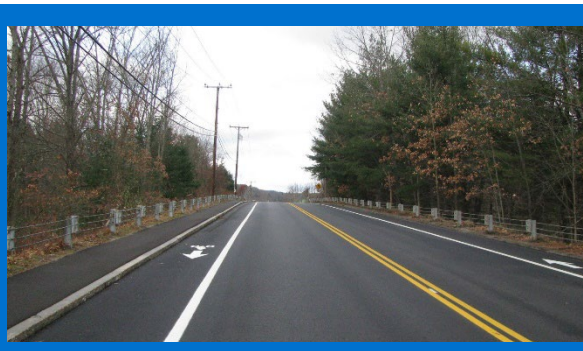
Chapter 90 Program Advisory Group

A Report on Challenges & Recommendations for Improvement



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Jay Green	Town Administrator	Adams	1
Dave Desrosiers	DPW Superintendent	Granby	2
Victoria Houle	City Engineer	Holyoke	2
Shaun Suhoski	Town Manager	Athol	2
Randy Heglin	Director of Public Works	Bolton	3
Steve Rolle	Transportation & Mobility Commissioner	Worcester	3
John Westerling	Director of Public Works	Natick	3
Mike Collins	DPW Director	Beverly	4
Mike Hale	DPW Director	Gloucester	4
Vonnie Reis	City Engineer	Melrose	4
William (Bill) Coyle	DPW Director	Plymouth	5
Geoffrey Gorman	Town Administrator	Marion	5
Paul Graves	Senior Project Manager	Barnstable	5
Fidel Maltez	City Manager	Chelsea	6
Neil McCole	DPW Superintendent	Randolph	6

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Executive Summary

In March 2024, the Healey/Driscoll Administration instructed the Massachusetts Department of Transportation (MassDOT) and the Executive Office for Administration and Finance (A&F) to convene a group of municipal officials to discuss challenges and potential improvements in the Chapter 90 Local Roads Program (the Program).

MassDOT and A&F assembled a 16-member statewide Advisory Group comprised of municipal transportation officials from across the Commonwealth. Over five meetings between June and December, members shared insights and experiences related to the Program, identified common challenges and developed a set of options for administrative and funding solutions for state officials to consider.

This report summarizes the Group's recommendations and new opportunities for the Program's administration, funding, and formula, and explores the Chapter 90 Program's history and evolution.

Program Overview

The Chapter 90 Program, established in 1973 and authorized through Massachusetts General Laws Chapter 90, Section 34, provides annual funding for municipalities to improve local transportation infrastructure. Funding is distributed based on a formula of local road mileage, population, and employment. Since its creation, the Program has experienced one formula change and various administrative changes to maximize the benefit and impacts for all municipalities.

MassDOT manages the Program, overseeing contracts, project requests, reimbursements, and Program compliance. Municipalities manage project planning and implementation.

Program Challenges

The Advisory Group identified five common challenges municipalities face:

- **Funding Levels:** The Chapter 90 Program has been funded at $200 million annually since 2012, except for a one-time increase in 2015. The current funding has not kept pace with municipal needs considering inflation, rising construction costs, and the impacts of climate change. Also discussed as a part of this challenge is that staff capacity and funding levels make it difficult for municipalities to conduct robust planning for their Chapter 90 investments. Smaller municipalities in particular struggle with this, often using funds as road conditions change, to meet short-term needs, or not at all. Meanwhile, other communities save funds year-over-year to accomplish a larger project. Taken together, this can result in a large sum of Program dollars being left unspent or uncommitted at any given time, though the funds are still needed by the communities.
- **Distribution Formula:** The Program's distribution formula, based on roadway mileage, population, and employment, might not adequately reflect the current needs of some municipalities, considering changing demographics and work patterns over the past 50 years.
- **Timing of Funding Availability:** The annual legislative process for fund authorization, typically completed in summer, forces municipalities to wait until the middle of the construction season to start a project, which is not always feasible.

- **Municipal Staff Training:** It can be challenging for staff to become knowledgeable about the Program regulations, the use of Grant Central, and the MassDOT prequalification process. Staff often are responsible for many other duties in addition to overseeing the Chapter 90 Program, so the time required to learn the mechanics of the Program can strain staff resources. This circumstance is worsened by workforce challenges at the local level, resulting in high turnover.
- **Eligible Activities:** Municipalities identified the need to expand eligible expenditures to include more preservation activities necessary for extending the life of existing transportation assets.

Recommended Program Improvements

Funding Improvements

- **Program Size:** The Advisory Group recommended increasing the Program size to $404.6 million to account for inflation since 2012 and other environmental factors that are driving up construction costs. This report includes an impact analysis of funding increases for municipalities across three different scenarios:
  - $250 million, a 25% funding increase;
  - $300 million, a 50% funding increase; and
  - $404.6 million, representing adjustment for inflation since 2012.
- **Distribution Formula:** The Advisory Group recommends adjusting the Program's distribution formula to make Chapter 90 distributions more equitable statewide. The group explored various formula factors to assess what impacts municipal apportionments, and recommends applying a new formula to any Program size increase beyond $200 million, choosing from among the following scenarios:
  - Reducing the weight of employment in the formula;
  - Eliminating employment from the formula; and
  - Apportionments based solely on municipally-owned road mileage.

  Other formula scenarios were also discussed and are detailed in the report. However, the group agreed that any formula change should de-emphasize the current employment factor.

Administrative Improvements

The final section of this report includes a set of recommended administrative changes to the Chapter 90 Program, as identified by the Advisory Group. These changes include:

- **Multi-Year Authorization:** Consider how multi-year authorizations might make funding availability more consistent and enable better local planning.
- **Capital Planning for Municipalities:** Create opportunities to support or encourage long-term capital planning of Chapter 90 funds by municipalities through new planning tools and/or multi-year funding authorizations.
- **Enhanced Training and Guidance:** Increase MassDOT's support to communities through online and in-person training and improved user guides to help navigate the Program, Grant Central, and the prequalification process. Continue to refine Grant Central and other tools.
- **Expanded Project Eligibility:** Expand eligible project categories to include various preservation activities.

1

Introduction

In March 2024, the Healey/Driscoll Administration directed the Massachusetts Department of Transportation (MassDOT) and the Executive Office of Administration and Finance (A&F) to convene a group of officials to discuss challenges and potential improvements in the Chapter 90 local roads program (the Program).

MassDOT and A&F assembled a 16 member statewide Advisory Committee comprised of municipal leaders and transportation officials. Over five meetings between June and December, members shared insights and experiences related to the Program, identified common challenges and developed a set of options for administrative and funding solutions for state officials to consider.

This report summarizes recommendations and new opportunities for the Program's administration, funding, and formula, and explores the Chapter 90 Program's history and evolution.

2

Program Overview

Program Purpose and History

The Chapter 90 Program, authorized through Massachusetts General Laws (M.G.L) Chapter 90, Section 34, provides an annual funding source for local roadway improvements. Program funds are allocated annually to municipalities using a formula. Eligible expenses fall into three primary categories: construction, equipment, and consultant services. The Program's broad eligibility criteria allow municipalities to evaluate their unique transportation needs and allocate funding accordingly. For many communities, Chapter 90 comprises most or all of the local roadway improvement budget.

Although state aid funding for local roadways existed under the title of Chapter 90 prior to 1973, the Chapter 90 Program as it exists today was authorized in 1973. On March 28, 1973, at the Annual Public Works Commissioner's Meeting, several key policies were implemented, including a distribution formula. The local aid formula was based on the following factors: 50% local road mileage; 25% population; and 25% employment. At that time, the policy also dictated a cost-sharing mechanism that required communities to fund 25 percent of Chapter 90 projects in some instances.

The Program has since been modified. Local match requirements were later removed, and the formula has been updated, maintaining the same factors but with adjusted weights of 58.33% local road mileage; 20.83% population; and 20.83% employment. These changes were made to increase funding to rural communities. Since that time, the Program has remained consistent.

Chapter 90 Formula Factors

Proportion of municipally owned roadway miles in a municipality in relation to the total locally owned mileage across the Commonwealth.

Proportion of the population of a municipality in relation to the population of the Commonwealth.

Proportion of the number of jobs located in a municipality in relation to the total number of jobs in the Commonwealth.

Program Administration

MassDOT

MassDOT administers the Chapter 90 Program. This involves establishing Program policies, contract management, project approval and review, and payment processing. The Chapter 90 Program is reimbursement-based, which means that communities submit a request to MassDOT for project cost reimbursement after expenses are incurred. **Figure 1** below shows the typical lifecycle of a Chapter 90 project. When communities have enough funding to complete a project, they submit a project request to MassDOT for review and approval. Then they implement the project before seeking reimbursement for the work performed. Communities also work closely with the MassDOT Office of Construction Prequalification to ensure proper advertising procedures are followed per Massachusetts General Law and that qualified contractors are hired to perform work.

Figure 1 Chapter 90 Project Lifecycle

Municipalities

Municipal staff are crucial to the Chapter 90 Program's success. Municipalities have authority over the expenditure of their Program funds. In addition, municipalities are tasked with submitting project requests, advertising projects, collecting bids, overseeing the execution of work or purchases, project closeout, and submitting reimbursement requests to MassDOT. Chapter 90 projects are typically managed by staff from Public Works, Highway, Engineering, or Planning Departments. However, in some instances, political entities such as Select Boards or Town Councils also play a role in Program administration. Municipalities are required to adhere to MassDOT's established procedures and comply with all relevant state regulations.

Massachusetts Legislature & Governor

The Massachusetts Legislature has traditionally authorized funds for the Chapter 90 Program through an annual bond bill and a subsequent terms bill. Authorizations determine the amount of bond funding allocated to the Program each fiscal year (FY), which runs from July 1 to June 30. The terms bill then sets forth any further conditions for the funding. Bond bills and terms bills must be passed by legislature and signed into law by the Governor before any resulting Chapter 90 funds are available to communities.

Additional MassDOT Funding for Municipalities

In addition to the Chapter 90 Program, MassDOT also administers several grant programs which provide funding to municipalities for specific projects. **Table 1** below identifies funding programs available to communities for targeted improvements. These programs each have unique application, evaluation, and selection processes.

Table 1 MassDOT Municipal Funding Programs

Program	Program Purpose	FY25 Program Size
Complete Streets Funding Program	Addresses critical gaps in active transportation networks by providing technical assistance and construction funding.	$15 million
Local Bottleneck Reduction Program	Funds innovative solutions to modernize traffic signals and address congestion bottlenecks on local roadways to improve traffic flow.	$6 million
Municipal Pavement Program	Provides funds to improve the condition of municipally-owned state-numbered routes.	$25 million
Municipal Small Bridge Program	Provides funding for the replacement, preservation, and rehabilitation of small bridges.	$15 million
Shared Streets and Spaces Program	Funds improvements to plazas, sidewalks, curbs, streets, bus stops, parking areas, and other public spaces in support of public health, safe mobility, and strengthened commerce.	$6.5 million
Rail and Transit Programs	MassDOT's Rail and Transit Division operates several grant programs on an annual or semi-annual basis that support improved transit connectivity and service, innovation and service expansion, and public-private partnerships to improve freight rail infrastructure.	Approximately $50 million
Safe Routes to School (SRTS)	Federally funded program that works to increase safe walking, biking, and rolling among public elementary, middle, and high school students. The program uses formula funds that are administered on a competitive basis.	$15 million

3

Program Challenges

The Chapter 90 Program has been operational for over 50 years with few adjustments made to the Program. Meanwhile, the state has experienced substantial economic, population, and environmental shifts. In other states and even at the federal level, infrastructure formula funding policies and programs are reviewed roughly every decade to evaluate the need for any changes. With that in mind, it is understandable that the Healey/Driscoll Administration has been responsive to feedback from municipalities and advocates to explore changes to Program's policies and processes. Through feedback provided by the Chapter 90 Advisory Group, five challenges related to the Program have been identified and are detailed in this section.

Challenge 1: Distribution Formula

As discussed in **Chapter 2: Program Overview**, Program apportionments are made based on a formula consisting of three factors:

1. Local road mileage (58.33%)
2. Population (20.83%)
3. Employment (20.83%)

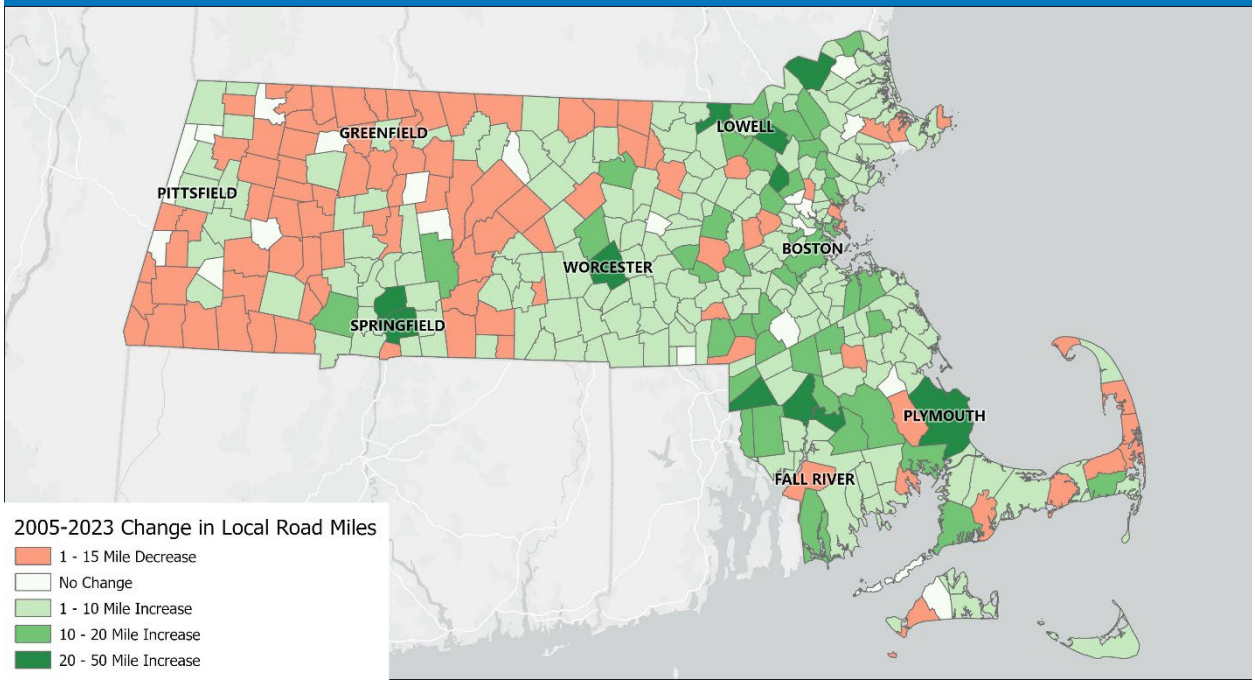
These formula components have not changed since 1973. The Advisory Group indicated that due to changing demographic conditions, the formula components may no longer reflect roadway needs or equitably distribute funds across all community types. This section evaluates how conditions supporting each formula factor have evolved since 1973.

Changing Demographic Conditions over Time

Local Road Mileage

Local road mileage makes up the largest share of the Chapter 90 Program formula and is calculated based on the centerline mileage of roadways under the jurisdiction of each municipality. Over the years, mileage has shifted among communities due to improved data collection methods, construction of new roadways, and shifts in the ownership of existing roadways. **Figure 2** below shows that many municipalities in western Massachusetts have lost miles while most in eastern Massachusetts have gained mileage. Changes to local road mileage in one community impacts apportionments for all municipalities.

Figure 2 Changes in Local Road Miles – 2005-2023



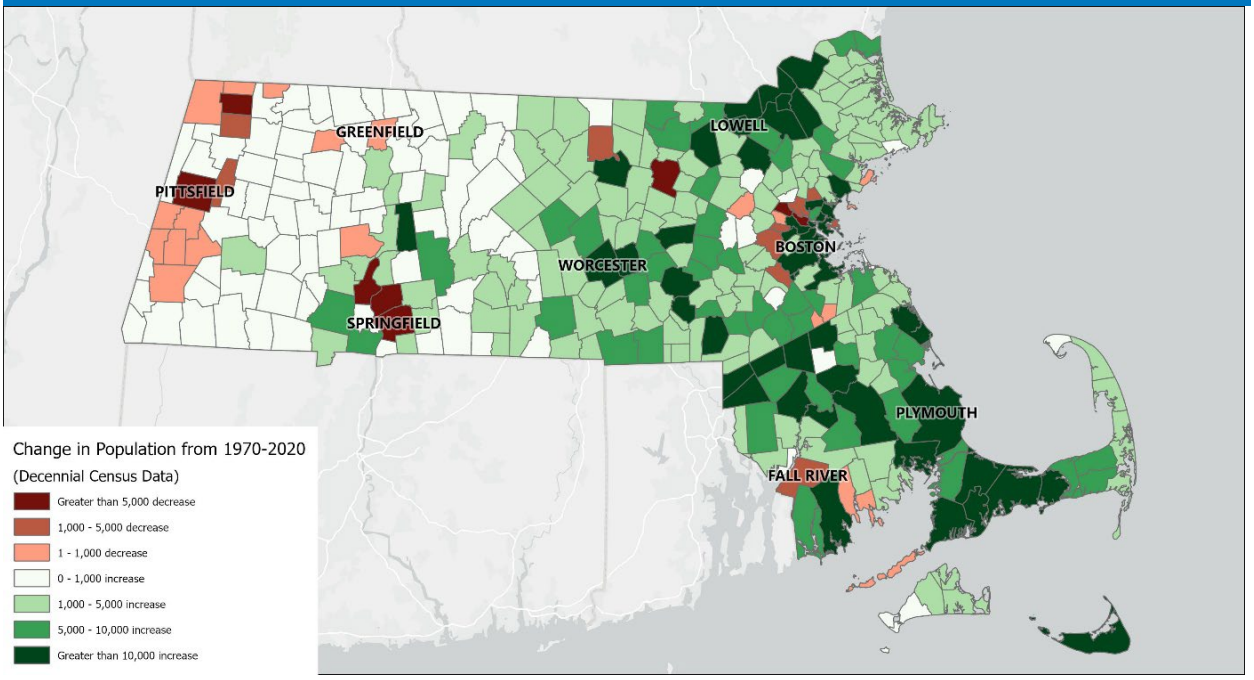
Source: MassDOT.

Population

Population in Massachusetts has changed significantly in the 50 years since the Program began. The formula uses population data from the United States Census Bureau's Decennial Census. **Figure 3** on the following page shows changes in population by municipality from 1970 to 2020, the most recent decennial census. Population in western Massachusetts communities such as Pittsfield and Springfield experienced the most significant declines in population during this period, losing more than 5,000 residents. By comparison, growth was highest in communities such as Worcester, Boston, Plymouth, and portions of the Cape, as well as communities located northeast of Lowell, along the New Hampshire border, where population increased by more than 10,000 individuals.

As population trends shift, apportionments tend to decrease for communities where population decreases and increase where population has grown, as population represents roughly 21 percent of the current formula. The Advisory Group reinforced that while population numbers may decrease in a community, the needs for roadway maintenance do not. This is particularly true for communities that experience a lot of "pass through" or "cut through" traffic whereby drivers who do not reside in a particular community are using its roadways to reach a destination in a different community. These assets must still be maintained in a state of good repair to facilitate safe and efficient travel within and through municipalities, but this traffic is not necessarily captured by the population formula factor.

Figure 3 Change in Population – 1970-2020



Population sourced from the United States Census Bureau decennial census data for 1970 and 2020.

Employment

Much like population, employment has changed significantly in Massachusetts since the Chapter 90 Program began. Employment is calculated based on the number of jobs located within a community using data from the Massachusetts Department of Economic Research (DER). Data is available dating back to 2001. **Figure 4,** below, illustrates the change in employment for each municipality from 2001 through 2023.

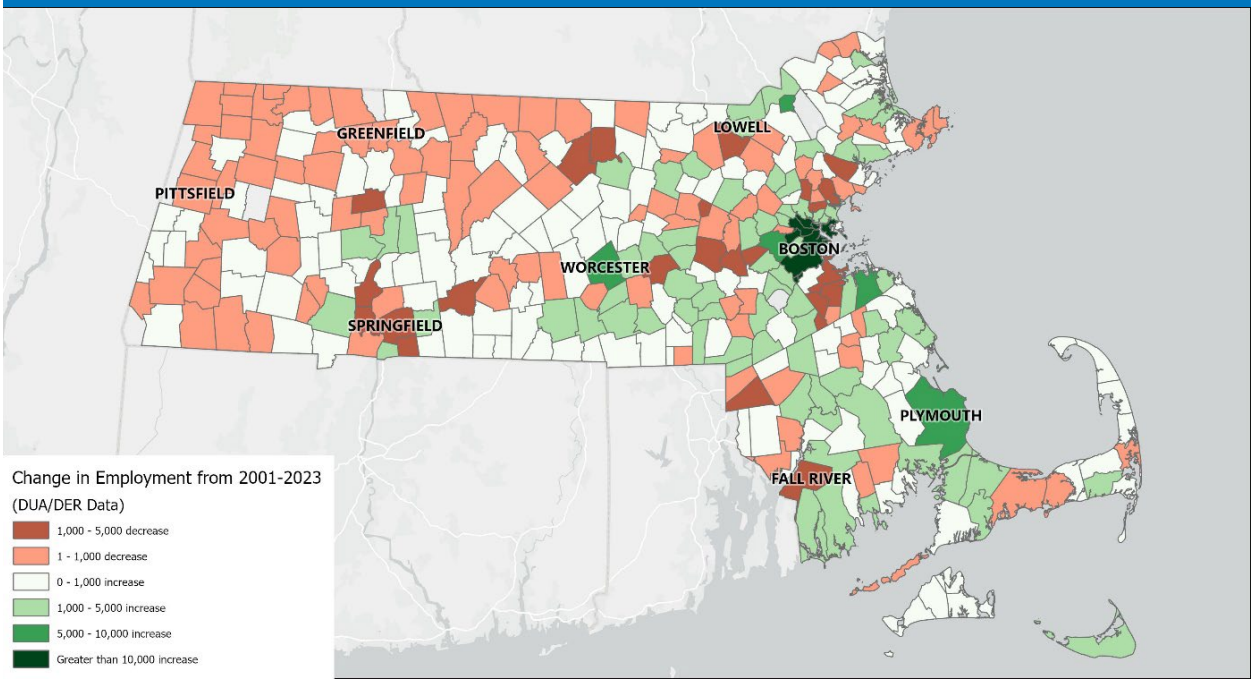
As the map shows, decreases in employment were most significant in western Massachusetts communities, though some communities in eastern Massachusetts, particularly areas just north and south of Boston also experienced decreases in employment during this period. Boston, Cambridge, and Somerville saw the largest growth in employment, each with over 10,000 new jobs over the last twenty years.

While shifts in the physical locations of jobs are important, recent trends related to teleworking should not be overlooked. During the COVID-19 pandemic, telework became more popular than ever. Many employees worked from their homes, regardless of the location of their office or employer. Telework has remained popular since. The United States Bureau of Labor and Statistics (BLS) reported that remote hours as a percentage of total hours worked rose from 13.5% in October 2022 to 16.4% in October 2024.

The June 2024 MassDOT report "*Impact of Teleworking: Evaluating Travel and Economic Efforts for the Commonwealth*" noted that individuals who travel further to work expect to telework more than those with shorter commutes. Moreover, the study projects that by 2050 there will be 22 percent fewer daily full-time commuters, along with a 53 percent increase in full-time home workers, and a 44 percent increase in hybrid workers, working remotely one to four days per week. When considering the new

popularity of teleworking, employment may no longer be as representative of where people travel to and from, and where roadway maintenance needs are highest, compared to years past.

Figure 4 Change in Employment by Municipality – 2001-2023



Employment data from the Massachusetts Department of Economic Research total annual average employment and wages dataset.

Additional Factors

Freight Impacts

Freight traffic on local roadways has shifted dramatically in the last decade, placing additional stressors on municipally-owned transportation infrastructure. According to MassDOT's 2023 *MA Freight Plan*, e-commerce activity surged during the pandemic years and continues to remain high. While average truck trip lengths have decreased, the number of trucks trips has increased, particularly in urban areas. This additional activity places more medium and large vehicles on roadways, contributing to degradation of streets and the surrounding landscape.[1] According to the *MA Freight Plan,* highway freight activity is projected to grow to more than 288 million tons, valued at $608.3 billion, by 2045. This indicates that freight traffic on local roadways is likely to continue to increase.

Challenge 2: Program Size

The Chapter 90 Program has been funded at $200 million since 2012 except for a single increase in 2015. During this period, inflationary pressures and climate change related costs have diluted the impact of the Program size, leaving communities with many asset needs that cannot be met.

1 Massachusetts Department of Transportation, *2023 Massachusetts Freight Plan*, accessed November 25, 2024, https://www.mass.gov/doc/2023-massachusetts-freight-plan/download.

Funding Levels Over Time

1973-2000

Chapter 90 authorizations from 1973 to 2000 were established through the annual budget process as well as through bond bills and other legislation. This, combined with limited digital records, makes exact Program funding levels difficult to document by fiscal year. What is clear, though, is that from 1973 through 2000, Chapter 90 funding levels were significantly lower than they are today.[2] For example, in FY 1973, Program allocations totaled approximately $16.7 million. By 1977, Program funding levels began to rise, increasing to $27 Million for FY 1978 and FY 1979.[3] This increase continued into the 1980s, reaching roughly $80 million in FY 1988.

Funding levels then fluctuated significantly during the 1990s, decreasing to $36.8 million in FY 1992 before rising temporarily to $300 million in FY 1995 through FY 1997. In FY 1999, Program size decreased to $150 million, split over two allocations under two separate chapters of the Acts of 1999.

2000-Present

Since 2000, the Chapter 90 Program has delivered over $4.2 billion in funding to municipalities across the Commonwealth. Program funding levels have ranged from $100 million to $300 million from FY 2000 through FY 2025. **Table 2** identifies allocations since FY 2000, based on records from MassDOT. As shown, funding levels generally increased every two to four years between FY 2000 and FY 2015. Beginning in FY 2016, funding levels have remained stagnant at $200 million, where they remain currently. In FY 2015, funding for the Program increased to $300 million for a single fiscal year when the Baker Administration decided to cover municipal costs for that year's record snowfall.

Table 2 Chapter 90 Program Allocations since Fiscal Year (FY) 2000

FY 2000-FY 2004	FY 2005-FY 2007	FY 2008-FY 2010	FY 2011	FY 2012-FY 2014	FY 2015	FY 2016-FY 2025
$100 million	$120 million	$150 million	$155 million	$200 million	$300 million	$200 million

Supplemental Authorizations

In addition to Chapter 90 bond funded allocations, there have also been several one-time supplemental authorizations to the Program, including:

- $30 million in FY 2015 for winter recovery after record-breaking snowstorms;
- $40 million in a cash appropriation from the FY 2018 state surplus;
- $20 million in a cash appropriation in FY 2020 from the FY 2019 state surplus;
- $100 million in FY 2022 through the Winter Recovery Assistance Program;[4]

2 To evaluate trends in annual Program funding during this period, historical Department of Public Works Annual Reports, and correspondence between DPW and the City of Beverely were reviewed to identify funding levels.

3 Letter from Executive Office of Transportation and Construction, Department of Public Works to City of Beverly, February 9, 1977.

4 Commonwealth of Massachusetts, "Winter Recovery Assistance Program (WRAP)," Mass.gov, accessed November 23, 2024, https://www.mass.gov/winter-recovery-assistance-program-wrap#:~:text=Provides%20cities%20and%20towns%20with%20funding%20to%20improve,as%20WRAP.%20The%20program%20is%20administered%20by%20MassDOT.

- $100 million in FY 2024 as part of the Fair Share Amendment of 2022;[5]
- $25 million in both FY 2024 and FY 2025 as part of the Rural Roadway Funding Program; and
- $45 million in FY 2025 as part of the Fair Share Amendment of 2024.

Impacts of Inflation

Construction and Labor Costs

While the Chapter 90 Program has remained level-funded since 2012, construction and labor costs have experienced significant inflationary pressure during this period. Since 2003, the United States Department of Transportation Federal Highway Administration (FHWA) has maintained the National Highway Construction Cost Index (NHCCI), a dataset that reflects quarterly construction costs across several categories. An analysis of this dataset reveals that, since 2003, the cost of construction for highway projects has increased 3.19 times, meaning that a $1 million project in 2003 would cost $3.19 million in 2024.

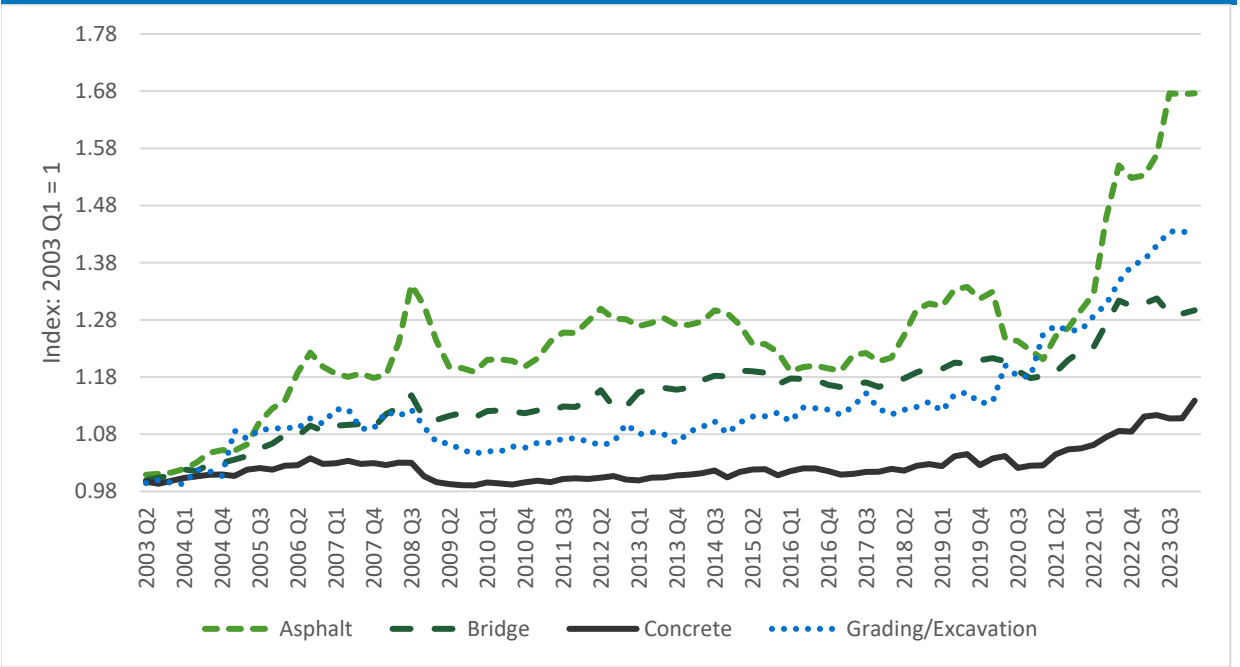
The NHCCI also provides an analysis of inflation by project components, including Asphalt, Base Stone, Bridge, Clearing, Concrete, Drainage, Electrical, Equipment, Erosion Control, Grading/Excavation, Structures, Traffic Control, and Utility. Key takeaways from this data include:

- Asphalt costs have increased by 167 percent compared to 2003 costs, with the highest increases occurring in 2008 and between Q1 and Q3 of 2023.
- Grading and Excavation costs have experienced the second highest increases during this period, rising by 143 percent.
- Bridge costs saw the third highest spike, increasing by 129 percent.
- Concrete costs saw the fourth highest increase, rising by 114 percent.

Figure 5 on the following page shows quarterly increases for each of these components since the NHCCI began in Q2 of 2003.

5 Commonwealth of Massachusetts, "Fair Share FY 2024 Amounts by Municipality," Mass.gov, accessed November 23, 2024, Fair Share FY 2024 amounts by municipality | Mass.gov.

Figure 5 Quarterly Increases in Asphalt, Grading/Excavation, Concrete, and Bridge Costs



Source: Transportation Economic Trends: Value of Transportation - Construction Cost | BTS Data Inventory

This data shows that nationally, costs for asphalt, bridge, concrete, and grading/excavation have risen significantly over the past twenty years and have all experienced rapid increases in just the past two years. 81 percent of Chapter 90 projects submitted to MassDOT between May and October 2024 were for pavement improvements. With asphalt experiencing the largest cost increases since 2003 and a steep increase since 2022, municipalities have been experiencing significant impacts of inflation on their pavement improvement projects.

Furthermore, MassDOT construction bid price data indicates that since the Program became flat-funded at $200 million in 2012, the cost of asphalt – one of the most popular uses of Chapter 90 funds – has risen dramatically. The cost to repave one mile of a two-lane road (12-foot travel lanes and 4-foot shoulders) has risen from $189,000 since 2012 to $294,000 at the time of this report.

While all municipalities in the Commonwealth have experienced inflationary pressures when it comes to labor and materials for infrastructure jobs, rural municipalities have felt the impacts of inflation more significantly. Rural communities generally receive lower annual apportionments and therefore undertake smaller scale projects. While both small and large projects require similar labor efforts to implement, small-scale projects do not benefit from the discounted pricing that contractors are often able to offer for large projects with higher material quantities. This, combined with the rise in materials costs, makes these smaller projects disproportionally more costly.

Climate Change Impacts

Alongside inflation, climate change has placed stressors on municipal roadway infrastructure, requiring more resources to address its impacts. The Advisory Group indicated that the increased frequency and severity of storms directly impacts municipal efforts to keep transportation assets in a state of good repair. For example, some Advisory Group members noted that intense rain events are causing more frequent road washouts. These events also overwhelm aging drainage systems, causing

flooding of the roadway in some cases. Along the same vein, pavement conditions have been challenged by more persistent freeze-thaw conditions, which causes cracking of roadways and sidewalks.

In rural communities that have a high prevalence of unpaved roads, the increased frequency and severity of weather events has had even more serious consequences. In some cases, communities are forced to close local dirt or gravel roads for months at a time because recurring issues are too costly to comprehensively address. While Chapter 90 funds can be used to maintain unpaved roadways, the funding need is cited as so significant that a separate resource dedicated to unpaved roads would be needed to address these critical concerns.

The impacts of climate change are expected to worsen over time in many areas of the Commonwealth. In July 2024, MassDOT published its long-range transportation plan, *Beyond Mobility: Massachusetts 2050 Transportation Plan*, which analyzed the impacts of climate change on the Commonwealth's transportation infrastructure. The plan specifically evaluated sea level rise and hurricane inundation zones to assess needs, and established resiliency as a priority area.[6] Notably, *Beyond Mobility* identified that more than 74% of the Commonwealth's population lives in coastal areas which could experience a 2.3-to-4.2-foot sea level rise by 2070, and that nine of the top 20 warmest years on record have occurred since 2010. Over 3,300 miles or roadway, most of which is municipally owned, is located within Hurricane Category 4 impact areas, and more than 2,500 bridges and 3,300 miles of roadway across the Commonwealth are located within 100 feet of flowing waterbodies.[7] Municipal infrastructure in these regions will face an increasing need to design and construct additional elements to address these climate change impacts—further increasing costs and burdens being placed on their Chapter 90 funds.

Unspent Chapter 90 Program Funds

Feedback from the Advisory Group indicated that when communities advocate for a larger Program size, the Program's unspent balance is often referenced as an indicator that additional funding is not necessary. Communities are allowed to "rollover" their funding year over year, so many communities have multiple years of unspent funds available to them at any given time. At the time of this report, $525 million of Chapter 90 funds remain unspent across all 351 municipalities. This means that the average unspent Chapter 90 balance by community is $1.5 million.[8]

However, the Advisory Group pointed out that while there are indeed many communities with large sums of unspent funds, much of those funds are actually committed to approved projects and should not be used as an indicator that existing funding is not needed. There is inevitably a gap between when communities submit a project request to MassDOT to utilize Chapter 90 funds and when that project is implemented, and then when costs are reimbursed to the community.

An analysis of municipal account balances and approved project requests shows that of the $525 million in unspent Chapter 90 funding available to communities, 63% is committed to a project that has not yet been completed. In other words, approximately $330 million worth of project requests have been submitted to MassDOT and were approved for implementation but have not yet been

6 Massachusetts Department of Transportation, *Beyond Mobility: Full Plan*, accessed November 25, 2024, https://www.mass.gov/doc/massdot-beyond-mobility-full-plan/download.

7 Massachusetts Department of Transportation, *Beyond Mobility: Full Plan,* 84-85.

8 $525 million includes base Chapter 90 Program funding and the $100 million in supplemental funding provided to the Chapter 90 Program in 2015.

requested for reimbursement. Meanwhile, the plans or intentions for $195 million (or an average of $555,555 per community) of unspent funds have not been formally communicated to MassDOT, though the funds remain available for municipal use.

Capital Planning

Communities may have unspent Program funds that are not committed to a project for several reasons. First, municipalities that receive relatively small apportionments tend to save their funding over several years in order to accomplish a larger project. However, project requests are not submitted to MassDOT until a project is fully funded and ready for implementation, so no mechanism to indicate longer-term project plans currently exists. On the other hand, some communities save their funds year over year simply because there is no specific plan in place for investments. They may be using their funds ad-hoc or on an emergency basis with no clear direction for spending their year's funding.

While the Program did launch a capital planning template alongside a revamped guidance document in 2021, the template is not required or widely used. Overall, the lack of consistent program spending or indication of planning inhibits the identification of strategic investments and contributes to misgivings regarding the need for additional Program resources.

Challenge 3: Timing of Funding Availability

As detailed in **Chapter 2: Program Overview**, Chapter 90 funds are authorized annually by the Legislature and approved by the Governor during the annual bond authorization process before they are available for municipal use. This tends to be completed mid-summer, though sometimes funds are fully approved and enacted earlier. Meanwhile, the construction season generally starts in late spring. In order for communities to complete larger projects during one construction season, funds need to be secured, and the contractor bidding process must be completed well in advance. However, due to timing constraints, communities may not be able to pursue a new project or be reimbursed for that fiscal year's funding until both the construction season and fiscal year have already begun. As a result, communities often must delay projects entirely until the next construction season when the prior year's funds are fully available and there is ample time to advertise and implement a project. This contributes to the challenge of unspent funding detailed in Challenge 2 above.

Challenge 4: Municipal Training

In **Chapter 2: Program Overview**, responsibilities for MassDOT and municipalities related to the Chapter 90 Program were discussed. Key municipal roles for the Program include:

- Planning and prioritizing projects;
- Submitting project requests;
- Hiring consultants and contractors;
- Meeting requirements related to MassDOT's prequalification standards;
- Overseeing and/or performing approved work; and
- Closing out projects and requesting reimbursements.

Many communities represented in the Advisory Group agreed that it can be challenging for staff to become fully knowledgeable about the Program regulations, the use of Grant Central, and the MassDOT prequalification process. Staff often are responsible for many other duties in addition to overseeing the Chapter 90 Program, so the time required to learn the mechanics of the Program can strain staff resources.

This is exacerbated by the workforce issues being experienced by many municipalities – particularly rural communities. Staff turnover rates are rising, resulting in a lack of continuity in Program management at the local level and an increased number of new individuals needing to become familiar with the Program. While MassDOT provides several user reference guides and training resources on its website, additional technical assistance offered both in-person and on-line would benefit communities.

Challenge 5: Eligible Expenditures

Current Program guidance identifies some pavement preservation activities such as chip stone sealing and crack sealing as eligible expenditures. However, various other activities that could be described as important preservation techniques are not currently eligible, such as catch basin cleaning or guardrail mowing. Finding other funding sources to accomplish these tasks can be difficult for communities. As a result, sometimes these activities end up being deferred or not accomplished at all.

4

Program Recommendations

Funding Improvements

Program Size

The Chapter 90 Program has been funded annually at $200 million since 2012, except for 2015, when it was increased to $300 million for a single year. With guidance from the Advisory Group, MassDOT assessed three alternative Program sizes to understand their potential impact on municipal funding, recommending Scenario 3 for implementation. It should be noted that the Program size is dictated by Legislature and the Governor and is constrained by competing priorities and limited resources across the Commonwealth.

Table 3 below compares the lowest, highest, and median apportionments under the current Program size as well as the three alternative sizes evaluated in this section.

Table 3 Lowest, Highest, and Median Apportionments under Increased Program Sizes

Apportionment Size	Lowest	Highest	Median
$200 Million (Current)	$8,553.17	$15,104,335.60	$407,774.28
$250 Million	$10,692.41	$18,878,450.77	$509,742.59
$300 Million	$12,830.89	$22,654,140.93	$611,691.11
$404.6 Million	$17,304.59	$30,552,884.73	$824,967.41

Scenario 1: $250 Million

Scenario 1 increases the annual Chater 90 Program size from $200 million to $250 million, following previous examples of incremental increases. In the early and mid-2000s, apportionments increased by approximately 20 to 25 percent every four years (2005, 2008, and 2012). Under the current formula with a $250 million Program size, communities would experience a 25 percent increase in funding. This scenario represents a modest increase that would still enable municipalities to achieve more within a single fiscal year.

Scenario 2: $300 Million

Scenario 2 evaluates increasing the Chapter 90 program size to $300 million, mirroring funding growth in the late 1990s and in 2015. These marked increases were achieved through supplemental budget allocations or Transportation Bond Bills. Using the current formula with a $300 million Program size, communities would experience a 50 percent increase in funding. This would provide substantial annual fiscal support to accomplish much more work.

Scenario 3: $404.6 Million

Scenario 3 adjusts for inflation as it relates to materials, goods, and services associated with roadway construction costs. The inflation-adjusted Program size was calculated using data from the United States Department of Transportation's Federal Highway Administration's (FHWA) National Highway Construction Cost Index (NCCI), which tracks quarterly construction costs dating back to 2003. Adjusting for inflated construction costs, the new Program would be $404.6 million.

Using the current formula with a $404.6 million Program size, communities would experience a 100 percent increase in funding. The Advisory Group detailed that this significant increase funding to all municipalities would position them to engage in long-term planning and undertake larger capital improvements. The Advisory Group advocated its preference for this scenario, with the understanding that it may be difficult for the Commonwealth to implement considering limited resource availability. Some group members also noted that while a $404 million Program would be ideal, they would not want to see the Program size for any of the discretionary grant programs discussed in **Chapter 2: Program Overview** be reduced in order to fund such an increase.

Distribution Formula

With advice from the Advisory Group, MassDOT examined formula scenarios that might better represent needs across the Commonwealth. The following formula alternatives were proposed by the Advisory Group, and are demonstrated on the following pages using a $200 million Program size:

- A formula that reduces the weight of employment and increases the weight of road mileage.
- A formula that eliminates employment and increases the weight of road mileage.
- A formula that considers road mileage only.
- A formula that uses the Rural Roadway Program formula.
- A formula that considers road mileage by roadway classification only.

While the Advisory Group did not recommend a particular formula from the above to advance, it noted that any formula change should seek to de-emphasize the weight of employment and prioritize mileage as a distribution factor. The group believed that employment was not as important a factor in determining roadway needs. Meanwhile, the members felt that mileage is a very important indicator of resource needs. Moreover, the group recommended that a change in formula be accompanied by an increase in total Program size and that a new formula should only apply to additional funding provided to the Program above the current $200 million.

Administrative Improvements

The Municipal Advisory Group identified potential administrative changes to alleviate challenges discussed in Chapter 3, falling into four primary categories:

1. Utilize multi-year authorizations.
2. Encourage Capital Planning activities.
3. Increase training support for communities and enhance guidance documents related to the Chapter 90 Program, Grant Central, and the MassDOT prequalification process.
4. Expand Program eligibility for preservation activities.

Multi-Year Authorizations

As discussed in the previous chapter, the bond authorization process often results in funds only becoming available to communities after the start of the fiscal year and construction season. The Advisory Group noted that in years' past, the Program had been included in a multi-year bond bill which eliminated the need for annual approval of funding. The advisory group recommended that this approach be revisited in the future.

When discussing this topic, the idea of conditional project approval was presented by the Advisory Group. This concept would entail allowing communities to be conditionally approved to begin work on a Chapter 90 project in advance of the availability of that fiscal year's funding. The Advisory Group emphasized that with this strategy, any work conducted under conditional approval would be undergone at the municipality's risk until funds are available and could be reimbursed.

Capital Planning

More formalized capital planning could encourage municipalities to prioritize their infrastructure needs and proactively plan roadway improvement projects. This would ultimately lead to a more impactful and efficient utilization of Chapter 90 funds across the Commonwealth. At the same time, a Chapter 90 capital plan would allow communities to indicate to MassDOT and other stakeholders that any unspent funds have a plan in place for use. The Advisory Group indicated the need for balance between encouraging more strategic planning and avoiding overburdening local staff with new requirements. The Advisory Group noted that the development of a capital planning template within Grant Central could easily allow communities to communicate their longer-term plans for their apportionments. Combined with a multi-year authorization, this could not only encourage strategic planning but could significantly aid in justifying the need for more resources by clearly demonstrating funding commitments.

Increased Municipal Training and Guidance

MassDOT currently supports municipalities through various resources, including Program guides, toolkits, and web-based trainings. Additionally, District State Aid Engineers offer technical assistance through calls, meetings, and field visits. The Advisory Group recommended that additional in-person training opportunities about the Program, Grant Central, and the prequalification process could benefit communities who have new employees that need to learn the Program's operation. MassDOT could also continue to update its guidance documents related to these subjects on an ongoing basis

to ensure clarity and ease of use. Finally, the group recommended continued refinement of technologies such as Grant Central.

Expanding Eligibility for Preservation

Under current Chapter 90 Program regulations, projects must fall into one of four categories: construction, equipment, consultant services, and other, which includes items like pavement management software, lighting, and facilities for equipment and salt storage. The Advisory Group emphasized that some preservation activities that are directly tied to pavement condition, such as guardrail mowing or catch basin cleaning, are ineligible. Expanding eligible project categories to include these activities could extend the life of these assets and encourage municipalities to undertake a broader range of projects.