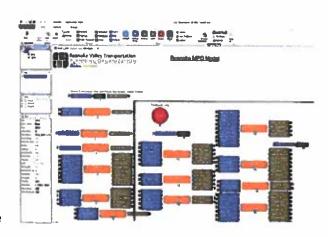
What's in the Model?

- "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



What's in the Model?

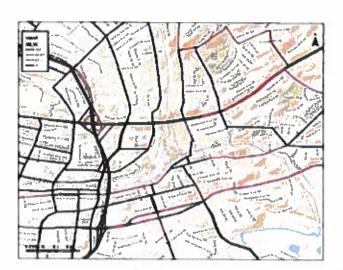
- •Model compared to reality or "validated" with observed data source including StreetLight Insight real time traffic data and transit boardings
- Validation in accordance with VDOT's Policy and Procedures Manual (PPM) guidelines
- •Model runs in Cube software and maintained by VDOT and the RVTPO





How can we use the model?

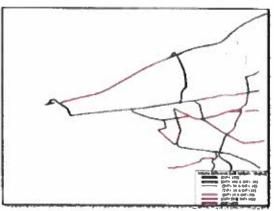
- Important for the RVTPO to know current and forecast congestion
- •Analyze various future scenarios besides what's in 2040 plan (including upcoming 2045 plan)
- •Opportunity to test scenarios to inform region's 2045 transportation/land development plans





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



	2045 Model VMT				
Functional Class	Original	CAV	Differe nce	% 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	0.296	
Total	1,370,132	1,375,732	5,600	100	



How can we use the model?

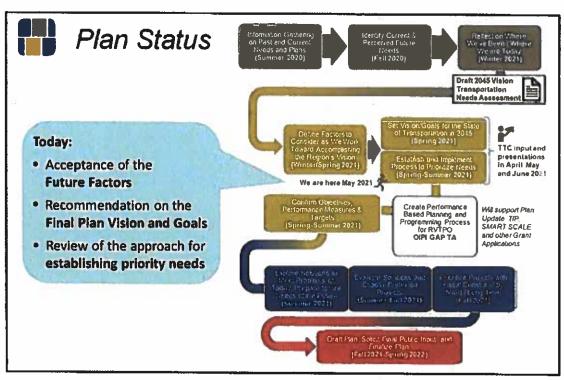
- Upcoming opportunity to test scenarios to inform region's 2045 transportation/land development plans
- · Changes in land use and population densities
- New roadway projects
- · Improvements in roadway capacities



Questions?









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"

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- Inclusive of all users. Suggested "accessible for all users"
- Conducive. Prefer "foster" or "promote"



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



Plan Goals Survey Responses



Provide a safe and secure transportation system



🛊 🚻 Enable reliable mobility



Fig. 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"

12



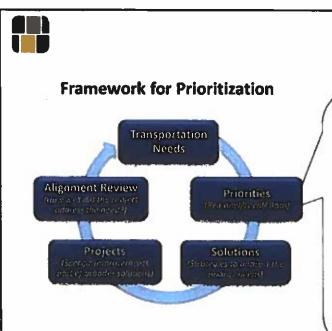
Plan Goals Draft Rewrite

- Provide a safe and secure transportation system
- **Enable reliable mobility**
- **層 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

Why Prioritize Needs?

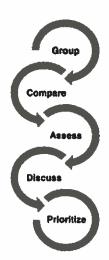
- 1. The Plan must be fiscally constrained (Federal law)
- 2. Needs exceed revenues
- 3. New revenue sources create opportunities
- Priority needs help identify candidate existing projects for inclusion in the Plan
- Priority needs help prioritize planning resources to develop new solutions



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. <u>Assess</u> the extent to which each need aligns with existing data and future factors
- 4. Staff and the TTC will review the analysis results and <u>discuss</u> how to reach priority decisions
- 5. Staff and the TTC reach final <u>prioritized</u> group needs decisions

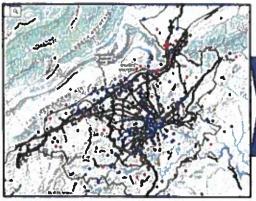


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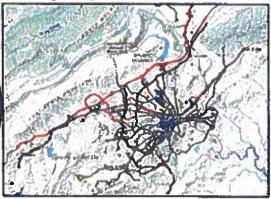


Priority Needs

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)

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