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# CHAPTER 1: GENERAL OVERVIEW OF THE TIP

The Delaware Valley Regional Planning Commission (DVRPC) is pleased to present the DVRPC FY2017 Transportation Improvement Program (TIP) for the Pennsylvania portion of the region (FY2017 to FY2020). DVRPC and its member governments have worked diligently to prepare a program of projects that responds to the needs of the region and at the same time complies with federal and state policies.

The DVRPC FY2017 TIP for Pennsylvania contains almost 450 projects (including the Interstate Management Program), totaling over \$5.3 billion for the phases to be advanced during the next four years, an average of over \$1.32 billion per year. Programmed funds include \$2 billion for projects primarily addressing the non-interstate highway system, and \$578 million for projects addressing the Interstate Management Program, resulting in an overall four-year total for the Highway Program of over \$2.5 billion. Additionally, there is a \$2.8 billion Transit Program for the Southeastern Pennsylvania Transportation Authority (SEPTA), Pottstown Area Rapid Transit (PART), and the Pennsylvania Department of Transportation (PennDOT). Chapter 2 presents financial summaries of these programs.

The board resolutions, see Appendix A, will certify that the DVRPC FY2017 TIP for Pennsylvania will meet various federal requirements pertaining to MPOs, the Clean Air Act Amendments, conformity, and the planning process.

The DVRPC FY2017 TIP for Pennsylvania meets the federal requirements of being financially constrained to a level of funding that is expected to be available to the region, as established in the financial guidance provided by PennDOT. See Appendix B for further details on this guidance.

## THE TIP AND FEDERAL REQUIREMENTS

The TIP is a requirement of federal transportation legislation, most recently, the Fixing America's Surface Transportation Act (FAST Act), or Public Law (P.L.) 114-94. The FAST Act was signed into law on December 4, 2015 and will expire on September 30, 2020. The FAST Act is the first federal law in over ten years to provide long-term funding certainty for surface transportation, after multiple extensions of the Moving Ahead for Progress in the 21st Century Act (MAP-21) which began on October 1, 2012 and originally was set to expire on September 31, 2014. The FAST Act built on the initiatives established in MAP-21, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the Transportation Equity Act for the 21st Century (TEA-21), and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Transportation investment has been prescribed in a balanced approach through a guaranteed commitment to highways and bridges, public transit, safety, intermodal projects, and advanced technologies, such as Intelligent Transportation Systems.

## WHAT THIS TIP DOCUMENT INCLUDES

The complete TIP document has been divided into multiple sections. Included is a general overview of the TIP and the TIP development process, intended to familiarize you with what the TIP is and is not, how it was developed, and what can be expected for projects in the TIP. The document also contains various summaries of the Pennsylvania programs, a description of the TIP public involvement process, including issues relating to environmental justice, an explanation of the mapping application and project listings, and codes and abbreviations included in the document. This reference information is followed by the project listings themselves, Competitive Programs section, and Major Project Status Report.

At the end of the document, there are four appendices: (a) Board Resolutions; (b) Financial Guidance used in developing the program, including the PennDOT Investment Plan; (c) Memorandum of Understanding on Procedures to Amend and Modify the TIP; (d) DVRPC TIP Project Benefit Criteria;

There is also an addendum, which is a companion document. This document contains four additional appendices: (e) PennDOT's General and Procedural Guidance, (f) SEPTA's Financial Capacity Analysis, (g) Executive Summary of the Documentation of the Conformity Finding, and (h) Summary of Public Involvement Process, Index of Comments, Original Public Comments, Responses to Public Comments, List of Recommended Changes, Public Comment Outreach Documentation, the Draft Highlights of the FY2017 Draft TIP for Pennsylvania, a copy of a letter sent to the Tribal Nations indicating that they can view the Draft TIP during the Public Comment period, and Proof of Publication.

## ACCESSING THE TIP VIA VARIOUS TECHNOLOGIES

### The World Wide Web

The TIP is found on the DVRPC website. You can easily search for the FY2017 TIP for Pennsylvania, as well previous TIPs. The website includes an interactive method for displaying maps and project listings, as well as a way to submit comments during the public comment period. Using Google Maps as a base, projects can be located using either street grid or aerial views. To use the DVRPC TIP website, go to [www.dvrpc.org/TIP](http://www.dvrpc.org/TIP).

### QR Code



DVRPC has provided the ability to use the QR Code (Quick Response Code) symbol to access the TIP website using your smartphone. Smartphone users with a QR Reader Application can open the application, point the camera at the QR Code symbol, and the smartphone will open up directly to the DVRPC TIP webpage. The DVRPC TIP QR Code symbol is shown to the left.

Scan the QR code with your smartphone for up-to-date information on DVRPC's TIP or visit [www.dvrpc.org/TIP](http://www.dvrpc.org/TIP).



## DVRPC Resource Center and Public Libraries

Hardcopies of the TIP are available at various public libraries that are listed in Table 10: Libraries Displaying the DVRPC FY2017 TIP for PA in this document and at the DVRPC Resource Center located on the 8th floor of 190 North Independence Mall West, Philadelphia, PA 19106.

## WHAT IS THE TIP?

**The TIP is the agreed-upon list of specific priority projects.** The TIP lists all projects that intend to use federal funds, along with non–federally funded projects that are regionally significant. The TIP represents the transportation improvement priorities of the region and is required by federal law, currently the FAST Act. The list is multimodal; in addition to the more traditional highway and public transit projects, it includes bicycle, pedestrian, and freight-related projects as well.

**The TIP shows estimated costs and schedules by project phase.** The TIP not only lists the specific projects but also documents the anticipated schedule and cost for each project phase (preliminary engineering, final design, right-of-way acquisition, and construction). Inclusion of a project phase in the TIP means that it is seriously expected to be implemented during the TIP time period.

**The TIP covers a four-year period by regulation, follows the federal fiscal year schedule, and is updated every other year.** Federal regulation requires that the TIP cover a minimum of four federal fiscal years of programming. DVRPC TIP documents for both Pennsylvania and New Jersey demonstrate a longer planning and programming horizon (12 years for PA; 10 years for NJ) in order to better understand expected resources and to provide the region with a more realistic timeframe for advancement of TIP projects as well as more realistic project costs. The funding presented in both TIP documents after the first four years is considered “Later Fiscal Year” funding, and per regulation is not technically available or able to be committed or authorized. The TIP operates on a federal fiscal year schedule that begins on October 1 of a given year and ends on September 30 of the following year. The Pennsylvania and New Jersey TIPs are updated every other year, in alternate years.

**The TIP may be changed after it is adopted.** Under the provisions of federal law and regulation, the approved TIP can be modified or amended in various ways in order to add new projects, delete projects, advance projects into the first year, and accommodate cost and phase-of-work changes or major scope changes to a project. The criteria and procedures for changing the TIP are outlined in a Memorandum of Understanding (MOU) included as Appendix C in this document.

**The TIP is financially constrained.** The list of projects in the TIP must be financially constrained to the amount of funds that are expected to be available. In order to add projects to the TIP, others must be deferred, or additional funding to the region must be identified. As a result, the TIP is not a wish list; competition between projects for a spot on the TIP clearly exists. The financial guidance used to develop each of the programs is included as Appendix B in this document.

**The TIP is authorization to seek funding.** A project's presence in the TIP represents a critical step in the authorization of funding for a project. It does not, however, represent a commitment of funds, an obligation to fund, or a grant of funds.

**The TIP is not a final schedule of project implementation.** The timeframe shown in the TIP is the best estimate at the time of TIP development, which ranges six to nine months prior to the beginning of the first fiscal year of the TIP period. Projects quite often cannot maintain that schedule and are reprogrammed to later years.

**The TIP does not guarantee project implementation.** Unforeseen problems may arise, such as engineering obstacles, environmental permit conflicts, changes in priorities, and additional financial constraints. These problems can slow a project and cause it to be postponed or even dropped from further consideration. It can also increase the project's overall cost.

## Regional Consensus

The production of the TIP is the culmination of the region's transportation planning process and represents a consensus among state and regional officials as to what near-term improvements to pursue. Consensus is crucial because the federal and state governments want assurance that all interested parties have participated in developing the priorities prior to committing significant sums of money. A project's inclusion in the TIP signifies regional agreement on the priority of the project and establishes its eligibility for federal funding.

## How Does the TIP Relate to the Long-Range Plan?

Regionally significant projects must be drawn from the region's Long-Range Plan, and all projects in the TIP must help implement the goals of the plan. The long-range plan, required by federal law, is the document that helps direct transportation and land-use decisions over a minimum 20-year horizon. The plan presents an extensive list of policies and strategies as well as the actions required to carry them out.

While all projects included in the TIP must be consistent with the long-range plan, projects that add capacity for single-occupant vehicles must meet further federal requirements in an air quality non-attainment region such as the Delaware Valley. These projects must result from the region's Congestion Management Process, which attempts to meet increasing travel demand through non-capacity-adding strategies, where practical. All projects included in the TIP have met this requirement.

The TIP represents the translation of recommendations from DVRPC's latest Long-Range Plan into a short-term program of improvements. For further information about the policies and strategies of the currently adopted Long-Range Plan, visit [www.dvrpc.org/LongRangePlan](http://www.dvrpc.org/LongRangePlan).

## How Does the TIP Relate to the Clean Air Act?

The Clean Air Act Amendments of 1990 require that all transportation plans, programs, and projects conform to the purpose of state implementation plans (SIPs) to attain national air quality standards. A TIP is said to conform if it is drawn from a conforming plan, as determined

by an emissions analysis. The projects in the DVRPC FY2017 TIP for Pennsylvania are a subset of the regionally significant projects contained in the *Connections 2040: Plan for Greater Philadelphia* Long-Range Plan.

The TIP and Plan are tested for conformity and meet all requirements, including the critical test that volatile organic compounds (VOCs), oxides of nitrogen (NOx), carbon monoxide (CO), and fine particulate matter (PM<sub>2.5</sub>) emissions are less than any applicable budgets or baseline established for all analysis years. The Executive Summary of the Documentation of the Conformity Finding is included as Appendix G in in the Addendum. A complete description of the conformity procedures can be found in the *Connections 2040: Plan for Greater Philadelphia* Long-Range Plan and on DVRPC's website, [www.dvrpc.org/AirQuality/Conformity](http://www.dvrpc.org/AirQuality/Conformity).

### How is the TIP Funded?

The major funding source for the projects in the TIP is the FAST Act, which is administered through the U.S. Department of Transportation's Federal Highway Administration and Federal Transit Administration. In addition, funds are made available by the states of Pennsylvania and New Jersey to match federal funding in varying ratios and to provide 100 percent financing for selected projects. Local counties, municipalities, and private developers or toll authorities, as well as transit operators, may also participate in providing matching funds for federal aid. New funding sources and innovative funding techniques are constantly being sought.

### Who are the Players?

Various agencies directly participate in the TIP development process. They include member governments, operating agencies, and state and federal agencies. Municipalities within the region participate through their respective county governments. Countless other groups, the business community, and the general public become involved through the DVRPC public participation process in addition to their involvement at the municipal and county level. The multiplicity of jurisdictions and agencies in the region necessitates a high degree of coordination during the TIP development process by DVRPC.

## HOW DOES A PROJECT GET ON THE TIP?

Securing a spot on the TIP is not a simple task. Sometimes years of pre-implementation research and public input precede a project's inclusion on the TIP. Although there are several ways in which a project can get on the TIP, the most typical course is described here. First, a particular transportation need is identified. In many cases, municipal planners and engineers generate lists of potential improvements based on their needs, analyses, and citizen complaints and inquiries. Since only DVRPC member agencies are allowed to formally submit candidate TIP projects, the local proposals are, in turn, reviewed at the county or major city level, often in consultation with locally based state engineers. If the county agrees that a particular idea has merit, it may decide to act as the project sponsor and work toward refining the initial idea and developing clear project specifications. Project proposals are also generated at the county and state level in much the same way.

Once each county and operating agency has developed its own lists of projects and priorities, they are brought to DVRPC, where the Regional Technical Committee (RTC) reviews them. The RTC seeks to ensure that the highest priorities of the region are being addressed within the limits of available resources and to assure consistency among projects and with the region's goals. The RTC is composed of state, county, and city planners; transit operators; citizen representatives from the Public Participation Task Force; and transportation-related interest groups and makes recommendations to the DVRPC Board.

Finally, the DVRPC Board provides the forum through which the elected officials of the region's counties and major cities and representatives of the states and operating agencies determine each year's TIP projects. After considering the recommendations of the RTC and the comments received from the public, the Board determines the final list of projects to be included in the TIP and adopts it as its selection of projects to be advanced.

### **What Happens to a Project Once it is on the TIP?**

Once a project is on the TIP, a considerable amount of work remains to be done to bring it to completion. The designated lead agency is responsible for ensuring that its project moves forward. The lead agency, in most cases, is the state DOT or transit operator and, in some cases, a county or city.

Highway projects typically proceed in phases (preliminary engineering, final design, right-of-way acquisition, construction). Each phase is included in the TIP, showing funding and anticipated schedule. Transit projects are programmed in the TIP according to the annual grant application cycle under which the funds will be sought. Ideally, a project will advance according to its programmed schedule. In reality, however, projects are often delayed due to unforeseen obstacles, such as environmental issues and community concerns. Tracking each project's progress is important in order to identify and resolve delays as soon as possible and to reallocate resources as necessary.

Once federal funds have been made available (termed federally "authorized") for a project's final construction phase, it will no longer appear in future TIP documents (even though the project may not yet be constructed or completed).

### **Why is Municipal and Interest Group Involvement Important?**

DVRPC believes that a collaborative process between all levels of government and the public and business communities will ensure that the best transportation program is produced. This type of process is one in which state, county, and local governments and transportation providers become partners in the planning and programming process, and interest groups and community leaders have a voice. For this reason, planning efforts for the region's capital improvements exhibit a "bottom-up" approach within the context of a regional plan that gives a top-down perspective.

## What Ways Can the Public Participate?

Public participation occurs during all stages of a project's development. Letters of concern to municipal and county officials and transit agency managers are one of the most effective starting points. As local investigations begin, public input may be provided at formal meetings or informal sessions with local and county planning boards and staff. Citizens are also asked to participate in special task forces to review transportation improvement concepts at the corridor, county, and regional level. Finally, once a project is on the TIP and it enters the preliminary engineering phase, the detailed environmental review process affords yet another opportunity for the public to offer input.

DVRPC provides various opportunities for the public to review its planning and programming activities. Representatives from the private sector, social service entities, environmental organizations, partnering agencies, and citizens are encouraged to comment on DVRPC's policies and plans. To this end, an online commenting feature is available for Board action items. The Commission's website provides a wide array of information and interactive mapping. Materials are available in hard copy at DVRPC's Resource Center, as well as at various libraries throughout the region. Project-specific open houses and listening sessions are held to inform the public and gather input.

Specifically, the public and other interest groups had the opportunity to comment on the Draft DVRPC FY2017 TIP for Pennsylvania before it was officially adopted by the DVRPC Board. DVRPC conducted a 30+-day public comment period and held one open-house meeting within that period to allow the public an opportunity to present comments about the process and projects to state, county, transit, and DVRPC staff. Copies of the Draft DVRPC FY2017 TIP were made available online, at the DVRPC resource center, as well as various public libraries that are listed in Table 10: Libraries Displaying the DVRPC FY2017 TIP for PA. The TIP documents are also viewable on DVRPC's website at [www.dvrpc.org/TIP](http://www.dvrpc.org/TIP).

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## CHAPTER 2: PROGRAM SUMMARIES

The DVRPC FY2017 TIP for Pennsylvania contains almost 450 projects (including the Interstate Management Program), totaling over \$5.3 billion for the phases to be advanced during the next four years, an average of over \$1.32 billion per year. Programmed funds include \$2 billion for projects primarily addressing the non-interstate highway system, and \$578 million for projects addressing the Interstate Management Program, resulting in an overall four-year total for the Highway Program of over \$2.5 billion. Additionally, there is a \$2.8 billion Transit Program for the Southeastern Pennsylvania Transportation Authority (SEPTA), Pottstown Area Rapid Transit (PART), and the Pennsylvania Department of Transportation (PennDOT) Bureau of Public Transit. Table 1 presents a funding summary for the DVRPC region by county and transit operator for each of the four TIP years in Pennsylvania, which includes federal, state, local and the Pennsylvania Statewide Interstate Management Program (IMP) funding for the DVRPC region. Tables 2 and 3 provide a breakdown of various state and federal funding sources and their distributions, including local matches.

Table 1: Cost Summary by County and Transit Operator in Pennsylvania (\$000)

	FY2017	FY2018	FY2019	FY2020	4-YEAR TOTAL (FY17–20)
<b>HIGHWAY PROGRAM</b>					
Bucks County	135,940	74,276	61,217	59,555	<b>330,988</b>
Chester County	35,745	52,491	37,567	86,335	<b>212,138</b>
Delaware County	84,534	69,858	42,932	85,954	<b>283,278</b>
Montgomery County	113,700	86,849	99,393	80,002	<b>379,944</b>
Philadelphia County	120,172	131,893	135,473	78,239	<b>465,777</b>
Various Counties	83,282	88,454	75,710	82,720	<b>330,166</b>
<b>Regional Highway Program</b>	<b>573,373</b>	<b>503,821</b>	<b>452,292</b>	<b>472,805</b>	<b>2,002,291</b>
Interstate – Montgomery County	5,504	9,496	163	4,190	<b>19,353</b>
Interstate – Philadelphia County	144,344	160,636	99,818	153,838	<b>558,636</b>
<b>Interstate Program Subtotal Cost</b>	<b>149,848</b>	<b>170,132</b>	<b>99,981</b>	<b>158,028</b>	<b>577,989</b>
Regional Highway and Interstate Program Total Cost	<b>723,221</b>	<b>673,953</b>	<b>552,273</b>	<b>630,833</b>	<b>2,580,280</b>
<b>TRANSIT PROGRAM</b>					
SEPTA	600,571	758,008	712,496	667,065	<b>2,738,140</b>
Pottstown Area Rapid Transit	2,240	3,635	2,235	2,235	<b>10,345</b>
PennDOT Bureau of Public Transit	2,750	1,500	55,000	0	<b>59,250</b>
<b>Transit Program Subtotal Cost</b>	<b>605,561</b>	<b>763,143</b>	<b>769,731</b>	<b>669,300</b>	<b>2,807,735</b>
<b>GRAND TOTAL COST – 4-YEAR TIP</b>	<b>1,328,782</b>	<b>1,437,096</b>	<b>1,322,004</b>	<b>1,300,133</b>	<b>5,388,015</b>

SOURCE: DVRPC. 2016

Table 2: Cost by TIP and Interstate Funding Category (\$000)<sup>1</sup>

FUND TYPE	FY2017	FY2018	FY2019	FY2020	4-YEAR TOTAL (FY17–20)	LFY 2021-2024	LFY 2025-2028	TOTAL LFYS 2021-2028
<b>DVRPC REGIONAL HIGHWAY PROGRAM</b>								
Bridge State	38,462	37,967	35,163	32,148	<b>143,740</b>	129,135	128,575	<b>257,710</b>
ARLE	6,842	0	0	0	<b>6,842</b>	0	0	<b>0</b>
MTF	147	0	147	0	<b>294</b>	0	0	<b>0</b>
Highway State	76,501	81,138	74,487	67,590	<b>299,716</b>	270,354	270,343	<b>540,697</b>
A-073 (GLG)	3,013	2,411	1,765	0	<b>7,189</b>	0	0	<b>0</b>
Bridge Off	12,244	12,244	12,244	12,244	<b>48,976</b>	48,976	48,976	<b>97,952</b>
CAQ	30,020	30,754	31,475	32,289	<b>124,538</b>	129,156	129,156	<b>258,312</b>
TIIF	3,400	4,000	0	0	<b>7,400</b>	0	0	<b>0</b>
FLEX	17,083	17,083	17,083	17,083	<b>68,332</b>	68,332	68,332	<b>136,664</b>
HCB	0	64	1,288	0	<b>1,352</b>	0	0	<b>0</b>
HSIP	12,754	13,208	13,653	14,159	<b>53,774</b>	56,636	56,636	<b>113,272</b>
LOC	21,917	20,314	16,879	10,424	<b>69,534</b>	31,252	348	<b>31,600</b>
NHPP	125,595	129,752	134,346	139,081	<b>528,774</b>	556,324	556,324	<b>1,112,648</b>
Other	961	475	0	0	<b>1,436</b>	0	0	<b>0</b>
RRX	774	673	427	536	<b>2,410</b>	315	0	<b>315</b>
sHSIP	10,499	6,284	0	0	<b>16,783</b>	0	0	<b>0</b>
SPK-NHPP	0	0	0	21,000	<b>21,000</b>	159,000	0	<b>159,000</b>
SRTSF	1,187	1,000	0	0	<b>2,187</b>	0	0	<b>0</b>
STP	26,964	27,400	27,743	28,248	<b>110,355</b>	112,992	112,992	<b>225,984</b>
STU	67,597	70,380	73,071	76,160	<b>287,208</b>	304,640	304,640	<b>609,280</b>
SXF	14,389	2,569	8,589	17,911	<b>43,458</b>	0	0	<b>0</b>
TAP	6,471	0	0	0	<b>6,471</b>	0	0	<b>0</b>
TAU	3,857	3,932	3,932	3,932	<b>15,653</b>	15,728	15,728	<b>31,456</b>
TIGER	0	10,265	0	0	<b>10,265</b>	0	0	<b>0</b>
Toll	0	0	0	0	<b>0</b>	0	0	<b>0</b>
TPK	92,696	31,908	0	0	<b>124,604</b>	0	0	<b>0</b>
Highway Subtotal	<b>573,373</b>	<b>503,821</b>	<b>452,292</b>	<b>472,805</b>	<b>2,002,291</b>	<b>1,882,840</b>	<b>1,692,050</b>	<b>3,574,890</b>
<b>INTERSTATE MANAGEMENT PROGRAM IN DVRPC REGION</b>								
B-State-IM	6,182	5,951	3,082	6,446	<b>21,661</b>	15,265	5,374	<b>20,639</b>
H-State-IM	21,705	24,674	26,768	12,744	<b>85,891</b>	52,730	23,614	<b>76,344</b>
NHPP-IM	117,461	131,007	70,131	138,838	<b>457,437</b>	628,251	672,775	<b>1,301,026</b>
SPK-NHPP	4,500	8,500	0	0	<b>13,000</b>	100,800	0	<b>100,800</b>
IMP Subtotal	<b>149,848</b>	<b>170,132</b>	<b>99,981</b>	<b>158,028</b>	<b>577,989</b>	<b>797,046</b>	<b>701,763</b>	<b>1,498,809</b>
Highway Grand Total	<b>723,221</b>	<b>673,953</b>	<b>552,273</b>	<b>630,833</b>	<b>2,580,280</b>	<b>2,679,886</b>	<b>2,393,813</b>	<b>5,073,699</b>

SOURCE: DVRPC. 2016

<sup>1</sup> The TIP fund categories are explained in Chapter 5: Codes and Abbreviations Overview, beginning on page 37. The funds that are highlighted in green are state transportation funds; the funds highlighted in blue are FHWA funds; the funds highlighted in purple are local/other funds. See pie chart titled Figure 2: Cost Summary by Funding Source in Pennsylvania (\$000) on page 12.



Table 3: Cost by Transit TIP Funding Category (\$000)<sup>2</sup>

FUND TYPE	FY2017	FY2018	FY2019	FY2020	4-YEAR TOTAL (FY17–20)	LFY 2021-2024	LFY 2025-2028	TOTAL LFYS 2021-2028
<b>SEPTA - TRANSIT PROGRAM</b>								
1514	293,944	322,411	322,450	329,854	1,268,659	1,356,769	1,383,247	2,740,016
5307	102,327	104,483	106,711	108,986	422,507	435,944	435,944	871,888
5324	19,702	0	0	0	19,702	0	0	0
5337	117,903	119,938	122,001	124,099	483,941	496,396	496,396	992,792
5339	7,259	7,451	7,649	7,852	30,211	31,408	31,408	62,816
LOC	26,550	20,926	20,925	20,918	89,319	83,633	83,602	167,235
Other	0	150,000	100,000	50,000	300,000	0	0	0
PTAF 44	32,886	32,799	32,760	25,356	123,801	64,071	37,591	101,662
<b>SEPTA Subtotal</b>	<b>600,571</b>	<b>758,008</b>	<b>712,496</b>	<b>667,065</b>	<b>2,738,140</b>	<b>2,468,221</b>	<b>2,468,188</b>	<b>4,936,409</b>
<b>PART- TRANSIT PROGRAM</b>								
1513	1,100	1,150	1,150	1,150	4,550	1,150	0	1,150
1517	100	50	50	50	250	50	0	50
5307	800	2,350	950	950	5,050	970	0	970
LOC	90	85	85	85	345	85	0	85
PTAF 44	150	0	0	0	150	0	0	0
<b>PART Subtotal</b>	<b>2,240</b>	<b>3,635</b>	<b>2,235</b>	<b>2,235</b>	<b>10,345</b>	<b>2,255</b>	<b>0</b>	<b>2,255</b>
<b>PENNDOT- TRANSIT PROGRAM</b>								
341	550	300	11,000	0	11,850	0	0	0
5307	2,200	1,200	18,000	0	21,400	0	0	0
5337	0	0	26,000	0	26,000	0	0	0
<b>PennDOT Subtotal</b>	<b>2,750</b>	<b>1,500</b>	<b>55,000</b>	<b>0</b>	<b>59,250</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Transit Grand Total</b>	<b>605,561</b>	<b>763,143</b>	<b>769,731</b>	<b>669,300</b>	<b>2,807,735</b>	<b>2,470,476</b>	<b>2,468,188</b>	<b>4,938,664</b>

SOURCE: DVRPC. 2016

Table 4: Grand Total Cost 4-Year Highway and Transit Program (\$000)

PROGRAM	FY2017	FY2018	FY2019	FY2020	4-YEAR TOTAL (FY17–20)	LFY 2021-2024	LFY 2025-2028	TOTAL LFYS 2021-2028
<b>GRAND TOTAL COST – 4 YEAR HIGHWAY AND TRANSIT PROGRAM</b>								
Highway	723,221	673,953	552,273	630,833	2,580,280	2,679,886	2,393,813	5,073,699
Transit	605,561	763,143	769,731	669,300	2,807,735	2,470,476	2,468,188	4,938,664
<b>DVRPC Total</b>	<b>1,328,782</b>	<b>1,437,096</b>	<b>1,322,004</b>	<b>1,300,133</b>	<b>5,388,015</b>	<b>5,150,362</b>	<b>4,862,001</b>	<b>10,012,363</b>

SOURCE: DVRPC. 2016

<sup>2</sup> The TIP fund categories are explained in Chapter 5: Codes and Abbreviations Overview, beginning on page 37. The funds that are highlighted in green are state transportation funds; the funds highlighted in blue are FHWA funds; the funds highlighted in purple are local/other funds. See pie chart titled Figure 2: Cost Summary by Funding Source in Pennsylvania (\$000) on page 12.

Figure 1: Cost Summary by County and Transit Operator in Pennsylvania (\$000)

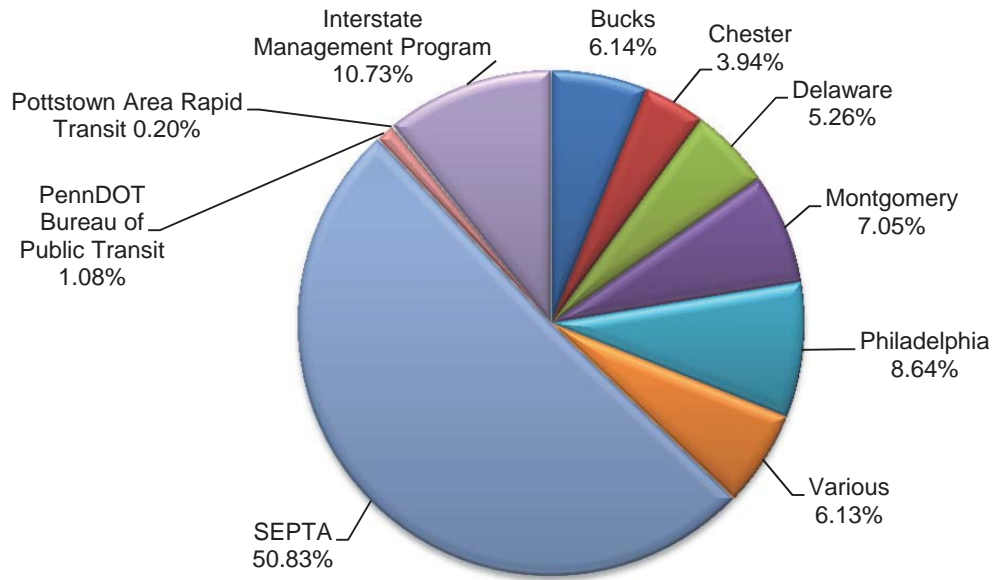
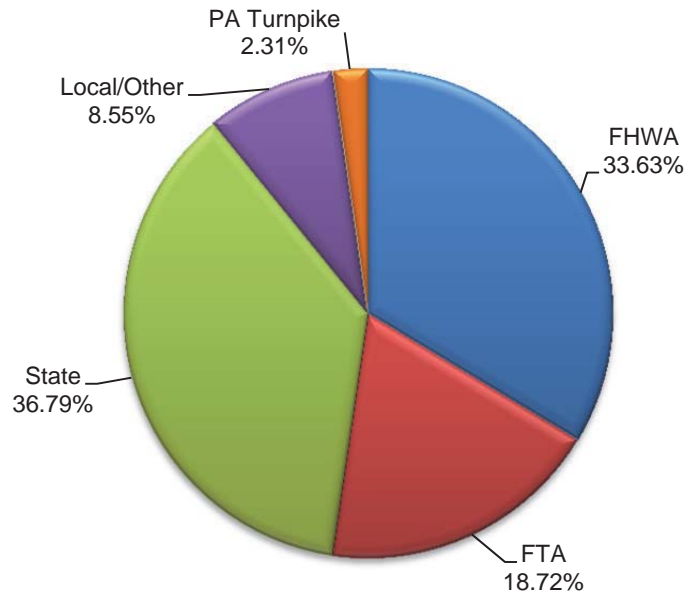


Figure 2: Cost Summary by Funding Source in Pennsylvania (\$000)



SOURCE: DVRPC. 2016

## PENNSYLVANIA ACT 89 AND FUNDING TO THE REGION

Act 89 of 2013 is the state of Pennsylvania's transportation funding bill that provides much-needed funding for the state's roads and bridges and transit systems. Act 89 was enacted to generate an additional \$2.3 billion annually by the fifth year of the program for the Commonwealth's highway, bridge, public transit, local government, port, aviation, and other intermodal infrastructure systems. Act 89 of 2013 eliminated the state retail gas tax paid at the pump starting January 1, 2014, and replaced it with an equivalent increase in the Oil Company Franchise Tax (OCFT). It also removed the cap on the OCFT in thirds over five years. The majority of the Act 89 funding is distributed as state highway funding (in addition to state bridge funding); however, state highway funds are flexible in use and can be used on a variety of infrastructure, including bridges if necessary. PennDOT is responsible for the third highest number of bridges in the nation and has high need in reducing the number of structurally deficient bridges.

Regarding funding to the Statewide Interstate Management Program (IMP), which is managed statewide, PennDOT's Financial Guidance (Appendix B) indicates that \$1,553,862,000 would be distributed (statewide) to projects in the IMP, over the four years FY2017 to FY2020. For projects programmed during the FY2017 to FY2020 time period, \$577,989,000, or 37 percent of IMP funds, have been distributed to the DVRPC region.

In addition to funds provided by the IMP, and according to the PennDOT Financial Guidance, which establishes base funding levels for the highway and transit programs, the DVRPC region receives close to 25 percent (\$1,610,064,000) of the \$6.5 billion in federal and state resources from the formula highway funds distributed to MPOs and RPOs in the state, and 62 percent (\$2,417,288,000) of \$3.8 billion in federal and state resources for the Transit Program. Overall, 37.5 percent (\$4,027,352,000) of \$10.3 billion in (highway and transit) federal and state resources for non-interstate funding over the four years (FY2017 to FY2020) of the STIP is allocated to the DVRPC region. For details, see PennDOT's Financial Guidance in Appendix B of this document, which reflects the region's core funding programs. These guidance numbers vary from actual programming levels, as seen in Table 1, due to a myriad of funds that are added to the TIP for earmarks, special funding programs, Pennsylvania Turnpike funding, discretionary awards, or awards from PennDOT statewide reserves.

## SEPTA EB-5 FUNDING

The transit portion of the DVRPC FY2017 TIP for Pennsylvania includes \$300 million of loan funding designated by fund code "OTH" or "Other." The funds will be provided through a loan agreement with the Delaware Valley Regional Center (DVRC), pursuant to the Employment Based Immigration-5th preference (EB-5) visa program administered by United States Citizenship and Immigration Services (USCIS).

The EB-5 visa program was created by the United States Congress in 1990 to stimulate the U.S. economy through job creation and capital investment by foreign investors. In 1992, Congress created the Immigrant Investor Program, also known as the Regional Center Program, which

sets aside EB-5 visas for participants who invest in commercial enterprises associated with regional centers approved by the USCIS based on proposals for promoting economic growth.

In January 2016, SEPTA entered into a loan agreement with DVRC that will be made available to SEPTA over a period of several years and will provide up to \$300 million to partially fund the capital projects identified in the table below. The loan is structured in such a way that funding can be used to support any or all of the five projects listed in the table below, at the funding level SEPTA chooses. The funding allocations programmed in the TIP are current estimates of how the funding will be used but is subject to change as these projects advance. The 5-year interest-only loan includes an option that allows SEPTA to repay the loan with cash, or through the issuance of municipal bonds. For the FY2017 TIP, SEPTA has assumed a repayment with municipal bonds with a 20-year amortization of principal. The debt service for the bonds is included in MPMS #60275. There are currently no outstanding borrowings under this loan agreement.

Table 5: SEPTA's EB-5 Funded Projects

MPMS #	Project	FY 2018	FY 2019	FY 2020	Total
60335	City Hall / 15 <sup>th</sup> Street Stations Rehabilitation	\$15,538,000	\$17,467,000	\$0	\$33,005,000
60636	Elwyn to Wawa Rail Restoration	\$30,462,000	\$12,533,000	\$15,000,000	\$57,995,000
60638	Regional Rail Car, Locomotive, and Trolley Acquisition	\$60,000,000	\$25,000,000	\$0	\$85,000,000
60651	Substations and Power Improvements	\$25,000,000	\$15,000,000	\$10,000,000	\$50,000,000
102569	Maintenance & Transportation Facilities- Frazer Yard Expansion	\$19,000,000	\$30,000,000	\$25,000,000	\$74,000,000
<b>Total</b>		<b>\$150,000,000</b>	<b>\$100,000,000</b>	<b>\$50,000,000</b>	<b>\$300,000,000</b>

## FINANCIAL CONSTRAINT

Toward the beginning of each TIP update, the state DOT develops estimated resources or "financial guidance" for use by DVRPC and the other MPOs and RPOs. The financial guidance establishes highway and transit funding levels that may be reasonably anticipated by the MPO over the TIP period from appropriate federal and state resources. Each region must develop its TIP within the funding levels established by this guidance, thus maintaining the "fiscal constraint" of the TIP. The guidance describes how each of the various federal and state varieties of funds are distributed to the regions. The PennDOT Financial Guidance is included in Appendix B. It should be noted that actual levels of federal and state transit funding are determined annually through the budget development and appropriations processes, so the amounts actually applied to projects during a given year will vary (generally lower) from what is shown in the TIP. Since the TIP has been developed according to the state guidance, it meets the federal requirement of being financially constrained.

The DVRPC FY2017 TIP for Pennsylvania makes information available for project costs beyond the formal four-year (FY2017 to FY2020) constrained period of the TIP. Project phases appear in these "Later Fiscal Years" (LFY) because it may take several years before the phase can advance due either to the technical effort that needs to be completed or to the funding constraints on the region. In any case, project costs that show in the TIP under "Later Fiscal Years" (FY2021 to FY2028) do not technically have available or committed funding and cannot be federally authorized since they fall outside of the four-year TIP period per federal regulation. However, in order to demonstrate a longer planning and programming horizon, to provide more realistic expectations and timeframes in which to expect advancement of TIP projects with more realistic costs, and to indicate a certain level of commitment to those projects by the region, the FY2017 TIP does show a financially constrained 12-year program from FY2017 to FY2028, using assumptions of funding levels that are currently available.

The Interstate Management Program (IMP), as part of the Pennsylvania Statewide Transportation Improvement Program (STIP), was created to proactively address the maintenance and reconstruction of the state's aging interstate infrastructure. An average of \$388 million per year (FY2017 to FY2020) will be used statewide, utilizing all federal National Highway Performance Program Funds that these miles/bridges represent, plus the appropriate state match. Those funds have been removed from what was previously allocated to the various regions throughout the state, but which are now pooled under the IMP. These funds are allocated statewide to specific projects. DVRPC has 21 projects in the region, totaling almost \$578 million, which is included in the IMP over the four years FY2017 to FY2020. Those highway projects, for I-95 in the City of Philadelphia and I-76 in Montgomery County, are listed in a separate Interstate Management Program section. The I-95/322 interchange in Delaware County is also included in the 12-year IMP in the third four years.

Federal regulations also require transit operators that receive federal funds for new capital facilities to prepare a Transit Financial Capacity Analysis showing the agency is capable of maintaining its existing operations, as well as take on the new capital projects and new services.

SEPTA certifies annually to its financial capacity as part of the Federal Transit Administration (FTA) Certifications and Assurances. In addition, the FTA conducts triennial reviews of SEPTA's compliance in 17 different areas, including Financial Management and Financial Capacity. The final report for the 2014 Triennial Review for SEPTA found no deficiencies with FTA requirements for Financial Management and Financial Capacity. This documentation is on file at the transit operators, as well as with the FTA. In addition, the complete and updated SEPTA Financial Capacity Analysis is included in this document (see Appendix F in the Addendum).

## PROJECT SELECTION AND EVALUATION PROCESS

The DVRPC TIP project selection process is consensus based, in combination with TIP project selection criteria that incorporate performance-based measures for new projects (see Appendix D for details on the TIP Project Benefit Criteria that addresses the FAST Act requirements and will further link to the goals of DVRPC's Long-Range Plan). At the beginning of the TIP update all project costs and schedules of existing projects were updated by PennDOT project managers and stakeholder subcommittee members. Subcommittee members reviewed projects and identified highest priorities. A series of subcommittee meetings were held, where costs and schedules were further reviewed and concerns were vetted and negotiated. New projects, and projects that were added back into the program after being on hold due to funding constraints, were evaluated using performance-based measures. A 12-year constrained programming horizon was developed for both the highway and transit programs. A constrained draft program was put out for a 30+-day public comment period, and the program, with recommended changes, was adopted by the DVRPC Board on July 28, 2016.

The DVRPC TIP Project Benefit Criteria proactively positions the region to address the FAST Act requirements and further links to the goals of the DVRPC Long-Range Plan. This effort considered all types of non-major roadway, transit, bike/pedestrian, preservation, operational improvement, and freight projects, and ultimately it establishes universal benefit criteria that can be used to evaluate both highway and transit projects, as well as projects in both the DVRPC Pennsylvania and New Jersey counties. For specific, large-scale, major regional Long-Range Plan projects or those using special fund categories, more specific project evaluation criteria will continue to be used. It is also important to note that the benefit criteria analysis is only one consideration in ultimate project selection. Local and regional priorities, asset management system rankings, public input, political support, geographic distribution, fund eligibility, project readiness, leveraging investments, and even working to ensure a variety of project types are all factors that play into consensus-based TIP project selection.

Only new TIP candidate projects went through the benefit evaluation process. Highway and bridge funded projects can also be screened via PennDOT's Linking Planning and NEPA (LPN) process, which can identify project readiness, community support, potential historic preservation, cultural resource, or environmental resource impacts. Transit agencies will screen projects internally before submitting them for more evaluation.

The following universal project benefit criteria have been established for the Transportation Improvement Program:

- ❖ **Facility/Asset Condition (19 percent)** – project brings a facility or asset into a state of good repair, extends the useful life of a facility, or removes a functionally obsolete bridge rating;
- ❖ **Safety (17 percent)** – safety critical for transit, high-crash road location, or incorporates an FHWA-proven safety countermeasure;
- ❖ **Reduce Congestion (15 percent)** – location in the Congestion Management Process (CMP) congested corridors, or appropriate everywhere CMP strategy; AADT per lane, and daily transit riders per daily seats;
- ❖ **Invest in Centers (13 percent)** – location in a Connections 2040 Center or Freight Center, or high, medium-high, or medium transit score areas, or connection between two or more key centers;
- ❖ **Facility/Asset Use (11 percent)** – daily vehicle miles traveled (VMT), truck volume, and transit ridership;
- ❖ **Economic Competitiveness (8 percent)**– reduced operating/maintenance costs, or part of an economic development or transit-oriented development (TOD) project;
- ❖ **Multimodal Bicycle/Pedestrian (7 percent)** – bicyclists and pedestrians using the facility, new trails, sidewalks, or bike trails, and connections to other multimodal facilities;
- ❖ **Environmental Justice (5 percent)** – benefits high “Indicators of Potential Disadvantage” (IPD – previously known as “Degrees of Disadvantage” or “DOD”) communities; and
- ❖ **Air Quality/Green Design (5 percent)** – stresses air quality benefits and incorporates environmentally friendly principals.

## THE LONG-RANGE PLAN AND INVESTING IN THE REGION’S PLANNING CENTERS

The Delaware Valley Region is a mosaic of 352 townships, boroughs, and cities, each making their own land use decisions. The *Connections 2040: Plan for Greater Philadelphia*, the region’s Long-Range Plan serves as a blueprint for the prioritization and funding of capital transportation investments for the region. The Plan has been developed through a comprehensive, cooperative, continuing, coordinated, and compatible process. It incorporates the eight key planning factors contained in the federal transportation planning regulations. Those factors are:

- ❖ Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

- ❖ Increase the safety of the transportation system for all motorized and nonmotorized users;
- ❖ Increase the ability of the transportation system to support homeland security and to safeguard the personal security of all motorized and nonmotorized users;
- ❖ Increase accessibility and mobility of people and freight;
- ❖ Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns;
- ❖ Enhance the integration and connectivity of the system, across and between modes, for people and freight;
- ❖ Promote efficient system management and operation; and
- ❖ Emphasize the preservation of the existing system.
- ❖ Additional Planning Factors - The May 27, 2016 Federal Register publication of the *“Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning; Final Rule”* provides guidance for DVRPC, particularly in the area of the Long-Range Plan. The final rule adds two factors to consider in the long-range plan: “Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation”; and “Enhance travel and tourism”. While not required to be included until May 27, 2018, DVRPC will begin to address these in the current plan update, which is scheduled for Board adoption in the summer of 2017.

In an effort to categorize and simplify types of communities and corresponding long-range planning policies, DVRPC organized the region into seven Center types as part of the development of *Connections 2040: Plan for Greater Philadelphia*. Those seven areas are Metropolitan Center (Center City/University City/Camden Central Business District); Metropolitan Subcenters, which reflects their magnitude of jobs and commercial activity; Neighborhood Centers, which have varying characteristics, assets, challenges, and needs, and that specific approaches and strategies for improving and revitalizing these neighborhoods will differ; Suburban Centers, which are regionally significant and defined primarily by a concentration and variety of office, retail, professional, and light industrial uses, and generally have more jobs than residents, and are generally auto dependent; Town Centers, which have a mixture of high-density residential and commercial land use, are pedestrian friendly, are often transit oriented and are surround by suburban land uses; Rural Centers, which have a minimum density of six people and three employees per developed acre and are surround by rural and agricultural land uses; and Planned Centers, which are planned town-center-type developments on greenfields in Growing Suburbs or Rural Areas or through redevelopment on greyfields and/or brownfields in Developed Communities.



As the implementation tool of the Long-Range Plan, the TIP funds a variety of projects that address the transportation needs of all seven categories of planning centers, and all eight planning factors. Planning centers for all Pennsylvania TIP projects are included on each project listing in the DVRPC FY2017 TIP document for Pennsylvania. A more complete discussion and illustration of planning centers can be found in the *Connections 2040: Plan for Greater Philadelphia* Long-Range Plan on the DVRPC website at [www.dvrpc.org/LongRangePlan](http://www.dvrpc.org/LongRangePlan).

## CONGESTION MANAGEMENT PROCESS

A Congestion Management Process (CMP) is a systematic process for managing congestion. It identifies specific multimodal strategies for all locations in the region to minimize congestion and enhance the ability of people and goods to reach their destinations. These multimodal strategies include, but are not limited to, operational improvements, travel demand management, policy approaches, and additions to roadway and transit capacity. The CMP advances the goals of the DVRPC Long-Range Plan and strengthens the connection between the Plan and the Transportation Improvement Program (TIP). In coordination with other management systems, the CMP serves the following purposes:

- ❖ It provides technical information for consideration in updating the TIP as to what may be the most efficient subcorridors and transportation strategies for investment of the limited dollars available.
- ❖ It helps with reviewing and prioritizing the list of existing Study and Development proposals in New Jersey and with feeding new ones into the pipeline.
- ❖ It is used in selecting corridor studies for DVRPC.

The CMP evaluates all new or modified TIP projects proposed for federal or state funding, and, where Major Single-Occupancy Vehicle (SOV) capacity is consistent, the CMP includes the required table of multimodal supplemental strategies to reduce travel demand and to get the most value from the investment. Project managers are encouraged to contact DVRPC to check whether project alternatives are consistent early in planning phases for the most effective coordination.

The CMP category of Major SOV Capacity-adding Projects refers to projects that add roadway capacity in a way that affects regional or corridor travel patterns. The projects are noted as such in their TIP descriptions. This review considers, though is not determined by, projects modeled for air quality conformity purposes and studies considered likely to result in nonexempt projects. Being categorized as Major SOV makes a project eligible for additional support from CMP staff to help it generate the most long-term positive effect possible in an environment of limited funding.

The CMP completes its cycle by evaluating the effectiveness of transportation improvements and then starts updating the analysis again on approximately a three-year cycle. Further information about the CMP can be obtained from the DVRPC resource center or on DVRPC's website at [www.dvrpc.org/CongestionManagement](http://www.dvrpc.org/CongestionManagement).

## GOODS MOVEMENT AND ECONOMIC DEVELOPMENT

DVRPC proactively seeks to fulfill the federal requirement to include freight as a primary planning factor through its long-range transportation planning, TIP development, and the conduct of technical studies. DVRPC's goal is to serve the region's manufacturers, businesses, ports, freight railroads, truckers, air cargo interests, and developers and to maintain the Philadelphia-Camden-Trenton region as an international freight center.

At the forefront of DVRPC's freight-planning program is the Delaware Valley Goods Movement Task Force (DVGMTF). This broad-based freight advisory committee provides a forum for the private and public sector freight community to interject its unique perspectives on regional plans and specific projects. The FAST Act creates a new National Highway Freight Program (NHFP) funded at an average of \$1.2 billion per year, for fiscal years 2016–2020, that is distributed to the states by formula. Each state receives NHFP funds in proportion to the amount of funds a state receives compared to other states under all formula apportioned programs. For example, if a state receives five percent of federal-aid formula funding, the state will receive five percent of the NHFP funding. As of the printing of this document, guidance from PennDOT is forthcoming. There is also a new competitive federal grant for freight named Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE). FASTLANE Grants, authorized under the FAST Act's Nationally Significant Freight and Highway Projects program, will fund critical freight and highway projects across the country. The FAST Act authorizes an average of \$900 million in funding for FASTLANE Grants for fiscal years 2016–2020, with at least 25 percent reserved for rural projects, and ten percent for small projects that do not meet statutory minimum project size requirements.

The FAST Act directs the FHWA Administrator to establish a National Highway Freight Network (NHFN), replacing the National Freight Network and Primary Freight Network established under MAP-21, to strategically direct federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system. The NHFN includes the following four subsystems of roadways:

- ❖ Primary Highway Freight System (PHFS): This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable national data. The initial network consists of 41,518 centerline miles, including 37,436 centerline miles of Interstate, and 4,082 centerline miles of non-Interstate roads.
- ❖ Other Interstate portions not on the PHFS: These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide important continuity and access to freight transportation facilities. As of December 31, 2013, these portions amounted to approximately 9,511 centerline miles of Interstate, nationwide. This number and the total mileage of the NHFN will fluctuate with additions (including conversions of State routes) and deletions to the Interstate Highway System.
- ❖ Critical Rural Freight Corridors (CRFCs): These are public roads not in an urbanized area, to be designated by the states, which provide access and connection to the PHFS and

the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities.

- ❖ Critical Urban Freight Corridors (CUFCs): These are public roads in urbanized areas that provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities.

The Delaware Valley contains an impressive freight transportation network consisting of highways, rail lines, ports, airports, and pipelines. There are also many related support facilities such as warehouses, manufacturing sites, rail yards, and truck stops. To support its freight planning activities, DVRPC offers a web-based PhillyFreightFinder freight mapping and data platform for the Delaware Valley that can be found at [www.dvrpc.org/webmaps/PhillyFreightFinder](http://www.dvrpc.org/webmaps/PhillyFreightFinder). It pinpoints freight facilities and freight activity in the region and highlights how the various freight system components intertwine and complement one another. PhillyFreightFinder contains 20 individual layers of infrastructure and facilities that are organized into seven categories. PhillyFreightFinder has been created with a variety of uses and users in mind, ranging from county and city planners to the general public and municipal officials. Further information about the Freight Planning Program at DVRPC can be obtained from DVRPC's website at [www.dvrpc.org/freight](http://www.dvrpc.org/freight).

Projects listed in Table 6 illustrate a sampling of projects in the TIP that promote goods movement and economic development, and some of the benefits they provide to the freight industry. The identified projects have a direct, significant, and positive association with the flow of goods at intermodal facilities, near manufacturing, office, or commercial locations, or along strategic corridors. The projects improve National Highway System (NHS) connector routes, operating conditions for commercial vehicles, and access to economic activity centers. The benefits of the projects can be expressed in terms of increasing safety and efficiency, spurring economic activity, creating jobs, protecting the environment and the region's quality of life, and promoting primary freight corridors and industrial centers.

## TOLL AUTHORITY HIGHWAY, TRANSIT, AND PORT-RELATED PROJECTS

The toll authorities with facilities in the Pennsylvania portion of this region (Pennsylvania Turnpike Commission, Delaware River Port Authority/PATCO, Delaware River Joint Toll Bridge Commission, etc.) undertake numerous significant highway and port-related projects utilizing their own funds. Although not included in the project listings or funding summaries, it is important to identify toll authority projects to provide a more complete picture of the transportation issues being addressed throughout the region. The projects are listed, along with their associated costs, in Table 7.

Table 6: Supporting Projects That Facilitate Goods Movement and Economic Development

BENEFITS	PROJECT MPMS #	COUNTY
<b>ADVANCES SAFETY AND SECURITY</b>		
Railroad/Highway Grade Crossings	Statewide	Various
<b>BALANCES FREIGHT OPERATIONAL NEEDS WITH COMMUNITY GOALS</b>		
Bridgewater Road Extension	79329	Delaware
<b>IMPROVES THE ENVIRONMENT</b>		
DVRPC Competitive CMAQ Program	48201	Various
<b>ELIMINATES BOTTLENECKS/REDUCES CONGESTION, UPGRADES BRIDGES, AND IMPROVES INTERSECTIONS</b>		
US 1, Baltimore Pike Widening	14541	Chester
<b>MAINTAINS PRIMARY TRUCK ROUTES, HIGHWAYS OF REGIONAL SIGNIFICANCE, AND PAVEMENT</b>		
I-95 Reconstruction	17782, 17821, 47811, 47812, 47813, 79685, 79686, 79826, 79827, 79828, 79903, 79904, 79905, 79908, 79910, 79911, 79912, 83640, 103557, 103558, 103559, 103560, 103561, 103562	Philadelphia
<b>IMPROVES DISTRIBUTION PATTERNS AND SUPPLY CHAINS AND MODERNIZES INTERCHANGES AND RAMPS</b>		
I-95/PA Turnpike Interchange	13347, 95439, 95444	Bucks
<b>MAXIMIZES FREIGHT RAILROADS</b>		
Hulmeville Avenue Bridge Over Conrail	13606	Bucks
<b>PROMOTES THE GROWTH OF CENTRAL BUSINESS DISTRICTS, COMMERCE, AND TOURISM</b>		
PA 23/Valley Forge Road and North Gulph Road Relocation (2NG)	66952	Montgomery
<b>SPEEDS THE DELIVERY OF GOODS AND MODERNIZES COMMUNICATIONS</b>		
Quakertown Joint Closed Loop Signal System	57635	Bucks
<b>IMPROVES NHS INTERMODAL CONNECTORS AND SERVES PORTS, AIRPORTS, FREIGHT CENTERS, AND/OR MANUFACTURING SITES</b>		
Philadelphia Naval Shipyard Access	46958	Philadelphia

SOURCE: DVRPC, 2016

Table 7: Toll Authority Projects

PROJECT	SCHEDULE (YEARS)	COST (IN MILLIONS)
<b>DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION</b>		
Scudder Falls Bridge Replacement Project	2017-2020	\$319
New Hope-Lambertville Toll Supported Bridge Rehabilitation	2020	\$4.1
Centre Bridge Stockton Toll Supported Bridge Rehabilitation	2018-2019	\$6.5
<b>DELAWARE RIVER PORT AUTHORITY/PORT AUTHORITY TRANSIT CORPORATION (DRPA/PATCO)</b>		
Benjamin Franklin Bridge – Replace Moveable Barrier	2016–2017	\$5.4
Benjamin Franklin Bridge - Tower Expansion Joint Rehabilitation	2016–2018	\$7.0
Benjamin Franklin Bridge - Masonry Rehabilitation	2017–2019	\$5.8
Benjamin Franklin Bridge - Bridge Deck Resurfacing	2018–2020	\$27.0
Betsy Ross Bridge – Bridge Deck Resurfacings	2015-2017	\$14.4
Commodore Barry Bridge - Deleading and Repainting	2015-2020	\$90.2
Commodore Barry Bridge - Structural Rehabilitation -	2016–2020	\$11.1
Facility Security	2013-2020	\$32.0
Walt Whitman Bridge – Deleading and Repainting	2016–2020	\$55.2
Walt Whitman Bridge - Replacement of PA DMS Boards	2016–2018	\$4.5
PATCO - Rehabilitation of Track Structure on Viaduct at Westmont	2016–2017	\$13.9
PATCO - PATCO Hall and Way Interlocking Rehabilitation	2016–2018	\$6.5
PATCO - PATCO Interlocking and Track Rehabilitation Phase II	2018–2019	\$16.4
PATCO - Replace Electrical Cables in Subways	2017–2019	\$9.5

SOURCE: DVRPC. 2016

Table 7: Toll Authority Projects (Continued)

PROJECT	SCHEDULE (YEARS)	COST (IN MILLIONS)
Pennsylvania Turnpike Commission		
PA Turnpike/I-95 Interchange Project - Stage 3 – will provide an additional bridge over the Delaware River parallel to the existing bridge	Beyond 2020	Not Available
I-76, Roadway and Bridge Reconstruction, SR 29 to Valley Forge, MP. 319-326	TBD	\$260.0
I-76, Roadway and Bridge Reconstruction, Downingtown to SR 29, MP 312-316	Design Ends 2019 Construction End 2022	\$85.0
I-76, Roadway and Bridge Reconstruction, Downingtown to SR 29, MP 316-319	Design Ends 2021 Construction Ends 2024	\$90.0
I-76, Replacement of Yellow Springs Road bridge over the Turnpike (T-488)	Construction Ends: 2016	\$7.0
I-76, Roadway and Bridge Reconstruction, Morgantown to Downingtown, MP 298-312	Design Started Construction TBD	\$390.0
I-476, Roadway and Bridge Reconstruction, Mid-County to Lansdale A26-A31(Wambold Road Included)	Construction Ends 2017	\$207.0
I-476, Roadway and Bridge Reconstruction, Lansdale to Quakertown	Design ends 2019 Construction Ends 2022	\$350.0
I-276/I-95 Interchange	Design Ended 2015 Construction Phase 1 ends 2018	\$430.0

SOURCE: DVRPC. 2016

## SELECTED STUDIES

Future TIP projects are likely to be generated from Environmental Impact Statements (EIS)/Environmental Assessments (EA), Transportation Investment Studies (TIS) (formerly known as Major Investment Studies), and Feasibility Assessments (FA) that are currently underway. An EIS is an in-depth technical analysis of the significant environmental impact of a project, and it identifies alternatives that would avoid or minimize the adverse impact. The purpose of TIS is to provide policy-level information about the impact of alternative transportation investments in order to ensure cost-effective decisions when major new facilities are contemplated. DVRPC's Unified Planning Work Program identifies ongoing studies. Selected studies for FY17, including those from the DVRPC Work Program, are listed in Table 8: Selected Transportation Studies.

Table 8: Selected Transportation Studies

SELECTED STUDIES CURRENTLY UNDERWAY IN PENNSYLVANIA	BENEFICIARIES
<b>PENNSYLVANIA STUDIES</b>	
Hard Shoulder Running and ITS Enhancements on I-76 Phase 2	PennDOT, Montgomery County, City of Philadelphia, Pennsylvania Turnpike Commission, adjacent municipalities, and the traveling public.
East Callowhill Safety and Traffic Calming Measures	City of Philadelphia, local residents, businesses and the traveling public
Bridge Feasibility Study in Pottstown	Pottstown Borough, Montgomery County, and DVRPC region.
Station Area Planning for NHSL King of Prussia Extension	Montgomery County, Upper Merion Township, SEPTA, PennDOT
Safe Routes to Transit Concept Development: Pennsylvania Locations	SEPTA, NJ Transit and selected Counties, municipalities, rail commuters and pedestrians and bicyclists in the vicinity of the station.
Exton Train Station – Concept Planning for Phases 2 & 3	SEPTA, Chester County, PennDOT, West Whiteland Township, park-and-ride customers from surrounding areas.

SOURCE: DVRPC. 2016

## SPECIAL PROGRAMS

Special programs are often established that set aside funding for projects that will be selected at a future date or that dedicate funds for specific types of projects. Examples are the Congestion Mitigation and Air Quality Improvement Program (CMAQ) and the Transportation Alternatives Program (TAP) that includes the Safe Routes to School Program.

### DVRPC Competitive CMAQ Program

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) was established by ISTEA and has continued under TEA-21, SAFETEA-LU, MAP-21, and the FAST Act. CMAQ funds are allocated to the states for use in air quality non-attainment and maintenance areas for projects that contribute to the attainment of the Clean Air Act standards by reducing emissions from highway sources. The types of projects that are eligible for CMAQ funding include public transit improvements; bicycle and pedestrian facilities and outreach efforts; traffic flow improvements; ridesharing and other demand management programs; alternative fuel vehicles; and projects that will reduce idling emissions and diesel engine retrofits. In addition to the projects that use CMAQ funds and are selected through the regular TIP development process, DVRPC periodically sets aside a specific amount of CMAQ funds for a DVRPC Competitive CMAQ Program. Any public agency or public-private partnership may submit projects to DVRPC for consideration. The CMAQ subcommittee of the Regional Technical Committee evaluates the projects and makes recommendations to the Board for final selection. In July 2016, the DVRPC Board finalized the most recent round of the DVRPC Competitive PA CMAQ Program by selecting 17 projects for funding in the DVRPC Pennsylvania counties. There is \$21 million set aside in the FY2017 TIP for eligible projects.

### Transportation Alternatives Program (TAP)

The FAST Act's Surface Transportation Block Grant sets aside funding for the continuation of the Transportation Alternatives Program (TAP), which was established under MAP-21 as an amalgamation of the previous authorization's Transportation Enhancements (TE), Recreational Trails (REC TRAILS), and Safe Routes to School programs. Under the FAST Act, this program is no longer called TAP; however, no name has been given and the state has decided to continue to use the TAP name until a name is established. Eligibility requirements of these programs have remained largely the same. Not only is there a statewide TAP allocation, there is also a direct allocation of TAP funds to urbanized areas with populations greater than 200,000, and all TAP funds must be awarded through a competitive process, whether the funds come from regional MPO funds or from the statewide allocation.

Transportation alternatives projects build pedestrian and bicycle facilities, improve access to public transportation, create safe routes to school, preserve historic transportation structures, provide environmental mitigation, and create trail projects that serve a transportation purpose, while promoting safety and mobility among others. The FAST Act apportions \$3,857,000 TAP funds in FY17 and \$3,932,000 TAP funds annually, after FY2017, directly to the DVRPC southeastern Pennsylvania region for use in selecting projects on a competitive basis. A recent competitive round of two years' worth of MPO funding occurred in the winter of 2016, with final



project selections in the spring of 2016. Even though the FAST Act is only a five-year authorization, funds are shown in all 12 years of the TIP in anticipation of continuing resolutions or a new reauthorization. For the DVRPC regional funding, priority is given to the following project types: Bicycle and Pedestrian Facilities; Conversion of Abandoned Railway Corridors to Trails; and Stormwater Management. During the regional TAP selection rounds, the four DVRPC Pennsylvania counties and the City of Philadelphia are involved in project evaluation and formulating recommendations for the DVRPC Board. Much like the Competitive CMAQ Program, projects are subjected to a rigorous evaluation process before the priority list of projects is selected. In addition to the regional MPO funding, there is a Statewide Transportation Alternatives Program, administered by PennDOT, totaling approximately \$26,000,000 (also two years' worth of funding), for which sponsors across the state may apply, with project selection expected to take place in the summer/early fall of 2016.

To provide for the continuation of recreational trails projects, the FAST Act builds on MAP-21 and directs each state to set aside a portion of its TAP funds for projects relating to recreational trails, unless a state exercises the "opt out" option. In Pennsylvania, the program will continue and will be administered by the Department of Conservation and Natural Resources (DCNR). Guidance for the Recreational Trails Program remains relatively unchanged from MAP-21.

## RESPONDING TO TITLE VI AND ENVIRONMENTAL JUSTICE CONCERNS

The Transportation Improvement Program (TIP), as the agreed-upon list of priority projects for the region, serves to manage funding for construction, improvement, and expansion of the region's transportation system, a system that affects every resident of the Delaware Valley. Title VI of the Civil Rights Act of 1964 states that no person or group shall be excluded from participation in or denied the benefits of any program or activity utilizing federal funds, and the 1994 President's Executive Order on Environmental Justice (#12898) ensures "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."

Each federal agency is required to identify any disproportionately high and adverse health or environmental effects of its programs on minority populations and low-income populations. In turn, metropolitan planning organizations (MPOs), as part of the United States Department of Transportation's certification requirements, are charged with evaluating their plans and programs for Title VI and Environmental Justice (EJ) sensitivity, including expanding their outreach efforts to low-income and minority populations.

As the MPO for the nine-county, bi-state Philadelphia-Camden-Trenton region, DVRPC is committed to responding to the federal guidance on Title VI and EJ and has designated the Transportation Planning Division and Office of Communications and Engagement to address technical and public involvement activities, respectively, as they relate to Title VI and EJ. To meet the requirements of these laws, the Commission must:

- ❖ Enhance its analytical capabilities to ensure that the Long-Range Plan and the TIP comply with Title VI;
- ❖ Identify residential, employment, and transportation patterns of low-income and minority populations so that their needs can be identified and addressed and the benefits and burdens of transportation can be fairly distributed; and
- ❖ Evaluate and, where necessary, improve the public outreach process to eliminate barriers and engage minority and low-income populations in regional decision-making.

DVRPC's Unified Planning Work Program involves the evaluation of EJ issues through quantitative and qualitative analysis and mapping. In 2001, DVRPC developed an EJ technical assessment to identify direct and disparate effects of its plans, programs, and planning process on defined demographic groups in the Delaware Valley region. This assessment, significantly revised in 2010 and updated in 2014, is called Indicators of Potential Disadvantage (IPD), and it is utilized in various DVRPC plans and programs, including the TIP. The EJ analysis tool is available online at [www.dvrpc.org/webmaps/EJ2014](http://www.dvrpc.org/webmaps/EJ2014). DVRPC regularly publishes an update, *Environmental Justice at DVRPC*, which summarizes EJ and public outreach activities of the previous year and describes the methodology for evaluating the agency's Long-Range Plan, TIP, and other projects and programs. In 2014, the DVRPC Board approved the Commission's Title VI Compliance Plan, which establishes a framework for DVRPC's efforts to ensure compliance with Title VI, as well as with other EJ and nondiscrimination mandates. The plan outlines how Title VI and EJ considerations are reflected in the Commission's work program, publications, communications, public involvement efforts, and general way of doing business.

DVRPC believes that effective public outreach is a dynamic and ongoing process that is essential to meeting the future transportation and land-use needs of all residents of the Delaware Valley. Further, effective planning cannot be achieved without the consideration, cooperation, and consent of residents and stakeholders throughout the region. In April 2012, the DVRPC Board adopted an updated Public Participation Plan, which is designed as a resource for DVRPC's Board, staff, and the public to better understand the Commission's overall public participation strategy and procedures, as well as the federal mandates that inform DVRPC's public participation efforts. In addition to public meetings, events, and various communication channels, a primary outlet for public participation in DVRPC is the Public Participation Task Force composed of appointed members and members-at-large throughout Greater Philadelphia bringing their own individual experiences to the planning table. The task force strives to represent regional diversity.

## ENVIRONMENTAL JUSTICE ANALYSIS OF THE TIP

DVRPC's Transportation Improvement Program (TIP) for Pennsylvania is an important component of the agency's overall Environmental Justice (EJ) initiatives, Public Involvement Program, and work program activities. As the TIP is updated every other year for Pennsylvania, new analyses and mapping are conducted, and public comments are received.

The TIP uses DVRPC's Indicators of Potential Disadvantage (IPD) to analyze and map projects. Using U.S. Census American Community Survey (ACS) 2010–2014 five-year estimates, DVRPC has

identified different geographic areas in which populations may disproportionately bear the burden of planning decisions and/or demographic groups who may be underrepresented in the planning process. There are eight population groups that are currently analyzed via the IPD. These categories include: households in poverty, non-Hispanic minority, Hispanic, elderly (75 years and over), car-less households, persons with physical disabilities, limited English proficiency, and female head of household with child.

Each census tract is evaluated by the IPD to quantify the concentration of potentially disadvantaged populations. A census tract is considered vulnerable if the concentration of IPDs is greater than the regional average. TIP projects are mapped to identify low-disadvantage census tracts (with one to four IPDs) and high-disadvantage census tracts (with five to eight IPDs), with and without a TIP project.

Table 9: Indicators of Potential Disadvantage Analysis Table

Number of Indicators of Potential Disadvantage (IPD) per census tract:  Non-Hispanic minority; Hispanic; Limited English Proficiency (LEP); persons with a physical disability; elderly over 75 years of age; carless households; female head of household with child; households in poverty.	Total Census Tracts (998)	Number of Census Tracts that contain a project in FY2017 to FY2020 Pennsylvania Highway TIP	Percent of Census Tracts that contain a project in FY2017 to FY2020 Pennsylvania Highway TIP	Number of Census Tracts that contain a project in FY2017 to FY2020 Pennsylvania Transit TIP	Percent of Census Tracts that contain a project in FY2017 to FY2020 Pennsylvania Transit TIP
0 IPD  (Not Potentially Disadvantaged)	175	109	10.9 percent	6	0.6 percent
1–4 IPD  (Potentially Disadvantaged)	530	314	31.4 percent	18	1.8 percent
5–8 IPD  (Potentially More Disadvantaged)	293	163	16.3 percent	4	0.4 percent

Source: DVRPC 2016

Table 9 shows that there is a higher level of existence of highway projects in census tracts with one to four indicators of potential disadvantage. There is also a higher level of existence of transit projects in census tracts with one to four indicators of potential disadvantage.

The location of transportation investments can greatly influence the level of mobility and accessibility within and throughout the region. DVRPC's EJ method is used to analyze the distribution of the TIP for both highway and transit programs. Not all TIP projects can be mapped due to the scale and nature of the improvement. While a TIP project may not occur in an EJ-sensitive area, disadvantaged populations can still be impacted by the proposed investment, especially if the project focuses on a highway or transit corridor that is used by a particular disadvantaged population. Consideration of Environmental Justice communities is included in the DVRPC Project Benefit Criteria, which can be found in Appendix D.

## CHAPTER 3: PUBLIC INVOLVEMENT

The Delaware Valley Regional Planning Commission (DVRPC) firmly believes in the principle of public participation by reaching out to and satisfying as many populations as possible in an equitable and timely manner. Public participation is the only real way to ascertain the interests of a wide variety of citizens, including the under-involved and often unconcerned, the private sector, special-interest activists, mature citizens, educators and parents, public officials, and the physically and economically disadvantaged. While today's citizens are far more sophisticated, and modern standards are more inclusive, the need for public involvement is inherent to sound decision-making.

Every citizen is responsible for becoming involved in regional issues and playing a role in the decision-making process; therefore, DVRPC strives to provide as many opportunities as possible for residents to be informed and aware of the decisions that will affect the future of this region.

The public comment period for the Draft DVRPC FY2017 TIP for Pennsylvania opened on May 27, 2016 and extended through June 27, 2016, at 5:00 p.m. (EST). There was a public meeting held at the following location for the purpose of presenting comments on the Draft FY2017 TIP:

**MONDAY, JUNE 21, 2016**  
**4:00 P.M.–6:00 P.M.**  
**DVRPC CONFERENCE ROOM**  
**190 N. INDEPENDENCE MALL WEST, 8TH FLOOR**  
**PHILADELPHIA, PA 19106**  
 🗉 **WEB CONFERENCING WAS AVAILABLE.**

Web conferencing was available for the public meeting at DVRPC. Those interested in using this option to join the meeting were asked to register by June 17, 2016 by contacting 215-592-1800 or [public\\_affairs@dvrpc.org](mailto:public_affairs@dvrpc.org).

DVRPC's website ([www.dvrpc.org](http://www.dvrpc.org)) is a vital tool in public outreach and serves a useful purpose during the TIP update cycle. The entire Draft TIP document was available on the DVRPC website, including the date and location of the public meeting and other general information. Individuals could download or access current TIP materials any time. The best way to submit comments was online, as part of DVRPC's web-based TIP public comment application located at [www.dvrpc.org/TIP](http://www.dvrpc.org/TIP). Users could click on the "Submit a comment on the Draft DVPRC FY2017 TIP for Pennsylvania" button to make general and project-specific comments. DVRPC staff then acquired responses from the appropriate agencies. Responses were not provided unless the comments were submitted in writing during the public comment period. Public comments were also accepted via email by way of the [public\\_affairs@dvrpc.org](mailto:public_affairs@dvrpc.org) email address.

In addition, written comments could have been forwarded via U.S. mail to:

**TIP COMMENTS  
OFFICE OF COMMUNICATIONS AND ENGAGEMENT  
DELAWARE VALLEY REGIONAL PLANNING COMMISSION  
190 N. INDEPENDENCE MALL WEST, 8TH FLOOR  
PHILADELPHIA, PA 19106**

Furthermore, DVRPC frequently utilizes social media ([Facebook](#), [Twitter](#), and [Instagram](#)) during the public comment period to garner the public's interest and attention. For example, different projects and facts about the Draft TIP were highlighted via social media posts. For those without access to the Internet, TIP documents were made available at selected area libraries (see Table 10), including the DVRPC Resource Center at the DVRPC office in the American College of Physicians Building in downtown Philadelphia. Users could also submit comments by sending a fax transmittal to (215) 592-9125. Call (215) 592-1800 for more information.

## **PUBLIC COMMENT GUIDANCE**

In an effort to facilitate the public comment process, DVRPC offered some extended guidance. Listed below are issues that DVRPC asked the public to consider during the review of the Draft TIP document.

- ❖ Given the projects in the TIP, are we heading in the right direction? Are we meeting the needs of the region? Are we following the intent of the FAST Act?
- ❖ For example, does the TIP contain the appropriate mix of projects with regard to (a) the amount of investment in highway projects versus the amount in transit projects, or (b) the types of improvements, such as maintenance and reconstruction of the existing system versus new capacity-adding projects; or nontraditional projects (such as pedestrian, bicycle, smart technology, Transportation Alternatives Program, and Congestion Mitigation and Air Quality projects) versus the traditional highway and transit projects?
- ❖ Is this region getting its fair share of resources compared to other regions in the state or nation?
- ❖ Is the current transportation project development process, including environmental reviews and public input, effective?
- ❖ Given financial constraints, are we spending money on the right types of projects?
- ❖ Is the TIP document easy to use? How could it be improved?

Of course, comments are not limited to these broader issues of concern. DVRPC, as always, welcomes opinions on specific projects contained in the TIP, the TIP development process, or any other topic of concern. However, we reminded those intending to recommend new projects for the TIP that in order to earn a place on the TIP, projects must first progress through the screening and planning processes described earlier. As a result, requests for new projects are generally referred to the appropriate agency for further investigation through their respective pre-TIP study efforts. These study efforts may lead to the project winning a place on the TIP in some future year.

Table 10: Libraries Displaying the DVRPC FY2017 TIP for PA

<p>Philadelphia City Institute Library 1905 Locust Street Philadelphia, PA 19103 ☎ (215) 685-6621</p>	<p>Independence Branch Library 18 South 7th Street Philadelphia, PA 19106 ☎ (215) 685-1633</p>	<p>Ramonita G. Derodriguez Branch Library 600 W. Girard Avenue Philadelphia, PA 19123 ☎ (215) 686-1768</p>
<p>Joseph E. Coleman Regional Library 68 W. Cheltenham Avenue Philadelphia, PA 19144 ☎ (215) 686-2155</p>	<p>Lucien E. Blackwell Regional Library 201 South 40<sup>th</sup> Street Philadelphia, PA 19104 ☎ (215) 685-7671</p>	<p>Northeast Regional Library 2228 Cottman Avenue Philadelphia, PA 19149 ☎ (215) 685-0501</p>
<p>Free Library of Philadelphia 1901 Vine Street Philadelphia, PA 19103 ☎ (215) 686-5300</p>	<p>McPherson Square Branch Library 601 E. Indiana Avenue Philadelphia, PA 19134 ☎ (215) 685-9995</p>	<p>Doylestown District Center Library 150 S. Pine Street Doylestown, PA 18901 ☎ (215) 348-9081</p>
<p>Levittown Regional Library 7311 New Falls Road Levittown, PA 19055 ☎ (215) 949-2324</p>	<p>Indian Valley Public Library 100 E. Church Avenue Telford, PA 18969 ☎ (215) 723-9109</p>	<p>Newtown Public Library 201 Bishop Hollow Road Newtown Square, PA 19073 ☎ (610) 353-1022</p>
<p>Chester County Library 450 Exton Square Parkway Exton, PA 19341 ☎ (610) 280-2600</p>	<p>Coatesville Area Public Library 501 E. Lincoln Highway Coatesville, PA 19320 ☎ (215) 384-4115</p>	<p>Cheltenham Township Library 215 S. Keswick Avenue Glenside, PA 19038 ☎ (215) 885-0457</p>
<p>J. Lewis Crozer Library 620 Engle Street Chester, PA 19013 ☎ (610) 494-3454</p>	<p>La Mott Free Library 7420 Sycamore Avenue La Mott, PA 19027 ☎ (215) 635-4419</p>	<p>Ardmore Library 108 Ardmore Avenue Ardmore, PA 19003 ☎ (610) 642-5187</p>
<p>Library for the Blind &amp; Physically Handicapped Free Library of Philadelphia 919 Walnut Street Philadelphia, PA 19107 ☎ (215) 683-3213</p>		

SOURCE: DVRPC. 2016



# CHAPTER 4: MAPPING APPLICATION AND LISTINGS OVERVIEW

## MAPPING APPLICATION AND GEOGRAPHIC INFORMATION SYSTEMS

For the first time, the TIP will not contain printed static maps in the document. Due to the ever-changing nature of the TIP, the maps are out of date by the time the final version of the TIP is printed and distributed. For this reason, DVRPC suggests using the TIP Web Search Tool, [www.dvrpc.org/TIP](http://www.dvrpc.org/TIP), as the primary mapping function to show the location of mappable projects for the highway, transit, and Interstate projects.

Different types of projects, such as intersection improvements, bridge replacements, or transit facilities, are shown using various colors and symbols in the TIP Web Search Tool. Certain types of projects, such as roadway landscaping, lease payments for the use of railroad tracks, or preliminary studies, are not mapped. These projects are listed in a drop-down list under the heading “TIP Projects Not Mapped.”

The TIP Web Search Tool has been enhanced to include more robust data sets, not just TIP projects, but also overlays of Planning Centers, Freight Centers, CMP Corridors, and Indicators of Potential Disadvantage (IPD), as well as a “search by address or location” function. To go along with the more robust TIP Web Search Tool, DVRPC has made TIP Geographic Information System (GIS) data available as well. GIS is an important planning tool that supports state, regional, county, and local planning and technical efforts. Nearly all planning activities incorporate GIS technology, whether it is for data collection and storage, or analysis and presentation. GIS allows planners to view and query spatial data, perform advanced analysis to discover relationships, patterns, and trends, and effectively present information to decision-makers and the public.

Downloadable GIS point, line and polygon location features for TIP projects in the current adopted Pennsylvania and New Jersey TIPs, as well as formal TIP Actions that the DVRPC RTC and Board approve are available via the Transportation section of DVRPC’s GIS Data webpage, [www.dvrpc.org/Mapping/Data](http://www.dvrpc.org/Mapping/Data). This webpage also contains links to DVRPC’s *GIS Portal*, interactive maps, a map gallery, in addition to other data resources. The *GIS Portal* contains boundaries, demographic, planning, and transportation data which is helpful for obtaining data that provides context for the Transportation Improvement Program.

## DVRPC REGIONAL HIGHWAY AND TRANSIT PROGRAMS

This document includes various project listings. The project listings include the Pennsylvania Highway, Transit, and Interstate Management Programs, which are thoroughly explained in the following paragraphs.

The project listings are grouped by county and transit operator. The first section includes highway projects for Bucks, Chester, Delaware, and Montgomery counties; the City of Philadelphia; and a listing of projects that apply to various counties. The second section includes transit projects for PennDOT's Bureau of Public Transit (BPT), Pottstown Area Rapid Transit (PART), and SEPTA. The third section applies to the Interstate Management Program (IMP).

Within each county grouping, individual highway and transit projects are listed numerically by DOT ID number (MPMS). Each project listing provides information on total program period cost, cost by fiscal year, phase of work, and funding source. Costs are shown in thousands of dollars. Also included are project location, project description, and air-quality code.

All projects within the four years of the TIP period (FY2017 to FY2020) are considered funded and are able to be federally authorized for funding. By federal regulation, the TIP is the four-year constrained program for which revenues are reasonably expected to be available. However, the region has worked to develop a 12-year constrained programming horizon for highway and transit projects in order to provide more realistic expectations and timeframes in which to expect advancement of TIP projects with more realistic costs. Many projects that have phases within the four years also have phases (such as construction) that may be out in later fiscal years (LFY) FY2021 to FY2028. This 12-year constrained programming horizon is illustrated on the project listings within the TIP document. Project phases that fall beyond the four-year TIP are technically "unfunded," but they are listed, as they represent the region's planned commitment to fund these phases in the future as funds become available.

## CHAPTER 5: CODES AND ABBREVIATIONS

### OVERVIEW

Various codes and abbreviations are used in the project descriptions for the phase of work and source of funds. These codes and abbreviations are explained below.

#### AIR QUALITY CODES

An alphanumeric air quality (AQ) coding scheme has been developed for all projects. The AQ code is applied by DVRPC for the conformity determination and exempt eligibility identification purposes.

For nonexempt projects, the first conformity “analysis year” following the project’s opening or projected completion is listed: 2017, 2020, 2025, 2035, or 2040. The letter following the year indicates whether the project was modeled (M) in the regional simulation or if the project was analyzed using an off-model technique (O).

The Clean Air Act regulations also provide for projects that may be exempt from the conformity analysis. An exempt project of the final conformity rule (40 CFR 93) is defined as a project listed in Table 11 that primarily enhances safety or aesthetics, maintains mass transit, continues current levels of ridesharing, or builds bicycle and pedestrian facilities. There are several categories of exempt projects, and DVRPC indicates the specific exempt code in the project descriptions. In cases in which multiple codes apply, the most representative code is assigned. Exempt projects in design phases are classified under the planning and technical studies category. Table 11 and Table 12 provide a complete list of exempt and nonexempt categories and corresponding air quality codes.

Projects that have been determined to be not regionally significant as defined in the final conformity rule and do not fit into an exempt category have been labeled “NRS.”

#### LONG-RANGE PLAN ID

The Long-Range Plan ID (MRP ID) indicates if a project is identified as a Major Regional Project in the DVRPC Long-Range Plan with the corresponding ID number.

#### STATUS CODES

DVRPC has developed a coding scheme for projects that have been determined to be “new” projects in the TIP. New projects in the TIP are denoted with one of three status codes: NEW, NEW-B, or RETURN. These status codes indicate which projects were not programmed in the final version of the preceding TIP (FY2015 to FY2018) and assist in establishing the origin of these projects.

Table 11: Air Quality Codes for DVRPC Exempt Projects

EXEMPT PROJECT CATEGORY		AQ CODE	EXEMPT PROJECT CATEGORY	AQ CODE	
SAFETY	Railroad/Highway Crossing	S1	MASS TRANSIT	Operating assistance to transit agencies	M1
	Hazard Elimination Program	S2		Purchase of support vehicles	M2
	Safer Non-Federal-Aid System Roads	S3		Rehabilitation of transit vehicles	M3
	Shoulder Improvements	S4		Purchase of office, shop, and operating equipment for existing facilities	M4
	Increasing Sight Distance	S5		Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.)	M5
	Safety improvement program	S6		Construction or renovation of power, signal, and communications systems	M6
	Traffic control device and operating assistance other than signalization projects	S7		Construction of small passenger shelters and information kiosks	M7
	Railroad/highway crossing warning devices	S8		Reconstruction or renovation of transit buildings and structures	M8
	Guardrails, median barriers, crash cushions	S9		Rehabilitation or reconstruction of track structures, track, and tracked-in existing rights-of-way	M9
	Pavement resurfacing and/or rehabilitation	S10		Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet	M10
	Pavement marking demonstration	S11		Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771	M11
	Emergency relief (23 U.S.C. 125)	S12	OTHER PROJECTS	Specific activities that do not involve or lead directly to construction, such as planning and technical studies	X1
	Fencing	S13		Grants for training and research programs	X2
	Skid treatments	S14		Planning activities conducted pursuant to title 23 and 49 U.S.C.	X3
	Safety roadside rest areas	S15		Federal aid systems revisions	X4
	Adding medians	S16		Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action	X5
	Truck-climbing lanes outside the urbanized area	S17		Noise attenuation	X6
	Lighting improvements	S18		Advance land acquisitions (23 CFR 712 or 23 CFR 771)	X7
	Widening narrow pavements or reconstructing bridges (no additional travel lanes)	S19		Acquisition of scenic easements	X8
	Emergency truck pullovers	S20		Plantings, landscaping, etc.	X9
AIR QUALITY	Continuation of ridesharing and van-pooling promotion activities at current levels	A1		Sign removal	X10
	Bicycle and pedestrian facilities	A2	Directional and informational signs	X11	
NOT REGIONALLY SIGNIFICANT PROJECTS	Projects determined to be "Not Regionally Significant" and do not fit into an exempt category	NRS	Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities)	X12	
STUDY AND DEVELOPMENT PROJECTS (NJ)	Project in the Study and Development Program expected to result in an exempt project	SDX	Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational, or capacity changes	X13	
<b>NO REGIONAL EMISSIONS ANALYSIS REQUIRED</b>					
Intersection channelization projects		R1	Truck size and weight inspection stations	R4	
Intersection signalization projects at individual intersections		R2	Changes in vertical and horizontal alignment	R5	
Interchange reconfiguration projects		R3	Bus terminals and transfer points	R6	

SOURCE: DVRPC. 2016

Table 12: Air Quality Analysis Years for DVRPC Non-exempt Projects

REGIONALLY SIGNIFICANT, NON-EXEMPT CODES	AQ ANALYSIS YEAR	
PROJECTS MODELED USING DVRPC'S TRAVEL DEMAND MODEL	Regionally significant, non-exempt projects included in the 2017 network and all subsequent analysis years – PA only	2017M
PROJECTS MODELED USING DVRPC'S TRAVEL DEMAND MODEL	Regionally significant, non-exempt projects included in the 2020 network and all subsequent analysis years	2020M
PROJECTS MODELED USING DVRPC'S TRAVEL DEMAND MODEL	Regionally significant, non-exempt projects included in the 2025 network and all subsequent analysis years	2025M
PROJECTS MODELED USING DVRPC'S TRAVEL DEMAND MODEL	Regionally significant, non-exempt projects included in the 2035 network and all subsequent analysis years	2035M
PROJECTS MODELED USING DVRPC'S TRAVEL DEMAND MODEL	Regionally significant, non-exempt projects included in the 2040 network and all subsequent analysis years	2040M

Source: DVRPC, 2016

Notes on Tables 11 and 12:

Both exempt and not regionally significant project categories adhere to 40 CFR 93 Sections 126 and 127.

In the PM<sub>10</sub> non-attainment or maintenance area, rehabilitation of transit vehicles is exempt only if they comply with control measures in the applicable implementation plan.

Projects indicated as “NEW” have never been programmed in a prior year TIP. These projects are programmed in the TIP for the absolute first time. Projects indicated as “NEW-B” are new “break-out” projects that have been “broken out of,” or derived from, an existing TIP project. Lastly, projects indicated as “RETURN” have previously been programmed in a prior year TIP, but through a variety of circumstances, have returned to be programmed in the FY2017 TIP.

## PLANNING CENTER NOTATION

The Greater Philadelphia region is a mosaic of 352 townships, boroughs, and cities, each making their own land use decisions. In an effort to categorize and simplify types of communities and corresponding long-range planning policies, DVRPC organized the region into seven Center types as part of the development of Connections 2040: Plan for Greater Philadelphia. Those seven areas are Metropolitan Center (Center City/University City/Camden Central Business District); Metropolitan Subcenters, which reflects their magnitude of jobs and commercial activity; Neighborhood Centers, which have varying characteristics, assets, challenges, and needs, and that specific approaches and strategies for improving and revitalizing these neighborhoods will

differ; Suburban Centers, which are regionally significant and defined primarily by a concentration and variety of office, retail, professional, and light industrial uses, and generally have more jobs than residents, and are generally auto dependent; Town Centers, which have a mixture of high-density residential and commercial land use, are pedestrian friendly, are often transit oriented and are surround by suburban land uses; Rural Centers, which have a minimum density of six people and three employees per developed acre and are surround by rural and agricultural land uses; and Planned Centers, which are planned town-center-type developments on greenfields in Growing Suburbs or Rural Areas or through redevelopment on greyfields and/or brownfields in Developed Communities. “Planning Center” is a notation in the TIP project description.

## INDICATORS OF POTENTIAL DISADVANTAGE

DVRPC uses the Indicators of Potential Disadvantage (IPD) methodology to identify direct and disparate impacts of its plans, programs, and planning process on defined population groups in the Delaware Valley region under Title VI of the Civil Rights Act and the Executive Order on Environmental Justice. Population groups assessed at the census tract level, as defined by the U.S. Census Bureau, include Non-Hispanic Minority, Carless Households, Households in Poverty, Female Head of Household with Child, Elderly (over 75 years old), Hispanic, Limited English Proficiency, and persons with a physical disability. Census tracts that have higher concentrations of a particular demographic group than the regional average for that population are considered to be at a disadvantage. The total number of demographic groups that are above the regional average concentration in each census tract is that tract’s IPD. If a tract has higher than average population for three of the identified demographic groups, for example, then it has three IPDs. IPDs range from zero to seven, with seven indicating a tract at the highest degree of disadvantage. “IPD” is listed in the project descriptions to note the highest number of IPD tracts impacted by a project on the TIP.

## CONGESTION MANAGEMENT PROCESS (CMP) NOTATION

Certain projects have been determined to be major capacity or operational improvements and found consistent with DVRPC’s CMP. They are noted as such in the TIP description, with indications of whether supplemental strategies for addressing congestion are required and in which subcorridor. The CMP category of Major SOV Capacity Projects refers to projects that add capacity or improve operations in a way that impacts regional travel patterns. This review considers, though is not determined by, projects modeled for air-quality conformity purposes and studies considered likely to result in nonexempt projects.

## FREIGHT CORRIDOR INITIATIVE

Projects that have a direct, significant impact on the flow of goods along strategic freight corridors or that improve National Highway System (NHS) connector routes to intermodal facilities are noted as integral to the Delaware Valley Freight Corridors Initiative.

## PHASE OF WORK ABBREVIATIONS

**CAL (Capital Acquisition Lease)** - Involves lease payments attributable to the acquisition, through financial leasing arrangements for various capital assets for transit operator.

**CAP (Capital Asset Construction)** - Involves construction of buildings, structures, equipment, or intellectual property for transit operator.

**CON (Construction)** - Involves the actual building of a project.

**DS (Debt Service)** - Involves scheduled payments due for principal and interest on bonds for transit operator.

**EC (Engineering/Construction)** - Funding can be used for both design and construction costs.

**ER (Engineering/Right-of-Way)** - Funding can be used for both design and right-of-way costs.

**ERC (Engineering/Right-of-Way/Construction)** - Funding can be used for design, right-of-way, and construction costs.

**FD (Final Design)** - The refinement of the Initial Preferred Alternative (IPA) based on environmental studies, community input, and the needs of the traveling public. In the New Jersey TIP, Final Design is designated as “DES.”

**OP (Operations Phase)** – Funding can be used for any activity required for the operation of a transit system.

**PE (Preliminary Engineering)** - The process of advancing preliminary engineering and obtaining formal community and environmental approval of the Initially Preferred Alternative.

**PRA (Planning, Research and Administration)** – Involves planning, research, or administrative projects.

**PUR (Purchase of Equipment)** - Involves the purchasing of equipment.

**ROW (Right-of-Way Acquisition)** - Involves purchasing the land needed to build a project.

**UTL (Utilities)** - Utility relocation work associated with a project.

## FEDERAL HIGHWAY FUNDING SOURCES ABBREVIATIONS

**“\*” (Advanced Construct)** - In the TIP project listings section, an asterisk (\*) after a fund code indicates that the phase has been initiated as advanced construct using state funds and will be “converted” to federal funds. Advanced construct is a finance tool that allows PennDOT to secure federal authorization for a project without tying up any federal funds or obligation authority. There are a couple of advantages to using advanced construct financing: First, advanced construct is used on large construction projects that span two or more construction

seasons. Advanced construct frees up and allows PennDOT to use federal obligation authority that might have been used for that project on several other projects. This allows PennDOT to have multiple projects in construction at one time versus only having one project in construction. Secondly, PennDOT uses advanced construct to authorize new project phases that will be implemented in the last quarter of the federal fiscal year (July, August, and September), when funds and obligation authority are generally scarce. Nearly all advanced construct represents the borrowing of future federal funds.

**BOF or BRIDGE-OFF (Federal Bridge Program)** - Provides funding for the rehabilitation or replacement of bridges that are off the federal-aid system and are defined as structurally deficient and/or functionally obsolete.

**CAQ or CMAQ (Congestion Mitigation and Air Quality Improvement Program)** - Federal funding for projects that improve air quality and/or relieve congestion without adding new highway capacity. This funding also provides funding to areas in nonattainment or maintenance for ozone, carbon monoxide, and/or particulate matter. States that have no nonattainment or maintenance areas still receive a minimum apportionment of CMAQ funding for either air quality projects or other elements of flexible spending.

**FLEX (Flexible funds)** – Federal funding anticipated to be transferred from FHWA to FTA, or from FTA to FHWA, in support of a transit or highway project.

**HCB (Historic Covered Bridge Preservation Program)** – Federal funding to preserve, rehabilitate, or restore historic covered bridges eligible for listing on the National Register of Historic Places.

**HSIP (Highway Safety Improvement Program)** - Federal funding for projects or strategies included in the state strategic highway safety plan that correct or improve a hazardous road location or feature or address a highway safety problem.

**National Freight Program (NFP)** – Funding for this program will be held in a statewide line item pending official guidance from FHWA.

**National Highway Performance Program (NHPP)** – Provides funding used to support the condition and performance of the enhanced National Highway System (NHS) and to construct new facilities on the NHS that support national performance goals. Eligible activities broadly vary from workforce development and training to construction of bridges, tunnels, highways, and bicycle and pedestrian facilities to ITS capital improvements, for example.

**National Highway Performance Program Statewide Reserve (NHPP Reserve)** – Funding reserved from the federal allocation and then distributed to specific projects chosen by the Secretary of Transportation for the Commonwealth of Pennsylvania. Provides funding used to support the condition and performance of the National Highway System (NHS) and to construct new facilities on the enhanced NHS that support national performance goals. Eligible activities broadly vary from workforce development and training to construction of bridges, tunnels, highways, and bicycle and pedestrian facilities to ITS capital improvements, for example.



**RRX (Rail Highway Grade Crossing)** - Federal funding for safety improvement projects to reduce the number and severity of crashes at public highway-rail grade crossings.

**SPIKE or SPK (Federal Spike Funds – NHPP/STP/STU Funds)** - Funding reserved from federal allocations and then distributed to specific projects chosen by the Secretary of Transportation for the Commonwealth of Pennsylvania. Several variations of SPIKE funding are coded. (Example: SPK-NHPP for National Highway Performance Program SPIKE funds).

**sHSIP (HSIP Set Aside Program)** – Federal 148 funds set aside for merit based projects submitted by PennDOT Engineering Districts in partnership with area planning partners (MPOs/RPOs) and selected by PennDOT’s Highway Safety & Traffic Operation Division (HSTOD) and PennDOT’s Center for Program Development and Management. These infrastructure related safety projects must implement focus areas from the current Pennsylvania Strategic Highway Safety Plan (SHSP) using Data Driven Safety Analysis (DDSA). Submissions are submitted and accepted on a two year cycle.

**SRTSF (Safe Routes to School Federal-Aid)** – Federal funding that can be used for programs and projects that encourage children and their parents to walk and bicycle safely to school.

**STP (Surface Transportation Block Grant Program/STBG)** - Federal flexible funding that may be used on any federal aid highway, bridge project, public road, transit capital project, and intracity and intercity bus terminals and facilities. Previously known as Surface Transportation Program (STP).

**STU (Surface Transportation Block Grant Program-Urban Allocation)** - Federal funding previously made available under various smaller federal aid categories, as well as a broad, flexible component that is allocated based on federal formulas to areas with population over 200,000. Previously known as Surface Transportation Program Urban Allocation (STU).

**SXF** - Special federal funding from congressional earmarks provided under ISTEA, TEA-21, and SAFETEA-LU.

**TAP or TAU (Surface Transportation Block Grant Programs Set-Aside)** – This program is formally known as Transportation Alternatives. 50 percent of the funds allocated to each state are based upon populations greater than 200,000. A competitive process for selection of projects must take place. The fund code for this allocation is designated as TAU. The other 50 percent of funds are available to any area of the state and is to be held in a statewide reserve that requires a statewide competitive process for selection of projects. The fund code is designated as TAP.

**TIGER (Transportation Investment Generating Economic Recovery)** - Special discretionary federal economic recovery funding used to spur a national competition for innovative, multimodal, and multijurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, a region, or the nation.

## STATE HIGHWAY FUNDING SOURCES ABBREVIATIONS

**A-073 (Appropriations 073) – Green Light Go** - Act 89 of 2013 created a new grant funding program for designated corridors to reduce congestion and improve efficiency of traffic signals on state highways. Green Light-Go Pennsylvania's Municipal Signal Partnership Program will provide up to \$40 million state funds during State Fiscal Year (SFY) 2016-2017, and after, for the operation and maintenance of traffic signals along critical and designated state highways with a required 50% municipal or private cash match.

**183 (Appropriation 183)** - State funding that can be applied to local bridge projects.

**185 (Appropriation 185)** - State funding that can be applied to state bridge projects.

**185-IM (Appropriation 185)** – State funding that can be applied to state bridge projects in the Interstate Management Program.

**179 or 179A (Appropriation 179)** - State funding that can be applied to selected local bridge projects in distressed areas.

**244 (Automatic Red Light Enforcement (ARLE))** – This program targets high crash intersections within the Commonwealth of Pennsylvania with the implementation of an automated system that records violations by drivers who run red lights and are fined for their violation. The Pennsylvania Department of Transportation distributes the funds via a grant program specifically designated for transportation safety improvements. Municipalities may apply for these grant moneys to pay for eligible roadway enhancement, safety, and congestion projects.

**411 (Multimodal Transportation Fund)** – This program is a competitive statewide program established by Act 89 of 2013 to provide grants to ensure that a safe and reliable system of transportation is available for the residents of the Commonwealth of Pennsylvania. The program is intended to provide financial assistance to municipalities, councils of governments, businesses, economic development organizations, public transportation agencies, rail/freight entities, and ports to improve transportation assets in order to enhance communities, pedestrian safety, and transit revitalization. The 411 fund code specifically refers to the Multimodal Transportation Fund administered by PennDOT, not by the Commonwealth Finance Authority (CFA).

**581 (Appropriation 581)** - State funding that can be applied to highway or bridge projects on the state highway system.

**e581 (Transportation Infrastructure Investment Fund)** – State economic development funding that can be applied to highway projects on the state highway system.

**581-IM (Appropriation 581)** - State funding that can be applied to highway projects in the Interstate Management Program.

**SPIKE or SPK (State Spike Funds – State Bridge/State Highway)** - Funding reserved from state allocations and then distributed to specific projects chosen by the Secretary of Transportation

for the Commonwealth of Pennsylvania. Several variations of SPIKE funding are coded. (Example: SPK-SH for State Highway SPIKE funds).

## OTHER HIGHWAY FUNDS

**LOC** - Funding provided by counties, municipalities, or other nonfederal sources to be used to match state or federal funds.

**OTHER** – Other funds.

**TBD** - To be determined.

**TOLL (Toll Credit Match)** – State toll credits that may be used to match federal funds.

**TPK (Turnpike Funds)** – Funds provided by the Pennsylvania Turnpike Commission.

## FEDERAL TRANSIT FUNDING SOURCES ABBREVIATIONS

**CAQ or CMAQ (Congestion Mitigation and Air Quality Improvement Program)** - Federal funding for projects that improve air quality and/or relieve congestion without adding new highway capacity. This funding provides funding to areas in nonattainment or maintenance for ozone, carbon monoxide, and/or particulate matter. States that have no nonattainment or maintenance areas still receive a minimum apportionment of CMAQ funding for either air quality projects or other elements of flexible spending. Funds may be used for any transit capital expenditures otherwise eligible for FTA funding as long as they have an air quality benefit. These funds can be “flexed” (transferred) from FHWA to FTA for use by transit operators.

**DEMO (Demonstration Funds)** - Special federal funding from congressional earmarks provided under ISTEA, TEA-21, and SAFETEA-LU.

**FED OTHER (Federal Other)** – Used to denote unanticipated allocations of federal funds outside the regular apportionment process, so the funding source is not known.

**SECTION 5303, 5304, 5305 (FTA Formula Metropolitan and Statewide Planning and NonMetropolitan Transportation Planning)** – Provides funding and procedural requirements for multimodal transportation planning in metropolitan areas and states. Planning needs to be cooperative, continuous, and comprehensive, resulting in long-range plans and short-range programs reflecting transportation investment priorities.

**SECTION 5307 (FTA Urbanized Area Formula Grants Program)** – Provides funding to public transit systems in Urbanized Areas (UZA) for public transportation capital, planning, job access and reverse commute projects, as well as operating expenses in certain circumstances.

**SECTION 5307(h) (FTA Passenger Ferry Grant Discretionary Program)** – Provides competitive funding to public ferry systems in urbanized areas.

**SECTION 5309 (FTA Discretionary Capital Investment Grants/CIG)** – FTA’s primary grant program for funding major transit capital investments, including heavy rail, commuter rail, light rail, streetcars, and bus rapid transit, this discretionary grant program is unlike most others in government. Instead of an annual call for applications and selection of awardees, the law requires that projects seeking CIG funding complete a series of steps over several years to be eligible for funding.

**SECTION 5309 (FTA Discretionary Pilot Program for Transit-Oriented Development Planning)** – Provides funding to local communities to integrate land use and transportation planning with a transit capital investment that will seek funding through the Capital Investment Grant (CIG) Program.

**SECTION 5309(\*\*) (FTA Discretionary Expedited Project Delivery for Capital Investment Grants Pilot)** – Allows up to eight projects over the life of the pilot program to be selected for expedited grant awards. Projects must be supported through a public-private partnership and demonstrate local financial commitment, technical capacity, and a certification that the existing transit system is in a state of good repair.

**SECTION 5310 (FTA Enhanced Mobility of Seniors and Individuals with Disabilities Program)** – Formula funding to States for the purpose of assisting private nonprofit groups in meeting transportation needs of the elderly and persons with disabilities.

**SECTION 5311 (FTA Formula Grants for Rural Areas)** – Provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations less than 50,000, where many residents often rely on public transit to reach their destinations.

**SECTION 5311(b)(3) (FTA Formula Rural Transportation Assistance Program)** – Provides funding to states for developing training, technical assistance, research, and related support services in rural areas. The program also includes a national program that provides information and materials for use by local operators and state administering agencies and supports research and technical assistance projects of national interest.

**SECTION 5311(c)(2)(B) (FTA Tribal Transit Formula Grants)** – Provides funding to federally recognized Indian tribes to provide public transportation services on and around Indian reservations or tribal land in rural areas. Funding is provided as a set-aside within of the Formula Grants to Rural Areas program and allocated both by statutory formula and through a competitive discretionary program.

**SECTION 5312 (FTA Discretionary Public Transportation Innovation)** – Provides funding to develop innovative products and services assisting transit agencies in better meeting the needs of their customers.

**SECTION 5312(i) (FTA Discretionary Transit Cooperative Research Program)** – Research program that develops near-term, practical solutions such as best practices, transit security guidelines, testing prototypes, and new planning and management tools.

**SECTION 5314(a) (FTA Formula Technical Assistance and Standards Development)** – Provides funding for technical assistance programs and activities that improve the management and delivery of public transportation and development of the transit industry workforce.

**SECTION 5314(b) (FTA Formula Human Resources and Training)** – Provides for grants or contracts for human resource and workforce development programs as they apply to public transportation activities.

**SECTION 5324 (FTA Formula Public Transportation Emergency Relief Program)** – Helps states and public transportation systems pay for protecting, repairing, and/or replacing equipment and facilities that may suffer or have suffered serious damage as a result of an emergency, including natural disasters such as floods, hurricanes, and tornadoes. It provides authorization for Section 5307 and 5311 funds to be used for disaster relief in response to a declared disaster.

**SECTION 5337 (FTA Formula State of Good Repair Grants/SGR)** – Provides capital assistance for maintenance, replacement, and rehabilitation projects of existing high-intensity fixed guideway and high-intensity motorbus systems to maintain a state of good repair. Additionally, SGR grants are eligible for developing and implementing Transit Asset Management plans.

**SECTION 5339(a) (FTA Formula Grants for Buses and Bus Facilities Formula Program)** – Provides funding to states and transit agencies through a statutory formula to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. In addition to the formula allocation, this program includes two discretionary components: The Bus and Bus Facilities Discretionary Program and the Low or No Emissions Bus Discretionary Program.

**SECTION 5339(b) (FTA Discretionary Bus and Bus Facilities Grants Program)** – Provides funding through a competitive allocation process to States and transit agencies to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. The competitive allocation provides funding for major improvements to bus transit systems that would not be achievable through formula allocations.

**SECTION 5339(c) (FTA Discretionary Low or No Emission Vehicle Deployment Program)** – Provides funding through a competitive process to States and transit agencies to purchase or lease low or no emission transit buses and related equipment, or to lease, construct, or rehabilitate facilities to support low or no emission transit buses. The program provides funding to support the wider deployment of advanced propulsion technologies within the nation's transit fleet.

**TIGER (Transportation Investment Generating Economic Recovery)** - Special discretionary federal economic recovery funding used to spur a national competition for innovative, multimodal, and multijurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, a region, or the nation.

**Tribal Transit Program (FTA Public Transportation on Indian Reservations Program)** – The Tribal Transit Program is a set-aside from the Formula Grants for Rural Areas program consisting

of a \$25 million formula program and a \$5 million discretionary grant program subject to the availability of appropriations. A 10-percent local match is required under the discretionary program, however, there is no local match required under the formula program.

## STATE TRANSIT FUNDING SOURCES

**PTAF 44 (Public Transportation Assistance Fund)** – State funding provided by the Public Transportation Assistance Fund.

**Section 1513 (Mass Transit Operating)** - State operating funding that is distributed to transit agencies based on their demonstrated need.

**SEC 1514 (Asset Improvement Program)** - State funding that is distributed to transit agencies based on their demonstrated need. Funding can be used for debt service payments, asset improvement projects, and acquisition of new assets.

**Section 1516/341 (Programs of Statewide Significance)** - Programs such as Persons with Disabilities, Welfare to Work, intercity bus and rail service, as well as technical assistance and demonstration projects, are funded using a dedicated portion of Public Transportation Trust Fund (PTTF). The match requirement varies by program.

**Section 1517.1 (Alternative Energy Capital Investment Program)** - This is a competitive grant program to implement capital improvements for conversion to an alternative energy source.

## OTHER TRANSIT FUNDS

**LOCAL** - Funding provided by counties, municipalities, or other nonfederal sources to be used to match state or federal funds.

**OTHER** – Other funds.

Figure 3: Roadmap for TIP Project Listing

## ROADMAP FOR TIP PROJECT LISTING

Below is an example of an actual TIP project listing with modified information for display purposes.

### DVRPC Project Category

Project location information

Roadways are grouped into different functional classifications based on the character of service they are intended to provide (e.g. major collector, principal arterial). All roadway projects using federal funds must be approved on the federally classified roadway system before a roadway can be included in the TIP.

Indicates if a project is "New," "New-B," or "Return." See page 37 for further explanation.

PennDOT ID#

County where project is located

**DVRPC FY 2017-2020 TIP for PA**

Pennsylvania - Highway Program (Status: TIP)

**Final Version**

**Bucks**

MPMS# 6477A

County Lines Road Widening SR:2038

State Route, if applicable

LIMITS: Stumper Road to Lower States Road/Kulper Road

IMPROVEMENT: Roadway New Capacity

MUNICIPALITIES: Montgomery Township; Horsham Township; Warrington Township

PLANNING AREA: Growing Suburb

Actl Let Date: 9/17/2015

MRPID:34

AQ Code:2020M

IPD: 0

PROJECT MANAGER: George Dunneiners ADE CONSTR

CMP: Major SOV Capacity

CMP Subcorridor(s): 12B

PennDOT Class: Additional Lanes

PennDOT Improvement: Additional Lanes

NHPP: Y

This project includes the widening of County Lines Road from 2 lane to 5 lanes with 5' shoulders. The project length is approximately 2 miles. The posted speed limit for the project area is 45 MPH and the design speed is 50 MPH. The project also includes intersection improvements at the Stumper Road/Kulper Road intersection and the addition of sidewalks. This project will also eliminate multiple substandard vertical curves along the road, which contribute to safety concerns at the intersection. The project may include the construction of two noise barriers and will include 61 partial right of way takes. There are no anticipated residential or commercial relocations as a result of this project.

Project CMP (Congestion Management Process) commitments include strategies such as improvements for bicyclists, pedestrians, and drivers on the existing road network (operations). See DVRPC's 2008 annual memoranda on supplemental strategies for details related to this project.

		TIP Program Years (\$ 000)											
Phase	Fund	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028
CON	NHPP*	2,000											
CON	581*	500											
		2,500	0	0	0	0	0	0	0	0	0	0	0
		Total FY2017-2020				Total FY2021-2024				Total FY2025-2028			
		2,500				0				0			

Funds are in Millions (\$).

\*Y\* indicates the project is eligible for federal National Highway Performance Program (NHPP) funding

Congestion Management Process (CMP) codes; see page 40 for explanation.

Anticipated Preliminary Engineering, Final Design, Right of Way, Utility, or Construction project phases; see pages 40 to 41 for discussion.

Highest Indicators of Potential Disadvantage (IPD) for Environmental Justice; see page 38 for discussion.

PennDOT Class and Improvement Category

Air Quality Code; see pages 38, and 39 for explanations

Project Manager assigned by PennDOT District 6-0

Indicates that a project is identified as a Major Regional Project in the DVRPC long-range plan.

Community types which correspond to long range planning policies; see pages 17 to 19 for discussion.

Estimated or actual date that project contractor bids for construction may be open; advertising dates occur prior to let dates.

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