

## Chapter 9 | Financial Element

### Introduction

The *Regional Intergovernmental Council Metropolitan Transportation Plan (RIC MTP)* outlines the region’s long-range transportation strategies. In accordance with both state and federal requirements, the RIC MTP is required to be financially constrained. The intent of a long-range transportation plan is to demonstrate how projects that have been recommended and prioritized can realistically be funded by the plan’s horizon year. It is essential to understand the expected levels of future funding, estimated planning-level project costs, and to have consistent assumptions that address all modes of transportation. A financially constrained plan allows RIC, member jurisdictions, and supporting agencies to focus on near-term opportunities and to identify strategies that support plan implementation.

The following chapter summarizes the financial constraint methodology and results. The recommendations and prioritization are consistent with Chapter 4.

### Financially Constrained Plan Development

The financially constrained plan—which is required by the FAST Act and MAP-21 for long-range transportation plans—shows the proposed investments over the life of the plan that are reasonably anticipated based on future revenues during a series of funding periods. Achieving this balance is referred to as “financial constraint.” The funding periods summarized for the RIC MTP are as follows:

- 2021-2025
- 2026-2030
- 2031-2040
- 2041-2050

The 2021-2025 funding period includes the committed projects and associated funding from the Dynamic State Transportation Improvement Program (DSTIP) or West Virginia STIP. The projects and funding levels identified during this time period have already been identified as priority projects through previous performance-based planning efforts. As such, these projects are not re-evaluated as part of this MTP update.

The 2025-2030, 2031-2040, and 2041-2050 funding periods help divide the remainder of the projects and project revenues into five- and ten-year time bands. The projects that cannot be funded within the 2050 fiscally constrained plan are considered to be a part of the vision plan.

The blend of transportation recommendations proposed to meet the needs of the region over the next twenty-five years is consistent with revenue forecasts. The proposed recommendations were developed in collaboration with the Regional Intergovernmental Council (RIC) MPO, the West Virginia Department of Transportation (WVDOT), the Federal Highway Administration (FHWA), member jurisdictions, and the public. The proposed projects include roadway, freight, bicycle, pedestrian, and transit improvements for the duration of this plan. Since transit costs and revenues are generated and maintained by the Kanawha Valley Regional Transportation Authority (KVRTA), transit was not considered as part of this financially constrained plan. The financial plan details both the proposed investment toward these recommendations and revenue forecasts over the life of the RIC MTP. The recommendations also reflect travel benefits and socioeconomic impacts identified in Chapter 4 and the Appendix.

These projects are the result of extensive public outreach. The participation process included two rounds of virtual community workshops, an interactive online survey, an interactive project website, stakeholder interviews, and the participation of the plan's Steering Committee. More information on the community outreach effort can be found in Chapter 1 and the Appendix.

## Financially Constrained Plan Assumptions

The recommendations were derived from a variety of sources, including previous planning efforts, deficiencies analysis, and feedback from the public. Projects from previous planning efforts were more likely to have estimated project costs. Where possible, these estimated costs were brought forward into the current plan and inflated to current year dollars (i.e. 2021). The projects that did not have previously identified costs were independently estimated by considering the unit cost for recommended facility types, along with consideration for project elements including contingency, anticipated right-of-way, design, and environmental and/or utility costs.

All of the dollar figures discussed in this chapter were analyzed in current year dollars and then inflated to reflect the projected year of expenditure or implementation time band. The inflation rate used to determine the year of expenditure dollars was derived from WVDOT's *Calendar Year 2017 Long Range Revenue Estimates for use in MPO Long Range Transportation Plans*. Since the last plan's update, detailed studies to determine more accurate project costs have been completed. These project costs have been updated to accurately reflect to the current year dollar amount.

Chapter 9 provides an overview of revenue assumptions, probable cost estimates, and financial strategies in addition to the assumptions used to determine these values. In subsequent plan updates, all funding programs, projects, and assumptions will be re-evaluated.

## Roadway

### Roadway Capital

The capital roadway projects that were identified during recommendation development were taken through a regional prioritization process. The outcome of that process is a list of prioritized projects that can be considered for incorporation into the financially constrained plan. To determine when projects should be implemented, the

priority project list is compared to the available revenues. In the Kanawha-Putnam region, funding for capital roadway projects is primarily obtained through federal and state sources as outlined by the DSTIP.

Currently, the funding received from WVDOT accounts for the majority of all capital highway funding available in the study area. There are several new widening projects or improvement projects that are under construction using money derived from the DSTIP:

- WV 622 Widening
- RHL Boulevard Construction
- US 119 Oakwood Area Improvements (RCUT)
- US 35/I-64 Widening

Additional information on these committed projects can be found in Chapter 4.

The federal revenue levels available for the RIC MPO have been projected by WVDOT in the document *Calendar Year 2017 Long Range Revenue Estimates for use in MPO Long Range Transportation Plans*. The revenues in the RIC area are projected from 2021-2050 in the document. To fully project the revenues for the life of the RIC MTP, the assumptions outlined by WVDOT were used to develop these revenue projections, along with a 1.5% annual inflation rate, were applied to forecast the years 2046-2050. The funding levels for committed projects in the STIP were combined with the projected revenues for the years 2026-2050 to determine that there will be a total of \$863.3 million available for capacity highway projects of the life of this plan.

*Table 9-1: Highway Capital Revenue Summary (year of expenditure dollars)*

PERIOD	AMOUNT
2021-2025 <sup>1</sup>	\$100,800,000
2026-2030	\$108,487,275
2031-2040	\$299,165,483
2041-2050	\$455,719,790
Total	\$863,372,548

It is essential that the revenue estimates reflect a reasonable level of future funding dollars based on the current level of funding. As a result, this revenue estimate does not consider potential changes to the state funding structure.

When the funding levels have been established, the next step is to consider the needs that should be fulfilled within each funding period of the plan. To determine the priority order, the prioritization results documented in

<sup>1</sup> 2021-2025 is consistent with the WVDOT Dynamic State Transportation Improvement Program and was accessed on July 7, 2021.

Table 4-8 were considered. The capital roadway project prioritization evaluated recommendations based on a series of quantitative and qualitative metrics that addressed the plan's guiding principles. While it would be ideal to implement every project, realistically, only certain projects can be funded. As a result, higher ranked projects were considered first for funding.

During the financial constraint process, higher cost projects were also considered higher priority despite not having enough revenues available for a given funding period. In those instances, lower cost projects with the most favorable prioritization score would be advanced to make use of the available revenues in that funding period.

The following figures and tables divide the capital roadway projects into 2021-2025 (committed), 2026-2030, 2031-2040, 2041-2050, and unfunded vision categories. Figure 9-1 shows the capital roadway projects divided by these funding periods. Tables 9-2 through 9-6 break out the financially constrained projects during each of these funding periods.

Based on the financial analysis, twenty-one out of twenty-seven roadway capital projects for the RIC MTP can be funded within the 2050 horizon year. Each funding period's list of projects is financially constrained within that period with a small amount of revenue that is carried over to the next funding period. In accordance with federal guidance, the midpoint year for each funding period was used to determine the potential project year of expenditure (resulting in an inflated project cost). There are approximately \$2.2 billion of unmet needs in the MPO planning area.

After determining the financial constraint, the projects that are anticipated to receive funding were tested within the travel demand model. Figure 9-2 shows the remaining 2050 network congestion following the implementation of these projects. Additional performance data for the financially constrained network can be found in the Appendix.

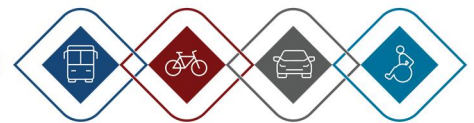
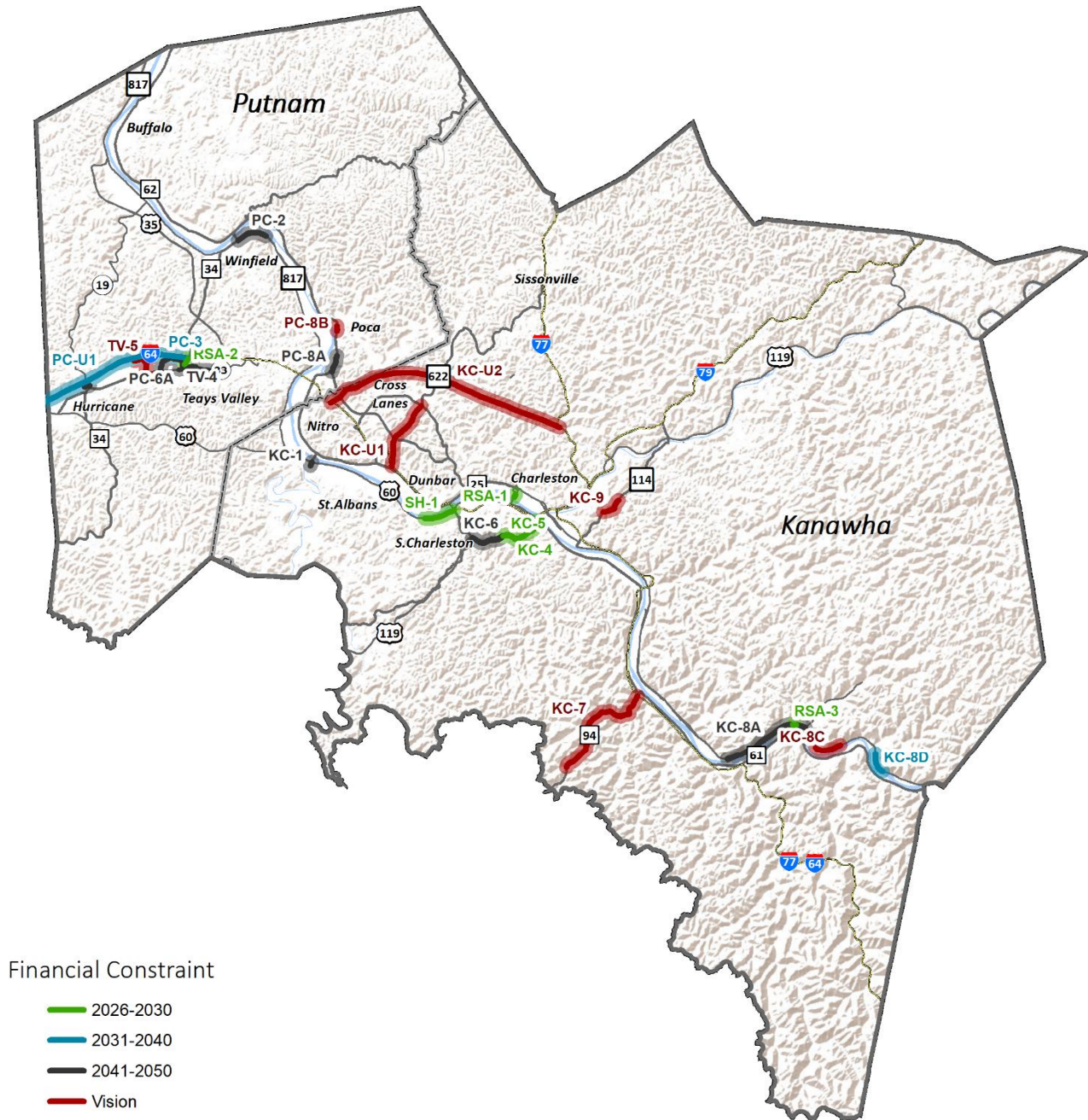


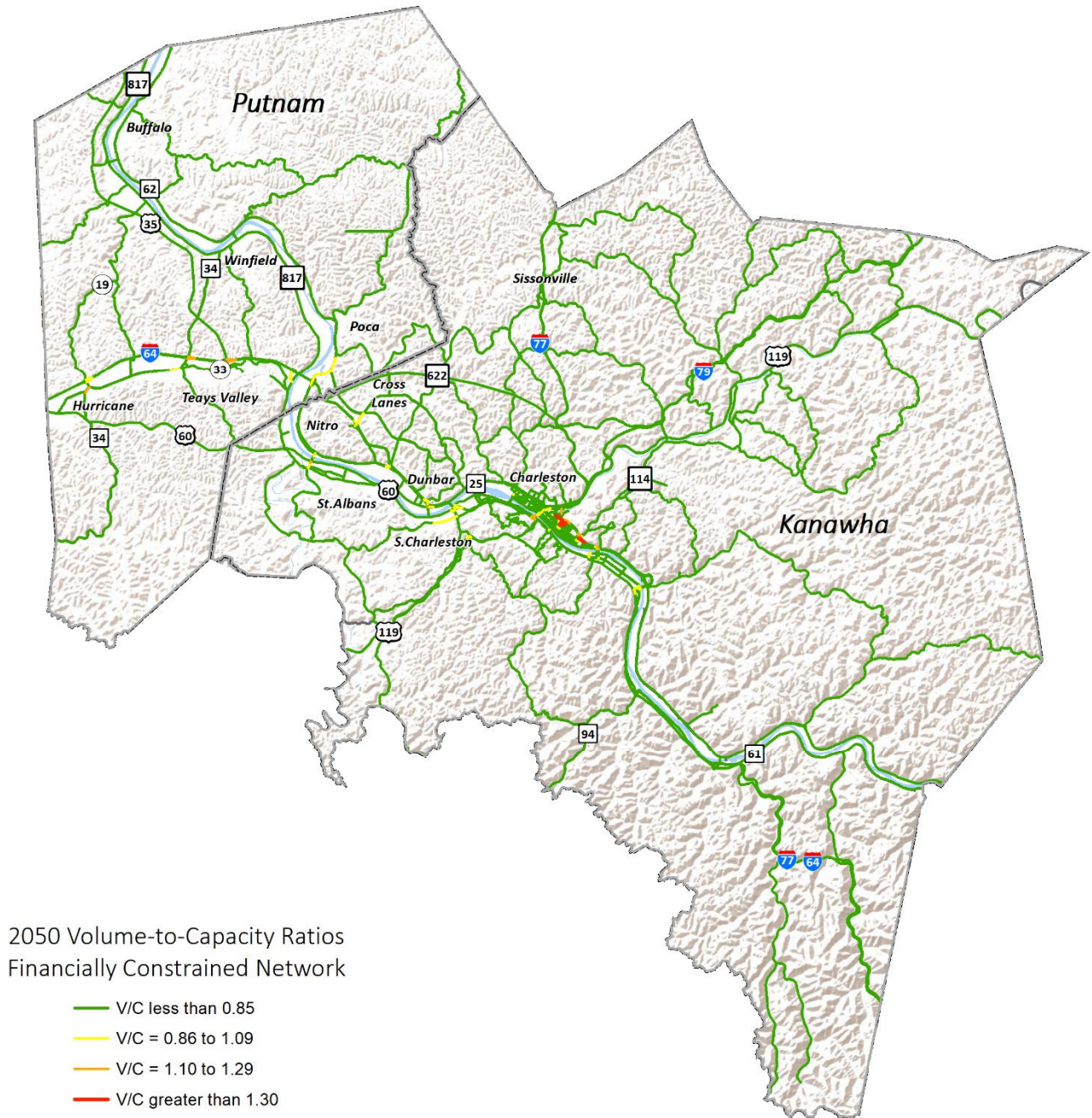
Figure 9-1: Financially Constrained Projects



Financial Constraint

- 2026-2030
- 2031-2040
- 2041-2050
- Vision

Figure 9-2: 2050 Volume-to-Capacity



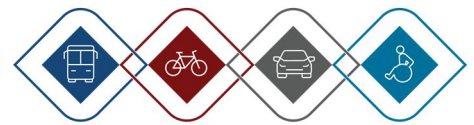


Table 9-2: Committed Roadway STIP Projects 2021-2025

FACILITY	PROJECT DESCRIPTION
Interstate 64 – Nitro to US 35	Upgrade to 6 lanes
WV 622 – Cross Lanes	Widen roadway
US 119 Oakwood Area Improvements	Construct RCUT
RHL Boulevard Connection	Construct new roadway

Table 9-3: 2026-2030 Financially Constrained Projects (year of expenditure dollars)

ID	FACILITY	FROM	TO	PROJECT DESCRIPTION	ANTICIPATED COSTS
RSA-1	Patrick Street	4th Ave	Patrick Street Plaza	Intersection modifications	\$406,898
SH-1	MacCorkle Ave	Rock Lake Drive	Jefferson Road	Multiple (restripe, signal optimization, sidewalk enhancements, etc.)	\$6,242,273
KC-5	US 119 (Corridor G)	I-64 Connector	Lucado Road (generally)	Widening, Cantley Flyover	\$49,915,000
KC-4	US 119 (Corridor G)	MacCorkle Avenue	Lucado Road	Widening	\$16,581,120
RSA-3	US 60 (Dupont Ave)	Hull Ave	William Street	Intersection improvements	\$709,009
RSA-2	WV 34	I-64	Great Teays Blvd	Roundabout corridor	\$4,926,320

Table 9-4: 2031-2040 Financially Constrained Projects (year of expenditure dollars)

ID	FACILITY	FROM	TO	PROJECT DESCRIPTION	ANTICIPATED COSTS
PC-U1	Interstate 64	Cow Creek Road	Cabell County Line	Upgrade to 6 lanes	\$163,756,181
PC-3	Interstate 64	Cow Creek Road	WV 34	Upgrade to 6 lanes	\$89,321,553
KC-8D	US 60	Old Town Road	Browns Mountain Road	Widening	\$18,527,159

Table 9-5: 2041-2050 Financially Constrained Projects (year of expenditure dollars)

ID	FACILITY	FROM	TO	PROJECT DESCRIPTION	ANTICIPATED COSTS
PC-6A	Teays Valley Road (CR 33)	WV 34	Thomas Drive	Widening	\$46,195,692
KC-8A	US 60 (Dupont Ave)	Kellys Creek Road (CR 81)	Chelyan Bridge	Access Management	\$135,316,681
PC-2	WV 817	Winfield Bridge	Planters Road	Widening	\$43,115,980
KC-6	US 119 (Corridor G)	Jefferson Road Interchange	Emerald Road	Widening	\$107,648,651
PC-8A	WV 62	WV 25	Dairy Road	Widening	\$5,459,522
KC-1	3 <sup>rd</sup> Street Underpass	-	-	Widening	\$36,825,588
TV-4	Mt. Vernon Road (CR 34)	WV 34	WV 34 (Teays Valley Road)	Modernization	\$20,298,704
PC-4	Hurricane Improvements	-	-	Access Management	\$4,442,032



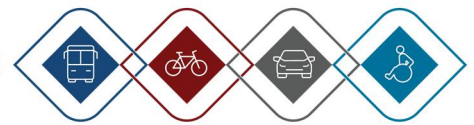


Table 9-6: Unconstrained Vision Plan Projects (2051 dollars)

ID	FACILITY	FROM	TO	PROJECT DESCRIPTION	ANTICIPATED COSTS
KC-U1	Institute Connector	Institute Interchange	WV 622	New Alignment	\$247,475,641
KC-9	WV 114 (Greenbrier Street)	Airport Road	Rutledge Road (CR 46)	Widening	\$65,191,429
KC-8C	US 60	Sycamore Road	Britt Hollow	Widening	\$78,229,715
KC-U2	Northern Connector	I-64	I-77	New Alignment	\$1,564,548,508
KC-7	WV 94 (Lens Creek Road)	Six Mile Hollow Road	I-64	Widening	\$184,165,786
PC-8B	WV 62	Heizer Creek Road	Poca City Limits (southside)	Widening	\$55,412,714
TV-5	Sleepy Hollow Road	Teays Valley Road	Cow Creek Road	Widening	\$62,457,595

### Maintenance Funding

Maintenance funding in the Kanawha-Putnam region is primarily utilized for routine roadway maintenance in addition to paving dirt roadways, replacing traffic signals, adding pedestrian and bicycle facilities. Maintenance needs are primarily funded by the state, with some additional funding provided by municipalities. The City of Charleston has a user fee in place to help cover the cost of maintenance on city streets. For the purposes of this plan, maintenance funding levels were determined using the *WVDOT Calendar Year 2017 Long Range Revenue Estimates for use in the MPO Long Range Transportation Plans*. Statewide non-improvement expenditures including Set-Asides, Debt Service, Administration, and Routine Maintenance were pulled from this document. Per the guidance of this document, 14.3% of all available statewide funding is expected to be used for the RIC MPO area. These maintenance funds are only expected to increase with inflation. Therefore, additional maintenance funds are not being allocated for new or improved facilities, as it would result in a deficiency in maintenance funds in future years.

By projecting these funding sources through the 2050 horizon year of the RIC MTP, the total maintenance funding available for the region totals to approximately \$3.7 billion. The maintenance costs generated annually are assumed to be equal to the revenue available.

*Table 9-7: Highway Maintenance Revenue Summary (year of expenditure dollars)*

PERIOD	AMOUNT
2021-2025	\$475,116,642
2026-2030	\$586,408,108
2031-2040	\$1,617,07,887
2041-2050	\$1,102,554,882
Total	\$3,781,153,519

### New Funding Set Asides

Recently, MPOs have been setting aside a certain amount of revenue to ensure all of the region's needs are being addressed. Similar to the maintenance funds described above, this financial plan considers two crucial categories shown in Table 9-8. These funding categories ensure that the RIC MPO has dedicated funds to use on safety and ADA compliant projects through the plan's 2050 horizon year as new needs arise. While the DSTIP currently allocates \$9 million for ADA implementation throughout the state, this set aside money provides flexibility for the RIC MPO. These funds could be used by the RIC MPO to pursue projects that are high-impact and low-cost.

*Table 9-8: New Funding Categories (per year)*

NEW FUNDING CATEGORIES	AMOUNT PER YEAR
Safety and Intersections	\$1,000,000
ADA Implementation	\$500,000

## Bicycle and Pedestrian

New bicycle and pedestrian facilities in the Kanawha-Putnam area are primarily funded utilizing state and federal funding. These funding sources have historically included the Transportation Alternatives Program (TAP), National Recreational Trails (NRT), Highway Safety Improvement Program (HSIP), and other state and federal funding sources. Since a portion of the RIC MPO includes Huntington—a part of the WV-KY-OH Transportation Management Area—a portion of TAP funds can be directly allocated inside the RIC MPO area. The local match is typically around 20% for TAP funding.

In order to forecast bicycle and pedestrian revenue projections, statewide TAP and NRT funding levels were obtained from the DSTIP. The committed projects that appear in the DSTIP are added into the 2021-2025 period. Using guidance from the WVDOT *Calendar Year 2017 Long Range Revenue Estimates for use in MPO Long Range Transportation Plans*, 14.3% of all available statewide funding is expected to be used in the RIC MPO. Table 9-9 projects the revenues for bicycle and pedestrian projects within the Kanawha-Putnam area using these assumptions.

*Table 9-9: Bicycle and Pedestrian Revenue Summary (year of expenditure)*

PERIOD	AMOUNT
2021-2025	\$7,592,210
2026-2030	\$9,461,275
2031-2040	\$26,483,541
2041-2050	\$41,128,130
Total	\$84,665,156

There are numerous bicycle and pedestrian improvement projects that have funding already allocated within the DSTIP. These committed projects primarily include sidewalk construction and multi-use pathways. A list of committed projects is included in Table 9-10.

Chapter 5 includes a list of recommended bicycle and pedestrian facilities in priority order. The RIC MPO should continue to prioritize bicycle and pedestrian recommendations and carry forward these projects into implementation. When feasible, bicycle and pedestrian projects should be considered as part of recommended roadway improvements.

*Table 9-10: Committed Bicycle and Pedestrian STIP Projects, 2021-2025*

PROJECT DESCRIPTION	ANTICIPATED COSTS
Charleston Washington St Streetscape	\$254,772
Grosscup Ave Sidewalk	\$30,000
Charleston Sidewalks South	\$156,000

PROJECT DESCRIPTION	ANTICIPATED COSTS
Dunbar 12 <sup>th</sup> St Streetscape	\$332,834
Dunbar 12 <sup>th</sup> Streetscape 2014	\$201,344
St Albans Streetscape 2014	\$241,000
Grosscup Ave Sidewalk	\$75,000
Hatfield McCoy Kanawha Construct Trail System	\$100,000
Hurricane Sidewalks	\$276,000
Great Teays Blvd Sidewalk	\$340,000
Rhoda High School Ave 3 <sup>rd</sup>	\$88,800
Hurricane Main St Sidewalks	\$116,000
Teays Valley Sidewalks 2015	\$300,000
Winfield Downtown Streetscape	\$294,650

## Conclusion

The RIC MTP provides a vision for transportation that considers existing and future needs and priorities for all modes of travel. The creation of a financially constrained plan helps ensure that prioritized projects can be reasonably funded and implemented for the duration of the long range plan. The RIC MTP has identified numerous transportation needs throughout the region, not all of which can be funded using the currently projected revenue streams. As projects move into funding and implementation, the RIC MPO will collaborate with WVDOT and FHWA to determine how to best advance the recommended projects of this plan. The MPO will continue to opportunistically seek new funding sources. The project priorities should be reassessed through future planning cycles as new data becomes available. This dynamic process will provide guidance for the region to effectively address its transportation needs.