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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

POUCH Z
JUNEAU, ALASKA 99811
PHONE: (907) 465-3900

OFFICE OF THE COMMISSIONER

January 10, 1984

Re: Fiscal Note Transmittal

Distribution

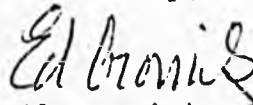
The Department of Transportation and Public Facilities hereby transmits the fiscal note and supporting documentation for the legislation identified below. This transmittal supersedes all previous distributions.

Bill No.: HB 286

Title : "...Special appropriation ... design breakwater at Dog Bay..."

Sponsor : Zharoff

Sincerely,



Ed Cronick
Legislative Liaison
Department of Transportation
& Public Facilities

DISTRIBUTION:

Legislative Finance
Legislative Sponsor
~~House~~ - House Transportation
Office of Management and Budget - Lina Emerson
Impacted Agency(ies) Attn: Legislative Liaison - N.A.
Regional Directors of Administrative Services - J. Merrill
Regional Director P&P - R. Snell

STATE OF ALASKA
FISCAL NOTE

Revision Date: 11/30/83

I. REQUEST

Bill/Resolution No.: HB 286
 Title: Spec App/DM&PF/Design Breakwater
at Doa Bay
 Sponsor: Zharoff
 Requestor: Transportation & Finance
 Date of Request: 10/1/83

II. FISCAL DETAIL

Agency Affected: DOT&PF
 Program Category Affected: Transportation
 BRU, Program or Subprogram(s) Affected:
Design and Construction

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 84	FY 85	FY 86	FY 87	FY 88	FY 89
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
TOTAL OPERATING	-0-	-0-	-0-	-0-	-0-	-0-
CAPITAL	750.0	21,750.0*	19,972.0*			
* Worst Condition Scenario						
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND	750.0	21,750.0*	19,972.0*	-0-	-0-	-0-
FEDERAL FUNDS						
OTHER (Specify Source)						
TOTAL						

POSITIONS:

FULL TIME	-0 -	-0-	-0-	-0-	-0-	-0-
PART TIME						
TEMPORARY						
TOTAL						

II. SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

Not identified by bill sponsor.

IV. ANALYSIS: Attach a separate page for any Analysis

Prepared by: William R. Snell, Director Phone: 266-1462
 Division: Central Region Planning, Programming Date: 11/30/83
 Approved by Commissioner: David W. Hauden Date: 11/30/83
 Department: Deputy Commissioner, Central Region

Distribution:

Original to Legislative Finance
 Copy to Office of Management and Budget (for Legislature introduced bills)
 Copy to Department (for Governor introduced bills)
 Copy to Sponsor
 Copy to Requestor (if different from Sponsor)

9/14/83

V. ANALYSIS:

1) Analysis of the fiscal impact on existing programs:

No fiscal impact on existing program is anticipated. The project would be operated and maintained by the community when completed.

2) Analysis of the fiscal impact on new programs or activities:

The expansion of Dog Bay Harbor will facilitate and encourage the increased development of the renewable marine resources throughout the region. Kodiak, the third largest commercial fishing port in the United States, is a world leader in king crab production and ranks among the top four national ports in halibut production. Some 2,000 commercial fishing vessels annually use the small boat basin that has protected moorage for about 200 vessels. Kodiak is also an important cargo port and transshipment center and the channel allows unrestricted access for coastal vessels. This basin and the small basin at nearby Old Harbor are the only protected basins between Cook Inlet and the Shumagin Islands, so they are important harbors of refuge.

3) Analysis of how the figures in the fiscal note were derived:

The figures are provided by the Buildings and Harbors Section, Design and Construction Division of DOT&FF based on an analysis of March 16, 1983. The Corps of Engineers' Kodiak Harbor Study was a primary source of information. The estimates reflect a \$750,000 reduction as a result of a FY'84 appropriation for design.

The cost figures are based on conceptual considerations within an accuracy range of -25% to +75%. A conceptual estimate is based on a design engineer work using existing information without the advantage of a field investigation or a detailed design study. This accounts for the wide range in the degree of accuracy. A detailed design study would be required to increase the accuracy of the project cost estimate and reduce the accuracy range.

Current status of the design project: The present appropriation of \$750,000 is being used for preliminary engineering efforts to gather and analyze bathymetric and subsurface soils data. No design work has been undertaken yet. Unused funds from the preliminary engineering effort will be directed toward the design element.

4) Additional information necessary to explain the fiscal note:

Note: \$750.0 in design funds was provided in SLA 83 Chapter 107. The original request was for \$2,500.0 in design funds. An additional \$1,750.0 is needed for adequate design and preliminary engineering work before construction can be effectively employed.

A. Assumptions

The design of the subject project is being viewed as a potential in-house design with the utilization of State materials and geology sections in coordination with outside consultants. Initial estimates propose construction of a 1,900 foot rubble mound breakwater with an entrance channel crossing from Near Island to Grass Island and finally to Gull Island, entirely enclosing Dog Bay. The breakwater would provide year-round protection to Dog Bay from wave and swell action. The following is the design cost breakdown prepared March 16, 1983 by Central Region's Design/Buildings and Harbors.

1. Aerial photography, mapping and half-tone positive enlargements	\$ 35,000.00
2. Field and office reconnaissance of breakwater and material sites	100,000.00
3. Geophysical and seismic surveying of material sites	85,000.00
4. Geotechnical exploration, lab work, core drilling	285,000.00
5. Bathymetric sounding and bottom contours	86,000.00
6. Deep water coring, samples and consolidation testing	250,000.00
7. Model testing and circulation studies, wave hindcasting	206,000.00
8. Preparation of environmental document	200,000.00
9. Design: all phases	<u>350,000.00</u>
	\$1,597,000.00

The construction scenario could be coupled with the stabilization of Pillar Mountain thus effecting a tremendous cost saving. However, it would not be economically feasible for the same contractor to set up the stabilization effort and the construction of the breakwater at the same time. The production of inner core filler material will occur at Near Island. This condition gives us the best condition scenario and would greatly reduce the cost of the project. Likewise, obtaining the rip-rap material at Near Island will also greatly reduce the cost of the project. Worst case condition scenario would be having to bring the inner core material from Pillar Mountain and the rip-rap material from Anton Larsen Bay Quarry.

The first construction cost estimate is based on the worst condition scenario because the development of material sites on Near Island are unknown with regard to availability, quantity, and quality of the rock. Established sources have known conditions and very likely will be used as alternate site if Near Island proves inadequate.

The following ranges are provided so that all concerned are aware of the great difference in obtaining the material locally on Near Island as compared to alternate sources as indicated above.

1. Near Island, Pillar Mountain and Anton Larsen Bay Material Sources
(worst condition scenario)

<u>Material</u>	<u>Quantities (cu.vds.)</u>	<u>Cost/cu.vd.</u>	<u>Total</u>
Armor rock	155,000	\$100.00	\$15,500,000.00
Inner core	415,000	\$50.00	<u>20,750,000.00</u>
		Sub-total	\$36,250,000.00
		Mobilization	1,000,000.00
		Design	1,597,000.00
		Contingency 10%	<u>3,625,000.00</u>
		Total	\$42,472,000.00

2. Near Island and Pillar Mountain Material Sources
(best condition scenario)

<u>Material</u>	<u>Quantities (cu.vds.)</u>	<u>Cost/cu.vd.</u>	<u>Total</u>
Armor rock	155,000	\$50.00	\$ 7,750,000.00
Inner core	415,000	\$20.00	<u>8,300,000.00</u>
		Sub-total	\$16,050,000.00
		Mobilization	1,000,000.00
		Design	1,597,000.00
		Contingency 10%	<u>1,605,000.00</u>
		Total	\$20,252,000.00

The design costs are in 1983 dollars and the construction cost estimates are in spring 1984 dollars. No commitment of maintenance or operating funds would be necessary.

5) Program Summary

No new positions are anticipated, nor can any other major expenditure items be identified at this time.

6) Computations

Not applicable.

STATE OF ALASKA
FISCAL NOTEI. REQUEST

Bill/Resolution No.: HB 286
 Title: Spec App/DOT&PF/Design Breakwater
at Dog Bay
 Sponsor: Zharoff
 Requestor: Transportation & Finance

II. FISCAL DETAIL

Agency Affected: DOT&PF
 Program Category Affected: _____
 BRU, Program or Subprogram(s) Affected: _____

EXPENDITURES/REVENUES: (Thousands of Dollars)

<u>OPERATING</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>FY 86</u>	<u>FY 87</u>	<u>FY 88</u>
100 PERSONAL SERVICES						
200 TRAVEL						
300 CONTRACTUAL						
400 COMMODITIES						
500 EQUIPMENT						
600 LAND & STRUCTURES						
700 GRANTS, CLAIMS, ETC.						
<u>TOTAL OPERATING</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>
<u>CAPITAL</u>	<u>-0-</u>	<u>2,500.0</u>	<u>20,000.0*</u>	<u>19,972.0*</u>	<u>-0-</u>	<u>-0-</u>
			* worst condition scenario			
<u>REVENUE</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>	<u>-0-</u>

FUNDING: (Thousands of Dollars)

<u>GENERAL FUND</u>	<u>-0-</u>	<u>2,500.0</u>	<u>20,000.0*</u>	<u>19,972.0*</u>	<u>-0-</u>	<u>-0-</u>
<u>FEDERAL FUNDS</u>						
<u>OTHER (Specify Source)</u>						

POSITIONS:

<u>FULL TIME</u>						
<u>PART TIME</u>						
<u>TEMPORARY</u>						

II. SOURCE OF FUNDS TO OFFSET FISCAL IMPACT OF BILL:

None identified.

IV. ANALYSIS: Attach a separate page for any Analysis

Prepared by: William R. Snell Phone: 266-1462
 Division: Planning & Programming Date: April 18, 1983

Approved by Commissioner: David W. Haugen Date: April 22, 1983
 Department: Deputy Commissioner, Central Region, DOT&PF

Distribution:

Original to Legislative Finance
 Copy to Office of Management and Budget (for Legislature introduced bills)
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3/8/83

IV. ANALYSIS (HB 286)A. Assumptions

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The design costs are in 1983 dollars and the construction cost estimates are in spring 1984 dollars. No commitment of maintenance or operating funds would be necessary.

B. PROGRAM SUMMARY

No new positions are anticipated, nor can any other major expenditure items be identified at this time.

C. COMPUTATIONS

Not applicable.

D. Economic Impact

Kodiak Island is located in one of the State's best natural fishing grounds. Currently, 15 shore-based commercial processing plants process crab, salmon, shrimp and halibut. Further Development of the bottomfish industry is being explored and the commercial fishing fleet continues to grow.

E. Impact on Local Governments

No information at this time.

F. Attachments

None.