

September 2, 2021

MEMORANDUM

TO: Members, Transportation Technical Committee
 FROM: Cristina Finch, AICP, LEED AP, Secretary to the Transportation Technical Committee
 SUBJ: September 9, 2021 TTC Meeting/Agenda

The September meeting of the Transportation Technical Committee (TTC) will be held Thursday, September 9, 2021 at 1:30 p.m. at the Roanoke Valley-Alleghany Regional Commission office (Top Floor Conference Room), 313 Luck Avenue, SW, Roanoke, VA. In accordance with CDC regulations, attendees who are fully vaccinated against the COVID-19 virus are not required to wear masks. Unvaccinated attendees, or those who choose to for health or other concerns, are encouraged to wear a mask while inside the Commission building.

TTC AGENDA

1. Welcome, Call to Order, Roll Call *Chairman Tripp*
2. Approval of the Consent Agenda items..... *Chairman Tripp*
 - A. Approval of the Agenda
 - B. Action on the August 12, 2021 TTC Minutes, pp. 2-12
3. Chairman’s Remarks *Chairman Tripp*
4. Recommendation on Amendment #4 to the Roanoke Valley.....*Cristina Finch*
 Transportation Plan, p. 13 & Attachment #1: [Vision 2040 Draft 9-1-21](#)
5. Continued Development of the Update to the Roanoke Valley *Cristina Finch & Cambridge Systematics*
 Transportation Plan, pp. 14-16 & Attachment #2: [Needs Prioritization Draft 9-9-21](#)
6. Other Business
 - A. Analysis of “SMART SCALE Round 4”, pp. 17- 41 *William Long*
 Attachment #3: [SMART SCALE Round 4 Analysis](#)
 - B. Update on FY23 and FY24 Transportation Alternatives Set-Aside*Cristina Finch*
 Block Grant Program Applications
7. Comments by TTC Members and/or Citizens
8. Adjournment (by 3:00 p.m.)

TPO POLICY BOARD: Cities of Roanoke and Salem; Counties of Bedford, Botetourt, Montgomery and Roanoke; Town of Vinton; Greater Roanoke Transit Company (*Valley Metro*); Roanoke-Blacksburg Regional Airport; Virginia Department of Rail & Public Transportation; Virginia Department of Transportation

MINUTES

The August meeting of the Transportation Technical Committee was held on Thursday, August 12, 2021 at 1:30 p.m. at the Roanoke Valley-Alleghany Regional Commission, 313 Luck Avenue, SW, Roanoke, VA.

VOTING MEMBERS PRESENT

Mariel Fowler	County of Bedford
Megan Cronise	County of Roanoke
Wayne Leftwich	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
Cody Sexton	Town of Vinton
Michael Gray	Virginia Dept. of Transportation - Salem District

VOTING MEMBERS ABSENT

David Givens	County of Botetourt
Dan Brugh	County of Montgomery
Will Crawford	County of Roanoke
Dorian Allen	Greater Roanoke Trans. Company (Valley Metro)
Nathan Sanford	Unified Human Serv. Transp. System (RADAR)
Daniel Sonenklar	Virginia Dept. of Rail and Public Transportation

NON-VOTING MEMBERS ABSENT

Kevin Jones	Federal Highway Administration
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RVARC Staff Present: Cristina Finch, Bryan Hill, Eddie Wells, William Long and Virginia Mullen.

1. WELCOME, CALL TO ORDER, ROLL CALL

Chair Tripp called the meeting to order at 1:30 p.m. and asked Cristina Finch, Secretary to the TTC, to call the roll. Ms. Finch stated that a quorum was present.

2. APPROVAL OF CONSENT AGENDA ITEMS

The following consent agenda items were distributed earlier:

- A. August 12, 2021 RVTPO Meeting Agenda
- B. July 8, 2021 TTC Minutes

Vice Chair Jamison proposed the following change: Page 3 of the agenda packet, last sentence under item #2 Chairman Remarks should read as follows: *“Liz Belcher announced*

there will be Bridging the Gap ribbon cutting ceremony on Tuesday, July ~~2020~~ 2021 at 9:00 a.m. at the Barnhardt Creek Bridge on the Roanoke River Greenway.”

Motion: by Mark Jamison to approve items (A) and (B) under the consent agenda, as amended; seconded by Anita McMillan.

TTC Action: Motion carried unanimously.

3. CHAIR REMARKS

Chair Tripp commented he was happy to see everyone in person today and thanked staff for ensuring the virtual meetings went smoothly during the pandemic.

4. REVIEW OF DRAFT AMENDMENT TO THE ROANOKE VALLEY TRANSPORTATION PLAN

Ms. Finch noted a draft amendment to the Roanoke Valley Transportation Plan (RVTP) and a marketing brochure showcasing the region’s top 10 unfunded project priorities had been distributed with the agenda packet. Ms. Finch asked members for feedback on the presented information. Ms. Finch noted the draft plan will be shared with the Policy Board at their August meeting where the board will be asked to approve its release for public comment and a public hearing at the September meeting. TTC members will review the final draft at their September TTC meeting and will be asked for a recommendation to the Board at that time.

Mr. Sexton asked if there is an anticipated date of the adoption of the full (updated) plan. Ms. Finch replied that the last plan was adopted September 2017, thus it is anticipated that the new plan will be adopted by September 2022.

Vice Chair Jamison noted that on page 19 of the Vision 2040 Roanoke Valley Transportation Draft plan, the project “Route 460/W. Ruritan Road Intersection Improvements” location is listed as City of Roanoke and it should be Roanoke County.

Ms. McMillan asked about the deadline for providing feedback on the plan. Ms. Finch replied Tuesday, August 24th. Ms. Cronise commented that she will be submitting small edits as well.

5. DISCUSSION ON CONTINUED DEVELOPMENT OF THE UPDATE TO THE ROANOKE VALLEY TRANSPORTATION PLAN AND A PERFORMANCE-BASED TRANSPORTATION PLANNING AND PROGRAMMING PROCESS

Cristina Finch explained that as part of the OIPI GAP grant received by the RVTPO, staff was working with consultants to develop the RVTPO’s Performance-Based Planning Process. As part of this effort, staff has reviewed the current planning process to identify areas for improvement that can be worked on as the region looks to transition to performance-based planning.

Rachel Ruhlen and Bryan Hill presented information on performance based planning and programming. Issues noted by staff:

- Federally mandated performance measures do not include equity, economy, or environment
- Finding time to transition to performance-based planning
- RVTPO has little direct control over programming

(The PowerPoint presentation is included with the Minutes.)

Mr. Wayne Leftwich agreed that performance measurements are missing a few key elements- it is one sided and not looking at environment, equity, and economy.

Mr. Cody Sexton commented that the implementation of the annual updates to the Long Range Plan was a huge first step and has helped localities to align their goals with regional goals. Mr. Sexton also added that, in his opinion, the appropriate time to have a programming discussion is during funding decision phases versus planning phases.

Ms. Finch commented that the state has tried to coordinate what has been applied for through SMART SCALE with the region's Long Range Plan and that is why the question is being asked on the application, but some projects still fall through the cracks.

Chair Tripp suggested that maybe it would help to narrow the goals for regional planning.

Ms. Megan Cronise commented that project prioritization changes very frequently, and a lot of it depends on funding; it is a hard issue to fix.

Ms. Finch noted that she understands that issues do come up, however the plan was last amended in January 2020 and there are over twenty projects on the amendment list which indicates some disconnect even though it is never going to be a 100% match between planning and programming.

Ms. Finch commented that another issue is getting better information about the new ideas or projects that are seeking funding so staff can better explain it to the public when public input is sought.

Ms. Cronise suggested the Regional Commission to look into creating a regional transportation map, similar to Roanoke County's transportation story map.

6. OTHER BUSINESS

A. Review of Surface Transportation Block Grant (STBG) Application Process- applications due by 5:00 p.m. on September 24, 2021

Ms. Finch shared on the screen the www.rvarc.org website and explained how the STBG applications can be uploaded. Ms. Finch noted that the applications are due by 5:00 p.m. on September 24, 2021. Ms. Finch also noted that the file name should be limited to fifteen characters.

7. COMMENTS BY MEMBERS AND / OR CITIZENS

Mr. Sexton asked when the updated boundary of the TPO will take place. Ms. Finch replied that she will consult with Mr. Matt Miller. Ms. Finch added that there will be no change in the planning boundaries that are being used for this plan update.

9. Adjournment

The meeting was adjourned at 2:29 p.m.

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



Roanoke Valley Transportation
PLANNING ORGANIZATION
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REGIONAL commission

Performance Based Planning and Programming

TTC Meeting, Thursday, August 12, 2021

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1

Performance Measures

- Safety
- Congestion/Reliability
- Bridge and Pavement Condition
- System Performance
- Public Transit Agency Safety Plan
- Transit Asset Management

What's missing?

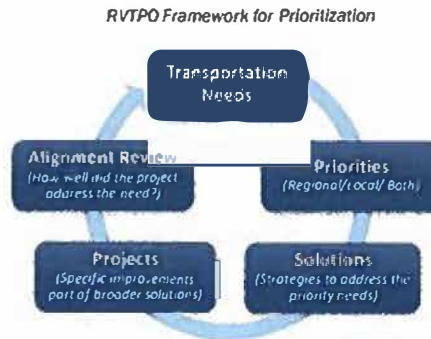
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2

Planning & Programming

- Planning
 - Goals, needs, solutions
- Programming
 - Project development, prioritization, selection
 - Project study & implementation
 - Fiscal constraint



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3

Planning

- How can planning be performance based?
- How are performance measures and outcomes used in planning?

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4

Planning

- Time
- Regional perspective
- Public input
- Performance based

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5

Planning - Time

No time for planning!

- Programming
- Preparing for next grant deadline
- Planning
- Transitioning to performance-based planning

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6

Planning - Regional Perspective

- Project recommendations from studies & plans are not often reviewed through the context of regional planning
- Projects receive funding first and are added to the long-range plan second

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7

Planning - Public Input

- Quantity
- Quality
- Diversity
- Meaningful

Quality - Few people know what the RVTPO or LRTP are. How can they give quality input?

Meaningful - What is the appropriate time to get public input on a project?

- Locality/state study or plan
- Long-range plan

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8

Planning - Performance Based

- How are performance measures and outcomes considered in project development, prioritization, and selection?
 - By citizens providing public input?
 - During local/state studies & plans?
 - When projects are added to the long-range plan?

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9

Programming

- How are performance measures used in programming?
- How can programming be performance based?

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10

Programming

- RVTPO role
- Project prioritization

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11

Programming - RVTPO Role

- TIP: Management tool for implementing plans
- Programming document: Long-range plan fiscally constrained list of projects
- RVTPO determines programming of STBG and TA (~\$5 million annual)
- State & localities determine the rest of the ~\$150 million TIP

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12

Programming - Project prioritization

- There is no project prioritization
- The Six Year Improvement Program and the TIP are not entirely consistent with the long-range plan

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13

Programming

- When are performance measures and outcomes considered during the programming of projects?
 - During the SYIP development process?
 - During the LRTP development process?
 - When projects are added to the long-range plan?
 - When projects are added to the TIP?

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STAFF REPORT

September 9, 2021 TTC Meeting

SUBJ: Recommendation on Amendment #4 to the Roanoke Valley Transportation Plan

As mentioned at the August meeting, a draft amendment to the Roanoke Valley Transportation Plan (RVTP) has been prepared to reflect the following changes since the plan was last adopted in January 2020.

1. Inclusion of projects into the RVTP budget (the constrained list) which have been recently granted funding that are not in the current plan budget adopted in January 2020.
2. Inclusion of newly identified priority projects to the RVTP constrained list (if fiscally possible) which will be seeking funds in upcoming grant programs.
3. Acceptance of projects with updated costs greater than 10% over original costs.
4. Removal of projects from the constrained list that are no longer priorities to be included in the budget.
5. Inclusion of new projects to add to the vision list in the event that more funds than expected become available.

Since the August TTC meeting, the Hinchee Trail Parking Lot project has been moved from the constrained to the vision list. A new project, Williamson Road Pedestrian Improvements from Hawthorne Road to Woodbury St, NW in the City of Roanoke has been added to the vision list. The marketing brochure has been included in the new Appendix E, and a description added to the amendment summary at the beginning of the document. Other minor edits have also been made. The amendment has been released for public comment with a deadline of September 22, and a public hearing will occur at the September 23 Policy Board meeting.

TTC Action: Recommendation to the RVTPO Policy Board regarding approval of Amendment #4 to the current Roanoke Valley Transportation Plan.


STAFF REPORT

September 9, 2021 TTC Meeting

SUBJ: Continued Development of the Update to the Roanoke Valley Transportation Plan

RVTPO staff and the consultant team have been working since June to develop, test, and apply a needs prioritization process. The purpose of this process is to use readily available data to help assess the importance of 630 individual needs identified through the Needs Assessment by aligning each need with data that represents aspects of the Roanoke Valley Transportation Plan goals. The outcome of the process is a prioritized list of needs, organized by need type, that RVTPO staff and the TTC can review as a means to make decisions on committing resources to investigating solutions for possible inclusion in the fiscally constrained long-range plan. This methodology as a tool to help inform the next steps of the planning process, as highlighted in the process figure (updated to reflect current status from prior Roanoke Valley Transportation Plan briefings to the TTC).

This staff report provides guidance to your review of three additional sets of information for TTC review.

1. **Needs Prioritization Methodology Report** – This methodology documentation outlines the process for prioritizing various transportation needs throughout the Roanoke Valley region. Included is the overall process for completing the prioritization and an overview of the needs criteria and individual metrics within each criteria. The Access needs prioritization methodology is still being worked on and will be discussed at the meeting.
2. **Needs Prioritization Spreadsheet Model** – The spreadsheet model includes each individual need and the associated prioritization result for each criteria outlined in the methodology report. For review, the spreadsheet model is available here:  [Needs Prioritization Calc 20210902.xlsx](#)

Note, the spreadsheet model will open in a landing tab with information summarizing the content of each tab. This is setup to show a completely transparent process and calculations. As noted in the methodology document, much of the raw results for each criteria used to develop “scores” is drawn from a separate GIS analysis. The Online Map described below also enables you to see the characteristics of the base layers used to develop the scores.

3. **Needs Prioritization Online Map** – The online map enables a spatial understanding of the needs that were prioritized and the outcomes of the methodology. Access to the online map is available here: [Roanoke Needs Scoring DR5 \(arcgis.com\)](#).

The Online Map enables you to turn on and off different layers, including the transportation needs, metrics that support the calculations within each criteria (multimodal, activity density, throughput, safety, environmental justice, and economics), and the prioritized needs results.

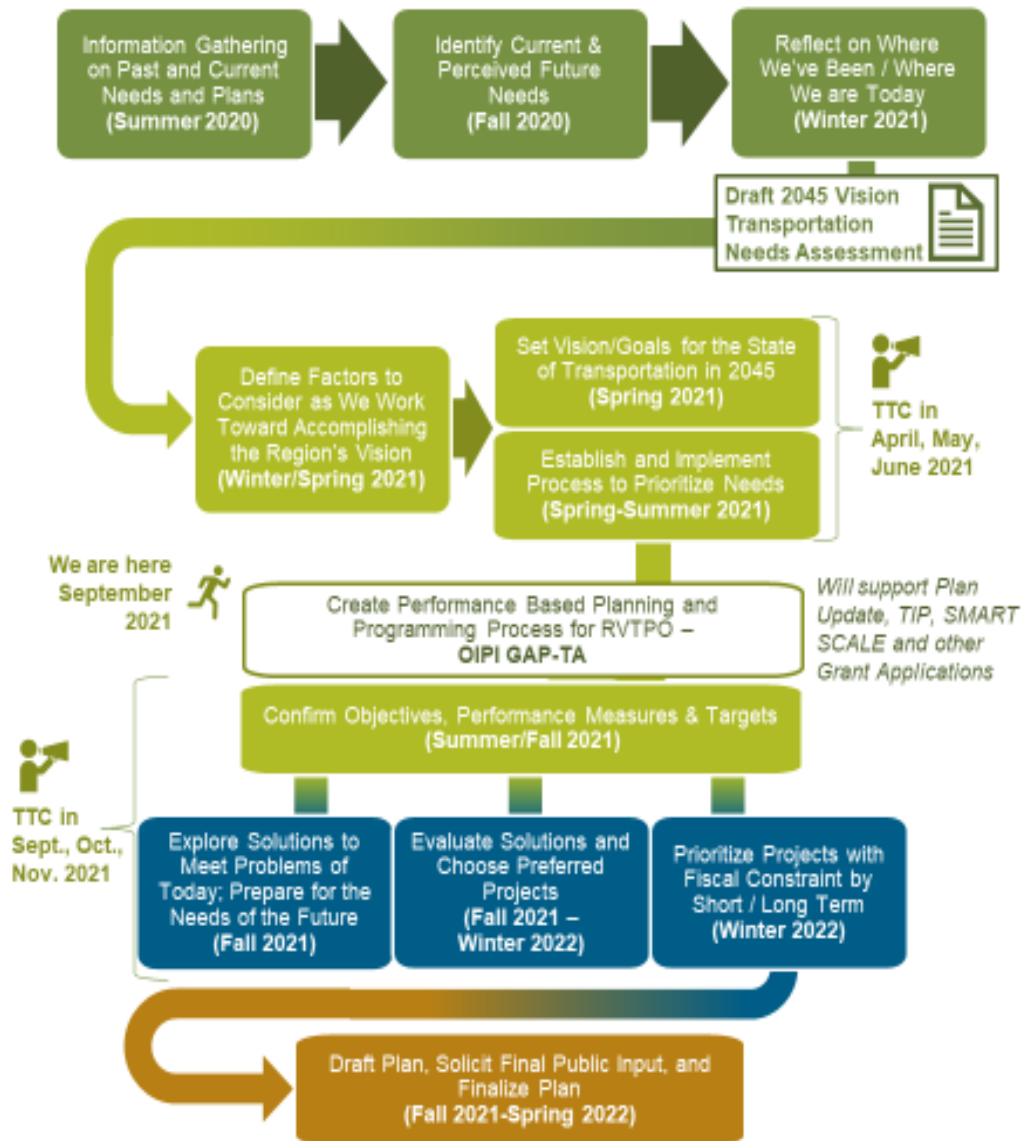
Prioritized need results are presented and colored by quartile based on the scoring results for each need type: automobile safety, pedestrian safety, bicycle safety, transit safety, congestion, system management – non-transit, and system management – transit. The example map on the next page only shows the results for automobile safety needs.

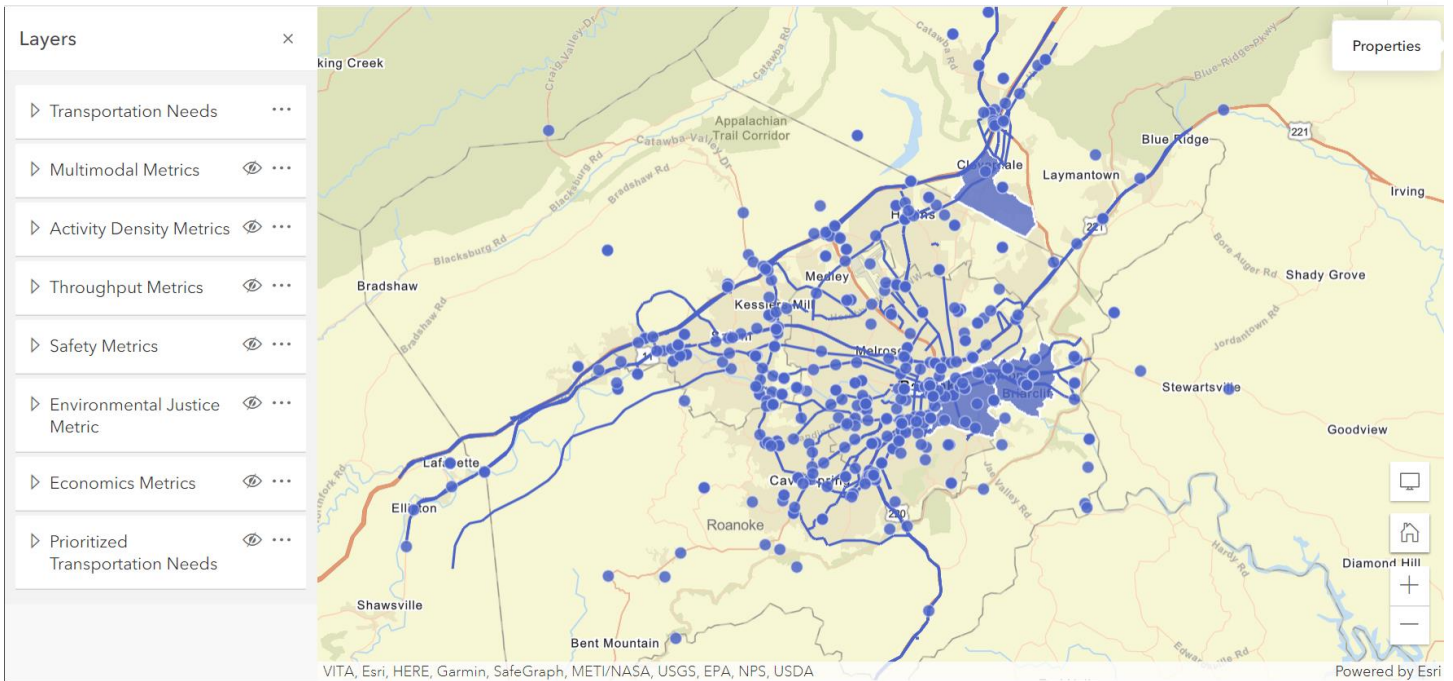
The described methodology and associated files represent the quantitative / geospatial performance. Other considerations should be applied to these quantitative results, such as alignment with regional goals, geographic equity, comparison to VTrans mid-term needs, and other factors. **The results serve as a tool to inform priority need decisions but should not be treated as a definitive or absolute list or ranking.**

TTC Action: Review and provide feedback on the needs prioritization.

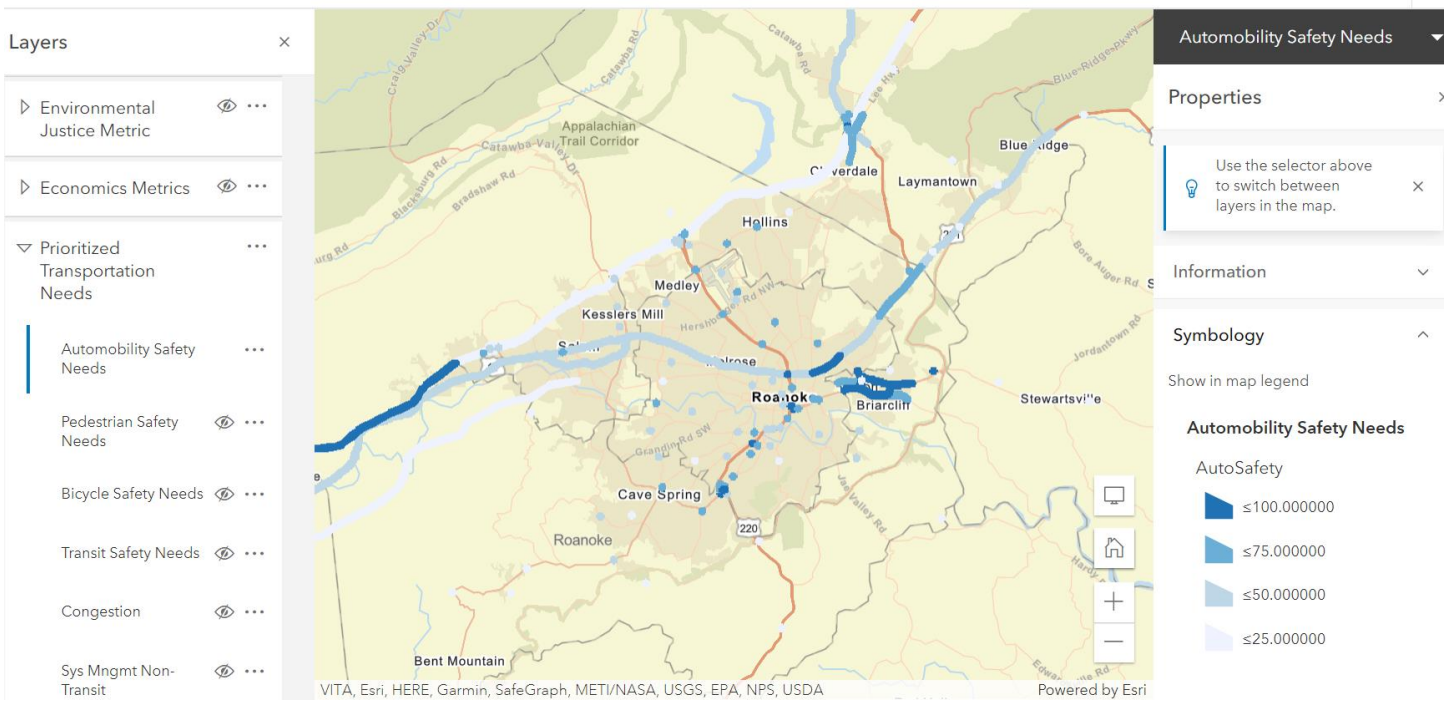
Roanoke Valley Transportation Plan Update

September 2021 Status





Landing page for Online Map, depicting the transportation needs, metrics, and prioritized transportation need layers on the left. In the map are the actual transportation needs collected through the needs assessment process.



Selecting the prioritized transportation needs layer, viewing only automobile safety needs. Need priority is color coded into quartiles based on the distribution of scores for each need type.

STAFF REPORT
TTC Meeting September 9, 2021
SUBJ: Historical Analysis of SMART SCALE in the RVTPO Region

At the January 24, 2019 RVTPO meeting, the Policy Board received an update from staff on the proposed FY20 SMART SCALE funding scenario. During that discussion, staff was directed to perform an in-depth analysis on the performance and scoring of projects during the FY20 SMART SCALE funding cycle. That analysis was presented to the Policy Board at their February 28, 2019 meeting.

Continuing this direction after the FY22 SMART SCALE funding cycle, staff have prepared an updated historical and comparative analysis of FY22 round of applications and the previous three rounds with the intent to explore, address, and answer the following:

1. Changes in SMART SCALE funding in Rounds 1 through 4;
2. Updates to the SMART SCALE screening and scoring processes;
3. Overall performance of the RVTPO region;
4. Impacts of leveraged funds;
5. Patterns for successful and unsuccessful SMART SCALE applications; and
6. Potential strategies for the RVTPO in future SMART SCALE rounds.

The full analysis is provided as an attachment in the agenda packet. The PowerPoint presentation to the RVTPO Policy Board on August 26 follows this staff report.

In preparation for the FY24 round of SMART SCALE applications, staff has updated the [SMART SCALE Candidate Project Request Form](#) for agencies requesting the RVARC or RVTPO to make an application on their behalf. As in Round 4 there is an upload link to send the completed form, which must be submitted no later than **Friday, November 12, 2021**. A copy of the form follows the PowerPoint presentation.

TTC Action: For informational and discussion purposes, no action requested.

SMART SCALE ROUND 4

An analysis of SMART SCALE Round 4 in the RVTPO service area



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SMART SCALE FUNDING IN ROUND 4

DGP Funds available

VDOT District	DGP Funding available	% of total DGP funds	% of state population
Richmond	\$118,716,865	13.8%	15.6%
Hampton Roads	\$115,601,411	13.4%	20.7%
Culpeper	\$112,856,880	13.1%	5.0%
Lynchburg	\$111,952,581	13.0%	4.6%
Northern Virginia	\$106,355,895	12.3%	29.6%
Salem	\$103,311,186	12.0%	8.1%
Bristol	\$71,371,134	8.3%	4.0%
Fredericksburg	\$68,183,300	7.9%	5.8%
Staunton	\$52,991,786	6.2%	6.6%
Total	\$861,341,039	100%	100%

HPPP funds

\$490 million for statewide competition of HPPP-eligible projects

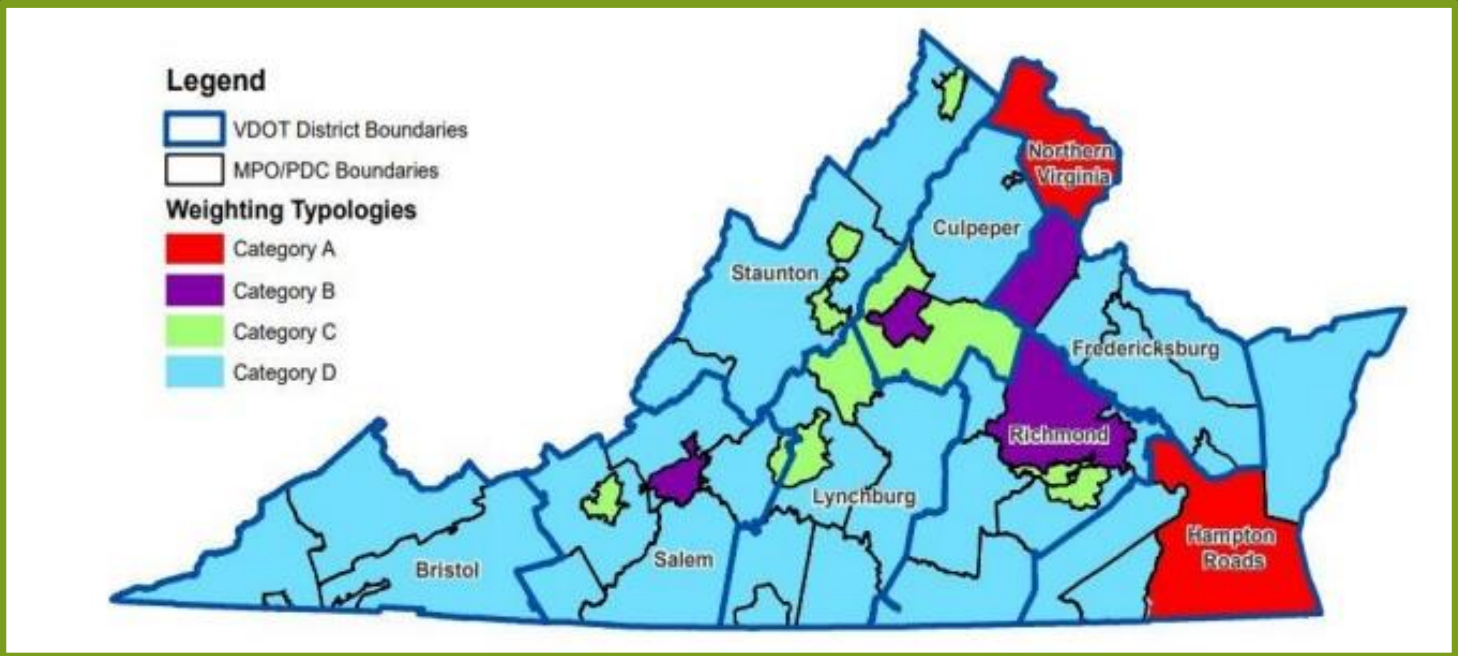
CHANGE IN DGP FUNDS RDS. 1-4

	Round 1 (FY 17)		Round 2 (FY 18)		Round 3 (FY 20)		Round 4 (FY 22)	
<u>District</u>	<u>DGP Available</u>	<u>% of total</u>	<u>DGP Available</u>	<u>% of total</u>	<u>DGP Available</u>	<u>% of total</u>	<u>DGP Available</u>	<u>% of total</u>
Northern Virginia	\$183,055,970	20.7%	\$89,403,058	23.4%	\$98,064,652	23.1%	\$106,355,895	12.3%
Hampton Roads	\$178,033,507	20.2%	\$86,791,093	22.7%	\$93,829,044	19.4%	\$115,601,411	13.4%
Richmond	\$127,411,522	14.4%	\$56,176,746	14.7%	\$67,368,537	15.9%	\$118,716,865	13.8%
Salem	\$84,868,412	9.6%	\$32,633,500	8.5%	\$37,988,254	9.0%	\$103,311,186	12.0%
Staunton	\$68,917,727	7.8%	\$24,270,367	6.4%	\$29,688,863	7.0%	\$52,991,786	6.2%
Fredericksburg	\$60,504,406	6.9%	\$26,409,641	6.9%	\$32,074,604	7.6%	\$68,183,300	7.9%
Culpeper	\$54,872,548	6.2%	\$19,910,405	5.2%	\$24,574,905	5.8%	\$112,856,880	13.1%
Lynchburg	\$63,096,980	7.1%	\$25,297,175	6.6%	\$27,083,771	6.4%	\$111,952,581	13.0%
Bristol	\$62,239,019	7.0%	\$21,210,894	5.6%	\$25,199,298	5.9%	\$71,371,134	8.3%
TOTAL	\$883,000,000	100.0%	\$382,102,879	100.0%	\$435,760,928	100.0%	\$861,341,039	100%

CHANGE IN HPPP FUNDS RDS. 1-4

District	Round 1 (FY 17)		Round 2 (FY 18)		Round 3 (FY 20)		Round 4 (FY 22)	
	HPPP Awarded	% of total	HPPP Awarded	% of total	HPPP Awarded	% of total	HPPP Awarded	% of total
Northern Virginia	\$339,798,423	40.8%	\$287,625,771	43.7%	\$107,099,719	24.6%	\$113,921,809	23.3%
Hampton Roads	\$154,384,282	18.5%	\$150,334,113	22.8%	\$229,669,466	52.8%	\$50,935,147	10.4%
Richmond	\$72,351,951	8.7%	\$90,390,348	13.7%	\$24,850,543	5.7%	\$62,768,311	12.8%
RVTPO area	\$18,310,387	2.2%	\$38,338,799	5.8%	\$10,142,915	2.3%	\$9,090,977	1.9%
Rest of Salem	\$10,262,390	1.2%	\$0	--	\$2,979,888	0.7%	\$29,240,493	6.0%
Staunton	\$36,855,128	4.4%	\$16,434,253	2.5%	\$14,006,257	3.2%	\$27,092,335	5.5%
Fredericksburg	\$144,115,767	17.3%	\$23,528,870	3.6%	\$21,450,744	4.9%	\$40,128,406	8.2%
Culpeper	\$25,559,585	3.1%	\$36,670,555	5.6%	\$7,007,394	1.6%	\$51,307,790	10.5%
Lynchburg	\$22,668,708	2.7%	\$12,630,159	1.9%	\$8,149,545	1.9%	\$38,659,408	7.9%
Bristol	\$8,925,584	1.1%	\$2,817,806	0.4%	\$9,779,759	2.2%	\$16,816,599	3.4%
Multi	--	--	--	--	--	--	\$50,000,000	10.2%
TOTAL	\$833,232,205	100%	\$658,770,674	100%	\$435,136,230	100%	\$489,961,275	100%

WEIGHTING TYPOLOGIES IN VIRGINIA



Category	Congestion mitigation	Economic development	Accessibility	Safety	Environmental quality	Land use
A	45%	5%	15%	5%	10%	20%
B	15%	20%	25%	20%	10%	10%
C	15%	25%	25%	25%	10%	-
D	10%	35%	15%	30%	10%	-

FACTOR MEASURES AND WEIGHTING

Factor	Weighting	Measure	Measure Value	Weighting
Congestion Mitigation	15%	Increase in peak period throughput	Persons	50%
		Reduction in peak period delay	Person hours	50%
Economic Development	20%	Square feet of commercial and industrial space supported	Adjust square feet	60%
		Tons of goods impacted	Daily tons	20%
		Improvement in travel time reliability	Adjusted buffer time index	20%
Accessibility	25%	Increase in access to jobs	Jobs per resident	60%
		Increase in access to jobs for disadvantaged populations	Jobs per resident	20%
		Increase in access to multimodal travel choices	Adjusted users	20%
Safety	20%	Reduction in fatal and injury crashes	EPDO	70%
		Reduction in fatal and injury crash rate	EPDO / 100 M VMT	30%
Environment	10%	Improvement to air quality	Adjusted points	100%
		Impact to natural resources	Impacted acres	
Land Use	10%	Support of transportation-efficient land development	Access x Population/employment density	50%
		Support of future transportation-efficient land development	Access x population/employment density change	50%

ROUND 4 PERFORMANCE

By VDOT district

District	Projects submitted	Projects funded	Funding requested	Amount funded	% funded of total request
RVTPO area	19	15	\$158,174,939	\$75,570,309	47.8%
Virginia	405	167	\$7,296,384,412	\$1,387,462,277	19.0%
Salem	60	29	\$628,876,611	\$142,763,745	22.7%
Bristol	34	17	\$212,172,128	\$90,211,409	42.5%
Culpeper	38	21	\$374,425,459	\$164,211,832	43.9%
Fredericksburg	36	12	\$561,778,592	\$113,315,075	20.2%
Hampton Roads	53	24	\$1,221,258,893	\$168,391,850	13.8%
Lynchburg	30	11	\$488,510,686	\$154,461,736	31.6%
Northern Virginia	31	11	\$2,621,283,673	\$238,380,808	9.1%
Richmond	78	19	\$956,451,633	\$186,657,723	19.5%
Staunton	45	22	\$231,626,737	\$79,068,098	34.1%
Multi	1	1	\$50,000,000	\$50,000,000	100.0%

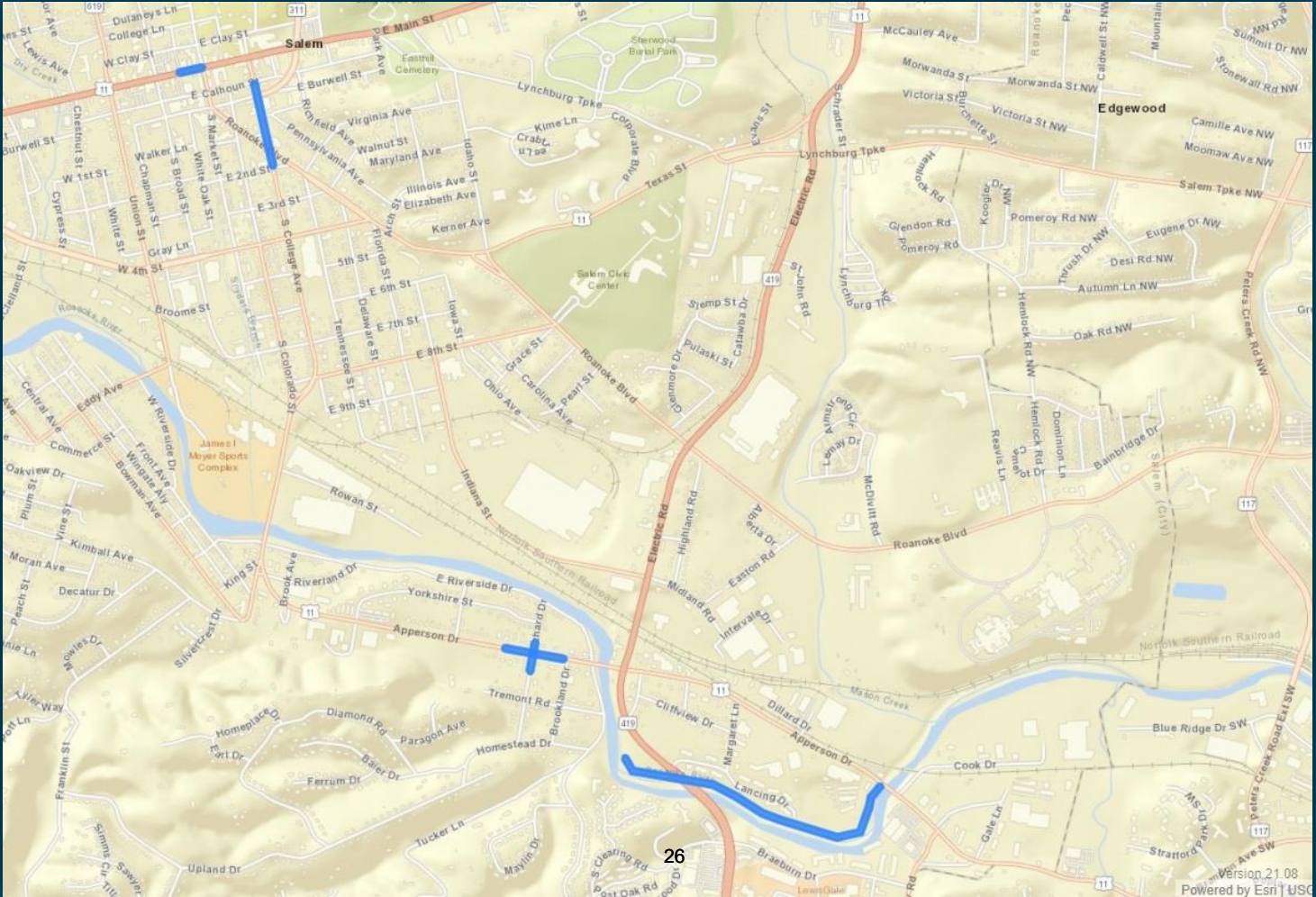
By RVTPO locality

Organization	Projects submitted	Funding requested	Projects funded	Funding allocated	% of request
Botetourt County	2	\$19,035,828	1	\$7,623,347	40.0%
Roanoke County	4	\$43,294,893	3	\$24,042,769	55.5%
Roanoke City	4	\$15,724,159	4	\$15,724,159	100.0%
Salem City	4	\$11,689,276	4	\$11,689,276	100.0%
Vinton Town	1	\$7,399,781	1	\$7,399,781	100.0%
Valley Metro	0	\$0	0	\$0	---
RVARC ⁺	1	\$28,225,261	0	\$0	0.0%
RVTPO	3	\$32,805,740	2	\$9,090,976	27.7%
TOTAL	19	\$158,174,939	15	\$75,570,309	47.8%

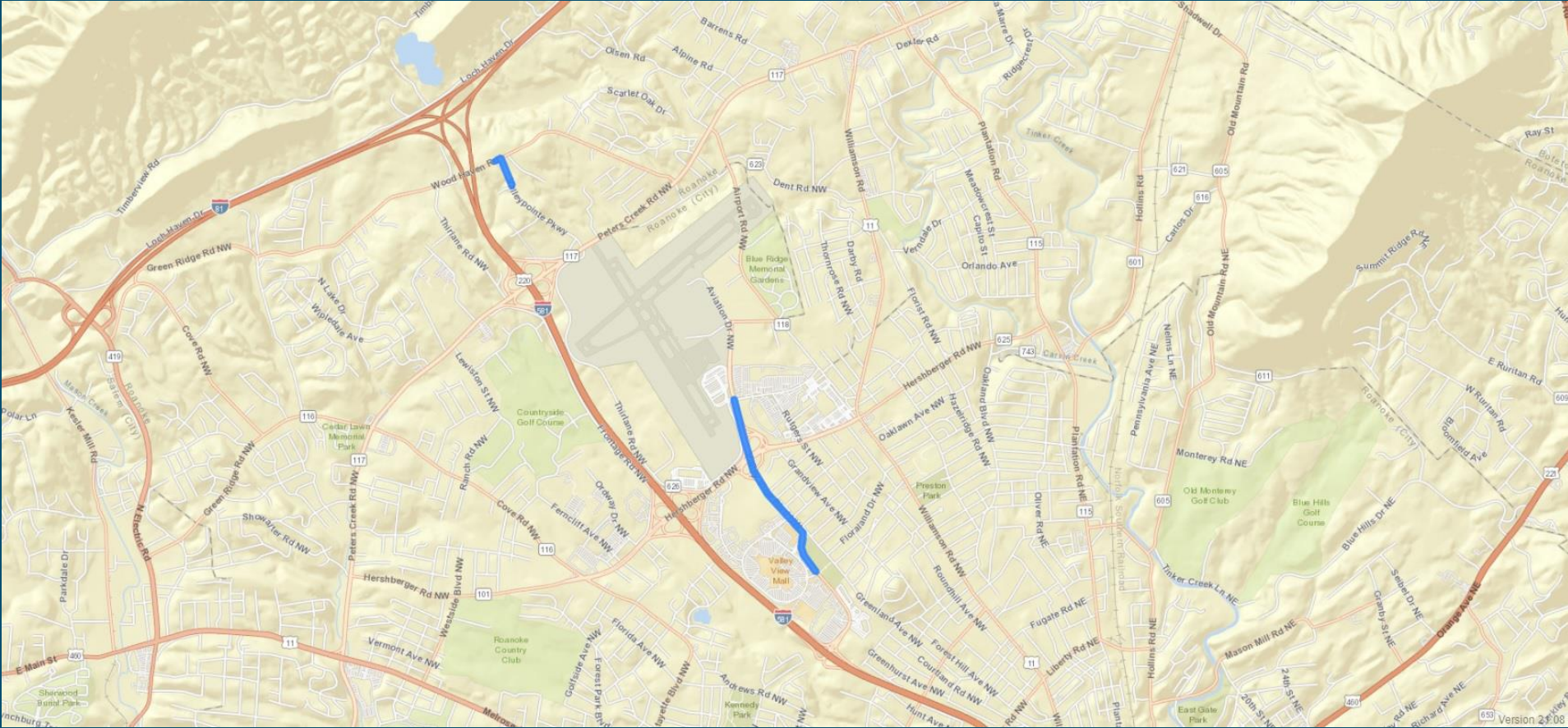
WHAT GOT FUNDED?

Organization	Project title	Total project cost	SS funding	DGP/HPPP
Botetourt County	US 460 / Laymantown Rd Intersection Improvement	\$7,623,347	\$7,623,347	DGP
Salem	Downtown Salem - College Avenue Improvements	\$3,017,132	\$2,469,332	DGP
	Downtown Salem – Market Street Intersection Improvements	\$2,311,825	\$2,311,825	DGP
	Apperson Drive (Rt 11) and Orchard Intersection Improvements	\$2,387,558	\$2,387,558	DGP
	Roanoke River Greenway Golden Spike	\$4,520,561	\$4,520,561	DGP
RVTPPO	Route 460 Intersections from Carson Rd. to Huntridge Rd.	\$2,766,831	\$2,339,028	HPPP
	Route 460 at West Ruritan Road Intersection Improvements	\$7,537,497	\$6,751,948	HPPP
Roanoke City	Route 460 (Orange Ave) Improvements Seibel Dr/ Hickory Woods	\$436,731	\$436,731	DGP
	Valley View Blvd / Aviation Drive Pedestrian Improvements	\$7,178,491	\$5,928,491	DGP
	Route 460 (Orange Ave) Improvements near Blue Hills Drive	\$5,580,213	\$4,903,493	DGP
	Route 460 (Orange Ave) Improvements at King Street	\$5,005,724	\$4,455,444	DGP
Roanoke County	Starkey Road/Buck Mountain Road Intersection Improvements	\$5,841,480	\$2,583,365	DGP
	Valleypointe Parkway Realignment	\$9,837,072	\$7,337,072	DGP
	Route 419 Streetscape Improvements, Phase 2	\$18,469,482	\$14,122,332	DGP
Vinton	Walnut Avenue Corridor Improvements Phase 3 Project	\$7,339,781	\$7,399,781	DGP

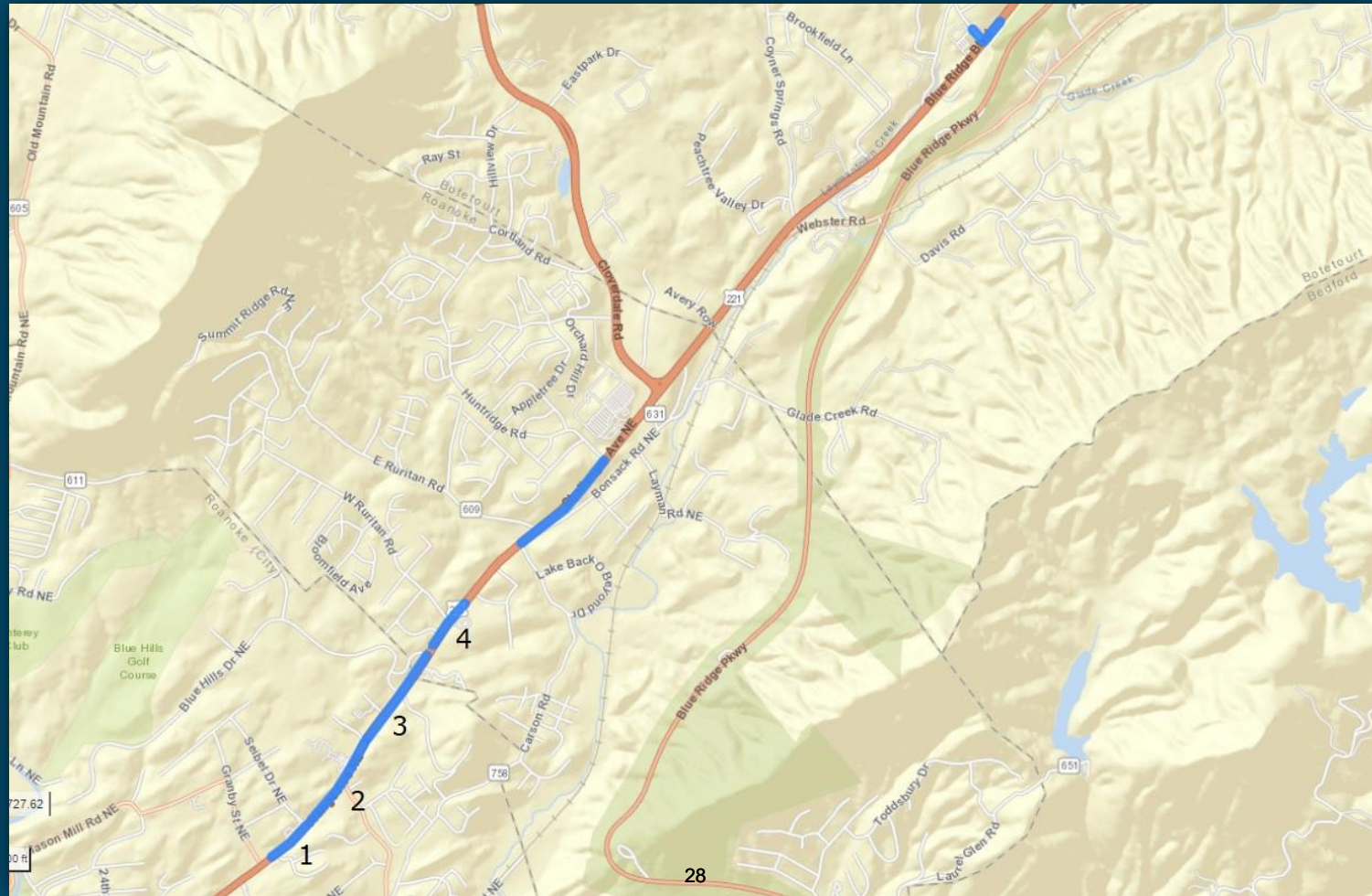
TRANSPORTATION ISSUES BEING ADDRESSED BY SMART SCALE ROUND 4



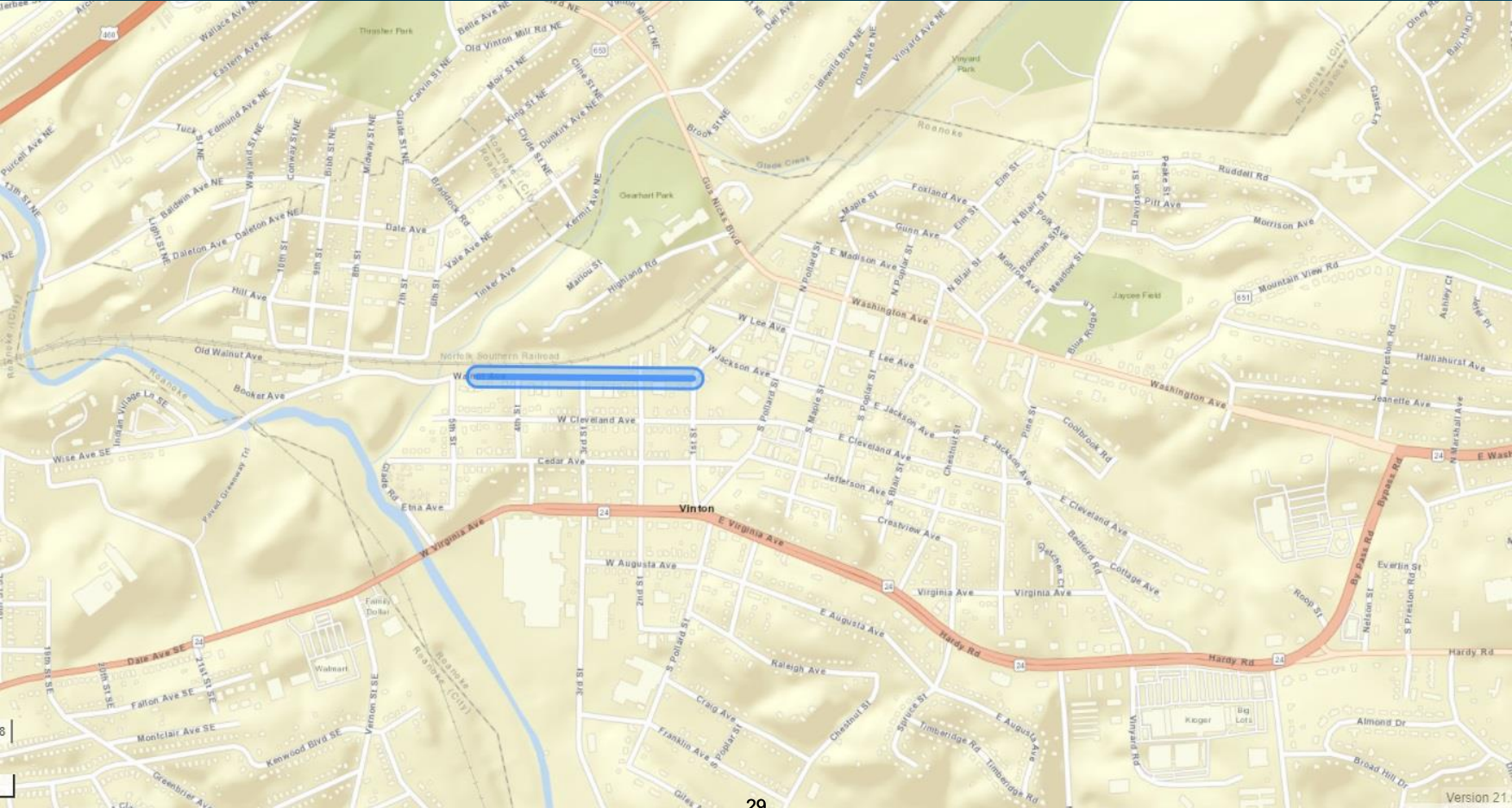
TRANSPORTATION ISSUES BEING ADDRESSED BY SMART SCALE ROUND 4



TRANSPORTATION ISSUES BEING ADDRESSED BY SMART SCALE ROUND 4



TRANSPORTATION ISSUES BEING ADDRESSED BY SMART SCALE ROUND 4



TRANSPORTATION ISSUES BEING ADDRESSED BY SMART SCALE ROUND 4



IMPACT OF SMART SCALE REQUEST

SMART SCALE scoring formula

$$\text{SMART SCALE score} = \frac{\text{Benefit score}}{\left(\frac{\text{SMART SCALE request}}{\$10,000,000} \right)}$$

Importance of low request

- In the RVTPO area, the average request for funded project was \$5 million
 - Average for unfunded: \$20 million

- In the Salem District, only three of the 20 most expensive projects were funded.
 - Only two of the 20 highest requests were funded.
- In Virginia, the two most expensive funded projects requested just 24% of the total project cost.

SMART SCALE SCORE TABLE

Smart Scale Request (\$ million)

Project Benefit Score

	\$27	\$26	\$25	\$24	\$23	\$22	\$21	\$20	\$19	\$18	\$17	\$16	\$15	\$14	\$13	\$12	\$11	\$10	\$9	\$8	\$7	\$6	\$5	\$4	\$3	\$2	\$1
1.0	0.37	0.38	0.40	0.42	0.43	0.45	0.48	0.50	0.53	0.56	0.59	0.63	0.67	0.71	0.77	0.83	0.91	1.00	1.11	1.25	1.43	1.67	2.00	2.50	3.33	5.00	10.00
1.5	0.56	0.58	0.60	0.63	0.65	0.68	0.71	0.75	0.79	0.83	0.88	0.94	1.00	1.07	1.15	1.25	1.36	1.50	1.67	1.88	2.14	2.50	3.00	3.75	5.00	7.50	15.00
2.0	0.74	0.77	0.80	0.83	0.87	0.91	0.95	1.00	1.05	1.11	1.18	1.25	1.33	1.43	1.54	1.67	1.82	2.00	2.22	2.50	2.86	3.33	4.00	5.00	6.67	10.00	20.00
2.5	0.93	0.96	1.00	1.04	1.09	1.14	1.19	1.25	1.32	1.39	1.47	1.56	1.67	1.79	1.92	2.08	2.27	2.50	2.78	3.13	3.57	4.17	5.00	6.25	8.33	12.50	25.00
3.0	1.11	1.15	1.20	1.25	1.30	1.36	1.43	1.50	1.58	1.67	1.76	1.88	2.00	2.14	2.31	2.50	2.73	3.00	3.33	3.75	4.29	5.00	6.00	7.50	10.00	15.00	30.00
3.5	1.30	1.35	1.40	1.46	1.52	1.59	1.67	1.75	1.84	1.94	2.06	2.19	2.33	2.50	2.69	2.92	3.18	3.50	3.89	4.38	5.00	5.83	7.00	8.75	11.67	17.50	35.00
4.0	1.48	1.54	1.60	1.67	1.74	1.82	1.90	2.00	2.11	2.22	2.35	2.50	2.67	2.86	3.08	3.33	3.64	4.00	4.44	5.00	5.71	6.67	8.00	10.00	13.33	20.00	40.00
4.5	1.67	1.73	1.80	1.88	1.96	2.05	2.14	2.25	2.37	2.50	2.65	2.81	3.00	3.21	3.46	3.75	4.09	4.50	5.00	5.63	6.43	7.50	9.00	11.25	15.00	22.50	45.00
5.0	1.85	1.92	2.00	2.08	2.17	2.27	2.38	2.50	2.63	2.78	2.94	3.13	3.33	3.57	3.85	4.17	4.55	5.00	5.56	6.25	7.14	8.33	10.00	12.50	16.67	25.00	50.00
5.5	2.04	2.12	2.20	2.29	2.39	2.50	2.62	2.75	2.89	3.06	3.24	3.44	3.67	3.93	4.23	4.58	5.00	4.58	6.11	6.88	7.86	9.17	11.00	13.75	18.33	27.50	55.00
6.0	2.22	2.31	2.40	2.50	2.61	2.73	2.86	3.00	3.16	3.33	3.53	3.75	4.00	4.29	4.62	5.00	5.45	6.00	6.67	7.50	8.57	10.00	12.00	15.00	20.00	30.00	60.00
6.5	2.41	2.50	2.60	2.71	2.83	2.95	3.10	3.25	3.42	3.61	3.82	4.06	4.33	4.64	5.00	5.42	5.91	6.50	7.22	8.13	9.29	10.83	13.00	16.25	21.67	32.50	65.00
7.0	2.59	2.69	2.80	2.92	3.04	3.18	3.33	3.50	3.68	3.89	4.12	4.38	4.67	5.00	5.38	5.83	6.36	7.00	7.78	8.75	10.00	11.67	14.00	17.50	23.33	35.00	70.00
7.5	2.78	2.88	3.00	3.13	3.26	3.41	3.57	3.75	3.95	4.17	4.41	4.69	5.00	5.36	5.77	6.25	6.82	7.50	8.33	9.38	10.71	12.50	15.00	18.75	25.00	37.50	75.00
8.0	2.96	3.08	3.20	3.33	3.48	3.64	3.81	4.00	4.21	4.44	4.71	5.00	5.33	5.71	6.15	6.67	7.27	8.00	8.89	10.00	11.43	13.33	16.00	20.00	26.67	40.00	80.00
8.5	3.15	3.27	3.40	3.54	3.70	3.86	4.05	4.25	4.47	4.72	5.00	5.31	5.67	6.07	6.54	7.08	7.73	7.08	9.44	10.63	12.14	14.17	17.00	21.25	28.33	42.50	85.00
9.0	3.33	3.46	3.60	3.75	3.91	4.09	4.29	4.50	4.74	5.00	5.29	5.63	6.00	6.43	6.92	7.50	8.18	9.00	10.00	11.25	12.86	15.00	18.00	22.50	30.00	45.00	90.00
9.5	3.52	3.65	3.80	3.96	4.13	4.32	4.52	4.75	5.00	5.28	5.59	5.94	6.33	6.79	7.31	7.92	8.64	9.50	10.56	11.88	13.57	15.83	19.00	23.75	31.67	47.50	95.00
10.0	3.70	3.85	4.00	4.17	4.35	4.55	4.76	5.00	5.26	5.56	5.88	6.25	6.67	7.14	7.69	8.33	9.09	10.00	11.11	12.50	14.29	16.67	20.00	25.00	33.33	50.00	100.00
10.5	3.89	4.04	4.20	4.38	4.57	4.77	5.00	5.25	5.53	5.83	6.18	6.56	7.00	7.50	8.08	8.75	9.55	10.50	11.67	13.13	15.00	17.50	21.00	26.25	35.00	52.50	105.00
11.0	4.07	4.23	4.40	4.58	4.78	5.00	5.24	5.50	5.79	6.11	6.47	6.88	7.33	7.86	8.46	9.17	10.00	11.00	12.22	13.75	15.71	18.33	22.00	27.50	36.67	55.00	110.00
11.5	4.26	4.42	4.60	4.79	5.00	5.23	5.48	5.75	6.05	6.39	6.76	7.19	7.67	8.21	8.85	9.58	10.45	9.58	12.78	14.38	16.43	19.17	23.00	28.75	38.33	57.50	115.00
12.0	4.44	4.62	4.80	5.00	5.22	5.45	5.71	6.00	6.32	6.67	7.06	7.50	8.00	8.57	9.23	10.00	10.91	12.00	13.33	15.00	17.14	20.00	24.00	30.00	40.00	60.00	120.00
12.5	4.63	4.81	5.00	5.21	5.43	5.68	5.95	6.25	6.58	6.94	7.35	7.81	8.33	8.93	9.62	10.42	11.36	12.50	13.89	15.63	17.86	20.83	25.00	31.25	41.67	62.50	125.00

ANALYSIS OF ROUND 4 UNSUCCESSFUL PROJECTS

Applicant	Project	Benefit Score	Total Project Cost	SMART SCALE request	Provided Leverage	SS Score	Maximum Request	Minimum Leverage Needed	Min. leverage - provided	New SS score	Funding program
RVTPO	Orange Ave Improvements	9.48	\$23,714,763	\$23,714,763	\$0	4.00	\$18,846,919	\$4,867,844	\$4,867,844	5.03	HPP
Roanoke County	Rt 460 / Alt Rt 220 Intersection Improvements	2.67	\$21,796,984	\$19,252,124	\$2,544,860	1.39	\$8,207,808	\$13,589,176	\$11,044,316	3.25	DGP
RVARC	I-581 Exit 2 Interchange Improvements	3.69	\$28,225,261	\$28,225,261	\$0	1.31	\$7,935,484	\$20,289,777	\$20,289,777	4.65	HPP
Botetourt County	Rt 220 Superstreet Improvements	1.16	\$14,412,482	\$11,412,482	\$3,000,000	1.01	\$4,249,085	\$10,163,397	\$7,163,397	2.73	DGP

ANALYSIS OF LEVERAGED FUNDS IN ROUND 4 FOR SUCCESSFUL PROJECTS

Applicant	Project	Benefit Score	Total project cost	SS funding request	STBG request	Leverage amount	SS score	Maximum SS request	Minimum required leverage	Min. leverage - provided	New SS score	Funding Program
RVTPO	Route 460 Intersections (Carson Rd. to Huntridge Rd.)	2.60	\$2,766,831	\$2,339,028	\$427,803 leverage	\$427,803	11.12	\$2,766,831	\$0	(\$427,803)	9.4	HPP
RVTPO	Route 460 at W. Ruritan Rd Improvements	3.77	\$7,537,497	\$6,751,948	\$785,549 leverage	\$785,549	5.59	\$7,537,497	\$0	(\$785,549)	5.00	HPP
Roanoke County	Route 419 Streetscape Improvements, Phase 2	7.65	\$18,469,482	\$14,122,332	\$1,505,438 leverage	\$4,347,150	5.42	\$18,469,482	\$0	(\$4,347,150)	4.09	DGP
Roanoke County	Valleypointe Parkway Realignment	6.64	\$9,837,072	\$7,337,072	\$5,352,108 fully fund	\$2,500,000	9.05	\$9,837,072	\$0	(\$2,500,000)	6.75	DGP
Roanoke County	Starkey Rd / Buck Mtn Rd Intersection Improvements	2.56	\$5,841,480	\$2,582,365	\$2,098,115 to supplement \$1.6 M revenue sharing, together fully funding project	\$3,258,115	9.91	\$5,841,480	\$0	(\$3,258,115)	4.38	DGP
Roanoke City	Route 460 Improvements near Blue Hills Drive	4.57	\$5,580,213	\$4,903,493	\$676,720 leverage	\$676,720	9.32	\$5,580,213	\$0	(\$676,720)	8.19	DGP
Roanoke City	Route 460 Improvements at King Street	3.56	\$5,005,724	\$4,455,444	\$550,280 leverage	\$550,280	7.99	\$5,005,724	\$0	(\$550,280)	7.11	DGP
Roanoke City	Valley View / Aviation Pedestrian Improvements	5.86	\$7,178,491	\$5,928,491	\$2,513,437 to fully fund	\$1,250,000	9.88	\$7,178,491	\$0	(\$1,250,000)	8.16	DGP
Total		--	\$62,216,790	\$48,420,173		\$13,795,617	--	\$62,216,790	\$0	(\$13,795,452)	--	--

HYPOTHETICAL LEVERAGE CALCULATIONS WITH ROUND 3 FUNDING LEVELS

Applicant	Project	Benefit Score	Total project cost	SS funding request	STBG request	Leverage amount	SS score	Maximum SS request	Minimum required leverage	Min. leverage - provided	New SS score	Funding Program
RVTPO	Route 460 Intersections (Carson Rd. to Huntridge Rd.)	2.6	\$2,766,831	\$2,339,028	\$427,803 leverage	\$427,803	11.12	\$2,766,831	\$0	(\$427,803)	9.40	HPPP
RVTPO	Route 460 at W. Ruritan Rd Improvements	3.77	\$7,537,497	\$6,751,948	\$785,549 leverage	\$785,549	5.59	\$7,537,497	\$0	(\$785,549)	5.00	HPPP
Roanoke County	Route 419 Streetscape Improvements, Phase 2	7.65	\$18,469,482	\$14,122,332	\$1,505,438 leverage	\$4,347,150	5.42	\$10,479,452	\$7,990,030	\$3,642,880	7.30	HPPP
Roanoke County	Valleypointe Parkway Realignment	6.64	\$9,837,072	\$7,337,072	\$5,352,108 fully fund	\$2,500,000	9.05	\$8,300,000	\$1,537,072	(\$962,928)	7.99	DGP
Roanoke County	Starkey Rd / Buck Mtn Rd Intersection Improvements	2.56	\$5,841,480	\$2,582,365	\$2,098,115 to supplement \$1.6 M revenue sharing, together fully funding project	\$3,258,115	9.91	\$2,825,608	\$3,015,872	(\$242,243)	9.06	DGP
Roanoke City	Route 460 Improvements near Blue Hills Drive	4.57	\$5,580,213	\$4,903,493	\$676,720 leverage	\$676,720	9.32	\$5,044,150	\$536,063	(\$140,657)	9.06	DGP
Roanoke City	Route 460 Improvements at King Street	3.56	\$5,005,724	\$4,455,444	\$550,280 leverage	\$550,280	7.99	\$4,876,712	\$129,012	(\$421,268)	7.30	HPPP
Roanoke City	Valley View / Aviation Pedestrian Improvements	5.86	\$7,178,491	\$5,928,491	\$2,513,437 to fully fund	\$1,250,000	9.88	\$6,467,992	\$710,499	(\$539,501)	9.06	DGP
Total		--	\$62,216,790	\$48,420,173		\$13,795,617	--	\$35,010,819	\$16,901,643	\$122,931	--	--

RVTPO AREA PATTERNS IN ROUND 4

- Successful Projects
 - Lower cost requests
 - High benefit score in economic development support (square feet of commercial and industrial space supported) and support of transportation-efficient land development (population and employment density)
- Unsuccessful Projects
 - High cost, high request
 - Low benefit scores in target factors

STRATEGIES FOR CONSIDERATION

- Pursue projects with greater potential benefit score or lower funding request
 - Improve benefit score could be difficult (changing the project)
- Lower request:
 - Change project so it costs less overall (could impact benefit score)
 - Add leverage to high-cost projects so the request is lower

STRATEGIES FOR CONSIDERATION

- Project sponsors may refine leverage strategy if assuming levels of funding similar to Round 4
- DGP projects submitted with less leverage are still competitive (More Round 4 funding dollars were available per DGP project)
 - 45 projects in Salem district competed for \$103,311,186 of DGP
 - 294 projects in Virginia competed for \$489,961,274 of HPPP
- 1. Leverage funds are primarily utilized on coveted higher cost, lower benefit projects competing for HPPP funds in order to boost lower scores and be more competitive statewide.
- 2. Localities apply for higher-cost projects so they are eligible for DGP (lower competition). The HPPP-eligible projects have a lower cost (and lower request), which make them more competitive statewide.

NEXT STEPS

- Project sponsors consider which projects are best for SMART SCALE Round 5 and consider possible leverage utilization
- Email analysis to the Technical Committee
- Sept. 24 - RVTPO receives applications for STBG funding
- Nov. 12 - RVTPO and RVARC receive requests from member organizations for SMART SCALE 5 project submittal (max. 4 - RVTPO and 4 - RVARC)
- January/February - RVTPO and RVARC select projects to apply for in SMART SCALE Round 5
- March 1 - SMART SCALE Round 5 pre-application portal opens

Candidate Project Request Form for RVARC and RVTPO SMART SCALE Applications

Upload the completed Project Request Form through this link:
<https://rvarc.sharefile.com/r-rb049008770d348cfba89439732b134a7>
Form to be submitted no later than Friday, November 12, 2021

Date Submitted:

Submitter's Name:

Organization:

Submitter's Email and Phone #:

Project Title:

Project Description:

Project Cost Estimate:

1. Is this project in the Roanoke Valley Transportation Plan?

___ Yes - Please reference project/page #:

___ No - If no, please state the project's purpose and need.

If no, why is it more important for the region to pursue this project now rather than other projects in the Plan?

2. Is this project in the Roanoke Urbanized Area (RVTPO Service Area)? No Yes

If so, which organization are you requesting to submit the application? RVTPO RVARC

3. Is this project in the Rural portion of the Roanoke Valley-Alleghany Region? No Yes

4. In what way does this project serve a Corridor of Statewide Significance or Regional Network?

Please identify reference from VTrans2040 Needs Assessment

(<https://icfbometrics.blob.core.windows.net/vtrans/assets/docs/VTrans2040-Needs-Assessment.pdf>).

5. Is this project in the RVARC's Regional Comprehensive Economic Development Strategy (CEDS)?

If yes, list page #.

If no, please state project's purpose & need.

If no, why is it more important for the region to pursue this project now rather than other projects in the CEDS?

6. Has this project been submitted for previous rounds of SMART SCALE? If so, which round(s)?

7. Has this project had funds previously committed to it (STBG, TA, Local funds, Other)?

8. Is it anticipated that new or additional funds will be committed by the sponsor organization or requested from the RVTPO?

9. For locality applicants only, is this project listed as a priority in the comprehensive plan?

Yes - Please reference project/page #:

No - If no, please state the project's purpose and need.

If no, why is it more important for the region to pursue this project now rather than other projects in the Plan?