

MaineDOT Work Plan

Calendar Years 2015-2016-2017

January 2015



MaineDOT

January 5, 2015

Dear MaineDOT Customer:

I am privileged to introduce the *MaineDOT Work Plan for Calendar Years 2015-2016-2017*. This latest, annual *Work Plan* describes *all* of the projects and activities that the Maine Department of Transportation (MaineDOT) plans to undertake over the next three years. It describes all work planned to be done by, or under contract for, MaineDOT during that time frame, including major construction projects for all transportation modes; smaller construction and maintenance projects; plowing and summer road maintenance; bus, rail and ferry operations; sidewalks and trails; and more. The *Work Plan* documents what we plan to do, and provides a tool for you, our customer, to assess how well we are performing our mission: *To responsibly provide our customers the safest and most efficient transportation system possible, given available resources.*

Developing the *Work Plan* requires significant effort all across the department. We begin by estimating the federal, state, local and private funding resources we anticipate will be available, knowing that they may change over the life of the plan. Meanwhile, planners and engineers continuously monitor and measure the condition of Maine's ever-changing transportation system. With those foundations, we use data-driven processes to select projects and activities, striving to optimize the planned work so we can make the best of every available dollar.

The estimated value of work in this *Work Plan* totals more than \$2.0 billion, with some 1,929 work items to be performed over three years. The projects and activities listed for Calendar Year (CY) 2015 are more firmly funded and with definite schedules, while listings for CYs 2016 and 2017 are more subject to changes that may be needed due to future fluctuations in funding and prices, permitting variables and seasonal weather conditions. The CY 2015 work includes 523 capital projects with a combined total value of \$469 million, including the following work, shown with approximate estimated costs:

- Replacement or rehabilitation of 47 Bridges, at a total estimated value of nearly \$95 million.
- Construction, reconstruction or rehabilitation of 108 miles of state-jurisdiction roads, at a total estimated value of \$122 million.
- Paving to preserve the investment on 252 miles of high-priority, improved roads, at a total estimated value of about \$86 million.
- Light capital paving (LCP) to keep 600 miles of lower-priority roads serviceable, at a total estimated value of \$28 million.
- 76 highway spot and safety projects, at a total estimated value of \$30 million.
- 94 multimodal capital projects to improve ports, rail, airports, transit facilities and other modes of transportation, with a total estimated value of \$72 million.

Noteworthy capital projects in the new *Work Plan*, with approximate cost estimates, include:

- 5.1 miles of Highway Rehabilitation - Route 1 in Whiting, Edmunds - \$8.8 million
- 5.5 miles of Highway Reconstruction - Route 11 in T14R06 (Soucy Hill) - \$9.0 million
- 2.8 miles of Highway Reconstruction on Route 2 in Dixfield - \$8.1 million
- New Interstate Interchange on I-95 in Waterville (Trafton Road) - \$5.9 million
- 1.4 miles of Highway Reconstruction on Route 1A in Ellsworth - \$5.2 million
- 2.8 miles of Highway Rehabilitation on Route 201 in Caratunk - \$5.1 million
- Superstructure Replacement of the Route 1 Viaduct in Bath - \$13.6 million
- Replacement of the Somesville Bridge between Biddeford and Saco - \$5.9 million
- Construction of the Beals Island Bridge in Jonesport and Beals - \$9.7 million (partially funded)
- Replacement of the Androscoggin River Bridge; Peru and Mexico - \$11.1 million
- Improvements at the International Marine Terminal, Portland (Phase II) - \$4.0 million
- Dredging of the Commercial Channel at the Port of Searsport - \$3.0 million
- Industrial Rail Access Program, Statewide - \$5.5 million

I want to highlight a couple of features in this year's *Work Plan*. The first is the significant investment we are making in Maine's economy. In addition to maintaining a healthy highway and bridge system, we are continuing to make strategic investment in our ports, freight-rail and aviation facilities—all targeted to improve access and lower transportation costs for the businesses that employ Maine people and help grow our economy. For example, as you read through the document, you will find many marine and rail-freight capital investments that are aimed at improving business across our state. Secondly, for greater transparency, and to ensure you know about all work that MaineDOT will be doing in your community, this *Work Plan* has more detail than ever about the maintenance activities that comprise a major part of our work.

With ongoing uncertainties about federal funding, shrinking buying power and rapidly aging infrastructure, adequately funding Maine's, and the nation's, transportation needs continues to be challenging. The department's new *Keeping Our Bridges Safe* report, for example, provides new information about the unmet bridge needs in our state—now estimated at approximately \$70 million per year. In early spring this year, the first *MaineDOT Annual Progress Report* will be published, and will shed additional light on the state's overall transportation needs. However, in this challenging environment, I remain deeply committed to providing you with the best possible customer service, which means giving you a transportation system that supports our economy and helps improve the quality of life for Maine people. The *Work Plan* is designed to do that, and if we can do better, I want to hear from you. If you have questions or concerns, please visit our website at www.mainedot.gov, or call the MaineDOT Outreach Office, at 207-624-3300.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Bernhardt', with a stylized flourish at the end.

David Bernhardt, P.E. - Commissioner
Maine Department of Transportation

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Introduction

The MaineDOT Work Plan - Calendar Years 2015-2016-2017

This third annual publication of the Maine Department of Transportation (MaineDOT) *Work Plan* describes all of the projects and activities planned by the department for the next three calendar years. The *Work Plan* includes capital projects and programs; maintenance and operations projects and activities; and all of the administrative functions of the department. The work described in this *Work Plan* has a value of more than \$2.0 billion, and includes 1,929 work items planned over three years.

For Calendar Year (CY) 2015, the year with the most definite funding and the most detailed scopes and schedules, there are 894 work items, including, with their approximate cost estimates:

- 523 Capital Projects - Estimated Cost: \$469 million
- 108 Miles of Highway Construction and Rehabilitation - Estimated Cost: \$122 million
- 252 Miles of Preservation Paving - Estimated Cost: \$86 million
- 600 Miles of Light Capital Paving - Estimated Cost: \$28 million
- 76 Highway Spot and Safety Improvements - Estimated Cost: \$30 million
- 47 Bridge Projects (Highway Bridges) - Estimated Cost: \$95 million
- 94 Multimodal Capital Projects - Estimated Cost: \$72 million
- \$138 million in Maintenance and Operations Activities
 - including 192 maintenance projects - Estimated Cost: \$16 million
- 31 Transportation Planning and Research Activities - Estimated Cost: \$7 million
- \$12 million for Administration
- 28 Capital Aviation Projects - Estimated Cost: \$27 million
- 13 Port and Marine Projects and Activities - Estimated Cost: \$3 million
- 11 Freight Rail Capital Projects - Estimated Cost: \$5 million
- 39 Transit Projects and Activities - Estimated Cost: \$43 million
- 6 Ferry Projects and Activities - Estimated Cost: \$15 million
- 8 Bicycle and Pedestrian Capital Projects - Estimated Cost: \$2 million

Capital Projects and Programs

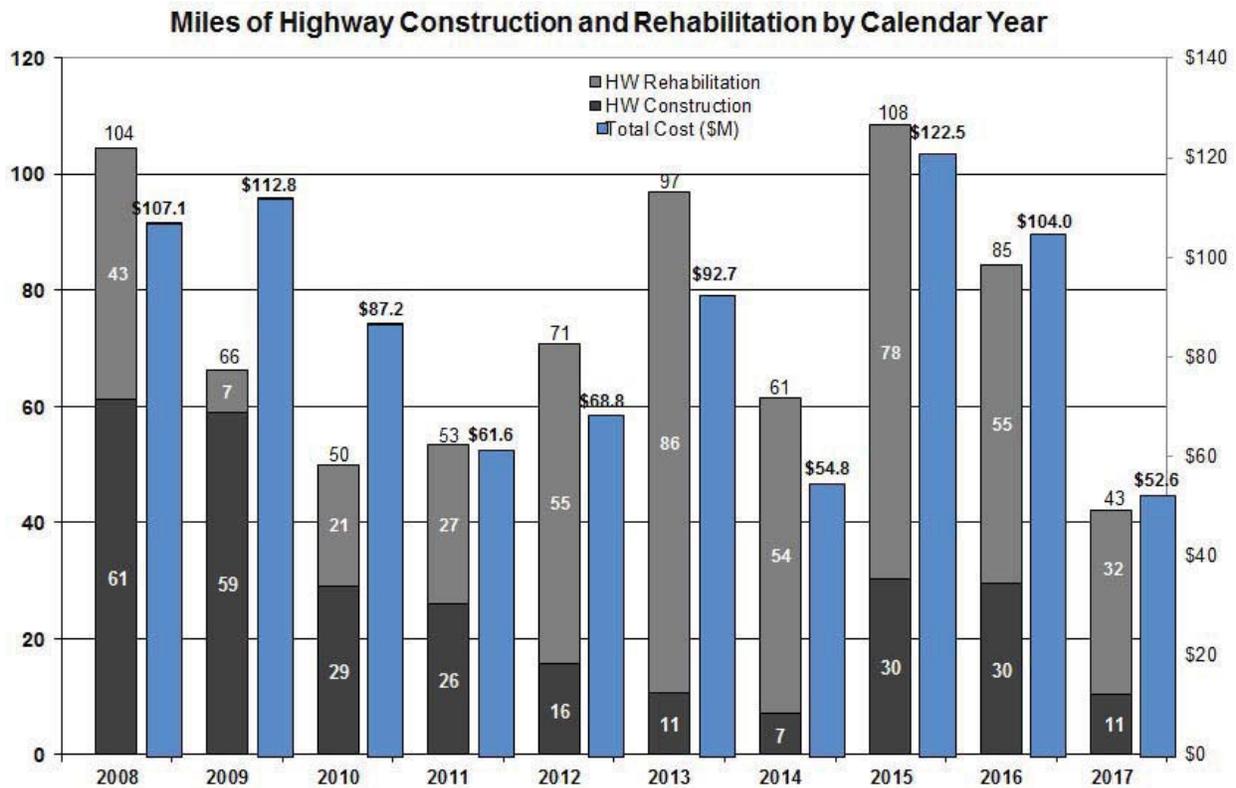
The 2015-2016-2017 *Work Plan* includes over \$1.2 billion in capital work—more than \$990 million in highway and bridge projects and more than \$215 million in multimodal projects. Capital projects are major improvement projects with defined begin- and end-dates and with a useful life of ten years or more. They include bridge replacements, highway construction and paving, acquisition of buses and ferries, sidewalk construction, and major improvements to airports, among other investments. Most capital projects in this *Work Plan* have undergone or are currently undergoing engineering, and will be constructed by private contractors selected by competitive bid. Capital work also includes municipal capital investment through the Local Roads Assistance Program.

Highway and Bridge Capital Work

The largest and most widely used component of Maine’s transportation system is our 8,818-mile highway network. Maine’s need to invest in developing, upgrading, and maintaining highway infrastructure is significant. This *Work Plan* directs approximately \$990 million to highway and bridge capital projects during the three-year life of the *Work Plan*. Over the next three years, MaineDOT anticipates delivering to construction:

- 236 miles of Highway Construction and Rehabilitation - Estimated Cost: \$279 million
- 691 miles of Preservation Paving - Estimated Cost: \$232 million
- 1,800 miles of Light Capital Paving - Estimated Cost: \$86 million
- 210 Safety and Spot Improvements - Estimated Cost: \$94 million
- 124 Bridge Construction Projects - Estimated Cost: \$194 million

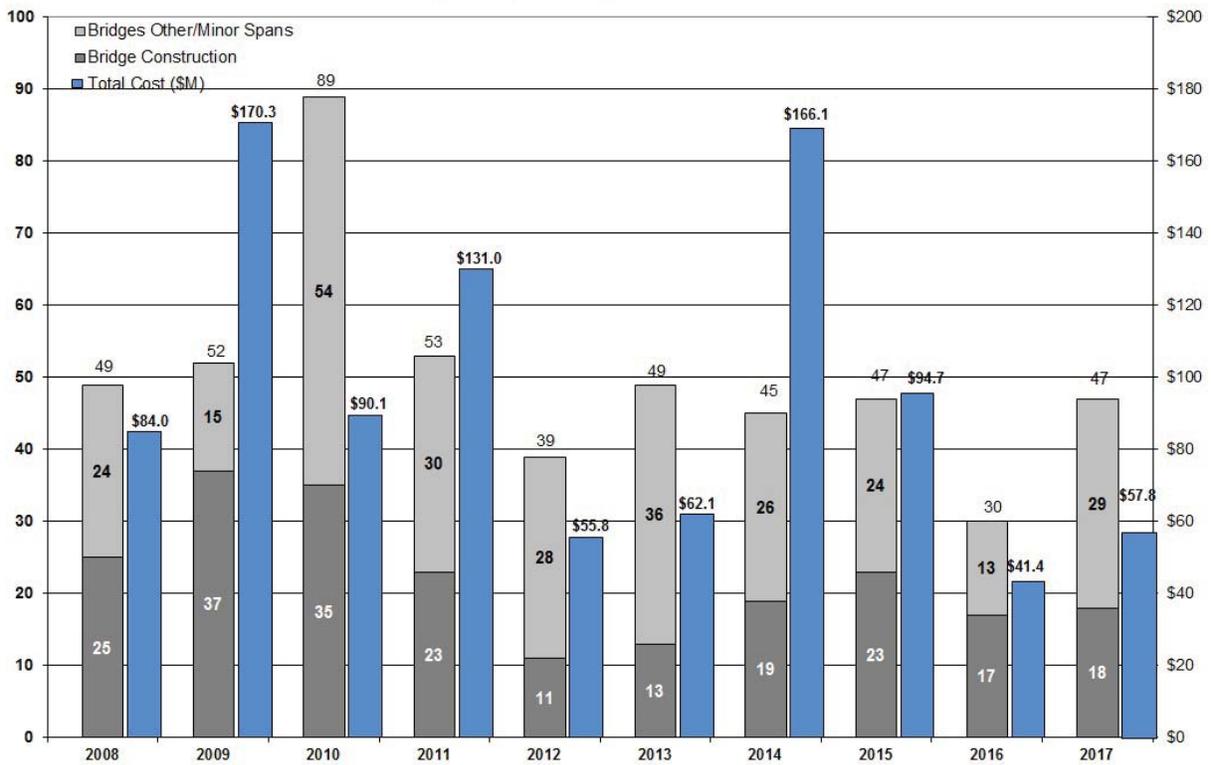
The bar charts below show the total cost of those highway and bridge projects in the *Work Plan* that are funded for construction, (including the costs of construction, engineering and property acquisition). Similar charts of the department’s Construction Advertise Plan (CAP) provide estimates of construction costs only. The CAP is available on the MaineDOT website, at www.mainedot.gov.



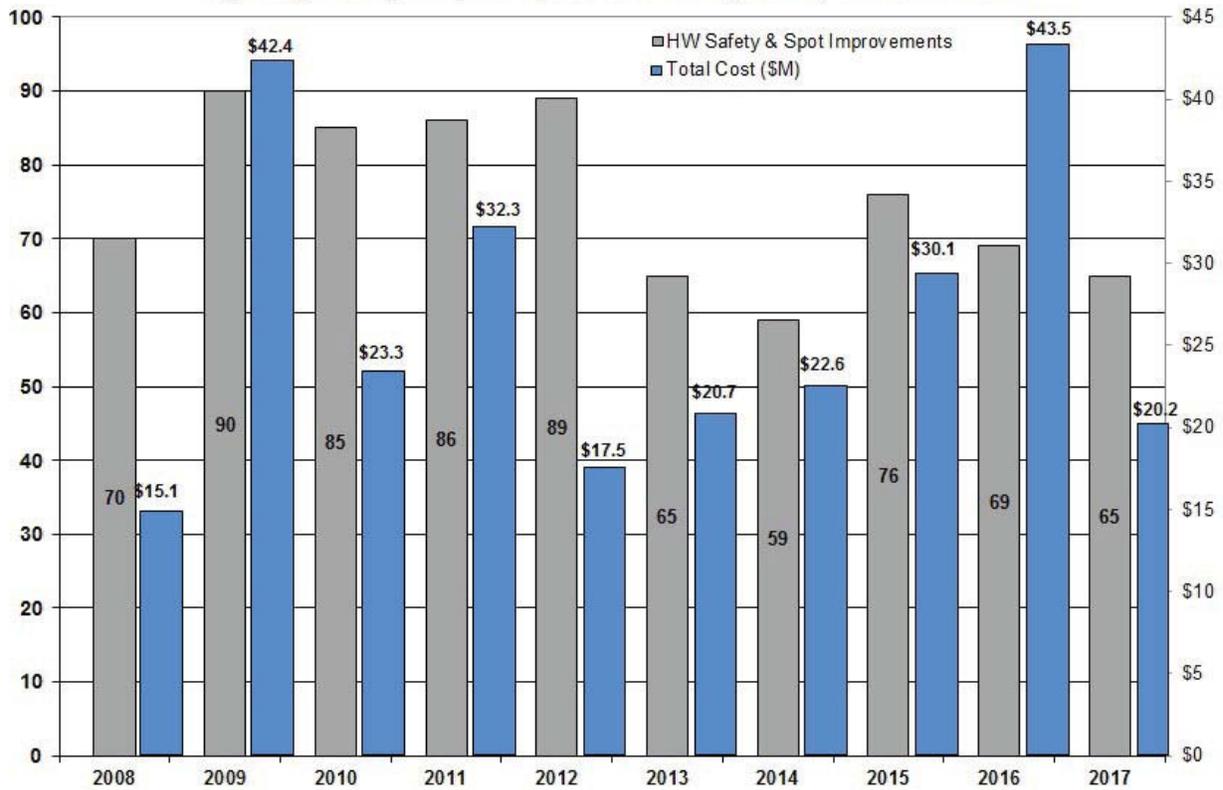
Miles of Highway Paving by Calendar Year



Bridge Projects by Calendar Year



Highway Safety & Spot Improvement Projects by Calendar Year



Multimodal Capital Work

Ports and Marine Investments - The *Work Plan* includes nearly \$11 million in state funding for marine-freight investments and improvements to public marine facilities, including:

- \$4 million for Phase II improvements at the International Marine Terminal (IMT) in Portland
- \$3 million for dredging the commercial shipping channel at the port of Searsport
- \$2.6 million for Boating Infrastructure Grant (BIG) and Small Harbor Improvement Program (SHIP) projects to make waterfront improvements in coastal communities

Freight Rail - This *Work Plan* provides \$21.5 million to fund 28 freight rail projects and activities, including \$2.75 million of state funds for the Industrial Rail Access Program (IRAP), which will leverage \$2.75 million more in private funding.

Transit - This *Work Plan* funds over \$73 million in transit capital, including more than \$56 million in FTA capital funding, over \$13 million in local funding and about \$4 million in state funding. These funds provide support to Maine’s regional and local transit providers, which own and operate 432 transit vehicles with a combined replacement value of about \$56 million. MaineDOT oversees procurement and management of the state fleet, ensuring compliance with federal requirements and continued eligibility for federal funding.

Aviation - The *Work Plan* provides \$4.8 million in state funding to match federal grants for safety and infrastructure improvements at publicly owned airports, leveraging approximately \$3.6 million in local funding and about \$70 million in Federal Aviation Administration (FAA)

funds. Projects include runway and taxiway reconstruction, safety improvements and devices, and other enhancements to improve airport access and support economic development.

Ferries - This *Work Plan* provides nearly \$3.5 million for Maine State Ferry Service (MSFS) projects and \$420,000 for ferry-facility projects on the Casco Bay Island Transit District system.

Bicycle and Pedestrian Facilities - The *Work Plan* provides approximately \$9.0 million in federal funding for bicycle and pedestrian facilities, with matching funds of more than \$2.0 million from towns and cities. Projects and initiatives include sidewalk construction, bicycle/pedestrian shared facilities, crossing improvements, downtown improvements, bicycle/pedestrian safety improvements, and Safe Routes to School projects.

Statewide Capital Programs

Statewide Capital Programs are capital programs and expenditures that are statewide or regional, and that support capital improvements. These programs total over \$213 million in the Statewide Capital Programs tab this *Work Plan*. Some of these programs will identify location-specific projects in the future, but project selection may not yet have occurred because the selections are done by local entities (e.g., the Local Road Assistance Program), because selections cannot be done until need is determined in future years (e.g., Light Capital Paving), or because selection occurs by means of a rolling, a demand-response process (e.g., Municipal Partnership Initiative and Business Partnership Initiative). The Statewide Capital Programs are summarized below:

The major expenditure categories in the Statewide Capital Programs list are outlined below:

Statewide Capital Programs - 2015-2017	
Aviation	\$927,000
Bridge Preservation	\$400,000
Business Partnership Initiative	\$9,312,000
Freight (Commercial Vehicle Enforcement -Transfer to Public Safety)	\$750,000
Highway Light Capital Paving (approximately 15% of CY 2016 and all of CY 2017)	\$33,889,000
Highway Preservation Paving (CY 2017 only)	\$23,438,000
Highway Rehabilitation (PACTS Municipal Partnership projects to be identified)	\$2,561,000
Highway Safety and Spot Improvements	\$22,259,000
Local Road Assistance Program	\$65,950,000
Marine	\$1,872,000
Municipal Partnership Initiative - 2016 and 2017 only	\$16,000,000
Public Transportation	\$17,694,000
Rail	\$15,176,000
Recreational Trails Program and PACTS-Area Trails	\$2,942,000
Statewide Capital Programs Total	\$213,170,000

Aviation includes crack-sealing to preserve airport runway pavement.

Bridge Preservation includes bridge-strengthening and bridge improvements on state-owned rail lines.

The **Business Partnership Initiative** provides state funding to match private investment in highway improvements performed to facilitate economic development.

Freight provides funding for the Department of Public Safety to purchase vehicles for the State Police Commercial Vehicle Enforcement Unit.

The **Highway Light Capital Paving (LCP)** Program performs light paving treatments to improve safety and drivability, and to extend the life of lower-priority roadways.

Highway Preservation Paving work items in this tab show aggregate funding for ¾-inch overlays and similar paving treatments to be performed in each Region and on the Interstate in CY 2017.

Highway Rehabilitation refers to funding for the PACTS Municipal Partnership Initiative.

Highway Safety and Spot Improvements include striping, guardrail, rumble strips, crack-sealing, signage, measures to reduce vehicle/large animal collisions, improvements to visitor information centers, and installation of pedestrian crossing-signals.

The **Local Road Assistance Program** distributes a portion of State Highway Fund revenues to municipalities for capital improvements on State Aid and local roads.

Marine programs include the Boating Infrastructure Grant program funded by the U.S. Fish and Wildlife Service, and funding for infrastructure improvements for the Maine State Ferry Service.

The **Municipal Partnership Initiative** funds financial partnerships with municipalities to make highway improvements of local interest.

Public Transportation includes capital funding for buses and bus facilities under Federal Transit Administration (FTA) intercity, urban, small urban, and rural programs that serve the general public, and elderly and disabled persons. Some FTA funding may be used for either capital or operating expense. This category also provides for improvements to park-and-ride lots.

Rail includes operational improvements to state-owned rail lines, rail-crossing improvements and the Industrial Rail Access Program, which partners with private-sector entities to fund rail improvements that support economic development.

The **Recreational Trails Program** (listed under Bicycle-Pedestrian) transfers Federal Highway Administration (FHWA) funding to the Maine Department of Agriculture, Conservation and Forestry for improvements to multi-use trails. Capital funding for PACTS-Area Bike-Ped capital is also shown under Bicycle/Pedestrian; specific projects are to be identified in future years.

Statewide Operations

While capital-related work represents about 60% of MaineDOT's work efforts, ongoing maintenance, operations and administrative activities that support the department's work and the transportation system as a whole are also described in this *Work Plan*. Some of these include winter snow and ice control, summer road maintenance, maintenance of non-highway/bridge infrastructure, planning and compliance activities, human resources, training, technology, and financial administration. These and other activities that are *statewide* in nature and provide

support for the department overall—as well as for MaineDOT bureaus and offices—are displayed in the Statewide Operations listings. Two major subsets of the listings in this tab—Highway and Bridge Maintenance and Operations, and Multimodal Operations and Support—are described in more detail below. (Note: location-specific activities are shown separately in the *County* listings.)

Highway and Bridge Maintenance and Operations

Maintenance and operation of Maine’s extensive highway and bridge system—a subset of the Statewide Operations listings—accounts for a tremendous portion of MaineDOT’s overall work activity. This work is essential to the smooth movement of people and goods, and to the health of the Maine economy. It is also an essential and cost-effective means of protecting the state highway and bridge system. From year to year, and within CY 2015, actual expenditures for this work will depend on the constantly changing condition of the system, and importantly, on weather. The frequency and duration of weather events, for example, may require changing priorities and adjusting budgets throughout the course of the year. For those reasons, overall expenditures for routine maintenance and operation of the highway and bridge system are shown in this *Work Plan* as approximate annual budget figures.

Overall maintenance and operations expenditures on the state highway and bridge system are estimated at \$137.8 million for CY 2015. A portion of that total, approximately \$16.1 million, is comprised of large maintenance activities that are project-like in nature in that they do not recur annually, they have begin- and end-dates, and they are location-specific. Over 190 such maintenance project listings scheduled for CY 2015 are shown separately in the *County* listings of this *Work Plan*.

Multimodal Operations

A second major subset of the Statewide Operations tab listings is comprised of funding support for various multimodal operations. Multimodal operations include support for the *Downeaster* passenger rail service, for the transit network statewide, for Maine State Ferry Service Operations, and for *GOMaine*, a statewide commuter service.

Passenger Rail Operations - The *Downeaster* passenger rail service runs from Portland to Boston, with two trains per day running from Portland to Brunswick. In 2014, passenger fares and other revenues paid for more than 53% of the total operating expense for the *Downeaster*. The *Work Plan* provides \$34.7 million for passenger rail operations over three years.

Transit Operations - Maine’s 21 transit providers provide coordinated service to commuters, tourists, the elderly, and individuals with disabilities. Transit Operations work items include transit planning, administration and operating support for these services. The 2015-2016-2017 *Work Plan* provides about \$69 million for transit operations, including approximately \$43 million in FTA (federal) funds, over \$22 million in local support from cities and towns, and approximately \$3.5 million in state matching funds.

Ferry Service Operations - The Maine State Ferry Service connects Islesboro, North Haven, Swan’s Island, Vinalhaven, Frenchboro, and Matinicus with the mainland. MSFS serves 2,500 year-round residents, plus many summer residents and tourists. The *Work Plan* provides \$30.7 million for MSFS operations—approximately 50% from fares and 50% from the Highway Fund.

Aviation Operations - In addition to the funding support for projects at the public airports in Maine, MaineDOT also owns and operates two airports, the Augusta State Airport and the

Deblois Airstrip. The *Work Plan* provides over \$1.6 million for the operating costs at the Augusta State Airport.

The following table shows the work items in this *Work Plan* for the major Statewide Operations categories, along with the funding allocated to them:

Statewide Operations - 2015-2017	
Administration	\$37,688,000
Bridge and Structural Maintenance	\$20,290,000
Building and Lot Maintenance	\$27,425,000
Communications and Outreach	\$3,937,000
Custodial Maintenance (Highways)	\$40,940,000
Debt Service	\$112,453,000
Drainage Maintenance (Highways)	\$44,472,000
Employee Education and Training	\$18,163,000
Highway System Operations	\$139,875,000
Information Technology Support	\$38,693,000
Inventory and Performance Management	\$28,456,000
Maintenance Crew Operations	\$50,000,000
Multimodal System Operations	\$30,836,000
Operational and Safety Maintenance (Highways)	\$14,900,000
Policy, Planning and Research	\$20,374,000
Public Transportation Operations	\$70,140,000
Surface and Base Maintenance (Highways)	\$25,066,000
Work Program Management	\$67,008,000
Statewide Operations Total	\$790,816,000

Details on individual items in each of these categories can be found in the Statewide Operations tab. Annually recurring Statewide Operations work items for various MaineDOT work units appear as three annual listings—one each for CYs 2015, 2016 and 2017. The categories are briefly described as follows:

Administration includes the ongoing functions that provide support for MaineDOT programs and projects, including department-wide financial and administrative services, financial administration for federal programs and funding, human resources, legal services, operation of the Executive Office, geographic information systems management, performance measurement and accountability, the Freight and Business Services Office, and engineering oversight.

Bridge and Structural Maintenance includes investments to prevent or repair routine problems, and to extend the useful life of bridges until capital funding becomes available.

Building and Lot Maintenance support maintenance of over 600 buildings and more than 100 building lots, as well as maintenance of ancillary structures such as lighting poles and mast arms that support overhead signage.

Communications and Outreach includes the Local Transportation Assistance Program, work zone safety education, bicycle and pedestrian safety education, and audio-visual and other creative services.

Custodial Maintenance includes bridge washing and minor maintenance, highway sweeping, highway patrolling and inspecting, litter removal, highway mowing, railroad maintenance and rest-area maintenance.

Debt Service includes principal and interest payments on General Obligation (GO) bonds and FHWA Grant Anticipation Revenue Vehicle (GARVEE, federal bonding instrument) bonds.

Drainage Maintenance activities focus on removing water from the highway structure, and are the single most essential strategy for extending longevity of the road.

Employee Education and Training includes employee education and training for the Bureau of Maintenance and Operations, occupational safety training, and operation and maintenance of the Fairfield Training Center,

Highway System Operations funds the work of about three quarters of MaineDOT employees, and includes the overall operational budget of the Bureau of Maintenance and Operations; crash-data collection, traffic counts, monitoring of heavy vehicles, vegetation management, the maintenance of highway technology equipment, operation of moveable bridges, and the department's operations center.

Information Technology Support funds development, operation and maintenance of the department's technology systems through the state Office of Information Technology.

Inventory and Performance Management includes vehicle size and weight classification, traffic counts, highway classification, traffic engineering studies, bridge inspections, operation of the Safety Office, and operation of the Results and Information Office (RIO).

Maintenance Crew Operations includes equipment service, repair and associated fleet costs; crew supervision and management; sign shop operations; and material processing and transport.

Multimodal System Operations is operation of the Maine State Ferry Service.

Operational and Safety Maintenance includes maintenance of traffic signals and lighting, and guardrail installation and maintenance.

Policy, Planning and Research includes management of MaineDOT planning activities and studies, public outreach; project scoping and analysis; *Work Plan* development; Metropolitan Planning and Regional Planning Organization planning; and research programs and projects.

Public Transportation Operations supports statewide operations, planning and administration for buses, passenger rail, and ferries, including operating support and administration of federal programs, state-funded transit assistance, and operating support for the *Downeaster* passenger rail service.

Surface and Base Maintenance includes highway shoulder and base maintenance, highway grading, and pavement maintenance and repair.

Work Program Management includes the functions that support the development of projects, including overall management of the capital program; construction-contracting; Highway, Bridge and Multimodal Program management; engineering software; materials testing; property acquisition; quality assurance; and survey project support and equipment. Work Program Management also includes compliance activities that MaineDOT conducts to meet federal and

state regulatory requirements, such as federal civil rights compliance; on-the-job training support; historic review; implementation of environmental streamlining and mitigation; endangered species data collection; weather-event vulnerability assessment; state and federal environmental review; safety compliance, and transfer payments to the Department of Environmental Protection to fund air quality compliance reviews for capital projects.

Funding, Resource Assumptions and Resource Allocation

Funding

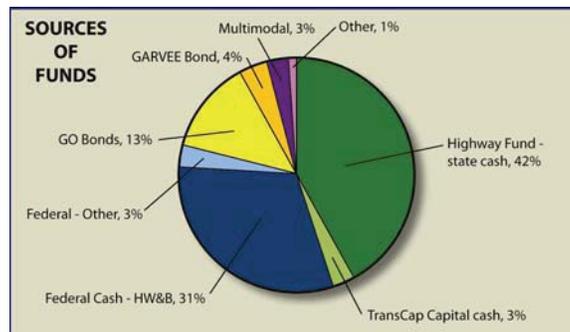
Development of the *Work Plan* requires that the funding that is available to support the work described first be identified and categorized according to eligibility. The major funding sources that combine to provide the financial resources that support the *Work Plan* include:

- Federal Highway Administration (FHWA) Formula Funds
- Federal Transit Administration (FTA) Formula Funds
- Federal Aviation Administration (FAA) Formula and Entitlement Funds
- USDOT TIGER and Other Federal Competitive Grant Programs
- Federal Highway Administration Grant Anticipation Revenue (GARVEE) Bonds
- State Highway Fund
- State TransCap Revenue Account
- State Multimodal Transportation Accounts
- State General Obligation Bonding
- Municipal and Private Funds

These funding sources must generally be directed to specific uses, with some restrictions:

- FHWA dollars must be used on federally eligible highway and bridge projects and programs, allocated by category (e.g., Interstate System, bridges, trails or safety program.)
- FTA dollars must be used for federally eligible buses, bus facilities and operations.
- FAA dollars must be used for federally eligible projects on the aviation system.
- State Highway Fund dollars must be used to support the highway and bridge system, and cannot be used to support non-highway-and-bridge needs.
- State General Obligation bonding must be used on capital projects and are often directed to specific uses.
- Legislative requirements exist for certain specific uses (e.g., Local Road Assistance Program.)

A breakdown of the MaineDOT’s “Sources of Funds” for state fiscal years 2014 and 2015 combined, totaling \$1.14 billion, is shown in the following graphic.



While this pie chart provides an overview of the relative proportion of MaineDOT funding sources, the value of work represented this *Work Plan*—more than \$2 billion—is higher for a few reasons. First, the *Work Plan* covers three calendar years, while the state budget covers two state fiscal years. Also, the *Work Plan* includes funding from sources not considered part of the state budget, including local and private matching finds, and federal funds received directly by non-MaineDOT end-user recipients. This *Work Plan* also reflects some funding carried over from previous budget years that could not be expended until now because of various timing issues. Lastly, the value of work from all phases of a project is shown in the total project costs, in order to give a more accurate view of project cost, even if some amounts have already been expended. (e.g., the cost of design previously performed on projects now being funded for construction.)

As with any plan that predicts future funding, if the funding does not materialize, the *Work Plan* will need to be adjusted according to the resources that are actually available.

Resource Assumptions

In allocating funding for the *Work Plan*, department staff must make certain assumptions about what resources and revenue streams will be available, knowing that these resources may not turn out as expected. Uncertainty about funding from major federal funding programs is continuing, and both state and federal motor fuel tax revenues remain unpredictable due to increasing automobile efficiency, fluctuating gasoline prices and other economic conditions.

Federal Funding - This *Work Plan* assumes “flat” (i.e., no annual increase) funding from federal programs. The *Work Plan* also assumes support from policy-makers for \$50 million in Federal Highway Administration Grant Anticipation Revenue (GARVEE) bonding in CY 2017. The GARVEE mechanism enables states to finance debt with future FHWA formula funds.

State Funding - State revenue forecasts guide the *Work Plan*’s assumptions about what revenues will be available from the State Highway Fund. Other major resource assumptions in this *Work Plan* include potential state bonding. Based on bonding that has occurred in recent years, this *Work Plan* assumes support from the Governor, and legislative and voter approval, for \$40 million per year in General Obligation bonding for transportation in both CY 2016 and CY 2017. For planning purposes and based on historical averages, these prospective bonds are, in this *Work Plan*, allocated 80% (\$32 million per year) to highway and bridge uses, and 20% (\$8 million per year) to multimodal transportation uses. The *Work Plan* also assumes there will be enough State Highway Fund dollars to fund 600 miles of paving by Light Capital Paving Program. The actual amounts ultimately available will not be known until the 127th Maine Legislature approves a budget for the 2016/2017 biennium, sometime in the spring of 2015. While additional resources may arise from federal grant programs, public-private partnerships, or other circumstances, there are no assumptions in this *Work Plan* regarding those possibilities. Some lesser and very conservative assumptions for smaller projected amounts include municipal and private matching funds, year-end balances from federal programs and typical carryover amounts.

Resource Allocation

Federal and state eligibilities largely determine the funding available for each expenditure category in the *Work Plan*. Within the broad categories are other requirements. For instance, a specific amount is allocated by FHWA for the Surface Transportation Program and another amount for the Highway Safety Improvement Program. Allocation of resources to major

program areas is thus substantially set by the respective federal and state sources. Few types of funding are flexible for use across multiple programs. Within these limitations, resources are first allocated to ‘must-do’ uses such as debt service, federal compliance, winter plowing and critical bridge needs. MaineDOT managers allocate the remaining available funding to broad categories according to the needs of the transportation system, and with the context of the dollars and unit-production proportions allocated to those categories in recent years. Allocations are then provided to department staff for use in developing the project lists for their respective programs.

Project Prioritization and Selection

Prioritization, selection and recommendation of projects for the *Work Plan* are conducted by MaineDOT staff committees—the Highway Committee, the Bridge Committee, the Multimodal Committee and the Management Team of the Bureau of Maintenance and Operations (M&O). These committees are comprised of staff from relevant disciplines and specializations. They work throughout the year to identify project candidates and prioritize them for potential inclusion in the *Work Plan*. The committees first review the last two years of the current *Work Plan* (CY 2015 and CY 2016) and make needed adjustments in cost, schedule or project scope. Once those adjustments are made, new projects for the third year of the *Work Plan* (CY 2017) are prioritized and recommended. Selection methodologies for these committees vary according to asset type and transportation mode, but the foundational principles—managing the overall transportation system, using current and reliable data, using rational scoring systems, and building in flexibility for unanticipated needs and developments—are common across all areas.

Highway and Bridge Project Prioritization

A systems approach is used to prioritize highway corridors and quantify customer-service levels. This Highway Corridor Priority/Customer Service Level framework is based on two questions:

- What is the priority of the roadway?
- Given its priority, what level of service can customers reasonably expect?

Larger and more-traveled highways are considered higher priority than smaller roads that carry less traffic. Interstate corridors have the highest priority, while collector roads and local streets are lower priorities for Maine’s highway system. To determine highway priority, the model also uses other objective criteria such as the roadway’s federal functional classification, truck traffic, relative amount of traffic and the business activity it supports. With this data, the HCP/CSL model classifies all 23,551 miles of public highways as one of six levels:

- **HCP 1:** 1,751 miles - 7% of statewide mileage; 41% of Maine vehicle-miles traveled (VMT); the Maine Turnpike, all Interstate miles, and key principal arterials.
- **HCP 2:** 963 miles - 4% of statewide mileage; 12% of VMT; non-Interstate and high-value arterials.
- **HCP 3:** 1,988 miles - 8% of statewide mileage; 17% of VMT; the remaining arterials and the most significant major-collectors.
- **HCP 4:** 1,967 miles - 8% of statewide mileage; 9% of VMT; the remaining major- and urban-collector highways.
- **HCP 5:** 2,479 miles - 11% of statewide mileage; 8% of VMT; mostly minor-collector highways.
- **HCP 6:** 14,403 miles - 61% of statewide mileage; 13% of VMT; local roads and streets that are the year-round responsibility of municipalities.

The HCP scale is then combined with a Customer Service Level (CSL) metric on an A-through-F scale. The CSL is determined using data on the safety, condition and service of the road. The result is a consistent tool to measure how a road compares to other roads of the same priority level. Additional information on the HCP/CSL system is available online at <http://www.maine.gov/mdot/about/assets/hwy/>.

The HCP/CSL system allows MaineDOT to focus resources on the most-needed projects, and to refine long-term capital goals and needs. It also plays a major role in allocating highway maintenance resources. The engineers, planners and other specialists of the department's Highway Committee, Bridge Committee and M&O Management Team, use the CSLs of Maine's highway corridors in developing and prioritizing candidate highway projects to be considered for inclusion in the *Work Plan*.

With the HCP/CSL framework as the foundation for identifying highway and bridge candidates, prioritization and selection of potential projects also involves consideration of these questions:

- What is the customer benefit that will arise from the candidate project? Are there other transportation alternatives if this candidate project does not proceed?
- Does the candidate project address a demonstrated safety issue?
- Does the candidate project involve a public-private or public-public partnership that will stretch scarce transportation resources?
- Does the candidate project relate to economic activity and job growth?
- Does the candidate project fill a gap in the existing highway corridor or other asset?
- Is the candidate able to proceed to construction within the next three years, considering environmental documentation and permitting?
- Is there public support for the candidate project?
- Does the potential project preserve an element of the existing transportation system, such as replacing a failing bridge or protecting an already-existing transportation investment?

With the consideration these questions, project candidates are further refined to derive final project recommendations.

Multimodal Project Prioritization

Prioritization and selection of multimodal (non-highway/bridge) projects begins with the lead MaineDOT staff members proposing candidates based on known needs and/or requirements. Allocation of financial resources to these various modal programs is largely set by federal funding categories. State bond proceeds and other state revenue streams are sometimes more flexible between programs, but may also be limited as to how they can be used.

Freight Rail Projects - Industrial Rail Access Program (IRAP) projects are ranked on economic and transportation efficiency criteria, and the top-rated projects then selected within available funding. Rail-crossing safety projects are selected using safety criteria and input from localities, railroad operators and the public. Rail bridge projects are prioritized based on inspection reports, and maintenance projects are identified based on input from rail operators and staff inspections.

Passenger Rail - Infrastructure improvements for the *Downeaster* service are prioritized by MaineDOT and the Northern New England Passenger Rail Authority. Capital expenditures require extensive analysis that evaluates system maintenance and need.

Transit - Transit project-candidates are grouped by federal urban, small urban and rural program eligibilities. Within each program, formulas that include population, road mileage and level of

service are used to distribute operating funds according to local needs. The FTA capital program makes funding available for replacement of buses that have completed their useful life. New or expanded service requires identification of service gaps and measureable objectives.

Port and Marine Projects - Prospective investments in Maine ports and other marine facilities are developed by MaineDOT and Maine Port Authority staff using data used to identify market opportunities. Final recommendations are based on the capacities each marine facility to serve those specific markets and are reviewed by the Maine Port Authority Board of Directors.

Small Harbor Improvement Program (SHIP) - SHIP projects are selected through an ongoing application process based on the eligibility of the proposed project and an approved local match. Projects must meet the goal of improving access and facilities in coastal communities.

Aviation Projects - Aviation projects are selected based on needs identified by municipal and regional airports in their federally approved master plans. Candidate projects are reviewed and prioritized by MaineDOT and proposed to the FAA, which chooses the projects to be funded.

Ferry Projects - Capital projects for improvements to public ferries—transfer bridges, piers, and stations of the Maine State Ferry Service and Casco Bay Island Transit District—are prioritized by department staff based on remaining service life, repair needs and public benefit.

Bicycle and Pedestrian Projects - These projects are funded with dedicated federal funding and selected by an ongoing application process. A committee ensures that proposed projects improve safety and promote economic development. A 20% match must be approved by the municipality.

Multimodal project selection that is not already determined through funding eligibilities and mode-specific requirements are reviewed and prioritized by the department's Multimodal Committee. The committee reviews projects eligible for discretionary funding, prioritizes and project recommendations. The department is currently developing Customer Service Levels for multimodal projects, eventually to be used in an analysis framework similar to the HCP/CSL system for highways and bridges.

All *Work Plan* projects and activities recommended by staff are provided to the department's senior management team for final review and approval prior to publication in the *Work Plan*.

The Funding Challenge

The needs of the transportation system in Maine, as in all other states, have outpaced available federal and state resources. Maine's large land area, and relatively low population and high number of state-jurisdiction highway miles all contribute to the extent of this challenge for Maine. This can be measured against capital goals established by the Maine Legislature in 2011 to promote maintaining the state's highway system at an adequate level. The highway-related goals include:

- By 2022, improve all Priority 1 and Priority 2 highways so that their safety, condition and serviceability customer service level is *Fair* or better.
- By 2027, improve all Priority 3 highways so that their safety, condition and serviceability customer service level is *Fair* or better.
- By 2017, implement a pavement program for all Priority 4 corridors that maintains their ride quality customer service level at *Fair* or better;
- Continue the Light Capital Paving program on a 7-year cycle for Priority 5 highways.

These goals are not overreaching but, rather, were developed to address just the basic needs of the existing system. For instance, the reader can infer from the fourth goal above that for about 4,200 miles, approximately half of all state-jurisdiction highway miles, the department currently has no plans for improvement other than Light Capital Paving to protect the road and provide customers with acceptable rideability. The following table provides an update of the status of the highway and bridge system as measured against the statutory goals. Again this year, and even with the funding assumptions in this *Work Plan*, (which include bonding that has yet to be proposed or approved), the department’s highway and bridge programs will experience a shortfall, now estimated at approximately \$119 million per year.

Core Highway and Bridge Programs				
CY 2015-2016-2017 <i>Work Plan</i> vs. Need				
(\$ Millions)				
Work Group	Average Annual \$ from 2015-2016-2017 <i>Work Plan</i>	Annual \$ Needed to Meet Basic Statutory Goals	Average Annual \$ Shortfall	Dollar % Shortfall*
Bridge Capital & Preservation	\$70	\$140	(\$70)	(50%)
Highway Reconstruction/Rehab	\$93	\$100	(\$7)	(7%)
Pavement Preservation	\$78	\$120	(\$42)	(35%)
Light Capital Paving	\$28	\$28	\$0	0%
Total - Core Programs	\$269	\$388	(\$119)	(31%)

In summary—the need for sustainable, predictable capital funding will continue to be the major transportation policy challenge facing the nation and our state for the foreseeable future.

Reading the *Work Plan*

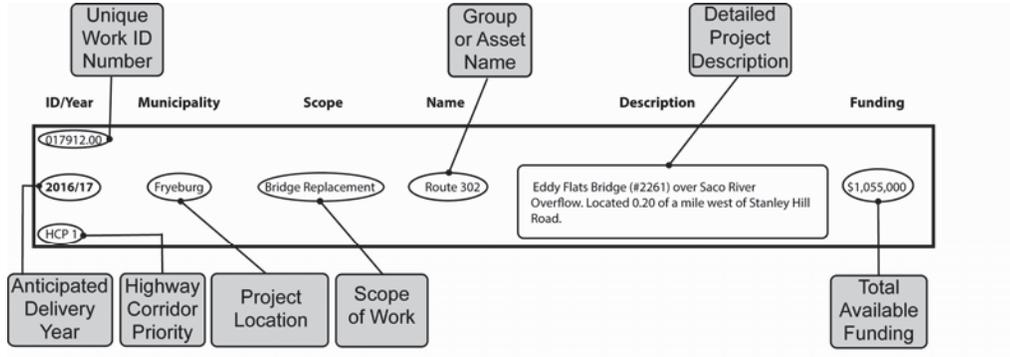
The lists in this *Work Plan* describe *all* projects and activities of the department. Listings in the *Work Plan* include projects and activities planned for Calendar Years (CYs) 2015, 2016 and 2017. CY 2015 project listings include specific information about the project construction and delivery schedules. CY 2015 projects are planned definitely to move forward in 2015. The timing of CY 2016 and 2017 projects is less certain, and schedule-years for those projects may possibly change in next year’s *Work Plan*. CY 2016 and 2017 projects are generally in some stage of pre-construction development, but are expected to move forward so long as the funding assumptions in the *Work Plan* come to pass as anticipated.

Work Plan Tabs

- The **County Tabs** contain location-specific lists—sorted alphabetically by County. Projects and activities are ordered alphabetically by locality. Those located across more than one locality are shown in an anchor community only, to avoid duplication.
- The **Statewide Capital Programs** tab includes capital work not tied to a specific location.

- The **Statewide Operations** tab describes all other department operations and administrative activities, both internal to MaineDOT and in partnership with other agencies.

The Statewide Capital Programs and Statewide Operations lists are displayed similarly to the location-specific County lists. Work item listings appear as in the graphic below:



Online and Interactive *Work Plan*

The content of this *Work Plan* is also published on our website as a printable and searchable pdf document. To augment the full document, the online version also provides municipality-specific reports that include upcoming scheduled highway system work, a synopsis of the highway maintenance work that was completed in the preceding year, current Local Road Assistance Program (LRAP) payments to that community and recently completed capital projects. There is also a link to our interactive MapViewer, with which you can find planned projects, highway corridors and their Highway Corridor Priority (HCP) categories, and other features on Maine’s transportation system. Visit <http://maine.gov/mdot/projects/workplan/search/> for more information. A printed version of the *Work Plan* is also available upon request. To request a copy, call the Bureau of Planning at 207-624-3300, or e-mail Planning.MaineDOT@maine.gov.