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287

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

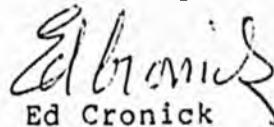
The Department of Transportation and Public Facilities hereby transmits the fiscal note and supporting documentation for the legislation identified below. This transmittal supersedes all previous distributions.

Bill No.: HB 287

Title : "...Special appropriation ... stabilization of Piller Mountain..."

Sponsor : Zharoff

Sincerely,



Ed Cronick
Legislative Liaison
Department of Transportation
& Public Facilities

DISTRIBUTION:

Legislative Finance
Legislative Sponsor
Requestor - House Transportation
Office of Management and Budget - Lisa 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 287
 Title: Spec.App/DOT&PF/Stablization of
Pillar Mountain
 Sponsor: Zharoff
 Requestor: Transprtation & 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	-0-	3,410.0	10,706.0	10,706.0	10,706.0	-0-
* Port of Kodiak Development Plan						
REVENUE	-0-	-0-	-0-	-0-	-0-	-0-

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	3,410.0	10,706.0	10,706.0	10,706.0	-0-
FEDERAL FUNDS						
OTHER (Specify Source)						
TOTAL						

POSITIONS:

FULL TIME						
PART TIME						
TEMPORARY						
TOTAL						

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

Not identified.

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. Haugen 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
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9/14/83

ANALYSIS

1) Analysis of the fiscal impact on existing programs:

No fiscal impact on existing programs is anticipated.

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

The size of the financial cost of this project would postpone the development of several smaller, higher priority projects in the State identified through the capital budget development process.

The City of Kodiak has completed Port Development Plan. The Plan identifies Pilliar Mountain stablization as a priority project because of its potential impact on other related port development activities (i.e., permanent break-water and upland staging areas).

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

The figures in the fiscal note are based on the Port of Kodiak Development Plan, 1982. The design costs are in 1984 dollars and the construction cost estimates are in 1985 dollars.

The degree of accuracy in the funding figures is based on conceptual considerations within a range of -25% to +75% accuracy. A conceptual estimate is based on a design engineer's 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.

4) Additional information necessary to explain the fiscal note:

A. Assumptions

The Stabilization of Pillar Mountain includes three phases: 1) The preparatory accumulation of data identified by the Pillar Mountain Geotechnical Study Committee for the identification of remedial measures for stabilization; 2) Preliminary engineering and design for the stabilization project; and 3) The stabilization project. Preliminary engineer's estimates contained in the Port of Kodiak Development Plan estimates a project cost of approximately \$29,600,000. Specifically, this project would produce an estimated 5,400,000 cubic yards of material through excavation and create 35 acres of critical port upland between piers 2 and 3. Estimating engineering design to require ten percent of the project budget, approximately \$2.9 million would be required for the data collection and design. No maintenance or operating funds would be involved once the stabilization was complete.

B. Program Summary

No new positions are anticipated, nor can any other major expenditure items be identified at this time. No commitment or operating funds would be necessary.

C. Computations

See Assumptions.

D. Economic Impact

Rock excavated from the slope during the stabilization can be used to improve the commercial rockinq areas along Kodiak waterfront, to create additional developable uplands, and to provide a stockpile of fill for future use.

E. Impact on Local Government

No information at this time.

F. Attachments

1. Excerpts from Port of Kodiak Development Plan.
2. Pillar Mountain Stabilization Status Report.

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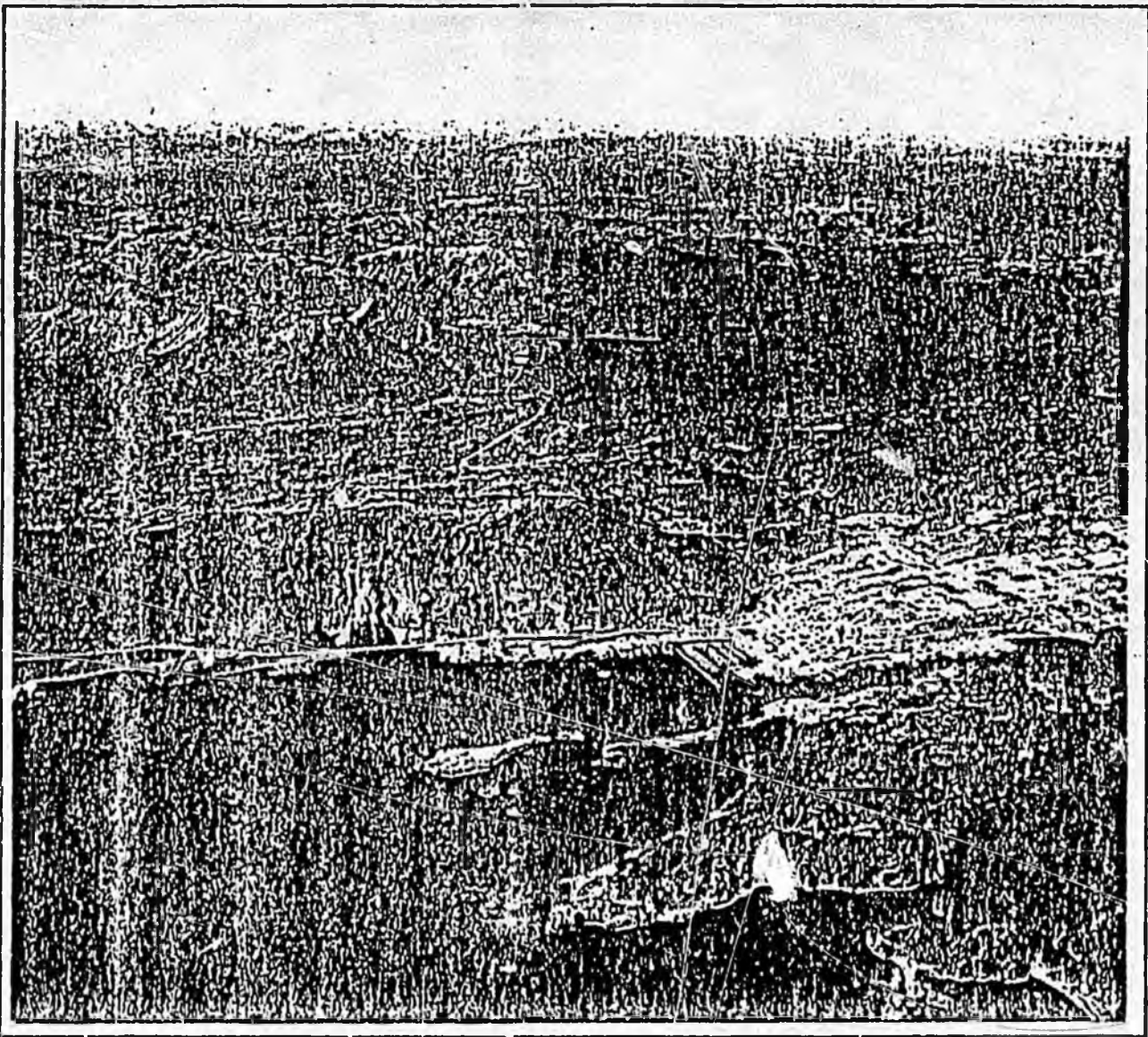
11B 287

Peratrovich & Nottingham, Inc.

Kramer, Chin & Mayo, Inc.

Williams-Kuebelbeck & Associates, Inc.

Roy A. Ecklund



Port of Kodiak Development Plan

Pillar Mountain

Located southeast of the City of Kodiak, Pillar Mountain presents substantial limitations and hazards to present and future development. Proximity of the mountain's steep slopes to the waterfront has restricted utilization of important coastal lands and has reduced available staging area for the existing marine facilities. Additionally, the presently active slide area adjacent to City Piers 2 and 3 poses a significant threat to the area. A slope failure and slide involving approximately 4,000,000 cubic yards of rock could produce an extremely damaging splash wave. The resulting damage to persons and property is inestimable.

Fortunately, this potentially hazardous condition can be removed and transformed into the basis for a series of projects which would benefit the entire community. Stabilizing Pillar Mountain is feasible, and the rock excavated from the slope during that work can be used to improve the commercial docking areas along Kodiak's waterfront, to create additional developable uplands, and to provide a stockpile of fill for future use. This project is the recommended first priority of this planning study.

Specifically, the stabilization project would produce an estimated 5,400,000 cubic

yards of material through excavation. As part of the stabilization project, 35 acres of critical port upland area can be created by filling between Piers 2 and 3 and along the coast to the entrance of Gibson Cove. This approach allows for disposal of part of the excavated material at no additional cost and provides land adjacent to the port area for container van storage and future construction of an additional cargo dock. Additional projects which may also use Pillar Mountain as a source of inexpensive fill material are the Gull Island breakwater, the Dog Bay waterfront area on Near Island, and Gibson Cove improvements. Each of these projects is discussed later in this chapter.

The stabilization of Pillar Mountain must begin with a staged plan that combines sound engineering and design principles with appropriate construction methods. This work could be accomplished in three years, beginning in 1985 with completion in 1987. Funding for this project should come from the State of Alaska through a Special Emergency Funding Request, a type of funding which can be designated by the state governor in situations where human life is threatened. The Pillar Mountain situation should qualify for special emergency funding due to the present situation which threatens life and property

and the fact that slide activity is thought to have been renewed due to construction of the Abbert Highway, a state road.

Much of the potential development recommended in this study would be accomplished most easily and inexpensively by using fill material from Pillar Mountain. Table 27 compares the costs of land and harbor improvements with and without fill from Pillar Mountain to demonstrate the substantial benefits that could be gained from the stabilization project in addition to the advantage of removing a hazard that threatens property and lives. How much the fill will cost depends upon whether Pillar Mountain fill material is available and the distance which fill must be transported for each specific project. Applying the different incremental costs affects the yield and cost/benefit analyses of each project. These analyses are discussed along with the individual project descriptions.

Although Pillar Mountain offers Kodiak a relatively inexpensive source of fill, it is not so inexpensive as to make those projects requiring fill viable on a cost/benefit basis if the cost of the stabilization project is included. When the cost of stabilizing Pillar Mountain is borne by the state as recommended, the economic

viability of some projects is greatly increased. Pillar Mountain stabilization cannot be justified on a strictly economic basis; however, eliminating the present hazard to life and property would be an important public benefit. Using projections about the effects of a Pillar Mountain failure as a measure, the potential damages from that hazard greatly exceed the cost of stabilization.

Table 27 Pillar Mountain Stabilization and Related Projects Comparative Costs

Project	Fill Produced (cubic yards)	Cost	
Pillar Mountain stabilization	5,400,000	\$29,600,000	
Project	Fill Required (cubic yards)	Cost	
		With Pillar Mountain Fill	Without Pillar Mountain Fill
Kodiak development Port fill area (state funding)	4,300,000	\$ -0- (included in cost of stabilization project)	\$60,200,000
Gull Island breakwater (federal funding)	118,000	12,000,000	20,800,000
Gibson Cove fill area* (private funding)	360,000	1,420,000	1,824,000
Near Island development Dog Bay waterfront area (state funding)	<u>770,000</u>	<u>3,080,000</u>	<u>10,700,000</u>
Total Cost of stabilization	5,548,000**	<u>\$16,500,000</u> <u>+29,600,000</u>	<u>\$93,524,000</u>
		<u>\$46,100,000</u>	

*Construction of the Gibson Cove fill area and breakwater need not occur at the time of stabilization.
 **The 148,000 cubic yards needed in addition to the fill produced by the stabilization project can be obtained from a stockpile area created on Pillar Mountain.

#B28T

Department of Transportation and Public Facilities

Central Region Planning & Programming

PILLAR MOUNTAIN STABILIZATION

Status Report

February, 1983

Purpose: The Pillar Mountain Stabilization/Status Report was prepared in response to a request from State Senator Mulcahy.

Background: Pillar Mountain is a 1,300 foot mountain at the southern edge of the city limits of Kodiak, directly above the highway between the city and the airport. The unstable slope of the mountain presents a serious hazard to St. Paul Harbor. The presently active slide area, approximately 1,200 feet high by 1,700 feet long, threatens the Abbert Highway and two city docks with rockfall. A major rock slide in April 1971 followed excavation activities at the toe of the slope and resulted in highway closure for approximately six weeks. Since that time, numerous studies have been conducted by the various governmental units to determine the landslide danger. This report summarizes the available information sources and identifies the various alternatives which have been discussed regarding the mountain. Much of the information is taken from material prepared for the Pillar Mountain Geotechnical Study Committee. The committee was organized by the Borough and City in 1978 to review the problem and recommend an action program.

Issues: Certain issues have been identified relating to the Pillar Mountain stabilization problem. The recently drafted Port of Kodiak Development Plan identifies Pillar Mountain as a serious hazard to St. Paul Harbor, threatening the Abbert Highway and two city docks with rockfall. Specific issues include:

1. Due to the proximity of Pillar Mountain and its steep slopes, coastal development occurring within St. Paul Harbor has been limited to a narrow band of waterfront land.
2. Ground movement has been identified as one cause of cargo dock slippage at City Pier 3. Continued slippage could cause permanent damage to the city docks.
3. Rockfall continues on the Abbert Highway.
4. Massive slope failure could result in a tsunami-like 600-foot splash wave at the base. It is projected the wave would move across the harbor at 100 mi/hour. The height of the landslide-induced wave could reach 87 feet at Near Island and 35 feet approaching the City of Kodiak with run-up approximately equal to the 1964 tsunami.
5. The possibility exists that movement could increase as a result of an earthquake, water saturation of the landslide mass, or other cause.

6. Kodiak's seismic potential is very great given that it sits atop the tectonic plate system where the Continental Plate and the Pacific Plate meet.

Information Sources: Local units of government have invested in numerous studies to determine the landslide danger. A brief chronological history of the list of reports and activities which have occurred follows:

1. Report of Foundation Investigation of Proposed Container Shipping Facility, Kodiak, Dames & Moore, report for the City of Kodiak, December 1971. This report summarizes the results of sub-bottom exploration by seismic surveys and borings which provided information for the siting and design of the container wharf.
2. Consultation & Geotechnical Investigation of Pillar Mountain Slide, Dames & Moore, for Alaska Department of Highways, April 1973.
3. Kodiak Harbor, Alaska, Feasibility Report, Small Boat Harbor Improvement, Corps of Engineers, USAE District, Alaska, May 1975.
4. RM Consultants reoccupy survey points, Spring 1976.
5. Report of Stability Investigation Container Wharf Bulkhead, Converse-Ward-Davis-Dixon Associates, Inc., April 1976. This report contains an epicenter location map, graph of expected recurrence rate versus magnitude, graph of expected number of occurrences versus peak ground acceleration, and a list of instrumentally recorded earthquakes in the area.
5. Aerial photographs dated 30 April 1977, scale 1:100, sheet numbers 30, 36, and 37.
7. Drawing titled: "City of Kodiak Container Shipping Facility," November 1977 (revised November 1978). Identifies new cargo dock slippage to sea at rate of one-inch per year.
8. Map of Mountain, Corps of Engineers, USAE District, Alaska, March 1978.
9. Pillar Mountain Landslide, Kodiak, Alaska, U.S. Geological Survey, "Open File Report" No. 78-217, April 1978. Report evaluated the physical appearance of the mountain, the geology of the slide area and data from a slope indicator. The concern which generated the classification study was that fast moving landslides on oversteepened slopes (about 45°) such as Pillar Mountain have been devastating elsewhere. The report expressed the concern that major ground failure is a distinct possibility. The report recommended a thorough monitoring investigation be initiated over a two to three year period to gauge slippage. USGS estimated the study would cost \$900,000. No action was taken.
10. Letter to Reuben Kachadoorian, U.S. Geological Survey, Menlo Park, California, from W.E. Strohm, Jr., USAE Waterways Experiment Station, April 1978.

11. Press release from U.S. Geological Survey, "Landslide Could Endanger Kodiak, Alaska," by Don Kelley, May 1978.
12. Letter to Department of Public Works, Engineering Division, Kodiak, Alaska from Edwin Wald, California, July 1978.
13. Report of Geotechnical Studies Container Wharf Bulkhead, by Converse-Ward-Davis-Dixon, Inc., August 1978. The information in this report consisted of logs of the borings per placement of inclinometer casings in the rockfill and subjacent materials of the container wharf, the records of slope indicator readings, and the surface surveys of movements of the collars of the inclinometer casings.
14. Proposed Geotechnical Investigation Pillar Mountain Slide, Dames & Moore, to the City of Kodiak, October 1978.
15. Memo titled, "Pillar Mountain Instability Problem, Kodiak," Lee McAnerney, Commissioner, Department of Community and Regional Affairs to Jessie Dodson, Special Assistant, Office of the Governor, September 1978. Recommends desirability of inter-departmental discussion of the Pillar Mountain instability problem with participation by the Office of the Governor.
16. Memo titled, "Pillar Mountain Instability Problem, Kodiak," Dennis Dooley, Director, Transportation Planning, DOT/PF, to Lee McAnerney, Commissioner, Department of Community and Regional Affairs, October 1978. Supports legislative action to fund a \$60,000 study to determine Pillar Mountain stability.
17. Drawing titled, "Pillar Mountain Slide Area Contour Map, Kodiak, Alaska," by Ron A. Ecklund, November 1978 (revised December 1978). Horizontal location of 35 sectional points.
18. "A Resolution of the Kodiak Island Borough Assembly Creating a Geotechnical Study Committee for the Purpose of Furthering Geotechnical Investigations and Recommendations of the Pillar Mountain Slide Area Problem," Resolution No. 78-76-R, December 1978.
19. Preliminary Report of Pillar Mountain Geotechnical Committee, Pillar Mountain Geotechnical Study Committee, June 1979.
20. Appropriation of \$479,000 from State of Alaska through the State Division of Geological and Geotechnical Surveys, monitored by Pillar Mountain Geotechnical Study Committee, June 1979.
21. Evaluation of Ground Survey Program and Surface Movement on Pillar Mountain Slide for City of Kodiak, Kam W. Wong, August 1979.
22. "Offshore Survey," U.S. Geological Survey requested by Geotechnical Study Committee, October 1980. Seafloor deformation was found and interpreted as being related to Pillar Mountain movement.
23. Interim Report on Slope Stability and Possible Remedial Measures, RM Consultants, September 1981.

24. Pillar Mountain Stabilization Bill, introduced by State Representative Zharoff in the amount of \$1,000,000, January 1982. Bill died in Finance Committee, February 1982.

Alternatives: The Geotechnical Study Committee, in 1979, considered four possible courses of action regarding the mountain's stabilization. Those alternatives included:

1. Minimal Additional Action

In this approach a minimal slide movement monitoring program would be established, but no additional studies would be undertaken. This type of monitoring program may provide advance warning of additional significant slide movements. However, its ability to predict advance warning of significant slide movements would be limited by the frequency of the observation and by its inability to provide rapid measurements following a rapid slide triggering action such as could conceivably occur as a result of an earthquake. The degree of the hazard presented by a slide would not be significantly altered by the monitoring. This limited monitoring program would not improve the behavior of the slide mass. The actual current hazard level would continue. However, with monitoring, the risk to the people in the community would be somewhat less as warning might be provided for some types of slides. Should remedial action be deemed desirable, then only minimal additional insight into the slide behavior or possible remedial action will have been obtained under this course of action.

2. Remedial Measures Without Additional Studies

In this course of action, remedial measures such as excavation, drainage, or placing buttressing fill could be undertaken without benefit of the results of additional studies. The chief advantages of taking this course of action are that if the work is correctly done, then: 1) it would save the cost of an investigation and, 2) it would eliminate the hazard in the shortest time. However, it is quite possible that a "remedial" excavation in the wrong place could trigger the very slide that it was supposed to prevent. Furthermore, without additional information one cannot judge whether or not enough remedial measures would be either insufficient, overdone, or would increase the hazard.

3. Systematic and Comprehensive Data Collection and Evaluation

A third course of action would be to institute a data collection program and systematically increase information from previous studies to a more comprehensive level. The objective would be to obtain a better understanding of the dynamics of the slide area as well as the reactive behavior of the bay. It is conceivable, although unlikely, that such studies could indicate that the possible development of a rapid deep-seated slide is too remote to be considered a hazard.

The danger of this approach is that the study can become an academic exercise which eventually would lead to a more complete understanding of the slide, but in the meantime, would provide little relief to the community in terms of alleviating the socioeconomic realities now confronting development. Such studies can also lead to the conclusion that further studies would be required to fully understand the slide.

Many of these studies are desirable, but the Geotechnical Committee cautioned that although the outcome of the studies may lead to better understanding, they have the potential of indefinitely maintaining a socioeconomic status quo. Therefore, remedial action is concurrently recommended.

4. Combined Data Collection and a Remedial Program

In this approach it is acknowledged that a potential hazard exists and that the consequences of the possible hazard are such that it may well be necessary to consider remedial measures to minimize or eliminate the hazard. Possible remedial measures include: 1) unloading the top of the slide area; 2) buttressing the base of the slide area; and, 3) improving the surface and sub-surface drainage and thereby reducing the water pressures within the slide mass. It seems possible that the most cost-effective remedial measure would be a combination of unloading the top and buttressing the base in the present slide area and improving drainage within the slide and within adjacent slopes of Pillar Mountain where this measure was found to be desirable.

Preliminary cost estimates and plans are required to determine if these or other remedial measures are viable. Some field data should be obtained to ensure that the plans are reasonable and that the initial cost estimates will not be greatly exceeded during the course of the remedial work. The information required would likely consist of knowledge of the depth of the slide, the shape of the base of the slide, and the hydrologic and structural geologic relationship of the slide mass and the adjacent areas. The data collection investigation in this approach would be limited to those aspects of the slide needed to plan and monitor the remedial measures.

As new data on the slide are obtained, the nature of the hazard and the necessity for remedial measures should continue to be reviewed.

Conclusions: The Pillar Mountain Geotechnical Committee concluded that there was sufficient information available to state that the mountain continues to fail. The data base, however, was insufficient to allow prediction of the magnitude or frequency of failure. Interpretations of the data as it now exists continues to generate a variety of possible consequences and, hence, uncertainty.

The Geotechnical Study Committee concurred that a combined data collection and remedial program was the best course of action and recommended that such a program be implemented as soon as funding could be made available.

The Committee concluded that a major question concerning the shape, and depth of failure must be answered prior to attempts to take remedial steps. The Committee recommended, therefore, that the following studies be initiated to fill data gaps prior to the initiation of remedial action.

1. Preparation of an accurate, large-scale topographic map based on new aerial photography.
2. Preparation of an accurate, large-scale geologic map.
3. Review of existing offshore data not now available to the Committee.
4. a. Continuation and expansion of the Division of Geological and Geophysical Surveys' monitoring system.
b. Obtain subsurface data and installation of drill hole monitoring devices.
5. Laboratory tests of rocks and other materials.
6. Collection and analysis of existing, and possibly additional seismic data.
7. Collection and analysis of hydrologic data.

The recently completed Port of Kodiak Development Plan has identified the stabilization of Pillar Mountain as a priority project because of the present limitation it poses to port development. Proximity of the mountain's steep slopes to the waterfront has restricted utilization of important coastal lands and has reduced available staging areas for the existing marine facilities. Additionally, the presently active slide area adjacent to City Piers 2 and 3 poses a significant threat to the piers.

The proposed stabilization project would produce an estimated 5,400,000 cubic yards of material through excavation. As part of the stabilization project, 35 acres of critical port upland area might be created by filling between Piers 2 and 3 and along the coast to the entrance of Gibson Cove. This approach allows for disposal of part of the excavated material at no additional cost and provides land adjacent to the port area for container van storage and future construction of an additional cargo dock. Additional projects which may also use Pillar Mountain as a source of inexpensive fill material are the Gull Island breakwater, the Dog Bay waterfront area on Near Island, and Gibson Cove improvements.

The advantages of the Pillar Mountain stabilization project include:

1. A hazard which prevents construction of improvements in the immediate port area and threatens human life and property would be removed.
2. Space for over 2,000 linear feet of additional deepwater dock frontage would be created between Piers 2 and 3.
3. Approximately 35 acres of critical port upland area for marine commercial and industrial expansion would be created.

4. Breakwaters to reduce the roll and surge of waves on port facilities could be built.
5. Land to properly access and service the Dog Bay small boat harbor could be created.
6. A reserve stockpile of excess fill material for future use could be made available.

Recommendations: The staff recommendation is to proceed with efforts to stabilize Pillar Mountain. The exact focus of the first phase of this project will be determined by available resources, but should include: 1) the preparatory accumulation of data identified by the Pillar Mountain Geotechnical Study Committee as necessary for the identification of the remedial measures for stabilization, 2) a funding assessment, and 3) securing of funds for the data collection and engineering design phase.

Preliminary engineering projections estimate the Pillar mountain stabilization project will cost approximately \$29,600,000. In March, 1981 a state appropriation allocated \$1,276,000 for repairs to the Kodiak Highway. The appropriation was authorized to fund emergency repairs for the highway in the area of Pillar Mountain. The project was to use part of the funds to provide an emergency solution to the most critical problem areas (\$276,000) and set aside part of the funds until a long range solution could be identified (\$1,000,000.) The \$1,000,000 set aside for the long-range highway repair project could conceivably be used for the stabilization project. Estimating engineering design to require ten percent of a total budget, approximately \$2.9 million would be required for the data collection and design. Consequently, an additional \$1.9 million must be secured before initiating the project.

The City of Kodiak is one of ^{the Nation's} Alaska's most productive fishing ports and ^{one of Alaska's most important} trans-shipment ports for cargo. Recognizing the significance of the port, it is reasonable that the State of Alaska contribute to the development of the stabilization project. Funds in the amount of \$1.9 million should be sought by the City to supplement the currently available \$1 million.

Page 1 of 2

STATE OF ALASKA
FISCAL NOTE

I. REQUEST

Bill/Resolution No.: HB 287
 Title: Spec App/DO&PF/Stabilization of Pillar Mountain
 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)

OPERATING	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
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	-0-	3,100.0	9,733.0*	9,733.0*	9,733.0*	-0-
* Port of Kodiak Development Plan						
REVENUE	-0-	-0-	-0-	-0-	-0-	-0-

FUNDING: (Thousands of Dollars)

GENERAL FUND	-0-	3,100.0	9,733.0	9,733.0	9,733.0	-0-
FEDERAL FUNDS						
OTHER (Specify Source)						

POSITIONS:

FULL TIME						
PART TIME						
TEMPORARY						

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

Not 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)
- Copy to Department (for Governor introduced bills)
- Copy to Sponsor
- Copy to Requestor (if different from Sponsor)

3/8/83

IV. ANALYSISA. Assumptions

The Stabilization of Pillar Mountain includes three phases: 1) The preparatory accumulation of data identified by the Pillar Mountain Geotechnical Study Committee for the identification of remedial measures for stabilization; 2) Preliminary engineering and design for the stabilization project; and 3) the stabilization project. Preliminary engineer's estimates contained in the Port of Kodiak Development Plan estimates a project cost of approximately \$29,600,000. Specifically, this project would produce an estimated 5,400,000 cubic yards of material through excavation and create 35 acres of critical port upland between piers 2 and 3. Estimating engineering design to require ten percent of the project budget, approximately \$2.9 million would be required for the data collection and design. No maintenance or operating funds would be involved once the stabilization was complete.

B. Program Summary

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C. Computations

See Assumptions.

D. Economic Impact

Rock excavated from the slope during the stabilization can be used to improve the commercial rocking areas along Kodiak waterfront, to create additional developable uplands, and to provide a stockpile of fill for future use.

E. Impact on Local Government

No information at this time.

F. Attachments

1. Excerpts from Port of Kodiak Development Plan.
2. Pillar Mountain Stabilization Status Report.