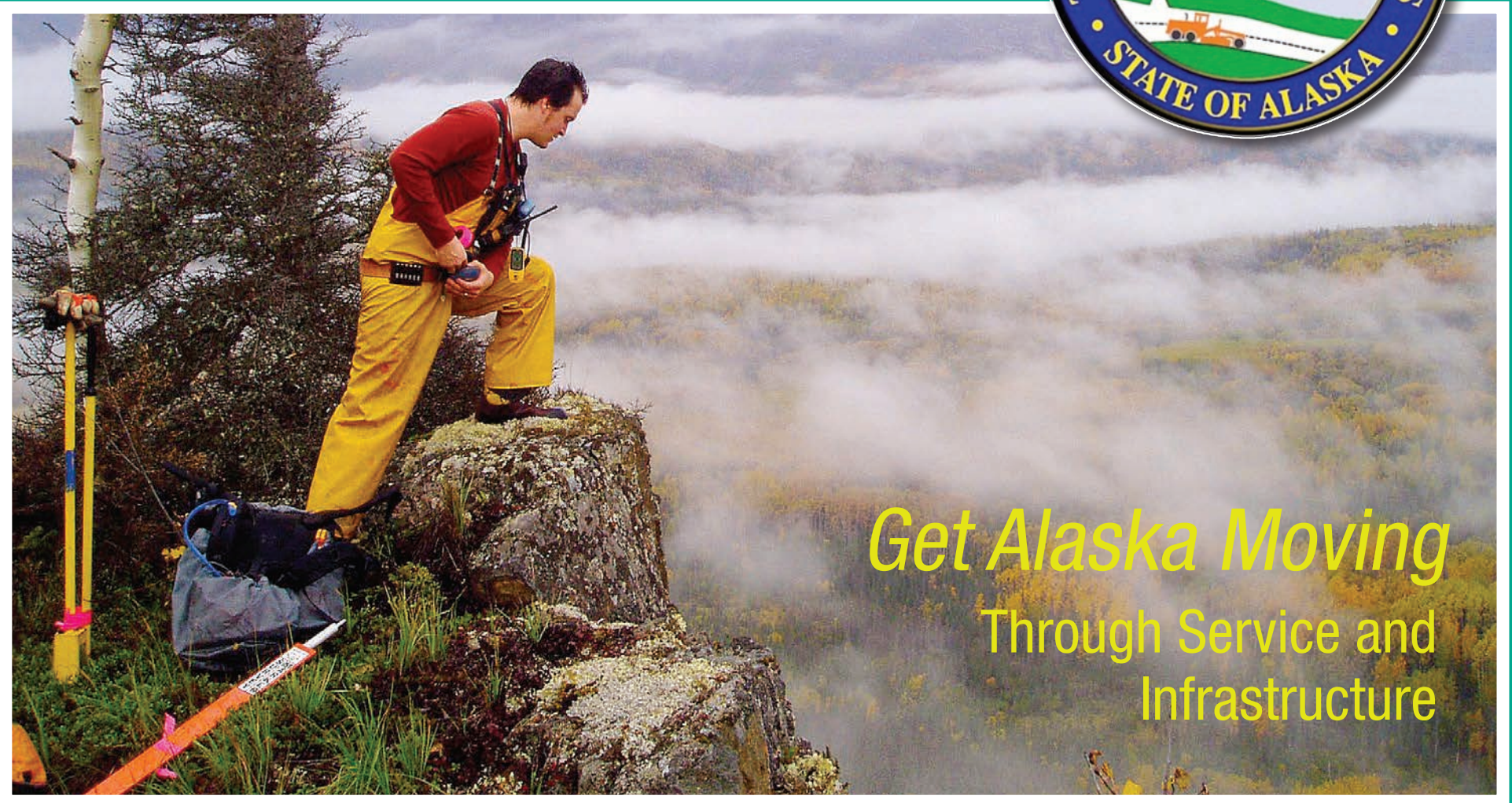


2012 Department Overview



Get Alaska Moving
Through Service and
Infrastructure

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Cover photos: Front cover, surveyor overlooking the Chickaloon area, by Ryan Quigley, ADOT&PF. Back cover, northbound traffic on Egan Expressway, by Peter Metcalfe.

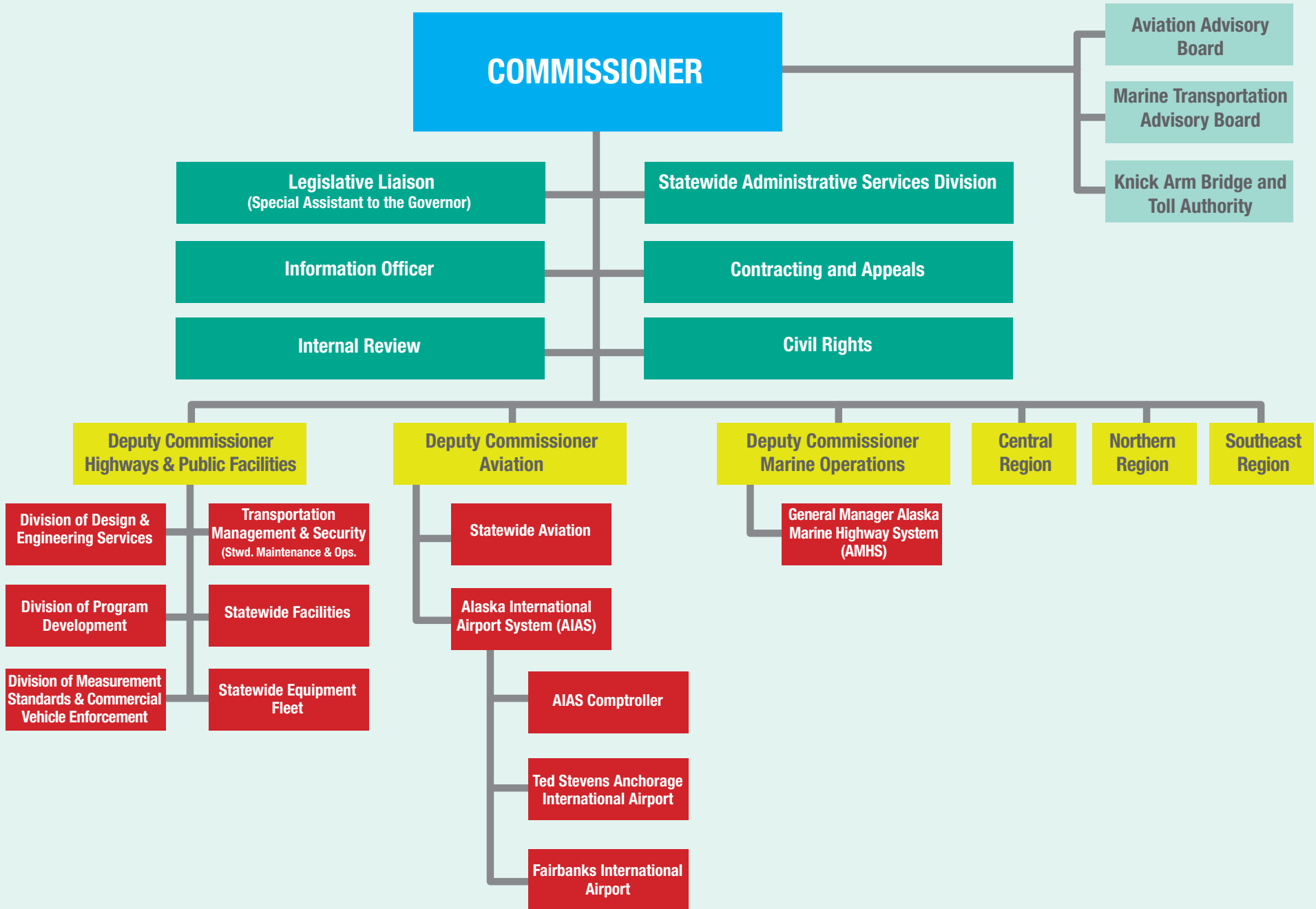
The 2012 Department Overview was produced by the Alaska Department of Transportation and Public Facilities in Juneau, Alaska, at a cost of \$10.47 per copy.

MV Chenege on Valdez Narrows heading towards Prince William Sound; photo by Peter Metcalfe



Department of Transportation & Public Facilities

Organizational Chart



June 30, 2012

Dear Fellow Alaskan:

Thank you for taking a few minutes to read the department's 2012 Overview. The scope of the department's responsibilities is broad, its expertise unique, and its performance designed to support economic and social vitality through the construction and preservation of a safe and efficient transportation network.

In this 2012 Overview, you will learn about measurement standards, regional maintenance, marine highways, and much more. We face great challenges, including a demanding environment that ranges from temperate rainforest to frozen tundra, a significant maintenance backlog, an aging workforce, the prospect of declining federal transportation funds, and the effects of climate change on the state's communities and infrastructure. I am fortunate to lead a resourceful and talented agency prepared to address these challenges in ways that are both smart and sustainable.

We strive to maximize the useful life of Alaska's transportation assets: roads, airports, terminals and transit fleets. The twin concepts of asset management and service-based budgeting—both practices that originated in the private sector but have gained broad public sector application—are helping the department organize its work around measurable outcomes. Detailed baseline data and careful attention to the preservation of assets increasingly guides agency decision-making.

Expanding our highway network and building associated facilities, will, I believe, promote economic growth and increase access and mobility. With appropriate funding, the Roads to Resources program will help us expand Alaska's transportation infrastructure to assist in the development of oil and mineral resources, leading to long term economic sustainability and growth.

Our success depends on the service, innovation, and competence of our employees, and on the methods the department uses to preserve, build, and operate the state's transportation system. We are committed to being a superior organization, creating efficiencies, using money wisely, and being accountable for our work.

Sincerely,



Marc Luiken, *Commissioner*

Introduction

The Alaska Department of Transportation and Public Facilities is responsible for the safe and efficient operation of an extensive transportation system that supports social mobility, commerce and industry, and economic growth.

Department assets include 5,619 centerline-miles of highway, 805 bridges, 254 airports, 11 ferries serving 35 ports,¹ and 720 state-owned and/or managed buildings throughout the state. Maintenance personnel are stationed at 80 maintenance facilities, from Ketchikan in southern Southeast Alaska to Barrow on the Arctic coast, to Adak, almost 1,200 miles west of Anchorage in the Aleutian Islands.

Most people see our crews out plowing snow, cleaning ditches, repairing guardrails and traffic lights, seal-coating roads and runways, and cutting roadside vegetation; or our crews who regularly respond to floods, mudslides, downed trees and other emergencies. But the visible work of the department represents only a slice of its extensive portfolio and expertise. From equipment operators and geotechnical engineers to reservations agents and architects, the department's diverse areas of expertise comprise almost 200 different job classes. The department researches topics ranging from seismic effects on bridges and wetlands assessment modeling, to design for air convection embankments (see 2012 Pavement Management Report) and performance modeling of multi-lane roundabouts.

Land, air, and sea transportation, including sightseeing, and transportation support and courier services directly employed 20,500 Alaskans in the third quarter of 2011, while transportation-related employment in businesses such as car dealers, auto parts stores, auto repair shops, gas stations, shipyards, vehicle rental firms, and road and bridge construction accounted for another 10,000 jobs.² Air transportation represents the largest sector of Alaska's transportation industry, representing 30 percent of transportation jobs, of which about half are in Anchorage.³ From the scores of rural and coastal communities isolated but for air and water services, to the role of the international airport system in moving freight across the globe, Alaska's transportation infrastructure remains vital, both locally and globally.

As you read this report, look carefully at the highlights for each Section or Division. These portray the scope, diversity, and complexity of the department's work, underscoring its aspirations and efforts.

The department must address numerous issues as it strives to operate a safe and efficient system, and, as you will read in the subsequent section, there are many challenges, from working in an unforgiving environment, to recruiting and retaining skilled workers, to preparing for anticipated decreases in federal funds. We hope this report provides insight into our work and a better understanding of the department's purpose and importance.

[1] Ouzinkie and Old Harbor added as ports in 2011 and 2012.

[2] Alaska Department of Labor and Workforce Development, Quarterly Census of Employment and Wages, 2011

[3] Alaska Department of Labor and Workforce Development, Alaska Economic Trends, April 2012

Challenges in Alaska Transportation

The department faces numerous challenges in preserving and improving the transportation system. The solvency of the Federal Highway Trust Fund, climate change and its associated effects on infrastructure, rising costs for commodities, and anticipated requirements for asset and performance management are issues that must be accommodated in the state's transportation program.

Funding

After the expiration of the last highway transportation funding bill – SAFETEA-LU — in 2009, Congress began passing a series of Continuing Resolutions to extend highway funding. As the ninth short-term extension neared its expiration date of June 30, 2012, Congress reauthorized funding through September 30, 2014 with a bill titled Moving Ahead for Progress in the 21st Century or MAP-21. The reauthorization bill is currently being analyzed by department planners.

The Federal Highway Administration helps fund state highway programs with appropriations from the Federal Highway Trust Fund, which is capitalized by an 18.4 cents per gallon federal highway gas tax and several smaller revenue sources. The gas tax no longer produces enough revenue to adequately fund the national highway program; for the past three fiscal years the program has been subsidized from the federal general fund. It seems unlikely the fund will recover at the current tax rate, as people now drive fewer overall miles and cars get ever better gas mileage.

State general fund appropriations for highway projects, which have tended to vary dramatically over the years, have been trending upwards since 2004. Alaska is the only state without a dedicated transportation fund, making it difficult for the department's planners to predict funding levels year-to-year, but the trend is encouraging, and

state fiscal year 2013 saw high levels of funding for transportation infrastructure.

The use of public-private partnerships for road construction financing is becoming more widespread. Currently 26 states and one territory have enacted laws that enable the use of public-private partnerships.⁴ For Alaska, these arrangements represent an opportunity to generate private capital to construct roads to resources without competing for public funds that are needed to maintain and preserve the state's existing highway system. The department is working with the Alaska Industrial Development and Export Authority (AIDEA) to strengthen its ability to develop private partnerships.

Climate

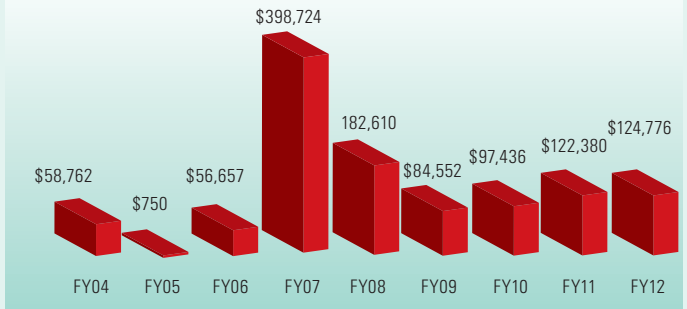
In 2010, the Statewide Maintenance Chief prepared a presentation on climate change and transportation infrastructure in Alaska that chronicled thawing permafrost and coastal and riparian erosion among other effects. For the presentation, see:

See http://www.climatechange.alaska.gov/docs/afe09/9_Coffey.pdf

The consequences of climate change for the department include higher construction costs to maintain frozen permafrost, the high cost of armoring streets in coastal communities such as Kotzebue's

State General Funds in DOT Capital Budget

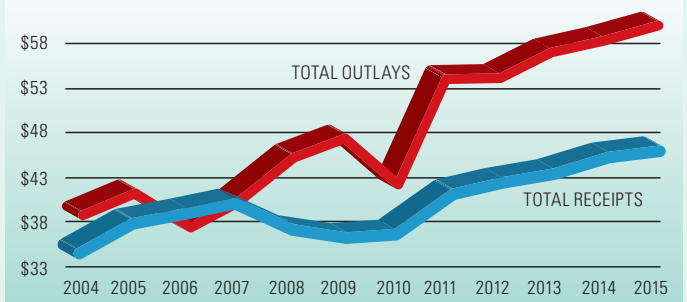
Millions of Dollars



ADOT&PF Division of Program Development

Highway Trust Fund: Receipts and Outlays Discrepancy

Billions of Dollars



American Association of State Highway Transportation Officials

Total Change in Mean Annual Temperature

1949-2009, in Fahrenheit



Alaska Climate Research Center-Geophysical Institute, UAF

[4] AASHTO – the American Association of State Highway Transportation Officials

Shore Avenue, responding to increased glacial melt and associated avalanches and debris flows, and more difficult and expensive rural airport construction due to thawing permafrost.

Arctic Deepwater Port

Climate change appears to be opening vast areas of the Arctic to use and development. The department conducted a deepwater port charrette with the U.S. Army Corps of Engineers in 2011, initiating a process of joint planning for the siting and development of one or more ports along the 927-mile-long Arctic coast of Alaska. By working with the Army Corps of Engineers and conducting a combination of research and mapping, the agencies can develop a list of potential port sites on the State's arctic coastline for use by the U.S. Navy, Coast Guard, and National Oceanic and Atmospheric Administration to support the patrol and study of the region. A port could also boost the state's economic development opportunities

through its potential use as a direct shipping point for resources developed in the western and northern regions of Alaska. Any future endeavors of this sort could provide strategic advantages for American commercial and military interests, as well as providing the infrastructure to support oil and gas development in the Arctic Ocean.

Deferred Maintenance

The department is addressing a significant backlog of deferred maintenance, particularly for highways and bridges. The Governor and the Legislature have committed nearly \$80 million over the last three years to help the department "jump-start" this effort. Making a successful transition to a preservation program based on asset management depends on bringing existing transportation assets up to good operating condition.

Permitting

Permitting requirements inevitably add complexity, cost, and delay to the department's projects. Spill prevention plans, storm water pollution prevention plans, regulation of particulate matter, and historic property preservation reviews place demands on expertise, equipment, and time. Safeguards and best practices are essential, both in design and construction, and should be standardized, where sensible, in project permitting.

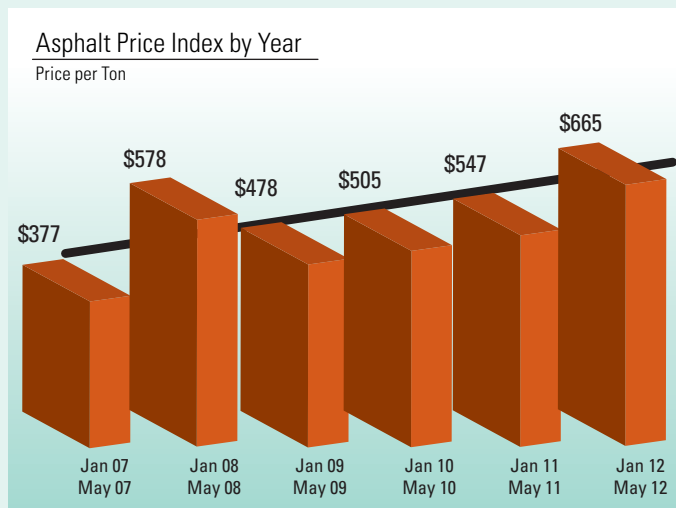
Rising Costs

Costs are going up for oil-based products and equipment and manpower. Rising fuel costs, in particular, affect almost every aspect of department operations, from paying the cost of operating equipment and running the ferries to designing energy-efficient buildings and paving highways.

Because oil is an essential component of asphalt, rising oil prices have driven up liquid asphalt prices as well. In just the period between 2007 and today, the cost of asphalt has increased by 76 percent. In 2011 alone, the department paid \$32 million for liquid asphalt for highway and airport construction projects and \$2.2 million for liquid asphalt used in ongoing maintenance and preservation activities.

State of Good Repair

Federal transportation agencies are likely to give "good repair" higher prominence in a surface transportation reauthorization bill. This would require states to maintain their existing infrastructure in good condition, essentially an asset management approach (see Page 27, Transportation Asset Management). While it is hard to argue with the concept of ensuring assets are well maintained, this could result in reduced funding for new capacity (either for new roads or new lanes on existing roads) and the diversion of funds from project budgets to data collection, management, and reporting.



Statewide Transportation Improvement Program (STIP)*

The state's four-year program for transportation system preservation and development, (the STIP) includes interstate, state and some local highways, bridges, ferries and other forms of public transportation, but does not include airports or non-ferry-related ports and harbors.



STIP

Federal law (23 USC 135) requires that, in order to receive federal surface transportation funding,

a state must prepare a statewide transportation improvement program (STIP), which must be fiscally constrained to reflect reasonably expected funding. Most of Alaska's surface transportation program falls under federal program requirements and funding levels because of the state's substantial use of federal highway funds. Federal funding for STIP projects remains an estimate until after the federal budget is approved, around October 1 of each year.

Alaska's STIP, a four-year program for transportation system preservation and development, includes interstate, state and some local highways, bridges, ferries and other forms of public transportation, but does not include airports or non-ferry-related ports and harbors. It covers all system improvements for which partial or full federal funding is approved and that are expected to take place during the four-year duration of the STIP.

The 2012-2015 STIP contains a special cluster of largely state-funded projects that support economic development, including the prospective construction of a natural gas pipeline. These projects strengthen

and replace bridges, rebuild highways, add turning and passing lanes, and accomplish other work that supports increased use and loads on National Highway System routes. Projects include:

- ▶ Reconstruction of the Parks Highway between MP 239 and MP 263;
- ▶ Rehabilitation, restoration and resurfacing of the Richardson Highway between MP 65 and MP 74;
- ▶ Reconstruction including widening, spot repairs, and resurfacing of the Dalton Highway between MP 209 and MP 235 and between MP 289 and MP 305; and
- ▶ Construction of a weigh station on the Richardson Highway to accommodate large truck and trailer combinations hauling heavy loads (currently unfunded).

These projects, each important in its own right for highway improvement and general mobility, also support future development important to the state's economy.

STIP Spending Categories

Congress, through the Federal Highway Administration and the Federal Transit Administration, provides funding to Alaska transportation projects and programs under more than 60 different



* Congressional passage of a surface transportation reauthorization bill on June 28, 2012, known familiarly as MAP-21, will result in modifications to one or more STIP spending categories



program categories. These funds are organized within the following DOT&PF spending categories in the STIP, listed in the order of their historic levels of funding:

National Highway System (NHS) funds support the network of highest priority highways and ferry links connecting the state's population centers with economic hubs, border crossings, public transit facilities, airports, and port facilities. In 1995, Congress designated in law all of the routes that make up the NHS. Ferries and ferry terminals are included in either the Alaska Highway System or the NHS, as appropriate. The department uses these funds for pavement preservation, building more capacity and relieving congestion, installing safety improvements such as lighting and guardrails, improving air quality, and for a variety of other tasks focused on system preservation, expansion and safety.

Community Transportation Program (CTP) funds support partnerships with local governments, tribes, and other parties to build projects that serve local and regional needs, including economic development-related projects. The CTP provides funds for local transit projects, Intelligent Transportation Systems (see the section on "Data Services"), and local road and street projects in remote, rural, and urban communities.

Mandatory Program fund categories, which are restricted to specific uses required by the Federal Highway Administration, include:

- ▶ transportation planning, research and data programs to develop the Long-Range Transportation Policy Plan, the STIP, and keep relevant statistics about the transportation system;
- ▶ bridge inspection and rehabilitation, including replacement of structurally deficient bridges (see the 2010 and 2012 Alaska Bridge Reports);

- ▶ the Highway Safety Improvement Program, which seeks to reduce traffic fatalities and serious injuries on all public roads through the installation of highway safety improvements;
- ▶ the Safe Routes to Schools program, which identifies and develops separated bike and pedestrian access for school children;
- ▶ projects to improve air quality, such as transit bus replacement, vehicle inspection and maintenance programs, and enhanced traffic signal coordination, as well as paving for dust control, constructing park and share lots, and encouraging ride sharing;
- ▶ civil rights program funding that supports Alaska DOT&PF's policy of ensuring that no person be excluded from participation, or be denied benefits, based on race, religion, color, gender, age, marital status, ability, or national origin; and
- ▶ funds earmarked by Congress for specific projects.

Alaska Highway System (AHS) includes state highways, roads, and ferry links that are not part of the National Highway System (see above) but are still important to the state because they link cities with economic centers and recreational areas and span the distances between cities. The department has established AHS routes by regulation. DOT&PF uses funds for the Alaska Highway System essentially for the same purposes as funds for the National Highway System, focusing on preservation, improved capacity, and enhanced safety.

Trails and Recreational Access for Alaska (TRAAK) includes the development of bike and pedestrian paths and trails, landscaping, historic preservation, highway waysides and associated interpretive signage, access to recreational facilities, and similar improvements.

Project Selection

The department is guided by the policies of the Long-Range Transportation Plan and the Transportation Improvement Plans (TIPs) prepared by Anchorage and Fairbanks, along with transportation plans developed by other municipalities, DOT&PF regions, tribes, transit agencies, and various state and federal offices. Project selection is also influenced by attainment of clean air standards and attention to underserved populations.

Through a public process, the department nominates projects on the National Highway System and the Alaska Highway System based on the need to upgrade sections that are below standards, accomplish initial hard surfacing or pavement rehabilitation, and to improve safety or increase capacity. The department requests nominations from the public and other groups for projects in the Community Transportation Program and for the Trails and Recreation Access for Alaskans (TRAAK) program.

A project qualifies under the Community Transportation Program if it is a local road or

a transit development or if it uses technology to improve traffic flow or safety. A project qualifies under TRAAK if it improves access to recreational facilities, provides trails and pathways for transportation (bike and pedestrian paths), or provides scenic and interpretive improvements along highways. A Project Evaluation Board reviews, scores, and ranks proposed projects based on established criteria.

STIP projects do not always proceed on schedule, so, in order to maximize the state's ability to use its federal spending authority, projects not ready to advance at a critical time yield their place in the schedule to other projects that are ready to go. Such changes require amendments to the STIP using procedures established in state and federal law and, except for minor or administrative changes, require public notice and a comment period. The department maintains a list of amendments and administrative modifications to the STIP, both pending and final, on its Internet web pages. When an amendment or modification is proposed and then approved, it links to the STIP webpage.

See: www.dot.alaska.gov/stip



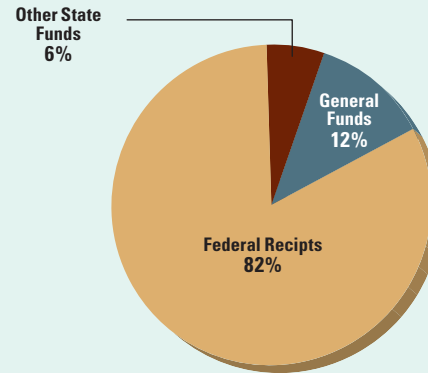
Shore Avenue in Kotzebue; photo by Peter Mercalle

Budget

The Division of Administrative Services provides administrative infrastructure, oversight, and expertise in the areas of budget, finance, procurement, information technology standards and policies, cost allocation plans, human resource management, collection of federal and other revenue, and website development and maintenance.

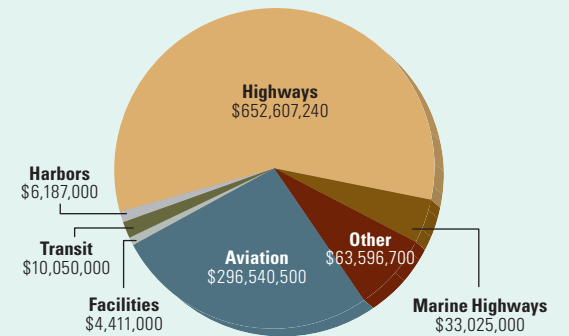
SOURCES OF FUNDS

FY 2011 Capital Budget
Authorized=\$1,066,417,440

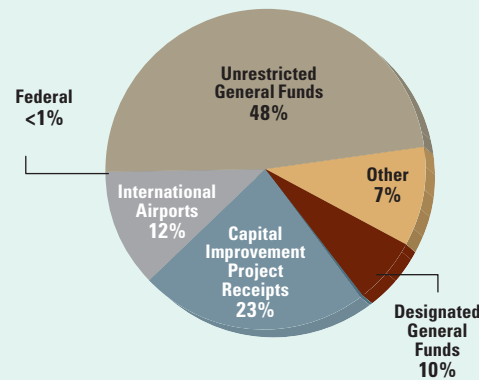


USES OF FUNDS

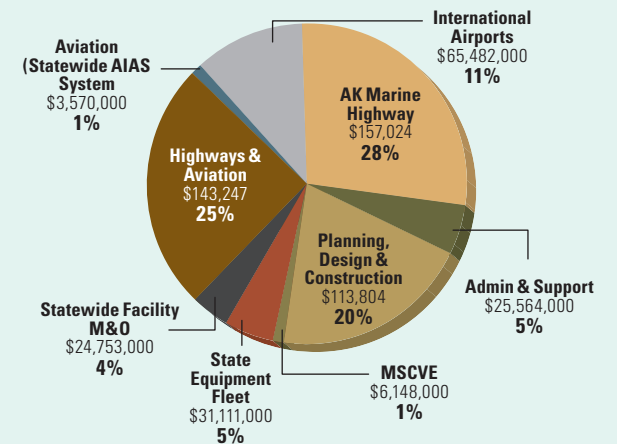
FY 2011 Capital Budget
by Program Area



FY 2011 Operating Budget
Actuals=\$570,701,200



FY 2011 Operating Budget
by Program Area



Statewide Aviation

The Alaska Department of Transportation & Public Facilities (ADOT&PF) operates 252 rural airports, which provide the primary means of access to 82 percent of Alaska's communities. The Division of Statewide Aviation prepares policies, procedures, and programs to plan, develop, improve, operate, and manage DOT&PF's Rural Airport System, as well as policies related to aviation issues.

Duties

- ▶ Partner with the Federal Aviation Administration, Alaska's Congressional Delegation, Alaska legislators, Alaska's Aviation Advisory Board, ADOT&PF's regional functional groups, aviation stakeholders, municipal airports, and other agencies to address airport and aviation-related policy issues.
- ▶ Coordinate the airport capital project evaluation process, develop a multi-year airport capital improvement program, and execute FAA Airport Improvement Program grants for ADOT&PF's rural airport system.
- ▶ Develop and implement airport property management regulations and policies.
- ▶ Develop and administer property management and contractual agreements for land-use activities at the rural airports in accordance with FAA grant assurances and state statute.
- ▶ Improve airport and flight safety through collaboration with FAA and other aviation stakeholders, using planning, training, and research.

Highlights

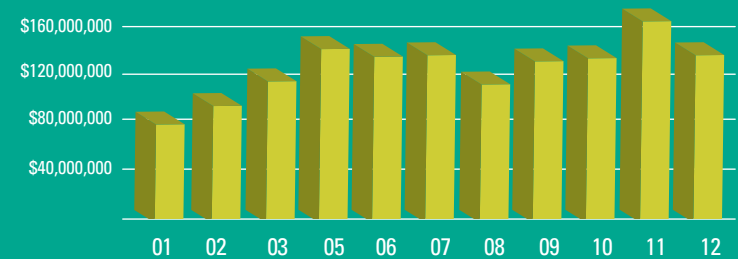
- ▶ Developed and communicated information and policies regarding Alaska's statewide aviation concerns for incorporation into the FAA reauthorization bills in Congress. Our goals for these bills include retaining the essential air service program, allowing use of 100 octane low-lead fuel, making U.S. Postal Service bypass mail hub changes, and allowing for the continued air transport of oxygen supplies.
- ▶ Between 2004 and 2011, reduced, from 23 to seven, the number of airports closed due to seasonally soft runway conditions or other issues. Akiachak airport was improved in 2011 to eliminate seasonal closure.
- ▶ Funded projects in 2011 to provide 24-hour medical evacuation capability in Akutan, Ouzinkie, Alakanuk, and Manley. Airport improvements were completed at Akiachak, Takotna, and Tuluksak to allow similar 24-hour access medical evacuation capabilities for these communities.
- ▶ In federal fiscal year 2011, worked with the FAA to execute Airport Improvement Program (AIP) grants totaling approximately \$150.4 million for the Rural Airport System and \$55.2 million for the International Airport System.



PenAir Grumman Goose arriving in Akutan; photo by Rebecca Cronkhite ADOT&PF

- ▶ Implemented new statewide Rural Airport System lease/rental rates on January 1, 2011. The additional revenue from the leases will help offset rising operation and maintenance costs, as well as demonstrate the state's continued attempt to meet the FAA grant assurance regarding self-sustainability of federally funded airports.

DOT & PF Rural Airport System — Federal Share (fiscal years)



International Airports

The Alaska International Airport System (AIAS), which includes the Ted Stevens Anchorage International Airport and the Fairbanks International Airport, hosts over 50 international and domestic airlines that provide passenger and cargo service throughout Alaska, the United States, Europe, and Asia. Anchorage is the fifth largest airport in the world for cargo throughput and second largest airport in the U.S. for landed cargo weight.

Duties

- ▶ Maintain compliance with multiple regulations of the Transportation Safety Administration, Environmental Protection Agency, Federal Aviation Administration, and other agencies.
- ▶ Provide safe and efficient infrastructure for the transportation of passengers and cargo to, from, and throughout Alaska by coordinating with air carriers and regulatory agencies, as well as with other airports and the Department of Defense.
- ▶ Provide and maintain facilities that ensure a high level of service for airport customers.
- ▶ Provide and maintain general aviation facilities and services in support of aircraft owners and pilots.
- ▶ Coordinate with local communities and airport interests in an open and transparent manner on long-term plans, economic development, and airport impacts.

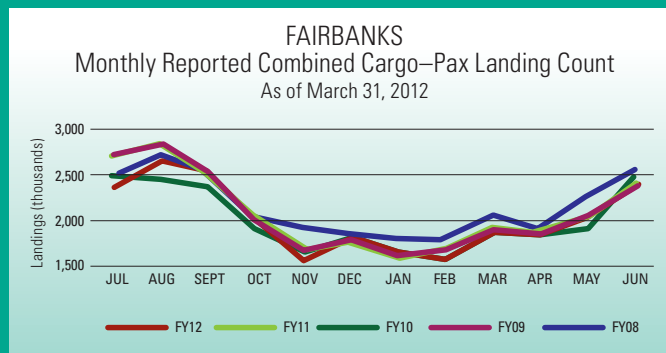
Highlights

- ▶ Ted Stevens Anchorage International Airport is the second largest cargo airport in the United States and fifth largest in the world.
- ▶ Following years of aggressive capital development, AIAS initiated Strategic and Master Planning processes to guide long-term development and operations.
- ▶ AIAS management completed trade missions to Asia and hosted the second Annual Cargo Summit to bolster international cargo transfer opportunities unique to Alaska.
- ▶ AIAS worked with local convention and visitors bureaus, attended trade shows, and met with airlines to expand passenger service.

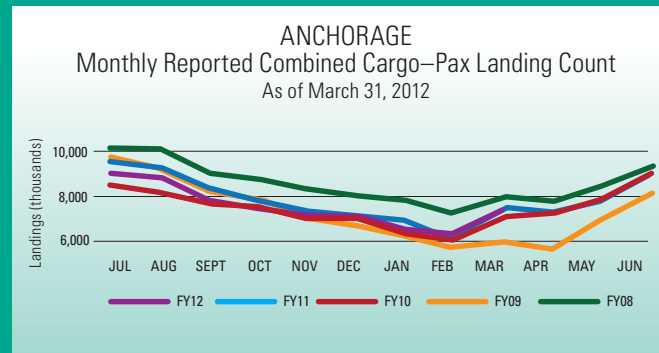


Ted Stevens Anchorage International

- ▶ Ted Stevens Anchorage International Airport received the Air Cargo Excellence Award from Air Cargo World, a distinction voted on by airline customers that rate airports on performance, value, facilities, and operations.
- ▶ Fairbanks International Airport passenger terminal was ranked among the ten most beautiful in the world by The Atlantic Cities magazine.
- ▶ United Airlines initiated seasonal direct passenger service between Fairbanks and Denver and year-around service between Anchorage and Denver; JetBlue began direct service between Anchorage and Los Angeles; Yakutia Airlines is beginning summer seasonal service between Anchorage and Petropavlovsk-Kamchatsky; and Korean Airlines will initiate seasonal charter operations from both Anchorage and Fairbanks during the 2012 summer season.
- ▶ Ted Stevens Anchorage International Airport won the Balchen Post award for the fifth time for demonstrating excellence in ice and snow control.
- ▶ Officials of the Ted Stevens Anchorage International Airport attended the Mid-Atlantic Conference in Reykjavik, Iceland, opening conversations about possible passenger service to Alaska.



ADOT&PF Alaska International Airport System



ADOT&PF Alaska International Airport System

Marine Highway System

The mission of the Alaska Marine Highway System is to provide safe, reliable, and efficient transportation of people, goods, and vehicles between communities in Alaska and Canada and the “Lower 48,” while providing opportunities to develop and maintain a reasonable standard of living and high quality of life, including social, education, and health needs.

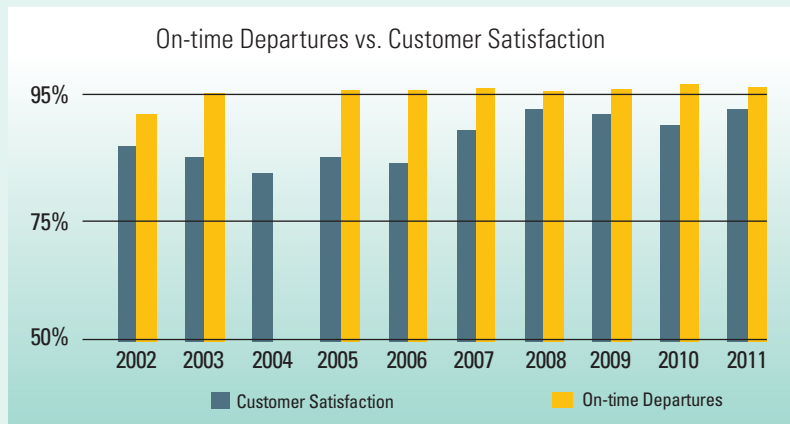
Duties

Operate a fleet of 11 ships, including six mainline ferries, two high-speed ferries, and three feeder ferries that serve 33 ports in Alaska, one port in Prince Rupert, Canada, and one port in Bellingham, Washington.

Highlights

- ▶ Provided safe and reliable transportation under consistent schedules made available at the earliest possible schedule release date; achieved a high on-time arrival and departure rate (93 percent in 2011); and rated consistently high in customer satisfaction (97 percent in 2011).

- ▶ Continued to improve customer service through the implementation of online vessel tracking and the integration of tracking and schedule data into the Alaska 511 system to provide accurate, real-time data to the public through multiple means.
- ▶ Began the process of bringing Alaska Ship & Drydock onboard as the construction manager/general contractor for the Alaska Class Ferry project, initially for design, and potentially for the construction of the ship.
- ▶ Received the 2011 Aurora Award of Excellence from the Public Relations Society of America, Alaska Chapter, for the Alaska Marine Highway System website.



MV LeConte Arriving in Skagway; photo by Lara Labesky ADOT&PF

- ▶ Grew online reservations from virtually none in 2002 to a record high of 34.1 percent of all reservations made in 2011. Design of a new reservation system is underway to make online reservations even more user-friendly to customers and complementary to AMHS marketing efforts.
- ▶ Safely transported over 334,000 passengers and 114,000 vehicles (an all-time system record for vehicles), which helped support communities, sustain rural economies, and promote independent traveler tourism.
- ▶ Replaced marine structures, flexi-float systems, and transfer bridges at ferry terminals in Hoonah and Angoon to enhance safety and to enable these terminals to accommodate both the fast vehicle ferries and traditional ships. Completed the new Hoonah terminal building, staging area, perimeter security fencing, and connection to the city wastewater system.
- ▶ M/V *Aurora* completed a habitability and ship systems refurbishment project from September 2011 to March 2012 on time and with only 3.5 percent growth in the \$7 million budget. This major Capital Improvement Project included overhaul of both main engines, a new emergency generator, complete renovation of cafeteria and crew quarters, and the renewal of solarium windows, along with various inspections.
- ▶ Added service to the communities of Ouzinkie and Old Harbor.

Surface Transportation

The Surface Transportation Section manages public transportation funds entrusted to the department to ensure that the department delivers projects consistent with state and federal laws and regulations and remains eligible to receive federal funding.

Duties

- ▶ The STIP team manages the department's Statewide Transportation Improvement Program (STIP), and its associated revisions, issues notices for public comment, and finalizes and submits the STIP for approval by the federal government. A project with federal funding must be listed in an approved STIP before it can be funded.
- ▶ The Capital Budget Team works with DOT&PF's Administrative Services Division and the STIP team to identify projects for inclusion in the department's annual Capital Budget request to the Alaska State Legislature. The department is required to obtain legislative approval to receive and expend state and federal funding; without it, projects cannot begin.
- ▶ The Federal-Aid Team manages the Federal-Aid contracts signed by the department's agent and the FHWA to ensure projects are eligible to receive federal funds. To be eligible for federal funding, a project must have a Federal-Aid contract in place before project work can start.

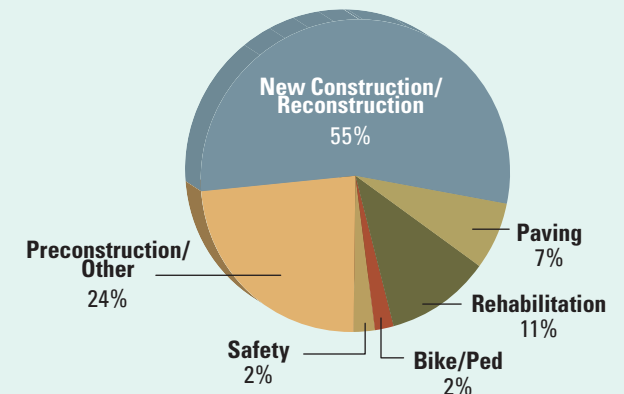
- ▶ In state fiscal year 2011, the Capital Budget Team submitted requests for legislative authority for \$917,905,125 in federal funding and \$194,446,974 in state funding. The federal funds include authority for Federal Aviation Administration, Federal Highway Administration, Federal Transit Administration, National Highway Traffic Safety Administration, and Federal Motor Carriers Safety Administration projects. The state funds include general fund matching, general fund projects, international airport construction funds, international airport revenue funds, etc.
- ▶ In federal fiscal year 2011, the Federal-Aid Team created and processed 741 federal-aid project agreements and modification transactions. A project agreement is a project-specific contract between the Federal Highway Administration and the state that guarantees federal reimbursement of state funds expended on the approved highway project.

Highlights

- ▶ In federal fiscal year 2011, the STIP team created and received approval for 19 amendments to the 2010 – 2013 STIP; the team also prepared the draft 2012-2015 STIP and began the public review process.

Highway Construction by Improvement Type

ADOT&PF Division of Program Development



Transportation Operations

The development, maintenance, improvement, and preservation of transportation facilities constitute the overall work of the department. System design, construction, and maintenance occurs through the department's three regions.

Central Region Maintenance

The Central Region operated and maintained 4,999 lane-miles of roads, 101 airports, and 262 bridges. Maintenance crews

- ▶ crack-sealed 429 lane miles of highways; provided surface maintenance of either gravel or paved runways for 26 airports; performed drainage improvements for 58 miles of roadway; performed repairs on 25 bridges; installed and/or repaired 33,126 linear feet of guardrail; performed 2,044 lane miles of brush cutting; installed 6,648 feet of airport fencing; performed \$373,350 of culvert repairs; overlaid or patched deteriorated sections of roads in Anchorage, the Mat-Su Valley, and Kenai Peninsula;
- ▶ applied deferred maintenance funding to accomplish significant highway repairs on the Sterling Highway (spot repairs between Anchor Point and Homer), Skyline West (Homer), Seward Highway (36th Ave to 76th Ave), Birchwood Airport Access, Rabbit Creek Road, Old Seward Highway (Dimond Blvd. to O'Malley), East 36th Ave., Klatt Road, De Armoun Road, Birchwood Loop, International Airport Road, Lucas Road, Pittman Road, Palmer-Wasilla Extension, Wolverine Road, and Bodenbug Loop.

Central Region Project Development

The Central Region received \$154 million in federal highway construction authorization in federal fiscal year 2011 and \$126.3 million in federal aviation authorization, the majority of which was allocated to the construction phase.

- ▶ Awarded \$5.2 million in general fund and \$200 million in federal-funded construction contracts.

The Central Region completed the following projects:

- ▶ Reconstruction of the Parks Highway MP 72 and MP 83.
- ▶ Construction of a new runway, taxiway, and apron for the rural airport on Akiachak.
- ▶ Construction of a new runway, taxiway, and apron for the rural airport at Takotna.
- ▶ Resurfacing of eight miles of the Glenn Highway between Eklutna and the Parks Highway.
- ▶ Channelization improvements on Parkway and on Debarr Road from Bragaw Street to Hoyt Street
- ▶ Resurfacing of 8.5 miles of the Seward Highway between Potter Marsh and Dowling Road.

Highlights

Northern Region

- ▶ Chip-sealed/paved 157 lane-miles of roads
- ▶ Crack-sealed 151,000 linear feet of road
- ▶ Brushed 3,092 lane-miles of right-of-way
- ▶ Re-striped 3,465 lane-miles of highway
- ▶ Repaired 1,355 drainage structures
- ▶ Completed \$59 million in road projects
- ▶ Completed \$23 million in airport projects

Central Region

- ▶ Crack-sealed 429 lane-miles of highway
- ▶ Completed surface maintenance of 26 airports
- ▶ Improved drainage on 58 miles of road
- ▶ Repaired 25 bridges
- ▶ Installed or repaired 33,126 feet of guardrail
- ▶ Performed culvert repairs worth \$325,350
- ▶ Overlaid/patched roads throughout South Central

Southeast Region

- ▶ Ditched and cleared brush along 248 lane-miles of highway
- ▶ Chip-sealed 12 lane-miles of road
- ▶ Crack-sealed 15,341 feet of road
- ▶ Cleaned 514 miles of ditches
- ▶ Striped 373 miles of paved highway
- ▶ Completed \$86 million of projects



Glenn Highway Lighting Project; photo by Mark Shullman ADOT&PF

- ▶ Installation of warning signs and roadside delineators on selected sections of four major NHS routes (Parks Highway, Seward Highway, Sterling Highway, and Knik Goose Bay Road).
- ▶ Construction of improvements to Lake Hood Airstrip, including installation of control gates and fencing.
- ▶ Reconstruction of Trunk Road on new alignment from the Parks Highway to the Palmer-Wasilla Highway.
- ▶ Reconstruction of the Dillingham Wood River Road.
- ▶ Reconstruction of terminal apron and taxiways for the Dillingham Airport.
- ▶ Construction of airside improvements at Ted Stevens Anchorage International Airport, including reconstruction of the Concourse A apron and the addition of 1,500 feet to Runway 7R.
- ▶ Resurfacing of nine miles of the Glenn Highway between MP 109 and MP 118, including major drainage improvements.
- ▶ Construction of the repairs to the Chignik Lagoon Runway.
- ▶ Reconstruction of the Old Glenn Highway between South Birchwood and Peter's Creek.
- ▶ Construction of a multi-use pathway along Kalifornsky Beach Road from Bridge Access Road to near Mallard Road.
- ▶ Resurfacing of eight miles of the Sterling Highway between MP 82 and MP 90.

Northern Region Maintenance

The Northern Region operated, maintained, and repaired 8,850 lane-miles of roads, 104 airports, and 376 bridges.

- ▶ Applied chip-seal, hot mix asphalt paving, or high float surfacing to 157 lane-miles of paved roads and highways.
- ▶ Applied approximately 151,000 linear feet of surface crack-sealing and performed approximately 765,000 square feet of surface crack banding on 481 centerline miles of roadway.
- ▶ Applied dust palliative products to the runways, taxiways, and aprons at Buckland, Hughes, Kantishna, Kotzebue, Noatak, Russian Mission, Noorvik, and White Mountain.
- ▶ Cut approximately 3,092 lane-miles of brush and trees along public rights-of-way.
- ▶ Performed maintenance and repair work on 32 bridges.
- ▶ Re-striped 3,465 lane-miles of highway.
- ▶ Replaced 39 small diameter culverts and performed periodic maintenance on 1,355 other drainage structures.
- ▶ Repaired 9,355 linear feet of guardrail, fencing, and barriers; installed, replaced, and/or corrected the height of 8,159 linear feet of existing guardrail to enhance safety for the traveling public.
- ▶ Responded to and cleared 14 avalanches in the Thompson Pass area on the Richardson Highway, as well as 20 avalanches in the Atigun Pass area.
- ▶ Developed and implemented 11 aggregate crushing contracts, which produced over 195,000 cubic yards of stockpiled aggregate material.

Northern Region Project Development

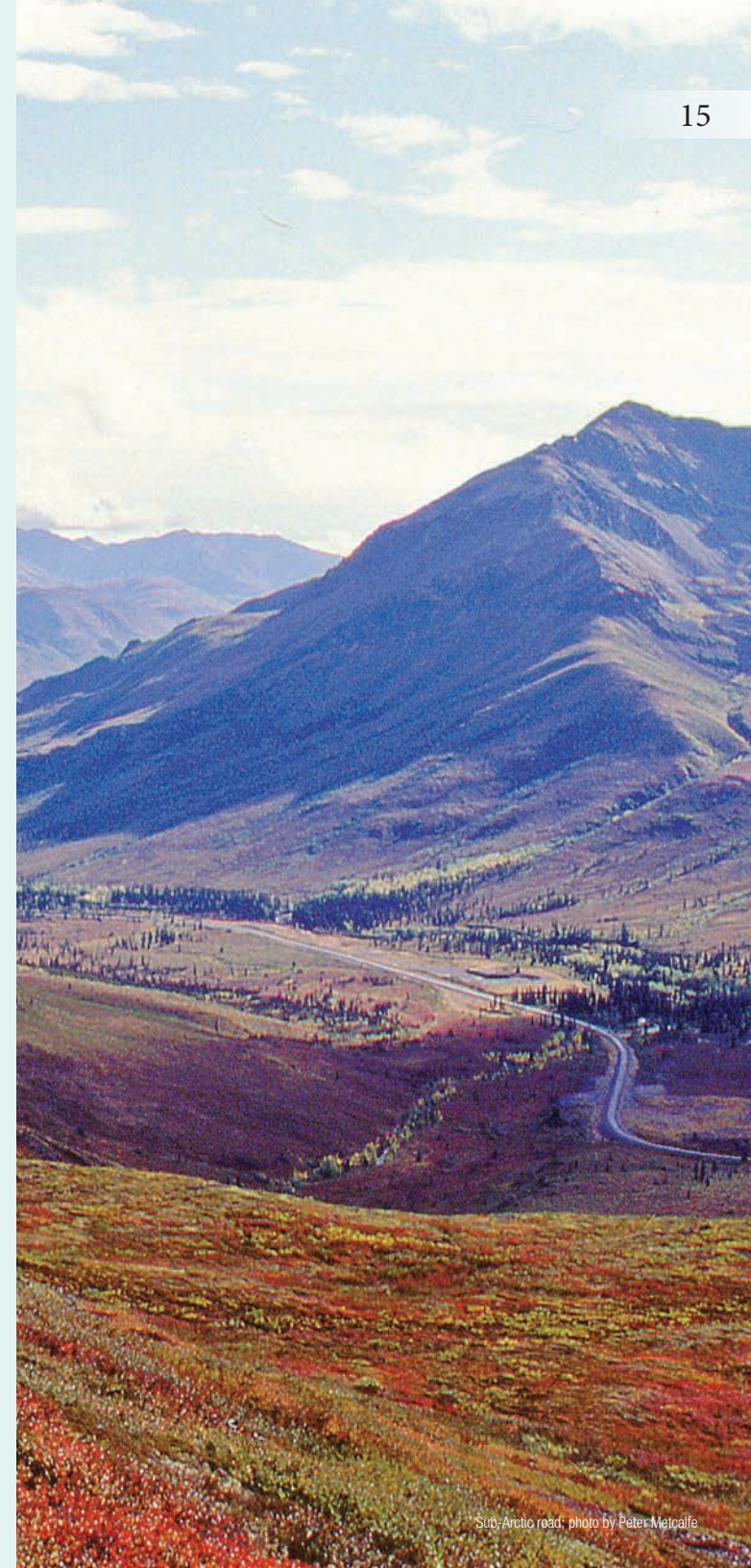
The Northern Region received \$134 million in federal highway funds and \$50.6 million in federal aviation construction authorization in federal fiscal year 2011. The Region completed \$59.0 million in construction and reconstruction of needed transportation infrastructure improvements.

- ▶ Completed construction of the Nome Bypass Road.
- ▶ Completed construction of the Richardson Highway North Pole Interchange.
- ▶ Reconstructed Parks Highway MP 287-305.
- ▶ Resurfaced Galena Road.
- ▶ Performed dust control at Fort Yukon
- ▶ Reconstructed Selawik boardwalk and landfill road.
- ▶ Refurbished pavement on Valdez area-wide bike and pedestrian trail.
- ▶ Completed \$23.0 million in runway, taxiway, lighting, environmental structures, and safety measures.
- ▶ Made improvements at Alakanuk, Alakaket, Galena, Kotzebue, Minto, and Fairbanks International airports.

Southeast Region Maintenance

The Southeast Region maintains 1,300 lane-miles of state highway, 115 bridges, 43 harbors, and 33 seaplane floats, and operates 10 airports. The work described below involved clearing brush from 248 lane-miles of highway, chip-sealing 12 lane-miles, crack sealing 15,341 lane-miles, cleaning 514 miles of ditches, and striping 373 miles of pavement.

- ▶ **Gustavus:** Performed crack sealing on the airport runways and ramps; cut brush at airport and along highways.
- ▶ **Haines:** Cut brush, cleaned ditches, replaced deteriorated culverts, cleared rock slides, and patched and crack-sealed damaged roads; repaired deteriorated bridge deck; painted and striped airport and highways.
- ▶ **Hoonah:** Cut brush at airport and along highway and cleaned highway ditches and culverts.
- ▶ **Juneau:** Completed extensive brush cutting and ditching. Patched deteriorated sections of highway, including both cold patching and mill-and-fill operations. Painted and striped highways.
- ▶ **Kake:** Completed extensive brush cutting on the airport.
- ▶ **Ketchikan:** Completed extensive ditching on North and South Tongass Highways; cleaned debris from underneath guardrail and cut brush on both highways; performed extensive patching of deteriorated highway sections; completed highway striping and painting; and added material and bladed gravel roads.





- ▶ **Klawock:** Painted and striped, cleared rock slides. Repaired deteriorated pavement, and performed extensive ditching and brush cutting of the highway system.
- ▶ **Petersburg:** Completed extensive ditching and brushing on Mitkof Highway; chip sealed three miles of the gravel road portion of Mitkof Highway; cleared rock slides from the highway, and painted and striped the highway and airport.
- ▶ **Sitka:** Completed ditching and brush cutting on road system and airport; repaired damaged pavement on airport and highways; installed lighting on airport windsock; implemented intensive wildlife control operations through contract with the U.S. Forest Service; painted and striped highways and airport.
- ▶ **Skagway:** Accomplished extensive ditching and brushing of highways and airport; cleared numerous rock slides and snow slides; replaced damaged and worn delineators and guardrail; painted and striped highway and airport.
- ▶ **Wrangell:** Repaired and chip sealed damaged sections of Zimovia Highway; completed brushing and ditching on Zimovia Highway, crack-sealed runway; painted and striped highway and airport.

Southeast Region Project Development

The Southeast Region was responsible for construction administration of nearly \$86 million in federal highway, federal aviation, federal transit administration, general fund and reimbursable construction projects awarded in federal fiscal year 2011.

- ▶ Processed approximately \$64 million in contractor payments.
- ▶ Completed a gravel-to-black paving project (1 mile) at Coffman Cove on Prince of Wales Island.
- ▶ Completed pavement rehabilitation projects in Yakutat (6.9 miles), Juneau (6.1 miles), and Ketchikan (0.7 miles).
- ▶ Completed the fourth and final phase of a major expansion of the Runway Safety Area at the Petersburg airport.
- ▶ Completed construction and delivery of the \$7.4 million airport shuttle ferry, M/V *Ken Eichner 2*, to replace the aging M/V *Bob Ellis* shuttle ferry that serves the Ketchikan airport.
- ▶ Completed the construction of an \$8 million runway safety area improvement project at the Gustavus airport.
- ▶ Continued construction of a \$25 million runway safety area improvement project at the airport in Sitka.
- ▶ Closed out 12 completed construction contracts totaling \$20.6 million.
- ▶ Obtained materials testing qualifications for eight new technicians and engineers, and re-qualified 11 technicians and engineers under the Western Alliance for Quality in Transportation Construction program.

Bridge Section

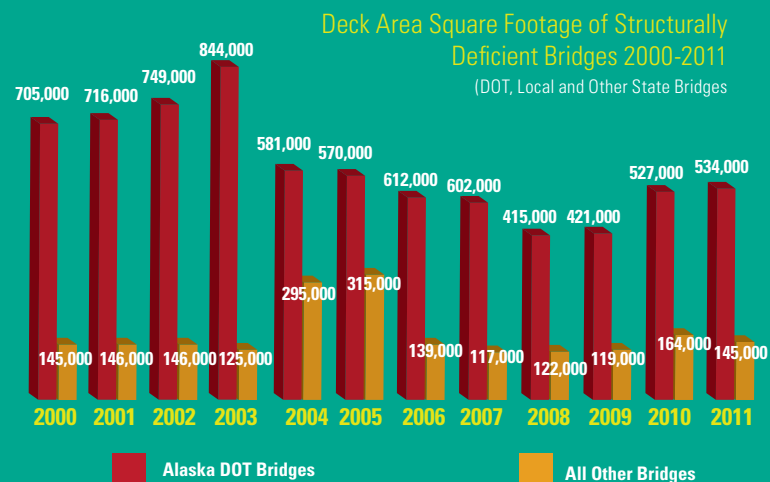
The bridge section, a statewide unit located at Juneau Headquarters, provides structural and hydraulic design services and consulting oversight for new bridge construction and bridge rehabilitation and provides bridge management services for public bridges owned by other state and local agencies.

Duties

- ▶ Bridge design services include structural and hydraulic design for bridge replacement, rehabilitation, and repair projects; review of consultant designs; and construction engineering support.
- ▶ Bridge management services include routine, fracture-critical damage, and special bridge inspections; oversight of bridge inspections by consultants; and load rating of bridges and evaluating bridge overload permit requests.
- ▶ Other services include reviewing and updating bridge construction specifications, inspecting minor state-owned highway structures, and high-tower light poles.

Highlights

- ▶ The deck area square footage of structurally deficient bridges showed an overall downward trend between 2003 and 2011, but with increases over the past two years.
- ▶ Awarded bids for rehabilitation, inspection, replacement, and seismic retrofit of nine bridges in 2010.
- ▶ Currently providing on-going construction support or construction completion for 16 bridges, including replacement of the Gakona River truss on the Tok Cut-Off Highway.
- ▶ The Bridge Section has sponsored research to improve the quality and durability of new bridges and to prolong the life and safety of existing bridges. Notable research projects included work on the seismic performance of bridge columns.



By examining new materials and analysis techniques, columns with greater deflection capacity are being developed and employed in new bridge projects. These improved building techniques reduce potential earthquake damage and allow bridges to survive strong earthquakes.

Left: graph by ADOT&PF Engineering and Design Services Bridge Section.

Right: The Fred Zharoff Memorial Bridge spans the narrows in front of the City of Kodiak; photo by Peter Metcalfe.



Ports and Harbors

The Harbor Program Development Division is a statewide unit located in Juneau and Anchorage.



ADOT&PF Engineering and Design Services

Duties

- ▶ Provide a broad range of services associated with harbor and coastal engineering issues across the state, mainly concerning shore protection issues for the design of highways, airports, and harbors.
- ▶ Assist coastal Alaskan communities with harbor and erosion issues.
- ▶ Provide state financial assistance to local government harbor projects through three programs: the U.S. Army Corps of Engineer match program; the Harbor Facility grant program (AS 29.60.800); and the Community Harbor Deferred Maintenance and Transfer program (AS 35.10.120), subject to approval by the Alaska State Legislature.
- ▶ Manage 25 department-owned harbor facilities.
- ▶ Work statewide on port and harbor planning and funding issues.

Highlights

- ▶ Started work on a joint Arctic Ports planning study with the Alaska District of the Corps of Engineers. Goal is to identify western and northern Alaskan ports that could accommodate a deep draft Coast Guard icebreaker and enhance the state's community and natural resource development goals.
- ▶ The Harbor Facility Grant program provides 50/50 matching state grants to municipalities and regional housing for small boat harbor projects. The program received 11 applications for fiscal year 2012 and 10 applications for fiscal year 2013. To date, 11 grants have been completed and the department has contributed \$12.1 million in state matching funds. By leveraging state funds, over \$24 million worth of harbor construction projects have been completed.
- ▶ Conducted a waterfront development study at Mertarvik for the Bureau of Indian Affairs as part of state and federal government efforts to relocate the Village of Newtok, which is suffering from coastal erosion resulting from climate change.
- ▶ Completed two major maintenance projects: the Port Alexander Inner Float, totaling \$598,731, and Kasaan Harbor, totaling \$1,729,917.
- ▶ State personnel performed 12 routine harbor and five seaplane facility inspections during the year.



Environmental Section

The Statewide Environmental Office provides guidance for developing policy and procedures that implement federal, state, and local environmental statutes, regulations, and ordinances.

Duties

- ▶ Provide guidance, forms, and training for storm water construction permit compliance; produce annual report on construction storm water consent decree compliance. Coordinate review of select active construction projects for training and evaluation of storm water compliance.
- ▶ The Statewide Environmental Office also provides oversight of the State's 6004 Program, through which the department has assumed certain National Environmental Policy Act (NEPA) responsibilities from FHWA for various federal-aid highway projects.

Highlights

- ▶ Through February 29, 2012, DOT&PF had assumed responsibility for and approved 375 Categorical Exclusions or re-evaluation of Categorical Exclusions under a sec. 6004 Memorandum of Understanding.
- ▶ Revised guidance and forms and updated the Alaska Certified Erosion and Sediment Control Lead (AK-CESCL) training to incorporate changes in the Alaska Department of Environmental Conservation reissued Construction General Permit; provided training for designers on storm water issues; initiated a two-year project to evaluate material sites for storm water permitting requirements.
- ▶ Efforts to satisfy stipulations of Programmatic Agreement regarding the Federal-Aid Highway Program in Alaska (Alaska Road PA) began February 23, 2010, the effective date, and continued during the past fiscal year. The signatories to the agreement include the Federal Highway Administration, the Advisory Council on Historic Preservation, the Alaska Department of Transportation and Public Facilities, and the Alaska State Historic Preservation Officer.
- ▶ Drafted Interim Guidance to evaluate Alaska roads and highways for National Register of Historic Places eligibility until a more developed Historic Road Context is completed. The Interim Guidance has been accepted by the Alaska Road PA signatories and will be implemented via a 2nd Amendment to the PA during May 2012.
- ▶ Developed a Historic Roads Context study and Final Guidance methodology to assess eligibility of roads as also stipulated in the Alaska Road PA. A Request for Proposals was prepared for the project and a Notice of Intent to Award a Contract has been issued. Contract work will begin in mid-May of 2012.



Roads to Resources

The Roads to Resource Program (R2R) works jointly with state agencies, resource developers, and other interested entities, including boroughs and regional and village Native corporations, to develop transportation infrastructure in Alaska that can support natural resource development of oil and gas, energy, mining, timber, fisheries, and agriculture. The program development model anticipates analysis and implementation of Public-Private Partnerships to fund projects, as situations warrant.

Duties

- ▶ Identify resource development projects that require construction of transportation access. The Roads to Resources Program embraces not only road access, but marine, rail, and aviation related access as well.
- ▶ Work in support of the Department of Natural Resources and the resource industries in assessing, designing, and permitting transportation improvements necessary for economically viable resource development.
- ▶ Categorize projects based on a broad range of technical and social criteria, including state and regional economic benefits from creation of local jobs, improved transportation access, and reduced cost of living for rural Alaskan communities, and evaluation of impacts to cultural, subsistence, and environmental values.
- ▶ Work with resource developers, the Alaska Industrial Development and Export Authority (AIDEA), Native corporations, contractors, and other interested financial entities to facilitate development of appropriate mechanisms for major capital funding of large transportation projects to access resources. Startup investment by the state in a Road to Resources project can be reimbursed through the partnership via industry user or toll fees.
- ▶ Provide reconnaissance-level technical and financial support for access options analyses, initial baseline field studies, and design and cost analyses of conceptual options; host agency and public meetings to identify development impact issues and solutions with an aim to develop consensus for a preferred access alternative.
- ▶ Facilitate National Environmental Policy Act (NEPA) permitting processes, either as applicant or by providing technical support to non-DOT&PF applicants.

Highlights

- ▶ **Foothills West Transportation Access** - This project will improve access to known Gubik gas and Umiat oil accumulations and optimize exploration and development of hydrocarbon resources within the Foothills Areawide Lease Sale area. Preparation of an Environmental Impact Statement, with the U.S. Army Corp of Engineers as lead agency, began in May 2011 and is scheduled for conclusion in the winter of 2014 with the publication of a Record of Decision.

- ▶ **Ambler Mining District Access** – This project will provide all-season transportation access to promote exploration, development, and production of known mineral resources in the Ambler mineral belt. Reconnaissance-level engineering evaluations are completed and baseline field studies are underway. Multiple community meetings have been held in nine rural communities near the Ambler mining district to collect public input concerning effects of improved transportation access on the region, and measures to mitigate impacts on cultural and subsistence values.

- ▶ **Road to Tanana** – By improving road access to known mineral developments in the Manley region mineral belt, this project will support mining opportunity expansion and resource exploration and provide an all-season road to the Yukon River near the Community of Tanana. The all-season road will improve access by connecting Tanana to the Elliot Highway near Fairbanks. The project will support regional and community sustainability by reducing the cost of living and providing greater opportunities for employment and commerce in the Tanana-to-Manley region. Local public meetings were held in the spring of 2012 to collect public input, and surveys and baseline field studies are scheduled for the summer of 2012.

- ▶ **Klondike Industrial Highway Ore Haul Refurbishment** - This project will refurbish and strengthen the Klondike Highway pavement to accommodate increased ore and freight demands from Yukon mining industries. The project also includes strengthening or replacement of the Wm. Moore Bridge with an alternative structure capable of handling heavy-haul ore truck loads anticipated from Yukon mines.

- ▶ **Fiscal Year 2013 Alaska State Roads to Resources Appropriations: \$26.5 million:**

Foothills West Transportation Access	\$10 million
Amber Mining District Access	\$ 4 million
Road to Tanana	\$10 million
Klondike Industrial Highway	\$2.5 million



Heavy Hauling on the Dalton Highway by Shawn Crites, DOT&PF

Highway Safety Partners

- ▶ National Highway Traffic Safety Administration
- ▶ State and Local Law Enforcement Agencies
- ▶ Alaska Injury Prevention Center
- ▶ The Strategic Traffic Safety Plan Coordinating Committee
- ▶ The Alaska Traffic Records Coordinating Committee
- ▶ The Alaska Designated Safety Corridor Review Team
- ▶ Alaska Court System
- ▶ Alaska Motorcycle Safety Advisory Committee
- ▶ Alaska TraCS Steering Committee
- ▶ Municipality of Anchorage

Transportation Safety

The Alaska Highway Safety Office (AHSO) coordinates traffic safety programming focused on public outreach and education, enforcement, promotion of new safety technology, integration of public health strategies, collaboration with safety and private sector organizations, and cooperation with state and local governments.

Duties

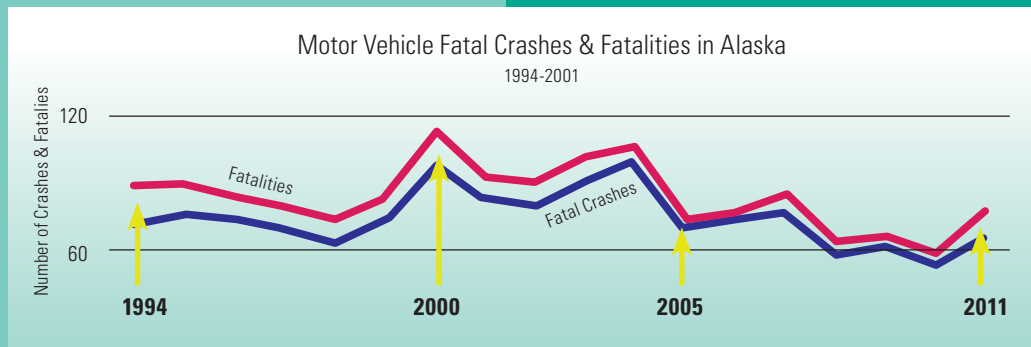
- ▶ Develop, implement, and evaluate a statewide strategic traffic safety planning process that includes all elements of traffic safety: education, enforcement, engineering, and evaluation.
- ▶ Develop partnerships with various state and local agencies to ensure traffic safety data is collected and analyzed then made available to partners and to the public for strategic planning. Traffic Safety Partners are listed at left.
- ▶ Coordinate with traffic safety partners to encourage statewide participation in national traffic safety mobilization initiatives such as “Click It or Ticket” and “Drive Sober or Get Pulled Over.” These enforce-

ment and media campaigns have contributed to increases in seatbelt use from 83.2 percent of drivers in 2006 to 89.3 percent in 2011, and decreased unbelted traffic fatalities from 17 in 2006 to 13 in 2010.

- ▶ Collect, code, and analyze the data for all fatal motor vehicle crashes in the state for the Fatality Analysis Reporting System (FARS) in the National Highway Traffic Safety Administration (NHTSA). This data is used by federal, state, and local agencies, as well as by organizations and corporations, to effectively design and implement crash reduction programs, identify traffic-way design problems and take corrective actions, adopt traffic safety legislation, design safer vehicle standards, develop strategies for reducing collisions with animals, and allocate grant money among many other uses.

Highlights

- ▶ Alaska’s motor vehicle traffic fatality count has shown a steady decline since 1975, to a low of 56 in 2010.
- ▶ Alcohol-related fatalities have declined steadily since 1994, to a low of 19 in 2010.
- ▶ Unbelted traffic fatalities have decreased steadily since 1994, to a recent low of 12 in 2009.



Statewide Systems

Transit, Scenic Byways, Safe Routes to Schools, Statewide Transportation Plan

The Statewide Systems Section manages the development of the Statewide Long-Range Transportation Plan and delivers grant funding and assistance to communities and organizations around the state in support of public and community transportation, Alaska Scenic Byways, and Alaska Safe Routes to School.

Duties

- ▶ Conduct statewide transportation planning and related analytical studies to produce the Alaska Statewide Long-Range Transportation Plan.
- ▶ Deliver grant funding and guidance to public transportation agencies and community transportation providers around the state.
- ▶ Partner with federal and state agencies and coalitions and community organizations to identify, improve, and enhance transportation options for Alaskans through the Alaska Safe Routes to School and Alaska Scenic Byways grant programs.
- ▶ Supported the re-established Governor's Coordinated Transportation Task Force in public forums and meetings around the state, completing a needs analysis and action plan for improving statewide coordination of public and community transportation services.
- ▶ Distributed first-ever State of Alaska funds authorized specifically for public and community transportation to 34 agencies and service providers around the state.

Highlights

- ▶ Partnered with the Corps of Engineers Alaska District to conduct a two-day Arctic Port planning charrette, a catalyst for further exploration and analysis of potential sites for development of an Arctic port to support national and state interests and missions in the Arctic region.
- ▶ Partnered with Alaska Federal Land Management agencies in development of the Alaska Federal Lands Long-Range Transportation Plan draft.
- ▶ Purchased 25 vans and two buses for 12 local transit agencies around the state
- ▶ Engaged over 28 Alaska communities in development of Safe Routes to School programs and projects.
- ▶ Designated Walden Point Road on Annette Island, the Copper River Highway near Cordova, and the Alaska Marine Highway route between Homer and Seldovia as State Scenic Byways in 2011.



New Tanana River Bridge, Elmer Marx, ADO18PF

Bike & Pedestrian Program

The Bicycle/Pedestrian Program provides technical assistance to DOT&PF and local government planners, designers, and program managers to improve facilities for Alaskans who walk or bike and coordinates with government, private, and nonprofit partners to organize, plan, and implement statewide bicycle and pedestrian transportation safety programs.

Duties

- ▶ Provide technical assistance to project managers and engineers, local governments, and the public to improve pedestrian and bicycle facilities and safety.
- ▶ Enhance the public's use and enjoyment of the surface transportation system through improvements to the roadway and surrounding environment.
- ▶ Partner with law enforcement, safety advocates, and others to promote bicycle and pedestrian transportation safety through the "Four E's": education, enforcement, engineering, and emergency response.
- ▶ According to American Community Survey data, Alaskan adults who bike to work increased both in real numbers and in the percentage of working population. On average, nearly 3,300 Alaskans bike to work each day, making the state sixth in the nation in the percentage of adult commuters who bike to work. By comparison, in 1990, Alaska ranked 14th in the nation. Alaska's rate of just under one percent is nearly double the national average. And the survey data show that Alaskan women bike to work at more than twice the rate of their counterparts in the nation as a whole.
- ▶ Alaska's rate of pedestrian fatalities is among the lowest in the nation, according to the 2012 Benchmarking Report by the Alliance for Biking and Walking. The Benchmarking Report shows that Alaska has about 1.5 pedestrian fatalities per 10,000 daily pedestrians, compared to the national mean/average of 5.2. Nevertheless, with pedestrians making up about 12 percent of all traffic fatalities, there is still much room for improvement.

Highlights

- ▶ Alaska consistently ranks first in the nation in the percentage of adult workers who walk to work. This was reaffirmed with the release of the latest U.S. Census Bureau's 2006-2010 American Community Survey data. According to the U.S. Census, almost 8.2 percent of Alaskan commuters walk to work, nearly three times the national average of 2.85 percent.



Data Services

The Transportation Information Group (TIG) manages the department's Highway Performance Monitoring System, Functional Classification, Certified Public Road Mileage, Motor Vehicle Crash Reporting, Statewide Traffic Reporting, and Intelligent Transportation Systems (ITS). TIG is responsible for developing and maintaining statewide road and traffic information in compliance with federal requirements and provides road and traffic data to

planners and engineers for improving highway design, operation, and maintenance. The two most important ITS applications are the 511 Traveler Information System (511.alaska.gov) and the Road Weather Information System (roadweather.alaska.gov). These two real-time information systems disseminate critical roadway information to help the public make travel decisions and to keep the public apprised of the department's winter-weather maintenance decisions.

Duties

- ▶ Provide road network and feature information to the public through the department's Highway Data Port web application.
- ▶ Provide roadway, traffic, and crash data to traffic engineers and transportation planners to help them prioritize highway safety improvement projects and programs.
- ▶ Deploy the department's 511 Traveler Information System (511 and RWIS).
- ▶ Submit annual Highway Performance Monitoring System (HPMS) and monthly Permanent Traffic Recorder (PTR) data.
- ▶ Process motor vehicle crash data into TIG's transportation database.
- ▶ Maintain statewide road network in a Geographic Information System (GIS) environment.
- ▶ Administer statewide ITS architecture.
- ▶ Administer a multi-agency Strategic Traffic Safety Plan that addresses three emphasis areas: Driver Behavior, Roadways, and Special Users (bike/pedestrian/motorcycle use).

Highlights

- ▶ The department's Intelligent Transportation System (ITS) applications improve traveler safety and efficiency. These include 46 Road Weather Information System (RWIS) cameras at 54 sites, more than 60 temperature data probes for seasonal weight restriction, 10 portable message boards for emergency operations, and 97 traffic counters for estimating the annual average daily traffic.
- ▶ 511 is an Internet and telephone service designed to help travelers access driving conditions, roadwork, closures, and National Weather Service forecasts. The new generation 511 Traveler Information System launched in March 2010 and received 64,720 visits during the year. (Visit 511 at <http://511.alaska.gov>)
- ▶ The website www.roadweather.alaska.gov incorporates the DOT road weather cameras, atmospheric weather, road surface temperatures, links to cameras from other agencies such as the Federal Aviation Administration (FAA) and temperature profiles used for implementing and removing seasonal weight restrictions.
- ▶ Completed the Strategic Traffic Safety Plan (visit the STSP at <http://stsp.alaska.gov>)



511 Road Information camera image, MP 35.8 Glenn Highway, ADOT&PF.

Measurement Standards and Commercial Vehicle Enforcement

The Division of Measurement Standards and Commercial Vehicle Enforcement ensures confidence in equitable trade, enhances motoring public safety, and protects public infrastructure through regulation of commercial vehicle weights and safety measures.



Fox Weigh Station; photo by Matthew Matta, ADOT&PF.

Duties

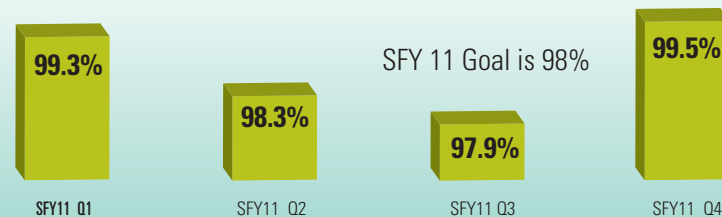
- ▶ Check prepackaged products and commodities to ensure adequate packaging
- ▶ Inspect and test weighing and measurement equipment used in commerce.
- ▶ Provide educational outreach to device owners.
- ▶ Conduct Commercial Motor Vehicle (CMV) safety, size, and weight inspections.
- ▶ Conduct Compliance Reviews and Safety Audits on carriers operating in the state.
- ▶ Continue enforcement and training partnerships with local, state, and federal law enforcement agencies.
- ▶ Educate passenger and commodity carriers that operate in the state.

Highlights

- ▶ Weights and Measures inspections increased by 0.5 percent to 18,717 in 2011.
- ▶ The division conducted 5,827 commercial vehicle safety inspections in federal fiscal year 2011.
- ▶ Commercial Vehicle Enforcement Officers placed 793 unsafe trucks, 192 unqualified truck drivers, 22 unsafe motor coaches, and 20 unqualified motor coach drivers out of service.
- ▶ Commercial Vehicle Enforcement Officers documented 10,280 safety infractions: 7,777 vehicle, 2,443 driver, and 60 HazMat.
- ▶ The division deployed the Mobile Inspection Station in 2011, enabling the extended deployment of enforcement personnel to communities not served by fixed weigh stations.
- ▶ The division achieved a commercial vehicle weight compliance rate of 98.7 percent in state fiscal year 2011. The division weighed 30,882 commercial vehicles at weigh stations throughout the state.
- ▶ The division issued 19,338 overweight and oversize permits and 5,831 temporary truck/tractor permits in 2011.

Alaska Commercial Motor Vehicle Weight Compliance

SFY 11



Transportation Asset Management (TAM) Unit

The two-position TAM unit, which was established in 2011, is located within the Commissioner's Office, under the Chief Engineer. The unit facilitates life cycle preservation, management, and operations initiatives between regions, divisions, and sections statewide to meet a required level of service in the most cost effective manner through the management of transportation assets for present and future users.

Duties

- ▶ Assess current management and operational practices related to transportation assets.
- ▶ Identify proven best management practices to preserve the existing transportation system.
- ▶ Make recommendations for implementation of new asset management practices or systems.
- ▶ Facilitate asset management education and outreach.
- ▶ Coordinate existing and develop new asset management policies and procedures.
- ▶ Develop and maintain an Asset Management Plan as a companion to the Long-Range Transportation Plan.

Highlights

- ▶ Completed initial Asset Management training and assessment.
- ▶ Formed Transportation Asset Management Executive Oversight Committee.
- ▶ Conducted peer exchange with North Carolina and Kentucky DOT's, two acknowledged leaders in TAM.
- ▶ Launched Geotechnical Asset Management (GAM) Program
- ▶ Established Parks Highway TAM/ GAM demonstration project.





Buildings and Facilities

Statewide Public Facilities provides project management for the design and construction of buildings for the State of Alaska. Projects range in scope from remodeling of existing facilities to construction of new buildings.

Duties

- ▶ Prepare project scoping and preliminary estimates.
- ▶ Solicit, select, negotiate, and award professional services agreements with design consultants, then review designs.
- ▶ Solicit and award construction contracts and provide construction contract administration oversight.

Highlights

- ▶ Completed construction of the new Bethel Readiness Center for DMVA.
- ▶ Completed the new Scientific Crime Detection Laboratory ahead of schedule in June 2012. The \$87.5 million, 84,000 square foot state of the art facility is expected to increase the efficiency of the laboratory and reduce the existing case back log.
- ▶ Completed the renovation of McLaughlin Youth Center's Intensive Treatment Unit for DHSS.
- ▶ Awarded \$10 million in contracts for energy efficiency improvements to State-owned facilities with American Recovery and Reinvestment Act (ARRA) funding from the U.S. Department of Energy.

Statewide Materials

Quality assurance, pavement engineering, foundation/soils engineering, and engineering geology

The Headquarters Materials Section supports the department's mission by providing specialized technical expertise in construction materials and engineering services to design, construction, and maintenance operations across the state. Together, headquarters and regional materials engineers provide technical leadership by enhancing design and construction quality. Their focus is on continued improvement in the durability and sustainability of our transportation and public facilities for use by all Alaskans.

Duties

- ▶ Provide design, construction, and maintenance technical support for:
 - geological subsurface bridge foundation investigations;
 - geotechnical and bridge foundation engineering;
 - the Statewide Aggregate Materials Site Inventory;
 - pavement engineering;
 - materials laboratory testing and quality assurance protocols;
 - the Statewide Unstable Slopes Inventory and Rating Program; and
 - specifications and technical manuals.
- ▶ Manage the State's Qualified Construction Products List, and approval process.
- ▶ Provide statewide radiation safety management and control of nuclear asphalt and moisture gauges.
- ▶ Contract management of consultant-provided construction material testing and inspection services.
- ▶ Oversee the State of Alaska's Materials Testing Technician training and qualification program for construction material samplers and testers. This program manages construction material samplers and testers qualifications not only for department personnel but also industry personnel statewide.

Highlights

- ▶ Began a research project for implementation of a Corridor Asset Management Program (CAMP) pilot project for the Parks Highway between Anchorage and Fairbanks. The pilot program will refine the corridor asset management concept, define critical program elements, and create the framework and a methodology for implementation of a model program for the department. The goal of this trial implementation is to test the effectiveness of the system in supporting data-driven asset management decisions. Ultimately, the CAMP will be utilized for project development, funding allocation, safety improvement, and prudent combinations of projects to improve corridor Level of Service and overall system service life in spite of the current economic environment where the department is faced with diminishing capital and operations budgets.
- ▶ Continued the Statewide Material Sites Inventory, an ongoing project dedicated to collecting information on the history, location, status, volume, and other physical properties of aggregate materials sites along highways throughout Alaska. The inventory includes aerial photographs and inspection data, including quantities, quality, access, geology and maps, and land use, which together detail the present status of the sites. The inventory is web accessible to anyone seeking aggregate for highway construction activities.
- ▶ Continued the Unstable Slope Management Program (USMP), a project dedicated to identification, assessment, and mitigation of unstable rock, soil, and embankment slopes that affect the safety and mobility of Alaskans who use our transportation system. The ultimate goal of the program is the systematic elimination of unstable slopes through programmed engineering design and construction.



Gravel pit near Tok; photo by Mike San Angelo.

The Road Ahead

Individuals, businesses, and industry around Alaska often take for granted that the state's transportation systems—highways, airports, marine facilities, plants, and equipment—will be safe, reliable, efficient, and well-kept. The department, in managing this system on behalf of its many users and beneficiaries, must ensure that these assets, with an estimated cumulative worth of \$6.3 billion, are continually maintained to protect their value. The cost of replacing this infrastructure is simply too great to do otherwise.

The department recognizes that its infrastructure investments are aging, while, at the same time, the costs of maintaining these assets continue to rise. Studies have determined that a good maintenance program is six times more efficient than a do-nothing approach that leads to replacement. Maintenance funds must be used systematically and proactively to sustain the value of our diverse and expansive transportation system.

Transportation Asset Management provides a business model for asset preservation that departs from the more traditional approach of fixing the worst problems first. With a large inventory of deferred maintenance already “on the books,” however, and with a federal funding mechanism that historically has favored rehabilitation over preservation, there is both a significant backlog of “worst first” work to be completed and a financial

incentive to maintain the status quo. As federal transportation managers and policy makers lead the transition from an emphasis on building new capacity, to an emphasis on preserving existing capacity, funding priorities will follow. The new federal surface transportation reauthorization, MAP-21, is the first major step in this policy transformation.

Just as the department is beginning its engagement with asset management, it is also preparing to lead, and to facilitate, in the development of roads to important mineral and oil and gas deposits. Here, our role as stewards of the public transportation system is repeated in a different venue to foster future growth in base sector industries. By leveraging private funds to construct access roads into resource-rich areas, and by using our analytical, engineering and project management skills to ensure prudent route selection and construction practices, the department will continue to contribute to the state's economic livelihood.

Designed to accept exceptionally heavy loads, resource roads to resource development projects do not always align well with federal funding priorities.

Our ability to rely on alternative financing for resource roads will help ensure that public funds are available to preserve and extend the life of

the public transportation network already in place. It is the department's responsibility both to protect on-going economic activity by ensuring the long-term viability of the existing system of highways, airports, bridges, vessels and ports, and to promote new economic opportunity through facilitated investments in roads to important state-owned resources. Seemingly distinct, these activities spring from the same core department competencies of planning, analysis, engineering, stewardship, and project development.

All who use our streets and highways—whether the general public, commercial users, or advocacy groups—expect the department to be diligent, fair, and smart. We expect no less of ourselves as we strive to operate a first-rate transportation system.



Alaska Department of Transportation and Public Facilities

2012 Department Overview

