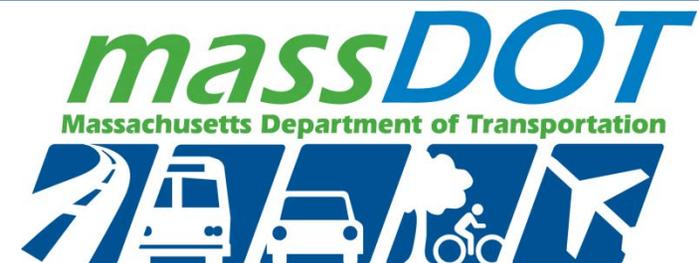




# MassDOT Capital Investment Plan Fiscal Year 2016

Issued June 2015







## To Our Customers and Stakeholders –

I am pleased to present this one year FY2016 update to the previously published FY2014-FY2018 Capital Investment Plan of the Massachusetts Department of Transportation (MassDOT). This plan, the first to be issued by the Baker-Polito Administration, embodies a commitment to ensuring that the Commonwealth's transportation investments will be statewide, strategic and sustainable. **Together, the Capital Investment Program for MassDOT and for the MBTA commit just over \$3 billion to our statewide transportation system in FY2016, a level of spending that exceeds the peak years of the Central Artery project.** The joint development and issuance of both CIPs reflect our continuing commitment to operating as 'One MassDOT' that provides the best transportation services and investments that we can for the Commonwealth.

The vast majority of the expenditures to be made by the MassDOT agencies in FY2016 will be based on prior contracts and commitments; this plan does not yet fully reflect potential changes to MassDOT's investment priorities. The number of ongoing projects reflects the importance of continuous investment in our transportation system, including investments in maintenance and system preservation. Even with the need to fulfill existing contracts and maintain existing assets, the plan accommodates smaller but strategic investments that have been proven to be effective (such as the Industrial Rail Access Program and grants to public use airports) and a new Complete Streets Certification Program.

This plan accounts for every state and federal dollar available to MassDOT for expenditure on capital projects and programs during FY2016. The chapter titled 'Overview of Sources and Uses,' provides information on all of the sources of funding available to the MassDOT agencies, as well as a description of the proposed uses of that funding in FY2016. The accompanying investment tables detail specific projects for FY2016, as well as the capital budget implications of those projects in FY2017 and beyond.

MassDOT and the MBTA both need to develop fully revised, five year CIPs to guide future capital investment and preparation of those longer-term investment plans will begin as soon as the FY2016 plan is finalized. In developing those plans, MassDOT will use project selection criteria to assist in the selection of investments. These criteria, now undergoing review by a legislatively created council, are scheduled to be finalized by June 30, 2015. With these project selection criteria, MassDOT will have an important tool for evaluating and prioritizing our investments to ensure that the Commonwealth achieves the best possible return on its transportation investments.

Transportation projects are not simply shovels in the ground, poured pavement, or laid rails. They are investments in our Commonwealth, our communities, and ourselves. We all have a stake in those investments.

Stephanie Pollack

Secretary & Chief Executive Officer



## Notice of Nondiscrimination Rights and Protections to Beneficiaries

### Federal “Title VI/Nondiscrimination” Protections

The Massachusetts Department of Transportation (MassDOT) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, the Federal Transit Administration, or both prohibit discrimination on the basis of age, sex, and disability. These protected categories are contemplated within MassDOT’s Title VI Programs consistent with federal interpretation and administration. Additionally, MassDOT provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with US Department of Transportation policy and guidance on federal Executive Order 13166.

### State Nondiscrimination Protections

MassDOT also complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 §§ 92a, 98, 98a, prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry. Likewise, MassDOT complies with the Governor’s Executive Order 526, section 4 requiring all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran’s status (including Vietnam-era veterans), or background.

### Additional Information

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

Title VI Specialist  
MassDOT, Office of Diversity and Civil Rights  
[MassDOT.CivilRights@state.ma.us](mailto:MassDOT.CivilRights@state.ma.us)

10 Park Plaza  
Boston, MA 02116  
857-368-8580  
TTY: 857-368-0603

### Complaint Filing

To file a complaint alleging a violation of Title VI or related federal nondiscrimination law, contact the Title VI Specialist (above) within 180 days of the alleged discriminatory conduct.

To file a complaint alleging a violation of the state’s Public Accommodation Law, contact the Massachusetts Commission Against Discrimination within 300 days of the alleged discriminatory conduct at:

Massachusetts Commission Against Discrimination (MCAD)  
One Ashburton Place, 6th Floor  
Boston, MA 02109  
617-994-6000  
TTY: 617-994-6196

**Translation**

If this information is needed in another language, please contact the MassDOT Title VI Specialist at 857-368-8580.

Caso esta informação seja necessária em outro idioma, favor contar o Especialista em Título VI do MassDOT pelo telefone 857-368-8580.

Si necesita esta información en otro idioma, por favor contacte al especialista de MassDOT del Título VI al 857-368-8580.

如果需要使用其它语言了解信息，请联系马萨诸塞州交通部（MassDOT）《民权法案》第六章专员，电话857-368-8580。

如果需要使用其它語言了解信息，請聯繫馬薩諸塞州交通部（MassDOT）《民權法案》第六章專員，電話857-368-8580。

Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь со специалистом по Титулу VI Департамента Транспорта штата Массачусетс (MassDOT) по тел: 857-368-8580.

Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Espesyalis MassDOT Title VI la nan nimewo 857-368-8580.

Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Chuyên viên Luật VI của MassDOT theo số điện thoại 857-368-8580.

Si vous avez besoin d'obtenir une copie de la présente dans une autre langue, veuillez contacter le spécialiste du Titre VI de MassDOT en composant le 857-368-8580.

Se ha bisogno di ricevere queste informazioni in un'altra lingua si prega di contattare lo Specialista MassDOT del Titolo VI al numero 857-368-8580.

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857-368-8580 إن كنت بحاجة إلى هذه المعلومات بلغة أخرى، يُرجى الاتصال بأخصائي الفقرة السادسة على الهاتف

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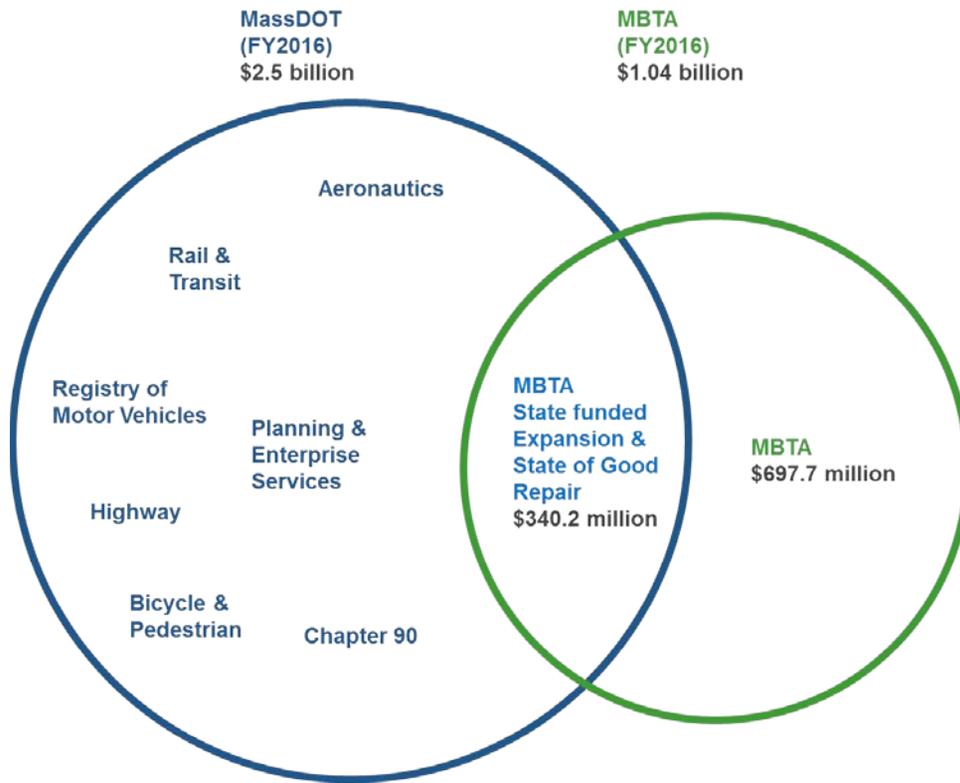
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# Introduction

This document provides a one-year update to the FY2014-FY2018 Capital Investment Plan of the Massachusetts Department of Transportation (MassDOT), addressing only those transportation investments that MassDOT plans to undertake in FY2016 (including their capital budget implications for FY2017 and beyond). The vast majority of the investments identified in this plan

represent investments in maintaining the existing system and in the continuation or completion of ongoing projects. Even with the need to fulfill existing contracts and maintain existing assets, the plan accommodates smaller but strategic investments to ensure that the investment program as a whole is statewide, strategic and sustainable.

This document is specific to MassDOT, but it is closely tied to the Capital Investment Program of the Massachusetts Bay Transportation Authority (MBTA). The Commonwealth has committed capital funding to a number of large, high-priority MBTA investments, including the extension of the Green Line to Somerville and Medford and the purchase of new Red and Orange Line cars. Those



funds – \$340.2 million in FY2016 – flow through MassDOT to the MBTA via project-specific contracts, and so are shown in this document. The diagram here represents the connection between the MassDOT and MBTA capital plans.

This document, which fully commits all state and federal funds available to MassDOT for use in FY2016, represents more than \$2.5 billion of investment in the Commonwealth’s transportation system – different modes, all regions, and a wide variety of projects. MassDOT commits to using all of the funds made available in this document within FY2016. The MBTA Capital Investment Program expends another \$1 billion on the MBTA system, of which \$340 million in FY 2016 flows from MassDOT to the MBTA. **The combined investment of just over \$3.1 billion outlined in these two documents enables the Commonwealth to make vital investments in fixing and maintaining our transportation system that will produce returns in the form of economic growth, prosperous cities and towns and better quality of life.**

The FY16 CIP is a one year plan. MassDOT is statutorily required to produce a five year capital investment plan, however it is not required to release an annually revised plan. The most recent MassDOT CIP addressed FY2014-2019; MassDOT will soon revisit that five-year plan in order to update the Commonwealth’s transportation investment strategy. In particular, MassDOT has been working with the Project Selection Advisory Council to develop a set of quantitative project selection criteria. Once this one year plan and those project selection criteria are finalized, MassDOT will begin working on a fully revised five year capital plan, which will be published early in calendar 2016 to cover the period FY2017-FY2021.

## Capital Investment Strategy

MassDOT’s approach to investing in the Commonwealth’s transportation system must be **strategic, statewide, and sustainable**. The vast backlog of state of good repair needs on our infrastructure, coupled with transportation’s role in supporting continued economic growth in Massachusetts, requires a **strategic** approach beginning with this plan and continuing with the upcoming FY17-FY21 CIP, MassDOT will do just that, using the new project prioritization system currently being recommended by the Project Selection Advisory Council to create a portfolio of transportation investments. Capital investments must balance the need to responsibly maintain existing assets with the need to modernize and add capacity as needed to support economic growth. Cities and towns throughout the commonwealth must be able to rely on MASSDOT and the MBTA for projects critical to the local economy and quality of life, so this CIP takes a truly **statewide** approach to improving our transportation system. Finally, transportation investment must be both financially and environmentally sustainable in order to position future generations for continued prosperity.

This plan is ambitious and wide-reaching but also achievable and financially prudent. In most years, MassDOT is fortunate to receive the majority of the state bond cap; given the pressing need for capital funding throughout state government, MassDOT must be judicious in our use of the Commonwealth's capital dollars. Furthermore, MassDOT is in the process of completing a number of major capital investments, which – along with maintaining our commitment to the ongoing maintenance of our assets – require much of our available capital funding. As is reflected in this document, there is only a limited opportunity to pursue new investment priorities in the coming fiscal year. However, this capital plan makes strategic use of all available federal, state and private dollars in order to invest in the Administration's core priorities: fixing and maintaining our assets, economic development and investing in our communities. This plan advances the necessary maintenance and system preservation of the Commonwealth's highway system, pursue projects that modernize and in a handful of cases increase the capacity of the state's transportation networks and undertake important planning efforts that will help lay the groundwork for the next generation of needed investments.

MassDOT is currently supporting the development of a set of **performance-based project selection criteria**. These criteria, which are undergoing review by a legislatively created independent council, are scheduled to be finalized and submitted to the legislature by June 30, 2015. Once the criteria are complete, MassDOT staff will work to create a process for applying the criteria to projects already in the development pipeline and to new investment ideas as they come forward. The draft selection criteria and their associated goals are as follows:

### System Preservation

- The Commonwealth should focus on the proactive preservation of assets to ensure that the existing transportation system can support mobility, safety, economic development, and transportation equity in the Commonwealth going forward.

### Mobility

- The transportation system should provide options and efficiently connect people to their destinations.

### Cost effectiveness

- Investments that have a better benefit to cost ratio should be prioritized.

### Economic impact

- The transportation system should support economic growth in the Commonwealth in a sustainable manner.

### Environmental and health factors

- The transportation system should avoid or mitigate negative environmental and health impacts, and allow all customers to have access to safe and comfortable healthy transportation options.

### Safety

- The transportation system should be safe and ensure the security of people and goods in transit.

### Social equity and fairness

- The transportation system should distribute both the benefits and burdens of development equitably among all communities.

### Policy support

- Projects should get credit if they address policy goals that are not accounted for or have such a strong anticipated impact that they warrant credit beyond the criteria weight.

Once these project selection criteria are final, MassDOT will shortly have a much better system for evaluating and prioritizing our investments – an absolutely crucial tool in a world of finite resources and never-ending needs. We encourage the public to read the project selection criteria, a draft of which can be found on the MassDOT website at: [www.massdot.state.ma.us/BoardsCommittees/ProjectSelectionAdvisoryCouncil.aspx](http://www.massdot.state.ma.us/BoardsCommittees/ProjectSelectionAdvisoryCouncil.aspx).

The forthcoming FY2017-FY2021 Capital Investment Plan for MassDOT will make use of these selection criteria, once finalized, for identifying and selecting not just “projects” but **investments**. Transportation projects are not simply shovels in the ground, poured concrete, or laid rails. They are investments in the Commonwealth, our communities and ourselves. We must expect and demand of our investments that they provide returns, not only in mobility but also in economic prosperity, environmental stewardship, and improved social access and equality. Going forward, this will be the lens MassDOT uses to evaluate how we spend our capital resources.

To be able to continue to advance as many projects as possible but in a manner that is fiscally prudent, MassDOT is **pursuing design and engineering for the next generation of major projects, whether or not construction financing has been committed for those projects**. This will allow us to move through the important phases of planning, community outreach, concept and preliminary design, and permitting so that MassDOT and its stakeholders can consider, support and develop, options for final construction funding. This work is often funded using eligible agency overhead dollars, which allows us to preserve key capital funds for later generations of design and ultimately for construction. We believe that this will allow us to be more nimble and responsive to opportunity.

**Five projects of particular note in this category include South Coast Rail, the expansion of Boston South Station, the reconfiguration of the I-90 interchange in the Allston area of Boston, the I-90/I-495 interchange project and the Green Line Extension (GLX) to Route 16.** All of these efforts are key to growing our economy, improving our mobility, and strengthening our quality of life. For all, we have committed funds for planning, public involvement, permitting, and design – in the case of South Station, we were fortunate to receive a competitive federal grant to support that work. None of these three projects was slated to be in construction in FY2016 and MassDOT does not yet have finance plans in place to support the start of construction. But as we develop a full FY2017-FY2021 five year capital plan we look forward to working with our partners and stakeholders in the public and private sectors to determine how best to advance these and other crucial investments in a manner that is fiscally prudent and sustainable.

In our efforts to find resourceful ways to advance capital projects, we will be making use of transportation-dedicated funds generated by the Commonwealth’s gaming initiative (MGL Chapter 23K, Section 62). A total of \$12.5 million of these funds, with \$5 million committed in FY16, will make possible the implementation of a new **Complete Streets Certification Program** to support cities and towns in the design and construction of roadways. The **Complete Streets Certification Program** will allow us to both support those communities that may be challenged to provide design funds and help to create a pipeline of Complete Streets projects that will further our goals for providing more and better mobility options across the Commonwealth.

The projected balance of currently available gaming funds will also be used to support:

- **\$8.3 million for signal improvements on the Worcester Line**

Additional upgrades to be completed in connection with the Boston Landing station partnership with New Balance

Lastly, it is important to note the strategic uses of the federally-funded Congestion Mitigation and Air Quality Improvement (CMAQ) program shown in this plan. The long-standing CMAQ program funds state-level projects that reduce vehicular congestion and air pollution. MassDOT distribute a portion of its annual federal CMAQ apportionment to the 13 planning

regions of the Commonwealth for use on beneficial projects of regional importance and retains a portion to invest in eligible statewide initiatives. For FY2016, MassDOT will commit **\$28.1 million** to projects that support bicycling and walking; alternative fuels and vehicles; and innovative traffic signal pilots, including:

- **\$750,000 for the fifteen Transportation Management Associations** of the Commonwealth (funded with a combination of CMAQ and gaming funds).
- \$5.5 million for **Bruce Freeman Rail Trail** (Concord)
- \$2.0 million for **Park & Ride Expansion Program** (statewide)
- \$500,000 for **Electric Vehicle Plug-In Charging Stations** (statewide)
- \$400,000 for **Adaptive Signals Controls** (11 intersections)

In all of these ways, MassDOT is striving to implement a balanced and strategic program of capital investments that will provide sustainable, lasting benefits across the Commonwealth.

## Planned Investments

This document provides a complete listing of all FY2016 investments. Some highlights, by MassDOT Division, are listed here.

### Highway Division Investments

Capital Investment in FY2016 total: \$1.7 billion

- **\$200 million in Chapter 90 funds to support transportation projects undertaken by our municipal partners.**

- \$405.9 million for projects within the Accelerated Bridge Program, including the Longfellow (Boston/Cambridge), Whittier (Newburyport/Amesbury), and Fore River (Quincy/Weymouth) Bridges, **including associated bicycling and pedestrian infrastructure.**
- \$166.4 million in non-Federal Aid with approximately **\$100M funding statewide preservation & maintenance and \$64.4M supporting capital improvements.**
- \$4.0 million for **Dedham Street Corridor improvements** in the Towns of Canton, Norwood and Westwood. MassDOT will work to re-program available federal funding for this project (already at 100% design) beginning in FY16.
- \$2.0 million for completion of **east-west connection through Southfield** by extending Trotter Road (funding originally from FY15)
- \$1.3 million for the **North Central Multiuse Pathway** (Winchendon).
- \$1.4 million for the **Quequechan Rail Trail** (Fall River).
- \$1.0 million for a partnership with Merrimack College to support improvements along **Route 114 corridor.**

## Aeronautics Division Investments

Capital Investment in FY2016 total: \$29.7 million

- \$26.2 million for grants to public use airports for **airport development; safety improvements; aircraft accident investigations; navigational aids; and statewide aviation planning.**
- \$3.3 million for **airfield markings, tree clearing, pavement rehabilitation, and upgrades to airport security.**
- \$200,000 to continue **a study on how best to reduce the carbon footprint of our regional airports.**

## Rail & Transit Division Investments

Capital Investment in FY2016 total: \$114.1 million

- \$83.7 million for **statewide transit investments**, including at the 15 Regional Transit Authorities: bus replacement; maintenance and operations of fleet replacement needs; and regionally significant RTA projects for maintenance facilities and \$5 million for the commuter garage at Newburyport commuter rail station.
- \$27.9 million for projects to improve the existing freight and passenger rail transport system along critical rail corridors, **including \$3 million for the Berkshire Line and \$3.5 million for the Framingham Secondary**.
- \$2.5 million for the Industrial Rail Access Program **to support partnerships with private freight rail carriers to improve rail infrastructure**.

## Registry of Motor Vehicles Investments

Capital Investment in FY2016 total: \$38.6 million

- \$34.4 million for one phase of the replacement of the Automated License and Registration System (ALARS).
- \$4.2 million for **branch and customer service improvements**, including the deployment of self-service kiosks and the replacement of outdated core network systems to improve reliability, customer service, and safety in branch offices

Following this Introduction, this document provides an overview of the sources of funding available to the MassDOT agencies, as well as a description of the uses of that funding in FY2016. This overview provides information on the planned expenditures, by MassDOT Divisions, in FY2016.

# Overview of Sources and Uses

This Capital Investment Plan (CIP) represents the distribution of estimated state and federal resources for the construction, maintenance, and development of projects across our statewide transportation system for state fiscal year 2016, including highways; bridges; bicycle and pedestrian paths; local roads; bus and rail networks; and airport safety infrastructure in all regions of the Commonwealth. The charts, tables and project listings within the CIP provide readers with a full accounting of how transportation investments will be made over the next fiscal year. This includes projects and information from the Statewide Transportation Improvement Program (STIP), regional Transportation Improvement Programs (TIPs), sections of the MBTA Capital Investment Plan, and the Aeronautics/Federal Aviation Administration Investment Plan.

Like all other transportation agencies, MassDOT must perform regular maintenance, repair, and replacement of its capital assets. This includes activities such as paving roads, repairing bridges, replacing signs and lights, maintaining our buses and trains, and replacing older information technology systems. The goal of the CIP is to keep the transportation assets of the Commonwealth in a state of good repair so as to maintain reliability, improve safety, create jobs and economic development for the long-term benefit of the Commonwealth, to invest in targeted expansion, and to modernize our transportation infrastructure.

The vast majority of the funding in this CIP is allocated to existing cash flows for previously committed projects. As an example, of the \$816 million in state bond cap provided to MassDOT for FY2016, approximately \$634.2 million, or 77% is used to pay the costs of ongoing projects.

The table on the following page summarizes the proposed FY2016 Capital Investment Plan by sources and the distribution of those sources by program.

<b>Fiscal Year 2016 – Capital Sources</b>	<b>Amount</b>
Bond Cap	\$816,000,000
Federal Highway Funding	\$658,414,167
Special Obligation Debt	\$395,658,208
Accelerated Bridge Program	\$405,865,123

Tolls	\$238,395,367
Federal Transit Authority Funding	\$48,094,125
Federal Aviation Administration Funding	\$12,862,169
Third Party	\$17,239,807
<b>Total</b>	<b>\$2,592,528,966</b>

<b>Fiscal Year 2016 – Capital Uses</b>	<b>Amount</b>
Highway Division	\$1,696,862,695
Massachusetts Bay Transportation Authority	\$402,138,208
Chapter 90	\$200,000,000
Transit Division	\$83,734,413
Commonwealth Funded Projects	\$60,000,000
Planning and Enterprise Services	\$51,000,000
Registry of Motor Vehicles	\$38,650,000
Rail Division	\$30,458,000
Aeronautics Division	\$29,685,650
<b>Total</b>	<b>\$2,592,528,966</b>

## Capital Investment Plan Sources

The following sections provide an overview of the funding sources and categories accounted for in the CIP. Funding levels for FY2016 are noted in each section, with a description of how the source funds can be utilized.

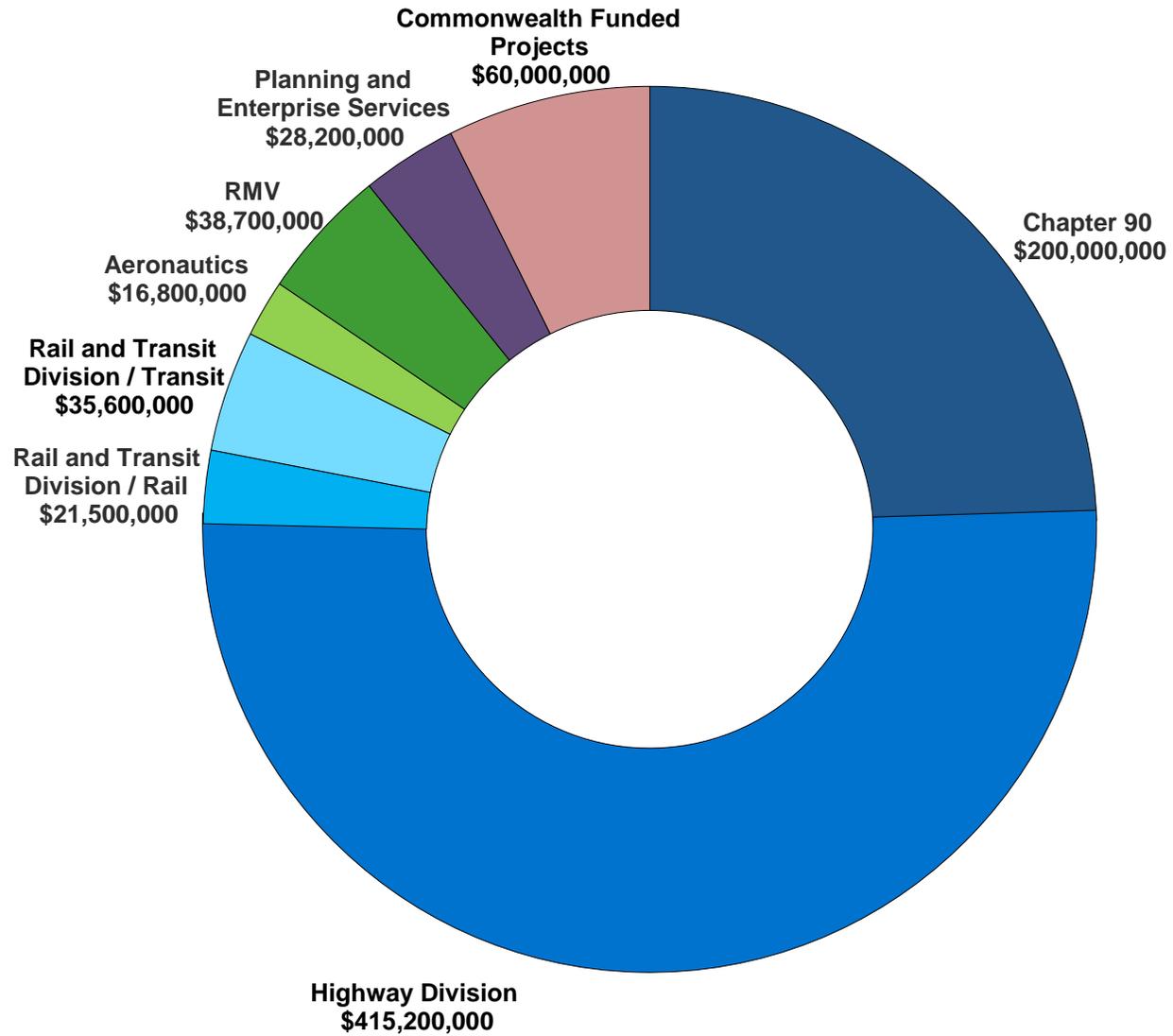
**Bond Cap: \$816.0 million**

The Commonwealth bond cap is the amount of proceeds from money borrowed by the Commonwealth in public debt markets. A portion of this is allocated to MassDOT on an annual basis. The overall borrowing limit is governed largely by the statutory debt ceiling and the Commonwealth's debt affordability analysis prepared by the Executive Office of Administration and Finance.

Spending of bond cap is made possible through authorizations contained in the Transportation Bond Bills. This source of funding is eligible to support spending in a wide number of project categories within legislative authorization. At MassDOT, bond cap is used for two major purposes: to provide the state match for federally aided capital projects (generally 10% to 20% of total project cost) and to fund 100% state-funded capital programs, including local road aid (Chapter 90), rail and transit investments, and road and bridge projects. MassDOT prepared the draft FY16 CIP using an anticipated bond cap of \$748 million, since then ANF's final FY16 CIP has provided \$68 million of additional bond cap to MassDOT bringing our total state bond cap amount for FY2016 to \$816 million.

The chart on the following page illustrates how the bond cap is allocated by MassDOT division.

# FY 16 Bond Cap by Division



## Federal Highway Funding: \$658.4 million

Federal Highway funding is provided to each state through formulas and discretionary grants. The funding is broken into a number of smaller constituent programs which guide its use, based upon federal laws and regulations. For most funding programs, federal funding provides 80% of eligible project costs, while the state's 20% match is provided by MassDOT's bond cap proceeds.

The CIP includes federally-funded highway projects that are programmed by the thirteen Metropolitan Planning Organizations (MPOs) in their respective Transportation Improvement Programs (TIPs). The TIPs are four-year capital planning documents that are updated once a year in the summer by each of the MPOs and reflect their regional priorities and goals. Cumulatively, they make up the federally required State Transportation Improvement Program (STIP). The STIP represents the total of all federally funded investments into our highway and transit systems for the next four years. As the STIP is finalized late each summer, this CIP includes 2016 projects from the 2015-2018 STIP. Once the 2016-2019 STIP is approved by our federal partners at USDOT and EPA, the federally-funded projects within the CIP will be updated to reflect the investments prioritized by our MPO partners.

During the development of the FY 16 TIPs, MassDOT decided to stop reserving funding off-the-top for state designated "Regional Major Infrastructure Projects, and to instead allocate that funding among the MPOs to program for local projects at the MPO level. The last project to receive funding under the prior program was the I-91 viaduct, which was programmed for a total of \$231 million. The project, which was recently awarded, came in significantly under budget, freeing up approximately \$48 million in additional capacity. MassDOT will be recommending to the MPOs that this funding be used for one final Regional Major Infrastructure Project – the construction of Dedham Street Corridor Improvements in Canton, Norwood and Westwood, which will construct a new off-ramp from Interstate 95 northbound to Dedham Street in Canton, and will also widen Dedham Street in Canton, Norwood, and Westwood to four lanes. These capacity improvements will unlock several important development parcels and provide a new alternative route to Amtrak and Massachusetts Bay Transportation Authority (MBTA) Commuter Rail services at Route 128 Station.

## **Special Obligation Debt – MBTA Projects: \$395.7 million**

In 2013, the Legislature enacted a multi-year transportation finance bill that provided additional funding to support investments in transportation infrastructure. Later that year, the Legislature authorized a Transportation Bond Bill which allowed for the issuance of general special obligation bonds for certain improvements to transit and statewide passenger rail projects, including the red and orange line cars for the MBTA and the green line extension. These bonds are to be secured and repaid from the Commonwealth Transportation Fund (CTF), using the additional revenue raised under the Transportation Finance Bill of 2013. Special Obligation Transit Bonds are subject to the statutory debt limit imposed by Section 60A of Chapter 29 of the General Laws. Under this limit, and in addition to the general obligation bond program, the current capacity to issue these special obligations is \$395.7 million.

The MassDOT CIP provides \$395.7 million in special obligation spending on transit projects of which \$341.7 million is to fund the MBTA-related costs. The remaining \$54 million is used by MassDOT to fund the MBTA-related costs of non-MBTA projects.

## **Accelerated Bridge Program (ABP): \$405.9 million**

Enacted in 2008, the Accelerated Bridge Program (ABP) allocated \$3 billion in funding to improve the condition of bridges across the state. ABP is financed with a combination of two sources: (1) ABP-specific Special Obligation Bonds secured by the revenues collected by the Commonwealth Transportation Fund (CTF); and (2) Federal grant anticipation notes issued by the Commonwealth. Consistent with the program's enabling legislation the amounts borrowed and expended for the program are outside of the state bond cap. The final projects under the program will be advertised in FY2016 and all projects completed by 2019.

## **Tolls: \$238.3 million**

Toll funds are generated by driver and freight carrier use of certain highways, bridges, and tunnels within the Commonwealth. Tolled elements of the roadway system include the Massachusetts Turnpike (I-90); the Tobin Bridge; the Sumner Tunnel; Callahan Tunnel; and the Ted Williams Tunnel.

Toll revenues collected on the Western Turnpike and Metropolitan Highway System must be spent only on the system where the revenue was raised. These tolled revenues fund the operations and maintenance of the Metropolitan Highway System and the Western Turnpike, as well as debt service associated with the former Massachusetts Turnpike Authority, including debt incurred during the construction of the Central Artery/Tunnel Project.

### **Federal Transit Administration Funding (FTA): \$48.1 million**

The Federal Transit Administration provides financial assistance to improve, maintain, and operate existing transit systems, as well as to develop new transit service. FTA provides this funding through a wide range of grant programs to MassDOT and the Regional Transit Authorities for capital investments. Grantees are responsible for managing their programs in accordance with federal requirements and FTA provides oversight on statutory and administrative requirements. Among the various federally funded transit categories are urbanized formula funds which are used for public transportation capital and operating assistance and statewide program funds which are used to improve mobility for seniors and individuals with disabilities. The Federal Transit Administration also provides funding to the MBTA, as described in the FY2016 MBTA Capital Investment Program.

### **Federal Aviation Administration Funding (FAA): \$12.9 million**

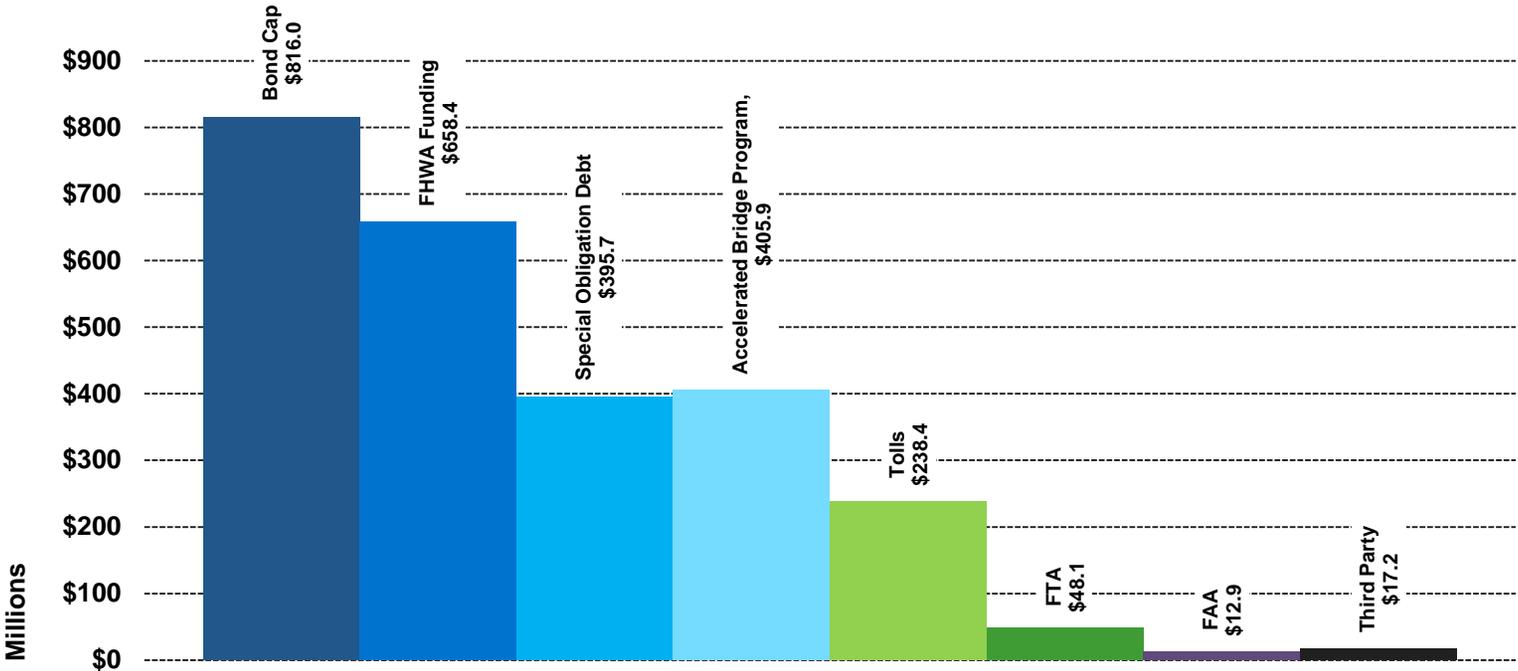
The Federal Aviation Administration gives grants under programs such as the Airport Improvement Program (AIP) to regional airports for capital investment and improvement. Typically, FAA funds 90% of eligible project costs and the 10% match is divided equally between the local project sponsor and MassDOT.

### **Third-Party Funding: \$17.2 million**

Third-party funds are provided to MassDOT by private entities or other units of government to fund specific transportation projects. The third-party funding assumed in this document is the payment by the Boston Convention and Exhibition Center (BCEC) to relocate the MassDOT Central Laboratory from its current location on BCEC property.

The chart on the following page illustrates the different sources of funds utilized in this CIP:

# Capital Investment Plan Funding Sources



# Capital Investment Plan Uses

The following sections provide an overview of the usage categories accounted for in the CIP. Funding levels for FY2016 are noted in each section, with examples of how each category is utilized.

## Chapter 90: \$200 million

The Chapter 90 program, which is funded by state bond cap, provides state reimbursement for local road projects and other uses as defined in law. Each year, funding in the program is allocated to the 351 municipalities of the Commonwealth based upon a formula that considers road mileage (58.33%), population (20.83%) and employment (20.83%).

## Highway Division: \$1.7 billion

The Highway Division is responsible for over 9,500 lane miles of roadway, representing over 3,000 linear miles. The Division's purview includes maintenance or inspection of over 5,000 bridges, and use of over 100 maintenance depots, 65 fueling sites, and 210 salt sheds. The Division monitors approximately 1,000 traffic and facility security cameras and posts information on 374 message boards and signs to the driving public.

Below is an overview of the types of projects and programs undertaken by the Highway Division:

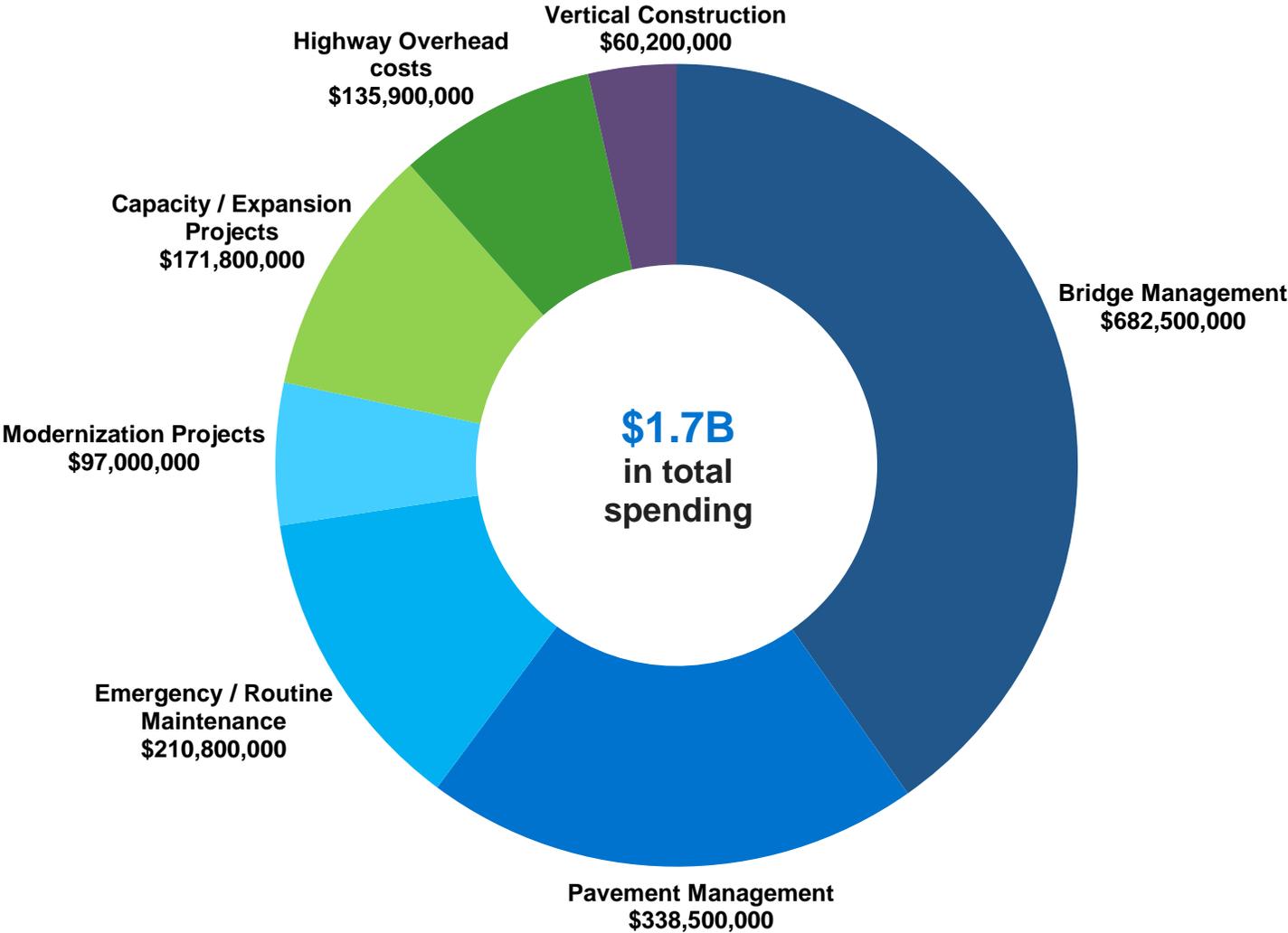
- *Bridge Management Program (\$682.5 million):* A selected program of bridge preservation, rehabilitation, and replacement. While the primary focus of this task is to preserve and maintain existing structures, new elements may be incorporated into projects to address safety issues, environmental concerns, and bicycle and pedestrian improvements.
- *Capacity/Expansion Projects (\$171.8 million):* This category is for projects that add new connections or expand existing ones that no longer address user demand. Examples include the ongoing Route 128 add-a-lane project and the reconstruction of Crosby's Corner.

- *Emergency and Routine Maintenance Programs (\$210.8 million)*: This funding is typically allocated via District-wide contracts for scheduled and emergency maintenance of MassDOT roads and bridges. Typically, work includes bridge deck repairs, crack sealing and repaving, and lighting improvements.
- *Highway Overhead Costs (\$135.9 million)*: Associated overhead costs pertaining to transportation construction projects, such as right of way, design, safety, bridge inspections, environmental permitting, and operations.
- *Modernization Projects (\$97.0 million)*: Site specific projects that are aimed at rehabilitating or replacing highway infrastructure that can no longer be maintained in its current condition or has outlived its useful service life. Examples of this include roadway reconstruction or upgraded tolling infrastructure. Projects within this category include upgrades to meet current standards and other MassDOT policy goals.
- *Pavement Management Program (\$338.5 million)*: Work conducted at strategic, cost effective times in order to preserve or extend the life of a roadway surface. While the primary focus of this task is to preserve and maintain existing roadways, new elements may be incorporated into projects to address safety issues, environmental concerns, and bicycle and pedestrian improvements.
- *Vertical Construction (\$60.2 million)*: This category is for routine repairs and upgrades to division operated buildings for environmental compliance and accessibility.

<b>Fiscal Year 2016 – Capital Sources</b>	<b>Amount</b>
Bond Cap	\$415,228,230
Federal Highway Funding	\$620,134,168
Accelerated Bridge Program	\$405,865,123
Tolls	\$238,395,367
Third Party	\$17,239,807
<b>Total</b>	<b>\$1,696,862,695</b>

<b>Fiscal Year 2016 – Capital Uses</b>	<b>Amount</b>
Highway Division	\$1,696,862,695
<b>Total</b>	<b>\$1,696,862,695</b>

# Highway Spending by Program



## MBTA Projects: \$402.1 million

The MBTA is the fifth largest transit system in the United States, with ridership of approximately 1.3 million daily passengers. The MBTA maintains nine rapid transit lines, 183 bus routes, 14 commuter rail lines, three ferry routes, and a paratransit service (THE RIDE). Its roster of equipment currently consists of 651 heavy and light rail vehicles, 624 diesel buses, 360 compressed natural gas (CNG) buses, 32 electric/diesel buses, 25 hybrid buses, 28 trackless trolleys, 100 commuter rail locomotives, 393 commuter rail coaches, 2 ferry boats, and 656 vehicles for THE RIDE. Service is provided to more than 250 stations.

The MassDOT CIP funds a defined list of MBTA projects that are also programmed in the MBTA's CIP. Major MBTA investments funded by MassDOT include:

- *South Coast Rail (\$44.1 million)*: This project is advancing towards 15% design, and includes the short-term upgrade of five grade crossings (in Freetown, Taunton and New Bedford) and replacement of four railroad bridges.
- *Green Line Extension (\$151.7 million)*: A Full Funding Grant Agreement between the Commonwealth and the Federal Transit Administration commits the federal government to reimburse the state for up to half of the approved project costs (with a Federal cap of \$996 million). The MassDOT CIP funds the ongoing state spending of the project including design and early action construction items.
- *Red and Orange Line Program (\$103.1 million)*: The MBTA has procured the replacement of 152 Orange Line vehicles (full fleet replacement and growth) and 74 Red Line vehicles (replacing cars manufactured in 1969). The procurement requires final assembly in Springfield, Massachusetts. Additionally, investment in this program supports upgrades in anticipation of the car delivery, including improvements to track, signals and other facilities.

## Commonwealth-Funded Projects: \$60.0 million

## Massport Project: \$35.0 million

- *Boston Harbor Dredging (\$35 million)*: In partnership with Massport, MassDOT is committed to matching a federal grant from the Army Corps of Engineers to increase the depth of Boston Harbor to approximately 50 feet, opening the port for increased commercial shipping while growing the regional economy.

## UMass Boston Project: \$25.0 million

- *UMass Boston (\$25.0 million)*: For road and related infrastructure work around UMass Boston's campus serving the entirety of Columbia Point.

## Rail and Transit Division- Rail (Non-MBTA): \$30.5 million

Massachusetts has more than 1,000 miles of rail, which supports both freight and passenger rail transport. Thirteen freight railroads operate in Massachusetts, the largest of which are CSX Transportation, Pan Am Railways, Providence & Worcester Railroad, and New England Central Railroad. These four railroads provide major rail connections to the national freight rail system. Passenger rail operations include multiple Amtrak-operated inter-city passenger rail services throughout Massachusetts, and the MBTA-operated commuter rail service throughout the metropolitan Boston area. The major Amtrak passenger route into Massachusetts is the Northeast Corridor, which runs from Boston's South Station to Washington, DC. The CIP allocates funding to improve the existing freight system along these critical rail corridors. Funding in the CIP includes:

- *Knowledge Corridor and Vermonter Service (\$3.9 million)*: Funding for the continued development of the Knowledge Corridor rail service between Springfield, Northampton, Greenfield, and Southern Vermont.
- *Grade Crossings (\$9.0 million)*: Funding for activities to improve lights, approaches, physical barriers and other warning devices at locations where public and private rail lines cross state or municipal roads. The primary focus of these roads is safety, reducing the risk for a train collision.
- *Industrial Rail Access Program (\$2.5 million)*: Funding for the rehabilitation and restoration of short spur lines that service underutilized industrial or commercial parks.

Fiscal Year 2016 – Rail Capital Sources	Amount
Bond Cap	\$21,458,000
Federal Highway Funding	\$9,000,000
<b>Total</b>	<b>\$30,458,000</b>

Fiscal Year 2016 – Rail Capital Uses	Amount
Rail Division Projects	\$30,458,000
<b>Total</b>	<b>\$30,458,000</b>

## Rail and Transit Division -Transit: \$83.7 million

There are 15 Regional Transit Authorities (RTAs) operating throughout the Commonwealth that provides over 29 million trips annually. The RTAs offer fixed route bus and paratransit services. The CIP provides capital funding to the RTAs, to provide the non-federal match to federal transit capital funds and to fund state of good repair actions such as bus replacements or maintenance facilities. MassDOT works with the RTAs to prioritize available funding for critical system enhancement and state of good repair projects that include:

- *Bus Replacement:* The average age of RTA buses now exceeds 10 years. Working with the individual RTAs and using fleet information reported to the National Transit Database, the Rail and Transit Division is allocating additional resources for the replacement of buses and passenger vehicles. This bus replacement program identifies both the current and deferred replacement needs for each RTA's transit fleet and ongoing funding requirements to meet those needs.
- *Maintenance and Operations:* In addition to fleet replacement needs, MassDOT is working with the RTAs to track other repair needs such as operations facilities, passenger facilities, equipment/systems, and parking garages.
- *Regionally Significant Projects:* Funding in this category supports the design and construction of projects that serve a broader regional focus or leverage additional opportunities for cost savings, such as garage modernizations that include energy and water efficiency systems.

Fiscal Year 2016 – Capital Sources	Amount
Bond Cap	\$35,640,288
FTA Funding	\$48,094,125
<b>Total</b>	<b>\$83,734,413</b>

Fiscal Year 2016 – Capital Uses	Amount
Regional Transit Authorities	\$68,732,686
Mobility Assistance Program / Intercity Bus Program	\$15,001,727
<b>Total</b>	<b>\$83,734,413</b>

## Planning and Enterprise Services: \$51 million

The Planning and Enterprise Services is comprised of the Executive, Fiscal, Human Resources, Legal, Real Estate, Audit, Diversity and Civil Rights and Performance Management offices. Historically, personnel and other goods (IT hardware, consultant services, utilities, etc.) within the MassDOT shared services programs (activities shared between operating divisions to consolidate costs and reduce bureaucracy) have been charged to capital accounts, resulting in millions of additional dollars in interest payments, while reducing the amount of money available for statewide capital projects. This long-standing practice will come to an end in FY16 and all operating expenses funded in this CIP will transfer to the department's operating budget. **At the end of FY15 all salary expenses will have moved from the capital budget to the operating budget. The remaining FY16 expenses paid by capital will be moved to the operating budget by the end of FY16.** The capital funding for Planning and Enterprise Services in FY2016 includes:

- Repairs and other improvements to 10 Park Plaza and other MassDOT facilities.
- Reconstruction and improvements to the statewide information technology network, including improvements to obsolete computer software and networks; and implementation of the legislatively mandated asset Management System and capital project management system.
- Security improvements to MassDOT facilities, programs and projects.

Fiscal Year 2016 – Capital Sources	Amount
Bond Cap	\$28,200,000
Federal Highway Funding	\$22,800,000
<b>Total</b>	<b>\$51,000,000</b>

Fiscal Year 2016 – Capital Uses	Amount
Planning and Enterprise Services	\$51,000,000
<b>Total</b>	<b>\$51,000,000</b>

### Registry of Motor Vehicles (RMV): \$38.6 million

The Registry is a regulatory agency ensuring public safety through vehicle inspections, oversight of licensing standards, and coordination with the insurance industry and public safety agencies on efforts to improve driving behaviors and accident reduction. Using the funding allocated in this plan, the Registry is advancing the following initiatives to improve customer service and public safety.

- In FY2016, the Registry is allocating **\$34.5 million** for the phased replacement of the ALARS system. ALARS processes six million public safety transactions per day and facilitates the collection of over \$1 billion in annual transportation revenues. However, the system came online in the 1980's and has significantly outperformed its useful life and is no longer sufficient for a 21<sup>st</sup>-Century Registry operation. The funding allocated in this plan is for a comprehensive modernization effort that includes the archiving of twenty years of data, removing old software and building a new, modern computer system. A new system will improve ease of access for customers through a resilient, adaptable program that minimizes barriers between residents, Registry staff, and partner agencies.

- The remaining **\$4.2 million** allocated in the CIP is for branch and customer service improvements, including the deployment of self-service kiosks and the replacement of outdated, obsolete wiring, data and other core network systems to improve reliability, customer service and safety in branch offices.

Fiscal Year 2016 – Capital Sources	Amount
Bond Cap	\$38,650,000
<b>Total</b>	<b>\$38,650,000</b>

Fiscal Year 2016 – Capital Uses	Amount
ALARS	\$34,450,000
RMV Projects	\$4,200,000
<b>Total</b>	<b>\$38,650,000</b>

## Aeronautics Division: \$29.7 million

Massachusetts’ system of public-use airports is comprised of nine commercial service and 30 general aviation airports. The MassDOT Aeronautics Division supports the operation and development of 36 of these airports through grant funding; airport inspections; technical guidance; statewide planning; aviation education outreach; and communication with local, state and federal officials. The Massachusetts Port Authority owns and operates the remaining three airports: Boston Logan International Airport, Laurence G. Hanscom Field, and Worcester Regional Airport.

Funding in the CIP includes the Commonwealth’s matching share of funds for projects funded through Federal Aviation Administration’s (FAA) Airport Improvement Program (AIP) and funds provided through the Division’s Airport Safety and Maintenance Program (ASMP). The Division uses ASMP funding to assist airports that are either not eligible for federal grants, or for routine maintenance projects not eligible for AIP funding from the FAA. In fiscal year 2016, the division will program \$16.8 million in state funds and \$12.8 million in FAA funding to meet the goals of the Massachusetts Statewide Airport System Plan. These funds will be used for a portfolio of projects within the following categories:

- *Airport Planning:* Projects may involve planning on an individual airport or statewide level and range from a large integrated statewide/regional airport system to a smaller airport master plan for individual sponsors.

These plans identify and evaluate the aviation facilities needed to meet the current and future transportation needs of a particular study area. Other planning related projects may include feasibility studies and environmental permitting projects.

- *Airport Facilities:* Projects include facilities or equipment associated with the construction, improvement, maintenance, and repair of airport runways, taxiways, navigation systems, or communications systems.

<b>Fiscal Year 2016 – Capital Sources</b>	<b>Amount</b>
Bond Cap	\$16,823,481
FAA Funding	\$12,862,169
<b>Total</b>	<b>\$29,685,650</b>

<b>Fiscal Year 2016 – Capital Uses</b>	<b>Amount</b>
Aeronautics Projects	\$29,685,650
<b>Total</b>	<b>\$29,685,650</b>

# Appendices – Investment Tables

