

**State of Alaska  
FY2009 Governor's Operating Budget**

**Department of Transportation/Public Facilities  
Highways and Aviation  
Results Delivery Unit Budget Summary**

## Highways and Aviation Results Delivery Unit

### Contribution to Department's Mission

Operate, maintain, safeguard, and control the state's infrastructure system of highways, airports and harbors.

### Core Services

- Winter snow and ice control, including snow plowing, snow removal, sanding, anti-icing, avalanche control, snow fencing and culvert thawing.
- Summer maintenance including: grading, pothole patching, crack sealing, leveling of heaves and dips, brush clearing, sweeping, dust control, drainage cleaning and repair, pavement marking, fence and guardrail repair, bridge painting and repair, and sign maintenance.
- Road and airport lighting systems maintenance, including: traffic signals, intersection and road illumination, harbor electrical service and lighting, and runway and taxiway lights.
- Roadside litter control and trash removal at rest areas, turnouts and campgrounds.
- Access control to state rights of way for driveways, access roads, signs and utilities.
- Security at state airports in compliance with the Homeland Security and the Transportation Security Administration (TSA).
- Operation of certificated airports in compliance with 14 CFR Part 139.
- Maintenance of federally mandated security at state airports, including access controls, criminal history checks and badging, security fencing, communications, and law enforcement.
- Emergency response to impacts on State highways and airports from natural disasters.
- Active avalanche program.

End Result	Strategies to Achieve End Result
<p><b>A: Maintain State owned roads, highways and airports to appropriate department standards.</b></p> <p><u>Target #1:</u> Improve customer satisfaction by 3% with DOT&amp;PF services.</p> <p><u>Measure #1:</u> Change in customer satisfaction based on survey of customers.</p>	<p><b>A1: Keep urban highways passable at all times.</b></p> <p><u>Target #1:</u> Clean up snow and ice from urban highways within 18 hours after end of snow storm.</p> <p><u>Measure #1:</u> Number of hours after end of storm before urban highways are cleaned up (shoulders and intersections clear and berms pushed back).</p> <p><b>A2: Ensure regulatory compliance at rural Part 139 airports.</b></p> <p><u>Target #1:</u> No major violations during annual Part 139 inspections.</p> <p><u>Measure #1:</u> Number of Part 139 inspection violations.</p> <p><b>A3: Carry out safe DOT&amp;PF operations.</b></p> <p><u>Target #1:</u> 10% increase in employees successfully completing required safety training.</p> <p><u>Measure #1:</u> Percent of employees completing required safety training.</p>

Major Activities to Advance Strategies	
<ul style="list-style-type: none"> <li>• Use maintenance management system to monitor efficient and effective use of State resources</li> </ul>	<ul style="list-style-type: none"> <li>• Develop policies and procedures for accident/incident review, tracking and prevention</li> </ul>

### Major Activities to Advance Strategies

- Increase scheduled preventative maintenance
- Implement technologies and use of anti-icing chemicals for effective anti-icing program
- Provide safety training and compliance monitoring
- Provide equipment operator training and certification
- Deploy Alaska land mobile radios and receivers

### FY2009 Resources Allocated to Achieve Results

FY2009 Results Delivery Unit Budget: \$121,194,200

**Personnel:**

Full time	523
Part time	81
<b>Total</b>	<b>604</b>

### Performance Measure Detail

#### A: Result - Maintain State owned roads, highways and airports to appropriate department standards.

**Target #1:** Improve customer satisfaction by 3% with DOT&PF services.

**Measure #1:** Change in customer satisfaction based on survey of customers.

#### Customer Satisfaction

Year	YTD	% Change
1998	60%	
2005	79%	31.7%
2007	no survey	not available

**Analysis of results and challenges:** DOT&PF has contracted for a survey to be conducted in the fall of 2007. Customer satisfaction with the operation and maintenance of our highways and rural airport system increased significantly between 1998 and 2005. This result may have direct corollary with the maintenance budgets. In 1998, the burgeoning state fiscal problems manifested into flat line budgets that limited our ability to address maintenance problems on the roads and airports. Starting in 2003, the maintenance program began receiving additional funding in both operating and capital programs. These increased funds allowed the department to address some of the long-standing issues that the public had complained about for several years.

#### A1: Strategy - Keep urban highways passable at all times.

**Target #1:** Clean up snow and ice from urban highways within 18 hours after end of snow storm.

**Measure #1:** Number of hours after end of storm before urban highways are cleaned up (shoulders and intersections clear and berms pushed back).

#### Average number of hours to clean urban roads

Year	YTD
FY 2005	15.5
FY 2006	14.7
FY 2007	32.0

**Analysis of results and challenges:** Urban highways receive priority snow and ice control service due to the large volume of traffic on these routes. Managers must ensure that maintenance personnel and equipment are mobilized to clear these routes and have them cleaned up within 18 hours after a winter storm subsides. A

completed winter road provides safe driving conditions and will be either a bare road or a plowed road with an adequate amount of sand applied for traction. Intersections and turn lanes will be cleared of snow in the driving lanes.

This result is an average clean up time for the four large urban centers of the state – Anchorage, Fairbanks, Palmer/Wasilla and Juneau. Individual area clean up times ranged from 20 hours in Juneau to 38 hours in Anchorage. The winter of 2006/2007 was very challenging for snow removal activities. Portions of the state received record snowfall. In other areas, the storms were not discreet events but continued in duration for days at a time. For instance, in Anchorage there were 5 events from late December to the end of January. With nearly continuous precipitation, the crews were in constant effort to move snow off the roads and then haul it away. Variables including severity of the snow storms and the amount of secondary roads that must also be plowed all factor into how long it takes to clean up the roadsides and intersections. For instance Fairbanks crews do a complete circuit of their Priority One roads first before spreading out to their Priority Two and Three roads. Only after all roads have at least been plowed through will the crews return to do the clean up. Maintenance managers are challenged to apply enough resources at the right time to deal with the storm without overstressing the capabilities of the operators or over-expending funds. They must address additional needs on non-urban roads, keep crews working safely, and be ready to respond to future storms.

## A2: Strategy - Ensure regulatory compliance at rural Part 139 airports.

**Target #1:** No major violations during annual Part 139 inspections.

**Measure #1:** Number of Part 139 inspection violations.

### Number of major airport violations

Year	YTD
2004	0
2005	0
2006	0
2007	0

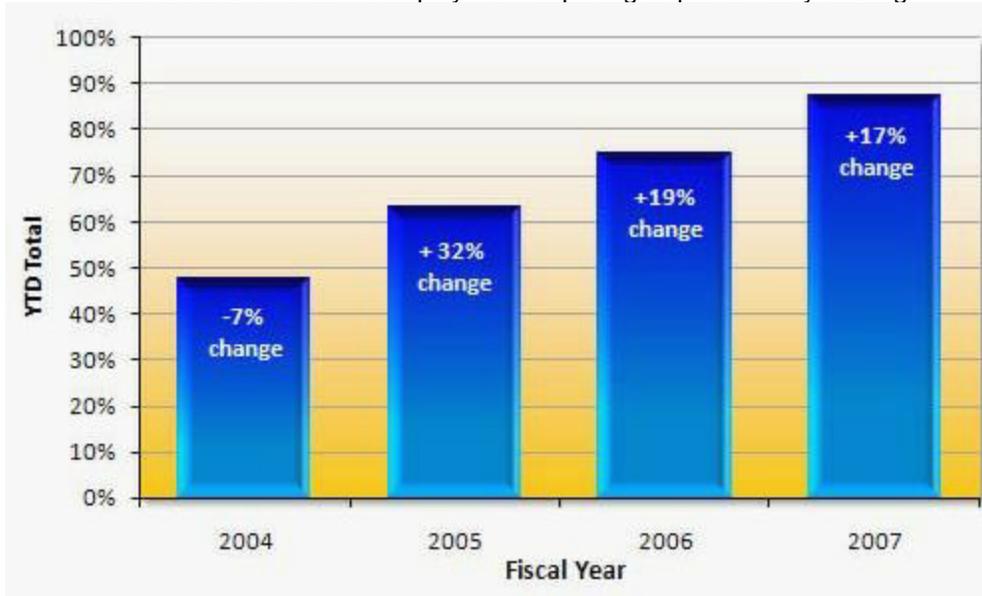
**Analysis of results and challenges:** State of Alaska rural airports that provide Part 139 service (air carriers with aircraft of over 30 seats) must meet rigid Federal Aviation Administration (FAA) standards to maintain their certificates. FAA inspects each airport annually. Failures to meet FAA standards for airport operations, called "violations", can result in fines or suspension of the airport's certificate. DOT&PF's goal is to maintain the airports at a level of compliance that will ensure no violations occur.

We continue to be successful in meeting this goal. Maintaining this level of service requires diligence and skillful management of airport maintenance assets and extensive training of airport maintenance crews. Costs of airport maintenance continue to rise as FAA regulatory requirements become more stringent.

### A3: Strategy - Carry out safe DOT&PF operations.

**Target #1:** 10% increase in employees successfully completing required safety training.

**Measure #1:** Percent of employees completing required safety training.



**Analysis of results and challenges:** We continue to see lower costs to the department as a result of these increased training events. Highway and airport maintenance duties are inherently dangerous. Federal and State Occupational Safety and Health Administration (OSHA) training requirements were established to help ensure that maintenance workers stay safe. Meeting those requirements is challenging for managers who have limited time and resources. Adding to the difficulty is providing these requirements to a workforce spread out across the state in 84 different locations while continuing to meet regular workload obligations. Department management is incrementally increasing the training of maintenance workers while still providing a full level of service on our highways and airports. Through additional safety and equipment operations training, we are reducing work related injuries and workers compensation claims.

### Key RDU Challenges

- Warming climate trends are having major impacts on the transportation infrastructure in the Northern Region. Permafrost is found beneath most of the Northern Region. Thawing of ice-rich discontinuous permafrost has already damaged roads, airports, and buildings and has resulted in increased maintenance costs. Thawing and melting are likely to continue to bring widespread changes in ecosystems, increased erosion, and damage to buildings, roads, airports and other infrastructure increasing the State's financial burden. Airport security continues to be a major issue. Maintenance and Operations staff are constantly working with the TSA to meet the new and continually changing certified airport security requirements. One of the issues is limiting access to restricted areas. This requires that the Department employees and private business employees at the certified airports be fingerprinted and an historical crime check completed.
- The continuing escalation in fuel prices and utility costs results in a larger percentage of the budget is spent covering these costs and in turn reduces the amount available to cover routine and preventative maintenance items. This results in accelerated deterioration and an increasing deferred maintenance backlog. The baseline values in the budget for fuel and utilities are based on the FY05 budget. These values need to be increased to accurately reflect existing costs.
- The cost of outsourcing portions of the maintenance work to contracts continue to rise as rates for skilled operators increases. Conversely, it is becoming more difficult to attract and hire qualified journeyman as the pay and benefits are better elsewhere.
- Protecting Alaska's investment in its transportation infrastructure continues to be a key concern. Lack of adequate funding over much of the previous decade has limited the extent of Maintenance and Operations (M&O's) preventative maintenance program resulting in continuing deterioration of the existing highway and airport systems. Increased traffic volumes and truck weights are causing increased deterioration and driving up maintenance costs.

As the transportation infrastructure continues to age, M&O is faced with an ever-increasing list of deferred maintenance work. Other demands include increases in the cost of labor, materials, electricity, and fuel; and the cost of maintaining new infrastructure such as airport taxiways and lighting systems and highway traffic signals. The Maintenance and Operations (M&O) budget has not kept up with these increased demands and is not adequate to sustain basic preventative maintenance of our roads and airports.

- Increased costs have been offset slightly through increased productivity and other efficiencies. They are offset largely by increased reliance on capital funds. Highways and Aviation has made maximum use of federal highway funding to achieve improvements in road surfaces (chip sealing), which decreases maintenance costs for the short term. These funds are limited to specific maintenance activities such as asphalt and bridge repair and are not available for routine activities such as guardrail repair or snow and ice control. Operating costs, however, have continued to increase and still outweigh the sum of our cost reducing efforts, the infusion of capital funds, and our operating revenues.
- The Highways and Aviation (H&A) workforce is aging and nearing retirement. The front wave of baby boomers are departing the work force. There are not sufficient skilled employees within our ranks to fill these vacancies. Recruitment for these positions may also become a problem. Other states are currently unable to hire skilled personnel to fill their needs. The department previously had various grades of operators and mechanics from heavy duty to light duty and laborers. This allowed employees a natural progression as they acquired skills. In the past, lower level positions were deleted to retain higher skilled operators and mechanics. The State must be proactive in planning for departure of skilled workforce so the level of service on our transportation system is not adversely impacted.

## Significant Changes in Results to be Delivered in FY2009

Continuing increases in environmental regulatory requirements are placing additional burdens on the Highways and Aviation (H&A) budget. Environmental permits are required for basic maintenance work, storm water pollution and spill prevention plans need to be developed and implemented, and additional street sweeping is needed in Anchorage to meet Environmental Protection Agency (EPA) requirements.

## Major RDU Accomplishments in 2007

- Provided surface maintenance of either gravel or paved runways for 41 airports.
- Performed repairs on 19 bridges throughout Central Region
- Overlaid some deteriorated sections of a few roads in the Anchorage, Mat-Su, and Kenai Peninsula with asphalt pavement.
- Conducted storm damage repairs to various sites on highways and airports with emergency repair funds.
- Applied chip seal, hot mix, or high float asphalt to 530 lane miles of roads (all regions).
- Performed 1,021,522 lineal feet of surface crack seal treatment on our paved highways in Northern and Central Regions, with over 1,000,000 feet treated in Central Region.
- Cut approximately 17,888 lane miles of brush and trees along our highway, side road and bike path rights-of-way throughout the state.
- Installed, replaced or raised existing guardrail by 7,106 lineal feet as a safety enhancement for the traveling public throughout the Northern Region.
- Performed repairs on 12 bridges throughout the Northern Region and cleaned another 16 bridges at the request of Bridge Design. Work consisted of bridge deck and structural repairs including sliding expansion joints, bridge rail supports, erosion repair to bridge abutments, spalling concrete, cracks, exposed reinforcing steel on concrete bridge decks and replacement of timbers on wooden decked bridges.
- Graded, shaped and compacted 64 acres of runway and taxiway surfaces at seven airports. Applied dust palliative on airport runways at six airports, which stabilized over 25 lane miles of runway surfaces. Did critical runway repairs at the Savoonga Airport, and general major maintenance at seven other airports.
- Re-stripped 10,441 lane miles of highways. Northern Region provided assistance to Southeast Region by sending a regional paint crew to Haines and Skagway to stripe all State maintained roads in the maintenance area.
- Responded to the October 2007 flood event that impacted and severely damaged the Richardson, Edgerton and Copper River Highways as well as the McCarthy Road, Dayville Road, and Mineral Creek Road. Performed emergency repairs at 65 damaged sites including emergency repairs to reopen the Richardson, Edgerton, and Copper River Highways as well as the McCarthy Road. Performed emergency repairs to the Tonsina, Teikel, Stuart, and Lakina River Bridges.
- Established seven aggregate crushing contracts for over 285,500 cubic yards of aggregate material stockpiles in the Northern Region for current and future surface repairs by federal and state projects. Established riprap contract to

provide for 3,000 cubic yards of riprap stockpiles on the Copper River Highway for emergency use.

- Completed a \$1.5 million pavement refurbishment project at various locations through out Southeast Region.
- Hired construction management firm to help coordinate major repair work on seven airport projects during summer 2007.

Contact Information
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**Highways and Aviation  
RDU Financial Summary by Component**

*All dollars shown in thousands*

	FY2007 Actuals				FY2008 Management Plan				FY2009 Governor			
	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds	General Funds	Federal Funds	Other Funds	Total Funds
<b>Formula Expenditures</b>	None.											
<b>Non-Formula Expenditures</b>												
Central Highways and Aviation	35,163.4	341.9	5,604.5	41,109.8	37,840.7	509.7	4,022.8	42,373.2	38,328.0	496.9	4,243.6	43,068.5
Northern Highways & Aviation	50,657.3	178.4	5,672.8	56,508.5	53,323.6	468.1	6,830.0	60,621.7	53,081.0	328.1	7,079.2	60,488.3
Southeast Highways & Aviation	10,985.3	0.0	1,475.7	12,461.0	11,672.6	0.0	1,771.2	13,443.8	11,759.1	215.0	1,796.1	13,770.2
Whittier Access and Tunnel	100.0	0.0	3,414.5	3,514.5	100.0	0.0	3,760.2	3,860.2	100.0	0.0	3,767.2	3,867.2
<b>Totals</b>	<b>96,906.0</b>	<b>520.3</b>	<b>16,167.5</b>	<b>113,593.8</b>	<b>102,936.9</b>	<b>977.8</b>	<b>16,384.2</b>	<b>120,298.9</b>	<b>103,268.1</b>	<b>1,040.0</b>	<b>16,886.1</b>	<b>121,194.2</b>

**Highways and Aviation  
Summary of RDU Budget Changes by Component  
From FY2008 Management Plan to FY2009 Governor**

*All dollars shown in thousands*

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
<b>FY2008 Management Plan</b>	<b>102,936.9</b>	<b>977.8</b>	<b>16,384.2</b>	<b>120,298.9</b>
<b>Adjustments which will continue current level of service:</b>				
-Central Highways and Aviation	341.0	-12.8	60.8	389.0
-Northern Highways & Aviation	-433.3	-140.0	119.2	-454.1
-Southeast Highways & Aviation	202.4	215.0	24.9	442.3
-Whittier Access and Tunnel	0.0	0.0	7.0	7.0
<b>Proposed budget decreases:</b>				
-Central Highways and Aviation	-523.7	0.0	0.0	-523.7
-Northern Highways & Aviation	-1,102.3	0.0	0.0	-1,102.3
-Southeast Highways & Aviation	-300.9	0.0	0.0	-300.9
<b>Proposed budget increases:</b>				
-Central Highways and Aviation	670.0	0.0	160.0	830.0
-Northern Highways & Aviation	1,293.0	0.0	130.0	1,423.0
-Southeast Highways & Aviation	185.0	0.0	0.0	185.0
<b>FY2009 Governor</b>	<b>103,268.1</b>	<b>1,040.0</b>	<b>16,886.1</b>	<b>121,194.2</b>