



Chapter 9: Financial Plan

Beginning with the Intermodal Surface Transportation Efficiency Act (ISTEA), signed in 1991, Metropolitan Transportation Plans have been required to demonstrate “fiscal constraint” by adhering to an improvement projects budget represented by estimated future available funding. This fiscal constraint prompts regional leaders to prioritize the projects on their “wish list” or vision plan and identify those projects that can realistically be funded. This approach brings a reality check to both regional project lists and air quality analysis. Chapter 9 examines the financial plan, highlighting anticipated highway improvement project revenue. The chapter provides a year-of-expenditure analysis, illustrating that anticipated future revenue will offset future project costs.

Transportation Funding Analysis

Federal planning regulations require the MTP to present a reasonable projection of future available transportation funds, and this funding projection must first account for system maintenance costs. Given that the West Virginia Division of Highways (WVDOH) maintains the vast majority of the public roadway system outside of municipalities, the WVDOH provides the funding forecasts to all MPOs in the state upon which to base MTP assumptions regarding future available funds. The WVDOH generates a projection of total available future funding based on historic revenues (13 years) and then identifies the share of projected revenues that will be needed for “non-improvement” categories including administration, routine maintenance, equipment, ear marks, etc. The share of historic funding attributed to Appalachian Development Highway System expansion, Federal Aid (FA) 3R Resurfacing, FA Bond Funds and all non-federal program categories was excluded from the funds projected to be available for system expansion at the MPO level. Through this process, which is documented in

Calendar Year 2013 Long Range Revenue Estimates for use in MPO Long Range Transportation Plans (WVDOH, March 2013), the WVDOH developed statewide revenue estimates according to the following parameters:

- Total revenue for the State Road Fund during the 25-year period will equal \$24.2 billion in 2012 dollars.
- Non-improvement activities are estimated to cost \$483.2 million annually during the forecast period.
- Based on historical programming information, only 23.0% of the funding available for projects would be considered true “improvements” statewide.
- Based on guidance provided in the FY 2013 STIP document, it is assumed that earmarks will equal \$0 per year throughout the forecast period.
- Based on the averages of VMT, Highway Mileage, Population, and Historical Funding, the representative funding split between MPO and Non-MPO areas of the state is 46.2% and 53.6%, respectively.

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When these factors are considered, little funding remains for true transportation improvements. Specifically, the statewide funds projected to be available for true “improvements” for MPO planning purposes account for only \$2.8 billion or 11.6% of all projected revenue.

Projected system expansion funds are allocated to the MPOs on the basis of historical share of expansion funds. In the case of the Kanawha-Putnam region, this share is 13.3%. The projected system expansion funds are the basis for the fiscal constraint for the MTP, given that they are prepared in a manner that accounts for system maintenance first, as required by federal planning guidelines.

The financial projections are prepared for the years outside of the timeframe of committed transportation programming in the existing Statewide Transportation Improvement Program (STIP). The timeframe of the financial projections is 2014 to 2038. Given that some major projects are included but not fully funded within the years of the STIP (2013-2018), the fiscal constraint analysis accounts for the completion of these projects first, and then assumes that remaining funds projected for the 2019-2040 timeframe are available for additional projects. With respect to the major ongoing projects, the fiscal constraint analysis accounts for the Jefferson Road and I-64 improvements that are financed outside of the TIP period. Pursuant to this methodology and in collaboration with WVDOH, the study team deducted \$28.3 million

(2013 dollars) from anticipated long range funding to account for the anticipated revenue vehicle bond repayment on the Jefferson Road widening project. Similarly, the study team deducted \$25.4 million (2013 dollars) to account for I-64 improvements, which are scheduled to occur in 2019.

Federal regulations also require that the fiscally constrained analysis incorporate inflation, or reflect “year of expenditure” forecasts for both revenue and cost. West Virginia’s forecasts were prepared in constant 2012 dollars, but a long range inflation rate of 4.3% annually is recommended for use in year-of-expenditure analysis. Since the current long range estimate of inflation is 4.3%, revenues are estimated to grow at that rate annually to maintain purchasing power. These forecasts translate to approximately \$14.9 million (2012 dollars) annually for the Kanawha-Putnam transportation system expansion funds. Finally, the study team inflated anticipated revenues in efforts to capture 2039 and 2040 since the WVDOT forecasts did not extend beyond 2038.

The study team developed project costs through agency collaboration, industry expertise, and estimates from prior studies. With respect to the latter, the study team inflated the previous estimates to 2013 dollars, using a 4.3% annual inflation rate. This rate was derived from the WVDOT Blended Construction Price Index.

In efforts to compare anticipated costs and revenues, the study team calculated the total cost for all projects. It was immediately evident that the expected revenues would not cover all project costs, particularly given the magnitude of several projects. For example, the Northern Connector (KC-U2) will cost approximately \$433.3 million – more than the entire revenues for the long range transportation plan period (2019 to 2040). Even without the Northern Connector, the expected revenues could not accommodate all of the remaining projects.

The study team utilized an online public input survey (MetroQuest, Phase II) and a robust prioritization analysis to help refine the project list and ensure financial responsibility. The results indicated lower priority for several of the more expensive projects: the Institute Connector (\$87.4 million), the I-64 widening from Cabell County to Cow Creek Road (\$141.1 million), and the Northern Connector. In fact, the Institute Connector ranked 17th (out of 20) in the public input survey, while the I-64 widening (PC-U1) ranked second to last – trailing only the Northern Connector. These three projects, while potentially reducing



MetroQuest, an online public input survey, complemented the prioritization analysis in helping refine the project list.

delay in high-traffic locations, also ranked in the lower half of all projects during the prioritization analysis. The study team, relying on public input, prioritization metrics, and inherent financial constraints, ultimately chose to designate these projects as “unfunded” vision projects, and in some cases, recommended additional study to determine the specific impacts (social and environmental) of these projects. Without KC-U1, KC-U2, and PC-U1, the remaining projects were within budget or “fiscally constrained.” In other words, the anticipated revenues were high enough to cover the expected costs, both in 2013 dollars and in years of expenditure.

The Metro Mobility 2040 study team pursued the following course when finalizing the year of expenditure analysis. First, the study team divided the MTP period into four phases. The first period reflects the STIP time frame, which primarily covers those projects that are existing or have funding committed for them (E+C). The STIP project costs do not count towards the anticipated MTP revenues, with the exception of those projects whose construction extends beyond 2018 (for example, the Jefferson Road and I-64 widening). As described in the previous revenue discussion, the study team deducted those E+C project costs (\$28.3 million for Jefferson Road and \$25.4 million for I-64 improvements) from the total fiscally constrained budget. Table 20 reflects these deductions. The remaining time periods are used to delineate various phases of the metropolitan transportation plan (2019-2026, 2027-2033, and 2034-2040).

Once the time periods were established, the study team turned to the prioritization results to help determine the potential phasing of the fiscally constrained projects. To the greatest extent possible, the study team incorporated projects based on their relative prioritization scores. In general, the study team awarded earlier construction dates to the higher scoring projects. This proved to be a challenge given that cost and revenue should approximately match up within each respective time period. As a result, the anticipated funding for the earlier time periods could not sufficiently accommodate several of those projects that were both high scoring and expensive (for example, KC-6 and PC-1). The methodology previously discussed helped to produce a fiscally constrained plan, both in 2013 dollars and year of expenditure dollars. Table 20 shows the costs and revenues (in year of expenditure) for the Kanawha-Putnam region.



Key steps in the “Year of Expenditure” analysis.

TABLE 20: WVDOH REVENUE ESTIMATES (2013-2040)

Time Period	Project ID	Facility	Prioritization Rank	2013 Dollars		Year of Expenditure	
				Total Anticipated Revenue (2013 \$)	Project Cost (2013 \$)	**Total Anticipated Revenue (Nominal \$)	**Anticipated Costs (Nominal \$)
TIP (2013 to 2018)	EC4,EC5 (E+C)	Widen Jefferson Road	N/A (E+C)	*Deduction	\$28.3M	Deduction	\$42.2M
	P7 (E+C)	Widen I-64 from US 35 to WV 25	N/A (E+C)	*Deduction	\$25.4M	Deduction	\$37.9M
2019 to 2026	KC-5	US 119 (Corridor G)	1		\$34.7M		\$51.8M
	KC-4	US 119 (Corridor G) - build before KC-5	2		\$5.6M		\$8.3M
	KC-2	Cross Lanes - WV 622, WV 62 improvements	3	\$70.5M	\$4.7M	\$106.1M	\$7.0M
	PC-5	Teays Valley area improvements	4	*(Includes E+C deductions)	\$12.9M	(Includes E+C deductions)	\$19.2M
	PC-6	Scott Depot area improvements	5		\$1.3M		\$1.9M
	KC-1	St. Albans - 3rd Street Underpass	8		\$9.6M		\$14.3M
	PC-7	Nitro - WV 25 (1st Avenue)	11		\$2.1M		\$3.2M
	KC-3	WV 62 (West Washington Street)	18		\$.6M		\$1.0M
2027 to 2033	KC-6	US 119 (Corridor G)	6		\$24.9M		\$51.0M
	PC-3	Interstate 64	9		\$29.6M		\$60.7M
	PC-4	Hurricane area improvements	13	\$108.6M	\$1.0M	\$223.4M	\$2.1M
	KC-8A	US 60 (Dupont Avenue)	16		\$31.3M		\$64.1M
	PC-2	Winfield - WV 817 widening	17		\$5.7M		\$11.7M
	KC-8B	US 60 - spot improvements	19		\$14.4M		\$29.5M
2034 to 2040	PC-1	Buffalo - New US 35	7		\$98.4M		\$271.1M
	PC-8A	WV 62/WV 25 to Dairy Road	15	\$108.6M	\$1.6M	\$300.2M	\$4.5M
	PC-8B	WV 62; Poca limits to Heizer Creek Rd.	15		\$1.6M		\$4.5M
	KC-7	WV 94 (Lens Creek Road)	21		\$4.7M		\$13.0M
Total Revenues and Costs (including E+C deductions)				\$287.7M	\$284.6M	\$629.7M	\$618.7M

* Notes: The study team deducted \$28.3 million (\$2013 \$) from revenues to account for bond repayment on Jefferson Road widening project and deducted \$25.4 million (2013 \$) for I-64 improvements.

** The study team aggregated the expected revenues and costs by time period since some projects require several years of planning, engineering, and construction. The study team aggregated revenues using the WVDOH projections. The study team aggregated costs by inflating the project costs by the median inflation rates for each time period.



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