



CONNECT CENTRAL VIRGINIA 2045

**THE REGIONAL
TRANSPORTATION PLAN
FOR CENTRAL VIRGINIA**

September 16, 2020





RESOLUTION ADOPTING THE CONNECT CENTRAL VIRGINIA 2045 LONG-RANGE TRANSPORTATION PLAN

Whereas the Central Virginia Metropolitan Planning Organization (now CVTPO) adopted the Central Virginia Long-Range Transportation Plan, Year 2040, on October 15, 2015;

Whereas the CVTPO is federally mandated to update its long-range transportation plan every five years;

Whereas the Connect Central Virginia 2045 Plan provides a blueprint for a transportation system that is vital to Central Virginia's growth and quality of life;

Whereas Connect Central Virginia 2045 includes a regional multi-modal transportation vision, guiding principles and goals as well as a set of transportation projects to advance the growth and quality of life for Central Virginians; and

Whereas Connect Central Virginia 2045 was developed in conjunction with an extensive public involvement effort, consideration of financial constraints, environmental, socio-economic, and economic impacts, and consideration of the transportation and land use concerns of local, state, and federal governments; now, therefore, be it

Resolved, that the Central Virginia Transportation Planning Organization does hereby adopt the Connect Central Virginia 2045 Long-Range Transportation Plan.

Approved this 17th day of September 2020.

ATTESTED BY:

Gary R. Christie, Secretary
Central Virginia Transportation
Planning Organization

CERTIFIED BY:

Jon Hardie, Chair
Central Virginia Transportation
Planning Organization

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EXECUTIVE SUMMARY

Connect Central Virginia 2045 offers a unified transportation vision for the Central Virginia region by merging three major regional planning efforts: the 2045 Long Range Transportation Plan (LRTP), the Lynchburg Connectivity Study, and the Region 2000 Rural Long Range Transportation Plan. This document coordinates the insights and recommendations of all three planning efforts, and ultimately serves as the Central Virginia Transportation Planning Organization's (CVTPO) Long Range Transportation Plan (LRTP).

The 2045 process included a detailed transportation project evaluation process, designed to identify the most cost-effective solutions to the region's transportation needs. A set of 2045 goals and performance measures served as the scoring framework for this process. The result is a list of regional priorities that can feed into future state funding applications for the Central Virginia Region. The Rural Transportation Programming (RTP) element addresses transportation considerations outside of the TPO (urban) area, whereas the Comprehensive Economic Development Strategies (CEDS) element replaces the former Lynchburg Connectivity Study and presents recommendations for meeting economic development themes.

With these various elements, Connect Central Virginia 2045 transcends each of the original three plans, creating a resource that is greater than the sum of its parts. The main focus, the CVTPO's LRTP, is thus more effective at serving its function as the Metropolitan Area's transportation plan. This approach also merges regional goals into a consolidated vision that includes five goals:

- » **Economy:** Retain and increase business and employment opportunities.
- » **Safety:** Provide a safe and secure transportation system.
- » **Mobility and Accessibility:** Provide a transportation system that facilitates the efficient movement of people and goods.
- » **Community and Nature:** Improve the quality of life and protect the environment.
- » **Efficiency:** Preserve the existing transportation system and promote efficient system management.



CENTRAL VIRGINIA TPO

The Central Virginia Transportation Planning Organization (CVTPO) is a federally mandated organization representing the transportation interests for the City of Lynchburg, the Town of Amherst, and urbanized portions of Amherst County, Bedford County, and Campbell County. It is one of 342 MPOs that were created by the U.S. Congress through the Federal-Aid Highway Act of 1962 to ensure that existing and future expenditures of governmental funds for transportation projects and programs are based on a continuing, cooperative, and comprehensive (“3-C”) planning process. All federal funding for transportation projects and programs in these urbanized areas and surrounding counties are channeled through the planning process implemented by the TPO.

CVTPO, like other MPOs, is charged with the creation of two primary documents: the Transportation Improvement Program (TIP), which budgets for transportation projects to be implemented over a 5-year period, and the Long Range Transportation Plan (L RTP), which is the focus of this document.

LONG RANGE TRANSPORTATION PLANS

One of the recurrent responsibilities of the CVTPO is the maintenance of an L RTP. This document is a federally mandated plan that outlines the region’s priority transportation improvements for the ensuing decades. For the MPO area, also called the urbanized area, or Metropolitan Planning Area (MPA), the L RTP is a fundamental and critical document that unlocks federal funding for the region’s transportation investments. Without the L RTP, these federal funds would be unavailable, causing most transportation projects to be too expensive for local or even state coffers.

A CONSTRAINED PLAN

The L RTP is a constrained plan, meaning that the selected project costs are for a budget based on anticipated transportation funding available to the area over the next two decades. The TPO calculates the cost of transportation improvements and lists those projects that fit within the budget of anticipated funding. Any projects that cannot fit in the long-range budget are moved to an unconstrained Vision List. Review **Chapter VIII** for the constrained list of projects, referred to as the Constrained Long Range Plan (CLRP).

A COLLECTIVE TRANSPORTATION VISION

The L RTP sets a collective vision for the region’s future transportation system, then identifies projects that are intended to achieve regional goals and objectives. Federal Code requires that the plan consider all modes of transportation, including private vehicles, public transit, biking, walking, and more. L RTPs can also address issues such as bridge maintenance and air travel. Per federal mandate, the L RTP must be updated every five years. This document is the five-year update for the horizon year 2045.

THE 2040 LONG-RANGE TRANSPORTATION PLAN

The last update of the L RTP was published in 2015 and planned for transportation projects and programs through the year 2040. One of the major goals of that update was to align the TPO with emerging federal and state government programs that emphasized transportation performance standards to select transportation projects. Working with the public and key stakeholders in the region, the TPO created an analytical framework to prioritize transportation improvements based on their consistency with the TPO’s goals, as well as federal and state policies. This initiative not only launched the TPO’s foray into performance-based planning, but also set the region up to compete effectively in the state’s SMART SCALE transportation funding program. Refer to **Chapter VI** for more information on SMART SCALE and other considerations.



CONNECT CENTRAL VIRGINIA 2045

THE 2045 LRTP

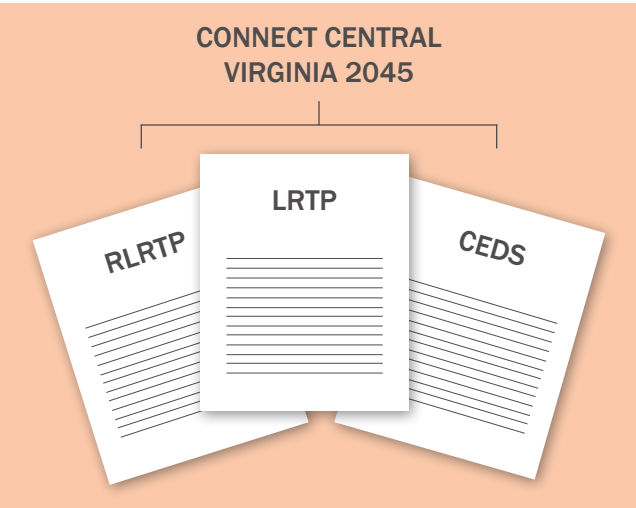
In the 2045 update of the LRTP, CVTPO has built on successful elements of the previous plan, then introduced various new features that are intended to address new challenges faced by the region and Commonwealth. It updates the region’s goals and performance measures to better align with federal guidelines and state processes that score projects for potential funding. It also offers a renewed focus on project implementation that is intended to increase the success of the TPO in securing state and federal transportation funds. To achieve this goal, the process developed an evaluation approach that mimics state funding programs, pairs projects with potential funding sources, and suggests next steps for preparing and advancing projects for funding applications.

LYNCHBURG CONNECTIVITY STUDY

The Lynchburg Connectivity Study, originally adopted in 2017, addresses the goal of strengthening the Lynchburg regional economy by enhancing the flows of people, goods, and information that connect the region with national and global markets. It offers a description of the current role of connectivity in supporting the region’s economy, and subsequently identifies and assesses opportunities for improving the region’s connection points.

Chapter II and **Chapter VIII** are bridges between the original Lynchburg Connectivity Study and the LRTP. These elements of Connect Central Virginia 2045 illustrate how the region can implement goals, objectives, and strategies that arose from

Figure 1: Diagram of the structure of this document



the Connectivity Study. This update supersedes the Connectivity Study and thus ties into the region’s Comprehensive Economic Development Strategies (CEDS) plan, which used the Connectivity Study as its transportation element.

THE 2040 RURAL LONG RANGE TRANSPORTATION PLAN

Rural Transportation Programs can greatly influence urbanized areas, as rural and metropolitan areas are intrinsically linked. In the effort to consider these linkages more fully, Connect Central Virginia 2045 incorporates elements of the recently approved Rural Long Range Transportation Plan. Most notably, the Vision List of projects includes a category of rural recommendations that could directly influence the TPO. The Vision List also recommends joint rural-urban studies. Connect Central Virginia 2045 is intended to lay the groundwork for a full integration of TPO and Rural Long Range Plans for the 2050 update.

Connect Central Virginia 2045 Planning Process





CONNECT CENTRAL VIRGINIA CONSULTANT TEAM

CVTPO secured the consulting services of EPR, P.C. to develop the 2045 LRTP. Kimley-Horn was the subconsultant and provided modeling services with the travel demand model. EDR Group served as economic development consultants on the team. This document refers to the consulting firms by name or by simply denoting them as the “consultants.”

2045 PROJECT SUMMARY

Refer to **Chapter VIII** for the full list of projects and Connect Central Virginia 2045 recommendations. Below is a summary of projects, including:

- » CEDS recommendations from the subsumed Lynchburg Connectivity Study
- » Rural projects from the 2040 RL RTP
- » The TPO Project List
 - › Constrained Long Range Plan (CLRP)
 - › High-ranking TPO projects that can rotate into the CLRP when more is known about constrained funding

CEDS RECOMMENDATIONS

Connect Central Virginia 2045 incorporates a series of strategies and actions that address regional connectivity and directly influence the region’s desirability to skilled workers, businesses, and future residents. Themes and strategy areas include the following. **Chapter VIII** details recommendations that support these strategies and themes.

Connectivity Themes

- » Labor Market & Intra-Regional Connectivity
- » Labor Market & Inter-Regional Connectivity
- » Digital Connectivity

Supporting Strategy Area

- » Placemaking
- » Transportation Bottlenecks
- » Transit and Travel Demand Management (TDM)
- » Intercity Passenger Rail
- » Air Service Development
- » Access on Key Highway Corridors
- » Cargo-Oriented Development
- » Broadband Coverage



Notable Features of this Plan

In preparation for this plan, the EPR, P.C. consulting team identified common limitations of how LRTPs function under the federal framework of guidelines. This discussion revealed opportunities to design new approaches to bring greater value to the TPO area and even the surrounding rural region. Below are some of the features and innovations found in this plan:

Interconnectedness

Rather than assessing the benefits of individual projects in an isolated manner, proposed projects were combined into scenarios, tested as a system, and compared with other project groupings through a method of performance measure analysis.

Detail and Guidance on Projects

Since Virginia's funding programs now require more detailed project descriptions and accurate cost estimates, the 2045 plan offers an expanded description of all recommended projects. This differs from past LRTP project descriptions, which have been far less detailed.

Functional Vision Lists

Since the Vision List projects can now qualify for funding under Virginia's SMART SCALE process, the 2045 Plan organizes these projects into meaningful categories and offers guidance for TPO officials on next steps, maintenance of the plan, cost estimates, ties to the Unified Planning Work Program (UPWP) and other useful direction. Refer to Chapter VIII.

Public Engagement

Public engagement is a common challenge for Long Range Planning Processes. For 2045, the process included new approaches, such as public intercepts, a Virtual Town Hall, and a MetroQuest survey. The resulting public input played an important role in all aspects of the process, from validating the goals and performance measures to project selection. Refer to Chapter III.

User-Friendly Format

As a public document that is critical to the region, the TPO emphasized that this plan should be easy to read and navigate. To accomplish this, the plan includes guidance on how to use this document as a resource, call-out boxes with important information, and language that excludes as much transportation jargon as possible. This plan particularly attempted to make the project list chapter more engaging and easier to understand, with the understanding that this is the section most readers will use.

Electronic Version

In the effort to make the 2045 Plan more accessible, the TPO developed an electronic version of the plan using the mySidewalk platform—a service that transposes the plan to a visually appealing web platform that readily allows decision-makers to easily reference the plan from a computer or smartphone. This format allows decision-makers to easily reference the plan from a computer or smart phone. The electronic version also includes additional materials and information, with hyperlinks to relevant resources.



RURAL LONG-RANGE TRANSPORTATION PLAN PROJECT LIST

The RL RTP element of the plan lists project recommendations for the rural area of the Central Virginia Planning District Commission (CVPDC). The rural regional projects have a horizon year of 2040 and address the anticipated impacts of population and employment growth upon the transportation system. The RL RTP was developed as a vision plan, addressing all needs of the transportation system studied regardless of anticipated funding availability.

While the Rural Transportation element lists over 200 rural transportation projects, the tables below list the top 10 priorities by county. This list of higher priority projects is intended to assist with SMART SCALE and other transportation funding decisions for the Rural Transportation Program area.

2045 LRTP PROJECT LIST

The 2045 LRTP consists of two lists: The Constrained Long Range Plan (CLRP) and the Vision List. The financially constrained transportation improvement project list is limited by a reasonable estimation of future state and local transportation funding sources through year 2045. Once the total amount of anticipated funding has been allocated, the LRTP is established, and remaining projects fall into the unconstrained, or vision, list. **Table 2** details the projects that make up the Constrained Long Range Plan (CLRP).

Table 1: 2040 RL RTP projects list

Amherst County		Appomattox County	
Project #1	North Amherst Highway & Patrick Henry Highway	Project #1	Confederate Boulevard
Project #2	North Amherst Highway	Project #2	Richmond Highway & Spout Spring Road
Project #3	Richmond Highway, Segment 1	Project #3	Richmond Highway & Stage Road
Project #4	Richmond Highway, Segment 2	Project #4	Richmond Highway & Old Evergreen Road
Project #5	Father Judge Road	Project #5	Richmond Highway
Project #6	Riverville Road	Project #6	Confederate Boulevard & Court Street
Project #7	Geddes Mountain Road & Patrick Henry Highway	Project #7	Richmond Highway & Piney Ridge Road
Project #8	Baileys Sawmill Road	Project #8	Hixburg Road, Segment 1
Project #9	Matohe Road	Project #9	Hixburg Road, Segment 2
Project #10	Union Hill Road	Project #10	Old Evergreen Road

Bedford County		Campbell County	
Project #1	West Lynchburg Salem Turnpike & Camp Jaycee Road	Project #1	Wards Road & Gladys Road
Project #2	East Lynchburg Salem Turnpike, Segment 1	Project #2	Wards Road & Colonial Highway
Project #3	East Lynchburg Salem Turnpike & East Main Street	Project #3	Wards Road, Segment 1
Project #4	West Lynchburg Salem Turnpike & Villamont Road	Project #4	Clarion Road
Project #5	West Lynchburg Salem Turnpike, Segment 1	Project #5	Main Street & 7th Street
Project #6	East Lynchburg Salem Turnpike, Segment 2	Project #6	Brookneal Highway and Epsons Road
Project #7	West Lynchburg Salem Turnpike & Patterson Mill Road	Project #7	Village Highway & Plum Branch Road
Project #8	West Lynchburg Salem Turnpike & Johnson School Road	Project #8	Wards Road, Segment 2
Project #9	West Lynchburg Salem Turnpike, Segment 2	Project #9	Main Street
Project #10	East Lynchburg Salem Turnpike, Segment 3	Project #10	Lusardi Drive/Lynchburg Avenue





Table 2: Constrained project list

Connect Central Virginia 2045 Constrained List									
Map ID	JURISDICTION2	ROUTE	Name	Description	Estimated Cost	Previous Spending	FY20	FY21-25	Remaining Balance
1	Campbell County	460	Waterlick Congestion and Safety Improvements	Waterlick Road (Route 622) congestion and safety improvements including construction of new turn lanes, new median, road widening, installation of new signal poles, and implementation of access management.	\$ 3,233,297	\$ 2,433,297	\$ 800,000	\$ -	\$ -
2	Campbell County	622	Route 622, Lynbrook Road	This project is for the reconstruction and new construction of a segment of Route 622 from Route 29 to Route 683. Work includes alignment improvements and construction of a new bridge over Flat Creek.	\$ 11,029,052	\$ 6,246,079	\$ 2,458,777	\$ 2,324,196	\$ -
3	Amherst County	682	Route 682 Woody's Lake Road	Reconstruction of Route 682 (Woody's Lake Road) to include 11'-12' lanes with 4' ditch and 4' shoulder from US 29 Business (South Amherst Highway) to end paved facility.	\$ 7,855,088	\$ 7,855,088	\$ -	\$ -	\$ -
Not Mapped	Amherst County	682	#HB2.FY17 RTE 682 - RECONSTRUCTION GARVEE DEBT SERVICE		\$ 10,131,165	\$ 487,051	\$ 432,815	\$ 2,709,156	\$ 6,502,143
4	Lynchburg	221	RTE 221 - INTERSECTION IMPROVEMENTS	The Lynchburg Expressway (US 501) One-Way Pair Project is intended to relieve congestion and improve safety at the US 221 intersection by splitting 501 into a one-way pair on either side of 221.	\$ 38,538,037	\$ 4,722,884	\$ -	\$ 16,701,515	\$ 17,113,638
5	Lynchburg	9999	Oddfellows Road Segment B2	Reconstruction of Odd Fellows Road to include new three-lane facility with center turn lane, new roundabout at intersection of Albert Lankford Road and Murray Place, new bridge over NS railroad, and construction of new shared use path.	\$ 16,023,177	\$ 16,023,177	\$ -	\$ -	\$ -
Not Mapped	Lynchburg	9999	#HB2.FY17 ODDFELL'S RD SEG B2 RECON GARVEE DEBT SERVICE		\$ 5,995,416	\$ 2,443,321	\$ 602,190	\$ 639,747	\$ 2,310,158
6	Lynchburg	9999	Rivermont Ave. and Bedford Ave. Intersection improvement	Construct directional left turning islands at the intersection of Rivermont Ave and Bedford Ave.	\$ 485,000	\$ -	\$ -	\$ 485,000	\$ -
7	Bedford County	221	RTE 221 - INTERSECTION IMPROVEMENTS	Improvements to the intersection of Route 221 (Lakeside Drive) at Lynchburg Expressway (Route 501) including one-way split pairs on US 501 on either side of 221. Other improvements include new sidewalk and shared use path, median, and turn lanes.	\$ 8,137,995	\$ 1,454,182	\$ -	\$ 6,683,813	\$ -
8	Bedford County	811	Right turn lane northbound Route 811 at Route 622	Construct a new northbound right turn lane and taper on Thomas Jefferson Road (Route 811) at Waterlick Road (Route 622).	\$ 381,163	\$ 174,464	\$ 131,793	\$ 74,906	\$ -



Figure 2: Constrained list projects

