

Transportation Infrastructure

Goal

Development of an adequate, equitable, and sustainable funding program in order to maintain safe, reliable and resilient transportation infrastructure.

Key Issues

General Description of Focus Area and issue

Rural communities have a significant amount of transportation infrastructure to manage and maintain - including but not limited to accepted roadways, municipally owned bridges, and culverts. This presents challenges as the traditional funding mechanism, the Commonwealth's MGL Chapter 90 Program ("Chapter 90"), does not provide enough money to adequately maintain this infrastructure or cover the cost to design necessary improvements. Further, technology infrastructure development in rural communities typically lags behind development of such infrastructure in urban areas, which could hamper advancement for future technology such as autonomous vehicles.

Examples that highlight the issue

Chapter 90 funding is insufficient to adequately maintain local transportation assets in a State of Good Repair (SGR). This is exacerbated by aging roads, bridges and culverts that are vulnerable to severe weather events. The Massachusetts Municipal Association (MMA) estimates that \$685 million per year is necessary to maintain local roads in Massachusetts, while only \$200 million has been available annually.

- The replacement of the East Street Bridge in Southampton, which was built in the 1930s, will cost \$2.6 million in total. The town recently passed a proposition 2 ½ override to fund a \$1.6 million 20-year bond. The town will use a \$1 million MassWorks grant it received in 2017 to cover the remainder of the cost. The average Southampton single-family home will see a yearly increase of \$46.66 in taxes over the life of the bond.

High design costs and lower rural project evaluation scores make it difficult for rural communities to advance federally funded major transportation improvement projects to construction. In addition, limited staff capacity also makes it difficult for rural communities to commit the time necessary to apply for grants to fund roadway design and construction projects.

- Tropical Storm Irene decimated Franklin County. The Town of Hawley was especially hard hit with miles of washed out roads and culverts. A FRCOG inventory to assess culverts and other drainage outlets revealed 286 culverts and other drainage outlets to date. Much of this infrastructure is too small to meet MassDOT's definition of a culvert. Only 16 structures appear for the Town of Hawley in MassDOT's Bridges Web

Application. Only one is identified as a culvert. The North Atlantic Aquatic Connectivity Collaborative data base only identifies 69 structures to date in the Town of Hawley.

Unaccepted roads are not eligible for public funding requiring the abutters to bear the cost of maintenance. This situation is complicated by the fact that Massachusetts law requires action before a municipality may expend public funds for the removal of snow and ice from private ways open to public use (MGL c.40 6C.) Private roads must also be brought into compliance with local standards before they can be accepted as a public way.

Telecommunication and utilities infrastructure in rural areas to support next generation transportation lags behind urban areas. Inconsistent cellular service limits opportunities to use shared mobility services. Charging stations will be necessary to support electric vehicles and enhanced data networks such as 5G may be necessary to fully support autonomous vehicles.

Existing Policies and Programs –

Chapter 90 Program – The Chapter 90 program reimburses municipalities for road-related construction projects through general obligation bond issuances. Each community received an allocation based on a formula that considers population, employment and accepted roadway miles. This program is the main source of funding for roadway construction and maintenance for most towns and is currently funded at \$200 million dollars per year.

Municipal Small Bridge Program – A \$50 million MassDOT program over five years to assist cities and towns to replace or preserve bridges with spans between 10' and 20'. Each municipality may qualify for up to \$500,000 per year for the design and construction of small bridges that are not eligible for federal aid under existing programs.

Culvert Replacement Municipal Assistance Grant Program – Rural communities find design, permitting and construction of culverts to be daunting or simply infeasible. The MA Division of Ecological Resources' Culvert Replacement Municipal Assistance Grant Program (2017) assists municipalities with replacing undersized, perched, and/or degraded culverts in areas of high ecological value. However, the Program's project eligibility requirements and funding levels (\$750,000 in 2019) do not match most rural communities' needs.

Best Practices

Spencer Roads FMPC Capital Improvement Project. The Town of Spencer, MA developed a Financial Management Planning Committee (FMPC) to analyze the most efficient method to improve the condition of the Town's roadway network. The FMPC worked in cooperation with a private consultant to evaluate the extent of improvements necessary to bring local roads into SGR, and collectively estimated that the Town faced a backlog of road improvement projects in excess of \$30 million. To address this issue, Spencer residents subsequently approved a five or more year, \$19 million bond to begin to improve their transportation infrastructure. To date,

the Town has completed three projects and is advancing work on additional projects based on the schedule it outlined in its capital plan.

Recommendations

Perform an equity assessment of Chapter 90 apportionments. The current Chapter 90 formula incorporates roadway mileage, population, and employment to derive the annual apportionment for each community. As a result, a rural community receives significantly less Chapter 90 funds than an urban community with similar roadway mileage due to its lower population and employment. It is recommended that the Massachusetts Legislature commission a study to identify how current Chapter 90 funds are spent; compare rural and urban infrastructure needs; and develop recommendations to update the Program to ensure it is truly equitable for all cities and towns.

Review and Update the Chapter 90 Program. Use the results of the Chapter 90 equity assessment to review and update the existing Chapter 90 formula and develop a true multi-year plan to appropriate this funding. The bond authorization for this program remains 'flat' at \$200 million per year. It is recommended that the spending level for Chapter 90 be raised and increased at a rate comparable to inflation in future years to assist communities in advancing necessary transportation improvements.

Build capacity in rural infrastructure to support emerging technology and climate resiliency. Changes in technology have the ability to greatly improve the safety and efficiency in which vehicles operate. This requires the appropriate infrastructure to fully support new technology such as autonomous vehicles, electric vehicles, broadband communications including 5G networks, and ITS. It is recommended the Commonwealth consider a new competitive grant program specific to rural towns for the purpose of assessing and upgrading their current infrastructure to support emerging technology and climate resiliency.

Expedite permitting and develop increased funding for addressing small bridge and culvert needs. As of the writing of this Plan, MassDOT and EOEEA (and MMA) are facilitating a Small Bridge and Culvert Working Group that will be recommending policy, regulation and funding changes to improve access to technical assistance and funding for both types of projects.

For Appendix

Stakeholders consulted: Many people, agencies and organizations were consulted in the drafting of this Plan. Recommendations contained in this document are not necessarily supported or endorsed by all parties listed below.

MassDOT
Massachusetts Regional Planning Agencies (RPAs)
Town of Granby, MA
Transportation for Massachusetts (T4MA)

Federal Highway Administration (FHWA)
Federal Transit Administration (FTA)
MA Division of Ecological Restoration
The Nature Conservancy
Massachusetts Municipal Association (MMA)
Town of Williamstown, MA
University of Massachusetts
Massachusetts Public Interest Research Group (MassPIRG)
Massachusetts Public Health Association (MPHA)
Union of Concerned Scientists
Acadia Center
Town of Whately Highway Department
Town of Princeton Road Advisory Committee

References:

<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleVII/Chapter40/Section6C>

<https://www.mma.org/advocacy/chapter-90-funding-needs-a-boost/>

http://www.spencerma.gov/Pages/SpencerMA_Highway/roadsproject

MassDOT Bridges Web Application:

<http://massdot.maps.arcgis.com/apps/webappviewer/index.html?id=d42ae2ac2cb640ac992f763570ce10ed>

NAACC Data Center: https://naacc.org/naacc_search_crossing.cfm