Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

AGENDA
MPO Technical Committee
Tuesday, July 20th, 2020
10:00 AM Virtual Meeting via Zoom

This meeting will be conducted using video/phone conferencing. Use the link below to access the meeting.
https://us02web.zoom.us/j/87989814300?pwd=N3B3QlJQQlRvT3ZscWdmaS9obFk2dz09

Meeting ID: 879 8981 4300
Passcode: 334069

Item	Time	Description
0	10:00-10:05	**Attendance and Emergency Statement**
1	10:05-10:10	**Matters from the Public: limit of 3 minutes per speaker** *Members of the Public are welcome to provide comment on any public-interest, transportation-related topic, including the items listed on this agenda – limit three minutes per speaker*
2	10:10-10:15	**Approval of draft meeting minutes*** • See **May 2021 MPO Tech Minutes DRAFT**
3	10:15-10:20	**Electronic Meeting Policy* - Sandy Shackelford (CAMPO)** • See **MPO Tech Remote Participation Memo** • See **MPO Tech Remote Participation Policy**
4	10:20-10:50	**Smart Scale Application Recommendations* - Sandy Shackelford (CAMPO)** • See **July MPO Smart Scale Memo** • See **July MPO Smart Scale Presentation**
5	10:50-11:00	**Electric Vehicle Report – Lucinda Shannon (CAMPO)** • See **Electric Vehicle Report** • See **EV Presentation Slides**
6	11:00-11:10	**Rideshare Updates – Sara Pennington (CAMPO)** • See **Rideshare Work Plan** • Afton Express
7	11:10-11:30	**MPO Updates – Sandy Shackelford and Lucinda Shannon (CAMPO)** • See **MPO Public Engagement Plan** • Rt 29 Corridor Study
8	11:30-11:50	**Roundtable Updates**
9	11:50-12:00	**Additional Matters from the Public: Limit of 3 minutes per speaker** *Members of the Public are welcome to provide comment on any public-interest, transportation-related topic, including the items listed on this agenda – limit three minutes per speaker*

** A recommendation to the Policy Board and/or vote is expected for this item*

Upcoming Meetings:
MPO Policy Board (4th Wednesday): July 28th at 4pm
MPO Tech Committee (3rd Tuesday): September 21st at 10am

Thomas Jefferson Planning District Commission
Charlottesville/Albemarle MPO

NOTICE of ELECTRONIC MEETING:

This meeting of the Charlottesville-Albemarle Metropolitan Planning Organization Technical Committee is being held pursuant to *Code of Virginia* § **2.2-3708.2**, which allows a public body to hold electronic meetings when the locality in which it is located has declared a local state of emergency, and the catastrophic nature of the emergency makes it impracticable or unsafe to assemble a quorum in a single location, and the purpose of the meeting is to provide for the discharge of its lawful purposes, duties, and responsibilities.

This meeting is being held via electronic video and audio means through Zoom online meetings and is accessible to the public with close captioning and there will be an opportunity for public comment during that portion of the agenda.

Notice has been provided to the public through notice at the TJPDC offices, to the media, web site posting and agenda.

The meeting minutes will reflect the nature of the emergency, the meeting was held by electronic communication means, and the type of electronic communication means by which the meeting was held.

A recording of the meeting will be posted at www.tjpdc.org within 10 days of the meeting.

Thomas Jefferson Planning District Commission

Regional Vision ▪ Collaborative Leadership ▪ Professional Service

MPO Technical Committee Meeting

Draft Minutes, May 18, 2021

VOTING MEMBERS & ALTERNATES		STAFF	
Alex Ikefuna, Charlottesville	x	Jessica Hersh-Ballering, TJPDC	x
Jeanette Janiczek, Charlottesville	x	Sandy Shackelford, TJPDC	x
Rory Stolzenberg, Charlottesville PC	x	Lucinda Shannon, TJPDC	x
Kevin McDermott, Albemarle	x	Gretchen Thomas	x
Dan Butch, Albemarle	x		
Tim Keller, Albemarle PC	x	**NON-VOTING MEMBERS**	
Chuck Proctor, VDOT	x	Tony Cho FTA	
Stacy Londrey, VDOT (alternate)			
Christine Jacobs, TJPDC			
Stephen Johnson, Jaunt	x	**GUESTS/PUBLIC**	
Bill Palmer, UVA	x	Erin Robartes, UVA PhD Student	x
Patrick Clark, UVA (alternate)		T Donna Chen, UVA Student	x
Juwhan Lee, CAT		Vivek Hariharan	x
Wood Hudson, DRPT	x		
Sara Pennington, Rideshare	x		
Richard Duran, FHWA			

***Note**: The Governor has declared a state of emergency due to the COVID-19 pandemic and the nature of this declared emergency makes it impracticable or unsafe for the Thomas Jefferson Planning District Commission to assemble in a single location. This meeting was held utilizing electronic virtual communication with the Zoom software application, and in accordance with virtual meeting procedures and policies as outlined in Item 4.0-01 of the Virginia state budget (HB29), as effective April 24, 2020. A recording of the meeting was made available to the public on March 9,2021 at https://www.youtube.com/watch?v=g-kfKHk5PKM&feature=youtu.be&ab_channel=TJPDC-MPO.*

1. CALL TO ORDER:

The MPO Technical Committee Chair, Rory Stolzenberg, presided and called the meeting to order at 10:01 a.m. Jessica Hersh-Ballering took attendance by roll call, and certified that a quorum was present. Mr. Stolzenberg read the Notice of Electronic Meeting and Commissioner and Public Protocol.

2. MATTERS FROM THE PUBLIC (MINUTE 1:45):

a. **Comments by the Public:** None

b. **Comments provided via email, online, web site, etc.:** None

3. APPROVAL OF DRAFT MEETING MINUTES (MINUTE 2:00)

Motion/Action: On a motion by Tim Keller, seconded by Stephen Johnson, the committee unanimously approved the minutes of the March 16, 2021 meeting.

4. VIRGINIA BICYCLE CRASH STUDIES (MINUTE 3:03):

Erin Robartes, UVA PhD student, presented the committee with her detailed analysis of bicycle crash data in Charlottesville.

5. TAP APPLICATION (MINUTE 37:08):

Jeanette Janiczek presented the committee with a map for a new trail system that the City's Parks Department will be submitting for a TAP grant ($500K from State and $125 for local match). She also reported that the City will be applying for another TAP grant in the future for Safe Ride to School programming.

6. TIP ADJUSTMENT (MINUTE 45:40)

Lucinda Shannon shared TIP adjustments that have happened in the past two months. These are administrative adjustments that and no monies were added or subtracted from the TIP.

7. UNITED PLANNING WORK PROGRAM (MINUTE 59:56)

Sandy Shackelford reported that the MPO Policy Board decided to use the additional monies in the UPWP towards the climate action initiatives (the Tech committee chose another option) and to be put extra money ($25K) in reserve for another project moving forward.

There is a public meeting at the Policy Board meeting next week to approve the UPWP. Staff will be looking at scope of work to identify priorities and opportunities.

Motion/Action: Kevin made a motion to recommend the UPWP for approval. Tim Keller seconded the motion and the motion passed unanimously.

8. SMART SCALE ROUND 5 (MINUTE 1:06:02)

Ms. Shackelford shared the timeline from March 2021 to March 2022, and the current status of the process. She also presented projects being considered for application. She asked the committee to look at the list and come back to the next meeting with their thoughts on which projects to prioritize.

9. ROUNDTABLE DISCUSSION (MINUTE 1:34:11):

- Mr. Keller had no additional updates.
- Bill Palmer reminded the committee that 2021 graduation is this weekend which will impact traffic and bus routes.
- Dan Butch had no new updates.
- Kevin McDermott said he is presenting the Smart Scale projects and the revenue sharing projects to the Board of Supervisors. He reported that the Crozet Master Plan project coordination meeting is coming up in the next few weeks. He updated the committee the status of a number of sidewalk projects. Mr. McDermott will provide a link to everyone once the Crozet Master Plan is available to the public.

- Mr. Butch noted that Albemarle has the corridor study is also ongoing
- Stephen Johnson said he is getting ready for a Transportation and Housing webinar hosted by the Regional Housing Partnership.
- Ms. Janiczek reported that the state awarded the City $4.2 mil in state of good repair which will help with the Belmont Bridge. There was also a hearing on the East High streetscape coming up. City staff is looking at the future Smart Scale project. They are not moving forward with revenue sharing funds.
- Chuck Proctor has been focusing on contacting localities re: their Smart Scale projects.
- Mr. Keller asked the County about the status on the rural roads process. Mr. Butch replied with an update. There is a public meeting tomorrow night regarding this subject.
- Sara Pennington reported said she is promoting Bike Month in May. She said as the country comes out of the pandemic, she is focusing on reminding commuters their options for ridesharing.
- Ms. Shannon reminded the committee about the webinar coming up on Thursday, May 20 re: Transportation and Housing.
- Ms. Shackelford said the UPWP has $20K+ additional money to support the Three Notch'd Trail if the County/City determine it is a priority. She also said the PDC is hiring for a planner and asked the committee to share this information with any groups or individuals who may be interested in this position.
- Rory Stolzenberg said the transportation and land use in the comp plan is available for review.

10. MATTERS FROM THE PUBLIC: None.

ADJOURNMENT: Mr. Stolzenberg adjourned the meeting at 12:00 noon.

Thomas Jefferson Planning District Commission

Regional Vision ▪ Collaborative Leadership ▪ Professional Service

MEMO

To: Regional Transit Partnership

From: David Blount, Deputy Director

Date: June 24, 2021

Re: Remote Electronic Participation in Meetings Policy

Purpose:
To consider adoption of a CA-MPO Technical Committee policy allowing members to participate in meetings by electronic communication means.

Background:
The Virginia Freedom of Information Act, at § 2.2-3708.2 of the *Code of Virginia*, permits individual members of a public body to participate in a public meeting through electronic participation. Such participation is authorized only if the public body has adopted a written policy allowing for and governing participation of its members by electronic communication means, including an approval process for such participation. Consistent with state enabling provisions, the CA-MPO Technical Committee began allowing meetings to be held without the physical presence of members during the declared state of emergency. However, the CA-MPO Technical Committee has not yet adopted a policy, as enabled in 2018, to authorize remote participation by individual members at meetings when a quorum is physically assembled.

Recommendation: Staff recommends that the Commission adopt the attached policy, titled Remote Electronic Participation, as authorized by subsection C of § 2.2-3708.2 of the *Code of Virginia*.

401 East Water Street ▪ Post Office Box 1505 ▪ Charlottesville, Virginia 22902-1505
Telephone (434) 979-7310 ▪ **Fax** (434) 979 1597 ▪ **Virginia Relay Users:** 711 (TDD) ▪ **email:** info@tjpdc.org ▪ **web:** www.tjpdc.org

REMOTE ELECTRONIC PARTICIPATION

This purpose of this policy is to provide for the Charlottesville-Albemarle MPO Technical Committee to permit a member to participate in a Partnership meeting through electronic communication means from a remote location, provided that:

A. Notification of Inability to Attend Because of Personal Matter, Disability, Medical Condition or Location.

On or before the day of the meeting, the member shall notify the Chair that he or she is unable to attend the meeting due to a personal matter; a temporary or permanent disability or other medical condition that prevents physical attendance; that a family member's medical condition requires the member to provide care for such family member; or that that such member's principal residence is more than 60 miles from the meeting location identified in the required notice for such meeting. The member must identify with specificity the nature of the personal matter.

B. Quorum Physically Assembled; Approval of Remote Electronic Participation.

A quorum of the CA-MPO Technical Committee must be physically assembled at the primary or central meeting location. The CA-MPO Technical Committee members present must approve of the remote electronic participation; however, the decision shall be based solely on the criteria in Section A, without regard to the identity of the member or items that will be considered or voted on during the meeting.

C. Record of Action.

The CA-MPO Technical Committee's minutes shall reflect the specific nature of the personal matter; the disability or medical condition; the fact that a family member's medical condition that required the member to provide care for such family member, thereby preventing their physical attendance; or that such member's principal residence is more than 60 miles from the meeting location identified in the required notice for such meeting, as well as the remote location from which the absent member participated. If the absent member's remote participation is disapproved because participation would violate this policy, the disapproval shall be recorded in the CA-MPO Technical Committee's minutes with specificity.

D. Audibility of Absent Member.

The CA-MPO Technical Committee shall make arrangements for the voice of the absent member to be heard by all persons in attendance at the meeting location. If, for any reason, the voice of the absent member cannot reasonably be heard, the meeting may continue without the participation of the absent member.

E. Limitation on Remote Electronic Participation in Calendar Year.

Electronic participation by the absent member as provided in this policy shall not exceed two, or 25% of the meetings rounded up the next whole number, whichever is greater, CA-MPO Technical Committee meetings in each calendar year.

(Authorized pursuant to *Code of Virginia* § 2.2-3708.2)

Charlottesville-Albemarle Metropolitan Planning Organization
POB 1505, 401 E. Water St, Charlottesville, VA 22902 www.tjpdc.org
(434) 979-7310 phone • info@tjpdc.org email

Memorandum

To: MPO Committee Members
From: Sandy Shackelford, Director of Planning & Transportation
Date: July 13, 2021
Reference: Smart Scale Round 5 Staff Recommendations

Purpose:

The MPO has been working to develop a new process to improve public engagement opportunities in its development of Smart Scale project applications. The framework that the MPO has established is to select up to two projects of regional interest that would benefit from additional public engagement and facilitate a process to refine the projects and prepare applications for Round 5 Smart Scale submissions.

Background:

CA-MPO has reviewed its process of identifying and selecting SMART SCALE projects to move forward in Round 5 with the MPO Committees in previous meeting. An overall schedule of project identification and preparation is included for your reference as we move through the selection process.

CA-MPO staff has continued to work with Albemarle County, Charlottesville City, and VDOT staff to develop suggested projects for consideration by the MPO committees and the Policy Board based on previous studies and plans that have been completed that they consider to be beneficial to both localities. In addition, another project was suggested by CTAC that was also added to the list of potential projects as reviewed in June.

Following the schedule and process that has been developed for the CA-MPO SMART SCALE project selection process, the MPO Technical Committee and CTAC will be asked to recommend the projects that will be prepared for SMART SCALE Round 5 applications, with CA-MPO staff supporting additional engagement for up to two of the recommended projects.

The list of potential projects that has been identified by staff for consideration by the MPO Policy Board **is as follows**:

- District Avenue Roundabout
- Hillsdale Avenue Extension
- Rivanna River Bike & Pedestrian Crossing
- Avon Street Corridor
- 5th Street Corridor

The project that was suggested by a CTAC member is a grade separated ramp between US 250 and US 29 with termini on 250 west of the intersection with US 29 and on US 29 near Seminole Court, referred to as the US 29/250 flyover.

Project slides are attached to this memo for reference and review.

Staff developed goals for the Round 5 process were to develop and submit SMART SCALE projects that:

- Will be competitive based on project costs and benefits;
- Have been vetted through a public process;
- Have demonstrated public support; and
- Are documented in existing plans/studies.

After reviewing each of the projects against the goals that staff had developed early in the process, staff is recommending moving forward with the following projects:

- District Avenue Roundabout
- Rivanna River Bike & Pedestrian Crossing (with additional engagement)
- Avon Street Corridor Multi-Modal Improvements: Extend bike and pedestrian infrastructure from Druid Avenue in Charlottesville to Avon Court Park and Ride in Albemarle
- 5th Street Corridor Intersection and Multi-Modal Improvements: Intersection improvements at 5th Street and 5th Street Station Parkway and extension of bike/pedestrian infrastructure to tie into recently approved Fifth Street Hubs and Trail project

Since the District Avenue roundabout, Avon Street Corridor, and 5th Street Corridor projects were all developed through a study that involved high levels of public engagement, staff is recommending that minimal engagement would be needed as part of the development of those applications. CA-MPO staff would plan to convene at least 1-2 meetings with a stakeholder group for each of these three projects as final applications are developed.

Staff is recommending additional support to develop an application for the Rivanna River Bike & Pedestrian Crossing that would include both technical support and additional public/stakeholder engagement. Staff recommend first exploring whether there are opportunities to further reduce the project costs, and then supporting the project through additional engagement as an application is prepared and submitted.

The Hillsdale South Extension project was not recommended to move forward due to the project expense. It is a project that is on the Constrained List in the Long Range Transportation Plan, but due to the project cost, it is unlikely to score competitively in SMART SCALE. The project could be considered for submission by the Thomas Jefferson Planning District Commission if their four project slots are not otherwise committed closer to the application deadline.

The US 29/250 flyover project was also not recommended to move forward due to a number of factors. A similar project was considered during the development of the Hydraulic Small Area Plan and was not moved forward as a recommendation during the development of that plan. This project has not been vetted through a public process, is not included as a recommendation in any local or regional plans, and the cost of the project makes it unlikely to score competitively through the SMART SCALE process.

Recommendation:

Staff requests a recommendation from the MPO Technical Committee and CTAC to the Policy Board regarding the projects that should be submitted for SMART SCALE Round 5. Additionally, staff requests a recommendation on which of the project(s) should receive additional support during the application development. Table 1 summarizes the staff recommendation.

Table 1. Summary of staff recommended projects.

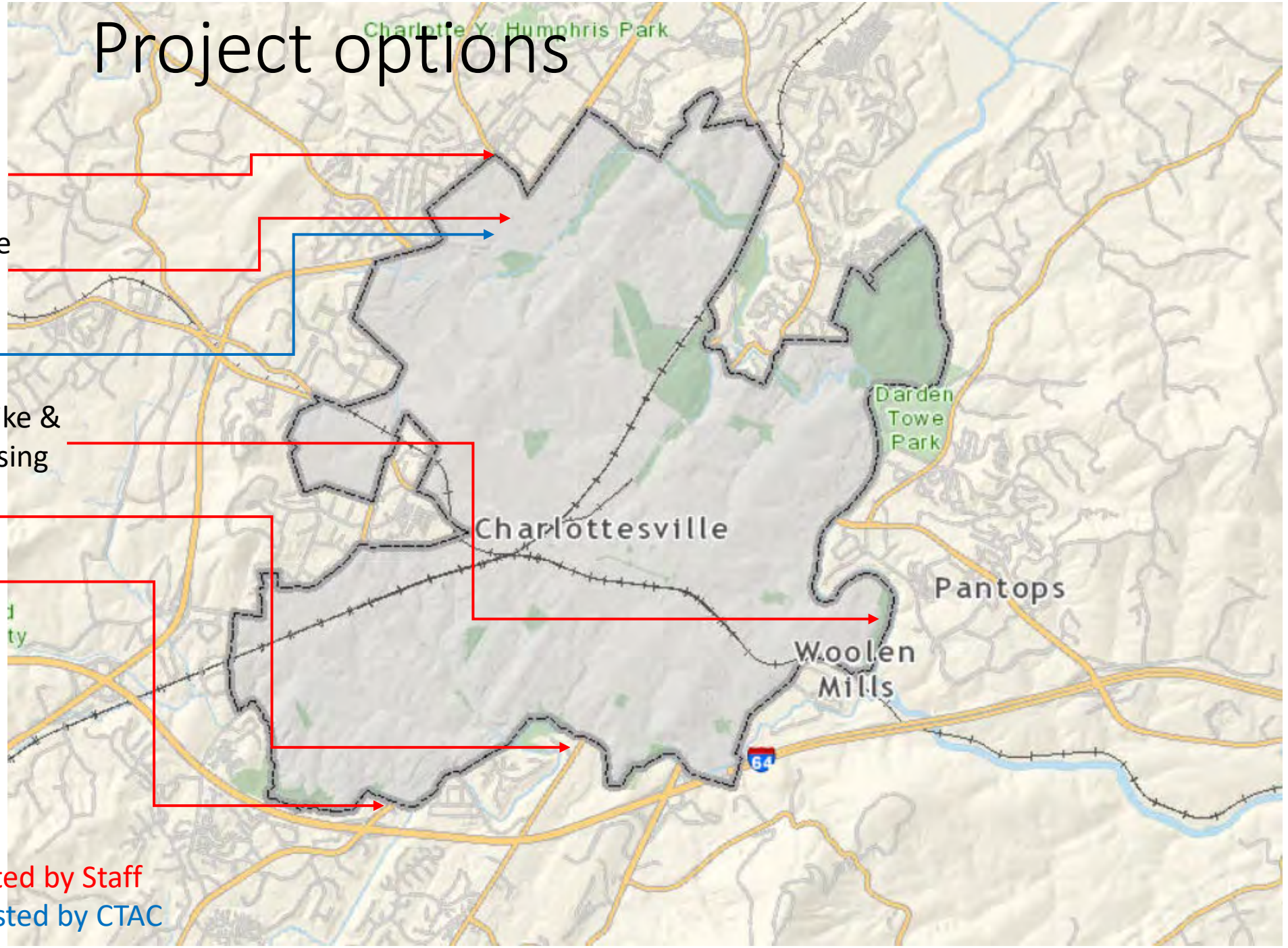
Project	Cost estimate (in millions)	Public Process	Plan	Staff Recommendation	Additional Engagement
District Avenue Roundabout	$8.4	Yes	Yes	Yes	Minimal
Hillsdale South Extension	$34.3	Yes	Yes	No	
Rivanna River Bike/Ped Crossing	$11.3 - $15.3	Yes	Yes	Yes	Yes
Avon Street Corridor	TBD	Yes	Yes	Yes	Minimal
Fifth Street Corridor	TBD	Yes	Yes	Yes	Minimal
29/250 Flyover	$50	No	No	No	

If there are any questions or comments, please contact Sandy Shackelford at sshackelford@tjpdc.org.

Table 2. Smart Scale Project Selection and Application Development Schedule

March 2021	Initial discussions about potential projects with MPO Committees.
April 2021 – May 2021	Receive requests for projects to be considered as Smart Scale applications from localities, CTAC, MPO Tech, and Regional Transit Partnership.
May 2021	Finalized list of projects requested for consideration from MPO committees and local governments will be presented to the MPO committees for initial review.
July 2021	CTAC and MPO Tech will make recommendations for up to two projects that should be selected for additional public engagement; the MPO Policy Board will select up to two projects that will move forward with additional public engagement.
September 2021	The Policy Board will appoint an advisory committee for each project that is selected as needing additional public engagement.
October 2021 – April 2022	MPO staff will facilitate public engagement process for selected projects.
February/March 2022	MPO staff will facilitate public workshops for all potential Smart Scale projects within the MPO region, coordinating with Charlottesville and Albemarle County.
April 2022	MPO staff will finalize project details with advisory committees based on additional public feedback received through the public workshops.
May 2022	Pre-application deadline.
June – July 2022	MPO staff will work with Charlottesville and Albemarle staff to coordinate requests for resolutions of support, economic development data, and any other supporting documentation needed for application submittals. MPO staff will coordinate with VDOT for any technical documentation that is needed for application submissions.
August 2022	Full application deadline.

Project options



District Avenue Roundabout

Hillsdale Avenue Extension

US 29/250 Flyover

Rivanna River Bike & Pedestrian Crossing

Avon Street

5th Street

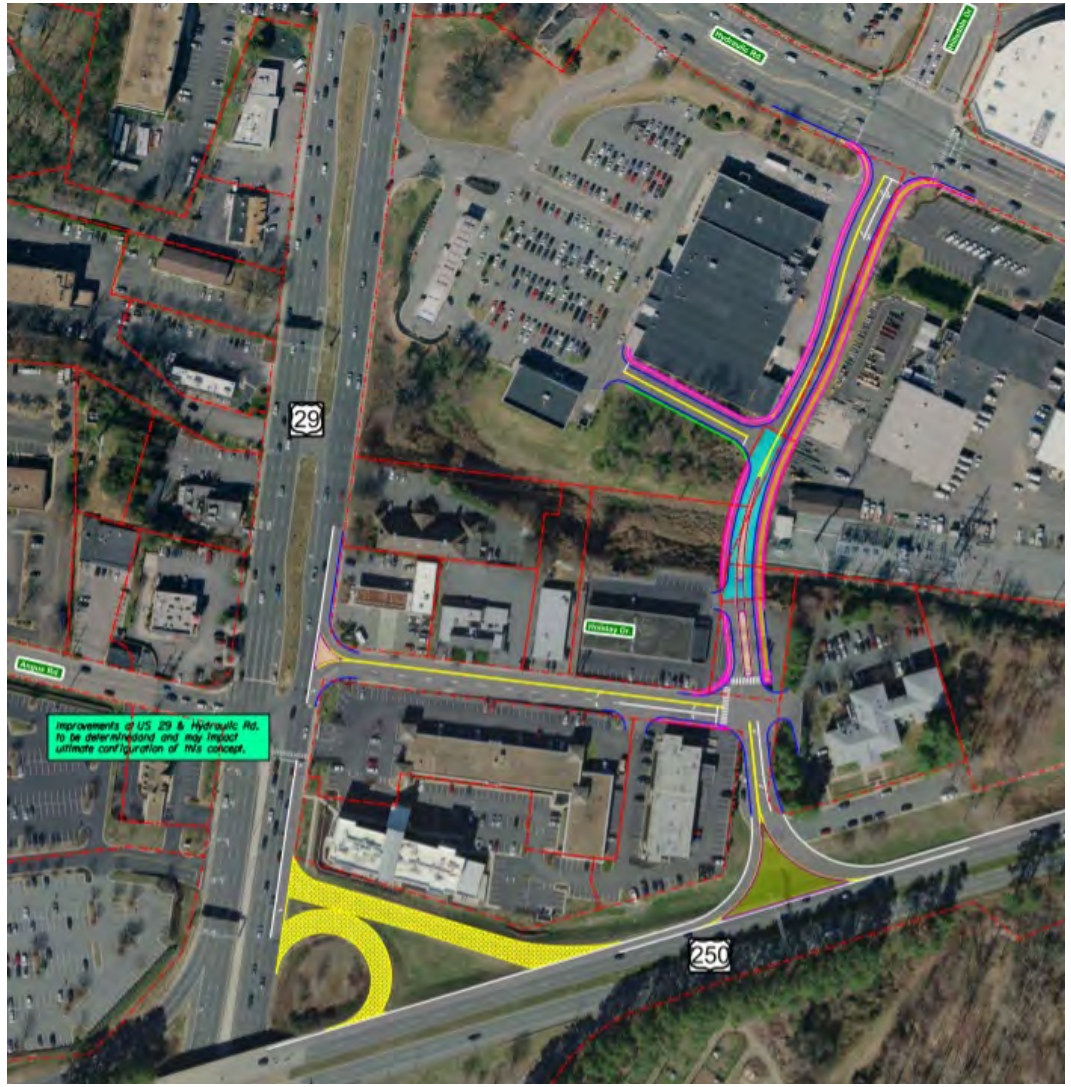
RED – Suggested by Staff

BLUE – Suggested by CTAC

District Avenue Roundabout

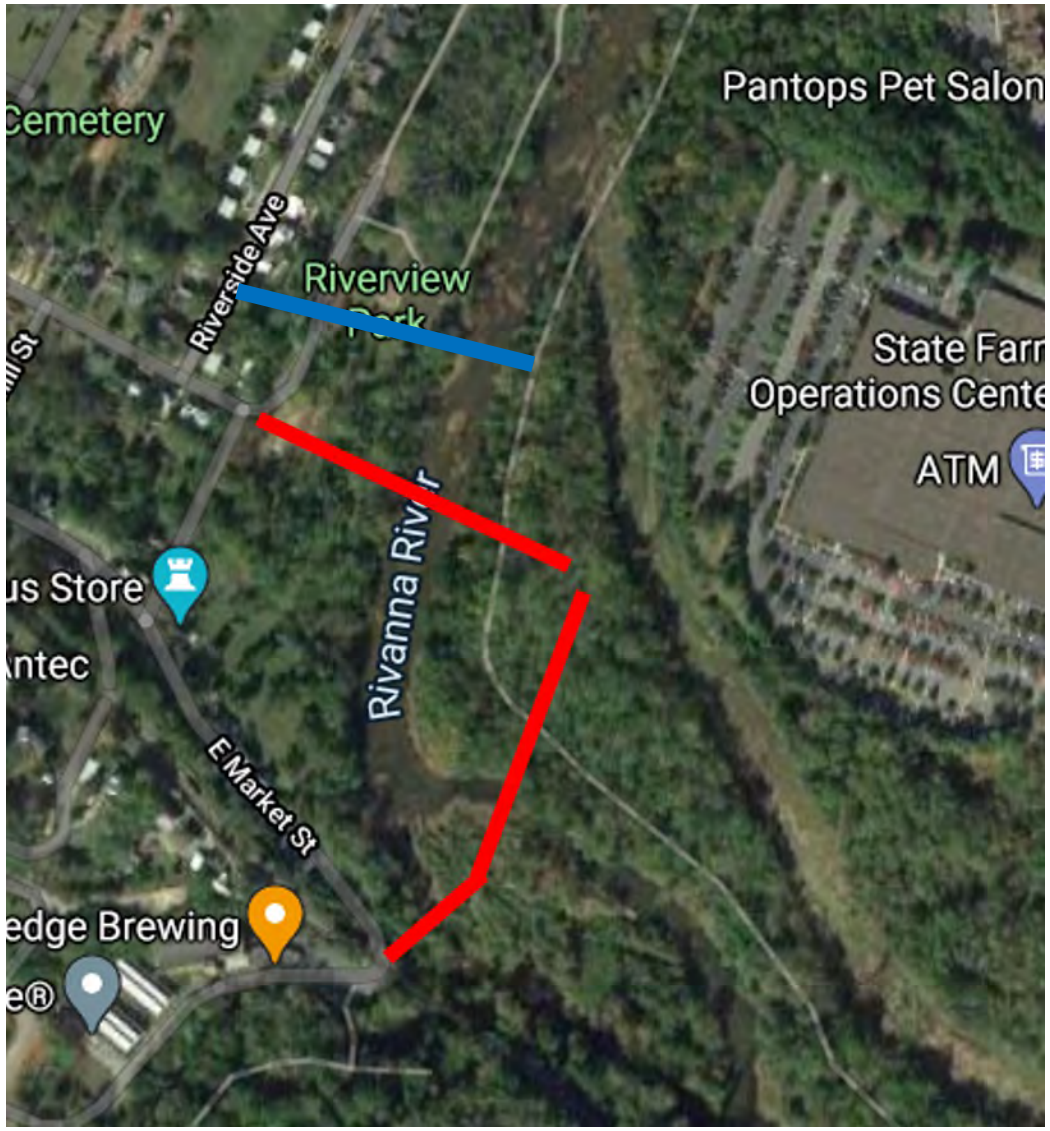
- $8.4 million estimated cost as of LRTP
- Recommended in the Hydraulic/29 Small Area Plan and on the constrained list in the LRTP
- Staff recommended project
- Minimal engagement recommended by staff

Hillsdale Avenue Extension

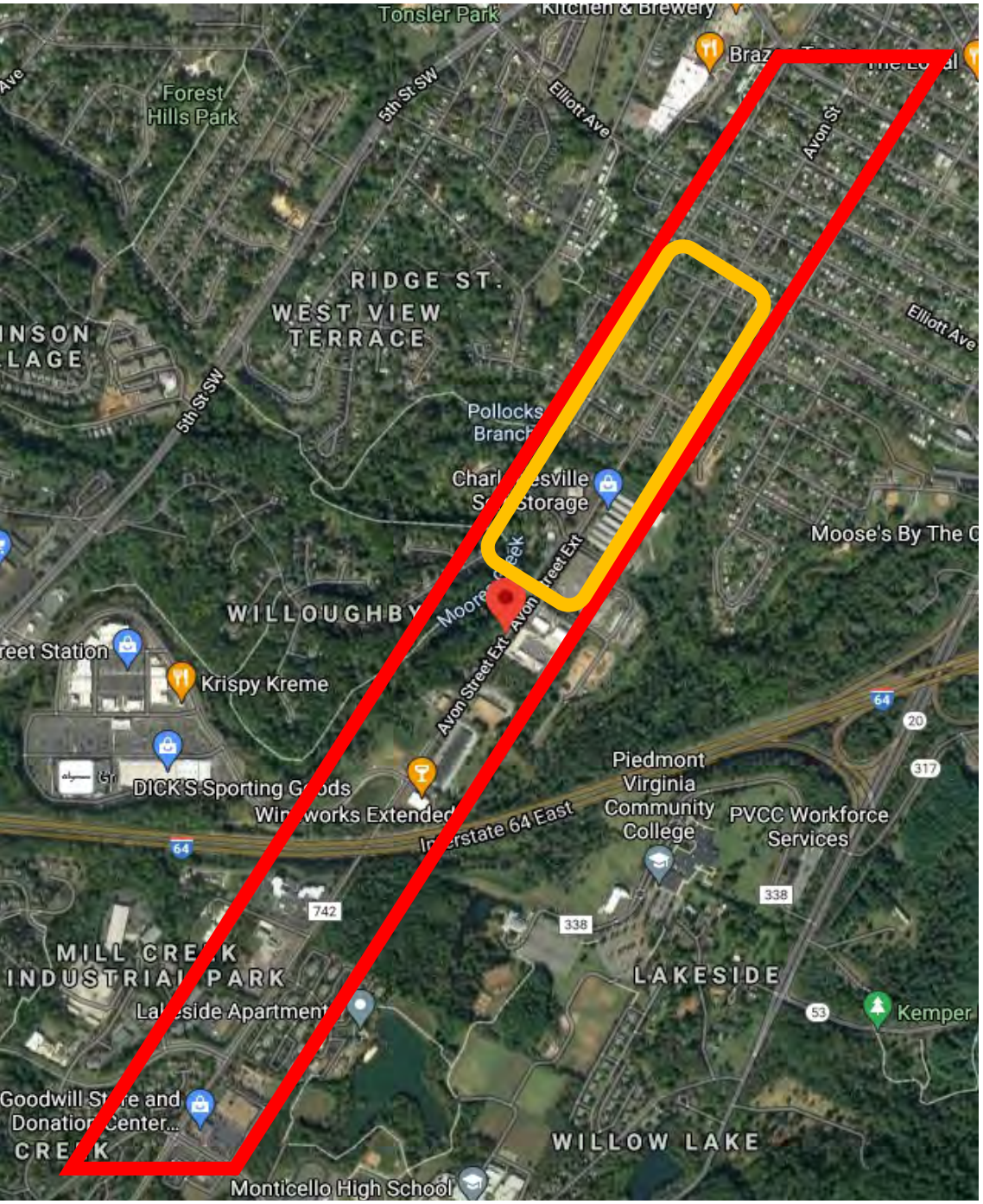


- $34.3 million estimated cost based on Round 4 submission
- Recommended as part of the Hydraulic/29 Small Area Plan and on the LRTP Constrained List
- Submitted in SMART SCALE ROUND 4
- Not likely to score competitively due to project cost
- Not recommended for one of the CA-MPO's submissions
  - Could be submitted by TJPDC if there are available slots

Rivanna River Bike and Pedestrian Crossing



- $11.3 million to $15.3 million consultant-developed cost estimate
- Recommended in the CA-MPO's Long Range Transportation Plan, Jefferson Area Bike & Pedestrian Plan, Pantops Small Area Master Plan
- Feasibility study completed by VHB in 2020
- Two potential design options were developed for consideration (third option suggested by CTAC member)
- Staff recommended project
- Additional effort spent on reducing project cost and public engagement recommended by staff



Avon Street Multi-Modal Improvements

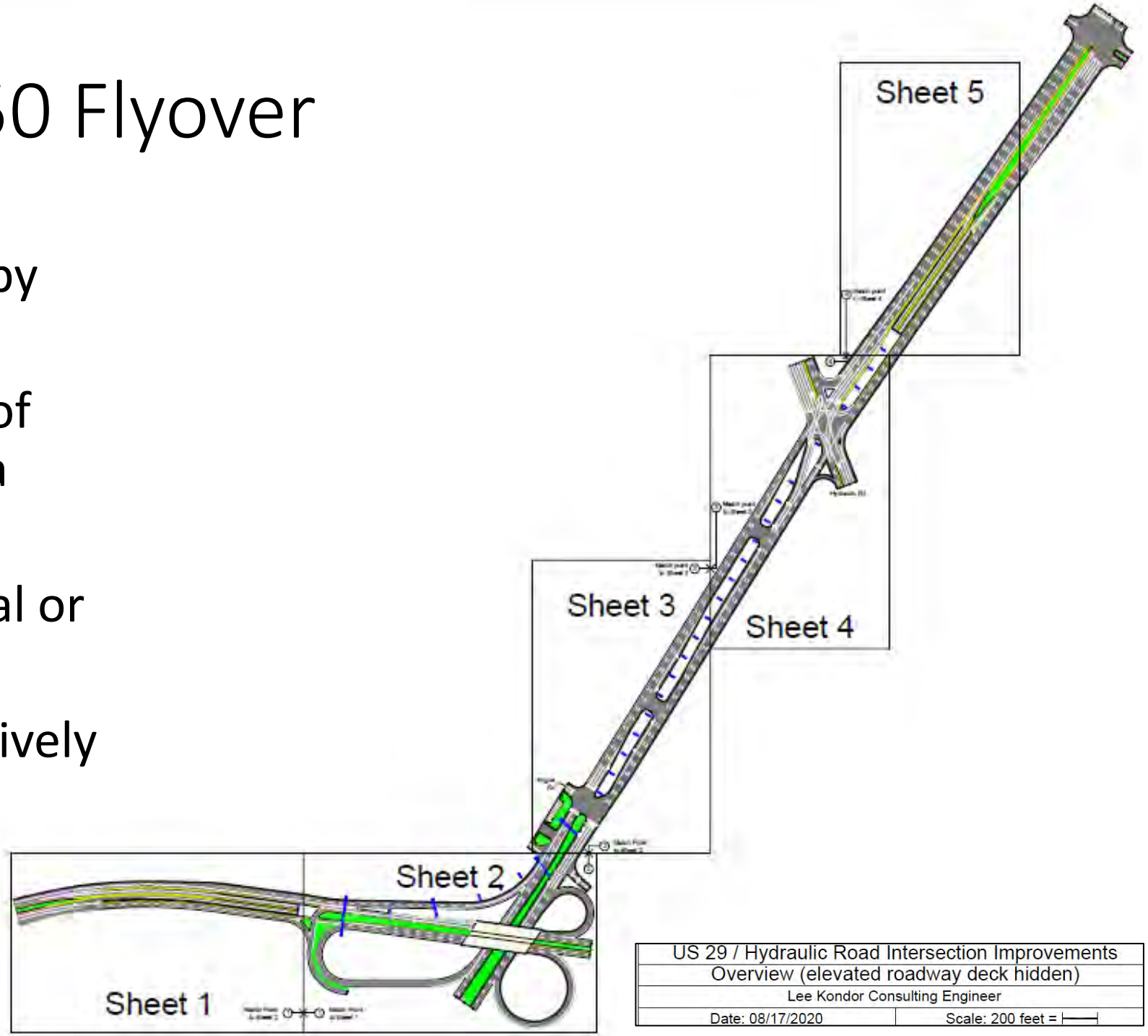
- Project costs TBD
- Avon Street RE(Vision) study completed for Albemarle County in 2020
- Bike and pedestrian facility needs identified in the Charlottesville Bicycle and Pedestrian Master Plan
- LRTP Vision List
- Staff recommends developing application for cohesive bike/ped infrastructure along Avon Road from Druid Avenue (City) to Avon Court Park and Ride (County)
- Minimal engagement recommended by staff

5th Street Multi-Modal Improvements

- Intersection improvements estimated at $2.8; Bike/ped infrastructure costs TBD
- LRTP Vision List
- Corridor study completed by VDOT in January 2021
- Staff recommends developing application to address the 5th Street Station Parkway intersection and to extend bike/ped infrastructure from recently approved Fifth Street Hubs and Trail project north

US 29/250 Flyover

- $50 million estimated cost by CTAC member
- Not recommended as part of the Hydraulic/20 Small Area Plan
- Not documented in any local or regional adopted plan
- Not likely to score competitively
- Not recommended by staff



Electric Vehicle Charging Station Study

Thomas Jefferson Region

ABSTRACT

This study identifies means to improving supports for the use of electric vehicles for area residents in the Thomas Jefferson Planning District Commission region—increasing transportation options, reducing fossil fuel emissions, and improving transportation infrastructure.

Thomas Jefferson Planning District Commission

Summer 2021

This page intentionally left blank

Contents

This page intentionally left blank

Introduction

Local governments will be the first to respond to community needs precipitated by the effects of climate change and are uniquely posed to take a leadership role in charting a resilient future while reducing the impacts of climate change. In alignment with Virginia's goal to reduce greenhouse gas emissions by 30% in 2030 and reach net zero by 2050, the City of Charlottesville, Albemarle County, and University of Virginia have set emission reduction goals as well. Electric vehicle (EV) use is part of these plans to reduce emissions and mitigate climate change in the Charlottesville Albemarle area. While electric vehicles include hybrid electric vehicles, plug-in hybrid electric vehicles and battery electric vehicles, this study will focus on battery electric vehicles because they are the most reliant on charging infrastructure.

The objective of this study is to help the Thomas Jefferson Planning District Commission (TJPDC) region increase transportation options, reduce fossil fuel emissions, and improve transportation infrastructure by identifying means to improving supports for the use of electric vehicles for area residents. This report provides a background for the local and global need to reduce greenhouse gases, confirms how the use of electric vehicles is one step towards this goal, and reports the number of electric vehicles and charging infrastructure in the TJPDC region. The final sections explore factors that affect EV adoption and use, and shares examples other communities use to support the growth of EV use.

Background

As the effects of climate change continue to tax the global community and TJPDC area with more frequent extreme weather events and diminished public health, national and local governments are looking for ways to mitigate climate change by reducing greenhouse gas emissions. Transportation is one of the largest contributors to emissions in our region and supporting alternatives to traditional gas fueled vehicles is identified as a strategy to reduce contributions to greenhouse gases.

Rising temperatures are identified as a measure of the severity of climate change and have been well documented by the United States government and scientists globally for over 70 years. The Intergovernmental Panel on Climate Change (IPCC) links rising global temperatures to greenhouse gasses produced by human activities and predicts significant long-term effects including rising temperatures, increased drought, and more extreme weather events. (NASA, 2020) July 2020 was the hottest recorded in the Northern Hemisphere since records began in 1951. In fact, the last six July's have been the hottest recorded global temperatures on record. (US Department of Commerce, 2020) The City of Charlottesville, Albemarle County, and the University of Virginia have all proactively taken steps to support initiatives to reduce greenhouse gas emissions, including supporting the use of EVs.

Benefits of EVs

The Commonwealth of Virginia responded to the threat of global warming by committing to reducing statewide greenhouse gas (GHG) emissions by 30% by 2030 and to reach net zero by 2050. (Alena Yarmosky, 2020) The City of Charlottesville, Albemarle County, and the University of Virginia set similar goals to reduce carbon emissions in our region. While climate change is a global issue, local governments will be responding to the effects, such as more frequent and greater weather events, greater temperature extremes, and public health risks associated with a changing climate. (Centers for Disease Control and Prevention, 2019)

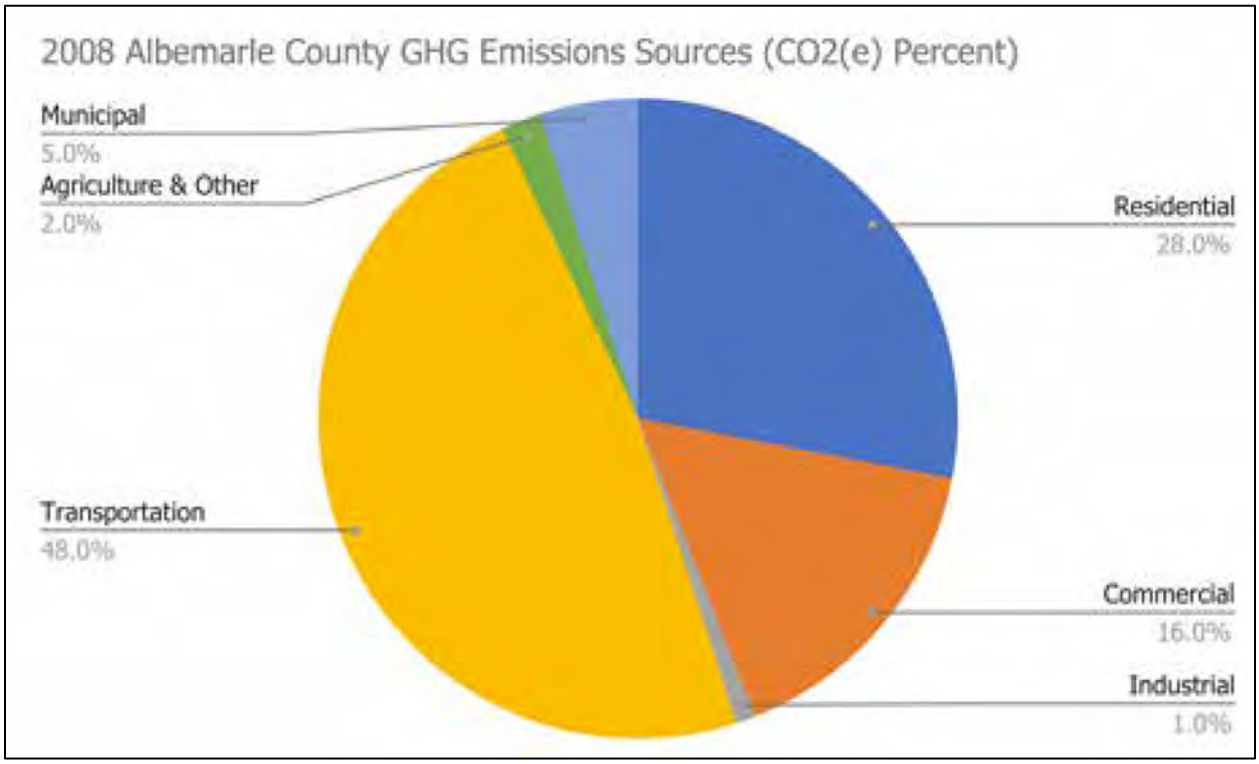
The Charlottesville area has been active in reducing their reliance on fossil fuels and emission reduction for several years. The Charlottesville City Council unanimously endorsed the US Mayors Climate Protection Agreement in 2006. Albemarle County's Board of Supervisors unanimously approved a Cool County Resolution in 2007 and in that same year, the University of Virginia solidified their commitment to reduce greenhouse gas emissions. (The LCAPP Steering Committee, 2011)

In 2009 the City of Charlottesville and Albemarle County assembled a committee of local representatives, including the University of Virginia to coordinate the community's response to climate change. They produced a report, titled Local Climate Action Planning Process (LCAPP), outlining a five-part framework to aid discussion and understanding of the region's energy use and help organize approaches and strategies to reach net zero by 2050. One of the recommendations in the Framework is to support the use of EVs by developing municipal and private sector guidelines for electric EV charging stations, parking, and incentives. (The LCAPP Steering Committee, 2011)

Albemarle County's 2008 inventory of greenhouse gas emissions[1], found that county's emissions were over 1.6 million tons carbon dioxide equivalent. When broken down by emission source, transportation accounted for almost half (48%) of the emissions of greenhouse gasses in the county. The City of Charlottesville's percentage of emissions for transportation was slightly less, but still accounted for the greatest emission source. (The LCAPP Steering Committee, 2011) Figure 1, copied from Albemarle County's Climate Action Plan Phase One illustrates the other emission sources in the county, including residential as the second highest source at 28%. (Albemarle County, Winter 2020)

[1] The measurements used included the total amount of all GHGs (expressed as an equivalent amount of CO2) generated to produce the energy needs of the community – whether the energy use is derived from fossil fuel combustion directly (such as by driving a gas vehicle) or indirectly (such as by using electricity generated by a natural gas-fired power plant) –minus the amount of GHGs sequestered within the community due to new practices that draw down carbon out of the atmosphere, like planting new trees (afforestation) and regenerative agriculture.

Figure 1: GHG Emissions Sources in Albemarle County



Source: Albemarle County Climate Action Plan Phase One

The City of Charlottesville has taken steps to reduce greenhouse gas emissions. The City Council Vision 2025: A Green City and Comprehensive Plans include actions to mitigate climate change on a local level. The City conducted greenhouse gas inventories in 2000, 2013, 2016, and 2018 finding that in 2016 greenhouse gas emissions were reduced by 23% since their baseline inventory in 2000. (City of Charlottesville, 2019)

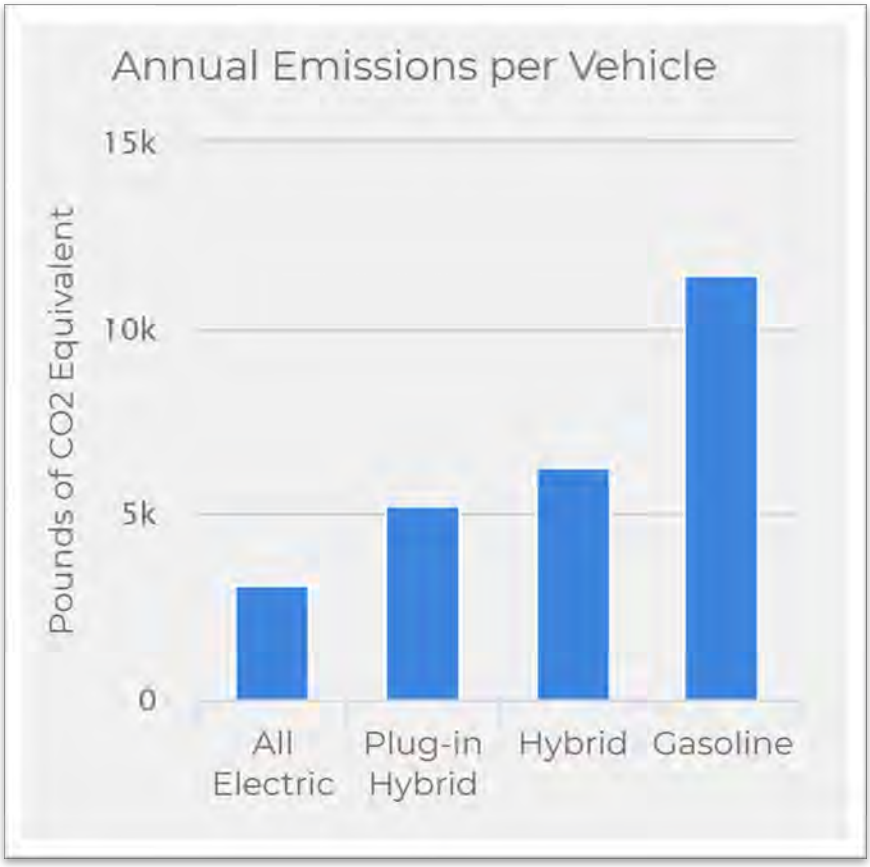
The US Department of Energy estimates that EV's in Virginia produce almost 70% less CO2 emission than traditional gas-powered vehicles. In Virginia, EV's generate approximately three thousand pounds of CO2 equivalent emissions per year per vehicle compared to gasoline powered vehicles which produce approximately eleven thousand pounds of CO2 equivalent annual emissions per vehicle. This amount was calculated using the "Well-to-wheel"[2] method for calculating emissions for vehicle miles traveled. This includes the emissions generated by producing the electricity used to charge EVs, assuming they are not being charged using renewable resources like solar and wind. (Energy, Emissions from Hybrid and Plug-In Electric

[2] "Well-to-wheel emissions include all emissions related to fuel production, processing, distribution, and use. In the case of gasoline, emissions are produced while extracting petroleum from the earth, refining it, distributing the fuel to stations, and burning it in vehicles. In the case of electricity, most electric power plants produce emissions, and there are additional emissions associated with the extraction, processing, and distribution of the primary energy sources they use for electricity production." (Energy, Emissions from Hybrid and Plug-In Electric Vehicles, 2020)

Vehicles, 2020)

Figure 2 illustrates estimated emissions based on fuel types used, including EV's, Plug-in Hybrid, Hybrid, and Gasoline vehicles based on average electricity sources in Virginia. As you can see, in Figure 2, EV's produce significantly less emissions than traditional gas-powered vehicles.

Figure 2: Comparison of Vehicle Emissions



Source: (Energy, Emissions from Hybrid and Plug-In Electric Vehicles, 2020)

Number of EVs in TJPDC

In 2020, there were 509 electric vehicles registered in the TJPDC region. According to projections, this number will continue to increase as the availability of EVs increase and purchase prices decrease. In addition, as the older EVs age there will be more used EVs available on the market, helping the purchase price decrease over the years.

Table 1 uses information gathered by Virginia Clean Cities from annual vehicles registration

data from the Virginia Department of Motor Vehicles to demonstrate the number of EVs registered in the TJPDC area over the past 12 years.

Table 1: Number of Electric Vehicles Registered in TJPDC Area

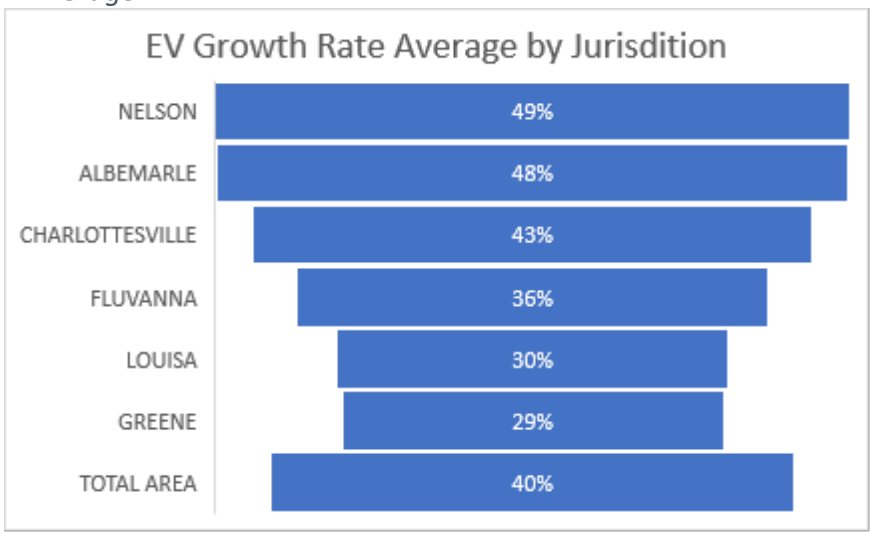
Jurisdiction	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ALBEMARLE	5	9	10	10	15	26	42	48	85	101	183	298
CHARLOTTESVILLE	3	4	8	8	10	12	17	18	28	49	84	119
GREENE	2	2	2	2	-	-	-	2	5	7	8	8
NELSON	-	1	1	1	1	1	1	2	5	6	15	25
FLUVANNA	2	4	5	3	3	3	5	3	5	6	14	23
LOUISA	3	4	6	7	4	5	6	6	9	15	21	36
Total	15	24	32	31	36	47	71	77	132	184	325	509

Source: Virginia Annual Vehicle Registration Data provided by Virginia DMV to Virginia DEQ each year

As seen in Table 1, the number of EVs in the TJPDC area has grown over the past twelve years. Based on the number of vehicles registered, EV registrations in the TJPDC area have grown between 30% and 49%. Figure 3 shows that while Albemarle County and the City of Charlottesville have the highest number of EVs, 298 and 119 respectively, Nelson County's EV registrations are growing at a faster rate. Virginia Clean Cities calculates the average growth for the state during 2008 to 2019 to be similar to TJPDC's EV growth, 39%.

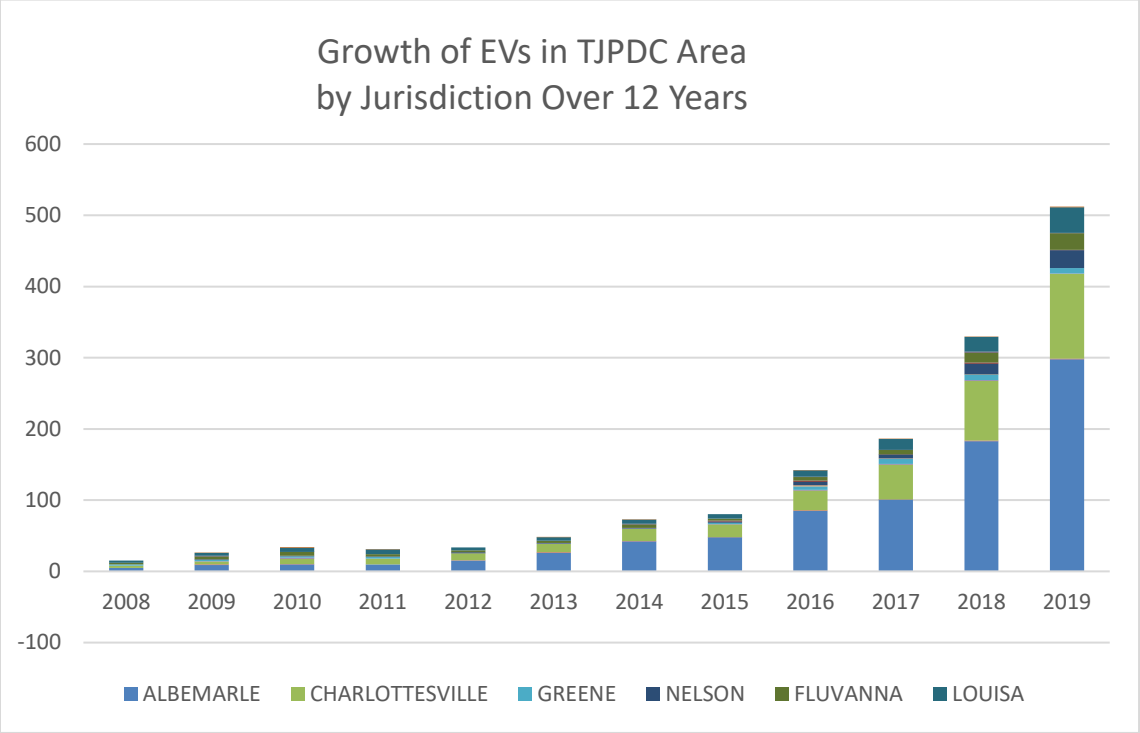
Figure 4 illustrates the EV registration growth over a period of 12 years, from 2008 to 2019, in the TJPDC region. Each bar on the *Growth of EVs in TJPDC Area by Jurisdiction Over 12 Years* chart is segmented to show the number of EV registrations for each jurisdiction by color.

Figure 3: Growth Rate by Jurisdiction, Weighted 12 Year Average



Source: Virginia Annual Vehicle Registration Data provided by Virginia DMV to Virginia DEQ each year

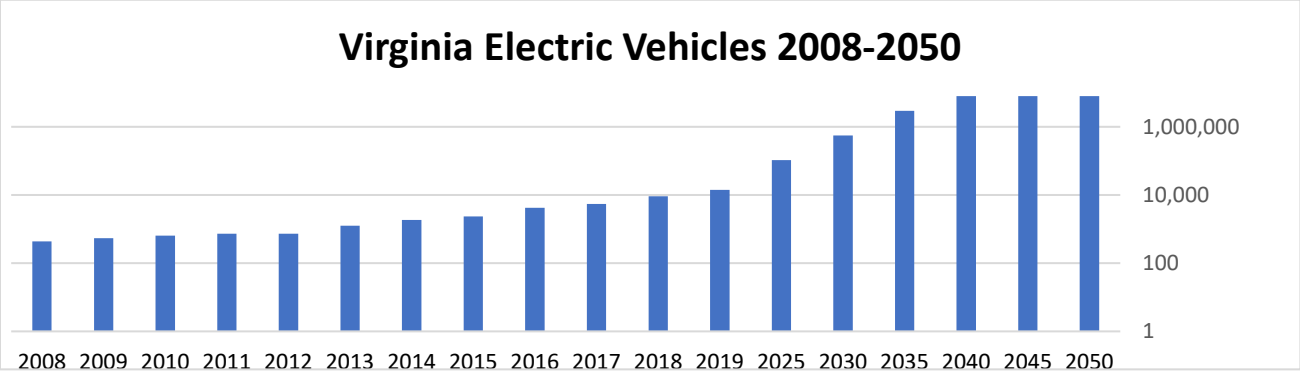
Figure 4: Historical EV Growth in TJPDC



Source: Virginia Annual Vehicle Registration Data provided by Virginia DMV to Virginia DEQ each year

Virginia Clean Cities used Annual Vehicle Registration Data from the Virginia DMV to project EV ownership growth over the next fifty years, estimating that by 2050, there will be eight million EVs in the commonwealth. Figure 5 illustrates the projected growth rate of EVs in Virginia.

Figure 3: Projected EV Population in Virginia



Source: Virginia Clean Cities

If current trends hold, there will be tens of thousands more electric vehicles on Virginia's roadways in the coming decades.

Infrastructure Supporting EVs in TJPDC Region

In their Climate Action Plan, Albemarle County recognizes that climate change has the potential to impact the county, its residents, and especially its agriculturally based businesses. Thus, threatening the local economy and rural character. Increasing public EV charging infrastructure is one of the strategies outlined in the county's plan to mitigate climate change. Two steps identified to increase EV charging stations are through local ordinances and policies encouraging new developments to include EV charging stations and explore partnerships and funding strategies to support EVs. (Albemarle County, Winter 2020)

As Charlottesville set goals to reduce greenhouse gas emissions by 45% by 2030 and to reach net zero by 2050, the city is also drafting its climate action plan. (Woods, 2020) The city reports that residents and visitors are requesting more public charging stations. The city is working to support EV use to provide more transportation options, lower transportation costs, reduce noise and air pollution, and greenhouse gas emissions for their residents. Access to public charging station in the city is especially important for people who live in apartments, condominiums and rental properties and cannot install a charging station at their homes. Public charging stations also support the businesses on the Downtown Mall through the installation of EV chargers near the mall for customers to dine and shop while their EVs are charging. (City of Charlottesville, 2020)

EV Charging Stations in the TJPDC Region

In 2020, there were 20 public EV charging stations in the TJPDC area. Most are in the City of Charlottesville (10) and seven are in Albemarle County. Greene County has no charging stations, Nelson, Louisa, and Fluvanna each have one. Table 2 illustrates the number of public charging stations in the TJPDC region by locality.

The City of Charlottesville supports EV drivers in the region through several initiatives, including the development and support of a publicly accessible EV charging network and educational events. The City maintains several web pages with information and resources to support EV users. In 2020, the City installed two DC Fast Chargers (City of Charlottesville, 2021) in their Water Street Parking Garage and has offered EV Charger Mini Grants since 2013. (City of Charlottesville, 2021) The EV Charger Mini Grant program helps private property owners install public EV charging stations. In 2019 they hosted an educational *Charlottesville Electrify Your Ride* event for EV owners and enthusiasts. (Charlottesville, 2020)

Table 2: Number of EV Charging Stations in TJPDC

Jurisdiction	# Stations	Jurisdiction	# Stations
ALBEMARLE	7	NELSON	1
CHARLOTTESVILLE	10	FLUVANNA	1
GREENE	0	LOUISA	1

Source: www.plugshare.com

Types of EV Charging Stations

EV charging stations or electric vehicle supply equipment (EVSE) comes in three major categories and can be tailored to different types of vehicles based on the vehicle model. The categories are based on the maximum amount of power the charger provides to the vehicle.

- Level 1: Does not require installation of additional charging equipment, it uses the typical 120 V AC plug and is used frequently by residents to charge their personal vehicles. Level 1 chargers deliver 2 to 5 miles of range per hour.
- Level 2: Requires the installation of additional charging equipment, it uses 240 V (residential) or 208 V (for commercial). Level 2 chargers deliver 10 to 20 miles of range per hour. These types of chargers are used in residential, public stations, and workplaces.
- DC Fast Charge: Requires instillation using specialized high-powered equipment, using 480 V AC to provide 60 to 80 miles of range in 20 minutes of charging. These stations are used mostly in public areas along heavy traffic corridors. (US Department of Energy, Energy Efficiency & Renewable Energy, 2020)

In addition to supporting residents who live in apartments and other housing types that do not support the installment of EV chargers, public chargers are needed to extend the range of the vehicles away from driver's homes—and to support lower range EVs such as plug-in hybrids that have an average range of 50 miles. At the moment, Clean Cities Virginia estimates that there are enough charging stations for ½ of 1% of EV trips in Virginia; if EV technology is going to effectively support the goal mitigating global carbon pollution, the number of EVs on the road needs to increase.

Table 3 and Figure 6 show the locations of public charging stations in the TJPDC region. Most of the public charging stations are in garages, primarily at hotels, the University, and City parking.

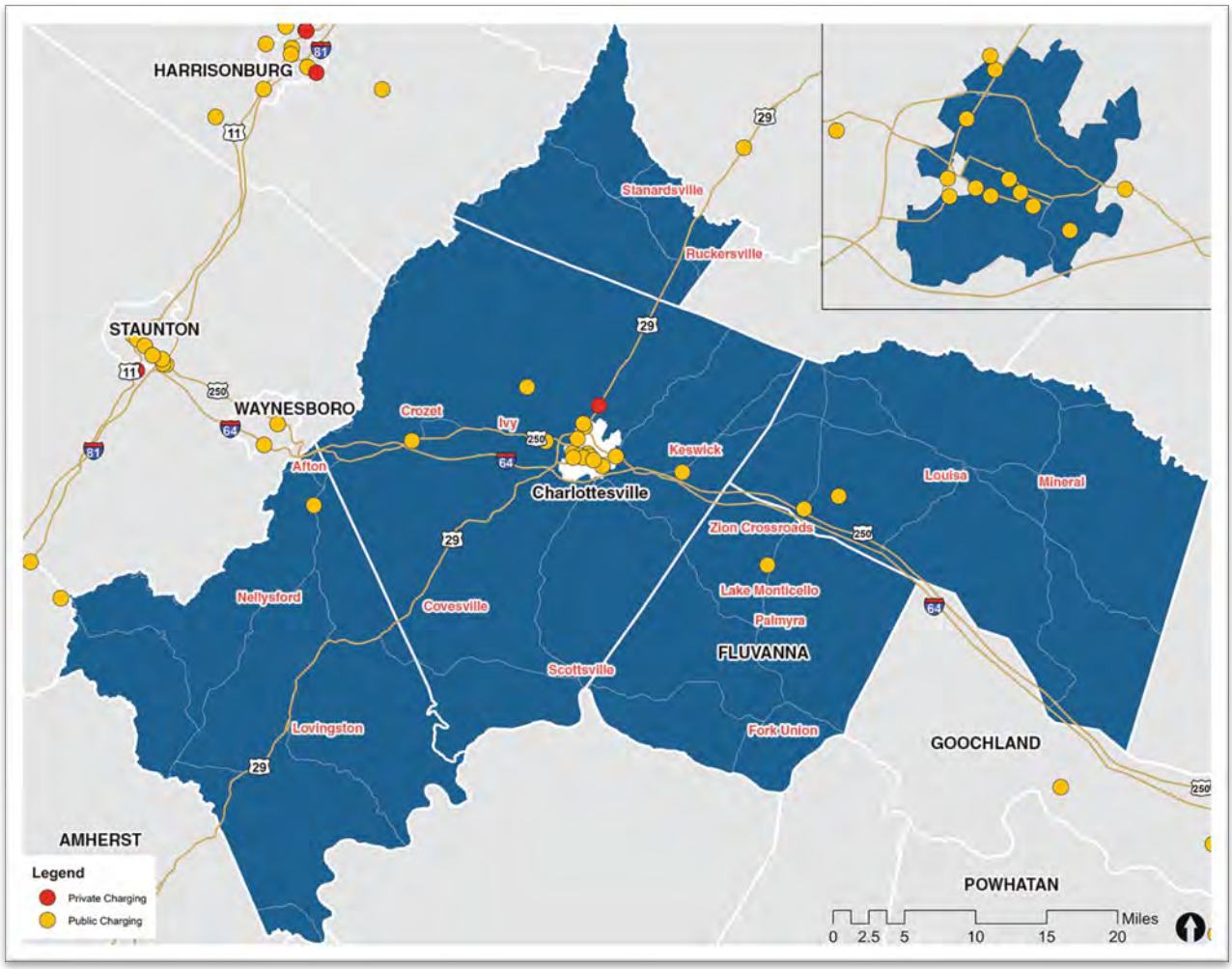
See next page

Table 3: Location of EV Charging Stations in TJPDC

EV Charging Station Locations			
Station Name	Street Address	County	EV Level EVSE Num
Colonial Nissan	200 Myers Dr	Albemarle	2
The Shops at Stonefield - Tesla Supercharger	2100 Hydraulic Rd	Albemarle	NA
Hyatt Place Charlottesville - Tesla Destination	2100 Bond St	Albemarle	3
Foxfield Inn, a Select Registry Property - Tesla Destination	2280 Garth Rd	Albemarle	2
BMW of Charlottesville	1295 Richmond Rd	Albemarle	2
Pro Re Nata Brewery - Tesla Destination	6135 Rockfish Gap Tpk	Albemarle	4
Keswick Hall & Golf Club - Tesla Destination	701 Club Dr	Albemarle	3
University of Virginia	400 Emmet St S	Charlottesville	1
Kardinal Hall	722 Preston Ave	Charlottesville	2
Graduate Charlottesville - Tesla Destination	1309 W Main St	Charlottesville	3
Boar's Head Inn - Tesla Destination	200 Ednam Dr	Charlottesville	3
The Flats at West Village - Tesla Destination	852 W Main St	Charlottesville	2
Oakhurst Inn - Tesla Destination	100 Oakhurst Cir	Charlottesville	2
Barracks Road Shopping Center	1117 Emmet St N	Charlottesville	NA
Martin Horn	210 Carlton Rd	Charlottesville	1
Omni - Charlottesville	212 Ridge McIntire Rd	Charlottesville	1
Water Street Garage	200 E Water St	Charlottesville	NA
TRAINING CENTER	1293 Salem Church Rd	Fluvanna	2
Prospect Hill Plantation Inn - Tesla Destination	2887 Poindexter Rd	Louisa	2
Afton Mountain Bed & Breakfast - Tesla Destination	10273 Rockfish Valley Hwy	Nelson	1

Source: www.plugshare.com

Figure 4: Charging stations in Charlottesville



Source: TJPDC

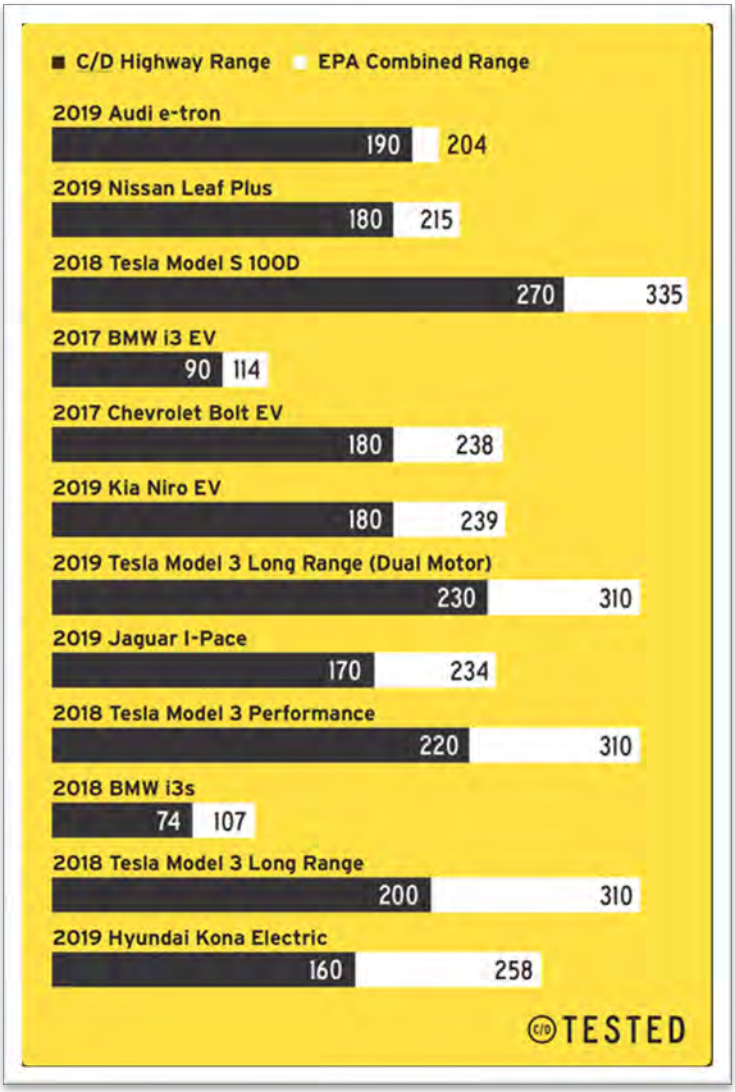
EV Range

Most EVs have to fill-up/re-charge twice as frequently as gas-powered vehicles. In their May 22, 2020 article, *EV Range: Everything You Need to Know*, Car and Driver Magazine estimated that EVs are limited to driving nearly half the distance of a gas-powered vehicle. This makes the location and availability of charging stations a major factor in EV usage. The Environmental Protection Agency (EPA) rates vehicles in multiple variants based on the speed the car is driven. Because of EV's regenerative power from decelerating, gas mileage improves in stop and go driving conditions and at lower speeds. The EPA's combined range[3] for EVs varies between 110 miles and 373 miles.

Car and Driver tested EVs at a steady 75 mph to estimate the lowest mileage range. The ranges resulting in this test fell short of both the EPA's highway and combined range estimates. Figure 7, copied from Car and Driver's website shows the Car and Driver (C/D) and the EPA ranges for top EVs in the United States. (Vanderwerp, 2020)

As shown in Figure 7, Based on Car and Driver's conservative estimates, electric vehicles can require charging as soon as 74 miles. Tesla models have significantly more range with the 2018 Tesla Model S 100D lasting 270 miles. The EPA's combined estimates for the Tesla 2018 Model S 100D were up to 335 miles before needing a charge. This is longer than most trips in the TJPDC area.

Figure 5: Estimate Driving Miles Range from Car and Driver



Source: Car and Driver (Vanderwerp, 2020)

[3] The EPA's range is used as the advertised figure for electric vehicles that are sold in the US. The 310-mile range is an estimate of the number of miles the vehicle should be able to travel in combined city and highway driving from a full charge.

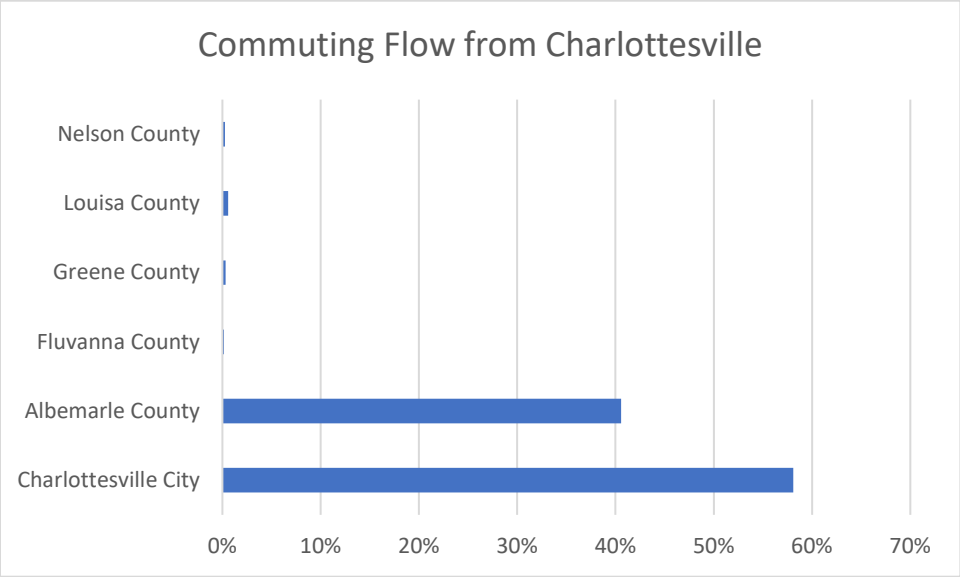
Commuting and Trip Patterns in TJPDC Region

The US Census collects locations of employers and where workers live. The data shows that most of the commuting trips in the TJPDC region are 25 miles or less and that most commuting trips in TJPDC take place within Albemarle county. Major employment areas include the following locations.

- The University of Virginia
- Charlottesville Downtown area
- Pantops area—US 250
- Fontaine Research Park
- University Research Park—Northfork
- Rt. 29 Corridor—US 250 to the Airport
  (Thomas Jeffesrson Planning District Commission, 2016)

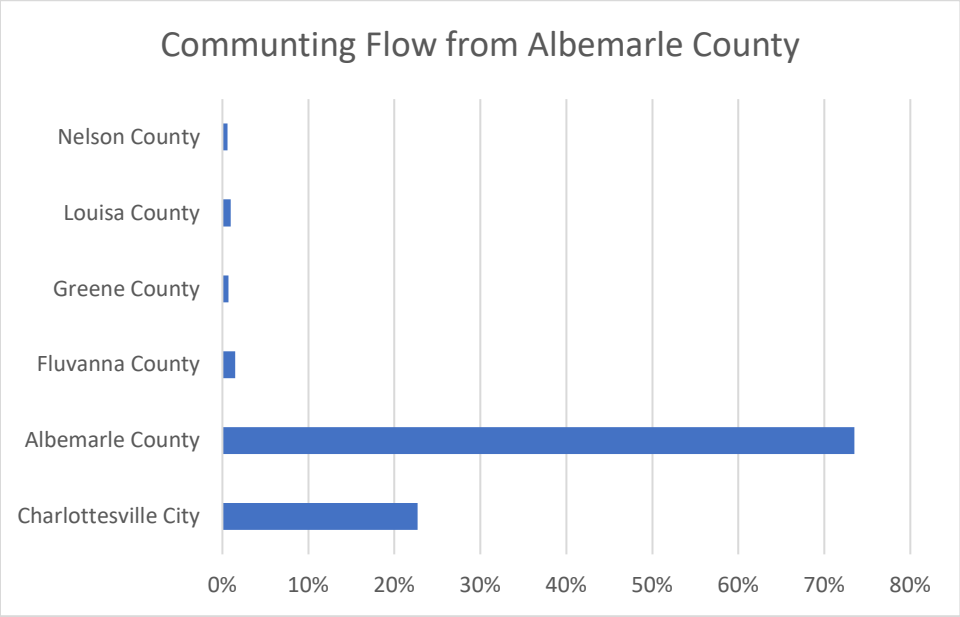
Most trips for work by residents of the TJPDC area are within the county or to other close locations within the region. As seen in Figures 8 through 13, more than fifty percent of commute trips in the TJPDC region are within a jurisdiction, except for Fluvanna and Greene counties who had more trips going to Albemarle County. Sixty percent of Greene county's residents travel to Albemarle County for employment destinations. Thirty-eight percent of Fluvanna's residents travel to Albemarle County for employment and another twenty-eight percent travel to Charlottesville. (US Census, 2020) Most commutes in the TJPDC region are short enough to not need a public charging station during the trip, especially if employers have charging stations at their facilities. These numbers will have changed during and after COVID as more people are working remotely and population and employment circumstances have changed.

Figure 6



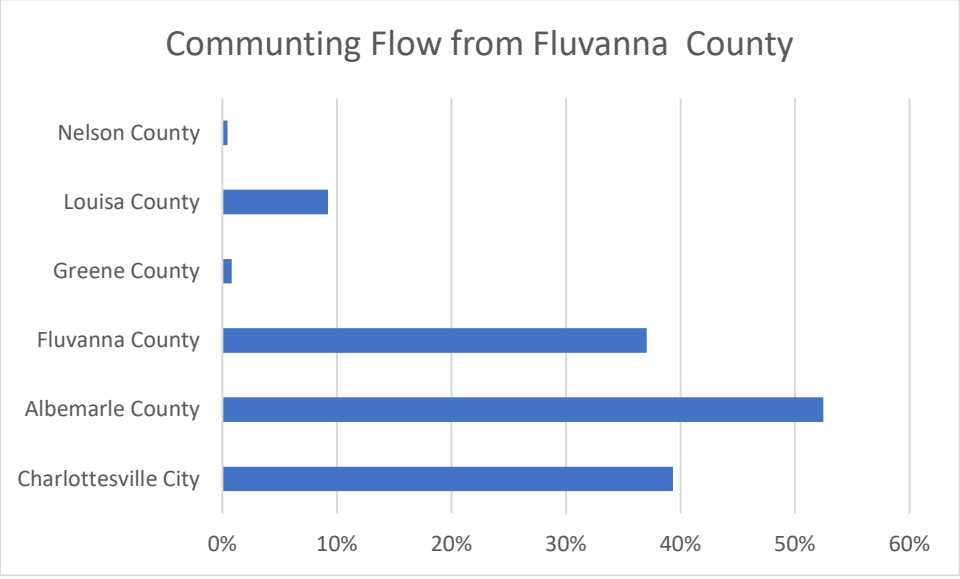
Source: US Census, 2011-2015, 4 Year ACS Commuting Flows

Figure 7



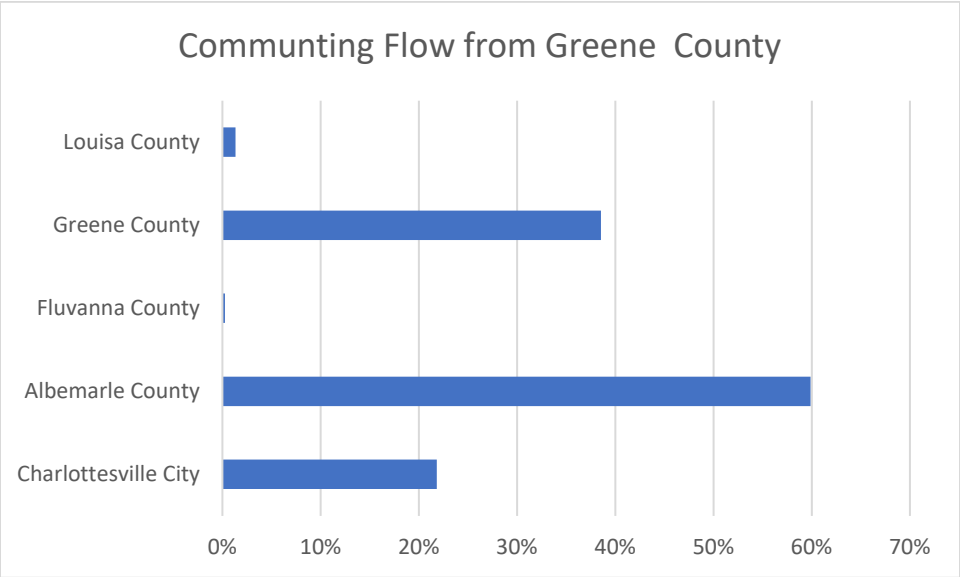
Source: US Census, 2011-2015, 4 Year ACS Commuting Flows

Figure 8



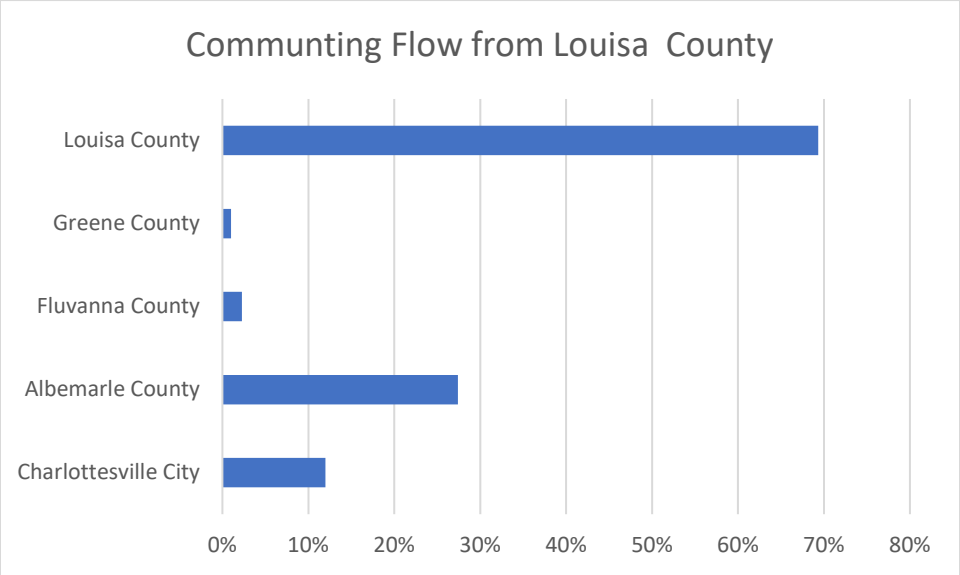
Source: US Census, 2011-2015, 4 Year ACS Commuting Flows

Figure 9



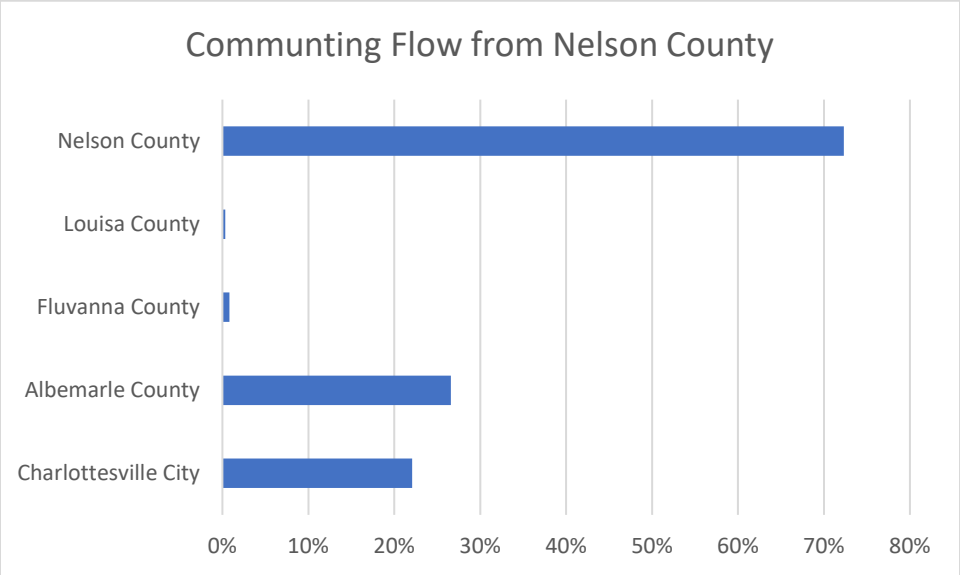
Source: US Census, 2011-2015, 4 Year ACS Commuting Flows

Figure 10



Source: US Census, 2011-2015, 4 Year ACS Commuting Flows

Figure 11



Source: US Census, 2011-2015, 4 Year ACS Commuting Flows

Factors that Affect EV Adoption

As with national markets, the challenges to EV adoption in the TJPDC area are mostly financial. However, there are also design considerations that local governments can implement to encourage the use of EVs. Some factors that negatively affect EV growth in the TJPDC area include the cost of purchasing vehicles, higher licensing fees, and lack of charging infrastructure.

Many electric vehicle models are more expensive than their gas-powered counterparts if they are bought new. Because it is a newer technology, the cost of purchasing EVs is higher than gas-powered vehicles and there are less used EVs available for sale. It is difficult to connect the future savings to a consumer when there are cheaper cars with more places to buy fuel, but this gap is shortening. Chen and Paleti's report, *Would You Consider a "Green" Vehicle? Anticipating Electric Vehicles, Adoption Patterns and Emissions Impacts in Virginia*, (2018) expects that federal and state financial incentives are critical factors to support EV adoption by helping to offset higher purchase prices. (Chen & Paleti, 2018) A September 2020 article in the New York Times, *The Age of Electric Cars Is Dawning Ahead of Schedule*, reports that with lower battery costs, EV purchase prices are dropping at a higher rate than expected. (Ewing, 2020) (Hanley, 2020)

In addition to the higher purchase cost, often the future benefits of an EV are not well known by consumers. There are many upsides including cheaper fuel and less maintenance. ChargEVC, a not-for-profit trade and research organization, estimates that the average driver could save almost $800 per year in fuel costs by switching to an EV. In addition to lower fuel costs, EVs

have one third of the moving parts compared to gasoline vehicles which translates to less maintenance related costs. (ChargeEvC, 2020)

In Virginia, the licensing fee for an electric vehicle is increasing from $64 to $88 a year compared to $40 for gas fueled cars. According to the Virginia Department of Motor Vehicles, effective July 1, 2022, fuel-efficient[4] and electric vehicles will be charged a Highway User Fee of $88 a year to offset the reduced gas tax revenue from the use of these vehicles. Starting in the spring of 2021, the Highway Use Fee will be tied to the fuel tax rate and the average number of miles traveled by a passenger vehicle in Virginia. (Virginia Department of Motor Vehicles, 2020) This added cost could be a discouraging aspect of investing in an electric vehicle.

Charging infrastructure is a key factor when considering the purchase of an EV. Depending on the part of the state, there could be many charging stations that allow for a quick vehicle charge or charging stations could be farther apart requiring a special trip to charge a vehicle. The EPA reports that 80% of privately owned EV charging is completed at home. Only 40% of households in the US have electricity located within 20 feet of the parking area. (US Department of Energy, Energy Efficiency & Renewable Energy, 2020)

According to the 2015-2019 American Community Survey 5-Year Estimates, 34% of the TJPDC housing units are not single-family detached homes. Meaning that occupants may not have the option of installing a charging station in the garage or near their house. Occupants also may not own a parking space to install a charger in. This number of attached units in the TJPDC region, 38,331, includes 1-unit attached (townhome), 2-units up to 20 or more units and the 32 boats, RVs, and vans counted as housing units in Albemarle. Figure 14 breaks down the number of attached units versus the number of detached units. While all but the City of Charlottesville have more detached or single-

THE U.S. EPA REPORTS THAT 80% OF PRIVATELY OWNED EV CHARGING IS COMPLETED AT HOME.

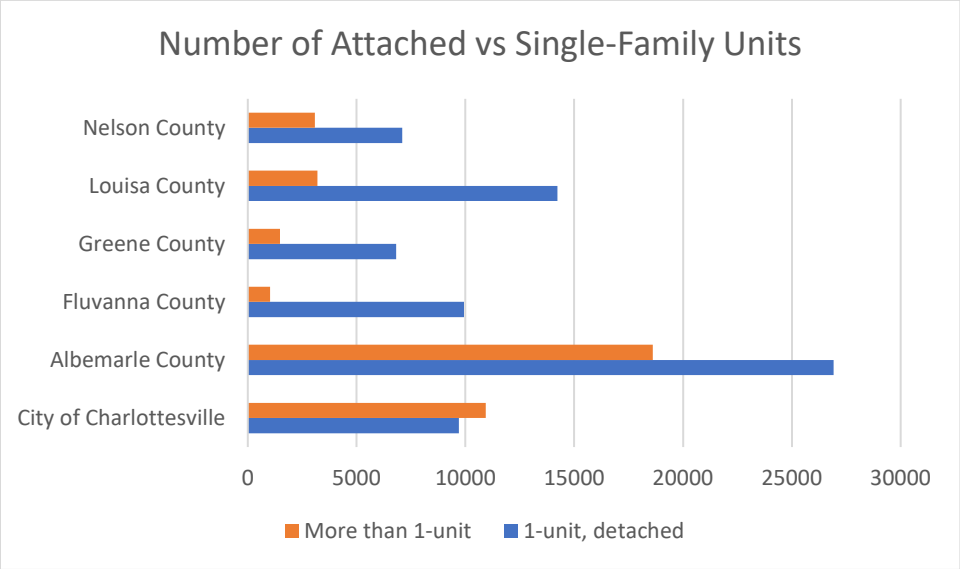
THERE ARE AN ESTIMATED 40K HOUSING UNITS IN THE TJPDC REGION WITH POTENTIAL BARRIERS TO CHARGING EVS AT HOME.

Sources: U.S. Department of Energy, Energy Efficiency & Renewable Energy, 2020 and *U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates*

[4] Fuel efficient vehicles are defined as having a combined miles-per-gallon rating of 25 or greater, electric vehicles, or alternative fuel vehicles that run on something other than gasoline or diesel.

family units, there are still almost forty thousand households in the region with barriers to charging an electric vehicle at home.

Figure 12: Estimated Number of Housing Units that are Suitable to Installing an EV Charger



Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

People who live in apartments, condominiums, and townhouses, as well as those in communities with homeowners' associations may have barriers to charging EVs at home. Commutes and most trips in the PDC region are relatively short and less than the range of most EVs, making home charging the most likely practice, especially in rural areas.

Table 4 breaks down the housing unit types by each jurisdiction.

Table 4: Number and type of Housing Units by Jurisdiction

Number and Type of Housing Units by Jurisdiction			
Geographic Area	**% More than 1-Unit**	**More than 1-unit**	**1-unit Detached Single-Family**
City of Charlottesville	53%	10,938	9,704
Albemarle County	41%	18,606	26,914
Fluvanna County	9%	1,018	9,930
Greene County	18%	1,481	6,810
Louisa County	18%	3,203	14,235
Nelson County	30%	3,085	7,090
Total TJPDC Region	34%	38,331	74,683

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Recommendations

Based on the research conducted and other initiatives that are already underway in the region, these are the opportunities that stakeholders could consider to support the adoption of electric vehicles throughout the region. Stakeholders like local governments, developers, educational institutions like the University of Virginia (UVA), utility companies, Virginia Department of Transportation (VDOT), transit providers, non-profits, and the TJPDC and MPO can all work together to reduce greenhouse gas emissions through initiatives supporting the adoption of electric vehicles. These opportunities include the areas of Infrastructure, funding, policy, and information gathering and sharing.

Infrastructure

Opportunity	Stakeholders
Identify convenient and highly visible public locations that could support EV charging infrastructure such as shopping centers, parking decks, stadiums, etc.	Local Governments Developers UVA
Collaborate with utility companies to provide EV charging infrastructure near utility pole sites that can be accessed via street parking to provide access to those in high-density housing without access to building-based charging infrastructure.	Local Governments Utility Companies VDOT
Assess opportunities to collaborate with transit providers as they consider opportunities to expand EV fleets.	Local Governments VDOT Jaunt CAT UTS
Collaborate with VDOT to consider incorporation of EV charging station infrastructure at new or existing Park and Ride lots.	Local Governments VDOT MPO/PDC
Include installation of EV charging infrastructure at major employment centers throughout the region.	Developers
Include EV charging infrastructure in new housing developments, especially multi-family developments.	Local Governments Developers Affordable Housing Agencies

Funding

Opportunity	Stakeholders
Pursue public/private partnerships and/or state and federal grants to support an increase in the availability of EV charging infrastructure.	Local Governments
Offer subsidies and grants to owners of multi-family residential developments to support the installation of EV charging infrastructure.	Local Governments UVA
Offer subsidies and grants to employers to support the installation of	Local Governments

EV charging infrastructure.	UVA

Policy

Opportunity	Stakeholders
Develop local ordinances and policies that encourage or require new developments to provide EV charging stations, as appropriate.	Local Governments
Assess a reduction of the personal property tax rate for EVs.	Local Governments
Assess opportunities to develop utility demand response programs to facilitate electric vehicle charging.	Utility Companies Local Governments Community Climate Collaborative MPO/PDC
Consider incentive programs to encourage owners of existing commercial/residential developments and employment centers to install EV infrastructure.	Local Governments
Support state and federal legislation encouraging the adoption of EVs like tax breaks and other incentives.	Local Governments Community Climate Collaborative

Information Gathering/Sharing

Opportunity	Stakeholders
Develop an inventory of existing multi-family housing developments that do not have access to building-based electrical infrastructure.	Local Governments MPO/PDC Affordable Housing Agencies
Develop a comprehensive database of resources to include information on financial incentives and technical guidance for stakeholders interested in adopting/supporting EV use.	Local Governments Community Climate Collaborative UVA MPO/PDC
Collaborate with local stakeholders on unified marketing and programming to support greater EV adoption throughout the region.	Local Governments Community Climate Collaborative UVA MPO/PDC

Guidance

Many communities are leading the way in the adoption of EVs and reducing greenhouse gases, California's EV charging network is four years ahead of Virginia's (Chen & Paleti, 2018) and many European countries are investing in infrastructure to support public charging stations for residents of dense neighborhoods with limited off-street parking. Some examples of how communities are implementing recommendations like the ones above are provided in this section.

For example, through London's Go Ultra Low Cities funding program, neighborhoods are installing EV charger ports on streetlight posts in front of public parking spaces. As of the fall of 2020, the Boroughs of Kensington and Chelsea have 43 Source London[5] charging ports and 225 lamp column chargers operated by Ubitricity. (The Royal Borough of Kensington and Chelsea, 2020) The March 24, 2020 CleanTechnica article, *Siemens Brings Street Light EV Charging To London Neighborhood,* reported that the City of Westminster has over 300 public EV charging stations and plans to reach a thousand stations in the 2021. (Hanley, 2020)

Some of the information identified through this research can assist the TJPDC region to encourage the adoption of EVs are listed below.

- Sample guidelines for EV Charging Stations, siting, and design
- Sample local ordinances and policies to encourage new developments to include EV charging stations (Zoning, Parking, and signage, building codes and permitting)
- Strategies to support the addition of charging stations for residents who live in multi dwelling units
- Available financial incentives and strategies
- Power grid and electric utility policies and planning
- Analysis of need for non-residential/employer charging stations and locations for the public
- Examples of successful strategies implemented by other agencies/governments

The next section offers examples of guidelines and ordinances localities in the United States have used to support building additional EV charging stations and EV use.

Sample Guidelines for EV Charging Stations

The Charlottesville *Local Climate Action Planning Process Report* recommends supporting the use of EVs by developing municipal and private sector guidelines for EV charging stations, parking, and incentives. The US Department of Energy, *A Guide to the Lessons Learned from the Clean Cities Community Electric Vehicle Readiness Projects* provides examples of guidelines and considerations localities enacted to encourage the use of EVs in their community. (Frades, 2014) Some of the topics to consider in developing guidelines are shared in this section. The

[5] Source London is a membership-based charging network of on-street parking EV charging stations that are powered by 100% renewable energy. In 2020 they had over 1,000 7kW and 22kW charging stations in London. They plan to double that amount by the end of 2020. (Bolloré Group, 2020)

section after this one, *Sample Local Ordinances*, provides considerations and examples of ordinances to support EVs in the development process.

Fairfax County, Virginia has an easy-to-use webpage explaining their permitting process for charging stations. They require plans for commercial and multi-family installations. Single-family units only submit electrical permits. The website has information about the requirements specific for EV charger installations and defines the types of electric vehicles and the types of chargers. (Fairfax County, 2020) Localities in the TJPDC region can consider the following design characteristics to add to their building codes:

- Structure and characteristics of the charging station itself
- Location and characteristics of parking spaces
- Uniform signage, including wayfinding signs
- ADA standards

Public charging stations will also have additional considerations like:

- Parking restrictions;
- Terms of use—hours of operation, cost to charge, cost to park, time limits; and
- Enforcement.

Providing clear guidelines for charging stations will help people install, find, and use the stations. Developers will have clear designs on what they are expected to plan for and produce. EV drivers will know what to look for and how to use the stations if they are all uniform, they will be easily recognizable, and all have similar operating procedures. This also signifies the localities' support for electric vehicles and supporting infrastructure.

The type of structure the EV charger is mounted on should be considered so that it is accessible to all kinds of users and does not interfere with local pedestrian and vehicle movement. For example, the height the charger is mounted can help avoid damage to vehicles and the charger as the result of collisions.

Specifying EV Charger parking space configurations can also include directions on whether builders should locate chargers in perpendicular, parallel, or angled parking spaces. Parking spaces should be designed to accommodate the added space needed to mount EV charges. Some localities choose to locate EV stations in less desirable locations to discourage non-charging vehicles from using them while other localities use the location of EV charging spaces as an incentive for using EVs. For example, St. Louis Park, MN specifies the following in their ordinances.

"The EVCS[6]s shall be located in desirable and convenient parking locations that will serve as an incentive for the use of electric vehicles." (Cooke & Ross, 2019)

[6] EVCS - Electric Vehicle Charging Station

Clear uniform signs on roadways and at parking facilities are recommended to help drivers find charging locations and understand the use requirements. For example, are EVs allowed to park in charging locations while not charging? Some public EV parking limits the amount of time vehicles can use the space. Who should an EV driver contact for assistance if the station is out-of-order? What are the costs and terms to use the charger?

Municipalities will also want to consider enforcement for parking in public EV charging spaces. If EV chargers are in prime parking spots, it is essential to ensure that EV drivers can use the spaces and that non-EVs are not blocking the spaces. This can include clear consistent rules with consequences posted in visible locations throughout the region.

By providing minimum standards or required designs for charging stations, localities can facilitate a smooth permitting process while planning for future technologies and trends. When developing these standards, consider the electrical supply equipment standards and parking space requirements.

Sample Local Ordinances

Albemarle County's *Climate Action Plan* suggests using local ordinances and policies to encourage new developments to include EV charging stations and explore partnerships and funding strategies to support EVs. In their 2019 report, *Summary of Best Practices in Electric Vehicle Ordinances,* the Great Plains Institute provides examples of zoning ordinance language and associated tools as a guide for cities on developing EV-ready zoning standards.

Including mention of where EV charging stations are allowed in ordinances helps streamline installation, eliminates confusion, and affirms the localities support for EV infrastructure. For example, Iowa Clean Cities Coalition recommends defining what types of EV charging installments are allowable by land use. For example, level 1 and 2 EV charging stations are allowed in all zones and level 3 stations are restricted to specific zoning districts or require a special use permit. (Ross, 2019)

Retrofitting parking structures can be much more expensive than outfitting garages during the initial construction phase. **Minimum requirements** and **make-ready standards** can be used to ensure that new buildings, especially multifamily residential developments are designed with future EV charging needs in mind. Localities often recommend or require that a proportion of parking spaces contain EV charging stations or be EV ready. For example, Howard County, MD has the following minimum requirement.

"For new occupancies subject to this section: at least 1 parking space for each 25 residential units shall feature energized outlets." (Cooke & Ross, 2019)

Some localities base their proportion requirements on land use, requiring more EV spaces in multifamily developments and lodging and less in retail, eating and drinking establishments.

Localities can also allow flexibility to exchange EV charging stations for meeting existing minimum parking requirements. For example, Middletown, CT provisions state:

"Requests for reduction of general parking spaces in exchange for additional EV parking: For any development that exceeds the minimum number of EVCs as required … The reduction of parking cannot be greater than 10% of the total amount of parking for the proposed development." (Cooke & Ross, 2019)

Make-ready standards or requirements for new construction can facilitate the installment of EV charging stations as the need arises. For example, St. Louis Park, MN requires all new, expanded, and reconstructed parking areas for multifamily residential uses to provide the electrical capacity necessary to accommodate the future hardwire installation of Level 2 EV charging stations for a minimum of 10% of required parking spaces. (Ross, 2019)

The Great Plains Institute provides the following recommendation for make-ready standards for multifamily parking spaces in a structure to ensure that electrical conduit (trunk line) and subpanels are preinstalled throughout the parking garage to allow Level-2 Charging Equipment to be connected in the future.

"Require that all parking spaces in a parking structure be made "EV-Capable" i.e. conduit be installed throughout the structure and subpanels sized to accommodate 60A or 40A breakers for each." (Cooke & Ross, 2019)

Conclusion

Statewide and nationally, EVs are recognized as an integral part of climate change mitigation strategies. As the City of Charlottesville, the University of Virginia, and Albemarle County Continue to develop strategies to mitigate climate change and reduce emissions, EVs will be part of the plans.

While financial incentives, like tax breaks, for purchasing EVs have been found to be an effective incentive for the adoption of EV technology, there are political barriers to tax incentives for EVs in Virginia. Localities can take actions in other ways, by laying out clear pathways for the installation and use of charging stations by using ordinances and incentives to encourage new developments to plan for and install charging infrastructure. Charlottesville's EV Charger Mini-Grant program helps increase charging options near commercial and retail activities and their website offers useful information and links about EVs, regulations and charging stations for potential hosts and EV users.

There are 10 public EV charging stations in the City of Charlottesville and 7 in Albemarle, with more coming. These stations are in public parking garages and retail/commercial parking lots. Most EV charging is completed at home and places of employment where vehicles will be parked for numerous hours. Increasing charging options for people who live in apartments and/or don't have designated parking with infrastructure to support installing an EV charger

will reduce a common barrier to EV purchase and use. Secondly, places of employment providing EV charging options for employees will also help support EV use. Localities in the TJPDC area can address this barrier with, guidelines, ordinances, and incentives to support the installation of EV charging infrastructure for multifamily housing and employment centers.

Works Cited

Albemarle County. (Winter 2020). *Climate Action Plan Draft; Phase One.* Albemarle County. Retrieved September 11, 2020, from https://www.albemarle.org/home/showdocument?id=3182

Alena Yarmosky, O. o. (2020, Septmeber 14). *Governor Northam Signs Clean Energy Legislation.* Retrieved from Virginia Governor Ralph Northam: https://www.governor.virginia.gov/newsroom/all-releases/2020/april/headline-856056-en.html

Bolloré Group. (2020, September 23). *About Source London*. Retrieved from Source London: https://www.sourcelondon.net/about-source-london

Centers for Disease Control and Prevention. (2019, September 9). *Scientific Framework*. Retrieved March 2, 2020, from Centers for Disease Control and Prevention: https://www.cdc.gov/climateandhealth/policy.htm

ChargeEvC. (2020, September 14). *Electric Vehicle Savings Calculator*. Retrieved from ChargeEvC: Better Travel, Stronger Grid.: https://www.chargevc.org/ev-calculator/

Charlottesville, C. o. (2020, September 11). *Electric Vehicle (EV) Charging in Charlottesville*. Retrieved from Charlottesville : https://www.charlottesville.gov/762/Electric-Vehicle-EV-Charging#/find/nearest?location=22902&fuel=ELEC

Chen, T. D., & Paleti, R. (2018). *Would You Consider a "Green" Vehicle? Anticipating Electric Vehicle Adoption Patterns and Emissions Impacts in Virginia.* Charlottesville: Department of Engineering Systems & Environment, University of Virginia.

City of Charlottesville. (2019). *2016 Greenhouse Gas Inventory City of Charlottesville.* Charlottesville: City of Charlottesville.

City of Charlottesville. (2020, September 11). *Support for EV Charging* . Retrieved from Charlottesville: https://www.charlottesville.gov/767/Support-for-EV-Charging

City of Charlottesville. (2021, April 26). *EV Charger Mini-Grant*. Retrieved from Welcome to the City of Charlottesville: https://www.charlottesville.gov/765

City of Charlottesville. (2021, April 26). *EV Charging in Water Street Parking Garage*. Retrieved from Welcome to the City of Charlottesville: https://www.charlottesville.gov/1322

Cooke, C., & Ross, B. (2019). *Summary of Best Practices in Electric Vehicle Ordinances.* Great Plains Institute. Retrieved December 7, 2020, from https://www.betterenergy.org/wp-content/uploads/2019/06/GPI_EV_Ordinance_Summary_web.pdf

Energy, U. D. (2019, August 2020). *Electric Vehicle Benefits*. Retrieved from Office of Energy Efficiency and Renewable Energy: https://www.energy.gov/eere/electricvehicles/electric-vehicle-benefits

Energy, U. D. (2020, August 28). *Emissions from Hybrid and Plug-In Electric Vehicles*. Retrieved from Alternative Fuels Data Center: https://afdc.energy.gov/vehicles/electric_emissions.html

Ewing, J. (2020, September 20). The Age of Electric Cars Is Dawning Ahead of Schedule. *New York Times*. Retrieved from https://www.nytimes.com/2020/09/20/business/electric-cars-batteries-tesla-elon-musk.html?auth=login-google1tap&campaign_id=9&emc=edit_nn_20200922&instance_id=22405&login=googl

e1tap&nl=the-morning&regi_id=139859437&section_index=2&section_name=three_more_b
Fairfax County. (2020, December 16). *Electric Vehicle Charging Stations*. Retrieved from Fairfax County Virginia: https://www.fairfaxcounty.gov/landdevelopment/electric-vehicle-charging-stations
Frades, M. (2014). *A Guide to the Lessons Learned from the Clean Cities Community Electric Vehicle Readiness Projects.* US Department of Energy, Energy Efficiency & Renewable Energy.
Hanley, S. (2020, March 24). Siemens Brings Street Light EV Charging To London Neighborhood. *CleanTechnica*. Retrieved from https://cleantechnica.com/2020/03/24/siemens-brings-street-light-ev-charging-to-london-neighborhood/
NASA. (2020, August 31). *The Effects of Climate Change*. Retrieved from Vital Signs of the Planet: https://climate.nasa.gov/effects/
Ross, C. C. (2019). *Summary of Best Practices in Eletric Vehicle Ordin ances.* Great Plains Institute. Retrieved December 7, 2020, from https://www.betterenergy.org/wp-content/uploads/2019/06/GPI_EV_Ordinance_Summary_web.pdf
The LCAPP Steering Committee. (2011). *Local Climate Action Planning Process Report.* Charlottesville: City of Charlottesville, Albemarle County, and University of Virgina.
The Royal Borough of Kensington and Chelsea. (2020, September 23). *See our Electric Vehicle Charging Strategy*. Retrieved from Electric Vehicles: https://www.rbkc.gov.uk/parking-transport-and-streets/visitors/visitor-parking/electric-vehicles
Thomas Jeffesrson Planning District Commission. (2016). *RideShare; Transportation Demand Management Plan Update FY16-FY21.* Charlottesville .
US Census. (2020, September 21). *2011-2015, 4 Year ACS Commuting Flows.* Retrieved from Table 1. Residency County to Workplace County Commuting Flows for the United States and Puerto Rico Sorted by Residence Geography: https://www.census.gov/data/tables/2015/demo/metro-micro/commuting-flows-2015.html
US Department of Commerce, N. O. (2020, August 31). *News and Features: July 2020: Another scorching month in a scorching year*. Retrieved from Climate. gov: https://www.climate.gov/news-features/understanding-climate/july-2020-another-scorching-month-scorching-year
US Department of Energy, Energy Efficiency & Renewable Energy. (2020, September 21). *Vehicle Charging*. Retrieved from Electric Vehicles: https://www.energy.gov/eere/electricvehicles/vehicle-charging
Vanderwerp, D. (2020, May 22). *EV Range: Everything You Need to Know*. Retrieved from Car and Driver: https://www.caranddriver.com/shopping-advice/a32603216/ev-range-explained/
Virginia Department of Motor Vehicles. (2020, September 14). *Highway Use Fee (HUF)*. Retrieved from Virginia.gov: https://www.dmv.virginia.gov/vehicles/#HighwayUse_fee.asp
Woods, C. R. (2020, September 21). *Heat islands to factro into planning process revision*. Retrieved from Charlottesville Tomorrow: https://www.cvilletomorrow.org/articles/heat-islands-to-factor-into-planning-process-

revision/

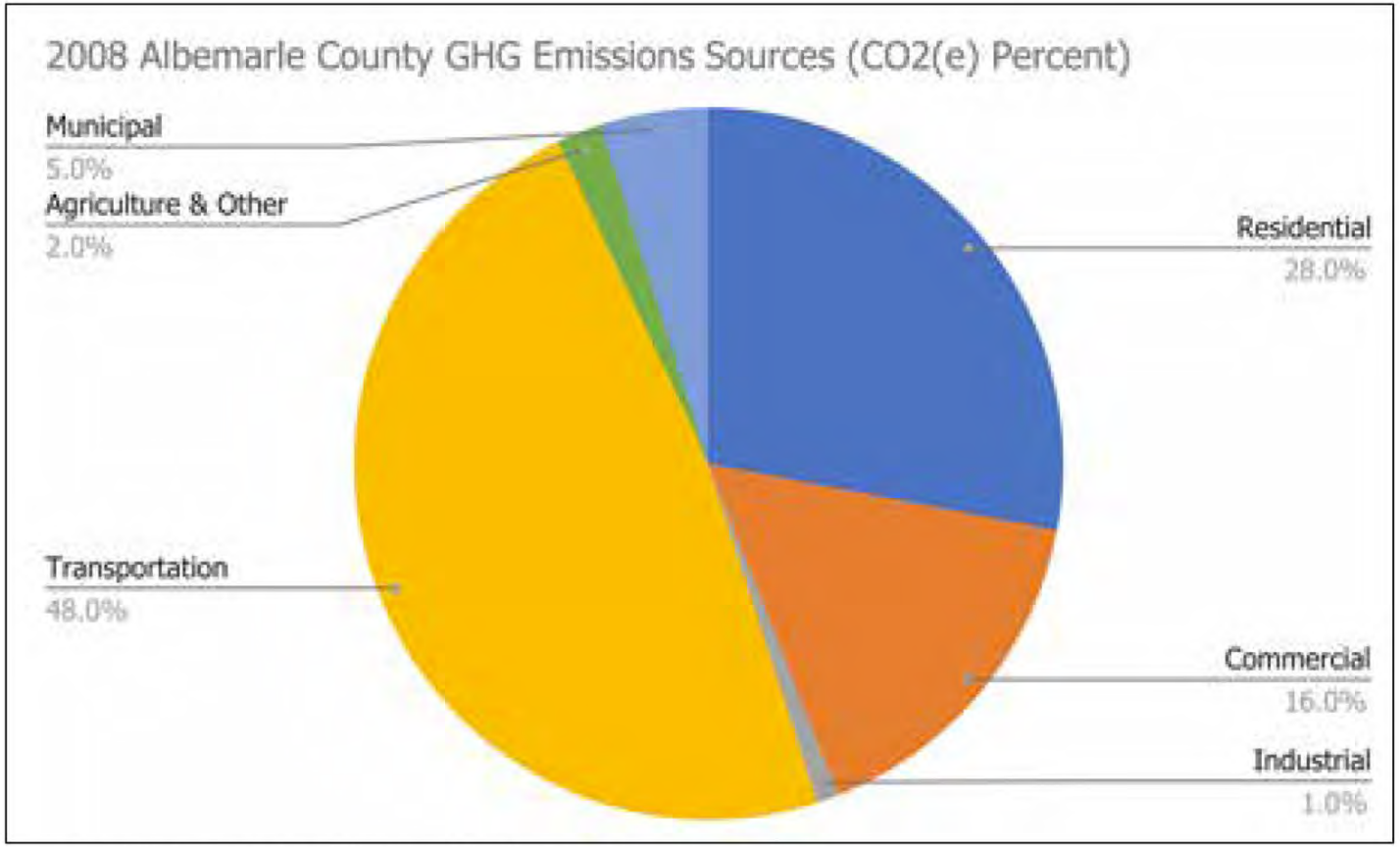
Electric Vehicle Charging Station Study

Region 10

Benefits of Electric Vehicle Use

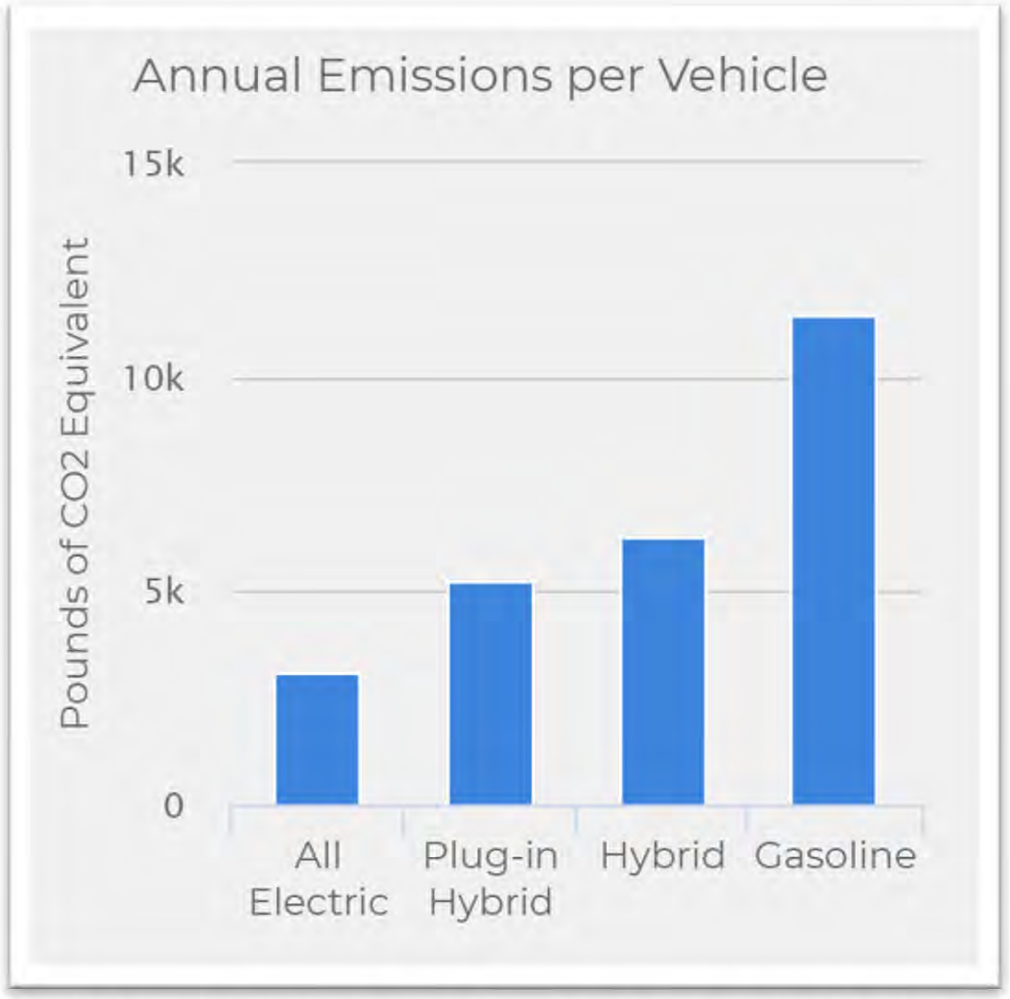
Transportation is the largest single source of greenhouse gas emission in the MPO area.

Figure 1: GHG Emissions Sources in Albemarle County



Source: Albemarle County Climate Action Plan Phase One

Figure 2: Comparison of Vehicle Emissions



Source: (Energy, Emissions from Hybrid and Plug-In Electric Vehicles, 2020)

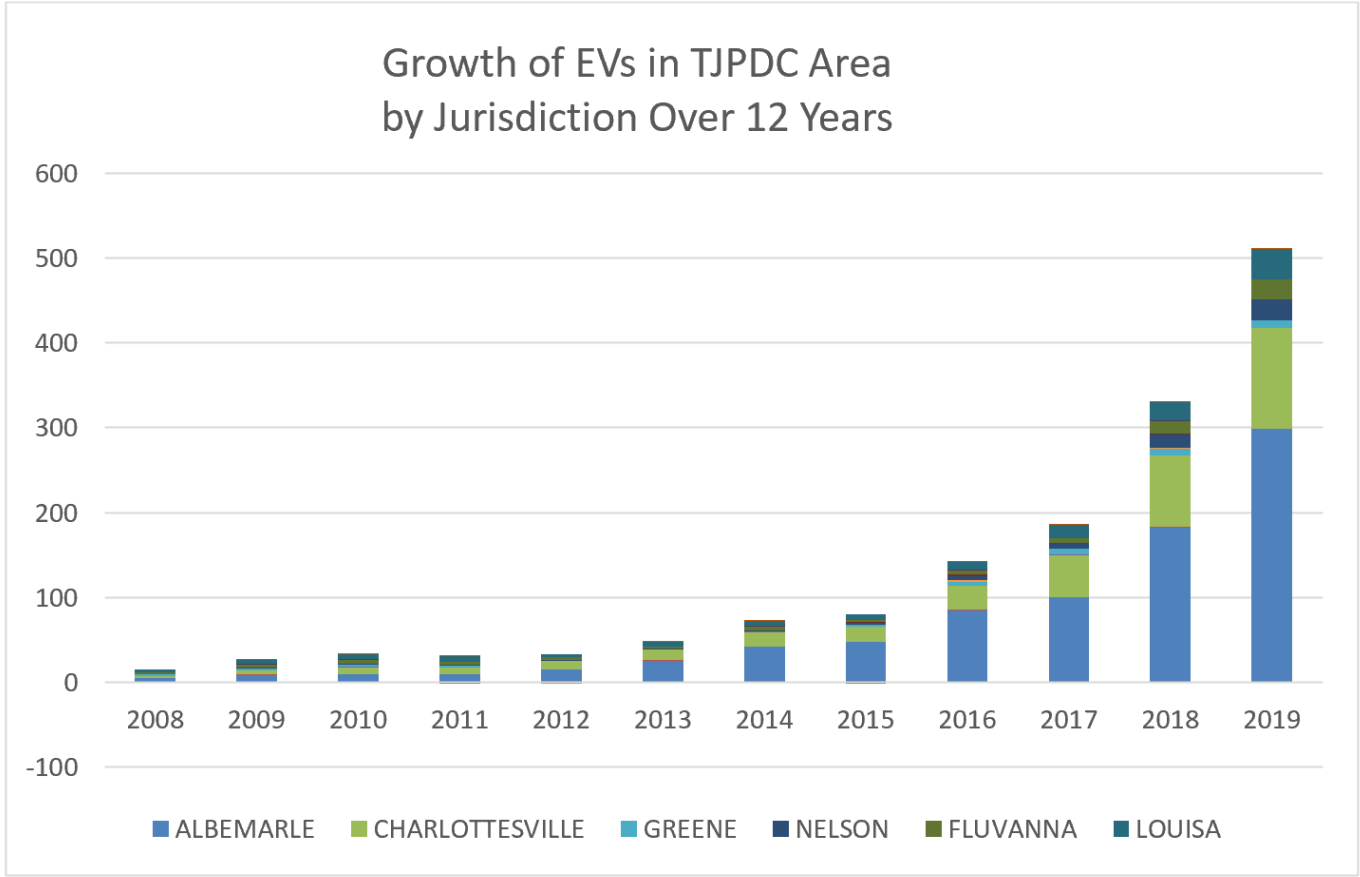
Benefits of Electric Vehicle Use

EVs produce almost 70% less emissions than gas-powered vehicles.

Benefits of Electric Vehicle Use

EV registrations in the TJPDC area have grown between 30% and 49% from 2008 to 2019

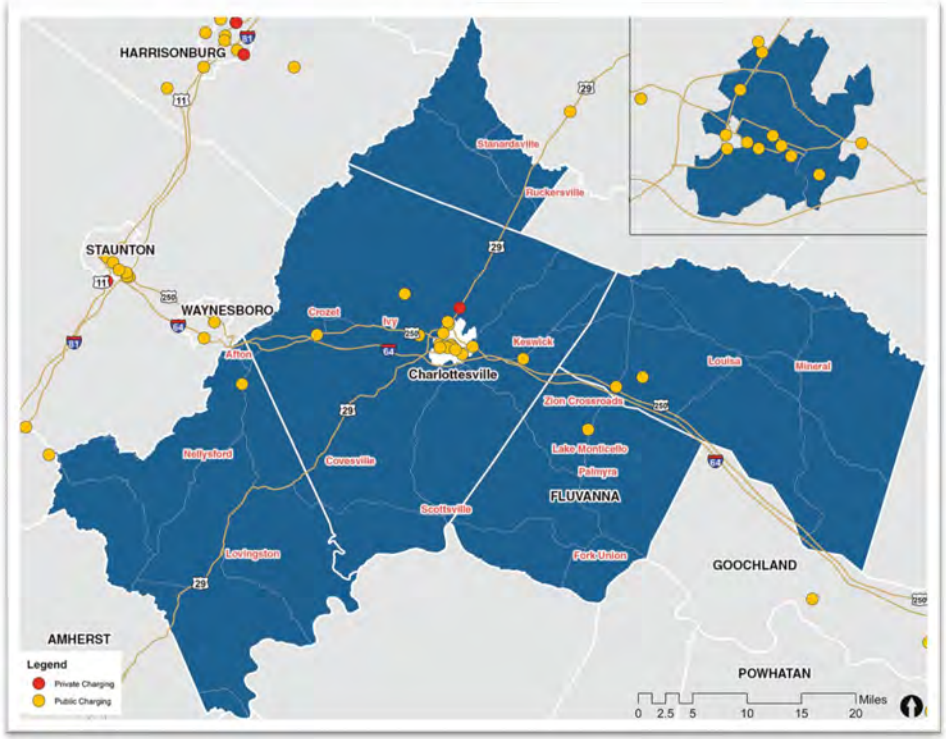
Figure 4: Historical EV Growth in TJPDC



Source: Virginia Annual Vehicle Registration Data provided by Virginia DMV to Virginia DEQ each year

Infrastructure Supporting EVs in TJPDC's Region

Figure 6: Charging stations in Charlottesville



Source: TJPDC

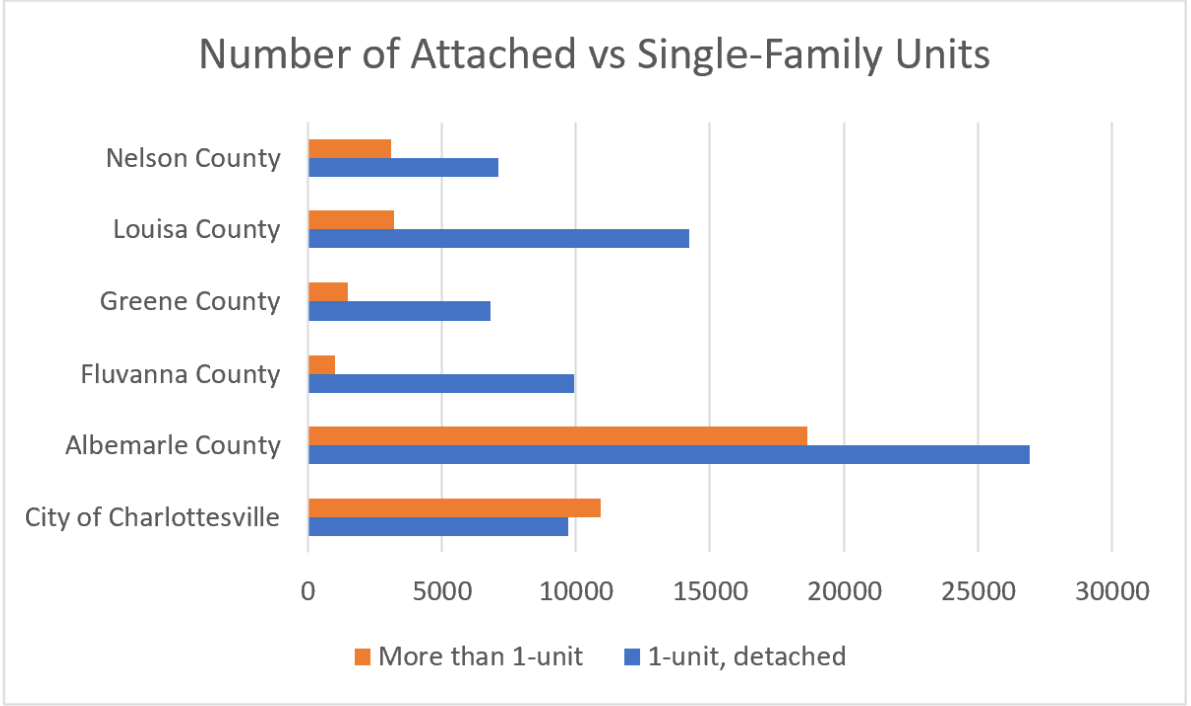
Table 2: Number of EV Charging Stations in TJPDC

Jurisdiction	# Stations	Jurisdiction	# Stations
ALBEMARLE	7	NELSON	1
CHARLOTTESVILLE	10	FLUVANNA	1
GREENE	0	LOUISA	1

Source: www.plugshare.com

The U.S. EPA reports that 80% of privately owned EV charging is completed at home.

Figure 14: Estimated Number of Housing Units with Parking that is Suitable to Installing an EV Charger



Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

There are an estimated 40K housing units in the TJPDC region with potential barriers to installing home charging facilities

Table 4: Number and type of Housing Units by Jurisdiction

Number and Type of Housing Units by Jurisdiction			
Geographic Area	**% More than 1-Unit**	**More than 1-unit**	**1-unit Detached Single-Family**
City of Charlottesville	53%	10,938	9,704
Albemarle County	41%	18,606	26,914
Fluvanna County	9%	1,018	9,930
Greene County	18%	1,481	6,810
Louisa County	18%	3,203	14,235
Nelson County	30%	3,085	7,090
Total TJPDC Region	-	38,331	74,683

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates

Strategies to encourage personal EV use

Financial incentives for vehicle purchase and charging infrastructure

Support installation of charging infrastructure for residents who do not own parking close enough to install EV charging infrastructure

Strategies to support personal EV use

- Install charging infrastructure in public parking spaces that residents use to park overnight
- Provide guidelines for EV charging stations
- Develop local ordinances and policies to encourage new housing developments to include EV charging infrastructure
- Makeready standards, encourage new multi-family construction to provide electrical capacity necessary to accommodate future charging infrastructure
- Encourage employers to install EV charging stations for employees

Thomas Jefferson Planning District Commission
FY-2022 RideShare Work Program
July 01, 2021 – June 30, 2022

rideSHARE

Thomas Jefferson Planning District Commission

DRPT

Preface

Prepared on behalf of the Thomas Jefferson Planning District Commission, through a cooperative process involving Region 10's localities (Albemarle, Fluvanna, Greene, Louisa and Nelson counties and the City of Charlottesville), JAUNT, RideShare, and the Virginia Department of Rail and Public Transportation.

This scope of work has been prepared to outline the work program that will be undertaken within the scope of the RideShare funding that is allocated to the PDC. The scope of work includes operational expenses for managing the regional RideShare program, marketing, events, and time spent seeking other funding opportunities in support of the greater goals of RideShare. All activities included in the work program have to meet the Transportation Demand Management (TDM) Operating Assistance grant program requirements administered by DRPT.

The preparation of this program was financially aided through administrative funds from the FY21 Unified Planning Work Program.

Table of Contents

Introduction

Purpose and Objective

The CAPS Operating Assistance grant program (formerly known as the TDM Operating Assistance Grant) provides funding to support the operation of existing commuter assistance programs that serve the public, reduce single occupant vehicle trips, and increase carpool, vanpool, and transit use.

The goal of the CAPS Operating Assistance grant program is to mitigate traffic congestion, which is the elimination of single occupant vehicle (SOV) auto trips by shifting SOV trips to carpool, vanpool, and transit. The benefits of congestion mitigation are moving more people though the heavily traveled corridors without increasing the number of vehicles in those corridors, reducing pollution, conserving fuel, and saving money on commuting. CAPS Operating Assistance funds the general day-to-day operations of a commuter assistance program, including ride matching services, guaranteed ride home program, and marketing and promotion of ride matching and non-SOV travel modes.

Each year, the TJPDC applies for the CAPS Operating Assistance grant to continue operation of its RideShare program. In addition, an amount of funding the MPO receives from the Federal Highway Administration and Federal Transit Administration to support its Unified Planning Work Program (UPWP) is dedicated to supporting programs that are outside the scope of the CAPS Operating Assistance grant but still support the same goals of reducing single occupancy vehicle trips.

The CAPS Operating Assistance grant provides 80 percent funding and requires a 20 percent local match. The portion of the program funding that is supported through MPO funding sources provides 90 percent funding (80 percent federal and 10 percent state) and required a 10 percent local match.

In FY-2022 the PDC requested $139,358 through the TDM Operating Assistance grant. The PDC will provide a local match of $34,840 for a total program funding amount of $174,198. In addition, the MPO's UPWP has allocated an additional $8,500 for work supporting RideShare and TDM initiatives ($9,000 through federal and state sources with a $1,000 local match).

RideShare

The scope of work is established in the grant application and must comply with the DRPT grant application guidance manual, and the relevant scope of work outlined in the UPWP is approved by the MPO Policy Board.

Highlights of FY21

In FY21, the RideShare Program maintained focus on the traffic mitigation outcome, amid the COVID-19 pandemic. The program dedicated the majority of staff time and resources to Telework, which was at the request of DRPT staff. While TJPDC staff conducted its regular administration of the program and continued to provide ride-matching services, Guaranteed Ride Home services, and other TDM services to the region and its members, the following highlights the more substantive efforts.

TELEWORK!VA – As we began FY21 still in the midst of the pandemic, many non-essential workers were still remote working for safety. TJPDC and CSPDC staff have worked jointly to promote and highlight telworking resources, including Telework!VA. The two PDCs have collaborated planning and conducting a webinar for Chamber members and regional businesses to understand why continuing telework after the pandemic is important. The two PDCs have also created common visuals and social media designs to create a cohesive message with DRPT throughout the Commonwealth. Staff was also the keynote speaker on Telework resources for the Better Business Challenge sponsored by C3. Staff also promoted Telework during March with DRPT's annual program.

COMMUTE STORIES – Staff of the two PDCs wrote up profiles to highlight our own commuters and their commute stories. This was done as part of RideShare Week, since we couldn't promote our normal try a new commute. We wanted to add a personal element to help foster connections during the pandemic and also showcase how our region was commuting during the pandemic.

TRANSIT APPRECIATION – In lieu of the traditional Transit Week that DRPT promotes, this year due to the pandemic, the state focused on transit safety and appreciation to the transit staff. RideShare promoted stories on local transit agencies that DRPT put together.

PROFESSIONAL DEVELOPMENT – Staff also participated in many learning opportunities through the Association of Commuter Transportation (ACT) virtual conference, tdm forum, webinars and virtual panel discussions. At the TDM Forum, Program Manager, Sara Pennington was awarded the honor of Top 40 Under 40. The program manager also began working towards the Commuter Choice Certificate, which is a two-year program through the Center for Urban Transportation Research (CUTR).

Fiscal Year 2022 Budget

The budget is broken down into two tables. The first being the allocation of costs related to staff utilization (including salaries, fringe benefits, and indirect costs), and the second being the additional operational costs that are accounted for in the TDM Operating Assistance grant request.

Staff Utilization			
	TDM	**FTA**	**Total**
1.0 Program Administration			
Coordinate budget and usage activity reports	$ 14,000	$ 2,000	$ 16,000
MPO and PDC meeting participation	$ 5,000	$ 2,000	$ 7,000
Database management and customer support	$ 7,000	$ -	$ 7,000
Program coordination	$ 12,000	$ 1,000	$ 13,000
Professional training	$ 4,000	$ -	$ 4,000
2.0 Marketing and Outreach			
Participation in promotional events	$ 41,205	$ 2,500	$ 43,705
Maintain on-line presence	$ 6,000	$ -	$ 6,000
Advertise RideShare program	$ 27,205	$ -	$ 27,205
Marketing Plan	$ 11,000	$	$ 11,000
Explore other potential funding	$ 2,000	$ 1,000	$ 3,000
TOTAL	**$ 129,410**	**$ 8,500**	**$ 137,910**

Other Program Costs	
Communication Services	$150
Advertising & Promotion Media	$20,166
Dues & Subscriptions	$2360
Education & Training	$2,297
Guaranteed/Emergency Ride Trips	$2,000
Printing & Reproduction	$400
Vanpool Subsidy	$500
Services & Maintenance Contracts	$11,144
Supplies & Materials (Other)	$271
Travel	$5,500
TOTAL	**$44,788**

FY2022 Scope of Work: This section of the Scope of Work details the administrative and programming tasks, staff responsibilities, and expected end products. The purpose of this work element is to facilitate awareness and utilization of resources available to support TDM efforts throughout the region. The cost allocations referenced in the following section just include staff utilization. The costs shown in the "Other Program Costs" table above have already been accounted for in the CAPS Operating Grant application.

Fiscal Year 2022 Activities by Task

FY 2022 – 1.0 Program Administration

The purpose of this task is to facilitate the daily operations of the RideShare program by meeting procedural requirements and incorporating RideShare programs into overall PDC and MPO transportation planning efforts.

Task 1.1 - Coordinate budget and usage activity reports
RideShare: $14,000
FTA: $2,000
DESCRIPTION OF ACTIVITIES:
Prepare monthly progress reports and invoices to be submitted for reimbursement. TJPDC staff will coordinate activities, develop reports to DRPT and VDOT, and prepare invoices for review by DRPT. Run reports on ridership based on information culminated from user reporting platforms and park and ride lot inventories.

DELIVERABLE TASKS TO BE UNDERTAKEN:
- Submit 12 monthly reports and invoices to DRPT
- Submit 12 monthly MPO reports
- Submit an annual report for FY21.
- Submit quarterly report for TJPDC
- Quarterly inventories of park and ride lots.
- Regular reports on member-reported service usage.

Task 1.2 – MPO and PDC meeting participation
RideShare: $5,000
FTA: $2,000
DESCRIPTION OF ACTIVITIES:
Staff will represent RideShare on various technical committees coordinated by the TJPDC and the Charlottesville-Albemarle MPO. This includes a RideShare representative being a formal member of the Rural Technical Advisory Committee, and participation as needed at the various MPO committee meetings, including the Citizens Committee, the MPO Technical Advisory Committee, the Policy Board, as well as the Regional Transit Partnership. Staff will also represent RideShare on other related committees or inter-agency councils as requested.

DELIVERABLE TASKS TO BE UNDERTAKEN:
- Regular staff participation with the Rural Technical Advisory Committee.
- Participation as needed with the various MPO committees.
- Participation as requested with other non-profit or inter-agency committees.
- PDC meetings, including Commission presentations

Task 1.3 – Database Management & Customer Support
RideShare: $7,000
FTA: $0
DESCRIPTION OF ACTIVITIES:
Staff will provide maintenance of the online database as needed. This includes remaining up-to-date on any changes in the ride matching platform used, making manual edits as needed/requested, working with the state coordinators to resolve any technical issues, and providing user support services. Staff will also coordinate any requests through the Guaranteed Ride Home program.

DELIVERABLE TASKS TO BE UNDERTAKEN:

- Ensure accuracy and reliability of the ridesharing database.
- Process Guaranteed Ride Home voucher requests.
- Process Guaranteed Ride Home registrations/renewals.

Task 1.4 – Program Coordination
RideShare: $12,000
FTA: $1,000
DESCRIPTION OF ACTIVITIES:
Staff will provide the ongoing administrative support to ensure that the program continues operation without any breaks in continuity.

DELIVERABLE TASKS TO BE UNDERTAKEN:
- Completed application for the TDM Operating Assistance Grant for FY23.
- DPRT grant training and meetings.
- Development of a FY23 work plan.
- Coordination with other regional transportation programs.
- Coordination with other CAPS programs in the state for peer-to-peer exchange.
- Coordination with other PDC's with CAPS program, specifically CSPDC our partner in RideShare.
-

Task 1.5 – Professional Training
RideShare: $5,000
FTA: $0
DESCRIPTION OF ACTIVITIES:
There will be continued training and professional development, allowing staff to attend Association for Commuter Transportation, DRPT, FHWA, FTA training, conferences, seminars, webinars, and other events. Similarly, TJPDC staff representing RideShare and TDM interests will facilitate and participate in seminars, webinars, and stakeholder training, such as public forums, open houses and roundtable functions.

DELIVERABLE TASKS TO BE UNDERTAKEN:
- Attend ACT International Conference, TDM Forum, monthly webinars and Friday discussions panel.
- Attend trainings from state agencies.
- Participate with other stakeholders to attend Single Occupancy Vehicle listening sessions.

FY 2022 - 2.0 Marketing and Outreach

The following tasks highlight the technical services that the TJPDC will provide to its member localities in Fiscal Year 2021. The TJPDC will assist its member localities with specific projects, which are listed under task 2.1. The remaining tasks under this section include efforts related to grant writing, travel demand management and general local assistance.

Task 2.1 – Participation in Promotional Events
RideShare: $41,405
FTA: $2,500
DESCRIPTION OF ACTIVITIES:
Staff will develop innovative marketing strategies to support and promote activities and events that encourage alternative transportation options. This includes planning, developing and staffing events, developing and distributing marketing materials, and collaborating with partner organizations to capitalize on existing resources. Events include: Try Transit Week, RideShare Week, Telework Week, and the Clean Commute Challenge.

DELIVERABLE TASKS TO BE UNDERTAKEN:

- Prepare calendar of events.
- Plan and develop each individual event, including any contests and prizes to be awarded.
- Promote events through a variety of social and traditional media outlets.
- Increase the number of partner organizations participating in events.

Task 2.2 – Maintain On-line Presence

RideShare: $6,000

FTA: $0

DESCRIPTION OF ACTIVITIES:

Staff will utilize technology to increase awareness about RideShare, TDM, and events that are currently being promoted. Staff will ensure information available online is current and accurate, and will work to create opportunities for increased online interaction.

DELIVERABLE TASKS TO BE UNDERTAKEN:

- Maintain RideShare website.
- Utilize social media platforms to promote RideShare and related events.
- Implement social media strategies from Marketing Plan once completed.

Task 2.3 – Advertise RideShare Program

RideShare: $27,205

FTA: $0

DESCRIPTION OF ACTIVITIES:

Staff will continue to raise awareness of RideShare through paid advertisement and earned media in a variety of media platforms.

DELIVERABLE TASKS TO BE UNDERTAKEN:

- Develop and maintain advertising contracts to promote RideShare to a wider audience.
- Assess new marketing opportunities to reach a broader range of potential users.
- Implement new marketing techniques, mediums and channels from Marketing Plan once completed.

Task 2.4 – Pursue funding opportunities to expand services

RideShare: $2,000

FTA: $1,000

DESCRIPTION OF ACTIVITIES:

Staff will research and begin to develop an application for either a Mobility Program grant to develop a robust employer outreach program, or a travel planning program. The goal will be to coordinate with large regional employers and continue to build off of existing successful programs, or develop a program that makes individual travel plans for area residents. In addition, staff will explore financial resources to develop a travel training service for individuals who need assistance in using the public transportation options throughout the region.

DELIVERABLE TASKS TO BE UNDERTAKEN:

- Research needs and available resources in the region.
- Identify potential funding resources.
- Prepare and submit grant applications.
- Develop a list of potential employers with whom to partner.
- Research existing programs currently undertaken by employers in the region.

Task 2.5 – Marketing Research and Implementation Plan

RideShare: $22,000

FTA: $0

DESCRIPTION OF ACTIVITIES:

RideShare will hire an outside marketing firm to help us update regional market research and use that information to develop a media/marketing plan that staff can implement throughout the program year. In addition to this plan, we are also seeking updated printed materials that will need to be designed and printed.

DELIVERABLE TASKS TO BE UNDERTAKEN:

- Conduct market research for the region.
- Identify key target audiences.
- Develop a brand strategy to continue program awareness.
- Create a marketing implementation plan for all mediums, including digital.
- Create a campaign marketing plan for events and special promotions.
- Design printed promotional materials.

FY23 Anticipated Work Tasks

To provide a longer-view of the RideShare and related TDM work program, staff began to anticipate work tasks for the next fiscal year. By presenting the FY20, FY21 and FY22 descriptions, staff hopes to create better continuity between fiscal years and manage commitments to member localities.

In FY23, staff will conduct an update to the five-year Travel Demand Management Plan. If funded, staff will also work towards the development of a robust employee outreach program and pursue an analysis of the feasibility of providing public transportation travel training services. The TJPDC will continue to operate the RideShare program.

Appendices

Appendix A: FY2022 TDM Operating Assistance Grant Application

CA-MPO ENGAGEMENT PLAN

Charlottesville Albemarle Metropolitan Planning Organization

ABSTRACT

The engagement plan outlines the process and activities the Charlottesville Albemarle Metropolitan Planning Organization (CA-MPO) uses to create opportunities for effective participation, communication, and consultation with all parties interested in the development, adoption, and amendment of its transportation plans and projects.

This page is intentionally left blank.

First Adopted:

- August 12, 2002

Revised:

- February 14, 2005
- June 20, 2007
- April 22, 2009
- January 23, 2013
- September 28, 2016
- September 23, 2020
- July __, 2021

Federal "Title VI/Nondiscrimination" Protections

The Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administrated by the Federal Highway Administration, the Federal Transit Administration, or both prohibit discrimination on the basis of age, sex, and disability. These protected categories are contemplated within the CA-MPO's Title VI Programs consistent with federal interpretation and administration. Additionally, the CA-MPO provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with US Department of Transportation policy and guidance on federal Executive Order 13166.

Table of Contents

Introduction

The engagement plan is the process by which an organization involves interested or affected individuals, organizations, and government entities during the planning process.

The engagement plan documents the process and activities the Charlottesville-Albemarle Metropolitan Planning Organization (CA-MPO) uses to create opportunities for effective participation, communication, and consultation with all parties interested in the development, adoption, and amendment of its transportation plans and projects including the Long Range Transportation Plan (LRTP), the Transportation Improvement Program (TIP), the Unified Planning and Work Program (UPWP) and other CA-MPO transportation studies.

Additionally, this plan specifies the following:

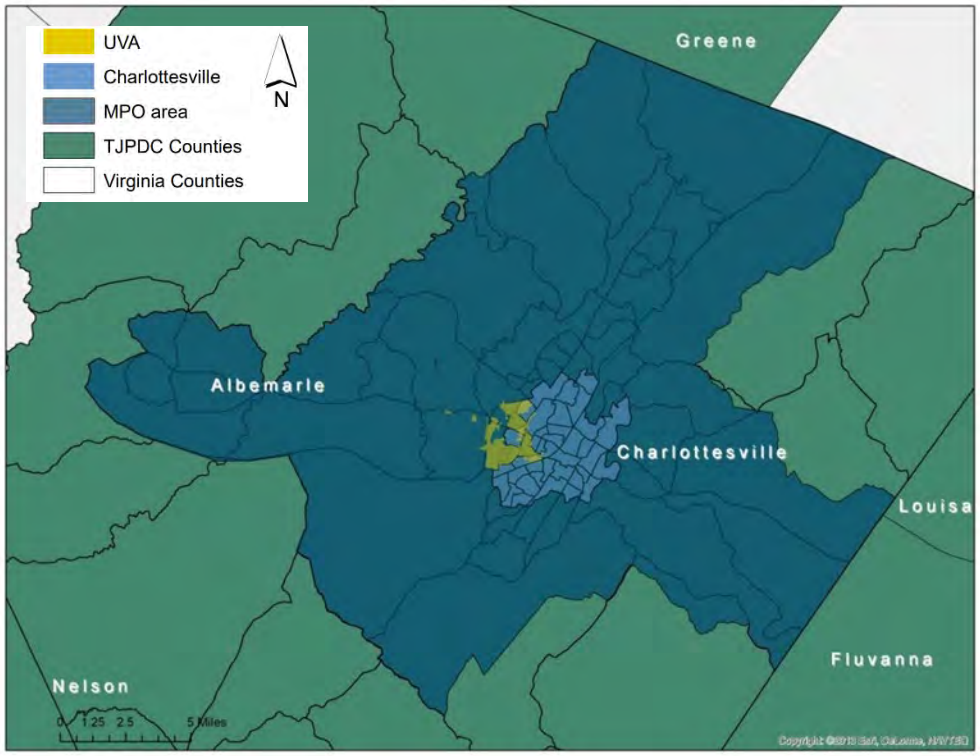
- CA-MPO plans and projects will include an engagement component;
- Legal requirements for public involvement will be met or exceeded;
- Official meetings of the CA-MPO will be open to the public and include opportunities for public comment at the beginning and end of the meeting;
- A public comment period of 45 calendar days will be provided prior to the adoption of this engagement plan and/or any significant amendment to the process; and
- The engagement plan will be reviewed and revised or amended as needed, in consultation with the interested or affected individuals, organizations, and government entities, and with the review of the CA-MPO committees.

What is the CA-MPO

An MPO, or Metropolitan Planning Organization, is an organization comprised of representatives and policymakers from an urbanized area's local governments dedicated to the coordination of transportation planning and policy development within its geographical boundaries.

Federal regulations require that MPOs be designated for urbanized areas with populations of more than 50,000 to provide comprehensive, cooperative, and continuing transportation planning. The boundary of an MPO is based upon U.S Census populations and is determined by an agreement between the MPO and the Governor. The current boundaries of the Charlottesville-Albemarle MPO contain all the city of Charlottesville and the urbanized portions of Albemarle County. The Map in Figure 1 shows the area included in the CA-MPO.

Figure 1: Map of the CA-MPO Service Area



The governing body of the CA-MPO is the Policy Board, which has decision-making authority. The CA-MPO also has two standing committees: (1) the Technical Committee made up of technically qualified staff from the local governments, state agencies, area transit providers, the University of Virginia, and Planning Commissioners; and (2) the Citizens Transportation Advisory Committee made up of citizen representatives from within the MPO boundaries with appointments made by each of the member localities as well as the Policy Board.

What Does the CA-MPO Do?

The primary purpose of an MPO is to ensure that the region is compliant with federal transportation and planning statutes, as well as facilitate a coordinated and collaborative process for decision-making concerning the present and future transportation goals of a region.

The core functions of an MPO are to:

- Create and maintain a Long Range Transportation Plan (LRTP), which is a federally-mandated plan that outlines a region's transportation goals over the next 20 years
- Create and maintain a Transportation Improvement Program (TIP), which outlines scheduled spending of transportation funds within the region over a period of 4 years
- Coordinate transportation planning efforts and prioritize transportation improvement needs throughout the region considering financial, political, and environmental constraints

The CA-MPO and Thomas Jefferson Planning District Commission (TJPDC) can also work on special transportation projects like road improvements, transit operations, corridor plans, and bike and pedestrian planning.

For example, the TJPDC, which also staffs the CA-MPO, produced the **Jefferson Area Bike and Pedestrian Plan** to identify and prioritize bike and pedestrian infrastructure needs in the TJPDC region. The plan is the culmination of more than two years of work and an extensive community engagement process made possible by a grant from the Charlottesville Area Community Foundation and assistance from the Piedmont Environmental Council. The plan seeks to encourage implementation by providing a focused list of regionally-significant bicycle and pedestrian projects that enhance regional connectivity and provide routes connecting the region's important residential and economic centers. The urban areas in the City of Charlottesville and Albemarle County are emphasized. Recommendations are also provided for towns, development areas, and rural areas in Albemarle, Greene, Louisa, Nelson and Fluvanna Counties. The City of Charlottesville also hosts a voluntary advisory Bicycle & Pedestrian Advisory Committee dedicated to improving bicycle and pedestrian facility design and safety for all road users.

Some MPOs are more involved in transit planning, freight, and rail and even aviation planning. The CA-MPO could expand to those areas if a need arises in the future.

CA-MPO's Role in Transportation Planning

The ability to travel throughout the region affects the safety and quality of life for everyone in the community. The CA-MPO provides an independent cooperative forum for regional planning in collaboration with state, local government, transit agency, and university planning partners on select transportation plans and projects. Transportation planning is the first step of a multi-year process to design, fund, purchase land for, and ultimately construct transportation projects. The CA-MPO is one of many agencies involved in the development and maintenance of transportation infrastructure.

The CA-MPO's main responsibilities are maintaining a list of funded transportation projects called the Transportation Improvement Program (TIP) and generating a Long Range Transportation Plan (LRTP). The LRTP, updated every 5 years, outlines the region's priority transportation improvements over the next 20 years. Regional transportation projects must be included in the LRTP to qualify for federal funding. The LRTP exists to provide guidance on current transportation conditions and prioritizes future transportation improvement projects based on estimated funding sources. The state and localities choose which of these projects will be funded and how they will be implemented.

Partnerships

The CA-MPO collaborates with the City of Charlottesville and Albemarle County to coordinate transportation planning and prioritize projects throughout the CA-MPO region.

The **Virginia Department of Transportation and the Department of Rail and Public Transportation** both support the efforts of the MPO by providing programming oversight, ensuring that the MPO meets all of the state and federal requirements, and providing technical support as needed.

The majority of the funding for MPO operations comes from the **Federal Highway Administration and Federal Transit Administration**. Both agencies have non-voting members represented on the MPO Policy Board.

Public transportation for the MPO area is provided by Charlottesville Area Transit (CAT), run by the City of Charlottesville. JAUNT, contracts with the city and county to provide specialized public transportation services to the City of Charlottesville, Albemarle County, Buckingham County, Fluvanna County, Louisa County, and Nelson County. JAUNT works to coordinate transit services with human services agencies, ensuring access to transportation services. Both transit agencies have Transit Development Plans available for public review and comment. The CA-MPO staffs the Regional Transportation Partnership (RTP) to facilitate regional transit coordination in the Thomas Jefferson Planning District region.

The **University of Virginia** operates the University Transit Service (UTS) which provides fare-free transit service to UVA students, faculty, and staff between UVA facilities and around the main campus. UVA is represented on the CA-MPO Technical Committee and as a non-voting member of the CA-MPO Policy Board.

The **Regional Transit Partnership** (RTP) is an official advisory board, created by the City of Charlottesville, Albemarle County, and JAUNT, in Partnership with the Virginia Department of Rail and Public Transportation to provide recommendations to decision-makers on transit-related matters. While being part of the RTP from its inception, UVA was added as a voting member in 2019. The RTP is not a formal committee of the CA-MPO, but the RTP's Memorandum of Understanding states that funding for the RTP will be a regular item in the CA-MPO's Unified Planning Work Program.

CA-MPO's Engagement Goals and Strategies

It is the policy of the CA-MPO to facilitate engagement through open access to the transportation planning process for all stakeholders. To the extent possible by law and budget constraints, planning processes will be inclusive of and accessible to interested or affected individuals, organizations, and government entities well as to other regional stakeholders.

The CA-MPO is committed to developing an engagement process based on the following principles:

- Transparency
- Coordination
- Responsiveness
- Inclusiveness

The CA-MPO recognizes that not all citizens and groups have been represented in past planning processes. It aspires to actively engage and represent historically underserved populations in the planning process through effective engagement activities, making information accessible and understandable to a broad range of stakeholders considering those who may experience barriers to participation.

CA-MPO will use the following steps/goals to approach engagement. For engagement to be effective, effort must be taken to provide interested parties with contextual educational materials and listen to the resulting feedback. CA-MPO strives to make its engagement process accessible and satisfactory for all parties.

CA-MPO's Public Engagement Goals

1) Create thoughtful opportunities to engage all affected parties in MPO planning projects
2) Provide information and education about the MPO's transportation planning activities
3) Listen and respond to public feedback on MPO activities

Each goal is defined in this following section with associated strategies to engage interested or affected individuals, organizations, and government entities.

ONE: Create thoughtful opportunities to engage all affected parties in MPO planning projects

The CA-MPO will provide robust, appropriate opportunities for all members of the community to participate in its planning processes. This will include outreach to affected parties who are not easily engaged because of their race, location, age, ability, and/or limited resources.

The CA-MPO will strive to utilize a variety of strategies to promote engagement including the following as appropriate for the project/plan:

1) CA-MPO Committees
    - Utilize CTAC and MPO Tech committees to facilitate public and partner engagement
2) Public Meetings
    - Involve the public earlier in the planning process
    - Host public meetings at accessible times and locations
    - Use a variety of formats to present technical information to include tables, charts, graphs, maps, and other visual elements in addition to verbal and written explanations
    - Utilize and maintain an email list of interested parties to share information about public meetings and CA-MPO projects
3) Engage Historically Underserved Populations
    - Offer interpretive services at public meetings and events (with advanced notice)
    - Host events in locations welcoming to historically underserved communities
    - Partner with organizations that serve historically underserved communities
4) Utilize technology in a strategic manner to reach affected parties

- Employ digital surveys, interactive maps, and other tools to make engagement convenient
- Use social media to solicit feedback on planning activities
- Host streamed and/or recorded public meetings on the CA-MPO website
- Solicit comments using email and partner electronic news sources

5) Public Comments
    - Allow for public comments at the beginning and end of all MPO public meetings
    - Offer periods for review and comment before adopting planning and process documents
    - Provide staff point-of-contact information for the public to submit feedback or ask questions in a variety of ways including in person, through email, through paper mail, and on the phone

TWO: Provide information and education about the MPO's transportation planning activities

Understanding the transportation planning process is key to making effective contributions to transportation projects and plans. The CA-MPO will seek new and effective ways to educate interested or affected parties on transportation planning, regulations, and best practices. Some of the strategies the CA-MPO may use to inform and educate interested parties about the transportation planning process include the following.

1) Media engagement
    - Publish notices and press releases with a variety of regional media outlets
    - Utilize local radio and podcasts to promote engagement activities
    - Partner with other agencies to disseminate information
    - Share engagement opportunities and project information on social media platforms
2) Notice of meetings and events
    - Utilize a stakeholder email distribution list to provide notice of meetings and materials
    - Post agenda and materials on the CA-MPO website when sent to committee members
    - Share meeting notices with partner agencies for dissemination to their audiences, including neighborhood associations and local organizations
    - Use email, website, and social media to advertise public meetings
3) Website and visual designs
    - Utilize the MPO website to share information about MPO projects and process documents
    - Post public meeting times, locations, and agenda packets on the website
    - Provide educational information and MPO Process documents for viewing or download on the website

THREE: Listen and respond to feedback on MPO activities

Effective engagement requires empowering interested or affected individuals, organizations, and government entities with easily understandable information and listening and responding to comments and feedback. This is especially important for plans and processes that may have impacts for historically underserved communities or populations. When developing transportation plans for areas where historically underserved populations are likely to be impacted, the MPO will communicate with interested parties and leaders in the community to hear what they want in their neighborhood. Some strategies that the MPO will employ to engage, consider, and respond to feedback include the following.

1) Be accessible
    a. Staff will be available to meet with stakeholders, partners, and historically underserved communities in settings and times that are convenient to the stakeholders, partners, and historically underserved communities
    b. Staff will be available during normal business hours to respond to questions and comments
    c. Public comments will be collected in appropriate and accessible formats—via, mail, email, phone, in person, and during meetings
2) Be responsive
    a. Public feedback on plans will be made available to the public, stakeholders, and decision makers
3) Be considerate
    a. The MPO values its partnerships and will continue to prioritize collaboration among regional stakeholders
    b. Demonstrate explicit consideration and response to public input received during planning and development processes

Opportunities for Engagement

This section first outlines the planning document that the CA-MPO produces and updates and how interested or affected individuals, organizations, and government entities can engage during the planning process. Then, next this section describes tools the CA-MPO uses to engage interested parties.

CA-MPO Plans and Document

All residents of the CA-MPO area are entitled to engage with the transportation planning process. The MPO's main activities include developing the Long Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP). Both documents provide clear avenues for public engagement during the development process. The table below lists the CA-MPO process documents and how the public can find information and engage with the development of these transportation planning documents. Following the table, are descriptions of each document and how they interact with the CA-MPO community.

MPO Planning Documents and Engagement Process			
Document	***How often updated***	***Comment Period for Approval/Amendment***	***How to engage***
Long Range Transportation Plan (LRTP)	Every 5 years	Approval 30 days Amendment 15 days	Public events, submit comments, public hearing, MPO committee meetings, email notices
Transportation Improvement Program (TIP)	Every 4 years	Approval 30 days Amendment 15 days	Public hearing, submit comments, MPO committee meetings, email notices
Unified Planning Work Program (UPWP)	Annually	Approval 15 days	MPO committee meetings, submit comments, email notices
CA-MPO Engagement Plan	Periodic review	Approval 45 days Amendment 45 days	MPO committee meetings, submit comments, email notices
Title VI Plan	Every 3 years	Approval 15 days	MPO committee meetings, submit comments, email notices
Other studies and plans, Bicycle and Pedestrian Plan, corridor studies, and area plans	As needed	Approval 15 days	MPO committee meetings, submit comments, email notices

Long Range Transportation Plan (LRTP)

The Long Range Transportation Plan (LRTP) is a federally-mandated plan that outlines the region's priority transportation improvements over the next 20 years and beyond. Regional transportation projects must be included in a Metropolitan Planning Organization (MPO)'s LRTP to qualify for federal funding. The LRTP provides guidance on current transportation conditions and attempts to project what projects and monies will be needed in the future.

The LRTP provides for extensive public engagement. The CA-MPO engages the public and stakeholders in developing goals and objectives for area transportation systems and creating performance criteria used to select projects to submit for funding. The CA-MPO works closely with VDOT to identify transportation deficiencies, develop a project list, evaluate the projects, and develop a constrained project list based on available funding.

During the LRTP planning process project proposals are submitted to the CA-MPO and judged upon the criteria created for the LRTP that highlights priorities for the future. The LRTP is adopted by the CA-MPO Policy Board after public hearings and presentation of the final plan. Public hearings, along with technical committees of the MPO and other stakeholder input, help shape the direction of the plan.

Transportation Improvement Program (TIP)

The Transportation Improvement Program (TIP) reflects the goals and values of the LRTP. The TIP is, in essence, the realization of the LRTP, because it establishes the projects that have funds allocated and creates a schedule for completion.

The TIP is connected to the Statewide Transportation Improvement Program (STIP), Virginia's federally required four-year program that identifies the transportation projects (highway, passenger rail, freight, public transit, bicycle and pedestrian) that will utilize federal transportation funding or require approval from either the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA). Virginia provides many opportunities for the public to provide input on transportation projects and priorities as part of the continuing transportation planning process for the development of the STIP and the state required Six-Year Improvement Program.

The TIP informs the CA-MPO partners and the public of the state's planned spending of federal transportation funds in the MPO, in coordination with significant state and local funds for four consecutive fiscal years. The goal of the TIP is to provide a clear picture of upcoming transportation improvements in an MPO's area, how much they will cost, and an estimate of how long they will take to complete.

The TIP is updated every 4 years, the MPO Technical Committee will reviewing the plan and the MPO Policy Board must hold a public hearing to adopt the plan. The MPO Technical Committee holds a discussion of the TIP and makes a recommendation on action to the MPO Policy Board. The public can attend and comment at the MPO Technical Committee meeting and also during the MPO Policy Board's public hearing.

Unified Planning Work Program (UPWP)

The Unified Planning Work Program (UPWP) is a formal presentation of the transportation planning projects that will be undertaken by an MPO for a designated fiscal year. The UPWP serves as a mechanism for the MPO to plan the money that it receives from federal and state sources—it can go towards project research, committee management, or other responsibilities of the MPO.

Federal law dictates that work programs identified in the UPWP must incorporate one or more of eight basic planning factors in order to be included. These factors include safety, security, and connectivity, and generally represent most or all of an MPO's planning goals. The MPO, after considering these factors, will then formulate its own set of planning priorities after input from staff, transportation stakeholders, local governments, and the general public, and use these priorities to guide and formulate projects. Long term transportation planning efforts, like the Long Range Transportation Plan developed by an MPO, will also guide and prioritize projects.

The UPWP reflects the priorities of an MPO in terms of its desired transportation planning, but also provides a detailed list of projects, their associated costs and timelines for completion, as well as end products and deliverables. In addition to its critical function, accounting for the expenditure of federal funds which make up the majority of the MPO's budget, it serves as a way to communicate the MPO's priorities to associated localities and residents and ensure that the work that will be completed throughout the year is in line with the goals and vision of the region.

The UPWP is prepared by the CA-MPO to support transportation and planning priorities that have been determined by the CA-MPO Policy Board with opportunities for input from its member localities, other state agencies, and the public. These priorities are reflected in the long range transportation planning process and broader transportation goals and vision.

CA-MPO Engagement Plan

The Charlottesville Albemarle Metropolitan Planning Organization Engagement Plan is a federally required document demonstrating how the CA-MPO will engage interested or affected individuals, organizations, and government entities during the planning process. This plan outlines the CA-MPO's engagement goals and illustrates opportunities for engagement. The CA-MPO is committed to actively seeking out and engaging historically underserved communities, as demonstrated in the goals previously outlined in this document.

The engagement plan is periodically reviewed and updated as needed. In addition to opportunities to participate in the engagement plan update during MPO committee meetings, by submitting comments or contacting staff, there will be a 45-day public review period where the CA-MPO will actively seek out comments and engagement.

Title VI Plan

The CA-MOP's Title VI/Environmental Justice Plan outlines how the CA-MPO mitigates against and avoids inadvertently excluding low-income, minority, limited-English-speaking, disabled, and elderly populations in the planning process and in the development of planning documents. This plan will also include a procedure that allows members of these populations to submit grievances regarding perceived discriminatory actions.

The Title VI Plan is updated by the MPO every three years using population data from the US Census. It identifies populations that may be disproportionately disadvantage from participating in transportation planning activities and plans to mitigate the disadvantages. In addition to opportunities to participate in the Title VI update during MPO committee meetings, by submitting comments or contacting staff, there will be a 15-day public review period where the CA-MPO will actively seek out comments and engage with organizations and community leaders representing any disproportionately disadvantaged populations identified.

Other Studies and Plans

In addition to the federally required planning documents outlined above, the CA-MPO offers additional opportunities for engagement with the Charlottesville-Albemarle community. The MPO works closely with state and local planning staff on additional transportation plans and studies. As each CA-MPO project is different, the approaches to engagement are tailored to

match the needs of the project. For example, in response to needs identified by the public and CA-MPO partners, the CA-MPO developed a more robust engagement process for selecting Smart Scale applications to submit for funding.

The most common funding sources that localities can apply for are Smart Scale, Revenue Sharing, and Transportation Alternatives. Localities, Metropolitan Planning Organizations, and Planning Commissions are the primary applicants for these transportation funding sources.

Smart Scale is a bi-annual state funding process that allocates funds to projects to help satisfy the state's long-range transportation plan, VTrans. There are many different types of projects that can be submitted for Smart Scale funding, including improvements to significant state transportation corridors, urban areas, and regional transportation networks. Localities, MPOs, and public transit agencies can submit requests for funding, and the state uses a criteria system that measures a project's effect on transportation system performance factors including congestion, economic development, and public safety to select projects for funding.

The CA-MPO can submit four applications to the Smart Scale process for funding. Typically, these project applications are submitted in coordination with the state on behalf of the localities the MPO represents. Smart Scale projects being considered for application through the MPO with high public interest will be selected for enhanced public participation, as funding allows. This will include public workshops and the collection and dissemination of comments. Public participation is encouraged throughout the Smart Scale project selection process for all the MPO applications. Committee meetings will review all the projects selected for application and the Policy Board also allows comments during their selection process.

CA-MPO Engagement Tools

The CA-MPO uses a variety of engagement tools based on the planning project or document and interested parties. Most of the CA-MPO's projects include collaboration with the state, local governments, and the public. Some planning documents, like the Long Range Transportation Plan, require extensive public engagement and the CA-MPO will employ multiple engagement strategies. The CA-MPO is always looking for new and creative ways to engage interested parties below are *some* of the tools that the CA-MPO uses.

CA-MPO Committees

Committees are the forums where issues are discussed and formal decisions are made. There are two standing committees, and the Policy Board. All committee meetings are open to the public and meeting schedules and records of past meetings are posted on the CA-MPO website and will be made available in alternative formats upon request.

Policy Board: Decision-making authority rests with the Policy Board, whose voting membership is made up of two members each from the Albemarle Board of Supervisors and Charlottesville City Council, and the District Engineer for the VDOT Culpeper District.

Technical Committee: The voting membership of the Technical Committee consists of individuals with technical knowledge in transportation and land use planning, and the voting

membership consists of representatives from local government staff and Planning Commissions, area transit providers, the University of Virginia, and state agencies.

Citizens Transportation Advisory Committee: Comprised of members of the Charlottesville-Albemarle community, the committee provides feedback, recommendations, and community input on transportation proposals to the Policy Board. The Citizens Transportation Advisory Committee is specifically convened to enhance public engagement and incorporate a broad range of community interests into the decision-making process. Each of the local government governing bodies and the Policy Board have a designated number of members to appoint to this committee.

Meeting agendas, materials, and notes for all these committees are available on the CA-MPO website and the public can request to be added to the stakeholder email list and have the meeting notices and materials emailed directly to them. Time is set aside during all the public meetings for public comments.

Website

The CA-MPO maintains a website where interested parties can access transportation planning documents, like the TIP and LRTP. Committee meeting dates, agendas, recordings, and notes are also available on the website.

Stakeholder Emails

Interested or affected individuals, organizations, and government entities can request to be added to a stakeholder email list for topics they are interested in. The website lists committees and other events that people might want to sign up to receive more information on.

Informational Presentations

The CA-MPO staff are available to visit agencies, neighborhoods, organizations, and government entities to share information and present on CA-MPO transportation planning projects that interest them, as funds allow. If the CA-MPO is conducting a transportation planning project in an area that affects a community, they will make efforts to connect with community leaders to share information and gather public comments, as funds allow.

Other Engagement Tools

The CA-MPO uses a variety of methods to engage interested or affected individuals, organizations, and government entities in their planning projects. Some of the tools the CA-MPO uses include:

- Surveys
- Video Recordings
- Information Booths/Kiosks
- Social Media
- Public hearings
- Public workshops and other events
- Attendance at community events with engagement materials

The CA-MPO uses surveys as a tool to gather public comments as appropriate. Many of the CA-MPO meetings are recorded and available to interested or affected individuals, organizations, and government entities on the CA-MPO website. To further engage with a diverse audience, the TJPDC maintains a Facebook page to periodically update page followers on topics of interest related to the TJPDC and the MPO. This format allows for information to easily be disseminated. CA-MPO staff is enthusiastic about including affected parties in planning projects and uses the most effective engagement innovations and strategies according to the needs of each project.

Outreach to Underserved Populations

The CA-MPO maintains a Title VI/Environmental Justice Plan to mitigate against and avoid inadvertently excluding low-income, minority, limited-English-speaking, disabled, and elderly populations in the transportation planning process and in the development of planning documents. That plan also includes contact information and procedures to allow members of these populations to submit grievances regarding perceived discriminatory actions. This plan is reviewed and updated periodically by the CA-MPO and VDOT.

The CA-MPO strives to ensure that its planning efforts are holistic and inclusive of all populations that are part of the regional community. Arrangements will be made for interpreters for hearing impaired individuals, and every effort will be made to ensure provision of interpreters for non-English speaking persons, provided a request is submitted at least one week before the meeting. For meetings conducted electronically, interpretation services may be provided through closed captioning options.

Every effort is made for public hearings, workshops, and forums to be scheduled at times and locations that are accessible and convenient. The CA-MPO works to include stakeholders in both the development and approval of planning documents like the TIP and LRTP. These efforts can vary depending on the type of plan. In the development of new plans MPO staff makes every effort to not only ensure that these plans consider the needs of minority and low-income populations, but also strives to include these populations in the development of these plans.

Appendices

Appendix A: Glossary of Terms

The following transportation-related acronyms are used in this document:

ACCT	Alliance for Community Choice in Transportation
BRT	Bus Rapid Transit
CA-MPO	Charlottesville Albemarle Metropolitan Planning Organization
CAT	Charlottesville Area Transit
CTAC	Citizen's Transportation Advisory Committee
DRPT	Virginia Department of Rail and Public Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year (refers to the state fiscal year July 1 – June 30)
GIS	Geographic Information System (mapping)
IS	Regional transit service provider to Charlottesville City, and Albemarle, Fluvanna, Louisa, Nelson, Greene, and Buckingham Counties
LRTP	Long Range Transportation Plan. Refers to the 20-year transportation plan.
LRT	Light Rail Transit
MAP-21	Moving Ahead for Progress in the 21st Century
MPO	Metropolitan Planning Organization
PL	FHWA Planning Funding (used by MPO)
PPP	Public Participation Plan
RideShare	Free Carpool matching service for Charlottesville City, and Albemarle, Fluvanna, Louisa, Nelson, and Greene Counties
RTP	Regional Transit Partnership
SAFETEA-LU	Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (legislation governing the metropolitan planning process)
SOV	Single Occupant Vehicle
SPR	FHWA State Planning and Research Funding (used by VDOT to support MPO)
TDP	Transit Development Plan (for CTS and JAUNT)
TIP	Transportation Improvement Program
TJPDC	Thomas Jefferson Planning District Commission
TMPD	VDOT Transportation and Mobility Planning Division
UPWP	Unified Planning and Work Program (also referred to as Work Program)
UTS	University Transit Service
UVA	University of Virginia
VDOT	Virginia Department of Transportation

Appendix B: Comments and Responses Collected for this Engagement Plan

Appendix C: Title VI and Non-Discrimination

The Charlottesville Albemarle Metropolitan Planning Organization (CA-MPO) fully complies with Title VI of the Civil Rights Act of 1964 and related statutes, executive orders, and regulations in all programs and activities. The CA-MPO operates without regard to race, color, national origin, income, gender, age, and disability. Any person who believes him/herself or any specific class of persons, to be subjected to discrimination prohibited by Title VI may by him/herself or by representative file a written complaint with the CA-MPO Title VI Coordinator. A complaint must be filed no later than 180 days after the date of the alleged discrimination. Please contact the Title VI Coordinator via phone at 434-979-7310 for more information. The CA-MPO meetings are conducted in accessible locations and materials can be provided in accessible formats and in languages other than English. If you would like accessibility or language accommodation, please contact the Title VI Coordinator at 434-979-7310. If you wish to attend a CA-MPO function and require special accommodations, please give CA-MPO one week's notice in advance.

Appendix D: Resolution of Adoption