

**Jim Justice**  
Governor

**Jimmy Wriston, PE**  
Cabinet Secretary of Transportation

**2023 - 2028**

Federal Fiscal Years

# STIP

Statewide Transportation Improvement Program

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**The West Virginia  
Department of Transportation**

**IN COOPERATION WITH THE  
Federal Highway Administration**

**AND THE  
Federal Transit Administration**



State of  
West Virginia  
Department of  
Transportation



U.S. Department  
of Transportation  
Federal Highway  
Administration



U.S. Department  
of Transportation  
Federal Transit  
Administration

# West Virginia 2023-2028 STIP

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## **1. INTRODUCTION**

The need for an effective local, regional, and national transportation network touches every citizen of West Virginia and the United States. Virtually every aspect of daily life depends on adequate roadways and other modes of transportation. Whether it is for transporting our children to school, getting us to work, or bringing goods to our stores from across the country or around the globe, an adequate transportation network enables individuals to experience a higher quality of life by improving access to social, economic, educational, and recreational opportunities. Since the need and desire for safe and efficient transportation is so universal, citizens, businesses, and elected representatives alike are concerned with the details of transportation maintenance, improvement, and construction activities. In recognition of the impact that the transportation network has on our Nation, the federal government requires each state to prepare a Long-Range Statewide Transportation Plan. The purpose of these statewide long-range (i.e. at least 20 year) plans is for each state to outline the strategies for how it intends to preserve and enhance the transportation infrastructure for the traveling public with the resources that can reasonably be anticipated to be available for those purposes.

Long-term goals and policies for the WVDOT currently reside in West Virginia's 2050 Statewide Long-Range Transportation Plan, which discusses in broad terms the long-range goals and objectives of its member agencies, of which the West Virginia Division of Highways (WVDOH) is a part. The current plan, which can be viewed at [www.transportation.wv.gov](http://www.transportation.wv.gov), not only met federal requirements in place at the time, but also went further than previous Long-Range plans in discussing linkages to both the Statewide Transportation Improvement Program (STIP) and the State's Transportation Asset Management Plan (TAMP).

The State's long-range transportation plan is by necessity both multi-modal in nature to reflect the interconnectivity and interdependence of the various modes of transportation used for getting people, goods and services from point A to point B, but is also intended to be a strategic document. The plan also serves as a blueprint of what the State desires to achieve during the planning horizon (i.e. currently 2050) and is not intended to specifically identify what needs to be done by the State and or other entities to meet those goals. For example, the long-range plan identifies the goal of "Safety and Security for All Users" but does not and could not realistically identify all construction projects across all modes over a twenty-plus year period that would be needed to achieve that goal. Achieving the goals and objectives of the long-range plan is complicated by the fact that private not public entities are responsible for some infrastructure like railroads and shipping terminals and as such states cannot force these private entities to construct facilities or locate in a specific area. These outcomes are further complicated by the fact that even where modes are controlled primarily by public entities (airports, highways, mass transit, etc.) funding at the federal, state and local level for investing in these facilities is typically mode specific and each funding source has rules and regulations governing how those funds can be utilized. This remainder of this STIP document focuses on the funding and requirements associated with highways and public transit.

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In order to ensure that states are working on near-term highway and transit initiatives that will produce the desired strategic outcomes reflected in their long-range statewide plans as well as the performance targets outlined in each state's TAMP, states are also federally required to develop a four-year program of federally funded projects that reflect what projects the State intends to implement during the four-year period with the funds that are anticipated to be available for those purposes. The four-year document is called the STIP.

In West Virginia, unlike the majority of states, State government rather than county or local government, has ownership and responsibility for virtually all public highways. With this in mind, it is important that the West Virginia Department of Transportation (WVDOT) and specifically the West Virginia Division of Highways (WVDOH) and West Virginia Division of Public Transit (WVPT) clearly outline the tasks and improvements that can realistically be funded in the near future with not only federal funds, but also State funds. As a result, for a brief period the WVDOH produced a six-year planning document referred to as the Six-Year Plan. This document outlined both State and federally funded highway projects that the WVDOH anticipated implementing during the period. Due to the documents overlap with the federally required STIP and timing issues surrounding the updates of both documents, it generated considerable confusion. As such, it was determined that a more prudent course of action would be to merge the two documents. As an initial step in merging the two documents, in January 2008, the Agency produced the first Six-Year STIP covering FFY 2008-2013, providing the outer two years for information only.

In November 2008 the merger process culminated when the 2009-2014 STIP was approved. This was the first official document issued by the WVDOT, which included a listing of federal-aid projects along with a listing of projects to be funded solely with State monies. The first four years of the program served as the State's official STIP and the remaining two years were provided for informational purposes only. The development, adjustment and or amendments to the federally funded portion of the document follow the required federal procedures and regulations associated with the STIP. The currently approved STIP document covers FFY 2020-2025, with the last two years (i.e. FFY 2024 and 2025) being for illustrative purposes only. While the STIP is only federally required to be updated once every four years, the WVDOT has routinely updated the document more frequently to revise and maintain a six-year planning horizon. For this update, which is being developed to cover FFY 2023-2028, the WVDOT has opted to resubmit this document to the Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and the public one year early. It is anticipated that future updates of the STIP will typically be submitted on a biennial basis.

The STIP is not a static document and continues to evolve over time in an effort to keep the public informed and engaged in the Transportation Planning and Programming process. Enhancements have been and will continue to be implemented to keep the document relevant and compliant with ever changing federal requirements.

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The 2010-2015 STIP and all subsequent STIP documents have each provided a section outlining the efforts that were made to improve the management and reporting of the program. The STIP was organized so that all programmed projects would fall within one of the eight designated core programs. The goal was to better manage assets to meet the program's needs and with less emphasis on the type of funding used. Furthermore, the types of investments and the amount of funding directed to each of the sub-programs can be compared to targets contained in both the State's Long-Range Plan and TAMP.

The timing of federal legislation and the actions mandated by them will by necessity have a significant impact on the work conducted on the transportation network and the content of required documents, such as the STIP. As an example, the implementation of Public Law 112-141, the Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Act, which was enacted on July 6, 2012, made significant changes to the programs through which transportation projects were funded. Although project eligibility generally remained unchanged, the number of highway programs was reduced in an attempt to give states more flexibility to deal with their specific issues. As a result, the WVDOT had to transition its STIP away from SAFETEA-LU funding programs to MAP-21 programs. Subsequently, while the WVDOT was in the midst of updating its current FFY 2016-2021 STIP, which was approved jointly by FHWA and FTA on April 22, 2016, a new multi-year transportation bill was approved. Public Law 114-94, the Fixing America's Surface Transportation (FAST) Act, was enacted on December 4, 2015. In transportation circles, the abbreviations of FAST Act and simply FAST are used interchangeably. Fortunately, the FAST Act, which covered FFY 2016-2021, built upon the foundations of MAP-21 leaving many of the prior Act's programs and performance-based requirements intact. As such, the WVDOT was able to proceed with, and gain approval of their current STIP. Most recently, Public Law 117—58, the Infrastructure Investment and Jobs Act (IIJA), was enacted on November 15<sup>th</sup>, 2021, and covers FFY 2022-2026. In transportation circles the new legislation is also commonly referred to as the Bipartisan Infrastructure Law or (BIL).

At the time of this document's preparation, only limited detailed information regarding the size and scope of the Law and the ramifications for West Virginia's STIP are available. However, a STIP update is prudent at this time to address the new funding programs being initiated as part of the IIJA, such as the Carbon Reduction program, Protect Program, Electric Vehicle Program, and the Bridge Investment Program.

Although now somewhat dated, another example of how outside factors can impact the WVDOT's transportation program was the designation of the Huntington, WV-KY-OH metropolitan statistical area as a Transportation Management Area (TMA). On July 18, 2012, the U.S. DOT, FTA and FHWA announced that all urbanized areas with populations greater than 200,000, as determined by the 2010 Census, are designated as TMAs. As a result of this announcement, a new urbanized area that is generally centered on Huntington, West Virginia was identified during the 2010 Census with a population of 202,637 and was listed as a TMA. The new TMA not only

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comprises portions of Cabell, Wayne and Putnam counties in West Virginia, but also extends across state lines into Kentucky and Ohio.

Prior to the 2010 Census, the areas that comprised the new TMA already met lower urbanized thresholds (50,000) that necessitated a host of additional planning requirements in order to be eligible for federal-aid funds. Those functions are performed in part by Metropolitan Planning Organizations (MPOs). Within West Virginia, the new TMA covers areas within the planning boundaries of two MPOs, which are the KYOVA Interstate Planning Commission (KYOVA), which serves Cabell and Wayne counties in West Virginia (in addition to Boyd and Greenup counties in Kentucky and Lawrence County in Ohio) and the Regional Intergovernmental Council (RIC) Metropolitan Planning Organization, which serves Kanawha and Putnam Counties. Funding requirements associated with TMAs necessitated that West Virginia's 2013-2018 STIP and subsequent STIP documents be changed to reflect the sub-allocation of federal funds required for TMAs. Since portions of both the KYOVA and RIC planning areas have been designated as a TMA, a small part of the federal-aid highway funds apportioned to West Virginia are sub-allocated for use solely within the TMA.

In similar fashion to the suballocation of funds for TMA's, as part of the IJJA, an additional sub-allocation of funds for urbanized areas between 50,000 and 200,000 in population has been required. The exact details and requirements associated with this additional population sub-class have not been made available at the time of this report's preparation. Any additional procedural or funding requirements associated with this population group will be incorporated into the STIP as information becomes available.

The state of West Virginia contains eight MPOs which are responsible for planning activities within the urbanized areas of 50,000 or more population. This includes development of a long-range Metropolitan Transportation Plan (MTP) which spans a minimum of 20 years, as well as a local Transportation Improvement Program (TIP). Metropolitan Planning Organizations TIPs are approved at the local level, and by the Governor, for incorporation, without change, into the STIP. This process allows potential submissions to be compared with the Statewide Transportation Plan and local Metropolitan Transportation Plans. The coordination of the WVDOT and the MPOs are outlined in the STIP Operating Procedures.

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The eight Metropolitan Planning Organizations are identified below:

1. BELOMAR (Ohio and Marshall Counties)
2. BHJ (Brooke and Hancock Counties)
3. FRMPO (Fayette and Raleigh Counties)
4. HEP (Berkeley and Jefferson Counties)
5. KYOVA (Cabell and Wayne Counties)
6. MMMPO (Monongalia County)
7. RIC (Kanawha and Putnam Counties)
8. WWW (Wood County)

The Six-Year STIP includes a wide variety of projects including roadway, bridge, bicycle, pedestrian, safety and public transportation (transit) projects. While the primary concern of this document is federally funded projects, Regionally Significant State funded projects are also listed.

The FFY 2020-2025 STIP was a significant departure from prior STIPs, in that West Virginia began to utilize the ability to “group” some projects for financial constraint and administrative purposes rather than listing all projects individually. Most highway projects are typically defined by three phases of activity, such as ENG (Design), ROW (Right of Way) and CON (Construction). Each phase of a standalone project is shown in its respective year of anticipated authorization. The federally funded portion of the STIP is fiscally balanced (or constrained to include projects for which there is committed funding available) and includes project phases that have a reasonable expectation of being ready for implementation by the year listed. Grouping allows for certain projects that meet specific criteria to be combined and represented as line items in the STIP. The primary purpose of grouping is to avoid delays in project implementation by providing flexibility and limiting the administrative actions required on lower cost projects that will have negligible environmental impacts. All information relating to the individual projects that comprise the group as they are determined are still maintained and available for public review. The WVDOT intends to continue to utilize groupable projects for the FFY 2023-2028 STIP. A more detailed discussion of how the WVDOT has implemented “grouping” into the STIP will be presented later in this document.

Projects are subject to many considerations and actions from conception to completion that may impede or accelerate their progress. These considerations may include policy decisions; changes in design requirements; conflicts with other scheduled activities; unforeseen circumstances such as cutbacks in funding; shortage of manpower; or inflation of project costs. Project cost estimates are based on best available engineering estimates at the time the STIP is developed. As required by MAP-21, FAST and IJJA, the projects are shown in anticipated year of expenditure dollars; however, final cost for the actual projects may differ as the projects are refined in the project development process prior to construction. When a project is adversely affected by any of the above-mentioned factors, the projected fiscal year dates and/or costs will be adjusted accordingly.

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Given the complexity of the STIP document and its emphasis on financial constraint a description of how the WVDOT is organized and how it obtains and is required to direct its financial resources is warranted and in reality, necessary for the public to provide meaningful input into the transportation planning and programming process.

## **2. WEST VIRGINIA DEPARTMENT OF TRANSPORTATION**

Comprised of more than 5,000 employees, the West Virginia Department of Transportation (WVDOT) provides essential services in transportation, tourism and economic development. These services provide for the safety and protection for the citizens of West Virginia, as well as the traveling public, through a modern highway, rail and airport system.

The WVDOT consists of the following agencies:

- Division of Highways
- Division of Motor Vehicles
- Office of Administrative Hearings
- Division of Multimodal Transportation Facilities
- Parkways Authority

### **2.1 DIVISION OF HIGHWAYS**

The West Virginia Division of Highways (WVDOH) is responsible for the planning, engineering, right-of-way acquisition, construction and maintenance of more than 34,000 miles of State maintained roads. Being only one of four states, including Virginia, Delaware and North Carolina, West Virginia owns virtually all of the roadways within the State and does not split roadway jurisdiction with a county or a township system. This equates to 89% of the public roads being the responsibility of the WVDOH with the remaining 11% being owned by a municipality, a federal agency or the West Virginia Parkways Authority. Additional responsibilities include highway research, outdoor advertising, roadside development, safety, bridge inspection and dissemination of highway related information. These responsibilities are administered by the several divisions situated within the central headquarters (such as Engineering Division, Right-of-Way Division, Traffic Engineering Division, Operations Division, etc.) and by the ten districts located throughout the State. The districts and their respective counties are as follows:

- District 1: Boone, Clay, Kanawha, Mason, Putnam
- District 2: Cabell, Lincoln, Logan, Mingo, Wayne
- District 3: Calhoun, Jackson, Pleasants, Ritchie, Roane, Wirt, Wood
- District 4: Doddridge, Harrison, Marion, Monongalia, Preston, Taylor
- District 5: Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan
- District 6: Brooke, Hancock, Marshall, Ohio, Tyler, Wetzel



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- District 7: Barbour, Braxton, Gilmer, Lewis, Upshur, Webster
- District 8: Pendleton, Pocahontas, Randolph, Tucker
- District 9: Fayette, Greenbrier, Monroe, Nicholas, Summers
- District 10: McDowell, Mercer, Raleigh, Wyoming

## **2.2 PUBLIC TRANSIT**

The Division of Multimodal Transportation Facilities fosters the development of public transportation services in the State and administers federal and state transit programs by being the designated State organization for the receipt of Federal Transit Administration (FTA) funding. The Division assists public transportation providers, not by actually operating buses and vans, but by keeping local systems safe, efficient and effective through financial support, technical and administrative assistance, statewide marketing and training. The Division ensures that all Federal Transit Administration grant requirements are met by the Division and its subrecipients.

The Division is also the state safety oversight agency (SSOA) responsible for West Virginia for overseeing West Virginia University's (WVU) safety program for the Morgantown Personal Rapid Transit (MPRT) system operated by WVU.

Some of the numerous services that the Division provides transit providers include:

- Distribution of operating and capital assistance to small urban and rural transit systems to help cover cost of essential public transportation services and miscellaneous equipment,
- Serving as a central procurement source for vehicles and communication equipment for The Section 5310 and 5311 providers (transit authorities and private non-profit agencies),
- Providing planning and technical assistance, either directly or through contractors, to enhance the safety, efficiency and effectiveness of transportation services in the State,
- Providing driver training on the safe and proper ways to transport the elderly and disabled, as well as provide access to supervisory training, defensive driving, mechanics training and many other topics,
- Documenting and promoting the benefits of public transportation for both users and nonusers,
- Provides information and guidance on responsible funding levels to support the development and enhancement of public transportation facilities and services.
- Ensures compliance with numerous federal requirements attached to Federal Transit Administration funding. The Division administers five FTA programs for the State of West Virginia. They are:
  - Section 5304 Statewide Transportation Planning Program

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- Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities
- Section 5311 Rural Area Formula Program
- Section 5329 Transit Safety and Oversight
- Section 5339 Bus and Bus Facilities

Two other FTA programs are included in the STIP, the Section 5307 Urbanized Area Formula Grants, utilized by transit organizations situated within the eight metropolitan areas of the State, and the Section 5337 State of Good Repair Grants utilized by West Virginia University for the Personal Rapid Transit facility. Both of these organizations are direct FTA recipients; this funding is not administered by the Division.

On November 15, 2021 President Biden signed the Infrastructure Investment and Jobs (IIJA) Act of 2021(IIJA) into law. The IIJA enacted \$91 Billion through the act's five-year span, FY2022-2026, for reauthorized transit programs. FTA Formula programs will be increased by 30% in FY2021-2022 and a 5% increase for subsequent years.

The IIJA replaces the FAST Act which authorized \$61.1 billion over the five fiscal years (FY) 2016 through 2020 for programs administered by the FTA.

The FAST Act, took effect in FFY2016 and provides funding through FFY2020. The FAST Act continued many trends first initiated in the Moving Ahead for Progress in the 21st Century Act, or MAP-21 such as safety, transit asset management and discretionary federal programs.

The Division is revising, per FTA timelines, it's group Transit Asset Management plan that includes all the State's recipients of FTA Sections 5307, 5311 and 5310 (where applicable). In addition, the Division has issued yearly performance targets based upon the plan. This has allowed the Division to have enough information to begin committing resources to areas shown to be deficient by the yearly inventory analysis for the performance targets.

The Division and the small urban transit agencies, working with a consultant, developed and implemented Public Transit Agency Safety Plans (PTASP). Using these plans, the small urban transit providers set individual transit safety performance measures yearly.

Our communities are enriched by a safe, affordable public transportation system and this contributes to the economic vitality of the State. West Virginians and visitors to our State depend on public transportation daily - for work, business, recreation, shopping, and access to education or medical services. Many elderly, disabled and economically disadvantaged citizens rely on public transportation and making the choice for using public transportation can help reduce traffic congestion and help the environment. For these reasons the Division is committed to the STIP process as a means of continuing to provide funding for these services.

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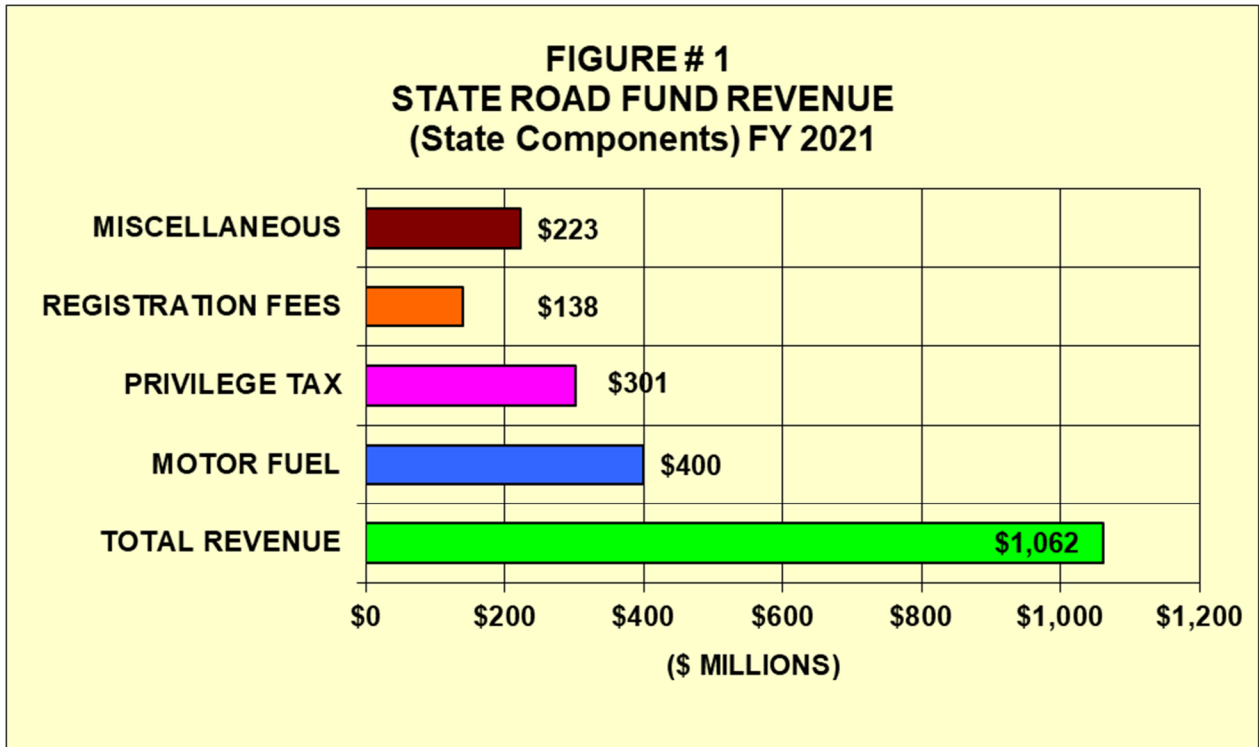
## **3. FINANCIAL RESOURCES - STATE ROAD FUNDS**

While it would seem deceptively simple for WVDOH staff to identify all highway improvements that will occur over the next six years on roadways under its jurisdiction, the reality is that providing that information with a reasonable degree of accuracy is quite difficult. Before a program that identifies future highway improvements can be laid out, it is important to understand the many functions that the State Road Fund (discussed below) must support and the limited funds which are available. The activities of the WVDOH are funded almost exclusively from the State Road Fund, which receives its funding from State revenue collections and federal reimbursement. The State revenue component of the State Road Fund is derived from motor fuel taxes, registration fees, privilege taxes, and miscellaneous income levied and generated at the State level. The federal component is derived from federal-aid reimbursements available to the State through national federal-aid highway legislation. Federal-aid highway funds are generated predominantly by motor fuel taxes and fees levied at the national level and are deposited in the Highway Trust Fund. In order to help highway departments plan and schedule projects, Congress will typically pass legislation that authorizes the expenditure of federal-aid funds over a multi-year period and specifies how those funds are to be distributed among the states. The current multi-year federal reauthorization legislation as mentioned previously is the Infrastructure Investment and Jobs Act (IIJA), which was signed into law on November 15, 2021, and replaces the prior multi-year legislation (FAST). As mentioned previously, the IIJA covers FFY 2022-2026. As such, two of the six years covered in the WVDOT's FFY 2023-2028 STIP will have to be based solely on assumptions regarding the potential size and scope of any federal transportation program after FFY 2026. To this end, it is assumed the federal government will continue to invest in highway and transit initiatives at the same level as IIJA. However, the simple lack of any clarity or certainty regarding their involvement helps to illustrate how difficult it is to plan and budget for a multi-year program that relies on estimates and anticipated funding from a highway bill that has not been drafted. Given the uncertainty that exists surrounding the level of federal support in the outer years and the direct impact it will have on West Virginia's STIP, conservative assumptions are prudent. Specifics regarding those assumptions will be explained later in this document.

### **3.1 STATE ROAD FUND – STATE REVENUE**

The State Road Fund collected \$1.062 billion in State revenue for State Fiscal Year (FY) 2021 (see Figure #1). Those revenues were generated from four basic categories: Motor Fuel Taxes, Registration Fees, Privilege Taxes, and Miscellaneous Revenues.

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While the Motor Fuel Tax has served as the primary revenue generator for the State Road Fund, it has at times come under scrutiny, especially when retail fuel prices significantly increase, which in turn generated Legislative action. A brief outline of some of the past volatile activity regarding Motor Fuel Tax rates in West Virginia follows below.

The Motor Fuel Tax rate was 27¢ per gallon in calendar year (CY) 2006 and had increased to 31.5¢ per gallon for CY 2007 and subsequently increased to 32.2¢ in CY 2008 due to a continual rise in the variable rate component of the State's Motor Fuel Tax. In response to the run-ups in retail fuel prices in 2007 and 2008, the Legislature forestalled a subsequent increase in the variable rate by freezing that portion of the Motor Fuel Tax at a rate of 11.7¢ for CY 2009. The actions taken by the Legislature represented the second time during a five-year period where the variable rate portion of the tax had been frozen. In an effort to curb dramatic swings in the variable portion of the Motor Fuel Tax, in November 2009, the Legislature revised West Virginia Code and established a new floor for the variable rate portion of the tax, which was previously established at 4.85¢ per gallon. The new rate was based on 5% of a minimum wholesale price of motor fuel of \$2.34 per gallon, which is equivalent to 11.7¢ per gallon. The rate is calculated by the Department of Revenue yearly and any adjustment in the rate is effective on January 1 of the next year. In addition to the higher floor value, a maximum annual variance in the variable rate portion of the tax was set at 10% (i.e. the variable rate can adjust up or down no more than 10% from the prior year). Because of this change made, the variable rate the rate increased to 11.7¢ per gallon in CY 2010. After 2010, the variable component continued to change annually CY 2011(11.7¢), CY 2012 (12.9¢), CY 2013 (15.6

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¢), CY 2014 (15.2¢), CY 2015 (14.1¢), CY 2016 (12.7), CY 2017 (11.7¢) without incident. However, early in 2017, the Legislature again revised West Virginia Code and established a new floor for the variable rate portion of the tax increasing it to \$3.04 per gallon and made it effective July 1, 2017. As a result of the changes made, the variable rate portion of the Motor Fuel Tax increased from 11.7¢ per gallon to 15.2¢ per gallon for the second half of CY 2017. The rate has remained the same for CY 2018 thru CY 2022.

In addition to the actions regarding the variable rate portion of the Motor Fuel Tax, in November 2009, the Legislature also set the flat rate portion of the Motor Fuel Tax permanently at its current rate of 20.5¢. Prior to the change, the flat rate portion would have reverted to 15.5¢ per gallon on July 31, 2013. The flat rate component of the Motor Fuel Tax has remained unchanged through the first half of FY 2022. As the result of these changes, the total Motor Fuel Tax rate for FY 2021 was set at 35.7¢ per gallon, respectively. During FY 2021, the Motor Fuel Tax generated \$399.5 million in revenue. It should be noted that the FY 2020 and 2021 values were both lower than during FY 2019. The drop in revenue is attributed to the Covid pandemic, which has had the ancillary effect of reducing travel and fuel consumption. It appears that the revenue generated from the Motor Fuel Tax will begin to rebound in FY 2022.

For the purposes of this document, Registration Fees encompass not only vehicle registration fees but also driver's licenses, permits, and litter control fees. Vehicle registration fees are based on a vehicle's classification and are renewed annually or on a multi-year basis. Driver's licenses and learner's permit fees are imposed on persons qualified to operate a motor vehicle. In CY 2017, in conjunction with changing the variable rate floor value of the Motor Fuel Tax, the Legislature also acted to significantly increase a number of the components that make up Registration Fees, which had not been modified in decades. Some examples are that the cost of Registration increased from \$30 to \$51.5 per year and Titling was increased from \$10 to \$15. As a result of the changes imposed, revenue generated by Registration Fees into the Road Fund increased from \$104 million in FY 2017 to \$150 million in FY 2018. Revenue from Registration Fees has also been negatively impacted by the pandemic. After peaking in FY 2019 at \$170.5 million, revenue decreased to \$124.2 million in FY 2020 and then rebounded to \$138.4 million in FY 2021.

The Privilege Tax, imposed when the certificate of title is issued, was first enacted in 1935 at a rate of 2% of the vehicle value. The rate was increased to 5% in 1971 and remained unchanged until 2017. As was the case with Registration Fees and the Motor Fuel Tax, the Legislature took action increasing the rate from 5% to 6% to be more consistent with other sales taxes. In FY 2017, Privilege Taxes generated \$204 million in revenue. Due in large part to the Legislature's action, in FY 2018, revenue generated from Privilege Taxes increased to \$250 million. Unlike the Motor Fuel Tax and Registration Fees, revenue from the Privilege Tax actually increased during the pandemic. Revenue from the Privilege Tax increased from

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\$265.5 million in FY 2020 to \$301.0 million in FY 2021. The growth is attributed to the significant increase in the cost of used and new vehicles caused by worldwide parts shortages.

Miscellaneous Revenue sources typically include revenue from interest on investments, map sales, permits, etc., and have historically been small in comparison to the other revenue sources of the State Road Fund. However, due to several legislative actions, Miscellaneous Revenue now frequently accounts for a larger share of State Road Fund monies. One of the most significant impacts was a legislatively mandated yearly transfer of revenue from the State's General Fund to the State Road Fund, which was intended to offset costs incurred by the WVDOH when its contractors pay State Sales Tax on construction materials. The amount of the transfer varied yearly depending on the size and scope of the WVDOH's construction program, but typically added several million dollars to the State Road Fund annually. The mandated transfer was eliminated in 2017.

In addition to the recurring transfers of funds, mentioned above other one-time initiatives have been pursued legislatively to bolster the Agency's budget in a given year. In FY 2010, in an effort to stabilize the Agency's paving program, which had been impacted by a severe economic downturn, the Legislature transferred \$27.3 million from the Motor Fuel Shortfall Reserve Fund to the State Road Fund. As a result of the mandated funding transfers, the amount of Miscellaneous Revenue collected increased by \$10.7 million from FY 2009 to FY 2010. In FY 2011, there were no such supplementary transfers; however, in FY 2012 the Legislature transferred \$15 million from the Lottery Revenue to the State Road Fund to once again bolster the Agency's paving program. As such, in FY 2012, Miscellaneous Revenue was significantly higher than the preceding year and accounted for \$45.8 million of the State Road Fund's revenue. In FY 2013 there were no supplementary transfers and Miscellaneous Revenue decreased to \$36.1 million, of which the transfer of sales taxes for highway construction materials accounted for \$11.3 million of total FY 13 Miscellaneous Revenue. In FY 2014, the Agency experienced a reversal of fortune. As mentioned previously, the variable rate portion of the States Motor Fuel Tax increased from CY 2012 to 2014 due to higher energy prices as the economy rebounded from the Great Recession, which helped stabilize the State Road Fund. However, despite the uptick in the economy the State's General Fund had not fared as well as the State Road Fund. As such, in FY 2014, the annual mandated transfer of Sales Taxes was supposed to be postponed to FY 15 but was ultimately abandoned altogether. The revenue woes of the State's General Fund continued for the following three consecutive fiscal years and during each year (FY 2015, FY2016, FY 2017) the mandated annual transfer was forestalled and eventually eliminated altogether, as mentioned previously. Despite the lack of these funds, the Miscellaneous Revenue Component of the State Road Fund continued to increase to (\$21.0, \$23.0, and \$26 million), in those respective years. The increases were due in large part to contributions from natural gas companies to partially offset damage done to State roads during their pipeline and well construction associated with Marcellus and Utica Shale.

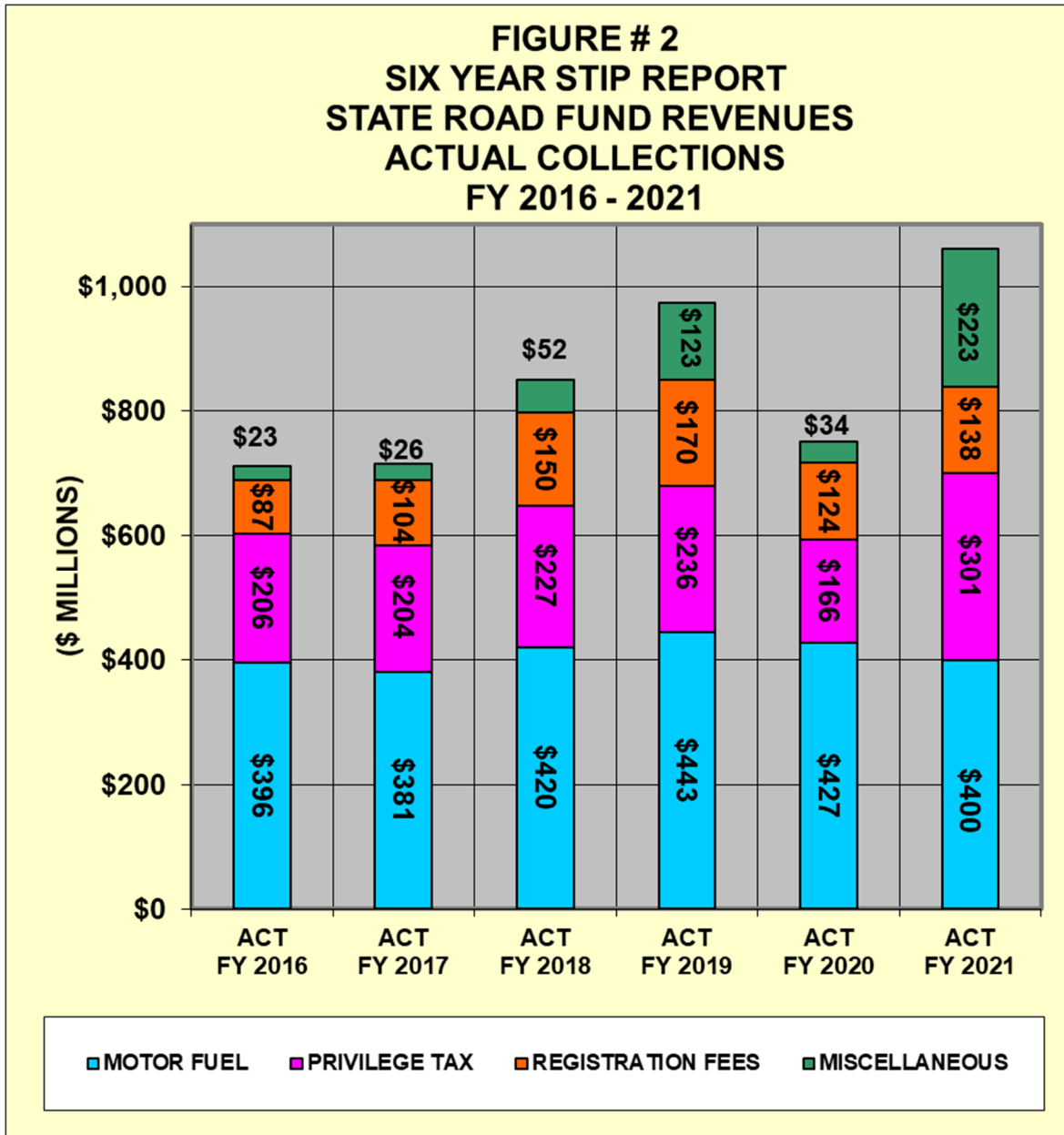
## ***West Virginia 2023-2028 STIP***

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Although the yearly mandated transfer was eliminated, the Legislature has continued to inject General Fund surpluses into the State Road Fund. These transfers are not required and cannot be predicted. Furthermore, these transfers are usually tied to specific initiatives desired by the Legislature, such as Secondary Road Maintenance. According to the WVDOH Budget Division, \$104.2 million was transferred in FY 2019 for Maintenance and Equipment, and \$150 million was transferred in FY 2021 for General Revenue surplus (GRS) non-federal aid maintenance projects. In addition, to transfers of funds to the State Road Fund, other initiatives like the Medical Access Road Program (MARP), which was a byproduct of the federal CARES Act, provided \$50 million in FY 2020 for transportation projects that were ultimately reimbursable by the federal government. While any infusion of Revenue is helpful, the lack of predictability and potential spending mandates makes long-term planning difficult.

The net effect of the adjustments and legislative actions discussed above on the State Road Fund over the last six fiscal years is shown below (see Figure #2). As can be seen, overall revenue trended upward from \$712 million in FY 2016 to over \$1.06 Billion in 2021. Due to the flurry of legislative actions that have taken place since CY 2017, which have altered the Agency's revenue streams, and additional federal relief it is difficult to predict with any high degree of certainty the amount of revenue that will be available for highway construction initiatives over a six-year period as is federally mandated.

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### 3.2 STATE REVENUE PROJECTIONS

The foundation of the STIP is available revenue, both federal and, more importantly, State. A review of Figures #1 and #2 indicates that State revenues from four components (Motor Fuel Tax, Privilege Tax, Registration Fees, and Miscellaneous) contributed \$1.062 billion to the State Road Fund in FY 2021. When comparing collections in FY 2016 to FY 2021, collections rose roughly 49%. While some of the growth is attributed to the legislative action to raise Registration Fees and the Privilege Tax rate, a large part of the revenue increase was due to a one-time transfer from the General Fund that cannot be relied upon. Conversely, other



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components are being negatively impacted by the pandemic. Given the volatility that currently exists, a conservative forecast is prudent.

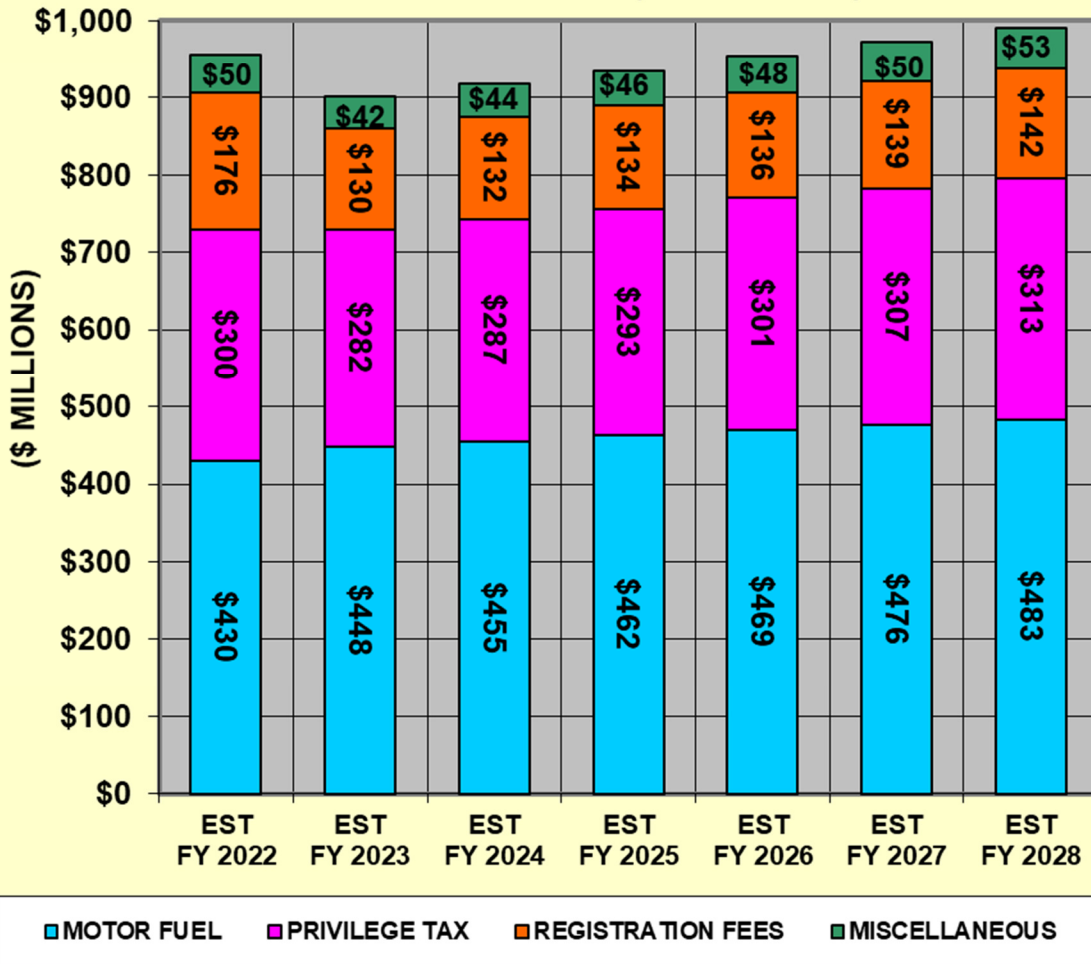
In order to develop estimates of future deposits into the State Road Fund, the WVDOT typically relies on the expertise of individuals at the West Virginia State Tax Department, as well as internal staff, for the development of its short-range revenue forecasts. Revenue forecasts are predicated on a number of underlying factors and assumptions. Some of the most important assumptions deal with the anticipated cost and consumption of oil and motor fuel and, to a lesser extent, their impact on human behavior (e.g., if fuel costs remain high, will individuals continue to buy larger more expensive cars or will they buy smaller more fuel-efficient vehicles, will they carpool or will they continue to drive alone, will they utilize public transit more, etc.).

Ideally, the underlying factors for developing State revenue projections would not fluctuate dramatically; however, the conditions for projecting the State's transportation revenues have been far from ideal in recent years. Relatively recent legislative changes to several of the revenue components of the State Road Fund, coupled with the impacts of the Covid pandemic and a number of one-time General Fund transfers has made the development of reliable long-range and even short-range forecasts nearly impossible. Given the ongoing volatility of revenue components, the WVDOH believes that for planning purposes associated with the STIP, it should rely on the revenue estimates generated for the recently completed LRTP as opposed to the traditional sources of data for most of the planning horizon.

In contrast to the "official revenue projections" currently available, the baseline revenue projections from the LRTP tend to show a slower recovery from the pandemic than the State's current estimates. The LRTP baseline forecast for each of the components of the State Road Fund for FY 2023 through 2028 can be seen in Figure #3 below. The FY 2022 value is based on the current "official" estimate. The primary driver of the LRTP revenue forecast is the State's population. It has tied population trends to the various revenue components of the State Road Fund. A simplified explanation would be more people need more cars and drive more so as population rises Privilege Tax, Registration Fees and Motor Fuel consumption would all increase. The baseline LRTP forecast assumes that the State's population will slowly shift from its downward trend since the 1950's to modest growth.

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**FIGURE # 3  
SIX YEAR STIP REPORT  
STATE ROAD FUND REVENUES  
(ACTUAL & PROJECTED  
FY 2022 - 2028(Nominal \$'s)**



# West Virginia 2023-2028 STIP

**TABLE # 1**  
**STATE REVENUES ACTUAL & FORECAST FY 2021 - FY 2028**

REVENUE SOURCE	ACTUAL FY 2021	EST FY 2022	EST FY 2023	EST FY 2024	EST FY 2025	EST FY 2026	EST FY 2027	EST FY 2028	EST FY 23-28
MOTOR FUEL TAX	\$399.5	\$430.0	\$448.3	\$455.3	\$462.3	\$469.3	\$476.2	\$483.2	\$2,794.6
PRIVILEGE TAX	\$301.0	\$300.0	\$281.7	\$287.4	\$293.2	\$300.5	\$306.6	\$312.7	\$1,782.0
REGISTRATION FEES*	\$136.5	\$174.0	\$128.3	\$130.3	\$132.2	\$134.9	\$137.6	\$140.3	\$803.6
MISCELLANEOUS REVENUE	\$223.1	\$50.0	\$41.5	\$43.7	\$45.8	\$48.0	\$50.3	\$52.6	\$281.9
<b>TOTAL RECEIPTS</b>	<b>\$1,060.1</b>	<b>\$954.0</b>	<b>\$899.8</b>	<b>\$916.7</b>	<b>\$933.5</b>	<b>\$952.7</b>	<b>\$970.6</b>	<b>\$988.8</b>	<b>\$5,627.3</b>

VALUES AS OF FEBRUARY 2022

Note: \* REGISTRATION FEES INCLUDE LITTER CONTROL FEE

A review of Table #1 and Figure #3 indicates that under the current forecast, State revenues into the State Road Fund would average \$943.7 million per year and equal \$5.7 billion over the six-year period From FY 2023-2028. While it is true that revenues of the State Road Fund increased significantly from FY 2017 to FY 2018 (roughly \$132 million or 18%), as a result of legislative action and has been bolstered by additional one-time transfers from the General Fund, current projections for the next six years reflect limited growth (i.e. less than 2% per year) in revenue. Current estimates project that revenue in FY 2028 will be essentially 10% greater in nominal terms to that of FY 2023. While the recent infusion of revenue has enabled the Agency to commence work on a number of backlogged projects, the lack of any continued growth will make it difficult for the WVDOT to continue moving forward with needed projects. The lagging revenue growth will be exacerbated when the impact of inflation on purchasing power is taken into account.

As of December 2007, federal guidelines required all project costs contained in the STIP to be shown in year-of-expenditure dollars. In order to adjust capital costs to year-of-expenditure dollars, it was necessary to develop a yearly project adjustment/inflation factor. While numerous indexes exist for calculating inflation, staffs of the WVDOT and FHWA agreed to use a 20-year rolling average of the composite index of FHWA's Price Trends for Federal-Aid Highway Construction. Unfortunately, the FHWA ceased producing the index data after 2006. In the absence of national data, the WVDOT has developed a highway construction index using its Average Unit Bid Prices Based on Contracts Awarded documents. In order to continue to calculate a 20-year rolling average, assumed FHWA values were developed that are equivalent to the change in the WVDOT index.

The methodology for indexing project costs for inflation was reviewed during the development of West Virginia's Multi-Modal Statewide Transportation Plan to determine if a new index or enhancements to the existing methodology were appropriate. Due to the broad nature of the responsibilities of the WVDOT and the Divisions of which it is comprised, it was determined that a blended index would be more appropriate than any single index available. The blended

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index consists of weighted portions of West Virginia's Highway Construction Price Index, which specifically focuses on the cost of highway construction, and secondly the broader Consumer Price Index (CPI) for the South Urban Region, which would be more reflective of other non-construction specific items (i.e., costs associated with purchasing rolling stock, acquiring right-of-way, facility maintenance and those of employee benefits). The yearly blended index is calculated by prorating the two existing indexes on an 82% (WVHCPI) and 18% (CPI South Urban Region) basis. As was the case before, a 20-year rolling average was used to generate a yearly inflation factor to help mute the impact of sharp spikes or downturn in costs. The new value is typically calculated annually. However, due to multiple changes in the Agency's hardware and software, which impact not only general accounting but also specifically analysis of contract bids, the value has not been updated since January 2017, but is still relevant for planning purposes. The current 20-year rolling average of the blended index is 5.04% per year for the 1997 to 2016 period. FHWA has somewhat recently started producing a new National Highway Construction Cost Index, which is similar to the index that was suspended in 2006. At present data on the new National Index is only available for an 18-year period from 2003 to 2021. The current 18-year average growth in construction costs on the national index is 5.7% per year. Given that West Virginia's index is a blend on construction and non-construction items, the rate appears suitable for continued use for planning purposes even though it has not been recalculated since 2017.

The impact that inflation has on purchasing power when State revenues are projected to be virtually stagnant is significant. The purchasing power of the State Road Fund will be impacted over time. During the six-year period from FY 2023-FY 2028 inflation will have the impact of reducing the Agency's purchasing power by approximately \$1.1 billion. In constant 2021 dollars, State revenues would average only \$757 million per year. These calculations help demonstrate why even after revenue was boosted recently, the Agency continues to struggle to meet its obligations to the citizens of West Virginia and the traveling public at large. The Agency continues to search for internal efficiencies to curb the impact of inflation. However, only so much can be done in that regard and in order to remain fiscally sound the Agency has been forced to reduce services and the amount of work being done. By FY 2028, the Agency's purchasing power will be less than it was in FY 2017 (\$715 million), before legislative action.

### **3.3 STATE ROAD FUND – FEDERAL-AID REIMBURSEMENT**

The federal government has long recognized the need for an efficient and effective national highway network. To help satisfy this need, the federal government authorizes the expenditure of federal funds for various activities that it has deemed to be of national importance. Rather than trying to own, operate, and maintain the highway infrastructure across the nation, the federal government makes funds available to state and local governments having jurisdiction over important transportation facilities to accomplish these tasks. While not specifically owning these assets, FHWA and FTA maintain an "interest" in the assets subject to federal requirements. The activities and/or the network of roads and bridges in which the federal

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government will participate in their renovation, improvement, and construction are termed “federal-aid-eligible”.

The federal government primarily uses the national highway functional classification system of roadways as the basis for determining which facilities are eligible for federal-aid. Due to the national focus on these roadways, except under special circumstances, roads that are functionally classified as Rural Minor Collector, Rural Local Service, or Urban Local Service are not eligible for federal-aid. Throughout the State, only 27% (10,477 miles) of West Virginia’s certified public highway mileage (38,850 miles) are traditionally eligible for federal-aid. The remaining 73% (28,373 miles) must be funded entirely by the governmental entity having jurisdiction over those highways. In West Virginia, where the WVDOH has statutory responsibility for nearly all roads (i.e. 34,961 miles, or 90% of the certified mileage, which excludes 1,316 miles of roadways classified as Primitive), virtually all maintenance, improvements, and construction initiatives on the 28,373 miles of Non-FA-Eligible roadways are funded with 100% State revenues. In addition to the previously listed classifications, the federal government also prohibits use of federal-aid funds for specific activities. This is of paramount importance because federal funds may not be typically used to pay for the top three mandated priorities of the WVDOH (Debt Service, Administrative Support, and Routine Maintenance expenditures). As a result, not only are the majority of roadways under the WVDOH jurisdiction not eligible for federal assistance, but neither are its top three mandated priorities. It should be noted that in response to the pandemic the federal government passed the Coronavirus Aid, Relief, and Economic Security (CARES) Act. One aspect of the CARES Act made approximately \$106.7 million in funds available to the WVDOH for virtually any activity performed by the Agency. The WVDOH has been using these resources to offset its required Debt Service payments, essentially freeing up those State Road Fund resources for other purposes and to compensate for the short-term downturn in State revenue. The CARES Act funds should be exhausted by the end of FY 2022, and like the one-time revenue infusions provided by the Legislature cannot be factored into future revenue projections.

As mentioned previously, Congress typically authorizes a specific total amount of federal-aid highway funds for a multi-year period and prescribes methods for apportioning or allocating those funds to the individual states for various transportation purposes. Furthermore, in order to assure that specific types of highway needs are addressed, Congress identifies various highway programs or sub-allocations and will then set the eligibility criteria, matching fund requirements (most federal funds must be matched on an 80/20 federal-to-state ratio), and the funding levels to be made available. The federal legislation that makes these funds available to the states is twofold in nature. First, when multi-year authorizing legislation (like FAST and IJA or BIL) is in place, formulas are established to dictate how much of those funds will be apportioned among the states, on a yearly basis, over the life of the legislation. This allows transportation agencies to set long-range priorities. Second, in previous years a significant amount of discretionary or earmarked funds was made available as part of the authorizing

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legislation. These funds were appropriated and allocated per the wording contained in the legislation or through the award of competitive grants. The exact amount of earmarked or discretionary funds was impossible to predict and came in the form of line items for specific projects (i.e., the funds can be used only for the initiative described in the legislation or for which a grant was requested). MAP-21 eliminated the appropriation of new earmarks (existing earmarks will be used until they are spent), but significantly expanded the size and number of competitive grants, for which the WVDOT has no assurances it will be awarded. This policy was continued and expanded under the FAST Act and has been expanded still further under IIJA making the prediction of future revenue difficult.

In addition to the apportionments described above, obligation limitations must also be factored. These are caps placed on federal-aid highway funding to control highway program spending in response to economic and budgetary conditions. In short, obligation limitations have the impact of generally reducing a state's federal-aid apportionments and allocations. While it is possible for total Obligation Authority (OA) to be greater than the total apportionment or the appropriation amounts, historically it has been between 90% to 95% of those levels. While some apportionments get obligation authority that can only be used for projects that meet those requirements, much of the obligation authority the Agency receives comes in block form that can be applied to multiple apportionment categories. This mechanism provides states with the flexibility to apply more or less of their obligation authority to a specific federal program in a given year, as long as it does not exceed the unobligated balance available for that program.

In FFY 2021, the obligation authority was higher than the normal 96% of the annual apportionments. This was due to the State receiving \$40 million in supplemental OA as part of the August redistribution process. Without the addition of the discretionary OA, the state's value would have been roughly 88% for FFY 2021. The IIJA has only recently been enacted and at the time of this documents preparation the government was still operating under a Continuing Resolution (CR) preventing a full year of obligation authority from being available for review. As such a relatively conservative assumed obligation level of 90% of apportionment + \$20 million for August Redistribution will be applied uniformly to all Core federal programs over the six-year period. It is also assumed that the Agency's Core apportionments will increase at a rate of 2% per year, which is in line with yearly growth in overall funding for IIJA programs nationwide.

When the federal-aid component, which is predominantly derived from FHWA, of the State Road Fund is examined, it should be noted that the federal funds are, in fact, reimbursements. FHWA does not provide funds directly to the states. However, the states are allowed to obligate available federal highway funds based upon the amount of OA they will receive. The obligations serve as commitments for the federal government to reimburse a state for the federal share of the highway initiatives' eligible costs. As indicated previously, most programs are matched by a state on an 80% federal / 20% state share basis. When expenditures are

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incurred on a project that is federally eligible and has been authorized, they are initially paid for by the state and then a reimbursement is requested from FHWA. Once a request is made, it typically takes two business days for the FHWA to reimburse the state. This information is important because, while the amount of funds that can be obligated by the State in a given year can be predicted with some degree of certainty when a multi-year federal highway authorization is in place, the timing of when the required matching funds will be needed to cover expenditures cannot be predicted as easily. In FY 2021, federal-aid reimbursements to the WVDOH totaled \$374 million, which was down from \$405 million collected in FY 2020, but slightly above the \$367 million collected in FY 2019. The year-to-year fluctuations are a function of not only the size and type of projects being advanced by the WVDOH, but also of the delivery mechanism used and financing structure. It should be noted that the process described above reflects the way FHWA programs work not FTA. FTA has blanket pre-award authority and obligates formal funds to State and Transit Agencies and is not constrained by obligation authority.

During the last decade, the Agency has experimented with a myriad of non-traditional delivery and financial tools on high dollar projects to see if they could be delivered faster in a cost-effective manner. As an example, the WVDOH pursued the use of Design/Build/Finance arrangements for some of the Agency's large multi-year initiatives, such as the Coalfields Expressway, the expansion of US 35, construction of the Wellsburg Bridge, and a portion of Corridor H. Design/Build/Finance arrangements are one example of a Public-Private-Partnership (PPP) and an extension of the Design/Build concept, which has been used by the Agency for a number of years to accelerate delivery of infrastructure projects. Under the Design/Build/Finance arrangements used by the WVDOT, the contractor is given the task of securing short term or gap funding for the awarded project and then is paid for the project in equal monthly installments over a specified duration. The objective of these arrangements is to both accelerate the delivery of critical infrastructure and to enable better financial planning by the Agency. Financial planning is enhanced by replacing monthly construction progress voucher estimates, which can vary widely over the course of the project depending on the type of activity being performed, with a known monthly value. While these arrangements do provide an element of certainty, they are by no means a panacea for eliminating financial risk. The fact remains that these projects are being implemented as Advance Construction (AC) initiatives by the State and the federal government is only committed to reimburse the Agency for funds actually obligated. The risk remains that the WVDOH is obligated to pay the monthly installments regardless of any future federal participation or lack thereof. In addition, since the federal government operates on a reimbursement basis, until progress achieved on the project meets or exceeds payments, the WVDOH cannot seek reimbursement. As such, the State Road Fund must have sufficient capacity and resiliency to carry those expenditures until reimbursement can be pursued.

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## **4. FINANCIAL GOALS AND POLICIES**

With nearly 39,000 miles of public roadways, West Virginia is one of only four states (Delaware, North Carolina, and Virginia are the others) in which there is no county and/or township ownership of highways. As a result, the WVDOH has statutory authority for the construction, improvement, and maintenance for the lion's share of nearly all public highway miles (34,961 miles or 90%) in the State, which is one of the highest percentages in the nation. Furthermore, despite its relatively small size, the WVDOH is responsible for the sixth-largest state-maintained highway network in the nation.

While WVDOT goals and policies contained in the State's long-range transportation plan are the driving force behind the projects contained in the Six-Year STIP, the time, type, location, and extent of highway renovation, improvement, and construction initiatives are dependent on available funding. Some of the more pertinent goals and policies contained in West Virginia's 2050 Long Range Transportation Plan, which will dictate in broad terms where and how its financial resources are directed are:

- Maintain multimodal infrastructure in a state of good repair,
- Reduce transportation fatalities and serious injuries across all modes,
- Strengthen the ability of communities and industries to access national and international trade markets, and
- Create transportation systems that promote healthy lifestyles.

In order to transform these goals and policies into reality, the Agency must do the following:

- Pay debt service;
- Pay operating expenses;
- Perform routine maintenance;
- Match all available federal-aid;
- Renovate or replace highway bridge and pavement infrastructure;
- Address safety, operations and congestion issues; and
- Continue progress on major transportation corridors.

The extent to which these goals can be achieved in any given year depends on the nature of the highway problems being addressed and funds available for their implementation. Some highway needs when met provide only short-term effects (e.g., snow removal will only suffice until the next snowstorm), whereas others may provide near-permanent solutions (e.g., the removal of a roadside obstruction to improve safety). Identified highway needs represent problems that need to be addressed by the WVDOH, which responds by developing and funding programs that solve those problems. Analysis conducted during the development of the State's long-range transportation plan indicated that highway needs exceeded the funding available to meet those needs. The cost



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associated with some of the identified needs, such as fixing all deficient bridges, could consume all available State highway funds in a given year. Furthermore, the Agency is mandated to address the financial obligations associated with Debt Service, Administrative Support and Maintenance before undertaking other initiatives. A more detailed discussion of needs-assessment, funding allocations, and program development is contained later in this document.

## **4.1 DEBT SERVICE**

The first mandated priority of the WVDOH is Debt Service. Debt Service payments are analogous to paying a mortgage on a house. Few citizens would dispute the value of owning a home, yet few would have the financial wherewithal to purchase a home on a cash basis. Similarly, long-term financing of major highway initiatives is warranted at times to maximize the benefits to citizens when interest rates are favorable.

The WVDOH must use incoming revenue to pay the principal and interest due on State bonds issued for prior highway initiatives. The WVDOH and its predecessor agencies, with public approval, have engaged in the practice of selling road bonds to expedite highway improvements since 1920. Most recently, in October 2017, citizens approved the Roads to Prosperity Amendment to the State's Constitution that authorizes the sale of up to \$1.6 Billion in General Obligation Road Bonds (GO Bonds) between July 1, 2017 and June 30, 2021. The first \$800 million of these bonds were sold in May 2018, followed by \$600 million in December 2019, and finally \$200 million in June 2021. As structured, the WVDOH will be required to make annual payments of \$55.4 million for twenty-five years from FY 2019 to FY 2043 to pay for debt (\$1.39 Billion) associated with the first issuance of Roads to Prosperity Road Bonds. The debt service payments associated with the other two issuances were not as straight forward, with varying amounts over the six-year period being covered by the STIP. As currently structured, the debt service associated with the Roads to Prosperity GO Bonds will average \$115.6 million per year. In addition to the Debt Service associated with Roads to Prosperity, in 1996 citizens approved the Safe Road Amendment authorizing the sale of \$550 million GO Road Bonds for highway initiatives. The WVDOH has issued refunding bonds (akin to refinancing a mortgage) several times, since the original bonds were issued to take advantage of more favorable interest rates. As a result of the refinancing of those bonds, as of June 30, 2018, there was still outstanding debt of \$162.4 million still on those bonds that would not be fully retired until 2025. As such, even though the WVDOH is in the waning years of retiring the debt associated with the prior bond referendum, the WVDOH will be required to make annual payments of \$15.3 million in FY 2022 and 2023 and \$23.2 million during FY 2024 and FY 2025 to pay off the remaining debt associated with the 1996 referendum. Debt Service payments from the State Road Fund were \$113.6 million in State FY 2021. Based upon the draft FY 2023 budget information that was available at the time of this report's preparation, Debt Service payments over the next six years from FY 2023 to FY 2026, will increase steadily

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from \$133.5 million in FY 2023 to \$138.8 million in FY 2025 before reducing \$115.6 million in FY 2026 after the debt associated with the Safe Roads Amendment is paid off.

While Set-Asides are not specifically part of Debt Service, they are Legislative mandates that require monies from the State Road Fund to be diverted to other agencies to cover “highway-related” activities. The net result is that a portion of State Road Fund monies shown in revenue estimates will not be available for highway infrastructure projects and need to be removed from consideration. In FY 2021, \$44.1 million in State Road Fund monies were used to pay for Set-Asides. The largest Set-Aside has consistently been for the operation of West Virginia Division of Motor Vehicles (WVDMV). In FY 2021, \$40.1 million in State Road Fund monies was used to pay for WVDMV operations. In addition to supporting WVDMV operations, State Road Fund monies are used to cover the cost of administrative hearings and legal claims against the WVDOH and WVDMV. The WVDOH is also legislatively required to transfer funds from the State Road Fund to the Industrial Access Road (IAR) Fund. While the monies transferred to the IAR Fund are not available to the WVDOH for general purposes, they are available for the construction of roads to industrial access facilities throughout the State. Despite this fact, since the emphasis in this report is primarily on monies available in the State Road Fund, IAR transfers are treated as a Set-Aside. Beginning in FY 2011, a portion of State Road Fund revenue was redirected to cover the costs associated with the newly created Office of Administrative Hearings. The functions of this office were previously contained within the WVDMV, but the Legislature has now established it as a standalone entity. In FY 2021, \$2.2 million was transferred from the State Road Fund to the IAR Fund, \$1.0 million was needed for the Office of Administrative Hearings and \$0.8 million was needed for legal claims. From FY 2023 to FY 2026, the total cost of all Set-Asides is estimated to range from \$66.7 to \$69.5 million annually.

As discussed above, the WVDOH will be required to make Debt Service payments between \$115 and \$138 million per year over the next six-year period. Those Debt Service payments are needed to complete the retirement of debt associated with the \$550 million in general obligation bonds approved by voters in 1996, as well as covering a portion of the debt associated with the Roads to Prosperity GO Bonds approved by voters in 2017. In addition to these items, there are other ongoing debt related initiatives being pursued in an overall attempt to kickstart the State’s economy that will only partially impact the State Road Fund, but will directly affect the FFY 2023-2028 STIP, those being the issuance of Special Obligation Notes and the sale of Turnpike Toll Revenue Bonds by the West Virginia Parkways Authority.

The WVDOH has recently conducted multiple issuances of Special Obligation Notes to expedite construction work as part of the overall Roads to Prosperity initiative being pursued by the current Administration. In 2017, the Agency issued \$220 million in Special Obligation Notes to pay for a portion of 31 separate projects statewide, which at the time of this report’s preparation are at various stages of completion. These projects consisted primarily of pavement

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reconstruction projects on the Interstates in West Virginia and a number of bridge replacements. Proceeds received from the sale of those Notes was not deposited into the State Road Fund, but into a separate standalone bond fund. When the 31 projects were awarded, the proceeds from the Notes were only sufficient to cover approximately 95% of the projected construction costs. At present, all funding needed for these projects above what is available in the standalone bond fund is being paid for out of the State Road Fund.

The WVDOH, in cooperation with the FHWA, is using two financing tools to pay the ongoing Debt Service associated with those notes. First, by utilizing a Grant Anticipation Revenue Vehicle (GARVEE), the WVDOH was able to use future federal-aid funds to pay approximately 80% of the Debt Service associated with the notes. Second, by utilizing a combination of “toll credits” and “bridge credits” that the State has accumulated as a soft match for the State’s portion (20%) of the Debt Service, the Debt Service payments will essentially be paid with 100% federal funds. The downside to this arrangement is that the federal-aid portion of the WVDOH’s improvement program in future years will be reduced by an amount equal to the Debt Service payments during those years, which was determined to be \$295.7 million based on twelve annual payments of \$24.6 million annually through FFY 2029. Since the payments do not technically flow through the State Road Fund, these payments are not reflected as one of the WVDOH’s mandated priorities (e.g., Debt Service), but are reflected as a reduction in available federal-aid funds for new improvements. The upside of this arrangement is the ability to advance critical infrastructure projects sooner than would be possible on a pay-as-you-go basis, thus obtaining lower construction costs and the ability to begin accruing the transportation benefits.

In similar fashion, in 2018, the Agency issued an additional \$78.8 million in Special Obligation Notes to expedite and pay for the construction of 36 more projects statewide. Unlike the prior issuance these projects consisted of predominantly small to mid-size bridge replacements and initiatives to correct drainage problems (i.e. pipes and inlets) on expressway facilities around the State. The debt associated with these Notes is \$114.4 million. Debt service payments of \$7.6 million per year for fifteen years from FFY 2019 to 2033 will be needed to retire the debt associated with these Notes. As was the case with the Notes issued in 2017, the Agency utilized the GARVEE mechanism to pay the debt service and utilizing a combination of bridge and toll credits to make the payments essentially 100% federally funded. As such, over the next six years covered by the STIP, if no new GARVEE’s are issued, the Agency will need to dedicate \$32.2 million per year (\$193.2 million) of future federal funding to pay for these initiatives. It should also be mentioned that the bond covenants associated with the sale of those Notes require the WVDOH to utilize the first eligible obligation authority it receives during the FFY to cover those commitments. Primarily, the WVDOH has used a combination of National Highway System/National Highway Performance Program (NHS/NHPP) and Surface Transportation Block Grant Program (STBG) funds for this purpose. Even when multi-year federal highway legislation like MAP-21, FAST and IJA are in place, yearly values must be

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approved in the federal budget. When either multi-year piece of legislation expires or annual budgets are delayed, the federal-aid program generally operates under of a Continuing Resolution. In these instances, the Agency, receives its OA in piecemeal fashion and it may take a few months to build up enough STBG and NHS/NHPP funds to make our required GARVEE obligations. Since the bond covenants specify that the first eligible obligation authority must be used for GARVEE, the WVDOH has avoided the potential problem of delaying new highway projects by obligating the funds for GARVEE early (i.e. at the end of the prior FFY).

Again, as part of the overall strategy to improve the State's economy by investing in highway construction projects, the Legislature acted in 2017, to continue and increase tolls on the West Virginia Turnpike. Revenue generated from the increased toll revenue was intended to allow the West Virginia Parkways Authority to issue up to \$500 million in new Turnpike Toll Revenue Bonds to finance road, highway and bridge projects within a ten-county region adjacent to the West Virginia Turnpike. In July 2018, the Parkways Authority issued the first installment of Toll Revenue Bonds (\$166 million), which generated proceeds of \$172 million. In June 2021, the Parkways Authority issued the second installment of Toll Revenue Bonds (\$333 million), which generated proceeds of \$423 million with premium. Proceeds from both sales have been deposited into standalone funds that are being used by the WVDOH for construction projects within the specified region.

Projects being funded in part with these sources of revenue are having both direct and indirect effects on the State Road Fund and the STIP. First, all regionally significant transportation projects must be listed in the STIP regardless of funding source. Second, as originally envisioned, the construction phases of those projects were anticipated to be funded solely with bond proceeds; however, WVDOH management has begun applying funding 10% of the construction phases with federal-aid funds, which will impact the fiscal constraints of the STIP. Third, much of the engineering and right of way costs associated with these initiatives is either being funded in the STIP or by the State Road Fund, which will also impact fiscal constraints. Finally, the projects developed with these bonds will affect the State's performance measures.

## **4.2 OPERATING EXPENSES**

The second mandated priority is the payment of Administrative Support expenses of the WVDOH's operations. In order to effectively meet its statutory responsibility for maintenance, improvement, and construction of its vast infrastructure, the WVDOH has an in-house quota of approximately 5,000 individuals who are principally dedicated to highway maintenance, improvement, and construction activities. As in any firm of this size, a number of individuals are needed to perform tasks of a support nature (executive, finance, legal, human resources, information technology, etc.). Without these support functions in place, the WVDOH could not operate. In addition to these support personnel, costs associated with the WVDOH

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inventory and equipment (snowplows, mowers, trucks, etc.) also are considered a support expense. Before even basic maintenance activities can start, the WVDOH must meet its daily financial obligations (insurance, salaries, pensions, etc.) for the facilities and staff related to these functions and must pay for the equipment needed to accomplish basic functions. Unlike Debt Service payments, Administrative Support costs are not fixed, but fluctuate depending on a variety of factors which include, but are not limited to, the number of employees, changes in benefits costs and changes in equipment costs. Administrative Support expenses were \$91.2 million. Due to a budgeting change associated with materials and inventory, Administrative Support costs are anticipated to increase dramatically in FY 22 to \$198 million and stay near that value through FY 2026 (\$199.5 million). It should be noted that actual and projected expenditures were primarily excerpted from the “WVDOT’s FY 23 Budget Presentation” booklet, but since projections in that document only extend through FY 26, the same 4 % per year inflation rate used in West Virginia’s 2050 LRTP will be applied to extrapolate expenditures through FY 2028. As such, Administrative Support costs would increase to \$215.8 million in FY 2028.

### **4.3 ROUTINE MAINTENANCE**

Once Debt Service and Administrative Support expenses are covered, funds are expended on the third mandated priority - Routine Maintenance of the WVDOH’s roadways. The WVDOH has facilities, equipment and workers in all 55 counties dedicated to Routine Maintenance of the highways and bridges under its jurisdiction. Routine Maintenance includes such activities as snow removal, brush cutting, bridge inspection, litter collection, pothole patching, and ditch cleaning, to name a few. If the WVDOH did not perform these fundamental tasks, these roadways would rapidly become unusable to the traveling public. While maintenance embodies all functions performed by the WVDOH that serve to preserve, as near as possible, the State’s infrastructure in its present condition, for the purposes of this report, activities such as renovation, resurfacing, and bridge repair are considered improvements rather than maintenance expenditures. Like Administrative Support expenses, Routine Maintenance does not historically remain fixed. Akin to Administrative Support expenses, Routine Maintenance costs tend to fluctuate but overall, they will trend higher over time, depending on a number of factors such as weather, improvements in surface type, traffic volume, fuel, material, and personnel costs to name but a few.

It should be noted that until recently, the Maintenance Appropriation Line for the WVDOH was comprised of both true routine maintenance and renovation activities (i.e. slide repair, small bridges, etc..), which made accurately tracking capital expenditures somewhat difficult. As part of a recent restructuring of the Agency’s budget, not only is the state funded renovation work, but also, all other state funded capital expenditures (i.e., Contract Paving, Non-Fed Bridge, and Non-Fed Improvement) that were previously budgeted by standalone appropriation line, being directed to the Maintenance budget appropriation line. The expanded

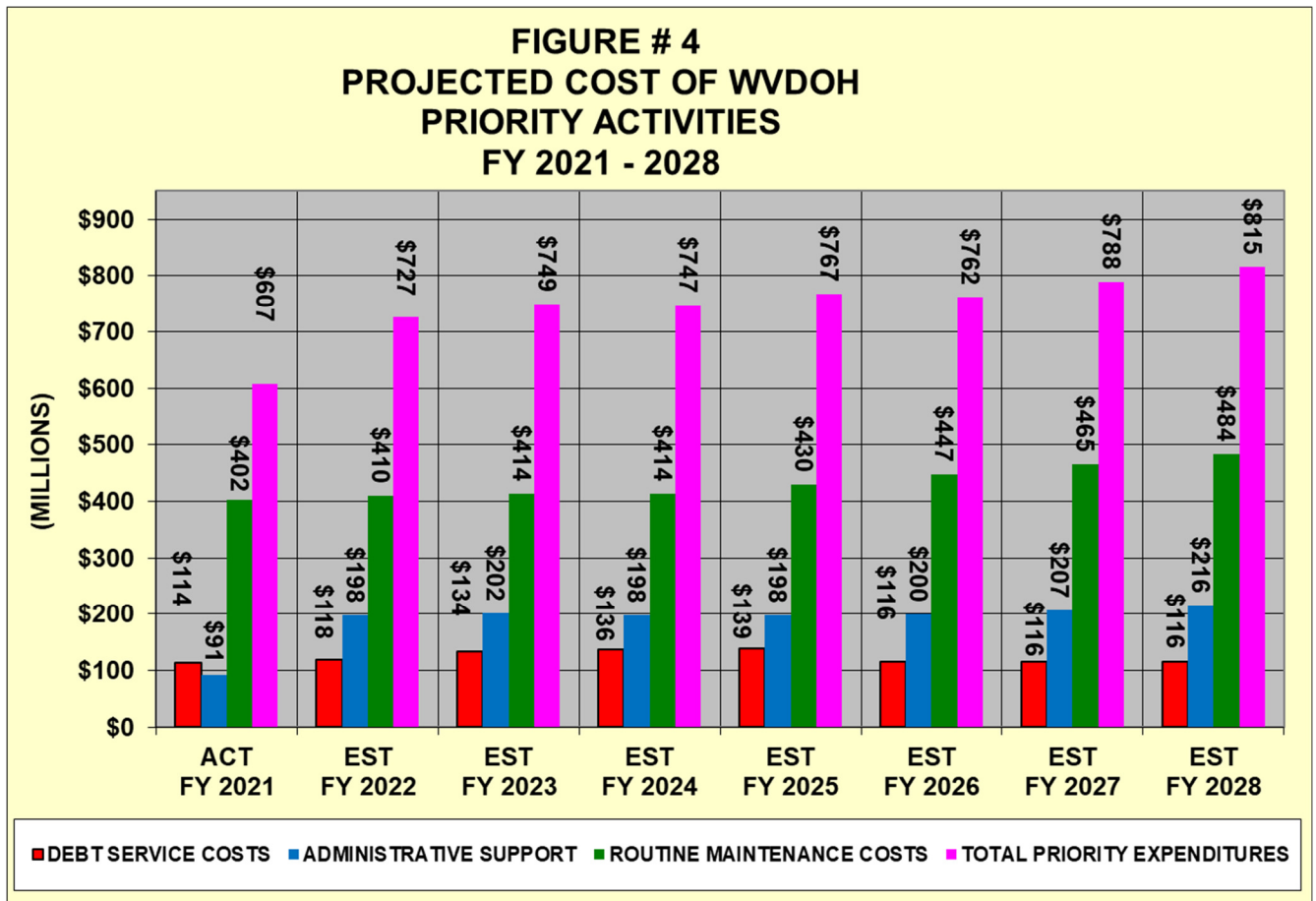
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comingling of capital expenditures with routine maintenance expenditures for budgetary purposes will further increase the difficulty of accurately tracking and reporting these expenditures. The switch has and will likely continue to cause some accounting discrepancies in the short run as old projects are completed and future projects come online.

WVDOT's FY 2023 Budget booklet makes no attempt to distinguish between state funded capital expenditures and true routine or "Annual Plan" maintenance. In FY 2021, as part of the State's Transportation Asset Management Plan (TAMP) consistency review, it was determined that of the \$533.0 million in total Maintenance appropriation expenditures, \$130.6 million went toward capital projects and the remainder (\$402.4 million) went toward routine maintenance. The booklet indicates that after onetime increases (due to a General Fund transfer in FY 2022) expenditures on the Maintenance line will be held constant in the outer years of FY 2024 through 2026. Realizing that inflation will obviously impact the Agency's program, it is assumed that routine maintenance aspects of the Maintenance appropriation will continue to increase per year and the size of the State's non-federal aid funded program will be shrunk to accommodate available revenue. Based on these assumptions, forecasted expenditures for true routine maintenance are predicted to increase over time from \$410.4 million in FY 2022 to \$483.3 million in FY 2028. The change in costs of the Agency's mandated priorities over time is shown below (See Figure #4).

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#### 4.4 OTHER GOALS AND POLICIES

The other goals and policies are actually handled in the program itself. Matching federal-aid, replacing and rehabilitating infrastructure, and improving safety are all part of the programming function.

Typically, a reasonable estimate of State funds available to the WVDOH for improvements would be determined by subtracting the cost of the Agency’s mandated priorities and Set-Asides from the State revenue components of the State Road Fund as shown in Figure # 5. However, the Agency, as described previously in this document, is currently in the midst of the Roads to Prosperity initiative to kickstart the State’s economy by investing in transportation. As originally conceived, the State would initiate \$2.6 Billion in capital projects by selling various types and amounts of bonds over a four-year period. The program was intended to consist of \$1.6 Billion in General Obligation Road Bonds (GO Bonds), \$500 million in Turnpike Revenue Bonds, and \$500 million in Grant Anticipated Revenue Vehicle (GARVEE Bonds). Due to the massive size of this program and development time needed to get projects ready, the program is by necessity be delivered in waves over multiple fiscal years.

As of February 2022, as part of the Roads to Prosperity initiative, the State has issued debt offerings of approximately \$2.4 billion of the \$2.6 billion originally envisioned. \$1.6 Billion

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in GO Bonds in three separate offerings (\$800, \$600 and \$200 million, respectively), \$0.5 billion in Turnpike Revenue Bonds in two separate offerings (\$166 and \$334 million, respectively), and \$0.3 billion GARVEE notes in two separate issuances (\$220 and \$79 million, respectively). The additional funding provided by these infusions will have varying impacts on the transportation program moving forward. Any additional sale of GARVEE notes will directly impact the STIP as a reduction of federal funding available for new and ongoing initiatives. Currently, the Agency will need to dedicate \$32.2 million per year over the six years covered by the STIP to pay for the two GARVEE issuances that have already taken place. The sale of additional Turnpike Revenue Bonds will have no debt related impact on the STIP per se, but will as mentioned previously, affect the performance measures, fiscal constraint due to the 10% federal funding being applied, and project mix included in the STIP.

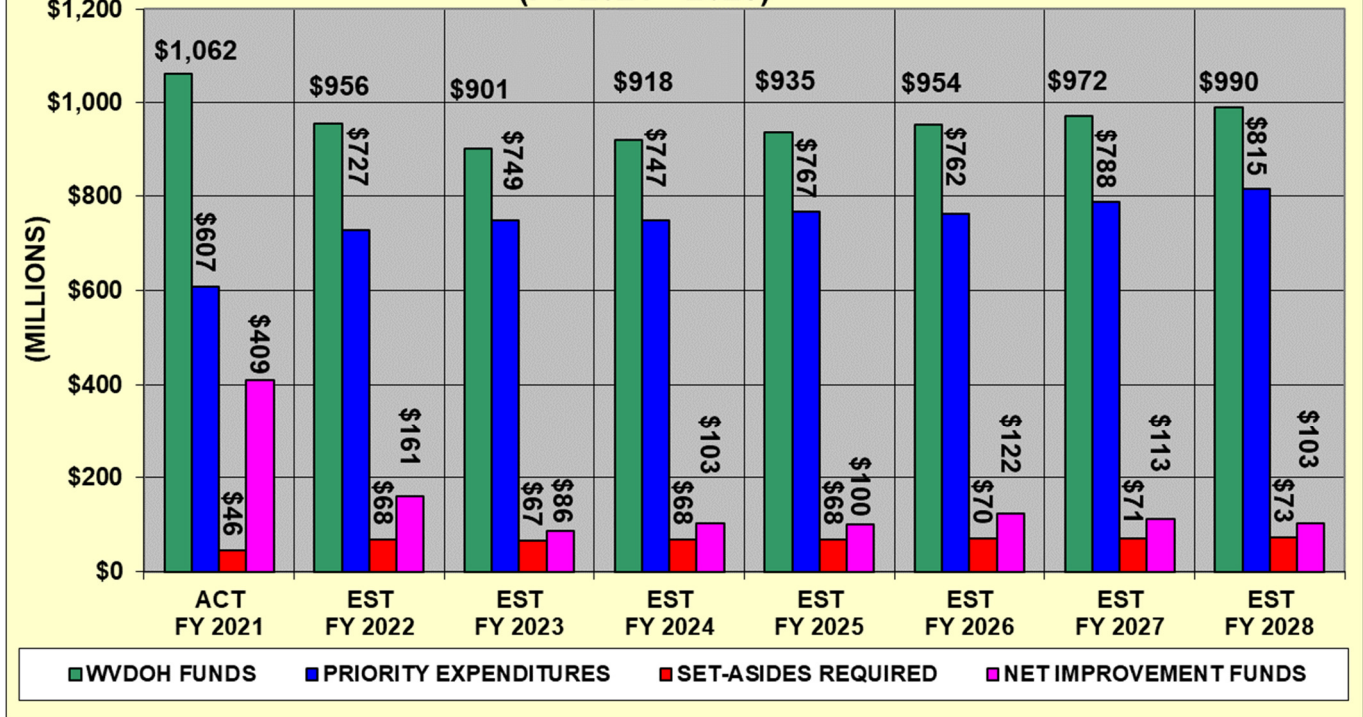
This document is primarily focused on what initiatives the State will pursue with the federal funds assumed to be available to it over the FFY 2023 to FFY 2028 period. At present, with the exception of GARVEE payments, federally reimbursable projects are being funded primarily with State Road Fund monies not Turnpike Revenue or General Obligation Bonds. As such, while there are a host of other capital initiatives ongoing. This document will focus only upon the amount of State Road Fund dollars available for improvements and the federal-aid anticipated to be available for new initiatives as well.

As can be seen from Figure #5, due in large part to increases in Debt Service, Routine Maintenance and Administrative costs, the amount of State Road Funds available for highway improvements is anticipated to trend downward over the forecast period. Despite the lackluster forecast, it is reasonable to assume that after the WVDOH meets its mandated priorities and covers required legislatively required Set-Asides, sufficient funds will remain for matching federal funding anticipated to be available during the next six years. The next section of this document briefly describes the types of federal-aid highway funds anticipated to be available for the FFY 2023 to FFY 2028 STIP.



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**FIGURE # 5  
STATE FUNDS  
AVAILABLE FOR WVDOT IMPROVEMENTS  
(FY 2021 - 2028)**



## 5. PERFORMANCE BASED PLANNING REQUIREMENTS

The Moving Ahead for Progress in the 21<sup>st</sup> Century (MAP-21) Act passed by Congress in 2012, and subsequently in 2015, the Fixing America’s Surface Transportation (FAST) Act established a number of performance and asset related requirements that states were required to implement in order to be eligible for future federal-aid highway and transit funds. Many of the requirements established under MAP-21 had phase in dates established that were after MAP-21 was set to expire. As such, many states (including West Virginia) were hesitant to devote a significant amount of resources to these endeavors until they were sure they were going to be continued in subsequent transportation legislation. With the enactment of the FAST Act and its reaffirmation of a performance-based transportation program, the WVDOT began working in earnest on meeting the necessary requirements. The IIJA enacted in November 2021, builds upon the performance-based requirements contained in the two previous pieces of transportation legislation.

The precursor for the performance-based requirements for the recipients of federal-aid transportation funds was two-fold. First, the establishment of seven (7) National Transportation Goals:

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1. Safety-to achieve a significant reduction in traffic fatalities and serious injuries on all public roads
2. Infrastructure Condition- To maintain the highway infrastructure asset system in a state of good repair
3. Congestion Reduction- To achieve a significant reduction in congestion on the National Highway System.
4. System Reliability- To improve the efficiency of the surface transportation system
5. Freight Movement and Economic Vitality- to improve the National Highway freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.
6. Environmental Sustainability- To enhance the performance of the transportation system while protecting and enhancing the natural environment.
7. Reduced Project Delivery Delays- To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

Second, requirements established in MAP-21 for the United States Department of Transportation (USDOT) to establish national performance measures (associated to the National Goals) to assess performance/condition and used to carry out several federal-aid highway programs (National Highway Performance Program, Highway Safety Improvement Program, Congestion Mitigation and Air Quality Program, and the National Highway Freight Program). Given the complexity of the issues, the rulemaking associated with developing the required performance measures took several years to come to fruition. The performance measures adopted were by the USDOT were as follows:

1. Percentage of Pavements of the Interstate System in Good Condition
2. Percentage of Pavements of the Interstate System in Poor Condition
3. Percentage of Pavements of the Non-Interstate NHS in Good Condition
4. Percentage of Pavements of the Non-Interstate NHS in Poor Condition
5. Percentage of NHS Bridges Classified in Good Condition
6. Percentage of NHS Bridges Classified in Poor Condition
7. Percent of Person-Miles Traveled on the Interstate System That Are Reliable
8. Percent of Person-Miles Traveled on the Non-Interstate NHS That Are Reliable
9. Truck Travel Time Reliability (TTTR) Index
10. Total Emission Reductions: PM2.5
11. Total Emission Reductions: PM10
12. Number of Fatalities
13. Rate of Fatalities
14. Number of Serious Injuries

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15. Rate of Serious Injuries
16. Number of Non-motorized Fatalities and Non-motorized Serious Injuries
17. Total Emissions Reductions: CO
18. Total Emissions Reductions: NOX
19. Total Emissions Reductions: VOC

In addition to the performance measures identified above, which deal with the federal-aid highways, other performance and asset related requirements were developed for public transit. Those items will be discussed in the Transit portion of the STIP. Once the USDOT formally adopted performance measures outlined above, states were required to establish baseline values, set performance targets and begin reporting the information to FHWA. It should be noted that not all performance measures were adopted at the same time and as such, base line years will differ. A discussion of West Virginia's overall efforts in this regard and the status at the time of this document's preparation follows.

## **5.1 PERFORMANCE MEASURES AND TARGETS**

The requirements for states and other entities to identify their baseline information and report their conditions and targets have varied depending on when the USDOT formally adopted a performance measure. The WVDOT met all required phase-in dates associated with the various requirements. Figure 5A below outlines the status of the nineteen highway related measures identified above, as of September 30, 2022. It is not the intent of this document to regurgitate the performance data and information contained in the 2022 Baseline Performance Report, but rather to discuss in broad generalities the impact they will have on future iterations of the STIP.

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Figure 5A:

		Baseline	First Performance Period					
		2017	2018	2019	2019 Target	2020	2021	2021 Target
Bridge % Good Deck Area	NBI structures on NHS	13.9%	13.1%	11.6%	14.0%	8.9%	10.1%	11.0%
Bridge % Poor Deck Area	NBI structures on NHS	11.9%	15.3%	13.5%	10.0%	13.4%	14.1%	13.0%
Pavement % Good Lane Miles	Interstate	68.3%	78.7%	80.6%	N/A	73.7%	73.80%	75.0%
Pavement % Poor Lane Miles	Interstate	0.1%	0.2%	0.0%	N/A	0.5%	0.40%	4.0%
Pavement % Good Lane Miles (full distress)	Non-Interstate NHS	40.3%	40.0%	43.0%	40.0%	43.3%	43.0%	45.0%
Pavement % Poor Lane Miles (full distress)	Non-Interstate NHS	0.0%	0.5%	2.0%	5.0%	1.5%	1.5%	5.0%
% Reliable Person-Miles Traveled	Interstate	99.8%	99.1%	99.1%	98.0%	99.7%	99.9%	96.0%
% Reliable Person-Miles Traveled	Non-Interstate NHS	93.1%	94.6%	93.8%	N/A	95.3%	95.4%	87.0%
Truck Travel Time Reliability Index	Interstate	1.22	1.26	1.27	1.25	1.19	1.21	1.40
PM2.5 Emission Reductions (kg/day)	Applicable CMAQ projects	0.092	0.122		0.092	0.122		0.092
PM10 Emission Reductions (kg/day)	Applicable CMAQ projects	0.000	0.131		0.000	0.131		0.000
NOx Emission Reductions (kg/day)	Applicable CMAQ projects	N/A	1.621		N/A	1.621		N/A

Note: Division of Highways is working with transportation planning partners to develop 2023 and 2025 calendar year performance measure targets consistent with current FHWA regulations. The Division of Highways Transportation Asset Management Plan (TAMP) is being finalized in fall 2022 and will include these targets. Division of Highways is also required to submit a baseline performance report for the next four-year period including these targets to FHWA during October 2022.

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A review of Figure 5A, indicates that the first six performance measures deal with the condition of pavement and bridges on the National Highway System. The performance measures associated with pavement are further sub-divided by the Interstate System and the remainder of the NHS. Much of the information regarding these performance measures is currently in flux, since the WVDOH is in the process of updating its official Transportation Asset Management Plan (TAMP). The WVDOH used a two-step process for its TAMP; developing an initial and subsequently a final TAMP. The final version of the TAMP had to be submitted by June 30, 2019, to avoid penalties outlined in MAP-21.

The two-step process provided the Agency with time to correct a number of issues for a compliant TAMP. The initial TAMP outlined items that the Agency was lacking in order to have a compliant final TAMP. The major deficiencies were the need for a Bridge Management System (BMS) and a more robust Pavement Management System (PMS), that would allow the Agency to perform life cycle cost analyses to determine the impact of alternative investment strategies. The final TAMP required an investment strategy to be identified that is monitored yearly by FHWA to ensure that it is to the extent possible being adhered to. The timing associated with the development and approval of a new STIP in conjunction with the recent passage of new multi-year transportation legislation (i.e. IIJA) in concert with a TAMP update will necessitate that assumptions be made initially regarding the size and type of investments to be made in the STIP regarding pavement and bridges. It is currently assumed that the Agency will rely heavily on placeholders in the outer years of the STIP, especially for bridge projects that will need to be vetted through the Agency's BMS. Likewise, specific pavement restoration projects are highly dependent on annual reviews of their condition and deterioration after winter and are not generally identified beyond the first one or possibly two years. Based on the results of the analysis and the investment strategy selected by management, it is likely that an Amendment of the new STIP will be required shortly after its approval to make any required revisions in the size and scope of the State's pavement and bridge programs.

The next two performance measures deal with System Reliability. Travel time reliability concerns in West Virginia are traditionally associated with weather, work zones, incidents, or special events. Recurring interstate reliability concerns are limited to corridors within the Charleston, Beckley, Martinsburg and Morgantown regions. Non-Interstate NHS reliability concerns are more widespread, primarily in Charleston, Huntington, Morgantown, and Parkersburg regions. Safety trends in WV show an overall decline in the number and rate of fatalities and serious injuries, indicating the potential for less reliability issues associated with incidents. Increasingly, the impact of more widespread work zones associated with the significant amount of construction as part of the Roads to Prosperity program, may have the most significant impact on reliability over the next 4-years. A review of Figure 5A indicates that reliability of the Interstate System in West Virginia is not a serious problem with 2-year and 4-year targets consistently above 95%. While construction associated with regular federal-aid and roads to Prosperity will impact Reliability in the short run, they will ultimately allow the State

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to maintain an extremely high reliability level on the Interstates.

When the influx of funding associated with Roads to Prosperity and the construction projects they continue to generate are completed, it is anticipated overall reliability on the facilities will increase over time.

The next performance measure (i.e., Truck Travel Time Reliability Index or TTTR), is specifically geared toward addressing freight needs. Within WV, there are limited Interstate segments with truck travel time reliability at 1.5 or greater, including I-64 west of Charleston, I-77 near Bluefield/E. River Mountain Tunnel, I-79 near Bridgeport/Clarksburg. These locations and others are typically associated with interchange spacing, access to intermodal or manufacturing facilities, toll plazas, or interstate geometry and terrain. Increasingly, the impact of more widespread work zones associated with the significant amount of construction as part of the Roads to Prosperity program, may have the most significant impact on reliability in the next 4-years. As with the prior performance measures, it is anticipated that the TTTR will degrade over the next four. The degradation is due not only to construction initiatives on major freight facilities in the State, but also due to external factors including truck volume growth, shifting logistics patterns and economic development. More detailed information regarding the State's freight network and infrastructure needs can be found in the West Virginia's State Freight Plan. As will be discussed below, federal-aid highway funds apportioned under the National Highway Freight Program, will be targeted to address the State's most critical freight needs.

The next two performance measures shown in Figure #5A deal with emissions reductions. Federal-aid highway projects to address emissions reduction are typically funded using Congestion Mitigation and Air Quality (CMAQ) funds, which will be explained in more detail below. Due to the general lack of significant air quality issues in West Virginia, most CMAQ funds provide to the State are flexible and can be used in any portion of the State. The WVDOT, through collaboration with the applicable MPOs, developed 2-year and 4-year target emission reductions. The maintenance areas and applicable pollutants are – PM 2.5 for Charleston and Steubenville/Weirton maintenance areas and PM 10 for the Weirton maintenance area. For PM 2.5, the baseline value is 0.092 kilograms per day. West Virginia anticipates that its program of improvements will allow that value to remain constant over the 2-year and 4-year period. The baseline performance and targets were established on a limited set of quantified PM2.5 emission reduction CMAQ projects, therefore the targets are set equal to the baseline estimate until more project data is available. At this time, the WVDOT does not anticipate make any reductions in PM 10, since there were no projects established for specifically addressing the issue.

The next five performance measures shown in Figure 5A address Safety associated with the transportation network. In compliance with requirements of 23 CFR Part 490 FHWA recently established Safety Performance Management Measures (SPMs) for all states and metropolitan planning organizations (MPO). These SPMs require the development of specific safety targets for the number and rate of fatalities, the number and rate of serious injuries, and the number of fatalities for non-motorized users (pedestrians and bicyclists). Additionally, NHTSA was required to establish similar Safety Performance Management Measures for state Highway Safety Offices (HSO, in this case the Governor's Highway Safety Program). They established twelve SPMs for state HSOs. It is further required that the State Department of Transportation (DOT)

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and the (HSO) must have identical targets for three of those numbers (the number and rate for fatalities and the number of serious injuries). MPOs may develop their own safety targets or adopt what the state has developed. West Virginia's MPOs were actively involved in the Strategic Highway Safety Plan (SHSP) update process either as members of the Safety Management Task Force (SMTF) or as reviewers of the SHSP. This helps ensure coordination including what type of projects may be included in the Statewide Transportation Improvement Program (STIP) and local Transportation Improvement Programs (TIP). Continued coordination of SPMs among these agencies will be reported in the Governor's Highway Safety Program and Highway Safety Improvement Program annual reports. Continued coordination of SPMs among these agencies will be reported in the Highway Safety Improvement Program and Governor's Highway Safety Program annual reports submitted to FHWA and NHTSA respectively.

SHSP goals are not the same as these safety targets. However, guidance from the FHWA urges states to look at the SHSP process as an opportunity to establish longer-term goals and objectives that can align with the annual targets. SHSP goals span multiple years and can be more aspirational in nature such as West Virginia's Zero Fatalities. To ensure consistency, FHWA recommends individuals involved in setting the annual targets also be involved in establishing the SHSP goals and objectives which was the case in West Virginia. West Virginia will not only strive to reduce fatalities by 50 percent by 2030, but also achieve a 66 percent reduction in serious injuries by 2030. Furthermore, it is anticipated that with the judicious use of West Virginia's federal-aid apportionments of Highway Safety Improvement Program (HSIP), the State will continue to see a steady decline in the Number of Non-motorized fatalities and injuries statewide.

The final three performance measures shown in Figure #5A are also related to emissions reductions. However, for the first performance period, these performance measures only apply to urbanized areas with more than 1 million people or areas that are classified as non-attainment areas for ozone, carbon monoxide, or particulate matter. The population threshold changes to more than 200,000 in the second performance period. West Virginia has no population centers of that size and as such has opted not to track these performance measures at the present time.

### **6. FEDERAL STIP FUNDING**

Given the small size of the State's population, the terrain, and the vast highway network that the WVDOH must maintain, it is clear that the State relies heavily on federal funding to maintain its roads and bridges. It is not surprising that one of the State's goals is to capture any and all available federal funding. As indicated previously, the federal government's financial participation in highway construction is generally governed by multi-year highway authorization legislation. The current multi-year authorization is IIJA, which was enacted on November 15, 2021, and without legislative action will expire on September 30, 2026. The IIJA replaced the preceding multi-year authorization and its extensions (FAST). As such, federal participation in highway and transit related programs is only guaranteed through FFY 2026. While it must be stressed that there is no guarantee of federal participation in highway construction beyond September 30, 2026, the likelihood of the federal government divesting itself entirely from such an integral part of the nation's economy is extremely remote. Lacking any authorizing legislation for outer years covered

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by the STIP and realizing that the long-term viability of the primary federal funding mechanism for highways and transit - the Highway Trust Fund (HTF) – has been an ongoing concern at the national level, WVDOT personnel believe projections of future federal-aid funding should be relatively conservative.

Traditionally, to build added conservatism into future estimates, the WVDOT has applied a straight percentage reduction to its apportionment to reflect the fact that OA is usually less than 100% of apportionment. The Agency intends to continue in this regard and will assume that OA will be equivalent to 98% of apportionment. In addition, for the purposes of this document, the values, as discussed for each funding program, represent the potential obligation levels and are assumed to be reflective of the values that remain after any “takedowns” and penalties are applied.

If all funds were expended in the year they were obligated, the WVDOT would anticipate the need for matching funds of approximately \$185 million per year based upon the typical 80/20 matching requirement. On virtually every federal-aid eligible project, there are individual activities and items that are deemed ineligible for federal-aid reimbursement. As such, the State’s share of funds required to complete federal projects is almost always greater than the amount that was projected. Individually the impact of ineligible charges would have a negligible effect on the State’s federal-aid program, but as a group this disparity can significantly alter the amount of State matching funds required on an annual basis. Conversely, the decision by the Agency to use Toll Credits and Bridge Credits as the soft match on projects (as have been described for GARVEE debt service payments) will ultimately reduce the amount of State funds needed annually.

A description of the major funding programs contained in IJJA and the average amount of funding West Virginia anticipates having available to use annually, during the six-year period, follows:

## **6.1 NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)**

With the Interstate System nearing completion nationwide in 1991, the federal government sought to identify a larger network of roadways of national significance that should receive dedicated, federal-aid funds. The network, as envisioned, would consist of over 160,000 miles of major roads throughout the United States. The NHS, which was designated in 1996, encompassed all of the Interstate System and a large percentage of the nation’s highways that are functionally classified as a Principal Arterial. MAP-21 expanded the scope to encompass all Principal Arterials not previously designated as part of the NHS. The Enhanced NHS consists of approximately 220,000 miles of roadway nationally. The change simply increases the amount of roadway mileage on the NHS in the state and are hence eligible for NHS funding and reduces the amount of roadway mileage on the Surface Transportation Program (STP) system. For the remainder of this report no distinction is made between the original and enhanced NHS. A large majority of the non-Interstate roadways that make up the NHS are in



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need of major improvement in order to meet current highway design standards. Upgrading NHS roadways has been a major focus of the nation's highway improvement initiatives.

West Virginia's NHS roadways total over 1,985 miles, of which 555 miles are Interstate roadways. The West Virginia Parkways Authority (WVPA), rather than the WVDOH, is responsible for 86 of the State's Interstate miles. As of August 15, 2022, a total of 7,248 public vehicular bridges were identified in West Virginia, of which 1,299 are located on the NHS network. The WVDOH is responsible for 1,198 of the 1,299 bridges located on the NHS. The WVPA is responsible for 92 and Other entities are responsible for remaining. The WVDOH is responsible for the majority of public bridges in the State. Upkeep on these facilities for the safety of the traveling public requires significant investment on the part of the Agency.

The NHPP funding is intended to support the condition and performance of the NHS and for the construction of new facilities on the NHS (such as the Appalachian Development Highway System (ADHS)). Under this program states have the ability to fund projects to resurface or add capacity to Interstates, replace bridges on all NHS routes, resurface or upgrade non-Interstate NHS routes and continue the construction of West Virginia's portion of the ADHS. The disparate nature of the projects eligible for NHPP funding requires the WVDOT to balance investments between preservation and performance/expansion activities across both bridge and roadway asset classes on its highest priority roadways.

To ensure that the preservation aspect of this program is not ignored, states are required to develop asset management plans (TAMPs) for the NHS and establish minimum performance conditions for Interstate pavements and bridges on the NHS. The requirement for having a TAMP originated in MAP-21. This requirement was carried forward into the FAST Act and most currently into IIJA.

During the next six years West Virginia anticipates receiving an average of \$310 million annually in NHPP funds that are typically matched on an 80% federal and a 20% state basis. However, funds obligated for the completion of the ADHS can be matched on a 100% federal basis. To further aid states in addressing their specific areas of needs, a State may transfer up to 50% of any apportionment to another formula program except no transfers are permitted of Metropolitan Planning funds or funds sub-allocated to areas based on population. The WVDOH has made significant use of the transferability of funds over the last few years. Specifically, transferring NHPP funds to the STP to allow for greater flexibility in programming and funding projects. However, since the deck area of West Virginia's NHS bridges no longer meets the 10% threshold transfers from that program are currently prohibited.

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Despite the fact that approximately 57% of the state’s annual apportionment is directed to the NHPP, given the high cost associated with improving and constructing these roadways and the fact that performance measures established for the program emphasize preservation activities, the WVDOH will be able to make only modest headway on plans to improve these facilities. It is the lack of significant amounts of federal and State funding coupled with the overarching need to preserve existing infrastructure that has left the WVDOH in the unenviable position of having to place many of the highway improvement initiatives desired by the public on hold while waiting for sufficient funding.

## **6.2 SURFACE TRANSPORTATION BLOCK GRANT (STBG) PROGRAM**

STBG funds, are essentially a renaming of the former STP funds are very flexible because they may be expended on any of the 10,477 miles of roadway, which are typically considered federal-aid-eligible (i.e. any road that is not functionally classified as a Rural Local, Urban Local or Rural Minor Collector). If needed, a portion of the state’s STBG apportionment can be transferred to other less flexible funding categories like the NHPP. While STBG funds may be expended for projects on NHS routes in the State, they serve as the principal federal-aid funding mechanism for the remaining 8,492 miles of federal-aid-eligible roadway and 5,934 bridges statewide that are not part of the NHS. As such, the WVDOH has typically done the opposite (i.e. transferred NHPP funds to STBG funds). However, as mentioned previously the WVDOH cannot do this at the present time, because the State has fallen below the required performance level on NHS bridges.

The WVDOH anticipates receiving an average of \$170 million in obligations for all STBG purposes. Throughout the State, 3,739 bridges are located on roads termed “off-system”. Those bridges are located on roadways functionally classified as Rural Local, Urban Local or Rural Minor Collector. Highway projects on these facilities are generally not eligible for federal-aid; however, because of the potential for loss of life associated with a bridge failure, a small portion of STBG funds (i.e. 9%) are set aside for bridges on those facilities. The STBG funds are further designated by geography and population, with a significant portion of the remaining funds able to be used anywhere in the State. The population based funding is divided into four separate population categories (1) less than 5,000 (2) 5,000 to 50,000, (3) 50,000 to 200,000, and (4) greater than 200,000 (TMA). Like most federal-aid funds, STBG funds must be matched at an 80% federal and a 20% state basis.

## **6.3 HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)**

To emphasize the ongoing commitment to improving the safety elements of the transportation network \$36 million has been apportioned to the State in the form of HSIP funds. The objective of HSIP is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. This program is subject to set-aside railway/highway crossing programs, which are

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currently estimated to be 7% of the state's base HSIP funding. While projects typically will require a 90/10 matching ratio, some activities are eligible for 100% federal funding. For the purposes of this document, embedded within the HSIP program is the Highway-Rail Grade Crossings Program. The overarching requirement is that HSIP funds be used for safety projects that are consistent with the state's Strategic Highway Safety Plan (SHSP) and that correct or improve a hazardous road location or feature or address a highway safety problem. West Virginia's current SHSP covers calendar years 2022 to 2026. The plan identifies strategies for improving transportation safety in West Virginia, not specific projects. West Virginia anticipates receiving approximately \$34 million annually in safety related obligations during the forecast period.

As part of the ongoing initiative for transportation investments to be driven by performance measures, West Virginia has established (see Table #4) performance measures, goals and targets for fatalities, fatality rate, serious injuries and serious injury rates. While virtually every type of federal funding could be directed to improving safety components of the state's transportation network, HSIP are intended to specifically address this need. As such, the type of projects selected within the FFY 2023-2028 STIP that utilize HSIP funding will have a direct impact on the State's ability to reach the goals established.

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Table #4:

Measure				2020		2021		2022		2023
	2017	2018	2019	Measure	Target	Measure*	Target	Measure	Target	Target
Fatalities (5-year avg)	289.0	281.4	279.0	278.8	267.0	281.2	263.7		262.1	262.1
Fatality Rate (5-year avg)	1.493	1.450	1.438	1.500	1.482	1.639	1.457		1.558	1.558
Serious Injuries (5-year avg)	1,270.0	1,171.8	1,081.4	992.2	1,120.0	909.6	1,002.0		926.4	854.8
Serious Injury Rate (5-year avg)	6.562	6.040	5.570	5.310	5.360	5.245	5.023		5.634	TBD**
Bicycle and Pedestrian Fatalities and Serious Injuries (5-year avg)	94.8	97.0	97.2	91.6	78.6	85.2	86.2		80.9	TBD**

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## **6.4 NATIONAL HIGHWAY FREIGHT PROGRAM**

The National Highway Freight Program (NHFP) provides funding to improve the efficient movement of freight on the National Highway Freight Network (NHFN). Interestingly, the NHFN did not exist prior to FAST. FAST required the establishment of a NHFN, which was required to consist of the following components: The Primary Highway Freight System (PHFS), Critical Rural Freight Corridors, Critical Urban Freight Corridors and any portion of the Interstate System not designated as part of the PHFS. Furthermore, FAST required each state to develop a State Freight Plan that is consistent with Title 49 of United States Code 70202. West Virginia completed their required State Freight Plan in September 2018. In West Virginia, 2,139 miles of roadway has been designated as part of the State's freight network, which is comprised of the Interstate and ADHS routes in the State as well several other routes designated as critical rural or urban freight facilities. The WVDOT proposes to direct future apportionments of NHFP funds to aid in the acceleration of ADHS Corridor H to improve freight flow through the central part of the State. NHFP funds have an 80/20 matching ratio. For the purposes of this document, the WVDOT anticipates receiving \$16 million annually in NHFP funds.

## **6.5 CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ) PROGRAM**

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program provides federal funding to qualifying transportation projects that provide an air quality benefit by reducing congestion. These funds assist areas that have been designated as non-attainment or maintenance areas according to the national ambient air quality standards for ozone and carbon monoxide emissions under the Clean Air Act Amendments of 1990. While West Virginia is fairly rural and does not typically experience the traffic congestion problems prevalent in major metropolitan areas, it does have some air-quality non-attainment problems. Use of CMAQ funding is not restricted to specific roadways, but to projects or programs that solve air quality problems. Examples of eligible CMAQ projects are those that improve traffic flow, improve signalization, and improve intersections.

MAP-21 and subsequently FAST requires states that have particulate matter (PM 2.5) non-attainment areas, which West Virginia does, to specifically target 25% of their CMAQ funding towards addressing that issue. According to the current air quality standards, at present, none of the state's counties are considered in non-attainment; however, four of the state's fifty-five counties (Kanawha, Putnam, Brooke and Hancock) are considered as a PM 2.5 maintenance area, and thus eligible for the 25% set aside. After the takedown for PM 2.5 is applied (approximately \$4 million), because the rest of the state is currently considered in attainment, the remaining CMAQ funds (approximately \$12 million) may be used anywhere in the state and may be used for projects that would also be eligible for STBG funds. During the next six

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years, the WVDOT anticipates receiving approximately \$16 million annually in CMAQ funding. CMAQ Program funds are matched at an 80/20 federal to state ratio.

Furthermore, BIL adds shared micromobility, diesel replacements, medium-duty or heavy duty zero emission vehicles and related charging equipment, alternative fuel projects as eligible activities.

## **6.6 STATEWIDE PLANNING & RESEARCH (SPR)**

Realizing that adequate planning is essential to the development of an efficient and effective transportation network, the federal government has for some time mandated that states follow a cooperative, continuous and comprehensive process, known as “3C”, for making transportation investment decisions. In addition, the federal government has also recognized the ongoing need for a research component to the national highway program. To this end, federal legislation requires a 2% set-aside from each state’s apportionments of the NHPP, STBG, CMAQ and HSIP to fund the State Planning and Research (SPR) Program. Unless a state requests an exception, federal provisions dictate that not less than 25% of SPR funds must be expended on research, development and technology (RD&T) transfer activities with the remaining funds used for statewide, metropolitan and other planning activities. SPR funds have the standard 80/20 matching ratio. West Virginia anticipates receiving \$10 million annually for all statewide planning activities.

## **6.7 TRANSPORTATION ALTERNATIVES (TA)**

The Transportation Alternatives Program (TAP) was a new program created under MAP-21 that essentially provides funding for projects that were previously eligible for funding under Transportation Enhancement, Recreational Trails and Safe Routes to Schools Programs contained in SAFETEA-LU. Under FAST, the name was modified to eliminate the word “program”, but eligibility remains essentially unchanged. Under MAP-21, TAP was funded as a 2% takedown of other programs (NHPP, STBG, HSIP, CMAQ and Metropolitan Planning) prior to apportionment. Under IIJA, funding is a set aside from STBG funds available nationally. TA funds are apportioned to each state based upon their ratio of FFY 2009 Transportation Enhancement Funds. TA funds are sub-allocated by population in exactly the same manner STBG funds are, with roughly 50% being able to be used anywhere in the State and the remaining 50% being distributed into four population thresholds:

- >200,000 (TMAs),
- >50,000 and <200,000,
- >5,000 but <50,000; and,
- <5,000.

West Virginia had the option of not continuing with a standalone Recreational Trails (RT) Program. However, since West Virginia did not opt out of the RT Program, \$1.3 million per

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year of West Virginia's TA funds are redirected to a standalone RT Program. For the purposes of this report, RT funds are not reflected separately and are considered to be embedded into the state's TA apportionment. An additional nuance of the sub-allocated portion of TA funds is that TMAs are required to develop their own competitive application process for TA funding that is sub-allocated to a TMA. TA projects have an 80/20 matching ratio, with the local sponsor providing the 20% non-federal portion. West Virginia anticipates receiving \$8 million, per year, for these initiatives, of which, \$2.2 million, annually, will be made available for recreational trail facilities, and the remainder (\$5.8 million) will be made available for other TA initiatives.

## **6.8 METROPOLITAN PLANNING (PL) PROGRAM**

PL funds are used to pay for planning requirements that are specific to Metropolitan Planning Organizations (MPOs), urbanized areas with populations in excess of 50,000. Despite West Virginia's relatively small population, it currently has eight MPOs. Furthermore, as mentioned previously, a portion of the State has been designated as a TMA. Planning issues and requirements associated with the TMA will be jointly addressed by the two MPO's (KYOVA and RIC) with planning boundaries within the TMA.

PL funds are required to be distributed to the various MPOs based on a formula, which at a minimum must be based on population. PL funds have an 80/20 federal to state matching ratio. Unlike most federal funds, the WVDOT requires local governments to provide half of the required match. As such PL funds are matched on an 80/10/10 basis - federal, state and local, respectively. West Virginia anticipates receiving \$2 million annually in PL funding.

## **6.9 CARBON REDUCTION PROGRAM**

Carbon Reduction Program funds are sub-allocated to each of the State's eight MPO areas. West Virginia anticipates receiving approximately \$8 million in Carbon Reduction Program funds annually. These funds have a wide range of eligible projects which include:

- Traffic monitoring, management, and control facility or program, including advanced truck stop electrification systems;
- Public transportation projects eligible under 23 USC 142;
- Transportation Alternative projects;
- Advanced transportation and congestion management technologies;
- Deployment of infrastructure-based intelligent transportation systems capital improvements and the installation of vehicle-to-infrastructure communications equipment;
- Street lighting and traffic control devices with energy-efficient alternatives;

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While this is not an exhaustive list of eligible projects the list above does provide the intent of the program which is to reduce emissions.

## **6.10 NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE (NEVI) PROGRAM**

The NEVI Program funds that West Virginia anticipates receiving is \$45,683,164 for the duration of the 5 year bill. These funds have a wide range of eligible projects which include:

- Projects that are directly related to the charging of a vehicle and only for EV charging infrastructure that is open to the public or to authorized commercial motor vehicle operators from more than one company.
- The acquisition and installation of electric vehicle charging infrastructure to serve as a catalyst for the deployment of such infrastructure and to connect it to a network to facilitate data collection, access, and reliability.
- Development phase activities relating the acquisition or installation of electric vehicle charging infrastructure.
- Operating assistance for costs allocable to operating and maintaining EV charging infrastructure acquired or installed under the program (for up to 5 years);
- Acquisition or installation of traffic control devices located in the right-of-way to provide directional information to EV charging infrastructure acquired, installed, or operated under the NEVI Formula program, and on-premises signs providing information about such infrastructure.
- Mapping and analysis activities to evaluate current and future demand for EV charging infrastructure.
- Data sharing about EV charging infrastructure to ensure long-term success of investments under program.

## **6.11 PROTECT PROGRAM**

PROTECT stands for Protecting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation. The intent of this program is to help make surface transportation more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure. The Protect Program funds that West Virginia anticipates receiving are approximately \$16 million annually.

## **6.12 MISCELLANEOUS PROGRAMS**

The obligation levels associated with the list of programs discussed previously represent the lion's share of Core federal highway funds that the WVDOH can anticipate on a yearly basis.



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While West Virginia may receive annual federal-aid funds for other smaller initiatives such as Local Technical Assistance Program, Redistributed OA, Direct Federal funding for forest highways, and Other Allocated Funds, these programs are not considered in this document.

## **6.13 DISCRETIONARY OR “SPECIAL” FEDERAL-AID FUNDS**

Beyond the sources of federal-aid that the WVDOH can predict with relative certainty, in the past it has received additional “special” or discretionary federal-aid funds on a one-time basis. Unlike the program funds described above, the receipt of “special” federal-aid cannot be predicted. In the past, these funds typically came in the form of “earmarks” contained in yearly federal appropriations bills (which can be used by the WVDOH only for the specific project described) or from competitive grants in which all states compete. Matching ratios for discretionary funds frequently are specified in legislation or under the grant application guidelines. In the past, much of the discretionary funding received by the WVDOH required no state match (i.e., 100/0 matching ratio); however, more recent funding has required the standard 80/20 match. More recently, the funds have come in the form of discretionary grants (i.e. TIGER, INFRA, BUILD, RAISE, etc.) received by the State through a competitive process. These funds cannot be predicted with any certainty. Therefore, until they are actually received and available for obligation, they are not included in funding calculations.

## **7 TOLL CREDITS**

Although not a federally funded program similar to those aforementioned, Toll Credits are a beneficial financing tool that can be used to offset potential cash management issues. In essence, a state that collects toll revenue on a federal-aid eligible facility and expends those revenues for capital improvements on a federal-aid eligible facility can earn a credit for those expenditures as long as the state sustains an adequate Maintenance of Effort (MOE) on its infrastructure. The credit, in turn, can be used in place of state matching funds on future federal-aid eligible projects. As such, even if state revenues declined significantly in the short run, the Agency could potentially continue on with the federal-aid portion of its program by using Toll Credits in place of state matching funds. In so doing, any project to which Toll Credits were applied would be 100% federally funded thus eliminating the need for the state match. However, since the federal-aid program operates on a reimbursable basis, the State must have sufficient funds on hand to pay for the project and await a 100% reimbursement. Furthermore, since the credits do not provide actual cash for projects their application may be limited, especially for FTA projects.

## **8 BRIDGE CREDITS**

Akin to Toll Credits, in CY 2010 the WVDOH was made aware that according to Title 23, Section 144(m) of the U.S. Code of Federal Regulations, a State may also earn Bridge Credits for conducting capital improvements on federal-aid eligible bridges with state and local funds. Similar to Toll Credits, once earned, Bridge Credits can be used in place of the required State

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Matching funds on future federal-aid bridge projects. WVDOH staff worked with FHWA personnel to formulate a methodology for determining the eligibility of bridge projects and tracking their use in subsequent years. As of June 30, 2017, the WVDOH had officially earned \$52.057 million in Bridge Credits. Prior to FY 2018, the WVDOH had never requested to use any of the Bridge credits accumulated. However, in FY 2018, the WVDOH issued \$220 million special obligation notes that would be financed as a GARVEE. In order to make the debt service (\$295.72 million) associated with the notes essentially 100% federal, the WVDOH opted to use a combination of Bridge and Toll Credits available to the state to make up the state's match. Based on the WVDOH's initial calculations, \$11.35 million in Bridge Credits needed to be reserved for this purpose. As new calculations are finalized, and approvals are obtained from FHWA, they will be incorporated into future updates of the STIP.

## **9 STIP PROGRAMS AND GROUPABLE PROJECTS:**

The narrative above outlined the various types of federal-aid funds that are anticipated to be available to West Virginia for highway and transit purposes over the next six years. The WVDOH is required to remain fiscally constrained based upon the individual fund types. As mentioned above these funds have specific limits on what they can be used for and in some cases where they can be used. While this information is very important, it does not typically resonate well with the public regarding what the Agency is doing with the funds available to it. People want to know how much the Agency is going to spend on items like Pavement, Slides, New Road Construction, Bridges, Signals, etc. not what funds are being used to fund them. To help better inform and educate the public, the STIP for presentation and discussion purposes is divided into eight individual programs with various sub-programs. The eight programs of the STIP are as follows:

- Bridge Program
- Pavement Program
- Traffic Program
- Community Development and Connectivity Program
- Localized Mobility Program
- Regional Mobility Program
- Planning and Workforce Development Program; and the
- Transit Program

These eight programs are not only easier to conceptualize, but also align better with the myriad of performance measures that the Agency must report on. Furthermore, realizing that the needs associated with transportation always exceed funding available to meet those needs, these Programs helps to communicate how the Agency plans to utilize its scarce resources and

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ultimately how the performance of the transportation network will change over time. The eight programs and their associated sub-programs are described in detail later in this report.

Lastly, the WVDOT intends to use the opportunity created by the development of the new STIP, to continue to utilize the concept of “groupable” projects, where applicable, into the planning process.

Grouping of projects allows flexibility and reduces paperwork for programming minor projects. Highway Projects that are not considered to be of appropriate scale for individual identification in a given program year may be grouped by function, work type, and/or geographic area using the applicable classifications under 23 CFR 771.117(c) and (d) and/or 40 CFR part 93 or for FTA projects CFR 771.118 . In nonattainment and maintenance areas, project classifications must be consistent with the “exempt project” classifications contained in the EPA’s transportation conformity regulations (40 CFR part 93, subpart A).

In addition, projects proposed for funding under title 23 U.S.C. Chapter 2 that are not regionally significant may be grouped in one-line item or identified individually in the STIP. The WVDOT, FHWA and FTA have administratively concurred that a project with an estimated construction cost of less than \$10 million is of appropriate scale to consider for grouping. For air quality non-attainment/maintenance areas, only projects that are exempt from conformity requirements may be grouped.

Essentially, for a project to be initially “grouped” in the STIP, it would have to have individual phase costs (Engineering, Right of Way and Construction) of less than \$10 million, be assumed to meet all requirements of a Categorical Exclusion under the NEPA Process and not add capacity potentially affecting air quality (i.e. the addition of through lanes or the creation or extension of a highway facility). Given the limiting factors identified, it is assumed that some portion of the eight individual programs listed above could be “grouped”. As part of the STIP development process, the WVDOT intends to screen existing and proposed projects of the various aspects of the eight Core Programs for potential grouping. As the STIP is developed and the size and composition of the eight Core Programs is determined, allocations will be established as placeholders for financial constraint. Using the guidelines and assumptions above, where individual projects have not been identified, the allocations will be assumed to consist of groupable projects.

In conjunction with the development of the new STIP, the Agency will be working with Metropolitan Planning Organizations, Federal Highway Administration and Federal Transit Agency staff to simultaneously update the STIP operating procedures to not only reflect the proposed changes associated with groupable projects, but also to clarify what will trigger future Amendments and Administrative Modifications.

