



## Richmond Regional Transportation Planning Organization (RRTPO) Policy Board



### NOTES

This meeting is open to the public. Members of the public are invited to attend virtually. Please alert the RRTPO at [RRTPO@PlanRVA.org](mailto:RRTPO@PlanRVA.org) if electronic transmission of this meeting fails for the public. Please refer to our [Statement Regarding Virtual Meeting Participation by Members of the Public](#) for more information.

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Meetings are also live streamed and archived on our YouTube Channel at [Plan RVA - YouTube](#).

Members of the public are invited to submit public comments either verbally or in writing. Written comments can be submitted through the Q&A/Chat function on Zoom by email to [RRTPO@PlanRVA.org](mailto:RRTPO@PlanRVA.org). Written comments will be read aloud or summarized during the meeting when possible and will be included in the meeting minutes. Verbal comments will be taken during the Public Comment Period on the agenda. Please through the Q&A/Chat functions on Zoom if you would like to comment. When acknowledged by the Chairman, please clearly state your name so that it may be recorded in the meeting minutes.

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*PlanRVA is where the region comes together to look ahead. Established in 1969, PlanRVA promotes cooperation across the region's nine localities and supports programs and organizations like the Richmond Regional Transportation Planning Organization, Central Virginia Transportation Authority, the Emergency Management Alliance of Central Virginia, Lower Chickahominy Watershed Collective and Don't Trash Central Virginia.*

# AGENDA

## **RICHMOND REGIONAL TRANSPORTATION PLANNING ORGANIZATION POLICY BOARD**

**Thursday, July 6, 2023, 9:30 a.m.**

**PlanRVA Boardroom, 424 Hull Street, Suite 300, Richmond, VA 23224 and via Zoom**

If you wish to participate in this meeting virtually, please register via Zoom at the following link: [https://planrva-org.zoom.us/webinar/register/WN\\_PdJHm5MzSeazezUFI87oJg](https://planrva-org.zoom.us/webinar/register/WN_PdJHm5MzSeazezUFI87oJg)

**Call to Order** (*Peterson*)

**Pledge of Allegiance** (*Peterson*)

**Welcome and Introductions** (*Peterson*)

**Certification of a Quorum** (*Firestone*)

### **A. ADMINISTRATION**

**1. Confirmation of Member Participation from a Remote Location**

(*as needed*) (*Peterson*)

**Action requested (if there are member requests to participate remotely): motion to confirm that the Chair's decision to approve or disapprove the member(s) request to participate from a remote location was in conformance with the RRTPO Policy for Remote Participation of Members; and, the voice of the remotely participating member(s) can be heard by all persons at the primary or central meeting location (voice vote).**

**2. Consideration of Amendments to the Meeting Agenda**

(*Peterson*)

**3. RRTPO Chair's Report**

(*Peterson/10 minutes*)

**a. Locality Highlight – Town of Ashland**

**4. Open Public Comment Period**

(*Peterson/5 minutes*)

**5. [Approval of May 18 and June 1, 2023, RRTPO Policy Board Meeting Minutes](#) – page 5**

(*Peterson*)

**Action requested: motion to approve minutes as presented (voice vote).**

6. **Election of FY24 Chair and Vice-Chair** – page 17

*(Peterson)*

**Action requested: motion to elect RRTPO Policy Board FY24 Chair and Vice Chair to serve from July 1, 2023, through June 30, 2024 (voice vote).**

7. **Revision to FY24 Meeting Schedule** – page 18

*(Parsons)*

**Action requested: motion to approve revision to FY24 meeting schedule to remove October 5, 2023, meeting (voice vote).**

8. **Consent Agenda**

*(Parsons)*

**Action requested: motion to approve consent agenda as presented (voice vote).**

a. **RRTPO Work Status and Financial Reports – March and May 2023** – page 20  
**Information item.**

b. **FY21 – FY24 TIP Amendment: VDOT Request - #SMART18 - Richmond-Henrico Turnpike - South Segment** – page 40

**Consent action: approval of request to amend the #SMART18 - Richmond-Henrico Turnpike - South Segment project.**

**B. NEW BUSINESS**

1. **SE Data Approval** – page 44

*(Aryal/15 minutes)*

**Action requested: motion to approve the SE Data as presented (voice vote).**

2. **West Broad Street BRT Corridor Analysis**

*(Motta/15 minutes)*

**Action requested: motion to adopt the West Broad Street BRT Corridor Analysis (voice vote).**

3. **FY 2024 UPWP Amendment** – page 122

*(Parsons/5 minutes)*

**Action requested: motion to approve two amendments to the FY2024 UPWP (roll call vote).**

4. **Agreement with GRTC for the Utilization of Pass-through FTA and Commonwealth Transit Funds in the Richmond Regional Transportation Planning Organization area for fiscal year 2024** – page 162

*(Parsons/5 minutes)*

**Action requested: motion to approve the agreement (roll call vote).**

5. **FY21 – FY24 TIP Amendment: City of Richmond Request – Main Street Station Improvements** – page 172

*(Busching/5 minutes)*

**Action requested: motion to approve request to amend the FY21 – FY24 Transportation Improvement Program (TIP) to add the COR001 – Main Street Station Improvements project (roll call vote).**

6. **FY21 – FY24 TIP Amendment: City of Richmond Request – North-South Bus Rapid Transit Line** – page 174  
(Busching/5 minutes)  
**Action requested: motion to approve request to amend the FY21 – FY24 Transportation Improvement Program (TIP) to add the COR002 - North South Bus Rapid Transit Line project (roll call vote).**

#### **C. AGENCY AND COMMITTEE REPORTS**

1. **Transportation Agency Updates**  
(15 minutes)
  - a. **CVTA** – Parsons – page 177
  - b. **GRTC** – Adams
  - c. **RMTA** – Dean
  - d. **DRPT** – Dubinsky
  - e. **VDOT** – Totten

#### **D. OTHER BUSINESS**

1. **Future Meeting Topics** – page 178  
(Chairman/5 minutes)
2. **RRTPO Member Comments**  
(Chairman/5 minutes)
3. **Next Meeting: September 7, 2023, 9:30 a.m., PlanRVA Boardroom, 424 Hull Street, Suite 300, Richmond, VA 23224 and via Zoom**  
(Chairman)

#### **E. ADJOURNMENT**

**RICHMOND REGIONAL TRANSPORTATION PLANNING ORGANIZATION  
POLICY BOARD MEETING MINUTES  
PlanRVA James River Boardroom and via Zoom  
Thursday, May 18, 2023 - 9:30 a.m.**

**MEMBERS and ALTERNATES (A) PRESENT (X), VIRTUAL (V):**

<b>VOTING MEMBERS</b>					
<b>Town of Ashland</b>		<b>Charles City County</b>		<b>Chesterfield County</b>	
John H. Hodges	X	Byron M. Adkins, Sr.	X	Kevin P. Carroll	X
Anita Barnhart (A)		William Coad (A)		James M. Holland	X
				Christopher Winslow	
<b>Goochland County</b>		<b>Hanover County</b>		Mark S. Miller (A)	
Susan F. Lascolette		Sean M. Davis			
John L. Lumpkins Jr., <b>FY23 Chair</b>	X	W. Canova Peterson IV, <b>FY23 Vice Chair</b>	X	<b>Henrico County</b>	
Vacant (A)		Faye O. Prichard (A)		Patricia S. O'Bannon	V
Vacant (A)		Vacant (A)		Frank J. Thornton	X
				Thomas Branin (A)	
<b>New Kent County</b>		<b>Powhatan County</b>		Vacant (A)	
Patricia A. Paige	X	David T. Williams	X		
C. Thomas Tiller Jr.		Karen Carmack		<b>City of Richmond</b>	
Thomas W. Evelyn (A)		Vacant (A)		Andreas D. Addison	X
Vacant (A)		Vacant (A)		Katherine L. Jordan	
				Stephanie A. Lynch	
<b>Capital Region Airport Commission</b>		<b>GRTC Transit System</b>		Cynthia I. Newbille	X
John B. Rutledge		Sheryl Adams		Michael J. Jones (A)	
Vacant (A)		Adrienne Torres (A)	X	Kristen Nye (A)	
				Ellen F. Robertson (A)	
<b>RIC Metropolitan Transp. Authority (RMTA)</b>		<b>Secretary of Trans. Designee</b>			
Joi Taylor Dean	X	VDOT, Dale Totten			
Vacant (A)		VDOT, Mark E. Riblett (A)	X		
<b>NON-VOTING MEMBERS</b>					
<b>CTAC</b>		<b>DRPT</b>		<b>Federal Highway Administration (FHWA)</b>	
Lisa M. Guthrie	X	Tiffany T. Dubinsky	X	Thomas L. Nelson Jr.	
Sera Erickson (A)	X	Grant Sparks (A)		Ivan Rucker (A)	
<b>Federal Transit Administration (FTA)</b>		<b>RideFinders</b>		<b>VA Dept. of Aviation (DOAV)</b>	
Daniel Koenig (Liaison)		Von S. Tisdale	X	Rusty Harrington)	
Vacant (A)		Cherika N. Ruffin (A)			

<b>Other Community Transportation Advisory Committee Members Present:</b>					
Robert Basham	V	Upton Martin	X	Tony Williams	V
John Easter	X	Michael Testerman	X		

**Ashland | Charles City | Chesterfield | Goochland | Hanover | Henrico | New Kent | Powhatan | Richmond**

PlanRVA, 424 Hull Street, Suite 300, Richmond, VA 23224

**RRTPO Policy Board Meeting Minutes – page 1**

*The technology used for the RRTPO Policy Board meeting was a web-hosted service created by Zoom and YouTube Live Streaming and was open and accessible for participation by members of the public. A recording of this meeting is available on our [Plan RVA YouTube Channel](#).*

*Virtual participation of this meeting by members of the committee is authorized under the City of Richmond Res. No. 2020-R025, - declaration of a local emergency due to the potential spread of COVID-19, adopted March 16, 2020. The resolution is available [here](#).*

### **Call to Order**

The Richmond Regional Transportation Planning Organization (RRTPO) Policy Board Chair, John L. Lumpkins, Jr., presided and called the May 18, 2023, RRTPO Policy Board meeting to order at 9:34 a.m.

### **Pledge of Allegiance**

The Pledge of Allegiance was led by Vice Chair Peterson.

### **Welcome and Introductions**

Chair Lumpkins welcomed all the attendees.

### **Certification of a Quorum**

Janice Firestone, Program Manager, took attendance and certified that a quorum was present in-person.

## **A. ADMINISTRATION**

### **1. Confirmation of Member Participation from a Remote Location**

Chair Lumpkins announced his approval of the request of Patricia O'Bannon to participate remotely in the meeting.

On motion by Frank Thornton, seconded by Cynthia I. Newbille, the RRTPO Policy Board voted unanimously to confirm that the Chair's decision to approve the member's request to participate from a remote location was in conformance with the RRTPO Policy for Remote Participation of Members; and, the voice of the remotely participating member could be heard by all persons at the primary or central meeting location. (voice vote).

The quorum was updated to show the following: Patricia O'Bannon was present remotely from her home in Henrico County, Virginia. Reason: a personal matter, specifically a scheduling conflict that prevents in-person attendance at PlanRVA.

### **2. Consideration of Amendments to the Meeting Agenda**

Chair Lumpkins announced a new request from VDOT for a TIP amendment (Item B.-4.) and a change in order to hear agency reports after other business.

On motion by W. Canova Peterson, seconded by David Williams, the members of the RRTPO Policy Board voted to approve the agenda as amended (voice vote).

### **3. RRTPO Chair's Report**

#### **a. Locality Highlight – Goochland County**

Vic Carpenter, County Administrator, gave a presentation on Goochland County. He reported on the population and other statistics, growth and economic development,



#### 4. Open Public Comment Period

There were no requests to address the RRTPO Policy Board.

#### 5. Approval of April 6, 2023, RRTPO Policy Board Meeting Minutes

On motion by David T. Williams, seconded by Cynthia I. Newbille, the members of the RRTPO Policy Board voted to approve the minutes as presented (voice vote; Byron Adkins abstained).

#### 6. Consent Agenda

Chet Parsons, RRTPO Secretary, reviewed the items in the consent agenda.

On motion by W. Canova Peterson, seconded by John H. Hodges, the members of the RRTPO Policy Board voted to approve the following consent agenda items (voice vote).

##### a. RRTPO Work Status and Financial Report – April 2023

Consent action: approval of report.

##### b. FY23 UPWP Amendment

**RESOLVED**, that the Richmond Regional Transportation Planning Organization (RRTPO) approves the amendments to the RRTPO Fiscal Year 2023 Unified Planning Work Program as presented.

**BE IT FURTHER RESOLVED**, that the RRTPO TAC action to amend the UPWP, as submitted, meets all requirements noted in the VDOT/RRPDC Agreement for the Utilization of Federal and State Funds to Support Metropolitan Planning in the Richmond Area as provided in Article III, Statement of Work, which includes VDOT and FHWA approval of this RRTPO action and amending the FY23 UPWP.

Work Task	RRTPO Budget				
	PL	5303	5303 CO (1)	STBG (2)	Total
7110 MPO Prog Mgmt	\$169,000	\$36,000			\$205,000
7120 UPWP Budget & Contracts	\$51,200	\$12,800			\$64,000
7210 Public Outreach/ Equity Analysis	\$220,000	\$0			\$220,000
7220 Special Planning Efforts	\$221,000	\$0			\$221,000
7230 Contingency Funding	\$34,749	\$115,928	\$330,889		\$481,565
7310 Long Range Transp Pln	\$53,000	\$0			\$53,000
7315 Scenario Planning	\$337,160	\$84,290		\$243,550	\$665,000
7320 Travel Demand Model	\$73,600	\$18,400		\$200,000	\$292,000
7330 Transit	\$0	\$280,000			\$280,000
7340 Act Transp- Bike/Ped	\$202,000	\$0			\$202,000
7350 System Resiliency	\$170,000	\$0			\$170,000
7410 Perf Based Transp Plng	\$69,472	\$15,528			\$85,000
7420 Financial Prog/TIP	\$291,410	\$70,590			\$362,000
7430 Rail & Freight	\$41,882	\$12,118			\$54,000
TOTAL (\$)	\$1,934,473	\$645,653	\$330,889	\$443,550	\$3,354,565

(1) FY 22 5303 carryover funds

(1) Previous specific STBG fund awards

**c. Regional Conformity Assessment**

**Resolved**, that the Richmond Regional Transportation Planning Organization (RRTPO) adopts the Richmond and Tri-Cities FY2024 – FY2027 Transportation Improvement Program and 2045 Long-Range Transportation Plan Regional Conformity Assessment as presented.

**d. TIP Amendments: Highway Maintenance Groupings**

**Resolved**, that the Richmond Regional Transportation Planning Organization (RRTPO) approves the following amendments to the FY21 – FY24 Transportation Improvement Program:

- Maintenance : Preventive Maintenance and System Preservation
  - Add \$115,430 (NHFP) in FFY23
  - Add \$2,258,586 (NHPP) in FFY23
  - Add \$31,116,665 (STP/STBG) in FFY23
- Maintenance : Preventive Maintenance for Bridges
  - Add \$751,472 (NHFP) in FFY23
  - Add \$2,102,357 (NHPP) in FFY23
  - Add 6,926,117 (STP/STBG) in FFY23
- Maintenance : Traffic and Safety Operations
  - Add an additional \$6,405,707 (STP/STBG) in FFY23

**B. NEW BUSINESS**

**1. FY24 – FY27 Transportation Improvement Program (TIP)**

Myles Busching, PlanRVA, presented the FY24-27 TIP. Board members commended Mr. Busching and staff for the work done on the project.

On motion by W. Canova Peterson, seconded by Cynthia I. Newbille, the members of the RRTPO Policy Board voted to approve the following resolution (roll call vote; see Appendix A):

**Resolved**, that the Richmond Regional Transportation Planning Organization (RRTPO) adopts the FY24 – FY27 Transportation Improvement Program as presented.

Joi Taylor Dean arrived at approximately 10:00 a.m.

**2. RRTPO Self-Certification**

Mr. Busching explained that the last federal review was in 2021. There were eight commendations and no faults found. He explained the model the self-certification process follows.

On motion by Kevin P. Carroll, seconded by Cynthia I. Newbille, the members of the RRTPO Policy Board voted to approve the following resolution (voice vote):

**Resolved**, that the Richmond Regional Transportation Planning Organization hereby certifies that in accordance with 23 Code of Federal Regulations (CFR) Part 450 Section 336 Self-certification and Federal certifications, the metropolitan transportation planning process is being carried out in accordance with all applicable requirements including:

1. 23 U.S.C. 134, 49 U.S.C. 5303, and 23 CFR 450.336;
2. Sections 174 and 176(c) and (d) of the Clean Air Act, as amended (42 U.S.C. 7504, 7506(c) and (d)) and 40 CFR part 93;



3. Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d-1) and 49 CFR part 21;
4. 49 U.S.C. 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity;
5. Section 1101(b) of the FAST Act (Pub. L. 114-357) and 49 CFR part 26 regarding the involvement of disadvantaged business enterprises in DOT funded projects;
6. 23 CFR part 230, regarding the implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts;
7. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) and 49 CFR parts 27, 37, and 38;
8. The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
9. Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender; and
10. Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794) and 49 CFR part 27 regarding discrimination against individuals with disabilities.

### **3. FY24 – FY29 Regional Funding Allocations**

Mr. Busching presented the proposed FY24-29 regional funding allocations for the Surface Transportation Block Grant (STBG), Congestion Mitigation and Air Quality (CMAQ), and Carbon Reduction Program (CRP).

On motion by John H. Hodges, seconded by Cynthia I. Newbille, the members of the RRTPO Policy Board voted to approve the following resolution (roll call vote; see Appendix A):

**RESOLVED**, that the Richmond Regional Transportation Planning Organization (RRTPO) policy board approves the allocation of regional Surface Transportation Block Grant (STBG), Congestion Mitigation and Air Quality (CMAQ), and Carbon Reduction Program (CRP) funds as show in the attached allocation plan spreadsheets.

**FURTHER RESOLVED**, that the RRTPO policy board approves the proposed transfers of previous funds as shown in the attached transfer plan spreadsheets and directs staff to take any necessary steps to coordinate the transfers with VDOT.

### **4. FY21 – FY24 TIP Amendment: 288 NB Hard Shoulder Running** (added to agenda)

Mark Riblett presented the proposed TIP amendment. Mr. Parsons noted that staff recommends the Policy Board hear the matter at an early (8:30 a.m.) session at the June 1<sup>st</sup> joint annual meeting to allow more time for review.

The existing shoulder on northbound route 288 between the on-ramp of route 711 to the off-ramp of route 6 would be reconstructed to a width of 13 feet to provide an 11 feet hard running shoulder plus a 2 feet shoulder. to be used during the AM peak travel hours. Also, included would be installation of gantries with signage regarding usage. ITS improvements would also be included within the Route 288

corridor. Project would also include the construction emergency pull-offs to provide a refuge area for disabled vehicles while the hard shoulder running lane is in operation. This project also includes a soundwall on the north side of the James River crossing and two (2) stormwater management basins. This project was a PlanRVA submission in Smart Scale Round 5. It is expected to be funded through a combination of Smart Scale, Innovation and Technology Transportation Fund (ITTF), and CVTA regional funds. The draft TIP amendment includes “Advance Construction (AC) – Other” funding for the Preliminary Engineering (PE) phase in FFY2023, meaning non-federal funds are proposed for this phase currently.

Board members had questions and Mr. Riblett explained why the matter is being brought forward now. There is previous funding on the project, which is not normal for new projects moving forward. There was a discussion about a conditional approval pending no negative public comment being received. If approved, an update will be provided at the June 1<sup>st</sup> meeting regarding public comment received.

On motion by Cynthia I. Newbille, seconded by Frank Thornton, the members of the RRTPO Policy Board voted to conditionally approve the following resolution as presented subject to completing the 15-day public review and receiving no adverse comments from members of the public (roll call vote; see Appendix A):

**Resolved**, that the Richmond Regional Transportation Planning Organization (RRTPO) policy board amends the FY21 – FY24 Transportation Improvement Program (TIP) to include UPC 122147: #SMART24 #ITTF23 - 288 NB HARD SHOULDER RUNNING (HSR) as shown in the attached TIP pages; and,

**Further resolved**, that this project is located outside of the former 8-Hour Ozone Maintenance Area and does not require an updated Air Quality Conformity Analysis; and,

**Further resolved**, that approval of this amendment is conditional upon the completion of a 15-day public review period; and,

**Finally resolved**, that approval of this amendment is conditional upon not receiving any adverse public comments which will require further review by the RRTPO.

## **D. OTHER BUSINESS**

### **1. Technical Advisory Committee Project Cost Estimates Report and Recommendations**

Mr. Busching explained the background of the matter and the process undertaken by the TAC to review the matter and develop recommendations. Board members thanked staff and TAC for the work done on this project.

The recommendation TAC developed is to make the RRTPO's cost estimating policy to encourage applicants to use the CEWB for all applications for projects that lead to construction, effective July 1, 2023; and, direct staff to update the Regional Project Selection framework to remove eligibility for

additional funding for projects submitted after July 1, 2023, that do not use VDOT's Cost Estimate Workbook (CEWB).

On motion by David Williams, seconded by Cynthia I. Newbille, the members of the RRTPO Policy Board voted to approve the following resolution (roll call vote; see Appendix A):

**WHEREAS**, the Richmond Regional Transportation Planning Organization (RRTPO) policy board has recognized the need for a review of cost estimating practice and procedures for regional funding; and,

**WHEREAS**, the RRTPO Technical Advisory Committee (TAC) has conducted a comprehensive review of current project performance and the reasons for current cost increases; and,

**WHEREAS**, the RRTPO TAC recommends the use of VDOT's Cost Estimating Workbook (CEWB) to standardize cost estimate reporting and inflation and allow easy comparison with VDOT-developed estimates; and,

**WHEREAS**, the RRTPO TAC recommends new projects that do not use the CEWB should not be eligible for additional funding if costs increase; therefore, be it

**RESOLVED**, that the RRTPO's cost estimating policy is to encourage applicants to use the CEWB for all applications for projects that lead to construction, effective July 1, 2023; and,

**FURTHER RESOLVED**, that staff is directed to update the Regional Project Selection framework to remove eligibility for additional funding for projects submitted after July 1, 2023, that do not use VDOT's Cost Estimate Workbook (CEWB).

## **2. CTAC Role Discussion (with CTAC Members)**

Lisa Guthrie, CTAC Chair, provided a background on CTAC's membership and efforts to add new organization representation. In doing so, the question has been raised as to what the committee's role in the RRTPO is. Upton Martin provided some suggestions about what increased role committee members could play.

Board members expressed support for the recommendations. The next CTAC meeting is scheduled for June 8<sup>th</sup>. Policy Board members are invited to attend.

## **3. Election of FY2024 Officers**

On motion by David Williams, seconded by John H. Hodges, the members of the RRTPO Policy Board voted to elect W. Canova Peterson as FY24 Chair and Christopher Winslow as Vice Chair to serve from July 1, 2023, through June 30, 2024. (voice vote).

#### **4. Approval of FY2024 Meeting Schedule**

On motion by W. Canova Peterson, seconded by David Williams, the members of the RRTPO Policy Board voted to approve the FY24 meeting schedule as presented (voice vote).

#### **5. Policy for Remote Participation of Members**

Eric Gregory, legal counsel, reviewed the requirements for remote participation of members.

#### **6. Future Meeting Topics**

Mr. Peterson requested a presentation from VDOT on ITTF.

No other future meeting topics were suggested by members.

#### **7. RRTPO Member Comments**

There were no comments from members.

#### **3. Next RRTPO Policy Board Meeting**

The next meeting is the joint annual meeting with the CVTA and PlanRVA Commission; scheduled for June 1, 2023, at 9:00 a.m. the PlanRVA James River Boardroom, 424 Hull Street, Suite 300, Richmond, VA 23224.

### **C. AGENCY AND COMMITTEE REPORTS**

#### **1. Transportation Agency Updates**

- a. CVTA** – this update was included in the meeting agenda packet.
- b. GRTC** – there was no formal update given by GRTC due to time constraints.
- c. RMTA** – Joi Taylor Dean reported that the RMTA board voted to do a toll adjustment. This will be the first since 2008. More information will be shared at a later date.
- d. DRPT** – this update is posted on the [meeting webpage](#).
- e. VDOT** – this update is posted on the [meeting webpage](#).

### **E. ADJOURNMENT:**

Chair Lumpkins adjourned the meeting at approximately 11:07 a.m.

## JOINT ANNUAL MEETING MINUTES

### Central Virginia Transportation Authority (CVTA) PlanRVA Commission Richmond Regional Transportation Planning Organization (RRTPO) Policy Board

Thursday, June 1, 2023, 9:00 a.m.

PlanRVA James River Boardroom, 424 Hull Street, Suite 300, Richmond, VA 23224

#### **MEMBERS and ALTERNATES PRESENT (X):**

<b>Town of Ashland</b>		<b>Hanover County</b>	
Kathy Abbott, PlanRVA		Sean M. Davis, CVTA, <b>FY23 Chair, PlanRVA</b> , RRTPO	X
Anita Barnhart, RRTPO		W. Canova Peterson IV, CVTA, PlanRVA, RRTPO	X
Brent Chambers, PlanRVA		Faye O. Prichard (A)	
John H. Hodges, CVTA, RRTPO,	X	Charlie Waddell, PlanRVA	
Daniel McGraw, CVTA, PlanRVA	X	Randy Whitaker, PlanRVA	
<b>Charles City County</b>		<b>Henrico County</b>	
Byron M. Adkins, Sr., CVTA, PlanRVA, RRTPO	X	Greg Baka, PlanRVA	
William Coad, CVTA, PlanRVA, RRTPO		Thomas Branin, RRTPO	
		Tyrone Nelson, PlanRVA	
<b>Chesterfield County</b>		Patricia S. O'Bannon, CVTA, PlanRVA, RRTPO	X
Kevin P. Carroll, <b>FY23 Chair, CVTA</b> , PlanRVA, RRTPO	X	Frank J. Thornton, CVTA, PlanRVA, RRTPO	
Tim Davey, PlanRVA	X	Melissa Thornton, PlanRVA	
Gloria Freye, PlanRVA	X		
James Holland, PlanRVA	X	<b>New Kent County</b>	
James Ingle, PlanRVA	X	John Lockwood, CVTA, PlanRVA	X
Mark S. Miller, PlanRVA, RRTPO		Patricia A. Paige, CVTA, PlanRVA, RRTPO	X
Christopher Winslow, CVTA, RRTPO, PlanRVA	X	Amy Pearson, PlanRVA	
		C. Thomas Tiller Jr., RRTPO	
<b>Goochland County</b>			
Susan F. Lascolette, CVTA, RRTPO		<b>Powhatan County</b>	
John L. Lumpkins Jr., <b>FY23 Chair, RRTPO</b>	X	Michael Byerly, CVTA, PlanRVA	
Neil Spoonhower, CVTA, PlanRVA	X	Karen Carmack, RRTPO	
Charlie Vaughters, PlanRVA		Bobby Hall, PlanRVA	
		Steve McClung, CVTA, PlanRVA	
		David T. Williams, RRTPO	X

## **MEMBERS and ALTERNATES PRESENT (X) continued:**

<b>City of Richmond</b>		<b>RideFinders</b>	
Andreas D. Addison, PlanRVA, RRTPO	X	Von S. Tisdale, RRTPO	X
Ann Frances Lambert, PlanRVA		Cherika N. Ruffin, RRTPO	X
Jacob Giovia, PlanRVA	X		
Katherine L. Jordan, RRTPO	X	<b>RRTPO Community Transportation Advisory Committee (CTAC)</b>	
Stephanie A. Lynch, PlanRVA, RRTPO		Lisa M. Guthrie, RRTPO	
Cynthia I. Newbille, PlanRVA, RRTPO		Sera Erickson, RRTPO	
Michael J. Jones, PlanRVA, RRTPO			
Kristen Nye, RRTPO		<b>Senate of Virginia</b>	
Rodney Poole, PlanRVA		Senator Ghazala F. Hashmi, CVTA	X
Ellen F. Robertson, PlanRVA, RRTPO			
Mayor Levar M. Stoney, CVTA		<b>Virginia Department. of Aviation</b>	
		Rusty Harrington, RRTPO	
<b>Capital Region Airport Commission</b>			
Perry Miller, CVTA		<b>Virginia Department of Transportation</b>	
John B. Rutledge, RRTPO		Stephen Brich, CVTA	
		Dale Totten, CVTA, RRTPO	X
<b>Commonwealth Transportation Board</b>		Mark E. Riblett, CVTA, RRTPO	X
Carlos M. Brown, CVTA			
		<b>Virginia Department of Rail and Public Transportation</b>	
<b>Federal Highway Administration</b>		Jennifer DeBruhl, CVTA	X
Thomas L. Nelson Jr., RRTPO		Tiffany T. Dubinsky, RRTPO	
Ivan Rucker, RRTPO		Zach Trogon, CVTA	
		Daniel Wagner, RRTPO	
<b>Federal Transit Administration</b>			
Daniel Koenig (Liaison), RRTPO		<b>Virginia House of Delegates</b>	
		Delegate Roxann Robinson, CVTA	
<b>GRTC Transit System</b>			
Sheryl Adams, CVTA, RRTPO		<b>Virginia Port Authority</b>	
Adrienne Torres, CVTA, RRTPO		Stephen Edwards, CVTA	
		Cathie Vick, CVTA	
<b>RIC Metropolitan Transp. Authority</b>		Barbara Nelson, CVTA	
Joi Taylor Dean, CVTA, RRTPO	X		

## **CALL TO ORDER**

Sean M. Davis, Chair, PlanRVA Commission, called the meeting to order at 9:03 a.m. Chair Davis introduced Kevin P. Carroll, Chair, CVTA, and John L. Lumpkins, Chair, RRTPO.

## **PLEDGE OF ALLEGIANCE**

The Pledge of Allegiance was led by Chair Lumpkins.

## **WELCOME AND INTRODUCTIONS**

Martha Shickle, Executive Director, PlanRVA, came forward and welcomed all attendees. Ms. Shickle introduced Bill Leighty, DecideSmart and moderator of the program.



## **CHAIR PANEL – WHY REGIONAL COOPERATION?**

Mr. Leighty shared comments on the importance of regional cooperation. He opened a discussion with Chairs Carroll, Davis and Lumpkins on what surprised them most when they first became members of their respective boards and other aspects of serving on those bodies. Chair Davis remarked that the commitment of the commissioners and the depth of the commitment to regional cooperation struck him as commendable. Chair Lumpkins noted he was surprised about the amount of regional cooperation. Chair Carroll remarked on the importance of getting the word out to the public about what the Authority does.

The group discussed the work being done by the boards and some of the important developments, projects and accomplishments from the last year. The Chairs also discussed what their hopes are for the Chairs that will be in place for the next fiscal year.

A video was shared on some of the key accomplishments and projects in the region.

## **KEYNOTE SPEAKER**

Chet Parsons, Director of Transportation, PlanRVA, introduced the Honorable W. Sheppard Miller, III, Secretary of Transportation, Commonwealth of Virginia, and keynote speaker for the program.

Secretary Miller addressed the group and shared thoughts on the cooperation that he has seen in the region. He described some of the key projects and accomplishments and noted the contributions of Carlos M. Brown of the Commonwealth Transportation Board to the CVTA.

## **SPECIAL PROGRAM – WHY RVA?**

Chris Lloyd, McGuireWoods Consulting, gave a presentation on site selection. The presentation included information on guiding principles, how site selection is evolving, scoring matrix and later stage evaluation factors.

## **SPECIAL RECOGNITIONS**

Bill Lawson, Vice Chair, Central Virginia Emergency Management Alliance, and Darshaun came forward and presented a New Outstanding Emergency Management Professional Award Stephen Nelson. Mr. Nelson expressed his appreciation to PlanRVA for the assistance he has received.

Ms. Shickle reported that PlanRVA was recognized in 2022 and 2023 for outstanding work in regional planning by the Virginia Association of Planning District Commission and the National Association of Development Association for its work to support the Emergency Management Alliance of Central Virginia in working to establishing the COVID-19 Emergency Response Fund. A video was shared on the partnership between the alliance and the Community Foundation to establish the fund.

Chair Davis called Chair Lumpkins and Patricia O'Bannon forward and commended them on their years of service to the boards.

David Blount, Executive Director, and Dwayne Tuggle, First Vice President, Virginia Association of Planning District Commissions, came forward and presented the 2023 Legislator of the Year Award to Delegate Delores McQuinn.

Chair Carroll announced an award that will be presented to Carlos M. Brown of the Commonwealth Transportation Board for his service to the CVTA.

Chair Lumpkins announced that awards are being given to David Williams and Cynthia I Newbille for their efforts at increasing awareness about cost estimates and overruns. M. Williams came forward to receive the award. Andreas Addison, Richmond City Council, accepted on Dr. Newbille's behalf.

Chair Davis presented Sarah Stewart, PlanRVA, with the PlanRVA Employee of the Year Award.

#### **MEMBER COMMENTS and OTHER ANNOUNCEMENTS**

There were no member comments or other announcements made.

#### **ADJOURNMENT**

Chair Davis adjourned the meeting at 11:08 a.m.

**AGENDA 7/6/23; ITEM A.-6.**

**ELECTION OF FISCAL YEAR 2024 RRTPO OFFICERS**

**Richmond Regional Transportation Planning Organization**

**REQUESTED ACTION:** Action is requested of the RRTPO Policy Board to elect an FY24 Chair and Vice Chair to serve from July 1, 2023, through June 30, 2024.

**BACKGROUND:** The RRTPO (MPO) bylaws establish the rotation order for the RRTPO Chair. Established RRTPO policy in the bylaws' [Non-binding Governance documents](#) stipulate that the RRTPO Vice Chair be from the jurisdiction next in line to serve as RRTPO Chair. For FY 2024, the rotation Chair is Hanover County and the rotation Vice Chair is Chesterfield County. Elections were held for RRTPO at its May meeting and these seats were confirmed, electing Canova Peterson as Chair and Christopher Winslow as Vice Chair.

Due to outcomes of the 2023 primary elections, the Policy Board is requested to consider a shift of the rotation that would not disrupt the function of the board with mid-year officer changes following the fall election. The Chair and Vice Chair are willing to swap the service years of Hanover County and Chesterfield County with Chesterfield serving as Chair of the RRTPO in FY24 and Hanover County serving as Vice Chair and then Hanover County assuming the Chair in FY25 and the regular rotation stays in place with the City of Richmond assuming Vice Chair as scheduled.

**ACTION REQUESTED:** The RRTPO Policy Board is requested to swap the Chair and Vice Chair leadership responsibilities between Hanover County and Chesterfield County for FY 2024 and FY 2025 and re-elect an FY24 Chair and Vice Chair to serve from July 1, 2023, through June 30, 2024.



## RRTPO POLICY BOARD FY24 PROPOSED MEETING SCHEDULE

<b>MEETING DATE (all meetings are on Thursdays)</b>	<b>TIME</b>	<b>LOCATION</b>
July 6, 2023	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
August – no meeting		
September 7, 2023	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
October – no meeting		
November 2, 2023	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
December 7, 2023	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
January 4, 2024	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
February 1, 2024	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
March 7, 2024	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
April 4, 2024	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
May 2, 2024	9:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
June 6, 2024 (Joint annual meeting with CVTA and PlanRVA)	TBD	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224

## RRTPO EXECUTIVE COMMITTEE FY24 PROPOSED MEETING SCHEDULE

<b>MEETING DATE (all meetings are on Thursdays)</b>	<b>TIME</b>	<b>LOCATION</b>
July 6, 2023	8:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
August – no meeting		
September 7, 2023	8:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
October – no meeting		
November 2, 2023	8:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
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May 2, 2024	8:30 a.m.	PlanRVA James River Boardroom 424 Hull Street, Suite 300, Richmond, VA 23224
June – no meeting		

# FY 2023



Richmond Regional  
**Transportation  
Planning  
Organization**

Work Program Status Report

March 2023

PlanRVA  
424 Hull Street, Suite 300  
Richmond, Virginia 23224  
804.323.2033 | [WWW.PLANRVA.ORG](http://WWW.PLANRVA.ORG)



The RRTPO Work Program Progress Report provides a short summary of each activity for the month of March 2023. Please reference the [FY 2023 UPWP](#) for details concerning the approved budget and work description for each task.

Table 1 identifies all the tasks in the UPWP and the associated budget and summarizes overall federal and local revenues budgeted by PlanRVA in FY 2023 to support the work of RRTPO. Federal funds budgeted constitute 80 percent of the total; State and local matching funds constitute 20 percent, unless otherwise noted.

**TABLE 1. SUMMARY OF FY 2023 RRTPO UPWP BUDGET**

Work Task	RRTPO Budget				
	PL	5303	CO 5303	OTHER (1)	GRAND TOTAL
7110 MPO Program Management	\$144,000	\$36,000	\$ -	\$ -	\$180,000
7120 UPWP Budget & Contract Admin.	\$51,200	\$12,800	\$ -	\$ -	\$64,000
7210 Public Outreach/Equity Analysis	\$220,000	\$ -	\$ -	\$ -	\$220,000
7220 Special Planning Efforts	\$221,000	\$ -	\$ -	\$ -	\$221,000
7230 Contingency Funding	\$84,748.50	\$115,928	\$330,889	\$ -	\$531,565.50
7310 Long Range Transp Planning	\$28,000	\$ -	\$ -	\$ -	\$28,000
7315 Scenario Planning	\$337,160	\$84,290		\$243,550	\$665,000
7320 Travel Demand Model	\$73,600	\$18,400	\$ -	\$200,000	\$292,000
7330 Transit	\$ -	\$280,000	\$ -	\$ -	\$280,000
7340 Act Transp-Bike/Ped	\$202,000	\$ -	\$ -	\$ -	\$202,000
7350 System Resiliency	\$170,000	\$ -	\$ -	\$ -	\$170,000
7410 Perf Based Transp Planning	\$69,472	\$15,528	\$ -	\$ -	\$85,000
7420 Financial Program / TIP	\$291,410	\$70,590	\$ -	\$ -	\$362,000
7430 Rail & Freight	\$41,882	\$12,118	\$ -	\$ -	\$54,000
TOTAL (\$)	\$1,934,472.50	\$645,653	\$330,889	\$443,550	\$3,354,564.50

(1) 7310 funds are direct carryover from FY22. 7315 and 7320 funds are RSTBG funds for travel demand model development.

### Program Management

7100	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Program Management	244,000	45,042	210,920	86%	13

- Developed agenda packets for RRTPO Policy Board, Executive Committee, Community Transportation Advisory Committee (CTAC) and Technical Advisory Committee (TAC).
- Coordinated, staffed and participated in above meetings.
- Drafted minutes of above meetings and posted along with other related documents.
- Updated/maintained contacts database; added/removed members and interested parties for Policy Board and committees.
- Tracked UPWP progress and work task coordination.
- Met with Policy Board Chair to review April TPO agenda and packet.
- Participated in Communications Team meeting.
- Staff meetings to plan TIP open house and FY24 officer elections/schedules.
- Worked on planning for annual Transportation Forum event: coordinated speakers, finalized agenda, met with ChamberRVA for planning session, toured venue, finalized prize donations, created social media posts/emails for potential attendees, attended, facilitated and staffed forum event.
- Preparation for May CTAC meeting: Gathered and reviewed information concerning the proposed Green City development in Henrico County. Made arrangements for a speaker for the meeting. Contacted GRTC about providing a presentation.
- Participated VAMPO virtual Peer-to-Peer Exchange and prepared a summary of the main discussion points.
- Participated in the PlanRVA staff meeting.
- Participated in meeting of the New Kent Community Health Improvement Plan Steering Committee.
- Observed meetings of the Tri-Cities MPO and Technical Advisory Committee.
- Observed and prepared a summary of the March 3 meeting of the Scenario Planning Advisory Committee.
- Participated in the Mamba Mentality Lunch and Learn Program

### Public Outreach & Equity Analysis

7210	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Public Outreach & Equity Analysis	220,000	30,156	136,376	62%	13

- Participated in planning meeting and outreach discussion regarding Flying Squirrels and Richmond Kickers sponsorships.

- Implemented community outreach tactics and submitted announcements to digital & print media to publicize meetings for RRTPO, PlanRVA, and the CVTA
- Published newsletter and blog for RRTPO, PlanRVA and the CVTA to inform the public of recent successes and upcoming priorities.
- Participated in planning meeting and outreach discussion for the transportation forum.
- Developed outreach and marketing materials for the Trolley Line Oral History project.
- Participated in GRTC public engagement process for North-South and Western BRT surveys.
- Continued community outreach regarding upcoming decisions, public engagement opportunities, Title VI and work that is being undertaken in each of the nine jurisdictions.
- Provides staff opportunity for lunch and learn “Mamba Mentality” about our country’s history and how to better move forward with equitable systems and programs.

#### Special Planning Efforts

7220	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Special Planning Efforts	221,000	22,746	132,972	60%	20

- Continual update of the competitive funding spreadsheet of Federal and State infrastructure fund programs as a resource for all PlanRVA jurisdictions. Posted on web site and introduced to PlanRVA board.
- Continued to collaborate with our partners to refine the small jurisdiction pilot program.
- Continued work on the Ashland Bike Ped plan update project, including facilitation of the March 9 meeting and March 30 work session of the Ashland Parks & Recreation committee to discuss Vision, Goals & Objectives for the plan.

#### Contingency Funding

7230	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Contingency Funding	531,565.50	0	0	0	18

No funds expended this period.

### Long-Range Transportation Plan

7310	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
L RTP	28,000	12,852	44,490	159%	19

### External Organization/Transportation Study

- Attended Association of Metropolitan Planning Organization (AMPO) Technical Committee and Interest group meetings and webinars.
- Reviewed and ranked twenty-four abstracts submitted for presentation for AMPO's annual conference.
- Attended the North Courthouse Road STARS Study Kick-off Meeting.
- Attended the Powhite Parkway Extension Traffic Working Group Meeting
- Attended the FHWA/FTA Webinar for the Updated Guidebook on Model Long-Range Transportation Plans.

### Scenario Planning

7315	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Scenario Planning	665,000	35,528	328,933	49%	20

- Continued coordination with the consultant team for the overall scenario planning process. The Scenario Planning process has been branded as 'the Pathways to the Future (P2F)'.
- Continued work on the technical aspects of the process including review of proposed data and models.
- Worked to develop an invitation list for the public charette which is scheduled for April 21, 2023.

(Also refer to 7350 Systems Resilience Plan for work completed or in progress that will also support the Scenario Planning.)

### Travel Demand Model (RTDM)

7320	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
RTDM	292,000	13,344	74,431	25%	21

### Socioeconomic Data

- Finalized the 2050 Socioeconomic (SE) Data after the localities reviewed and vetted the data.
- Developed the SE data draft documents.

- Developed the online SE data story map and data dashboard for interactive online viewing of the data.

#### RTC Model

- Finalized and executed the Scope of Work for Task Order 11 as a part of the on-call consultant support for the Travel Demand Model. Task Order 11 will focus on adding a Connected/Autonomous Vehicle component to the existing Richmond/Tri-Cities (RTC) Model.

#### Data Request

- Provided the 2017 and 2045 Socioeconomic Data by TAZ to the consultants (Foursquare ITP) for GRTC's Transit Strategic Plan (TSP)

#### Transit

7330	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Transit	280,000	20,330	176,288	63%	22

- Reviewed the following documents: Shared Mobility-How Businesses are Rewriting the Rules of the Private Transportation Game, Re-programming Mobility-The Digital Transformation of Transportation in the United States, Universal Mobility An Implementation Resource, Considerations for TNC Partnerships: Seniors & Individuals with Disabilities, Not If, but when: Autonomous Driving & the Future of Transit
- Participated in the following webinars: Autonomy for the Rest of Us, National Aging and Disability Transportation Center - Microtransit vs. Micromobility: Planning Considerations, National Aging and Disability Transportation Center - NADTC Coordination Coalition Initiative Showcase and Virginia Tech Safe D - Automated Shuttles and Buses for All Users
- Attended the March 21 meeting of the GRTC Board of Directors and prepared a summary of the primary meeting points.
- Attended and reported on regional activities at February 23 meeting of the Senior Connections Advisory Council.
- Planned March 16 CTAC meeting on State legislative review.
- February 21 San Jose State University webinar, "Free Transit for All." on equity implications of free transit service; free-transit strategies; operating without fares.
- Feb 27 webinar by US Aging Housing and Services Resource Center on "The Role of Transportation in Cross Sector Collaborations Designed to Improve Housing Stability."

### Active Transportation: Bicycle and Pedestrian

7340	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Active Transportation	202,000	18,853	165,996	82%	23

- Continued to support PlanRVA staff on the Lower Chickahominy River recreational infrastructure and trails planning.

### Fall Line

- Met with Sports Backers to discuss the future management of Fall Line.
- Continued to track Fall Line discussion and decision-making at CVTA and TAC meetings. Assisted with the CVTA Fall Line Working Group Wayfinding plan proposals.
- Staff continued to work with regional and state partners on presentation for a panel discussion at the April 25-27 Virginia Land Conservation and Greenways Conference (VaULT).

### Richmond Regional Bicycle and Pedestrian Plan

- Updates on projects contributing to the regional Active Transportation network continue to be made to the [BikePedRVA 2045 Information Hub](#).
- Supported PlanRVA staff as we assist the Town of Ashland with the update to the Town's bicycle and pedestrian plan, including an evening work session in Ashland on March 30.
- Began planning for an April presentation for the Safe & Healthy Streets Commission City of Richmond.

### Ashland Trolley Line Trail Study

- Additional information and images continue to be added to a [story map](#) for the project which illustrates the history and potential for the 14-mile Trolley Line Trail, essentially serving as the northern portion of the Fall Line.
- PlanRVA staff continues to work with the National Park Service and a local history team of experts from Richmond, Ashland, Hanover, and Henrico counties on the public history project intended to uncover and record oral history stories from around the operational period of the trolley line (ca. 1908-1938).
- Staff began planning for a second public event for the Ashland Trolley Line Public History Project at Virginia Union University (VUU) with NPS, City of Richmond, and a VCU graduate student on April 29. It will be a guided Walk & Talk in the area around VUU.

### East Coast Greenway

- Staff also continue to work with ECG on updates to alignment and designated sections of the trail the Richmond region and to help track funding grants for improvements to sections of the trail.
- Staff continued to work with ECG on the Spring Virginia Summit, expected to be held on April 13.



### Systems Resilience Plan

7350	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Systems Resil. Plan	170,000	15,582	115,305	68%	24

- An intern for the Richmond Regional Cooling Capacity Analysis Process (DOF U&CG Program) began work on March 13<sup>th</sup> and is dedicating ~10hrs/wk to the project. This month was dedicated to onboarding the intern and familiarizing them with the project, work plan, and necessary background information.
- FEMA has placed a temporary nationwide hold on all SHSP National Priority Grants, which includes PlanRVA's Critical Infrastructure Mapping Project. Therefore, work has been placed on hold until word is received from FEMA that work can recommence.
- Determined that pursuing SolSmart Regional Designation would be beneficial to the resilience of the region and will leverage additional resources and technical assistance for localities to streamline and reduce the cost of solar investments. A Commitment Letter has been drafted and is awaiting signature by the Executive Director.
- Continued internal discussion on resilience metrics in Scenario Planning and provided feedback on model methodology.'
- Continued to participate in support regional and local resiliency efforts, including the DCR Coastal Resiliency TAC and the Richmond Connects EV Subcommittee.
- Received notification of presumptive funding for the Richmond MSA under the EPA Climate Pollution Reduction Grant. Staff assessed the opportunity and grant requirements and decided that PlanRVA will be the lead agency for the MSA and our Resilience Planner will lead that effort. Staff began strategizing on how to fulfill the requirements of the grant and began reaching out to our jurisdictions, local tribes, and neighboring PDCs with localities within the Richmond MSA to invite their participation.

### Performance Based Transportation Planning

7410	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Perf. Based Transp. Planning.	85,000	0	16,714	20%	25

### Federal Performance Measures:

- No Work done in this period.

### Transportation Improvement Program (TIP)

7420	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
TIP	362,000	10,606	170,431	47%	26

#### FY21 – FY24 TIP Maintenance:

- Submitted one (1) TIP amendment for a VDOT project approved at the 3/2/23 Policy Board meeting. [Amendment notes here.](#)
- Coordinated with VDOT regarding illustrative project list to support discretionary grant applications; concept prepared for April TAC presentation
- Prepared three (3) TIP amendments for April TAC review:
  - Maintenance: Preventive Maintenance and System Preservation
  - Maintenance: Preventive Maintenance for Bridges
  - Maintenance: Traffic and Safety Operations

#### FY24 – FY27 TIP Development:

- Coordination with VDOT on three (3) non-federal projects for draft TIP
- Draft conformity project list approved by TPO
- Opened public review for draft TIP and conformity assessment
- Prepared and ran advertisements for review period and open house in Times Dispatch and Free Press

#### Regional Funding

- Draft allocation plans in development; pushed back to late April special TAC meeting to include Carbon Reduction Program (CRP) funding
- Completed one transfer:
  - \$418,249 in FY05, FY09, FY22 RSTP from UPC 70721 to UPC 104890

### Rail, Freight, Intermodal Planning

7430	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Rail, Freight, Interim. Planning.	54,000	0	7,762	14%	27

#### RRTPO Freight Planning Program

- No Work done in this period.

### Transportation Improvement Program (TIP)

7420	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
TIP	362,000	11,999	182,431	50%	26

#### FY21 – FY24 TIP Maintenance:

- Finalized one (1) TIP adjustment to reflect earmarked funds on a GRTC projects. [Adjustment note here.](#)
- Prepared one (1) TIP amendment for May TAC review:
  - UPC 122147: #SMART24 #ITTF23 - 288 NB HARD SHOULDER RUNNING (HSR)
- Prepared three (3) TIP amendments for May policy board review:
  - Maintenance: Preventive Maintenance and System Preservation
  - Maintenance: Preventive Maintenance for Bridges
  - Maintenance: Traffic and Safety Operations

#### FY24 – FY27 TIP Development:

- Concluded public review period – no adverse comment requiring revisions or response
- Prepared draft TIP for May 9 TAC
- Prepared draft Regional Conformity Assessment for May 9 TAC
- Prepared MPO self-certification analysis and resolution for May 9 TAC

#### Regional Funding

- Draft allocation and transfer plans developed; TAC to review at May 9 meeting due to policy board schedule change
- Completed one transfer:
  - Transfer of \$243,550 in Fiscal Year 2021 RSTP from UPC 118143 to UPC 86357 completed on 4/18/2023 to consolidate UPCs

### Rail, Freight, Intermodal Planning

7430	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Rail, Freight, Interim. Planning.	54,000	0	7,762	14%	27

#### RRTPO Freight Planning Program

- No Work done in this period.

# FY 2023



Richmond Regional  
**Transportation  
Planning  
Organization**

Work Program Status Report

May 2023

PlanRVA  
424 Hull Street, Suite 300  
Richmond, Virginia 23224  
804.323.2033 | [WWW.PLANRVA.ORG](http://WWW.PLANRVA.ORG)

The RRTPO Work Program Progress Report provides a short summary of each activity for the month of May 2023. Please reference the [FY 2023 UPWP](#) for details concerning the approved budget and work description for each task.

Table 1 identifies all the tasks in the UPWP and the associated budget and summarizes overall federal and local revenues budgeted by PlanRVA in FY 2023 to support the work of RRTPO. Federal funds budgeted constitute 80 percent of the total; State and local matching funds constitute 20 percent, unless otherwise noted.

**TABLE 1. SUMMARY OF FY 2023 RRTPO UPWP BUDGET**

Work Task	RRTPO Budget				
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TOTAL (\$)	\$1,934,472.50	\$645,653	\$330,889	\$443,550	\$3,354,564.50

(1) 7310 funds are direct carryover from FY22. 7315 and 7320 funds are RSTBG funds for travel demand model development.

### Program Management

7100	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Program Management	244,000	17,991	223,001	91%	13

- Developed agenda packets for RRTPO Policy Board, Executive Committee and Technical Advisory Committee (TAC).
- Coordinated, staffed and participated in above meetings.
- Drafted minutes of above meetings and posted along with other related documents.
- Finalized FY24 schedule of all RRTPO meetings for Policy Board approval.
- Training on SWAY and Monday.com for future tracking of RRTPO contacts and development of new member orientation presentations/packets.
- Updated/maintained contacts database; added/removed members and interested parties for Policy Board and committees.
- Tracked UPWP progress and work task coordination.
- Finalized agenda, logistics and speakers for RRTPO, CVTA and PlanRVA Joint Annual Meeting scheduled for June 1, 2023.

### Public Outreach & Equity Analysis

7210	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Public Outreach & Equity Analysis	220,000	22,014	198,760	90%	13

- Participated in planning meeting and outreach discussion regarding Flying Squirrels and Richmond Kickers sponsorships.
- Implemented community outreach tactics and submitted announcements to digital & print media to publicize meetings for RRTPO, PlanRVA, and the CVTA
- Published newsletter and blog for RRTPO, PlanRVA and the CVTA to inform the public of recent successes and upcoming priorities.
- Participated in planning meeting and outreach discussion for the Joint Annual Meeting
- Continue to promote the opportunity to the public to contribute stories to the Ashland Trolley Line Public History Project.
- Participated in GRTC public engagement process for North-South and Western BRT surveys.
- Continued community outreach regarding upcoming decisions, public engagement opportunities, Title VI and work that is being undertaken in each of the nine jurisdictions.
- Provides staff opportunity for lunch and learn “Mamba Mentality” about our country’s history and how to better move forward with equitable systems and programs.
- Distributed flyers and captured photographs at Squirrels game and community events.



- Monitored engagement for all social media posts for Scenario planning, BRT stakeholder meetings, and upcoming events.

### Special Planning Efforts

7220	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Special Planning Efforts	221,000	31,724	198,620	90%	20

- Delivered the draft for the Ashland Bike Ped plan update project to the Town staff and the Ashland Parks & Recreation committee on May 11; working on edits received from the Town staff and committee.

### Contingency Funding

7230	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Contingency Funding	531,565.50	0	0	0	18

No funds expended this period.

### Long-Range Transportation Plan

7310	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
L RTP	28,000	1,481	48,773	174%	19

### External Organization/Transportation Study

- Developed the presentation slides and poster for Transportation Research Board (TRB) - Conference on Innovations in Travel Analysis and Planning. Staff abstract about the planning tools used in ConnectRVA 2045 (the region's current adopted long-range transportation plan) was selected for the presentation in the conference.

### Scenario Planning

7315	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Scenario Planning	665,000	102,616	503,741	76%	20

- Continued coordination with the consultant team for the overall scenario planning process. The Scenario Planning process has been branded as ‘the Pathways to the Future (P2F)’.
- Continued work on the technical aspects of the process including development of data and proposed models.
- Developed the four-factor based scenario narrative framework which will be used to develop scenario narratives.
- Monitored the ‘Pathway to the Future’ public survey in the MetroQuest platform. The survey was available in both [English](#) and [Spanish](#) versions and was open to the public until June 1.

(Also refer to 7350 Systems Resilience Plan for work completed or in progress that will also support the Scenario Planning.)

### Travel Demand Model (RTDM)

7320	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
RTDM	292,000	741	86,168	30%	21

### RTC Model

- Attended web-based meetings to discuss the enhancement of the Richmond Simplified Land Use Allocation Model (RSLAM), and the development of a Connected/Autonomous Vehicle component to the existing Richmond/Tri-Cities (RTC) Model. This is a part of Task 11 of the on-call consultant support for the Travel Demand Model.

### Data Request

- Provided the 2017 Virginia Employment Commission Job data aggregated to a hexagonal grid of polygons of ¼ mile in size covering the GRTC service area to the consultants (Jarrett Walker) for GRTC’s North South BRT Study.
- Provided the 2050 Socioeconomic Data by TAZ to the consultants (RK&K.) for N. Courthouse Road STARS Study

## Transit

7330	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Transit	280,000	20,373	213,771	76%	22

- Reviewed GRTC service changes effective May 21.
- Attended Virginia Transit Association 2023 Annual Conference in Virginia Beach May 23–24.
- Reviewed the following documents:
  - Transportation Access for Everyone: Washington State
  - Inclusive Transit: Advancing Equity Through Improved Access & Opportunity
  - Connected Urban Growth: Public-Private Collaborations for Transforming Urban Mobility
- Participated in a May 3 virtual meeting with CTAC Chair and member Lisa Guthrie and Upton Martin, respectively, concerning plans for a discussion with the TPO on opportunities for greater involvement of CTAC members in the planning process.
- Participated in a May 3 University of Florida Transportation Institute webinar, “Barriers and Facilities of People with Disabilities in Accepting and Adopting Autonomous Shared Mobility Services.” The webinar featured the findings of a survey of adults’ experiences with use of an autonomous shuttle. In addition to developing a regression model to predict adults’ use of autonomous vehicles, the research developed qualitative responses concerning the aspects of autonomous vehicles’ safety, availability, adaptability, affordability, accessibility, and acceptability. Factors that may contribute to use of autonomous vehicles by older adults include presence of an on-board attendant; cost; design issues; schedule and availability if night and weekend service; and compliance with ADA requirements.
- Participated in the May 3 Senior Connections Open House event. Toured the agency’s new building and spoke with staff about regional transportation issues affecting seniors.
- Prepared and presented a summary of recent and upcoming regional transportation developments at the May 10 meeting of the Senior Connections Human Services Transportation Coordination Entity Steering Committee.
- Observed the May 5 meeting of the Tri-Cities MPO Technical Advisory Committee and prepared a summary of the primary meeting points.
- Observed the May 8 meeting of the CVTA Technical Advisory Committee. The primary business included a discussion of the need to expand the membership of the Fall Line Working Group to include representatives of SportsBackers, FOLAR, and Friends of the Fall Line Trail.
- Observed the May 9 RRTPO Technical Advisory Committee meeting. Primary topics included an amendment to the FY21-FY24 TIP to add a project to improve the northbound shoulders on Rt 288 and recommendation of Policy Committee approval of the regional conformity assessment, the FY24-27 TIP, self-certification analysis, and proposed FY24-29 proposed allocation plans and new project selections.

- Participated in the May 9 Mamba Mentality Lunch and Learn program, which featured a Ted Talk video by Kelly McGongal entitled "The Upside of Stress" and a discussion of the causes of stress, how individuals handle stress, and stress and its relation to health. The video encouraged individuals to change their minds about stress and to think about stress better. It was noted that stress produces heightened levels of oxytocin, which can result in individuals seeking physical contact and help and support. The speaker noted that stress gives us access to our hearts, and we get stressed about the things we care about. Suggested coping mechanisms include exercise, listening to music, and verbalizing our feelings to others.
- Observed the May 10 meeting of the CVTA Finance Committee. Primary topics included a review and discussion of a debt and reserve approach; the timeline for bond issuance; the FY-224 administrative and operating budget; and policy for remote participation by Committee members.

#### North-South BRT

- Attended public meeting for N/S BRT at River City Middle School May 9.
- Attended bi-weekly meetings with project team developing the plan for a north-south BRT expansion for GRTC.
- Continued developing project website for [GRTC North-South BRT](#).

#### West Broad Street BRT

- Presented draft report for West Broad Street BRT Analysis to Human Services Transportation Coordination Entity on May 8.
- Reviewed stakeholder and public comments for the draft West Broad Street BRT Analysis.
- Completed [West Broad Street BRT Corridor Analysis](#).
- Presented report for West Broad Street BRT Analysis at a virtual public stakeholder meeting on May 31.
- Held status meetings with GRTC and Henrico County representatives.
- Continued developing project website for [West Broad Street BRT](#).

#### Active Transportation: Bicycle and Pedestrian

7340	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Active Transportation	202,000	16,222	197,516	98%	23

- Participated in Virginia Statewide Bicycle and Pedestrian Advisory Committee (BPAC) 2022 Spring Meeting.
- Participated in a webinar "Cycling Past 50" examined the cycling habits and preferences of thousands of adults ages 50 to 85-plus and how to keep them engaged and safely cycling as they age.
- Participated in a webinar "Local Infrastructure Hub: Safe Streets for All" that highlighted winning projects from the 2022 Safe Streets and Roads for All grant opportunity and provide insights to applicants for the 2023 cycle.

### Fall Line

- Continued to track Fall Line discussion and decision-making at CVTA and TAC meetings.
- Participated in the May 3 APA Virginia May Urbanism Happy Hour: Progress on the Fall Line Trail.
- Participated in two in-person charettes on May 8 and May 12 for the Sports Backers Vision Plan for Fall Line.
- Participated in Henrico County's May 16 Fall Line public meeting at Lewis Ginter Botanical Garden. PlanRVA staff supported the Ashland Trolley Line Public History Project.

### Richmond Regional Bicycle and Pedestrian Plan

- Updates on projects contributing to the regional Active Transportation network continue to be made to the [BikePedRVA 2045 Information Hub](#).
- Supported PlanRVA staff as we continue to assist the Town of Ashland with the update to the Town's bicycle and pedestrian plan.
- Staff worked to program a panel for PlanRVA Day to be held on June 1.

### Ashland Trolley Line Trail Study

- Additional information and images continue to be added to a [story map](#) for the project which illustrates the history and potential for the 14-mile Trolley Line Trail, essentially serving as the northern portion of the Fall Line.
- PlanRVA staff continues to work with the National Park Service and a local history team of experts from Richmond, Ashland, Hanover, and Henrico counties on the public history project intended to uncover and record oral history stories from around the operational period of the trolley line (ca. 1908-1938).
- Participated in Henrico County's May 16 Fall Line public meeting at Lewis Ginter Botanical Garden. PlanRVA staff supported the Ashland Trolley Line Public History Project.

### East Coast Greenway

- Staff also continue to work with ECG on updates to alignment and designated sections of the trail the Richmond region and to help track funding grants for improvements to sections of the trail.
- Staff reviewed the East Coast Greenway Alliance Annual Report.
- Staff assisted the East Coast Greenway Alliance schedule and promote an event on May 24 at Starr Hill Beer Hall & Rooftop for the premier of the short film, "Changing Gears," highlighting Richmond's Urban Cycling Group.

### Systems Resilience Plan

7350	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Systems Resil. Plan	170,000	13,618	145,771	86%	24

- The intern for the Richmond Regional Cooling Capacity Analysis Process (DOF U&CG Program) is concluding his work. He has conducted a literature review, identified reference areas for analysis, identified data needs, and began collecting data. PlanRVA is considering extending his internship to continue analysis.
- FEMA obligated funds for the SHSP grant that supports our Critical Infrastructure Mapping project. PlanRVA is beginning work next month.
- The PlanRVA FY24 Work Plan was approved and included pursuit of SolSmart Regional Designation. An update meeting with SolSmart representatives is scheduled for next month.
- Continued internal discussion on resilience metrics in Scenario Planning and helped select scenarios for modeling.
- Continued to participate in support regional and local resiliency efforts, including the Richmond Connects EV Subcommittee and the newly formed Greater Continuum of Care Resilience Workgroup.
- Submitted an application to the EPA's Climate Pollution Reduction Grant Program. The grant supplies \$1 Million over three years for the creation of a Climate Action Plan that includes an all-sector GHG inventory, reduction targets, and quantified GHG reduction measures for the Richmond MSA.

### Performance Based Transportation Planning

7410	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Perf. Based Transp. Planning.	85,000	0	16,714	20%	25

No funds expended this period.

### Transportation Improvement Program (TIP)

7420	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
TIP	362,000	10,696	193,127	53%	26

#### FY21 – FY24 TIP Maintenance:

- Reviewed one (1) TIP amendment at May TAC:
  - UPC 122147: #SMART24 #ITTF23 - 288 NB HARD SHOULDER RUNNING (HSR)

- Approved [four \(4\) TIP amendments](#) at May policy board:
  - Maintenance: Preventive Maintenance and System Preservation
  - Maintenance: Preventive Maintenance for Bridges
  - Maintenance: Traffic and Safety Operations
  - UPC 122147: #SMART24 #ITTF23 - 288 NB HARD SHOULDER RUNNING (HSR) - contingent on completion of public review (5/30)

#### FY24 – FY27 TIP Development:

- TAC recommendation of TIP, Regional Conformity Assessment, MPO self-certification analysis and resolution at May 9 meeting
- Policy Board adopted TIP, Regional Conformity Assessment, MPO self-certification analysis and resolution at May 18 meeting
- Submitted conformity approval to VDOT Environmental on May 23
- Submitted completed TIP packet to VDOT and DRPT on May 30

#### Regional Funding

- TAC reviewed at May 9 meeting and recommended approval
- RRTPO approved allocations and transfers including 2 new CMAQ and 5 new STBG projects
- Policy Board approved new cost estimating policy requiring Cost Estimate Workbook (CEWB) for all projects leading to construction. Projects that do not use CEWB in application will not be eligible for additional TPO funding beyond original estimate.

#### Rail, Freight, Intermodal Planning

7430	BUDGET	Billed this month	Total Funds Expended	% Total Funds Expended	UPWP Page
Rail, Freight, Interim. Planning.	54,000	185	7,948	15%	27

#### RRTPO Freight Planning Program

- Reviewed the scope of work for the RRTPO Freight Planning Program for the next fiscal year (FY-24).
- Attended TRB's Urban Freight Committee

**POLICY BOARD AGENDA 07/06/23; ITEM A.-8.-b.**

**FY21 – FY24 TIP AMENDMENT: VDOT REQUEST – #SMART18 - RICHMOND-HENRICO TURNPIKE - SOUTH SEGMENT**

**Richmond Regional Transportation Planning Organization**

**REQUESTED ACTION:** Review the requested amendment of the FY21 – FY24 Transportation Improvement Program (TIP) to update an existing project.

**BACKGROUND:** The RRTPO has received a request from VDOT to revise a project in the FY21 – FY24 TIP.

- UPC 111716 – #SMART18 - Richmond-Henrico Turnpike - South Segment (Henrico County)

This project is a Smart Scale selection and will widen Richmond-Henrico Turnpike from the intersection of Laburnum Avenue north to Hummingbird Road. The existing 2-lane, undivided roadway will be improved to a four-lane, divided roadway with a 16-foot raised median. A sidewalk will be constructed along the west side of Richmond-Henrico Turnpike and a shared-use path will be added along the east side.

The proposed amendment will make the following changes to the planned estimate and obligations:

- Update project estimate from \$18,642,000 to \$29,678,850.
- Move \$165,826 (STP/STBG) from FFY23 to FFY22, add \$92,100 (AC-STP/STBG) FFY23 PE, add \$92,100 (ACC-STP/STBG) FFY24 (PE phase).
- Release \$4,484,000 (AC-Other) FFY21, add \$2,756,642 (STP/STBG), release \$1,866,522 (ACC-STP/STBG) FFY22, add \$1,732,358 (AC-STP/STBG) FFY23, add \$1,732,358 (ACC-STP/STBG) FFY24 (RW phase).
- Release \$12,513,000 (AC-Other) FFY23 (CN phase).

AC - OTHER: Other non-federal funding; potential to convert to federal obligations in the future.

STP/STBG: Provides flexible funding for a wide range of eligible projects and programs to address state and local transportation needs.

**PUBLIC REVIEW:** A fifteen-day public review was held between June 15 and June 30, consistent with the Public Engagement Plan. Any comments received from this review period will be shared with the board prior to action on this item.

**TAC RECOMMENDATION:** TAC reviewed this request at the June meeting and unanimously recommended approval as presented.

**STAFF RECOMMENDATION:** Staff recommends approval of this TIP amendment as requested.



**REQUESTED ACTION:** The following resolution is presented for consideration:

**Resolved,** that the Richmond Regional Transportation Planning Organization (RRTPO) amends the #SMART18 - Richmond-Henrico Turnpike - South Segment project (UPC 111716) as follows:

- Update project estimate from \$18,642,000 to \$29,678,850.
- Move \$165,826 (STP/STBG) from FFY23 to FFY22, add \$92,100 (AC-STP/STBG) FFY23 PE, add \$92,100 (ACC- STP/STBG) FFY24 (PE phase).
- Release \$4,484,000 (AC-Other) FFY21, add \$2,756,642 (STP/STBG), release \$1,866,522 (ACC-STP/STBG) FFY22, add \$1,732,358 (AC-STP/STBG) FFY23, add \$1,732,358 (ACC-STP/STBG) FFY24 (RW phase).
- Release \$12,513,000 (AC-Other) FFY23 (CN phase).

# FY 2021 to FY 2024 Richmond Region TPO Transportation Improvement Program

## Secondary

UPC 111716

**Jurisdiction:** Henrico County  
**Route/Street:** Richmond-Henrico Turnpike  
**Description:** Richmond-Henrico Turnpike - South Segment  
**Scope:** Reconstruction w/ Added Capacity  
**From:** Laburnum Avenue  
**To:** Hummingbird Rd  
**Length:**  
**Administered By:** Locally **Regionally Significant:** No  
**MPO Note:**



### Schedule

Phase	Start	End	Status
Preliminary Engineering (PE):			
Right of Way (RW):			
Construction (CN):			

### Cost Estimates / Previous Obligations

Cost Estimates	Previous Obligations
PE:	Fund Source
RW:	Obligation
CN:	
Total: \$29,678,850	

### Goals addressed

Access	No	Congestion	Yes	Environment	No
Freight	No	Landuse	No	Maintenance	No
Safety	Yes	Reliability	No	Multimodal	Yes

### Federal Obligations

Phase	Fund Source	Match	Federal Obligations			
			FY21	FY22	FY23	FY24
PE	AC	\$0	\$0	\$0	\$92,100	\$0
PE	AC CONVERSION	\$0	\$0	\$0	\$0	\$92,100
PE	STP/STBG	\$0	\$1,479,174	\$165,826	\$0	\$0
RW	AC	\$0	\$0	\$0	\$1,732,358	\$0
RW	AC CONVERSION	\$0	\$0	\$0	\$0	\$1,732,358
RW	STP/STBG	\$0	\$0	\$2,756,642	\$0	\$0

### Amendments

**Amd 48** 7/6/2023 Approved

Update project estimate from \$18,642,000 to \$29,678,850. Move \$165,826 (STP/STBG) from FFY23 to FFY22, add \$92,100 (AC-STP/STBG) FFY23, add \$92,100 (ACC-STP/STBG) FFY24 PE phase; release \$4,484,000 (AC-Other) FFY21, add \$2,756,642 (STP/STBG), release \$1,866,522 (ACC-STP/STBG) FFY22, add \$1,732,358 (AC-STP/STBG) FFY23, add \$1,732,358 (ACC-STP/STBG) FFY24 RW phase; release \$12,513,000 (AC-Other) FFY23 CN phase

Date Requested 5/9/2023

### Adjustments

**Adj 102** 10/6/2022 Completed

Henrico County

UPC 111716

## FY 2021 to FY 2024 Richmond Region TPO Transportation Improvement Program

### Secondary

#### UPC 111716

1.) Move \$366,522 (ACCSTP/STBG) from FFY23 to FFY21 & add an addit'l \$1,112,652 PE phase. 2.) Add \$1,866,522 (ACC-STP/STBG) FFY22 RW phase. 3.) Remove \$1,645,000 AC FFY21 PE phase.

Date Requested 9/26/2022

## **POLICY BOARD AGENDA 7/6/2023; ITEM B.-1.**

### **Socioeconomic Data 2050 Future Year Data Approval**

#### **Richmond Regional Transportation Planning Organization**

**REQUESTED ACTION:** The RRTPO policy board is requested to review and approve the 2050 Future Year Socioeconomic Data. This data will be used in the Richmond/Tri-Cities Regional Travel Demand Model update process.

**BACKGROUND:** The Richmond Regional Transportation Planning Organization is in the process of developing its first Scenario Planning Process and Tools - Pathways to the Future (P2F). This will be followed by the development of the 2050 Long-Range Transportation Plan (LRTP). Both of these data driven processes/projects will provide significant decision-making tools to guide how the RRTPO, Central Virginia Transportation Authority (CVTA), the localities, Virginia Department of Transportation (VDOT), Virginia Department of Rail and Public Transportation (DRPT), GRTC Transit Systems and other partners will meet the transportation needs of the Richmond region over the next 25 plus years.

A first task in the 'Pathways to the Future' and the 2050 LRTP development process is to update the Richmond/Tri-Cities (RTC) Regional Travel Demand Model and the supporting Socioeconomic (SE) data, also called as the Landuse Data. The RRTPO, the Tri-Cities MPO and VDOT Richmond District staff are working closely with VDOT modeling staff to update the RTC model.

The RTC model update requires a new set of horizon year (2050) population and employment data as a primary input. This data has been developed by a working group of the RRTPO TAC – the Socioeconomic (SE) Data Work Group. RRTPO TAC in their May 27, 2022, meeting authorized the establishment of the SE Data Workgroup. The establishment of SE Data Work Group has occurred with the development of each LRTP cycle and includes appointees from local government staff who are qualified to confirm the required data inputs, and representatives from VDOT, DRPT and GRTC. Locality involvement is critical to confirming data at the small geographic areas called Transportation Analysis Zone (TAZ).

The SE Data workgroup convened its first meeting on July 13, 2022. The workgroup approved the Future Year 2050 data in their April 6, 2023, meeting.

The draft '*Socioeconomic Data Report for the 2017 Base Year and the 2050 Forecast Year*' report and the '*Executive Summary*' report are provided as attachments for the policy board review and comments. The report provides estimates and projections of population, employment, housing, school and college enrollment and auto ownership data of the Richmond Region at the TAZ geography.

**SE DATA WORKGROUP RECOMMENDATION:** Socioeconomic Data Workgroup approved the 2050 Future Year Data at the Traffic Analysis Zone (TAZ), Jurisdictional and Regional levels and recommended that the RRTPO Technical Advisory Committee (TAC) approve the data as presented.

**TAC RECOMMENDATION:** The TAC approved the 2050 Future Year Data at the Traffic Analysis Zone (TAZ), Jurisdictional and Regional levels and recommended RRTPO Policy Board for the approval of the data as it was presented by RRTPO staff.

**STAFF RECOMMENDATION:** RRTPO staff concurs with the TAC recommendations.

**RRTPO ACTION REQUESTED:** The following resolution is presented for the RRTPO policy board review and action:

**RESOLVED**, that the Richmond Regional Transportation Planning Organization (RRTPO) policy board approves the 2050 Future Year Socioeconomic Data at the Traffic Analysis Zone (TAZ), Jurisdictional and Regional levels as presented by RRTPO staff.

**FURTHER RESOLVED**, that the RRTPO Policy Board authorizes staff to use the 2050 Future Year Socioeconomic Data in the RTC model update process.

SA

#### **Attachments**

Socioeconomic Data Report for the 2017 Base Year and the 2050 Forecast Year

Socioeconomic Data Report for the 2017 Base Year and the 2050 Forecast Year – Executive Summary

# Richmond Regional Transportation Planning Organization

## Socioeconomic Data Report for the 2017 Base Year and 2050 Forecast Year

### Executive Summary



## **ACKNOWLEDGEMENT**

This report was prepared in cooperation with the United States Department of Transportation, Federal Highway Administration, the Virginia Department of Transportation, Virginia Department of Rail and Public Transportation, GRTC Transit Systems and the representatives of the nine local jurisdictions of the Richmond region and is the collective work of state, regional and local representatives of the Richmond Regional Transportation Planning Organization (RRTPO) Socioeconomic Data Workgroup.

## **DISCLAIMER**

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### **Note:**

PlanRVA is the brand of the legal entity known as Richmond Regional Planning District Commission.  
The RRTPO is the brand of the legal entity known as Richmond Area Metropolitan Planning Organization.

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## **Richmond Regional Transportation Planning Organization**

The Richmond Regional Transportation Planning Organization (RRTPO) is the federal and state designated regional transportation planning organization that serves as the forum for cooperative transportation decision-making in the Richmond area. The Richmond Regional PlanRVA is the contracting agent and staff for the Richmond Regional TPO.

<b><u>Voting Members</u></b>			<b><u>Non-Voting Members</u></b>
<b>Town of Ashland</b> John H. Hodges Anita Barnhart *	<b>Henrico County</b> Patricia S. O'Bannon Frank J. Thornton Thomas Branin *	<b>CRAC</b> John B. Rutledge (Vacant)	<b>FHWA</b> Ivan Rucker Thomas L. Nelson, Jr., P.E.
<b>Charles City County</b> Byron Adkins, Sr. William G. Coad *	<b>New Kent County</b> C. Thomas Tiller, Jr. Patricia A. Paige Thomas W. Evelyn *	<b>GRTC Transit System</b> Sharyl Adams Adrienne Torres *	<b>FTA</b> Daniel Koenig (Vacant)
<b>Chesterfield County</b> Kevin P. Carroll Christopher Winslow James M. Holland Mark S. Miller *	<b>Powhatan County</b> Karin M. Carmack David T. Williams	<b>RMATA</b> Joi Taylor Dean (Vacant)	<b>RideFinders. Inc.</b> Von S. Tisdale Cherika Ruffin
<b>Goochland County.</b> John L. Lumpkins, Jr. Susan F. Lascolette	<b>City of Richmond</b> Andreas D. Addison Katherine L. Jordan Dr. Cynthia I. Newbille Stephanie A. Lynch Michael J. Jones * Kristen Nye * Ellen F. Robertson *	<b>Virginia Secretary of Transportation Designee</b> Dale R. Totten Mark E. Riblett, P.E. *	<b>DOAV</b> Rusty Harrington (Vacant)
<b>Hanover County</b> W. Canova Peterson Sean M. Davis Faye O. Prichard *			<b>DRPT</b> Grant Sparks Tiffany T. Dubinsky
			<b>CTAC</b> Lisa M. Guthrie Sera Erickson
* Alternates ** Not eligible to vote			

## **2017 - 2050 Socioeconomic Data Workgroup Members List**

<b>Town of Ashland</b> Nora Amos	<b>New Kent County</b> Kelli Le Duc	<b>Virginia Department of Transportation (VDOT)</b> Enhua Liu Nicole Mueller
<b>Charles City County</b> Ronda Russell	<b>Powhatan County</b> Bret Schardin	<b>Virginia Department of Rail and Public Transportation (DRPT)</b> Daniel Wagner
<b>Chesterfield County</b> Logan Ashby	<b>City of Richmond</b> Brian Mercer	<b>GRTC Transit Systems</b> Patricia Robinson Sam Sink
<b>Goochland County</b> Austin Goyne		<b>Crater PDC/Tri-Cities MPO</b> Ronald Svejksky
<b>Hanover County</b> Andrew Pompei		<b>PlanRVA/RRTPO</b> Chet Parsons Sulabh Aryal
<b>Henrico County</b> Seth Humphreys		

### **Principal Project Staff**

Sulabh Aryal – Transportation Planning Manager (Project Manager)  
Chet Parsons – Director of Transportation  
Sarin Adhikari – Data Manager  
Rishabh Singh – Data Analyst  
Elizabeth Greenwell – Data Analyst

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# Introduction

The Richmond Regional Transportation Planning Organization (RRTPO) is in the process of developing its first Scenario Planning Process and Tools - Pathways to the Future (P2F). This will be followed by the development of the 2050 Long-Range Transportation Plan (LRTP). Both data-driven projects will provide significant decision-making tools to guide how the RRTPO, Central Virginia Transportation Authority (CVTA), the localities, Virginia Department of Transportation (VDOT), Virginia Department of Rail and Public Transportation (DRPT), GRTC Transit Systems and other partners will meet the transportation needs of the Richmond region over the next 25 plus years.

A first task in the 'Pathways to the Future' and the LRTP development process is to update the Richmond/Tri-Cities (RTC) Regional Travel Demand Model and the supporting Socioeconomic (SE) data, also called the Land use Data. The RRTPO, the Tri-Cities MPO and VDOT Richmond District staff are working closely with VDOT modeling staff to update the RTC model.

As the years 2020 and 2021 have been very unreliable to become the new base-year due to Covid-19 related implications for long-term forecast, RRTPO staff proposed not to develop a new base year for this SE data update and retain 2017 (previously developed and approved) as the base year. These Covid-19 implications included - decrease in employment, overall decrease in travel including AM and PM commutes and decrease in transit ridership. The year 2022 could have been a reliable base-year as things came back to normalcy, but the required data for 2022 would have been only available in late 2023 or early 2024 at the earliest as there is normally a one-year lag in getting the accurate data. This would fall outside the project timeline.

It was decided that the RTC model would be updated using the same base year (2017) and a new horizon year (2050). The data for 2050 was developed using 2017 data (ignoring Covid-19 Implications) and also looking at Census 2020 population and housing numbers. A scenario assuming long-term Covid-19 related implications will be developed as one of the scenarios in the 'Pathways to the Future'.

The RTC model update required a new set of horizon year (2050) population and employment data as a primary input. This data was developed by a working group of the RRTPO Technical Advisory Committee – the Socioeconomic (SE) Data Work Group. The establishment of SE Data Work Group has occurred with the development of each LRTP cycle and includes appointees from local government staff who are qualified to confirm the required data inputs, and representatives from VDOT, DRPT and GRTC. Locality involvement is critical to confirming data at the Transportation Analysis Zone (TAZ) level. The Socioeconomic Data Work Group to develop the 2050 data was convened in the early spring of 2022.

The 2017-2050 Socioeconomic Data provides estimates and projections of population, employment, housing, school and college enrollment and auto ownership data of the Richmond Region within small geographic areas called Transportation Analysis Zones (TAZs).

Though the primary purpose of the SE data is to provide input into the RTC Model, this data is also used by local governments, regional and state agencies, non-profit organizations and consultants for a variety of studies including regional transportation plans and studies( multimodal, highway, transit, active transportation and freight), comprehensive economic development analysis, demographic analysis, infrastructure planning on a local or regional basis, sustainability plans, or local comprehensive planning in the context of a region. This data is unique in sense no other available dataset provides future projections of population, employment, and derivatives in a small geography like the TAZ.

## 2017 Base Year Summary Table

Jurisdiction <sup>1</sup>	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
<b>Ashland<sup>2</sup></b>	7,785	6,320	1,465	3,024	2,917	4,954	713	1,418	8,636	3,065	5,571
<b>Charles City</b>	7,126	7,126	0	3,328	2,874	8,672	650	0	1,668	96	1,572
<b>Chesterfield<sup>3</sup></b>	340,848	336,197	4,651	132,586	124,595	293,337	62,779	20,985	131,120	34,646	96,474
<b>Goochland</b>	23,536	22,812	724	9,679	8,981	23,485	2,925	531	13,966	1,360	12,606
<b>Hanover<sup>4</sup></b>	109,595	106,677	2,918	41,706	40,247	97,794	18,226	1,418	50,625	12,969	37,656
<b>Henrico</b>	335,283	328,396	6,887	135,628	132,421	279,241	57,860	11,490	191,240	45,877	145,363
<b>New Kent</b>	21,347	20,740	607	8,389	8,008	21,868	3,336	100	3,956	948	3,008
<b>Powhatan</b>	29,147	27,150	1,997	11,022	10,442	29,566	4,635	0	6,092	1,577	4,515
<b>Richmond</b>	224,798	210,302	14,496	108,043	99,958	129,444	29,536	41,746	152,044	24,468	127,576
<b>Region Total</b>	<b>1,091,680</b>	<b>1,059,400</b>	<b>32,280</b>	<b>450,381</b>	<b>427,526</b>	<b>883,407</b>	<b>179,947</b>	<b>76,270</b>	<b>550,711</b>	<b>121,941</b>	<b>428,770</b>

<sup>1</sup>Includes all jurisdictions in Planning District 15 (i.e. RRTPO Metropolitan Planning Area and Tri-Cities Area MPO portion of Chesterfield)

<sup>2</sup>Displayed here separately, but also included as a part of Hanover County

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## 2050 Forecast Year Summary Table

Jurisdiction <sup>1</sup>	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
<b>Ashland<sup>2</sup></b>	8,822	7,604	1,218	3,763	3,511	6,139	776	1,477	13,408	4,953	8,455
<b>Charles City</b>	6,552	6,552	0	2,892	2,643	7,973	473	0	1,850	113	1,737
<b>Chesterfield<sup>3</sup></b>	504,814	499,044	5,770	191,692	184,489	432,400	77,677	22,272	186,051	45,719	140,332
<b>Goochland</b>	34,742	33,825	917	14,373	13,323	34,571	4,182	531	21,704	2,091	19,613
<b>Hanover<sup>4</sup></b>	142,156	140,085	2,071	55,470	53,103	128,181	19,843	1,477	68,361	16,543	51,818
<b>Henrico</b>	422,954	418,846	4,108	177,175	168,992	356,989	74,880	12,378	246,718	53,576	193,142
<b>New Kent</b>	36,081	35,509	572	14,478	13,712	37,432	6,102	310	6,299	1,336	4,963
<b>Powhatan</b>	39,576	38,501	1,075	16,198	14,808	41,963	6,362	0	7,704	1,886	5,818
<b>Richmond</b>	278,538	266,920	11,618	141,740	129,582	159,489	42,990	41,809	178,256	26,762	151,494
<b>Region Total</b>	<b>1,465,413</b>	<b>1,439,282</b>	<b>26,131</b>	<b>614,018</b>	<b>580,652</b>	<b>1,198,998</b>	<b>232,509</b>	<b>78,777</b>	<b>716,943</b>	<b>148,026</b>	<b>568,917</b>

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# Methodology for 2017 Base Year

## Housing and Population

The 2017 base year methodology for development of the housing and population data used a bottom-up approach for tracking local residential development. Henrico and Hanover counties track their annual growth through their Continuing, Cooperative and Comprehensive data process, also known as 3-C data. Socioeconomic Data workgroup decided to use this approach for all jurisdictions in developing the population and housing data as part of the 2017-2050 Socioeconomic update process.

The following steps were used:

1. Certificate of occupancies (COs) and demolitions (Demos) by address/location was tracked and using GIS, each CO and Demo point was spatially joined with the Transportation Analysis Zone (TAZ)
2. Using the 2010 Census data as the starting point, all the Census blocks with total population, group quarters population, total housing units, vacant housing units, and occupied housing units where nested into each TAZ.
3. Since the 2010 Census data was completed on April 1, 2010, each jurisdiction was instructed to track their COs and Demos from April 1 – Dec 31, 2010, and then for each subsequent calendar year from 2011 to 2017.
4. COs and Demos dating from April 1 – Dec 31, 2010, were then inputted into 3-C model for year 2010. Subsequently all COs and Demos for the entire year from 2011 to 2017 were input into the 3-C model.
5. The data development process used for Hanover, Chesterfield, and Henrico:
  - All three of these jurisdictions had already been tracking their 3-C data and have the same methodology described for the rural jurisdictions below with a few exceptions:
  - Having tracked 3-C data prior to 2010 all three jurisdictions had a breakdown between single family vs multi-family.
  - Henrico used surveys to identify group quarters population and the multi-family vacancy rates.

- All three jurisdictions used specific countywide average household size based on the 2010 Census and then used American Community Survey (ACS) in subsequent years.
- All the jurisdictions used individual vacancy rate by TAZ based on the 2010 Census, ACS or Costar Vacancy data (if available)

6. The rural jurisdictions (Charles City, New Kent, Powhatan, and Goochland) process was developed as follows:

- There was no breakdown of single family and multi-family.
- A countywide vacancy rate, specific to each jurisdiction and based on either the 2010 Census or ACS was applied to all the rural jurisdictions for both single family and multi-family housing.
- A countywide average household size was then applied based on the 2010 Census to calculate the single family and multi-family population.

7. City of Richmond data development process:

- Only total housing units were tracked since the housing stock in the city is so much more diverse was no way to know the exact breakdown.
- To account for the diverse housing stock the City was divided into five districts which had similar housing characteristics (downtown, northeast, southside, uptown, and the westend) and each district had a different vacancy rate and average household size.

## **Employment**

RRTPO staff used the 2nd quarter 2017 VEC data as the primary source for employment data. The 2017 VEC data was provided with latitude and longitude coordinate systems for most of the employer addresses allowing staff to plot most of the points rather than geocoding over 27,000 employer addresses. Over 95% of the 2017 VEC employment was either plotted or successfully geocoded. Employer addresses without latitude and longitude coordinates were geocoded after their addresses were verified.

Employers with 200 or more employees were verified through contact (phone or email) and disaggregated to several locations where was necessary. The 2017 employment data also went to a thorough spot-checking process as RRTPO staff compared it against the 2012 employment. Any major differences were reality-checked. Some differences reflected employers relocating or going out of business. Other addresses were geocoded on the wrong side of the street or employment needed to be disaggregated into several locations. Staff researched any TAZ where employment had a difference of +/-100 and/or represented a large proportional difference. Several rounds of this spot checking were done along with notes as to reasons for major differences

## **Autos**

Virginia Department of Motor Vehicles (DMV) Automobile Registration Data was used as the primary source for autos. The aim was to get a database from DMV which only included registered motorized vehicle for personal use. RRTPO and DMV staff spent at least three sessions to develop the query which would yield the most appropriate database applicable. The process was started by querying out the Garage Jurisdiction (the address where the vehicle registration is sent to the customer. If a post box was provided, we also needed a physical address). We assumed that this address is where the vehicle is parked at night. If a vehicle is not registered or registered outside the region but is still parked at the address, we just ignore those. All non-motorized vehicles such as any type of trailers, chassis, hearse, etc. were eliminated. Similarly, customer type – “Individual” and Use type “Personal” were only kept in the database. This filtered out fleet vehicles. Also, vehicles with more than 2 Axles were filtered out. The data after all these different queries came out

good. The registration addresses (almost 900,000 records for the Richmond region) were geocoded, spatially joined and aggregated by TAZs. The database was then crosschecked with housing data. More than 99% of the data fell within the applicable autos per housing range.

## **K-12 School and College Enrollment**

K-12 school enrollment was compiled using the fall of 2017 academic enrollment numbers provided by Virginia’s Department of Education (DOE) for most of the jurisdictions. Hanover and Henrico counties used their School Board numbers. In some cases, axillary locations and alternative schools were called to verify.

K-12 private school enrollment was compiled using the 2012 database of private schools, RRTPO had maintained and the online website [www.greatschools.org](http://www.greatschools.org). The 2017 fall enrollment number was used. For any other private schools where staff had no record of enrollment numbers, staff contacted individual schools.

University and college enrollment were compiled through phone calls to each institution, using the fall enrollment of the 2017-2018 academic year. These enrollment numbers include both full-time and part-time students. These institutions include 4-year universities, 2-year colleges, post-graduate programs, certificate programs, technical schools, and proprietary colleges and universities – also known as for-profit institutions of higher learning.



## Methodology for 2050 Forecast Year

For the 2050 Future year data projections Socioeconomic Data Workgroup decided to do a Top-down approach in which we develop the jurisdictional control-total first, then distribute to the individual TAZs. Distribution to the TAZs was based on both current and future trends.

Two independent projections were done to establish the control-totals: population and employment. Other attributes were directly dependent on the established population or employment control-totals.

### Housing and Population

The Weldon Copper 2050 population projection – which is the commonwealth of Virginia's official projection was used as the jurisdiction control total for population. The Virginia State code provides a variance of plus/minus 10 percent from the Weldon Copper projections without documentation. If the variance is more than 10 percent a proper documentation is required. Most of the jurisdiction established their control- totals with the Weldon Copper projections, with Charles City and Hanover counties and the city of Richmond being the exception. Overall, the regional population projection was only 0.74 percent more than the Weldon Cooper projections.

For each jurisdiction the net difference of the base year population and the future year population was calculated. This yielded the exact new population which needs to be added. We assumed that in the future year each TAZs retains at least the population as its base year unless there is a massive demolition project planned. TAZ population growth was based on major development projects (projects in a short-term pipeline 5-10 years). This information was either provided by the jurisdiction or researched from online and print media and press releases. In Richmond and Henrico infill development and vacant buildings were also considered. This distribution of population in the TAZs was further reviewed by jurisdictional staff and in some cases tweaked based on local knowledge. Overall, the distribution of the population in the TAZs is in line with the locality

comprehensive plans (including the ones which are being updated now, i.e., HenricoNext and Envision Hanover).

The major development project provided the number of new housing units for each TAZs. The households (or occupied housing units) were calculated using the vacancy rates. As Census 2020 data has been released, the vacancy rates from Census 2020 were used - either the same jurisdiction-wide vacancy rates (smaller jurisdictions) or different vacancy rates for each TAZ (larger jurisdiction). Population was then calculated using the average household size, (kept fractionally smaller than what was in Census 2020). The remaining population needed to reach the control-total was calculated in the reverse order. In this case the population was added to the TAZ first, then the households were calculated using the average household size and finally the housing units were calculated using the vacancy rates.

RRTPO staff and jurisdiction staff reached out or did web research on any potential projections for Group Quarters population. When the projections were available, those were reflected in the TAZs. If there was no projection available, the group quarters population was kept same as the Census 2020 numbers.

### Autos

RRTPO staff did significant research on local, regional, and national, current, and future trends on auto ownership. The current trends show an increase in the auto-ownership rates (autos/household) in the last decade. On the other hand, many research papers show a decline in future auto-ownership rates. Connected and Automated Vehicles market penetration by 2050 is another factor which would affect auto-ownership rates in the future and could go either way.

Based on all this research RRTPO staff decided to keep the auto-ownership rates constant from the base year. Each TAZ has a separate auto-ownership rate in the base year. The total households in each TAZ were multiplied by the auto-ownership rate to get the

number of autos in each TAZs. The TAZ autos were aggregated to get the jurisdictional total.

### **K-12 School and College Enrollment**

For the K-12 school enrollment growth is mostly accounted for in public school enrollment. Private school enrollment in the future year 2050 was kept constant to the 2017 base year unless projections numbers were received from individual entities. RRTPO developed a cohort component model which gives the future population by age cohort and gender. First, the total school age children (age ranges 5-9, 10-14 and 15-19) were calculated for 2050 using the cohort component model. Private school enrollment (from 2017 base year), drop-out rates and home-schooling rates (data from the 2017 DOE) was applied assuming they remain constant in 2050. Children living in one jurisdiction and going to private school in another jurisdiction and vice versa also were also considered and reflected by multiplying by an adjusting factor (constant).

The adjusting factor is different for each jurisdiction and was calculated using 2017 data and kept constant for 2050. Applying the adjusting factor yielded the total public-school enrollment for each jurisdiction for 2050. The private school enrollment was then added to arrive at the total K-12 enrollment by TAZ. Note that the school enrollment numbers, home-schooling rates and drop-out rates for 2020 and 2021 were ignored for 2050 projection due to Covid-19 related implications.

RRTPO staff and jurisdiction staff reached out or did web research on any potential projections for college and universities for 2050 which included looking at any published capital improvement or master plans. For community colleges staff looked at the historical enrollment numbers. The community colleges in the Richmond region had peaked in 2012 and have had a decline since then. Based on these observations the 2050 community college enrollment numbers were kept constant as the current enrollment. For most proprietary colleges, when the projections were available, those were reflected in the TAZs. If there was no projection available, the college enrollment number was kept constant as the current enrollment.

### **Employment**

The State of Virginia does not have an officially recognized employment projections. There are several private companies who provide proprietary employment projections by jurisdictions. RRTPO staff had previously contracted Chmura Economics & Analytics (Chmura), a Richmond based, nationally recognized economics and analytics firm to develop the employment projections for the future year 2045 by jurisdiction and by 2-digit NAICS code (by sector). RRTPO staff used the same model to develop the future year 2050 employment control-totals. The employment control-totals as established by RRTPO staff was accepted by the jurisdictions as the baseline employment projections.

For each jurisdiction the net difference of the base year employment and the future year employment was calculated. This yielded the exact new employment which needed to be added. RRTPO staff assumed that in the future year each TAZs retains at least the same employment as its base year unless there is a major rezoning or a major demolition project. RRTPO staff first allocated employment based on what major commercial development projects were already in the pipeline gather from information provided by the jurisdiction staff or researched from online and print media and press releases.

The commercial development projects provided information on the type of commercial activity and the and the total area or square footage. The square footage was converted into number of employees based on industry standards. For Richmond, Henrico and Chesterfield the employment was further distributed into the TAZs using a future land use (FLU) built-out analysis for square footage. The square footage was converted into number of employees based on industry standards. This FLU built-out analysis looked at land uses as they related to retail, office, industrial, and mixed-uses assuming any undeveloped land would be developed to 30-50 percent of its capacity. For Hanover county the employment was further distributed into the TAZs by identifying areas for economic growth which focused on major corridors in the county with heavy emphasis on US-33 corridor growth.

For all the jurisdictions, the remaining employment needed to reach the control total was distributed proportionally to all remaining TAZs not previously allocated by pipeline activity or by the FLU built-out analysis/ major corridors to account for natural employment growth based on the 2017 employment distribution. This distribution of employment in the TAZs was further reviewed by jurisdictional staff and in some cases tweaked based on local knowledge.

The employment was further broken down into retail and non-retail based on pipeline commercial activities, 2017 employment mix and future land use and aggregated to jurisdictional control totals. Similarly, for modeling purpose the employment was further broken down into 2-digit NAICS code (20 categories) for each TAZ and aggregated to the NAICS jurisdictional control-totals developed by RRTPO staff.

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# Richmond Regional Transportation Planning Organization

## Socioeconomic Data Report for the 2017 Base Year and 2050 Forecast Year



## **ACKNOWLEDGEMENT**

This report was prepared in cooperation with the United States Department of Transportation, Federal Highway Administration, the Virginia Department of Transportation, Virginia Department of Rail and Public Transportation, GRTC Transit Systems and the representatives of the nine local jurisdictions of the Richmond region and is the collective work of state, regional and local representatives of the Richmond Regional Transportation Planning Organization (RRTPO) Socioeconomic Data Workgroup.

## **DISCLAIMER**

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### **Note:**

PlanRVA is the brand of the legal entity known as Richmond Regional Planning District Commission.  
The RRTPO is the brand of the legal entity known as Richmond Area Metropolitan Planning Organization.

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## **Richmond Regional Transportation Planning Organization**

The Richmond Regional Transportation Planning Organization (RRTPO) is the federal and state designated regional transportation planning organization that serves as the forum for cooperative transportation decision-making in the Richmond area. The Richmond Regional PlanRVA is the contracting agent and staff for the Richmond Regional TPO.

<b><u>Voting Members</u></b>			<b><u>Non-Voting Members</u></b>
<b>Town of Ashland</b> John H. Hodges Anita Barnhart *	<b>Henrico County</b> Patricia S. O'Bannon Frank J. Thornton Thomas Branin *	<b>CRAC</b> John B. Rutledge (Vacant)	<b>FHWA</b> Ivan Rucker Thomas L. Nelson, Jr., P.E.
<b>Charles City County</b> Byron Adkins, Sr. William G. Coad *	<b>New Kent County</b> C. Thomas Tiller, Jr. Patricia A. Paige Thomas W. Evelyn *	<b>GRTC Transit System</b> Sharyl Adams Adrienne Torres *	<b>FTA</b> Daniel Koenig (Vacant)
<b>Chesterfield County</b> Kevin P. Carroll Christopher Winslow James M. Holland Mark S. Miller *	<b>Powhatan County</b> Karin M. Carmack David T. Williams	<b>RMTA</b> Joi Taylor Dean (Vacant)	<b>RideFinders. Inc.</b> Von S. Tisdale Cherika Ruffin
<b>Goochland County.</b> John L. Lumpkins, Jr. Susan F. Lascolette	<b>City of Richmond</b> Andreas D. Addison Katherine L. Jordan Dr. Cynthia I. Newbille Stephanie A. Lynch Michael J. Jones * Kristen Nye * Ellen F. Robertson *	<b>Virginia Secretary of Transportation Designee</b> Dale R. Totten Mark E. Riblett, P.E. *	<b>DOAV</b> Rusty Harrington (Vacant)
<b>Hanover County</b> W. Canova Peterson Sean M. Davis Faye O. Prichard *			<b>DRPT</b> Grant Sparks Tiffany T. Dubinsky
			<b>CTAC</b> Lisa M. Guthrie Sera Erickson
* Alternates ** Not eligible to vote			

## **2017 - 2050 Socioeconomic Data Workgroup Members List**

<b>Town of Ashland</b> Nora Amos	<b>New Kent County</b> Kelli Le Duc	<b>Virginia Department of Transportation (VDOT)</b> Enhua Liu Nicole Mueller
<b>Charles City County</b> Ronda Russell	<b>Powhatan County</b> Bret Schardin	<b>Virginia Department of Rail and Public Transportation (DRPT)</b> Daniel Wagner
<b>Chesterfield County</b> Logan Ashby	<b>City of Richmond</b> Brian Mercer	<b>GRTC Transit Systems</b> Patricia Robinson Sam Sink
<b>Goochland County</b> Austin Goyne		<b>Crater PDC/Tri-Cities MPO</b> Ronald Svejksky
<b>Hanover County</b> Andrew Pompei		<b>PlanRVA/RRTPO</b> Chet Parsons Sulabh Aryal
<b>Henrico County</b> Seth Humphreys		

### **Principal Project Staff**

Sulabh Aryal – Transportation Planning Manager (Project Manager)  
Chet Parsons – Director of Transportation  
Sarin Adhikari – Data Manager  
Rishabh Singh – Data Analyst  
Elizabeth Greenwell – Data Analyst



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# Introduction

The Richmond Regional Transportation Planning Organization (RRTPO) is in the process of developing its first Scenario Planning Process and Tools - Pathways to the Future (P2F). This will be followed by the development of the 2050 Long-Range Transportation Plan (LRTP). Both data-driven projects will provide significant decision-making tools to guide how the RRTPO, Central Virginia Transportation Authority (CVTA), the localities, Virginia Department of Transportation (VDOT), Virginia Department of Rail and Public Transportation (DRPT), GRTC Transit Systems and other partners will meet the transportation needs of the Richmond region over the next 25 plus years.

A first task in the 'Pathways to the Future' and the LRTP development process is to update the Richmond/Tri-Cities (RTC) Regional Travel Demand Model and the supporting Socioeconomic (SE) data, also called the Land use Data. The RRTPO, the Tri-Cities MPO and VDOT Richmond District staff are working closely with VDOT modeling staff to update the RTC model.

As the years 2020 and 2021 have been very unreliable to become the new base-year due to Covid-19 related implications for long-term forecast, RRTPO staff proposed not to develop a new base year for this SE data update and retain 2017 (previously developed and approved) as the base year. These Covid-19 implications included - decrease in employment, overall decrease in travel including AM and PM commutes and decrease in transit ridership. The year 2022 could have been a reliable base-year as things came back to normalcy, but the required data for 2022 would have been only available in late 2023 or early 2024 at the earliest as there is normally a one-year lag in getting the accurate data. This would fall outside the project timeline.

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Jurisdiction <sup>1</sup>	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
<b>Ashland<sup>2</sup></b>	7,785	6,320	1,465	3,024	2,917	4,954	713	1,418	8,636	3,065	5,571
<b>Charles City</b>	7,126	7,126	0	3,328	2,874	8,672	650	0	1,668	96	1,572
<b>Chesterfield<sup>3</sup></b>	340,848	336,197	4,651	132,586	124,595	293,337	62,779	20,985	131,120	34,646	96,474
<b>Goochland</b>	23,536	22,812	724	9,679	8,981	23,485	2,925	531	13,966	1,360	12,606
<b>Hanover<sup>4</sup></b>	109,595	106,677	2,918	41,706	40,247	97,794	18,226	1,418	50,625	12,969	37,656
<b>Henrico</b>	335,283	328,396	6,887	135,628	132,421	279,241	57,860	11,490	191,240	45,877	145,363
<b>New Kent</b>	21,347	20,740	607	8,389	8,008	21,868	3,336	100	3,956	948	3,008
<b>Powhatan</b>	29,147	27,150	1,997	11,022	10,442	29,566	4,635	0	6,092	1,577	4,515
<b>Richmond</b>	224,798	210,302	14,496	108,043	99,958	129,444	29,536	41,746	152,044	24,468	127,576
<b>Region Total</b>	<b>1,091,680</b>	<b>1,059,400</b>	<b>32,280</b>	<b>450,381</b>	<b>427,526</b>	<b>883,407</b>	<b>179,947</b>	<b>76,270</b>	<b>550,711</b>	<b>121,941</b>	<b>428,770</b>

<sup>1</sup>Includes all jurisdictions in Planning District 15 (i.e. RRTPO Metropolitan Planning Area and Tri-Cities Area MPO portion of Chesterfield)

<sup>2</sup>Displayed here separately, but also included as a part of Hanover County

<sup>3</sup>Chesterfield County TAZs are located in both the RRTPO and Tri-Cities MPO

<sup>4</sup>Includes the Town of Ashland

## 2050 Forecast Year Summary Table

Jurisdiction <sup>1</sup>	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
<b>Ashland<sup>2</sup></b>	8,822	7,604	1,218	3,763	3,511	6,139	776	1,477	13,408	4,953	8,455
<b>Charles City</b>	6,552	6,552	0	2,892	2,643	7,973	473	0	1,850	113	1,737
<b>Chesterfield<sup>3</sup></b>	504,814	499,044	5,770	191,692	184,489	432,400	77,677	22,272	186,051	45,719	140,332
<b>Goochland</b>	34,742	33,825	917	14,373	13,323	34,571	4,182	531	21,704	2,091	19,613
<b>Hanover<sup>4</sup></b>	142,156	140,085	2,071	55,470	53,103	128,181	19,843	1,477	68,361	16,543	51,818
<b>Henrico</b>	422,954	418,846	4,108	177,175	168,992	356,989	74,880	12,378	246,718	53,576	193,142
<b>New Kent</b>	36,081	35,509	572	14,478	13,712	37,432	6,102	310	6,299	1,336	4,963
<b>Powhatan</b>	39,576	38,501	1,075	16,198	14,808	41,963	6,362	0	7,704	1,886	5,818
<b>Richmond</b>	278,538	266,920	11,618	141,740	129,582	159,489	42,990	41,809	178,256	26,762	151,494
<b>Region Total</b>	<b>1,465,413</b>	<b>1,439,282</b>	<b>26,131</b>	<b>614,018</b>	<b>580,652</b>	<b>1,198,998</b>	<b>232,509</b>	<b>78,777</b>	<b>716,943</b>	<b>148,026</b>	<b>568,917</b>

<sup>1</sup>Includes all jurisdictions in Planning District 15 (i.e. RRTPO Metropolitan Planning Area and Tri-Cities Area MPO portion of Chesterfield)

<sup>2</sup>Displayed here separately, but also included as a part of Hanover County

<sup>3</sup>Chesterfield County TAZs are located in both the RRTPO and Tri-Cities MPO

<sup>4</sup>Includes the Town of Ashland

# Methodology for 2017 Base Year

## Housing and Population

The 2017 base year methodology for development of the housing and population data used a bottom-up approach for tracking local residential development. Henrico and Hanover counties track their annual growth through their Continuing, Cooperative and Comprehensive data process, also known as 3-C data. Socioeconomic Data workgroup decided to use this approach for all jurisdictions in developing the population and housing data as part of the 2017-2050 Socioeconomic update process.

The following steps were used:

1. Certificate of occupancies (COs) and demolitions (Demos) by address/location was tracked and using GIS, each CO and Demo point was spatially joined with the Transportation Analysis Zone (TAZ)
2. Using the 2010 Census data as the starting point, all the Census blocks with total population, group quarters population, total housing units, vacant housing units, and occupied housing units where nested into each TAZ.
3. Since the 2010 Census data was completed on April 1, 2010, each jurisdiction was instructed to track their COs and Demos from April 1 – Dec 31, 2010, and then for each subsequent calendar year from 2011 to 2017.
4. COs and Demos dating from April 1 – Dec 31, 2010, were then inputted into 3-C model for year 2010. Subsequently all COs and Demos for the entire year from 2011 to 2017 were input into the 3-C model.
5. The data development process used for Hanover, Chesterfield, and Henrico:
  - All three of these jurisdictions had already been tracking their 3-C data and have the same methodology described for the rural jurisdictions below with a few exceptions:
  - Having tracked 3-C data prior to 2010 all three jurisdictions had a breakdown between single family vs multi-family.
  - Henrico used surveys to identify group quarters population and the multi-family vacancy rates.

- All three jurisdictions used specific countywide average household size based on the 2010 Census and then used American Community Survey (ACS) in subsequent years.
- All the jurisdictions used individual vacancy rate by TAZ based on the 2010 Census, ACS or Costar Vacancy data (if available)

6. The rural jurisdictions (Charles City, New Kent, Powhatan, and Goochland) process was developed as follows:

- There was no breakdown of single family and multi-family.
- A countywide vacancy rate, specific to each jurisdiction and based on either the 2010 Census or ACS was applied to all the rural jurisdictions for both single family and multi-family housing.
- A countywide average household size was then applied based on the 2010 Census to calculate the single family and multi-family population.

7. City of Richmond data development process:

- Only total housing units were tracked since the housing stock in the city is so much more diverse was no way to know the exact breakdown.
- To account for the diverse housing stock the City was divided into five districts which had similar housing characteristics (downtown, northeast, southside, uptown, and the westend) and each district had a different vacancy rate and average household size.

## **Employment**

RRTPO staff used the 2nd quarter 2017 VEC data as the primary source for employment data. The 2017 VEC data was provided with latitude and longitude coordinate systems for most of the employer addresses allowing staff to plot most of the points rather than geocoding over 27,000 employer addresses. Over 95% of the 2017 VEC employment was either plotted or successfully geocoded. Employer addresses without latitude and longitude coordinates were geocoded after their addresses were verified.

Employers with 200 or more employees were verified through contact (phone or email) and disaggregated to several locations where was necessary. The 2017 employment data also went to a thorough spot-checking process as RRTPO staff compared it against the 2012 employment. Any major differences were reality-checked. Some differences reflected employers relocating or going out of business. Other addresses were geocoded on the wrong side of the street or employment needed to be disaggregated into several locations. Staff researched any TAZ where employment had a difference of +/-100 and/or represented a large proportional difference. Several rounds of this spot checking were done along with notes as to reasons for major differences

## **Autos**

Virginia Department of Motor Vehicles (DMV) Automobile Registration Data was used as the primary source for autos. The aim was to get a database from DMV which only included registered motorized vehicle for personal use. RRTPO and DMV staff spent at least three sessions to develop the query which would yield the most appropriate database applicable. The process was started by querying out the Garage Jurisdiction (the address where the vehicle registration is sent to the customer. If a post box was provided, we also needed a physical address). We assumed that this address is where the vehicle is parked at night. If a vehicle is not registered or registered outside the region but is still parked at the address, we just ignore those. All non-motorized vehicles such as any type of trailers, chassis, hearse, etc. were eliminated. Similarly, customer type – “Individual” and Use type “Personal” were only kept in the database. This filtered out fleet vehicles. Also, vehicles with more than 2 Axles were filtered out. The data after all these different queries came out

good. The registration addresses (almost 900,000 records for the Richmond region) were geocoded, spatially joined and aggregated by TAZs. The database was then crosschecked with housing data. More than 99% of the data fell within the applicable autos per housing range.

## **K-12 School and College Enrollment**

K-12 school enrollment was compiled using the fall of 2017 academic enrollment numbers provided by Virginia’s Department of Education (DOE) for most of the jurisdictions. Hanover and Henrico counties used their School Board numbers. In some cases, axillary locations and alternative schools were called to verify.

K-12 private school enrollment was compiled using the 2012 database of private schools, RRTPO had maintained and the online website [www.greatschools.org](http://www.greatschools.org). The 2017 fall enrollment number was used. For any other private schools where staff had no record of enrollment numbers, staff contacted individual schools.

University and college enrollment were compiled through phone calls to each institution, using the fall enrollment of the 2017-2018 academic year. These enrollment numbers include both full-time and part-time students. These institutions include 4-year universities, 2-year colleges, post-graduate programs, certificate programs, technical schools, and proprietary colleges and universities – also known as for-profit institutions of higher learning.

## Methodology for 2050 Forecast Year

For the 2050 Future year data projections Socioeconomic Data Workgroup decided to do a Top-down approach in which we develop the jurisdictional control-total first, then distribute to the individual TAZs. Distribution to the TAZs was based on both current and future trends.

Two independent projections were done to establish the control-totals: population and employment. Other attributes were directly dependent on the established population or employment control-totals.

### Housing and Population

The Weldon Copper 2050 population projection – which is the commonwealth of Virginia's official projection was used as the jurisdiction control total for population. The Virginia State code provides a variance of plus/minus 10 percent from the Weldon Copper projections without documentation. If the variance is more than 10 percent a proper documentation is required. Most of the jurisdiction established their control- totals with the Weldon Copper projections, with Charles City and Hanover counties and the city of Richmond being the exception. Overall, the regional population projection was only 0.74 percent more than the Weldon Cooper projections.

For each jurisdiction the net difference of the base year population and the future year population was calculated. This yielded the exact new population which needs to be added. We assumed that in the future year each TAZs retains at least the population as its base year unless there is a massive demolition project planned. TAZ population growth was based on major development projects (projects in a short-term pipeline 5-10 years). This information was either provided by the jurisdiction or researched from online and print media and press releases. In Richmond and Henrico infill development and vacant buildings were also considered. This distribution of population in the TAZs was further reviewed by jurisdictional staff and in some cases tweaked based on local knowledge. Overall, the distribution of the population in the TAZs is in line with the locality

comprehensive plans (including the ones which are being updated now, i.e., HenricoNext and Envision Hanover).

The major development project provided the number of new housing units for each TAZs. The households (or occupied housing units) were calculated using the vacancy rates. As Census 2020 data has been released, the vacancy rates from Census 2020 were used - either the same jurisdiction-wide vacancy rates (smaller jurisdictions) or different vacancy rates for each TAZ (larger jurisdiction). Population was then calculated using the average household size, (kept fractionally smaller than what was in Census 2020). The remaining population needed to reach the control-total was calculated in the reverse order. In this case the population was added to the TAZ first, then the households were calculated using the average household size and finally the housing units were calculated using the vacancy rates.

RRTPO staff and jurisdiction staff reached out or did web research on any potential projections for Group Quarters population. When the projections were available, those were reflected in the TAZs. If there was no projection available, the group quarters population was kept same as the Census 2020 numbers.

### Autos

RRTPO staff did significant research on local, regional, and national, current, and future trends on auto ownership. The current trends show an increase in the auto-ownership rates (autos/household) in the last decade. On the other hand, many research papers show a decline in future auto-ownership rates. Connected and Automated Vehicles market penetration by 2050 is another factor which would affect auto-ownership rates in the future and could go either way.

Based on all this research RRTPO staff decided to keep the auto-ownership rates constant from the base year. Each TAZ has a separate auto-ownership rate in the base year. The total households in each TAZ were multiplied by the auto-ownership rate to get the



number of autos in each TAZs. The TAZ autos were aggregated to get the jurisdictional total.

### **K-12 School and College Enrollment**

For the K-12 school enrollment growth is mostly accounted for in public school enrollment. Private school enrollment in the future year 2050 was kept constant to the 2017 base year unless projections numbers were received from individual entities. RRTPO developed a cohort component model which gives the future population by age cohort and gender. First, the total school age children (age ranges 5-9, 10-14 and 15-19) were calculated for 2050 using the cohort component model. Private school enrollment (from 2017 base year), drop-out rates and home-schooling rates (data from the 2017 DOE) was applied assuming they remain constant in 2050. Children living in one jurisdiction and going to private school in another jurisdiction and vice versa also were also considered and reflected by multiplying by an adjusting factor (constant).

The adjusting factor is different for each jurisdiction and was calculated using 2017 data and kept constant for 2050. Applying the adjusting factor yielded the total public-school enrollment for each jurisdiction for 2050. The private school enrollment was then added to arrive at the total K-12 enrollment by TAZ. Note that the school enrollment numbers, home-schooling rates and drop-out rates for 2020 and 2021 were ignored for 2050 projection due to Covid-19 related implications.

RRTPO staff and jurisdiction staff reached out or did web research on any potential projections for college and universities for 2050 which included looking at any published capital improvement or master plans. For community colleges staff looked at the historical enrollment numbers. The community colleges in the Richmond region had peaked in 2012 and have had a decline since then. Based on these observations the 2050 community college enrollment numbers were kept constant as the current enrollment. For most proprietary colleges, when the projections were available, those were reflected in the TAZs. If there was no projection available, the college enrollment number was kept constant as the current enrollment.

### **Employment**

The State of Virginia does not have an officially recognized employment projections. There are several private companies who provide proprietary employment projections by jurisdictions. RRTPO staff had previously contracted Chmura Economics & Analytics (Chmura), a Richmond based, nationally recognized economics and analytics firm to develop the employment projections for the future year 2045 by jurisdiction and by 2-digit NAICS code (by sector). RRTPO staff used the same model to develop the future year 2050 employment control-totals. The employment control-totals as established by RRTPO staff was accepted by the jurisdictions as the baseline employment projections.

For each jurisdiction the net difference of the base year employment and the future year employment was calculated. This yielded the exact new employment which needed to be added. RRTPO staff assumed that in the future year each TAZs retains at least the same employment as its base year unless there is a major rezoning or a major demolition project. RRTPO staff first allocated employment based on what major commercial development projects were already in the pipeline gather from information provided by the jurisdiction staff or researched from online and print media and press releases.

The commercial development projects provided information on the type of commercial activity and the and the total area or square footage. The square footage was converted into number of employees based on industry standards. For Richmond, Henrico and Chesterfield the employment was further distributed into the TAZs using a future land use (FLU) built-out analysis for square footage. The square footage was converted into number of employees based on industry standards. This FLU built-out analysis looked at land uses as they related to retail, office, industrial, and mixed-uses assuming any undeveloped land would be developed to 30-50 percent of its capacity. For Hanover county the employment was further distributed into the TAZs by identifying areas for economic growth which focused on major corridors in the county with heavy emphasis on US-33 corridor growth.



For all the jurisdictions, the remaining employment needed to reach the control total was distributed proportionally to all remaining TAZs not previously allocated by pipeline activity or by the FLU built-out analysis/ major corridors to account for natural employment growth based on the 2017 employment distribution. This distribution of employment in the TAZs was further reviewed by jurisdictional staff and in some cases tweaked based on local knowledge.

The employment was further broken down into retail and non-retail based on pipeline commercial activities, 2017 employment mix and future land use and aggregated to jurisdictional control totals. Similarly, for modeling purpose the employment was further broken down into 2-digit NAICS code (20 categories) for each TAZ and aggregated to the NAICS jurisdictional control-totals developed by RRTPO staff.

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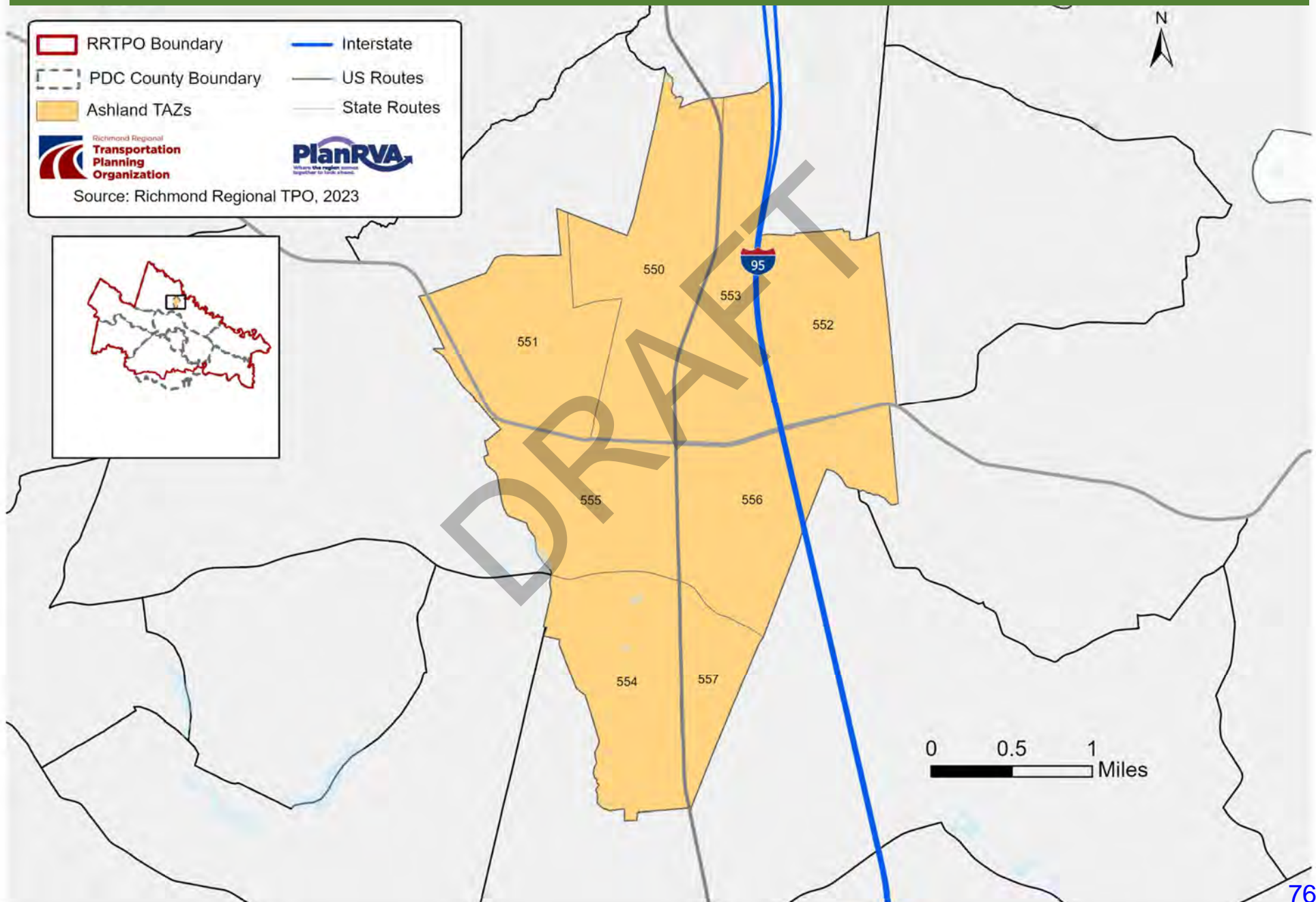
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## Jurisdictional Maps and Data

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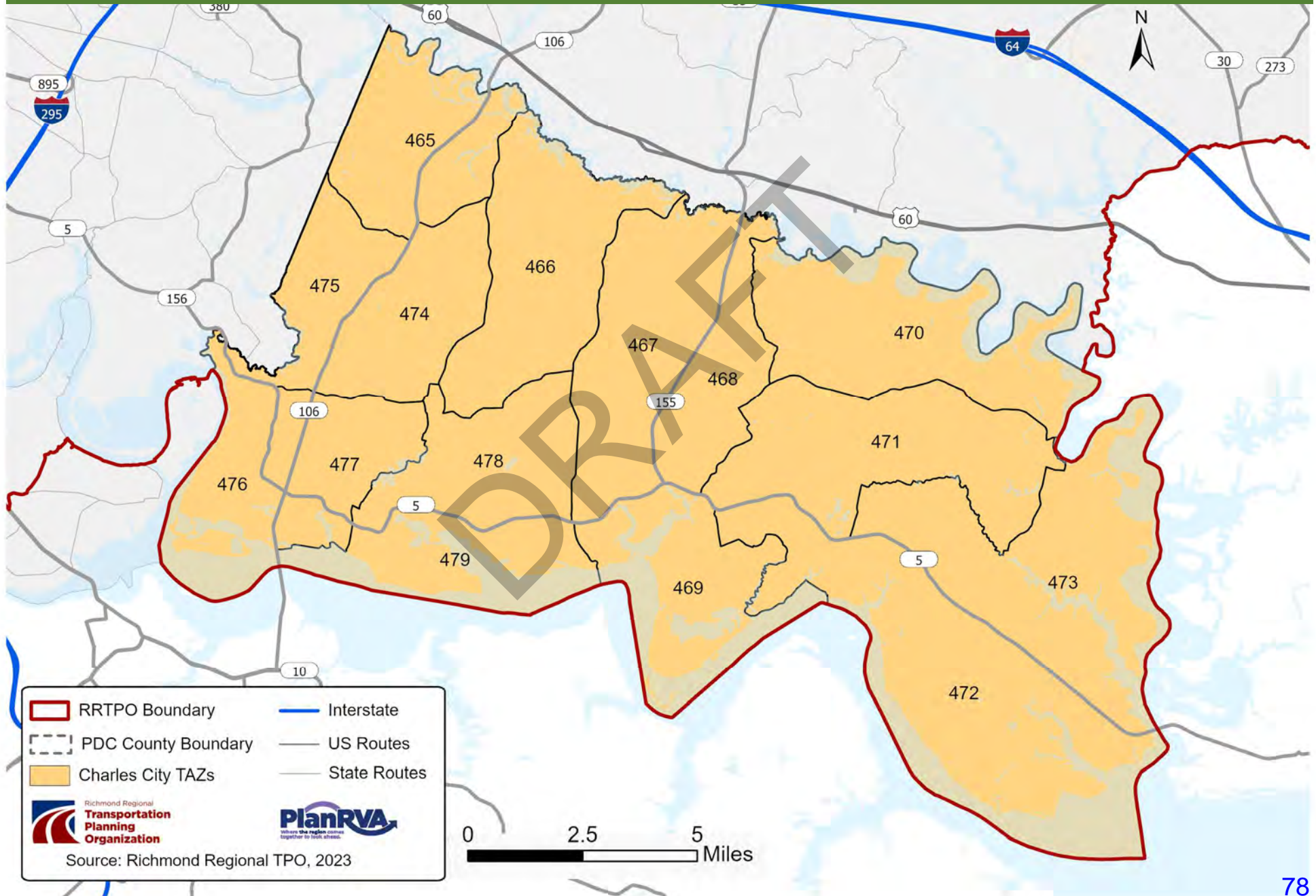
# Town of Ashland Map



## Town of Ashland

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
550	1,627	1,445	352	395	1,275	1,050	258	299	249	279	440	493	327	356	1,418	1,477	1,354	2,004	147	231	1,207	1,773
551	1,459	1,822	1,269	1,662	190	160	587	794	566	741	1,016	1,330	0	0	0	0	575	667	167	157	408	510
552	110	400	110	400	0	0	55	207	53	193	156	568	70	76	0	0	206	350	0	0	206	350
553	1,330	1,499	1,330	1,491	0	8	656	761	633	710	641	719	0	0	0	0	1,786	2,394	632	784	1,154	1,610
554	171	192	171	192	0	0	74	86	71	80	137	154	0	0	0	0	1,124	1,623	441	640	683	983
555	2,378	2,667	2,378	2,667	0	0	1,111	1,288	1,072	1,202	1,969	2,208	316	344	0	0	674	1,370	401	752	273	618
556	705	791	705	791	0	0	281	326	271	304	590	662	0	0	0	0	1,466	3,000	1,076	2,169	390	831
557	5	6	5	6	0	0	2	2	2	2	5	5	0	0	0	0	1,451	2,000	201	220	1,250	1,780
Total	7,785	8,822	6,320	7,604	1,465	1,218	3,024	3,763	2,917	3,511	4,954	6,139	713	776	1,418	1,477	8,636	13,408	3,065	4,953	5,571	8,455

# Charles City County Map

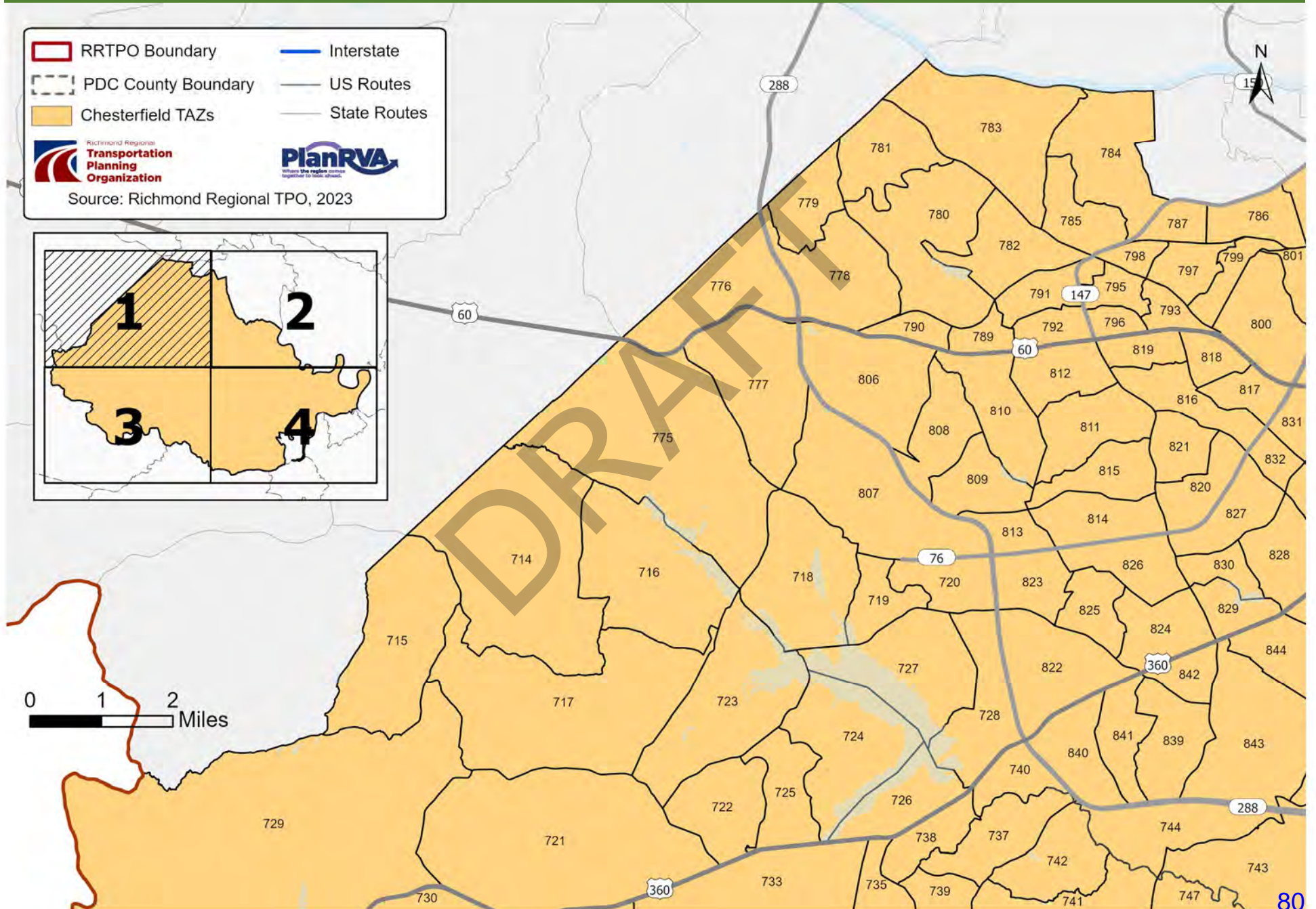


# Charles City County

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
465	766	704	766	704	0	0	358	311	309	284	977	898	0	0	0	0	903	1,030	40	55	863	975
466	1,109	1,020	1,109	1,020	0	0	517	450	447	411	1,525	1,402	0	0	0	0	47	47	5	2	42	45
467	694	638	694	638	0	0	324	281	280	257	802	736	650	473	0	0	144	158	7	7	137	151
468	424	390	424	390	0	0	198	172	171	157	619	568	0	0	0	0	22	34	1	0	21	34
469	169	156	169	156	0	0	79	69	68	63	182	169	0	0	0	0	324	340	32	39	292	301
470	322	296	322	296	0	0	151	130	130	119	354	324	0	0	0	0	33	33	0	0	33	33
471	501	460	501	460	0	0	234	202	202	185	604	553	0	0	0	0	25	25	1	2	24	23
472	481	442	481	442	0	0	225	196	194	179	501	462	0	0	0	0	48	48	5	3	43	45
473	275	253	275	253	0	0	128	112	111	102	290	266	0	0	0	0	0	0	0	0	0	0
474	580	533	580	533	0	0	271	235	234	215	780	717	0	0	0	0	11	21	0	0	11	21
475	419	385	419	385	0	0	196	171	169	156	527	486	0	0	0	0	13	15	2	3	11	12
476	122	112	122	112	0	0	57	49	49	45	111	102	0	0	0	0	59	60	2	1	57	59
477	481	442	481	442	0	0	224	196	194	179	619	571	0	0	0	0	4	4	0	0	4	4
478	689	634	689	634	0	0	322	280	278	256	697	642	0	0	0	0	14	14	0	0	14	14
479	94	87	94	87	0	0	44	38	38	35	84	77	0	0	0	0	21	21	1	1	20	20
Total	7,126	6,552	7,126	6,552	0	0	3,328	2,892	2,874	2,643	8,672	7,973	650	473	0	0	1,668	1,850	96	113	1,572	1,737

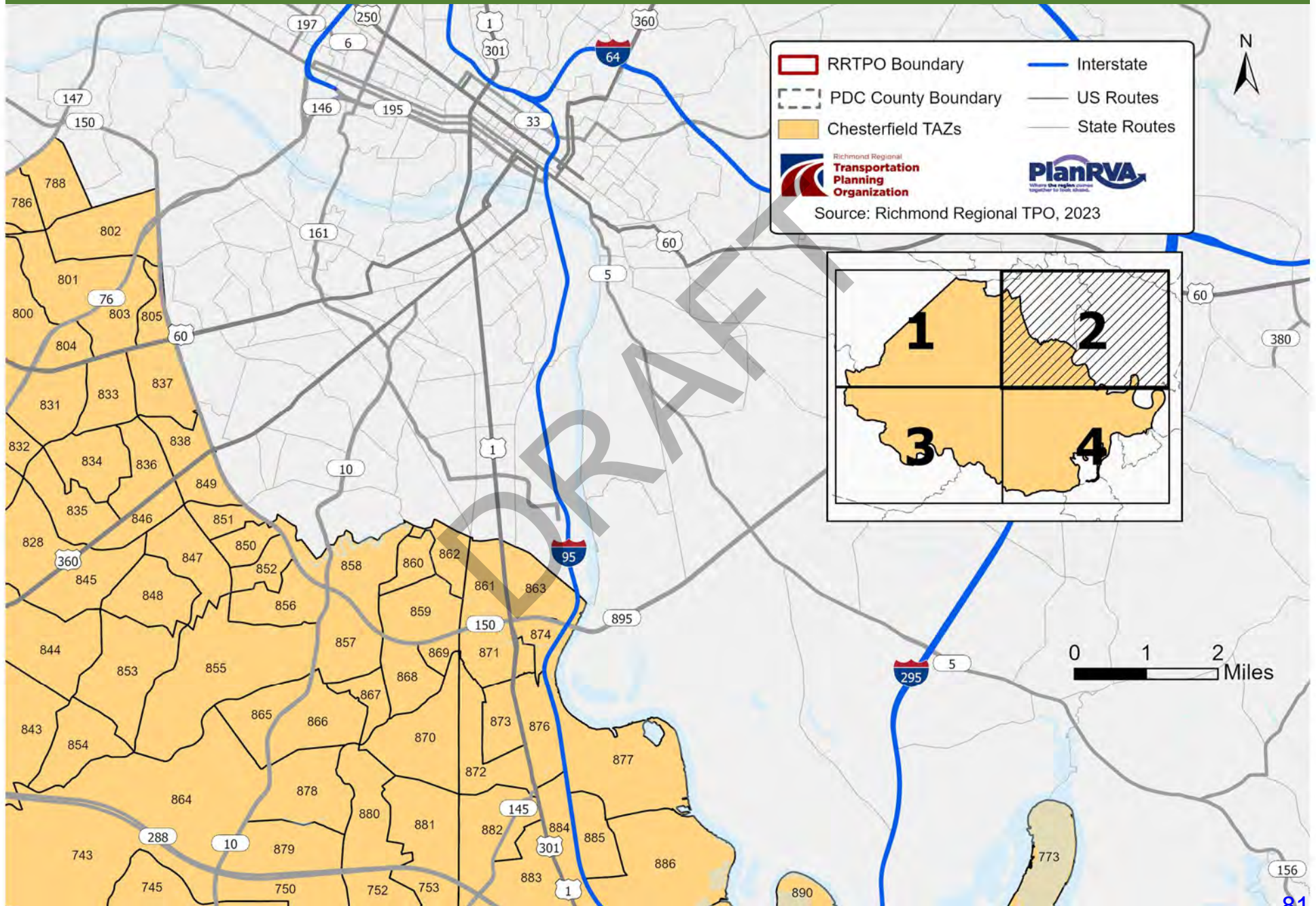


# Chesterfield County Map 1



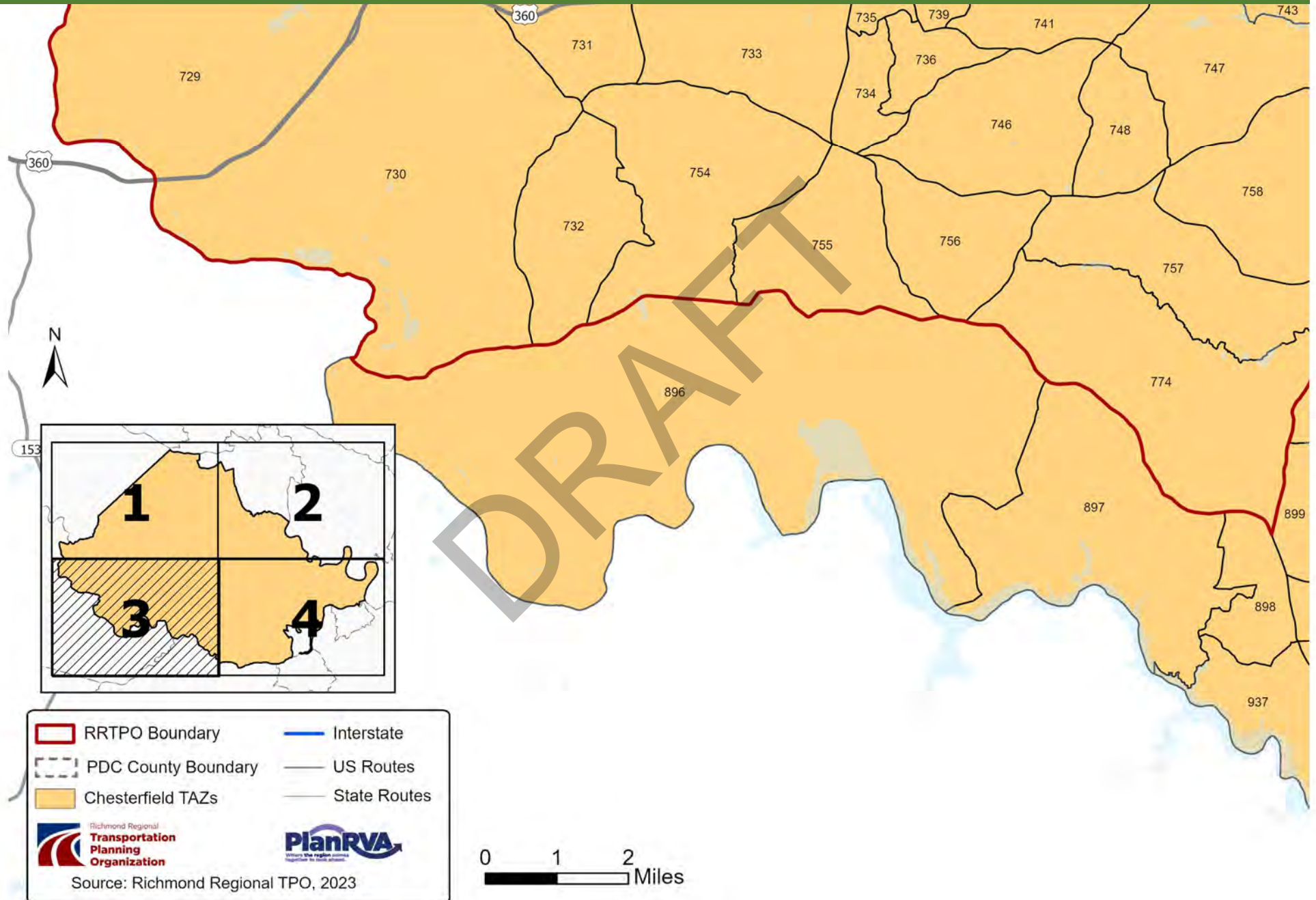


# Chesterfield County Map 2



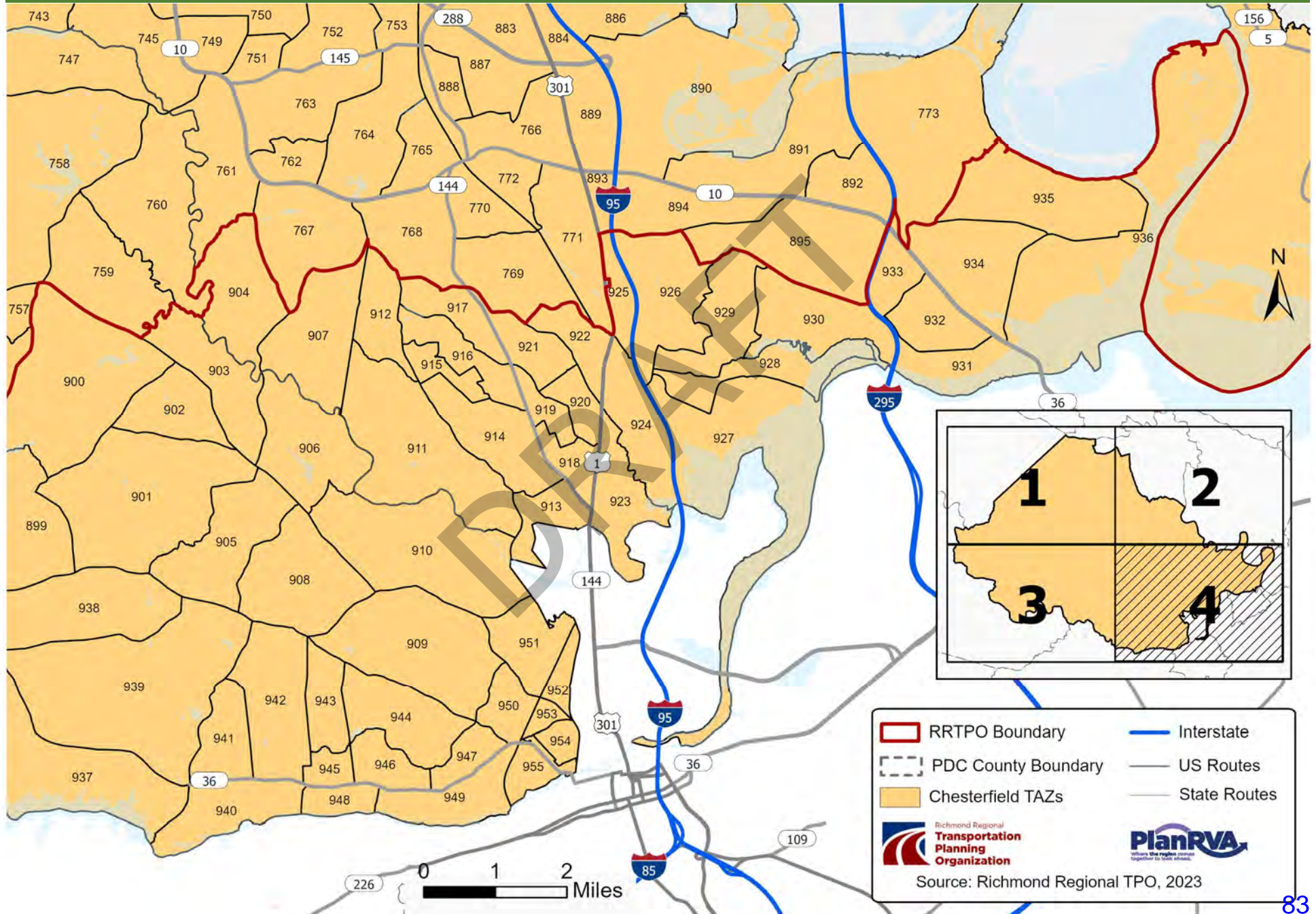


# Chesterfield County Map 3





# Chesterfield County Map 4



# Chesterfield County 1

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
714	249	4,577	249	4,577	0	0	102	1,834	96	1,765	295	5,424	0	0	0	0	*	4	*	2	*	2
715	111	147	111	147	0	0	45	57	42	55	124	162	0	0	0	0	7	7	0	0	7	7
716	274	1,174	274	1,174	0	0	108	450	101	433	305	1,308	0	0	0	0	7	7	0	0	7	7
717	2,083	5,474	2,083	5,474	0	0	626	1,606	588	1,546	1,627	4,278	0	0	0	0	55	10,043	0	3,251	55	6,792
718	3,647	5,872	3,647	5,872	0	0	1,365	2,146	1,283	2,065	2,895	4,660	0	0	0	0	104	520	15	79	89	441
719	2,619	3,041	2,605	3,041	14	0	1,058	1,205	994	1,160	2,103	2,454	872	1,041	0	0	292	292	0	0	292	292
720	1,457	4,402	1,457	4,402	0	0	644	1,900	605	1,829	1,072	3,241	76	167	0	0	1,415	1,729	247	326	1,168	1,403
721	2,654	12,569	2,654	12,569	0	0	904	4,178	849	4,021	1,948	9,226	0	900	0	0	149	4,024	49	1,327	100	2,697
722	2,147	7,260	2,147	7,260	0	0	643	2,122	604	2,042	1,836	6,207	0	0	0	0	62	283	1	4	61	279
723	2,647	5,581	2,647	5,581	0	0	830	1,708	780	1,644	2,063	4,348	0	0	0	0	52	52	1	1	51	51
724	4,968	5,678	4,968	5,678	0	0	1,891	2,110	1,777	2,031	4,267	4,877	1,544	1,844	0	0	833	834	89	85	744	749
725	2,885	4,450	2,885	4,450	0	0	1,034	1,557	972	1,499	2,389	3,684	222	487	0	0	358	406	101	99	257	307
726	1,255	1,490	1,255	1,490	0	0	580	672	545	647	1,178	1,398	0	0	0	0	1,230	1,292	726	699	504	593
727	3,873	4,420	3,873	4,420	0	0	1,648	1,837	1,549	1,768	3,410	3,892	0	0	0	0	344	351	49	48	295	303
728	2,253	3,097	2,253	3,089	0	8	905	1,212	850	1,166	1,935	2,654	5,055	6,037	0	0	1,988	1,988	574	585	1,414	1,403
729	646	854	646	854	0	0	230	296	216	285	716	945	0	0	0	0	56	56	27	28	29	28
730	341	451	341	451	0	0	127	164	119	158	366	486	795	949	0	0	208	208	0	0	208	208
731	146	193	146	193	0	0	54	71	51	68	180	240	0	0	0	0	139	139	91	98	48	41
732	222	294	222	294	0	0	77	99	72	95	207	273	0	0	0	0	*	5	*	0	*	5
733	6,920	12,124	6,916	12,120	4	4	2,258	3,864	2,122	3,719	5,597	9,809	1,047	1,250	0	0	1,237	1,522	968	1,186	269	336
734	1,780	2,330	1,780	2,330	0	0	623	796	585	766	1,684	2,205	0	0	0	0	*	399	*	47	*	352
735	942	1,157	942	1,157	0	0	437	525	411	505	868	1,067	0	0	0	0	432	432	391	389	41	43
736	2,643	3,982	2,643	3,972	0	10	1,023	1,501	961	1,445	2,358	3,546	881	1,052	0	0	145	145	1	0	144	145
737	2,297	4,644	2,297	4,644	0	0	823	1,623	773	1,562	1,926	3,892	625	746	0	0	*	166	*	0	*	166
738	1,754	2,096	1,749	2,047	5	49	662	756	622	728	1,490	1,744	0	0	0	0	903	948	468	456	435	492
739	2,513	2,990	2,513	2,990	0	0	869	1,010	817	972	2,172	2,584	0	0	0	0	23	23	0	0	23	23
740	1,912	2,420	1,912	2,412	0	8	1,063	1,309	999	1,260	1,280	1,614	0	0	0	0	2,291	2,322	1,700	1,716	591	606
741	1,278	1,689	1,278	1,689	0	0	498	642	468	618	1,422	1,878	0	0	0	0	55	55	0	0	55	55
742	2,015	2,810	2,015	2,810	0	0	671	914	631	880	1,569	2,188	3,462	4,135	0	0	485	485	0	0	485	485
743	475	556	117	298	358	258	56	139	53	134	134	339	200	439	0	0	397	1,252	0	0	397	1,252
744	280	356	280	356	0	0	123	153	116	147	342	433	0	0	0	0	618	618	93	100	525	518
745	475	627	471	627	4	0	221	288	208	277	544	724	0	0	0	0	603	1,067	443	708	160	359
746	2,684	3,548	2,684	3,548	0	0	970	1,253	912	1,206	2,948	3,898	0	0	0	0	65	65	2	2	63	63
747	283	376	283	376	0	0	115	150	108	144	353	471	0	0	0	0	*	53	*	0	*	53
748	694	917	694	917	0	0	305	395	287	380	812	1,075	0	0	0	0	35	35	6	7	29	28
749	1,057	1,194	379	681	678	513	274	481	257	463	302	544	0	0	0	0	4,338	4,398	103	78	4,235	4,320
750	482	1,943	482	1,943	0	0	189	745	178	717	463	1,865	4,073	4,864	0	0	730	1,183	11	18	719	1,165
751	1,959	2,398	1,959	2,398	0	0	835	999	785	961	1,570	1,922	0	0	0	0	60	60	24	21	36	39
752	3,464	3,922	3,459	3,922	5	0	1,274	1,410	1,197	1,357	3,085	3,497	0	0	0	0	21	21	1	1	20	20
753	1,028	1,359	1,028	1,359	0	0	404	522	380	502	1,017	1,344	0	0	0	0	7	8	0	0	7	8
754	768	1,016	768	1,016	0	0	295	380	277	366	896	1,184	0	0	0	0	39	39	0	0	39	39
755	1,563	2,066	1,563	2,066	0	0	586	756	551	728	1,771	2,340	0	0	0	0	68	68	3	4	65	64

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# Chesterfield County 2

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
			2017	2050			2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
756	1,329	1,771	1,329	1,771	0	0	446	581	419	559	1,328	1,772	0	0	0	0	31	31	0	0	31	31
757	822	1,086	822	1,086	0	0	320	412	301	397	939	1,238	0	0	0	0	14	14	4	3	10	11
758	1,940	2,544	1,940	2,544	0	0	767	983	721	946	2,272	2,981	0	0	0	0	111	111	1	1	110	110
759	1,327	1,635	1,327	1,635	0	0	463	557	435	536	1,333	1,643	0	0	0	0	58	58	14	14	44	44
760	1,576	2,489	1,576	2,489	0	0	535	826	503	795	1,530	2,418	0	0	0	0	43	43	26	28	17	15
761	50	102	50	47	0	55	22	21	21	20	65	62	0	0	0	0	1,226	1,337	466	486	760	851
762	1,687	2,208	1,687	2,132	0	76	796	983	748	946	1,228	1,553	0	0	0	0	386	387	21	18	365	369
763	2,622	3,355	2,611	3,355	11	0	987	1,237	927	1,191	2,333	2,997	0	0	0	0	834	865	549	553	285	312
764	1,814	2,909	1,814	2,909	0	0	773	1,209	726	1,164	1,813	2,907	796	951	0	0	190	190	0	0	190	190
765	2,194	3,321	2,194	3,321	0	0	1,139	1,682	1,070	1,619	1,540	2,330	0	0	0	0	406	435	169	189	237	246
766	1,627	2,129	1,627	2,124	0	5	687	877	646	844	1,566	2,046	3,055	3,648	0	0	1,123	1,165	646	658	477	507
767	947	1,622	939	1,617	8	5	502	845	472	813	811	1,397	253	302	0	0	1,148	1,183	640	616	508	567
768	1,004	1,270	1,004	1,270	0	0	412	508	387	489	1,156	1,461	0	0	0	0	163	182	50	55	113	127
769	3,378	4,465	3,378	4,465	0	0	1,173	1,514	1,102	1,457	3,097	4,095	618	738	0	0	*	126	*	1	*	125
770	1,550	2,051	1,550	2,051	0	0	725	936	681	901	1,448	1,916	0	0	0	0	906	906	782	800	124	106
771	1,613	2,151	1,613	2,151	0	0	641	834	602	803	1,420	1,894	0	0	0	0	1,086	1,097	984	989	102	108
772	1,079	1,426	1,079	1,426	0	0	458	590	430	568	1,011	1,335	0	0	0	0	118	123	28	31	90	92
773	1,014	2,303	1,014	2,303	0	0	397	880	373	847	1,125	2,555	0	0	0	0	4,901	7,000	13	22	4,888	6,978
774	913	1,204	898	1,183	15	21	356	458	335	441	899	1,183	0	0	0	0	135	135	64	69	71	66
775	2,036	6,630	2,036	6,630	0	0	810	2,576	761	2,479	1,865	6,075	0	0	0	0	81	2,433	2	76	79	2,357
776	176	8,197	176	8,197	0	0	65	2,950	61	2,839	108	5,026	0	0	0	0	1,271	1,500	838	1,003	433	497
777	101	1,218	101	1,216	0	2	44	513	41	494	102	1,229	0	0	573	573	230	230	7	7	223	223
778	3,652	5,270	3,652	5,270	0	0	1,422	2,004	1,336	1,929	3,049	4,402	0	0	0	0	1,589	1,724	57	71	1,532	1,653
779	1,242	1,602	1,242	1,602	0	0	396	499	372	480	1,060	1,368	0	0	0	0	114	114	70	67	44	47
780	3,263	3,957	3,263	3,827	0	130	1,356	1,552	1,274	1,494	3,046	3,572	0	0	0	0	1,210	1,210	647	608	563	602
781	1,903	2,237	1,903	2,237	0	0	642	737	603	709	1,687	1,984	0	0	0	0	89	89	0	0	89	89
782	2,341	2,842	2,341	2,737	0	105	856	977	804	940	2,212	2,586	0	0	0	0	626	628	1	1	625	627
783	3,224	4,527	3,224	4,527	0	0	1,050	1,440	987	1,386	2,735	3,841	2,747	3,281	0	0	403	403	4	3	399	400
784	2,029	2,346	2,029	2,339	0	7	782	881	735	848	2,041	2,355	0	0	0	0	126	126	9	6	117	120
785	1,377	1,673	1,377	1,673	0	0	738	875	693	842	1,060	1,288	1,980	2,365	0	0	1,313	1,315	561	534	752	781
786	1,350	1,685	1,350	1,685	0	0	581	708	546	681	1,270	1,584	713	923	0	0	495	496	157	149	338	347
787	1,031	1,260	1,031	1,260	0	0	457	544	429	524	928	1,134	490	1,075	0	0	139	139	31	22	108	117
788	1,352	1,536	1,349	1,535	3	1	565	628	531	604	1,240	1,410	0	0	0	0	445	445	116	112	329	333
789	1,191	1,355	1,191	1,355	0	0	601	667	565	642	893	1,015	0	0	0	0	517	518	388	384	129	134
790	296	1,411	296	1,411	0	0	163	757	153	729	270	1,286	0	0	0	0	523	555	298	316	225	239
791	1,903	2,187	1,898	2,187	5	0	835	939	785	904	1,659	1,910	0	0	0	0	286	288	4	3	282	285
792	612	1,428	612	1,428	0	0	265	605	249	582	531	1,241	0	0	0	0	1,231	1,242	636	651	595	591
793	276	348	276	348	0	0	141	174	132	167	266	337	0	0	0	0	3,095	4,916	578	782	2,517	4,134
794	112	250	112	250	0	0	79	170	74	164	171	379	0	0	5,555	5,555	560	703	243	304	317	399
795	1,094	2,052	1,094	2,052	0	0	579	1,061	544	1,021	726	1,363	0	0	0	0	969	992	548	560	421	432
796	67	76	67	11	0	65	57	9	54	9	34	6	0	0	0	0	2,618	4,137	2,054	3,201	564	936

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# Chesterfield County 3

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
			2017	2050			2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
797	2,565	3,037	2,565	3,037	0	0	968	1,120	910	1,078	2,177	2,579	582	695	0	0	146	146	2	2	144	144
798	1,425	1,689	1,425	1,609	0	80	693	765	651	736	1,069	1,209	0	0	0	0	188	189	80	72	108	117
799	2,256	2,555	2,256	2,555	0	0	1,105	1,221	1,038	1,175	1,616	1,829	0	0	0	0	155	157	22	16	133	141
800	2,562	3,605	2,324	3,090	238	515	962	1,249	904	1,202	1,816	2,415	0	0	0	0	1,864	1,869	999	883	865	986
801	2,184	2,508	1,984	2,325	200	183	851	974	800	937	1,915	2,243	0	0	0	0	32	32	4	3	28	29
802	812	1,084	812	1,084	0	0	362	472	340	454	829	1,107	563	672	0	0	*	142	*	0	*	142
803	2,010	3,021	2,010	3,021	0	0	887	1,303	834	1,254	1,190	1,789	0	0	152	152	1,991	2,450	268	332	1,723	2,118
804	420	826	415	817	5	9	273	526	257	506	232	457	0	0	0	0	1,136	1,459	254	293	882	1,166
805	484	2,512	484	2,512	0	0	286	1,449	269	1,395	335	1,737	0	0	0	0	2,550	4,982	295	592	2,255	4,390
806	3,294	6,416	3,290	6,412	4	4	1,598	3,041	1,502	2,927	2,727	5,314	1,691	2,019	4,412	4,412	1,145	1,370	620	705	525	665
807	3,060	6,189	3,003	6,097	57	92	1,184	2,348	1,113	2,260	1,823	3,702	1,510	1,803	0	0	1,917	8,912	68	243	1,849	8,669
808	3,757	4,695	3,757	4,695	0	0	1,349	1,646	1,268	1,584	2,729	3,409	2,252	2,689	0	0	604	609	157	139	447	470
809	2,063	2,544	2,063	2,544	0	0	768	926	722	891	2,007	2,477	0	0	0	0	97	97	47	44	50	53
810	3,432	4,437	3,432	4,437	0	0	1,209	1,526	1,136	1,469	2,878	3,722	1,327	1,585	0	0	972	977	249	230	723	747
811	2,824	3,384	2,824	3,384	0	0	1,094	1,280	1,028	1,232	2,608	3,126	0	0	0	0	90	90	24	20	66	70
812	702	928	702	928	0	0	354	457	333	440	721	953	0	0	0	0	1,361	1,402	1,002	1,085	359	317
813	981	1,296	977	1,296	4	0	485	629	456	605	883	1,172	0	0	0	0	7	76	1	12	6	64
814	3,388	3,946	3,388	3,946	0	0	1,263	1,436	1,187	1,382	2,851	3,319	0	0	0	0	60	60	5	4	55	56
815	2,058	2,719	2,054	2,718	4	1	792	1,023	744	985	1,722	2,280	2,051	2,449	0	0	431	433	91	90	340	343
816	2,209	2,578	2,200	2,570	9	8	893	1,019	839	981	2,084	2,437	0	0	0	0	1,336	1,416	73	81	1,263	1,335
817	1,420	1,667	1,416	1,664	4	3	559	641	525	617	1,188	1,396	0	0	0	0	2,385	3,082	139	156	2,246	2,926
818	978	1,125	978	1,125	0	0	391	438	367	422	815	937	0	0	612	612	1,787	2,331	605	803	1,182	1,528
819	522	591	522	591	0	0	206	228	194	219	335	378	0	0	0	0	3,820	3,941	1,476	1,654	2,344	2,287
820	2,258	2,774	2,244	2,767	14	7	830	999	780	961	2,112	2,602	0	0	0	0	1,005	1,005	200	242	805	763
821	1,456	1,754	1,450	1,754	6	0	592	698	556	672	1,311	1,585	551	658	0	0	245	245	0	0	245	245
822	554	731	545	722	9	9	223	289	210	278	582	770	0	0	0	0	1,878	2,099	1,082	1,299	796	800
823	223	1,170	223	1,170	0	0	95	485	89	467	184	965	0	0	0	0	1,509	1,535	62	65	1,447	1,470
824	1,795	2,396	1,795	2,396	0	0	767	1,001	721	963	1,499	2,002	0	0	0	0	1,152	1,170	361	370	791	800
825	2399	2,771	2,399	2,771	0	0	947	1,068	890	1,028	2188	2,527	0	0	0	0	58	58	9	5	49	53
826	1608	2,125	1,608	2123	0	2	642	827	603	796	1435	1,894	653	780	0	0	117	117	1	1	116	116
827	1599	2,090	1,595	2079	4	11	669	852	629	820	1585	2,066	0	0	0	0	53	53	0	0	53	53
828	1571	1,840	1,556	1837	15	3	658	758	618	730	1688	1,994	0	0	0	0	42	46	7	10	35	36
829	218	288	218	288	0	0	139	181	131	174	159	211	0	0	0	0	156	157	74	66	82	91
830	948	1,081	948	1081	0	0	407	452	382	435	944	1,075	0	0	0	0	21	21	0	0	21	21
831	1799	2,082	1,799	2073	0	9	756	850	710	818	1678	1,933	0	0	0	0	1415	1,583	342	311	1073	1,272
832	975	1,104	975	1104	0	0	404	447	380	430	849	961	0	0	0	0	*	3	*	0	*	3
833	1154	1,328	1,154	1328	0	0	548	616	515	593	1067	1,229	1552	1,853	0	0	1141	1,390	318	373	823	1,017
834	2387	2,889	2,387	2889	0	0	935	1,106	879	1,064	2228	2,697	0	0	0	0	29	29	5	4	24	25
835	1446	1,818	1,446	1818	0	0	561	688	527	662	1268	1,593	240	527	0	0	252	252	166	163	86	89
836	1241	1,769	1,228	1769	13	0	504	710	474	683	1232	1,775	0	0	0	0	676	907	217	231	459	676

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# Chesterfield County 4

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
837	1975	2,431	1,975	2431	0	0	773	929	726	894	639	787	0	0	0	0	1050	1,529	525	769	525	760
838	758	1,000	748	1000	10	0	285	372	268	358	637	851	0	0	0	0	249	249	81	76	168	173
839	3173	3,808	3,170	3801	3	7	1226	1,435	1152	1,381	2736	3,280	0	0	0	0	29	31	0	0	29	31
840	2660	3,369	2,660	3369	0	0	1184	1,464	1113	1,409	1897	2,402	676	807	0	0	361	362	68	66	293	296
841	2137	2,557	2,130	2556	7	1	859	1,006	807	968	1922	2,305	0	0	0	0	179	182	123	128	56	54
842	1245	2,088	1,237	2076	8	12	548	898	515	864	626	1,050	0	0	0	0	1053	1,340	602	768	451	572
843	2343	3,128	2,340	3125	3	3	903	1,178	849	1,134	2332	3,115	0	0	0	0	348	371	221	250	127	121
844	3036	4,013	3,036	4006	0	7	1113	1,435	1046	1,381	2681	3,540	1630	1,947	0	0	726	738	36	34	690	704
845	995	1,310	972	1284	23	26	428	552	402	531	923	1,219	0	0	0	0	83	84	1	1	82	83
846	680	899	680	898	0	1	322	417	303	401	445	589	1410	1,684	1,233	1,233	748	1,189	120	194	628	995
847	2498	2,993	2,494	2992	4	1	890	1,042	836	1,003	2345	2,813	220	483	0	0	179	180	139	133	40	47
848	2172	2,998	2,172	2997	0	1	794	1,069	746	1,029	1992	2,748	0	0	0	0	25	25	0	0	25	25
849	750	930	750	930	0	0	319	387	300	372	811	1,006	0	0	0	0	206	334	53	100	153	234
850	3388	3,868	3,386	3868	2	0	1280	1,428	1203	1,374	2209	2,523	0	0	0	0	62	62	2	2	60	60
851	2296	2,809	2,296	2809	0	0	996	1,190	936	1,145	1784	2,182	0	0	0	0	27	27	2	2	25	25
852	1,067	1,240	1,062	1,240	5	0	418	477	393	459	973	1,136	0	0	0	0	43	43	22	18	21	25
853	2,631	3,477	2,626	3,468	5	9	1,005	1,296	944	1,247	2,481	3,277	0	0	0	0	51	51	7	7	44	44
854	1,270	1,683	1,270	1,663	0	20	416	532	391	512	1,103	1,444	0	0	0	0	29	36	0	0	29	36
855	4,827	5,833	4,804	5,806	23	27	1,761	2,078	1,655	2,000	4,723	5,708	0	0	0	0	169	169	13	12	156	157
856	1,081	1,501	1,076	1,434	5	67	569	741	535	713	830	1,106	881	1,052	0	0	307	735	0	0	307	735
857	1,761	2,360	1,761	2,360	0	0	795	1,040	747	1,001	1,622	2,174	2,414	2,883	0	0	427	432	38	36	389	396
858	2,097	2,770	2,090	2,769	7	1	799	1,034	751	995	1,754	2,324	2,063	2,464	0	0	1,025	1,031	301	323	724	708
859	2,351	2,661	2,345	2,661	6	0	928	1,028	872	989	2,152	2,441	0	0	0	0	*	58	*	0	*	58
860	836	1,302	829	1,299	7	3	345	528	324	508	928	1,455	0	0	0	0	28	28	0	0	28	28
861	2,386	3,154	2,386	3,154	0	0	854	1,103	803	1,062	1,464	1,936	0	0	0	0	487	491	108	133	379	358
862	1,047	1,288	1,047	1,288	0	0	396	475	372	457	907	1,114	0	0	0	0	278	295	4	5	274	290
863	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	1,913	*	0	*	1,913
864	1,329	2,356	1,329	2,356	0	0	455	788	428	758	1,183	2,095	62	136	0	0	1,695	2,181	159	243	1,536	1,938
865	2,378	3,899	2,371	3,899	7	0	821	1,316	771	1,267	1,880	3,089	0	0	0	0	429	434	167	175	262	259
866	2,122	2,919	2,095	2,914	27	5	759	1,030	713	991	1,999	2,778	0	0	0	0	306	460	115	149	191	311
867	1,246	1,498	1,246	1,494	0	4	392	458	368	441	1,139	1,365	0	0	0	0	24	24	10	10	14	14
868	1,905	2,287	1,898	2,287	7	0	694	816	652	785	1,988	2,394	733	875	0	0	1,151	1,153	262	263	889	890
869	2,287	2,589	2,287	2,589	0	0	879	971	826	935	1,204	1,363	0	0	0	0	*	21	*	0	*	21
870	1,843	3,456	1,839	3,453	4	3	764	1,401	718	1,348	1,821	3,419	0	0	0	0	103	104	56	52	47	52
871	1,679	2,084	1,659	2,084	20	0	649	797	610	767	1,398	1,758	734	877	0	0	305	311	17	18	288	293
872	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	3,259	*	0	*	3,259
873	1,389	2,229	1,389	2,229	0	0	645	1,011	606	973	932	1,496	0	0	0	0	207	208	39	43	168	165
874	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	114	211	32	68	82	143
875	1,067	1,236	1,067	1,236	0	0	502	568	472	547	551	639	0	0	0	0	51	51	25	27	26	24
876	1,369	1,667	1,369	1,667	0	0	544	647	511	623	1,180	1,439	0	0	0	0	184	217	122	157	62	60

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# Chesterfield County 5

TAZ	Population						Housing						Automobiles	School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households		Grade K-12			Colleges		Total		Retail		Non-Retail			
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050		
877	59	91	59	91	0	0	30	45	28	43	62	95	0	0	0	0	580	1,536	25	106	555	1,430	
878	1,825	2,606	1,825	2,606	0	0	663	924	623	889	1,814	2,589	0	0	0	0	457	470	15	11	442	459	
879	1,783	2,356	1,783	2,356	0	0	699	902	657	868	1,522	2,011	0	0	0	0	47	49	0	0	47	49	
880	2,226	3,060	2,226	3,058	0	2	816	1,095	767	1,054	2,191	3,011	0	0	0	0	52	52	10	7	42	45	
881	1,969	2,624	1,965	2,622	4	2	751	979	706	942	1,974	2,634	0	0	0	0	391	392	22	37	369	355	
882	815	1,083	815	1,083	0	0	361	468	339	450	781	1,037	0	0	0	0	57	70	10	20	47	50	
883	2,430	3,135	2,430	3,135	0	0	930	1,171	874	1,127	1,759	2,268	545	651	0	0	230	249	107	113	123	136	
884	723	956	723	956	0	0	297	383	279	369	643	850	0	0	0	0	567	788	287	456	280	332	
885	461	610	461	610	0	0	198	257	186	247	400	531	0	0	0	0	842	893	55	66	787	827	
886	16	21	16	21	0	0	8	8	8	8	15	15	0	0	0	0	3,183	6,947	65	172	3,118	6,775	
887	2,813	3,394	2,809	3,394	4	0	1,061	1,251	997	1,204	2,678	3,234	0	0	0	0	516	517	214	209	302	308	
888	1,356	1,893	1,356	1,893	0	0	509	693	478	667	1,340	1,870	0	0	0	0	116	116	43	38	73	78	
889	735	3,080	735	3,080	0	0	311	1,272	292	1,224	664	2,783	0	0	0	0	500	1,582	396	1,273	104	309	
890	711	1,528	711	1,528	0	0	332	696	312	670	398	855	0	0	0	0	1,412	2,427	136	358	1,276	2,069	
891	3,176	4,549	3,176	4,549	0	0	1,257	1,757	1,181	1,691	2,484	3,557	16	35	0	0	534	547	92	98	442	449	
892	756	963	756	963	0	0	307	381	288	367	672	856	0	0	0	0	4,223	4,235	462	464	3,761	3,771	
893	6	38	6	35	0	3	4	23	4	22	9	50	0	0	3,735	3,735	960	960	534	532	426	428	
894	209	276	209	276	0	0	72	94	68	90	194	257	0	0	0	0	1,850	1,941	240	324	1,610	1,617	
895	3,128	4,021	3,128	4,016	0	5	1,070	1,340	1,005	1,290	2,978	3,823	2,305	2,753	0	0	914	929	240	273	674	656	
896	747	1,034	747	1,024	0	10	261	349	245	336	805	1,104	0	0	0	0	65	65	8	9	57	56	
897	1,591	2,599	1,591	2,599	0	0	538	858	506	826	1,608	2,625	0	0	0	0	129	129	14	13	115	116	
898	513	678	513	678	0	0	211	271	198	261	613	808	0	0	0	0	*	1	*	0	*	1	
899	252	521	252	521	0	0	105	212	99	204	255	525	0	0	0	0	*	5	*	0	*	5	
900	95	1,356	95	1,356	0	0	42	578	39	556	105	1,497	0	0	0	0	18	18	0	0	18	18	
901	254	336	254	336	0	0	109	140	102	135	285	377	0	0	0	0	27	27	1	1	26	26	
902	168	222	168	222	0	0	70	90	66	87	191	252	0	0	0	0	0	0	0	0	0	0	
903	436	679	436	679	0	0	168	256	158	246	469	730	0	0	0	0	19	19	0	0	19	19	
904	741	980	741	980	0	0	274	353	257	340	870	1,151	0	0	0	0	6	7	1	1	5	6	
905	259	342	256	342	3	0	106	139	100	134	307	411	0	0	0	0	*	6	*	0	*	6	
906	192	253	192	253	0	0	90	116	85	112	184	242	0	0	0	0	*	5	*	0	*	5	
907	729	924	729	924	0	0	303	375	285	361	881	1,116	0	0	0	0	36	36	0	0	36	36	
908	173	229	173	229	0	0	73	96	69	92	191	255	0	0	0	0	*	2	*	0	*	2	
909	331	1,776	331	1,776	0	0	129	674	121	649	276	1,480	0	0	0	0	0	0	0	0	0	0	
910	618	752	618	752	0	0	254	302	239	291	675	822	1,707	2,039	0	0	*	267	*	11	*	256	
911	79	251	79	251	0	0	35	109	33	105	119	379	0	0	0	0	*	2	*	0	*	2	
912	46	62	46	62	0	0	19	25	18	24	60	80	0	0	0	0	0	0	0	0	0	0	
913	415	548	415	548	0	0	169	218	159	210	233	308	0	0	0	0	*	12	*	1	*	11	
914	1,810	2,398	1,806	2,392	4	6	699	904	657	870	1,561	2,067	1,053	1,258	0	0	178	178	0	0	178	178	
915	830	1,004	830	1,004	0	0	305	361	287	347	897	1,085	0	0	0	0	5	5	0	0	5	5	
916	1,726	2,145	1,726	2,145	0	0	600	728	564	701	1,704	2,118	0	0	0	0	75	75	3	2	72	73	

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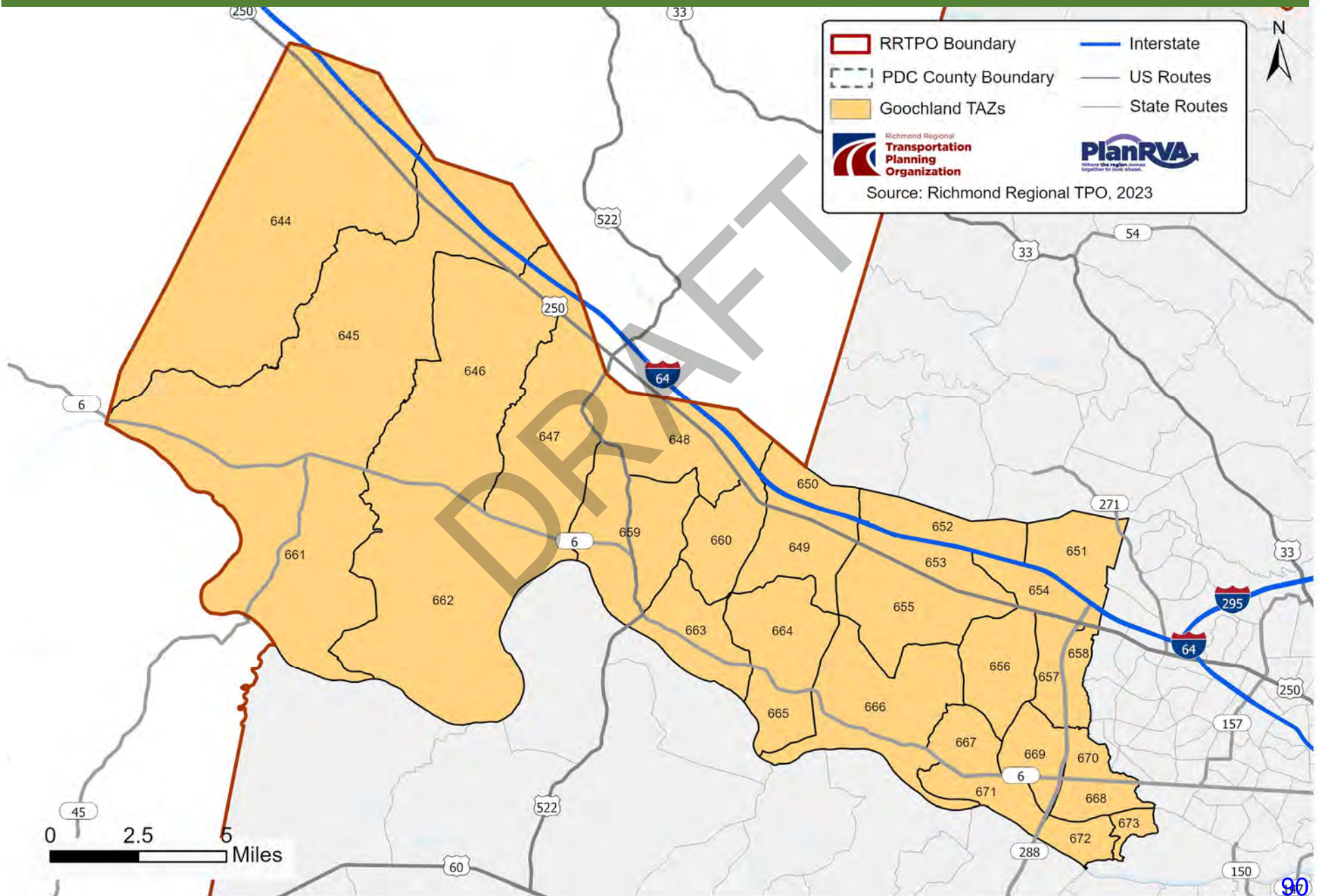


# Chesterfield County 6

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
			2017	2050			2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
917	1,644	1,993	1,644	1,993	0	0	610	721	573	694	1,639	1,985	0	0	0	0	*	6	*	0	*	6
918	971	1,284	971	1,282	0	2	379	488	356	470	819	1,081	206	452	0	0	19	19	3	4	16	15
919	1,356	1,807	1,356	1,807	0	0	459	597	431	575	838	1,118	597	713	0	0	*	109	*	0	*	109
920	795	1,004	790	996	5	8	299	369	281	355	678	857	0	0	0	0	27	27	7	5	20	22
921	1,493	1,690	1,493	1,690	0	0	554	613	521	590	1,456	1,649	0	0	0	0	33	33	0	0	33	33
922	1,402	2,560	1,402	2,560	0	0	531	947	499	911	783	1,429	0	0	0	0	122	124	78	82	44	42
923	480	634	480	634	0	0	224	288	210	277	355	468	0	0	0	0	774	834	98	116	676	718
924	10	151	10	151	0	0	6	94	6	90	16	240	0	0	0	0	559	729	70	99	489	630
925	1,485	1,825	1,485	1,825	0	0	533	639	501	615	1,181	1,450	0	0	0	0	323	345	0	0	323	345
926	868	1,148	868	1,148	0	0	301	389	283	374	825	1,090	560	669	0	0	*	510	*	5	*	505
927	4	7	4	7	0	0	2	3	2	3	7	11	0	0	0	0	3,191	3,782	141	245	3,050	3,537
928	23	40	23	40	0	0	8	16	8	15	29	54	0	0	0	0	695	948	217	475	478	473
929	1,618	2,139	1,618	2,139	0	0	562	725	528	698	1,566	2,070	0	0	0	0	44	44	1	1	43	43
930	1,002	1,226	1,002	1,221	0	5	339	404	319	389	940	1,146	0	0	0	0	9	10	0	0	9	10
931	332	438	332	438	0	0	138	179	130	172	316	418	0	0	0	0	11	11	0	0	11	11
932	1,571	2,076	1,571	2,076	0	0	675	871	634	838	1,436	1,898	516	616	0	0	137	137	24	25	113	112
933	2,206	2,744	2,206	2,744	0	0	949	1,152	892	1,109	1,457	1,811	0	0	0	0	*	152	*	0	*	152
934	219	558	219	558	0	0	88	220	83	212	233	595	0	0	0	0	94	493	36	166	58	327
935	69	91	69	91	0	0	28	35	26	34	78	102	0	0	0	0	919	3,880	5	29	914	3,851
936	22	33	22	33	0	0	10	14	9	13	16	23	0	0	0	0	13	1,615	0	0	13	1,615
937	812	1,689	812	1,689	0	0	302	613	284	590	880	1,828	0	0	0	0	56	56	0	0	56	56
938	510	796	510	796	0	0	195	296	183	285	532	829	0	0	0	0	4	4	1	2	3	2
939	959	1,268	959	1,268	0	0	375	484	352	466	961	1,272	0	0	0	0	*	4	*	0	*	4
940	153	232	153	232	0	0	69	103	65	99	175	267	0	0	0	0	0	0	0	0	0	0
941	389	515	389	515	0	0	157	204	148	196	423	560	0	0	0	0	0	0	0	0	0	0
942	259	342	259	342	0	0	116	150	109	144	268	354	0	0	0	0	*	6	*	0	*	6
943	326	430	326	430	0	0	123	159	116	153	307	405	970	1,159	0	0	*	188	*	0	*	188
944	729	963	723	962	6	1	277	360	260	346	595	792	0	0	0	0	*	6	*	0	*	6
945	329	435	329	435	0	0	134	172	126	166	280	369	0	0	0	0	16	18	0	0	16	18
946	923	1,233	923	1,233	0	0	359	468	337	450	814	1,087	0	0	0	0	*	2	*	0	*	2
947	703	916	703	916	0	0	276	351	259	338	601	784	0	0	0	0	*	48	*	0	*	48
948	327	433	327	433	0	0	144	186	135	179	261	346	421	503	0	0	114	114	13	12	101	102
949	803	1,062	803	1,053	0	9	356	456	335	439	615	806	0	0	0	0	6	6	0	0	6	6
950	824	1,056	332	685	492	371	141	284	132	273	321	664	0	0	0	0	161	161	135	129	26	32
951	1,920	2,547	1,920	2,547	0	0	785	1,017	738	979	1,701	2,256	0	0	0	0	10	10	0	0	10	10
952	275	341	275	341	0	0	120	145	113	140	194	240	0	0	0	0	*	1	*	0	*	1
953	597	676	594	676	3	0	246	273	231	263	333	379	0	0	0	0	*	12	*	12	*	0
954	2,358	3,156	211	266	2,147	2,890	99	122	93	117	12	15	0	0	4,713	6,000	*	863	*	0	*	863
955	912	1,179	808	1,179	104	0	334	477	314	459	393	574	584	697	0	0	476	479	96	98	380	381
Total	340,848	504,814	336,197	499,044	4,651	5,770	132,586	191,692	124,595	184,489	293,337	432,400	62,779	77,677	20,985	22,272	131,120	186,051	34,646	45,719	96,474	140,332

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# Goochland County Map



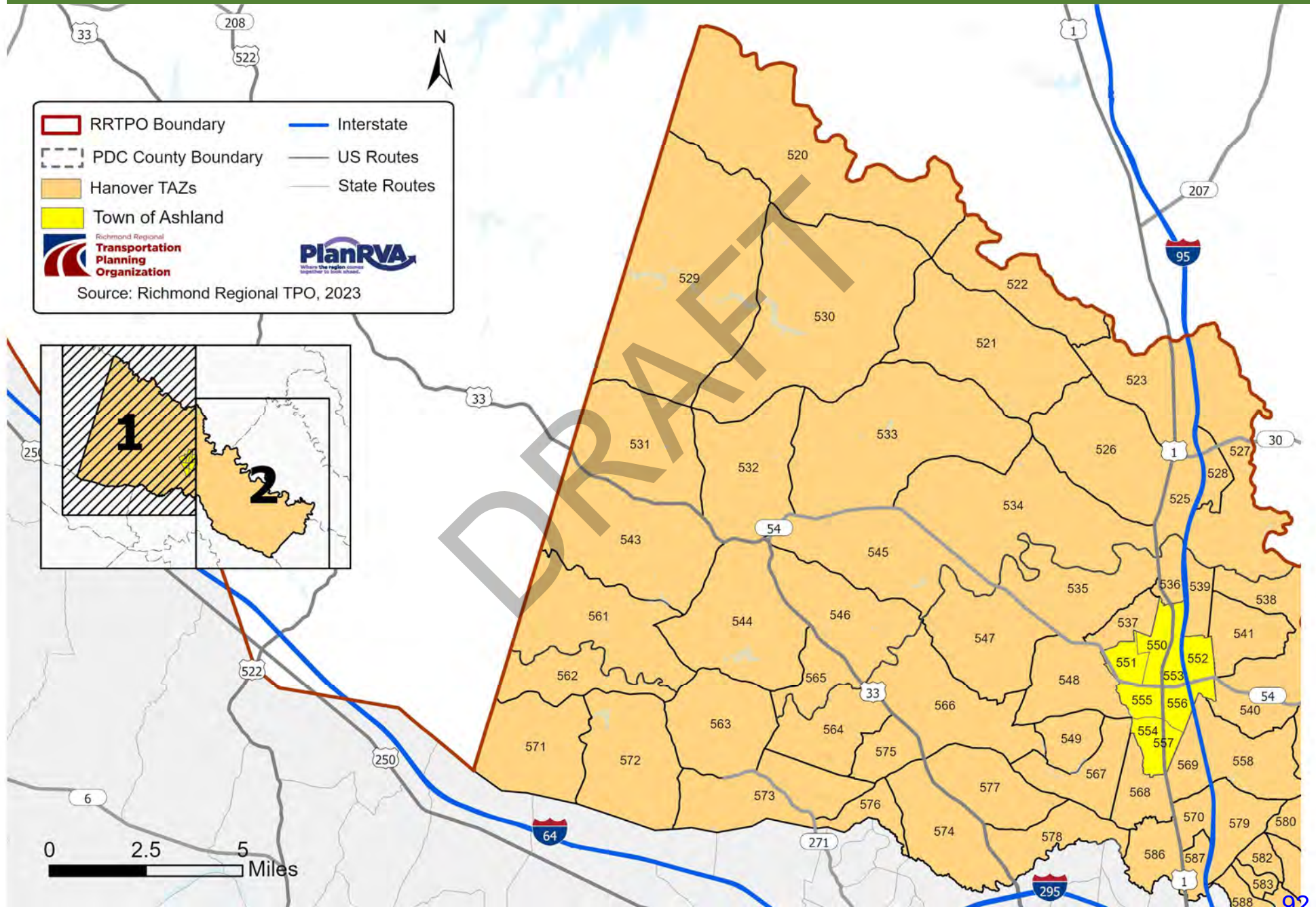
# Goochland County

TAZ	Population						Housing				Automobiles	School Enrollment				Employment						
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households			Grade K-12		Colleges		Total		Retail		Non-Retail		
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
644	2,068	2,181	2,068	2,181	0	0	877	927	814	859	1,854	1,956	0	0	0	0	20	30	0	0	20	30
645	1,885	2,024	1,885	2,024	0	0	799	859	742	796	1,936	2,077	346	460	0	0	132	196	2	5	130	191
646	1,420	1,676	1,420	1,676	0	0	602	712	559	660	1,354	1,599	0	0	0	0	171	253	20	42	151	211
647	1,451	1,637	1,397	1,545	54	92	593	656	550	608	1,309	1,447	0	0	0	0	270	401	2	5	268	396
648	1,303	1,529	1,303	1,529	0	0	553	649	513	602	1,415	1,660	0	0	0	0	55	82	19	28	36	54
649	615	743	615	743	0	0	261	316	242	293	690	835	514	716	0	0	91	135	34	57	57	78
650	119	126	119	126	0	0	51	54	47	50	98	104	0	0	0	0	168	250	21	28	147	222
651	414	587	414	587	0	0	176	249	163	231	310	439	0	0	0	0	1,597	2,815	74	138	1,523	2,677
652	508	653	508	653	0	0	216	277	200	257	659	847	0	0	0	0	41	61	0	0	41	61
653	724	764	724	764	0	0	307	324	285	300	868	914	0	0	0	0	354	526	52	79	302	447
654	213	947	213	947	0	0	91	401	84	372	239	1,058	0	0	0	0	521	853	294	458	227	395
655	699	818	699	815	0	3	296	345	275	320	875	1,018	0	0	0	0	109	162	0	0	109	162
656	1,737	2,274	1,737	2,274	0	0	737	967	684	896	1,700	2,227	0	0	0	0	460	683	19	22	441	661
657	175	899	175	899	0	0	74	383	69	355	158	813	0	0	0	0	5,655	8,402	230	226	5,425	8,176
658	599	4,685	599	4,685	0	0	254	1,991	236	1,846	544	4,255	0	0	0	0	12	456	0	0	12	456
659	2,230	2,663	1,641	2,156	589	507	696	916	646	849	1,637	2,151	1,802	2,394	531	531	1,410	2,091	320	638	1,090	1,453
660	643	1,161	643	1,161	0	0	273	493	253	457	793	1,432	0	0	0	0	65	96	22	40	43	56
661	687	724	676	720	11	4	287	305	266	283	663	705	35	81	0	0*	129*		32*			97
662	704	743	704	743	0	0	298	316	277	293	773	818	0	0	0	0	55	82	0	0	55	82
663	279	294	279	52	0	242	119	22	110	20	321	58	0	0	0	0	724	1,076	0	0	724	1,076
664	724	764	724	757	0	7	307	321	285	298	754	788	96	224	0	0	127	189	0	0	127	189
665	109	115	109	115	0	0	46	50	43	46	117	125	0	0	0	0*	4*		3*			1
666	843	940	843	940	0	0	358	399	332	370	971	1,082	0	0	0	0	535	794	57	60	478	734
667	1,201	1,311	1,201	1,311	0	0	510	557	473	516	1,213	1,323	0	0	0	0	145	216	63	91	82	125
668	549	579	549	579	0	0	233	246	216	228	614	648	85	198	0	0	85	125	60	89	25	36
669	307	612	257	569	50	43	109	242	101	224	263	583	47	109	0	0	355	528	0	0	355	528
670	59	1,954	53	1,938	6	16	23	828	21	768	61	2,231	0	0	0	0	496	737	56	50	440	687
671	191	201	191	201	0	0	81	85	75	79	202	213	0	0	0	0*	277*		0*			277
672	420	442	406	439	14	3	172	187	160	173	426	461	0	0	0	0	12	18	0	0	12	18
673	660	696	660	696	0	0	280	296	260	274	668	704	0	0	0	0	25	37	0	0	25	37
Total	23,536	34,742	22,812	33,825	724	917	9,679	14,373	8,981	13,323	23,485	34,571	2,925	4,182	531	531	13,966	21,704	1,360	2,091	12,606	19,613

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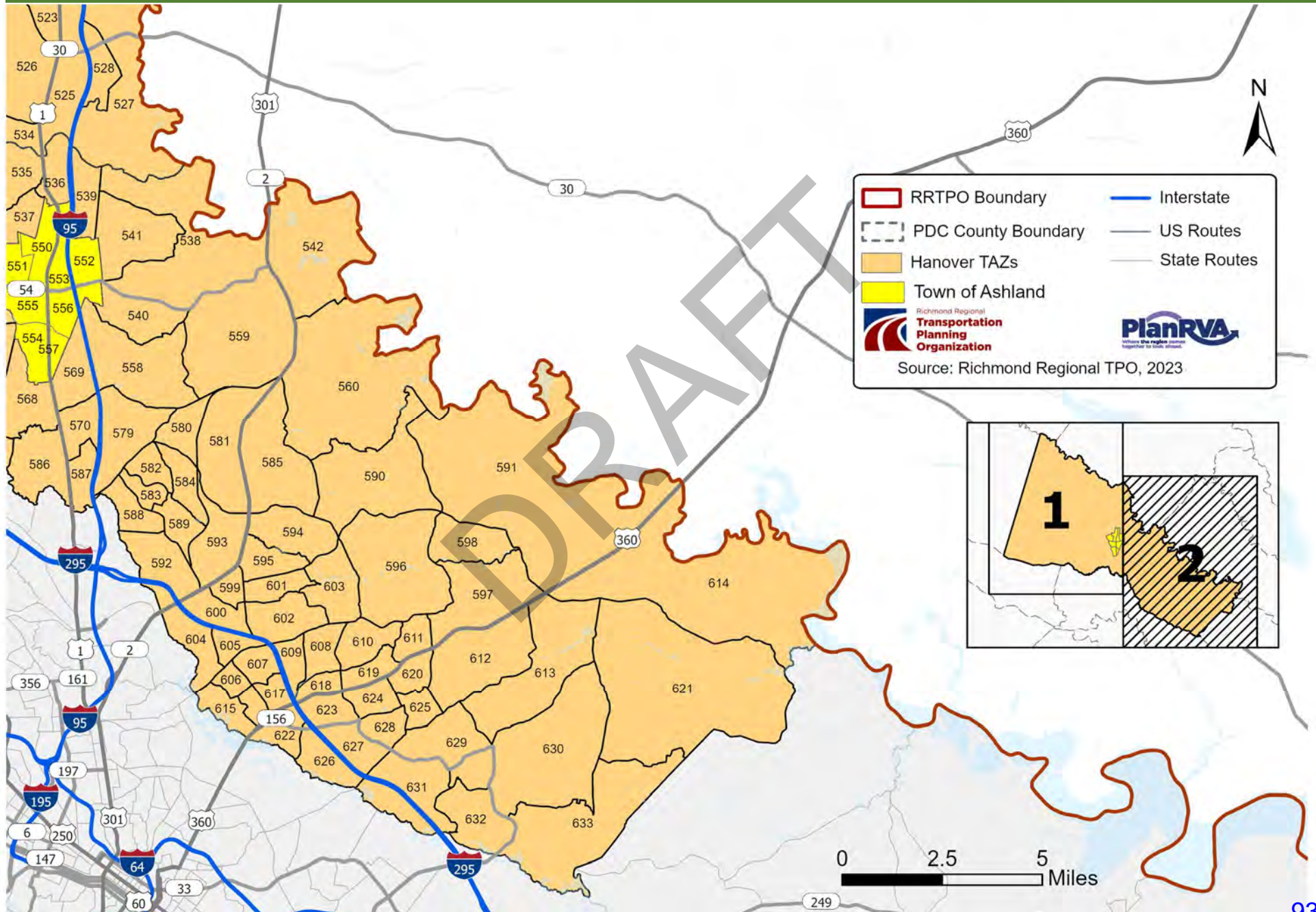


# Hanover County Map 1





# Hanover County Map 2



# Hanover County 1

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
520	766	782	766	782	0	0	287	295	277	283	749	765	0	0	0	0	52	60	7	6	45	54
521	544	556	544	556	0	0	207	213	200	204	542	553	0	0	0	0	34	45	0	0	34	45
522	199	202	199	202	0	0	73	74	70	71	147	149	0	0	0	0	*	13	*	0	*	13
523	199	202	199	202	0	0	100	102	97	98	219	221	0	0	0	0	63	76	12	27	51	49
524	82	459	82	459	0	0	38	216	37	207	92	515	0	0	0	0	395	508	0	0	395	508
525	200	1,120	200	1,120	0	0	82	461	79	442	126	705	0	0	0	0	*	73	*	0	*	73
526	490	500	490	500	0	0	200	205	193	197	565	577	0	0	0	0	65	92	27	33	38	59
527	168	537	96	537	72	0	65	367	63	352	134	749	0	0	0	0	*	421	*	0	*	421
528	3	17	3	17	0	0	1	6	1	6	0	0	0	0	0	0	*	2,401	*	218	*	2,183
529	1,106	1,130	1,106	1,130	0	0	433	445	418	427	1,178	1,203	0	0	0	0	25	26	2	2	23	24
530	934	953	934	953	0	0	384	395	371	379	905	925	316	344	0	0	119	137	8	9	111	128
531	687	702	687	702	0	0	268	276	259	265	647	662	0	0	0	0	52	59	36	37	16	22
532	873	891	873	891	0	0	347	357	335	342	968	988	0	0	0	0	164	170	61	49	103	121
533	1,083	1,106	1,083	1,106	0	0	398	409	384	392	1,136	1,160	0	0	0	0	82	99	54	57	28	42
534	891	910	891	910	0	0	355	365	343	350	931	950	0	0	0	0	113	117	3	3	110	114
535	894	912	894	912	0	0	370	380	357	364	1,023	1,043	0	0	0	0	77	140	0	0	77	140
536	81	454	81	454	0	0	40	228	39	219	69	387	0	0	0	0	258	535	172	332	86	203
537	329	337	329	336	0	1	128	132	124	127	296	303	0	0	0	0	13	14	0	0	13	14
538	392	590	392	590	0	0	163	246	157	236	345	519	0	0	0	0	5	38	0	0	5	38
539	97	543	97	543	0	0	35	198	34	190	77	430	0	0	0	0	*	11	*	11	*	0
540	478	554	478	554	0	0	177	206	171	198	534	618	0	0	0	0	*	103	*	1	*	102
541	740	4,142	740	4,142	0	0	294	1,658	284	1,590	699	3,913	0	0	0	0	*	2	*	0	*	2
542	639	573	214	247	425	326	70	81	68	78	138	158	0	0	0	0	1,343	1,751	3	4	1,340	1,747
543	826	844	826	844	0	0	315	324	304	311	825	844	0	0	0	0	130	135	0	0	130	135
544	1,439	1,480	1,439	1,468	0	12	503	516	485	495	1,312	1,339	566	616	0	0	296	322	140	147	156	175
545	980	999	980	999	0	0	367	376	354	361	993	1,013	0	0	0	0	*	427	*	0	*	427
546	769	786	769	786	0	0	299	307	288	294	680	694	0	0	0	0	71	74	22	20	49	54
547	694	708	694	708	0	0	292	300	282	288	701	716	2,422	2,637	0	0	242	484	0	0	242	484
548	406	426	406	414	0	12	175	179	169	172	483	492	0	0	0	0	19	20	7	7	12	13
549	591	1,005	591	1,005	0	0	236	405	228	388	622	1,058	0	0	0	0	9	24	1	2	8	22
550	1,627	1,445	352	395	1,275	1,050	258	299	249	279	440	493	327	356	1,418	1,477	1,354	2,004	147	231	1,207	1,773
551	1,459	1,822	1,269	1,662	190	160	587	794	566	741	1,016	1,330	0	0	0	0	575	667	167	157	408	510
552	110	400	110	400	0	0	55	207	53	193	156	568	70	76	0	0	206	350	0	0	206	350
553	1,330	1,499	1,330	1,491	0	8	656	761	633	710	641	719	0	0	0	0	1,786	2,394	632	784	1,154	1,610
554	171	192	171	192	0	0	74	86	71	80	137	154	0	0	0	0	1,124	1,623	441	640	683	983

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Town of Ashland

# Hanover County 2

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
			Housing Units																			
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
555	2,378	2,667	2,378	2,667	0	0	1,111	1,288	1,072	1,202	1,969	2,208	316	344	0	0	674	1,370	401	752	273	618
556	705	791	705	791	0	0	281	326	271	304	590	662	0	0	0	0	1,466	3,000	1,076	2,169	390	831
557	5	6	5	6	0	0	2	2	2	2	5	5	0	0	0	0	1,451	2,000	201	220	1,250	1,780
558	766	888	766	888	0	0	295	344	285	330	778	901	0	0	0	0	70	83	12	20	58	63
559	860	997	860	997	0	0	344	401	332	385	718	833	0	0	0	0	50	64	19	24	31	40
560	852	988	852	988	0	0	335	391	323	375	852	989	0	0	0	0	95	106	4	4	91	102
561	469	478	469	478	0	0	178	182	172	175	479	487	0	0	0	0	44	49	0	0	44	49
562	245	251	245	251	0	0	102	104	98	100	135	138	0	0	0	0	31	32	0	0	31	32
563	695	624	611	624	84	0	278	286	268	274	709	725	0	0	0	0	67	75	19	18	48	57
564	410	418	410	418	0	0	149	153	144	147	308	314	0	0	0	0	14	34	0	0	14	34
565	305	311	305	311	0	0	114	117	110	112	257	262	0	0	0	0	22	25	0	0	22	25
566	650	663	650	663	0	0	262	269	253	258	748	763	0	0	0	0	304	316	7	5	297	311
567	657	1,161	657	1,117	0	44	263	450	254	432	631	1,073	382	416	0	0	116	129	0	0	116	129
568	1,171	1,992	1,171	1,992	0	0	475	812	458	779	999	1,699	0	0	0	0	424	499	136	157	288	342
569	137	233	137	233	0	0	51	87	49	83	107	181	0	0	0	0	2,005	2,532	542	608	1,463	1,924
570	138	235	138	235	0	0	58	99	56	95	148	251	0	0	0	0	448	950	205	402	243	548
571	823	840	823	840	0	0	304	312	293	299	747	762	0	0	0	0	15	20	1	1	14	19
572	657	677	657	671	0	6	237	244	229	234	654	668	0	0	0	0	95	104	0	0	95	104
573	711	725	711	725	0	0	293	301	283	289	679	693	0	0	0	0	89	201	12	24	77	177
574	577	981	577	981	0	0	230	393	222	377	602	1,022	0	0	0	0	264	925	48	136	216	789
575	59	60	59	60	0	0	26	26	25	25	99	99	0	0	0	0	*	3	*	0	*	3
576	74	526	74	526	0	0	39	282	38	270	88	625	0	0	0	0	137	149	0	0	137	149
577	750	1,275	750	1,275	0	0	314	537	303	515	717	1,219	0	0	0	0	35	810	2	43	33	767
578	442	751	442	751	0	0	188	321	181	308	359	611	0	0	0	0	*	1,484	*	97	*	1,387
579	185	251	185	251	0	0	93	127	90	122	232	314	0	0	0	0	4,799	5,293	566	605	4,233	4,688
580	1,692	1,992	1,692	1,992	0	0	582	690	562	662	1,492	1,757	0	0	0	0	64	66	0	0	64	66
581	1,288	1,724	1,288	1,724	0	0	558	751	538	720	1,222	1,635	3,771	4,106	0	0	606	655	6	6	600	649
582	2,276	3,041	2,276	3,041	0	0	802	1,078	774	1,034	1,062	1,419	0	0	0	0	557	604	152	139	405	465
583	1,982	2,654	1,982	2,649	0	5	675	907	651	870	1,915	2,559	0	0	0	0	314	347	142	129	172	218
584	3,219	4,302	3,219	4,302	0	0	925	1,244	893	1,193	2,416	3,228	0	0	0	0	88	120	4	4	84	116
585	750	884	750	870	0	14	333	388	321	372	719	833	0	0	0	0	22	45	9	16	13	29
586	793	1,348	793	1,348	0	0	351	601	339	576	790	1,342	0	0	0	0	567	880	152	276	415	604
587	544	925	544	925	0	0	276	471	266	452	414	703	0	0	0	0	2,451	2,752	535	545	1,916	2,207
588	2,098	2,805	2,098	2,805	0	0	593	798	572	765	1,548	2,070	0	0	0	0	65	70	0	0	65	70

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Town of Ashland

# Hanover County 3

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
			Housing Units																			
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
589	1,493	1,998	1,493	1,998	0	0	506	681	488	653	1,248	1,670	3,459	3,766	0	0	568	590	2	2	566	588
590	958	1,110	958	1,110	0	0	340	396	328	380	920	1,066	0	0	0	0	75	93	2	0	73	93
591	1,426	1,653	1,426	1,653	0	0	556	649	537	622	1,455	1,685	0	0	0	0	63	67	2	2	61	65
592	1,307	1,748	1,307	1,748	0	0	456	613	440	588	1,174	1,569	0	0	0	0	187	333	46	67	141	266
593	3,442	4,604	3,442	4,600	0	4	1,322	1,778	1,276	1,705	3,028	4,046	0	0	0	0	1,266	1,950	560	684	706	1,266
594	83	600	83	600	0	0	30	219	29	210	97	702	0	0	0	0	0	11	0	0	0	11
595	2,174	2,907	2,174	2,907	0	0	887	1,194	856	1,145	2,048	2,739	0	0	0	0	928	985	171	140	757	845
596	1,232	1,427	1,232	1,427	0	0	466	543	450	521	1,362	1,577	608	662	0	0	75	101	5	5	70	96
597	511	592	511	592	0	0	217	252	209	242	527	610	0	0	0	0	51	95	6	9	45	86
598	331	384	331	384	0	0	116	136	112	130	339	393	0	0	0	0	42	46	2	1	40	45
599	954	1,277	954	1,277	0	0	376	507	363	486	998	1,336	417	454	0	0	358	504	99	126	259	378
600	904	1,207	904	1,207	0	0	369	495	356	475	881	1,175	204	222	0	0	1,311	1,481	106	94	1,205	1,387
601	785	1,054	785	1,050	0	4	319	430	308	412	791	1,058	0	0	0	0	*	157	*	6	*	151
602	257	380	186	251	71	129	101	137	97	131	372	502	0	0	0	0	657	1,201	199	276	458	925
603	2,274	3,041	2,274	3,041	0	0	804	1,082	776	1,038	1,905	2,548	479	521	0	0	68	197	6	14	62	183
604	5	8	5	8	0	0	2	3	2	3	5	8	0	0	0	0	1,749	2,023	26	28	1,723	1,995
605	1,003	1,340	1,003	1,340	0	0	356	480	344	460	968	1,294	0	0	0	0	2,039	3,199	126	122	1,913	3,077
606	1,200	1,614	1,200	1,606	0	8	467	630	451	604	1,020	1,366	110	120	0	0	68	81	16	18	52	63
607	1,520	1,696	1,268	1,693	252	3	570	765	550	734	1,184	1,580	0	0	0	0	395	430	11	8	384	422
608	2,703	3,121	2,154	2,876	549	245	1,003	1,347	968	1,292	2,079	2,775	0	0	0	0	496	525	6	3	490	522
609	185	251	185	251	0	0	74	100	71	96	227	307	0	0	0	0	*	445	*	24	*	421
610	3,805	4,895	3,805	4,886	0	9	1,356	1,752	1,308	1,680	3,184	4,090	573	624	0	0	284	313	25	26	259	287
611	1,888	2,526	1,888	2,523	0	3	709	953	684	914	1,498	2,002	0	0	0	0	157	241	51	66	106	175
612	660	766	660	766	0	0	290	339	280	325	782	908	420	457	0	0	*	136	*	4	*	132
613	1,276	1,479	1,276	1,479	0	0	491	572	474	549	1,454	1,684	0	0	0	0	59	61	3	2	56	59
614	870	1,008	870	1,008	0	0	348	406	336	389	1,069	1,238	0	0	0	0	34	44	7	7	27	37
615	1,007	1,354	1,007	1,348	0	6	373	503	360	482	967	1,295	0	0	0	0	642	687	423	426	219	261
616	1,373	1,834	1,373	1,834	0	0	622	835	600	801	1,138	1,519	578	629	0	0	1,185	1,251	161	142	1,024	1,109
617	1,158	1,544	1,158	1,544	0	0	485	651	468	624	1,049	1,399	0	0	0	0	84	89	51	49	33	40
618	914	1,225	914	1,222	0	3	411	554	397	531	775	1,037	2,600	2,831	0	0	1,507	1,706	917	972	590	734
619	1,035	1,383	1,035	1,379	0	4	395	530	381	508	817	1,089	86	94	0	0	807	926	593	607	214	319
620	2,065	2,758	2,065	2,758	0	0	663	891	640	855	1,747	2,334	0	0	0	0	297	477	49	56	248	421
621	1,683	1,951	1,683	1,951	0	0	597	696	576	668	1,705	1,977	0	0	0	0	61	148	3	7	58	141
622	2,711	3,472	2,711	3,472	0	0	1,159	1,493	1,118	1,432	1,990	2,549	0	0	0	0	535	628	134	122	401	506

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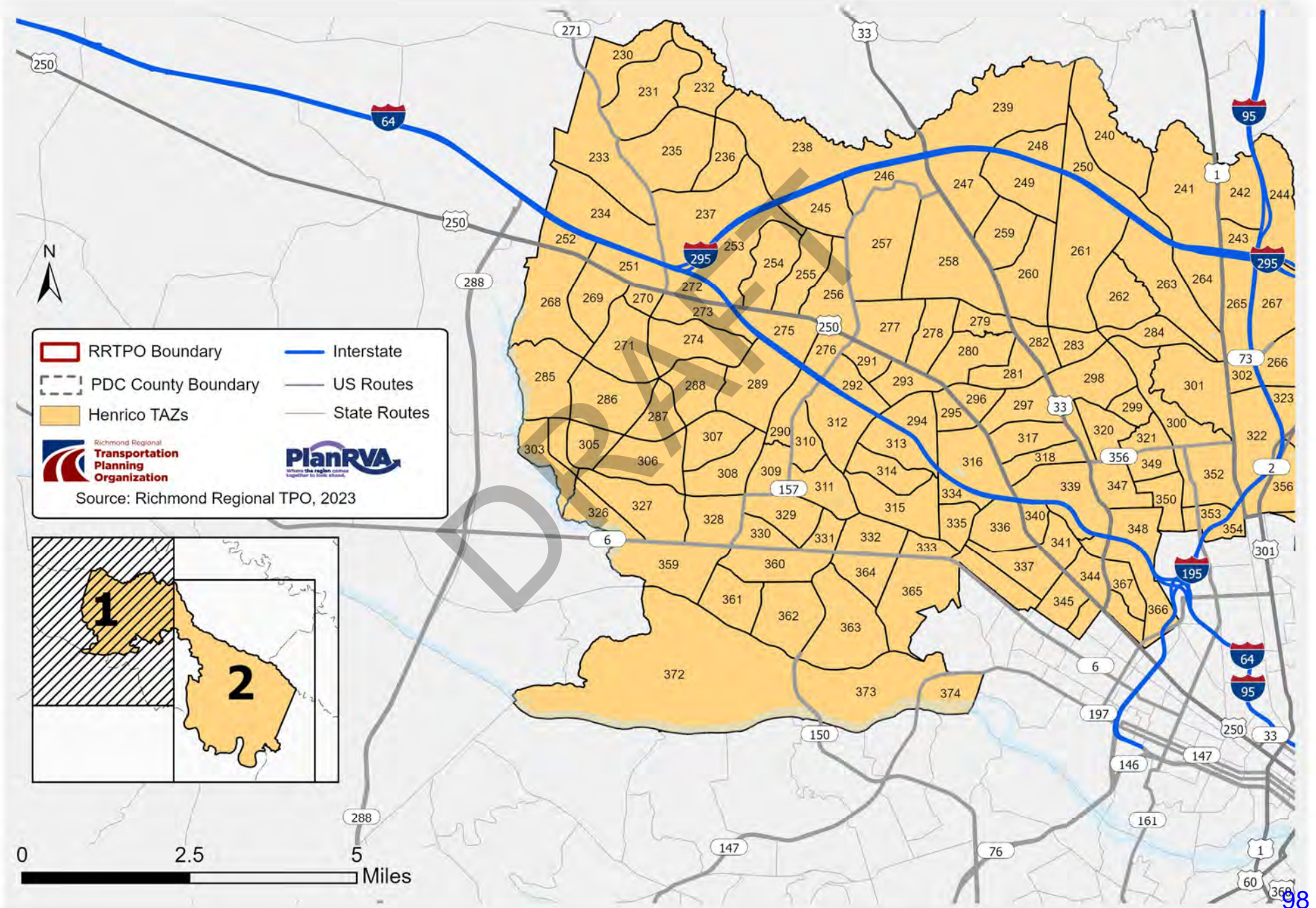


# Hanover County 4

TAZ	Population						Housing				Automobiles		School Enrollment				Employment						
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail		
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
623	1,492	1,994	1,492	1,990	0	0	4	640	859	618	824	1,331	1,775	0	0	0	0	1,930	2,154	1,563	1,593	367	561
624	1,866	2,292	1,866	2,292	0	0	0	733	905	707	868	1,627	1,998	0	0	0	0	1,441	1,921	1,035	1,273	406	648
625	705	940	705	940	0	0	0	260	349	251	335	658	878	0	0	0	0	200	352	5	8	195	344
626	1,217	1,280	1,217	1,280	0	0	0	550	582	531	558	982	1,032	0	0	0	0	30	300	0	0	30	300
627	2,639	3,318	2,639	3,307	0	11	0	976	1,230	942	1,180	2,400	3,006	0	0	0	0	129	180	51	56	78	124
628	1,530	1,845	1,530	1,845	0	0	0	557	676	537	648	1,513	1,826	522	568	0	0	*	142	*	0	*	142
629	661	886	661	886	0	0	0	277	373	267	358	778	1,043	0	0	0	0	*	91	*	0	*	91
630	1,027	1,191	1,027	1,191	0	0	0	388	453	374	434	1,221	1,417	0	0	0	0	20	22	1	1	19	21
631	441	588	441	588	0	0	0	199	267	192	256	399	532	0	0	0	0	20	500	14	313	6	187
632	216	251	216	251	0	0	0	78	91	75	87	193	224	0	0	0	0	29	34	6	5	23	29
633	969	1,122	969	1,122	0	0	0	363	422	350	405	1,175	1,360	0	0	0	0	226	237	2	2	224	235
Total	109,595	142,156	106,677	140,085	2,918	2,071	0	41,706	55,470	40,247	53,103	97,794	128,181	18,226	19,843	1,418	1,477	50,625	68,361	12,969	16,543	37,656	51,818

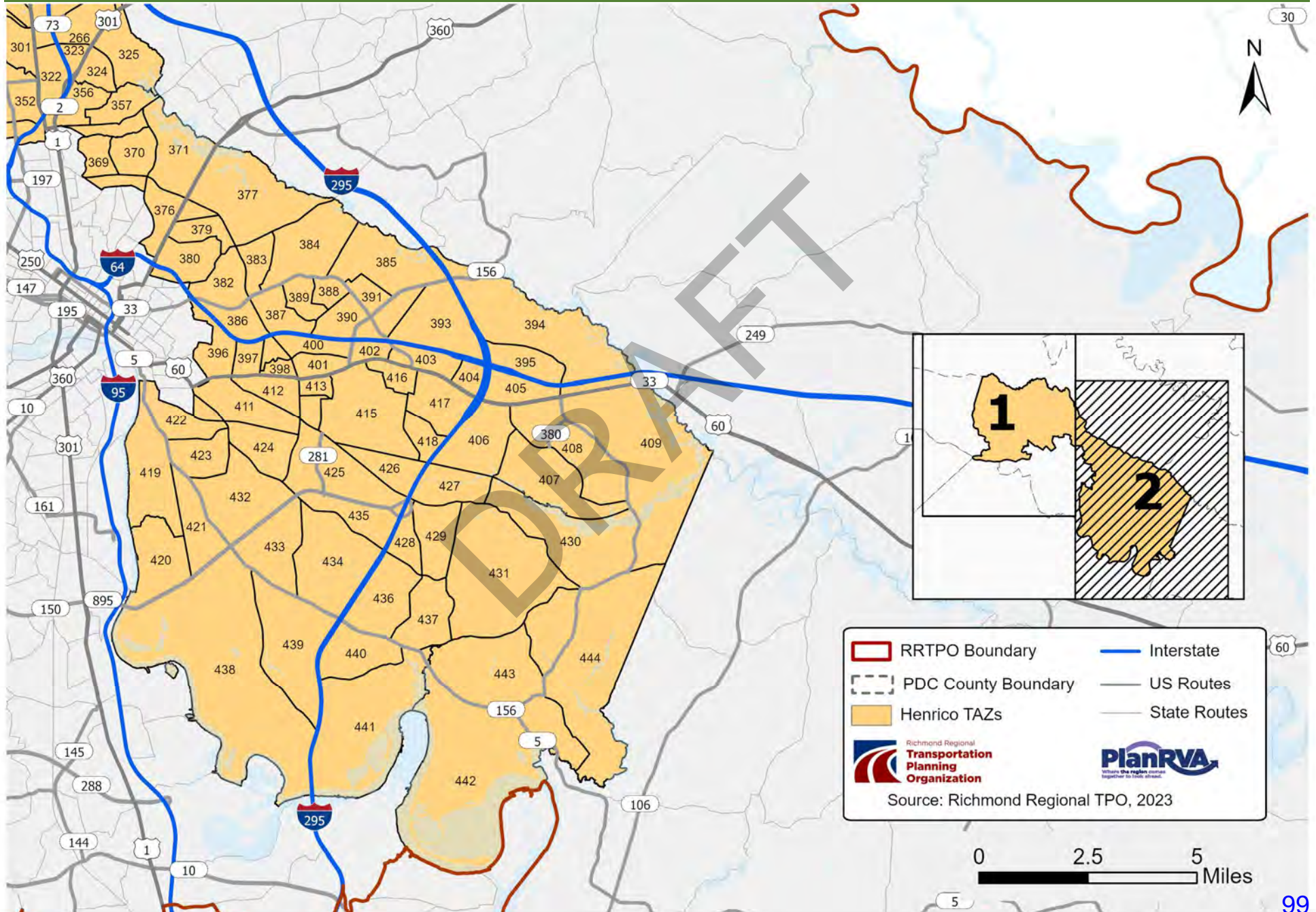
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# Henrico County Map 1





# Henrico County Map 2



# Henrico County 1

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
230	1,621	2,491	1,621	2,491	0	0	664	1,054	654	1,005	1,663	2,556	0	0	0	0	49	50	27	26	22	24
231	3,104	3,803	3,104	3,803	0	0	1,281	1,607	1,252	1,533	3,503	4,289	717	868	0	0	303	339	40	39	263	300
232	1,621	1,708	1,621	1,708	0	0	664	722	654	689	1,619	1,706	0	0	0	0	123	126	1	1	122	125
233	921	1,458	921	1,458	0	0	378	616	372	588	1,022	1,615	429	519	0	0	163	252	0	0	163	252
234	1,222	5,643	1,222	5,643	0	0	514	2,387	493	2,277	833	3,847	689	834	0	0	*	1,811	*	54	*	1,757
235	2,404	2,518	2,404	2,518	0	0	985	1,064	969	1,015	2,977	3,118	0	0	0	0	159	181	55	47	104	134
236	1,969	1,989	1,969	1,989	0	0	817	841	794	802	1,416	1,430	1,963	2,546	389	389	1,075	1,227	312	337	763	890
237	4,742	6,393	4,742	6,393	0	0	1,959	2,703	1,912	2,578	4,175	5,629	1,445	1,749	0	0	1,183	1,438	326	329	857	1,109
238	1,621	2,415	1,621	2,415	0	0	664	1,020	653	973	1,980	2,950	1,743	2,110	0	0	2,477	2,804	146	138	2,331	2,666
239	3,481	3,532	3,481	3,532	0	0	1,436	1,494	1,404	1,425	2,571	2,609	0	0	0	0	120	174	35	42	85	132
240	605	903	605	903	0	0	248	382	244	364	480	716	0	0	0	0	22	25	5	5	17	20
241	3,264	7,170	3,264	7,160	0	10	1,358	3,027	1,316	2,887	2,277	4,995	0	0	0	0	1,037	1,329	865	1,044	172	285
242	62	3,651	54	3,642	8	9	22	1,566	22	1,494	22	1,494	0	0	0	0	2,912	3,624	1,151	1,337	1,761	2,287
243	307	458	307	455	0	3	126	193	124	184	258	383	0	0	0	0	139	215	106	138	33	77
244	1,625	2,423	1,625	2,423	0	0	666	1,024	655	977	917	1,368	0	0	0	0	158	429	110	301	48	128
245	259	1,545	259	1,545	0	0	106	658	105	628	289	1,728	0	0	0	0	12,035	13,958	190	201	11,845	13,757
246	1,038	1,551	1,038	1,551	0	0	426	656	419	626	1,308	1,954	0	0	0	0	30	51	6	10	24	41
247	902	1,103	896	1,094	6	9	367	462	361	441	900	1,099	0	0	0	0	27	347	6	61	21	286
248	583	589	583	589	0	0	239	250	235	238	576	583	0	0	0	0	9	9	0	0	9	9
249	933	994	730	846	203	148	299	358	294	341	792	919	656	794	0	0	437	520	123	111	314	409
250	578	684	578	684	0	0	237	289	233	276	521	617	611	740	0	0	*	139	*	0	*	139
251	1,198	1,285	1,198	1,285	0	0	505	543	483	518	488	523	0	0	0	0	4,512	4,839	3,787	3,874	725	965
252	17	2,067	17	2,067	0	0	7	892	7	851	17	2,067	0	0	0	0	*	1,529	*	1,529	*	0
253	1,363	2,906	1,363	2,906	0	0	558	1,228	549	1,171	1,647	3,513	0	0	0	0	1,958	3,036	231	309	1,727	2,727
254	751	5,477	751	5,477	0	0	308	2,315	303	2,208	770	5,611	0	0	0	0	7,117	10,223	713	1,006	6,404	9,217
255	2,115	2,546	2,115	2,546	0	0	876	1,077	853	1,027	1,643	1,978	0	0	450	450	1,859	3,436	413	737	1,446	2,699
256	3,933	3,972	3,933	3,972	0	0	1,639	1,679	1,586	1,601	3,055	3,084	656	794	0	0	1,689	1,792	844	840	845	952
257	5,203	5,255	5,198	5,237	5	18	2,130	2,214	2,096	2,112	6,015	6,061	576	697	0	0	252	326	35	44	217	282
258	4,990	5,040	4,990	5,040	0	0	2,050	2,136	2,017	2,037	4,543	4,588	2,832	3,428	0	0	890	1,049	133	143	757	906
259	1,391	2,070	1,385	2,064	6	6	568	872	558	832	1,059	1,579	0	0	0	0	93	100	14	15	79	85
260	3,240	3,272	3,240	3,272	0	0	1,328	1,383	1,306	1,319	2,653	2,679	0	0	0	0	80	113	14	13	66	100
261	4,091	5,133	4,075	5,111	16	22	1,670	2,160	1,643	2,060	3,328	4,173	0	0	0	0	146	416	33	91	113	325
262	2,878	2,907	2,878	2,906	0	1	1,185	1,229	1,161	1,172	1,778	1,795	0	0	0	0	1,120	1,409	93	82	1,027	1,327
263	2,646	2,700	2,635	2,697	11	3	1,084	1,142	1,063	1,089	1,952	2,000	172	208	0	0	545	751	241	326	304	425
264	1,621	2,043	1,621	2,043	0	0	669	865	654	825	1,124	1,418	502	608	0	0	747	893	177	188	570	705

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# Henrico County 2

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
265	1,142	2,481	1,137	2,478	5	3	466	1,048	459	1,000	934	2,035	0	0	0	0	256	579	94	213	162	366
266	2,768	2,795	2,753	2,769	15	26	1,128	1,170	1,110	1,116	2,423	2,436	429	519	0	0	216	292	19	23	197	269
267	56	5,931	56	5,931	0	0	23	2,535	23	2,418	63	6,623	0	0	544	593	1,488	8,220	95	573	1,393	7,647
268	2,835	4,390	2,628	4,150	207	240	1,077	1,755	1,060	1,674	3,471	5,482	599	725	0	0	688	1,021	209	235	479	786
269	1,446	2,156	1,442	2,150	4	6	591	910	582	868	1,609	2,400	0	0	0	0	728	1,234	543	841	185	393
270	1,195	1,207	1,195	1,207	0	0	506	511	482	487	640	647	135	298	0	0	2,225	2,253	930	1,051	1,295	1,202
271	4,049	4,089	4,044	4,079	5	10	1,668	1,725	1,631	1,645	4,083	4,118	1,046	1,266	0	0	760	804	368	307	392	497
272	0	8	0	0	0	8	0	0	0	0	0	0	0	0	190	190	1,825	1,846	1,525	1,515	300	331
273	3,959	3,999	3,959	3,999	0	0	1,658	1,690	1,596	1,612	1,271	1,284	1,546	1,871	617	1,200	2,544	2,638	1,668	1,668	876	970
274	2,148	2,768	2,148	2,768	0	0	880	1,171	866	1,117	2,865	3,695	0	0	0	0	189	225	96	110	93	115
275	0	713	0	713	0	0	0	304	0	290	0	0	0	0	0	0	6,169	8,119	963	1,259	5,206	6,860
276	325	328	325	328	0	0	133	138	131	132	279	281	0	0	0	0	1,439	1,591	715	668	724	923
277	3,349	3,382	3,349	3,382	0	0	1,391	1,430	1,350	1,364	2,616	2,643	468	566	0	0	1,647	1,701	1,039	1,027	608	674
278	1,521	1,594	1,489	1,570	32	24	610	664	600	633	1,616	1,705	34	75	0	0	812	881	348	270	464	611
279	847	1,025	843	1,025	4	0	346	433	340	413	597	725	0	0	0	0	31	37	0	0	31	37
280	5,078	5,341	5,078	5,337	0	4	2,120	2,255	2,047	2,151	3,166	3,327	614	743	0	0	757	757	115	102	642	655
281	2,964	2,994	2,964	2,994	0	0	1,241	1,265	1,195	1,207	1,207	1,219	1,667	2,018	0	0	2,173	2,238	528	333	1,645	1,905
282	506	585	506	585	0	0	207	247	204	236	324	375	0	0	0	0	918	1,048	673	750	245	298
283	593	658	374	506	219	152	153	215	151	205	200	272	0	0	0	0	1,932	1,984	9	8	1,923	1,976
284	499	504	495	504	4	0	203	214	200	204	440	449	1,138	1,377	0	0	1,538	1,677	196	196	1,342	1,481
285	4,151	4,300	4,151	4,300	0	0	1,714	1,818	1,674	1,734	3,357	3,477	0	0	0	0	133	148	15	13	118	135
286	2,668	2,695	2,668	2,695	0	0	1,093	1,139	1,075	1,086	3,039	3,070	544	658	0	0	349	419	173	206	176	213
287	1,377	1,977	1,377	1,977	0	0	564	835	555	796	1,572	2,255	0	0	0	0	284	454	158	209	126	245
288	1,855	1,874	1,855	1,874	0	0	760	792	748	755	2,217	2,238	0	0	0	0	79	91	0	0	79	91
289	2,796	2,907	2,157	2,752	639	155	884	1,164	870	1,110	2,433	3,104	62	137	0	0	974	1,125	188	147	786	978
290	1,113	1,124	1,113	1,124	0	0	456	476	449	454	1,151	1,164	0	0	0	0	46	59	11	15	35	44
291	3,889	3,928	3,889	3,928	0	0	1,646	1,660	1,568	1,583	1,450	1,464	0	0	0	0	578	687	456	525	122	162
292	4,308	4,527	4,308	4,527	0	0	1,808	1,913	1,737	1,825	2,540	2,669	0	0	0	0	105	149	10	11	95	138
293	1,675	1,692	1,675	1,692	0	0	705	715	675	682	888	897	1,757	2,127	111	111	1,737	2,059	622	649	1,115	1,410
294	1,543	1,557	1,447	1,552	96	5	593	656	584	626	1,318	1,413	0	0	0	0	338	527	2	2	336	525
295	1,004	1,014	1,001	1,006	3	8	417	426	404	406	888	892	0	0	0	0	669	773	418	448	251	325
296	166	724	166	724	0	0	68	305	67	291	136	591	85	188	0	0	2,013	2,242	469	444	1,544	1,798
297	2,513	2,529	1,604	1,900	909	629	665	804	647	767	1,439	1,706	0	0	0	0	2,700	3,195	222	249	2,478	2,946
298	1,490	1,505	1,464	1,505	26	0	600	636	590	607	1,338	1,377	878	1,425	0	0	1,099	1,236	208	235	891	1,001
299	627	698	627	698	0	0	257	296	253	282	491	547	1,037	1,255	0	0	*	163	*	0	*	163
300	814	822	814	822	0	0	333	347	328	331	976	985	0	0	0	0	419	487	56	64	363	423
301	2,431	2,455	2,431	2,449	0	6	1,009	1,035	980	987	1,251	1,260	61	135	8,632	8,632	3,545	4,709	67	78	3,478	4,631
302	115	121	115	121	0	0	47	51	46	49	93	99	0	0	0	0	969	1,073	716	759	253	314
303	1,020	1,164	1,020	1,164	0	0	418	492	411	469	1,219	1,391	0	0	0	0	*	95	*	0	*	95
304	2,434	2,458	2,434	2,458	0	0	1,018	1,038	981	990	1,476	1,490	75	166	0	0	186	226	110	123	76	103

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# Henrico County 3

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
305	2,464	2,484	2,019	2,128	445	356	830	900	814	858	1,651	1,740	0	0	0	0	805	836	62	40	743	796
306	2,607	2,633	2,589	2,616	18	17	1,061	1,106	1,044	1,055	2,543	2,570	625	1,381	0	0	290	349	6	7	284	342
307	1,764	1,781	1,696	1,781	68	0	695	753	684	718	1,899	1,993	1,828	2,213	0	0	*	329	*	2	*	327
308	2,229	2,267	2,130	2,267	99	0	873	958	859	914	1,881	2,001	0	0	0	0	200	231	0	0	200	231
309	2,525	2,550	2,525	2,550	0	0	1,045	1,078	1,018	1,028	2,023	2,043	1,366	1,653	0	0	461	489	18	15	443	474
310	923	932	923	932	0	0	378	393	372	375	986	994	0	0	0	0	37	54	0	0	37	54
311	3,163	3,195	3,163	3,195	0	0	1,330	1,350	1,275	1,288	2,169	2,191	0	0	0	0	1,989	2,266	1,227	1,180	762	1,086
312	2,767	2,791	2,431	2,508	336	283	999	1,060	980	1,011	2,321	2,394	550	666	0	0	405	573	6	5	399	568
313	1,223	1,235	1,223	1,235	0	0	501	522	493	498	1,385	1,399	0	0	0	0	145	236	11	11	134	225
314	1,320	1,368	1,223	1,287	97	81	501	544	493	519	1,433	1,509	0	0	0	0	116	131	2	1	114	130
315	3,331	3,363	3,234	3,294	97	69	1,347	1,392	1,304	1,328	2,274	2,316	2,058	2,491	0	0	5,245	5,660	69	46	5,176	5,614
316	1,582	2,351	1,582	2,351	0	0	652	994	638	948	1,745	2,593	599	725	278	278	3,680	4,233	807	853	2,873	3,380
317	2,157	3,107	2,157	3,077	0	30	911	1,301	870	1,241	1,970	2,810	0	0	0	0	418	499	231	253	187	246
318	3,982	5,121	3,982	5,121	0	0	1,671	2,164	1,605	2,064	1,507	1,938	0	0	0	0	882	1,126	580	727	302	399
319	0	191	0	191	0	0	0	82	0	78	0	0	0	0	0	0	819	951	250	277	569	674
320	1,096	1,107	1,096	1,107	0	0	452	469	442	447	762	771	620	750	0	0	2,897	3,028	190	203	2,707	2,825
321	1,348	1,362	1,348	1,362	0	0	561	576	544	549	897	905	0	0	0	0	17	21	6	7	11	14
322	1,614	1,690	1,606	1,680	8	10	658	710	647	677	1,271	1,330	0	0	0	0	172	214	75	66	97	148
323	836	844	821	826	15	18	337	349	331	333	585	589	0	0	0	0	10	23	5	11	5	12
324	821	988	821	987	0	1	337	417	331	398	801	963	0	0	0	0	92	102	0	0	92	102
325	1,368	1,443	1,362	1,442	6	1	558	609	549	581	1,371	1,451	1,022	1,449	0	0	229	238	0	0	229	238
326	1,040	1,355	642	1,292	398	63	268	547	259	522	669	1,348	0	0	0	0	614	629	248	163	366	466
327	2,843	2,886	2,505	2,799	338	87	1,031	1,184	1,010	1,129	2,985	3,337	0	0	0	0	532	573	88	67	444	506
328	1,459	1,500	1,459	1,500	0	0	606	634	588	605	1,368	1,408	0	0	0	0	906	1,048	469	472	437	576
329	2,253	2,275	2,253	2,247	0	28	927	950	909	906	2,639	2,630	102	225	0	0	261	374	139	183	122	191
330	1,887	1,915	1,749	1,915	138	0	735	809	705	772	1,204	1,318	455	1,006	0	0	361	412	49	45	312	367
331	570	2,926	570	2,926	0	0	234	1,240	230	1,183	586	3,014	0	0	0	0	651	1,036	483	712	168	324
332	1,642	1,658	1,642	1,658	0	0	673	701	662	669	1,612	1,629	1,805	2,185	0	0	798	855	292	269	506	586
333	952	962	952	962	0	0	390	407	384	388	897	906	0	0	0	0	21	26	17	21	4	5
334	495	498	317	381	178	117	130	161	128	154	299	360	0	0	0	0	2,010	2,151	81	62	1,929	2,089
335	1,267	1,280	1,267	1,280	0	0	519	541	511	516	1,078	1,089	0	0	0	0	1,149	1,221	0	0	1,149	1,221
336	2,211	2,233	2,211	2,227	0	6	925	942	892	898	1,456	1,466	399	483	0	0	3,346	3,996	782	780	2,564	3,216
337	2,121	2,142	2,117	2,141	4	1	869	906	854	864	1,717	1,737	0	0	0	0	961	1,073	355	311	606	762
338	1,583	1,599	1,583	1,598	0	1	649	677	639	646	1,251	1,265	0	0	0	0	6,129	6,365	192	116	5,937	6,249
339	3,232	3,300	3,224	3,298	8	2	1,337	1,394	1,300	1,330	2,651	2,712	0	0	0	0	2,853	3,006	158	160	2,695	2,846
340	65	774	65	774	0	0	27	329	26	314	43	519	0	0	0	0	3,199	3,894	470	538	2,729	3,356

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# Henrico County 4

TAZ	Population						Housing				Automobiles		School Enrollment				Employment							
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail			
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050		
341	1,277	1,290	1,277	1,290	0	0	527	545	515	520	1,267	1,279	0	0	563	681	0	0	698	1,020	257	287	441	733
342	196	198	196	198	0	0	80	84	79	80	213	216	563	681	0	0	*	109	*	0	*	109		
343	359	363	359	363	0	0	147	153	145	146	289	291	0	0	0	0	0	0	10	50	0	0	10	50
344	312	5,194	312	5,194	0	0	128	2,200	126	2,098	296	4,929	0	0	0	0	0	0	2,335	4,000	903	1,454	1,432	2,546
345	1,245	2,504	1,139	2,449	106	55	467	1,036	459	988	960	2,066	163	360	0	0	0	0	2,693	2,916	798	588	1,895	2,328
346	852	1,537	852	1,537	0	0	350	651	344	621	306	552	0	0	0	0	0	0	2,922	3,091	1,235	1,132	1,687	1,959
347	1,578	1,594	1,574	1,582	4	12	645	670	635	639	1,178	1,185	0	0	0	0	0	0	1,591	1,731	121	89	1,470	1,642
348	544	572	544	570	0	2	223	240	219	229	399	417	0	0	0	0	0	0	1,079	1,181	24	32	1,055	1,149
349	2,060	2,081	2,053	2,076	7	5	854	879	828	838	1,292	1,308	508	615	0	0	0	0	173	213	12	13	161	200
350	2,441	2,465	2,433	2,462	8	3	998	1,040	981	992	1,664	1,683	0	0	0	0	0	0	31	40	21	26	10	14
351	875	882	682	746	193	136	280	316	275	301	438	479	0	0	0	0	0	0	392	450	158	117	234	333
352	1,665	2,482	1,665	2,482	0	0	695	1,050	671	1,001	510	761	0	0	0	0	0	0	435	582	182	211	253	371
353	791	799	791	799	0	0	324	338	319	322	526	531	0	0	0	0	0	0	316	335	142	150	174	185
354	853	896	0	366	853	530	0	156	0	149	0	0	0	0	0	0	0	0	85	208	79	194	6	14
355	0	0	0	0	0	0	0	0	0	0	0	0	121	267	0	0	0	0	801	894	454	390	347	504
356	3,326	3,536	3,326	3,536	0	0	1,389	1,495	1,341	1,426	1,835	1,951	0	0	0	0	0	0	234	277	155	168	79	109
357	2,937	3,000	2,937	3,000	0	0	1,238	1,269	1,184	1,210	1,433	1,464	1,746	2,113	0	0	0	0	*	633	*	8	*	625
358	512	530	512	530	0	0	210	224	207	214	459	475	0	0	0	0	0	0	106	225	7	11	99	214
359	3,245	3,275	3,245	3,275	0	0	1,359	1,384	1,308	1,320	2,581	2,605	0	0	0	0	0	0	402	462	15	12	387	450
360	2,917	3,023	2,917	3,023	0	0	1,205	1,277	1,176	1,218	2,724	2,821	680	823	0	0	0	0	431	528	303	378	128	150
361	1,267	1,280	1,267	1,280	0	0	519	541	511	516	1,493	1,508	0	0	0	0	0	0	61	76	2	1	59	75
362	1,889	1,908	1,889	1,908	0	0	774	806	762	769	1,760	1,776	1,680	3,713	0	0	0	0	*	503	*	3	*	500
363	2,955	3,002	2,955	3,002	0	0	1,211	1,270	1,192	1,211	3,132	3,182	456	724	0	0	0	0	234	319	39	43	195	276
364	1,177	1,189	1,177	1,189	0	0	483	502	474	479	1,414	1,429	0	0	0	0	0	0	232	310	72	74	160	236
365	2,924	2,953	2,924	2,953	0	0	1,198	1,248	1,179	1,190	3,137	3,166	658	796	0	0	0	0	317	376	133	144	184	232
366	207	807	207	807	0	0	85	343	84	327	175	681	0	0	0	0	0	0	2,296	2,839	464	580	1,832	2,259
367	0	1,227	0	1,227	0	0	0	523	0	499	0	0	0	0	0	0	0	0	3,888	4,519	280	243	3,608	4,276
368	0	1,188	0	1,188	0	0	0	506	0	483	0	0	0	0	279	535	4,729	5,208	185	185	4,544	5,023		
369	1,968	1,983	1,968	1,983	0	0	822	838	793	799	1,016	1,024	603	774	0	0	0	0	176	210	58	64	118	146
370	315	318	315	318	0	0	129	134	127	128	234	236	0	0	0	0	0	0	564	1,021	87	180	477	841
371	1,690	3,062	1,676	3,062	14	0	687	1,295	676	1,235	1,442	2,634	445	539	0	0	0	0	457	565	178	197	279	368
372	1,720	1,855	1,720	1,855	0	0	705	784	694	748	2,437	2,627	0	0	0	0	0	0	185	188	2	1	183	187
373	954	1,195	488	995	466	200	200	420	197	401	742	1,510	0	0	0	0	0	0	304	328	277	307	27	21
374	266	278	266	278	0	0	109	117	107	112	114	119	0	0	0	0	0	0	384	388	117	67	267	321

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# Henrico County 5

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
			2017	2050			2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
375	1,499	1,514	1,492	1,504	7	10	620	636	602	607	1,040	1,049	0	0	0	0	304	380	125	175	179	205
376	1,921	1,940	1,913	1,933	8	7	784	817	771	779	1,715	1,733	0	0	0	0	848	1,044	198	283	650	761
377	4,538	5,102	4,526	5,102	12	0	1,872	2,157	1,825	2,057	4,399	4,958	1,274	1,712	0	0	461	549	71	75	390	474
378	1,194	1,206	1,194	1,206	0	0	498	511	482	487	881	890	0	0	0	0	200	241	102	96	98	145
379	2,425	2,665	2,418	2,664	7	1	994	1,126	975	1,074	2,134	2,351	467	565	0	0	247	422	113	178	134	244
380	3,484	3,964	3,479	3,948	5	16	1,430	1,669	1,403	1,592	3,138	3,561	0	0	0	0	245	333	13	16	232	317
381	370	429	370	429	0	0	153	180	149	172	199	230	930	1,126	0	0	*	256	*	0	*	256
382	2,109	3,183	2,038	3,125	71	58	840	1,321	822	1,260	2,018	3,093	0	0	0	0	791	1,247	379	550	412	697
383	4,292	4,505	4,292	4,505	0	0	1,797	1,905	1,731	1,817	2,441	2,562	0	0	0	0	198	256	102	107	96	149
384	2,564	3,826	2,564	3,820	0	6	1,053	1,615	1,034	1,540	2,470	3,679	0	0	0	0	239	327	121	155	118	172
385	2,417	2,879	2,388	2,865	29	14	980	1,211	963	1,155	1,775	2,129	0	0	0	0	86	95	18	12	68	83
386	1,414	1,426	1,213	1,249	201	177	497	527	489	503	1,256	1,292	433	524	0	0	1,292	1,494	148	132	1,144	1,362
387	1,396	1,600	1,396	1,600	0	0	572	676	563	645	1,473	1,688	1,060	1,283	0	0	586	807	124	185	462	622
388	1,542	1,589	1,542	1,589	0	0	638	672	622	641	891	918	588	712	0	0	287	390	26	28	261	362
389	2,905	2,908	2,902	2,908	3	0	1,199	1,229	1,170	1,172	1,975	1,978	0	0	0	0	10	67	0	0	10	67
390	2,008	2,042	2,001	2,042	7	0	827	864	807	824	1,581	1,614	2,256	2,731	0	0	1,908	2,089	335	439	1,573	1,650
391	2,296	2,350	2,296	2,350	0	0	941	994	926	948	1,867	1,911	0	0	0	0	188	214	132	145	56	69
392	2,664	3,439	2,545	3,329	119	110	1,054	1,407	1,026	1,342	1,653	2,162	0	0	0	0	250	297	79	54	171	243
393	2,018	3,009	2,018	3,009	0	0	827	1,271	813	1,212	1,709	2,548	521	631	0	0	238	396	3	6	235	390
394	1,141	1,701	1,141	1,701	0	0	467	719	460	686	1,095	1,633	0	0	0	0	*	18	*	1	*	17
395	60	88	60	88	0	0	25	37	24	35	75	109	0	0	0	0	0	0	0	0	0	0
396	1,853	1,876	1,849	1,868	4	8	758	791	746	754	1,877	1,897	0	0	0	0	21	64	18	51	3	13
397	2,809	2,837	2,809	2,837	0	0	1,172	1,199	1,132	1,144	1,747	1,766	393	476	0	0	186	288	53	73	133	215
398	420	625	420	625	0	0	172	264	169	252	555	828	0	0	0	0	678	764	434	472	244	292
399	927	1,147	927	1,147	0	0	389	484	374	462	426	526	0	0	0	0	514	692	375	460	139	232
400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,978	2,467	1,572	2,140	406	327
401	1,949	2,904	1,945	2,898	4	6	809	1,225	784	1,168	1,477	2,200	0	0	0	0	594	759	356	407	238	352
402	793	801	793	801	0	0	325	339	320	323	680	686	235	284	0	0	212	359	76	138	136	221
403	1,779	2,062	1,779	2,062	0	0	734	872	718	832	1,179	1,366	0	0	0	0	92	251	33	69	59	182
404	155	466	155	466	0	0	63	196	62	187	183	552	0	0	0	0	278	455	131	301	147	154
405	94	140	94	140	0	0	38	60	38	57	89	134	0	0	0	0	*	293	*	0	*	293
406	94	140	94	140	0	0	38	60	38	57	140	210	0	0	0	0	133	609	0	0	133	609
407	236	352	236	352	0	0	96	149	95	142	230	344	0	0	0	0	*	2,809	*	144	*	2,665
408	523	542	518	542	5	0	212	229	209	218	543	566	0	0	0	0	985	1,463	1	1	984	1,462
409	2,496	3,726	2,496	3,726	0	0	1,023	1,576	1,007	1,503	2,703	4,034	940	1,234	0	0	211	671	8	22	203	649
410	1,401	1,484	1,380	1,484	21	0	581	627	556	598	496	533	0	0	0	0	41	51	5	7	36	44
411	1,396	1,410	1,396	1,391	0	19	572	588	563	561	1,151	1,147	0	0	0	0	1,154	1,498	354	555	800	943

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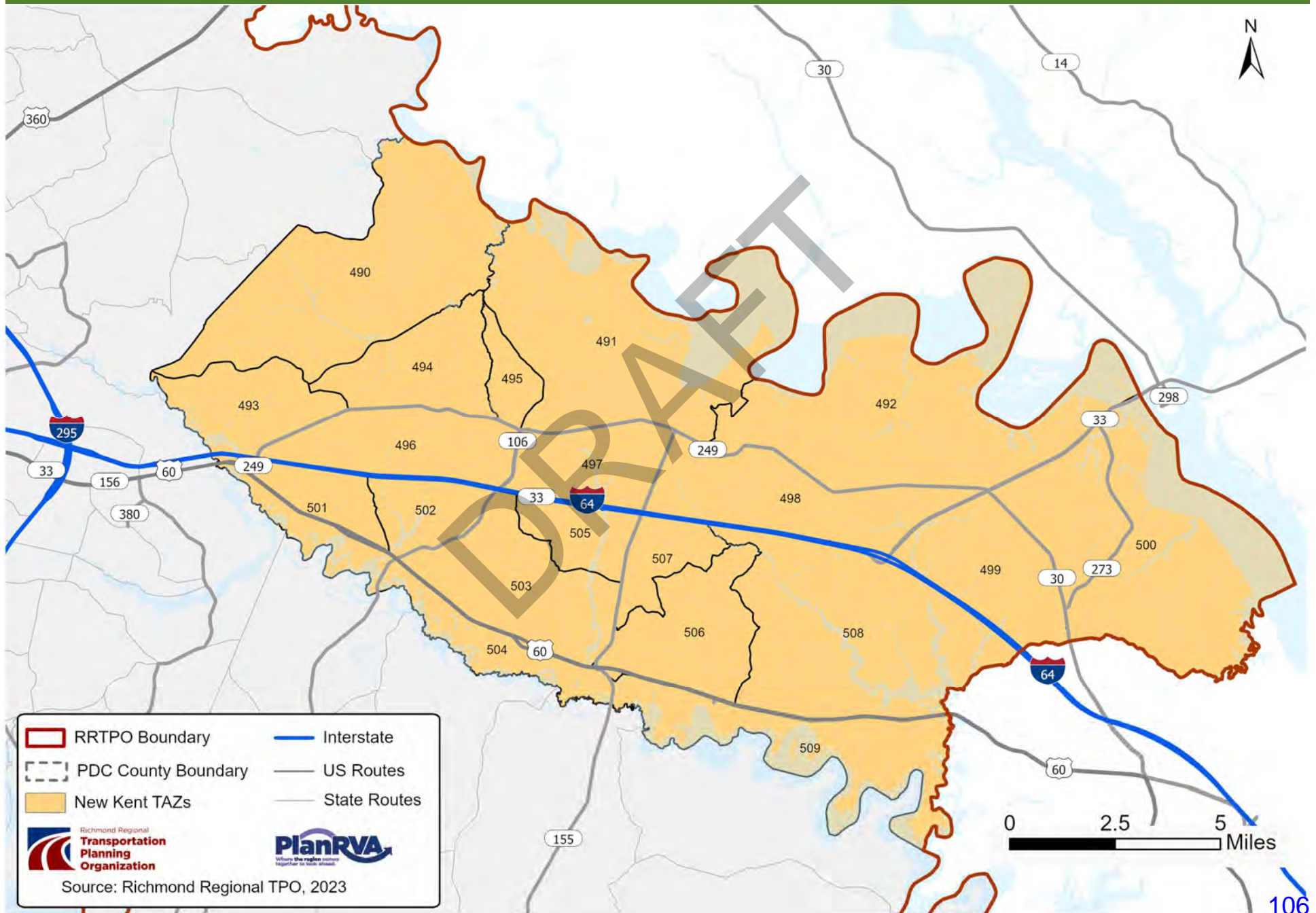


# Henrico County 6

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050		
412	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,327	4,099	489	656	2,838	3,443
413	733	740	733	740	0	0	307	312	295	298	502	507	0	0	0	0	991	1,307	208	299	783	1,008
414	192	214	192	214	0	0	78	90	77	86	164	183	0	0	0	0	958	1,152	48	55	910	1,097
415	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,334	3,577	138	285	2,196	3,292
416	1,584	1,600	1,584	1,600	0	0	649	676	638	645	1,298	1,312	410	496	0	0	377	421	87	78	290	343
417	1,009	1,506	1,009	1,506	0	0	420	637	407	608	841	1,256	0	0	0	0	96	169	69	109	27	60
418	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	213	*	0	*	213
419	855	4,068	855	4,068	0	0	350	1,723	345	1,643	435	2,072	0	0	0	0	*	2,259	*	154	*	2,105
420	236	352	236	352	0	0	97	149	95	142	377	564	0	0	0	0	20	30	1	2	19	28
421	2,002	2,273	2,002	2,273	0	0	820	960	807	916	2,029	2,303	0	0	0	0	72	136	22	39	50	97
422	1,583	1,893	1,583	1,893	0	0	655	800	638	763	1,378	1,648	0	0	0	0	22	88	0	0	22	88
423	3,852	3,890	3,852	3,890	0	0	1,584	1,645	1,553	1,569	4,531	4,578	0	0	0	0	34	78	12	27	22	51
424	17	26	17	26	0	0	7	10	7	10	27	39	0	0	0	0	1,185	1,301	0	0	1,185	1,301
425	192	200	187	200	5	0	77	84	75	80	186	198	0	0	0	0	1,434	2,252	92	215	1,342	2,037
426	47	71	47	71	0	0	19	29	19	28	31	46	0	0	0	0	5	70	0	0	5	70
427	123	181	123	181	0	0	50	77	49	73	165	246	0	0	0	0	0	26	0	10	0	16
428	245	366	245	366	0	0	101	155	99	148	385	576	0	0	0	0	*	5	*	0	*	5
429	450	670	450	670	0	0	184	282	181	269	362	538	0	0	0	0	13	49	4	13	9	36
430	978	1,453	967	1,452	11	1	397	614	390	586	729	1,095	0	0	0	0	24	50	1	2	23	48
431	967	1,442	967	1,433	0	9	397	606	390	578	1,420	2,105	0	0	0	0	42	55	6	8	36	47
432	1,631	2,428	1,623	2,428	8	0	665	1,025	654	978	1,831	2,738	2,936	3,554	0	0	694	1,020	10	16	684	1,004
433	561	2,018	561	2,018	0	0	230	852	226	813	499	1,795	0	0	0	0	49	230	26	91	23	139
434	2,816	3,251	2,806	3,235	10	16	1,150	1,367	1,131	1,304	3,195	3,684	0	0	0	0	88	377	15	36	73	341
435	374	558	374	558	0	0	153	237	151	226	352	527	517	651	0	0	*	158	*	3	*	155
436	556	829	556	822	0	7	228	347	224	331	680	1,005	0	0	0	0	*	7	*	0	*	7
437	139	800	139	800	0	0	57	338	56	322	146	840	0	0	0	0	35	35	25	28	10	7
438	1,380	2,056	1,374	2,049	6	7	563	866	554	826	1,511	2,253	0	0	0	0	84	195	5	14	79	181
439	1,046	1,557	1,042	1,545	4	12	427	653	420	623	1,230	1,825	682	825	0	0	227	550	74	169	153	381
440	89	133	89	128	0	5	37	55	36	52	100	144	0	0	0	0	51	77	29	31	22	46
441	179	266	179	266	0	0	73	112	72	107	151	224	0	0	0	0	*	164	*	0	*	164
442	45	67	45	67	0	0	18	28	18	27	36	54	0	0	0	0	0	0	0	0	0	0
443	45	67	45	67	0	0	18	28	18	27	60	90	0	0	0	0	*	3	*	3	*	0
444	551	817	537	817	14	0	220	346	217	330	687	1,045	0	0	0	0	25	85	19	60	6	25
Total	335,283	422,954	328,396	418,846	6,887	4,108	135,628	177,175	132,421	168,992	279,241	356,989	57,860	74,880	11,490	12,378	191,240	246,718	45,877	53,576	145,363	193,142

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# New Kent County Map



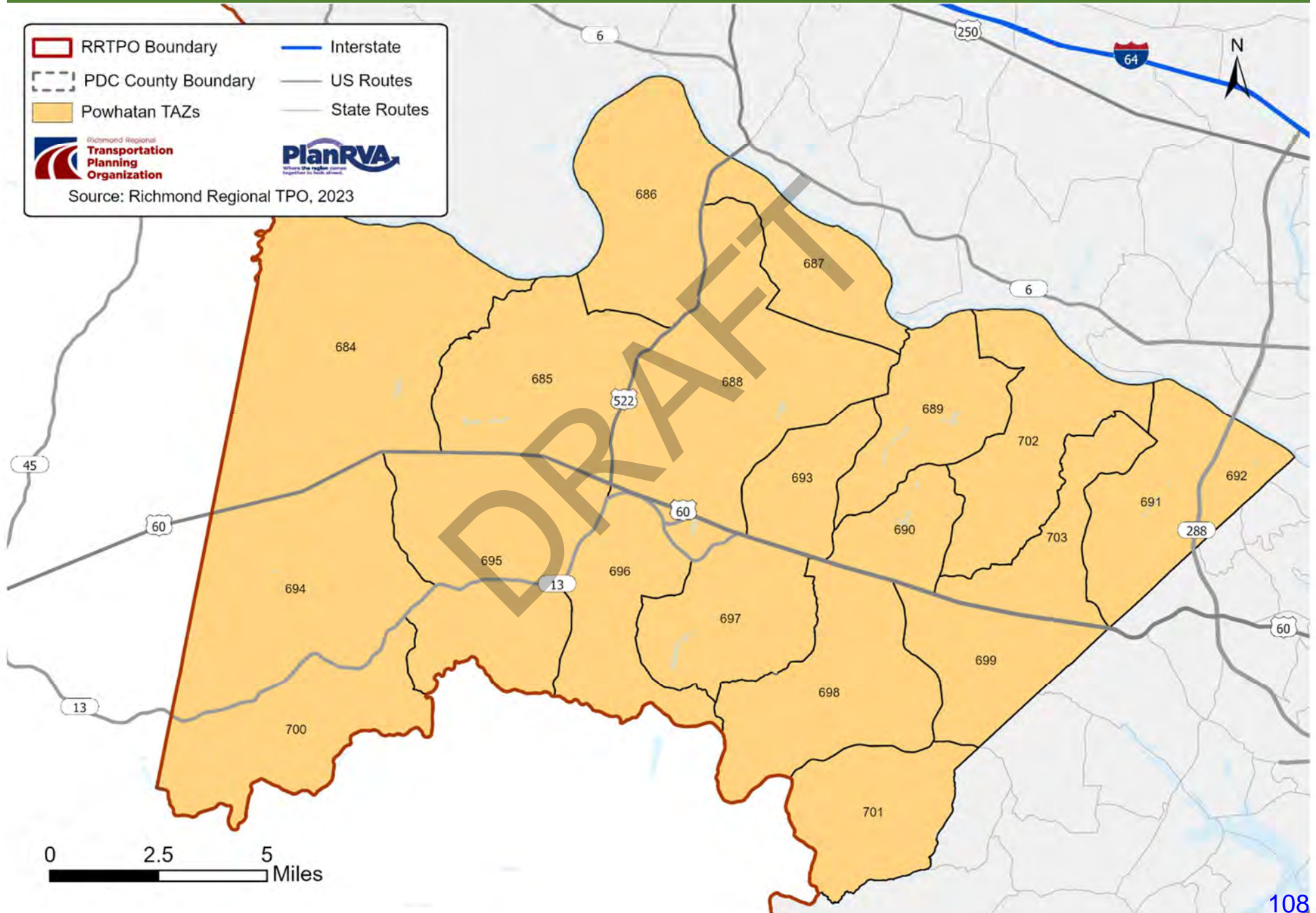
# New Kent County

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
			Housing Units																			
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
490	1,420	2,402	1,393	2,393	27	9	564	976	538	924	1,525	2,619	0	0	0	0	38	51	1	1	37	50
491	765	1,263	679	1,256	86	7	274	511	262	484	662	1,223	2,627	4,805	0	0	*	361	*	14	*	347
492	925	1,573	925	1,573	0	0	374	641	357	607	925	1,573	0	0	0	0	497	524	3	4	494	520
493	1,114	1,893	1,114	1,893	0	0	451	771	430	730	1,233	2,093	0	0	0	0	102	132	18	14	84	118
494	1,414	2,403	1,414	2,403	0	0	572	980	546	928	1,616	2,747	0	0	0	0	60	80	2	1	58	79
495	75	127	75	127	0	0	30	53	29	50	80	138	0	0	0	0	83	101	35	33	48	68
496	1,704	2,896	1,704	2,896	0	0	689	1,180	658	1,118	1,717	2,917	709	1,297	0	0	305	462	130	90	175	372
497	611	1,039	611	1,039	0	0	247	424	236	402	586	998	0	0	0	0	*	73	*	0	*	73
498	824	1,401	824	1,401	0	0	333	571	318	541	955	1,625	0	0	100	310	678	1,054	47	37	631	1,017
499	484	823	484	823	0	0	196	336	187	318	500	850	0	0	0	0	110	145	7	8	103	137
500	1,968	3,191	1,474	2,647	494	544	596	1,079	569	1,022	1,488	2,673	0	0	0	0	288	369	60	41	228	328
501	2,295	3,901	2,295	3,901	0	0	928	1,590	886	1,506	2,734	4,647	0	0	0	0	472	655	300	288	172	367
502	1,458	2,478	1,458	2,478	0	0	590	1,010	563	957	1,350	2,295	0	0	0	0	56	74	4	6	52	68
503	686	1,166	686	1,157	0	9	278	472	265	447	668	1,127	0	0	0	0	137	1,217	68	574	69	643
504	225	383	225	383	0	0	91	156	87	148	275	468	0	0	0	0	180	228	46	34	134	194
505	78	132	78	132	0	0	31	54	30	51	77	131	0	0	0	0	57	63	47	49	10	14
506	1,792	3,046	1,792	3,043	0	3	725	1,242	692	1,176	1,866	3,171	0	0	0	0	194	233	93	72	101	161
507	764	1,298	764	1,298	0	0	309	529	295	501	721	1,224	0	0	0	0	68	91	0	0	68	91
508	919	1,562	919	1,562	0	0	372	638	355	604	1,005	1,710	0	0	0	0	126	169	0	0	126	169
509	1,826	3,104	1,826	3,104	0	0	739	1,265	705	1,198	1,885	3,203	0	0	0	0	175	217	60	70	115	147
Total	21,347	36,081	20,740	35,509	607	572	8,389	14,478	8,008	13,712	21,868	37,432	3,336	6,102	100	310	3,956	6,299	948	1,336	3,008	4,963

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# Powhatan County Map

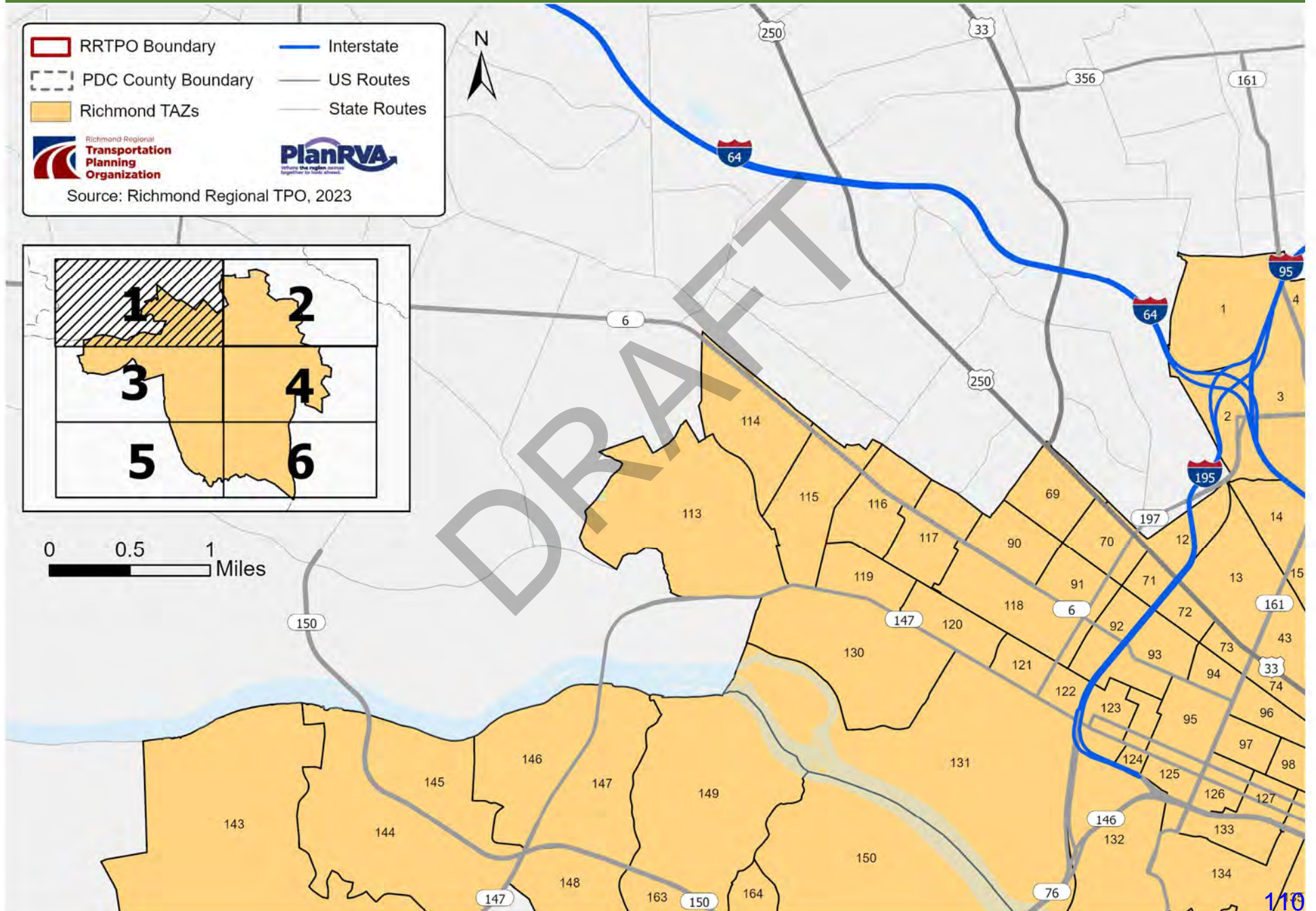


# Powhatan County

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050
684	1,230	1,673	1,230	1,673	0	0	499	703	473	643	1,323	1,798	0	0	0	0	38	47	7	6	31	41
685	1,555	2,102	1,555	2,102	0	0	631	884	598	808	1,695	2,290	924	1,201	0	0	290	367	3	4	287	363
686	460	604	460	577	0	27	187	243	177	222	470	589	0	0	0	0	*	117	*	9	*	108
687	2,385	2,436	416	1,428	1,969	1,008	169	602	160	550	492	1,691	0	0	0	0	7	9	0	0	7	9
688	2,647	3,798	2,647	3,798	0	0	1,075	1,597	1,018	1,460	3,076	4,412	338	777	0	0	776	944	349	424	427	520
689	1,607	2,111	1,607	2,111	0	0	652	888	618	812	1,758	2,310	0	0	0	0	117	143	51	57	66	86
690	1,079	1,417	1,079	1,417	0	0	438	596	415	545	1,056	1,387	0	0	0	0	249	298	160	181	89	117
691	676	1,088	676	1,088	0	0	274	458	260	419	747	1,204	0	0	0	0	*	56	*	1	*	55
692	619	1,337	619	1,337	0	0	251	562	238	514	614	1,326	0	0	0	0	349	519	141	187	208	332
693	2,047	2,688	2,044	2,688	3	0	830	1,131	786	1,034	2,226	2,928	0	0	0	0	168	211	16	15	152	196
694	1,035	1,716	1,035	1,716	0	0	420	722	398	660	1,127	1,869	0	0	0	0	18	23	0	0	18	23
695	1,188	1,561	1,188	1,561	0	0	483	656	457	600	1,226	1,610	0	0	0	0	103	127	33	35	70	92
696	1,720	2,466	1,695	2,433	25	33	688	1,024	652	936	1,644	2,360	1,219	1,584	0	0	919	1,145	172	245	747	900
697	2,075	2,726	2,075	2,726	0	0	842	1,146	798	1,048	2,375	3,119	0	0	0	0	98	123	10	10	88	113
698	2,584	3,395	2,584	3,395	0	0	1,049	1,429	994	1,306	2,914	3,829	0	0	0	0	211	266	14	12	197	254
699	1,698	2,373	1,698	2,371	0	2	689	998	653	912	1,844	2,575	0	0	0	0	1,141	1,430	140	137	1,001	1,293
700	650	854	650	854	0	0	264	360	250	329	638	840	0	0	0	0	25	31	8	9	17	22
701	1,269	1,668	1,269	1,663	0	5	515	700	488	640	1,433	1,879	0	0	0	0	*	187	*	0	*	187
702	1,843	2,538	1,843	2,538	0	0	749	1,068	709	976	2,015	2,774	0	0	0	0	63	79	2	3	61	76
703	780	1,025	780	1,025	0	0	317	431	300	394	893	1,173	2,154	2,800	0	0	1,235	1,582	466	551	769	1,031
Total	29,147	39,576	27,150	38,501	1,997	1,075	11,022	16,198	10,442	14,808	29,566	41,963	4,635	6,362	0	0	6,092	7,704	1,577	1,886	4,515	5,818

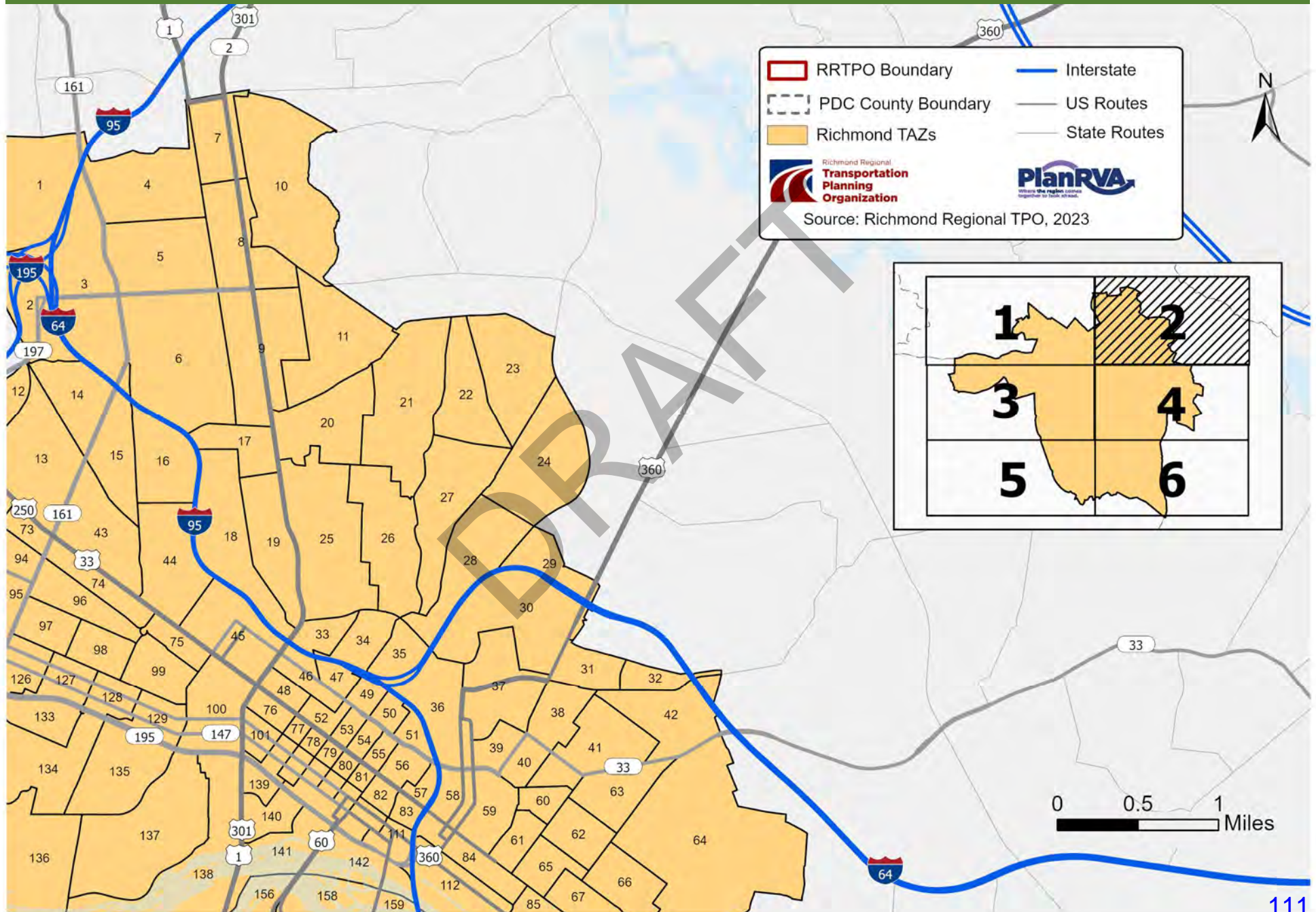
\*2017 Employment Data is redacted at the TAZ level when an employer made up at least 80% of employment or there were 3 or less employers. This is required by PlanRVA and Virginia Employment Commission (VEC) data sharing confidentiality agreement.

# City of Richmond Map 1



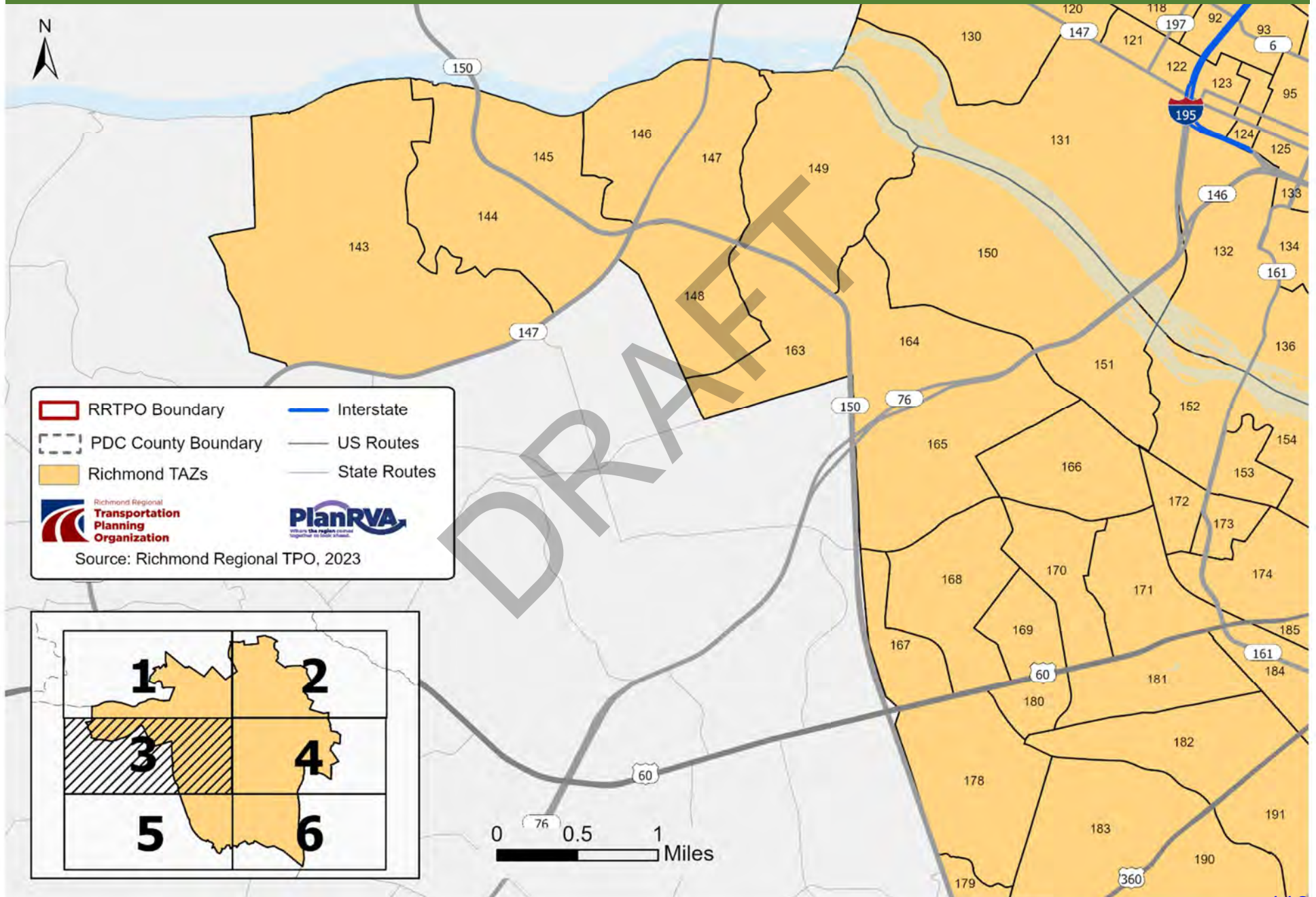


# City of Richmond Map 2



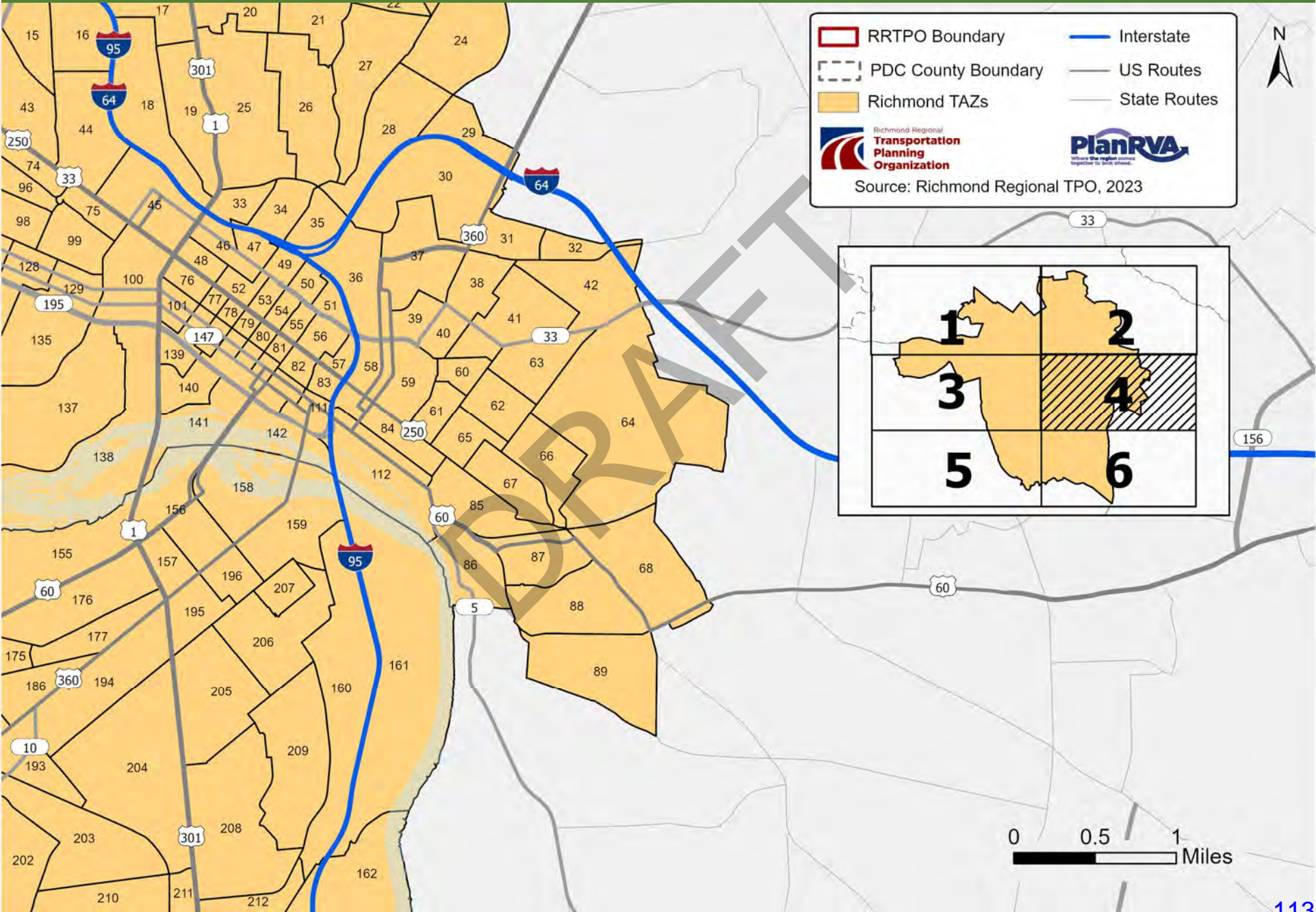


# City of Richmond Map 3



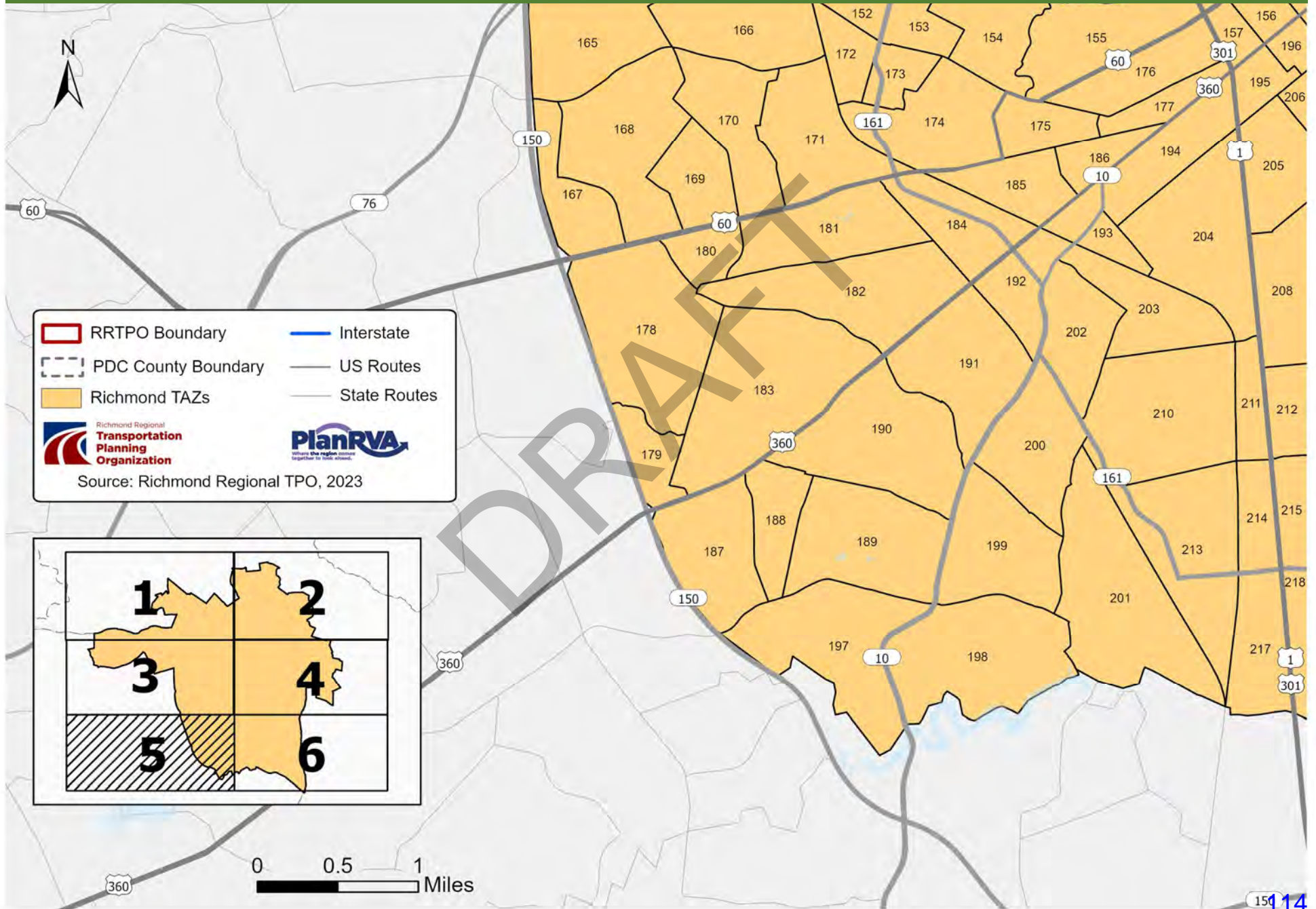


# City of Richmond Map 4

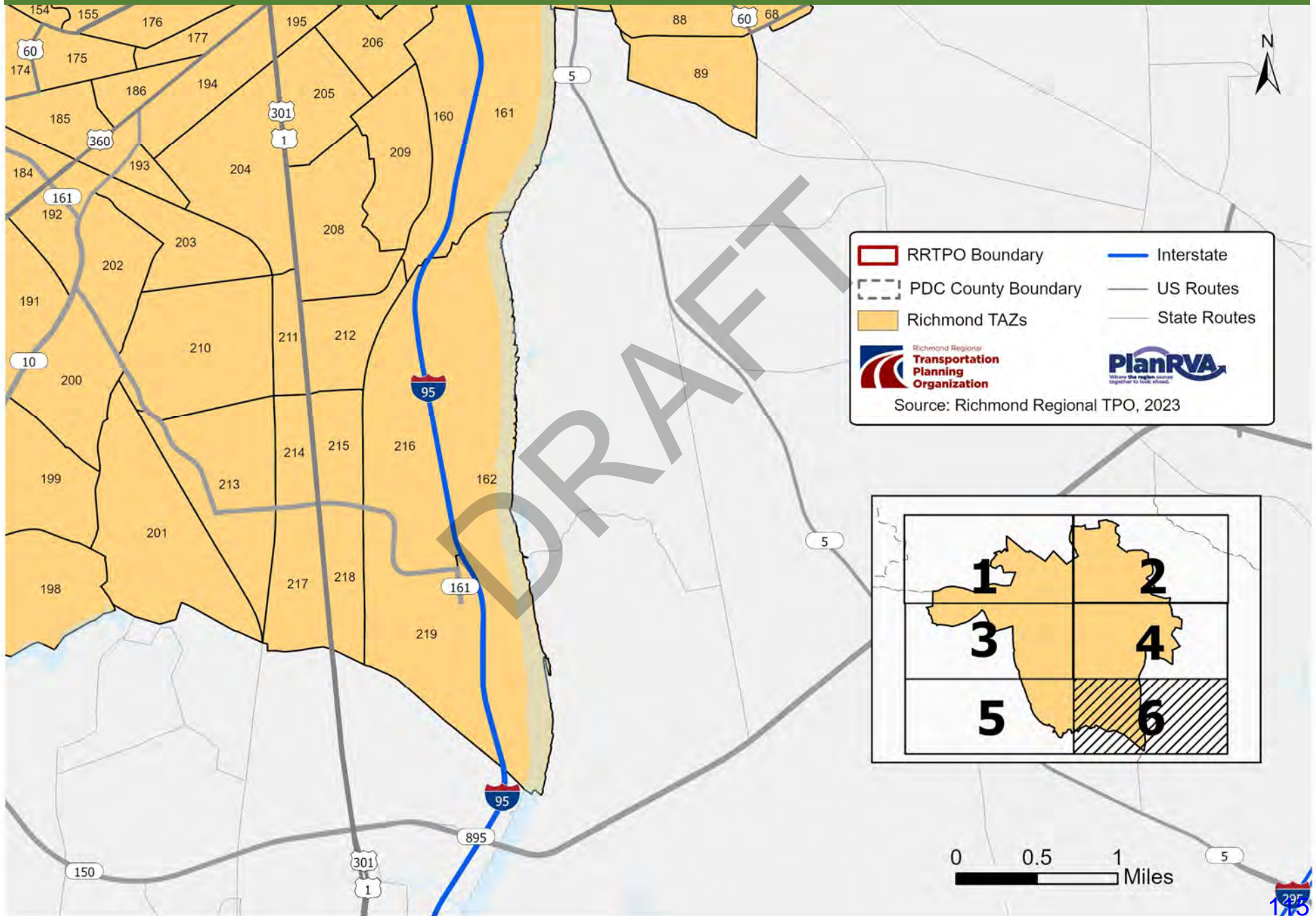




# City of Richmond Map 5



# City of Richmond Map 6





# City of Richmond 1

TAZ	Population						Housing						Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households		Grade K-12				Colleges		Total		Retail		Non-Retail			
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050		
1	10	16	10	16	0	0	5	8	4	7	0	0	0	0	0	0	66	91	0	0	66	91		
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,074	1,084	35	32	1,039	1,052		
3	3,020	3,211	2,774	3,127	246	84	1,332	1,450	1,176	1,326	1,023	1,153	0	0	0	0	648	653	163	113	485	540		
4	962	1,028	962	1,028	0	0	462	477	408	436	1,078	1,152	153	357	0	0	705	712	14	9	691	703		
5	1,670	1,786	1,670	1,786	0	0	802	828	708	757	1,242	1,328	649	864	0	0	255	256	158	125	97	131		
6	1,516	1,970	1,388	1,818	128	152	666	842	588	770	887	1,162	0	0	87	150	390	398	13	8	377	390		
7	1,279	1,367	1,279	1,367	0	0	614	634	542	580	639	684	0	0	0	0	161	161	135	132	26	29		
8	1,772	1,892	1,745	1,892	27	0	838	877	740	802	677	734	314	418	0	0	187	189	0	0	187	189		
9	2,267	2,300	2,060	2,187	207	113	989	1,014	873	927	1,027	1,091	165	385	0	0	139	140	43	33	96	107		
10	1,277	1,448	1,277	1,448	0	0	613	672	541	614	753	855	1,087	1,447	0	0	291	293	50	26	241	267		
11	1,510	1,550	1,510	1,549	0	1	725	719	640	657	1,038	1,066	0	0	0	0	*	2	*	1	*	1		
12	438	976	416	958	22	18	237	563	224	515	118	271	113	263	0	0	857	872	21	18	836	854		
13	1,819	6,944	1,815	6,942	4	2	1,015	4,012	959	3,668	728	2,784	0	0	0	0	3,111	3,500	759	820	2,352	2,680		
14	0	888	0	882	0	6	0	459	0	420	0	0	0	0	0	0	1,485	1,524	74	76	1,411	1,448		
15	0	4,530	0	4,511	0	19	0	3,289	0	3,007	0	4,185	0	0	0	0	882	1,222	28	30	854	1,192		
16	71	288	0	288	71	0	0	150	0	137	0	0	0	0	0	0	2,155	2,235	243	302	1,912	1,933		
17	402	427	356	426	46	1	171	197	151	180	237	283	0	0	0	0	894	902	45	27	849	875		
18	1,130	1,640	448	904	682	736	215	419	190	383	257	518	76	177	1,662	1,662	1,466	1,480	89	71	1,377	1,409		
19	691	961	592	961	99	0	281	441	248	403	293	476	0	0	0	0	707	713	127	144	580	569		
20	1,649	1,768	1,579	1,753	70	15	758	813	669	743	1,225	1,361	424	664	0	0	114	120	32	20	82	100		
21	2,338	2,389	2,334	2,385	4	4	1,120	1,106	989	1,011	1,588	1,623	258	365	0	0	147	148	41	27	106	121		
22	1,457	1,537	1,457	1,537	0	0	700	713	618	652	923	974	0	0	0	0	129	130	10	6	119	124		
23	1,768	1,768	1,760	1,768	8	0	845	820	746	750	1,157	1,163	0	0	0	0	63	63	42	42	21	21		
24	1,548	1,615	1,429	1,563	119	52	687	726	607	664	864	945	90	210	0	0	196	266	14	15	182	251		
25	2,008	2,234	2,002	2,234	6	0	953	1,026	841	938	987	1,101	0	0	0	0	538	670	192	225	346	445		
26	1,541	1,526	1,541	1,526	0	0	739	708	653	647	1,000	991	0	0	0	0	76	77	0	0	76	77		
27	1,169	1,073	1,169	1,073	0	0	548	486	484	444	549	504	367	489	0	0	*	92	*	0	*	92		
28	1,279	1,242	1,279	1,242	0	0	614	576	542	527	746	725	0	0	0	0	60	61	4	3	56	58		
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	420	423	71	77	349	346		
30	1,363	1,489	1,363	1,489	0	0	655	690	578	631	497	543	0	0	0	0	66	87	11	14	55	73		
31	774	829	770	829	4	0	370	385	327	352	366	394	0	0	0	0	15	15	14	13	1	2		
32	846	1,143	846	1,143	0	0	406	528	358	483	253	341	472	628	0	0	*	36	*	0	*	36		
33	830	957	829	957	1	0	398	443	351	405	186	215	0	0	0	0	35	100	5	19	30	81		
34	1,294	1,350	1,196	1,350	98	0	574	626	507	572	267	301	311	414	0	0	109	149	4	3	105	146		
35	433	500	433	500	0	0	208	232	184	212	43	50	0	0	0	0	*	152	*	0	*	152		
36	23	383	0	359	23	24	0	187	0	171	0	0	0	0	0	0	145	177	62	70	83	107		
37	3,206	3,326	1,730	2,589	1,476	737	830	1,200	733	1,097	544	814	0	0	0	0	170	170	122	101	48	69		
38	980	1,047	980	1,047	0	0	471	487	416	445	365	390	0	0	0	0	*	6	*	0	*	6		
39	100	107	100	107	0	0	48	49	42	45	23	25	611	813	0	0	166	168	0	0	166	168		
40	394	421	394	421	0	0	189	196	167	179	158	169	0	0	0	0	*	7	*	7	*	0		

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# City of Richmond 2

TAZ	Population						Housing						Automobiles		School Enrollment						Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households		Grade K-12				Colleges		Total		Retail		Non-Retail					
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050				
41	1,310	1,409	1,310	1,407	0	2	629	652	555	596	806	866	0	0	0	0	111	212	42	56	69	156				
42	1,554	1,661	1,554	1,661	0	0	747	772	660	706	608	650	393	523	0	0	154	155	11	6	143	149				
43	496	1,759	496	1,758	0	1	278	1,021	263	933	202	717	0	0	0	0	2,797	2,986	360	638	2,437	2,348				
44	511	1,244	511	1,242	0	2	291	732	275	669	286	696	0	0	0	0	1,261	1,350	191	186	1,070	1,164				
45	3,155	3,511	2,603	2,584	552	927	1,351	1,387	1,277	1,268	680	675	484	644	0	0	498	500	318	277	180	223				
46	489	709	489	709	0	0	344	517	326	473	279	405	983	1308	0	0	138	139	5	3	133	136				
47	360	740	349	740	11	0	216	476	205	435	163	346	0	0	0	0	24	55	14	26	10	29				
48	624	836	624	826	0	10	438	601	415	549	307	406	0	0	0	0	707	755	112	112	595	643				
49	29	260	29	259	0	1	15	136	14	124	10	89	0	0	0	0	528	740	0	0	528	740				
50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	919	984	30	26	889	958				
51	208	0	0	0	208	0	0	0	0	0	0	0	0	0	0	0	150	151	8	6	142	145				
52	321	1,137	321	1,137	0	0	221	808	209	739	141	499	0	0	0	0	400	425	213	265	187	160				
53	58	68	58	68	0	0	37	45	35	41	12	14	0	0	0	0	*	604	*	49	*	555				
54	6	480	0	471	6	9	0	343	0	314	0	437	0	0	0	0	2,368	6,889	312	1,514	2,056	5,375				
55	55	1,170	0	1,170	55	0	0	608	0	556	0	0	0	0	0	0	962	5,471	41	444	921	5,027				
56	0	1,229	0	1,209	0	20	0	629	0	575	0	0	0	0	4,148	4,148	12,877	13,498	169	133	12,708	13,365				
57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,767	1,783	203	130	1,564	1,653				
58	222	398	222	398	0	0	156	290	148	265	191	342	0	0	0	0	164	300	14	25	150	275				
59	1,610	1,948	1,610	1,948	0	0	1,125	1,410	1,065	1,289	742	898	139	324	0	0	126	127	56	50	70	77				
60	636	675	632	675	4	0	307	316	271	289	191	204	0	0	0	0	37	39	31	30	6	9				
61	584	741	584	741	0	0	394	517	373	473	476	604	0	0	0	0	118	124	90	96	28	28				
62	669	715	669	715	0	0	324	334	286	305	427	455	923	1228	0	0	241	243	4	2	237	241				
63	924	715	924	710	0	5	451	335	398	306	519	399	0	0	0	0	*	1,133	*	26	*	1,107				
64	2,186	2,597	2,186	2,597	0	0	1,049	1,203	926	1,100	1,141	1,355	0	0	0	0	14	14	6	6	8	8				
65	859	1,006	859	944	0	62	598	680	566	622	692	760	0	0	0	0	85	85	66	67	19	18				
66	1,343	1,427	1,223	1,371	120	56	587	634	518	580	653	731	367	488	0	0	*	73	*	2	*	71				
67	1,211	1,274	1,211	1,274	0	0	585	595	517	544	840	884	419	558	0	0	100	104	27	18	73	86				
68	1,539	1,571	1,533	1,565	6	6	736	726	650	664	945	965	0	0	0	0	56	56	28	26	28	30				
69	777	1,066	777	1,066	0	0	395	568	378	519	503	691	0	0	0	0	931	938	414	419	517	519				
70	566	605	566	605	0	0	288	323	276	295	436	466	734	977	0	0	795	802	106	73	689	729				
71	289	785	289	785	0	0	153	433	146	396	113	306	0	0	0	0	*	1,018	*	92	*	926				
72	595	701	595	701	0	0	339	412	320	377	338	398	0	0	0	0	587	592	61	64	526	528				
73	699	747	699	747	0	0	398	440	376	402	240	257	0	0	0	0	111	112	26	21	85	91				
74	1,757	1,799	1,738	1,755	19	44	990	1,034	936	945	591	597	80	186	0	0	678	681	339	323	339	358				
75	2,699	3,026	2,204	2,582	495	444	1,256	1,522	1,187	1,391	352	412	0	0	0	0	225	230	165	161	60	69				
76	1,448	1,845	1,335	1,842	113	3	937	1,339	887	1,224	295	407	90	210	0	0	756	868	492	498	264	370				
77	314	669	263	615	51	54	185	447	175	409	61	143	0	0	0	0	575	581	214	178	361	403				
78	572	589	572	589	0	0	438	467	415	427	160	165	0	0	0	0	231	300	84	104	147	196				
79	161	172	161	168	0	4	118	128	112	117	49	51	0	0	0	0	563	571	181	265	382	306				
80	401	534	401	528	0	6	282	384	267	351	189	248	0	0	0	0	346	380	202	195	144	185				

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# City of Richmond 3

TAZ	Population							Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households		Grade K-12			Colleges		Total		Retail		Non-Retail			
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
81	167	240	1	190	166	50	1	208	1	190	0	0	0	0	0	0	5,498	5,552	70	77	5,428	5,475	
82	1	6	1	6	0	0	1	7	1	6	1	6	0	0	0	0	1,554	1,569	13	25	1,541	1,544	
83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,584	2,609	105	111	2,479	2,498	
84	1,119	1,623	1,108	1,604	11	19	786	1,178	744	1,077	681	986	280	373	0	0	489	520	163	144	326	376	
85	583	623	583	623	0	0	280	289	247	264	390	417	0	0	0	0	29	29	21	21	8	8	
86	2	878	2	878	0	0	1	384	1	351	2	702	0	0	0	0	271	334	127	183	144	151	
87	250	276	250	276	0	0	120	128	106	117	207	228	0	0	0	0	0	0	0	0	0	0	
88	1,020	1,451	1,009	1,404	11	47	480	645	424	590	808	1,124	0	0	0	0	21	28	3	3	18	25	
89	1,433	1,500	1,433	1,500	0	0	688	696	608	636	1,001	1,047	0	0	0	0	177	179	6	5	171	174	
90	851	973	851	973	0	0	433	517	414	473	592	676	0	0	0	0	8	8	3	3	5	5	
91	647	866	647	866	0	0	329	462	315	422	622	833	0	0	0	0	*	79	*	68	*	11	
92	1,213	1,250	1,213	1,250	0	0	617	665	590	608	684	705	120	280	0	0	104	105	39	33	65	72	
93	2,154	2,199	2,117	2,181	37	18	1,199	1,278	1,133	1,168	1,239	1,277	484	644	0	0	189	191	40	26	149	165	
94	1,375	1,412	1,375	1,412	0	0	783	831	740	760	697	716	0	0	0	0	200	200	155	156	45	44	
95	1,704	1,784	1,704	1,784	0	0	971	1,051	918	961	1,114	1,166	670	1142	0	0	959	1,067	126	110	833	957	
96	1,801	1,850	1,801	1,850	0	0	1,026	1,089	970	996	959	985	0	0	0	0	281	282	194	187	87	95	
97	1,467	1,500	1,448	1,500	19	0	825	884	780	808	824	854	511	680	0	0	199	200	79	55	120	145	
98	1,212	1,330	1,208	1,330	4	0	688	782	650	715	919	1,011	0	0	0	0	128	128	79	71	49	57	
99	2,073	2,231	2,073	2,231	0	0	1,180	1,313	1,115	1,200	1,155	1,243	50	117	0	0	411	414	113	85	298	329	
100	6,081	6,500	1,454	2,329	4,627	4,171	810	1,340	765	1,225	246	394	0	0	26,888	26,888	*	12,299	*	571	*	11,728	
101	726	751	352	725	374	26	248	528	235	483	82	169	0	0	0	0	511	525	448	463	63	62	
102	870	896	850	883	20	13	598	643	566	588	186	193	0	0	0	0	502	510	29	25	473	485	
103	108	147	108	147	0	0	82	116	78	106	49	67	0	0	0	0	480	490	93	100	387	390	
104	180	192	180	191	0	1	138	152	131	139	51	54	0	0	0	0	752	765	60	59	692	706	
105	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1,195	3,132	139	304	1,056	2,828	
106	150	831	38	831	112	0	28	649	27	593	31	681	0	0	0	0	1,061	1,123	109	155	952	968	
107	461	875	461	875	0	0	351	689	332	630	179	340	0	0	0	0	1,782	1,991	279	418	1,503	1,573	
108	118	305	118	305	0	0	83	224	79	205	46	119	0	0	0	0	3,839	3,874	344	442	3,495	3,432	
109	0	416	0	416	0	0	0	217	0	198	0	0	0	0	0	0	3,845	3,894	300	332	3,545	3,562	
110	113	121	113	121	0	0	81	91	77	83	44	47	0	0	0	0	1,123	1,155	363	399	760	756	
111	456	488	456	488	0	0	337	374	319	342	147	158	0	0	4,938	4,938	1,978	2,056	240	393	1,738	1,663	
112	3,025	3,541	3,025	3,533	0	8	2,152	2,603	2,038	2,380	1,531	1,788	0	0	0	0	1,782	1,802	649	654	1,133	1,148	
113	3,203	3,235	454	1,155	2,749	2,080	231	614	221	561	578	1,467	0	0	4,023	4,023	2,412	2,436	61	33	2,351	2,403	
114	1,287	1,375	1,287	1,360	0	15	654	723	626	661	957	1,011	0	0	0	0	689	693	335	283	354	410	
115	808	963	808	963	0	0	412	513	394	469	611	727	2,605	3933	0	0	769	771	520	454	249	317	
116	982	1,108	982	1,108	0	0	497	587	476	537	824	930	0	0	0	0	839	843	407	373	432	470	
117	726	847	726	847	0	0	369	451	353	412	621	725	0	0	0	0	77	78	16	13	61	65	
118	1,685	1,769	1,685	1,769	0	0	857	942	820	861	1,044	1,096	0	0	0	0	54	54	14	14	40	40	
119	486	686	486	686	0	0	247	364	236	333	543	766	0	0	0	0	156	162	125	129	31	33	
120	686	744	686	744	0	0	349	396	334	362	561	608	501	667	0	0	88	89	14	10	74	79	

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# City of Richmond 4

TAZ	Population								Housing						Automobiles		School Enrollment						Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households		Grade K-12		Colleges				Total		Retail		Non-Retail							
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050						
121	497	531	497	531	0	0	253	282	242	258	279	297	0	0	0	0	39	39	0	0	39	39						
122	623	650	623	650	0	0	317	346	303	316	308	321	0	0	0	0	97	98	0	0	97	98						
123	646	690	646	690	0	0	368	406	348	371	447	477	0	0	0	0	1,379	1,515	1,120	1,160	259	355						
124	904	925	904	925	0	0	515	546	487	499	568	582	0	0	0	0	480	482	238	248	242	234						
125	985	994	980	994	5	0	558	585	527	535	498	506	0	0	0	0	1,002	1,003	871	870	131	133						
126	2,010	2,100	1,997	2,100	13	0	1,049	1,141	991	1,043	678	714	0	0	0	0	745	753	315	337	430	416						
127	1,082	1,141	1,082	1,141	0	0	609	665	576	608	565	596	0	0	0	0	276	278	186	202	90	76						
128	685	787	685	787	0	0	376	446	355	408	314	361	417	555	0	0	595	598	320	301	275	297						
129	736	844	736	844	0	0	404	480	382	439	218	251	0	0	0	0	610	612	429	443	181	169						
130	864	1,084	864	1,084	0	0	438	574	419	525	880	1,103	0	0	0	0	29	29	4	3	25	26						
131	1,081	1,259	1,081	1,259	0	0	549	668	525	611	1,246	1,450	0	0	0	0	117	118	27	25	90	93						
132	1,150	1,350	1,150	1,348	0	2	655	794	619	726	1,212	1,422	264	351	0	0	*	133	*	3	*	130						
133	930	1,100	930	1,057	0	43	529	621	500	568	529	601	0	0	0	0	61	65	15	14	46	51						
134	1,125	1,224	995	1,101	130	123	567	649	536	593	720	797	44	59	0	0	*	289	*	0	*	289						
135	1,723	1,934	1,723	1,934	0	0	976	1,132	922	1,035	1,100	1,235	0	0	0	0	11	11	6	6	5	5						
136	860	932	855	925	5	7	486	543	459	496	632	683	0	0	0	0	*	98	*	0	*	98						
137	65	76	65	76	0	0	35	43	33	39	21	25	0	0	0	0	94	95	17	9	77	86						
138	1,078	1,259	1,074	1,259	4	0	600	727	567	665	619	726	265	437	0	0	534	539	28	30	506	509						
139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	202	*	0	*	202						
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	834	898	11	18	823	880						
141	20	20	0	10	20	10	0	5	0	5	0	0	0	0	0	0	2,706	4,733	52	139	2,654	4,594						
142	602	1,317	602	1,317	0	0	446	1,010	422	923	304	665	0	0	0	0	1,834	1,950	105	150	1,729	1,800						
143	3,183	3,565	3,172	3,517	11	48	1,613	1,873	1,544	1,712	2,956	3,278	808	1,569	0	0	810	816	165	124	645	692						
144	1,764	2,835	1,764	2,835	0	0	862	1,450	825	1,326	949	1,525	152	354	0	0	1,241	1,434	737	718	504	716						
145	186	316	186	316	0	0	95	170	91	155	238	405	0	0	0	0	1,755	2,426	1	1	1,754	2,425						
146	637	681	637	681	0	0	324	363	310	332	633	678	0	0	0	0	28	28	11	10	17	18						
147	617	660	617	660	0	0	313	351	300	321	620	663	0	0	0	0	*	31	*	0	*	31						
148	1,088	1,162	1,072	1,104	16	58	545	588	522	538	806	831	0	0	0	0	179	181	0	0	179	181						
149	1,403	1,499	1,398	1,489	5	10	711	792	680	724	1,413	1,504	443	590	0	0	61	62	0	0	61	62						
150	1,591	1,653	1,585	1,647	6	6	806	876	771	801	1,392	1,446	0	0	0	0	713	895	238	271	475	624						
151	747	798	741	797	6	1	349	378	322	346	689	740	0	0	0	0	27	27	0	0	27	27						
152	930	994	928	994	2	0	437	471	403	431	794	849	0	0	0	0	116	116	82	80	34	36						
153	903	952	714	817	189	135	336	388	310	355	533	610	0	0	0	0	233	235	21	14	212	221						
154	682	729	682	729	0	0	321	347	296	317	573	614	91	212	0	0	52	52	5	3	47	49						
155	2,071	2,214	2,071	2,202	0	12	982	1,053	906	963	1,242	1,320	327	435	0	0	140	141	13	9	127	132						
156	1,646	2,205	1,604	2,187	42	18	920	1,299	871	1,188	755	1,030	26	61	0	0	3,242	4,466	51	95	3,191	4,371						
157	480	806	480	806	0	0	225	383	208	350	256	431	0	0	0	0	257	320	50	42	207	278						
158	1,144	5,605	1,137	5,600	7	5	629	3,211	596	2,936	282	1,389	0	0	0	0	699	1,296	48	98	651	1,198						
159	2,085	3,372	2,085	3,372	0	0	1,251	2,097	1,185	1,917	741	1,199	0	0	0	0	621	843	90	123	531	720						
160	2	2	2	2	0	0	1	1	1	1	1	1	0	0	0	0	567	572	46	52	521	520						

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# City of Richmond 5

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050		
161	2	2	0	2	2	0	0	1	0	1	0	0	0	0	0	0	58	80	0	0	58	80
162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	638	857	65	106	573	751
163	2,031	2,159	1,852	2,019	179	140	942	1,075	901	983	1,209	1,319	1,349	1796	0	0	1,050	1,053	704	565	346	488
164	639	700	639	700	0	0	325	373	311	341	517	567	0	0	0	0	911	1,041	570	594	341	447
165	2,467	2,849	2,467	2,836	0	13	1,162	1,349	1,073	1,233	1,593	1,831	755	1005	0	0	132	180	7	6	125	174
166	3,102	3,315	3,093	3,306	9	9	1,463	1,578	1,350	1,443	2,008	2,146	0	0	0	0	189	191	27	39	162	152
167	1,018	1,575	852	1,381	166	194	401	655	370	599	208	337	0	0	0	0	3,236	4,411	165	167	3,071	4,244
168	4,892	5,215	4,892	5,215	0	0	2,303	2,479	2,126	2,266	1,745	1,860	82	191	0	0	577	738	157	159	420	579
169	631	763	631	763	0	0	297	362	274	331	602	727	0	0	0	0	200	202	10	15	190	187
170	1,721	1,800	1,721	1,800	0	0	810	855	748	782	1,173	1,226	1,585	2639	0	0	1,209	1,651	55	76	1,154	1,575
171	1,209	1,339	1,209	1,339	0	0	569	636	525	581	1,096	1,213	0	0	0	0	144	145	50	56	94	89
172	520	664	520	664	0	0	245	315	226	288	384	489	446	594	0	0	106	107	32	19	74	88
173	546	583	546	583	0	0	257	277	237	253	413	441	130	303	0	0	114	114	67	51	47	63
174	3,469	3,700	3,469	3,700	0	0	1,633	1,758	1,507	1,607	1,554	1,657	1,180	1571	0	0	*	229	*	2	*	227
175	1,186	1,266	1,168	1,266	18	0	550	602	508	550	816	883	0	0	0	0	30	30	18	15	12	15
176	1,192	1,383	1,182	1,376	10	7	557	655	514	599	818	953	0	0	0	0	112	113	34	28	78	85
177	851	908	822	779	29	129	387	370	357	338	340	322	0	0	0	0	127	128	34	24	93	104
178	1,124	1,400	1,124	1,399	0	1	528	664	487	607	1,248	1,556	100	233	0	0	161	202	54	59	107	143
179	1,438	1,537	1,438	1,537	0	0	677	731	625	668	1,256	1,342	0	0	0	0	96	96	59	52	37	44
180	120	143	120	143	0	0	40	48	37	44	33	39	0	0	0	0	1,039	1,423	35	37	1,004	1,386
181	479	540	479	540	0	0	226	257	209	235	485	545	0	0	0	0	613	803	117	155	496	648
182	2,159	2,308	2,155	2,308	4	0	1,014	1,096	936	1,002	1,777	1,902	0	0	0	0	49	49	40	39	9	10
183	2,071	2,566	2,066	2,560	5	6	968	1,211	893	1,107	1,651	2,047	1,498	1994	0	0	286	340	146	146	140	194
184	147	157	146	154	1	3	69	74	64	68	147	156	0	0	0	0	1,321	1,330	373	363	948	967
185	1,502	1,855	1,502	1,855	0	0	707	882	653	806	788	973	54	126	0	0	20	50	15	32	5	18
186	652	697	652	693	0	4	307	328	283	300	455	482	274	365	0	0	80	81	10	5	70	76
187	1,052	1,271	1,052	1,271	0	0	495	604	457	552	981	1,185	0	0	0	0	65	68	56	59	9	9
188	1,033	1,104	1,033	1,104	0	0	486	525	449	480	687	734	0	0	0	0	9	9	0	0	9	9
189	1,427	1,664	1,427	1,664	0	0	672	791	620	723	1,236	1,441	563	749	0	0	113	146	27	20	86	126
190	2,402	2,646	2,402	2,536	0	110	1,119	1,193	1,033	1,091	2,022	2,136	120	180	0	0	100	125	34	36	66	89
191	3,777	4,288	3,759	4,288	18	0	1,756	2,022	1,621	1,849	3,308	3,773	641	853	0	0	107	142	15	11	92	131
192	765	800	765	800	0	0	360	380	332	347	682	713	0	0	0	0	196	197	57	45	139	152
193	1,113	1,133	1,113	1,133	0	0	524	539	484	493	530	540	0	0	0	0	113	114	16	15	97	99
194	594	648	578	610	16	38	272	290	251	265	364	384	0	0	0	0	395	399	29	34	366	365
195	714	750	714	750	0	0	337	357	311	326	437	458	441	587	0	0	299	325	23	15	276	310
196	653	1,175	653	1,175	0	0	309	561	285	513	335	603	0	0	0	0	*	85	*	75	*	10
197	776	999	772	986	4	13	350	452	323	413	817	1,045	0	0	0	0	28	39	0	0	28	39
198	1,251	1,347	1,245	1,339	6	8	586	637	541	582	1,266	1,362	0	0	0	0	104	105	51	46	53	59
199	1,096	1,269	1,096	1,269	0	0	515	602	475	550	1,285	1,488	1,642	2186	0	0	289	291	129	91	160	200
200	1,117	1,251	1,117	1,251	0	0	525	594	485	543	929	1,040	0	0	0	0	322	443	6	7	316	436

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# City of Richmond 6

TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	
201	2,088	2,569	2,084	2,569	4	0	976	1,215	901	1,111	2,017	2,487	0	0	0	0	34	47	0	0	34	47
202	885	1,029	644	796	241	233	303	378	280	346	339	419	0	0	0	0	3,175	3,206	93	58	3,082	3,148
203	852	911	852	911	0	0	401	432	370	395	695	742	0	0	0	0	502	504	283	258	219	246
204	4	510	4	510	0	0	2	294	2	269	3	404	0	0	0	0	638	930	22	45	616	885
205	1,927	1,967	1,927	1,960	0	7	903	926	833	847	1,188	1,208	719	957	0	0	169	170	23	14	146	156
206	565	595	406	456	159	139	191	217	176	198	77	87	0	0	0	0	385	483	20	24	365	459
207	4	120	2	120	2	0	1	66	1	60	0	0	0	0	0	0	238	240	40	41	198	199
208	2,309	2,584	2,262	2,570	47	14	1,062	1,217	980	1,113	1,436	1,631	0	0	0	0	123	160	63	75	60	85
209	1,327	1,668	1,327	1,668	0	0	625	793	577	725	492	618	0	0	0	0	680	686	97	87	583	599
210	1,124	1,200	1,124	1,196	0	4	529	568	488	519	623	663	0	0	0	0	1,090	1,507	0	0	1,090	1,507
211	231	265	231	265	0	0	109	127	101	116	144	165	0	0	0	0	351	410	43	81	308	329
212	1,009	1,212	1,009	1,212	0	0	475	575	438	526	682	819	0	0	0	0	57	79	18	27	39	52
213	478	644	475	644	3	0	223	305	206	279	503	681	0	0	0	0	861	1,189	3	3	858	1,186
214	249	359	249	359	0	0	117	171	108	156	229	331	197	262	0	0	183	250	65	69	118	181
215	903	1,096	903	1,096	0	0	425	521	392	476	590	716	0	0	0	0	32	80	26	66	6	14
216	580	633	580	633	0	0	273	301	252	275	495	540	0	0	0	0	2,601	2,626	102	177	2,499	2,449
217	716	984	716	984	0	0	337	467	311	427	768	1,054	0	0	0	0	420	500	183	255	237	245
218	489	632	489	632	0	0	230	300	212	274	355	459	0	0	0	0	186	202	144	164	42	38
219	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	428	528	167	248	261	280
Total	224,798	278,538	210,302	266,920	14,496	11,618	108,043	141,740	99,958	129,582	129,444	159,489	29,536	42,990	41,746	41,809	152,044	178,256	24,468	26,762	127,576	151,494

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## **AGENDA 7/6/23; ITEM B.-3**

### **FY 2024 Unified Planning Work Program Amendment**

#### **Richmond Regional Transportation Planning Organization**

REQUESTED ACTION: To approve two amendments to the adopted FY 2024 Unified Planning Work Program, adding detail for Work Task 7330 on pass through funding for GRTC and providing for administrative amendments to the UPWP.

BACKGROUND:

*Essential Infrastructure Plan (page 27 of 38)*

RRTPO action at its April 2023 meeting approved the adoption of the FY 2024 Unified Planning Work Program (UPWP) that had direct support in the amount of \$100,000 for GRTC in carryover 5303 transit funding. This type of support has not been undertaken by RRTPO in recent years and this amendment adds necessary detail to the UPWP to validate the use of these carryover funds.

With the partnership in supplying these funds, GRTC can augment existing staff for a temporary period and keep the project moving forward. This will keep the momentum going and get the project to a readiness point where it can be implemented. At the same time, RRTPO will undertake an internal study that looks at before/after of the installation of infrastructure and how it impacts ridership across the network. We think it will help make the case for the ability of CMAQ funds to be used for this type of improvement.

Much like a consultant invoice, GRTC will need to submit quarterly invoices to RRTPO that can be used to develop reimbursement requests to DRPT including a list of all staff whose positions are being supported with 5303 CO, hours and benefits, and a narrative of work completed as it related to the Essential Infrastructure Plan.

*UPWP Administrative Modifications (page 5 of 38)*

The purpose of this UPWP administrative modification request is to allow flexibility for minor funding shifts between subtasks.

Proposed Administrative Modifications to the UPWP include the following:

- Allow transfer of PL funding between subtasks of a broader UPWP task without RRTPO Policy Board approval.
- Funding transfers between UPWP subtasks must not substantially defund one subtask so it is unable to be completed as defined in the UPWP.

MPO staff may make administrative modifications without a public review period or RRTPO Policy Board approval. All UPWP revisions would still require review and approval from VDOT and FHWA. MPO staff must provide a justification for the transfer and any supporting documentation that helps document the transfer, including the UPWP description of task(s) affected, original budget, revised budget, and justification

for the request. Administrative Modifications will go into effect after approval by FHWA.

*DEFINITION RESOURCE*

Administrative modification - An administrative modification is a revision that does not require public review and comment, a redemonstration of fiscal constraint, a conformity determination (in nonattainment and maintenance areas), or MPO Policy Board approval. Definition language is from §450.104 Definitions. The CFR applies to LRTP and the STIP/TIP, but is being used to baseline Administrative Modifications for the UPWP.

STAFF RECOMMENDATION: Staff recommends that the RRTPO Policy Board approve the following resolution as presented:

**RESOLVED**, that the Richmond Regional Transportation Planning Organization Policy Board approves these amendments to the FY 2024 Unified Planning Work Program:

1. Revision to Work Task 7330, adding new detail regarding direct funding of GRTC Essential Infrastructure Plan
2. Inclusion of Administrative Modification language in the UPWP



## UNIFIED PLANNING WORK PROGRAM

FISCAL YEAR 2024

July 1, 2023 – June 30, 2024

Richmond Regional Transportation Planning Organization

Adopted July 6, 2023

**ACKNOWLEDGMENTS** This report was prepared by the Richmond Regional Planning District Commission (PlanRVA) staff through a cooperative process involving the City of Richmond, Counties of Charles City, Chesterfield, Goochland, Hanover, Henrico, New Kent and Powhatan, the Town of Ashland, the Virginia Department of Transportation (VDOT), the Virginia Department of Rail and Public Transportation (DRPT), the Virginia Department of Aviation, the Capital Region Airport Commission, GRTC Transit System, the Richmond Metropolitan Transportation Authority, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), PlanRVA and RideFinders, Inc., on behalf of the Richmond Regional Transportation Planning Organization (RRTPO). The contents of this work program reflect the views of the RRTPO. PlanRVA staff is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the FHWA, FTA, VDOT, DRPT or PlanRVA. This document does not constitute a standard, specification, or regulation. FHWA, FTA, VDOT, or DRPT acceptance of this document as evidence of fulfillment of the objectives of this work program does not constitute endorsement/approval of the need for any recommended improvements nor does it constitute approval of their location and design or a commitment to fund any such improvements. Additional project level environmental impact assessments and/or studies of alternatives may be necessary.

**NONDISCRIMINATION** The Richmond Regional Transportation Planning Organization (RRTPO) fully complies with Title VI of the Civil Rights Act of 1964 and related statutes and regulations in all programs and activities. The RRTPO will strive to provide reasonable accommodations and services for persons who require special assistance to participate in this public involvement opportunity. For more information on meeting accessibility, or to obtain a Title VI Complaint Form, see [www.planrva.org](http://www.planrva.org) or call the Title VI Coordinator at 804- 323-2033.

**NO DISCRIMINACIÓN** Aviso de Título VI abreviado al público: El Organización de Planeación Regional de Transporte de Richmond (RRTPO) cumple con el Título VI de la Ley de los Derechos Civiles de 1964 y con los estatutos y regulaciones relacionadas en todos los programas y actividades. RRTPO se esforzará en proveer acomodaciones razonables y servicios para personas que requieran asistencia especial para participar en esta oportunidad pública. Para más información sobre accesibilidad a la reunión o para obtener los documentos de reclamación del Título VI, entre a la página web ([www.planrva.org](http://www.planrva.org)) o llame al Coordinador del Título VI en 804-323-2033.

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# INTRODUCTION

## The Unified Planning Work Program (UPWP)

The purpose of the UPWP is to promote a unified regional approach to transportation planning in order to achieve regional goals and objectives. Additionally, the UPWP serves to document proposed expenditures of Federal, State and local transportation planning funds, and provides a management tool for RRTPO and the funding agencies in scheduling major transportation planning activities, milestones, and products.

The UPWP is required of all metropolitan planning organizations (MPOs) as a condition to receiving federal funds. RRTPO is the federally designated MPO for the Richmond region and consists of the member governments as shown in Figure 1.

The goal of the UPWP is a well-functioning process and program that meets the federal and state transportation planning requirements. This effort involves the public, interested parties, and the RRTPO in developing a multi-modal, continuing, comprehensive, and cooperative transportation planning and programming process. A requirement of Section 450.308(c) of the Metropolitan Planning regulations is that Transportation Management Area (TMA) designated MPOs shall include a discussion of the planning priorities facing the metropolitan planning area. Further discussion of these priorities is provided in the various work tasks.

The UPWP is the RRTPO's budget and work program for the upcoming fiscal year which begins on July 1, 2023 and concludes on June 30, 2024. The UPWP addresses federal/state planning and programming requirements, addresses regional transportation planning issues and needs, and includes activities required for the state and region to remain eligible for federal-aid highway and transit funds. The funding sources supporting the RRTPO program activities come from federal, state and local funds.

## PlanRVA and the RRTPO Planning Process

The FY24 UPWP continues to be organized with four core program areas: Program Management, Transportation Planning, Data and Analysis, and Financial Programs. Program Management is the policy, management and operations platform that supports the remaining three program areas. The program objectives, work elements, responsibilities, budgets, products and schedules are included within each core program area. The appendices consolidate information necessary to understanding and implementing the RRTPO program requirements.

There are work tasks that are included primarily as "project monitoring"; which means the RRTPO is a participating partner in the effort, but the designated lead role is undertaken by

another agency or organization such as the Greater Richmond Transit Company (GRTC), DRPT or VDOT. FTA requires that projects and studies receiving FTA funding be included in the UPWP; this is not a requirement shared by FHWA. All partners are provided the opportunity to incorporate project updates into the work task which those organizations or agencies lead.

The two primary funding sources supporting the work program are FHWA/PL funds and FTA Section 5303 funds. These funds are matched by state and local sources on an 80% federal (FHWA and FTA) 10% state (VDOT and DRPT), and 10% local (PlanRVA) basis. Additional funding includes FHWA/RSTP which are matched by state sources with 80% federal funding (FHWA) and 20% state funding (VDOT). The FHWA/PL funding allocations for FY24 from VDOT and the FTA 5303 funding allocations from DRPT have been received.

## **Administrative Modifications**

The purpose of UPWP administrative modifications are to allow flexibility for minor funding shifts between subtasks as work dictates during the fiscal year.

Administrative Modifications to the UPWP include the following:

- Allow transfer of PL funding between subtasks of a broader UPWP task without RRTPO Policy Board approval.
- Funding transfers between UPWP subtasks must not substantially defund one subtask so it is unable to be completed as defined in the UPWP.

MPO staff may make administrative modifications without a public review period or RRTPO Policy Board approval. All UPWP revisions would still require review and approval from VDOT and FHWA. MPO staff must provide a justification for the transfer and any supporting documentation that helps document the transfer, including the UPWP description of task(s) affected, original budget, revised budget, and justification for the request. Administrative Modifications will go into effect after approval by FHWA.

## **Work Program Priorities**

The RRTPO-approved FY24 UPWP priorities focus on fully addressing the recommendations from the August 2021 federal certification report, completing existing work tasks that span from FY23 into FY24, and advancing new initiatives. These priorities are outlined below.

### **Federal Certification Review Comments, FAST Act and Other USDOT Priorities**

The 2021 TMA Planning Certification Review highlights seventeen certification findings as a result of its coordinated efforts between FHWA, FTA, and RRTPO. Of those seventeen findings, eight are noted as commendations for exemplary performance and two have no finding due to

simple achievement of the task. There were no corrective actions noted in the review, which is a remarkable improvement over the 2017 review and is celebrated by the RRTPO Policy Board. The remaining findings are noted as recommendations below:

- Development of a periodic system performance report evaluating the condition and performance of the transportation system with respect to the performance targets, and progress achieved in meeting the performance targets.
- Update of TIP narrative indicating specific dollar amounts (or percentage of total TIP amount) utilized toward achievement of transit performance targets similar to the effort for highway investments.
- We strongly recommend that the Secretary of Transportation review the Commonwealth's current representation on the Policy Board to ensure that the Commonwealth's interests in passenger and freight rail, transportation demand management, ridesharing, and public transportation are appropriately represented. We recommend that DRPT be considered to be made a voting member moving forward.
- It is recommended that RRTPO, once guidance is released for the Bipartisan Infrastructure Bill (BIL), to reexamine the 3-C agreement (Memorandum of Understanding) on Metropolitan Transportation Planning Responsibilities for the Richmond Area to ensure it is in compliance.
- VDOT provide Section 504 training to the RRTPO to support their self-certification of Section 504.
- VDOT provide procedures and documentation to support the State's self-certification statement pursuant to 23 CFR 450.336 that the metropolitan planning process is being carried out in accordance with Section 504, ADA, The Older Americans Act, 23 USC 324, and with consideration of E.O. 12898 (EJ).
- RRTPO should continue to support a robust transit network which delivers comprehensive, equitable and convenient service, particularly in areas of greatest need, especially in light of new CVTA revenues.

### **Continuation of Existing Work Efforts**

- Develop a regional scenario planning tool that assesses the impacts of multiple future forces on growth patterns and development areas.
- Continue to develop the Regional Travel Demand Model to support transportation planning, research and analysis, including small area, sub-area, corridor and scenario planning tasks.

- Continue support of regional public transportation service that provides more frequent, accessible service including expansion of bus rapid transit to the west along the Borad Street Corridor and North-South through downtown Richmond.
- Advance the recommendations from prior year studies (BikePedRVA 2045, Regional Park and Ride Study, Transit Vision Plan Short-Range Priorities, etc.) into project applications, policies or other implementation efforts.
- Continue advancing the Fall Line with local, regional, state and national partners and evaluate opportunities for funding and amenities.
- Support the CVTA as a funding partner through data -driven analysis, cost estimating support, and prioritization and ranking tools.
- Continue to build public engagement and outreach strategies for the RRTPO and ensure compliance with Title VI, Environmental Justice and Low Literacy/Limited English Proficiency requirements.

## FY24 Priority Areas

- **Scenario Planning.** This work effort will fully develop an immersive scenario planning process for the region. This builds on intentions from the ConnectRVA 2045 plan and will include comprehensive data development, public engagement, and public-facing reporting and visualization.
- **Technical Assistance.** This work effort will support planning and technical support for member jurisdictions that need outside assistance. This work may include GIS support, planning project assistance, cost estimation, public engagement, or other needs as agreed upon.
- **Transportation investments to capitalize on regional commerce, workforce mobility and accessibility.** This work effort will include planning activities involving freight, transit, multimodal connectivity, and equity.
- **Expanding access to transit.** This work effort will include planning activities focused on further refinement of regional transit priorities and development of shovel-ready transit projects. The passage of the Infrastructure Investment and Jobs Act has opened many funding opportunities to consider. This task will be coordinated between GRTC and RRTPO leadership with guidance from DRPT.
- **Identify strategies for further integrating identified performance measures into project scoring and selection processes.** Categories of performance measures include Safety and Security, Congestion Mitigation and System Reliability, Freight Mobility, Multimodal Connectivity and Access to Employment. This work effort will include coordination with other regional partners to identify creative projects and solutions for desired transportation outcomes in the Region.
- **Expand data management and sharing capabilities (FHWA/FTA Planning Emphasis Area).** Fully incorporate data sharing and consideration into the transportation planning process, emphasizing data's value across multiple programs. Data sharing principles and data management will be elevated for a variety of issues, such as freight, bike and pedestrian planning, equity analyses, performance management, travel time reliability, connected and autonomous vehicles, mobility services, and safety.
- **Improve consideration of equity and justice in public planning processes (FHWA/FTA Planning Emphasis Area).** Actively advance racial equity and support for underserved and disadvantaged communities, including tribal governments, to help ensure public involvement in the planning process and that plans and strategies reflect various perspectives, concerns, and priorities from impacted areas. Work will consider the following:
  - Improving infrastructure for non-motorized travel, public transportation access, and increased public transportation service in underserved communities;
  - Planning for the safety of all road users, particularly those on arterials, through infrastructure improvements and advanced speed management;
  - Reducing single-occupancy vehicle travel and associated air pollution in communities near high-volume corridors;

- Working with transit providers to target demand-response service towards communities with higher concentrations of older adults and those with poor access to essential services; and
- Be a resource to providers as they consider equitable and sustainable practices while developing transit-oriented development including affordable housing strategies and consideration of environmental justice populations.
- **Tackling the Climate Crisis – Transition to a Clean Energy, Resilient Future (FHWA/FTA Planning Emphasis Area).** Identify measures to help achieve the national greenhouse gas reduction goals of 50-52 percent below 2005 levels by 2030, net-zero emissions by 2050, and increase resilience to extreme weather events and other disasters resulting from the increasing effects of climate change. This could include evaluating opportunities to reduce greenhouse gas emissions by reducing single-occupancy vehicle trips and increasing access to public transportation, and identifying transportation system vulnerabilities to climate change impacts and evaluating potential solutions.
- **Safe Streets (FHWA/FTA Planning Emphasis Area).** Be a resource to assist partner agencies plan, develop, and operate streets and networks that prioritize safety, comfort, and access to destinations for people who use the street network, including pedestrians, bicyclists, transit riders, micro-mobility users, freight delivery services, and motorists. The goal is to provide an equitable and safe transportation network for travelers of all ages and abilities, including those from marginalized communities facing historic disinvestment. This vision is not achieved through a one-size-fits-all solution – each complete street is unique and developed to best serve its community context and its primary role in the network.

As part of this work priority, RRTPO will meet the BIL requirement that each MPO use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. [\[§ 11206\(b\)\]](#)

- **Public Engagement (FHWA/FTA Planning Emphasis Area).** Continue developing methods and strategies to improve opportunities for the general public to take a more active role in project planning and development. Be a resource to connect impacted communities with decision-makers as plans and projects are considered. Identify a layered engagement approach that considers in-person, hybrid, and virtual tools and strategies for involvement.
- **Planning and Environmental Linkages (FHWA/FTA Planning Emphasis Area).** Develop project planning workflows that implement PEL as part of the transportation planning and environmental review processes. The use of PEL is a collaborative and integrated approach to transportation decision-making that considers environmental, community, and economic goals early in the transportation planning process, and uses the information, analysis, and products developed during planning to inform the environmental review process. PEL leads to interagency relationship building among planning, resource, and regulatory agencies in the early stages of planning to inform and improve project delivery timeframes, including minimizing duplication and creating one cohesive flow of information.

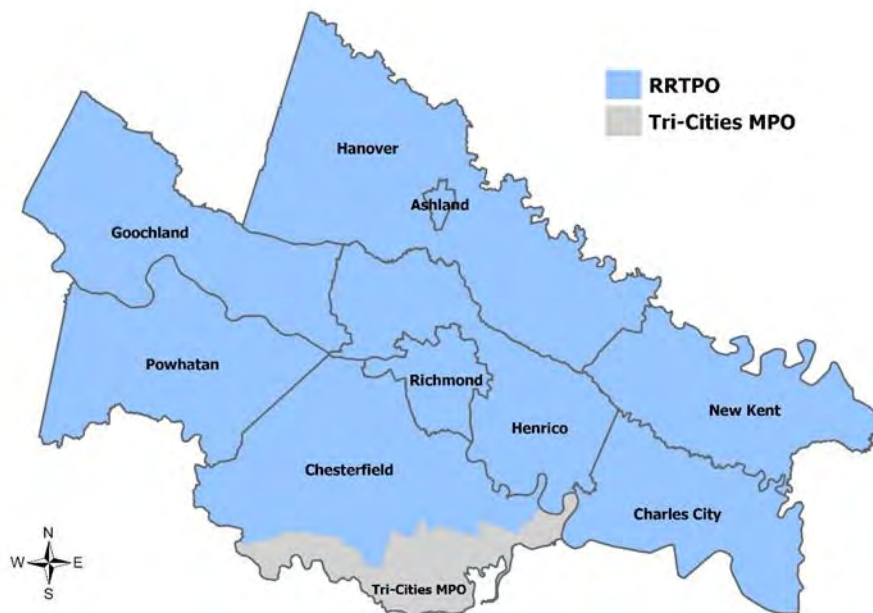


## The UPWP fulfills the federal requirement under 23 CFR §450.308:

*(b) An MPO shall document metropolitan transportation planning activities performed with funds provided under title 23 U.S.C. and title 49 U.S.C. Chapter 53 in a unified planning work program (UPWP)...*

*(c) ... each MPO, in cooperation with the State(s) and public transportation operator(s), shall develop a UPWP that includes a discussion of the planning priorities facing the MPA. The UPWP shall identify work proposed for the next 1- or 2-year period by major activity and task (including activities that address the planning factors in §450.306(b)), in sufficient detail to indicate who (e.g., MPO, State, public transportation operator, local government, or consultant) will perform the work, the schedule for completing the work, the resulting products, the proposed funding by activity/task, and a summary of the total amounts and sources of Federal and matching funds.*

Figure 1. Richmond Regional Transportation Planning Organization



## Metropolitan Planning Factors and RRTPO's FY 2024 Priorities

The 2015 *Fixing America's Surface Transportation Act (FASTACT)* continues the principles of integrated planning first set forth in 1992 with the Intermodal Surface Transportation Efficiency Act

Under the *FAST Act*, MPOs must consider ten (10) planning factors when developing transportation plans and programs.

1. Support the economic vitality of the Metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase the accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation; and
10. Enhance travel and tourism.

Development of this FY 2024 UPWP has been guided by regulations requiring the RRTPO planning process to consider and implement projects, strategies, and services that address these ten Metropolitan planning factors. Each of these planning factors affects nearly every task; the degree of consideration and analysis is based on the scale and complexity of many issues, including transportation system development, land use, employment, economic development, human and natural environment, and housing and community development (*23 CFR 450.306(b)*). The matrix on page 9 summarizes the applicability of each Metropolitan planning factor to the 2024 work program tasks.

### **Regional Models of Cooperation**

Regional Models of Cooperation provide a framework and process for States and MPOs to develop multi-jurisdictional transportation plans and agreements to improve communication, collaboration, policy implementation, use of technology and performance management across agency boundaries. Multi-jurisdictional planning combines many perspectives to improve coordination and implement effective planning across wide geographic areas. Regional models of cooperation offer a competitive advantage by improving decision-making and saving time and money through shared resources. Examples include freight and congestion management coordination.

### **Ladders of Opportunity**

Work—Infrastructure investment creates jobs and paves the way for business, particularly small and disadvantaged business enterprises

Connect—A multimodal transportation system provides Americans with safe, reliable, and affordable connections to employment, education, healthcare, and other essential services

Revitalize—Transportation infrastructure can lift up neighborhoods and regions by attracting new opportunities, jobs, and housing

## **FISCAL YEAR 2023 ACCOMPLISHMENTS**

The following summarizes work produced and planning activities performed during FY2023 to implement the approved RRTPO planning projects and consultant tasks listed below. Ongoing work program tasks, such as routine project administration, are not included in this summary and only major accomplishments are listed.

### **Task 7100 Program Support & Administration**

- 7110 Continued development and outreach tools with emphasis on public engagement and transparency. Continued strong staffing commitment to the Central Virginia Transportation Authority and served as lead staff for the new organization. Supported the CVTA Technical Committee and CVTA Finance Committee as they developed regional priorities, authority budget, financial management structure, revenue policies and procedures, and other key components of the fledgling organization. Supported the CVTA Regional Priorities Subcommittee and other committees and work groups as needed.

- 7120 Maintained the FY23 UPWP and developed amendments as needed to account for new emphasis on work tasks and priorities. Consulted with member governments and partners to ensure work was being performed as needed.

### **Task 7200 General Development & Comprehensive Planning**

- 7210 Continued evolution of the Public Engagement Plan to allow RRTPO to be flexible in how stakeholders can participate in the planning practice with emphasis on virtual engagement during the COVID-19 pandemic and how to best continue a variety of opportunities as COVID restrictions eased. Strengthened the role of CTAC and its ability to advise other RRTPO committees and the general public. Shifted approach to public engagement on [www.planrva.org](http://www.planrva.org) and continued to embrace the use of ESRI Storymaps to communicate project work. Supported Senior Connections and other human service transportation providers to better engage their constituents.
- 7220 Worked with regional partners to provide resources and support in the development of the Central Virginia Transportation Authority. Participated virtually in professional organizations and societies including the American Planning Association, National Association of Regional Councils, Association of MPOs, National Association of Development Organizations, Consortium for Scenario Planning, Intelligent Transportation Society of Virginia, and others to advance staff engagement and knowledge of best practices. Worked with VDOT and partner organizations to research and advance understanding of Connected and Autonomous Vehicles and their impact on regional travel. Partnered on STARS studies, IMR reports, and arterial management plans.
- 7230 Developed a process to unify consultant contracting and RFP procedures. Worked to provide staff with tools and education for remote work and coordination with partners and constituents.

### **Task 7300 Long-Range Transportation Planning**

- 7310 Strengthened process for project prioritization and developed metrics and performance measures. Worked with consultant to develop unique accessibility and land use tools to integrate into the regional travel demand model. Developed specific GIS tools to measure equity and environmental justice impacts of projects prior to project selection.
- 7315 Kicked off *Pathways to the Future* to develop the region's first cross-discipline scenario planning tool to assist in planning for uncertain futures. The project includes development of multiple computer models and data visualization tools, establishment of a steering committee of subject matter experts and engagement of the community across multiple focus areas that intersect with transportation.
- 7320 Developed next phase of Richmond Tri-Cities (RTC) model update with consultant.
- 7330 Continued coordination with GRTC and CVTA on developing the regional transit plan. Worked with GRTC to begin a detailed analysis of the N-S BRT corridor and a preliminary analysis of expanding BRT to western Henrico along Broad Street.

- 7340 Developed an in-depth project in partnership with the National Park Service to acknowledge and commemorate the Trolley Line Trail from Ashland to the City of Richmond, including storytelling, data development, and project planning. Staffed Fall Line work group and supported regional Fall Line design committee. Continued efforts to secure additional funding and design. Actively participated with regional East Coast Greenway (ECG) partners to continue trail development.
- 7350 Continued development of a resilience program in support of *ConnectRVA 2045*. Included resilience as a major component of the scenario planning tools in development. Hired a full-time resilience planner to lead these increasingly important efforts.

#### **Task 7400 Short-Range Transportation Planning**

- 7410 Fully revised the Transportation Improvement Program (TIP) into a dynamic, web-based resource that can be used by all skill levels to understand financial commitments to upcoming transportation projects. Developed dashboards and datasets to communicate safety issues and trends for all nine RRTPO member jurisdictions. Maintained Congestion Management Process data and reporting. Developed visualizations and a storymap to explain performance measures and trends to elected officials and the public. Submitted performance measures for Federal performance measures.
- 7420 Supported regional development of Smart Scale applications for Round Five. Worked directly with VDOT/OIPI to prepare applications. Supported CVTA project application, scoring, and ranking process and provided on-demand analysis and recommendations. Developed funding scenarios for consideration by the Authority. Maintained the current TIP and worked with partners to perform adjustments and amendments in a timely manner. Administered the RSTBG/CMAQ/TA project process. Successfully implemented complete revision and improvement of guidelines, policies, and processes for the RSTP/CMAQ guidance and supported the RSTP/CMAQ guidelines work group.
- 7430 Supported Staples Mill Small Area Plan. Performed internal audit of freight program and continued the process of prioritizing staff focus areas for FY24.

TABLE 1. Planning Factors and Task Matrix

RRTPO FY24 UNIFIED PLANNING WORK PROGRAM		PLANNING FACTORS								
PROJECT TASKS	1	2	3	4	5	6	7	8	9	10
	Economic	Safety	Security	Accessibility	Environment	Connectivity	Management	Preservation	Storm Water	Tourism
<b>7100 PROGRAM SUPPORT AND ADMINISTRATION</b>										
Task 7110 Program Management	X	X		X		X	X			
Task 7120 UPWP, Budget and Contract Administration	X	X		X		X	X			
<b>7200 GENERAL DEVELOPMENT &amp; COMPREHENSIVE PLANNING</b>										
Task 7210 Public Outreach & Equity Analysis			X	X	X					X
Task 7230 Special Planning Efforts	X	X	X	X	X	X	X			X
Task 7240 Contingency Funding			X	X	X	X	X			
<b>7300 LONG-RANGE TRANSPORTATION PLANNING</b>										
Task 7310 Long-Range Transportation Plan	X	X	X	X	X	X	X	X	X	X
Task 7315 Scenario Planning	X	X	X	X	X	X	X	X	X	X
Task 7320 Travel Demand Modeling & Emissions Analysis	X	X		X	X	X	X	X		
Task 7330 Transit	X	X	X	X	X	X	X	X	X	X
Task 7340 Active Transportation: Bicycle & Pedestrian	X	X	X	X	X	X	X	X	X	X
<b>7400 SHORT-RANGE TRANSPORTATION PLANNING</b>										
Task 7410 Performance Based Transportation Planning	X	X	X	X	X	X	X	X	X	X
Task 7420 Financial Programming / Transportation Improvement Program	X	X	X	X	X	X	X	X	X	X
Task 7430 Rail, Freight and Intermodal Planning	X	X	X	X	X	X	X	X	X	X



## FISCAL YEAR 2024 PROJECT TASK DESCRIPTIONS

RRTPO planning activities are divided into four major planning categories taken from the Federal Transit Act, Section 5303, Metropolitan Planning Program. Funding sources for planning activities include a combination of federal transit and highway programs.

The following pages describe each task, including its purpose, agency or agencies responsible for carrying out the work, and expected results.

Table 2 lists the projects, tasks, and total cost budgeted for each project. For details, see the individual task descriptions beginning on the next page, and the FY 2024 RRTPO Budget, beginning on page 28.

TABLE 2. PROJECT CATEGORIES AND TASK BUDGET

Task Number	Title	Total Budgeted Amount
<b>7100</b>	<b>PROGRAM SUPPORT &amp; ADMINISTRATION</b>	<b>\$283,000</b>
7110	Program Management	
7120	UPWP, Budget and Contract Administration	
<b>7200</b>	<b>EQUITY, OUTREACH &amp; COMPREHENSIVE PLANNING</b>	<b>\$643,500</b>
7210	Public Outreach & Equity Analysis	
7220	Special Planning Efforts	
7230	Contingency Funding	
<b>7300</b>	<b>LONG-RANGE TRANSPORTATION PLANNING</b>	<b>\$2,014,898</b>
7310	Long-Range Transportation Plan	
7315	Scenario Planning	
7320	Travel Demand Modeling & Emissions Analysis	
7330	Transit	
7340	Active Transportation: Bicycle & Pedestrian	
7350	System Resilience Plan	
<b>7400</b>	<b>SHORT-RANGE TRANSPORTATION PLANNING</b>	<b>\$491,000</b>
7410	Performance Based Transportation Planning	
7420	Financial Programming / Transportation Improvement Program	
7430	Rail, Freight & Intermodal Planning	

# 7100 PROGRAM SUPPORT AND ADMINISTRATION

## Task 7110 Program Management

### Purpose:

1. Support the planning process and provide contract administration for federal, state, and other funding programs as appropriate.
2. Support Policy Board, Technical Advisory Committee (TAC), Community Transportation Advisory Committee (CTAC) & subcommittee meetings.

### Method:

Major work activities within this task include: developing agendas, minutes, mailings, work status reports, program management and administration; federal/state program requirements and review of related legislation; and computer program support.

PlanRVA staff serves as lead staff for RRTPO program administration with VDOT Richmond District providing support through its partnership on committees and work groups, processing quarterly bills and other requisitions, and conducting various other technical and administration support activities. VDOT State Planning & Research (SPR) funds programmed under UPWP task 7110 provides for VDOT Richmond District support on all RRTPO work tasks.

<b>7110 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Maintenance and administration of the program and committees	Ongoing
2. Maintain current information on regional plans and programs	Ongoing
3. Coordinate consultant-related activities	As Needed
4. Coordinate special meetings including the RRTPO Transportation Forum	As Needed
5. Coordinate and fulfill interagency review and information requests	As Needed
<b>VDOT</b>	
1. Provide technical assistance to the RRTPO, member governments, and other agencies	As Needed
2. Provide review and guidance related to RRTPO planning and programming requirements and assistance addressing federal requirements	Ongoing

# 7100 PROGRAM SUPPORT AND ADMINISTRATION

## Task 7120 UPWP, Budget and Contract Administration

### Purpose:

1. Develop and maintain the Unified Planning Work Program.
2. Develop time allocations, budgets, and funding scenarios to support UPWP deployment.

### Method:

PlanRVA staff will cooperatively develop and administer the UPWP, and coordinate RRTPO planning activities and committee meetings in compliance with UPWP funding agencies. This work effort also supports the RRTPO program by providing legal and other financial services related to the RRTPO program.

This task provides for maintenance of the adopted UPWP and annual development of the RRTPO work program for the upcoming fiscal year. Work in this task includes development of time allocations, budgets, and funding to support the task descriptions. The UPWP also identifies the region's planning priorities, documents cooperation between the RRTPO and Tri-Cities Area MPO on various work activities and notes non-RRTPO transportation study activities funded by FTA as informational items.

<b>7120 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Administer RRTPO FY 2024 UPWP	Ongoing
2. Work with member governments to prepare grant applications supporting the UPWP with emphasis on the Bipartisan Infrastructure Law and other federal programs	As Needed
3. Communicate UPWP activities to the public through CTAC and outreach methods identified in Task 7210 and the RRTPO Public Engagement Plan	Ongoing
4. Coordinate review of and fulfill information requests	As Needed
5. Provide regular progress updates to VDOT and DRPT	Ongoing
6. Provide review and guidance related to RRTPO planning and programming requirements and assistance addressing federal requirements	Ongoing

# 7200 GENERAL DEVELOPMENT & COMPREHENSIVE PLANNING

## Task 7210 Public Outreach & Equity Analysis

### Purpose:

- 1) Actively engage stakeholders and the general public with information regarding RRTPO activities and current issues in metropolitan transportation planning.
- 2) Encourage and document citizen engagement in the development of RRTPO transportation plans, programs and policies via the approved PlanRVA Public Engagement Plan, Title VI Plan, and associated policies and procedures.

### Method:

This work effort supports the development of a functional and viable community engagement program, which creates a “citizen planner” role for the public on transportation issues and encourages public input to the transportation planning and programming process.

The RRTPO organization includes a standing Community Transportation Advisory Committee (CTAC) appointed by the RRTPO policy board. The CTAC membership includes representation from all the RRTPO local jurisdictions and community organizations, including a focus on seniors, individuals with disabilities, persons with low income and all persons that are transportation disadvantaged. Engagement with CTAC provides an opportunity for citizen and interested party input to inform and advise the RRTPO on plans, studies, issues, and other matters related to the planning of transportation systems and services.

In addition to supporting CTAC and the work groups, the RRTPO encourages community engagement for each of its work products, including the Long-Range Transportation Plan, Regional Bicycle and Pedestrian Plan, Pathways to the Future, and other current plans and studies. There are various ways to get involved, including the PlanRVA website, in-person and virtual meetings, community events, and other methods outlined in the RRTPO Public Engagement Plan.

<b>7210 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Work to ensure equitable opportunities for all people to participate in the work of PlanRVA and RRTPO.	Ongoing
2. Revise & update RRTPO Public Engagement Plan to include best practices	As Needed
3. Actively engage the community on plans and programs related to RRTPO	Ongoing
4. Support CTAC, TAC, and RRTPO Work Groups	Ongoing
5. Maintain PlanRVA website and project pages including storymaps and dashboards	Ongoing/As Needed

6. Serve as a resource to VDOT & DRPT to enhance participation by elderly, disabled, and low-income populations in transportation plans	As Needed
7. Support Senior Connections as a partner in developing regional coordination services as described in the RRTPO Needs and Gaps Assessment of the Transportation Disadvantaged report	Ongoing
8. Update and revise MOAs and committee bylaws	As Needed
9. Implement/administer any changes to the MPO organization structure, as needed	As Needed
<b>VDOT</b>	
1. Support PlanRVA efforts to engage regional stakeholders and the general public	Ongoing
<b>DRPT</b>	
1. Encourage and participate in PlanRVA efforts to raise awareness of transit improvement projects	Ongoing

# 7200 GENERAL DEVELOPMENT & COMPREHENSIVE PLANNING

## Task 7220 Special Planning Efforts

### Purpose:

- 1) Participate in and provide technical support to special planning efforts or studies in the region that are related to or impact transportation planning, system performance and financial programming as determined by the RRTPO Secretary.

### Method:

PlanRVA staff will work closely with member governments and partner agencies to complete additional studies and plans that help to advance the transportation plans of the region, including but not limited to collaborative strategic planning, economic development, land use analysis, tourism planning, regional and megaregional partnerships, financial competitiveness studies, and professional advancement.

<b>7220 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Provide technical support services to member jurisdictions as identified through joint agreement. The focus of these efforts will be GIS support, planning project assistance, cost estimation, public engagement, or other needs mutually agreed upon	As Needed
2. Professional leadership and advancement – work to be an active participant and leader in various professional organizations like the Virginia Association of MPOs, National Association of Development Organizations, Association of Metropolitan Planning Organizations, Transportation Research Board, ITSVA, American Planning Association, etc.	Ongoing
3. National Best Practices – Spread the word about work that PlanRVA is doing by attending and presenting at local, state, and national conferences.	Ongoing
4. Automated and Connected Vehicle Technology – Continue to work with VDOT and other partners to study and advance innovative technologies to support regional transportation mobility and accessibility	Ongoing
5. Actively participate in VDOT or locality-led regional transportation studies like STARS, Arterial Management Plans, IMRs and IMJs as well as responding to data requests	As Needed
6. Track and update technology needs as appropriate to keep PlanRVA on the cutting edge of best technology practices among MPOs and planning organizations	As Needed



## 7200 GENERAL DEVELOPMENT & COMPREHENSIVE PLANNING

### Task 7230 Contingency Funding

#### Purpose:

- 1) Provide additional support for new and unforeseen activities.

#### Method:

Financially support unforeseen activities related to community engagement, staffing, consultant contracts, or other activities associated with UPWP tasks. This item may also be used for funding new UPWP tasks that may be approved by the RRTPO Policy Board during the fiscal year

<b>7230 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Staffing or administrative tasks as appropriate to actively pursue and complete projects developed under the UPWP	As Needed
2. Consultant contracts to address needs or other projects as developed during the fiscal year	As Needed
3. Additional public engagement as identified during the planning phases for project assignments	As Needed
4. New UPWP tasks developed as part of a needs assessment during the fiscal year	As Needed
5. Address unanticipated funding shortfalls and/or rescissions	As Needed

# 7300 LONG-RANGE TRANSPORTATION PLANNING

## Task 7310 Long-Range Transportation Plan

### Purpose:

- 1) Develop and maintain a comprehensive future-reaching transportation plan to assess mobility and access needs of the Richmond region

### Method:

In accordance with RRTPO policy and applicable federal regulations, PlanRVA will coordinate and undertake various activities to update the Long-Range transportation plan in consultation and coordination with VDOT and DRPT staffs. The existing plan will be monitored and amended as necessary.

Through the activities in this work task, RRTPO will meet the BIL requirement that each MPO use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. [\[§ 11206\(b\)\]](#)

<b>7310 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Update ConnectRVA 2045 as needed and work to implement it and work collectively with CVTA to identify candidate projects for implementation	Ongoing
2. Coordinate with VDOT and DRPT on Regional Performance Measures and their ongoing assessment	Ongoing
3. Develop a comprehensive Scenario Planning process, Pathways to the Future, using <i>ConnectRVA 2045</i> that will inform the development of the next Long-Range Transportation Plan. This process will include community education, research, and data development during a multi-year process.	Throughout FY 2024
<b>VDOT</b>	
1. Support RRTPO in maintenance of <i>ConnectRVA 2045</i> and development of Pathways to the Future	Ongoing
2. Consider the impact of recommendations from various studies on <i>ConnectRVA 2045</i> , in association with VDOT planning efforts	Ongoing
3. Implement <i>VTrans</i>	Ongoing
<b>DRPT</b>	
1. Support RRTPO in developing <i>ConnectRVA 2045</i> and Pathways to the Future	Ongoing
2. Review RVA Transit Vision Plan and other regional transit and mobility plans in coordination with GRTC planning efforts for consistency with <i>ConnectRVA 2045</i> targets	Ongoing

## 7300 LONG-RANGE TRANSPORTATION PLANNING

### Task 7315 Scenario Planning

#### Purpose:

- 1) Develop a multi-disciplinary future conditions prediction model using scenario planning

#### Method:

In accordance with applicable federal regulations and accepted best practices, PlanRVA will coordinate and undertake various activities to develop a new scenario planning model called Pathways to the Future. The model will be developed through open public education, engagement and equitable practices with a focus on broad consensus on outcomes.

<b>7315 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Work collaboratively with the steering committee and associated stakeholders	Throughout FY24
2. Coordinate with VDOT, DRPT, and other partners on available data sources and cooperative use	Ongoing
3. Develop a comprehensive Scenario Planning process that will inform the development of the next Long-Range Transportation Plan. This process will include community education, research, and data development during a multi-year planning process.	FY 2024 and beyond
<b>VDOT</b>	
1. Support RRTPO in development of Pathways to the Future	Ongoing
2. Evaluate the impact of scenario planning outcomes on VDOT long-term planning efforts	Ongoing
<b>DRPT</b>	
1. Support RRTPO in developing Pathways to the Future	Ongoing
2. Evaluate the impact of scenario planning outcomes on DRPT long-term planning efforts	Ongoing

# 7300 LONG-RANGE TRANSPORTATION PLANNING

## Task 7320 Travel Demand Modeling & Emissions Analysis

### Purpose:

- 1) Simulate existing and future travel demand.
- 2) Effectively model, analyze, and document multi-modal transportation networks.
- 3) Estimate on-road motor-vehicle emissions including ozone precursors and greenhouse gas emissions.
- 4) Develop new methods for performing scenario analysis and planning

### Method:

PlanRVA and VDOT will cooperatively utilize the Richmond / Tri-Cities (RTC) travel demand model; prepare, analyze and document network-based travel forecasts, as needed; and undergo training in the use of travel demand modeling and emissions analysis tools. PlanRVA will investigate alternative platforms to develop alternative analyses and investigations into future conditions and impacts of transportation decision-making.

<b>7320 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Maintain and implement the RRTPO Travel Demand Model	Ongoing
2. Provide forecasts for regional studies	Ongoing/As Requested
3. Develop scenario planning platform and tools necessary to investigate future impacts from transportation investment.	Ongoing
4. Develop and implement a full transit demand model to complement the existing travel demand model	Ongoing
4. Continue work on update of the RRTPO Travel Demand Model and related sub-models for use in scenario planning and long-range planning. Investigate options for updating and/or replacing the existing model that will be more user-friendly and teachable.	Ongoing
5. Consult and cooperate with member governments, VDOT, Tri-Cities MPO, and other groups to develop opportunities for the Travel Demand Model in small-area, corridor, and other types of local planning efforts	Ongoing/As Needed

<b>VDOT</b>	
1. Assist with maintenance/implementation of the RRTPO Travel Demand Model and provide inputs for regional air quality analysis	Ongoing
<b>DRPT</b>	
1. Coordinate with RRTPO and VDOT to incorporate current transit data and forecasts into the Travel Demand Model	Ongoing/As Needed

# 7300 LONG-RANGE TRANSPORTATION PLANNING

## Task 7330 Transit

### Purpose:

- 1) Identify opportunities to enhance and increase connectivity to transit across the Richmond region.
- 2) Advance the coordination of transportation services for all people in the Richmond region with focus through an equity lens on disadvantaged and environmental justice populations.

### Method:

PlanRVA staff will support the implementation of the Transit Vision Plan (Near-term Technical Analysis), including support for GRTC in pursuit of shovel-ready projects and grant opportunities. PlanRVA will also support the state designated Area Agency on Aging in the maintenance of a plan to coordinate regional transportation services meeting the needs of disadvantaged populations.

Through the activities in this work task, RRTPO will meet the BIL requirement that each MPO use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. [\[§ 11206\(b\)\]](#)

RRTPO will work directly with GRTC to support the completion of their Essential Infrastructure Plan by augmenting staff for a temporary period to keep the project moving forward to completion. This includes RRTPO analysis of impacts of infrastructure improvements on ridership.

<b>7330 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Support implementation of the Greater RVA Transit Vision Plan	Ongoing
2. Support the implementation of the Coordinated Human Services Mobility Plan	Ongoing
3. Support the development of regional priorities for transit through staff support of the Central Virginia Transportation Authority.	Ongoing
4. Coordinate Transportation Demand Management processes and policies to improve congestion levels, influence travel demand and improve system efficiency. Particular emphasis on this program will be in partnership with Ridefinders.	Ongoing
5. Coordinate with Greater Richmond Transit Company (GRTC) to improve service to the region, including assistance with GRTC planning and visioning through its TDP and related efforts, with focus on BRT expansion and connectivity	Ongoing
6. Direct financial support to GRTC to temporarily augment staff that will enable completion of its Essential Infrastructure Plan. Develop before/after analysis of infrastructure to evaluate its impact on ridership.	June 30, 2024



<b>GRTC</b>	
1. Solicit support and technical assistance from PlanRVA staff for annual development of a plan for regional public transportation within Planning District 15 and other projects as needed	Ongoing
<b>DRPT</b>	
1. Solicit support & technical assistance from PlanRVA staff on implementation plans for the Greater RVA Transit Vision Plan	Ongoing

# 7300 LONG-RANGE TRANSPORTATION PLANNING

## Task 7340 Active Transportation: Bicycle & Pedestrian

### Purpose:

- 1) Plan for all modes of travel, including bicycle and pedestrian facilities connecting home, work, and school.
- 2) Provide a forum for regional conversation regarding active transportation and community health.

### Method:

The RRTPO is responsible for planning all modes of transportation including connecting accessible pedestrian facilities and bicycle facilities. This task provides oversight for the regional bicycle & pedestrian plan and pledges RRTPO support for area groups, organizations, and local governments to advance bicycle and pedestrian studies, programs, and projects.

Through the activities in this work task, RRTPO will meet the BIL requirement that each MPO use at least 2.5% of its PL funds on specified planning activities to increase safe and accessible options for multiple travel modes for people of all ages and abilities. [\[§ 11206\(b\)\]](#)"

<b>7340 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Work with partners to identify needed non-motorized improvements as part of a larger connectivity strategy with the regional transportation network	Ongoing
2. Coordinate and facilitate regional conversations on the alignment of the East Coast Greenway	Ongoing
3. Support the development of the Fall Line network and provide technical assistance	Ongoing
4. Develop integrated components of <i>ConnectRVA 2045</i> dedicated to improving bicycle and pedestrian connectivity	Ongoing
5. Lead and support the development of the Trolley Line Trail and associated interpretive materials and storytelling	Ongoing
6. Collect and synthesize performance data on nonmotorized travel as available	Ongoing
7. Evolve the Active Transportation Work Group to best serve the region	Ongoing
8. Work with member governments and state agencies to advance development of bicycle and pedestrian facilities	As Needed

<b>VDOT</b>	
1. Include PlanRVA staff as technical resources for new and ongoing bicycle and pedestrian projects in the Richmond region	As needed
2. Share counts and other performance metrics with PlanRVA staff for inclusion in plans and projects	Ongoing

# 7300 LONG-RANGE TRANSPORTATION PLANNING

## Task 7350 System Resilience

### Purpose:

- 1) Following federal guidance, consider projects and strategies that will improve resiliency and reliability of the transportation system through mitigation of stormwater impacts on the transportation system, improvement of resistance to heat island impacts and reduction of the vulnerability of existing transportation infrastructure to natural disasters.

### Method:

Coordinate transportation planning with environmental partners, homeland security, disaster preparedness, and post-disaster redevelopment planning. Enhance the resiliency of the transportation system to withstand threats from man-made and natural disasters. Think long-term about how to function as a region when societal gathering patterns are disrupted by weather, disease, economic turmoil, or other regional factors.

<b>7350 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Develop a system resilience analysis framework to complement <i>ConnectRVA 2045</i> that identifies strategies that reduce community impacts to climate change	Ongoing
2. Work with VDOT to develop a system for infrastructure assessment and prioritization	As Needed
3. Develop a watershed-based digital flood tool that will provide current information on potential impacts and priority infrastructure needs	Ongoing
4. Identify new indicators for assessment of community resilience	Ongoing
5. Develop project prioritization metrics that reflect resilience and environmental factors of project development	Ongoing
<b>VDOT</b>	
1. Collaborate with PlanRVA to develop a summary database of infrastructure vulnerability	Ongoing

# 7400 SHORT-RANGE TRANSPORTATION PLANNING

## Task 7410 Performance Based Transportation Planning

### Purpose:

- 1) In conjunction with VDOT, establish and work towards meeting a defined set of performance measures and targets through planning and programming projects that contribute towards regional goals.
- 2) Assess progress towards meeting goals.

### Method:

PlanRVA staff will work with VDOT regarding the establishment of performance measures and targets, how Federal rules will be implemented, and will monitor established rules and any proposed changes. The RRTPO will work with FHWA, FTA, VDOT and DRPT to incorporate these new requirements into the RRTPO planning and programming process in the work program.

Develop tools and visualizations to communicate performance of the transportation network in a data-driven process. Incorporate new datasets when possible, including the FY22 adopted Regional Transportation Safety Plan.

The following products and work tasks help to meet and assess these requirements.

<b>7410 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Safety - work with the RRTPO Vision Zero Workgroup to assess regional goals and to update and expand the Regional Safety Plan.	As Needed
2. Congestion Management Process – report on system reliability, such as bottlenecks and travel time data for all CMP designated roads; analysis of congested road segments for AM and PM travel time periods and identify strategies to improve or mitigate congestion.	Ongoing
3. Congestion Management Process – analyze and report on accident data for all CMP network designated roads, plus those roads functionally classified as collector and above in the Richmond region	Ongoing
<b>VDOT</b>	
1. Collaborate with PlanRVA staff to develop Intelligent Transportation Systems (ITS) projects and programs	As Needed
2. Provide needed data to PlanRVA for use in developing CMP analysis and reporting	Ongoing

## 7400 SHORT-RANGE TRANSPORTATION PLANNING

### Task 7420 Financial Programming / Transportation Improvement Program

#### Purpose:

- 1) Cooperatively develop and publish the RRTPO Transportation Improvement Program (TIP)
- 2) Revise policies and procedures for TIP development, as needed.
- 3) Develop and manage evaluation and allocation of federal and state transportation funding.
- 4) Report on previously authorized TIP projects.

#### Method:

PlanRVA, VDOT, and DRPT staff will jointly consult and coordinate with RRTPO Policy Board and advisory committees to maintain the TIP as needed; monitor authorized TIP projects; manage the RRTPO policies and procedures for TIP development; manage the RSTBG/CMAQ/TAP grant process; work to prepare regional applications for state and federal funding opportunities, and support the Central Virginia Transportation Authority.

<b>7420 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Revise and improve the RSTBG/CMAQ Project Review, Selection, and Allocation process as needed	Ongoing
2. Support financial analysis and consideration of project impacts for the Central Virginia Transportation Authority	Ongoing
3. TIP Analysis and Maintenance	Ongoing
4. Identify best practices to track and maintain reliable project cost estimates	Ongoing
5. Work collaboratively to develop regional applications for state and federal funding opportunities	
6. Develop tools and metrics to assist in evaluation of regionally significant projects including cost-benefit scoring and funding scenarios	Ongoing
<b>VDOT</b>	
1. Coordinate TIP project proposals for the State Highway System	Ongoing
2. Provide estimates of Federal/State funds available for TIP projects	As Needed
3. Coordinate with PlanRVA staff to develop funds allocation recommendations	Ongoing



<b>DRPT</b>	
1. Coordinate transit TIP projects and amendments	As Needed

# 7400 SHORT-RANGE TRANSPORTATION PLANNING

## Task 7430 Rail, Freight and Intermodal Planning

### Purpose:

- 1) Moving people and goods safely and efficiently with environmentally beneficial impacts.

### Method:

In order for Richmond to compete in the efficient movements of goods and services in the coming years, the region will need to identify, develop and implement intermodal strategies which will provide good connectivity for passenger movement, transfer of rail shipments, improved rail access for local truck shipments, expanded opportunity for air cargo movement, and alternative options of importing and exporting regional cargoes, such as by barge to the Port of Virginia's Richmond Marine Terminal. By ensuring the continued safe and efficient performance of the regional transportation system, the prevention of environmental degradation, while encouraging and attracting economic opportunities, the RRTPO will be promoting a high quality of life for our region.

The regional planning process can support policies that advocate investments in the rail system such as extension of sidings, crossovers, signal upgrades or grade-separation of crossings which can improve the performance of the rail system to the benefit of both passenger and freight movements.

<b>7430 Expected Results/Product:</b>	<b>Anticipated Completion Schedule:</b>
<b>RRTPO</b>	
1. Support Staples Mill Station redesign and upgrades	As Needed
2. Freight corridor data development and analysis. Investigation of best applications for freight data to support economic development.	Ongoing
3. Support implementation of I-95/RMT/Commerce Corridor Access Study	Ongoing
4. Freight and Intermodal Work Group – evaluate demand and feasibility	Ongoing
5. Richmond Area Rail Studies: Virginia State Rail Plan, Southeast High-Speed Rail (including DC2RVA: Washington to Richmond), Long Bridge / CSX plan – coordinate with DRPT on work activities	As Needed

# FISCAL YEAR 2024 RRTPO STAFFING AND BUDGET

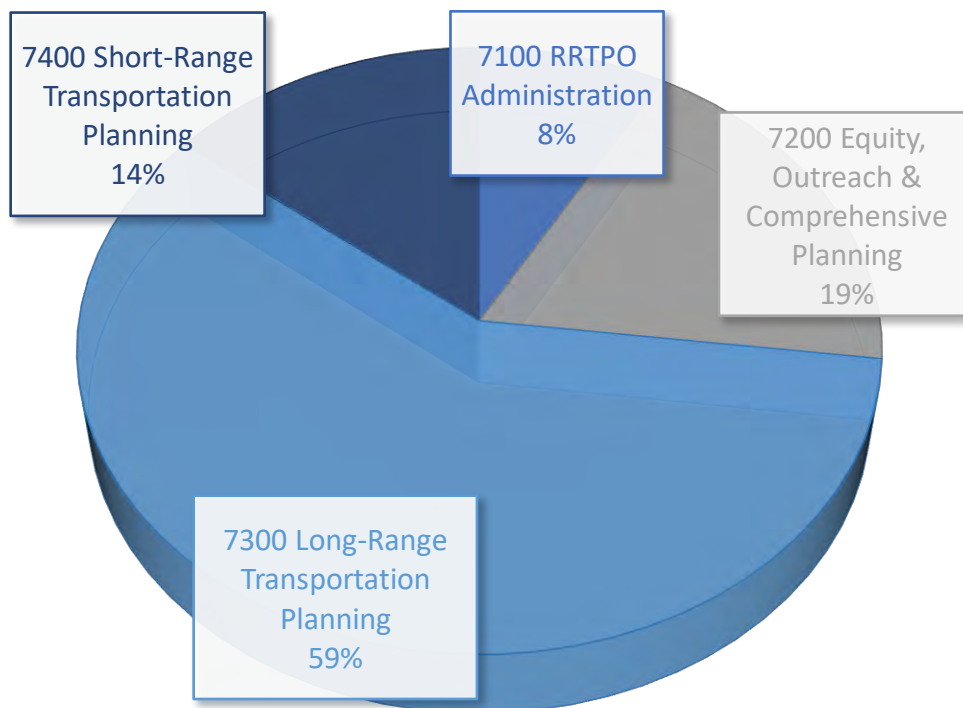
## RRTPO Staff Resources

Twelve personnel from PlanRVA are committed to full-time direct support of the tasks outlined in the FY 2024 RRTPO UPWP; another seven personnel are committed in part-time direct support. Additional personnel may be assigned to consultant-led work tasks.

Primary responsibility for the UPWP rests with PlanRVA staff. There are cases where other UPWP agencies are assigned primary responsibility for specific activities, as delineated in the task descriptions; PlanRVA will provide support for these activities. The PlanRVA Director of Transportation is responsible for overall program support and administration of RRTPO's work program tasks, as well as for interagency coordination with the other UPWP Agencies. Each staff person dedicated to direct support of the work program is charged with primary responsibility for accomplishing specific tasks or subtasks.

Figure 2 reflects the FY 2024 RRTPO budget by planning program project. On the following page, Table 3 details FY 2024 expenditures budgeted by PlanRVA on RRTPO planning projects or tasks described in this UPWP. For each planning project, total expenditures, type of fund, and federal/local matching amounts are identified.

**FIGURE 2. FY 2024 TOTAL RRTPO BUDGET BY TASK**



**TABLE 3. FY 2024 RRTPO Unified Planning Work Program**

FY 2024 RRTPO Budget											
Work Task	PL				5303				5303 CO <sup>(1)</sup>	STBG <sup>(2)</sup>	GRAND TOTAL
	Federal	State	Local	Total	Federal	State	Local	Total	Total		
7110 MPO Prog Mgmt	\$140,800	\$17,600	\$17,600	\$176,000	\$35,200	\$4,400	\$4,400	\$44,000			\$220,000
7120 UPWP Budget & Contracts	\$40,320	\$5,040	\$5,040	\$50,400	\$10,080	\$1,260	\$1,260	\$12,600			\$63,000
7210 Public Outreach/ Equity Analysis	\$111,040	\$13,880	\$13,880	\$138,800	\$27,760	\$3,470	\$3,470	\$34,700			\$173,500
7220 Special Planning Efforts	\$185,600	\$23,200	\$23,200	\$232,000	\$46,400	\$5,800	\$5,800	\$58,000			\$290,000
7230 Contingency Funding	\$125,280	\$15,660	\$15,660	\$156,600	\$18,720	\$2,340	\$2,340	\$23,400			\$180,000
7310 Long Range Transp Pln	\$49,200	\$6,150	\$6,150	\$61,500	\$0	\$0	\$0	\$0			\$61,500
7315 Scenario Planning	\$212,000	\$26,500	\$26,500	\$265,000	\$52,800	\$6,600	\$6,600	\$66,000		\$400,000	\$731,000
7320 Travel Demand Model	\$48,998	\$6,125	\$6,125	\$61,248	\$22,991	\$2,874	\$2,874	\$28,739	\$342,411		\$432,398
7330 Transit	\$0	\$0	\$0	\$0	\$208,000	\$26,000	\$26,000	\$260,000	\$100,000		\$360,000
7340 Act Transp- Bike/Ped	\$236,000	\$29,500	\$29,500	\$295,000	\$0	\$0	\$0	\$0			\$295,000
7350 System Resiliency	\$108,000	\$13,500	\$13,500	\$135,000	\$0	\$0	\$0	\$0			\$135,000
7410 Perf Based Transp Plng	\$30,000	\$3,750	\$3,750	\$37,500	\$30,000	\$3,750	\$3,750	\$37,500			\$75,000
7420 Financial Prog/TIP	\$231,680	\$28,960	\$28,960	\$289,600	\$57,920	\$7,240	\$7,240	\$72,400			\$362,000
7430 Rail & Freight	\$25,770	\$3,221	\$3,221	\$32,213	\$17,430	\$2,179	\$2,179	\$21,787			\$54,000
<b>TOTAL (\$)</b>	<b>\$1,544,688</b>	<b>\$193,086</b>	<b>\$193,086</b>	<b>\$1,930,861</b>	<b>\$527,301</b>	<b>\$65,913</b>	<b>\$65,913</b>	<b>\$659,126</b>	<b>\$442,411</b>	<b>\$400,000</b>	<b>\$3,432,398</b>

(1) FY23 5303 Carryover funds

(2) Expected STBG fund awards

## ACRONYM DEFINITIONS

Acronym	Definition
CMP	Congestion Management Process
CMAQ	Congestion Mitigation and Air Quality (federal funding)
CTAC	Community Transportation Advisory Committee, RRTPO advisory committee
CVTA	Central Virginia Transportation Authority
DRPT	Department of Rail and Public Transportation
EDAC	Elderly and Disability Advisory Committee, former RRTPO advisory committee
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY / FFY	Fiscal Year / Federal Fiscal Year
GRTC	Greater Richmond Transit Company
IMR	Interchange Modification Report
LRTP	Long Range Transportation Plan
MPO	Metropolitan Planning Organization
OIPI	Office of Intermodal Planning and Investment
PL	Planning funds (federal funding category)
PlanRVA	Richmond Regional Planning District Commission
Policy	Decision-making body of the RRTPO, composed of elected officials from nine jurisdictions
RMTA	Richmond Metropolitan Transportation Authority
RRTPO	Richmond Regional Transportation Planning Organization
RSTP	Regional Surface Transportation Program (federal funding)
RSTBG	Regional Surface Transportation Block Grant (federal funding)
RTC	Richmond / Tri-Cities MPOs
STARS	Strategically Targeted Affordable Roadway Solutions
TAC	Technical Advisory Committee, RRTPO advisory committee
TIP	Transportation Improvement Program, list of upcoming transportation projects
UPWP	Unified Planning Work Program, the RRTPO annual budget and work program
VDOT	Virginia Department of Transportation
VTrans	Virginia statewide, long-range transportation plan

## **AGENDA 7/6/23; ITEM B.-4**

### **Staff Report: AN AGREEMENT FOR THE UTILIZATION OF PASS THROUGH FTA AND COMMONWEALTH TRANSIT FUNDS IN THE RICHMOND REGIONAL TRANSPORTATION PLANNING ORGANIZATION AREA FOR FISCAL YEAR 2024**

#### **Richmond Regional Transportation Planning Organization**

REQUESTED ACTION: To approve an agreement for pass through funding to GRTC to complete its Essential Infrastructure Plan.

BACKGROUND:

*Essential Infrastructure Plan*

Through the adopted FY 2024 Unified Planning Work Program (UPWP) and its inclusion of pass through 5303 carryover funding, GRTC can augment existing staff for a temporary period and keep the project moving forward. This will keep the momentum going and get the project to a readiness point where it can be implemented. At the same time, RRTPO will undertake an internal study that looks at before/after of the installation of infrastructure and how it impacts ridership across the network. We think it will help make the case for the ability of CMAQ funds to be used for this type of improvement.

This agreement outlines the necessary requirements for GRTC to follow so that funds can be administered in a timely and responsible manner and will allow PlanRVA staff to track invoicing and payments as the plan is completed. Appendix A of the agreement outlines the work to be completed, the end products, a schedule for completion, and the funding amount being made available for this project.

STAFF RECOMMENDATION: Staff recommends that the RRTPO Policy Board approve the following resolution as presented:

**RESOLVED**, that the Richmond Regional Transportation Planning Organization Policy Board approves the Agreement for the Utilization of Pass-through FTA and Commonwealth Transit Funds in the Richmond Regional Transportation Planning Organization area for fiscal year 2024.



**AN AGREEMENT FOR THE UTILIZATION  
OF PASS-THROUGH FTA AND COMMONWEALTH TRANSIT FUNDS IN THE  
RICHMOND REGIONAL TRANSPORTATION PLANNING ORGANIZATION  
AREA FOR FISCAL YEAR 2024**

This Agreement, made and entered into as of this \_\_\_\_ day of \_\_\_\_\_, 2023 by and between the **Richmond Regional Transportation Planning Organization**, hereinafter referred to as the RRTPO, and the **Greater Richmond Transit Company**, hereinafter referred to as GRTC, for the utilization of pass-through FTA and Commonwealth Transit funds.

**Whereas**, the RRTPO has entered into a Project Agreement for the Use of FTA and Commonwealth Transit Funds with the Commonwealth of Virginia, Department of Rail and Public Transportation, hereinafter referred to as DRPT, to implement the activities specified in the RRTPO's Fiscal Year 2024 Unified Planning Work Program; and

**Whereas**, the RRTPO desires to engage GRTC to perform Task Number 7330.6 of this Work Program;

**Now, therefore**, the RRTPO and the GRTC do hereby mutually agree as follows:

**Article I – Scope of Service**

The GRTC shall perform, or have performed, in a professional manner, the services as outlined in the attached Scope of Work, Appendix A. The Scope shall include a copy of the work activity from the FY 2024 Unified Planning Work Program.

**Article II – Time of Performance**

The GRTC shall begin work effective July 1, 2023, or see that it has begun, and have the project finished and a report submitted to the RRTPO by June 30, 2024, for approval by the RRTPO and the Virginia Department of Rail and Public Transportation.

**Article III – Basis of Payment**

For services performed in accordance with the provisions of this Agreement, the RRTPO agrees to pay the GRTC 90% of actual costs up to the maximum amount of \$100,000 in FY 2024 Section 5303 funds. Actual costs shall include direct salaries and payroll burden as defined below and non-salary direct costs, such as consultant fees or costs, as detailed and attached to this Agreement.

1. Direct Salaries - Direct salaries are defined as the cost of salaries of employees for the time directly chargeable to the project. The GRTC shall provide a list of all personnel anticipated to charge time against the activities covered by this Agreement. This list shall be attached to this Agreement as Attachment B, and shall identify personnel by payroll classification only (planner, technician, etc.) and their present actual payroll rate per hour.

Premium overtime payments, when authorized by the RRTPO and the Virginia Department of Rail and Public Transportation, shall be included in direct labor costs. Payroll burden cost shall be added to the straight time salaries for overtime payment but shall not be added to premium overtime payments.

2. Payroll Burden - Payroll burden is defined as sick leave, vacation and holiday pay of engineers, draftsmen and other technical personnel, plus payroll and unemployment taxes, contributions for Social Security, unemployment compensation insurance, retirement plan, and life and medical insurance benefits. Costs of company contributions to a life insurance, medical insurance and retirement plan for employees shall be normal and reasonable. Payroll burden is expressed as a percentage of direct salaries.
3. Payroll Burden Percentage - The percentage to be applied for payroll burden for the purpose of computing partial payments shall be based on the GRTC accounting records and shall be adjusted annually to reflect current records. The maximum allowable percentage shall be as audited.

Quarterly payments shall be made for the services performed based on the GRTC detailed statement of expenditures. All vouchers submitted for quarterly payments shall be received by the RRTPO within ten days of the end of the quarter and supported by progress reports consisting of a schedule showing the percentage of completion, and a narrative outlining accomplishments during the quarter. The final voucher shall be submitted within 60 days subsequent to the completion of the work. Final payment shall be made no earlier than 60 days nor later than 120 days after the acceptance of the completed requirements of the Agreement. Final payment shall be based on audited costs and additive rates.

The GRTC agrees that, as determined by audit, any costs found to be unsupported by acceptable records or in violation of any provision of this Agreement shall not be reimbursable; and any previous payments of such costs shall be promptly reimbursed to the RRTPO.

The RRTPO must receive payment for work performed from the Virginia Department of Rail and Public Transportation before pass-through funds can be reimbursed to the GRTC.

#### **Article IV – Third Party Contracts**

Unless authorized in writing by the RRTPO, including by this Agreement, the GRTC shall not assign any portion of the work to be performed under this Agreement, or execute any contract, amendment, or change order thereto, or obligate itself in any manner with any third party with respect to its rights and responsibilities under the Agreement without the prior written agreement of the RRTPO. Further, no Request for Proposal (“RFP”) which uses Section 5303 funds may be issued prior to review and approval of the RFP by the RRTPO and DRPT.

#### **Article V - Restrictions, Prohibitions, Controls, and Labor Provisions**

The GRTC shall comply with all of the restrictions, prohibitions, controls, and labor provisions set forth in Appendix C, hereto attached and made part of the Agreement.

#### **Article VI – Compliance with Title VI of the Civil Rights Act of 1964**

The GRTC shall comply with the provisions of Title VI of the Civil Rights Act of 1964, and the provisions of

Appendix D, hereto attached and made a part of this agreement.

#### **Article VII – Other Provisions**

The GRTC shall be subject to all provisions placed on the RRTPO by the Virginia Department of Rail and Public Transportation in their Agreement for the use of FTA Section 5303 funds and Commonwealth Transit funds for FY 2024, the terms of which are incorporated herein by reference.

IN WITNESS WHEREOF, the parties hereunto have set their hands and affixed their seals, the day and year first written above.

ATTEST:

RICHMOND REGIONAL TRANSPORTATION  
PLANNING ORGANIZATION

BY: \_\_\_\_\_

Chet Parsons  
Director of Transportation

BY: \_\_\_\_\_

Martha Shickle  
Executive Director

ATTEST:

GREATER RICHMOND  
TRANSIT COMPANY

BY: \_\_\_\_\_

\_\_\_\_\_  
(TITLE)

BY: \_\_\_\_\_

\_\_\_\_\_  
(TITLE)

Appendix A - Scope of Work

Appendix B - Personnel

Appendix C - Restrictions, Prohibitions, Controls, and Labor Provisions

Appendix D - Title VI

## APPENDIX A

### 7330.6 GRTC Essential Infrastructure Plan

#### A. Background

GRTC currently has secured funding to install transit shelters at many stops in the current system. GRTC has requested professional services in support of the shelter installation program. Support services may consist of coordinating with regulatory agencies to ensure requirements are being applied in a reasonable manner, coordinating with regulatory agencies in support of obtaining regulatory approvals for installations, support in achieving shelter designs approvals, providing construction management of bus stop amenity installation, intermittent field support, and general staff support services.

This agreement would supply the framework for financial assistance through RRPO to enable GRTC to secure professional services and complete the work in the shelter installation program by June 30, 2024.

#### B. Work Elements (WE)

GRTC and its consultants will perform as-needed professional services in support of GRTC's shelter installation program. Services will consist of an average of 16 to 20 hours of week of professional services, including regular updates to GRTC of hours expended and hours remaining.

Professional services may include:

- Coordination calls with GRTC staff
- Support of GRTC with review by regulatory agencies/localities
- Coordinating directly with regulatory agencies/localities
- Assistance in prioritization of shelter installation locations
- Cost estimating support
- Construction support services
- Documentation of shelter program best practices

This task consists of effort required to administer the project including contracting, internal coordination, coordination with GRTC staff, supervision and general quality control, and project management responsibilities consisting of project organization and project scheduling. Consultants will submit monthly progress reports to the GRTC project manager.

**Monthly Reports:** These reports from GRTC include information detailing work performed using the funding outlined in Task Number 7330.6 of the FY 2024 UPWP, percentage of work completed and total expenses billed to date.

### C. End Products

1. WE 1 – GRTC Essential Infrastructure Plan
2. WE 2 – Updates to RRTPO Technical Advisory Committee and Policy Board
3. WE 3 – Monthly Reports and Invoicing

### D. Schedule

1. WE 1 – GRTC Essential Infrastructure Plan (12/7/2023)
2. WE 2 – Updates to RRTPO Technical Advisory Committee (10/10/2023) and Policy Board (12/7/2023)
3. WE 3 – Monthly Reports and Invoicing - monthly

### E. Participants

GRTC and consultant staff as needed

### F. Budget, Staff, Funding

(Funding information includes applicable state/local matching funds)

ENTITY	5303		TOTAL
GRTC	\$100,000		\$100,000

APPENDIX B: FY 2024 PERSONNEL

Position

Rate/Hour

KIMLEY-HORN AND ASSOCIATES, INC.					
	Person	Jonathan Oliver	Chloe Harwood	Alex White	
	Role	Senior Planner	Analyst II	Administrative Specialist II	Total
Task	Billing Rate	\$ 184.08	\$ 126.93	\$ 126.22	
1	Shelter Support Services	112	116	12	\$ 36,855
SubTotal - Base Labor		112	116	12	\$ 36,855
Optional Services					
2	Additional Three (3) Months of Support Services	112	116	12	\$ 36,855
SubTotal - Optional Labor		112	116	12	\$ 36,855
Total Labor		224	232	24	\$ 73,710



## APPENDIX C: Restrictions, Prohibitions, Controls, and Labor Provisions

- a. The GRTC, its agents, employees, assigns, or successors, and any persons, firms, or agency of whatever nature with whom it may contract or make agreement in connection with the Agreement, shall not discriminate against any employee or applicant for employment because of age, race, handicap, color, sex, or national origin. The GRTC shall take affirmative action to ensure that applicants are employed and that employees are treated during their employment, without regard to their age, race, religion, handicap, color, sex, or national origin. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- b. Disadvantaged Business Enterprise ("DBE"). It is the policy of the U.S. DOT that DBE's as defined in 49 C.F.R. pt.26 have the maximum opportunity to participate in the performance of contracts financed in whole or in part with the Federal funds under this Agreement. Consequently, the DBE requirements of 49 C.F.R. pt. 26 apply to this Agreement.

The GRTC or its contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any U.S. DOT-assisted contract or in the administration of its DBE program or the requirements of 49 C.F.R. pt. 26. The GRTC shall take all necessary and reasonable steps under 49 CFR pt.26 to ensure nondiscrimination in the award and administration of U.S. DOT-assisted contracts. The GRTC will utilize the Virginia Department of Transportation's DBE program, as required by 49 C.F.R. pt.26 and as approved by U.S. DOT. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this Agreement. Upon notification to the GRTC of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C.# 1001 and/or the Program Fraud Civil Remedies act of 1986 (31 U.S.C. #3801 *et seq.*)

Pursuant to the requirements of 49 C.F.R. pt. 26 the following clause must be inserted in each third party contract:

"The contractor, sub recipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of the contract. The contractor shall carry out applicable requirements of 49 C.F.R. pt.26 in the award and administration of U.S. DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of the contract or such remedy as the GRTC deems appropriate."

- c. Interest of Member of, or Delegates to, Congress. No member of, or delegate to, the Congress of the United States shall be admitted to any share or part of this Agreement or to any benefit arising therefrom.

- d. Conflict of Interest. The GRTC and its officers and employees shall comply with provisions of the State and Local Governments Conflicts Act, #2.2-3100 of the *Code of Virginia* (1950) *et seq.*, as amended.
- e. The GRTC, its agents, employees, assigns, or successors, and any persons, firm, or agency of whatever nature with whom it may contract or make an agreement, shall comply with the provisions of the Virginia Fair Employment Contracting Act, #2.2-4200 *et seq.* of the *Code of Virginia* (1950), as amended.

Draft

## APPENDIX D: Title VI

During the performance of this agreement, the GRTC, for itself, its assignees, and successors in interest, agrees as follows:

- a. **Compliance with Regulations:** The GRTC shall comply with the Regulations relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (U.S. DOT) 40 C.F.R. pt. 21, as amended (“Regulations”).
- b. **Nondiscrimination:** The GRTC, with regard to the work performed by it during the term of the Agreement, shall not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The GRTC shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations.
- c. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the GRTC for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the GRTC of the GRTC’s obligations under this Agreement and the Regulations relative to nondiscrimination on the grounds of race, color, sex, or national origin.
- d. **Information-Reports:** The GRTC shall provide all information and reports developed as a result of or required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the RRTPO to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of the GRTC is in the exclusive possession of another who fails or refuses to furnish this information, the GRTC shall so certify to the RRTPO and shall set forth the efforts it has made to obtain this information.
- e. **Sanctions for Noncompliance:** In the event of the GRTC’s noncompliance with the nondiscrimination provisions of this Agreement, the RRTPO shall impose such Agreement sanctions as it may determine to be appropriate, including, but not limited to:
  1. Withholding of payments to the GRTC under the Agreement until the GRTC complies; and/or
  2. Cancellation, termination, or suspension of the Agreement in whole or in part.
- f. **Incorporation of Provisions:** The GRTC shall include the provisions or paragraphs a through f in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The GRTC shall take such action with respect to any subcontract or procurement as the RRTPO may direct as a means of enforcing such provisions including sanctions for noncompliance; provided, however, that in the event the GRTC becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the GRTC must immediately notify the RRTPO so that steps can be taken to protect the interests of the RRTPO, the Department and the United States.

## **POLICY BOARD AGENDA 07/06/23; ITEM B.-5.**

### **FY21 – FY24 TIP AMENDMENT: CITY OF RICHMOND REQUEST – MAIN STREET STATION IMPROVEMENTS**

#### **Richmond Regional Transportation Planning Organization**

**REQUESTED ACTION:** Review the requested amendment of the FY21 – FY24 Transportation Improvement Program (TIP) to add a new project.

**BACKGROUND:** The RRTPO has received a request from the City of Richmond to add a new project to the FY21 – FY24 TIP.

- COR001 – Main Street Station Improvements (City of Richmond)

This project has received Community Project Funding (CPF), also known as Congressionally Directed Spending (CDS). This funding totals \$700,000 and is administered by the Federal Transit Administration (FTA). CPF requires a 20% match, or \$175,000.

This project will improve the safety and security of rail passengers and station visitors and contribute to the vision to bring the proposed Southeast High Speed Rail Line to its northern terminus at Main Street Station. The improvements to Main Street Station include ADA improvements and detectable warning surfaces on the west platform of Main Street Station, steel awning safety improvements for the multimodal loading zone, pedestrian plaza, and tunnel beneath the station, and building, office, and technology upgrades to include real-time passenger information displays. These improvements are necessary to accommodate and add passenger rail service on the west platform of Main Street Station.

**PUBLIC REVIEW:** A fifteen-day public review was held between June 15 and June 30, consistent with the Public Engagement Plan. Any comments received from this review period will be shared with the board prior to action on this item.

**TAC RECOMMENDATION:** TAC reviewed this request at the June meeting and unanimously recommended approval as presented.

**STAFF RECOMMENDATION:** Staff recommends approval of this TIP amendment as requested.

**REQUESTED ACTION:** The following resolution is presented for consideration:

**Resolved**, that the Richmond Regional Transportation Planning Organization (RRTPO) amends the FY21 – FY24 Transportation Improvement Program (TIP) to add the COR001 – Main Street Station Improvements project.

**Further Resolved**, that this project is exempt from transportation conformity determination pursuant to 40 CFR § 93.126 under the following exemption:

- Mass Transit - Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).

# FY 2021 to FY 2024 Richmond Region TPO Transportation Improvement Program

## Public Transportation

UPC COR001

**Jurisdiction:** Richmond  
**Route/Street:**  
**Description:** Main Street Station Improvements  
**Scope:** Transit  
**From:**  
**To:**  
**Length:**  
**Administered By:** Locally **Regionally Significant:** No  
**MPO Note:**



### Schedule

Phase	Start	End	Status
Preliminary Engineering (PE):			
Right of Way (RW):			
Construction (CN):			

### Cost Estimates / Previous Obligations

### Goals addressed

**Cost Estimates**  
**PE:**  
**RW:**  
**CN:**  
**Total:** \$875,000

Access	No	Congestion	No	Environment	No
Freight	No	Landuse	No	Maintenance	Yes
Safety	Yes	Reliability	No	Multimodal	Yes

### Federal Obligations

Fund Source	Federal Obligations			
	FY21	FY22	FY23	FY24
Local			\$175,000	
CPF			\$700,000	

### Amendments

**Amd 47** 7/6/2023 Approved

This is a new project. Add \$700,000 in Community Project Funding (CPF) and local match (\$175,000) to FFY23.

Date Requested 4/24/2023

## **POLICY BOARD AGENDA 07/06/23; ITEM B.-6.**

### **FY21 – FY24 TIP AMENDMENT: CITY OF RICHMOND REQUEST – NORTH-SOUTH BUS RAPID TRANSIT LINE**

#### **Richmond Regional Transportation Planning Organization**

**REQUESTED ACTION:** Review the requested amendment of the FY21 – FY24 Transportation Improvement Program (TIP) to add a new project.

**BACKGROUND:** The RRTPO has received a request from the City of Richmond to add a new project to the FY21 – FY24 TIP.

- COR002 – North South Bus Rapid Transit Line (City of Richmond)

This project has received Community Project Funding (CPF), also known as Congressionally Directed Spending (CDS). This funding totals \$3,000,000 and is administered by the Federal Transit Administration (FTA). CPF requires a 20% match, or \$750,000.

The CPF funding will be used to implement ITS technologies to facilitate safe and efficient transportation for all users including dedicated communication with the Richmond Signal System, emergency vehicle preemption, and transit signal priority. This project will provide reliable, high-speed communications to the proposed BRT stations and amenities, including real-time bus arrival information signs, totem bus arrival indicator lights, CCTV security cameras, emergency phones, ticket vending machines, transit signal priority queue jump technologies, and signal operations via an advanced fiber optic network.

This project is a portion of a larger project that will improve multimodal safety and operations along the 0.9-mile stretch of Commerce Road and 9th Street (Manchester Bridge) between Perry Street and Byrd Street by providing a 14' continuous shared use path within a widened median as part of the regional Fall Line Trail. The project will also provide a dedicated bus-only lane along both sides of 9th Street between Semmes Avenue and Byrd Street, along 9th Street between Byrd Street and Leigh Street, and along 8th Street between Byrd Street and Leigh Street for a total of 1.9 miles. These other pieces of the larger project are expected to be funded in Smart Scale Round 5.

In consultation with VDOT and DRPT, staff have prepared a TIP amendment to add the project with the FTA-administered earmark funds only. The balance of the larger project is expected to be funded with FHWA-administered funds and handled under a separate project UPC. Project notes will be added to link the two UPCs.

**PUBLIC REVIEW:** A fifteen-day public review was held between June 15 and June 30, consistent with the Public Engagement Plan. Any comments received from this review period will be shared with the board prior to action on this item.



**TAC RECOMMENDATION:** TAC reviewed this request at the June meeting and unanimously recommended approval as presented.

**STAFF RECOMMENDATION:** Staff recommends approval of the TIP amendment as presented.

**REQUESTED ACTION:** The following resolution is presented for consideration:

**Resolved,** that the Richmond Regional Transportation Planning Organization (RRTPO) amends the FY21 – FY24 Transportation Improvement Program (TIP) to add the COR002 - North South Bus Rapid Transit Line project.

**Further Resolved,** that this project is exempt from transportation conformity determination pursuant to 40 CFR § 93.126 under the following exemptions:

- Safety - Traffic control devices and operating assistance other than signalization projects
- Mass Transit - Construction or renovation of power, signal, and communications systems

# FY 2021 to FY 2024 Richmond Region TPO Transportation Improvement Program

## Public Transportation

UPC COR002

**Jurisdiction:** Richmond  
**Route/Street:** Manchester Bridge/8th St/9th St  
**Description:** North-South Bus Rapid Transit Line  
**Scope:** Transit  
**From:** Leigh St  
**To:** Perry St  
**Length:**  
**Administered By:** Locally **Regionally Significant:** No  
**MPO Note:**



### Schedule

Phase	Start	End	Status
Preliminary Engineering (PE):			
Right of Way (RW):			
Construction (CN):			

### Cost Estimates / Previous Obligations

**Cost Estimates**  
**PE:**  
**RW:**  
**CN:**  
**Total:** \$3,750,000

### Goals addressed

Access	No	Congestion	Yes	Environment	Yes
Freight	No	Landuse	Yes	Maintenance	No
Safety	No	Reliability	Yes	Multimodal	Yes

### Federal Obligations

Fund Source	Federal Obligations			
	FY21	FY22	FY23	FY24
Local			\$750,000	
CPF			\$3,000,000	

### Amendments

**Amd 49** 7/6/2023 Approved

This is a new project. Added \$3,000,000 in Community Project Funding (CPF) and local match (\$750,000) in FFY23.

Date Requested 4/24/2023

## **CVTA AGENCY UPDATE**

### **RRTPO Policy Board Meeting – July 6, 2023**

#### **April 28<sup>th</sup> CVTA Meeting**

The Authority meeting included the following presentations and discussions:

- PFM Presentation on Debt & Reserve Policy
- CVTA Leadership and CVTA Finance Committee Membership Rotation Discussion
  - A Nominating Committee will be appointed to develop recommendations

The Authority took action on the following items:

- Approval of revised Project Selection and Allocation Framework
- Approval of locality requests for advanced funding for CVTA leveraged projects
- Approval of five CVTA-Locality SPA Requests for projects in Chesterfield County and an agreement for seven projects in Henrico County.
- [CVTA Wayfinding Plan](#) – approval of AB Design as the Wayfinding Plan Vendor.

#### **June 7<sup>th</sup> CVTA Fall Line Working Group Meeting**

The group reviewed and or took action on the following:

- Addition of non-voting member representatives from the Tri-cities MPO, Sports Backers, FOLAR and the Virginia Capital Trail Foundation
- VDOT Updates – Design Build Phases
- Wayfinding Plan Update
- BikeWalk RVA Fall Line Vision Plan Update

#### **June 12<sup>th</sup> Technical Advisory Committee Meeting**

The committee heard and took action (where applicable) on the following items

- CVTA-Locality SPA Requests (Hanover County)

#### **June 14<sup>th</sup> CVTA Finance Committee Meeting**

The committee heard and took action (where applicable) on the following items

- Draft FY 2024 Administrative & Operating Budget Update
- Bond Counsel Update
- GRTC Regional Public Transportation Plan

#### **Upcoming Meetings:**

- July 10<sup>th</sup> CVTA Technical Advisory Committee
- July 12<sup>th</sup> CVTA Finance Committee
- July 14<sup>th</sup> CVTA. Expected agenda items include:
  - Proposed amendment to the financial policies and procedures
  - Adoption of FY2024 Administrative and Operating Budget
  - Request to issue RFP for Proposals for Bond Counsel
  - Authorization to engage firm to conduct informal confidential rating review
  - CVTA-Locality SPA Requests (Hanover County)
  - GRTC FY24 Regional Public Transportation Plan (RPTP)

## RRTPO POLICY BOARD AGENDA 7/6/23

### FUTURE MEETING TOPICS\*

Topic	Anticipated Meeting Date
Specialized Transit for Rural Localities	September 7, 2023
TA Set-Aside Projects Endorsement	September 7, 2023
VDOT Overview of ITTF Program (RT. 288 NB HSR reference)	September 7, 2023
CTAC Update	December 7, 2023
2024 Transportation Forum	March 2024 (tentative)
Richmond – Census Urbanized Area Boundary	TBD**
Transportation Forum	TBD**
DRPT Transit Modernization and Equity Study	TBD**
STBG/CMAQ competitive grants	TBD**
Update from RMTA/VDOT on tolls	TBD**
Infrastructure Program Presentation - state and federal funding	TBD**

\*This is not a comprehensive list of considerations and is subject to change.

\*\*Staff is working to schedule dates for upcoming presentations and will update as topics are finalized.