

State of Alaska FY2002 Governor's Operating Budget

Department of Transportation/Public Facilities
Highways and Aviation
Budget Request Unit

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Contact: Boyd J. Brownfield, Deputy Commissioner

Tel: (907) 465-3900 **Fax:** (907) 586-8365 **E-mail:** Boyd_Brownfield@DOT.state.ak.us

BRU Mission

The mission is to maintain, safeguard and control the state's infrastructure system of highways, airports and harbors.

BRU Services Provided

- 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, fence and guardrail repair, bridge painting and repair, and sign maintenance.
- Road and airport lighting systems including: Maintenance of 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.
- Control access to State rights of way for driveways, access roads, signs and utilities.

BRU Goals and Strategies

- Maintain and operate State highways, airports and harbors in a manner that assures safe and efficient transportation of both people and freight.
 - Cost effectively and properly maintain public infrastructure systems to prevent premature deterioration and costly repairs.
 - Monitor and report highway and airport conditions to public in a timely manner.
 - Continue the paving of gravel roads and preservation of existing asphalt roads throughout the state.
 - Begin use of new Intelligent Transportation System technologies such as Road and Weather Information Systems to better maintain the highways.
- Develop a maintenance management system to better manage our resources and gauge our performance.

Key BRU Issues for FY2001 – 2002

- A key issue continues to be how to protect Alaska's investment in its current and expanding transportation infrastructure. The State's investments in roads, airports, and harbors are eroding each year due to insufficient maintenance. As the transportation infrastructure continues to age, M&O is faced with ever-increasing list of deferred maintenance needs. Other demands include increases in the cost of labor, materials, electricity and fuel and the addition of new fees that must be paid to other state and federal agencies; and finally the increasing burden of new laws and regulations. The H&A budget continues to fall behind these demands and is inadequate to sustain basic preventative maintenance of our infrastructure. Our list of deferred maintenance items is projected to be \$258.5 million for statewide H&A needs. Adequate and stable funding is essential to properly maintain our infrastructure and provide a suitable level of service to the public.
- Increased costs have been offset slightly through increased productivity and other efficiencies. They are offset to a larger extent by increased reliance on capital funds. General Funds for capital improvements have dwindled in recent years to insignificant levels. 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 H&A workforce is aging and nearing retirement. Within the next five years over 30% of the H&A foreman, equipment operators and mechanics will be eligible for retirement. This is the front wave of baby boomers whose departure from the work force will leave a significant gap. 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. During previous budget reductions, these lesser skilled 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.

Major BRU Accomplishments for FY2000

- Crack sealed approximately 982 lane miles of highways.
- Paved over 239.8 lane miles of gravel roads.
- Transferred 13 miles of roads to local governments.
- Repaired 43 bridges
- Rebuilt 16 Hightower light standards on the Seward Highway
- Cleaned up and repaired damage to Seward and Richardson Highways from severe avalanche events

Key Performance Measures for FY2002

Measure: Whether the department maintains the pavement condition index (PCI) at 70 for runways and 60 for taxiways and aprons at every applicable airport 99 percent of the time.

(Developed jointly with Legislature in FY2001.)

Current Status:

Out of 381 runways, aprons and taxiways inspected, 48% of the runways exceed 70 and 66% of the aprons/taxiways exceed 60. The actual PCI by airport is extremely variable depending upon where the airport is and when it was last upgraded. For example, the Skagway airport has recently been reconstructed and, as the paved areas are all new, PCI scores would be at or near 100. On the other hand, Yakutat has a PCI of 50 and will not be surveyed until a major reconstruction project is completed. That project will begin in 2001 or 2002.

Benchmark:

PCI 70 for runways; PCI 60 for taxiways and aprons.

Background and Strategies:

The PCI is a quantitative indicator of overall pavement condition that, as part of a pavement management system, helps us to determine maintenance and rehabilitation needs at airports. It also helps us to determine priorities when scheduling major pavement projects. However, a PCI score is only part of the story. The Department's goal is to maintain airports' required operational capability through effective staffing, equipment, maintenance, and management practices that ensure our airports are safe and open for business whether they have new pavement or are due for rehabilitation.

Measure: Percentage private maintenance contracts at non-certified airports compared to total number of non-certified airports.

(Revised from Legislature's FY2001 version.)

Current Status:

70% of the Department's non-certificated airports are maintained under contract. The Department has 192 non-certificated airports. Of those, the maintenance and operations of 134 of them are contracted to private firms or individuals and the remainder are maintained by the Department.

Benchmark:

No benchmark has yet been established.

Background and Strategies:

The current strategy is to adequately maintain all airports as cost effectively as possible. Most of the non-certified airports that are not maintained with private contractors are located next to highways. Consequently, the highway

crews maintain these airports. They have all the necessary equipment and local knowledge of the airport's needs. Economy is gained by maintaining the highways and airports with existing employees and equipment. Costs to maintain airports are generally considerably higher at those not serviced by a road system. Maintenance costs will continue to be kept down through competitively bid contracts where it is cost effective to do so.

Measure: Percentage pass rate of annual federal airport certification inspections for response and safety standards set out in FAA regulations.

(Developed jointly with Legislature in FY2001.)

Current Status:

100% of airports passed certification inspection. Compliance is mandatory and issues are corrected when noted.

Benchmark:

100% of airports passed certification inspection. Compliance is mandatory and issues are corrected when noted.

Background and Strategies:

The FAA, to ensure safe and standard airfield operations and compliance with its FAR 139 certification requirements, inspects the certificated airports at least annually. These inspections cover a broad range of areas including Airport Rescue and Firefighting (ARFF), safety, lighting, markings, runway incursions (interference with aircraft during takeoff and landing) and a number of other operating standards.

The Department's goal is to improve compliance with the FAA's FAR 139 program. This can be achieved by the proper identification of deficiencies by maintenance, operations, and safety personnel. Inspections note deficiencies for a broad range of inspection criteria and differ each year depending on FAA focus. Compliance with FAR Part 139 is achieved through adequate training and supervision of airport personnel, and implementation of effective management practices by the Regional Maintenance and Operations staff. The Regional Airport Safety and Compliance Officer is always available to help airport managers with compliance issues and ensures, through regular communication and visits, that any problems are resolved quickly.

Measure: The number of miles of gravel roads that are surfaced with chip seal, hot mix, or high float asphalt for the first time, reported regionally.

(Developed jointly with Legislature in FY2001.)

Current Status:

The number of centerline miles of gravel road surfaced with chip seal, hot mix or high float asphalt for the first time during FY00 is as follows:

	Total	by Hwys & Aviation	by Const & CIP
Central Region	103.0	36.0	67.0
Northern Region	49.0	4.3	44.7
Southeast Region	5.0	.0	5.0
TOTAL	157.0	40.3	116.7

Benchmark:

We are unaware of any specific benchmark at this time. Number of miles of roads that are surfaced is dependent upon amount of funds budgeted through the STIP.

Background and Strategies:

The Road Paving Program established in State Fiscal Year 99 implements the Administration's goal of reducing maintenance costs and improving the quality of life for Alaskans by hard surfacing state owned/maintained Non National Highway System (NHS) gravel roads, as well as those NHS roads also identified under the Statewide Transportation Improvement Program (STIP). The scope of this work represents limited shoulder work, drainage and other work related to preserving the road structure. This is an extremely important program and will provide great benefit to many Alaskans. The Department of Transportation and Public Facilities also benefits directly from this program through reduced maintenance costs. Roads are selected for this program based on cost, condition of the roads, and traffic levels.

Measure: The percentage of highway and airport lane miles per full-time-equivalent employee compared to the average of member states of the Western Association of State Highway and Transportation Officials.

(Developed jointly with Legislature in FY2001.)

Current Status:

Northern Region Maintenance and Operations, Highways and Aviation maintains highway and airport lane miles with 42.1 lane miles per full time equivalent position. Southeast Region averages 35.3 highway and airport lane miles per full time equivalent. And, Central Region M&O maintains highway and airport lane miles with an average of 37.0 lane-miles per FTE position.

Benchmark:

Thirteen states average 21.7 lane miles per full time equivalent position based upon the 1993 Washington State report titled Maintenance, Management, and Administration Evaluation Report. Through a recent informal review of WASHTO states, the average lane miles per FTE for those states that responded are as follows:

Arizona	27.61
California	8.80
Colorado	18.66
Hawaii	7.23
Idaho	29.00
Nevada	38.18
Oklahoma	28.90
Texas	28.50

WASHTO Average 23.28

Background and Strategies:

At the current levels of lane miles per full-time-equivalent, the Department is not able to provide an adequate level of service. There is a long list of "deferred maintenance" work - jobs that have not been completed due to lack of personnel and other resources. Staff are required to concentrate on critical needs, such as snow removal, rock slides, flooding, and erosion of roadbeds, and are able to devote less attention to preventive maintenance, such as crack sealing, ditching, and brush cutting. Work on priority maintenance items is scheduled when time and resources permit, and federal funds are used to improve the transportation infrastructure to minimize future maintenance needs. The Department plans to implement an Alaskan maintenance management system that will establish specific maintenance criteria (roadway surface, drainage, snow & ice control, traffic services, etc.) with defined service levels and associated cost to identify to the public and legislature meaningful performance measures. Use of the maintenance management system will identify specific maintenance areas (e.g., guardrail repair, brush cutting, etc.) lacking in necessary resources. To reduce the average lane miles per employee, lane miles could be eliminated from state highway and aviation systems by transferring to communities, develop new funding sources, or encourage FHWA to make eligible more maintenance items under the federal aid highway program.

Measure: The number of miles of road maintenance for which responsibility is transferred to local governments.

(Developed jointly with Legislature in FY2001.)

Current Status:

In FY00 12.86 miles of road maintenance was transferred to local governments.

Benchmark:

No benchmark has yet been established.

Background and Strategies:

The transfer of road maintenance responsibility to local governments is negotiated between Planning, M&O and the local community. In exchange for a capital project benefiting the community, the community agrees to accept responsibility for maintaining an equivalent section of road. This is a win-win situation for the State and the community, allowing the use of federal funds to construct a project that benefits the community while reducing M&O general fund costs and responsibilities. The department is working with communities to identify roads that can be

transferred to municipality control. Currently we are working with municipal governments to transfer roads in Juneau, Haines, Petersburg, Mat-Su Borough and Kenai Peninsula Borough.

Status of FY2001 Performance Measures

	<i>Achieved</i>	<i>On track</i>	<i>Too soon to tell</i>	<i>Not likely to achieve</i>	<i>Needs modification</i>
<ul style="list-style-type: none"> Whether the department maintains the pavement condition index (PCI) at 70 for runways and 60 for taxiways and aprons at every applicable airport 99 percent of the time. 			X		
<ul style="list-style-type: none"> The percentage of cost-effective private maintenance contracts at non-certified airports compared to total number of non-certified airports. 					X
<ul style="list-style-type: none"> Percentage pass rate of annual federal airport certification inspections for response and safety standards set out in FAA regulations. 		X			
<ul style="list-style-type: none"> The number of miles of gravel roads that are surfaced with chip seal, hot mix, or high float asphalt for the first time, reported regionally. 		X			
<ul style="list-style-type: none"> The percentage of highway and airport lane miles per full-time-equivalent employee compared to the average of member states of the Western Association of State Highway and Transportation Officials. 		X			
<ul style="list-style-type: none"> The number of miles of road maintenance for which responsibility is transferred to local governments. 		X			

Highways and Aviation
BRU Financial Summary by Component

All dollars in thousands

	FY2000 Actuals				FY2001 Authorized				FY2002 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
Formula Expenditures None.												
Non-Formula Expenditures												
Central Highways and Aviation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28,110.7	1,173.1	921.6	30,205.4
Northern Highways & Aviation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36,839.6	461.5	561.1	37,862.2
North Reg. Hwys & Aviation Lang.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Southeast Highways & Aviation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8,854.3	0.0	317.0	9,171.3
Totals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	73,804.6	1,634.6	1,799.7	77,238.9

Highways and Aviation

Proposed Changes in Levels of Service for FY2002

- The Whittier Tunnel & Access component, currently in its own appropriation, will be transferred in to Central Region Highways & Aviation in FY2002.
- Funding for reopening maintenance stations in Central and Northern Regions closed during FY00 is transferred from Statewide Highways and Aviation Maintenance Needs component.
- Funding for spring opening of the Taylor, Boundary Spur, McCarthy, Nome/Teller, Nome/Council, and Kougarak roads/highways is transferred from Statewide Highways Snowplowing & Winter Maintenance.
- Construction and implementation of the Road and Weather and Information System outside the Anchorage Bowl, use of Remote Controlled Equipment during avalanche cleanup in Thompson Pass, and Snow Plow guidance systems will increase level of service for snow and ice control.
- Use of Public Building Funds and Highway Working Capital Funds in the FY01 budget was a one-time use of these revenue funds. Continuing M&O needs are reflected in this FY02 budget request as converted from these special funds to general funds.

Highways and Aviation

Summary of BRU Budget Changes by Component

From FY2001 Authorized to FY2002 Governor

All dollars in thousands

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2001 Authorized	0.0	0.0	0.0	0.0
Adjustments which get you to start of year:				
-Central Highways and Aviation	0.0	0.0	19.9	19.9
-Northern Highways & Aviation	0.0	0.0	10.6	10.6
-Southeast Highways & Aviation	0.0	0.0	7.1	7.1
Adjustments which will continue current level of service:				
-Central Highways and Aviation	1,644.6	-2.8	-594.8	1,047.0
-Northern Highways & Aviation	671.3	-2.5	-571.9	96.9
-Southeast Highways & Aviation	72.8	0.0	-47.3	25.5
Proposed budget increases:				
-Central Highways and Aviation	50.0	0.0	0.0	50.0
-Northern Highways & Aviation	125.0	0.0	0.0	125.0
-Southeast Highways & Aviation	0.0	0.0	54.5	54.5
FY2002 Governor	73,804.6	1,634.6	1,799.7	77,238.9