

State of Alaska
FY2003 Governor's Operating Budget

Department of Transportation/Public Facilities
Design and Engineering Services
Budget Request Unit Budget Summary

Design and Engineering Services Budget Request Unit

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BRU Mission

The mission of Design and Engineering Services is to develop projects that improve Alaska's transportation and public facilities infrastructure. The Division also provides a wide range of technical services to the Department, other state and federal agencies, local governments and the public.

BRU Services Provided

The planning of a project requires engineering, environmental and estimating services that are provided to Planning staff by the D&ES Division. Starting with the initial funding of a project, the D&ES Division has primary responsibility for a project through the completion of a bid-ready set of plans, specifications for the legal and technical contract terms, and an engineer's estimate for the cost of construction. The D&ES staff then provides technical assistance during bidding and construction.

The Division provides a wide range of technical support functions to the Department, other state and federal agencies, local governments, and the public. Examples include design assistance, traffic speed studies, bridge inspections, materials testing, the processing of utility, right of way and traffic permits, preparation of environmental documents, a full research program and the Local Technical Assistance Program (both funded by the Federal Highway Administration). The Design and Construction Standards section develops standards that are in use throughout the state.

BRU Goals and Strategies

- To develop projects in the capital budget according to the timing and at the funding levels contained in the Department's planning documents and to ensure that the division is capable of producing at least fifty percent of the design work necessary for the program. Retaining the in-house ability to perform the core functions of project delivery enables the department to respond to needs rapidly and is necessary to effectively manage consultants performing these same functions.
- Use consultants to provide specialized technical services such as photogrammetry, design of corrosion protection, hydrology, underwater inspections and environmental site assessments.
- Continue to develop positive working relationships with resource agencies that issue permits for Department projects such as the Corps of Engineers, U.S. Fish and Wildlife, the Department of Fish and Game, the Department of Environmental Conservation, the Environmental Protection Agency, and others.
- Participate in the development of the Department's planning documents so that the resulting scope, schedule and budget are consistent with good engineering practices and practical to implement.
- Further implement management reporting systems for projects to improve the coordination of resources, priorities, cost, scope and standards.
- Provide the following technical services: design assistance; traffic speed studies; permits; bridge inspections; materials testing; the processing of utility, right-of-way and traffic permits; preparation of environmental documents.
- Assist the public and businesses with permits for right-of-way use, utilities, lane closures, special events, driveways and signs in an efficient and service-oriented manner.
- Continue the Local Technical Assistance Program funded by the Federal Highway Administration as an outreach program to local agencies engaged in the design, construction and maintenance of roads.
- Provide a program of technical training funded by the Federal Highway Administration free to Department staff, local agencies, state and federal agencies and to consultants who are performing design work for the Department.

Provide State design standards for Capital Projects.

Key BRU Issues for FY2002 – 2003

- Section 1309 of the Transportation Equity Act for the 21st Century calls for a coordinated environmental review process to expedite federal highway and transit projects. Environmental streamlining efforts are underway nationwide. Negotiations for the state's streamlining agreements must take place to reflect Alaska's unique conditions. The initiative has two major areas of emphasis: protecting and enhancing environmental quality and reducing project delays.
- The Division's right-of-way (ROW) activities are time consuming, expensive and often on the critical path for project delivery. The Department is continuing efforts to streamline the ROW procedures; moving property management information into a statewide database; developing on-line applications for permits; amending the regulations related to ROW and permitting and developing new ways of contracting for consultant assistance with the ROW program.
- The Department continues to support various methods to reduce pavement rutting. The Division is responsible for improved pavement designs and providing technical assistance to the legislature on bills related to studded tire wear.
- As the Division continues to increase reliance on private sector consultants, services previously provided by Division staff must be looked at for possible private sector contracting. The negotiation and acquisition of land under eminent domain, utility relocation agreements, deep foundation drilling are examples of services that need to be contracted with a careful and cautious approach.
- The Division continues to evaluate designs and design standards to reduce maintenance costs of the completed capital improvement. Capital projects are an effective way to reduce maintenance costs by replacing or refurbishing worn or outdated public facilities. There is an opportunity to assist the maintenance program by incorporating low maintenance design features.

Major BRU Accomplishments in 2001

- The Division delivered a comprehensive program of bid ready designs and contract documents for projects across the state. The Division's performance placed the Department in a position to receive an additional \$ 2.2 million in Federal Highway Administration funding compared to \$1.5 million in FY2000. The additional funds were available because other states were unable to obligate their full allocations of federal-aid.

Key Performance Measures for FY2003

Measure:

The percentage of federal highway funds obligated in the previous federal fiscal year.
Sec 144(b)(1) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

100% of federal highway funds were obligated. The Division's target is to obligate 100% each year. The Division's performance in FY2001 placed the Department in a position to receive an additional \$ 2.2 million in funding from the Federal Highway Administration, compared to an additional \$1.5 million in FY2000. The additional funds were available because other states were not as well prepared and were unable to obligate their full allocation of federal-aid. Staff was increased in FY2000 to help meet our obligations. We are ready for the challenges ahead in FY2003.

Benchmark Comparisons:

All states attempt to achieve 100%.

Background and Strategies:

The Division strives to obligate all federal funds that are available to the state for highway projects. The staff continue

to work diligently on that front, reporting regularly on their projects to the Division management, and through a computerized management reporting system.

Measure:

The percentage of projects in the capital budget that have been bid in the year programmed.
Sec 144(b)(2) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

On track. Ideally, we would like to achieve 100%. However a goal of 100% shouldn't drive the Department to condemn property, limit public input or shorten the review of a sensitive environmental issue.

Benchmark Comparisons:

None

Background and Strategies:

We work cooperatively with the contracting community to balance the number of projects being bid at one time so that the contractor's estimating staff is not overwhelmed. In return we receive more competitive bids that reflect a better understanding of the work. The Division strives to complete designs and bid all projects that are part of the capital budget each year. Staff regularly report on their projects to the Division management, and maintain a computerized management reporting system.

Measure:

The percentage of total project costs spent on project development.
Sec 144(b)(3) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

For FY2000, the Division reported 14% of total project costs spent on project development. For FY2001, we are at 14.39%. The increase is due to the increase in federal funds and the inherent lag of construction expenditures occurring in the years following development expenditures.

Benchmark Comparisons:

There are no comparable benchmarks. A lower percentage is always desirable. Responding to public comments, environmental concerns and permitting requirements will always drive the percentage up. Our goal is achieving the right balance. Setting a number would be an oversimplification.

Background and Strategies:

The Division is developing management reporting tools to aid in its efforts to control project development costs. We have also instituted additional program codes to more carefully track right of way and utilities expenditures. We will use the available management tools to track our costs, and improve our performance.

Measure:

The percentage difference between final project estimates and construction bids.
Sec 144(b)(4) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

On track. Ideally estimates would accurately predict bids. However, we use those same estimates for developing the STIP and the capital budget. Within the total program, project costs increase during construction. Appropriations need to reflect the anticipated total cost so that a project is funded through completion. Our estimates, therefore, reflect total cost and are higher than bids.

Benchmark Comparisons:

There are no comparable benchmarks.

Background and Strategies:

The Division has a consultant under contract using federal research funds, constructing a bid analysis and estimate program. The program is 50% complete and should be finalized this summer. We will use this tool to improve our final project estimates by using historic information to prepare our estimates.

Measure:

Whether the department is successful in requiring private contractors performing design and engineering services for the state to report on the same measures.

Sec 144(b)(5) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

Work performed under contract is already included in the results of our other measures.

Benchmark Comparisons:

None

Measure:

The percentage of the design and engineering work of the division that was performed by private contractors.

Sec 144(b)(6) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

We estimate that there is greater than 50% of the design and engineering work performed by private contractors.

Benchmark Comparisons:

The Transportation Research Board Report #277 on the outsourcing of Department of Transportation design work recommends that the optimal program is a balance of one-half in-house and one-half consultant designs.

Background and Strategies:

Retaining the in-house ability to perform the core functions of project delivery position the department to respond to needs rapidly and is necessary to effectively manage consultants performing these same functions. The Division intends to maintain current staff levels, and contract out as necessary to complete the work programmed in the capital budget and obligate all federal highway and airport funds available.

Measure:

The transfer of state-owned ports and harbors to local control.

Sec 146(b)(4) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

Chapter 61, SLA 01 authorized funding to transfer Ketchikan Bar Harbor South, Pelican Harbor, and partial funding for the transfer of Sitka facilities. As of December 2001, Pelican Harbor and Sitka have transferred, and Ketchikan is expected to transfer soon (pending assembly action). To date, 22 facilities (including SLA 01 activity) have been transferred with 31 more candidates ready and awaiting adequate funding.

Benchmark Comparisons:

None

Background and Strategies:

The Statewide Harbors Engineer works with local communities to ensure the smooth transition of port and harbor transfers to local control. He actively follows the capital budget as it makes its way through the legislature, to ensure that he is prepared to take immediate steps once the budget passes and is signed by the Governor.

Measure:

Whether the department completes the environmental impact statement phase on the Ketchikan Airport Access by December 31, 2001.

Sec 150(b)(2) Ch 90 SLA 2001(HB 250)

Alaska's Target & Progress:

Work on the draft environmental document continues. Choosing a preferred alternative has been difficult. After meeting with the Northwest Cruise Ship Association, the less expensive low level bridge now appears to have significant economic impacts on businesses. The larger tour ships would not be able to traverse Tongass Narrows and a change in routing would equate to less berthing and consumer spending time in Ketchikan. A secondary issue is where to place a high level bridge. The FAA has been non-committal about the impacts of a high bridge near the airport and residents of Pennock Island and cruise line officials do not care for the Pennock site. These issues, along with a period of non-commitment from local elected officials facing a government consolidation move, has delayed the issuance of a preferred alternative. The best estimate to deliver a preferred alternative now appears to be in the spring of 2002.

Benchmark Comparisons:

None

Background and Strategies:

This project is under contract with a private firm. The Division staff overseeing the contractor's work meet regularly with the contractor to ensure that the project remains on track.

Design and Engineering Services
BRU Financial Summary by Component

All dollars in thousands

	FY2001 Actuals				FY2002 Authorized				FY2003 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
<u>Formula Expenditures</u>												
None.												
<u>Non-Formula Expenditures</u>												
SW Design & Engineering Svcs	899.1	0.0	6,572.0	7,471.1	913.9	0.0	7,249.4	8,163.3	930.7	0.0	7,770.8	8,701.5
Central Design & Eng Svcs	362.3	0.0	11,034.0	11,396.3	412.6	0.0	10,798.7	11,211.3	419.9	0.0	12,083.2	12,503.1
Northern Design & Eng Svcs	228.9	0.0	8,787.7	9,016.6	265.8	0.0	9,473.4	9,739.2	271.1	0.0	10,088.5	10,359.6
Southeast Design & Eng Svcs	287.3	0.0	5,605.1	5,892.4	328.1	0.0	5,653.8	5,981.9	334.3	0.0	6,030.0	6,364.3
Totals	1,777.6	0.0	31,998.8	33,776.4	1,920.4	0.0	33,175.3	35,095.7	1,956.0	0.0	35,972.5	37,928.5

Design and Engineering Services

Proposed Changes in Levels of Service for FY2003

Last year the Department received increase federal funding for highways, \$80 million in two special appropriations, and a substantial increase, \$60 million, in the FAA Airport Improvement Program. The high level of federal funding, plus more special appropriations, is expected to continue. Congress may add funds for security purposes and as part of an economic stimulus package. Changes to service levels are driven by congressional appropriations and may require additional resources in order to deliver the projects funded. The division has added additional engineering positions to accomodate recent growth in federal programs.

Design and Engineering Services

Summary of BRU Budget Changes by Component

From FY2002 Authorized to FY2003 Governor

All dollars in thousands

	<u>General Funds</u>	<u>Federal Funds</u>	<u>Other Funds</u>	<u>Total Funds</u>
FY2002 Authorized	1,920.4	0.0	33,175.3	35,095.7
Adjustments which will continue current level of service:				
-SW Design & Engineering Svcs	16.8	0.0	181.6	198.4
-Central Design & Eng Svcs	7.3	0.0	270.4	277.7
-Northern Design & Eng Svcs	5.3	0.0	245.1	250.4
-Southeast Design & Eng Svcs	6.2	0.0	141.4	147.6
Proposed budget increases:				
-SW Design & Engineering Svcs	0.0	0.0	339.8	339.8
-Central Design & Eng Svcs	0.0	0.0	1,014.1	1,014.1
-Northern Design & Eng Svcs	0.0	0.0	370.0	370.0
-Southeast Design & Eng Svcs	0.0	0.0	234.8	234.8
FY2003 Governor	1,956.0	0.0	35,972.5	37,928.5