

Legislative Budget and Finance Committee

Pennsylvania State Highway Maintenance Funding

Report Comments by Jason R. Brehouse, Esq., Chief Counsel & Project Manager
June 7, 2023

Good morning. My name is Jason Brehouse, Chief Counsel & Project Manager for the Legislative Budget and Finance Committee (LBFC). It is a pleasure to be here today with the committee members to discuss our report on Pennsylvania State Highway Maintenance Funding. Present with me today are committee staff, Anne Witkonis (a Project Manager) and Amy Hockenberry (an Analyst). We are also pleased to have with us today a representative of the Pennsylvania Department of Transportation (PennDOT), Dan Farley, Director of the Bureau of Operations.

Senate Resolution 2021-23 (SR 2021-23) directed the committee to:

- 1) Determine whether the state highway maintenance funding formula (SHMFF) has appropriately funded the county maintenance offices (CMOs) based on a review of maintenance needs versus maintenance allocation, including comparing the condition of the highways, bridges, and other assets. Determining the appropriateness of CMO funding shall also consider lane miles and bridges; vehicle miles traveled; and types of highways in the county, including 1997 population and future population projections.
- 2) Identify the distribution of highway maintenance funding directed to major, fixed expenditures, including personnel and benefit costs in each CMO.
- 3) Review state emergency funding totals by CMO for acts of nature such as flooding and landslides.
- 4) Compare PennDOT Engineering Districts on the effects of winter maintenance.
- 5) Review PennDOT's Road Maintenance and Preservation (RoadMaP) program created in 2016 and its selection criteria and future program stability.

The scope of this study covered the period 1997 through 2021, with an emphasis on Fiscal Years 2015-16 through 2021-22.

{Section II – Background Information on PennDOT's Highway and Bridge Maintenance Funding}

PennDOT oversees the Commonwealth's overall transportation system and is statutorily responsible for constructing, reconstructing, maintaining, and repairing all highways and bridges in the state highway system. PennDOT is a decentralized organization, the nature of which allows each of the agency's Engineering Districts and CMOs to use either internal resources or external contractors to complete maintenance activities.

PennDOT's 67 CMOs are divided geographically among the agency's 11 Engineering Districts numbered one through 12 (with no number 7). Each Engineering District is responsible for between three and nine CMOs. PennDOT maintains over 83,000 state 12' equivalent lane miles, the fifth largest highway system in the country, approximately 40,000 linear miles, and over 25,000 state bridges, the third highest number in the country.

During FY 2021-22, PennDOT's total state highway maintenance budget was approximately \$1.7 billion. This does not include the estimated overall additional highway maintenance funding needs of \$4.2 billion. This shortfall in highway maintenance funding is based on the annual requirement to perform cyclical maintenance activities. PennDOT, along with input from its Engineering Districts and their respective CMOs, determines the annual state highway maintenance budget needs based on the Pennsylvania state highway maintenance funding formula (SHMFF) established in Act 1997-3.

Act 1997-3 established the current Pennsylvania state highway maintenance funding formula that eliminated the utilization of the historical allocation of funds in 1978 and 1979 and instead incorporated a rolling five-year average of each CMO's expenditures along with a revision of the highway and bridge factors considered.

The Act 1997-3 formula provides funding based on two components: *The **first component** is an amount equal to the county's base allocation, which is the annual expenditure for routine maintenance operations performed by a CMO. It includes costs incurred for personnel services, operational expenses, and fixed assets, but does not include highway repair and restoration costs, averaged over the immediately preceding five years. The **second component** is based on the Additional State Highway Maintenance Appropriation (ASHMA) formula, in which each county receives a portion of state highway maintenance appropriations and executive authorizations (EAs) above the total of all counties' base allocations expressed in the following manner: **ASHMA= (40% RPQc + 15% BMDc + 30% LMc + 15% VMc)**. The ASHMA formula factors represent the following: determined using the following variables:*

- **“BMD [index].”** *The Bridge Maintenance Deficiency index is based upon bridge safety inspections of all state highway bridges, eight feet or greater in length, on a periodic basis.*
- **“c.”** *Any given county, when used alone or in conjunction with any formula part.*
- **“LM.”** *The number of actual state highway miles in each county as a proportion of the total number of state highway lane miles in Pennsylvania.*
- **“RPQ [index].”** *The Relative Pavement Quality Index is based upon a Road Quality Report, which entails the evaluation of the conditions of the highways in each county on a periodic basis. The criteria for determining any road deficiencies includes, but is not limited to road surface, foundation, drainage, shoulders, and other safety features such as road striping, guardrails, median barriers, and signs.*
- **“VM.”** *The number of vehicle miles traveled in each county as a proportion of the total vehicle miles traveled in Pennsylvania.*

{Section III – Funding Formula and Maintenance Needs}

PennDOT uses various factors to determine overall maintenance needs and assign dollar values. These factors include bridge maintenance, drainage needs, guide rail needs, and Systematic Technique to Analyze & Manage Pennsylvania’s Pavements (STAMPP) needs.

{Section IV – Funding for Major Fixed Expenditures}

We determined Engineering Districts and CMOs spent \$8.5 billion on fixed assets, operational expenses, and personnel services for FY 2015-16 to 2021-22. This amount consists of \$82 million in fixed assets, \$3.8 billion in operational expenses, and \$4.5 billion in personal services expenditures.

{Section V – Emergency Funding}

We found Annual Emergency Fund appropriations ranged from \$10 to \$20 million for FY 2015-16 to 2021-22. CMOs use emergency funding for unanticipated acts of nature, such as flooding, landslides, and other significant events, such as bridge collisions and pipe repair.

{Section VI – Winter Operations}

Our research determined that winter operations total costs for the past seven fiscal years ranged from \$212.3 million in FY 2019-20 to \$303 million in FY 2017-18. Costs per snow lane mile ranged from \$2,208 in FY 2017-18 to \$3,263 in FY 2020-21, averaging \$2,780 over the seven fiscal years included in this study.

{Section VII – Road Maintenance and Preservation Program (RoadMaP)}

Act 2016-85 created the Road Maintenance and Preservation Program, known as RoadMaP, to invest more than \$2 billion in highway maintenance and highway and bridge capital projects from FY 2017-18 to 2027-28 (on December 29, 2021, RoadMaP was halted due to the need for funds for CMOs’ core maintenance activities). We found that during the review period, from FY 2018-19 through FY 2021-22, 605 miles were treated for \$59.6 million and that these efforts resulted in a \$38.7 million savings over traditional methods.

{Section VIII – Questionnaire Responses}

We distributed a questionnaire with assistance from the PennDOT Central Office to each of the agency’s 11 Engineering Districts and received responses from all of them. We asked questions regarding the funding formula, maintenance, maintenance funding, expenditures, winter operations, incident management, paving, and cost reduction.