

Chapter 7: Revenue and Cost Analysis

This chapter explains the methodology for developing project cost estimates and revenue projections. Since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, MPOs have been required to demonstrate that estimated project costs do not exceed projected revenues. This federal requirement is complicated by Virginia's shift from the traditional formula-based approach to allocating federal transportation funds to a performance-based evaluation through the SMART SCALE project funding program. Despite this challenge, the LRTP includes a financial plan that estimates revenues for identified transportation improvements.

The SAWMPO region has transportation needs that exceed revenue projections. If additional funding becomes available during the life of the LRTP, projects included on the Vision (unfunded) List could be added to the fiscally-constrained project list. The Vision List is shown in **Appendix A**.

This chapter addresses:

- 7-1 Project Cost Estimate Development
- 7-2 Funding Sources
- 7-3 Anticipated Revenues

7 – 1 Project Cost Estimates

Planning level cost estimates were developed for projects identified in the SAWMPO Constrained and Vision Lists. Draft estimates came from the following sources, and were then validated and adjusted by VDOT Staunton District staff if necessary:

- VDOT Six Year Improvement Plan
- 2040 SAWMPO Long Range Transportation Plan
- Augusta County, City of Staunton, and City of Waynesboro Comprehensive Plans
- Recent MPO- and VDOT-led studies

For projects that did not have a cost estimate developed in any public planning document, the project team used VDOT's Statewide Planning Level Cost Estimating System to develop estimates. The program has year 2020 project costs that are inflated annually by 3% to reflect a future Year of Expenditure (YOE). This tool provides a high-level estimate based on the type of facility being constructed/reconstructed, and includes an overall percentage for Preliminary Engineering (PE) costs. Right of way (RW) costs are also included based upon an overall percentage of project cost.

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7 – 2 Funding Sources

Transportation funding is available through federal, state, and local government entities for roadway, bike and pedestrian, and transit projects. The Commonwealth administers federal funds for roadway construction, bicycle/pedestrian facilities, transit operations and facilities, and major planning and/or environmental studies through a variety of programs. The 2015 federal transportation funding and authorization bill, Fixing America's Surface Transportation (FAST) Act funds the following four major core programs for surface transportation projects pertinent to the SAWMPO.

Surface Transportation: Federal Funds

National Highway Performance Program (NHPP)

The prior federal transportation legislation - MAP-21 – and the FAST Act expanded the National Highway System (NHS) to include principal arterial roadways that were not originally part of the NHS. The Enhanced National Highway System is now comprised of the interstate system, all principal arterials, and bridges on the NHS. The NHPP provides funding for construction, reconstruction, or operational improvement of portions of the highway; inspection costs for NHS infrastructure including bridges; bicycle and pedestrian infrastructure; safety improvements on the NHS; environmental restoration within NHS corridors; intelligent transportation system (ITS) improvements; and the construction of bus terminals servicing the NHS.

Surface Transportation Program (STP)

Projects eligible for funding include construction, reconstruction, or operational improvement for highways and local access roads; bridge projects on public roads and construction of bridges on federal-aid highways; highway and transit safety infrastructure improvements; bicycle and pedestrian infrastructure including recreational trails; and environmental restoration.

Highway Safety Improvement Program (HSIP)

The HSIP allocates funds to reduce traffic fatalities and injuries on public roads. Eligible projects for this funding include public surface transportation projects or projects that align with the State Strategic Highway Safety Plan (SHSP) to mitigate hazardous roads or resolve highway safety challenges.

Transportation Alternatives (TAP) Program

MAP-21 created and the FAST Act maintained the Transportation Alternatives Program to encompass preceding programs including Transportation Enhancements, Safe Routes to School, and Recreational Trails. Projects eligible for this funding include, but are not limited to, the planning, design, and construction of on- and off-road trails for non-motorized transportation; converting abandoned railroad corridors for non-motorized trails; and environmental mitigation activities.

Surface Transportation: State Funding

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Virginia matches federally funded programs with state gas tax revenues along with maintenance programs received by urban localities by means of a formula-based system. The Commonwealth also supports a Revenue Sharing program where local funds are matched dollar for dollar with state funds. Eligible projects must be identified in local Capital Improvement Programs (CIPs) or adopted Comprehensive Plans to be eligible to receive Revenue Sharing funds.

Surface Transportation: Local Funding

Localities fund transportation projects primarily through general obligation bonds and general funds. Bond funds dedicate funding for long-term capital roadway projects. Local funding is also used to match federal and state funding sources. Local funding commitments are not accounted for in the fiscally constrained LRTP.

Public Transportation: Federal Funding

Urbanized Area Formula Program (FTA Section 5307)

The United States Congress establishes funding for the FTA Programs and funds are apportioned based on each state's share of the targeted populations. FTA allocates Section 5307 funding using a population-based formula to be dispensed by the Governor. This Governor's Apportionment of Section 5307 funds is administered by the Virginia Department of Rail and Public Transportation (DRPT).

DRPT allocates the FTA Section 5307 program as the designated recipient, to Direct Recipients in the Small Urbanized Areas / UZAs with a (population between 50,000 and 200,000 people. Section 5307 is a formula-based grant program allocated for transit capital improvements, operating, and planning assistance for public transit services.

Eligible activities include planning, engineering design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some Americans with Disabilities Act complementary paratransit service costs are considered capital costs.

For urbanized areas with populations less than 200,000, operating assistance is an eligible expense. In these areas, at least one percent of the funding apportioned to each area must be used for associated transit improvements such as preservation of historic structures and facilities intended for use in public transportation service; bus shelters; transit service related landscaping and streetscaping including benches, trash receptacles and street lights; pedestrian access and walkways; bicycle access including storage facilities and equipment for transporting bicycles on public transit vehicles; signage; or enhanced access to public transportation for people with disabilities.

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Rural Area Formula Program (FTA Section 5311)

Section 5311 is an FTA Formula Grants for Rural Areas program that provides capital and operating assistance to states to support public transportation in rural areas with populations of less than 50,000, where many residents often rely on public transit to reach their destinations. DRPT is the designated recipient for Virginia's FTA Section 5311 program. Federal guidelines allow DRPT to offer FTA 5311 funds to eligible subrecipients. Eligible subrecipients submit applications to DRPT for evaluation and selection.

State and federal grant funds administered by DRPT provide financial assistance to support Public Transportation Services through a competitive funding program is referred to as "MERIT" – Making Efficient and Responsible Investments in Transit. The MERIT program includes eight individually administered grant programs that provide funding for capital purchases and operations, TDM projects and operations, and planning processes and studies.

The capital assistance program provides funding for transit assets such as vehicles, transit facilities, maintenance equipment, machinery, and heavy equipment. The operating assistance program provides funding for transit operations, maintenance services, repairs and administrative costs, and TDM/commuter assistance program and project operations.

Transportation for Elderly Persons and Persons with Disabilities (Section 5310)

This program provides formula funding to States and other eligible recipients including non-profit organizations and governmental authorities for the purpose of assisting private nonprofit groups in meeting the transportation needs of the elderly and persons with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. Funds are obligated based on the annual program of projects included in a statewide grant application.

The State agency ensures that local applicants and project activities are eligible and in compliance with Federal requirements, that private not-for-profit transportation providers have an opportunity to participate as feasible, and that the program provides for coordination of federally assisted transportation services assisted by other Federal sources. Once the FTA approves the application, funds are available for state administration of its program and for allocation to individual sub-recipients within the state. Funding is apportioned by formula based upon the number of elderly persons and persons with disabilities in each state according to the latest U.S. Census data.

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Local Transit Funds

Local funding partners contribute financially to the transit system. A unique regional partnership has developed with local governments and private service entities that recognize the value of public transportation for their client base. The following agencies/entities have chosen to contribute financially to the public transportation system which significantly decreases the impact to local government budgets.

- Augusta Health
- Wilson Workforce and Rehabilitation Center
- Blue Ridge Community College
- Shenandoah Valley Social Services
- Staunton Downtown Development Association

7 – 3 Projected Revenues

Highway Revenue

VDOT receives revenues from state and federal sources referred to as Highway Revenue. State sources of funding are derived from four primary sources: sales tax on motor fuels, motor vehicles sales and use tax, motor vehicle license fee, and state sales and use tax. A large portion of the state's annual budget is dedicated to the Highway Maintenance and Operating Fund (HMOF) which comprises approximately 38% of the annual budget. Approximately 37% of the annual operating fund is dedicated to the state's construction program.

Transportation projects are sometimes financed using a combination of public and private funds. Financing from private entities is generally received through legally binding commitments made during the local property rezoning process to facilitate land development, known as proffers - voluntary cash or capital improvement payments from developers to local government to offset development impact - or as part of a Public Private Partnership (P3). The MPO defers to the respective jurisdictions to work with the development community, and VDOT, to determine the rational nexus of need proportional to mitigate the impact of any specific development.

Projected revenues are a requirement of the federal transportation planning process to ensure that investments are based on realistically anticipated revenues. Historically, surface transportation revenues were tied to network facility type and distributed to localities through the original construction formula, 40% to the Primary System, 30% to the Secondary System, and 30% to the Urban System. Virginia's SMART SCALE program replaces formula-based project funding with a competitive, project performance and outcome-based analysis to facilitate objective transportation decision making by the Commonwealth Transportation Board (CTB).

As a result, the MPO can no longer assume that dedicated transportation funding will reach the SAWMPO by formula. Based on revenue trends from the past several years, it is projected that the SAWMPO region will receive \$359,089,907 million for surface transportation projects between 2021 and 2045. Prior SYIP allocations from 2021 - 2025 on active projects are also included in **Table 8** below to reflect the total value of investments being

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made in the SAWMPO during the planning period, with initial I-81 Improvement program funding allocated in years 2021 – 2027 (see **Appendix B**).

Table 8: Projected Total Highway Revenues 2021 - 2045

Anticipated Revenues Category	Prior SYIP Allocations (2021 – 2027)*	Projected Revenues	Totals
Interstate 81 Improvement Program*	\$279,068,371	\$0.00	\$279,068,371
District Grant Program	\$24,327,000	\$18,780,655	\$43,107,655
High Priority Projects	\$6,756,000	\$18,780,655	\$25,536,655
Transportation Alternatives	\$1,589,499	\$6,719,826	\$8,309,325
Revenue Sharing	\$200,000	\$1,073,674	\$1,273,674
Highway Safety Improvement Program	\$0.00	\$1,578,869	\$1,578,869
State of Good Repair	\$436,659	\$651,069	\$1,087,728
Private Development	\$0.00	\$26,194,106	\$26,194,106
*I-81 Improvement Program Funding allocated for years 2021-2027		Total	\$359,089,907

Transit Revenues

Based on BRITE's FY21 allocations of FTA 5307 and 5311, and a projected 3% increase in the allocation each year, it is estimated that BRITE will receive \$90.5 million in total funding over the life of the LRTP. The BRITE system offsets its requests for federal and state operating funds with fare revenues. Fares for the BRITE system are a modest \$0.50 each way, and cover approximately 4% of operating expenses each year.

Table 9 summarizes estimated annual non-fare revenues for BRITE.

Table 9: Estimated Annual Transit Revenues 2021-2045

Estimated Annual Transit Revenues			
	5307	5311	Total
FY 2021	\$1,680,950	\$803,069	\$2,484,019
FY 2022	\$1,731,379	\$827,161	\$2,558,540
FY 2023	\$1,783,320	\$851,976	\$2,635,296

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Estimated Annual Transit Revenues (cont.)			
	5307	5311	Total
FY 2024	\$1,836,819	\$877,535	\$2,714,355
FY 2025	\$1,891,924	\$903,861	\$2,795,785
FY 2026	\$1,948,682	\$930,977	\$2,879,659
FY 2027	\$2,007,142	\$958,906	\$2,966,049
FY 2028	\$2,067,356	\$987,674	\$3,055,030
FY 2029	\$2,129,377	\$1,017,304	\$3,146,681
FY 2030	\$2,193,258	\$1,047,823	\$3,241,081
FY 2031	\$2,259,056	\$1,079,258	\$3,338,314
FY 2032	\$2,326,828	\$1,111,635	\$3,438,463
FY 2033	\$2,396,633	\$1,144,984	\$3,541,617
FY 2034	\$2,468,532	\$1,179,334	\$3,647,866
FY 2035	\$2,542,588	\$1,214,714	\$3,757,302
FY 2036	\$2,618,865	\$1,251,155	\$3,870,021
FY 2037	\$2,697,431	\$1,288,690	\$3,986,121
FY 2038	\$2,778,354	\$1,327,351	\$4,105,705
FY 2039	\$2,861,705	\$1,367,171	\$4,228,876
FY 2040	\$2,947,556	\$1,408,186	\$4,355,742
FY 2041	\$3,035,983	\$1,450,432	\$4,486,415
FY 2042	\$3,127,062	\$1,493,945	\$4,621,007
FY 2043	\$3,220,874	\$1,538,763	\$4,759,637
FY 2044	\$3,317,500	\$1,584,926	\$4,902,426
FY 2045	\$3,417,025	\$1,632,474	\$5,049,499
TOTAL	\$61,286,200	\$29,279,305	\$90,565,505

In fiscal years 2021 and 2022, BRITE will also use CARES Act funding for operating expenses. The CARES Act funding supports transit operations and agency response to the COVID-19 pandemic. BRITE received \$3,027,140 via the CARES Act.

5310 Revenues

Valley Program for Aging Services (VPAS) is currently the only 5310 recipient serving the SAWMPO region. VPAS uses 5310 funding for new vehicles and operating assistance. Based on the past ten years of 5310 awards to VPAS, and its vehicle replacement schedule, it is projected that VPAS will receive \$2,763,953.36 between 2020 and 2045.