

AGENDA

RICHMOND REGIONAL TRANSPORTATION PLANNING ORGANIZATION TECHNICAL ADVISORY COMMITTEE

Tuesday, April 11, 2023, 9:00 a.m.
Zoom Meeting

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_qjCTMRpvSRSAmc9ZQL33_w

1. Welcome and Introductions

(Smidler)

2. Roll Call & Certification of a Quorum

(Firestone)

3. Consideration of Amendments to the Meeting Agenda

(Smidler)

4. [Approval of March 14, 2023, TAC Meeting Minutes](#) – page 3

(Smidler)

Action requested: approval of minutes as presented (voice vote).

5. Open Public Comment Period

(Smidler/5 minutes)

6. TAC Chairman's Report

(Smidler/10 minutes)

7. RRTPO Update

(Parsons/Aryal/10 minutes)

a. **[CTAC Update](#)** – page 8

8. [Socioeconomic Data 2050 Future Year Data Approval](#) – page 10

(Aryal/10 minutes)

Action requested: motion to approve the 2050 Future Year Data at the Traffic Analysis Zone (TAZ), Jurisdictional and Regional levels and recommend RRTPO Policy Board for the approval of the data as it is presented by RRTPO staff.

9. GRTC FY24 Regional Public Transportation Plan (RPTP)

(Torres/10 minutes)

Discussion item; review of FY24 priorities.

10. **FY21 – FY24 TIP Amendments: Highway Maintenance Groupings** – page 88
(Busching/10 minutes)
Action requested: Provide a recommendation to the policy board on three (3) proposed TIP amendments from VDOT.
11. **TIP Illustrative Project List** – page 94
Information item.
(Busching/10 minutes)
12. **Transportation Agency Updates**
(10 minutes)
 - a. **DRPT** – Dubinsky
 - b. **GRTC** – Torres
 - c. **RideFinders** – O’Keeffe
 - d. **VDOT** - Mueller
13. **Future Meeting Topics** – page 96
(Smidler/5 minutes)
14. **TAC Member Comments**
(Smidler /5 minutes)
15. **Next Meeting: April 26, 2023, 9:00 a.m.**
(Smidler)
16. **Adjournment**
(Smidler)

**RICHMOND REGIONAL TRANSPORTATION PLANNING ORGANIZATION
TECHNICAL ADVISORY COMMITTEE (TAC)**

ZOOM MEETING MINUTES

March 14, 2023, 9:15 a.m. (following the ICG meeting)

MEMBERS and ALTERNATES (A) PRESENT:

Town of Ashland		Charles City County		Chesterfield County	
Nora D. Amos	X	Gary Mitchell	X	Barbara K. Smith	X
Vacant (A)		Rhonda Russell (A)		Chessa Walker (A)	X
Goochland County		Hanover County		Henrico County	
Austin Goyne	X	Joseph E. Vidunas, FY23 Vice Chair	X	Sharon Smidler, FY23 Chair	X
Thomas M. Coleman (A)	X	J. Michael Flagg (A)		Todd Eure (A)	
New Kent County		Powhatan County		City of Richmond	
Amy Inman	X	Bret Schardein		Dironna Moore Clarke	X
Kelli Le Duc (A)		Vacant (A)		Vacant (A)	
Capital Region Airport Commission		DRPT		GRTC	
John B. Rutledge		Tiffany T. Dubinsky	X	Sam Sink	
		Daniel Wagner (A)		Corey Robinson (A)	X
				Patricia Robinson (A)	X
PlanRVA		RideFinders		RMTA	
Chet Parsons	X	Von S. Tisdale		Theresa Simmons	
Sulabh Aryal (A)	X	John O'Keefe (A)	X		
VDOT					
Liz McAdory					
Nicole Mueller (A)	X				

The technology used for the RRTPO Technical Advisory Committee 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](#).

1. Welcome and Introductions

The Richmond Regional Transportation Planning Organization (RRTPO) Technical Advisory Committee (TAC) Chair, Sharon Smidler, presided and called the March 14, 2023, TAC meeting to order at 9:14 a.m.

2. Roll Call & Certification of a Quorum

Janice Firestone, Program Manager, took attendance by roll call and certified that a quorum was present.

3. Consideration of Amendments to the Meeting Agenda

Chair Smidler announced two changes to the agenda: 1. Item 10. Project Cost Estimating and Overruns will be changed to an action item and Item 12. FY24-FY29 STBG/CMAQ Allocations will be changed to an information item.

On motion by Sharon Smidler, seconded by Gary Mitchell, the RRTPO Technical Advisory Committee approved meeting agenda as amended (voice vote).

4. Approval of February 14, 2023, Meeting Minutes

On motion by Sharon Smidler, the RRTPO Technical Advisory Committee approved the meeting minutes as presented (voice vote; Austin Goyne abstained).

5. Open Public Comment Period

There were no requests to address the committee.

6. TAC Chairman's Report

Chair Smidler announced two events:

- [RVA Engage Webinar – Transportation – why it matters and what you can do](#) – Wednesday, March 15th from 6-7:30pm
- [RRTPO Transportation Forum](#) - Friday, March 17th from 8-10am at Main Street Station.

7. RRTPO Update

Chet Parsons did not have a formal update but reminded everyone that both of the events Chair Smidler mentioned require registration.

8. 2050 Socioeconomic Data Workgroup - Update

Sulabh Aryal, PlanRVA, provided this update and offered to answer any questions. The update is posted with the [meeting documents](#).

9. Competitive Funding Opportunities

Barbara Jacocks, PlanRVA, provided this presentation, which is posted with the [meeting documents](#). Following the presentation, TAC members had questions and Ms. Jacocks clarified that transit information is also welcome. TAC members expressed their appreciation for the work done and stressed the importance of this being a living document that is regularly updated. Staff reported that the plan is for it to be readily accessible and easy to use for members as well as the larger community.

10. Project Cost Estimating & Overruns

Myles Busching, PlanRVA, provided an overview of the recent work done on this matter. The presentation is posted with the [meeting documents](#). The policy board has referred this question of how to address cost estimating and overruns to TAC with the following requests:

1. Provide an explanation for the cost increases in all cases where an active or recently completed project has exceeded its original budget (requested last month); and,
2. Determine what policy changes are needed (if any) to reduce cost overruns and their impacts on regional funding programs. Some options to consider include:
 - a. Using more conservative estimate assumptions (like Smart Scale)

- b. Increasing project definition before selection (e.g., requiring 30% design)
- c. Reducing TPO exposure to overruns by awarding funds for a single phase or fixed dollar amounts
- d. Improving time to delivery

Committee members discussed the using the VDOT cost estimating workbook to ensure consistency/accuracy. It was noted that using that workbook might result in estimates being higher, but it will level the playing field between locally and VDOT administered projects. There was a discussion about the need to address projects that take long periods of time. Committee members also discussed the pros and cons of the option of increasing project definition before selection. It was suggested that localities agree to fund any overage on locally administered projects. It was noted that locality requests to locally administer projects are heavily vetted by VDOT prior to approval.

On motion of Austin Goynes, seconded by Joseph Vidunas, the RRTPO Technical Advisory Committee voted to recommend the Policy Board approve using the VDOT cost estimating workbook for all projects; if locality chooses not to use the workbook, that project will not be eligible for additional RRTPO funding; additionally the cost estimating workbook performance will be reviewed periodically (roll call vote).

Jurisdiction/Agency	Member	Aye	Nay	Abstain	Absent
Town of Ashland	Nora D. Amos	X			
Charles City County	Gary Mitchell			X	
Chesterfield County	Barbara K. Smith	X			
Goochland County	Austin Goynes	X			
Hanover County	Joseph E. Vidunas, Vice Chair	X			
Henrico County	Sharon Smidler, Chair	X			
New Kent County	Amy Inman	X			
Powhatan County	Bret Schardein				X
City of Richmond	Dironna Moore Clarke	X			
Capital Region Airport Commission	John B. Rutledge				X
DRPT	Tiffany Dubinsky	X			
GRTC Transit System	Patricia Robinson	X			
PlanRVA	Chet Parsons	X			
RideFinders	John O'Keeffe (A)	X			
RIC Metropolitan Transp. Authority	Theresa Simmons				X
VDOT	Nicole Mueller	X			
Totals		12	0	1	3

11. Draft FY24 – FY27 TIP & Regional Conformity Assessment

Mr. Busching presented this request and provided an overview of the information on the website (www.rttpotip.org) and how to use the site. He noted there are two non-federal, locally submitted projects that have not yet been added to the TIP; they will be added to the document prior to the opening of the public comment period.

On motion of Austin Goyne, seconded by Dironna Moore Clarke, the RRTPO Technical Advisory Committee voted recommend RRTPO Policy Board approval of the following resolution (roll call vote):

RESOLVED, that the Richmond Regional Transportation Planning Organization (RRTPO) Technical Advisory Committee authorizes staff to open a 30-day public review period on the draft FY24 – FY27 Transportation Improvement Program (TIP) and Regional Conformity Assessment pursuant to the RRTPO’s Public Engagement Plan.

Jurisdiction/Agency	Member	Aye	Nay	Abstain	Absent
Town of Ashland	Nora D. Amos	X			
Charles City County	Gary Mitchell			x	
Chesterfield County	Barbara K. Smith	X			
Goochland County	Austin Goyne	X			
Hanover County	Joseph E. Vidunas, Vice Chair	X			
Henrico County	Sharon Smidler, Chair	X			
New Kent County	Amy Inman	X			
Powhatan County	Bret Schardein				X
City of Richmond	Dironna Moore Clarke	X			
Capital Region Airport Commission	John B. Rutledge				X
DRPT	Tiffany Dubinsky	X			
GRTC Transit System	Patricia Robinson	X			
PlanRVA	Chet Parsons	X			
RideFinders	John O’Keeffe (A)				X
RIC Metropolitan Transp. Authority	Theresa Simmons				X
VDOT	Nicole Mueller	X			
Totals		11	0	1	4

12. FY24 – FY29 STBG/CMAQ Allocations

Mr. Busching presented this matter and explained the new information that was received after the agenda packet went out. Staff is requesting additional time to review the changes this will make to the project selection. He noted that the matter will be brought back to TAC at the April 11th meeting with a recommendation for approval. He asked for TAC member input on the process.

13. Transportation Agency Updates

a. DRPT

Tiffany Dubinsky provided an update on DRPT’s recent and upcoming activities, which is posted with the [meeting documents](#)..

b. GRTC

Corey Robinson provided an update on recent and upcoming GRTC activity. A double shelter was installed in Henrico County; the third for the year. Friday is Transit Driver Appreciation Day. Testing, training and emergency drills will be done on the downtown

transfer station operations at the end of March or beginning of April with an anticipated opening in May.

c. RideFinders

John O'Keeffe, RideFinders, provided an update (following the meeting) on the following RideFinders' activities:

- Started 2 new vanpools Newport News to Richmond and Colonial Heights to Fort Pickett both 7 passenger vanpools.
- Submitted 3 grant applications to DRPT
- Promoted the 2nd Annual Caring Commutes Challenge – a month-long challenge encouraging commuters to show love for the environment by logging their “green” commute trips during the month and participating in our social media daily prompts the week prior to Valentine’s Day.
- Shared multiple partner notices/announcements on Twitter, Instagram and Facebook from-Chesterfield County, Henrico County, Colonial Heights, VDOT, RVAGreen 2050, PlanRVA and the City of Richmond.
- RideFinders along with other TDM agencies in the state will be presenting at the Virginia Transit Association Conference in May.

d. VDOT

Nicole Mueller provided an update on VDOT's recent and upcoming activities, which is posted with the [meeting documents](#).

16. Future Meeting Topics

Chair Smidler reviewed the future meeting topics. Mr. Parsons noted there are two BRT feasibility studies are underway; TAC may be interested in a presentation on these. Members expressed an interest in having it on the next meeting agenda; the north-south BRT corridor study in particular.

17. TAC Member Comments

Nora Amos commented that Ashland is moving forward with the microtransit project. There were no other member comments.

18. Next Meeting: November

Chair Smidler noted the next meeting will be held on April 11, 2023.

19. Adjournment

Chair Smidler adjourned the meeting at 11:06 a.m.

MEMORANDUM

To: Richmond Regional Transportation Planning Organization (RRTPO) Policy Board
RRTPO Technical Advisory Committee

From: Kenneth Lantz, Jr., RRTPO Mobility Manager

Date: March 16, 2023

Subj: RRTPO Community Transportation Advisory Committee (CTAC) Meeting Report

The following is a brief report on discussion items from the March 16, 2023, CTAC meeting:

General Assembly Update

Information was presented and discussed concerning the 2023 session of the General Assembly.

John Easter of Chamber RVA noted that with a divided government, there were relatively few major initiatives coming out of the current session, and very little focus on transportation issues. Mr. Easter did note that one legislative proposal would create a transportation partnership opportunity fund that would support the transportation aspects of economic development projects. The amount to be allocated to the fund will be decided by the legislature as part of the budget process.

Victoria Higgins of the Chesapeake Climate Action Network, Virginia Conservation Network, noted that under consideration was a bill that would create an electric vehicle rural infrastructure and fund program. The program would assist private developers with non-utility costs associated with the installation of electric vehicle charging stations. Eligible projects would qualify for up to 70% of the non-utility costs of electric vehicle charging stations, and the total amount of grants awarded in any fiscal year would be limited to \$25 million.

Lisa Guthrie reviewed the breakdown of funding available for transit services through the Commonwealth Mass Transit Fund. Almost \$309 million is allocated to the Mass Transit Fund, and GRTC's share is approximately \$9.3 million. Ms. Guthrie also noted that a Transit Ridership Incentive Program (TRIP) provided funds to improve transit's regional connectivity and reduce barriers to transit use by supporting low-income and zero-fare programming. A bill under consideration would allow the Commonwealth Transportation Board to allocate up to 30% of the TRIP funds for bus shelters and electric bus infrastructure. Also under consideration by the session is a bill that would make assault of a public transit operator a Class 1 Misdemeanor.

Brantley Tyndall of Bike Walk RVA reviewed the functions of his organization, as well as Virginia and RVA crash trends. He noted that Virginia pedestrian fatalities had increased by over 36% between 2021 and 2022, and that the number of RVA pedestrian fatalities had increased by over 30% between 2021 and 2022. For persons age 50+ in the

Richmond region, pedestrian fatalities had increased by over 111% between 2021 and 2022. Mr. Tyndall said that continued advocacy efforts, additional bicycle/pedestrian infrastructure and Vision Zero programs are all needed to address pedestrian fatalities.

Next CTAC Meeting

The next CTAC meeting is scheduled for Thursday, May 18, 2023.

TAC AGENDA 4/11/23; ITEM 9.

Socioeconomic Data 2050 Future Year Data Approval

Richmond Regional Transportation Planning Organization

REQUESTED ACTION: The RRTPO TAC is requested to review and approve the 2050 Future Year Socioeconomic Data as approved by the Socioeconomic Data Workgroup and recommend RRTPO Policy Board for the approval of the data as presented. This data will be used in the Richmond/Tri-Cities (RTC) Regional Travel Demand Model update process.

BACKGROUND: The Richmond Regional Transportation Planning Organization is in 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 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 is expected to approve 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 TAC 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 is expected to approve the 2050 Future Year Data (in their April 6, 2023, meeting) at the Traffic Analysis Zone (TAZ), Jurisdictional and Regional levels and recommend that the RRTPO Technical Advisory Committee (TAC) approve the data as it is presented.

STAFF RECOMMENDATION: RRTPO staff concurs with the Socioeconomic Data Workgroup recommendations.

TAC ACTION REQUESTED: The TAC is requested to approve the 2050 Future Year Data at the Traffic Analysis Zone (TAZ), Jurisdictional and Regional levels and recommend RRTPO Policy Board for the approval of the data as it is presented by RRTPO staff.

SA

Attachments

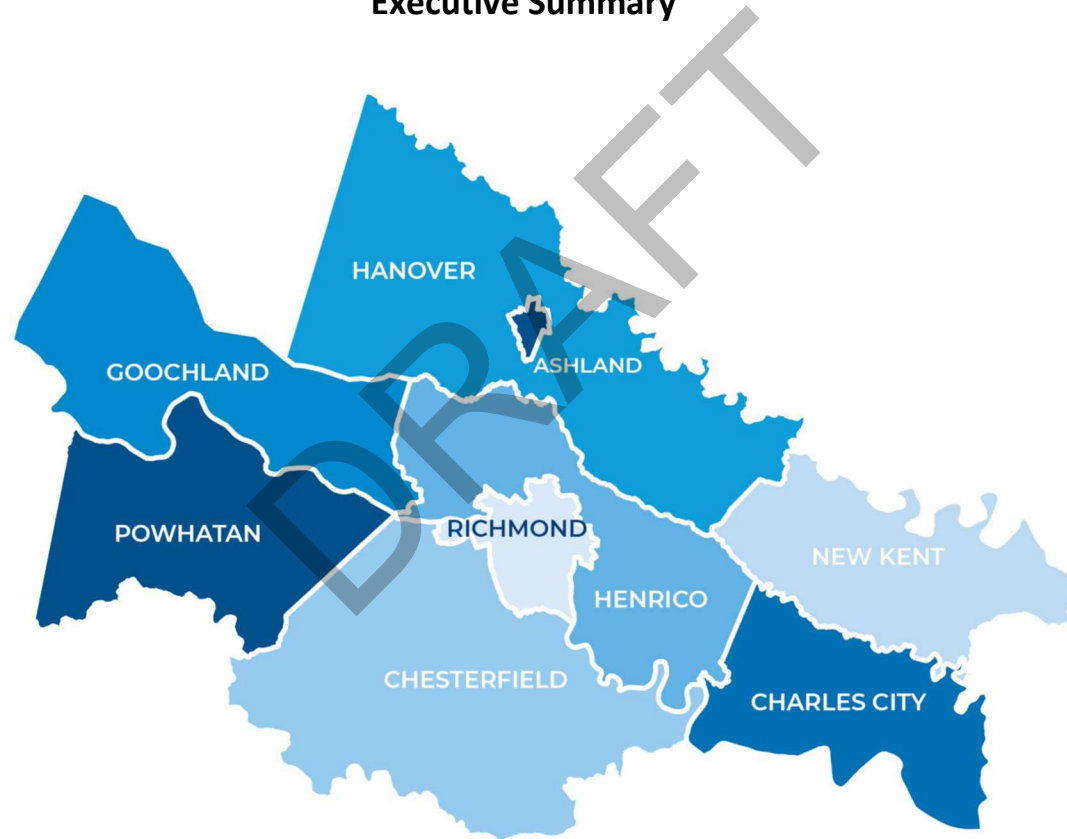
Socioeconomic Data Report for the 2017 Base Year and the 2050 Forecast Year

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

The contents of this report reflect the views of the RRTPO. PlanRVA and RRTPO are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Virginia Department of Rail and Public Transportation (VDRPT) or the Virginia Department of Transportation (VDOT). This report does not constitute a standard, specification, or regulation.

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government, the Commonwealth of Virginia, PlanRVA and the RRTPO member organizations assume no liability for the contents or use thereof.

NONDISCRIMINATION

PlanRVA and the 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 <https://planrva.org> or call the Title VI Coordinator at 804- 323-2033.

NO DISCRIMINACIÓN

Aviso de Título VI abreviado al público: RRTPO cumple plenamente con Título VI de la ley de Derechos Civiles de 1964 y con estatutos relacionados en todas programas y actividades. El RRTPO se esforzará por proporcionar alojamiento y servicios razonables para las personas que requieren asistencia especial para participar en esta oportunidad de participación pública. Para más información sobre accesibilidad de la reunión o para obtener los documentos de reclamación de Título VI, por favor visita <https://planrva.org> o llama el Coordinador del Título VI en 804-323-2033.

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.

This page is left blank for future RRTPO board approval letter.

DRAFT

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.

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

2017 - 2050 Socioeconomic Data Workgroup Members List

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

Table of Contents

Introduction.....	1
2017 Base Year Summary Table	2
2050 Forecast Year Summary Table	3
Methodology for 2017 Base Year	4
Methodology for 2050 Forecast Year	6

DRAFT

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 ¹	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
Ashland²	7,785	6,320	1,465	3,024	2,917	4,954	713	1,418	8,636	3,065	5,571
Charles City	7,126	7,126	0	3,328	2,874	8,672	650	0	1,668	96	1,572
Chesterfield³	340,848	336,197	4,651	132,586	124,595	293,337	62,779	20,985	131,120	34,646	96,474
Goochland	23,536	22,812	724	9,679	8,981	23,485	2,925	531	13,966	1,360	12,606
Hanover⁴	109,595	106,677	2,918	41,706	40,247	97,794	18,226	1,418	50,625	12,969	37,656
Henrico	335,283	328,396	6,887	135,628	132,421	279,241	57,860	11,490	191,240	45,877	145,363
New Kent	21,347	20,740	607	8,389	8,008	21,868	3,336	100	3,956	948	3,008
Powhatan	29,147	27,150	1,997	11,022	10,442	29,566	4,635	0	6,092	1,577	4,515
Richmond	224,798	210,302	14,496	108,043	99,958	129,444	29,536	41,746	152,044	24,468	127,576
Region Total	1,091,680	1,059,400	32,280	450,381	427,526	883,407	179,947	76,270	550,711	121,941	428,770

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

²Displayed here separately, but also included as a part of Hanover County

³Chesterfield County TAZs are located in both the RRTPO and Tri-Cities MPO

⁴Includes the Town of Ashland

2050 Forecast Year Summary Table

Jurisdiction ¹	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
Ashland²	8,822	7,604	1,218	3,763	3,511	6,139	776	1,477	13,408	4,953	8,455
Charles City	6,552	6,552	0	2,892	2,643	7,973	473	0	1,850	113	1,737
Chesterfield³	504,814	499,044	5,770	191,692	184,489	432,400	77,677	22,272	186,051	45,719	140,332
Goochland	34,742	33,825	917	14,373	13,323	34,571	4,182	531	21,704	2,091	19,613
Hanover⁴	142,156	140,085	2,071	55,470	53,103	128,181	19,843	1,477	68,361	16,543	51,818
Henrico	422,954	418,846	4,108	177,175	168,992	356,989	74,880	12,378	246,718	53,576	193,142
New Kent	36,081	35,509	572	14,478	13,712	37,432	6,102	310	6,299	1,336	4,963
Powhatan	39,576	38,501	1,075	16,198	14,808	41,963	6,362	0	7,704	1,886	5,818
Richmond	278,538	266,920	11,618	141,740	129,582	159,489	42,990	41,809	178,256	26,762	151,494
Region Total	1,465,413	1,439,282	26,131	614,018	580,652	1,198,998	232,509	78,777	716,943	148,026	568,917

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

²Displayed here separately, but also included as a part of Hanover County

³Chesterfield County TAZs are located in both the RRTPO and Tri-Cities MPO

⁴Includes 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. 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.

DRAFT

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

The contents of this report reflect the views of the RRTPO. PlanRVA and RRTPO are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Virginia Department of Rail and Public Transportation (VDRPT) or the Virginia Department of Transportation (VDOT). This report does not constitute a standard, specification, or regulation.

NOTICE

This document is disseminated under the sponsorship of the U.S. Department of Transportation in the interest of information exchange. The United States Government, the Commonwealth of Virginia, PlanRVA and the RRTPO member organizations assume no liability for the contents or use thereof.

NONDISCRIMINATION

PlanRVA and the 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 <https://planrva.org> or call the Title VI Coordinator at 804- 323-2033.

NO DISCRIMINACIÓN

Aviso de Título VI abreviado al público: RRTPO cumple plenamente con Título VI de la ley de Derechos Civiles de 1964 y con estatutos relacionados en todas programas y actividades. El RRTPO se esforzará por proporcionar alojamiento y servicios razonables para las personas que requieren asistencia especial para participar en esta oportunidad de participación pública. Para más información sobre accesibilidad de la reunión o para obtener los documentos de reclamación de Título VI, por favor visita <https://planrva.org> o llama el Coordinador del Título VI en 804-323-2033.

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.

This page is left blank for future RRTPO board approval letter.

DRAFT

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.

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

2017 - 2050 Socioeconomic Data Workgroup Members List

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

Table of Contents

Introduction.....	1
2017 Base Year Summary Table	2
2050 Forecast Year Summary Table	3
Methodology for 2017 Base Year	4
Methodology for 2050 Forecast Year	6
Jurisdictional Maps and Data.....	10
Town of Ashland	11
Charles City County	13
Chesterfield County.....	15
Chesterfield County.....	16
Goochland County	25
Hanover County	27
Henrico County	33
New Kent County.....	41
Powhatan County.....	43
City of Richmond.....	45

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 ¹	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
Ashland²	7,785	6,320	1,465	3,024	2,917	4,954	713	1,418	8,636	3,065	5,571
Charles City	7,126	7,126	0	3,328	2,874	8,672	650	0	1,668	96	1,572
Chesterfield³	340,848	336,197	4,651	132,586	124,595	293,337	62,779	20,985	131,120	34,646	96,474
Goochland	23,536	22,812	724	9,679	8,981	23,485	2,925	531	13,966	1,360	12,606
Hanover⁴	109,595	106,677	2,918	41,706	40,247	97,794	18,226	1,418	50,625	12,969	37,656
Henrico	335,283	328,396	6,887	135,628	132,421	279,241	57,860	11,490	191,240	45,877	145,363
New Kent	21,347	20,740	607	8,389	8,008	21,868	3,336	100	3,956	948	3,008
Powhatan	29,147	27,150	1,997	11,022	10,442	29,566	4,635	0	6,092	1,577	4,515
Richmond	224,798	210,302	14,496	108,043	99,958	129,444	29,536	41,746	152,044	24,468	127,576
Region Total	1,091,680	1,059,400	32,280	450,381	427,526	883,407	179,947	76,270	550,711	121,941	428,770

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

²Displayed here separately, but also included as a part of Hanover County

³Chesterfield County TAZs are located in both the RRTPO and Tri-Cities MPO

⁴Includes the Town of Ashland

2050 Forecast Year Summary Table

Jurisdiction ¹	Population			Housing		Autos	School Enrollment		Employment		
	Total	In Households	In Group Quarters	Housing Units	Households		K-12	Colleges	Total	Retail	Non-Retail
Ashland²	8,822	7,604	1,218	3,763	3,511	6,139	776	1,477	13,408	4,953	8,455
Charles City	6,552	6,552	0	2,892	2,643	7,973	473	0	1,850	113	1,737
Chesterfield³	504,814	499,044	5,770	191,692	184,489	432,400	77,677	22,272	186,051	45,719	140,332
Goochland	34,742	33,825	917	14,373	13,323	34,571	4,182	531	21,704	2,091	19,613
Hanover⁴	142,156	140,085	2,071	55,470	53,103	128,181	19,843	1,477	68,361	16,543	51,818
Henrico	422,954	418,846	4,108	177,175	168,992	356,989	74,880	12,378	246,718	53,576	193,142
New Kent	36,081	35,509	572	14,478	13,712	37,432	6,102	310	6,299	1,336	4,963
Powhatan	39,576	38,501	1,075	16,198	14,808	41,963	6,362	0	7,704	1,886	5,818
Richmond	278,538	266,920	11,618	141,740	129,582	159,489	42,990	41,809	178,256	26,762	151,494
Region Total	1,465,413	1,439,282	26,131	614,018	580,652	1,198,998	232,509	78,777	716,943	148,026	568,917

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

²Displayed here separately, but also included as a part of Hanover County

³Chesterfield County TAZs are located in both the RRTPO and Tri-Cities MPO

⁴Includes 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. 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.

DRAFT

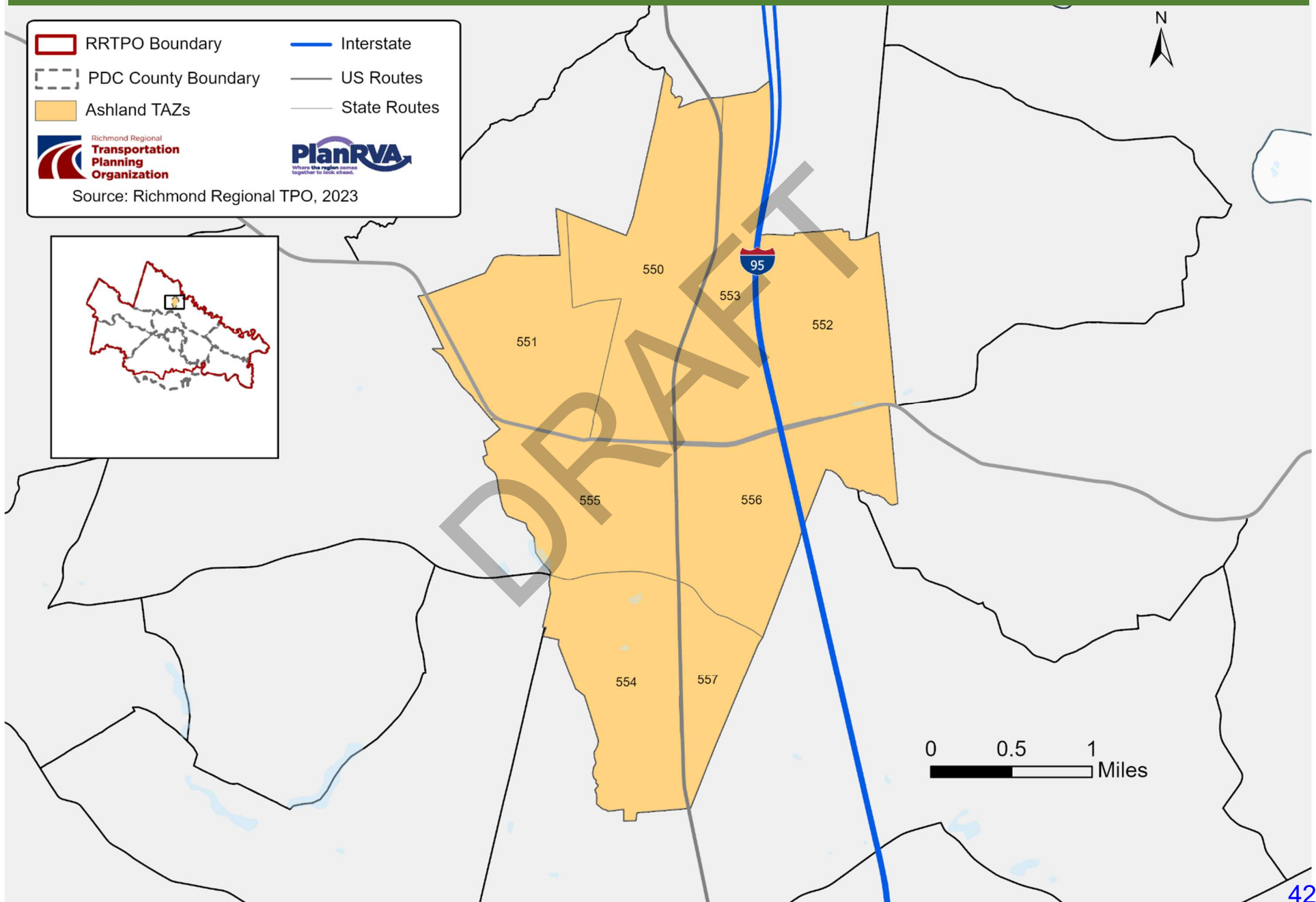
This page is intentionally left blank.

DRAFT

Jurisdictional Maps and Data

DRAFT

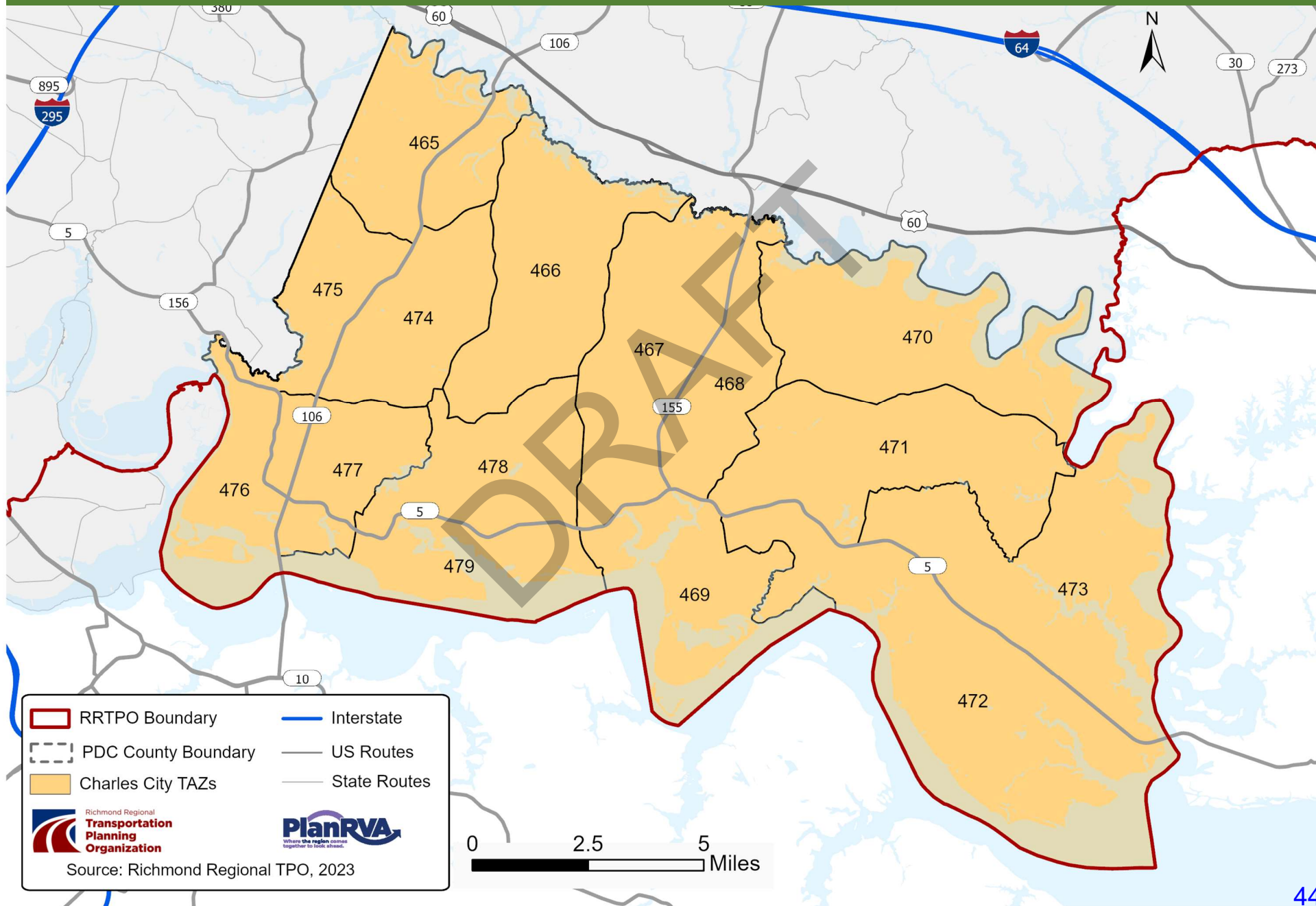
Town of Ashland Map



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

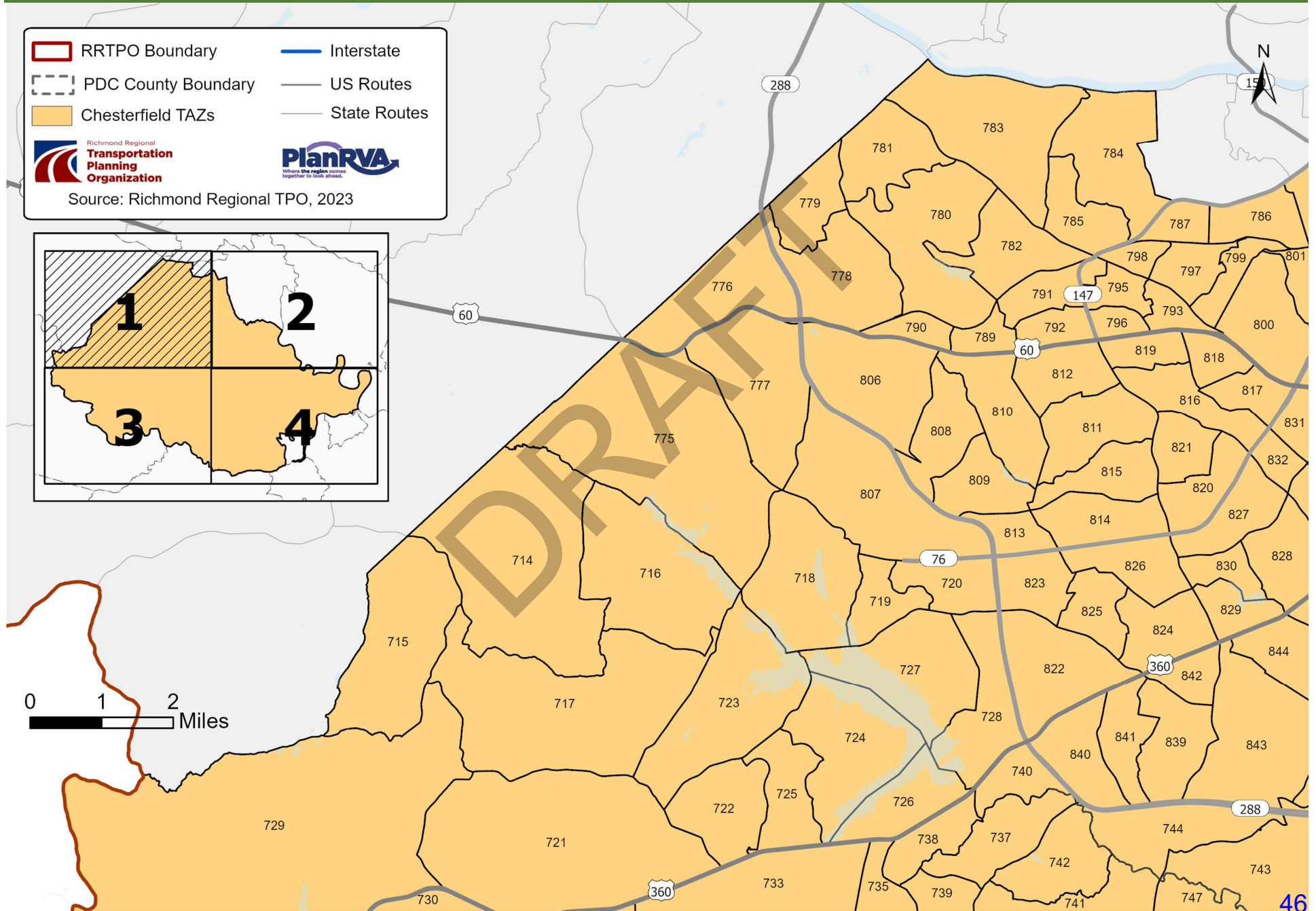
Charles City County Map



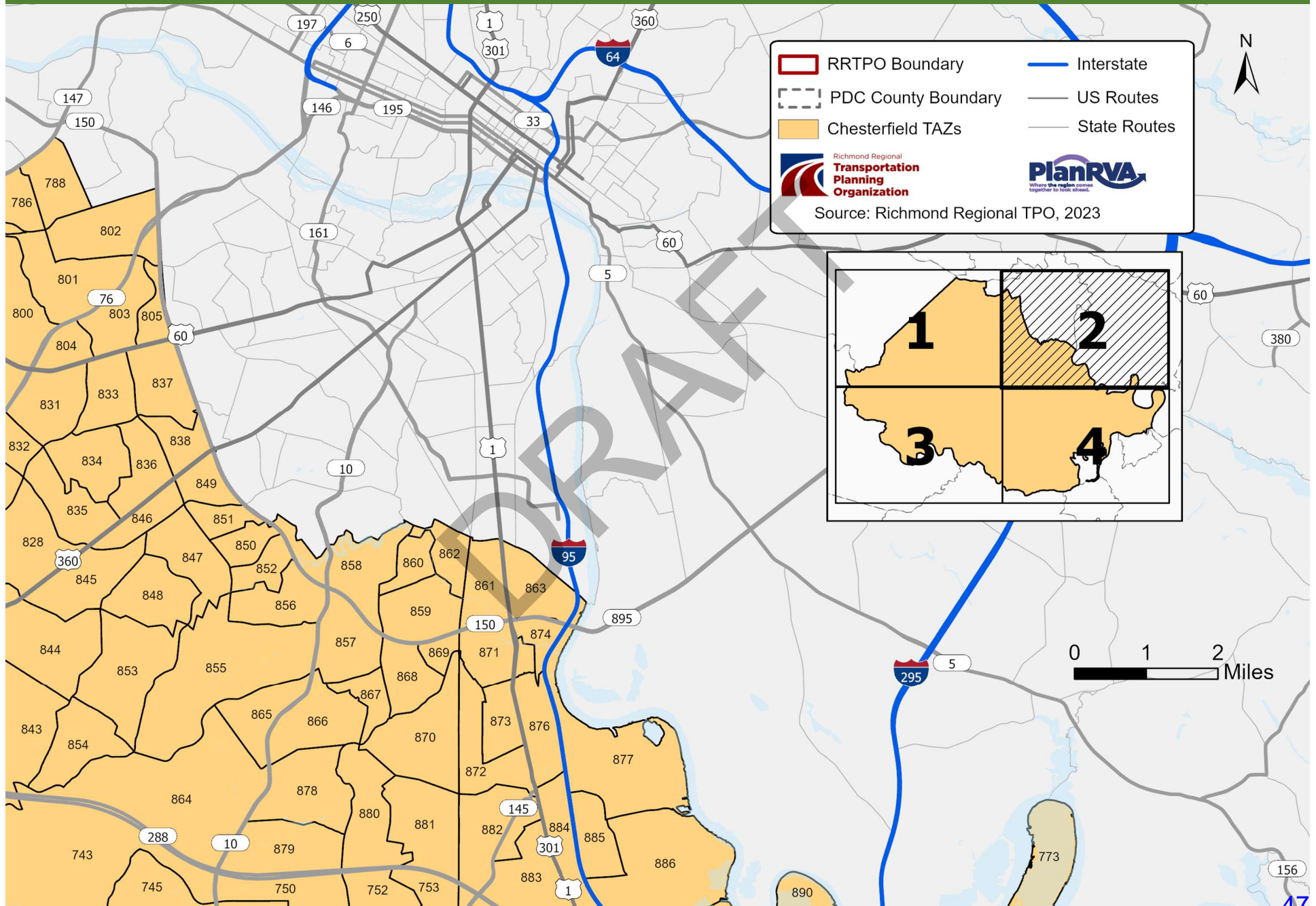
Charles City County

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

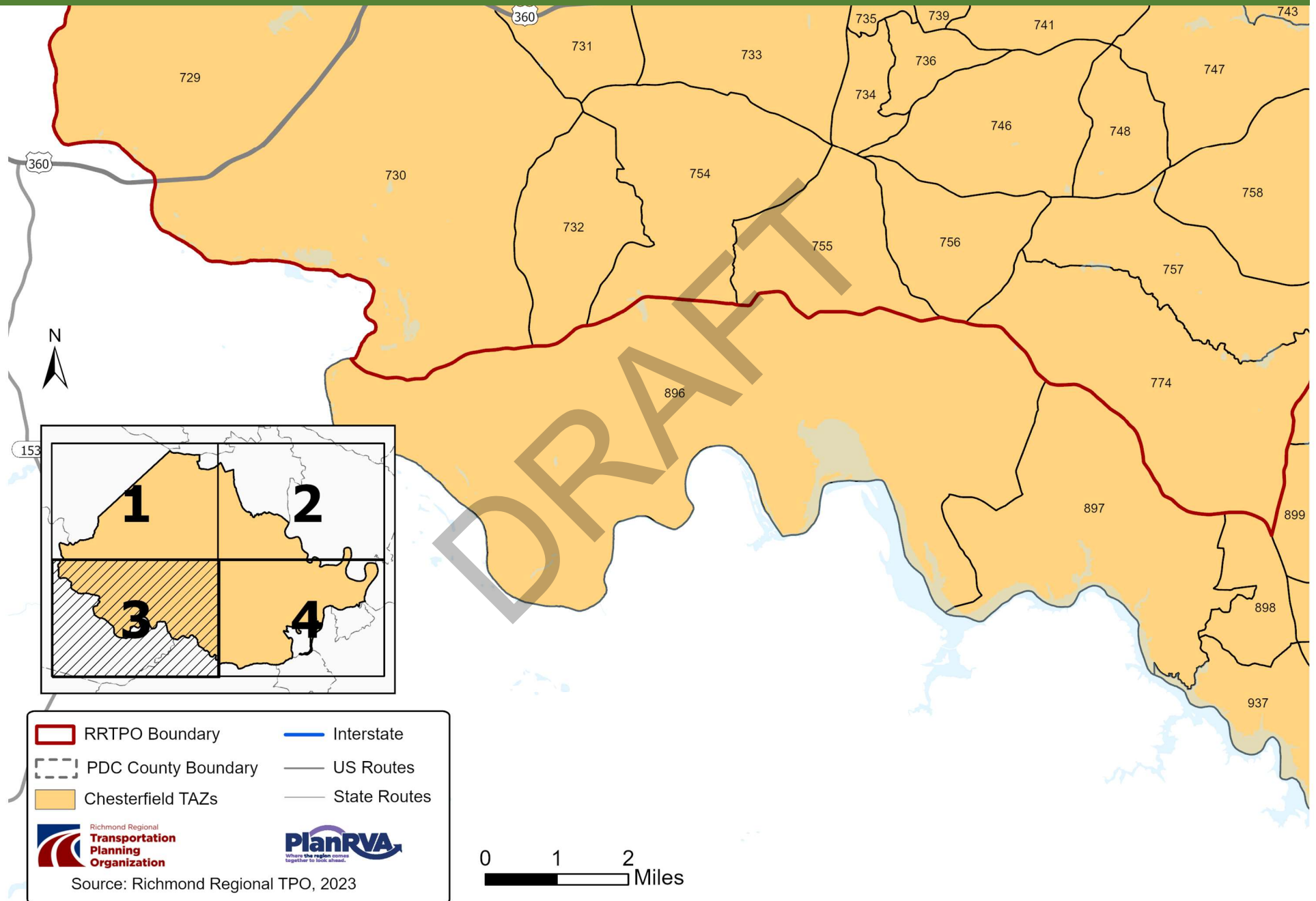
Chesterfield County Map 1



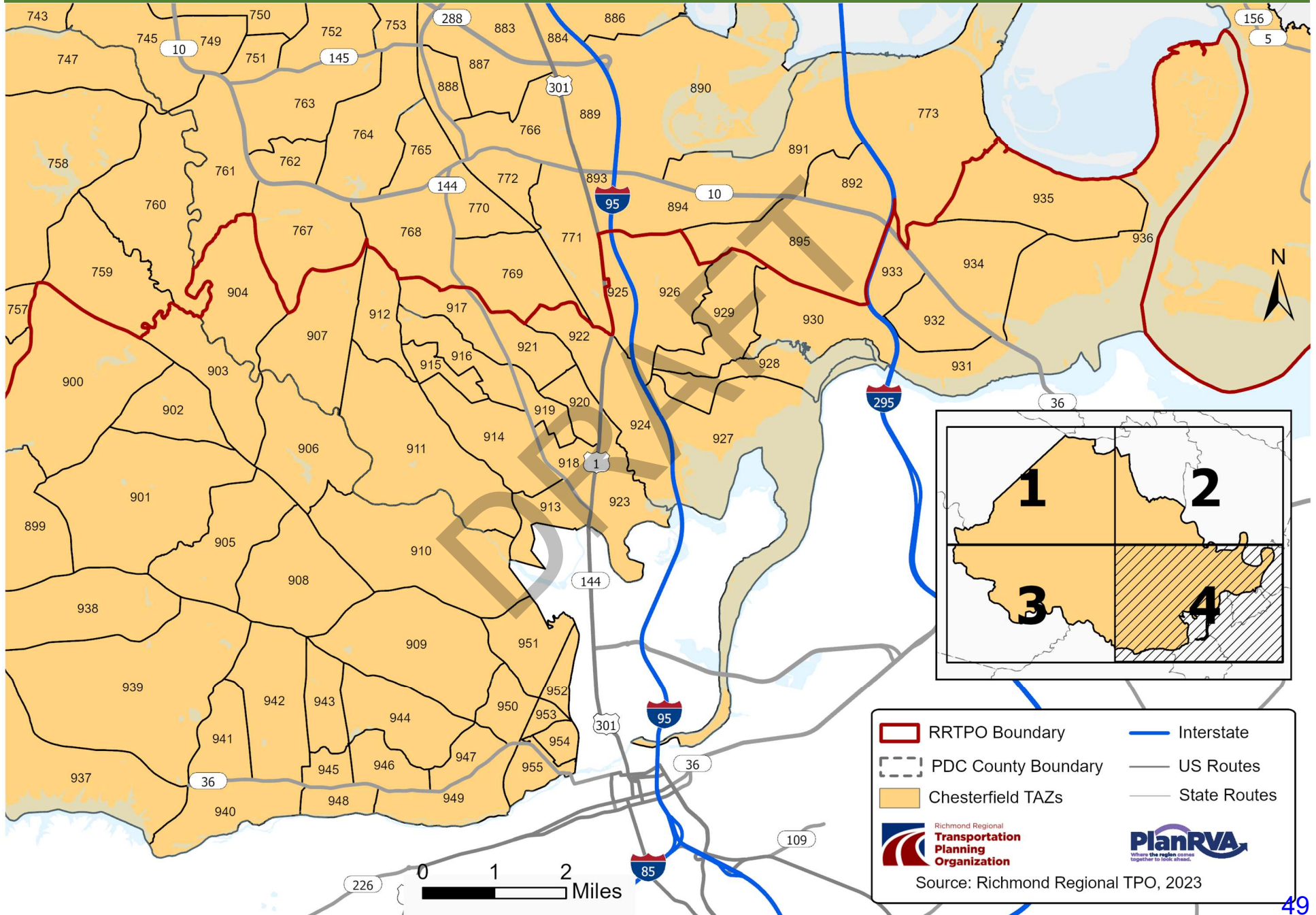
Chesterfield County Map 2



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

*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.

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

*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.

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	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

*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.

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

*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.

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		
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	

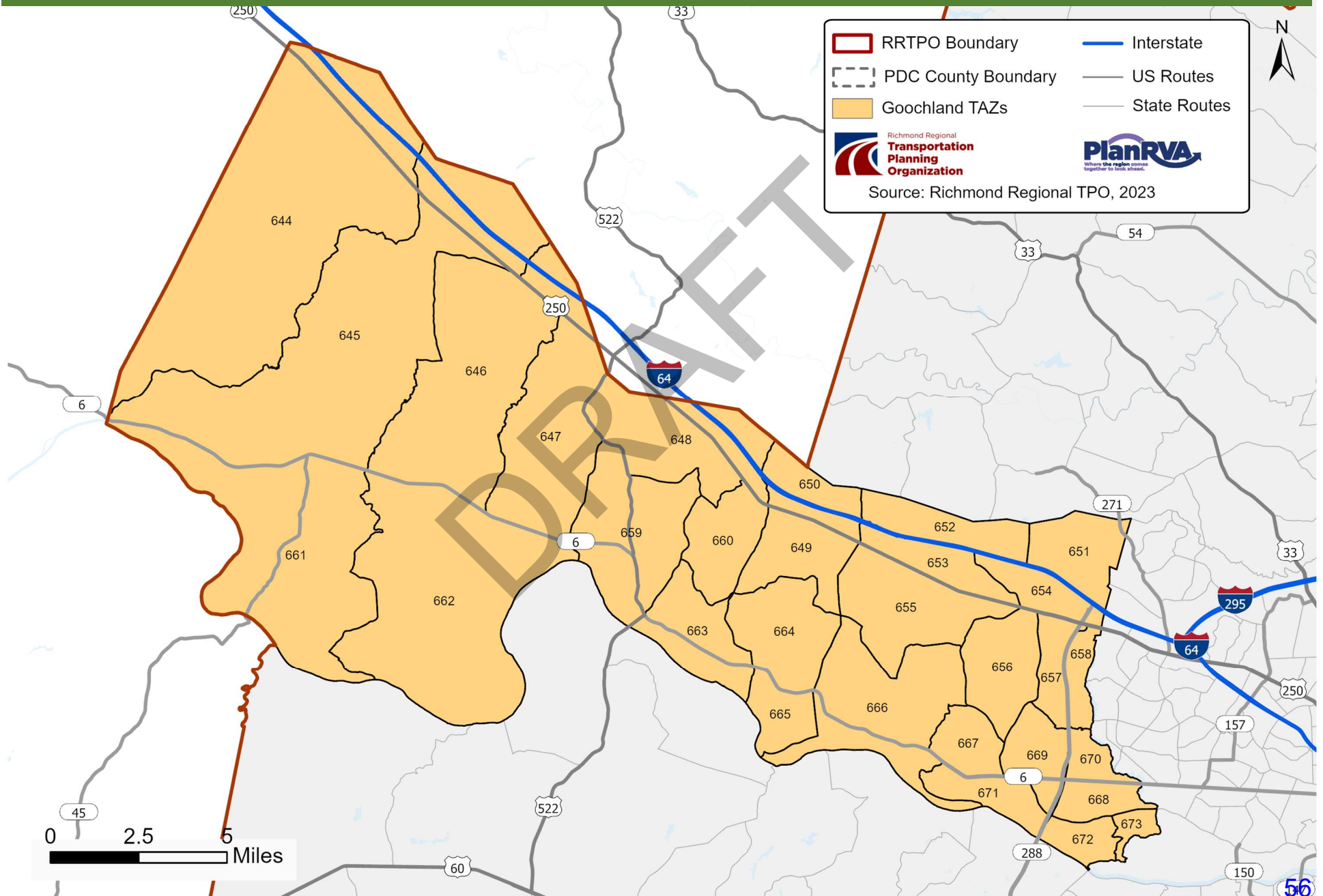
*2017 Employment Data is redacted at the TAZ level when an employer made up at least 80% of employment or there were 3 or less employers. This is required by PlanRVA and Virginia Employment Commission (VEC) data sharing confidentiality agreement.

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

*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.

Goochland County Map

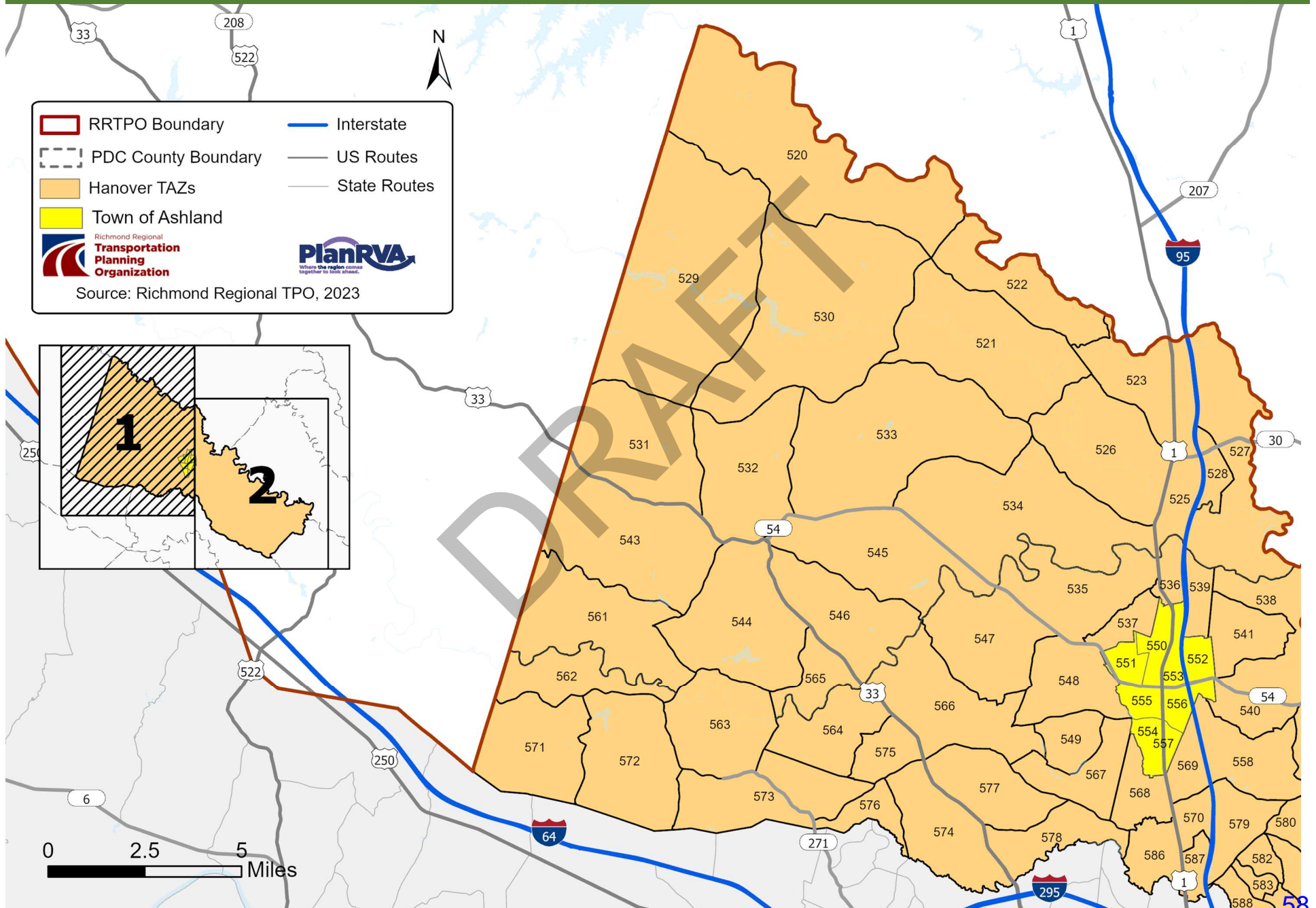


Goochland County

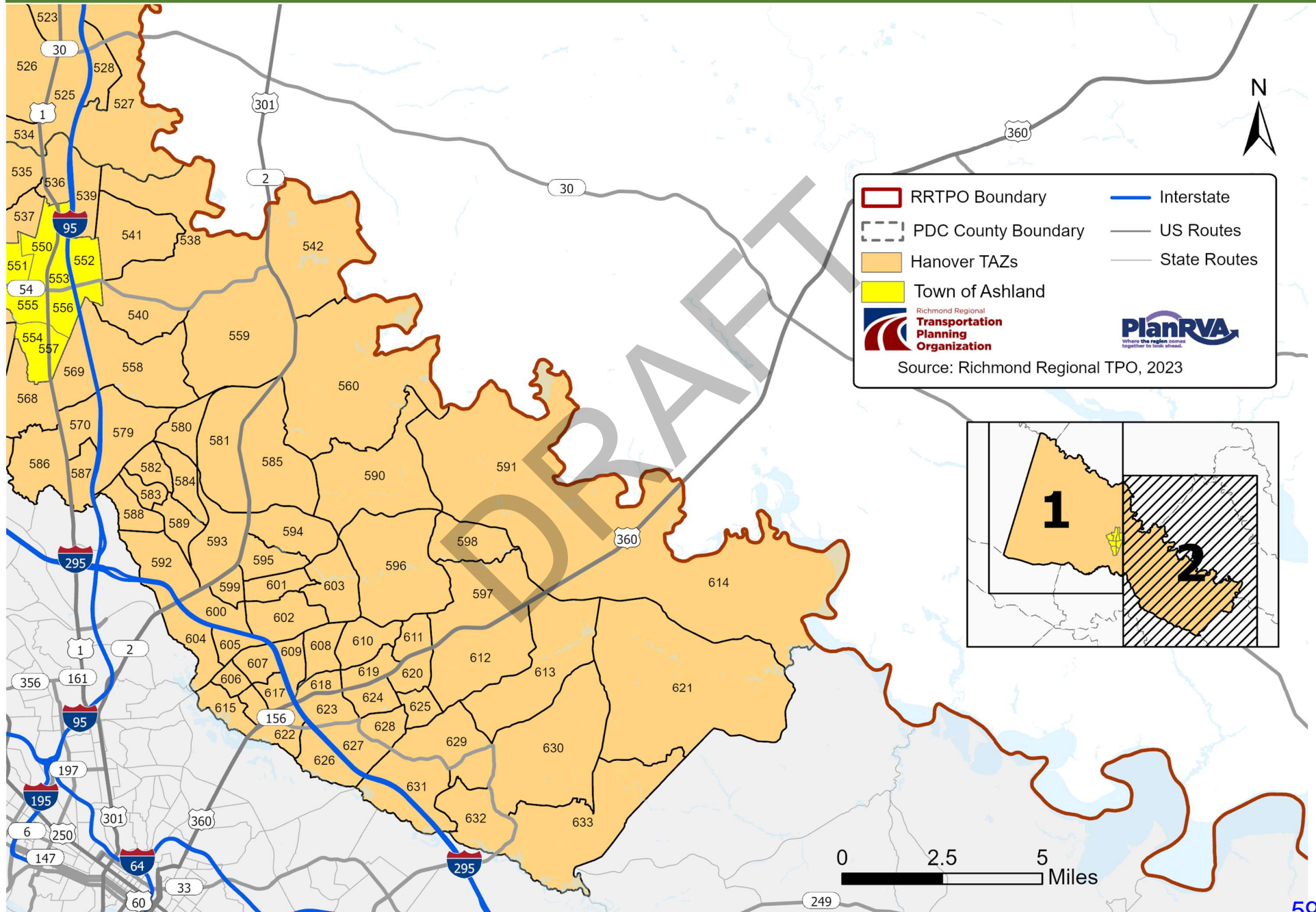
TAZ	Population						Housing				Automobiles	School Enrollment				Employment						
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households			Grade K-12		Colleges		Total		Retail		Non-Retail		
2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	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

*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.

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

*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.

Town of Ashland

Hanover 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	
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

*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.

Town of Ashland

Hanover 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
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

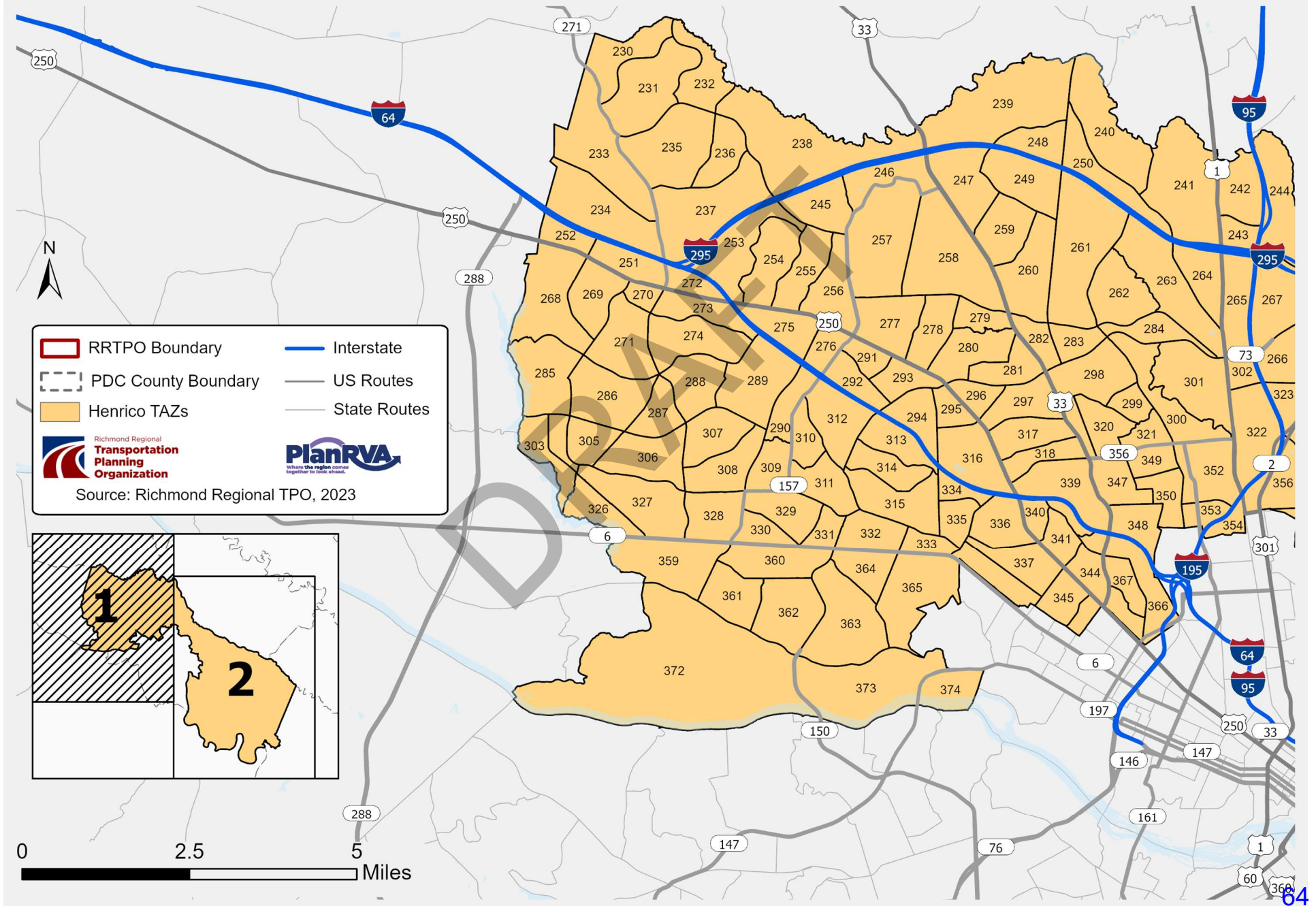
*2017 Employment Data is redacted at the TAZ level when an employer made up at least 80% of employment or there were 3 or less employers. This is required by PlanRVA and Virginia Employment Commission (VEC) data sharing confidentiality agreement.

Hanover County 4

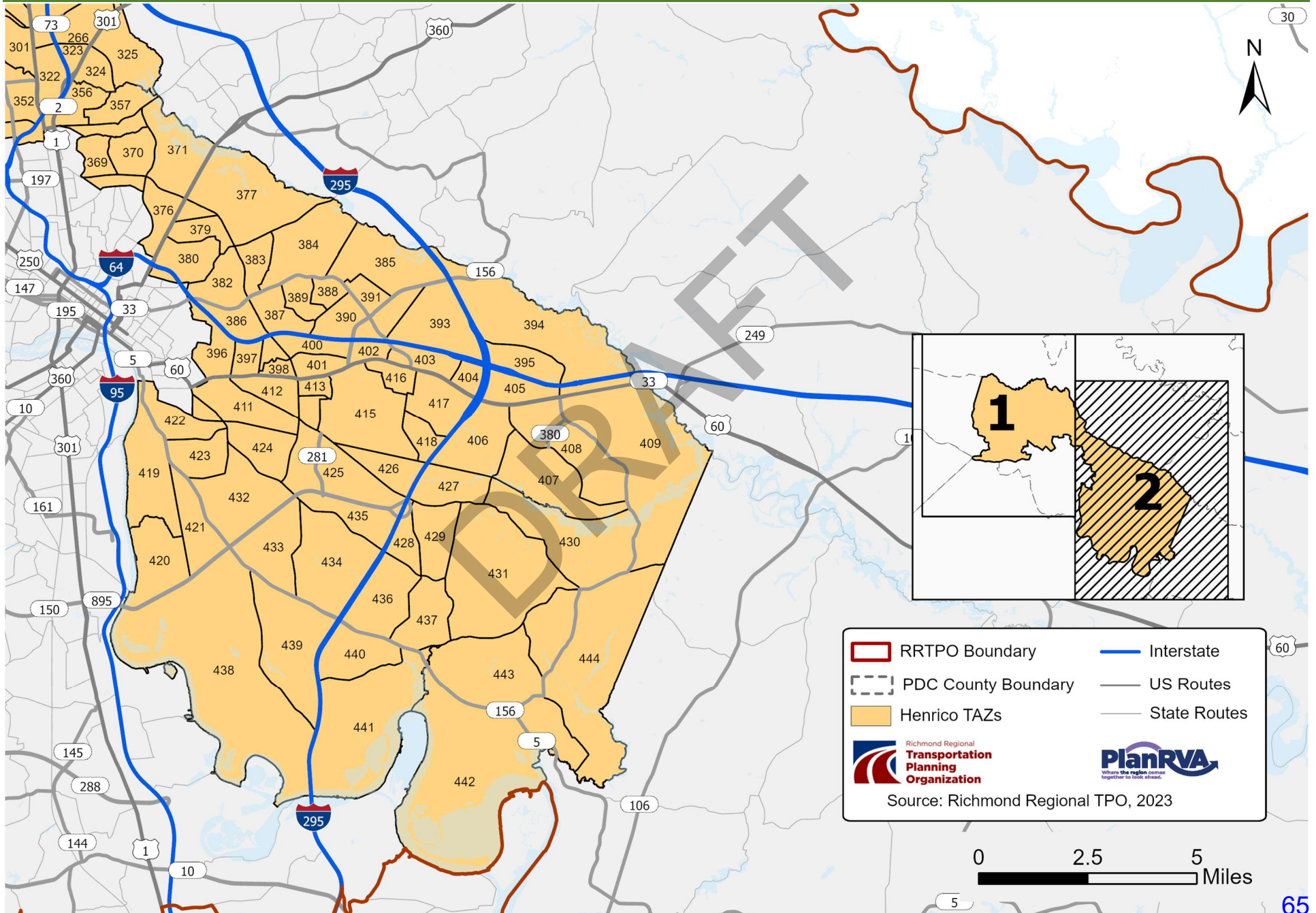
TAZ	Population							Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households		Grade K-12			Colleges		Total		Retail		Non-Retail			
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	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		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		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		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		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		557	676	537	648	1,513	1,826	522	568	0	0	*	142	*	0	*	142
629	661	886	661	886	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		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		199	267	192	256	399	532	0	0	0	0	20	500	14	313	6	187
632	216	251	216	251	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		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		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

*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.

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

*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.

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

*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.

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

*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.

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	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	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	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	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	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	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	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	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	31	40	21	26	10	14
351	875	882	682	746	193	136	280	316	275	301	438	479	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	435	582	182	211	253	371
353	791	799	791	799	0	0	324	338	319	322	526	531	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	85	208	79	194	6	14
355	0	0	0	0	0	0	0	0	0	0	0	0	121	267	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	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	*	633	*	8	*	625
358	512	530	512	530	0	0	210	224	207	214	459	475	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	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	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	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	*	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	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	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	317	376	133	144	184	232
366	207	807	207	807	0	0	85	343	84	327	175	681	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	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	176	210	58	64	118	146
370	315	318	315	318	0	0	129	134	127	128	234	236	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	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	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	304	328	277	307	27	21
374	266	278	266	278	0	0	109	117	107	112	114	119	0	0	0	0	384	388	117	67	267	321

*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.

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

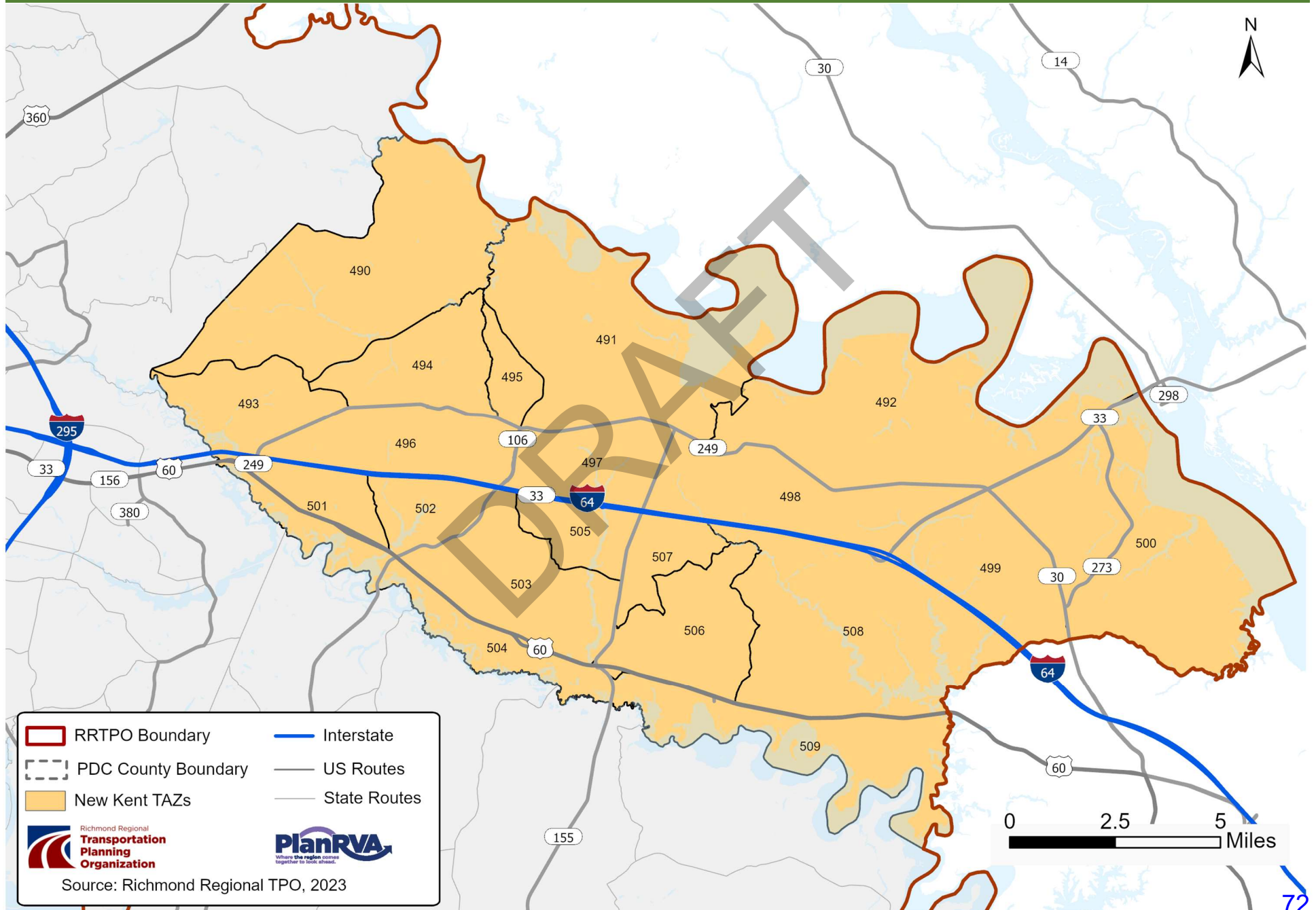
*2017 Employment Data is redacted at the TAZ level when an employer made up at least 80% of employment or there were 3 or less employers. This is required by PlanRVA and Virginia Employment Commission (VEC) data sharing confidentiality agreement.

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	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

*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.

New Kent County Map

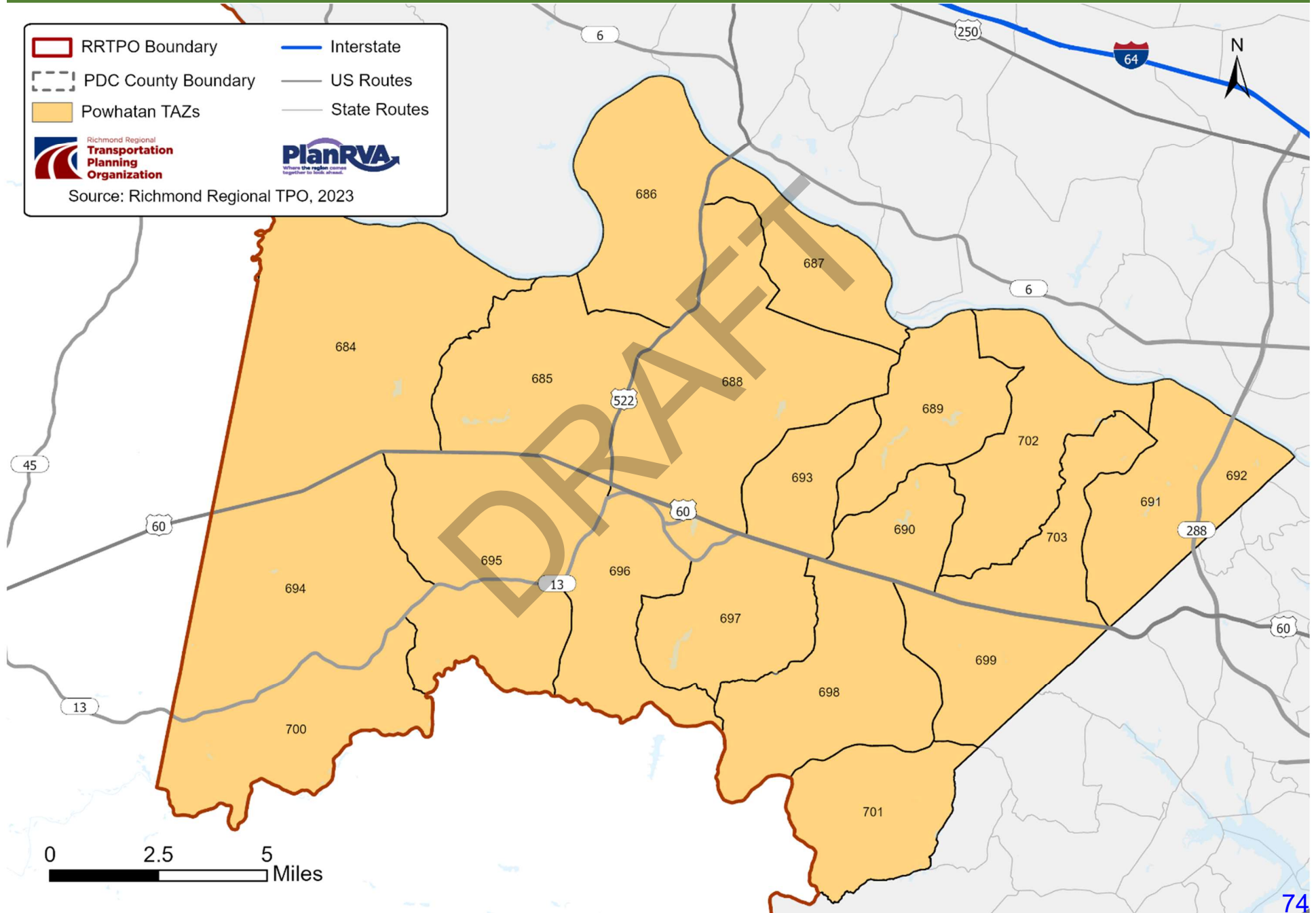


New Kent County

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
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

*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.

Powhatan County Map

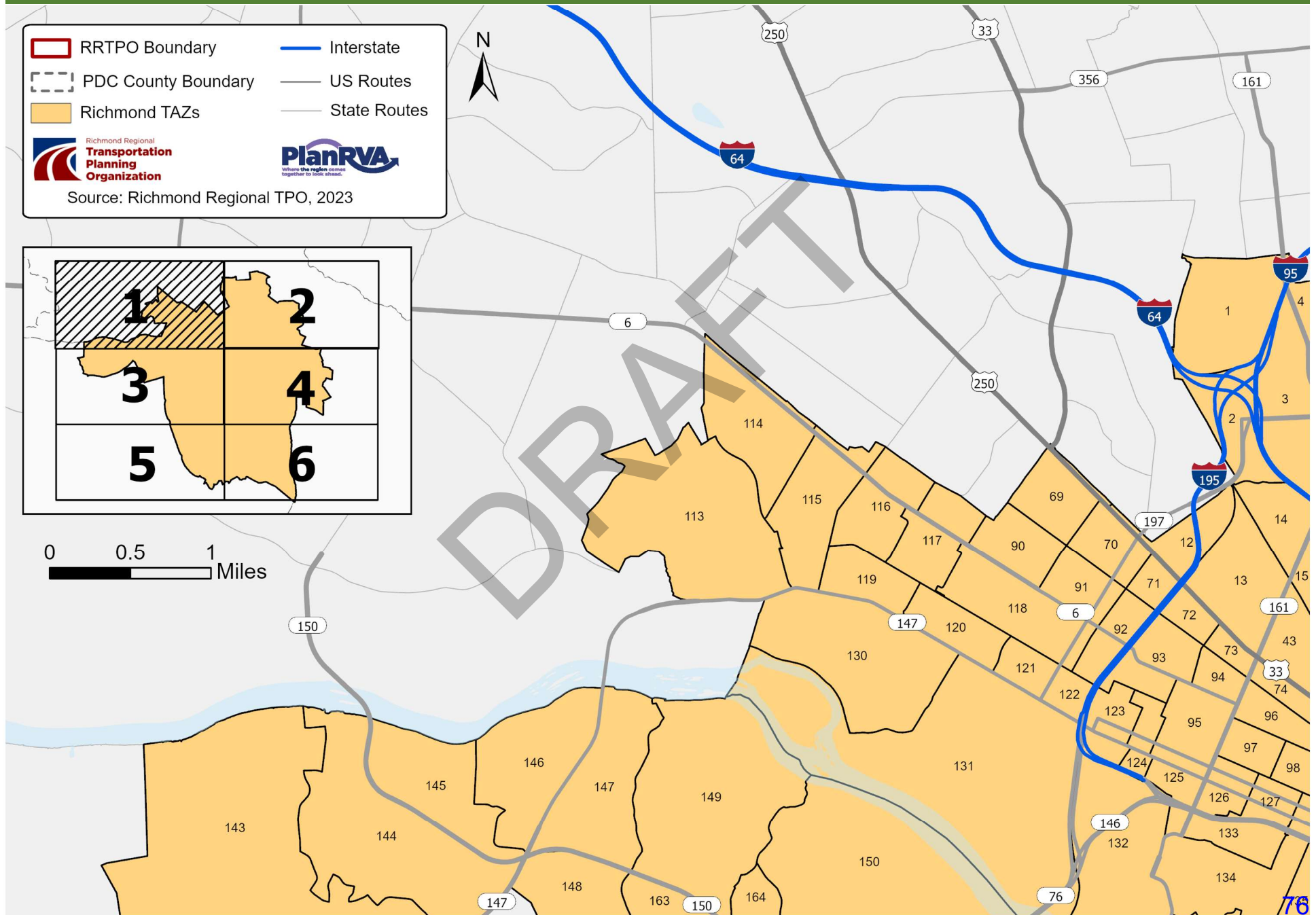


Powhatan County

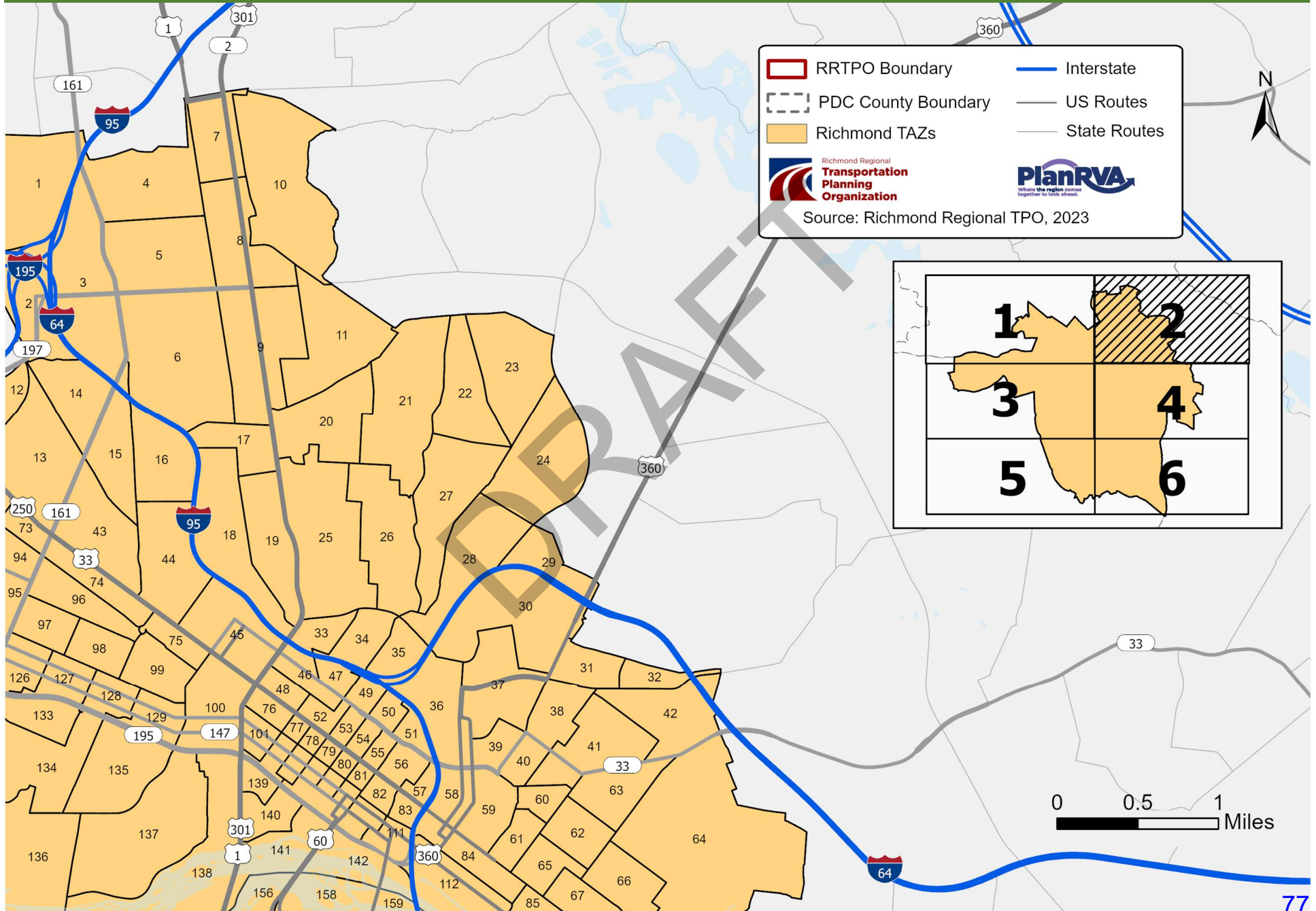
TAZ	Population						Housing				Automobiles		School Enrollment				Employment					
	Total		In Occupied Housing Units		In Group Quarters		Housing Units		Households				Grade K-12		Colleges		Total		Retail		Non-Retail	
	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050	2017	2050		
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.

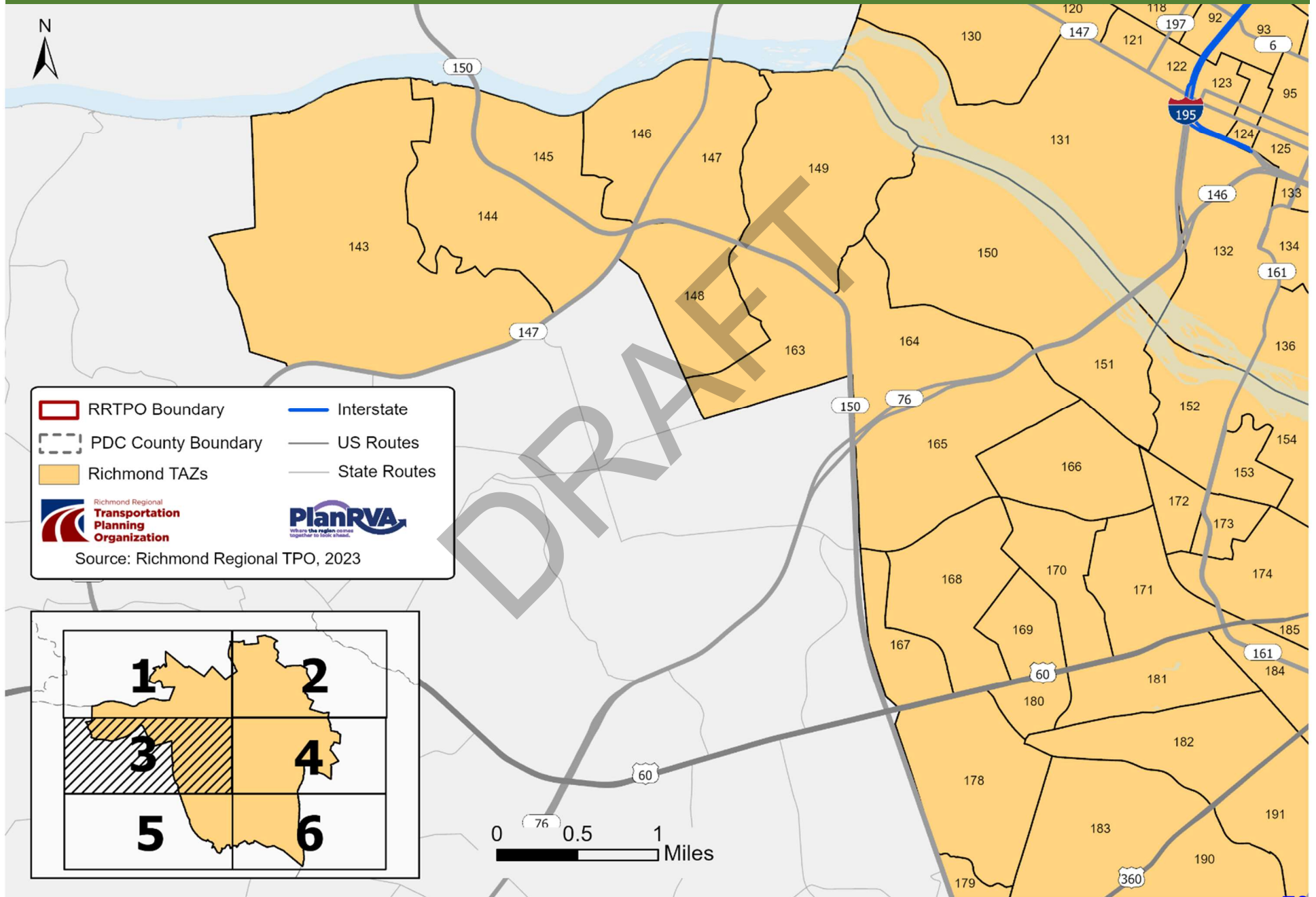
City of Richmond Map 1



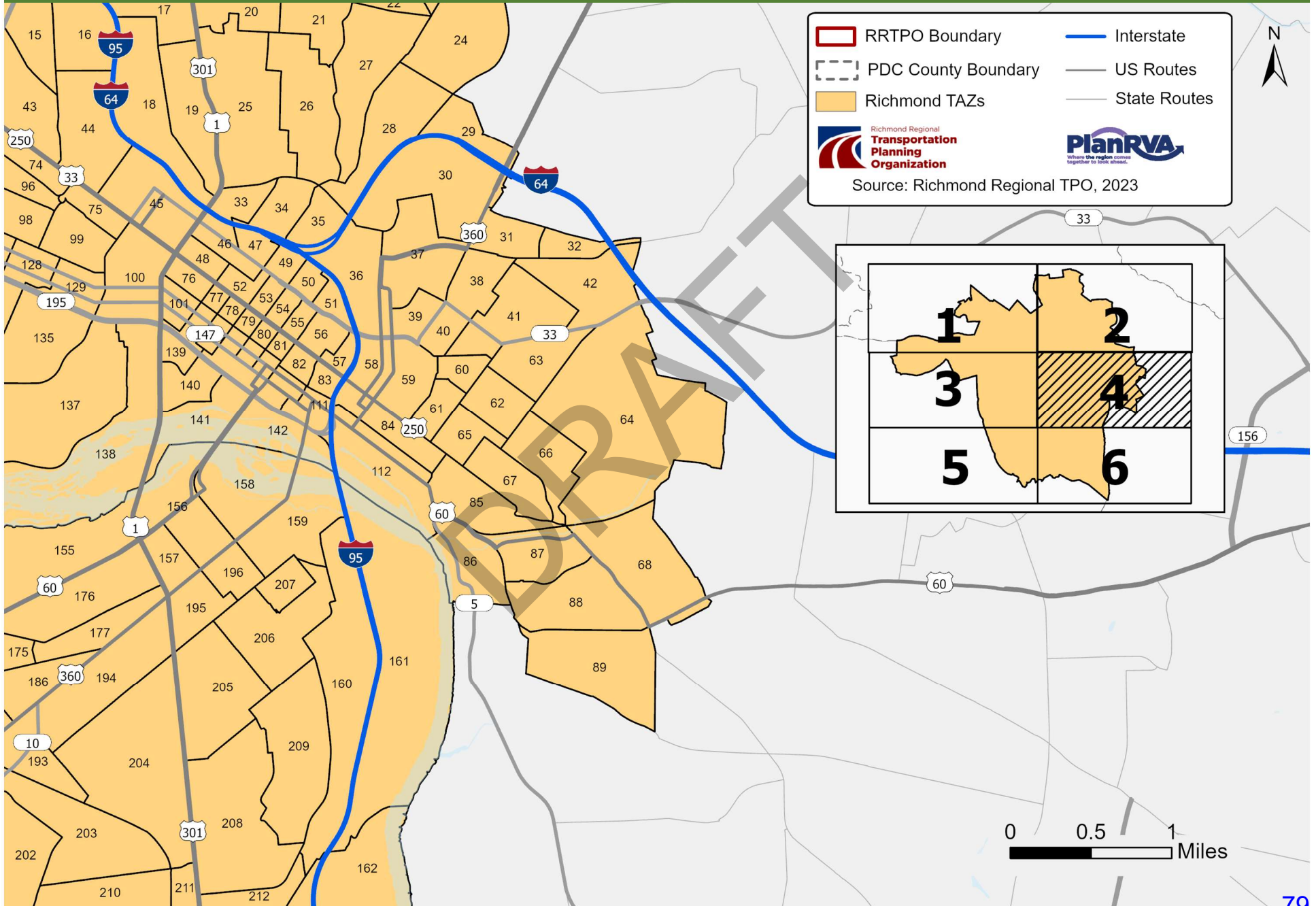
City of Richmond Map 2



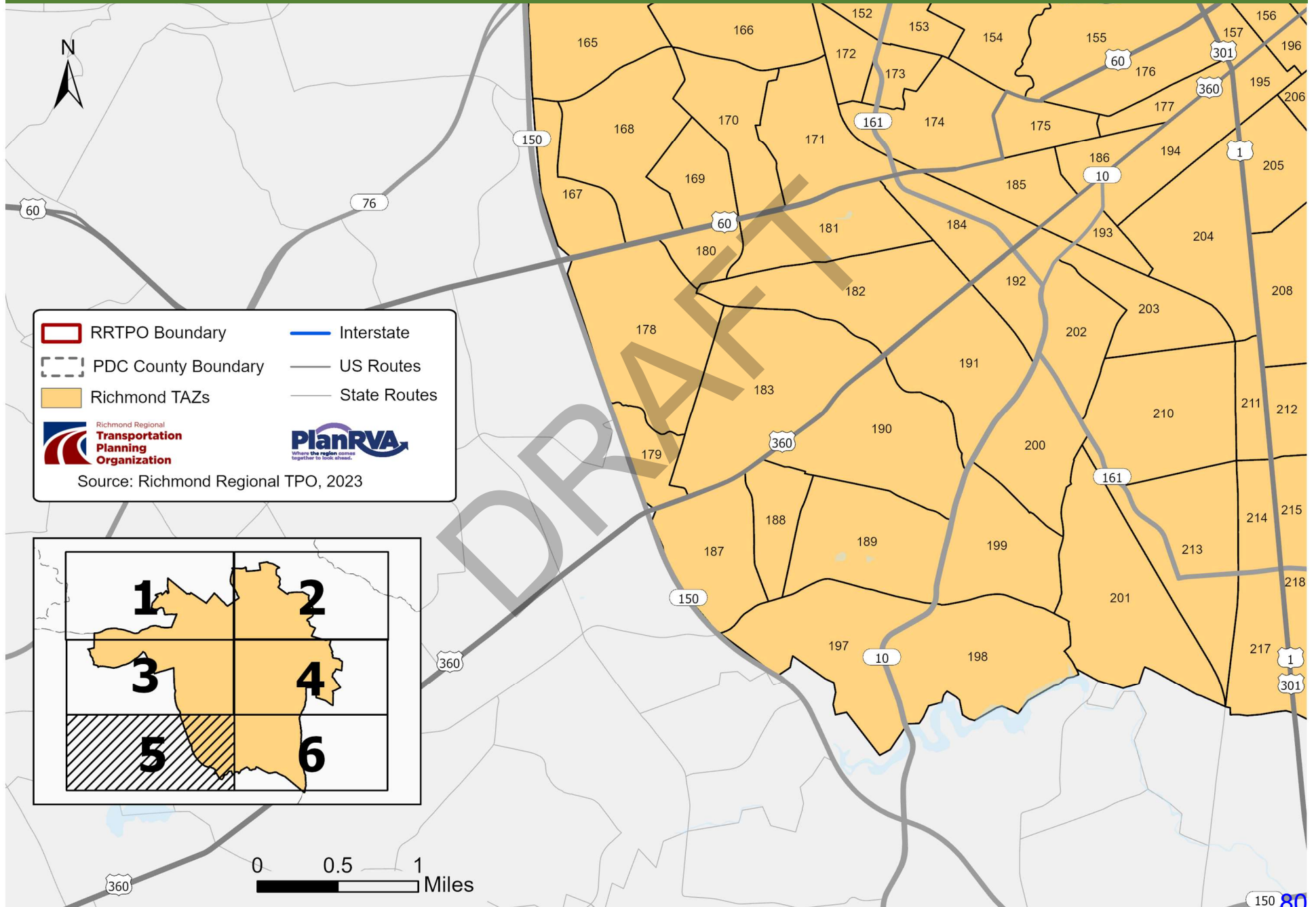
City of Richmond Map 3



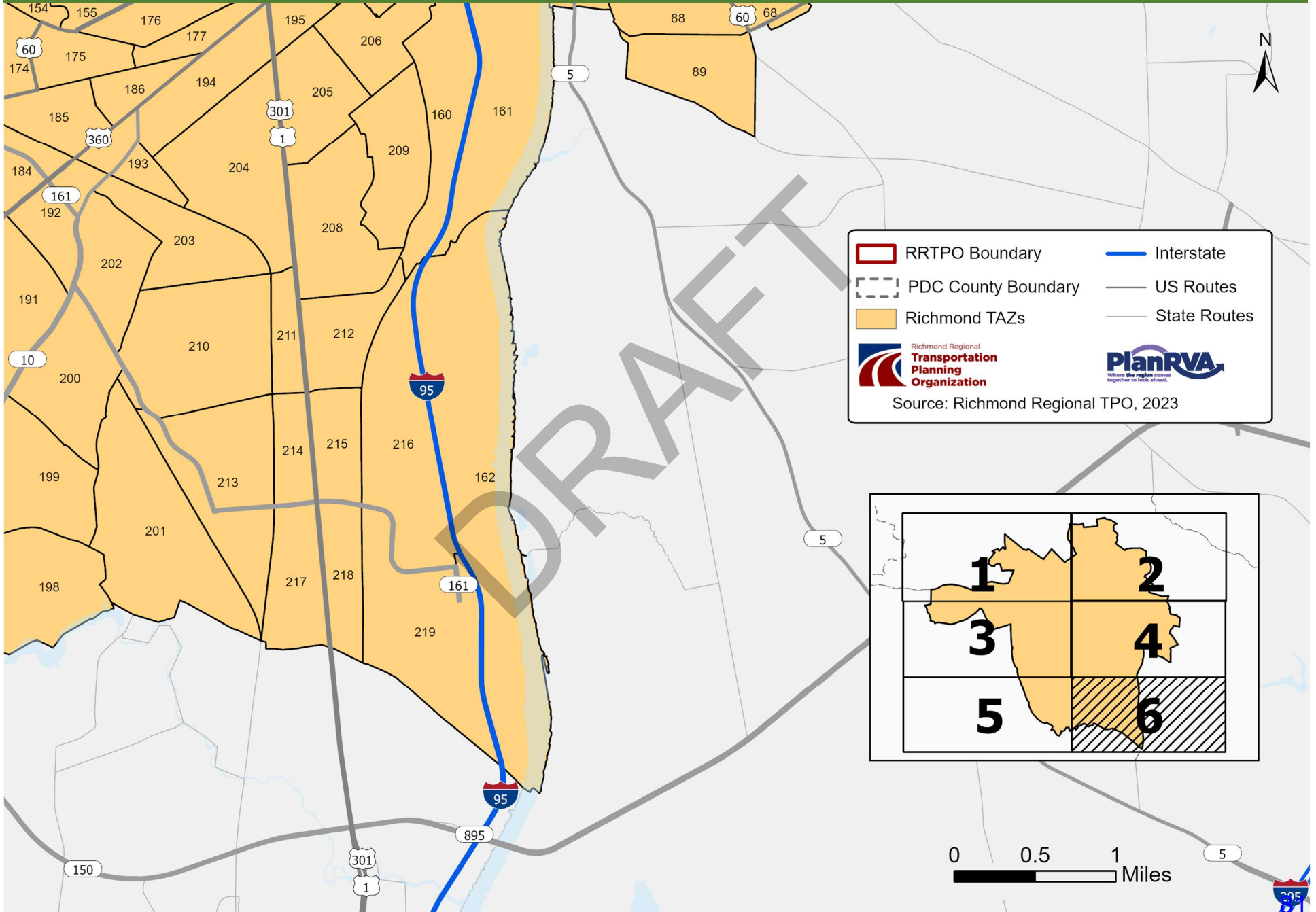
City of Richmond Map 4



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		
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

*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 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				

*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 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	

*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 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				

*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 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	
161	2	2	0	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	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	

*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 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

*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.

TAC AGENDA 4/11/23; ITEM #11

TIP Amendments: Highway Maintenance Groupings

Richmond Regional Transportation Planning Organization

REQUESTED ACTION: Review the proposed amendments to the FY21 – FY24 Transportation Improvement Program (TIP) and provide a recommendation to the RRTPO policy board.

BACKGROUND: The TIP is the region's collaborative list of transportation investments for a four-year period. Developing and maintaining the TIP is one of the core responsibilities of the RRTPO.

VDOT has requested amendments to the FY21 – FY24 TIP for three project groupings. Project groupings are pots of funds for similar types of projects that do not impact air quality or significantly impact capacity of the regional transportation network. Grouping projects allows additional flexibility in implementation as amendments are generally only needed if the total funding for the group of projects changes significantly. The amendments are all for **maintenance** project categories and each will add more funding. The proposed amendments are summarized below:

- 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

Funding Sources:

- National Highway Freight Program (NHFP): Provides funding to improve the movement of freight on the National Highway Freight Network (NHFN).
- National Highway Performance Program (NHPP): Provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a state's asset management plan for the NHS.
- Surface Transportation Program/Block Grant (STP/STBG): Provides flexible funding for a wide range of eligible projects and programs to address state and local transportation needs.

STAFF RECOMMENDATION: Staff recommends approval of the proposed amendments as submitted.

TAC REQUESTED ACTION: The following resolution is presented for TAC consideration and recommendation to the RRTPO policy board:

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

Richmond MPO**Project Groupings**

GROUPING		Maintenance : Preventive Maintenance and System Preservation				
PROGRAM NOTE		Funding identified to be obligated districtwide as projects are identified.				
ROUTE/STREET					TOTAL COST	\$161,517,367
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
CN	Federal - NHFP	\$0	\$2,500,000	\$2,500,000	\$115,430	\$0
	Federal - NHS/NHPP	\$0	\$8,194,023	\$24,582,069	\$2,258,586	\$0
	Federal - STP/STBG	\$0	\$21,974,931	\$65,038,149	\$31,116,665	\$3,237,514
CN TOTAL		\$0	\$32,668,954	\$92,120,218	\$33,490,681	\$3,237,514
MPO Note		TIP AMD - add \$115,430 (NHFP), \$2,258,586 (NHPP) & \$31,116,665 (STP/STBG) FFY23				

Federal funds include the use of soft match supported by approved toll credits unless otherwise indicated and/or matching funds are shown in the \"Match\" column. Non-federal fund sources are as noted in the \"Program Note\" and show

Richmond MPO**Project Groupings**

GROUPING		Maintenance : Preventive Maintenance for Bridges				
PROGRAM NOTE		Funding identified to be obligated districtwide as projects are identified.				
ROUTE/STREET					TOTAL COST	\$114,702,052
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
CN	Federal - NHFP	\$0	\$6,624,541	\$0	\$751,472	\$0
	Federal - NHS/NHPP	\$0	\$7,905,053	\$23,974,224	\$2,102,357	\$14,126,050
	Federal - STP/STBG	\$0	\$21,822,250	\$28,268,102	\$6,926,117	\$2,201,886
CN TOTAL		\$0	\$36,351,844	\$52,242,326	\$9,779,946	\$16,327,936
MPO Note		TIP AMD - add \$751,472 (NHFP), \$2,102,357 (NHPP) & \$6,926,117 (STP/STBG) FFY2				

Federal funds include the use of soft match supported by approved toll credits unless otherwise indicated and/or matching funds are shown in the \"Match\" column. Non-federal fund sources are as noted in the \"Program Note\" and show

Richmond MPO

Project Groupings

GROUPING		Maintenance : Traffic and Safety Operations				
PROGRAM NOTE		Funding identified to be obligated districtwide as projects are identified.				
ROUTE/STREET					TOTAL COST	\$24,638,456
	FUND SOURCE	MATCH	FY21	FY22	FY23	FY24
CN	Federal - STP/STBG	\$0	\$4,155,321	\$5,983,289	\$9,156,378	\$5,343,468
MPO Note		TIP AMD - add an addit'l \$6,405,707 (STP/STBG) FFY23				

Federal funds include the use of soft match supported by approved toll credits unless otherwise indicated and/or matching funds are shown in the \"Match\" column. Non-federal fund sources are as noted in the \"Program Note\" and show

FY 2021 to FY 2024 Richmond Region TPO Transportation Improvement Program

Project Amendments - Tracking Records

Amd 43	-999905	Grouping	Maintenance : Traffic and Safety Operations
5/4/2023	Approved	Add an additional \$6,405,707 (STP/STBG) to FY23	
		Date Requested 3/27/2023	
Amd 44	-999904	Grouping	Maintenance : Preventive Maintenance for Bridges
5/4/2023	Approved	Add \$751,472 (NHFP), \$2,102,357 (NHPP) & \$6,926,117 (STP/STBG) to FY23	
		Date Requested 3/27/2023	
Amd 45	-999903	Grouping	Maintenance : Preventive Maintenance and System Preservation
5/4/2023	Approved	Add \$115,430 (NHFP), \$2,258,586 (NHPP) & \$31,116,665 (STP/STBG) in FY23	
		Date Requested 3/27/2023	

TAC AGENDA 4/11/23; ITEM #12

TIP Illustrative Project List

Richmond Regional Transportation Planning Organization

INFORMATION ITEM: Background and reasoning for staff action to add an illustrative project list to the FY21 – FY24 Transportation Improvement Program (TIP). This is informational and does not require TAC action.

BACKGROUND: The Transportation Improvement Program (TIP) is the region's collaborative list of transportation investments for a four-year period. Developing and maintaining the TIP is one of the core responsibilities of the RRTPO.

With the passage of the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), a record number of competitive, discretionary funding programs exist. The RRTPO and member agencies and localities have aggressively pursued these new federal funding opportunities.

During the application process, project sponsors have been confronted with questions asking about inclusion in the Long-Range Transportation Plan (LRTP) and TIP. An example of these requirements from the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program is included here:

Applicants should coordinate with the relevant planning authority to ensure that the project will be included in the appropriate plan if required before an operating administration may obligate funds to the project. If the project is not included in the relevant planning documents when the RAISE application is submitted, applicants should include with their application a certification from the appropriate planning agency that actions are underway to include the project in the relevant planning document.

As the approach to the STIP/TIP in Virginia is to only reflect funding that has already been allocated to fully funded projects ready for implementation, projects seeking funding are not included in the TIP. RRTPO has generally prepared a resolution of endorsement for each application to demonstrate support and a willingness to amend the TIP. VDOT also has a form to submit requests for support ([available here](#)) and includes language about supporting inclusion in the STIP if all other requirements have been met in the letters of support.

In response to locality requests to include partially funded candidate projects in the TIP, the RRTPO has reviewed alternative approaches with a goal of streamlining the TPO process and positioning the region's applications to be competitive. After extensive conversations with VDOT, staff propose including an illustrative project list in the TIP.

ILLUSTRATIVE PROJECT LIST: An illustrative project is defined in 23 CFR 450.104 as an additional transportation project that may be included in a financial plan for a

metropolitan transportation plan, TIP, or STIP **if reasonable additional resources were to become available** (emphasis added). These projects are not included in the constrained plan but are recognized priorities for the region. In practice, this means that the TIP can include a near-term vision list.

An illustrative project list can be added as a third category of projects in the TIP (after the ungrouped and grouped projects) with an introduction noting that the projects are not included in the constrained plan but would be added to the TIP if additional funding is provided. In effect, this approach is the same as the TPO providing a resolution of support but would allow for a standing list that could be used for multiple grant applications and would allow applicants to demonstrate inclusion in the TIP.

Revisions to illustrative projects are not considered amendments (as they do not impact fiscal constraint or air quality conformity) and can be accomplished quickly to reflect any changes between applications as needed (23 CFR 450.104). The format of the project entries is up to the RRTPO to determine consistent with federal requirements; VDOT does not have any guidance for illustrative projects.

Per 23 CFR 450.330, no Federal action may be taken on an illustrative project by FHWA or FTA until it is formally included in the financially constrained and conforming metropolitan transportation plan and TIP. A successful project will still need to be added to the constrained plan via the normal amendment process based on the project schedule and available funding.

TAC AGENDA 4/11/23

TAC Future Meeting Topics*

Future Meeting Topics

- FY23 – FY29 TIP Recommendations
- FY24 – FY29 Regional Funding Allocations
- DRPT – Virginia Statewide Rail Plan
- CVTA Project Prioritization Updates
- Transit Modernization Study Update

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