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May 7, 1991

MEMORANDUM

TO: The Honorable Edward Y. Hirata, Director
Department of Transportation

SUBJECT: Final Environmental Impact Statement for the
Kalaupapa Airport, Roadways and Wharf Improvements

I am pleased to accept the Final Environmental Impact Statement for the Kalaupapa Airport, Roadways and Wharf Improvements as satisfactory fulfillment of the requirements of Chapter 343, Hawaii Revised Statutes.

This environmental impact statement will be a useful tool in the process of deciding if the action described therein should be allowed to proceed. My acceptance of the statement is an affirmation of the adequacy of that statement under the applicable laws and does not constitute an endorsement of the proposed action.

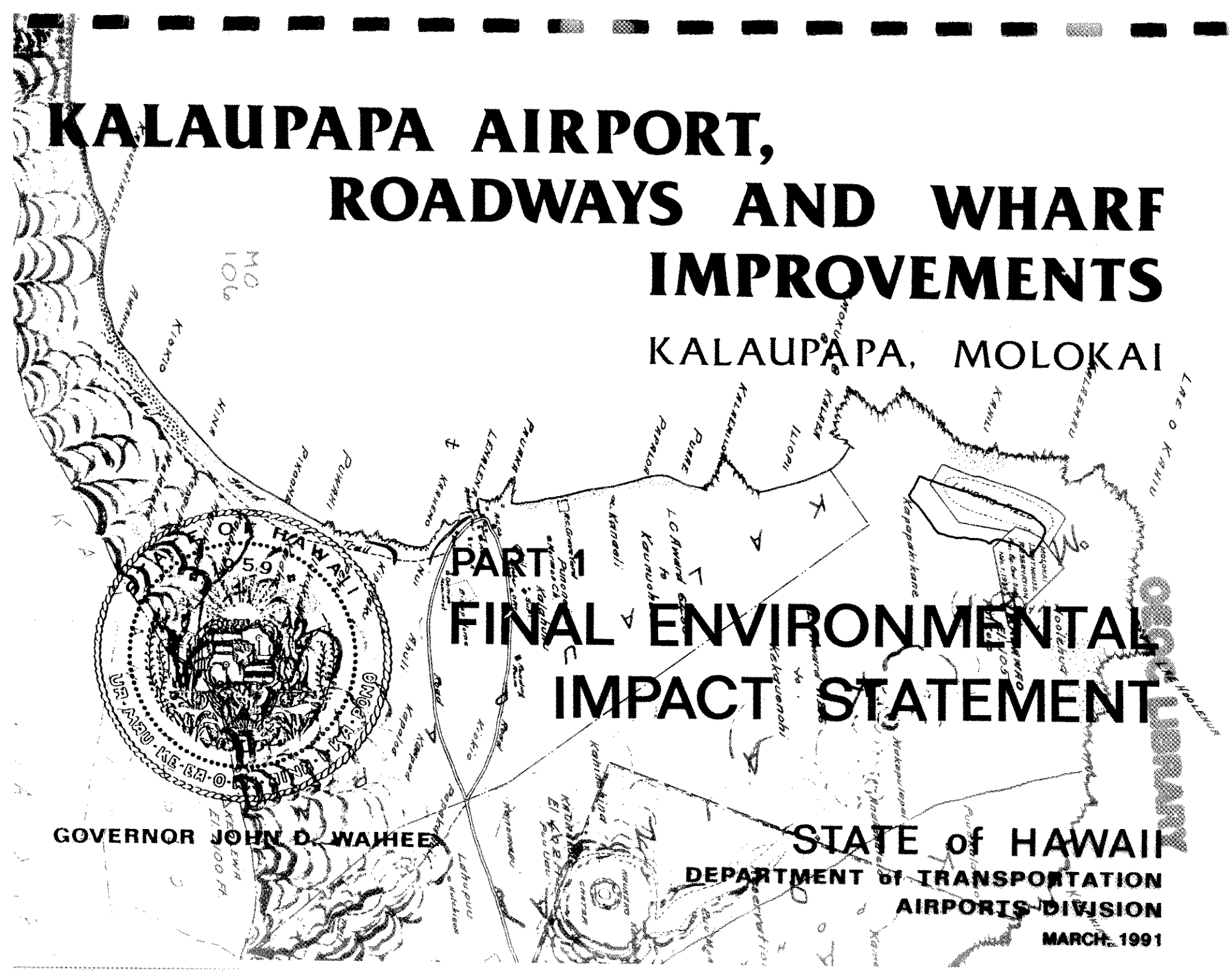
When the decision is made regarding the proposed action itself, I expect the proposing agency to consider if the societal benefits justify the environmental impacts which will likely occur. These impacts are adequately described in the statement and, together with the comments made by reviewers, provide a useful analysis of the proposed action.

JOHN WAIHEE

bcc: Hon. John Lewin

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS

KALAUPAPA, MOLOKAI



PART 1
FINAL ENVIRONMENTAL IMPACT STATEMENT

GOVERNOR JOHN D. WAIHEE

STATE of HAWAII
DEPARTMENT of TRANSPORTATION
AIRPORTS DIVISION
MARCH, 1991

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

FINAL

ENVIRONMENTAL IMPACT STATEMENT

PART 1 OF 2

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS KALAUPAPA, MOLOKAI, HAWAII

Submitted by:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION

This Statement is submitted for review pursuant to the following public law requirements: National Environmental Policy Act of 1969; Section 4(f) of the Department of Transportation Act of 1966; Section 505 of the Airport and Airway Improvement Act as amended by the Airport and Airways Safety Expansion Act of 1987; Sections 106 and 110 of the National Historic Preservation Act of 1966.

FINAL
ENVIRONMENTAL IMPACT STATEMENT

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS
KALAUPAPA, MOLOKAI, HAWAII

State Project No. AM5011-02
March, 1991

Prepared for:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
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Director, Department of Transportation
State of Hawaii

4/4/91
Date

THIS ENVIRONMENTAL IMPACT STATEMENT BECOMES A FEDERAL DOCUMENT WHEN EVALUATED AND SIGNED BY THE RESPONSIBLE FAA OFFICIAL.

Responsible FAA Official

Date

The preparation of this document was financed in part through a Planning Grant from the Federal Aviation Administration under Section 505 of the Airport and Airway Improvement Act as amended by the Airport and Airways Safety Expansion Act of 1987.

LEAD AGENCIES: State of Hawaii, Department of Transportation
Airports Division
859 Punchbowl Street
Honolulu, Hawaii 96813

Department of Transportation
Federal Aviation Administration
Honolulu Airports District Office

COOPERATING AGENCIES: State of Hawaii, Department of Health

US Department of the Interior,
National Parks Service

TITLE OF PROPOSED ACTION: Final Environmental Impact Statement
Kalaupapa Airport, Roadways and Wharf Improvements
Kalaupapa, Molokai, Hawaii

AFFECTED JURISDICTION: Kalaupapa, Kalawao County,
Island of Molokai, Hawaii

ABSTRACT: The purpose of the proposed actions are to provide the Kalaupapa peninsula with an airport that has greater margins of safety for the small aircraft that serve the airport; to improve the airport facilities (runway, taxiway, apron and terminal building) to reduce operations and maintenance costs; to provide the patients and residents of Kalaupapa with roadways that are easily traversable by wheel chairs and those whose ambulatory handicaps present difficulty of movement on uneven surfaces; and to provide the settlement with a repaired harbor facility that is capable of servicing the needs of the patients and residents.

Alternatives to the proposed airport actions have included several different layouts and configurations (lengths and orientation); the proposed project; the No-Action alternative; and alternative surface transportation modes.

The most significant potential impacts will be to the archaeological resources of the project areas; socioeconomic factors; and air and surface transportation facilities. Measures to avoid, reduce or mitigate potential adverse impacts are provided.

REVIEW COMMENT DEADLINE: 30 calendar days after the Notice of Availability (NOA) is published in the Federal Register. Please direct questions or written comments to:

Mr. Owen Miyamoto
Airports Administrator
State of Hawaii Department of Transportation,
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Telephone: (808) 836-6432

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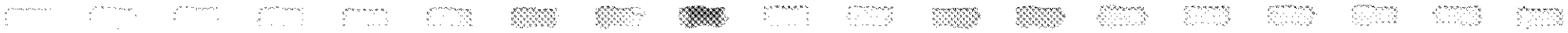


CHAPTER I

INTRODUCTION AND SUMMARY

CHAPTER I
INTRODUCTION AND SUMMARY

1. INTRODUCTION

This Environmental Impact Statement (EIS) has been prepared to assess the potential environmental impacts that might result from improving and rehabilitating Kalaupapa Airport, the airport road, secondary roadways, and the wharf at Kalaupapa on the island of Molokai, Hawaii. A Master Plan detailing the proposed airport improvements has been prepared by the State Department of Transportation, Airports Division (DOT-A). That Master Plan forms the basis of the airport project described herein. The lands on which the present airport and the majority of the proposed project are located are owned by the State of Hawaii, Department of Transportation and are under the management of the Airports Division. The airport property is identified as Tax Map Key (TMK) 2-6-1:01, Lot 5.

In addition to the proposed airport improvements, this EIS has also been prepared to address the potential impacts that might result from the repaving of the airport road from Kalaupapa Settlement to the airport, the roadways in the settlement and the rehabilitation of the wharf structure in Kalaupapa Harbor. Both of these projects are subsidiary projects to the airport project. The roadway and wharf projects are on lands under the control of the State Department of Health.

The airport, roadways, wharf and all of Kalaupapa peninsula, on the island of Molokai, are located within the Kalaupapa National Historical Park and Historical Landmark which is under the jurisdiction of the U.S. Department of Interior, National Park Service (NPS). Consequently, the project is subject to the National Environmental Policy Act (NEPA) as described below. The DOT and the Federal Aviation Administration (FAA) are co-lead agencies for this EIS, with the FAA being the Federal lead agency. According to FAA Advisory Circular (AC) 5050.4A, the lead agency's primary responsibility is to analyze "*the environmental impacts and consequences of a proposed Federal action involving airports, for the environmental assessment and related documents, and ultimately for approving or disapproving the environmental documents and the Federal action. It is, therefore, incumbent upon the FAA to assure that all documentation presents a full, accurate, and fair assessment of the environmental consequences of the proposed action.*" Other aspects of the

FAA's role include taking the lead in the scoping process, and setting the timing and coordination of the EIS.

2. PURPOSE OF THIS EIS/ENVIRONMENTAL PROCEDURES

The master planning and this EIS for the proposed airport project have been funded in part through a Planning Grant from the Federal Aviation Administration under Section 505 of the Airport and Airway Improvement Act as amended by the Airport and Airways Safety Expansion Act of 1987. Similarly, construction of the proposed airport improvements may include the use of federal funds as administered by the Federal Aviation Administration, and possibly include construction within the Conservation District (beach area). As such, this EIS has been prepared in compliance with the following: FAA Order 5050.4A (October 1985); the National Environmental Policy Act of 1969 (NEPA); the provisions of Hawaii Revised Statutes (HRS) Chapter 343, Hawaii's EIS Law, and Hawaii Administrative Rules (HAR) Title 11, Department of Health, Chapter 200: Environmental Impact Statement Rules, Sections 11-200-9 through 11-200-13; and State of Hawaii, Department of Transportation Procedures, Part 9 Project Management, Chapter 4 Environmental Assessment, Technical Environmental Reports and Environmental Impact Statements (EIS) Preparation, Coordination and Review, April 3, 1989. NEPA and the Federal EIS procedures as applied to this project are described below.

Both the National Environmental Policy Act (NEPA) of 1969 and the Federal Aviation Administration Order 5050.4A (October 1985) apply to the proposed project because it affects a National Historical Park and Landmark which involves Section 4(f) lands. The following describes the applicable sections of those regulations that apply to the project. In addition, environmental documentation is required for the proposed new runway.

The roadway and wharf improvements will require the use of state lands and monies. Consequently, Chapter 343, HRS, is applicable.

2.1 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

The National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321 *et seq.*) is implemented through the procedures and regulations established by the Council on Environmental Quality (CEQ). The regulations (effective July 30, 1979, 40 CFR Part 1500

through 1508), as revised, note (Section 1501.3) that agencies shall prepare an environmental impact statement when necessary under the procedures adopted by individual agencies to supplement the CEQ regulations. An environmental assessment (EA) may be prepared to assist agency planning and decision making regarding the determination to prepare an environmental impact statement. An EA was prepared for this project in 1989 and it was determined by FAA and DOT-A that an EIS is required to comply with NEPA. In preparing an EA or EIS, agencies shall involve environmental agencies, applicants, and the public to the extent practicable.

In compliance with the above requirements, public meetings have been held on Molokai and Oahu regarding the proposed project (see Chapter V of this EIS). Similarly, scoping meetings and informational meetings with affected federal and state agencies and the patients and residents of Kalaupapa have been held to ensure that the public and affected agencies are aware of the proposed project and its potential environmental consequences. Additionally, a draft of the EA was reviewed by the appropriate federal agencies, who determined that an EIS should be prepared.

2.2 FEDERAL AVIATION ADMINISTRATION ORDER 5050.4A

The Federal Aviation Administration Order 5050.4A (October 8, 1985) provides guidance to airport personnel, airport sponsors and others involved in airport actions, on the format and content of FAA environmental assessments and impact statements. The order provides instructions and guidance for preparing and processing the environmental assessments, findings of no significant impact (FONSI), and environmental impact statements for airport development proposals and other airport actions as required by various laws and regulations. Because the proposed improvements to Kalaupapa Airport fall within the definition of a "Federal Action" as defined by the FAA, i.e., work within a National Park, the provisions of FAA Order 5050.4A are applicable. In general, these provisions are as follows:

> Airport sponsors and the FAA shall carefully consider and weigh environmental amenities and values in a timely manner in evaluating proposed federal actions relating to airport planning and development, utilizing a systematic inter-disciplinary approach and involving local and state officials and individuals having expertise. The environmental consultation process is to provide officials and decision-makers,

> as well as members of the public, with an understanding of the potential environmental impacts of the proposed action. The final decision is to be based on a number of factors. Environmental considerations are to be weighed as fully and as fairly as non-environmental considerations. The FAA's objective is to enhance environmental quality and avoid or minimize adverse environmental impacts that might result from a proposed federal action in a manner consistent with FAA's principal mission to provide for the safety of aircraft operations.

In keeping with the above stated provisions and policy, DOT-A and FAA Honolulu Airports District Office have evaluated the potential environmental impacts of the proposed action as described in the EA and this EIS; utilized a systematic inter-disciplinary approach to the evaluation; involved other federal agencies as well as state and local agencies, groups and individuals; and involved the general and affected public in the planning and environmental analysis of the proposed project.

2.3 STATE ENVIRONMENTAL IMPACT STATEMENT REQUIREMENTS/ CHAPTER 343 HRS

Section 343-5(a) of Chapter 343 HRS (Revised) states that except as otherwise provided, an environmental assessment shall be required for actions that (1) "Propose the use of state or county lands or the use of state or county funds, other than funds to be used for feasibility or planning studies for possible future programs or projects which the agency has not approved, adopted or funded, or funds to be used for the acquisition of unimproved real property; provided that the agency shall consider environmental factors and available alternatives in its feasibility or planning studies;" (2) "Propose any use within any land classified as Conservation District by the State Land Use Commission under Chapter 205;" and (3) "Propose any use within the shoreline area as defined in section 205-A-41...." Accordingly, this Environmental Impact Statement for the proposed Kalaupapa Airport, roadways and wharf improvement project has been prepared and is submitted pursuant to the provisions of Chapter 343.

2.4 STATE DEPARTMENT OF TRANSPORTATION PROCEDURES, PART 9

The policy of the State Department of Transportation is that full consideration be given to social, economic, and environmental effects throughout the planning of actions or

projects; that provisions ensuring such consideration shall be incorporated into the decision-making process; that decisions shall be made in the best overall public interest, taking into consideration the need for fast, safe, and efficient transportation, public services and the cost of eliminating or minimizing possible adverse social, economic and environmental effects; and that state and federal environmental goals are met when developing projects involving state funds, both federal and state funds or state lands.

The general provisions of the Department's environmental policy procedures note that proposed actions or projects will be assessed as early as practicable to determine the need for an environmental impact statement. The assessment process should include consultation or expertise (technical, engineering, social, economic and environmental) as appropriate, as well as citizen's groups and individuals. Further, prevailing state and federal statutes, orders, regulations, and guidelines shall be complied with in preparing and processing environmental assessments or preparation notices, findings of no significant impacts (FONSI) or negative declarations, draft environmental impact statements, final environmental impact statements, Section 4(f) statements and exemptions. To ensure the fullest practicable and timely public information and understanding of actions or projects with potential environmental impacts, appropriate federal, state and local agencies and interested parties should have adequate opportunities to express their views early enough in the study process to influence the course of studies, as well as the action taken. Information about the existence, status, and results of studies should be made available throughout the study process.

In compliance with the above, the Kalaupapa Airport Technical Advisory Committee was formed and has been involved through the EA/EIS process. Copies of the Airport Master Plan and drafts of the EA were made available to members of the Advisory Committee for their information, review, and comment. In addition, as noted previously, numerous public meetings have been held and meetings with affected state and federal agencies held to ensure that the proposed project receives the benefit of input from these groups.

2.5 COMPLIANCE WITH FAA ORDER 5050.4A

This Environmental Impact Statement has been written to comply with both FAA Order 5050.4A, *Airport Environmental Handbook*, and Hawaii Revised Statutes, Chapter 343.

The requirements of Chapter 343, HRS, with regard to formatting of EISs have been followed. This section is included as an aid to those reviewers who need the information contained herein in the format designated in FAA Order 5050.4A.

a. NOISE

Aircraft noise generated from the airfield doesn't impact any residential or noise sensitive facilities. Overflights and occasional military nighttime operations, however, are audible at the settlement. The military night operations are known to be an annoyance to the residents. See Chapter III, Section 9 for additional information. A noise impact study was conducted for the project, and the resulting report is presented as Appendix E to this EIS.

b. LAND USE

There is no significant noise impact on any noise sensitive areas, therefore, this item is not applicable. Other aspects of land use, however, are addressed in Chapter III, Section 12.

c. SOCIAL IMPACTS

There will be no significant negative social impacts, such as relocation or long-term community disruption, resulting from the project. The impacts on existing public services are described in Chapter III, Section 11, and positive impacts of the proposed project are discussed in Chapter IV.

d. INDUCED SOCIOECONOMIC IMPACTS

No significant negative impacts are identified as a result of this action. However, several positive impacts, such as an increase in income and reliable air service, have been identified. These impacts are addressed in Chapter III, Section 6.

e. AIR QUALITY

Impacts to air quality are presented in Chapter III, Section 8.2. An air quality impact study was prepared for the project and the resulting report is presented as Appendix D of this EIS.

f. WATER QUALITY

There will be no significant discharge into any water body, however, a short-term increase in runoff may occur during construction. This issue is described in Chapter III, Section 2.2, and in Sections 3.3.1.2, 3.3.2.1, 3.3.2.2 and 3.3.3.

g. DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)

Section 4(f) (see Section 12.1.3.2) applies to the project due to the location of Kalaupapa Airfield in a National Park, a Federal and State of Hawaii Historic Register Site, and within the boundaries of an Historic Landmark. The airport will also increase its present acreage by using land to the east end of the runway controlled by the State of Hawaii, Department of Health. There will be no additional federal lands used except that avigation easements will be necessary to prevent the building of obstructions within the airspace. Also, a grading easement may have to be acquired for the lands within the Coast Guard property.

h. HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

There will be impacts on historical, archaeological and cultural features resulting from this project. No significant architectural impacts are expected to occur. A discussion of impacts to these resources is presented in Chapter III, Section 5, and the results of an archaeological survey presented in Appendix C.

i. BIOTIC COMMUNITIES

A discussion of impacts to biota is presented in Chapter III, Section 3.

j. ENDANGERED AND THREATENED SPECIES OF FLORA AND FAUNA

A discussion of endangered and threatened species is presented within the discussion of the biotic communities, Chapter III, Section 3. A specific discussion of threatened marine fauna is presented in Chapter III, Section 3.3.1.5.

k. WETLANDS

There are no wetlands within the project area and, therefore, this section is not applicable.

l. FLOODPLAINS

The airfield is located within a flood and tsunami zone as indicated by the Flood Insurance Rate Maps. The discussion of this may be found in Chapter III, Section 2.3.

m. COASTAL ZONE MANAGEMENT PROGRAM AND COASTAL BARRIERS

The proposed project will conform to all State of Hawaii Coastal Zone Management (CZM) and the Kalawao County Special Management Area (SMA) requirements. The proposed project will intrude past the coastal vegetation line and is within the Shoreline Management Area as defined by Kalawao County. The CZM program is discussed in Chapter III, Sections 12.1.3.1 and 12.4.3.3. The SMA is discussed in Chapter III, Section 12.3.

n. WILD AND SCENIC RIVERS

There are no wild or scenic rivers within the project area and, therefore, this section is not applicable.

o. FARMLAND

The land within the airport boundaries is not classified as prime farmland by the State of Hawaii. Some of the surrounding area was used for farming in the past,

but is now overgrown by shrubs. A description of the soil types found within the project area is presented in Chapter III, Section 2.1.

p. ENERGY SUPPLY AND NATURAL RESOURCES

There will be no significant impacts on the energy supply or natural resources. There will be an increase in energy consumption and the commitment of resources for construction. Due to the project location, however, all materials and energy needs must be obtained from sources outside of Kalaupapa. The description of the commitment of energy and resources is presented in Chapter III, Sections 2.1.5 and 10.4, and in Chapter IV, Section 2.

q. LIGHT EMISSIONS

There will be an increase in light emissions due to the installation of conventional runway lighting aids which will be used for emergency nighttime evacuations only. The light aids were requested by the community for their safety and use. The impacts will be insignificant due to the infrequent use of the lights.

r. SOLID WASTE IMPACTS

The proposed project is not expected to significantly affect the present solid waste collection or disposal system. This system is described in Chapter III, Section 10.3.

s. CONSTRUCTION IMPACTS

The construction impacts are described in their corresponding sections within Chapter III. For example, the construction impacts on the marine environment are presented in Chapter III, Section 3.3, MARINE ENVIRONMENT.

In summary, the influx of construction workers to Kalaupapa may impact the community. Therefore, although the impacts will be temporary, specific rules and regulations will be applied to the construction workers and contractor to minimize and mitigate the impacts. Generally, the construction workers will be contained

within the work area. Also, the contractor must establish a partially self-sufficient camp for the workers. All services must be provided for by the contractor except for water, electricity, waste disposal and communication lines.

A preliminary site for this camp, separated from the community, has been set aside.

t. DESIGN, ART AND ARCHITECTURAL APPLICATION

This issue is included in the section addressing the visual impacts, Chapter III, Section 4. The only major feature which would be considered in this category would be the grassblock pavers which will be used on the taxiway and apron. The grassblock pavers were chosen, instead of asphaltic concrete or concrete, to maintain the visual appearance and historic character around the terminal area. A concrete walkway will be built to connect the automobile parking area to the aircraft apron to enable ease of access by the handicapped.

3. APPLICANT AND PROJECT SUMMARY

The applicant for the proposed projects is the State of Hawaii Department of Transportation, Airports Division (DOT-A). Kalaupapa is administered, through a cooperative agreement with the National Park Service, by the State Department of Health (DOH). The Department of Health has requested that DOT-A be the lead State of Hawaii agency for the proposed airport, roadway and harbor improvements. As such, DOT-A will act as the lead state agency in the proposed projects. As discussed earlier, the FAA will be the lead Federal agency. The NPS has chosen to be a cooperating agency for this document.

3.1 NEED FOR THE PROPOSED ACTIONS

In 1980, the Kalaupapa National Historical Park was established by P.L. 96-565. The Act specifically states that the Kalaupapa Hansen's Disease patients "are guaranteed that they may remain at Kalaupapa as long as they wish." Many of the residents desire to live out their lives with Kalaupapa as their home. In order to maintain an appropriate quality of life, the assistance of a certain number of resident workers is and will continue to be

required. Dependable air service is essential to maintain and enhance the quality of life at Kalaupapa. Critical airport service factors are the "must fly" needs of the patient, visitor and worker residents for transportation and supplies, and resulting demands put upon the airport; the present unsatisfactory condition (including alignment) of the existing runway; and the air safety characteristics of the present airport. These factors make imperative the upgrading of present airport facilities to provide improved airport services at Kalaupapa. In addition, because many of the patients are confined to wheel chairs or whose ambulatory handicaps present difficulty of movement on uneven surfaces, it is necessary that the roadways within and around the settlement be smoothly paved to facilitate the patient's mobility. Similarly, sea transportation is sporadic because the harbor is located on the northwest coast of the peninsula and exposed to northerly swells which create high waves and surge conditions. Therefore, barges, the sole surface transportation route for cargo, are unable to dock at the harbor except in calm sea conditions. Because of wear and tear on the existing concrete pier, the pier is in need of repair and rehabilitation. The proposed repairs and rehabilitation work will increase margins of safety during the few times during the year that cargo barges can tie up to the pier. In addition, the pier will be required to offload materials, supplies and equipment required to improve the airport and roadways.

3.2 PURPOSES AND OBJECTIVES OF THE ACTIONS

The primary purposes of the proposed projects are to provide the Kalaupapa peninsula with an airport that has greater margins of safety for the small aircraft that serve the airport; and to improve the airport facilities (runway, taxiway, apron and terminal building) to reduce operations and maintenance costs. Accomplishment of these purposes will allow aircraft operations at times when they cannot now be conducted (due to weather conditions and physical constraints to operations), and encourage more frequent service, thereby providing more reliable and dependable air service for the residents and patients at Kalaupapa. Air service, for the importation of food stuffs, medical supplies and emergency medical care (evacuations), is the vital link for the peninsula with the rest of the state and the world. At present, air service is curtailed at times due to adverse cross winds, waves and rocks on the runway, and severe rainstorms. A Petition for Determination of Essential Air Service (EAS) has been filed by the state with the U.S. Department of Transportation and is being pursued by the State despite national EAS program reductions. The proposed airport improvements would be made in concert with that determination.

The purpose and objectives of the proposed roadway and harbor improvements, as noted previously, is to provide the patients and residents of Kalaupapa with roadways that are easily traversable by wheel chairs and those on crutches or who otherwise have difficulty in walking; and to provide the settlement with a harbor facility that is capable of servicing the needs of the patients and residents.

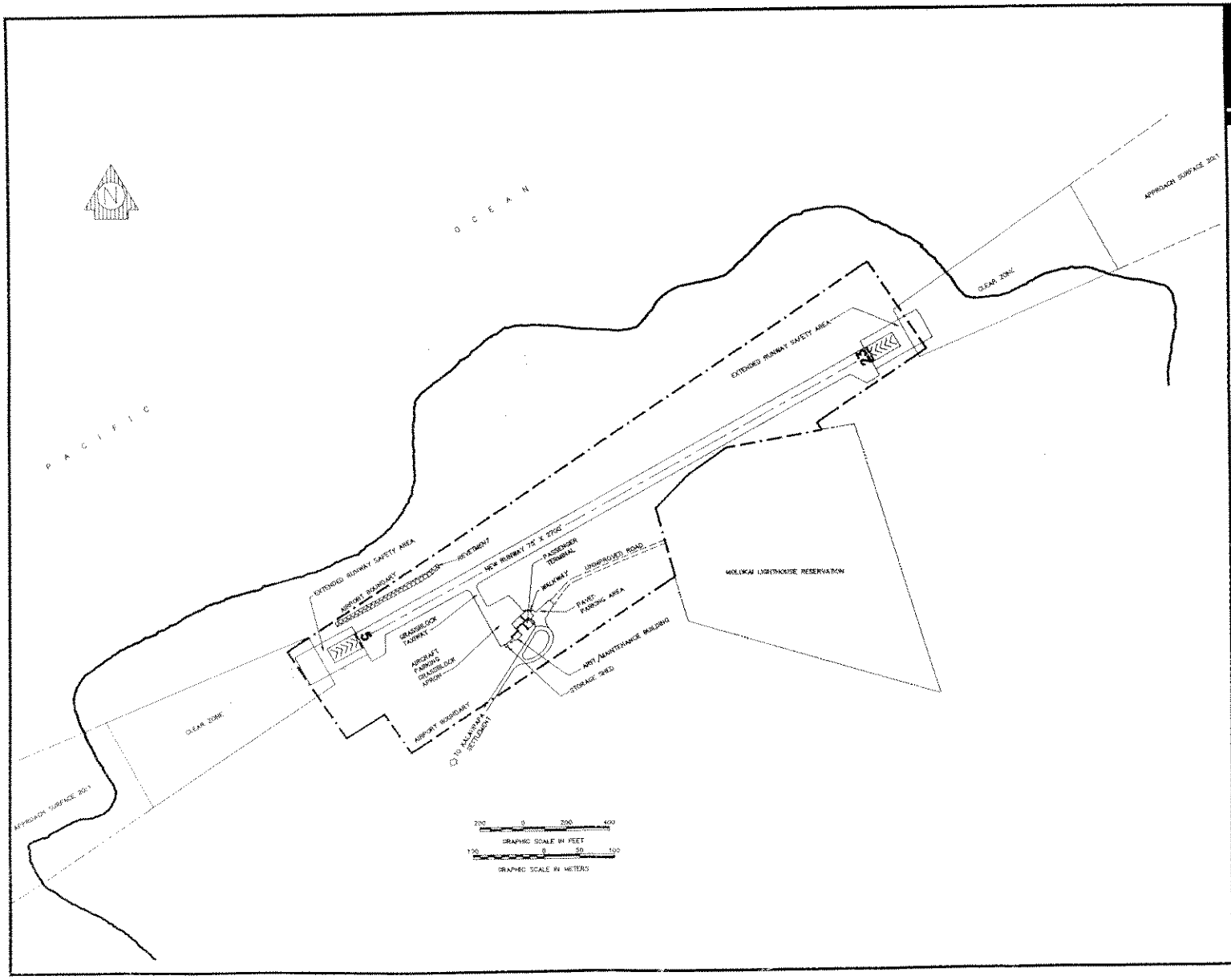
3.3 DESCRIPTION OF THE PROPOSED ACTIONS

An analysis of existing airport conditions, forecast requirements and master planning for future requirements is included in the Airport Master Plan. As noted in the Master Plan, the recommended plan will not be implemented. This represents a departure from the policy of DOT-A, which is based on principles of airport planning and FAA publications. The airport improvements to be implemented represent a compromise plan, devised by NPS, DOH and the patients of Kalaupapa, which is considered to be minimally acceptable from both safety and operational perspectives and is based on an assumption of maintaining the current level of air service with de Havilland DHC-6 STOL aircraft. The design aircraft, however, was the air medical evacuation aircraft (Cessna 400 Series), which require a longer (2,700 feet) runway for takeoff. The compromise plan incorporated the desires of the community and NPS to preserve intact the historical features around the airport. The proposed airport project is shown on Figure I-1. Note that the runway configuration for this plan is similar to Alternative 3 (Figure II-3) except that the southwest end will be contained within the existing airport boundaries.

Airport facility requirements that are to be made in the 1990-1992 time period are as follows:

- Widening, lengthening, and rotating (nominally five degrees to the east) the existing Kalaupapa Airport runway. Adding extended runway safety areas, blast pads and larger aircraft turnarounds (The proposed runway dimensions are 2,700 feet by 75 feet, as compared to the existing runway dimensions of 2,760 feet by 50 feet.);

- Constructing a paved taxiway between the runway and existing terminal area and a paved aircraft parking apron adjacent to the passenger terminal building (Grassblock will be used as the paving unit. Also a concrete walkway will be built from the automobile parking area to the aircraft apron.);



KEY PLAN . NOTES :

NO. DATE REVISIONS

PROJECT TITLE :

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS

SHEET TITLE :

PROPOSED AIRPORT DEVELOPMENT PLAN

DATE

DWG. NO.

FIGURE

I-1

- Providing airfield lighting for nighttime medical evacuation;
- Improving the airport road (on its present alignment and within its present width) between the terminal and Kalaupapa Settlement;
- Improving the utility systems to serve other airport developments;
- Acquire and/or obtain avigation easements for additional airport land; and
- Construct a shore protection revetment approximately 550 feet in length along the west edge of the airport property.

The decisions regarding the improvements to be made to the airport have been rendered following completion of archaeological inventory survey work, master planning efforts and consultation with the Kalaupapa patients. For the purposes of this EIS, it is presumed that the proposed project would include all of the above listed items. As such, it is believed that this EIS presents a "worst case" scenario and it is this scenario upon which the potential impacts of the proposed projects are based and described.

As indicated above, one of the facility requirements to be accomplished under the proposed project is paving the existing airport road from the airport to Kalaupapa Settlement. The roadway will retain its present alignment and width to avoid the possibility of impacting previously undisturbed archaeological sites. In addition, other secondary roadways will be graded and paved to the extent of available monies.

The harbor improvements to be included in the proposed project consist of strengthening the wharf, repairing the existing seawall and removing rocks from the barge basin. All of these actions are considered to be maintenance and repair actions. The only "in-the-water" work would be the removal of the rocks that have washed into the barge basin during storms.

4. REQUESTED GOVERNMENTAL ACTION

At present, the State of Hawaii, Department of Transportation, Airports Division, is not requesting financial assistance from the Federal Aviation Administration, under the Airport and Airway Safety and Capacity Expansion Act of 1987, for the Kalaupapa Airport improvements. However, future actions will include the submittal of a Conservation District

Use Application (CDUA) to the state Board of Land and Natural Resources to enable the proposed airport improvements to move forward. An SMA use permit will be required from Kalawao county.

5. PROJECT SCHEDULE AND COSTS

Planning, design and engineering work for the proposed projects are underway. Construction of the proposed airport, roadway and harbor improvements are expected to begin in mid-1991 and be completed by late 1992. The proposed schedule for the improvements is shown in Figure I-2.

Estimated construction and architectural and engineering costs for the proposed improvements are shown in Table I-1.

TABLE I-1

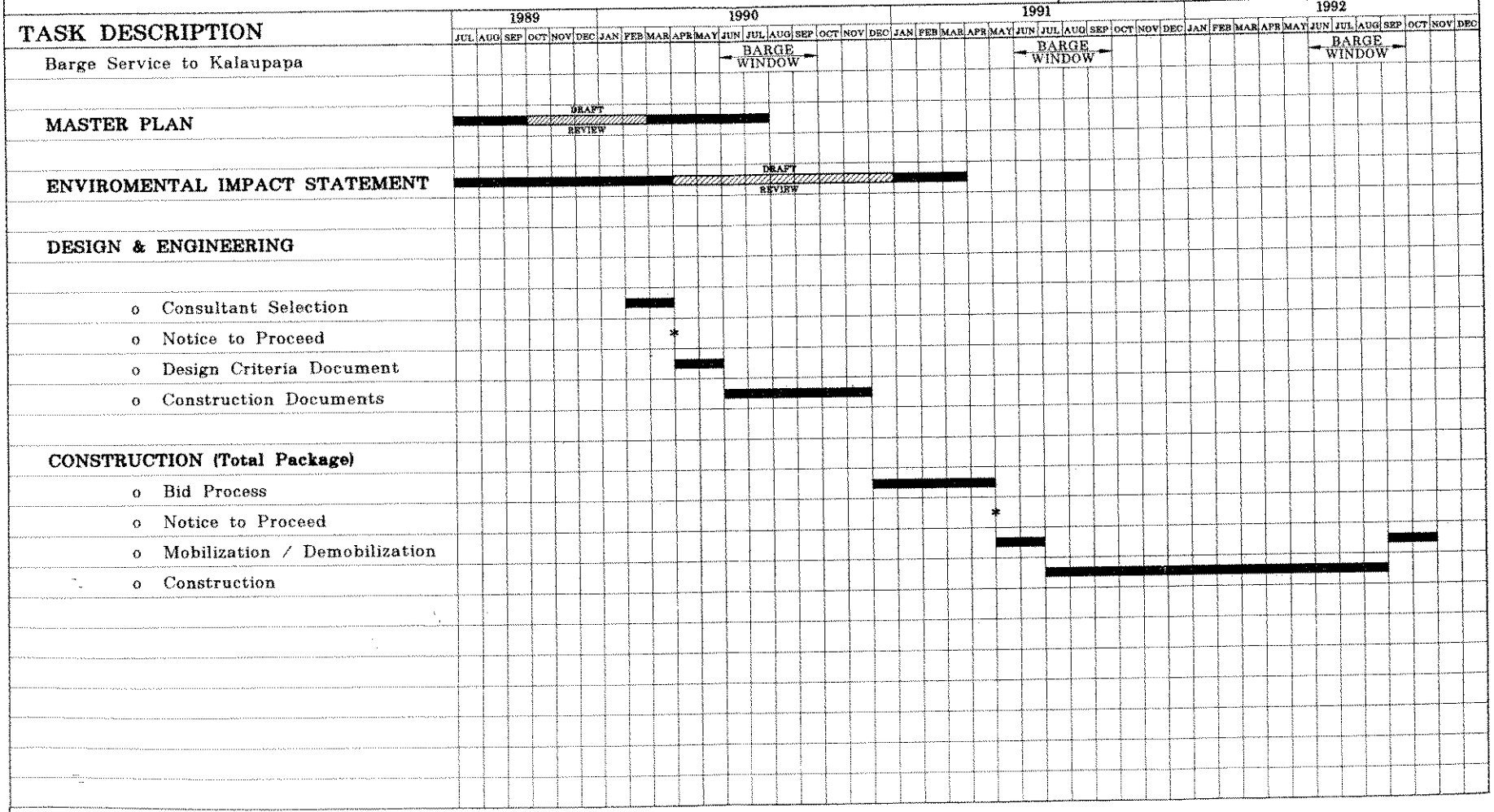
PROJECT DEVELOPMENT COSTS
(Mid-1989 Dollars)

DEVELOPMENT ACTION	COST ($ Million)
Runway Improvements	3.3
New Taxiway and Apron	0.5
Terminal Area Improvements	0.2
Access Road Improvements	1.6
New Airfield Lighting	0.5
Other Roadway Improvements	2.1
Harbor and Dock Repair	0.4
CONSTRUCTION COSTS	8.6
A & E Fees (at 14%)*	1.2
TOTAL COSTS	9.8

* A&E Fees include criteria development; design; and construction management services.

Schedule - Kalaupapa Airport Improvements

DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS

Edward K. Noda and Associates, Inc.

PROJECT DEVELOPMENT SCHEDULE

FIGURE
I-2

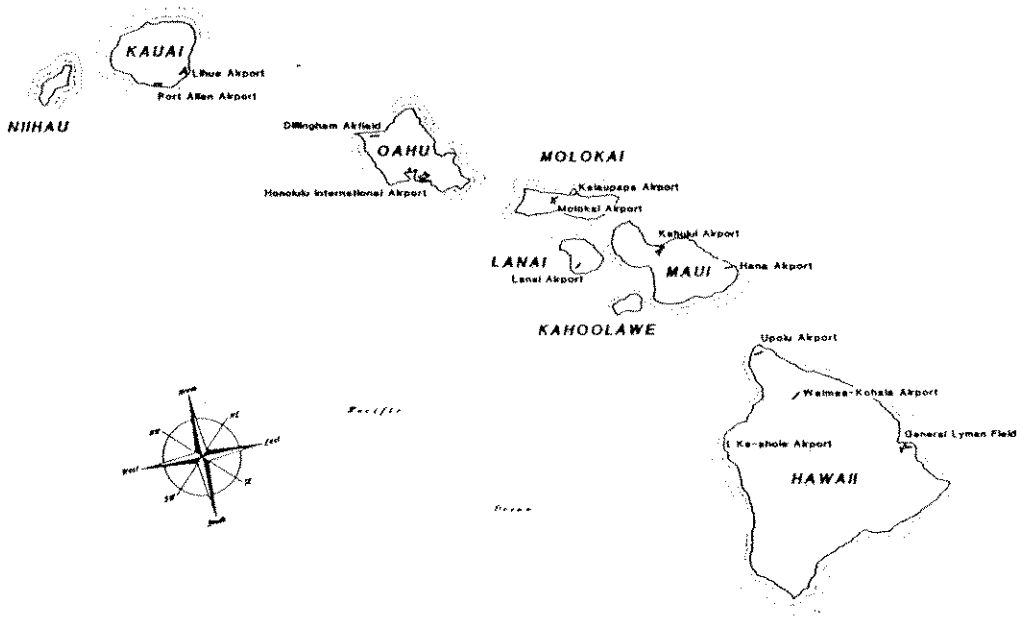
6. ALTERNATIVES INVESTIGATED

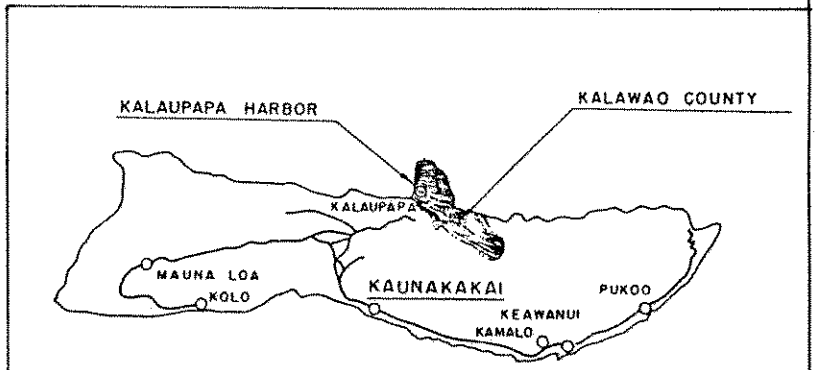
Due to the extraordinary circumstances regarding the location of the Kalaupapa Airport, the applicant was required to consult with and obtain joint approval for any development plan from the Kalaupapa patients, DOH and NPS. As a result the proposed action was developed through a unique planning process that involved numerous and often complex consultations with the Kalaupapa patients and resident workers, DOH and NPS. Numerous alternative plans were presented to assess various degrees of impact on the existing environment and aircraft operations. These plans included various runway lengths and alignments and various combinations of safety areas and associated runway lengths. In addition, various combinations of terminal area improvements and modifications were investigated. A special ballot, outlining the various alternatives, was developed for both the patients and resident workers. The ballot contained seven different alternative development plans, with the proposed action being a combination of two of the basic alternatives. In addition to various development plans, the alternative of "no-action" was also investigated. In essence, all of the alternatives were rejected either by the patients or resident workers or one of the agencies involved with Kalaupapa because of adverse impacts on archaeological/historical sites or because of adverse impacts on airport and aircraft operations. As noted previously, the development plan selected is less than that which DOT-A would recommend, but it does meet the requirements and desires of the patients.

Alternatives to the proposed roadway improvements have ranged from the alternative of "no-action" to major improvements to the roadways, including realignment and paving. Alternatives to the harbor action have also ranged from the alternative of "no-action" to significant improvements to the present harbor facilities. The proposed actions represent the most cost effective as well as most environmentally sensitive means of providing the amenities and facilities required by the patients. All alternatives investigated are detailed in Chapter II of this EIS.

7. ANTICIPATED IMPACTS OF THE ACTIONS

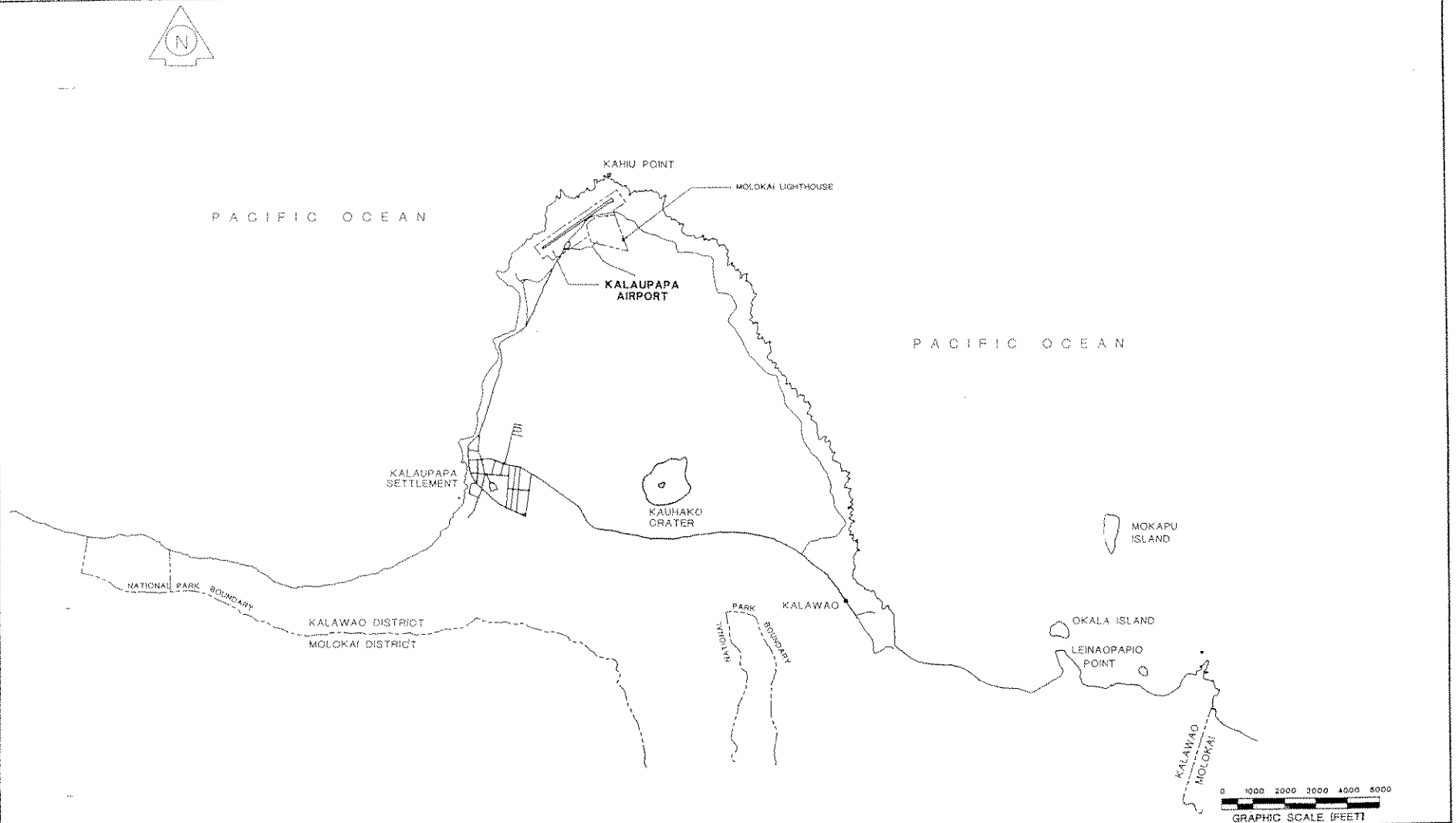
The proposed project area is located on the northwestern tip of the Kalaupapa peninsula on the island of Molokai (Figures I-3 and I-4). Of the six major Hawaiian islands, Molokai is the fourth largest. The island is made up of three separate shield volcanoes, with the Kalaupapa peninsula originating from the youngest of these, Kauhako Crater. Although





ISLAND OF MOLOKAI

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	Edward K. Noda and Associates, Inc.	STATE OF HAWAII ISLAND OF MOLOKAI	FIGURE I-3



AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS

Edward K. Noda and Associates, Inc.

LOCATION MAP
KALAUPAPA AIRPORT

FIGURE
I-4

Molokai is part of Maui County for administrative purposes, Kalaupapa peninsula is in a separate county, Kalawao County, administered by the State Director of Health, with some Maui County rules and regulations applicable to the Kalaupapa peninsula. A steep, virtually perpendicular cliff (pali) about 2,000 feet high separates the peninsula from the rest of the island (top side). Since 1865, Kalaupapa and Kalawao have served as a colony and hospital for victims of Hansen's Disease. Access to the Kalaupapa settlement is via daily air service (except when weather curtails flights), occasional freight barges and a steep trail down the pali. The Kalaupapa peninsula is a comparative flat leaf of lava about 2.25 miles long and 2.5 miles wide, projecting from the north coast of the island.

The Kalaupapa Airport is located on the northwestern tip of Kalaupapa Peninsula adjacent to the shoreline and within a Special Use Management Zone (Kalaupapa Airport) as defined in the Kalaupapa National Historical Park Management Plan (U.S. Department of Interior/National Park Service, 1987). The airport lands are owned by the State of Hawaii, Department of Transportation, Airports Division, and are designated Conservation by the State Land Use Commission. The airport property is identified as Tax Map Key (TMK) 2-6-1:01, Lot 5. Lands adjacent to the airport are also owned by the state (Department of Health) and federal government (U.S. Coast Guard Lighthouse). Lands to the southwest of the airport, through which the airport road passes, are owned in part by the state (Department of Health) and in part by the Department of Hawaiian Home Lands. The present airport lands cover about 42 acres. The access road from Kalaupapa to the airport is about 2 miles long. (Refer to Chapter III, Section 1 for further land use descriptions).

Construction of the Kalaupapa Airport was undertaken in 1931 and was completed in 1934. Originally, the airport was operated by the Board of Lepers Hospital and Settlement. The initial airport site was a sod field 2,000 feet long and 200 to 500 feet wide. Various improvements were made over the years including air terminal facilities.

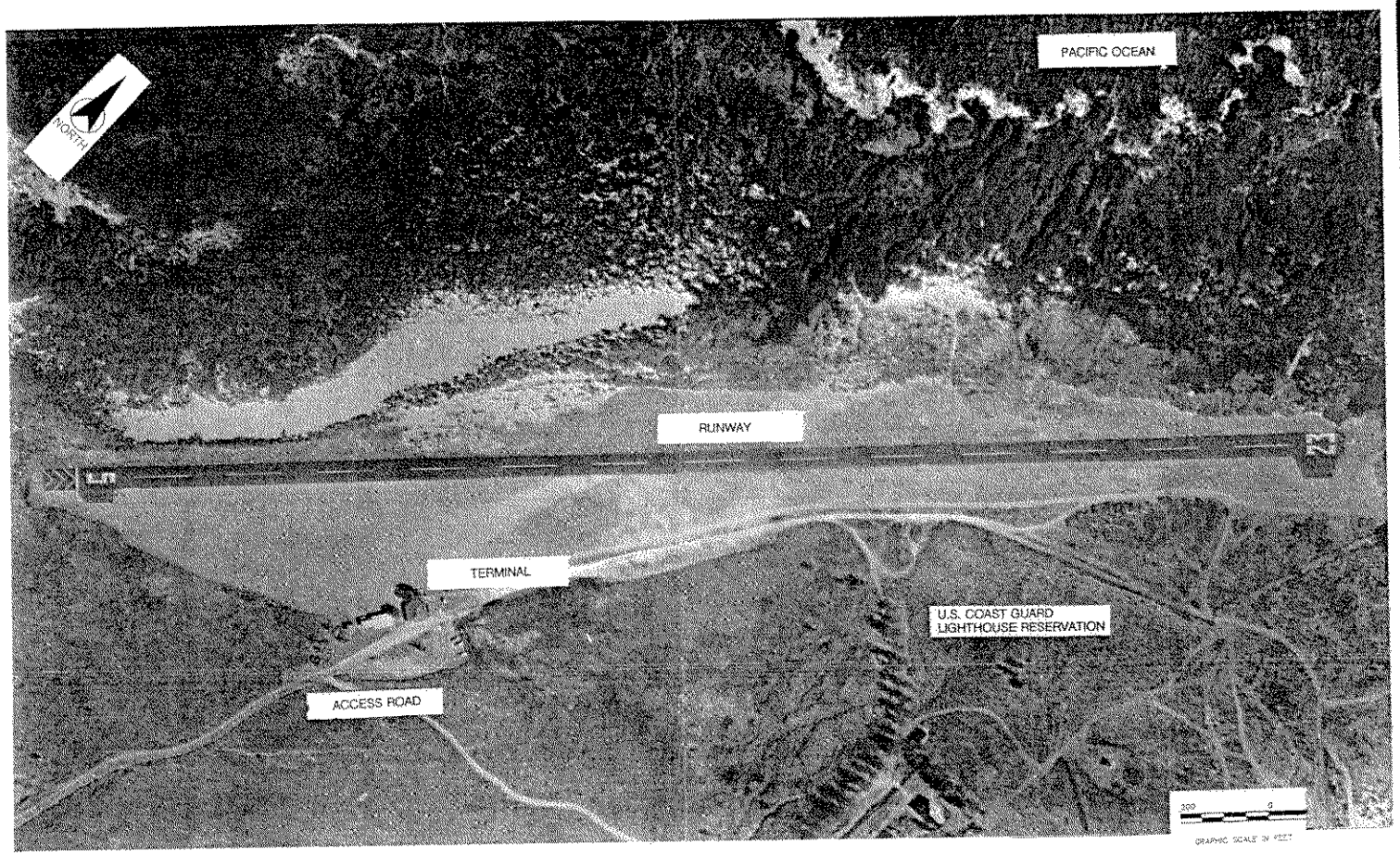
By Act 32 of the 1947 Legislature, the Hawaii Aeronautical Commission was created and Kalaupapa Airport was formally placed under the control of the Commission. Actual transfer of the management of the airport was delayed to 1955. In 1953, the 2,000 feet long sod runway was paved to a width of 50 feet. Contemporary maps indicated an area of approximately 23.0 acres.

In January 1970, DOT requested that the land be formally set aside for Kalaupapa Airport. On January 22, 1975, Executive Order No. 01732 was issued to DOT to set aside 42.225 acres. Later in 1975, the runway was extended from 2,000 feet to 2,760 feet to allow takeoff and landing by the Cessna 412 aircraft.

Kalaupapa Airport has a 2,760 ft. long paved runway but no paved taxiway or apron (Figure I-5). The airport layout plan is presented on Figure I-6. The runway is not level and the pavement is showing signs of distress in several areas. Runway pavement strength is adequate to support the Cessna 400 series and DHC-6 size aircraft that principally serve it. There are no navigation or landing aids at the airport (except for wind cones located at both ends of the runway) and no runway lighting. Consequently, all operations are conducted under Visual Flight Rules. There is no air traffic control tower at the airport and enroute traffic is under the control of the Honolulu Air Route Traffic Control Center.

There are three buildings on the airport including a 1,017 square foot terminal, a 1,229 square foot maintenance/office building, and a storage shed. The buildings are wood frame structures on concrete slabs and are in good condition. Utilities at the airport include water, electric power, sewerage, and telephone. A paved, two lane asphalt access road leads to the Settlement which is approximately two miles distant, and there are both paved and unpaved areas for parking ground vehicles near the terminal. The airport road is in poor condition over most of its length. In fiscal year 1988, the cost of airport operation was approximately $28,000, most of which was provided by the State.

Impacts, as described in this EIS, have been evaluated in terms of "significant", indicating a relatively large effect of the projects on or by an environmental issue area; "insignificant", indicating some but not a major effect of the projects on or by an environmental issue area; and "no impact" of the projects on or by an environmental issue area. To the extent possible, impacts have been defined based on quantifiable factors, such as a given number of acres of bird habitat would be lost or gained, or noise levels would be increased/decreased above/below a given standard. This type of analysis is intended to remove some of the subjectivity from the analyses and to allow reviewers to evaluate the potential impacts of the proposed projects independently, but on the same basis, as the preparers of the EIS.



Airports Division

KEY PLAN / NOTES :

NO DATE REVISIONS

PROJECT TITLE :

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS

SHEET TITLE :

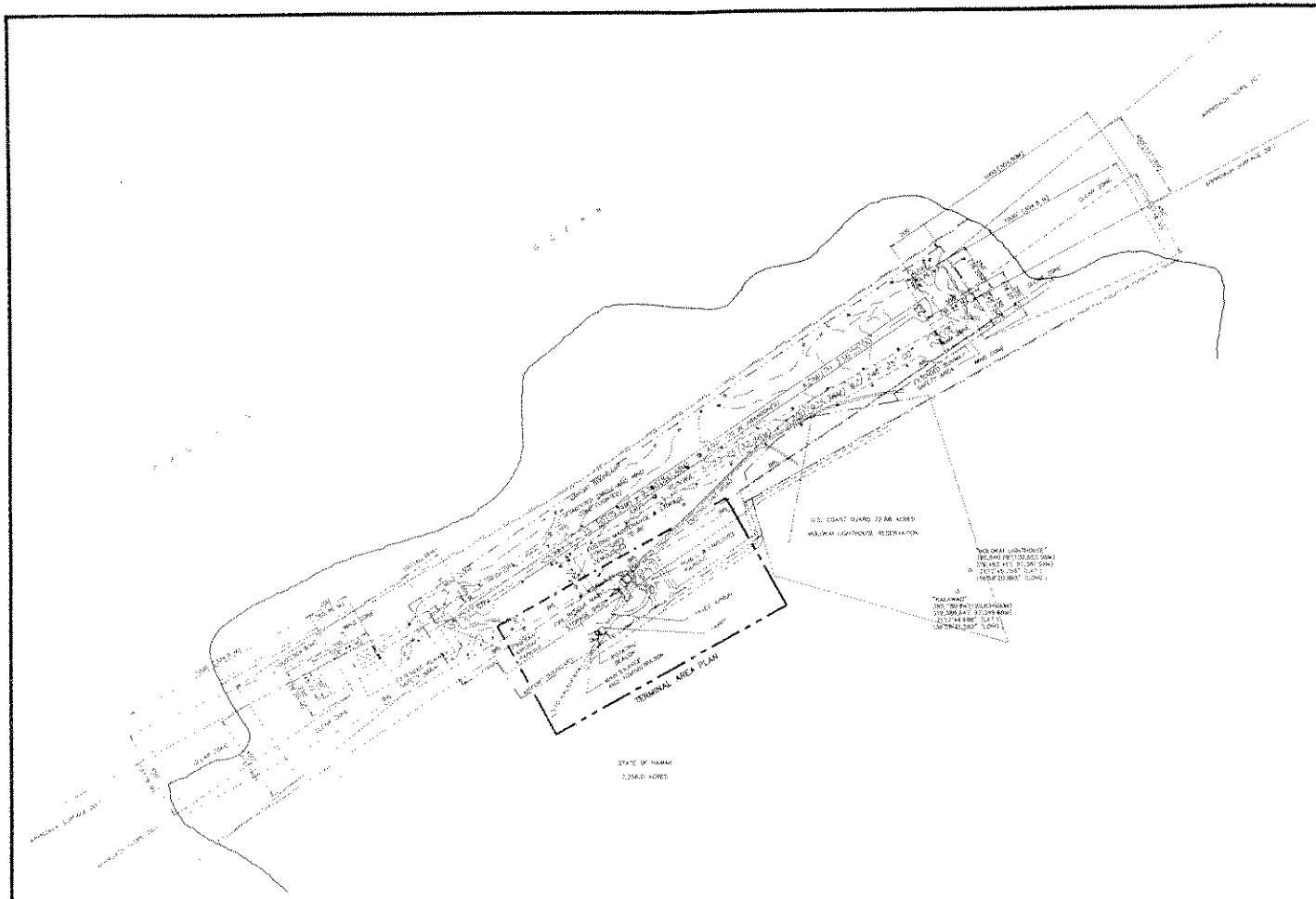
EXISTING FACILITIES
KALAUPAPA AIRPORT

DATE

SHEET NO

FIGURE

I-5



WIND ROSE	LEGEND	AIRPORT DATA	RUNWAY DATA

Airports Division

KEY PLAN / NOTES :

ISLAND OF MOLOKAI

LOCATION MAP

NO	DATE	REVISIONS

APPROVED:

PROJECT TITLE :

KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS

SHEET TITLE :

AIRPORT LAYOUT PLAN

DATE

DWG NO

FIGURE 1-6

The proposed airport actions are expected to result in significant positive impacts to the following environmental issue areas:

a. Socioeconomic Factors
b. Transportation Facilities
c. Educational and Health Services

The proposed actions will result in significant adverse impacts to the following environmental issue area:

a. Archaeological and Historical Resources

The proposed airport action is expected to result in insignificant impacts to the following environmental issue areas:

a. Geology, Physiography and Soils
b. Hydrology and Drainage
c. Floods or Tsunamis
d. Terrestrial Flora
e. Terrestrial Fauna
f. Marine Environment
g. Visual Attributes
h. Climate and Meteorology
i. Air Quality
j. Noise Quality
k. Potable Water System
l. Wastewater Collection, Treatment and Disposal
m. Solid Waste Collection and Disposal
n. Electrical Power and Communication Systems
o. Police and Fire Services
p. Recreational Facilities

There do not appear to be any environmental issue areas for which there would be no impacts by or on the proposed projects.

All potential adverse significant and insignificant impacts are mitigable resulting ultimately in no potential adverse impacts resulting from the proposed actions. For all of the above listed environmental issue areas, the probable impacts resulting from the

proposed actions and mitigation measures proposed to minimize potential adverse impacts are described in detail in Chapter III of this EIS.

8. AREAS OF CONTROVERSY

The primary area of controversy surrounding the proposed airport action has involved the possible loss of archaeological and historical resources. The entire Kalaupapa peninsula is known to contain a significant number of archaeological and historical features that have particular significance to the patients and Hawaiian community. The loss of any of these sites is of concern and is the primary reason the compromise airport development plan is being proposed. Areas of controversy regarding the proposed harbor improvements have generally been limited to the provision of a small boat launch ramp or other facility and areas of controversy regarding the roadway improvements have been limited to timing of the improvements.

9. UNRESOLVED ISSUES

With the adoption of the compromise airport development plan, there do not appear to be any other unresolved issues other than the permitting and approval issues which this EIS is designed to assist in resolving.

10. PUBLIC INVOLVEMENT

As indicated previously, a public hearing, several governmental agency and public informational meetings have been held in regard to the proposed airport improvements. Four public informational meetings have been held with regard to the master planning effort and a Master Plan Technical Advisory Committee was formed for the purpose of reviewing and commenting on detailed technical aspects of the Master Plan Program. Membership of the committee consisted of representatives of the airlines, airport tenants, government agencies and interested local community entities. In addition, during the state and federal Environmental Impact Statement Preparation Notice Consultation Period, the general public and governmental agencies were provided the opportunity to request to be a consulted party to the EIS preparation process. The state and federal EIS preparation notices and responses thereto are included in Chapter V of this EIS. Further, as noted previously, two

scoping meetings were held with regard to the preparation of this EIS. The notice for the scoping meeting was published in the Federal Register on January 8, 1990. One meeting was held in Honolulu on February 13, 1990, primarily for governmental agency purposes and one meeting was held in Kalaupapa on February 15, 1990 for the purpose of eliciting patient and resident worker comments regarding the EIS. The views of the resident patients and workers were considered very important due to the impact of the project on their daily lives. Minutes of these meetings are also included in Chapter V of this EIS. In addition, a public hearing was held on November 28, 1990 in Kalaupapa. The transcript of that meeting is included at the end of Chapter V.

The relationship of the proposed actions to federal, state and county land use statutes and policies is discussed in Chapter III, Section 12 and applicable environmental statutes are noted in Table I-2. Table I-3 lists the preparers and contributors to this EIS.

TABLE I-2

COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES

ENVIRONMENTAL LAWS	STATUS	COMMENTS
FEDERAL LAWS:		
CERCLA (Super Fund)	To be in Compliance	Appropriate real estate and structure audits to be conducted prior to construction
Clean Air Act	In Compliance	EIS reviewed by EPA and State DOH
Clean Water Act	In Compliance	EIS reviewed by State DOH
Coastal Zone Management Act	In Compliance	Consistency Determination to be submitted to Office of State Planning for concurrence
Endangered Species Act	To be in Compliance	US F&WS reviewed EIS
Estuary Protection Act	Not Applicable	
Executive Order 11988 Flood Plains	In Compliance	Habitable structures to be constructed above flood hazard height
Executive Order 12088 Federal Compliance with Pollution Control Standards	In Compliance	
Executive Order 12372 Comments Review of Federal Programs	In Compliance	Draft EIS processed through Area-wide Clearinghouse. Responses made to Clearinghouse comments
Federal Water Project Recreation Act	Not Applicable	
Fish and Wildlife Coordination Act	In Compliance	EIS reviewed by US F&WS and NMFS
Land and Water Conservation Fund	Not Applicable	

TABLE I-2

COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES
(Continued)

ENVIRONMENTAL LAWS	STATUS	COMMENTS
Marine Protection, Research and Sanctuaries Act	Not Applicable	
National Environmental Policy Act	In Compliance	Draft EIS filed with EPA and Notice published in Federal Register
National Historic Preservation Act	To be in Compliance	Site Inventory Survey performed; Section 106 compliance with State Historic Preservation Office and national Advisory Council in progress
Noise Control Act	In Compliance	See Chapter III, Section 9
Resource Conservation and Recovery Act	In Compliance	See Chapter III, Section 10.3
River and Harbor Act of 1899	Not Applicable	
Safe Drinking Water Act	In Compliance	No Effect
Solid Waste Disposal Act	In Compliance	See Chapter III, Section 10.3
Toxic Substance Control Act	In Compliance	
Watershed Protection and Flood Protection Act	Not Applicable	
Wild and Scenic Rivers Act	Not Applicable	
STATE LAWS:		
Chapter 343 HRS	In Compliance	EIS to be processed through the State Office of Environmental Quality Control
DOH Chapter 200	In Compliance	EIS contains all informational requirements and will be reviewed per Chapter 200

TABLE I-2

COMPLIANCE WITH ENVIRONMENTAL QUALITY STATUTES
(Continued)

ENVIRONMENTAL LAWS	STATUS	COMMENTS
Chapter 205-A Coastal Zone Management Act	In Compliance	CZM Consistency to be requested from OSP
Conservation District Use	To be in Compliance	CDUA to be submitted following approval/ acceptance of this EIS
Chapter 205 HRS	In Compliance	
Chapter 226 HRS Hawaii State Plan and Functional Plans	In Compliance	
COUNTY LAWS:		
Special Management Area	In Compliance	SMA Use Permit Application submitted to Kalawao County
Environmental Protection Rules and Regulations	To be in Compliance	Construction Contract documents to require compliance with all applicable county rules and regulations

TABLE I-3

LIST OF PREPARERS OF AND CONTRIBUTORS TO THIS ENVIRONMENTAL IMPACT STATEMENT

NAME	TITLE	AFFILIATION	EDUCATION	AREA OF EXPERTISE
E. K. Noda	Principal	E. K. Noda & Associates	Ph.D. Civil Engineering P.E.	Project Management
J. G. Dittmar	Principal	E. K. Noda & Associates	B.S. Zoology	Project Director
W. R. Buevens	Airport Planner	E. K. Noda & Associates	B. S. Civil Engineering & M.A. Political Science	Airport Planning
G. C. Goetz	Airport Architect/ Planner	E. K. Noda & Associates	A.A. Architecture, AIA	Airport Design/ Planning
B. Ishii	Airport Planner	E. K. Noda & Associates	M.S. Ocean Engineering	EIS Coordination/Air Quality/Noise Quality Analysis
G. Chapman	Environmental Analyst	Chapman Consulting Services	B.A. Zoology/ Economics	EIS Preparation
G. Krasnick	Environmental Analyst	GK & Associates	B.S. Biology/ M.S. Oceanography	EIS Preparation
P. Bruner	Wildlife Biologist	BYU-H	M.S. Biology	Avifauna & Feral Mammal Survey
S. Dollar	Marine Biologist	Marine Research Consultants	Ph.D. Oceanography	Marine Biology, Chemical Oceanography
J.S. Athens	Archaeologist	International Arch. Research Inst., Inc.	M.S. Anthropology	Archaeological Survey

TABLE I-3

LIST OF PREPARERS OF AND CONTRIBUTORS TO THIS ENVIRONMENTAL IMPACT STATEMENT
(Continued)

NAME	TITLE	AFFILIATION	EDUCATION	AREA OF EXPERTISE
T. Ladefoged	Archaeologist	International Arch. Research Inst., Inc.	M.S. Anthropology	Archaeological Survey
Barry D. Neal	Principal	Root & Neal	Ph.D. Meteorology	Air Quality
Barry D. Root	Principal	Root & Neal	Ph.D. Meteorology	Air Quality
R. Darby	Noise Consultant	R.A. Darby & Associates	PhD. Mechanical Engineering P.E.	Noise Analysis

CHAPTER II

ALTERNATIVES TO THE PROPOSED PROJECT

CHAPTER II
ALTERNATIVES TO THE PROPOSED PROJECT

1. INTRODUCTION

The National Environmental Policy Act (NEPA) views the identification and consideration of alternatives to the proposed actions as the heart of the EIS. In preparing the Kalaupapa Airport Master Plan, the airport planners, State DOT-A, State DOH and NPS evaluated a series of alternative airport layouts and configurations prior to deciding which layout would best meet the objectives of the project and satisfy the concerns of the patients, resident workers and NPS regarding archaeological/historical sites and features. In keeping with the applicable provisions of NEPA, Chapter 343, HRS and Title 11, Department of Health, Chapter 200, the known, reasonable alternatives to the proposed project are discussed below. The airport alternatives investigated have been limited to those that would provide the same benefits and/or accomplish the same objectives as the proposed project (Preferable Alternative). In brief, the alternatives investigated have been limited to different configurations and alignments of the runway and the alternative of "no action." Other concepts which have been considered include increasing surface vessel (barge) traffic, introducing ocean passenger vessel service, and constructing a roadway or tramway from "topside" down the pali to Kalaupapa settlement. The roadway project alternatives investigated have included realignment and complete rehabilitation of the airport road and Kalaupapa Settlement secondary roadways and the alternative of "no-action." The harbor project alternatives investigated have included a minimum repair, a maximum repair and a moderate repair (proposed project) alternatives and the "no-action" alternative. The specific environmental impacts of the preferred alternative for each project are discussed in Chapter III. In essence, all of the alternatives investigated for each project have been rejected because they would not meet the objectives of the projects as well as the preferred alternatives; would have greater adverse environmental impacts; or would be too costly.

2. OVERVIEW OF AIRPORT ALTERNATIVES CONSIDERED

As indicated previously in Chapter I, several alternative airport layouts have been investigated and analyzed from not only a technical operations standpoint but also relative

to their impact on archaeological and historical features and sites in the vicinity of the airport. The proposed project represents a compromise between providing an operationally safe and effective airport and one that impacts the fewest archaeological sites. The proposed project is not the plan preferred by the State DOT-A and is considered minimally acceptable from both safety and operational perspectives, assuming the current level of air service (i.e., de Havilland DHC-6 STOL aircraft). The design aircraft for the runway is the Cessna 400 Series air ambulance which requires a minimum runway length of 2,700 feet.

The analysis of possible alternative airport configurations at Kalaupapa followed an investigation of existing conditions. These investigations revealed a number of limitations on airport development. The primary limitations included:

- The location of the airport in a National Historical Park constrains what can be done. The cooperative agreement between the state and NPS requires that improvements to the airport be approved by the NPS. The NPS is constrained by provisions of the National Register of Historic Places. The objectives of both park and airport development must be reconciled before airport improvements can be made.

- Because the entire park is listed in the National Register of Historic Places, all undertakings with public involvement and/or federal funding require conformance with the procedures of the Advisory Council on Historic Preservation (36 CFR Part 800). Although this does not exclude the possibility of making changes to the airport terminal building or other parts of the terminal area, it severely limits what can be done. Also, the construction of the building (wood frame on concrete slab) practically prevents its being moved, so its proximity to the runway is a limitation on airfield improvements due to FAA separation criteria contained in Advisory Circular (AC) 150/5300-13. Section 110(f) of the National Historic Preservation Act states that "to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such a landmark."

- The location of the airport in an environmentally sensitive area places limitations on development in a number of ways. Expansion of the land area may be constrained by archaeological findings in the immediate vicinity of the airport. Air and water quality are presently pristine and almost any change could affect them. Because of the unique social environment at Kalaupapa, developments must be respectful of it and may be limited by social factors that would be considered to be unimportant in other locations.

- The physical location of the airport site places limitations on development. The ocean borders the existing runway on its north side and at both ends. On the south (and particularly southeast where the Molokai Lighthouse is located), the land is rising and excavation for construction would be costly. In addition, the availability for airport use of sufficient quantity of the federal land which surrounds the lighthouse is in question.

- Major construction is difficult at Kalaupapa because most labor, equipment and materials must be imported. While labor can be flown in, materials and equipment must be shipped in by barge which is limited to operation during certain times of the year by rough seas that prevail much of the time. At present, Kalaupapa is supplied by twice yearly barge operations that are inadequate to support construction activities; additional barge operations will be required. Only careful logistics planning can prevent these limitations from having a major impact on construction costs and schedules. Even with careful planning, construction costs will be high and schedules long by standards of development elsewhere in Hawaii.

- Kalaupapa Settlement is dependent upon reliable air transport service for resident travel, supplies and medical emergencies. The need to keep the airport operational during the time that improvements are being made will place limitations on construction activities.

- To the extent airport development is dependent upon supporting infrastructure (primarily utilities), it will be limited. At present, water is supplied to the airport by the NPS and electric power and communications (telephone) from topside sources. The capacity of these sources may need to be expanded to meet the demands of airport growth.

In addition to the above listed limitations, the analysis of existing conditions revealed some improvement opportunities. Those opportunities include:

- One of the factors limiting air service to Kalaupapa residents is the length and orientation of the runway. Its short length requires that many aircraft be weight limited on takeoff and the strong crosswind component from prevailing tradewinds prevents reliable aircraft operation. These and other airfield shortcomings can be improved, thereby providing safer, more reliable, air transportation for Kalaupapa residents and visitors.

- An improved airport will make it more convenient for visitors to travel to the park and their numbers may increase to the limit set by the residents (100 per day). This could present economic opportunities for the residents in providing services, including tours, food service and similar activities. Side benefits of

a greater volume of air traffic might be reduced air and freight fares and increased resident mobility.

- The improvement of Kalaupapa airport offers an opportunity to the Hawaii visitor industry. Although visitors to the park are currently limited to 36,500 (or an estimated 22,800 additional persons) per year, its outstanding scenic and historical attractions present opportunities for adding to the image of Hawaii as a unique tourist destination. The canonization of Father Damien de Veuster will increase the visitor interest in Kalaupapa and increase the demand on airport facilities.

The analysis of existing conditions also generated some concerns about the effects of development, the primary ones of which are listed and discussed below:

- At present, there are inadequate facilities for nighttime emergency medical evacuation from Kalaupapa; evacuation by air is the only practical means. Although improvement of the airport runway will help, the addition of airfield lighting and possible obstruction lighting for night operations is possible and would be helpful. The availability of fixed wing medical evacuation aircraft is presently considered to be excellent, whereas timely availability of rotocraft medevac aircraft is not assured.

- At present, air service to Kalaupapa is not frequent and dependable. Airport improvements will encourage as well as permit commuter airlines to operate more frequently, however, a satisfactory level of service is not guaranteed by market forces. Airport improvements coupled with the determination of essential air service for Kalaupapa are means of addressing this problem. As noted previously in Chapter I, an EAS petition for Kalaupapa has been filed.

- A basic concern about development is its effect on the residents' lifestyle and cultural values. The primary purposes of Kalaupapa National Historical Park, as set forth in Public Law 96-565, must be met by the program to improve the airport, and can only be achieved through establishment and maintenance of a dialogue between DOT-A, NPS, DOH, the residents of Kalaupapa and other interested parties.

2.1 AIRPORT ALTERNATIVES CONSIDERED

Given the above constraints and opportunities, the following identifies the major alternative airport configurations that have been investigated and analyzed by all parties

involved with the project, i.e., FAA, DOT-A, DOH, patients and resident workers and NPS. It is noted that the runway alternatives were evaluated on the basis of the following criteria:

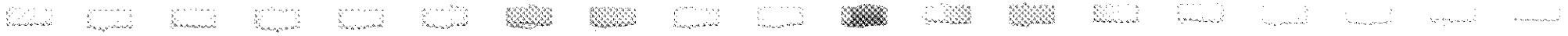
- Impact on archaeological sites;
- Effect on aircraft operational safety margins;
- Effect on aircraft operational cost efficiency;
- Effect on overall airport operational accessibility;
- Adequacy for air ambulance operations;
- Effect on level of service during construction; and
- Construction cost.

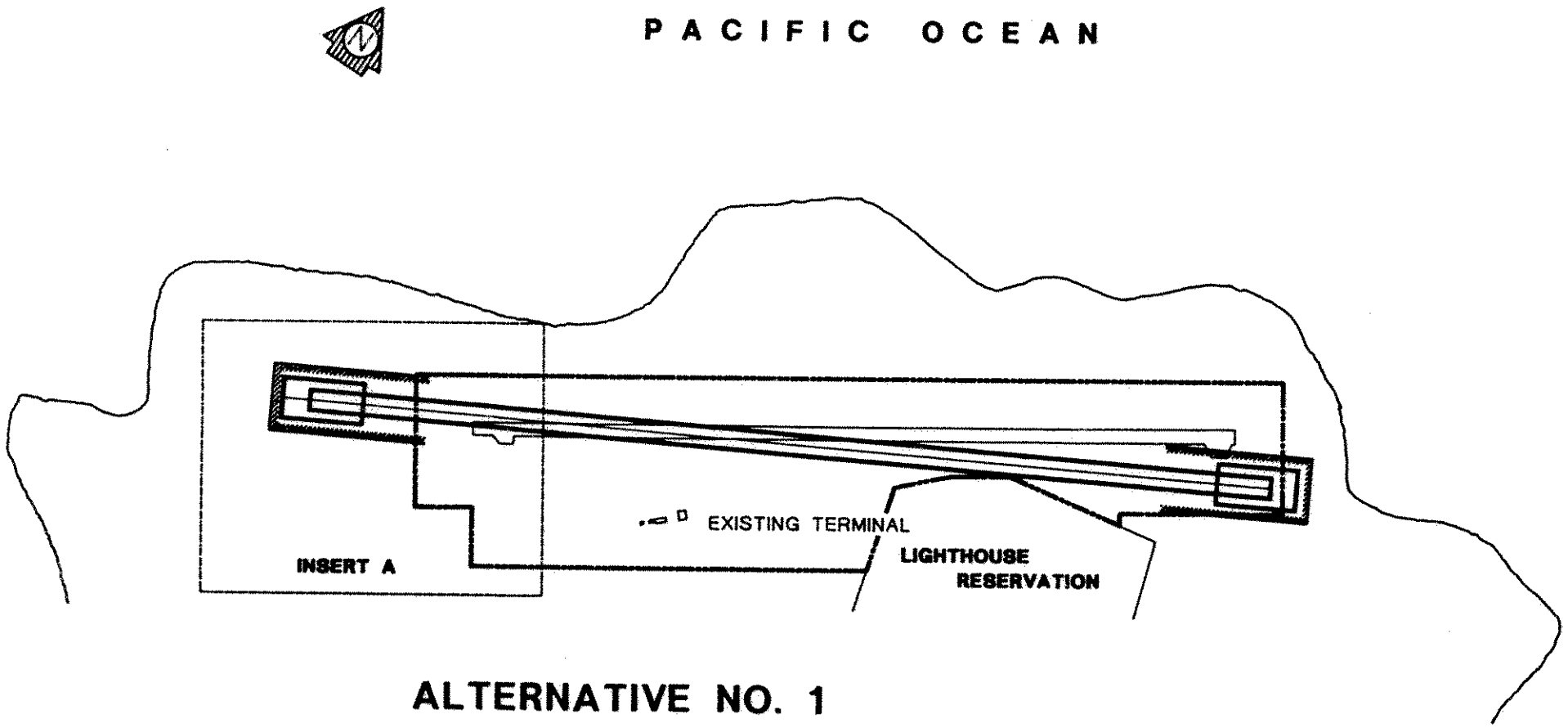
Altogether, nine alternative design concepts were considered for improvements to the runway, three principle runway alternatives (existing, 5 degree and 8 degree rotation) and three variations of features for each alignment. The following describes the 6 principle alternatives that the patients and residents of Kalaupapa were asked to evaluate. These six alternatives essentially combine all of the features of the nine alternative design concepts.

2.1.1 Alternative 1 (Figure II-1)

Alternative 1, which is preferred by DOT-A, includes a runway length of 3,200 feet with an effective takeoff length of 3,400 feet and a 5 degree rotation of the runway to the east. (Note: the effective runway takeoff length is 200 feet greater than the runway length due to the ability, with appropriate FAA clearances, to use the 200-foot runway blast pads on each end of the runway for takeoff purposes). This alternative provides the best margin of safety for aircraft operations; imposes the least weight penalty on aircraft expected to serve Kalaupapa; reduces the crosswind problem for aircraft expected to serve Kalaupapa; causes less interference with air service during construction than if improvements are made on the existing runway alignment; and the construction cost is less than a similar alternative utilizing the existing runway alignment. The major disadvantage of this alternative is that it causes disturbance to 14 archaeological sites. Also, this alternative would use more public, 4(f), lands than the proposed project. Other environmental impacts would be similar to, or the same as the proposed project.

Mitigation measures would be similar to those recommended for the proposed project, which are stated in Chapter III. Because this alternative causes the disturbance of 14 archaeological sites it was rejected by the residents of Kalaupapa and NPS.



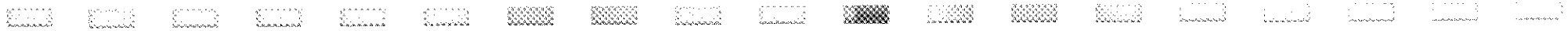


ALTERNATIVE NO. 1

3,200 FT. LENGTH - 5 DEGREE ROTATION
(EFFECTIVE LENGTH 3,400 FT.)

PLAN - KALAUPAPA AIRPORT

FIGURE
II-1



2.1.2 Alternative 2 (Figure II-2)

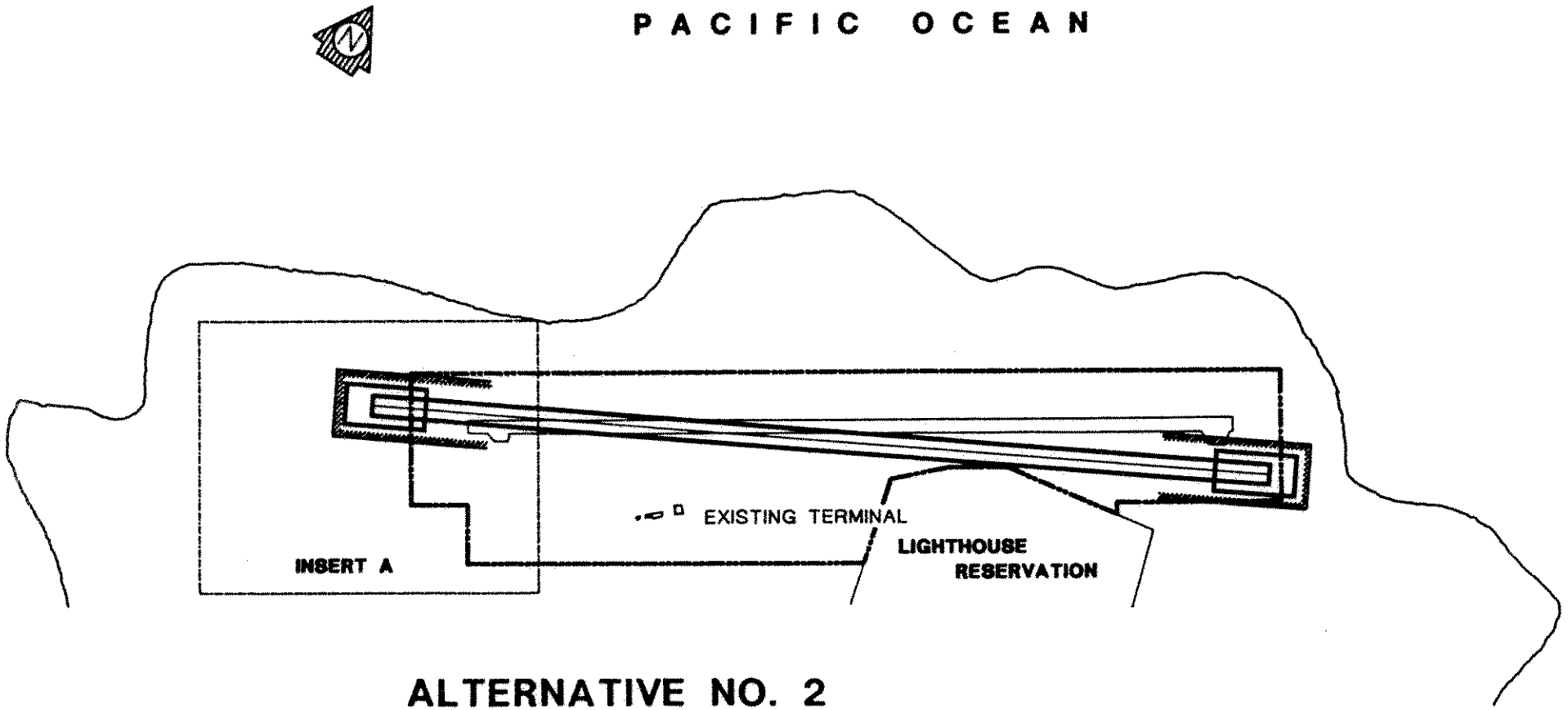
Alternative 2 includes a runway length of 2,950 feet with an effective takeoff length of 3,150 feet and a 5 degree rotation of the runway to the east. This alternative reduces the crosswind problem for aircraft expected to serve Kalaupapa; causes less interference with air service during construction than if improvements are made on the existing runway; has construction costs that would be less than a similar alternative utilizing the existing runway alignment; improves operational safety margins over the existing runway and the weight penalty is less than that required for the present runway. The major disadvantages of this alternative, as compared to the proposed project, are that it would cause the disturbance of 14 archaeological sites and use more public lands. Other environmental impacts would be similar to, or the same as the proposed project.

Mitigation measures would be similar to those recommended for the proposed project, which are stated in Chapter III. Because this alternative causes the disturbance of 14 archaeological sites it was rejected by the residents of Kalaupapa and NPS.

2.1.3 Alternative 3 (Figure II-3)

This alternative includes a runway length of 2,700 feet with an effective takeoff length of 2,900 feet and a 5 degree rotation of the runway to the east. This alternative reduces the crosswind problem for aircraft expected to serve Kalaupapa; causes less interference with air service during construction than if improvements are made on the existing runway; and has less construction costs than a similar alternative utilizing the existing runway alignment.

The major disadvantages of this alternative are that safety margins are not improved over those for the existing runway; the weight penalty is not improved over the existing runway and it causes disturbance to 7 archaeological sites. Other environmental impacts would be similar to or the same as those of the proposed project. Mitigation measures would be similar to those recommended for the proposed project, which are stated in Chapter III. Because this alternative causes the disturbance of 7 archaeological sites it was rejected by the residents of Kalaupapa and the NPS. However, this alternative has been combined with others to form the compromise runway development project.



ALTERNATIVE NO. 2

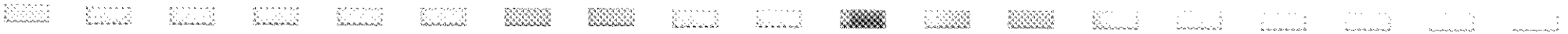
2,950 FT. LENGTH - 5 DEGREE ROTATION

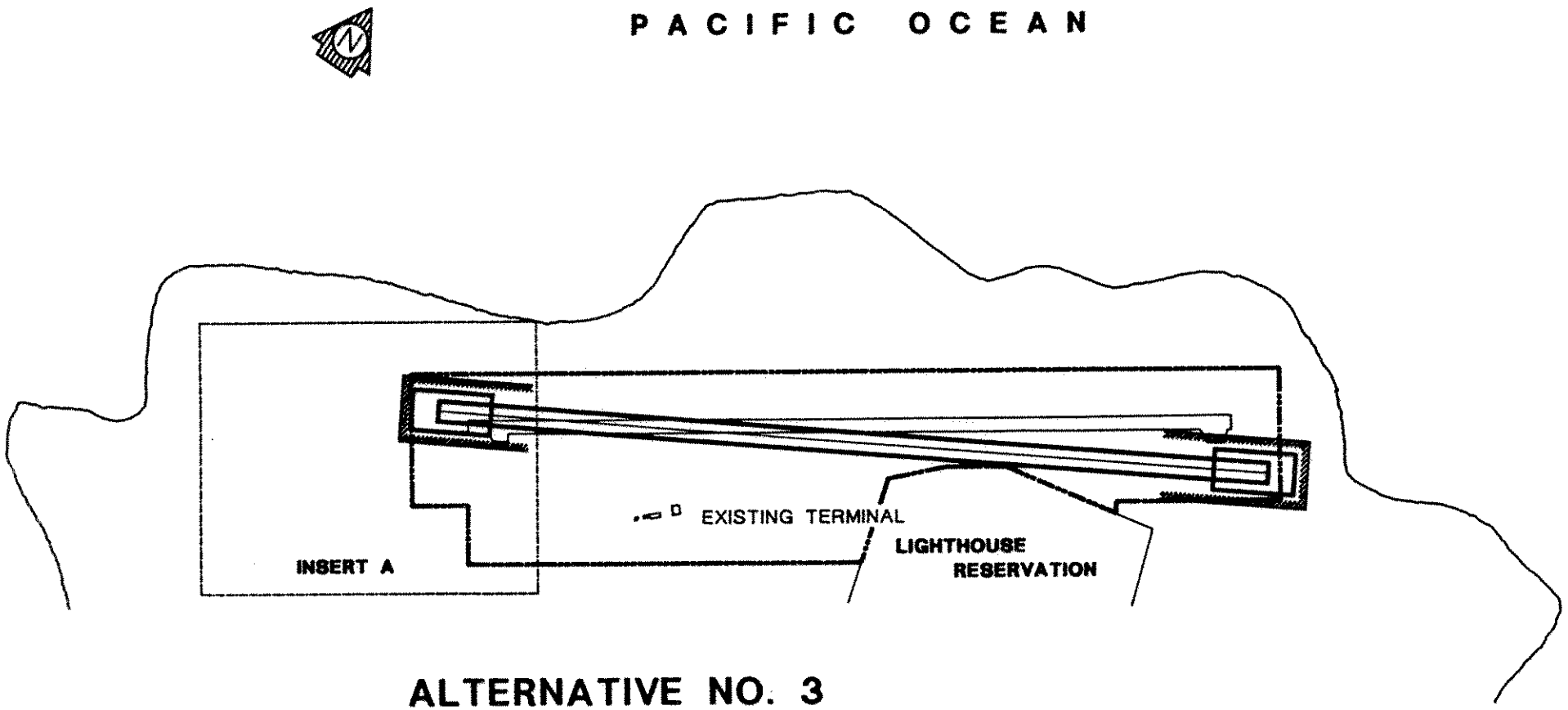
(EFFECTIVE LENGTH 3,150 FT.)

PLAN - KALAUPAPA AIRPORT

FIGURE

II-2





ALTERNATIVE NO. 3

2,700 FT. LENGTH - 5 DEGREE ROTATION

(EFFECTIVE LENGTH 2,900 FT.)

PLAN - KALAUPAPA AIRPORT

FIGURE

II-3

2.1.4 Alternative 4 (Figure II-4)

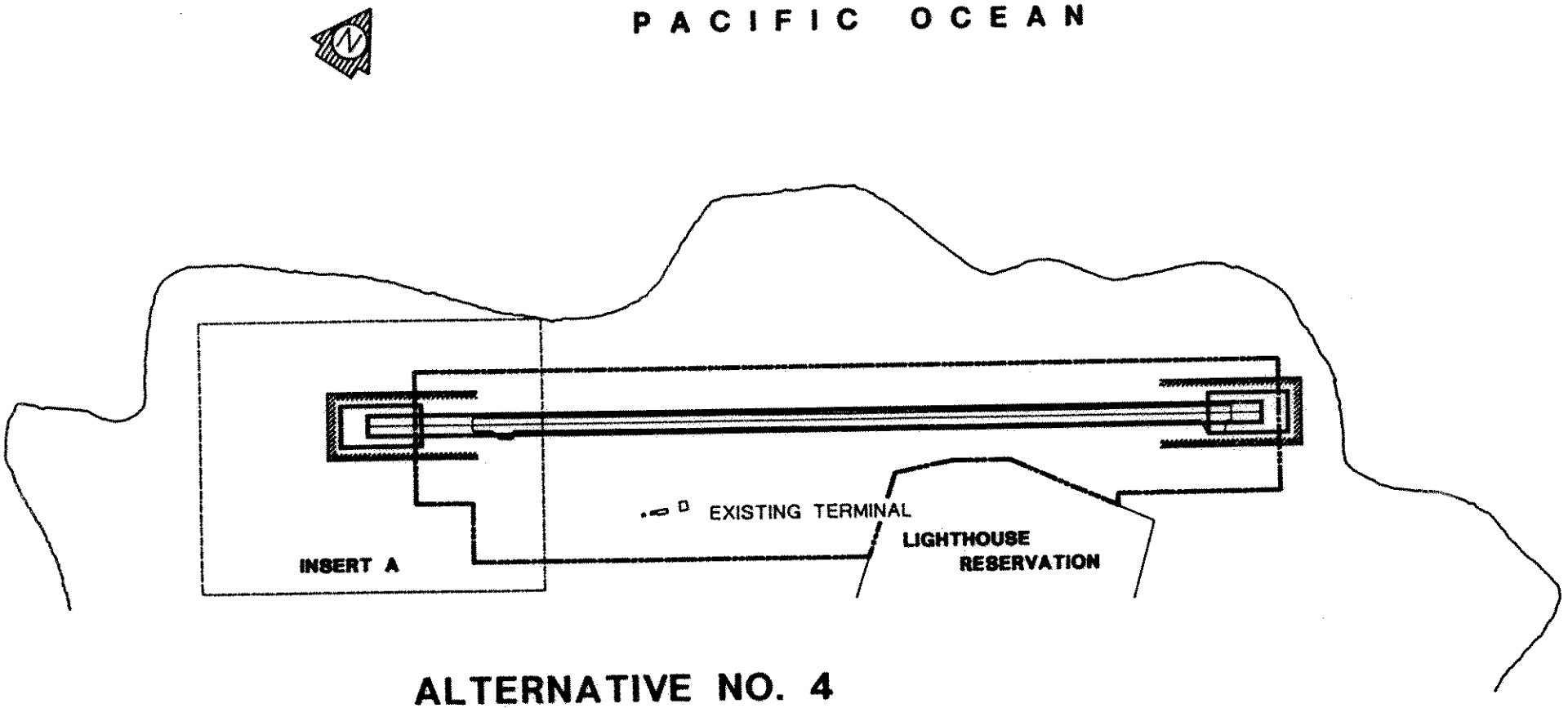
This alternative includes the improvement of the existing runway with a length of 2,950 feet with an effective takeoff length of 3,150 feet. The advantages of this alternative are that it would provide an improvement in the margin of safety for aircraft operations over the existing runway and there would be less weight penalty on aircraft than now exists. The primary disadvantages of this alternative are that it causes disturbance to 17 archaeological sites; does not reduce the existing crosswind problem for aircraft serving Kalaupapa; the construction costs are higher than for alternatives that rotate the runway; and the construction causes more interference to air service than do the alternatives in which the runway is rotated. This alternative would increase the use of public lands. Other environmental impacts would be similiar to those of the proposed project. Mitigation measures would be similar to those recommended for the proposed project, which are stated in Chapter III.

This alternative was rejected by the residents of Kalaupapa and the NPS because of the impact on archaeological sites and the lack of improvement to operational factors, i.e., margins of safety and costs.

2.1.5 Alternative 5 (Figure II-5)

Alternative 5 includes a runway length of 2,700 feet with an effective takeoff length of 2,900 feet, constructed on the present runway alignment.

There do not appear to be any engineering or operational advantages to this alternative. The disadvantages include disturbance to 7 archaeological sites; no reduction in the crosswind problem; interference with air service operations; no substantial reduction in weight penalties; and no improvement to margins of safety. Because of these factors, this alternative was rejected by the DOT-A, the NPS and the Kalaupapa residents. Other environmental impacts would be similiar to those of the proposed project. Mitigation measures would be similar to those recommended for the proposed project, which are stated in Chapter III.



ALTERNATIVE NO. 4

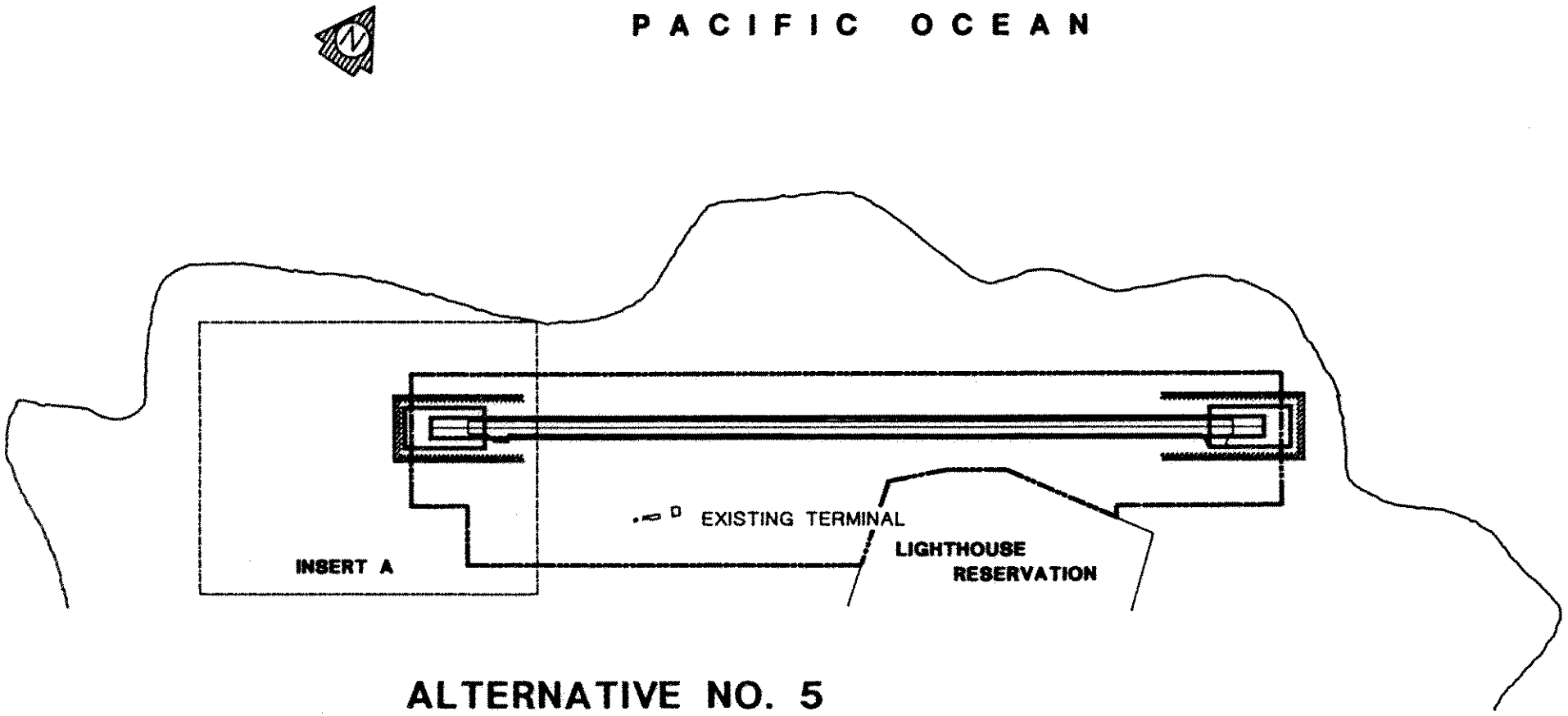
2,950 FT. LENGTH - PRESENT ALIGNMENT

(EFFECTIVE LENGTH 3,150 FT.)

PLAN - KALAUPAPA AIRPORT

FIGURE

II-4



ALTERNATIVE NO. 5

2,700 FT. LENGTH - PRESENT ALIGNMENT

(EFFECTIVE LENGTH 2,900 FT.)

PLAN - KALAUPAPA AIRPORT

FIGURE

II-5

2.1.6 Alternative 6 (Figure II-6)

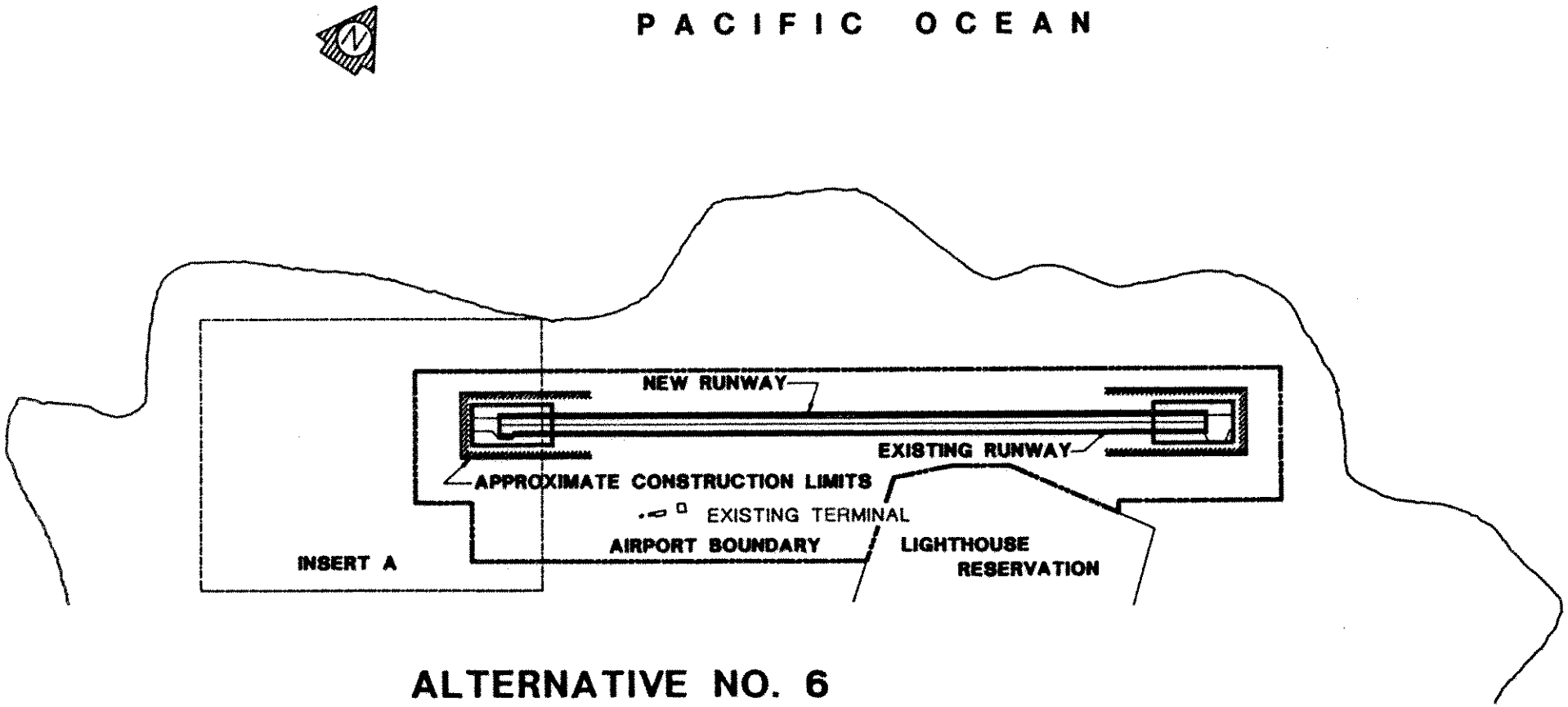
This alternative would also use the present runway alignment with a 2,260-foot long runway with an effective runway takeoff length of 2,460 feet. The major advantages of this alternative are that it causes no disturbance to any archaeological sites and that it costs less than other alternatives. The major disadvantages are that it decreases the margins of safety for aircraft operations; imposes greater weight penalties; causes more interference to aircraft operations during construction; does not reduce the crosswind problem; and will not allow air ambulance service. Because of these factors, this alternative was rejected by the DOT-A, the NPS and Kalaupapa residents.

This alternative would require no additional public lands, nor would it disturb any known archaeological sites. Other environmental impacts and mitigation measures would be similar to those of the proposed project.

2.2 ALTERNATIVE APRON AND TAXIWAY OPTIONS

In addition to the alternative runway lengths and alignments, alternative treatments for the apron and taxiway were investigated. Basically there were two major options. The first includes an asphaltic concrete taxiway and apron and the second is a grassblock taxiway and apron. The major advantages of the first are that it provides a smooth, even load bearing surface; is easy to maintain; and is more distinguishable for nighttime operations. The major disadvantage of this alternative is that it changes the rural character of the airport.

The major advantage of the second alternative is that it does retain the rural character of the airport while its disadvantages are a rougher surface; potential damage to aircraft from loose soil and stones; it is less distinguishable at night; and it is more difficult to maintain. Even with these disadvantages, this alternative is preferred by the patients, and is a part of the proposed project. Except for visual impacts, the environmental impacts and potential mitigation measures of these alternatives are similar.



ALTERNATIVE NO. 6

2,260 FT. LENGTH - PRESENT ALIGNMENT
(EFFECTIVE LENGTH 2,460 FT.)

PLAN - KALAUPAPA AIRPORT

FIGURE
II-6

2.3 OTHER RUNWAY ALTERNATIVES

In addition to the six primary runway alternatives investigated, as described previously, limited analyses of other alignments and lengths were analyzed. None of these alternatives, which included an 8 degree eastward rotation, presented significantly greater advantages than the preferred alternative or the preferred State DOT-A alternative (Alternative 1). The major reasons for not pursuing these alternatives were as follows. The technical impacts of using an alignment of less than 5 degrees rotation would not solve the crosswind problem at the airfield. Depending on runway length, the environmental impacts of this rotation would be similar to those of Alternatives 1, 2 or 3.

Increasing the rotation of alignment greater than 5 degrees would increase the wind coverage of the runway. However, excavation and construction costs would be increased. Also, these alternatives would impact more archaeological sites, increase the need for additional public, 4(f), lands and potentially impact the coastal zone, depending on runway length.

The mitigation measures appropriate for the impacts of the above alternatives would be similar in nature to those recommended for the proposed project.

2.4 "NO-ACTION ALTERNATIVE

This alternative is the retention of the existing airport and terminal area. The runway would remain 2,760 feet long and would still be subjected to the crosswind, weight penalty and safety margin disadvantages currently experienced. This alternative would not allow the overall objectives of the proposed airport project to be met and would continue the present levels of air service. Because of these factors, this alternative was not acceptable to the DOT-A, the NPS and the residents of Kalaupapa. New or increased environmental impacts would not occur, therefore, no mitigation measures were evaluated.

2.5 COMPARATIVE EVALUATION OF AIRPORT ALTERNATIVES

Based on the engineering and operational requirements analyses conducted, it was determined that the desired runway length should be 3,600 feet with appropriate blast pads and safety areas off each end of the runway. However, because this length runway would

have an adverse impact on archaeological sites, it was deemed unacceptable to the patients, DOH and NPS. Consequently, a runway with an effective takeoff length of 3,200 feet was selected as a compromise between the minimum acceptable length of 3,000 feet and the DOT-A desired 3,600 feet. The selected alternative has less impact on archaeological sites; greater operational safety margins; better operational cost efficiencies; greater crosswind coverage; less interference to air service during construction; and lower construction costs than other alternatives. The patients, DOH and NPS opted for an even shorter runway (2,900 feet for takeoff and 2,550 feet for landing with a displaced threshold).

3. NON-AIRPORT CONCEPTS

In keeping with applicable federal and state regulations, alternative means of accomplishing the project objectives were also investigated. Alternative concepts investigated included increased surface (sea) transportation facilities and capabilities and improved land transportation facilities to serve Kalaupapa. Neither of these concepts were considered acceptable for both environmental and cost reasons. Increased sea transportation to Kalaupapa would require the construction of better harbor facilities on a pristine coastline to provide a protected port at which surface vessels (barges or container ships) could call. The adverse environmental effects on marine communities, plus the costs that would be associated with the construction and operation of a new harbor, render this concept unacceptable. Similarly, improved land transportation routes might be developed between topside and the peninsula. However, the potential impacts of this concept are are significantly greater than those of the airport improvement concept. The major environmental impacts of the land transportation concept are the significant negative impacts on visual attributes, increased use of 4(f) lands and degradation of the character of the National Landmark. Economically, it would not be feasible. For these reasons, these two non-airport concepts were rejected.

Impacts of implementation of either of the non-airport concepts to other environmental resources would be similar to or slightly greater than those of the proposed project. The appropriate mitigation measures for these impacts would be similar in nature to those for the proposed project.

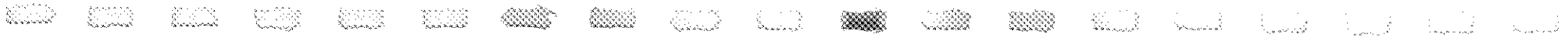
4. ROADWAY IMPROVEMENT ALTERNATIVES

As indicated previously, the proposed improvements to the roadways include resurfacing the present roadways on their present alignments. That is, no other major improvements, such as improving drainage structures, adding sidewalks, etc., would be made. As such, the alternatives essentially are limited to either making additional improvements and/or doing nothing. Neither of these alternatives are acceptable to the patients, NPS, DOH or the Department of Transportation. The no-action alternative would avoid new or increased levels of impacts, but would not provide for a safer more usable roadway.

Any alternative which would require major changes to the roadway alignment or increased excavation would significantly increase the impact on archaeological and historic sites, increease the use of 4(f) lands and potentially degrade the historical significance of the park. Other environmental impacts would be similar to or slightly greater than those of the proposed alternative, and the appropriate mitigation measures would be similar to those adopted for the proposed project.

5. HARBOR IMPROVEMENT ALTERNATIVES

Alternatives considered in addition to the proposed harbor improvements included a minimum repair alternative in which the present wharf and seawall would be repaired, the rocks removed from the barge basin, and the pier minimally strengthened, and a maximum repair alternative in which the wharf would be further strengthened and dolphins would be constructed, the seawall would be repaired and maintenance dredging of the barge basin would be accomplished. In addition, the alternative of "no-action" was considered. Each of these alternatives was rejected by the NPS, the DOH, Kalaupapa residents and the DOT, either on the basis of cost or their inability to meet the objectives of the harbor improvement project.



CHAPTER III

DESCRIPTION OF THE AFFECTED ENVIRONMENT, PROBABLE ENVIRONMENTAL CONSEQUENCES, AND PROPOSED MITIGATION MEASURES

CHAPTER III

DESCRIPTION OF THE AFFECTED ENVIRONMENT, PROBABLE ENVIRONMENTAL CONSEQUENCES, AND PROPOSED MITIGATION MEASURES

1. INTRODUCTION/EXISTING SETTING

1.1 REGIONAL SETTING

The proposed project area is located on the northwestern tip of the Kalaupapa peninsula on the island of Molokai. Although Molokai is part of Maui County for administrative purposes, Kalaupapa peninsula is a separate county, Kalawao County, administered by DOH. A steep, virtually perpendicular cliff (pali) about 2,000 feet high separates the peninsula from the rest of the island (top side). Since 1865, Kalaupapa and Kalawao have served as a colony and hospital for victims of Hansen's Disease. Access to the Kalaupapa settlement and peninsula is via daily air service to the Kalaupapa Airport (except when weather curtails flights), freight barges and a steep trail down the pali. The Kalaupapa peninsula is a comparative flat leaf of lava about 2.25 miles long and 2.5 miles wide, projecting from the north coast of the island.

1.2 EXISTING LAND USES

Kalaupapa Airport is located on the northwestern tip of Kalaupapa Peninsula adjacent to the shoreline and within a Special Use Management Zone (Kalaupapa Airport) as defined in the Kalaupapa National Historical Park Management Plan (U.S. Department of Interior/National Park Service, 1987). The airport lands, encompassing about 42 acres, are owned by the State of Hawaii, Department of Transportation, Airports Division, and are classified Conservation by the State Land Use Commission (refer to Section 12 for further description of land use plans and regulatory documents). The airport property is identified as Tax Map Key (TMK) 2-6-1:01, Lot 5.

1.3 EXISTING KALAUPAPA AIRPORT FACILITIES

Kalaupapa Airport has a 2,760 ft. long, 50 ft. wide paved runway but no paved taxiway or apron. The runway is not level and the pavement is showing signs of distress in several areas. Runway pavement strength is adequate to support the Cessna 400 series and DHC-6 size aircraft that principally serve it. There are no navigation or landing aids at the airport (except for wind cones located at both ends of the runway) and no runway lighting. Consequently, all operations are conducted under Visual Flight Rules. There is no air traffic control tower at the airport and enroute traffic is under the control of the Honolulu Air Route Traffic Control Center.

There are three buildings on the airport including a 1,017 square foot terminal, a 1,229 square foot maintenance/office building, and a storage shed. The buildings are wood frame structures on concrete slabs and are in good condition. Utilities at the airport include water, electric power, sewerage, and telephone. A paved, two lane asphalt access road leads to the Settlement which is approximately two miles distant, and there are both paved and unpaved areas for parking ground vehicles near the terminal. The access road is in poor condition over most of its length. In fiscal year 1988, the cost of airport operation was approximately $28,000, most of which was provided by the State.

1.4 SURROUNDING LAND USES AND DESCRIPTION OF KALAUPAPA SETTLEMENT

Lands adjacent to the airport are also owned by the state (Department of Health), and ceded lands are held by the federal government (National Park Service and U.S. Coast Guard Lighthouse). Lands to the southwest of the airport, through which the airport road passes, are owned in part by the state (Department of Health) and in part by the Department of Hawaiian Home Lands.

Located approximately 2 miles from the airport facility, the Kalaupapa Settlement has a population of about 150, including slightly less than 100 Hansen's Disease patients and about 50 non-patient staff and employees. Approximately 70 households are located in the Settlement, which has an inventory of about 100 buildings in use and many others not presently in use. Some of these buildings are included on the National Register of Historic Places. Access to the Settlement is available via the 2-mile road from the airport. Vehicular activity on the peninsula is limited primarily to government vehicles and activities

associated with the Settlement (35 government trucks and cars; 25 privately owned vehicles on the peninsula), which utilize the access road and other paved (6 miles) and unpaved (8 miles) roads on the peninsula. The history and a more detailed description of the Settlement are provided within Sections 5, 6, and 12 of this chapter.

1.5 SIGNIFICANCE CRITERIA

As described above, the airport project area is characterized by the airport runway and associated uses, surrounded primarily by open space of the peninsula. As such, changes in the environment due to urban activity may be more noticeable than in other urbanized localities, although the proposed airport, roadway and harbor projects must be recognized as minor improvements to existing uses. The impact assessments comprising this chapter must incorporate a threshold of significance for each environmental topic's potential impacts. This significance criterion or threshold can be described generally as the level at which effects of the project indicate not only a change in perceived conditions, but further a noticeable or substantial effect, constituting a "significant impact."

Throughout Chapter III, project effects are described and many are determined "insignificant impacts," meaning a slight change from existing conditions will result, but not to a level which reaches significance. A significant effect may be defined as a potentially substantial adverse change in any physical condition within the area affected by the project. This threshold is used generally throughout this EIS and, unless specific criteria are used (and stated) for a technical environmental topic, the above general guideline is the basis for impact significance determinations within this EIS. Further, throughout this chapter, for the most part the impact discussions focus primarily on the airport project because that project has the greatest potential impacts. However, where specifically noted, impacts relative to the roadway resurfacing and harbor rehabilitation projects are discussed. These discussions are primarily with regard to potential impacts associated with drainage and surface water runoff, the marine environment and socioeconomic issues.

2. PHYSICAL ENVIRONMENT

2.1 GEOLOGY, PHYSIOGRAPHY AND SOILS

2.1.1 Existing Conditions

2.1.1.1 Geology and Physiography

The geology and physiography of Kalaupapa peninsula and the airport area are a result of volcanic activity of Kauhako Crater, the most recent (Pleistocene) shield volcano on Molokai. A large trench, Kauhako Trench, which is probably a former large lava tube, leads north out of Kauhako Crater for about one mile. Kauhako Crater is about 2 miles south of the airport. Its last eruption occurred in the late Pleistocene time (Stearns, 1967). Several hills created by overflows from the trench extend seaward. Kauhako Crater consist of alkali olivine basalt pahoehoe lava, with abundant phenocrysts of feldspar, olivine and augite.

2.1.1.2 Soils

The soils of the Kalaupapa Airport area are classified by the Soil Conservation Service (SCS, 1972) as Rock Outcrop (rRO) along the shoreline; Rock Land (rRK) at the southwest end of the runway; Jaucus Sand (JaC) around the majority of the runway; and Kalaupapa very rocky silty clay loam (KFID) at the mauka side of the northeast end of the runway. The following describes the characteristics of these soil types.

> Rock Outcrop (rRO): This soil type consists of areas where exposed bedrock covers more than 90 percent of the surface. It occurs on all five major Hawaiian islands. The rock outcrops are mainly basalt and andesite. This land type is gently sloping to precipitous and is not suited to farming. It is used for water supply, wildlife habitat, and recreation. Capability classification is VIIIs, nonirrigated.
>
> Rock Land (rRK): This land type is made up of areas where exposed rock covers 25 to 90 percent of the surface and occurs on all major Hawaiian islands. Rock outcrops and very shallow soils are the main characteristics. Rock outcrops are mainly basalt and andesite, and the land type is nearly level to very steep. Rock Land is used for pasture, wildlife habitat and water

supply. Buildings on the steep slopes are susceptible to sliding when the soil is saturated. Capability classification is VIIs, nonirrigated.

Jaucas Sand, 0 to 15 percent slopes (JaC): The Jaucas series of soils are excessively drained, calcareous soils that occur as narrow strips on coastal plains adjacent to the ocean. These soils occur on all major islands and develop in wind- and water-deposited sand from coral and seashells. The slope range of the Jaucas sand land type in the airport area ranges from 0 to 15 percent but in most places the slope does not exceed 7 percent. In a representative profile, the soil is single grain, pale brown to very pale brown, sandy and more than 60 inches deep. In many places, the surface layer is dark brown as a result of accumulation of organic matter and alluvium. The soil is neutral to moderately alkaline throughout the profile. Permeability is rapid and runoff is very slow to slow. The hazard of water erosion is slight but wind erosion is a severe hazard where vegetation has been removed. Workability is slightly difficult because the soil lacks stability for use of equipment. This soil is used for pasture, sugarcane, truck crops and urban development. Capability classification is IVs if irrigated, VIe if nonirrigated.

Kalaupapa very rocky silty clay loam (KFID): The Kalaupapa series of soils consist of well-drained upland soils underlain by pahoehoe bedrock lava at a depth of about 14 inches. The soils developed in relatively recent volcanic ash and are gently sloping to moderately steep. The Kalaupapa very rocky silty clay loam occurs as one large area on Kalaupapa peninsula. It is shallow and there are many stones and cobblestones on the surface and few to many in the profile. Rock outcrops cover about 15 percent of the surface. Permeability is moderately rapid, runoff is slow to medium, and the erosion hazard is slight to moderate. Cultivation is impractical because of shallowness, the many stones and the rock outcrops. The soil is used for pasture. Most of the pastures are unimproved and much of the area is covered with lantana (*Lantana camara*). Mechanical clearing of brush is difficult. Capability classification is VIIs, nonirrigated.

Agriculturally, neither the airport area, roadway nor harbor area lands are classified within the Agricultural Lands of Significance to the State of Hawaii (ALISH) designation, although some areas near the pali on Kalaupapa peninsula are classified as Prime Agricultural lands within the ALISH designation.

In general, very little erosion has taken place on the peninsula. The airport is on the seaward edge of the pahoehoe lava flows from Kauhako Crater where they have leveled out to form a relatively flat, slightly sloping terrace. Seaward of the airport, a rocky-sandy beach slopes into the ocean. At times, waves wash sand and rock onto the runway making it

inoperable and causing localized erosion. Additionally, at times, wave action at the northeast end of the runway is high enough to cause fountaining of water into the air, thereby endangering or preventing aircraft operations.

2.1.1.3 Earthquakes and Volcanic Activity

Earthquake activity on Molokai is similar to the other Hawaiian Islands, with the exception of the island of Hawaii which is more active. Earthquake hazards on Molokai do not appear likely (Mullineaux, *et al.*, 1987). The potential for tsunamis from earthquake activity is discussed in Section 2.3 of this chapter.

Volcanic activity in Hawaii has also been described by Mullineaux, *et al.* (1987). Based on the analyses therein, the probability of future volcanism on Molokai seems extremely low. If eruptions do occur, they probably would originate at vents at or near Kalaupapa Peninsula or off the east end of the island.

2.1.2 Probable Impacts

2.1.2.1 Geology and Physiography

The proposed airport project could cause impacts to the site's topography and physiography through the realignment of the runway and the resultant clearing and grading operations that would be required. These activities are expected to be minimal and restricted to the immediate airport area. As such, impacts to the geology and physiography of the island, peninsula and immediate airport area are expected to be minimal and not result in any significant adverse impacts. Adherence to standard grading procedures will ensure minimal change to the existing topographical characteristics.

2.1.2.2 Soils

The proposed airport project could impact the soils and agricultural potential of the area by the use of additional lands for airport purposes. Also, the realigned runway will be placed closer to the area within the airport boundaries where localized erosion is taking place. The additional lands that would be required to realign the runway are not presently being used in agriculture. In the past (mid-1800s), the area may have been used to raise

sweet potatoes. That practice has been discontinued for several years. The soils of the project area would thus not be significantly impacted from clearing and grading operations.

Short-term erosion impacts could occur during grading and construction operations. These impacts could be mitigated by standard procedures outlined in the mitigation section below. Secondary effects of runoff and erosion (i.e., effects on marine environment, flora and/or fauna) are discussed in Sections 2.2 and 3.

2.1.2.3 Earthquake and Volcanic Activity

The likelihood of earthquake hazards is low on the island of Molokai (Mullineaux, *et al.*,1987). If a tsunami were generated by an offshore earthquake, it could impact the airport, potentially causing overtopping and erosion of the runway and taxiway. This potential hazard currently exists; the proposed project would improve the functional safety of the airport should seismic activity occur. Tsunamis are further discussed in Section 2.3. If volcanic eruptions occurred on the island, they probably would originate off the east end of the island or at vents on or near Kalaupapa Peninsula. Again, this potential volcanic activity currently exists and the project would improve the airport's safety against such natural hazards.

2.1.3 Mitigation Measures

Detailed subsurface soil and geotechnical engineering investigations should be conducted to provide grading, foundation (if applicable) and construction recommendations prior to final project design approval. As part of the mitigation, a rock revetment will be placed at the area where localized erosion is apparent. This revetment will stabilize the coast and support the new runway. Replanted coastal strand vegetation will also help prevent further erosion. Design and construction of any structures on-site should be in conformance with applicable building codes and standards, effectively minimizing hazards which could occur on-site from groundshaking. Erosion during site grading and/or construction should be minimized by erosion control measures such as maintaining vegetative buffers, placement of sandbags and timely planning of operations to avoid peak rainy seasons. These techniques should be monitored, verified and maintained by the state or other qualified personnel throughout construction phases to project completion.

2.1.4 Level of Significance After Mitigation

Implementation of measures recommended in this EIS and adherence to grading procedures will mitigate potential geologic and erosion impacts to an insignificant level. Other potential adverse impacts regarding physiography and seismic or volcanic activity are not considered significant; the project will not result in an increase in these hazards beyond the level of hazard that currently exists on-site. Important to note is that the project will improve the airport's safety in regard to seismic, erosion or volcanic activity.

2.1.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects will require the use of aggregate for sub-base, base and asphalt surface courses for the airport runway and roadways, as well concrete for the wharf repairs. It is expected that these products will be imported from other islands. The soils and rocks at Kalaupapa would not be used for construction purposes.

2.2 HYDROLOGY AND DRAINAGE

2.2.1 Existing Conditions

Median annual rainfall on Kalaupapa ranges from less than 25 inches along the shoreline to 75 inches in the valleys near the pali. Basal groundwater in windward Molokai is believed to be abundant but brackish and not suitable for potable water supplies. Surface waters, however, do offer some potential for potable water development on the peninsula, but costs are a limiting factor. It is expected that groundwater below the airport is brackish due to infiltration of seawater. Surface water drainage from the airport and roadways is presently allowed to sheet flow into the ocean either directly or via drainage swales. Given the relatively low level of aircraft and vehicular activity at present, existing drainage patterns do not appear to adversely affect either the terrestrial plant life along the landward or seaward edge of the runway or the marine life immediately offshore of the airport or roadway areas. Flooding is discussed in Section 2.3 of this chapter; biological resources are described in Section 3.

2.2.2 Probable Impacts

The proposed airport and roadway projects, by creating an increase in impervious surfaces, could impact the hydrology and drainage of the airport area by increasing surface water runoff into the basal brackish water supply and/or directly into the ocean. The airport project will increase the overall "improved" surface by approximately six acres. The majority of this additional acreage, however, will be covered with topsoil and grass. The only increase in the impervious surface area will result from the increases in length and width of the runway and the blast pads. This will total about two acres. Resurfacing of the existing roadways will not increase the area of impervious surfaces.

The proposed projects would retain present drainage structures, i.e., natural swales, and/or include new similar type structures or ditches and culverts to accommodate the facility improvements. No new drainage structures would be constructed as part of the roadway resurfacing project. As noted above, surface runoff from present aircraft operations do not now adversely affect terrestrial or marine life (see also Section 3). Forecast levels of aircraft operations are also relatively low and are not expected to adversely affect the terrestrial or marine biota of the airport or surrounding areas due to surface water runoff. Drainage structures and patterns would be in compliance with applicable federal, state and county rules and regulations. Flooding is further discussed in Section 2.3.

2.2.3 Mitigation Measures

The airport project may be required, as determined by further engineering analyses, to install additional drainage facilities and/or improve existing facilities (i.e., swales, ditches, culverts) to ensure that no runoff or water quality impacts will occur on or off the airport project site. As noted above, the roadway resurfacing project does not include any modifications to existing roadway drainage structures.

2.2.4 Level of Significance After Mitigation

Implementation of measures recommended in this EIS and adherence to applicable regulations can mitigate potential drainage, runoff, and associated hydrological impacts to a level below significance.

2.2.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the hydrology and drainage of Kalaupapa.

2.3 NATURAL HAZARDS - TSUNAMIS/FLOODS

2.3.1 Existing Conditions

Potential natural hazards to which the airport, roadways and harbor, and immediately surrounding areas could be subjected include earthquakes, volcanic eruptions, tsunamis and flooding due to high waves. Earthquake activity and volcanic hazards are discussed in Section 2.1 of this chapter. The remainder of this section focuses on tsunamis and flooding.

Because the airport area and most roadways are essentially at sea level, the areas are subjected to tsunamis. The recorded tsunami runup height measured following the 1946 Aleutian Islands earthquake generated wave was 20 feet at the tip of the peninsula and 44 feet on the southwestern intersection of the peninsula with the north shore of the island (Univ. of Hawaii, 1983). Tsunami runups after subsequent earthquakes have not been measured at Kalaupapa. The 1946 tsunami completely overtopped the airport runway. The Flood Insurance Rate Map (FIRM) for Kalaupapa indicates that the eastern portion of the airport area and access road are within the 100-year coastal flood zone; base flood elevations and flood hazard factors determined. The airport site is within a V24 zone, coastal flood with velocity hazard, due to wave action. Base flood elevations range from 14 to 17 feet above MSL. Adjacent to the V24 zone to the west is an A4 zone which has base flood elevations ranging from 14 to 16 feet above MSL. The remaining portion of the airport is within the C zone, which represents minimal flooding.

The roadway project will also be located within zones C, A4 and V24. The base flood elevation for the V24 zone ranges from 16 to 25 feet above MSL, whereas the A4 zone has base flood elevations from 15 to 28 feet above MSL. Also, a small portion of the roadway project and the harbor project are located within a V30 zone characterized as coastal flooding with velocity hazard, base flood elevations from 23 to 28 feet above MSL.

2.3.2 Probable Impacts

The proposed airport, roadway and harbor improvements are not expected to affect or be significantly affected by natural hazards (see also Section 2.1 discussion on earthquakes and volcanism). Because of the well to excessively well drained nature of the land and soil types, the natural slope of the ground and drainage facilities proposed or required, floods due to rainwater surface runoff are unlikely to occur. Future tsunami runup could impact the airport, roadways and harbor, potentially causing overtopping and erosion of the airport runway, taxiway and safety areas, roadways and harbor. This potential currently exists and does not present safety hazards of significance. The project will not increase hazards beyond what currently exist, in fact it will improve safety conditions of the airport.

2.3.3 Mitigation Measures

Appropriate engineering and design standards would be followed as a precaution against storm water runoff, high waves, tsunamis and earthquakes. The Department of Health has prepared emergency disaster and evacuation plans which will be followed in the event of a natural disaster.

2.3.4 Level of Significance After Mitigation

Implementation of measures proposed in this EIS and adherence to standards and regulations will mitigate potential impacts to a level of insignificance.

2.3.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to tsunamis and floods.

2.4 MAN-INDUCED HAZARDS/TOXIC WASTE

2.4.1 Existing Conditions

For the most part, all areas on Kalaupapa Peninsula have not been subjected to the storage and/or use of toxic waste materials other than the limited amount of vehicular fuels used in the Settlement. The area planned as the construction storage yard (see Figure I-1) has been used to store empty 55 gallon drums of roadway asphalt and petroleum products. However, the storage area is cleaned on a regular basis and none of the drums are allowed to deteriorate to the point of leakage. Similarly, aircraft fuel was stored at the airport terminal site, but that practice was discontinued several years ago. As such, there are no places where toxic/hazardous wastes and/or materials are stored or have been allowed to accumulate.

2.4.2 Probable Impacts

Impacts resulting from the proposed projects could occur from the use of asphaltic and petroleum products that will be used to pave the airport runway and roadways. As noted above, the construction contractor will be allowed to establish a construction camp in a cleared area near the airport and it is expected that all construction materials would be stored in this area. As such, careful control of potentially toxic or hazardous materials can be maintained. Short-term impacts from the use of asphaltic and petroleum products are expected to be insignificant and no long-term impacts are expected to result from the proposed projects.

2.4.3 Mitigation Measures

The primary mitigation measure to be employed is the storage of all potentially toxic/hazardous materials in the construction camp area. The contractor will be required to adhere to all applicable federal, state and county rules and regulations regarding the storage and use of toxic/hazardous materials and all unused materials will be removed from the island at the completion of the projects. All hazardous/toxic materials storage, use and disposal would be in compliance with the federal Toxic Substance Control Act.

2.4.4 Level of Significance After Mitigation

Implementation of measures proposed in this EIS and adherence to federal, state and county standards and regulations will mitigate potential impacts to a level of insignificance.

2.4.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to man-induced hazards/toxic wastes. It is noted that petroleum products will be used for asphalt surfaces as well as for the energy to construct the proposed projects. As such, these resources will be irretrievably committed to the projects.

3. NATURAL ENVIRONMENT

3.1 TERRESTRIAL FLORA

3.1.1 Existing Conditions

Several botanical surveys of various areas on Kalaupapa peninsula have been performed, most in conjunction with the National Park Service/University of Hawaii cooperative study program. Kauhako Crater, the northeast coastal spray zone and areas that would be impacted by a new water line system have been botanically surveyed (Linney and Funk, 1986; Stemermann, 1987 and Canfield, 1987). Although the majority of the airport area has not been specifically surveyed, the plant community descriptions in the above noted publications are generally applicable to the airport area.

In general, the airport is situated within four plant communities: (1) mostly (95 percent) introduced species; (2) partly (75 percent) introduced, partly native species; (3) mixed with 50 percent native and 50 percent introduced species; and (4) mixed with localized concentrations of native species. The majority of the airport is located in the mostly (95 percent) introduced species plant community, with the other three communities in limited direct contact at various portions of the airport. The northeastern end of the runway, for example, has been described as being within two basic plant zones: strand community and scrub/brushland. The strand vegetation is dominated by beach naupaka

(*Scaevola taccada*), beach morning glory (*Ipomoea brasiliensis*) and various grasses. The scrub/brushland vegetation includes koa-haole (*Leucaena leucocephla*), Christmas berry (*Schinus terebinthifolius*), lantana (*Lantana camara*), and various grasses including paspalum (*Paspalum* sp.) and Natal red-top (*Rhynchelytrum repens*).

The northeastern end of the runway has been mapped and characterized (Canfield, 1987) as being within the "*Scaevola taccada/Fimbristylis pycnocephala*" native protected rocky strand plant community. This plant community, which essentially is the same as the "mixed with localized concentrations of native species community" as described above, is characterized by Canfield as follows:

> "Community exists in coastal spray zone on loose basalt. Rock with little sand or with little clayey soil. Less directly wind-influenced than other plant communities. Located near Kahi'u Point, at northern tip of peninsula. Makai of roads, with predominantly native vegetation. Total cover of vegetation averages 60 percent. Disturbed by airstrip construction and limited trampling and grazing, since fence and airstrip should restrict access by feral animals. Vegetation dominated primarily by *Scaevola taccada* or *Fimbristylis pycnocephala*. Mean vegetation height 0.25 m. Localized plant associations are: *Scaevola taccada/ Sida fallax/Cynodon dactylon* (70 percent cover) on rock clayey soil, southeast of airstrip; *Fimbristylis pycnocephala/Euphorbia degeneri* (40 percent cover) on rock with sand, north of airstrip."

There are no known endangered, threatened or candidate plant species found within the airport area as listed by the U.S. Fish and Wildlife Service. Similarly, no known threatened or endangered plant species are known to occur along the roadways and/or harbor areas that would be affected by the proposed projects.

3.1.2 Probable Impacts

The proposed airport improvements would require the clearing and grading of approximately 20 acres of the strand and scrub/brushland communities. Of this, about 14 acres will be on airport property. Impacts to the strand community will be limited to an area of approximately 7,500 square feet where the extended runway safety area on the east end of the airport will extend beyond the present airport boundary. A small additional loss of strand vegetation could result from shore protection improvements. Neither the roadway

and/or harbor projects will require clearing of vegetation. Consequently, no impacts resulting from these projects are expected to occur.

3.1.3 Mitigation Measures

To mitigate the loss of plants due to construction and improvement of the airport, typical strand plants will be transplanted to new locations within the strand zone but outside the airport improvement area and/or as part of the airport landscaping. Similar measures have been taken successfully at other locations in Hawaii. The State Department of Transportation, Airports Division shall coordinate such actions with the National Park Service and U.S. Fish and Wildlife Service to assure that the appropriate protection measures are taken.

To the extent possible, other vegetation that is typical of the area's plant communities shall be used as landscaping materials around the airport. As indicated above, disruptions to the plant communities would be restricted to the immediate airport area and access roadway right-of-way.

Other mitigation measures to minimize potential adverse impacts would include restricting disruptions to only those immediate areas that require clearing or alteration to accommodate the proposed project.

3.1.4 Irreversible Commitments of Resources After Mitigation

Implementation of the above measures will ensure that potential impacts are mitigated to an insignificant level, protecting and/or transplanting resources identified as significant. These measures would result in minimal irreversible commitments of flora resources.

3.2 TERRESTRIAL FAUNA

3.2.1 Existing Conditions

Two avifauna and feral mammal surveys of the proposed project area have been performed in conjunction with the previous EA and are included as Appendix A. As

indicated in the appendix, the following characterizes the avifauna and feral mammals of the airport area.

The terrestrial wildlife in the airport area includes introduced and native species of land and seabirds, goats and, reportedly, several hundred axis deer that are seen on or near the runway at night. The principal species of birds inhabiting or frequenting the airport area include the following:

Resident Endemic (Native) Birds: None recorded during either survey. The Short-eared Owl (*Asio flammeus sandwichensis*) might occasionally be found at the airport as they forage over open lowlands as well as at higher elevation. In addition, the wetlands located between the town and the airport property contain sufficient water and food resources to support a small number of waterbirds. This wetland could be used by Black-necked Stilt (*Himantopus mexicanus knudseni*), American Coot (*Fulica americana alai*) and Common Moorhen (*Gallinula chloropus sandvicensis*).

Migratory Indigenous (Native) Birds: Pacific Golden Plover (*Pluvialis fulva*), Ruddy Turnstone (*Arenaria interpres*) and Wandering Tattler (*Heteroscelus incanus*). Two other species, Sanderling (*Calidris alba*) and Bristle-thighed Curlew (*Numenius tahitiensis*), may at times occur in the airport area, but none were recorded in the surveys conducted for the Master Plan and EA.

Seabirds: No seabirds were observed on the ground during the first survey, but three species, Great Frigatebird (*Fregata minor*), Red-footed Booby (*Sula sula*) and Wedge-tailed Shearwater (*Puffinus pacificus*), were observed flying overhead. During the second survey, two additional seabirds were recorded: Red-tailed Tropicbird (*Phaethon rubricauda*) and White-tailed Tropicbird (*Phaethon lepturus*). Both species were observed flying over the peninsula. Albatross (*Diomedea immutabilis*) have also been reported as occurring in the airport area.

Resident Indigenous (Native) Birds: None were recorded during either survey. Black-crowned night Heron (*Nycticorax nycticorax*) might occasionally forage in and around the airport area.

Exotic (Introduced) Birds: A total of 16 species of exotic birds were recorded during the first field survey and 12 species during the second survey conducted for the Master Plan and EA. The most numerous of these includes the Common Myna (*Acridotheres tristis*), Japanese White-eye (*Zosterops japonicus*), House Finch (*Carpodacus mexicanus*), Zebra Dove (*Geopelia striata*) and Nutmeg Mannikin (*Lonchura punctulata*).

A complete listing of the species of birds frequenting the airport area, as well as relative abundance of each species, is given in Appendix A. It is believed that mongooses, rats and mice also inhabit the airport area. All of these species, with the exception of the axis deer, are found throughout Hawaii. The axis deer is only found on Molokai, where its primary habitat is "topside" rather than on Kalaupapa peninsula. There are no known endangered or threatened wildlife species inhabiting or frequenting the airport area.

3.2.2 Probable Impacts

Based on the avifauna and feral mammal survey conducted, it does not appear that the proposed project would significantly affect the fauna of the project areas. The proposed improvements would reduce habitat for species that rely on brush covered habitats for foraging and shelter, such as Northern Cardinal (*Cardinalis cardinalis*), and game bird species such as Gray Francolin (*Francolinus pondicerianus*), Black Francolin (*Francolinus francolinus*) and Ring-necked Pheasant (*Phaesianus colchius*). At the same time, the proposed improvements should add habitat for migrant species such as Golden Plover and, to a lesser degree, Ruddy Turnstone. No significant changes in the feral mammal population should occur as a result of the proposed project. If the airfield is completely fenced, axis deer that now reportedly wander onto the runway would be prevented from entering the runway and airport. This would result in a beneficial effect on the deer population. Records of the endemic and endangered Hawaiian Hoary Bat (*Lasiurus cinerus semotus*) are sketchy but the species likely occurs on Molokai (Tomich, 1986). Little is known of their natural history, distribution or ecological requirements. No bats were recorded during the two nights of observations for this project.

3.2.3 Mitigation Measures

Due to the lack of expected adverse impacts to the fauna of the project areas, mitigation measures are not warranted. Potential secondary impacts from airport operations can be mitigated by fencing around the airport to keep axis deer and other species off the runway, thereby improving safety margins for aircraft and protecting the wildlife.

3.2.4 Irreversible Commitments of Resources After Mitigation

No significant impacts to fauna have been identified. Other existing and future potential secondary impacts to wildlife (from runaway operations) and other safety impacts can be mitigated by fencing around the runway, as indicated above.

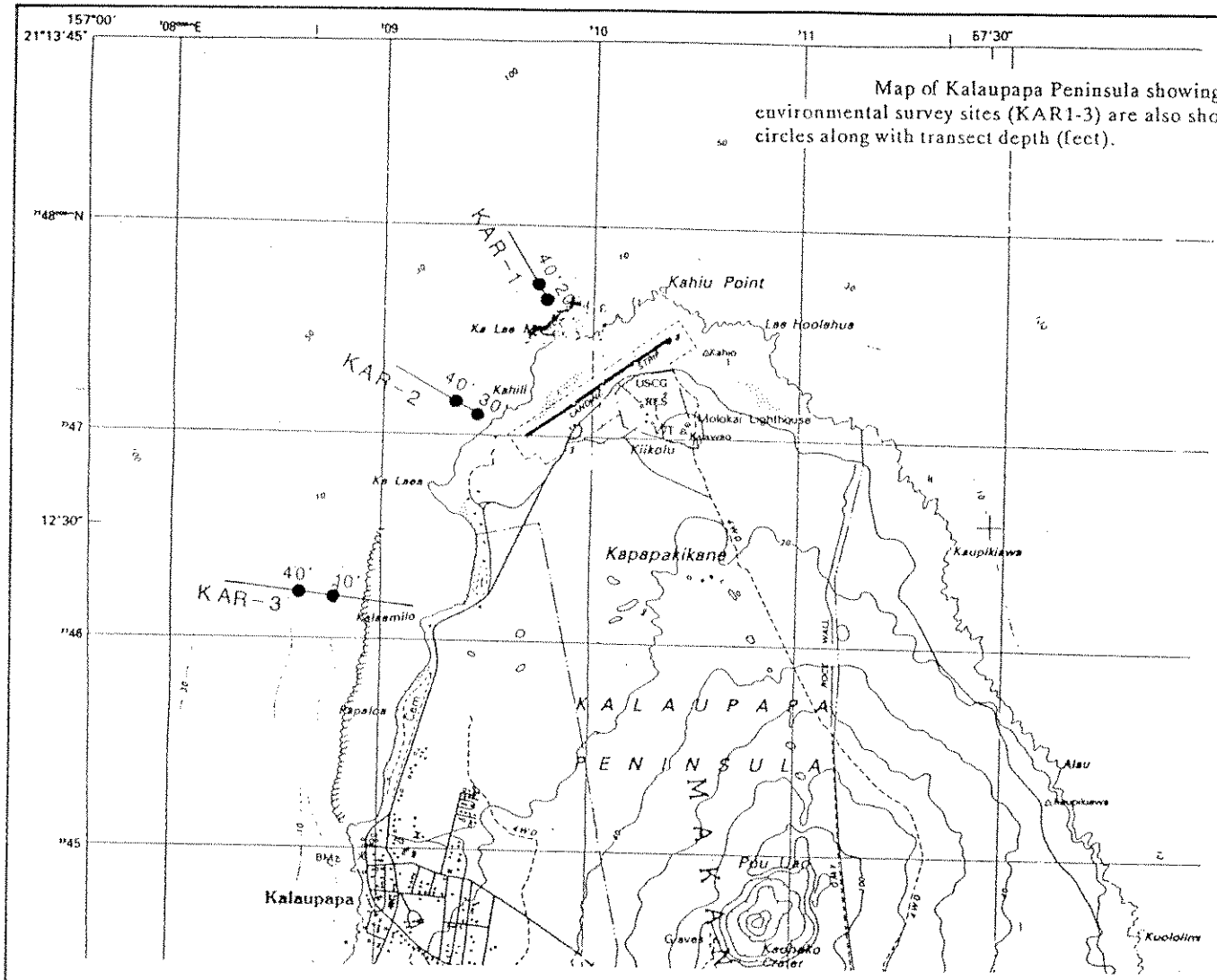
3.3 MARINE ENVIRONMENT

To evaluate the potential effects on water quality and the marine biological community structure resulting from construction of the runway extension, a baseline marine environmental survey of the Kalaupapa peninsula was conducted in July of 1989. A summary of the report, included as Appendix B, is provided below. Figure III-1 indicates the water quality sampling and marine survey stations.

3.3.1 Existing Conditions

3.3.1.1 Physical Structure

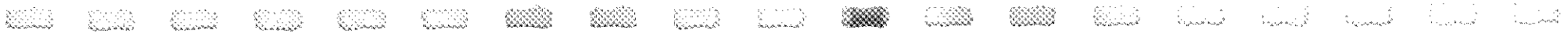
The nearshore area off the existing Kalaupapa airport runway is nearly homogeneous. A basaltic shoreline drops sharply from the shoreline in a vertical cliff face down to depths of 5-15 m. At the foot of the cliff, and extending offshore for distances of at least 500 m, and to water depths of at least 30 m, bottom topography is composed of large basaltic boulders. Interspersed in the boulders are areas of flat basaltic pavement. Surfaces of the boulders, as well as the shoreline cliff face, are relatively devoid of attached benthic organisms, owing to extreme turbulence during the months when winter storms impact the north shores of the Hawaiian Islands. The boulders form a complex of interstitial spaces that provide shelter for fish. South of the runway, the physical structure of the marine environment is somewhat different. The shoreline is composed of narrow white sand beaches, and the shoreline cliff is absent. Seaward of the shoreline there is a relatively flat basaltic platform approximately 3-5 m deep that extends approximately 200 m offshore. The platform is devoid of relief other than a scattering of small rocks. Seaward of 200 m, water depth extends to approximately 10 m and bottom topography consists of large boulders, similar to off the runway.



Map of Kalaupapa Peninsula showing location of existing runway. Locations of 3 marine environmental survey sites (KAR1-3) are also shown; locations of survey transects are shown as solid circles along with transect depth (feet).

SOURCE: MARINE RESEARCH CONSULTANTS

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	Edward K. Noda and Associates, Inc.	WATER QUALITY SAMPLING/MARINE SURVEY STATIONS	FIGURE III-1



3.3.1.2 Water Quality

Water quality parameters that were evaluated included the 10 specific criteria designated for open coastal waters in Chapter 11-54, Section 06 (Open Coastal Waters) of the Water Quality Standards, Department of Health, State of Hawaii. These criteria include: total nitrogen, nitrate + nitrite nitrogen (NO_3^- + NO_2^-), ammonia (NH_4^+), total phosphorus, Chlorophyll *a* (Chl *a*), turbidity, dissolved oxygen, temperature, pH and salinity. In addition, orthophosphate phosphorus (PO_4^{-3}) and silica (Si) were also reported because these parameters are sensitive indicators of biological activity and degree of groundwater mixing, respectively.

Table III-1 shows the results of water quality sampling off the Kalaupapa Airport. Also shown in Table III-1 are geometric means of all samples of each parameter, as well as the most stringent State of Hawaii Water Quality Standard limits. In addition, the mean values of weekly measurements collected for the past 3 years from the warm seawater intakeat the Natural Energy Laboratory of Hawaii (NELH) at Keahole Point on the Island of Hawaii, are also listed. As the waters off NELH are considered to represent pristine coastal oceanic condition, these data provide a good basis of comparison.

It can be seen that in all cases, the geometric mean of the Kalaupapa samples is below the most stringent of the Hawaii Water Quality Standards. With the exception of total dissolved nitrogen and dissolved organic nitrogen, means of parameters from the Kalaupapa samples are also below the means of NELH measurements. These comparisons indicate that at present the waters off Kalaupapa can be considered unimpacted by any extraneous inputs, and represent pristine oceanic conditions. Off the Kalaupapa runway, there is very little influence from land on water quality, and only a slight vertical stratification of salinity.

3.3.1.3 Benthic Community Structure

Coral cover is uniformly low throughout the offshore area of Kalaupapa owing to the intense forces associated with breaking waves that impact the coastline every winter season. Such wave action is sufficient in magnitude to prevent planular settlement, and growth of adult colonies. Table III-2 indicates percent coral cover, number of coral species, and species diversity for corals encountered on transects. Coral cover on all transects is

TABLE III-1

WATER QUALITY MEASUREMENTS
KALAUPAPA AIRPORT AREA

SAMPLE STATION	PO4 (µM)	NO^3 (µM)	NH^4 (µM)	SI (µM)	DOP (µM)	DON (µM)	TDP (µM)	TDN (µM)	TURB (NTU)	SAL (0/00)	CHL a (µM)	O_2 (%Sat)	pH	TEMP (°C)
1-1S	0.15	0.13	0.06	0.99	0.21	5.54	0.36	5.73	0.09	34.99	0.24	100	8.10	25.4
1-1D	0.15	0.13	0.03	0.79	0.24	6.03	0.39	6.19	0.07	35.27	0.25	102	8.09	25.4
1-2S	0.13	0.06	0.03	0.79	0.19	6.00	0.32	6.09	0.08	34.98	0.32	99	8.13	25.4
1-2D	0.14	0.06	0.06	1.58	0.22	7.83	0.36	7.95	0.10	35.21	0.25	101	8.08	25.4
2-1S	0.17	0.17	0.10	0.79	0.22	5.50	0.39	5.77	0.09	34.98	0.25	103	8.12	25.4
2-1D	0.17	0.17	0.19	0.99	0.19	7.08	0.36	7.44	0.08	35.00	0.23	101	8.11	25.3
2-2S	0.15	0.11	0.10	0.79	0.23	5.89	0.38	6.10	0.11	35.15	0.15	102	8.13	25.4
2-2D	0.14	0.11	0.06	0.59	0.20	6.46	0.34	6.63	0.09	35.09	0.21	100	8.09	25.4
3-1S	0.14	0.11	0.12	6.52	0.25	6.44	0.39	6.67	0.25	34.68	0.13	98	8.12	25.6
3-1D	0.14	0.11	0.13	2.77	0.24	6.62	0.38	6.86	0.09	35.02	0.15	99	8.13	25.4
3-2S	0.15	0.09	0.13	2.08	0.14	5.86	0.29	6.08	0.07	35.03	0.32	100	8.09	25.4
3-2D	0.13	0.06	0.19	1.38	0.18	6.28	0.31	6.53	0.10	35.03	0.50	99	8.08	25.4
GEOMETRIC MEAN	0.15	0.10	0.08	1.27	0.21	6.26	0.35	6.47	0.09	35.03	0.23	100	8.1	25.4
STATE STANDARDS		0.25	0.14				0.52	7.85	0.20		0.30			
NELH	0.16	0.20	0.36	2.98	0.24	4.34	0.40	4.90						

Legend:
S = Surface; D = Deep
NELH = Natural Energy Laboratory of Hawaii, Keahole Point, Hawaii.

extremely low, ranging from 3 percent to 6 percent. While 7 species of corals were encountered, species per transect ranged from 2 to 4, and two species (*Porites lobata* and *Pocillopora meandrina*) comprised 89 percent of all coral cover.

Other forms of benthos were extremely rare off the entire Kalaupapa area. Only two sea urchin species were observed, these were *Echinometra matheai* and *Echinostrephus aciculatus*. These urchins bore into rock surfaces, and were observed in small numbers on boulder surfaces. Other urchins that are normally found on the reef surface were not present, likely owing to the inability to withstand the turbulent motion associated with high surf conditions. Only one species of macroalgae was observed.

3.3.1.4 Reef Fish Community Structure

In contrast with the poorly developed coral community noted off the Kalaupapa Airport, the fish community was observed to be both diverse and abundant. A total of 64 species representing 17 families were observed on the 6 transects (Table 3 of Appendix B). On individual transects, the number of species noted ranged from 24 to 39 and the number of individuals ranged from 208 to 436. Both the behavior and composition of the fish community indicate that relatively little fishing pressure has been exerted on this site.

3.3.1.5 Threatened or Endangered Species

Three species of marine animals that occur in Hawaiian waters have been declared threatened or endangered. These are the threatened green sea turtle, the endangered hawksbill turtle and the endangered humpback whale. None of these species were sighted in the study area during the survey. Turtles are likely occasionally present in nearshore waters. Humpback whales, which migrate into Hawaiian waters in winter, were not expected to be seen during this summer survey.

3.3.2 Probable Impacts

3.3.2.1 Construction Impacts

No construction impacts to the marine environment are expected to occur as a result of either the roadway or harbor projects. The roadway projects are far enough removed

from the shoreline to result in no impacts. The harbor project, with the exception of minor rock removal from the barge basin, will be performed out of the water.

TABLE III-2

PERCENT REEF CORALS ON TRANSECTS IN VICINITY OF KALAUPAPA AIRPORT RUNWAY

CORAL SPECIES	TRANSECTS					
	KAR-1 20 ft	KAR-1 40 ft	KAR-2 30 ft	KAR-2 40 ft	KAR-3 10 ft	KAR-3 40 ft
Porites lobata	0.7	2.2	1.5	5.4	5.6	3.1
Pocillopora meandrina	1.5	0.5	0.9	0.2	0.3	0.6
Leptastrea purpurea	1.0					
Montipora verrucosa			0.1	0.2		
Cyphastrea ocellina					0.2	
Pavona varians					0.4	
Palythor tuberculosa	___	0.8	___	___	___	___
TOTAL CORAL COVER	3.20	3.50	2.50	5.80	6.50	3.70
SPECIES COVER DIVERSITY	1.05	0.91	0.83	0.29	0.62	0.43
SPECIES NUMBER	3	3	3	3	4	2

Implementing the proposed airport project will require the removal of solid material from behind the shoreline; it is not anticipated that there will be modification of the intertidal zone or any regions of the coastal zone. Thus, there is no potential for direct impacts from construction (i.e., removal) of organisms that inhabit the reef zones.

Potential alteration to water quality and biotic structure during construction could occur as a result of increased sedimentation and turbidity generated by on-land construction activities. These parameters may increase temporarily during the construction process, and the length of time of decreased water quality will depend on the length of the construction period. Following completion of the runway expansion, it is likely that there will be no permanent or residual effects to the marine environment as a result of airport expansion.

Increased sedimentation can have deleterious effects on corals, especially when burial occurs, but increased sedimentation does not necessarily result in negative impacts. Because sediments are suspended by natural processes in many reef environments (including Hawaii), most corals can withstand a certain level of sediment supply to the living surface, especially when the level of increase is for a short duration. Many species have the ability to remove sediment from their tissues and can nullify lethal effects of sedimentation. At the Kalaupapa site, it is expected that sediment suspension and removal by current action will prevent build-up of material on the sea floor, and allow organisms to maintain functional cleaning mechanisms.

3.3.2.2 Long-term Airport Activity

At Kalaupapa, it is expected that activities on the shoreline associated with runway expansion will have no long term impacts to water quality or biota. Results of the present survey indicate that water quality shows very little effects from land. Mixing forces are so intense owing to wind and sea conditions that materials are rapidly dispersed in the nearshore zone. Sediment created by the project would have little chance of accumulating in the water column or on the sea floor during the period of construction or afterwards.

A concern associated with excavation of the shoreline is a potential increase in incidence of toxic fish poisoning, termed ciguatera. Ciguatera is a circumtropical disease caused by the ingestion of a wide variety of coral reef fishes that contain toxins accumulated via the marine food chain. The microscopic organism implicated as the source of the

ciguatera toxin is a photosynthetic benthic dinoflagellate, *Gambierdiscus toxicus*. There is circumstantial evidence that there is a relationship between shoreline construction and ciguatera outbreaks, but a definitive cause between environmental alteration and the toxic outbreak has not been verified. As the Kalaupapa Airport Runway expansion will not involve the clearing of substrata below the water line, there is little potential for increased incidences of ciguatera poisoning caused by the development of the project.

In summary, the construction and operation of the expanded Kalaupapa airport should not result in any long-term permanent degradation of the marine environment.

3.3.3 Mitigation Measures

The July 1989 survey serves as a baseline for any required monitoring programs that may be required to meet county, state or federal permit requirements. Monitoring programs could identify any impacts to the environment resulting from the project, as well as mitigation measures to eliminate such impacts. No further mitigation is necessary beyond measures cited in Sections 2 and 3 of this chapter.

3.3.4 Level of Significance After Mitigation

Potential short-term impacts can be mitigated by measures herein. No long term impacts to the marine environment have be identified.

3.3.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the marine environment in the vicinity of the airport, roadways or harbor.

4. VISUAL ATTRIBUTES

4.1 EXISTING CONDITIONS

The existing visual character of the airport and surrounding area is one of open space and the airport runway and few associated single-story buildings with the ocean to the north

and steep pali to the south. A few of the Kalaupapa Settlement buildings can be seen to the southwest and the U.S. Coast Guard lighthouse can be seen to the northeast. Kauhako Crater is visible to the southeast. Figure III-2 A, B, C, D, E and F illustrate the present visual character of the airport and dock/harbor areas.

4.2 PROBABLE IMPACTS

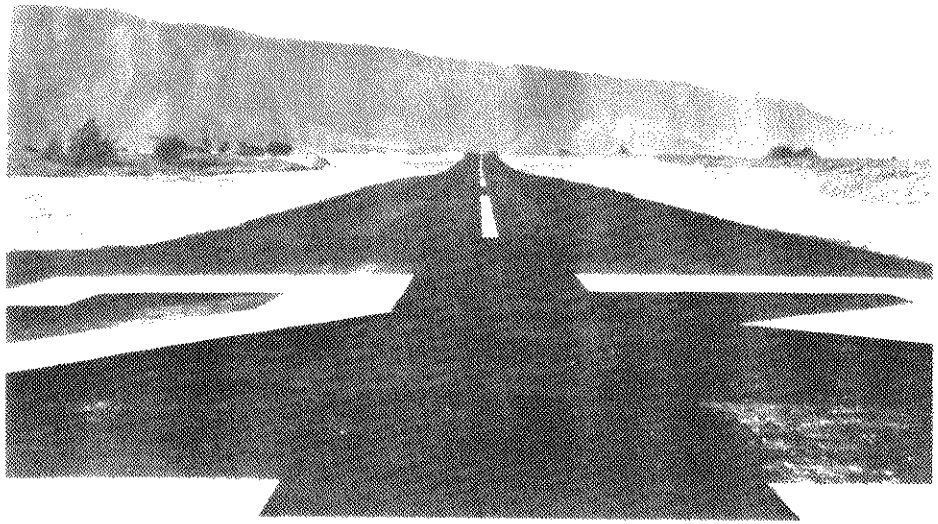
The proposed airport, roadway and harbor projects are not expected to significantly affect the present visual character of the area. It is possible that more airport area would be visible as a result of realigning the runway and/or reconstruction of ancillary buildings. Also, potential airfield lighting would be noticeable from the surrounding lands but no sensitive uses would be significantly impacted due to the airport's distance from the settlement. The lighting will only be used for emergency purposes. Further, should some type of shore protection be required to prevent rocks and sand washing onto the runway, that would be visible. In conclusion, visual impacts from the proposed project would be insignificant and/or mitigable; effects would be minor and limited to the immediate airport area, which does not contain sensitive view receptors (i.e., residences).

4.3 MITIGATION MEASURES

Site and building design plans, when reviewed, may warrant landscaped screening, fencing or other buffering mechanisms to minimize aesthetic/view impacts to surrounding and nearby lands. This determination will be made by the appropriate review agency. Similarly, airport lighting plans should be reviewed to ensure proper light screening and/or lighting direction. To maintain the existing aesthetic character of the terminal area, grassblock pavers will be used on the taxiway and apron. An asphaltic concrete or concrete walkway will be built to provide access to the aircraft apron.

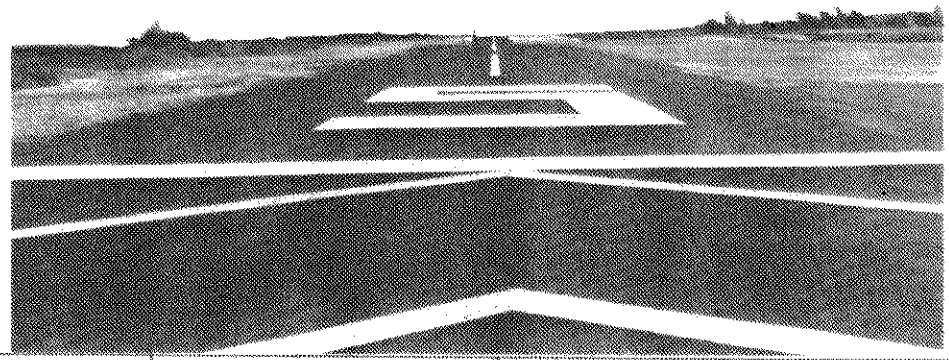
4.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of measures in this EIS will mitigate potential visual impacts to an insignificant level.

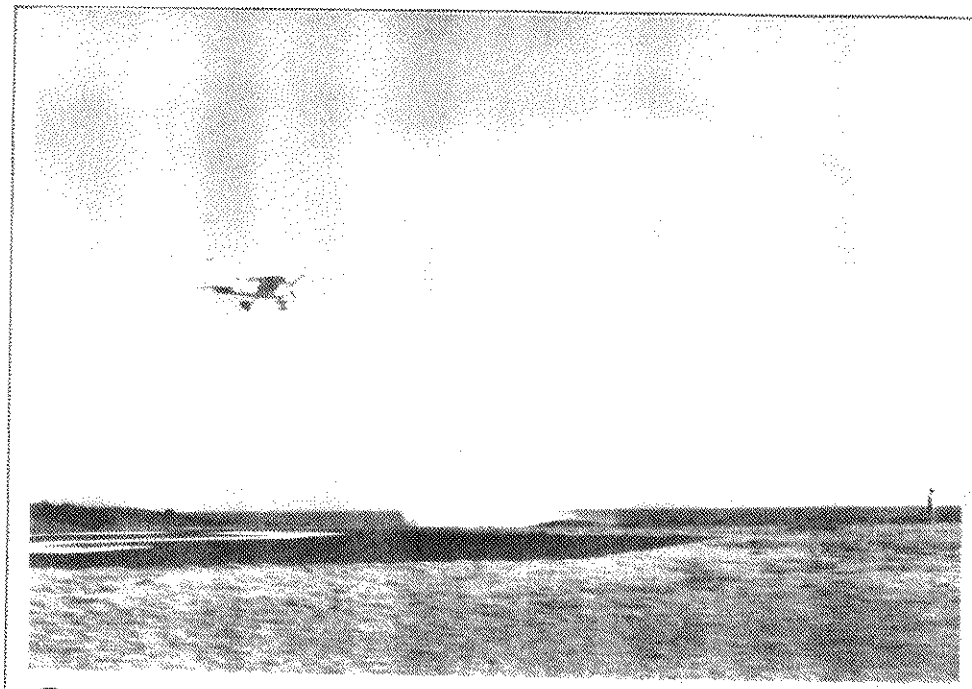


A

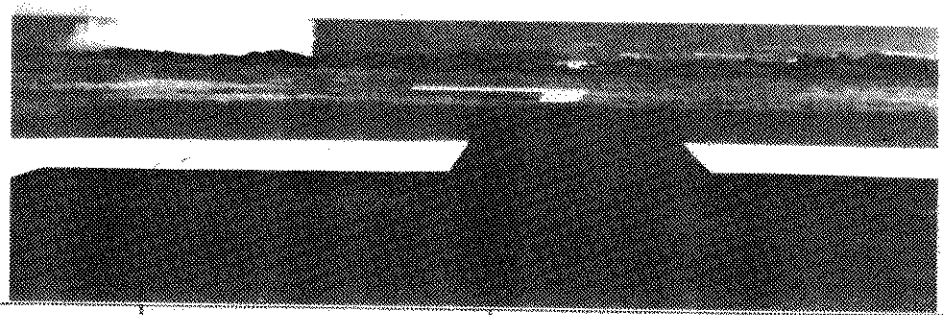
B



AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	Edward K. Noda and Associates, Inc.	VIEWS OF AIRPORT A AND B	FIGURE III-2A&B

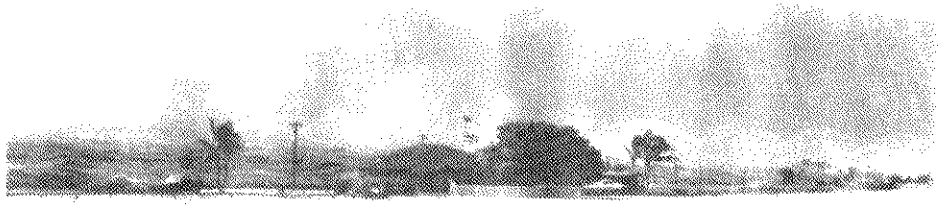


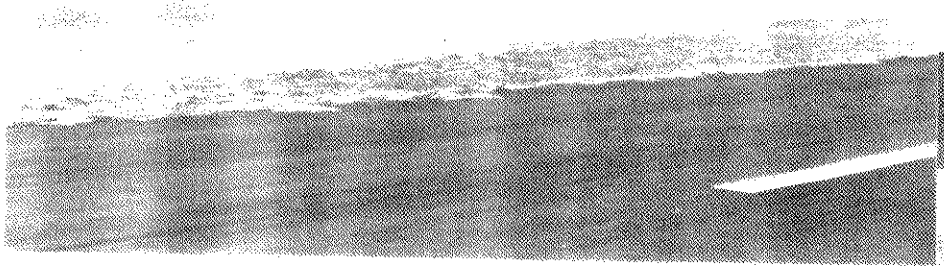
C



D

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	Edward K. Noda and Associates, Inc.	VIEWS OF AIRPORT C AND D	FIGURE III-2C&D





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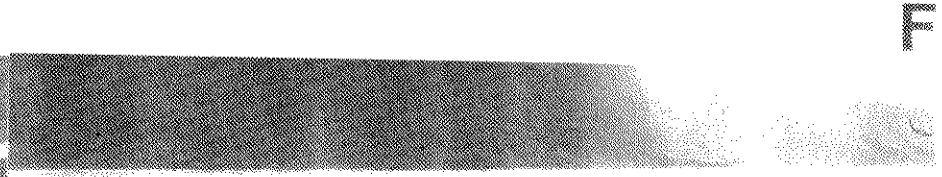

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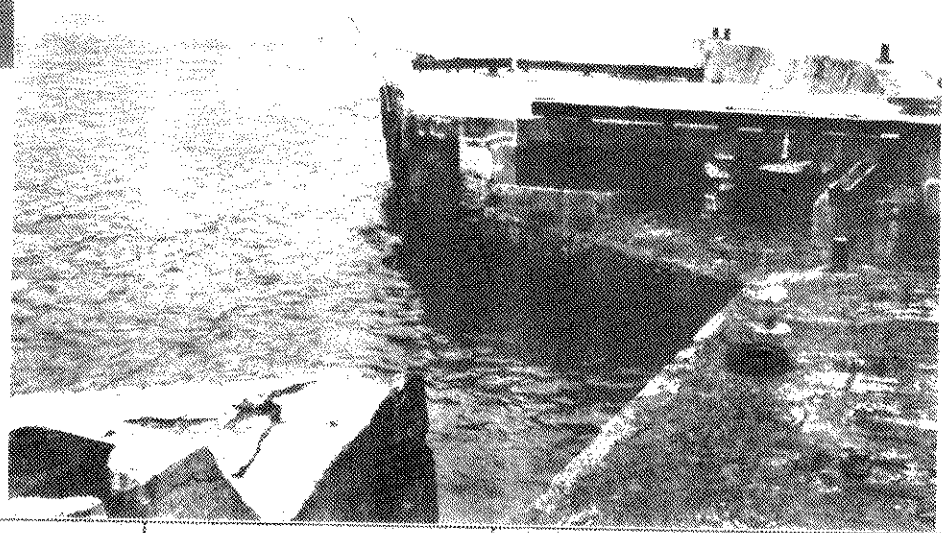

AIRPORTS DIVISION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

KALAUPAPA AIRPORT,
ROADWAYS AND WHARF IMPROVEMENTS

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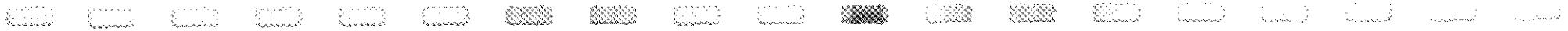
Associates, Inc.

VIEWS OF AIRPORT
AND WHARF

FIGURE
III-2E&F



4.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the visual attributes of the airport, roadways or harbor.

5. ARCHAEOLOGICAL AND HISTORICAL RESOURCES

5.1 EXISTING CONDITIONS

The entire Kalaupapa peninsula is known to be rich in archaeological and historical features. Several archaeological surveys have been conducted on the peninsula (see Barrera, 1978; Pearson, et al., 1974; Somers, G., 1985; and Somers, C., 1971). However, a significant portion of the peninsula has not been surveyed, as evidenced by the reconnaissance survey conducted for this EIS. It has been reported that the 1836 population of the peninsula was 2,700 and probably much higher in pre-contact times (Somers, G., 1985). The known archaeological remains that exist on the ground are extensive, well preserved, largely unexplored and further evidence of a large Hawaiian population. To determine the extent of archaeological features within the airport project area, a reconnaissance survey was conducted in November 1988 and a subsequent archaeological inventory survey was conducted in August 1989 (Appendix C). Both the reconnaissance and inventory surveys were conducted in compliance with the guidelines and standards established by the State Department of Land and Natural Resources Historic Preservation Program and State Historic Preservation Office (DLNR-HPP-SHPO), the National Register of Historic Places and the National Advisory Council on Historic Preservation. A total of 49 features were identified. They were organized into 40 sites: 29 in the west end of the airport project area and 11 in the east end of the airport project area. None had been recorded previously. The 49 archaeological features contain 559 architectural components. The findings of the reconnaissance and inventory surveys included a habitation complex, several shelters, large and small agricultural features, walls, animal pens and a hill-top enclosure and platform. Many of the features have multiple structural components, e.g., agricultural features associated with pens or enclosures. In general, the features are in an excellent state of preservation. No burials or religious features were identified in the project area. Twenty-three test pits totalling 11 square meters were excavated in 21 features. The archaeological features in the east end of the study area are primarily low C-shapes that were probably used for agricultural purposes. In contrast, the archaeological features in the west end are

the remains of a residential and agricultural complex. Several lines of evidence suggest that a majority of these features were used during the historic era. Figure III-3 and Figure III-4 indicate the locations of the features recorded during the inventory survey.

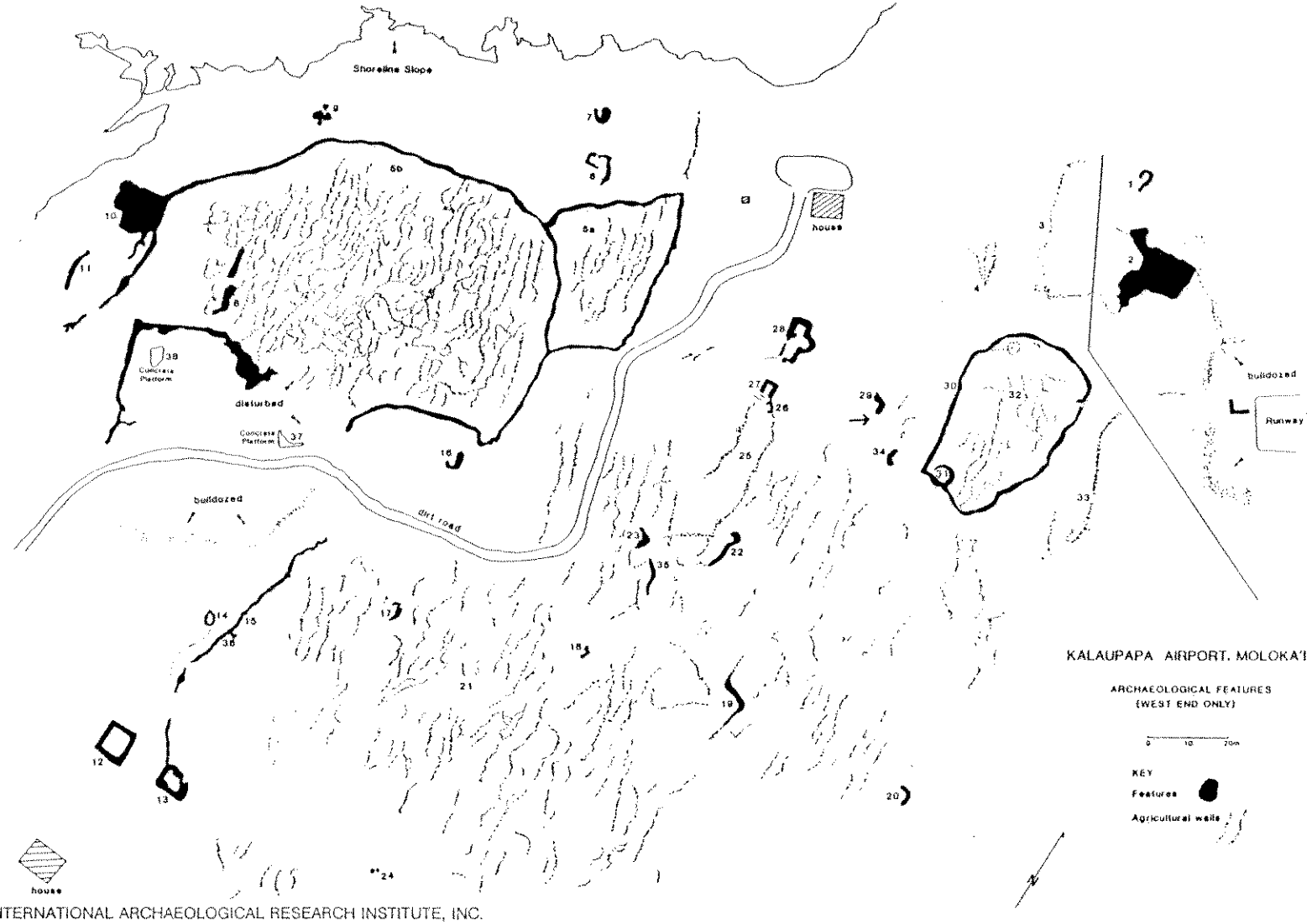
5.2 PROBABLE IMPACTS

The archaeological features in the airport study area are part of an exceptionally well preserved residential and agricultural system that appears to be distributed throughout the Kalaupapa peninsula. Although there is a lack of comprehensive archaeological data for the entire peninsula, it appears that the types of features found in the airport study area are found elsewhere on the peninsula. It is desirable to preserve as many of the archaeological features as possible. Realignment and/or extension of the present runway would require clearing and grading activities that could possibly disturb some of the known and/or unknown (surface and subsurface) archaeological features found within the project area. The pattern and density of archaeological feature occurrence in the airport area suggest that there are other features and possibly subsurface features that have not yet been found. Because the peninsula is known to have been a Hawaiian population center, it is likely that other archaeological features would be found within the proposed project boundaries.

General significance assessments and recommended treatments for all identified sites are summarized in Table III-3. Significance categories used in the site evaluation process are based on the National Register criteria for evaluation as outlined in the Code of Federal Regulations (36 CFR Part 60). The DLNR-HPP-SHPO uses these criteria for evaluating cultural resources.

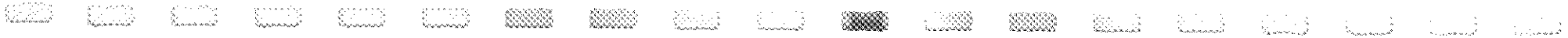
As shown in Table III-3, all 40 sites are regarded as potentially significant due to the important archaeological information which they may contain (Criterion D). A total of 32 of these sites appear to be significant only for their scientific information content and possible research value. Eight sites are deemed as excellent examples of a site type, and three of these also have cultural significance as possible prehistoric or historic shrines, or sites that are currently being used as a shrine.

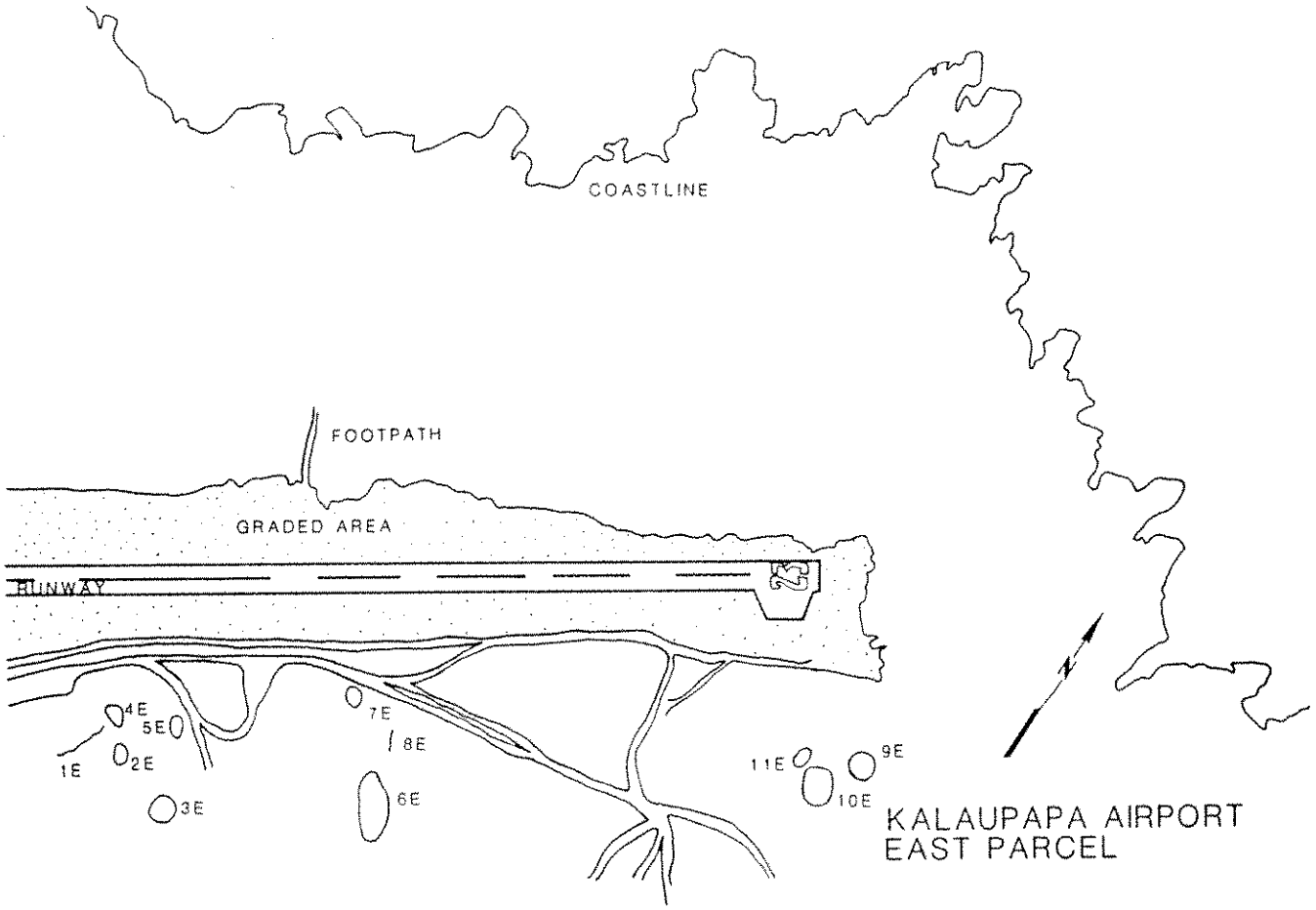
It is probable that the airport improvements will be somewhat limited and therefore mitigation of impacts necessary only for those sites directly impacted by the development. The three sites recommended for preservation will probably not be impacted by the



SOURCE: INTERNATIONAL ARCHAEOLOGICAL RESEARCH INSTITUTE, INC.

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	Edward K. Noda and Associates, Inc.	ARCHAEOLOGICAL SITES WEST END OF RUNWAY	FIGURE III-3





SOURCE: INTERNATIONAL ARCHAEOLOGICAL RESEARCH INSTITUTE, INC.

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	ARCHAEOLOGICAL SITES EAST END OF RUNWAY	FIGURE III-4

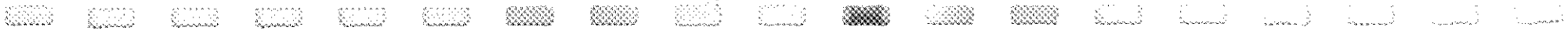


TABLE III-3

SUMMARY OF ARCHAEOLOGICAL SITE SIGNIFICANCE EVALUATIONS AND RECOMMENDED MITIGATION MEASURES

SITE NUMBER	FEATURE NUMBER	FEATURE TYPE	SIGNIFICANCE CRITERIA	MITIGATION PROCEDURE
1801	1	Shelter	D	2
	2	Residential		
	3	Boundary Enclosure		
1802	4	Agricultural	D	2
1803	5A-B	Agricultural	C D E	2 and/or 3
	8	Shelter		
	10	Residential		
1804	6	Residential	D	2
1805	7	Shelter	D	2
1806	9	Cupboards	D	2
1807	11	Shelter	D	2
1808	37	Residential	D	2
1809	38	Residential	D	2
1810	16	Shelter	D	2
1811	12	Animal Enclosure	C D E	2 and/or 3
1812	13	Possible Shrine	C D E	2 and/or 3
1813	14	Shelter	C D	2
1814	15	Boundary Alignment	C D	2
	36	Shelter		
1815	17	Shelter; Agricultural	D	2

TABLE III-3

SUMMARY OF ARCHAEOLOGICAL SITE SIGNIFICANCE EVALUATIONS AND RECOMMENDED MITIGATION MEASURES

(Continued)

SITE NUMBER	FEATURE NUMBER	FEATURE TYPE	SIGNIFICANCE CRITERIA	MITIGATION PROCEDURE
1816	18	Shelter	D	2
1817	19	Shelter; Agricultural	D	2
1818	20	Shelter	D	2
1819	21	Agricultural	C D	2
1820	22	Shelter	D	2
1821	23	Shelter	C D	2
1822	24	Shelter	D	2
1823	27	Shelter	C D	2
	26	Shelter		
	25	Agricultural		
1824	28	Residential	D	2
1825	29	Shelter	D	2
1826	30	Agricultural	D	2
	31	Shelter		
	32	Shelter		
1827	33	Shelter; Boundary	D	2
1828	34	Shelter	D	2
1829	35	Shelter	D	2

TABLE III-3

SUMMARY OF ARCHAEOLOGICAL SITE SIGNIFICANCE EVALUATIONS AND RECOMMENDED MITIGATION MEASURES

(Continued)

SITE NUMBER	FEATURE NUMBER	FEATURE TYPE	SIGNIFICANCE CRITERIA	MITIGATION PROCEDURE
1830	1E	Agricultural	D	2
1831	2E	Agricultural	D	2
1832	3E	Shelter	D	2
1833	4E	Agricultural	D	2
1834	5E	Shelter	D	2
1835	6E	Shelter; Agricultural	D	2
1836	7E	Foundation	D	2
1837	8E	Agricultural	D	2
1838	9E	Shelter	D	2
1839	10E	Shelter; Agricultural	D	2
1840	11E	Cupboard	D	2

Legend:

C = Site is an excellent example of a site type.

D = Site may be likely to yield information important in prehistory or history.

E = Site has cultural significance; probable religious structures (shrines, heiau) and/or burials present.

2 = Archaeological mitigation work needed; detailed recording and data recovery excavations.

3 = Preservation with appropriate interpretive data collection work.

development. The sites that will be impacted will require intensive investigation.

The Hawaii State Historic Preservation Officer has made the following determinations: (1) that five sites in the impact area at the west end of the runway are eligible for the National Register of Historic Places on the basis of their integrity and the information they may yield of importance to history or prehistory; (2) that the five sites will be adversely impacted by the undertaking; and (3) that the impact on the five sites may be mitigated by data recovery. Subsequently, at a meeting of all involved parties (March 7, 1991) it was agreed that only three sites, rather than five, would definitely be impacted and thus subject to data recovery, while a fourth site may be impacted.

5.3 MITIGATION MEASURES

A "Historic Preservation Mitigation Plan" has been prepared for the project and is included in Appendix C. The plan contains three elements: a data recovery plan, a burial treatment plan, and a preservation plan. The data recovery plan is a proposal to mitigate the impact of airport improvement on the three significant archaeological sites in the vicinity of the undertaking, and also addresses the fourth site that may fall within the impact zone. The data recovery plan also includes a proposal for monitoring during construction that cross-cuts the actions in the burial treatment and preservation plans.

Although there are no known human burials in the area of the undertaking, the burial treatment plan presents the procedures to be followed in the event of the discovery of previously unknown human remains or interments.

The preservation plan presents the means to protect those archaeological sites that are near the project area but will not be directly impacted by airport improvement. Protective action is proposed to ensure that significant sites outside the boundaries of the undertaking will not be inadvertently affected.

The mitigation plan will be implemented through a memorandum of agreement (MOA) among DLNR-HPP-SHPO, NPS, DOH, FAA, OHA and DOT-A.

5.4 IRREVERSIBLE COMMITMENTS OF RESOURCES AFTER MITIGATION

Implementation of the mitigation plan will result in an acceptable level of impacts to the archaeological and historical resources of the project area. The proposed airport project is a compromise layout and configuration that has been designed to miss as many archaeological sites as possible.

6. SOCIOECONOMIC ENVIRONMENT

6.1 EXISTING CONDITIONS

The existing socioeconomic characteristics of Kalaupapa generally reflect one of the primary purposes of the National Park, i.e., to serve as a home for people afflicted with Hansen's Disease. Kalaupapa Settlement has a population of approximately 150 Hansen's disease patients and workers.

The present economy of the Settlement is based mainly on activities of the Hawaii State Department of Health which operates and maintains it. In addition, the National Park Service carries on activities in the Historical Park. A maximum of one hundred visitors can be admitted to Kalaupapa each day, although, at present, the actual number is much smaller.

Approximately 70 households are located in the Settlement which has an inventory of some one hundred buildings in use. Many other buildings are located in the Settlement; some have historical value and are included in the National Register of Historic Places.

Table III-4 contains data on Hawaii's resident population for the period 1960 through 1986. It shows that the State's population has increased by 68 percent over the past 26 years, from 632,772 in 1960 to 1,062,300 in 1986. The population of Kalawao County is included in the Maui County totals. Kalawao is officially designated as a separate County but is usually considered to be a district of Maui County for statistical data purposes.

Population estimates for Kalawao County are shown in Table III-5. They indicate that the resident population has continued to decline over the past 16 years. The Kalaupapa

Settlement is the only area where the resident population lives in the County. In 1980 there were 71 households in the Settlement.

There are fewer than 100 Kalaupapa patient residents in the settlement. At present, 98 persons are eligible for residency with approximately 75 in residence. In addition, there are about 50 non-patient State Department of Health, National Park Service and non-government staff living in Kalaupapa.

The average age of the patient residents of Kalaupapa is over 60, older than for other parts of the State and reflects the choice of many former patients to live at Kalaupapa. It also reflects the fact that children of patients were removed from the Settlement, and family members of non-patient employees were usually not allowed to live at Kalaupapa. Public Law 96-565 established the Kalaupapa National Historical Park in 1980, and specifically states that Kalaupapa patients are guaranteed that they may remain at Kalaupapa as long as they wish. Many of these residents have chosen to continue to make Kalaupapa their home.

TABLE III-4

POPULATION OF THE STATE OF HAWAII
1960 TO 1989
(Numbers Rounded)

YEAR	STATE	MAUI	KAUAI	OAHU	HAWAII
1960	632,772	42,855	28,176	500,409	61,332
1970	771,600	46,500	29,800	631,600	63,800
1980	968,900	71,600	39,400	764,800	93,000
1987	1,082,500	89,900	47,600	830,600	114,400
1988	1,098,200	125,000	64,900	902,600	126,300
1989	1,112,100	N/A	N/A	N/A	N/A

N/A = Data not available.
Source: State of Hawaii, Department of Business and Economic Development, State Data Book, November 1989.

It is expected that the number of State Department of Health employee residents will decline slightly over the next 20 years while the number of National Park Service employee residents will increase.

TABLE III-5

KALAWAO COUNTY RESIDENT POPULATION
1970 TO 1988

YEAR	RESIDENT POPULATION
1970	172
1980	150
1985	147
1986	145
1988	121

Source: State of Hawaii, Department of Business and Economic Development, State Data Book, November 1989 and State of Hawaii department of Health records.

Economic activities at the Kalaupapa Settlement are limited at present. Residents are employed by such government agencies as the State Department of Health (DOH), National Park Service (NPS) and State Department of Transportation (DOT) as well as non-government agencies. The two tour operations providing escorted tours of the Settlement and Peninsula for visitors arriving by air, mule or hiking, are operated by resident patients. The Kalaupapa Store is for use only by the patients and staff.

The 1980 Act provides that, "the Secretary (of the Interior) shall provide patients a first right of refusal to provide revenue-producing visitor services, including such services as providing food, accommodations, transportation, tours, and guides."

The visitor industry could become a more significant part of the economy and employment on the Peninsula in the future. Current visitor levels are below the allowable 100 visitors per day.

6.2 PROBABLE IMPACTS

Improved airport, roadway and harbor facilities are expected to result in positive impacts to the residents of and visitors to Kalaupapa. Improved airport facilities are planned to allow more frequent and reliable air service to Kalaupapa. This will allow residents a greater flexibility in scheduling their visits to other islands than they enjoy at present. This situation is especially critical to those who go to Honolulu for medical/dental treatments, and lacks convenience for those wishing to visit family and friends on other islands. Similarly, medical services to the patients on Kalaupapa would be more reliably scheduled, thereby aiding the patients. The proposed airport improvements are also expected to result in positive economic impacts. Improved reliability of air service, along with the potential for increased air service, i.e., more daily flights, will provide increased economic opportunities for the residents of Kalaupapa. It is expected that there would be an increase in the number of tours of the facilities and historical/cultural sites on the peninsula. Such an increase, could involve participation of more of the residents as tour leaders as well as present increased opportunities for others to market their arts and crafts to the visitors. Increased numbers of visitors from the state as well as elsewhere would be benefited by a better understanding of the historical/cultural aspects of the peninsula and of Hansen's Disease.

As noted earlier, Kalaupapa National Historical Park abounds in significant cultural and natural features. A sizeable native Hawaiian population inhabited the peninsula long before it became a Hansen's Disease settlement. Except for a few early historic accounts, the only records of this occupation are the extensive, well-preserved and largely unexplored archaeological remains. Personages such as Father Damien de Veuster, Brother Joseph Dutton, and Mother Marianne Cope are known worldwide for their dedicated work with the patients at Kalaupapa. The Park is unprecedented in the NPS system because one of the primary resources are the people who were sent there against their will many years ago and are still living in the Park.

More than 400 homes, churches, monuments, hospitals, and associated structures on the peninsula recall the history of the settlements, and many of those remaining are clearly visible in the Kalaupapa Settlement. The original Kalawao Settlement was situated on the opposite side of the peninsula and only a few reminders from this settlement period remain. The best known of these is the church, first built in 1872, and later rebuilt and expanded by

Father Damien de Veuster. Visiting these sites under the guidance of residents of Kalaupapa and the National Park Service, will offer a meaningful and unique experience to an increased number of people.

Improved roadways will allow more patients to drive, walk or be wheeled around the Settlement in relative comfort. Similarly, improved harbor facilities will allow barges to tie to the wharf with fewer hazardous movements, minimize the potential for grounding and increase the safety and efficiency of cargo handling operations. Cargo off- and onloading will also be facilitated, resulting in less risk to the cargo and dock workers.

6.3 MITIGATION MEASURES

As noted above, the proposed projects are expected to result in positive socioeconomic impacts. As such, other than the current rules and regulations regarding the number of daily visitors allowed and protection and preservation of historical/cultural sites, mitigation measures to minimize potential adverse impacts are not warranted.

6.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant impacts have been identified.

6.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed projects have been designed to aid the residents and patients of Kalaupapa. As such, the proposed projects are not expected to result in any irreversible or irretrievable commitments of socioeconomic related resources.

6.6 CONSTRUCTION IMPACTS

Potential negative socioeconomic impacts may occur during the construction portion of this project. Although the construction phase is temporary, impacts to the community may persist with the influx of a large number of workers into this tiny, semi-isolated community. The potential impacts and the degree of severity will be related to the number of workers, conduct of the workers, duration of construction, and interaction with the

community. The estimated number of workers which will be on the site at one time is twenty five, and the project will require approximately 18 months to complete.

6.7 MITIGATION OF CONSTRUCTION IMPACTS

The DOT will specify to the contractor that all applicable rules and regulations must be followed. The rules, regulations, and the interaction of the workers and the community will be approved by the Kalaupapa Patients Advisory Council (KPAC), DOH, NPS, and the DOT-A. Also, within the framework of the construction documents, the contractor will set up a separate construction camp at a site approved by the KPAC, NPS, DOT-A and the DOH. The camp will be separated from the community and must minimize the disruption of community activities, including utilities, food and security.

7. TRANSPORTATION FACILITIES

7.1 EXISTING CONDITIONS

7.1.1 Air Transportation

Scheduled commercial air service to Kalaupapa peninsula is provided by Aloha Island Air and, until recently, by Air Molokai. Aloha Island Air has three daily scheduled flights into Kalaupapa from Honolulu, Kahului and Molokai Airports, with additional flights added on holidays and weekends. The de Havilland DHC-6 aircraft is used by Aloha Island Air. Air Molokai and others fly unscheduled flights to Kalaupapa. Private air service is also available on a charter basis. Historical airport activity is documented in Section 2.2 of the Airport Master Plan (March 1990), hereby incorporated by reference in this EIS. A total of 13,678 passengers enplaned and deplaned at the airport in 1988; total airport operations are estimated to be about 7,500 operations in 1988 (Tables III-6 and III-7).

Air cargo is flown into Kalaupapa by Aloha Island Air and others. These flights are important to the settlement because of the infrequent barge service (see below). Cargo volume flown into and out of Kalaupapa Airport in 1988 is estimated at over 200 tons (Airport Master Plan, Section 2.2.2). The current volume of mail of the airport (interisland) is estimated to be about 20 tons in 1988. The air cargo flights are currently scheduled during the day and deliver milk, bread, produce, newspapers, etc. daily to Kalaupapa, as well

as supplies for the DOH and general store. It is anticipated that these operations will continue to take place. Because of the unavailability of other modes of transportation (scheduled barge service comes to Kalaupapa only twice a year), equipment and other cargo are often flown in and out of Kalaupapa for replacement or repair.

At present, many flights are curtailed due to adverse cross-winds and/or heavy weather conditions. This can place hardships on resident patients and workers wishing to travel to Oahu or other islands, and visitors lacking overnight accommodations.

TABLE III-6

AVIATION DEMAND FORECASTS
KALAUPAPA AIRPORT

	AVERAGE DAILY VISITORS BY AIR				
ACTIVITY	**1988**	**50**	**100**	**200**	**300**
Passenger Total (enplaned and deplaned)	13,678	45,000	80,000	155,000	225,000
Commuter/Air Taxi	13,678	45,000	80,000	155,000	225,000
Cargo and Mail (tons) (enplaned and deplaned)	200[a]	250	300	400	500
Aircraft Operations					
Commuter/Air Taxi	5,000	8,000	11,000	16,000	23,000
General Aviation	1,500	1,500	2,000	2,500	3,000
Military	1,000	1,000	1,000	1,000	1,000
TOTAL	7,500	10,500	14,000	19,500	27,000
Based Aircraft	-0-	-0-	-0-	-0-	-0-

[a] Estimate based on discussions with air cargo operators.

Source: Airport Master Plan, E. K. Noda & Associates, March 1990.

TABLE III-7

FORECASTS OF PEAK HOUR ACTIVITY
KALAUPAPA AIRPORT

	AVERAGE DAILY VISITORS BY AIR				
ACTIVITY	**1988**	**50**	**100**	**200**	**300**
Enplaned Passengers	11	30	50	100	150
Departures					
Commuter Aircraft	2	4	5	7	11
Aircraft Operations					
Commuter/Air Taxi	4	7	9	14	22
General Aviation	2	2	2	2	0
Military	0	0	0	0	0
TOTAL	6	9	11	16	22

Source: Airport Master Plan, E. K. Noda & Associates, March 1990.

7.1.2 Water Transportation

Surface vessel (barge) service is provided twice per year, during the summer months when seas are calm enough to allow the barges to tie up to the small wharf. At times this service is also curtailed due to high sea conditions.

7.1.3 Ground Transportation

Access to Kalaupapa is also afforded by a switchback trail down the pali. The trail, over which commercial mule rides are offered, is about three miles long, beginning on private lands adjacent to Pala'au State Park topside and ending just on the outskirts of the settlement. The descent takes about one hour. Another much longer, rougher, poorly-marked, nearly impassable trail descends from the top of Waikolu Valley.

Vehicular traffic on the peninsula is limited primarily to government vehicles. There are about 35 government (federal and state) vehicles (trucks and cars) and 25 privately owned vehicles on the peninsula. There are also about six miles of paved roads and eight miles of unpaved roads.

7.2 PROBABLE IMPACTS

7.2.1 Air Transportation

The proposed project has been designed to provide the peninsula with improved airport and airport road facilities. As such, air service would be more reliable, airport safety margins would be increased and improvements to the airport road would aid transportation to the community. The Airport Master Plan describes in detail the proposed future operations. Because the proposed airport project has been designed to improve air transportation facilities at Kalaupapa, significant positive impacts are anticipated.

7.2.2 Ground and Water Transportation

Airport road improvements would be limited to the existing roadway rights-of-way. Positive and beneficial impacts are expected to result from the proposed airport, road and secondary roadway resurfacing project improvements. The proposed roadway project is expected to positively impact access within Kalaupapa Settlement. The airport road will still allow travel past the airport to the U.S. Coast Guard lighthouse and the beach areas east of the airport.

Similarly, with regard to the proposed harbor improvement project, surface vessel operations while in the Kalaupapa barge basin are expected to be positively affected by the proposed improvements. Improved airport facilities could reduce a portion of the settlement's dependence on the twice yearly barge service for some types of cargo. However, the proposed harbor project is expected to facilitate barge off- and onloading operations.

7.3 MITIGATION MEASURES

The proposed projects are expected to result in positive and beneficial impacts to Kalaupapa; no negative impacts are anticipated. Consequently, mitigation measures to minimize potential adverse impacts are not warranted.

7.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No significant adverse transportation impacts have been identified.

7.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The proposed projects have been planned and designed to improve the air, surface and sea transportation facilities of Kalaupapa. As such, these facilities will be irreversibly and irretrievably committed to the transportation requirements of Kalaupapa.

7.6 CONSTRUCTION IMPACTS

During construction, the demand on the various transportation services to, from and within Kalaupapa will increase. These impacts will be temporary and will have no significant long term effects.

7.7 MITIGATION OF CONSTRUCTION IMPACTS

To minimize the temporary impacts on the community, the contractor will be required to provide the necessary additional services to meet the increase in demands. These provisions may include additional barge service, land vehicles, and/or chartered air service.

8. CLIMATE, METEOROLOGY AND AIR QUALITY

8.1 CLIMATE AND METEOROLOGY

8.1.1 Existing Conditions

The climate of Kalaupapa is fairly typical of Hawaii's climate. Average rainfall on Kalaupapa varies from about 25 to 75 inches per year, with the December through March period being the wettest. Average temperatures on Kalaupapa range from lows of 60 degrees F to highs of about 85 degrees F. The lowest temperature recorded was 58 degrees F and the highest 95 degrees F. Surface winds are generally northeast trades with the mean wind speed being about 18 knots. Average relative humidity ranges between about 90 and 55 percent.

8.1.2 Probable Impacts

The proposed projects are not expected to impact the climate or meteorological conditions of the airport area or Kalaupapa peninsula.

8.1.3 Mitigation Measures

Due to the lack of expected impacts, mitigation measures to minimize potential adverse impacts are not warranted.

8.1.4 Level of Significance After Mitigation

No climatological impacts have been identified.

8.1.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the climate and meteorology of the airport, roadway or harbor areas.

8.2 AIR QUALITY

An air quality study for the airport project was prepared in September 1989 by Root & Neal (Appendix D). The purpose of the study is to describe existing air quality in the project area and to make a preliminary assessment of the potential short- and long-term direct and indirect air quality impacts that could result from the proposed airport improvements. Measures to mitigate potential impacts are suggested where possible and appropriate.

8.2.1 Existing Conditions

8.2.1.1 Air Quality Standards

National Ambient Air Quality Standards (AAQS) and State of Hawaii AAQS are summarized in Table III-8. AAQS have been established for six pollutants including particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone and lead. National AAQS are stated in terms of primary and secondary standards. National primary standards are designed to protect the public health with an "adequate margin of safety." National secondary standards, on the other hand, define levels of air quality necessary to protect the public welfare from "any known or anticipated adverse effects of a pollutant." Kalaupapa Peninsula is classified as a Class II area, and therefore, Prevention of Significant Deterioration (PSD) regulations are applicable.

In contrast to the national AAQS, Hawaii State AAQS are given in terms of a single standard that is designed "to protect public health and welfare and to prevent the significant deterioration of air quality." State of Hawaii AAQS are in some cases considerably more stringent than comparable national AAQS. In particular, the State of Hawaii 1-hour AAQS for carbon monoxide is four times more stringent than the comparable national limit.

8.2.1.2 Existing Air Quality

Although there are no existing air quality data for the Kalaupapa area, present air quality in the project area can be assumed to be nearly pristine due to its remote location, the lack of air pollution sources on the peninsula, and the windward location of the project

TABLE III-8

SUMMARY OF STATE OF HAWAII AND NATIONAL AMBIENT AIR QUALITY STANDARDS (AAQS)

POLLUTANT (Units)	AVERAGING TIME	MAXIMUM ALLOWABLE CONCENTRATION		
		NATIONAL PRIMARY	NATIONAL SECONDARY	STATE OF HAWAII
Suspended Particulate Matter ($\mu g/m^3$)	Annual	--	--	60[a]
	24 Hours	--	--	150[b]
Particulate Matter[c] ($\mu g/m^3$)	Annual	50	50	--
	24 Hours	150[b]	150[b]	--
Sulfur Dioxide ($\mu g/m^3$)	Annual	80	--	80
	24 Hours	365[b]	--	365[b]
	3 Hours	--	1,300[b]	1,300[b]
Nitrogen Dioxide ($\mu g/m^3$)	Annual	100	100	70
Carbon Monoxide (mg/m^3)	8 Hours	10[b]	--	5[b]
	1 Hour	40[b]	--	10[b]
Ozone ($\mu g/m^3$)	1 Hour	235[b]	235[b]	100[b]
Lead ($\mu g/m^3$)	Calendar Quarter	1.5	1.5	1.5

[a] Geometric Mean
[b] Not to be exceeded more than once per year
[c] Particles less than or equal to 10 microns aerodynamic diameter

site with respect to the northeast tradewinds. Occasional minor impacts may occur from natural, agricultural and/or vehicular sources.

The Kalaupapa airport is classified as an "indirect source" of air pollution as defined in the federal Clean Air Act of 1977 because its primary association with air pollution would be due to its inherent generation of mobile source, i.e., aircraft and motor vehicle activity. There are no state or private air quality monitoring stations in the vicinity of the project area. Given the relatively low level of aircraft and motor vehicle activity and the lack of urban development on the peninsula, there are few direct sources of air pollutants. It is probably safe to assume that the air quality of the project site presently meets all state and federal air quality standards.

8.2.2 Probable Impacts

8.2.2.1 Significance Criteria

To ascertain the significance of potential long-term direct and indirect air quality impacts of the airport project, estimates of air pollution emissions associated with the project and occurring in the project vicinity were prepared for comparison to the "significant" emission rates as defined by the State Department of Health. If emissions are below the significant levels, it is very unlikely that any significant impacts on air quality would occur. If emissions exceed the significant levels, it does not necessarily mean that there would be significant impacts, but it does suggest that a more detailed analysis is required. Significant emission rates for air pollutants are given in Table III-9.

8.2.2.2 Long-Term Impacts

Long term air quality impacts caused by airports occur from aircraft operations, motor vehicles, fuel storage and handling, and aircraft maintenance operations. At Kalaupapa, aircraft fueling and maintenance operations will not be performed. Thus, the only emissions of air pollutants will come from aircraft landing, taxiing and taking off, and from automobiles transporting visitors, supplies, and goods to and from the settlement.

Table III-9 is an emissions inventory for the Kalaupapa Airport Master Plan based on the emission factors and assumptions described above. Emission estimates are given for

TABLE III-9

AIR POLLUTION EMISSIONS INVENTORY FOR KALAUPAPA AIRPORT MASTER PLAN (TONS/YEAR)

AIR POLLUTANT/SOURCE	SIGNIFICANT EMISSION RATE (TONS/YEAR)	AVERAGE DAILY VISITORS BY AIR				
		1988	50	100	200	300[a]
Carbon Monoxide	100					
Aircraft		16.7	22.1	28.5	38.6	52.2
Automobiles		00.3	01.0	01.7	03.3	04.8
TOTAL		17.0	23.1	30.2	41.9	57.0
Nitrogen Oxides	40					
Aircraft		1.9	2.5	3.1	4.1	5.5
Automobiles		nil	0.1	0.2	0.3	0.5
TOTAL		1.9	2.6	3.3	4.4	6.0
Hydrocarbons	40					
Aircraft		8.9	12.7	16.6	23.0	32.0
Automobiles		nil	00.1	00.2	00.4	00.7
TOTAL		8.9	12.8	16.8	23.4	32.7
Sulfur Oxides	40					
Aircraft		0.3	0.5	0.6	0.8	1.2
Automobiles		nil	nil	nil	nil	nil
TOTAL		0.3	0.5	0.6	0.8	1.2
Total Suspended Particulate	25					
Aircraft		nil	nil	nil	nil	nil
Automobiles[b]		0.4	1.2	2.1	4.1	5.9
TOTAL		0.4	1.2	2.1	4.1	5.9
Particulate Matter (<10mμ)	25					
Aircraft		nil	nil	nil	nil	nil
Automobiles[b]		0.1	0.4	0.7	1.4	2.0
TOTAL		0.1	0.4	0.7	1.4	2.0

[a] Assuming 100 percent of passengers on commuter aircraft (e.g., Cessna 402, DHC-6)
[b] Fugitive Dust

each of the major (regulated) air pollutants that would be emitted including: carbon monoxide, nitrogen oxides, hydrocarbons, sulfur oxides, total suspended particulates, and particulate matter less than 10 microns diameter.

Based on aviation demand forecasts for various levels of development, both aircraft and automobile emissions in the vicinity of the airport were estimated. Aircraft emissions were estimated using U.S. EPA emission factors for civilian and military aircraft. U.S. EPA emission factors for aircraft are given in terms of pounds of air pollutant emitted per landing/takeoff cycle (see Appendix D for further aircraft emissions discussion). The EPA computer model MOBILE3 was used to estimate automobile tailpipe emissions. The MOBILE3 model, vehicle mix, and other assumptions are described in Appendix D. The proposed roadway improvements may have beneficial impacts on air quality by improving roadway driveability and reducing idling time.

To assess the significance of estimated emissions, Table III-9 also shows the state-defined significant emission rates (in tons per year) for carbon monoxide, nitrogen oxides, volatile organic compounds (hydrocarbons), sulfur dioxide and particulate matter. Comparing the significant emission rates to the estimated emissions, it can be seen that 1988 emission levels are far below the significant emission rates. Estimated emissions for 100 and 300 (worst case) daily visitor levels of development would remain well within the significant emission rates, consequently no adverse impacts are identified.

Kalaupapa Peninsula is designated a Class II air quality area. Air quality in a Class II area must comply with both the National Ambient Air Quality Standards (NAAQS) and the requirements of the federal Prevention of Significant Deterioration (PSD) regulations. Currently, among other requirements, PSD regulations set incremental limits for ambient concentrations of particulate matter and sulfur dioxide.

Currently, the State of Hawaii significant air pollution rates are set at the same levels as the PSD "*de minimus* emissions rate." Therefore, the estimated emission levels for the proposed project will achieve compliance with both NAAQS and PSD Class II increments, "*de minimus* emissions rate."

8.2.2.3 Off-Site Impacts

Occasional minor impacts may occur from natural, agricultural and/or vehicular sources. Natural sources of air pollutants which could affect the project area include the ocean (sea spray), plants (aero-allergens), wind-blown dust, and perhaps distant volcanoes on the Island of Hawaii. Dust and smoke from agricultural tilling and burning in the area may reduce air quality periodically, and tailpipe emissions as well as fugitive dust from the few automobiles in Kalaupapa may slightly affect air quality near roadways. These potential minor emissions do not represent significant air quality impacts.

8.2.2.4 Short-Term Impacts

Short-term direct and indirect impacts on air quality could potentially occur during project construction. For a project of this nature, there are two potential sources of air pollution emissions which could directly result in short-term air quality impacts during project construction: 1) fugitive dust from vehicle movement and soil excavation, and 2) exhaust emissions from on-site construction equipment.

Fugitive dust emissions may arise from grading and dirt-moving activities within the project sites. The emission rate for fugitive dust is nearly impossible to estimate accurately because of its elusive nature and because the potential for its generation varies greatly depending upon the type of soil at the construction site, the amount and type of dirt-disturbing activity taking place, the moisture content of exposed soil in work areas, and the wind speed. The EPA has provided a rough estimate for uncontrolled fugitive dust emissions from construction activity of 1.2 tons per acre per month under conditions of "medium" activity. Uncontrolled fugitive dust emissions in the project area would probably be somewhere near this level. State of Hawaii Air Pollution Control Regulations require that visible emissions of fugitive dust from construction activity be essentially nil. Adherence to those regulations as recommended in Section 8.2.3 will serve to mitigate any potentially significant short-term fugitive dust air quality impacts.

On-site mobile and stationary construction equipment will also emit some air pollutants in the form of engine exhausts. The largest of this equipment is usually diesel-powered. Nitrogen oxides emissions from diesel engines can be relatively high compared to gasoline-powered equipment, but the standard for nitrogen dioxide is set on

an annual basis and is not likely to be violated by short-term construction equipment emissions. Carbon monoxide emission from diesel engines, on the other hand, are very low and should be relatively insignificant. Adherence to the below measures can mitigate these impacts to an insignificant level.

8.2.3 Mitigation Measures

8.2.3.1 Long-Term Emissions

Long-term air quality impacts caused by aircraft and automobile traffic associated with the proposed project would be well within the State-defined significant emission rates. It is therefore unlikely that any significant long-term air quality impacts would occur, thus mitigation measures are unnecessary.

8.2.3.2 Short-Term Emissions

Short-term air quality impacts are foreseen as a result of project construction, creating fugitive dust emissions from site grading and other construction activities, and fumes emitted from gasoline and diesel-powered construction equipment. Short-term emissions can be minimized by the following:

- Use of a frequent watering program to limit bare-dirt surfaces from becoming significant dust generators;
- Requirements that all open-bodied trucks be covered when transporting dirt or dust producing materials;
- The paving of parking areas and the establishment of landscaping early in the construction process to limit areas of possible dust production.

8.2.4 Level of Significance After Mitigation

Emissions from aircraft and automobile traffic associated with the proposed project after it is fully developed would be insignificant, well within the state-defined significant emission rates. Thus, long-term air quality impacts would not be significant. Short-term impacts can be adequately mitigated to an insignificant level by the above measures.

8.2.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the air quality of the airport, roadway or harbor areas.

9. NOISE

A noise measurement and impact assessment study was conducted for the airport project by Darby & Associates in February 1989 (Appendix E). The report is summarized below.

9.1 EXISTING CONDITIONS

At present, the residents within Kalaupapa settlement experience sounds primarily generated by surf, wind in foliage and birds. Traffic movement and resulting noise are minimal. Ambient sound measurements, taken within the settlement (Wilcox House) during a relatively high wind condition (15 to 20 knots) indicate a Day-Night Average Sound Level (Ldn) of 64.8 dB. Sound levels in noise sensitive areas outside of the settlement indicate ambient sound levels of between 47 and 52 dB(A). Table III-10 and Table III-11 document existing noise levels. Figure III-5 and Figure III-6 indicate the noise measurement positions.

Aircraft generated sounds within the settlement, either from flyovers of the peninsula and/or operations at the airport, are generally not audible. Nighttime military helicopter operations at Kalaupapa reportedly do annoy residents due to their high noise levels and time of operation. Aircraft noise events currently being experienced at Kalaupapa Peninsula are: flight operations at Kalaupapa Airport and other aircraft flights over, or near, the peninsula. Extensive noise measurements of these activities were performed over a three-day period, and the results are presented in Appendix E.

Noise measurements of 36 aircraft operations at Kalaupapa Airport were obtained in the vicinity of the airport. A summary of the results including SEL and Lmax is provided in Table III-11. The results indicate that the aircraft operations at the airport cause significant impacts at locations in the vicinity of the airport. Since no sensitive noise receptors (i.e. residences, schools) exist in that vicinity (open space), airport noise is not

considered significant in the affected area. Noise measurements indicated that no significant impact occurred at locations within the town of Kalaupapa.

Also measured were 37 aircraft flyovers at various noise sensitive locations throughout Kalaupapa Peninsula. Except for occasional low-level flying general aviation aircraft and helicopters circling the peninsula, the aircraft flyovers are not considered to have any significant impact at Kalaupapa Peninsula. A summary of the results is provided in Table III-12.

9.2 PROBABLE IMPACTS

The results of the noise measurements indicate that, although aircraft operations do cause significant noise impacts in the vicinity of the airport and will continue to in the future, there are no significant impacts within Kalaupapa settlement. Also, no noise sensitive land uses exist in the noise-impacted area. Additionally, except for occasional low-level flying general aviation aircraft and helicopters circling the peninsula, the aircraft flyovers are not considered to have any significant impact at Kalaupapa. Increased aircraft operations which would be made possible by the project are not expected to significantly increase or affect existing ambient noise levels within Kalaupapa settlement. Consequently, no significant long-term noise impacts are identified. However, noise impacts associated with isolated nighttime emergency flights will occur. These are unavoidable, but should be infrequent. Given the nature of these circumstances, community acceptance is likely.

Short-term noise increases will be experienced in the immediate vicinity of the airport due to construction activity. These noises do not constitute a significant impact due to their minor, temporary nature and the lack of noise sensitive land uses in the affected area. Nevertheless, construction will be limited to daytime hours.

9.3 MITIGATION MEASURES

Because of the lack of expected adverse impacts resulting from the proposed projects on the noise environment, measures to minimize potential long-term adverse impacts are not warranted. To mitigate potential short-term construction noise impacts, construction activities will be limited to daytime hours.

9.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Long-term noise due to airport operations will not cause significant impacts to the noise environment in Kalaupapa. Short-term construction noise can be mitigated to a level below significance by the above measure.

TABLE III-10

SUMMARY OF AMBIENT ACOUSTICAL ENVIRONMENT MEASUREMENTS KALAUPAPA, MOLOKAI

POSITION NUMBER[a]	SOUND SOURCE	A-WEIGHTED SOUND LEVEL Db(A)	WIND CONDITION
5	Wind in foliage, surf, birds	50 - 64	NE, 15 to 20 kts
5	Wind in foliage, surf, birds	40 to 58	NE, 1 to 5 kts
6	Wind in foliage, birds	34 to 44	NE, 1 to 5 kts
7	Wind in foliage, birds	34 to 44	NE, 1 to 5 kts
8	Wind in foliage, birds	34 to 46	NE, 1 to 5 kts
8	Distant automobile	48 to 56	NE, 1 to 5 kts
9	Wind in foliage, birds	40 to 48	NE, 1 to 5 kts

[a] See Figures III-5 and III-6 for locations of measurement positions.

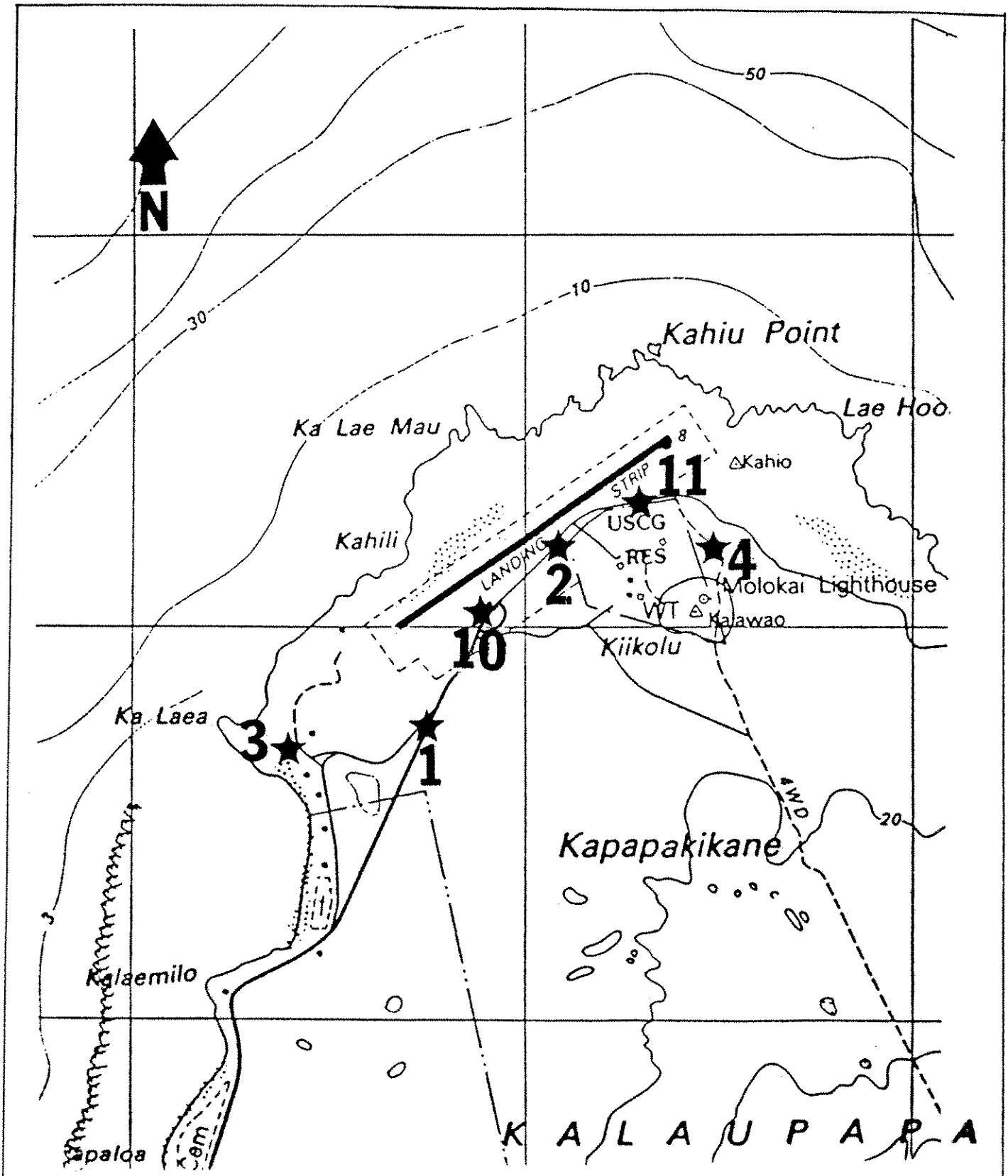
Source: Darby & Associates, 1989. Noise Measurement and Impact Assessment, Kalaupapa, Molokai, Hawaii.

TABLE III-11

SUMMARY OF THE RESULTS OF NOISE MEASUREMENTS OF AIRCRAFT OPERATIONS AT KALAUPAPA AIRPORT

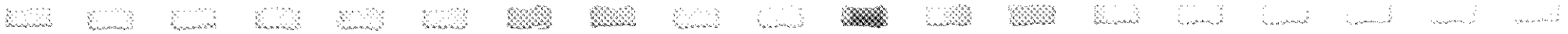
AIRCRAFT TYPE	FLIGHT PATTERN	POSITION NUMBER[a]	SEL dB(A)	Lmax dB(A)	NUMBER OF SAMPLES
Cessna 402	Takeoff	2	Avg. 94.4 High 95.9 Low 92.1	Avg. 90.9 High 92.8 Low 89.0	10
Cessna 402	Takeoff	4	Avg. 82.7 High 85.3 Low 77.4	Avg. 76.7 High 79.5 Low 71.8	9
Cessna 402	Takeoff	11	96.2	87.8	1
Cessna 402	Landing	1	75.8	70.0	1
Cessna 402	Landing	3	Avg. 85.5 High 88.0 Low 78.3	Avg. 79.8 High 82.8 Low 71.8	8
DHC-6	Takeoff	2	Avg. 98.0 High 100.3 Low 96.1	Avg. 94.2 High 97.0 Low 90.5	5
DHC-6	Takeoff	4	Avg. 90.5 High 91.4 Low 89.4	Avg. 84.1 High 84.3 Low 83.5	4
DHC-6	Landing	1	75.6	68.8	1
DHC-6	Landing	3	Avg. 84.7 High 85.3 Low 84.1	Avg. 77.8 High 78.8 Low 77.0	3
DHC-6	Landing	10	92.8	85.0	1
Single Prop.	Takeoff	2	Avg. 88.6 High 90.1 Low 85.0	Avg. 84.4 High 86.0 Low 79.8	4

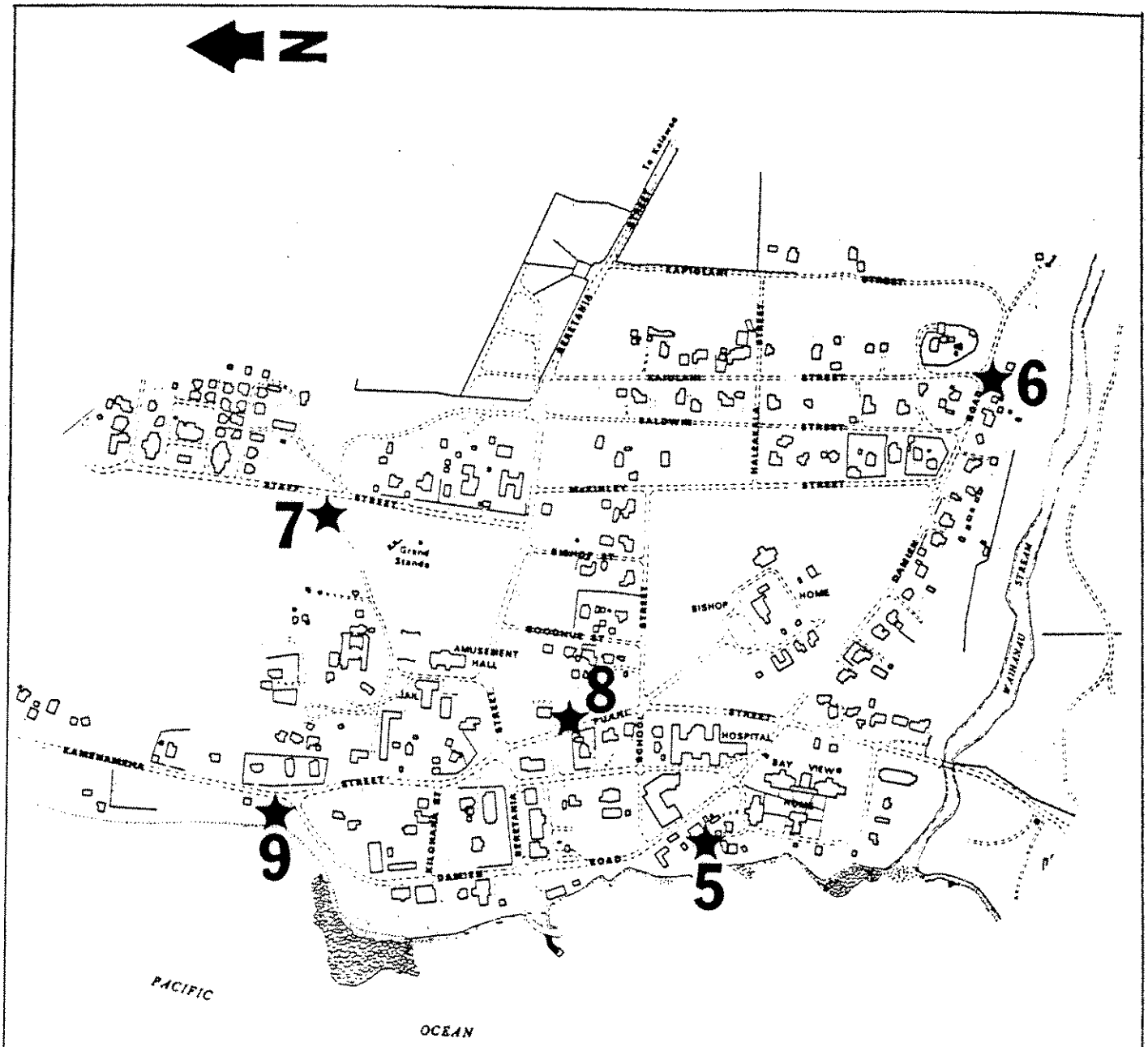
[a] See Figures III-5 and III-6 for locations of measurement positions.



SOURCE: DARBY & ASSOCIATES

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	NOISE MONITORING STATIONS - AIRPORT AREA	FIGURE III-5





SOURCE: DARBY & ASSOCIATES

AIRPORTS DIVISION DEPARTMENT OF TRANSPORTATION STATE OF HAWAII	KALAUPAPA AIRPORT, ROADWAYS AND WHARF IMPROVEMENTS	NOISE MONITORING STATIONS - WITHIN KALUAPAPA SETTLEMENT	FIGURE III-6

TABLE III-12

SUMMARY OF THE RESULTS OF MEASURABLE AIRCRAFT FLYOVERS AT KALAUPAPA AIRPORT

AIRCRAFT TYPE	FLIGHT PATTERN[a]	POSITION NUMBER[b]	SEL dB(A)	Lmax dB(A)	NUMBER OF SAMPLES
DHC-6	Over, C	2	65.7	56.0	1
DHC-6	Over, A	5	71.6	61.3	1
DHC-7	Over, B	2	64.0	54.0	1
DHC-7	Over, B	4	72.7	63.5	1
General Aviation	Circling	4	68.0	62.0	1
General Aviation	Over, C	4	59.0	59.0	1
General Aviation	Over, D	5	75.1	66.3	1
Helicopter	Circling	3	Avg. 78.4 High 81.6 Low 65.3	Avg. 66.8 High 68.8 Low 55.8	3
Helicopter	Circling	4	80.8	66.7	1

[a] See Figure 5, Appendix E for flight pattern description

[b] See Figures III-5 and III-6 for locations of measurement positions.

Source: Darby & Associates, 1989. Noise Measurement and Impact Assessment, Kalaupapa, Molokai, Hawaii.

9.5 IRRETRIEVABLE AND IRREVERSIBLE COMMITMENTS OF RESOURCES

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the noise quality of the airport, roadway or harbor areas.

10. UTILITY SYSTEMS

10.1 WATER SUPPLY

10.1.1 Existing Conditions

The existing Kalaupapa water system, supplied by the NPS, consists of one 575-foot deep well, two concrete water storage tanks with a total storage capacity of 172,000 gallons and associated distribution lines. The average daily consumption is 110,000 gallons. Consequently, with the existing storage limitations, water must be pumped daily. There have been instances in the past when water rationing was required due to electrical and/or mechanical failures. The National Park Service has plans to expand the reservoir capacity to 350,000 gallons. The water system, operated by the NPS since 1986, serves Kalaupapa settlement and the government lighthouse. A 6-inch diameter main carries water to the settlement. A 2-inch diameter pipe runs along the mountain side of the access road to Airport property. The existing storage tanks are in need of repair and the water line is subject to damage by high waves and falling rocks (U.S. Department of Interior/National Park Service, 1980). Waikolu Stream diversion was used for emergency backup, but is no longer operational. A new water line is in the design stage of development.

10.1.2 Probable Impacts

The proposed projects are not expected to directly affect the peninsula water system. However, should the number of visitors increase to the allowable 100 visitors per day as a result of improved air service, there could be higher demands on the water system and a resulting increased water consumption. Although an increase in the number of visitors per day is possible, it is expected that the proposed improvements to the water system, as described above, would handle increased demands on the system. Consequently, no significant water supply impacts are anticipated.

10.1.3 Mitigation Measures

As noted, the proposed projects are not expected to directly impact the Kalaupapa water system. As such, mitigation measures to minimize adverse impacts are not warranted. Proposed improvements to the water system by the National Park Service are expected to improve the reliability of the existing system, as well as accommodate potential increased consumption that might result from improved air service.

10.1.4 Level of Significance After Mitigation

No impacts have been identified.

10.1.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the water supply system of Kalaupapa above that which would occur without the projects.

10.2 WASTEWATER TREATMENT AND DISPOSAL

10.2.1 Existing Conditions

The Airport is served by a cesspool located on the ocean side of the access road in proximity to the passenger terminal building. Sewage percolates into the sandy subsoil. The existing wastewater system at Kalaupapa consists of over 300 cesspools. These systems appear to be operating efficiently and no problems have been reported in the recent past. It is expected that septic tanks will continue to be used for wastewater treatment and disposal. In compliance with State Department of Health regulations, the use of cesspools after January 1990 will not be an acceptable method of disposing of wastewaters.

10.2.2 Probable Impacts

The proposed projects are not expected to affect the present wastewater treatment and disposal system. The present airport terminal building, which is listed on the National Register of Historic Sites, will continue to be served by the present cesspool system. Since

the project does not propose an increase in passengers over that allowed and planned for, no new sewage systems are planned. Should the present system require improvement in the future, those impacts would be assessed at that time.

10.2.3 Mitigation Measures

Because of the lack of expected impacts, mitigation measures to minimize adverse impacts are not warranted.

10.2.4 Level of Significance After Mitigation

No impacts have been identified.

10.2.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the wastewater system of Kalaupapa above that which would occur without the projects.

10.3 SOLID WASTE DISPOSAL

10.3.1 Existing Conditions

Solid waste generated at Kalaupapa is collected by state workers and disposed of at a sanitary landfill on the peninsula. Although the total quantity of waste collected and disposed of annually is not known, the National Park Service has estimated (U.S. Department of Interior/National Park Service, 1987) that approximately 3,000 cans per year are disposed of in the landfill.

10.3.2 Probable Impacts

The proposed projects are not expected to significantly affect either the present solid waste collection or disposal system. It is possible that with improved air service as a result of an improved airport, there could be a slight increase in the quantity of waste collected

at the airport. The increase would not inhibit the capability to collect or dispose of solid waste of the airport, thus no significant impacts are anticipated.

10.3.3 Mitigation Measures

Due to the lack of expected significant impacts on the solid waste collection and disposal system, mitigation measures to minimize potential adverse impacts are not warranted. The construction contractor will be required to collect and dispose of any construction rubbish and debris at an acceptable and approved landfill site, probably located on an island other than Molokai. Solid wastes generated during the construction activities would be collected and disposed of in compliance with the federal Solid Waste Disposal Act and the Resource Conservation and Recovery Act.

10.3.4 Level of Significance After Mitigation

No impacts have been identified.

10.3.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the solid waste disposal system of Kalaupapa above that which would occur without the projects. As noted previously, the contractor will be required to dispose of his own solid waste in compliance with appropriate federal, state and county rules and regulations.

10.4 ELECTRICAL POWER, GAS AND COMMUNICATIONS

10.4.1 Existing Conditions

Electrical power on Kalaupapa is provided by Molokai Electric Company and the State Department of Health. Primary electrical service to the peninsula is provided via Molokai Electric Company transmission lines from "topside" of the peninsula. Overhead transmission lines (4.16kv) carry power down the pali to the settlement and then along the access road to the Airport. Emergency power for the water system is provided by two 90 kw diesel generators located at the water well. These generators provide power for the

water pump only. The settlement has one 25 kilowatt (kw) emergency generator that serves the hospital and a second 75 kw generator is planned to serve the staff area.

Telephone communications to Kalaupapa are provided by Hawaiian Telephone Company via telephone lines from the topside of the peninsula near Kaunakakai, extending to the settlement and Airport on common overhead poles. The electrical power and communications systems are adequate to serve existing and future conditions.

10.4.2 Probable Impacts

The proposed projects are not expected to significantly impact the existing electrical power or communications systems. Existing Molokai Electric transmission and distribution lines are adequate to provide additional power to the airport for runway lighting. Additionally, an emergency generator would be located at the airport for airfield lighting. Increased telecommunications could be accommodated by the existing Hawaiian Telephone Company system.

10.4.3 Mitigation Measures

Because of the lack of expected significant impacts to the electrical power and communications systems, mitigation measures to minimize potential adverse impacts are not warranted.

10.4.4 Level of Significance After Mitigation

No impacts have been identified.

10.4.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the electrical power, gas and/or communication systems of Kalaupapa above that which would occur without the projects.

11. PUBLIC SERVICES

11.1 POLICE/FIRE PROTECTION

11.1.1 Existing Conditions

Police and fire protection services are provided by the state and National Park Service. The State Department of Health provides police services through an appointed Sheriff and all law enforcement services are provided by the state. The Sheriff is appointed by the Kalaupapa Patient Advisory Council, and is the only full-time law enforcement officer within Kalaupapa. The Sheriff has the legal authority to appoint and deputize as many officers as necessary. The National Park Service does not have any authority to enforce laws, rules and regulations throughout most of the park. Fire protection is provided by one National Park Service fire engine and one state (Department of Health) fire engine. Also, a surplused airport fire truck serves as a backup unit. By law and cooperative agreements, the National Park Service is obligated to protect park resources from deterioration and destruction from fire and other causes, however, Kalaupapa has a volunteer fire department on which patients, resident workers and resident NPS staff serve. Park management also assists the state in obtaining fire protection equipment and training. One small truck equipped with fire fighting equipment is assigned to the airport. Fire extinguishers, in compliance with applicable FAA regulations, are also located at the airport.

11.1.2 Probable Impacts

The proposed airport, roadway and harbor improvements are not expected to significantly affect the present police and fire protection services available at Kalaupapa. The improvements could aid the area's fire fighting and emergency capabilities. The proposed airport improvements could include upgrading the present airport fire fighting equipment and improved roadways would facilitate the movement of fire fighting equipment.

11.1.3 Mitigation Measures

Because of the lack of expected impacts to the police and fire protection services, mitigation measures to minimize potential adverse impacts are not warranted.

11.1.4 Level of Significance After Mitigation

No impacts are identified.

11.1.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the public services of Kalaupapa above that which would occur without the projects.

11.2 HEALTH CARE

11.2.1 Existing Conditions

Health care at Kalaupapa is provided by the State Department of Health. Given that Kalaupapa exists for the treatment of Hansen's Disease, the health care facilities are in excellent condition and are staffed by professional health care specialists. Laws pertaining to institutionalized Hansen's Disease patients state that "all such persons shall be cared for as well as circumstances permit." This has been interpreted to mean all medical care needed for all diseases, whether Hansen's Disease related or not. The staff consists of a Chief Doctor who is assisted by seven registered professional nurses, two licensed practical nurses, a medical technologist, para-medical assistant, occupational therapist and one clerk/stenographer. The staff provides routine outpatient medical and nursing services. Around the clock nursing services are available. For conditions requiring hospitalization, patients are sent to Honolulu. All medical costs are paid for by the Leprosy Program. The original hospital, constructed in 1932, burned down in 1990, and has recently been replaced by a new infirmary. Dental services are provided occasionally from visiting dentists assigned by the State Department of Health. Due to the infrequency of this service, some Kalaupapa residents choose to have their dental work done at their own expense in Honolulu.

11.2.2 Probable Impacts

The proposed projects are expected to have a positive impact on the health care capabilities of Kalaupapa. Improved airport facilities would allow health care supplies to be more reliably shipped into the peninsula and would ensure reliable medical evacuation

services. Night medical evacuation capability is one of the objectives of the proposed airport improvement program. Similarly, improved roadways would facilitate the movement of the patients from their residences to the airport or to health care facilities within the Settlement.

11.2.3 Mitigation Measures

Because the proposed projects are expected to result in positive impacts to the health care capabilities of Kalaupapa, no mitigation measures are warranted.

11.2.4 Level of Significance After Mitigation

No impacts have been identified.

11.2.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the health care services of Kalaupapa above that which would occur without the projects.

11.3 SCHOOLS AND LIBRARIES

11.3.1 Existing Conditions

There are no schools at Kalaupapa but there is a library for patient and residents' use. The State Department of Health does provide instructors for various subjects and crafts and volunteers from other islands provide additional educational services.

11.3.2 Probable Impacts

The proposed airport improvement project is expected to provide positive indirect impacts on the educational services available to the residents of Kalaupapa. Improved airport conditions will allow more reliable air service to be available, resulting in the opportunity for increased visits by craft and other instructors.

11.3.3 Mitigation Measures

As noted above, the proposed airport project is expected to result in positive impacts to the educational opportunities available to the residents of Kalaupapa. As such, mitigation measures to minimize potential adverse impacts are not warranted.

11.3.4 Level of Significance After Mitigation

No impacts have been identified.

11.3.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the schools and library services of Kalaupapa above that which would occur without the projects.

11.4 RECREATIONAL FACILITIES

11.4.1 Existing Conditions

Recreational facilities and opportunities at Kalaupapa consist of a playfield complete with baseball field and bleachers, the dock area and other shoreline areas within the Settlement that are used for fishing and the remainder of the peninsula shoreline which is used for fishing, gathering, sunbathing and swimming. Other recreational opportunities consist of board games, "talking story," gardening, walking and hunting.

11.4.2 Probable Impacts

The proposed projects will not create additional recreational demands beyond what currently exists. However, resurfacing of the roadways will improve and facilitate patient and resident movement to favorite fishing spots and walking along the roadways. Consequently, positive impacts are anticipated.

11.4.3 Mitigation Measures

The roadway resurfacing project is a mitigation measure to alleviate present poor walking conditions on the roadways and will facilitate general movement within the Settlement.

11.4.4 Level of Significance After Mitigation

Because the proposed roadway resurfacing project is partly designed to facilitate movement within the Settlement, significant positive impacts are expected.

11.4.5 Irreversible and Irretrievable Commitments of Resources

The proposed projects are not expected to result in any irreversible or irretrievable commitments of resources relative to the recreational facilities and opportunities of Kalaupapa above that which would occur without the projects.

11.5 CONSTRUCTION IMPACTS

The influx of construction workers to this community may cause an increased demand on the public services of the community. Police and health care may be directly impacted, but these impacts will be temporary. During harbor construction, fishing at the harbor will not be permitted for reasons of safety and efficiency.

11.6 MITIGATION OF CONSTRUCTION IMPACTS

To minimize the impacts on public services, the contractor will be required to provide a security and fire-fighting capability. Also, arrangements must be made for the possibility of medical emergencies, as the existing hospital may not have the appropriate manpower or facilities to adequately treat construction related injuries. The impact on recreational facilities will be minimized by imposition of a set of rules of conduct for the workers. These rules will be approved by KPAC, NPS, DOT-A and the DOH.

12. LAND USE PLANS, POLICIES AND CONTROLS FOR THE AFFECTED AREA

12.1 INTRODUCTION/EXISTING CONDITIONS

The following identifies the major land use plans, policies and controls applicable to the Kalaupapa peninsula in general and specifically to Kalaupapa Settlement.

12.1.1 Background

Kalaupapa National Historical Park was established by Public Law (P.L.) 96-565, enacted on December 22, 1980. The following principal purposes of the park are stated in the act:

- to preserve and interpret the Kalaupapa settlement for education and inspiration of present and future generations;
- to provide a well-maintained community in which the Kalaupapa leprosy patients are guaranteed that they may remain at Kalaupapa as long as they wish; to protect the current lifestyle of these patients and their individual privacy; to research, preserve and maintain the present character of the community; to research, preserve and maintain important historic structures, traditional Hawaiian sites, cultural values and natural features; and to provide for limited visitation by the general public; and
- to provide that the preservation and interpretation of the settlement be managed and performed by patients and Native Hawaiians to the extent practical and that training opportunities be provided such persons in management and interpretation of the settlement's cultural, historical, educational and scenic resources.

The Act (P.L. 96-565) defined the boundary of Kalaupapa National Historical Park as all of Kalawao County and a few adjacent parcels and about 2,000 acres of submerged lands and waters extending one-quarter mile offshore. The Act also authorized and directed the Secretary of Interior to enter into cooperative agreements with owners of property within the park for the protection, maintenance, construction, improvement and interpretation of the sites, facilities and resources of the park. Since its establishment in 1866 as a place for the treatment and care of persons afflicted with Hansen's Disease, a

considerable body of law has evolved specific to Kalawao County. Of particular relevance to the management and operation of Kalaupapa National Historic Park is the following:

> The Director of the State Department of Health is responsible for the complete governance of Kalawao County and may adopt such rules and regulations considered necessary, as prescribed by the Hawaii Administrative Procedures Act.

As a result of the above, several written and unwritten rules have been promulgated governing the settlement. However, an interesting difference between Kalaupapa National Historical Park and other national parks is that nearly all of the lands and improvements within the authorized boundary may remain in non-federal ownership to be managed by the National Park Service. Formal cooperative agreements for such management have been consummated with the following groups:

State of Hawaii, Department of Health
Roman Catholic Church in the State of Hawaii
Hawaii Conference Foundation (United Church of Christ)
State of Hawaii, Department of Transportation
State of Hawaii, Department of Land and Natural Resources

12.1.2 Currently Pending Actions in National Park

A cooperative agreement remains to be completed with the State Department of Land and Natural Resources. In addition to the above, several Memoranda of Understanding or Agreement have also been signed with various entities for specific purposes. These include agreements for the installation of various wayside exhibits, fire protection services, preservation of historic sites and maintenance of the lighthouse.

12.1.3 Other Federal Programs and Requirements

12.1.3.1 Coastal Zone Management Program

The National CZM Act of 1972, as amended (16 U.S.C. 1451 et. seq.), and the federal regulations for "Federal Consistency with Approved Coastal Zone Management Programs" (15 *Code of Federal Regulations*, Part 930, Federal Register 37142, June 25, 1979) establish the basic informational and procedural requirements which are binding on all

federal agencies. Under these regulations, once a state's program is approved, the review for consistency is conducted by the state's CZM lead agency. Hawaii's approved Coastal Zone Management Program (HCZMP) is an expression of State policy to guide use, protection, and development of land and ocean resources within Hawaii's coastal zone. The cornerstone of the program is the Hawaii Coastal Zone Management (CZM) law (Chapter 205A, Hawaii Revised Statutes) and more specifically, its objectives and policies. Hawaii's program contains seven categories of objectives: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, and managing development.

The HCZMP is an integral component of the statewide planning system established by the enactment into law in 1978 of The Hawaii State Plan (Chapter 226, Hawaii Revised Statutes). The State Plan provides a policy guidance umbrella under which an implementation framework has been established integrating all major State and County activities in support of the State Plan. Within this context, the HCZMP's objectives and policies define the program's areas of concern. Consistency with these objectives and policies is required for federal actions and projects requiring federal permits or licenses. In Hawaii, consistency is determined by the Office of State Planning on the basis of an assessment provided by the applicant.

A CZMP Consistency Certification for the proposed project will be filed with the Office of State Planning. The proposed action is consistent with the following relevant objectives and policies of the State's Coastal Zone Management Program: (1) it assists in providing adequate, accessible and diverse recreational opportunities in the coastal zone management area by protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas, assists in managing public access to and along shorelines with recreational value, assists in providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation and expands public recreational use of County, State and Federally owned shoreline lands and waters having recreational value; (2) assists in supporting the state goals for protection, restoration, interpretation and display of historic resources; (3) complies with the policy that coastal development such as harbors and ports are designed and constructed so as to minimize adverse social, visual and environmental impacts in the coastal zone management area; and (4) assists in promoting water quality and quantity planning and management practices that reflect the tolerance of marine ecosystems.

12.1.3.2 Department of Transportation Act, Section 4(f)

The airport, roadway and harbor improvements will be performed within a National Park (Park), which is also a National Historic Site and Landmark. Accordingly, these improvements are subject to the Department of Transportation Act, Section 4(f), and all feasible and prudent alternatives to mitigate the impacts and use of this land must be evaluated. Because the entire Kalaupapa Peninsula is within the National Park and Historic Landmark, all alternatives would be subject to rules under Section 4(f). The proposed projects will have the least impact on the Park's features because they are being constructed on land which is presently used for identical purposes. Also, most of the Park is owned and controlled by State of Hawaii entities: the Department of Health, the Department of Transportation and the Department of Hawaiian Home Lands. The land within the proximity of the proposed projects owned by the Federal Government is the "lighthouse property", which is adjacent to the Airport property.

The majority of the airport improvements will be conducted within the existing airport boundary. The development of any other site within the Park would have a greater impact on the environment. There are no other feasible or prudent forms of transportation to Kalaupapa other than air transportation.

The runway construction will require construction and/or grading within two land parcels immediately adjacent to the airport boundaries. The first parcel of 13,195 square feet is located immediately south of and adjacent to the existing airport property, and is required for the Runway Safety Area of the new runway. This parcel is within the DOI-"lighthouse property", TMK 6-1-01:3, and requires a grading easement from DOI, which is presently in the approval process. The second parcel of 59,567 square feet is located at the northwest edge of the airport property and is required for the Runway Safety Area and the Extended Runway Safety Area. This parcel is controlled by the Department of Health and a construction easement is presently in the approval process.

Due to their location within the Park, the roadway and harbor improvements impact Section 4(f) lands. These improvements are maintenance improvements to existing facilities and will not impact any additional public lands. The proposed improvements are to be constructed on existing facilities and roadway alignments, and are necessary for the

continued safe use by the Kalaupapa community and staff. The development of any other site for these purposes would have greater environmental impacts.

All improvements are being coordinated with the Department of Interior, National Park Service, Kalaupapa and appropriate State agencies. Also, all improvements must be approved by the National Park Service due to various agreements between State agencies and the NPS.

12.1.3.3 Other Federal Requirements

As indicated in Chapter I, Section 2, the proposed project requires an Environmental Impact Statement per the requirements of the National Environmental Policy Act of 1969. This EIS serves that purpose. Further, the project requires a review of the project's impacts on historic resources per Section 106 of the National Historic Preservation Act. The project's consistency with Section 106 requirements is discussed in Chapter III, Section 4 of this EIS.

12.2 HAWAII STATE PLANS

The following describes the applicability of the Hawaii State Plan (Revised) (Chapter 226, HRS) and the State's Transportation Functional Plan, Historic Preservation Functional Plan, Recreation Functional Plan, Conservation Lands Functional Plan and Tourism Functional Plan, to the proposed project.

12.2.1 Hawaii State Plan (Revised 1989)

The Hawaii State Plan establishes a set of goals, objectives and policies which are to serve as long-range guidelines for the growth and development of the state. The Plan is divided into three parts: (I) Overall Theme, Goals, Objectives and Policies; (II) Planning Coordination and Implementation; and (III) Priority Directions. Part II establishes a state-wide planning system to coordinate and guide all major state and county activities and to implement Parts I and III. Because this section (Part II) pertains to the administrative structure and implementation process of the Plan, comments regarding the compliance of the proposed project to this section are not deemed appropriate.

The Plan lists three "Overall Themes" relating to: (1) Individual and family self-sufficiency; (2) Social and economic mobility; and (3) Community and social well-being.

These three themes are viewed as "basic functions of society" and goals toward which government must strive. To guarantee the elements of choice and mobility embodied in the three themes, three state goals were formulated: (1) A strong, viable economy, characterized by stability, diversity and growth, that enables the fulfillment of the needs and expectations of Hawaii's present and future generations; (2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems and uniqueness, that enhances the mental and physical well being of the people; and (3) Physical, social and economic well-being, for individuals and families in Hawaii, that nourishes a sense of community responsibility, of caring and of participation in community life.

The proposed project is consistent with the Hawaii State Plan in that it encourages an increase of economic activities and employment opportunities consistent with community needs and desires; promotes increased opportunities for Hawaii's people to pursue their socioeconomic aspirations throughout the islands; increases and diversifies employment opportunities for increased income and job choices; fosters an improved living standard for residents to achieve a steadily growing and diversified economic base that is not overly dependent on a few industries; strives to achieve a level of construction activity responsive to, and consistent with, state growth objectives; stimulates the development and expansion of economic activities which will benefit areas with substantial or expected employment problems; provides equal employment opportunities for all segments of Hawaii's population through affirmative action and non-discrimination measures; encourages businesses that have favorable financial multiplier effects within Hawaii's economy; promotes and protects intangible resources in Hawaii, such as scenic beauty and the aloha spirit, which are vital to a healthy economy; directs planning toward the achievement of a visitor industry that constitutes a major component of steady growth for Hawaii's economy; supports and assists in the promotion of Hawaii's visitor attractions and facilities; ensures that visitor industry activities are in keeping with the social, economic and physical needs and aspirations of Hawaii's people; develops the industry in a manner that will continue to provide new job opportunities and steady employment for Hawaii's people; fosters an understanding by visitors of the aloha spirit and the unique and sensitive character of Hawaii's cultures and values; is planned to be directed toward the achievement of enhancement of Hawaii's scenic assets, natural beauty and multicultural/historical resources; promotes the preservation and

restoration of significant natural and historic resources; provides incentives to maintain and enhance historical, cultural and scenic amenities; and protects those special areas, structures and elements that are an integral and functional part of Hawaii's ethnic and cultural heritage.

The purpose of the Priority Guidelines part of the State Plan is to establish overall priority guidelines to address areas of statewide concern. The overall direction of the priority guidelines is that the state shall strive to improve the quality of life for Hawaii's present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice and quality education. The proposed project is in concert with the Priority Guidelines in that it will encourage the continuation of visitor related businesses; will assist in the promotion of one of the state's unique visitor attractions and will encourage the maintenance and enhancement of the Aloha Spirit. In addition, the proposed project will allow more visitors to Hawaii's truly scenic and culturally significant sites and it will be a wise use of the limited land available for improved Kalaupapa peninsula facilities.

12.2.2 State Functional Plans

The Hawaii State Plan directs the appropriate state agencies to prepare functional plans for their respective program areas. There are twelve State Functional Plans that serve as the primary implementing vehicle for the goals, objectives and policies of the Hawaii State Plan. The proposed project is consistent with the State's Transportation Functional Plan, Historic Preservation Functional Plan, Recreation Functional Plan, Conservation Lands Functional Plan and Health Functional Plan.

12.3 COUNTY PLANS AND PROGRAMS

12.3.1 General Plan for the County of Maui

Generally, because Molokai is administered under the jurisdiction of Maui County, the General Plan for the county applies to projects on Molokai. In this instance, because Kalaupapa falls under the jurisdiction of the State Department of Health (DOH), the Maui County General Plan is not applicable to the project. However, the DOH attempts to

follow the general objectives and policies of the Maui County General Plan whenever possible. The General Plan addresses the areas of land use, environment, economy, public utilities and facilities and recreation and culture. These portions of the County General Plan specify that proposed actions assist in the management of planned growth of resident and visitor populations in order to avoid social, economic and environmental disruption; use the county land for the social and economic betterment of the county's residents; preserve existing lifestyles through careful and effective use of the land; preserve and protect the county's unique and fragile environmental resources; assist in the achievement of a stabilized, expanded and diversified economy; and provide public facilities to meet the present and future needs of the county residents.

12.3.2 Molokai Community Plan

As with the Maui County General Plan, the Molokai Community Plan does not specifically address Kalaupapa Peninsula because of the State Department of Health jurisdiction. However, Kalaupapa Peninsula is designated Conservation under the Molokai Community Plan. Although airports are not generally permitted uses in the Conservation District, the proposed project, situated at the site of the present airport, is a permitted use because it existed prior to the Conservation designation of the lands.

12.3.3 Maui/Kalawao County Zoning

There are no Maui or Kalawao County zoning designations on Kalaupapa, nor are any planned at this time because the peninsula falls under the jurisdiction of the State Department of Health.

12.3.4 Special Management Area

The proposed Kalaupapa Airport, roadway and harbor improvement projects would be accomplished within the Molokai Special Management Area (SMA) as defined under the provisions of Chapter 205A, Hawaii Revised Statutes. That process and the project's conformance with specific CZM objectives are discussed in the impacts sections (Section 12.4) on the following pages.

12.4 PROBABLE IMPACTS

The following sub-sections pertain to the projects' consistency with policies and regulations cited above in Sections 12.1 to 12.3.

12.4.1 Federal Programs

The proposed improvement projects support the principal purposes of the Kalaupapa National Historical Park Public Law (P.L.) 96-565 (listed in Section 12.1.1 above) in that (1) improved and more reliable air service would be available to the patients and residents of Kalaupapa; (2) an improved airport may attract more visitors to the Park (up to the limit set by the residents, i.e., 100 per day) thereby presenting economic opportunities for the residents in providing services to them; and (3) reduced air fares may result from a greater volume of air traffic and possibly from reduced aircraft maintenance costs. No inconsistencies or impacts are identified.

12.4.2 State Programs

12.4.2.1 Hawaii State Plan

The proposed airport improvement project will contribute to the attainment of the Hawaii State Plan goals, objectives and policies cited in Section 12.1, Part I of the State Plan by the following actions:

- Direct employment for construction workers during the construction phase and continued long-term employment for airline workers serving Kalaupapa would be provided.
- An improved airport and the resultant more reliable, and possibly more frequent, service will provide economic opportunities to the residents of Kalaupapa, should they wish to take advantage of those opportunities, to provide services to increased numbers of visitors (up to the 100 per day limit).
- An improved airport may result in reduced air fares due to a greater volume of air traffic and possibly reduced aircraft maintenance costs.
- Increased and/or more reliable air service would result in increased tax benefits to the state.

- Improved air service could enhance the mental and physical well-being of the patients at Kalaupapa and allow the residents to develop a greater sense of community responsibility and participation in community life through the opportunity to escort tours of the settlement and potentially through the sales of arts and crafts made by the residents.

- An improved airport would promote the scenic beauty and aloha spirit of the people of Kalaupapa.

- An improved airport would encourage the tourism business which has one of the greatest economic multiplier effects in Hawaii's economy.

- The proposed project would improve the condition of one of Hawaii's unique visitor attractions.

- The proposed project is in keeping with the stated needs and aspirations of the residents of Kalaupapa.

- The proposed project would provide opportunities for increased numbers of visitors (up to the 36,500 visitors per year limit) to view one of Hawaii's prime examples of its past and present cultural resources that is highly valuable and environmentally sensitive, and promote a better understanding among the general public about Hansen's Disease as well as a historical perspective of the trials and tribulations experienced by the patients due in part to a lack of understanding of the disease.

- The proposed project will aid in the preservation and restoration of the significant historic resources found on Kalaupapa Peninsula.

- An improved airport would provide additional incentives for the maintenance of those resources.

- The proposed project would enable the cultural resources of Kalaupapa to be protected and integrated into interpretive examples of Hawaii's cultural heritage.

The proposed projects are in concert with the Priority Guidelines (cited in Section 12.2.1, Part III of the State Plan) in that they will encourage the development of Kalaupapa resident's small craft and other visitor related businesses; will assist in the promotion of one of the state's unique visitor attractions and will encourage the maintenance and enhancement of the Aloha Spirit. In addition, the proposed projects will allow more visitors, up to the limit imposed on the peninsula, to visit one of Hawaii's truly scenic and culturally

significant sites and it will be a wise use of the limited land available for an improved airport on the peninsula.

12.4.2.2 State Functional Plans

The proposed projects are in conformance with the State Transportation Functional Plan, as they meet the social and economic needs of the residents of Kalaupapa while maintaining the environmental objectives of the state. The projects will aid in the conservation of energy by allowing safe and efficient aircraft, vehicle and barge operations at the airport and on the roadways and in the harbor.

The projects are in conformance with the State Historic Preservation Functional Plan. The proposed projects will promote the preservation of the significant historic artifacts found within the project boundaries, assist in the compilation of the inventory of historic places and properties, allow the historic features within the projects' boundaries to be preserved in accordance with acceptable standards of workmanship and allow new programs and expand existing programs relating the history of Kalaupapa's historic sites, cultural resources and heritages (see also Chapter III, Section 4 of this EIS).

The proposed projects are compatible with the State Recreation Functional Plan, as it conforms to community values and physical resources of Kalaupapa, will assist in maintaining natural and cultural resources and will allow improved public access to lands and waters with public recreational value.

The projects are in conformance with State Conservation Lands Functional Plan. In Hawaii in general, and specifically on Kalaupapa Peninsula, land resources are limited and many of Hawaii's biotic resources occur only in Hawaii. The proposed airport project will be situated at the site of the present airport. As such, the land has been dedicated to airport use for several years and the biotic community that has developed around the airport is acclimated to airport operations. The accomplishment of the proposed airport project at the site of the present airport will negate the need to utilize other lands on the peninsula, thereby protecting the limited land resources and environmentally sensitive areas of the peninsula. Consequently, the project is in conformance with the State Conservation Lands Functional Plan.

12.4.3 County Programs

12.4.3.1 General Plan for the County of Maui

The proposed project conforms to the general objectives and policies of the Maui County General Plan, which are cited in Section 12.3.1 under County Programs.

12.4.3.2 Molokai Community Plan

The Molokai Community Plan does not specifically address Kalaupapa Peninsula due to the State Department of Health jurisdiction. The peninsula's designation as Conservation under the Molokai Community Plan does bring certain conservation issues into consideration. As noted previously, the proposed projects generally comply with the Hawaii State Plan and the functional plans developed thereunder, including the Conservation Lands Functional Plan. A Conservation District Use Application will be filed for the proposed projects, if required, with this EIS as a portion of the support documentation for that application. Therefore, no inconsistencies or impacts of the project with the Community Plan exist.

12.4.3.3 Special Management Area (SMA) Permit/Coastal Zone Management (CZM) Program

A Special Management Area (SMA) permit (from Kalawao County, administered by the Department of Health) is required for the proposed projects and will be applied for. A CZMP Consistency Statement will be submitted to the Office of State Planning for their determination. The proposed projects conform to applicable Hawaii Coastal Zone Management (CZM) objectives as follows:

Objective for historic resources:

- Protect, preserve, and where desirable, restore those natural and man made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

As indicated in Chapter IV, Section 4 of this EIS, archaeological investigations of the proposed project site have revealed several surface archaeological features of historic or

cultural value on the site. There is the possibility that subsurface features may also exist. In compliance with appropriate federal, state and county rules and regulations, these sites will be preserved and protected as required. In addition, an archaeological monitoring team will be on call during site grading and preparation work should subsurface features be found. Work will be halted until the significance of those features can be determined. If it is determined that the features are culturally significant, appropriate preservation measures would be taken prior to the continuation of construction activities.

Objective for scenic and open space resources:

- Protect, preserve, and where desirable, restore or improve the quality of coastal scenic and open space resources.

The proposed projects will not result in the degradation of the region's coastal scenic and open space resources. Coastal scenic resources will not be affected as the proposed project is primarily open space itself and landscaping will be incorporated into the project design to ensure the smooth visual integration of the project and makai views.

Objective for coastal ecosystems:

- Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

The proposed project is not expected to have a significant effect on the coastal ecosystems. Storm runoff from the project will be allowed to continue to sheet flow or be directed to swales and ditches such that the coastal environment is not adversely affected; and the proposed project will not require work in the near- or offshore waters adjacent to the project site.

Objective for coastal hazards:

- Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion and subsidence.

One purpose of the proposed airport project is to reduce present hazards to aircraft resulting from high waves and fountaining of waves at the northeastern end of the runway.

As such, the proposed airport improvements would result in positive hazard impacts, by improving margins of safety, thereby reducing hazards to life and property. Similarly, the proposed project site will be protected from tsunamis. Further, there are no streams in the project area and erosion and subsidence are not a hazard at the project site.

12.5 MITIGATION MEASURES

Previous pages addressed the projects' conformance with applicable Land Use Policies and Controls. The project was found to be consistent with pertinent plans, thus requiring no mitigation in this EIS. It is important to note that the project must comply with regulating plans and programs, and must satisfy various permitting procedures concurrent with and subsequent to preparation of this EIS. These procedures and the permit processes will serve to document the project's compliance with applicable land use plans, guaranteeing no impacts.

12.6 LEVEL OF SIGNIFICANCE AFTER MITIGATION

No impacts have been identified.

13. CUMULATIVE IMPACTS

13.1 EXISTING CONDITIONS

The projects addressed in this EIS cumulatively improve transportation linkages to and within Kalaupapa settlement, thereby facilitating the safe and efficient movement of people and goods. The improvement of the transportation infrastructure will be extremely beneficial to those patients with ambulatory handicaps.

13.2 PROBABLE IMPACTS

Of the long-term adverse impacts identified as consequences of the actions described in this EIS, the loss of several archaeological sites appears to be the most significant. This impact is a consequence of the airport improvements only. The wharf and roadway projects will not affect additional archaeological, historical or cultural resources. There do not appear to be any significant cumulative long-term adverse impacts of these projects.

However, several of the temporary adverse impacts associated with construction activities in the settlement may be exacerbated by concurrent scheduling. These include an increase in mobile source emissions of air pollutants from construction equipment, an increase in construction-related noise, a cumulative disruption of transportation systems, increased pressure on public services from the construction workers, and perhaps an increased disruption of the lifestyle of the residents.

Because of the nature of the settlement itself and the regulations which guide activities therein, opportunities are very limited for other projects to impact the resources affected by the projects described in this EIS. With one exception, the NPS, DOH, DOT and DHHL have not indicated plans for future projects or improvements which could add to impacts described herein.

The only exception is the installation of replacement water laterals by the NPS. Their planned locations beneath the roadway could require excavation through the new pavement installed as part of this work. Presently, an agreement between the DOT-A and the NPS provides that the DOT-A will install the required water laterals within the project area for the NPS. This effectively precludes cumulative impacts other than the types addressed above. The specific environmental impacts of the water laterals project have been addressed in a separate document submitted by the NPS.

13.3 MITIGATION MEASURES

The fact that the construction projects will proceed concurrently is itself a mitigation of the duration of these impacts. Although the concept of "cumulative impacts" per se was never raised in public scoping or the review process, it is apparent from the public meetings and agency coordination efforts that a slight increase in the intensity of temporary, construction-related impacts is preferable to a longer duration of these impacts. Concurrent mobilization and demobilization of construction workers and equipment will also minimize associated costs.

13.4 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Mitigation of the cumulative impacts as described above will be effective in limiting the duration of transient impacts. During construction, there will be some amount of

inconvenience and disruption of the normally tranquil surroundings. By limiting the time involved in completing these projects, the significance of this disruption will be significantly decreased from what it might be if the projects were scheduled sequentially. In essence, because the projects are scheduled concurrently, the cumulative significance of their impacts is lessened.

13.5 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

In terms of resource commitments, the projects described herein would cumulatively have no more impact than the sum of their individual commitments. The concurrent scheduling of the water laterals project will provide a savings of construction labor and materials over what otherwise would be required.

CHAPTER IV

TOPICAL ISSUES

1. RELATIONSHIP BETWEEN SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Analyses of various on-site environmental features have found the Kalaupapa Airport property to possess physical attributes that are desirable as amenities in an airport. These attributes include the fact that the site currently serves the peninsula as an airport and the availability of adjacent, contiguous lands that can be used for improvement and expansion purposes. The analyses performed have also indicated that the proposed project is compatible with the existing natural environment. The specific measures that will be employed to mitigate potential adverse environmental impacts are described in this EIS and continue to be formulated in the planning phase of the proposed project. These measures would be followed in the design, construction and operations phases of the project.

Similarly, both the roadway and harbor projects are planned improvements to existing facilities and will not require the acquisition or use of additional lands or facilities.

No short-term exploitation of resources that will have negative long-term consequences have been identified for any of the proposed projects. The proposed airport improvements are envisioned by the state to last for decades; the proposed roadway improvements are designed to upgrade the existing roadways to the extent possible given the financial resources available; and the proposed harbor improvements are similarly expected to serve the Kalaupapa community for many years. The principal long-term benefits of the proposed projects include the productive uses of the properties involved; increased margins of safety for air service, pedestrian and vehicular traffic and surface vessel mooring, off- and on-loading operations; improved air and surface vessel service capabilities; increased economic opportunities for the residents of Kalaupapa who wish to take advantage of those increased opportunities; and increased community services and activities.

As noted in the discussion of Alternatives to the Proposed Project (Chapter II), one short-term use of the airport property would be to retain the present airport as is. This would continue the present relatively low levels of air service and appears to be less than

optimum use of the property. As the airport improvements are developed, significant socioeconomic benefits to the community will result. Direct, full-time employment opportunities and temporary construction employment will be generated by the project and these in turn will have benefits that ripple through the regional and island economy. Similarly, indirect, induced employment will be generated in those industries and services that cater to the construction and service related businesses serving the proposed project. In addition, public revenues from increased excise taxes are expected and the proposed project has been designed to increase the level of public services to meet the requirements of the residents of Kalaupapa. These same principles apply to the harbor project and, to a lesser extent, the roadway project.

2. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The major irreversible and irretrievable commitments of resources for specific environmental resource areas have been described in Chapter III. In summary, the proposed improvements to the Kalaupapa Airport, roadways, harbor and support amenities would result in the irreversible and irretrievable commitment of certain natural and fiscal resources. Major resource commitments include the land on which the projects are located and on which the facilities would be constructed, as well as money, construction materials, manpower and energy. The impacts of using these resources should be weighed against the expected positive socioeconomic benefits to be derived from the projects versus the consequences of taking no action or adopting other less beneficial uses of the properties.

The commitment of resources required to accomplish the projects includes building materials and labor, both of which are generally non-renewable and irretrievable. Construction of and resultant travel to/from the projects by residents and visitors, would require the consumption of petroleum products and petroleum based electrical generation. This, too, represents an irretrievable commitment of resources.

The proposed projects call for a substantial commitment of government supplied services and facilities. These supplies and services generally would be required without the proposed projects. The projects would add to the cultural, socioeconomic and recreational facilities available to the residents of and visitors to Kalaupapa and the island in general. Similarly, the projects would add to the tax revenues of the state. Increased air traffic, to the extent allowable by law, would result in higher airport revenues and assist in defraying the State's airport, roadway and harbor operation and maintenance costs.

3. CONSIDERATION OF OFFSETTING GOVERNMENTAL ACTIONS

By the very existence of a complex system of land use policies, plans, goals, objectives and controls at the federal, state and county levels of government, proposals requiring improvements to existing facilities and/or environmentally sensitive areas are often faced with inherent contradictions and conflicts within the land use regulatory system. As such, the Kalaupapa Airport, roadway and harbor projects must be reconciled against those planned elements that most appropriately apply. As indicated in Chapter III Section 12, the proposed project is generally consistent with the applicable State Plan, State Functional Plans, Maui County General Plan and Molokai Community Plan goals, policies and standards relating to the future of Kalaupapa, Molokai and Maui County. Adoption of the requested governmental action would enable the project to meet the initial land use regulatory requirements. Future actions, including application for and acceptance of an SMA use permit from Kalawao County (administered by the DOH) and a CDUA, as required, would enable the project to meet all land use regulatory requirements. The proposed projects are also in keeping with National Park Service policies in limiting the proposed actions to those that disturb as little of the existing conditions as possible while still accomplishing the goals and objectives of the proposed projects.

4. UNRESOLVED ISSUES

The Department of Transportation, Airports Division is aware of public concerns regarding the potential impacts of the proposed projects on cultural/historical/ archaeological sites in the immediate vicinity of the airport project and potential changes to the present Kalaupapa lifestyle. In an effort to resolve these concerns, the Department has been and will continue to work with the residents and interested groups and elected officials (see Chapter V) to assure that the final development plans meet the State's project objectives and satisfactorily address concerns that have been raised to date. The Department has an on-going community relations program and meets regularly with appropriate groups and organizations. A list of those meetings held to date is included in Chapter V of this EIS.

Other issues that remain unresolved at this time are permitting and procedural issues that this EIS is designed to help resolve. It is believed that these issues can be resolved without undue difficulty.

CHAPTER V

PUBLIC INVOLVEMENT

1. INTRODUCTION

This chapter describes the EIS public involvement program, reiterates the FAA's and State DOT-A's compliance with various Federal and local environmental laws and reproduces copies of all public notices, letters, and newspaper articles recording the FAA's and State's efforts to inform the public about the project and the public's involvement in the process of identifying significant issues, concerns, and possible impacts.

The public involvement effort for this project has been aided by the preparation of an archaeological inventory survey report, prepared with the help of the patients and residents of Kalaupapa as well as the NPS and DLNR-HPP-SHPO. The inventory survey report is summarized in Chapter III, Section 5 of the EIS and is available for review by the public at DOT-A, Honolulu International Airport and FAA, PJKK Federal Building, Room 7116.

2. NOTICE OF INTENT

A Notice of Intent (NOI) to prepare an Environmental Impact Statement was published in the January 8, 1990 issue of the Federal Register. The EIS Preparation Notice (EISPN) was published in the February 8, 1990 issue of the State of Hawaii Office of Environmental Quality Control Bulletin. One Federal agency, the National Park Service, made a formal reply to the NOI and provided comments in public meetings. One person, Ms. Sally Raisbeck, made a formal reply to the EIS Preparation Notice, but no comments were provided. The concerns of the NPS are addressed in the Draft EIS. The NOI and EISPN are reprinted in this chapter.

3. SCOPING

Formal EIS scoping was preceded by informal coordination with the State Department of Health, Department of Land and Natural Resources, Historic Preservation Program-State Historic Preservation Office. There was also project-related coordination with the patients and residents of Kalaupapa.

Two formal scoping meetings were held. The first was held for public agencies on February 13, 1990 at Honolulu International Airport, Honolulu, Hawaii. The minutes of that meeting, which summarize the agency concerns and the verbal responses to those concerns and questions, are reproduced here. Two days later on February 15, 1990, a public scoping meeting was held at Kalaupapa Settlement. Notices of the scoping meetings were mailed out two weeks prior to the meetings and various notices of the meeting were published as news articles or editorials in the Honolulu Advertiser and the Honolulu Star-Bulletin.

4. DOCUMENTATION OF ENVIRONMENTAL COMPLIANCE

4.1 Introduction

There has been full compliance with the two Federal environmental statutes that required coordination in the early phases of project planning.

4.1.1 Endangered Species Act.

The Draft EIS was made available to the US Fish and Wildlife Service (US F&WS) for their review pursuant to the Endangered Species Act and Fish and Wildlife Coordination Act. Available evidence and field investigations have indicated that there are no endangered or threatened species of plants or animals inhabiting or frequenting the project areas.

4.1.2 National Historic Preservation Act of 1966, as amended.

In compliance with Section 106 of the Act and its Advisory Council on Historic Preservation implementing regulations (36 CFR Part 800), an archaeological reconnaissance survey and an archaeological inventory survey of all of the Kalaupapa Airport area that might be affected by the proposed airport project was performed. These surveys consisted of surface and subsurface archaeological testing and sampling.

The reconnaissance survey and draft inventory survey reports have been reviewed by the Hawaii State Historic Preservation Officer (SHPO), in compliance the applicable regulations. The SHPO's review comments are included in the final inventory survey report and Final EIS. Based on discussions with SHPO, preliminary determinations of significance

have been developed for all buried cultural or natural deposits that were discovered during the inventory survey. Preliminary significance determinations for these resources are based on Criteria "c" and "d" (36 CFR Part 60A). The project is also in compliance with Section 110(f) of the Act, which states that "...to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such a landmark."

Chapter III, Section 5 of the EIS contains a summary of this coordination. It also describes in summary form the technical findings of the archaeological inventory survey. A complete "Historic Preservation Mitigation Plan" has been developed, and will be implemented through a Memorandum of Agreement among all relevant parties.

4.1.3 Intergovernmental Review of Federal Programs.

Executive Order 12372 (July 14, 1982) entitled "Intergovernmental Review of Federal Programs" directs Federal agencies to "accommodate State and local elected officials' concerns with proposed Federal financial assistance and direct Federal development" and when concerns cannot be accommodated, "to explain the bases for their decision in a timely manner." This latter review is guided by the Hawaii Office of State Planning "Clearinghouse Procedures Manual: State Process for the Intergovernmental Review of Federal Programs" (August 1987). The Draft EIS served as the primary vehicle to comply with the State Clearinghouse Procedures Manual. The required Standard Form 424 and supplementary State of Hawaii Clearinghouse Form were transmitted to the Areawide Clearinghouse at the City & County Department of General Planning (with copy furnished to State Clearinghouse).

4.1.4 Clean Water Act.

There are no proposed project features or construction activities which will affect either wetlands or any other navigable waters of the United States. No further Clean Water Act compliance procedures appear necessary at this time. The FAA and DOT-A will consult the DOH as to other Clean Water Act provisions, such as those pertaining to non-point source discharges.

4.1.5 Coastal Zone Management Act.

The Kalaupapa Airport, roadway and wharf projects will be evaluated in compliance

with Chapter 205-A (HRS). It is the opinion of the State Department of Transportation and Federal Aviation Administration that the proposed activities are consistent with and will be conducted in a manner which is consistent to the maximum extent practicable with the Hawaii Coastal Zone Management Program. Coordination with the State CZM office at the State Planning Office was undertaken following public release of the Draft EIS.

5. PUBLIC REVIEW OF PROJECT DOCUMENTATION AND THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

The following are copies of public notices and minutes of meetings held with various public agencies and interested private groups. Also included herewith is a copy of the ballot that was provided to the patients and residents of Kalaupapa in the efforts to determine the "best" airport project. The following is a list of the materials assembled in the remainder of this chapter in the order in which they appear.

DESCRIPTION OF ITEM	DATE
NOTICE OF INTENT AND EIS PREPARATION NOTICE	
FAA Notice of Intent Published in Federal Register	January 8, 1990
DOT-A Preparation Notice Published in OEQC Bulletin	August 10, 1990
REQUEST TO BE CONSULTED PARTY	
Letter received from Ms. Sally Raisbeck	October 17,1989
LIST OF AGENCIES RECEIVING DEIS	
List of agencies, from DOT-A	--
List of Agencies, from FAA	--
COMMENTS RECEIVED ON DEIS	
Letters received and responses	Various

PUBLIC HEARING MINUTES

Public Hearing Minutes	November 28, 1990

TECHNICAL ADVISORY COMMITTEE MEETING MINUTES

Meeting #1	November 15, 1988
Meeting #2	May 2, 1989
Meeting #3	October 17, 1989

PUBLIC INFORMATION MEETING MINUTES

Meeting #1	December 28, 1988
Meeting #2	May 3, 1989
Meeting #3	October 19, 1989
Meeting #4	November 28, 1989

EIS SCOPING MEETING MINUTES

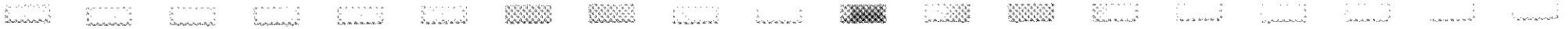
Federal Register Notice of Meeting	January 8, 1990
Scoping Meeting minutes	February 13 & 15, 1990

KALAUPAPA AIRPORT BALLOT

Copy of Ballot	--

NOTICE OF INTENT AND

EIS PREPARATION NOTICE



U.S. Department
of Transportation
**Federal Aviation
Administration**

AIRPORTS DISTRICT OFFICE
BOX 50244
HONOLULU, HI 96850-0001
Telephone: (808) 541-1243

January 30, 1990

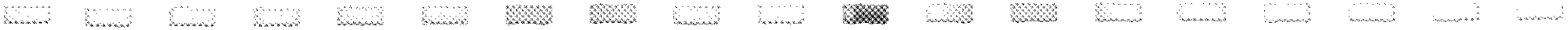
TO ALL INTERESTED AGENCIES:

The Federal Aviation Administration (FAA) will hold environmental scoping meetings to receive comments for use in preparation of an Environmental Impact Statement (EIS) for Kalaupapa Airport, Kalaupapa, Molokai, Hawaii. Attached is a copy of the Federal Register Notice which notes the time and place of the scoping meetings, information regarding the recommended development, and our address and phone number for information requests.

David J. Welhouse
Airport Engineer/Planner

Henry A. Sumida
Airports District Office Manager

Attachment



Comments on the proposed noise compatibility program should also be submitted to the above office.

SUPPLEMENTARY INFORMATION: This notice announces that the FAA finds that the noise exposure maps submitted for the BWI Airport are in compliance with applicable requirements of part 150, effective January 8, 1990. Further, the FAA is reviewing a proposed noise compatibility program for that airport which will be approved or disapproved on or before July 9, 1990. This notice also announces the availability of this program for public review and comment.

Under section 103 of Title I of the Aviation Safety and Noise Abatement Act of 1979 (hereinafter referred to as "the Act"), an airport operator may submit to the FAA noise exposure maps which meet applicable regulations and which depict non-compatible land uses as of the date of submission of such maps, a description of projected aircraft operations, and the ways in which such operations will affect such maps. The Act requires such maps to be developed in consultation with interested and affected parties in the local community, government agencies and persons using the airport.

An airport operator who has submitted noise exposure maps that are found by FAA to be in compliance with the requirements of Federal Aviation Regulations (FAR), part 150, promulgated pursuant to Title I of the Act, may submit a noise compatibility program for FAA approval which sets forth the measures the operator has taken or proposes for the reduction of existing non-compatible uses and for the prevention of the introduction of additional non-compatible uses.

The Maryland SAA submitted to the FAA on January 13, 1989, noise exposure maps, descriptions and other documentation which were produced during an airport noise compatibility planning study from January 1987, to November 21, 1988. It was requested that the FAA review this material as the noise exposure maps, as described in section 103(a)(1) of the Act, and that the noise mitigation measures, to be implemented jointly by the airport and surrounding communities, be approved as a noise compatibility program under section 104(b) of the Act.

The FAA has completed its review of the noise exposure maps and related descriptions submitted by the SAA. The specific maps under consideration are "the 1987 Base Case Ldn Contours (Figure 6.6.) and the Five Year Map Unmitigated 1993 Ldn Contours" (Figure 7.2). These Figures are included in Volume II—Noise Exposure Map—of the part 150 study in the submission. The FAA has determined that these maps for BWI are in compliance with applicable requirements. This determination is effective on January 8, 1990.

FAA's determination on an airport operator's noise exposure maps is limited to a finding that the maps were developed in accordance with the procedure contained in appendix A of FAR part 150. Such determination does not constitute approval of the applicant's data, information or plans, or a commitment to approve a noise compatibility program or to fund the implementation of that program.

If questions arise concerning the precise relationship of specific properties to noise exposure contours depicted on noise exposure maps submitted under section 103 of the Act, it should be noted that the FAA is not involved in any way in determining the relative locations of specific properties with regard to the depicted noise contours, or in interpreting the noise exposure maps to resolve questions concerning, for example, which properties should be covered by the provisions of section 107 of the Act. These functions are inseparable from the ultimate land-use control and planning responsibilities of local government. These local responsibilities are not changed in any way under part 150 or through FAA's review of noise exposure maps. Therefore, the responsibility for the detailed overlaying of noise exposure contours onto the maps depicting properties on the surface rests exclusively with the airport operator which submitted those maps, or with those public agencies and planning agencies with which consultation is required under section 103 of the Act. The FAA has relied on the certification by the airport operator under Section 150.21 of FAR part 150, that the statutorily required consultation has been accomplished.

The FAA formally received the noise compatibility program for BWI, also effective on January 13, 1989. Preliminary review of the submitted material indicates that it conforms to the requirements for the submittal of noise compatibility programs, but that further review will be necessary prior to approval or disapproval of the program. The formal review period, limited by law to a maximum of 180 days, will be completed on or before July 9, 1990.

The FAA's detailed evaluation will be conducted under the provisions of 14 CFR 150.33. The primary considerations in the evaluation process are whether the proposed measures may reduce the level of aviation safety, create an undue burden on interstate or foreign commerce, or be reasonably consistent with obtaining the goal of reducing existing non-compatible land uses and preventing the introduction of additional non-compatible land uses.

Interested persons are invited to comment on the proposed program with specific reference to these factors. All comments, other than those properly addressed to local land-use authorities, will be considered by the FAA to the extent practicable. The public comment period ends February 22, 1990.

Copies of the noise exposure maps, the FAA's evaluation of the maps and the proposed noise compatibility program are available for examination at the following locations:

Federal Aviation Administration, 800 Independence Ave., SW., Room 617, Washington, DC

Eastern Regional Office, FAA, Fitzgerald Federal Building Airports Division, JFK Int'l Airport, Jamaica, NY

Washington Airports District Office, FAA, Room 200, 900 South Washington Street, Falls Church, Virginia

State Aviation Administration, Maryland Department of Transportation,

Baltimore/Washington International Airport, Maryland

Questions may be directed to the individuals named above under the heading **"FOR FURTHER INFORMATION CONTACT".**

Issued in Jamaica, NY on November 30, 1989.

William Handel,

Manager, Airports Division.

[FR Doc. 90-375 Filed 1-5-90; 8:45 am]

BILLING CODE 4910-13-M

Intent to Prepare an Environmental Impact Statement and To Hold a Scoping Meeting for Kalaupapa Airport, Kalaupapa, Molikai, HI

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice to hold two (2) public scoping meetings.

SUMMARY: The Federal Aviation Administration (FAA) is issuing this notice to advise the public that an Environmental Impact Statement will be prepared for development recommended by the Master Plan for Kalaupapa Airport. To ensure that all significant issues related to the proposed action are identified, two (2) public scoping meetings will be held.

FOR FURTHER INFORMATION CONTACT: David J. Welhouse, Airport Engineer/

Planner, Federal Aviation Administration, Honolulu Airports District Office, P.O. Box 50344, Honolulu, Hawaii 96850-0001, Telephone: 808/541-1243.

SUPPLEMENTARY INFORMATION: The FAA, in cooperation with the Airports Division, Hawaii Department of Transportation, will prepare an Environmental Impact Statement for development recommended by the Master Plan for Kalupapa Airport.

Since the airport is located within the confines of the Kalaupapa National Historic Park and there exists the potential for significant environmental/archeological impacts, a decision has been made to prepare an Environmental Impact Statement (EIS). The Joint Lead Agencies for the preparation of the EIS will be the Federal Aviation Administration (FAA) and the Airports Division, Hawaii Department of Transportation.

Development recommended by the Master Plan to be evaluated in the EIS includes:

1. Widen, lengthen, and realign (5° east) the existing runway from 2,760' x 50' to 3,200' x 75'.
2. Construction of a connecting taxiway and aircraft apron.
3. Installation of airfield lighting and VASI-2 on Runway 5 for nighttime medical evacuation.
4. Replacement of existing ARFF/maintenance/administration/storage building.
5. Construction of covered baggage area adjacent to the existing terminal building.
6. Relocation of lighthouse road.
7. Improvement of airport entrance and entire road to Kalaupapa Settlement.
8. Improvement to existing utility systems.

Alternatives to the proposed runway realignment include: (1) No Action, (2) Maintain present runway length with Runway Safety Areas, (3) Extend existing runway with Safety Areas, (4) Proposed 5° realignment, and (5) Realignment of 8° with extension and safety areas.

Comments and suggestions are invited from Federal, State and local agencies, and other interested parties to ensure that the full range of issues related to these proposed projects are addressed and all significant issues identified. Comments and suggestions may be mailed to the FAA informational contact listed above.

Public Scoping Meeting: To facilitate receipt of comments, public scoping meetings will be held on February 13 and 15, 1990. The first meeting will be held on February 13 and 15, 1990. The first meeting will be held at the Prince Kuhio Federal Building, Room 5309, on Tuesday, February 13, 1990 at 10:00 a.m., HST. The second meeting will be held at Paschoal Hall in Kalaupapa on Thursday, February 15, 1990 at 12 Noon, HST.

Issued in Hawthorne, California on Friday, December 15, 1989.

Herman C. Bliss,

Manager, Airports Division, AWP-600.

[FR Doc. 90-373 Filed 1-5-90; 8:45 am]

BILLING CODE 4910-13-M

[Summary Notice No. PE-90-1]

Petition for Exemption; Summary of Petitions Received, Dispositions of Petitions Issued

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of petitions for exemption received and of dispositions of prior petitions.

SUMMARY: Pursuant to FAA's rulemaking provisions governing the application, processing, and disposition of petitions for exemption (14 CFR part 11), this notice contains a summary of certain petitions seeking relief from specified requirements of the Federal Aviation Regulations (14 CFR chapter I), dispositions of certain petitions previously received, and corrections. The purpose of this notice is to improve the public's awareness of, and participation in, this aspect of FAA's regulatory activities. Neither publication of this notice nor the inclusion or omission of information in the summary is intended to affect the legal status of any petition or its final disposition.

DATE: Comments on petitions received must identify the petition docket number involved and must be received on or before January 29, 1990.

ADDRESS: Send comments on any petition in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-10), Petition Docket No. _____, 800 Independence Avenue SW., Washington, DC 20591.

FOR FURTHER INFORMATION CONTACT: The petition, any comments received, and a copy of any final disposition are filed in the assigned regulatory docket and are available for examination in the Rules Docket (AGC-10), Room 915G, FAA Headquarters Building (FOB 10A), 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-3132.

This notice is published pursuant to paragraphs (c), (e), and (g) of § 11.27 of part 11 of the Federal Aviation Regulations (14 CFR part 11).

Issued in Washington, DC, on December 28, 1989.

Denise Donohue Hall,

Manager, Program Management Staff, Office of the Chief Counsel.

Petitions for Exemption

Docket No.: 24741.
Petitioner: United Airlines, Inc.
Sections of the FAR Affected: 14 CFR part 121, Appendix H.
Description of Relief Sought: To allow petitioner to use instructors who have not met the 1-year employment requirement and to permit that requirement to be met by employment with any other part 121 air carrier or in military high-performance jet operations.

Docket No.: 26063.
Petitioner: British Aerospace, Inc.
Sections of the FAR Affected: 14 CFR 121.411; 121.413; part 121, appendix H; 135.337 and 135.339.
Description of Relief Sought: To allow petitioner to use certain qualified instructor pilots to train pilots of part 121 and part 135 certificate holders in a Phase II simulator and in airplanes manufactured by petitioner.

Docket No.: 22998.
Petitioner: Amerada Hess Corporation.
Sections of the FAR Affected: 14 CFR 25.1321(b)(3).
Description of Relief Sought/Disposition: To amend Exemption No. 3550 that permits type certification of an Intercontinental Dynamics Corporation vertical scale, vertical speed indicator between the altimeter and the attitude indicator on the pilot's (left) instrument panel only, on Gulfstream III (G1159A) airplanes. The amendment would make the exemption an indefinite exemption with no further time limitations.

Withdrawn, December 8, 1989.

[FR Doc. 90-372 Filed 1-5-90; 8:45 am]

BILLING CODE 4910-13

DEPARTMENT OF THE TREASURY

Debt Management Advisory Committee; Meeting

Notice is hereby given, pursuant to section 10 of Public Law 92-463, that a meeting will be held at the U.S. Treasury Department in Washington, DC, on January 30, and January 31, 1990, of the following debt management advisory committee:

Public Securities Association Treasury Borrowing Advisory Committee

DOCUMENT FOR PUBLICATION IN THE OEQC BULLETIN

DATE: August 10, 1989 SUBMITTED BY: Edward K. Noda & Associates

THE DOCUMENT IS A (CHECK ALL THAT APPLY): BE SURE TO ATTACH 4 COPIES

- [x] CHAPTER 205A DOCUMENT
- [x] CHAPTER 343 DOCUMENT
- [ ] NEPA DOCUMENT

- [ ] NEGATIVE DECLARATION
- [ ] EIS PREPARATION NOTICE
- [ ] DRAFT EIS
- [ ] FINAL EIS
- [ ] ACCEPTANCE NOTICE
- [ ] FONSI

IS THE DOCUMENT A SUPPLEMENTAL EIS? YES [ ] NO [x]

TITLE OF PROPOSED ACTION OR PROJECT: Kalaupapa Airport Improvements

LOCATION: ISLAND Molokai DISTRICT Kalawao, County
ATTACH PROJECT LOCATION MAP(S)

TYPE OF ACTION (CHECK ONE): APPLICANT [ ] AGENCY [x]

NAME OF PROPOSING APPLICANT OR AGENCY: Department of Transportation
NAME OF CONTACT: Edward Y. Hirata, Director
ADDRESS: 869 Punchbowl Street
CITY: Honolulu STATE: Hawaii ZIP CODE: 96813
PHONE: (808) 548-3205 or ( )

NAME OF PREPARER OR CONSULTANT: Edward K. Noda & Associates
NAME OF CONTACT: Gordon A. Chapman
ADDRESS: 615 Piikoi Street, Suite 1000
CITY: Honolulu STATE: Hawaii ZIP CODE: 96814
PHONE: (808) 528-5228 or ( )

ACCEPTING AUTHORITY: Governor, State of Hawaii & Federal Aviation Administration

ESTIMATED PROJECT COST:

FEDERAL FUNDS	$
STATE FUNDS	$ 7.1 Million
COUNTY FUNDS	$
PRIVATE FUNDS	$
TOTAL	$ 7.1 Million

DOCUMENT PREPARATION COST:

NEG DEC/EA	$
DRAFT EIS	$
FINAL EIS	$
SUP DRAFT EIS	$
SUP FINAL EIS	$
TOTAL	$

EA TRIGGER (CHECK ALL THAT APPLY):

- [x] USE OF STATE OR COUNTY LANDS OR FUNDS
- [x] USE OF CONSERVATION DISTRICT LANDS
- [x] USE OF SHORELINE SETBACK AREA
- [x] USE OF HISTORIC SITE OR DISTRICT
- [ ] USE OF LANDS IN THE WAIKIKI SPECIAL DISTRICT

☐ USE REQUIRING AN AMENDMENT TO A COUNTY GENERAL PLAN
☐ USE REQUIRING THE RECLASSIFICATION OF CONSERVATION LANDS
☐ CONSTRUCTION OR MODIFICATION OF HELICOPTER FACILITIES
☐ OTHER _____

BRIEF DESCRIPTION OF THE PROPOSED ACTION OR PROJECT WHICH WILL BE PUBLISHED IN THE OEQC BULLETIN (LIMIT OF 500 WORDS OR LESS): _____

See Attached

(CONTINUE ON ANOTHER SHEET IF NECESSARY)

TAX MAP KEY(S): TMK 2-6-1:01, Lot 5

TOTAL ACREAGE:

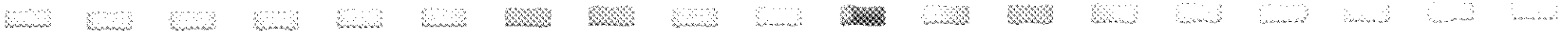
FOR OEQC USE ONLY

DATE OF SUBMISSION:
DATE OF PUBLICATION:
LAST DAY FOR CONSULTED PARTY REQUEST:
COMMENT PERIOD ENDS:
ACCEPTANCE DATE:
PUBLICATION DATE OF ACCEPTANCE:

OEQC #
PLANNER:

PROJECT DESCRIPTION

The State of Hawaii, Department of Transportation, Airports Division is proposing to improve the existing Kalaupapa Airport runway. The improvements under consideration include widening, lengthening and rotating (nominally) five degrees to the east the existing runway; adding extended runway safety areas, blast pads and larger aircraft turnarounds. In addition, a paved taxiway may be constructed between the runway and terminal area and a paved aircraft parking apron adjacent to the passenger terminal building may be constructed. The proposed project may also include providing airfield lighting for nighttime medical evacuation and VASI-2 NAVAID at the 5 end of the runway; demolishing the existing ARFF/maintenance/administration building and storage shed and constructing a new, larger facility fronting the paved apron; constructing a covered baggage area adjacent to the passenger terminal building; relocating the lighthouse road; improving the airport access road (on its present alignment) between the terminal and Settlement; and improving the utility systems to serve other airport developments. The proposed action does not include any modifications to the existing terminal building. Final determinations regarding the improvements to be made will be rendered following completion of on-going archaeological inventory survey and master planning work.



Recd 10/20/89

SALLY RAISBECK
633 LaniloaWay Haiku Maui HI 96708 (808) 572-6371

Gordon A. Chapman
Edward K. Noda and Assoc.
615 Piikoi St, Suite 1000
Honolulu HI 96814

Dear Sir:

I wish to be a consulted party on the EIS for

Kalaupapa Airport Improvements

Thank you.

Sincerely yours,

Sally Raisbeck

SALLY RAISBECK

October 17, 1989

ref OEQC Bulletin Oct 8, 1989

cc AIR-EP

CHAPMAN CONSULTING SERVICES

ENVIRONMENTAL ANALYSIS
PLANNING—REPORTS—PERMITTING

October 30, 1989

Ms. Sally Raisbeck
633 Laniloa Way,
Haiku, Maui Hawaii 96708

Subject: Kalaupapa Airport Improvements
Environmental Impact Statement

Dear Ms. Raisbeck:

Thank you for your letter of October 17, 1989 requesting to be a consulted party for the subject project. Enclosed herewith is a copy of the Environmental Assessment as submitted to the State Office of Environmental Quality Control by the State Department of Transportation. Please provide the undersigned, by November 15, 1989, any comments you may have on the assessment and a listing of the issues you believe should be covered in the EIS.

Should you have any questions regarding the project or the EIS, please contact myself [(808) 528-5228] or Mr. James Dittmar at Edward K. Noda & Associates [(808) 533-0553]. Thank you for your interest in the Kalaupapa Airport project.

Very truly yours,

Gordon A. Chapman

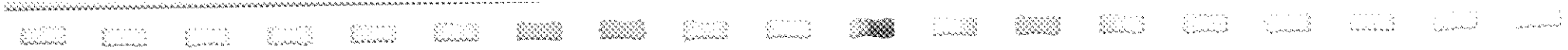
Encls. as noted

cc: J. Dittmar (EKNA) (w/o encls)

RECEIVED
OCT 1989
EDWARD K. NODA

900 Fort Street Mall, Suite 1550
Honolulu, Hawaii 96813
(808) 528-5228 FAX (808) 528-5379

LIST OF AGENCIES RECEIVING DEIS



LIST OF AGENCIES RECEIVING DEIS (FROM DOT-A)

State Agencies

Department of Accounting and General Services
Department of Agriculture
Department of Business and Economic Development
DBED, Library
Department of Defense
Department of Hawaiian Home Lands
Department of Health
Department of Land and Natural Resources (3)
DLNR, State Historic Preservation Officer
Department of Transportation (2)
Housing Finance & Development Corporation
Office of State Planning
Office of Environmental Quality Control
State Archives
State Energy Office

University of Hawaii

Environmental Center (4)
Water Resources Research Center

Federal Agencies

Army-Directorate of Facilities Engineering
Army Corps of Engineers, Pacific Ocean Division
Coast Guard, Commander 14th District
Environmental Protection Agency, Region IX
Fish and Wildlife Service
Geological Survey
Navy-Commander, Naval Base Pearl Harbor
Soil Conservation Service

Libraries

State Main Library (2)
Regional Libraries:
- Kaimuki
- Kaneohe
- Pearl City
- Hilo
- Wailuku
- Lihue

Maui:
Kahului
Lahaina
Makawao
Maui Community College
Molokai:
Molokai
Oahu:
University of Hawaii, Hamilton, Hawaiian Collection

Legislative Reference Bureau
Lanai:
Lanai Community-School

County of Maui

Department of Parks and Recreation
Department of Public Works
Department of Water Supply
Economic Development Agency
Planning Department

Media

Honolulu Advertiser
Honolulu Star-Bulletin
Sun Press
Maui News

Non-Governmental

American Lung Association
Hawaiian Electric Company
Office of Hawaiian Affairs

LIST OF AGENCIES RECEIVING DEIS (FROM FAA)

Council on Environmental Quality
General Counsel

Federal Aviation Administration
Community and Environmental Needs Division, APP-600 (12)

U.S. Department of Agriculture
Soil Conservation Service

U.S. Department of Commerce
NOAA
Director, Office of Ecology and Conservation

U.S. Department of Energy
Division of NEPA Affairs

U.S. Environmental Protection Agency
Office of Federal Activities
Management Information Unit (A-104) (5)

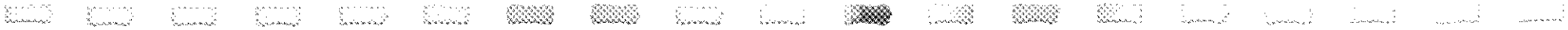
U.S. Environmental Protection Agency
Region IX
Office of Federal Activities (5)

U.S. Department of Housing and Urban Development
Regional Administrator IX
Environmental Clearance Office (2)

U.S. Department of the Interior
Assistant Secretary - Program Policy
Director, Environmental Project Review (14)

U.S. Department of the Interior
Office of the Assistant Secretary
Deputy for Environment and Safety

COMMENTS RECEIVED ON DEIS



LETTERS OF COMMENT ON THE DEIS

Substantive

State of Hawaii, Department of Health	8/20/90
Department of the Army, U.S. Army Engineering District	8/31/90
County of Maui, Planning Department	9/20/90
State of Hawaii, DLNR, State Historic Preservation Division	9/20/90
University of Hawaii, Environmental Center	9/24/90
State of Hawaii, Board of Land and Natural resources	10/4/90
U.S. Department of Commerce, NOAA, NMFS, SW Region	10/15/90
U.S. Department of Commerce, NOAA, Office of the Chief Scientist	10/22/90
State of Hawaii, Department of Health	10/24/90
U.S. Environmental Protection Agency, Region IX	10/31/90
U.S. Department of Transportation, FAA, Airports District Office	11/2/90
Pacific Basin Development Council	11/5/90
U.S. Department of Interior, Office of Environmental Affairs	12/7/90
U.S. Department of Transportation, FAA, Planning Section, AWP-611	1/17/91

Non-Substantive

State of Hawaii, Department of Transportation, Highways Division	7/31/90
State of Hawaii, Department of Accounting and General Services	8/7/90
State of Hawaii, Department of Transportation, Harbors Division	8/7/90
U.S. Department of the Navy, Commander, Naval Base Pearl Harbor	8/8/90
State of Hawaii, Department of Business and Economic Development	8/14/90
County of Maui, Department of Human Concerns	8/15/90
State of Hawaii, Department of Defense	8/23/90
U.S. Department of Interior, FWS, Pacific Islands Office	9/14/90
State of Hawaii, Housing Finance and Development Corporation	9/20/90
U.S. Department of Housing and Urban Development	10/12/90

1879

JOHN WAIHEE
GOVERNOR OF HAWAII

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

August 20, 1990

In reply, please refer to:
File:

MEMORANDUM

TO: Owen Miyamoto, Airports Administrator

FROM: Director of Health

SUBJECT: **Kalaupapa Airport Draft Environmental Impact Statement**

Thank you for the opportunity to review the Master Plan and the Draft EIS for Kalaupapa Airport. The Draft EIS appears to have incorporated the concerns which have been addressed throughout the planning process. The runway design appears to be a reasonable compromise between safety and limiting the numbers of people who can visit Kalaupapa on any given day, which was a concern of the Patient Council. Our comments, therefore, are minor and are as follows:

1. page I-9, paragraph 3, line 3: "the" should be changed to "The."

2. pages II-8 to III-9, 2.2.3 Mitigation Measures: It might be useful to provide an estimate of the additional drainage expected with the additional surface area with the new runway pavement and where that drainage will be diverted.

3. page III-13: Considering the proposed airport will impact 50% of the strand plant community, we strongly agree that these plants should either be transplanted to other areas or be incorporated into the airport landscaping.

4. page III-39, paragraph 1: The Kalaupapa Store is no longer only for the patients. Staff may also purchase goods from the store.

If you have any questions or if there are new developments, please contact Dr. Robert North at 548-4580 or Dr. Diane Hirsch at 548-4581.

JOHN C. LEWIN, M.D.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.126

The Honorable John C. Lewin
Director, Department of Health
1250 Punchbowl Street
Honolulu, Hawaii 96813

Dear Dr. Lewin:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport Master Plan
State Project No. AM5011-02

Thank you for your comments of August 20, 1990 on the subject DEIS. Your comments will be incorporated as follow.

1. Page I-9:

   The word "the" will be changed to "The". *(Page I-14)*

2. Chapter III, Section 2.2 in the Final EIS will provide an approximation of the increase in "improved" area. The actual drainage basin will be similar in character to the existing basin and should not pose any significant impact. *(Page III-9)*

3. Page III-13:

   The transplanting of the displaced strand community will be incorporated into the design of the airport improvements. *(Page III-15)*

4. Page III-39:

   The availability of the Kalaupapa Store to the staff will be corrected in the Final EIS. *(Page III-40)*

Very truly yours,

RECEIVED
MAR 29 1991
EDWARD K. NODA & ASSOCIATES

Edward Y. Hirata
Director of Transportation

bc: EKNA

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 230
FT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

August 31, 1990

Planning Division

Dr. Marvin T. Miura, Director
Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, Hawaii 96813

Dear Dr. Miura:

We have reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Kalaupapa Airport, Roadways, and Wharf at Kalaupapa, Molokai. The following comments are offered:

a. A Department of the Army permit is not required.

b. The flood evaluation statement in the last sentence on page III-9 of the DEIS is not correct. Based on the Federal Emergency Management Agency's Flood Insurance Rate Map dated September 6, 1989, portions of the project site are in Zone A4 (areas of 100-year flood), with base flood elevations ranging from 14 to 15 feet MSL; Zone V24 (areas of 100-year coastal flood with velocity hazard due to wave action), with base flood elevations ranging from 14 to 17 feet MSL; and Zone C (areas of minimal flooding).

Sincerely,

C Fujii

Kisuk Cheung
Director of Engineering

Copies Furnished:

Federal Aviation Administration
Honolulu Airports District Office
Honolulu International Airport
Honolulu, Hawaii 96819

Mr. Edward Y. Hirata, Director
State of Hawaii Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Mr. Owen Miyamoto, Airports Administrator
Airports Division
State of Hawaii Department of Transportation
Honolulu International Airport
Honolulu, Hawaii 96819

Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 1000
Honolulu, Hawaii 96814
ATTN: Gordon Chapman

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT • HONOLULU, HAWAII 96819

March 25, 1991

AIR-EN
91.136

Mr. Kisuk Cheung
Director of Engineering
Department of the Army
U.S. Army Engineer District, Honolulu
Building 230
Fort Shafter, Hawaii 96858-5440

Attn: Planning Division

Dear Mr. Cheung:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
State Project No. AM5011-02

Thank you for your comments on the subject DEIS. Your comments on the flood elevation description from the Flood Insurance Rate Maps will be included in the Final Environmental Impact Statement. *(Page III-1*

If you have any questions, please contact Mr. Walter Nishigata of my staff at 836-6407.

Very truly yours,

Owen Miyamoto
Airports Administrator

bc: EKNA

RECEIVED
MAR 27 1991
EDWARD K. NODA & ASSOCIATES

HANNIBAL TAVARES
Mayor

CHRISTOPHER L. HART
Planning Director

JOHN E. MIN
Deputy Planning Director

COUNTY OF MAUI
PLANNING DEPARTMENT
250 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 1990

Governor, State of Hawaii
c/o OEQC
465 South King Street #104
Honolulu, Hawaii 96813

Federal Aviation Administration
Honolulu Airports District Office
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Sirs:

Subject Draft Environmental Impact Statement on Kalaupapa Airport Master Plan at TMK: 2-6-1:01, Kalaupapa, Molokai

Thank you for the opportunity to comment on the abovementioned draft EIS. We wish to offer the following comments:

1. As mentioned on page III-79 of the draft EIS, the proposed project does lie within the Special Management Area and must conform to the objectives of the Hawaii Coastal Zone Management Act and the SMA Rules of the Molokai Planning Commission.

2. Due to a 1988 Maui County charter amendment creating a Molokai Planning Commission, the Special Management Area (SMA) permit application should be filed with the Molokai Planning Commission.

Should you have any questions, please contact Clayton Yoshida of this office.

Very truly yours,

Christopher L. Hart
Planning Director

RECEIVED
SEP 24 1990
EDWARD K. NODA & ASSOCIATES

cc: Dept. of Transportation
Edward K. Noda and Associates, Inc.
Office of Environmental Quality Control
John Min
C. Yoshida

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
DAN T. KOCHI (PRIMARY)
RONALD N. HIRANO
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

AIR-EN
91.95

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT • HONOLULU, HAWAII 96819

March 7, 1991

Mr. Brian Miskae
Planning Director
County of Maui
Planning Department
250 South High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Miskae:

Subject: Shoreline Management Area (SMA)
Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport Master Plan

Thank you for your department's comments on the subject DEIS. Attached is a recent decision by the State of Hawaii, Attorney General's office, indicating that an SMA submittal to the Molokai Planning Commission is not required since Kalaupapa Airport lies within Kalawao County.

The Department of Transportation will make a SMA submittal through the Department of Health to the Office of State Planning for a consistency review. Although not required, we would be pleased to present to the Molokai Planning Commission an informational presentation.

If you have any questions, please contact Mr. Walter Nishigata of my staff at 836-6407.

Very truly yours,

Owen Miyamoto
Airports Administrator

Attachments

bc: EKNA

LEGAL SECTION
DEPT. OF TRANSPORTATION
FEB 7 9 48 AM '91

JOHN WAIHEE
GOVERNOR

WARREN PRICE, III
ATTORNEY GENERAL

CORINNE K. A. WATANABE
FIRST DEPUTY ATTORNEY GENERAL

STATE OF HAWAII
DEPARTMENT OF THE ATTORNEY GENERAL
LAND/TRANSPORTATION DIVISION
ROOM 300, KEKUANAO'A BUILDING
465 SOUTH KING STREET
HONOLULU, HAWAII 96813

February 4, 1991

The Honorable Edward Y. Hirata
Director of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Hirata:

Re: Special Management Area Permit for Kalaupapa Airport

This is in response to your request dated November 8, 1990, on whether the State is required to apply for a Special Management Area ("SMA") permit for the Kalaupapa Airport. We answer in the negative.

We understand the relevant facts to be as follows:

1. On April 12, 1990, Dr. John C. Lewin, Director of Health, issued a "blanket permit" to the Department of Transportation for the scheduled Kalaupapa airport, road and pier improvements during the current biennium.

2. On September 20, 1990, Mr. Christopher L. Hart, Planning Director for the County of Maui, informed the State that the subject project lies within the SMA and a SMA permit is required.

Kalaupapa lies within the County of Kalawao. Section 326-34, Hawaii Revised Statutes, describes the boundaries of the County of Kalawao and its powers and authorities. Section 326-34, HRS, provides for the following:

> (a) The county of Kalawao shall consist of that portion of the island of Molokai known as Kalaupapa, Kalawao, and Waikolu, and commonly known or designated as the Kalaupapa Settlement, and shall not be or form a portion of the county of Maui, but is constituted a county by itself. As a county it shall have only the powers especially conferred and given by sections 326-34 to

> 326-38/1 and, except as provided in those sections, none of the provisions of the Hawaii Revised Statutes regarding counties shall be deemed to refer to or shall be applicable to the county of Kalawao.
>
> (b) The county of Kalawao shall be under the jurisdiction and control of the department of health and be governed by the laws, and rules relating to the department and the care and treatment of persons affected with Hansen's disease, except as otherwise provided by law.

[Emphasis added]. Accordingly, the County of Maui has no authority to require DOT to comply with Maui County's SMA requirements, since Maui County has no jurisdiction over Kalawao.

However Section 205A-3(5), HRS, provides that the "lead agency", the office of state planning, shall conduct a continuing review of state agencies' compliance with the objectives and policies of the Coastal Zone Management Program. Hence, although DOT would not have to comply with County SMA requirements, it is advisable that DOT consult with the Office of State Planning for a consistency review.

Should you have any questions, I can be contacted at 548-8934.

Very truly yours,

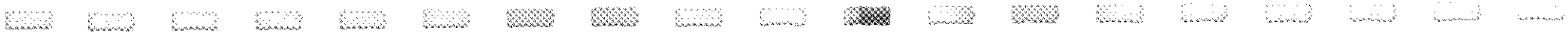
Dawn N.S. Chang
Deputy Attorney General

DNSC:dmu
2635E

APPROVED

Warren Price, III
Attorney General

1/ Sections 326-34 to 326-38 relate to the office, duties and powers of the Sheriff of the County of Kalawao.



JOHN WAIHEE
GOVERNOR OF HAWAII

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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MANABU TAGOMORI
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CONSERVATION AND RESOURCES ENFORCEMENT
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SEP 24 1990
EDWARD K. NODA & ASSOCIATES

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

September 20, 1990

MEMORANDUM

TO: Owen Miyamoto, Airports Administrator
State Department of Transportation

FROM: Don Hibbard, Director, Historic Preservation Program

SUBJECT: Review of Draft EIS for the Kalaupapa Airport, Roadways and Wharf
Kalaupapa, Molokai
TMK 2-6-1:01

Thank you for the opportunity to review this document.

Chapter III, pages 29-36 of this document contain a summary of identified historic sites (5.1), the assessment of the impacts (5.2) and proposed mitigation measures (5.3). 5.1 Existing Conditions (p. 29) has adequately summarized the results of an inventory survey that was conducted to identify the historic sites present in the airport area. Figures III-3 and III-4 clearly show the location of the sites in relation to the existing runway. However, only the draft of the report has been attached to the Draft EIS (Appendix C). We recommend that the final report be attached to the Final EIS and that page 29 be revised to reflect any changes made on the final report.

5.2 Probable Impacts (page 32) - This section is mostly an evaluation of the significance of the sites as shown in Table III-3. Again, this table was adopted from the draft archaeological report, and it is not acceptable because features rather than sites are evaluated. The revised table in the final report should be used so that significance evaluations are made by site. Only one sentence is included stating that the runway realignment and/or extension would disturb sites within the project area. This section should be expanded to identify the specific sites that will be adversely affected by the proposed airport project.

5.3 Mitigation Measures - This section refers to Table III-3, which also includes the corresponding mitigation measures for each feature. We concur with the proposed mitigation measures.

Finally, we would like to add that the Federal Aviation Administration has been in consultation with our office in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended.

Should you have any questions, please contact Ms. Annie Griffin, staff archaeologist for Maui county, at 587-0013.

cc: Governor, State of Hawaii, c/o OEQC
Federal Aviation Administration
State Department of Transportation
Edward K. Noda and Associates, Inc.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.135

The Honorable Don Hibbard
Director, Historic Preservation Program
State of Hawaii
Department of Land and Natural Resources
33 South King Street, 6th Floor
Honolulu, Hawaii 96813

Dear Mr. Hibbard:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadways, and Wharf Improvements
State Project No. AM5011-02

Thank you for your comments regarding the subject DEIS. We will attach the Final Archaeological report to the Final EIS and incorporate the changes to pages III-29 and III-32. We are pleased with your concurrence on our consultant's findings and will continue to consult your office as the project progresses. *(Appendix C and Pages III-30 to III-38).*
If you have any question, contact Mr. Walter Nishigata, of my staff, at 836-6407.

Very truly yours,

Edward Y. Hirata
Director of Transportation

bc: EKNA

RECEIVED
MAR 29 1991
EDWARD K. NODA & ASSOCIATES

University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7361

RECEIVED
SEP 26 1990
EDWARD K. NODA & ASSOCIATES

September 24, 1990
RE:0561

Governor, State of Hawaii
c/o Office of Environmental Quality Control
465 South King Street, Room 104
Honolulu, Hawaii 96813

Federal Aviation Administration
Honolulu Airports District Office
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Sirs:

Draft Environmental Impact Statement (EIS)
Kalaupapa Airport Master Plan Improvements
Kalawao County, Molokai

The above referenced document addresses proposed improvements to the existing Kalaupapa Airport. Proposed improvements include widening and rotating five degrees to the east the existing runway; adding extended runway safety areas, blast pads and larger aircraft turnarounds, and other improvements intended to improve safety margins and provide more reliable and dependable air service at Kalaupapa.

The Environmental Center has reviewed this EIS with the assistance of Michael Graves and Jo Lynn Gunness, Anthropology; Y.S. Fok and Henry Gee, Water Resources Research Center; and William Grannis and Lee Lyttle, Environmental Center.

General Comments

We commend the Department of Transportation on a generally well written Draft EIS which addresses the criteria of both NEPA and Chapter 343, H.R.S. Our reviewers noted, however, that in addition to presenting an equal assessment of a number of alternate actions as required by CEQ regulations, the Draft EIS is required by State EIS rules to specify the proposed action in detail (Title 11, Chapter 200, Section 17, DOH Administrative Rules). Our reviewers were unable to determine from Section 3.3 on page I-7 how much

longer and wider the 'Compromise Development Plan' would be over the existing conditions. In addition, the distinctions between Alternative 3 and the 'Compromise Development Plan' were not readily apparent.

Archaeology

It is unfortunate that the Archaeological Inventory Survey (AIS) in Appendix C was barely readible. This made it difficult to review much of the details of some archaeological features. Given the richness of historically noted sites in this area, the Final EIS should weigh the cost of losing any of these irretrievable sites against the degrees of safety and operational benefits gained at the airport.

Our reviewers fully concur with the AIS recommendations that "a detailed mitigation strategy should be written in consultation with the appropriate agencies" and that "detailed recording and data recovery excavations" should be done on all sites which would be lost.

Transportation

Tables III-6 and III-7, which illustrate demand and peak hour forecasts, respectively, are unclear. What do the "50, 100, 200, and 300" headings denote? The reader expects to see the years beyond 1988.

Noise

A number of tables in Section 9 direct the reader to Figure III-7 which is nonexistent.

Thank you for the opportunity to comment on this document, and we hope that you will find our comments helpful.

Yours truly,

John T. Harrison, Ph.D.
Environmental Coordinator

cc: DOT
Edward K. Noda and Associates ✓
Roger Fujioka
Michael Graves
Jo Lynn Gunness
Y.S. Fok
Henry Gee
William Grannis
Lee Lyttle

JOHN WAIHEE
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT • HONOLULU, HAWAII 96819

March 25, 1991

Dr. John T. Harrison
Environmental Coordinator
University of Hawaii at Manoa
Environmental Center
Crawford 317
2550 Campus Road
Honolulu, Hawaii 96822

Dear Dr. Harrison:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
State Project No. AM5011-02

Thank you for your comments on the subject report. We are pl
that you and your associates found the DEIS to be a generally
written document.

In regard to your comments:

General comments:

Your comment on the description of the Compromise Plan is r
We will clarify the changes to the airfield in Chapter I, Se
3.3. The key difference between Alternative 3 and the Compr
Plan was to keep the construction within the existing sout
boundary of the airport. *(Page I-13)*

The terminal area will remain the same, except for the inclus
airfield lighting and an expanded grassblock apron and taxiw

Archaeology:

We apologize for the unreadability of the archaeology report.
reduction in type size was necessary to accommodate the bindi
the report. We will remedy this problem in the final EIS. I
(Appendix C)

would like a full size copy of the archaeology report, please contact Dean Nakagawa of my staff at 836-6526.

All mitigation and data recovery plans will be closely coordinated with the applicable State and Federal agencies.

Transportation:

The headings for Tables III-6 and III-7 deviate from the "normal" forecast tables due the visitation policy at Kalaupapa. The Kalaupapa Patients Advisory Council sets a limit on the number of daily visitors which are allowed into Kalaupapa Peninsula. Therefore, in forecasting operation levels we looked at different maximum daily visitor counts instead of the "normal" planning year type methods.

Noise:

The references to Figures III-6 and III-7 in the tables will be changed to reflect the correct Figure numbers. *(Pages II-58, 59, and 62)*

If you have any question, please contact Mr. Walter Nishigata, of my staff, at 836-6407.

Very truly yours,

Owen Miyamoto
Airports Administrator

bc: EKNA

RECEIVED
MAR 27 1991
EDWARD K. NODA & ASSOCIATES

2526 FILE

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

WILLIAM W. PATY, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
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RUSSELL N. FUKUMOTO

AQUACULTURE DEVELOPMENT PROGRAM
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LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

'90 OCT -4 P1:43

REF:OCEA:JN

OFC. OF ENVIRONMENTAL QUALITY CONTROL

File No.: 91-76
Doc. No.: 9332E

MEMORANDUM

TO: Office of Environmental Quality Control

FROM: William W. Paty, Chairperson
Board of Land and Natural Resources

SUBJECT: EIS Review for the Kalaupapa Airport, Molokai;
TMK 2-6-01: 1

Thank you for giving our Department the opportunity to comment on this matter. We have reviewed the materials you submitted and have the following comments.

The DEIS adequately addressed and described mitigation measures proposed to avoid, reduce or mitigate potential impacts to aquatic resource values. However, our Molokai biologist notes that construction proposed to increase the length of the runway may generate additional storm runoff into the ocean, and the proposed removal of a large rock would produce some temporary turbidity. Therefore, precautions should be taken during construction to prevent excessive eroded materials, debris, petroleum products and other contaminants from entering coastal waters.

Additionally, we would appreciate the opportunity to review, as we have in the past, future activities by the DOT in the inshore waters of Kalaupapa, activities such as dredging, shoreline construction and other possible submerged-land modifications that could have potential adverse impacts on the marine environment.

Thank you again for your cooperation in this matter. Please feel free to call Jay Lembeck of our Office of Conservation and Environmental Affairs, at 548-7837, if you have any questions.

William W. Paty

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.128

The Honorable William Paty
Chairperson, Board of Land and Natural Resources
State of Hawaii
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Paty:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
State Project No. AM5011-02

Thank you for your comments on the subject DEIS which were provided in your Document No. 9332E, File No. 91-76. Your comments regarding the potential impacts to the marine environment during construction are noted. The necessary precautions will be undertaken to avoid disturbance of the coastal environment. *(Page III-9 and Pages III-24 to III-25)*
As in the past, the Airports Division will inform your department of any activities which may impact the marine environment.

Very truly yours,

Edward Y. Hirata
Director of Transportation

bc: ✓EKNA

RECEIVED
MAR 29 1991
EDWARD K. NODA & ASSOCIATES

OCT 30 1990

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of the Chief Scientist
Washington, D.C. 20230

October 22, 1990

Mr. David J. Welhouse
Airport Engineer/Planner
Honolulu Airports District Office
Box 50244
Honolulu, Hawaii 96850-0001

Dear Mr. Wellhouse:

Enclosed are comments to the Draft Environmental Impact Statement for the Kalaupapa Airport, Klaupapa, Molokai, Hawaii. We hope our comments will assist you. Thank you for giving us an opportunity to review the document.

Sincerely,

David Cottingham

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosure

National Marine Fisheries Service, Southwest Region
DEIS Comments

The Draft Environmental Impact Statement (DEIS), Kalaupapa Airport Master Plan, Kalaupapa, Molokai, Hawaii has been received by the National Marine Fisheries Service (NMFS), Southwest Region for review and comments. The statement has been reviewed and the following comments are offered for your consideration.

General Comments

The DEIS has been prepared to assess the potential environmental impacts from improving and rehabilitating Kalaupapa Airport, the airport access road and secondary roadways, and the wharf at Kalaupapa on the island of Molokai, Hawaii. None of these projects will involve direct in-water work with the exception of proposed removal of seawall rocks which have been washed into the barge basin during storms.

NMFS is concerned about potential secondary impacts from the project on the pristine marine environment and fishery resources found in coastal waters surrounding Kalaupapa peninsula. As stated in the subject DEIS the fish community off Kalaupapa is diverse and abundant. This resource continues to be utilized by the Hansen's disease patients and staff at the Kalaupapa Settlement, despite the advanced age of the majority of patients. During a recent site inspection NMFS observed patients and staff fishing with nets in the small bay immediately southwest of the airport. The primary species being caught for consumption was kala (Naso unicornis). Pole and line fishing was also being conducted in the large tide pool complex immediately north of the airport. Consequently, we feel it is important that every effort be made to avoid sedimentation and turbidity in coastal waters during airport rehabilitation construction.

Coastal waters and beaches of Kalaupapa peninsula may be of greater importance to threatened and endangered species under NMFS jurisdiction than indicated in the DEIS. NMFS has received reports of sea turtles nesting on sand beaches at Kalaupapa by both patients and National Park Service personnel. However, because of the remoteness of the area we have not as yet been able to confirm these reports. In addition, the endangered humpback whale (Megaptera novaeangliae) is commonly sighted in nearshore waters off Kalaupapa peninsula during winter and spring months. In March 1987 a humpback whale calf stranded at the northern tip of the peninsula.

Specific comments

Chapter I, Introduction and Summary.

Page I-6, paragraph 1.
A statement is made in this paragraph that the Kalaupapa "harbor is located on the exposed northerly coast of the peninsula". In fact it is located on the west coast of the peninsula in a partial lee from the predominant tradewinds.

Chapter III, Description of the Affected Environment, Probable Environmental Consequences, and Proposed Mitigation Measures.

Page III-22, Paragraphs 3.3.1.4 and 3.3.1.5.
Both of these paragaphs should be expanded to include the information presented in the above General Comments. A mitigation section should be included to discuss measures to insure that runoff from the proposed project construction sites will not impact coastal beaches or nearshore waters.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.140

Mr. David Cottingham
Director, Ecology and Environmental Conservation Office
United States Department of Commerce
National Oceanic and Atmospheric Administration
Office of the Chief Scientist
Washington, D.C. 20230

Dear Mr. Cottingham:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
Kalaupapa, Molokai, Hawaii
State Project No. AM5011-02

Thank you for your comments on the subject DEIS. We shall incorporate them accordingly. We also received comments from the National Marine Fisheries Service, Southwest Region, and have responded directly to them. Our response to them is attached for your information. *(See NMFS Comments)*

If you have any question, please contact Mr. Owen Miyamoto of my staff at (808)-836-6432.

Very truly yours,

Edward Y. Hirata
Director of Transportation

Attachment

c: FAA-ADO-HNL

bc: EKNA

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
300 South Ferry Street
Terminal Island, CA 90731

October 15, 1990 F/SWR13:JJN

Mr. Owen Miyamoto
Airports Administrator
State of Hawaii
Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Mr. Miyamoto,

The National Marine Fisheries Service (NMFS), Southwest Region has reviewed the Draft Environmental Impact Statement (DEIS) for the Kalaupapa Airport Master Plan, Kalaupapa, Molokai, Hawaii (June 1990).

In order to provide as timely a response to your request for comments as possible, we are submitting the enclosed comments to you directly, in parallel with their transmittal to the Department of Commerce for incorporation in the Departmental response. These comments represent the views of the NMFS, Southwest Region. The formal consolidated views of the Department should reach you shortly.

Sincerely yours,

for E.C. Fullerton
Regional Director

cc: F/SWR13, Naughton

National Marine Fisheries Service, Southwest Region
DEIS Comments

The Draft Environmental Impact Statement (DEIS), Kalaupapa Airport Master Plan, Kalaupapa, Molokai, Hawaii has been received by the National Marine Fisheries Service (NMFS), Southwest Region for review and comments. The statement has been reviewed and the following comments are offered for your consideration.

General Comments

The DEIS has been prepared to assess the potential environmental impacts from improving and rehabilitating Kalaupapa Airport, the airport access road and secondary roadways, and the wharf at Kalaupapa on the island of Molokai, Hawaii. None of these projects will involve direct in-water work with the exception of proposed removal of seawall rocks which have been washed into the barge basin during storms.

NMFS is concerned about potential secondary impacts from the project on the pristine marine environment and fishery resources found in coastal waters surrounding Kalaupapa peninsula. As stated in the subject DEIS the fish community off Kalaupapa is diverse and abundant. This resource continues to be utilized by the Hansen's disease patients and staff at the Kalaupapa Settlement, despite the advanced age of the majority of patients. During a recent site inspection NMFS observed patients and staff fishing with nets in the small bay immediately southwest of the airport. The primary species being caught for consumption was kala (Naso unicornis). Pole and line fishing was also being conducted in the large tide pool complex immediately north of the airport. Consequently, we feel it is important that every effort be made to avoid sedimentation and turbidity in coastal waters during airport rehabilitation construction.

Coastal waters and beaches of Kalaupapa peninsula may be of greater importance to threatened and endangered species under NMFS jurisdiction than indicated in the DEIS. NMFS has received reports of sea turtles nesting on sand beaches at Kalaupapa by both patients and National Park Service personnel. However, because of the remoteness of the area we have not as yet been able to confirm these reports. In addition, the endangered humpback whale (Megaptera novaeangliae) is commonly sighted in nearshore waters off Kalaupapa peninsula during winter and spring months. In March 1987 a humpback whale calf stranded at the northern tip of the peninsula.

Specific comments

Chapter I, Introduction and Summary.

Page I-6, paragraph 1.
A statement is made in this paragraph that the Kalaupapa "harbor is located on the exposed northerly coast of the peninsula". In fact it is located on the west coast of the peninsula in a partial lee from the predominant tradewinds.

Chapter III, Description of the Affected Environment, Probable Environmental Consequences, and Proposed Mitigation Measures.

Page III-22, Paragraphs 3.3.1.4 and 3.3.1.5.
Both of these paragaphs should be expanded to include the information presented in the above General Comments. A mitigation section should be included to discuss measures to insure that runoff from the proposed project construction sites will not impact coastal beaches or nearshore waters.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.134

Mr. E. C. Fullerton
Regional Director
United States Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
300 South Ferry Street
Terminal Island, California 90731

Dear Mr. Fullerton:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
Kalaupapa, Molokai, Hawaii
State Project No. AM5011-02

Thank you for your comments on the subject DEIS which were provided in your letter dated October 15, 1990, F/SWR13:JJN. This letter addresses those comments.

General Comments

Your comments regarding the protection of the pristine marine environment and fishery resources are noted. However, we foresee no significant impacts, primary or secondary, to the marine environment. When applicable, we will undertake all reasonable measures to minimize the disturbance of the marine environment. *(Page III-1 to III-2*

We will not impact the bay which is referred to in your letter.

There are no sand beaches within the project area and, therefore, we will not be impacting sea turtle nesting areas. We are aware of the presence of the humpback whale during a portion of the year and will use all appropriate measures to minimize impacts on them. *(Page III-1 to III-2*

Specific Comments

Page I-6, paragraph 1: *(Page I-11)*

The harbor exposure will be corrected in the Final EIS.

Page III-22, Paragraphs 3.3.1.4 and 3.3.1.5:

As stated earlier, we will not be impacting the sand beaches on Kalaupapa Peninsula and, therefore, no mitigation is necessary.

Runoff will be minimized using applicable construction and design techniques as stated in the Draft and Final EIS. There will be no significant impact on the endangered species or the coral communities and, therefore, it will not be necessary to expand the discussion in these paragraphs. *(Also see page III-7)*

If you have any question, please contact Mr. Owen Miyamoto of my staff at (808) 836-6432.

Very truly yours,

Edward Y. Hirata
Director of Transportation

c: FAA-ADO-HNL
NOAA

bc: ✓ EKNA

cc: [illegible]
G. Krosnick

JOHN WAIHEE
GOVERNOR OF HAWAII

JOHN C. LEWIN, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P. O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:
EPHSD
2-190

October 24, 1990

RECEIVED
OCT 30 1990
EDWARD K. NO[illegible] ASSOCIATES

To: Acting Director
Office of Environmental Quality Control

From: Director of Health

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport Improvements
TMK: 2-6-1:01
Molokai

We have reviewed the subject DEIS on the subject project submitted by your office. The following comments are offered:

Wastewater Disposal

1. The subject area is in a proposed critical wastewater disposal area as determined by the Maui County Wastewater Advisory Committee. In the future, no cesspools will be allowed in the subject area.

2. It has been determined that the subject project is not within the public sewer system.

3. At present, there does not appear to be problems with the existing septic tank systems. An individual wastewater system (IWS) is an acceptable form of wastewater treatment and disposal. In addition, please be informed that all wastewater treatment and disposal plans must conform to the applicable provisions of Chapter 11-62, Wastewater System. We reserve the right to review the detailed wastewater plans for conformance to the applicable rules.

Air Pollution

The air quality assessment for the proposed Keahuolu Development conducted by Barry D. Neal and dated August 1990, concluded that exceedances of the state one-hour and eight-hour carbon monoxide ambient standards may occur with or without the proposed project. The proposed major roadway improvements associated with the project would in fact improve the air quality.

The assessment of Concepts 1, 2 and 3 of the proposed project indicates that Concept 1 may result in exceedances of the state ambient standards for carbon monoxide, whereas, Concepts 2 and 3 would not. As such, either Concept 2 or 3 of the proposed project is recommended. A monitoring program should also be considered by the applicant to verify that the state standards is not exceeded.

Drinking Water

1. According to the DEIS, the airport master plan will not involve any improvements to the water system. Thus, the Department's Administrative Rules, Title 11, Chapter 20, "Potable Water Systems," will not be applicable.

2. We did note a few errors on page III-60, regarding the Kalaupapa water system (Public Water System No. 239). According to our records, the National Park Service has been operating the Kalaupapa water system since May 1986. It is also our understanding that the Waikolu Stream intake is no longer operational.

JOHN C. LEWIN, M.D.

cc: Federal Aviation Administration
State Department of Transportation
√Edward K. Noda and Associates, Inc.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.127

The Honorable John C. Lewin
Director, Department of Health
1250 Punchbowl Street
Honolulu, Hawaii 96813

Dear Dr. Lewin:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
State Project No. AM5011-02

Thank you for your comments of October 24, 2990, letter 2-190, on the subject DEIS. This letter is in response to your comments.

Wastewater Disposal

1. We are aware of the new cesspool regulation which does not allow for new cesspools in Kalaupapa.

2. We are aware that the project areas are not connected to a public sewer system.

3. We will not affect the existing airport or harbor wastewater disposal system. However, we will work with your department to mitigate the disposal of wastewater during construction.

Air Pollution

The comments provided in your memorandum is directed to another project, "The Keahuolu Development" and are, therefore, not applicable to this DEIS. However, the roadway improvements at Kalaupapa may allow for more efficient transportation thereby improving the air quality.

Drinking Water

We will check and correct the discrepancies on the operation of the water system on page III-60. *(Page III-63)*

Very truly yours,

Edward Y. Hirata
Director of Transportation

bc: EKNA

RECEIVED
MAR 29 1991
EDWARD K. NODA & ASSOCIATES

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105

31 OCT 1990

Henry A. Sumida, Airports District Office Manager
Federal Aviation Administration
U.S. Department of Transportation
Box 50244
Honolulu, Hawaii 96850-0001

Dear Mr. Sumida:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) titled **KALAUPAPA AIRPORT MASTER PLAN, Island of Molokai, Kalawao County, Hawaii.** Our comments are provided pursuant to the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and the Council on Environmental Quality's Regulations for Implementing NEPA (40 CFR 1500-1508). Our detailed comments are enclosed.

The DEIS assesses the environmental impacts that may occur from improving and rehabilitating Kalaupapa Airport, the airport access road and secondary roadways, and the Kalaupapa wharf. Proposed actions to be done in 1990-1992 include 1) clearing and grading approximately 40 acres of scrub/brushland and other plant communities, 2) widening, lengthening and rotating the existing airport runway, 3) constructing a paved taxiway and a paved airport parking apron, 4) providing airfield lighting, 5) improving the access road, 6) improving the utility systems to serve other airport developments and 7) obtaining navigation easements for additional airport land.

We have rated this DEIS as Category EC-2, Environmental Concerns - Insufficient Information (please see Enclosure 2, "Summary of Rating Definitions and Follow-up Actions"). We have environmental concerns because the proposed project may have adverse impacts on water quality and protected beneficial uses such as fish and coral populations without a firm commitment by the Federal Aviation Administration (FAA) to adopt mitigation to protect these natural resources. The Final Environmental Impact Statement (FEIS) should contain greater information on the species of coral which may be affected by erosion, sedimentation and the runoff of pollutants such as hydrocarbons and the ability of <u>individual</u> species to withstand sediments and pollutants. The FEIS should assess the impacts of sediments and pollutants on the <u>most sensitive</u> species rather than treating all seven species as a homogeneous community that is equally resilient.

Printed on Recycled Paper

31 OCT 1990

We appreciate the opportunity to comment on this DEIS. Please send us two copies of the Final Environmental Impact Statement (FEIS) when it is officially filed with the EPA's Washington, D.C. office. If you have any questions, please call me at 415-744-1567 (FTS 484-1567) or have your staff contact Mr. David Tomsovic of my staff at 415-744-1569 (FTS 484-1569).

Sincerely,

Deanna M. Wieman

Deanna M. Wieman, Director
Office of External Affairs

Enclosures: 2 (3 pages of EIS comments; 1 page EIS rating sheet)

cc: Hawaii Department of Transportation, Airports Division, Owen Miyamoto, Airports Administrator
Hawaii Department of Health, Dr. John C. Lewin, Director
Hawaii Department of Fish and Game, Division of Aquatic Resources, Henry Sakuda
Hawaii Office of Environmental Quality Control, Dr. Marvin Miura, Director
U.S. Fish and Wildlife Service, Andy Yuen
National Marine Fisheries Service, John Naughten
U.S. EPA, Honolulu Office, Vicky Tsuhako
U.S. Army Corps of Engineers, Kisuk Cheung
East-West Center, Dr. James E. Maragos

EPA to FAA, Kalaupapa Airport Master Plan Developments, Island of Molokai, Hawaii - Draft Environmental Impact Statement. October 1990

31 OCT 1990

WATER QUALITY COMMENTS

1. The DEIS states (page III-13) that approximately 40 acres of scrub/brushland and other plant communities will be cleared and graded in order to proceed with airport improvements. This is a relatively large area that is subject to soil erosion and runoff unless proper control measures are implemented. The DEIS (page III-22) notes that "potential alteration to water quality and biotic structure during construction could occur as a result of increased sedimentation and turbidity generated by on-land construction..." The DEIS also states (page III-6) that "short-term erosion impacts could occur during grading and construction..." However, the DEIS states, "it is likely that there will be no permanent or residual effects to the marine environment" following construction of the airport expansion (page III-23).

As mitigation, the DEIS (page III-7) states that "erosion during site grading and/or construction should be minimized by erosion control measures such as maintaining vegetative buffers, placement of sandbags and timely planning of operations to avoid peak rainy seasons. These techniques should be monitored, verified and maintained by the state or other qualified personnel throughout construction phases to project completion."

The DEIS also states (page III-8) that the project may be required, as determined by further engineering analyses, to install additional drainage facilities and/or improve existing facilities (swales, ditches, culverts) to ensure that no runoff or water quality impacts will occur (underline added). The DEIS further notes (page III-24) that "monitoring programs could identify any impacts to the environment," but there is no indication in the DEIS that monitoring will be required by the FAA (underline added).

2. In 1987 the Federal Clean Water Act (CWA) was amended by adding Section 319. Section 319 requires States to assess nonpoint source water pollution problems, develop nonpoint source pollution management programs and implement controls to protect water quality and beneficial uses. Under the CWA, EPA has designated the Hawaii Department of Health (HDOH) as the lead agency to implement Section 319's Nonpoint Source Program. The HDOH prepared a state Nonpoint Source Management Program (SMP), pursuant to Section 319(b), which was approved by EPA on January 4, 1990. Hawaii's SMP identifies several Best Management Practices (BMPs) which would be applicable to the construction and operation of Kalaupapa Airport.

* Proper design and construction of access roads,
* Planting vegetation and/or mulching on highly erodible or critically eroding areas,

* Debris basins, and
* Dikes or diversions to avoid runoff across erodible areas.

3. Federal projects and activities must be consistent with state SMPs, pursuant to the Federal consistency review requirements of Sections 319(b)(2)(f) and 319(k) of the CWA. These sections require Federal agencies to submit specific assistance programs and development projects to the delegated State nonpoint source agency (i.e., HDOH) for review to determine their consistency with Hawaii's SMP. The FAA is required to work closely with the HDOH to satisfy FAA's obligations under Section 319.

4. We recommend that the FEIS document the measures that FAA has taken to satisfy the requirements of the CWA, including consultation with the HDOH on the best means to control the runoff of sediments and other pollutants to surface waters.

We recommend that the FEIS and Record of Decision contain a commitment that the FAA will adopt all measures necessary to minimize erosion and runoff during construction in order to protect water quality and beneficial uses such as fish and coral populations. In addition to the Best Management Practices identified in #2 above, appropriate mitigation to reduce sediment loads to surface waters may include avoidance of construction during the rainy season, installation of drainage systems and catch basins, and dust suppression on exposed areas until construction has been completed or revegetation proved successful. We strongly recommend monitoring of sediment discharges with provisions to modify operations if turbidity becomes excessive. The monitoring of sediment would be useful for future FAA-funded projects in Hawaii that may affect coastal waters. Appropriate mitigation should be implemented to control the runoff of hydrocarbons and other pollutants once the airport improvements have been completed.

5. The DEIS states (page V-3) that "no proposed project features or construction activities will affect either wetlands or any other navigable waters of the United States. No further Clean Water Act compliance procedures appear necessary at this time." This statement should be modified to note that the FAA must consult with the HDOH to ensure that all project activities are consistent with the CWA's nonpoint requirements for Federal projects (see #3 above).

CORAL COMMENTS

The DEIS makes the assumption that potential impacts to coral colonies from erosion, sedimentation and other pollutants will not be a significant impact. Two main reasons are given for this conclusion: "Mixing forces are so intense owing to wind and sea conditions that materials are rapidly dispersed in the nearshore zone" and "most corals can withstand a certain level of sediment supply to the living surface, especially...for a short duration. Many species have the ability to remove sediment from their tissues and can nullify lethal effects of sedimentation" (DEIS, page III-23).

We have several concerns with the assertion that increased erosion and sedimentation will not have adverse or long-term impacts on coral populations offshore Kalaupapa.

Our first concern is that the DEIS has no discussion on the ability of each of the seven species of coral to withstand sediments and other pollutants, whether for longer or shorter periods. The effects of sediment on the degradation of coral communities in Hawaii has been documented. For example, the U.S. Army Corps of Engineers has noted that "Pavona may be more sensitive to sediment stress than other species" of coral (U.S. Army Corps of Engineers, Honolulu District, A Decade of Ecological Studies Following Construction of Honokohau Small Boat Harbor, Kona, Hawaii, September 1983, page 49). The Army Corps' study also notes that other factors can affect coral populations, including reduced penetration of sunlight due to the presence of sediments (ibid., page 56). As noted in our cover letter, the DEIS should contain information on the potential impacts of pollutants and other factors on the most sensitive species, rather than treating all seven species as a common whole.

Our second concern is that there is no estimate regarding the amount of sediments, hydrocarbons and other pollutants that may enter coastal waters, either during the construction or operational phases. It thus seems premature to state that there will be no adverse impacts on fish and coral populations.

Our third concern is that there may be inadequate mitigation to reduce or eliminate potential adverse impacts to coral and fish populations. As noted above, mitigation to control sedimentation and other pollutants will help to protect water quality and fish and coral populations. We recommend that the FAA and the Hawaii Department of Transportation consult agencies with expertise in coral biology, for example, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the Hawaii Department of Fish and Game, and universities in Hawaii. Dr. James E. Maragos of the Environment and Policy Institute at the East-West Center in Honolulu has done a great deal of work on coral populations, including the Army Corps' study noted above. Dr. Maragos indicated that a study is currently underway on the impacts of sediment on coral populations on Molokai's southern shore (phone conversation with David Tomsovic, October 26, 1990). The recommendations of those with expertise in coral biology should be reflected in the Kalaupapa FEIS and Record of Decision.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.141

Ms. Deanna M. Wieman
Director, Office of External Affairs
United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, California 94105

Dear Ms. Wieman:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
Kalaupapa, Molokai, Hawaii
State Project No. AM5011-02

Thank you for your comments on the subject DEIS. This letter addresses those comments.

To respond to your comments on the impacts on the coral communities, we had our marine consultant review your comments and provide a response. His response and resume are attached.

We will use all appropriate measures to minimize the impacts of the runoff into the marine environment. However, we maintain that the impacts on the marine environment will be insignificant. *(Page III-7)*

The following statements are in response to the comments which were provided as an attachment to your letter.

Water Quality Comments

1. The initial estimate of land which required clearing and grading on Page III-13 has been reduced from 40 acres to 20 acres. As stated earlier, all appropriate measures will be undertaken to insure minimal runoff and impacts on the marine environment. All applicable State guidelines will be followed and monitored by the State Department of Transportation, Airports Division. If water quality *(Page III-1 and III-*

monitoring is deemed necessary by the State Department of Health, the State Department of Transportation will implement appropriate water quality monitoring and verification.

2. All appropriate non-point Source Management Program SMP measures will be undertaken during construction. Mitigation measures which will minimize the sediment runoff will be listed in the Final EIS. The proposed project will not significantly impact the quality and quantity of the runoff. *(Page III-7)*

3. We will work closely with the Federal Aviation Administration and the State Department of Health to meet the obligations of Section 319.

4. The mitigation measures to prevent erosion are listed in section 2.1.3 of Chapter III. These will be adequate to minimize runoff into the ocean. This document is also being reviewed by the State Department of Health, and their comments will be included in the Final EIS. As stated in the DEIS, the need for water quality monitoring will be in compliance with the requirements of the State Department of Health. We do not expect significant changes in the runoff during and after the construction of the project. *(Page III-7)*

5. The Final EIS will be modified to include a statement regarding Clean Water Act Compliance to non-point sources on Page V-3. *(Page V-3)*

Coral Comments

Please refer to the attached comments prepared by our marine consultant.

If you should have any question, please contact Mr. Owen Miyamoto of my staff at (808) 836-6432.

Very truly yours,

Edward Y. Hirata
Director of Transportation

Attachment: Marine Research Consultants

c: FAA-ADO-HNL

bc: EKNA

RECEIVED
MAR 29 1991
EDWARD K. NODA & ASSOCIATES

MARINE
RESEARCH
CONSULTANTS

217 PROSPECT ST. F-2
HONOLULU, HI 96813
808-956-7631
808-599-4181

December 5, 1990

James G. Dittmar
Executive Vice President
Edward K. Noda Associates, Inc.
615 Piikoi St. Suite 1000
Honolulu, HI 96814

Dear Mr. Dittmar:

This letter is in response to the comments by the U. S. Environmental Protection Agency (Region IX) regarding potential impacts to reef corals in the vicinity of the planned airport expansion at Kalaupapa, Molokai, Hawaii. The comments made by the EPA regarding lack of consideration of impacts to corals by the possibility of temporary increases in sediment to the nearshore region are not warranted for the following reasons:

1. The DEIS describes the coral communities in the area off Kalaupapa as exceptionally depauperate in reef corals. In fact, after 20 years of investigating reef coral community structure throughout the Hawaiian Archipelago, I have not seen a more inhospitable environment for coral growth. Virtually all of the corals observed in the area were small encrustations growing on the vertical sides of boulders that presented no exposed surfaces above the boulder substratum. No corals were observed growing on the bottom, presumably because the natural forces associated with sediment abrasion prevent settlement and growth.

2. The notion of consideration of differential susceptibility of individual species is not relevant for several reasons. Firstly, citation of the Corps of Engineers study of Honokohau Harbor as an example of a species-by-species consideration of sediment effects is not accurate. In this report Maragos considers the possible reasons why two species of corals inside the Harbor suffered impacts owing to expansion of the Harbor. The complete statement regarding Pavona varians is as follows.."A stronger argument for Pavona varians mortality caused by construction activity can be made although actual proof is lacking. The many dead large heads of Pavona and other partially killed colonies with the dead portions covered by fine sediment in 1981 **suggest** some sediment damage. Sediment generation was likely during recent construction, and Pavona may be more sensitive to sediment stress than other species." Several points can be made regarding these statements. First, this treatment does not constitute a species-by-species analysis as suggested by the EPA, and does not even make any definitive statements as to the susceptibility of one species. It is entirely possible that

the Pavona colonies were killed by other factors, and sediment depositlon on dead portlons occurred following this damage. Indeed, if sediment was the cause of mortality it is likely that entire colonies, not just portlons, would be affected. It should also be noted that these effects were observed within a man-made basin; there was no observed damage to any corals outside Honokohau Harbor in response to expansion of the Harbor basin. As the Kalaupapa airport project does not involve any modification of the underwater environment, the observation of no impacts to the natural environment at Honokohau is the relevant comparison to the Kalaupapa project.

3. A recently completed Ph.D. dissertation at the University of Hawaii is entitled "Sedimentation and Reef Corals" by Gregor Hodgson. In this study, Hawaiian corals were subjected to various regimes of sediment stress and the effects noted. Corals were considered on the basis of growth form, as this appeared to be the pertinent parameter with respect to susceptibility to sediment damage. A consistent result for all corals was that for sediment to cause a negative impact, sediment accumulation on the coral surface was necessary. As stated above, all corals observed off Kalaupapa were of the same growth form, flat encrustations growing on the vertical sides of rock formations. With such vertical orientation and no protruding surfaces, there is no possibility of sediment accumulation of the coral surface, hence there is no potential for impact to coral growth or settlement. Incidentally, one coral species studied by Hodgson that occurred at Kalaupapa (Montipora verrucosa) showed no negative effects from even the most severe of the test treatments of sediment deposition.

4. The DEIS presents a lengthy literature review on the impacts of sediment to coral reefs. Several additional studies, including the dissertation cited above, are now available to add to the literature review. A report entitled "Environmental Assessment of Coral Reef Community Structure at Honolua Bay, Maui, Hawaii" was prepared for Maui Land and Pineapple Company by Marine Research Consultants in 1990. Results of this study revealed extremely high percentages of coral cover in Honolua Bay (average of 72%, compared to 3% off Kalaupapa. Species number at Honolua Bay (13 compared to 7 at Kalaupapa) and diversity (maximum of 1.84 compared to 1.05 at Kalaupapa) are among the highest reported for any site in the Hawaiian Islands. A characteristic of Honolua Bay is predictable seasonal episodes of extremely high turbidity owing to discharge of a stream at the head of the bay. Runoff-associated turbidity has been a characteristic of Honolua for many years, and comparison of the 1990 survey with a previous study of coral communities in 1974 reveals that there are no changes in coral community structure in the intervening years. The occurrence of perhaps the most diverse and abundant assemblage of coral found in the Hawaiian Islands in an area of continuous and substantial sediment input is indicative that Hawaiian corals are indeed able to withstand a degree of sediment stress without negative impacts. The potential impacts of sediment that might result from the Kalaupapa airport expansion will undoubtedly be of lower magnitude and duration, than the ongoing processes at Honolua Bay.

5. Another recently completed survey entitled "Baseline Assessment of the Marine Environment off West Molokai in the Vicinity of the Proposed Alpha, U.S.A., Inc. Development", prepared by Marine Research Consultants in 1990, describes coral community structure in offshore areas of southwest

Molokai. A significant result of the program was the finding that coral communities in areas subjected to continuous input of terrigenous (land derived) sediment were substantially richer than areas where terrigenous sediment was not present, but where natural marine sediment (sand) was abundant. Again, coral communities in the areas off southwest Molokai where terrigenous sediments were abundant were significantly higher in all community parameters compared to the areas off Kalaupapa. This situation presents another scenario illustrating that Hawaiian reef corals are adapted to withstand the effects of sediment in many environmental regimes that appear to be potentially more detrimental than the Kalaupapa situation.

6. Lastly, the recommendation by the EPA to consult those with expertise in coral biology has been met. Examination of my resume will show that I have a substantial educational and publication record, both as a University of Hawaii researcher and as a private consultant, in the fields related to coral ecology.

Hopefully, these comments adequately address the concerns in the EPA review.

Sincerely,

Steven Dollar, Ph.D.

RESUME

of

STEVEN J. DOLLAR, Ph.D.

PRINCIPAL

of

MARINE RESEARCH CONSULTANTS
217 Prospect St., F-2
Honolulu, Hawaii
(808) 599-4181

ACADEMIC EXPERIENCE

B.S. 1971., University of Miami, Coral Gables, Fla. Majors in Biology and Chemistry, Graduated with honors, magna cum laud.

M.S. 1975., University of Hawaii, Honolulu, Hi. Biological Oceanography. Thesis title: Zonation of Reef Corals off the Kona Coast of Hawaii.

Ph.D. 1986., University of Hawaii, Honolulu, Hi. Dept. of Oceanography, Dissertation title: Response of Benthic Ecosystems to Deep Ocean Sewage Outfalls in Hawaii: Nutrient Cycling at the Sediment-Water Interface.

FIELD EXPERIENCE

Twenty years experience dealing with coral reef and nearshore marine biology and chemistry, primarily in the Hawaiian Islands. Extensive practical research experience in the fields of biological and chemical oceanography, marine ecology reef ecosystem stress, benthic community metabolism, sediment-water interactions, water quality monitoring and environmental impact assessment.

PUBLICATIONS

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ENVIRONMENTAL IMPACT ASSESSMENTS

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Dollar, S. J. 1983. Preliminary assessment of the marine environment at prospective seawater intake/outfall sites for the solid waste processing and resource recovery facility. Prepared for the City and County of Honolulu.

Dollar, S. J. 1983. Preliminary assessment of the marine environment in the vicinity of Nanuku Inlet, Mauna Lani Resort, South Kohala, Hawaii. Prepared for Mauna Lani Resort, Inc.

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Marine Research Consultants, 1989. An assessment of potential environmental impacts from the proposed Kohana'iki Marina; a comparative study of Honokohau Harbor, North Kona, Hawaii. Prepared for Engineering Concepts, Inc.

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Marine Research Consultants, 1989. Preliminary assessment of the potential effects to the marine environment from the proposed Kilauea golf course and country club, Kilauea, Kauai. Prepared for F.B.D. Enterprises, USA.

Marine Research Consultants, 1989. Marine environmental baseline survey to assess the effects of extension of the runway at Kalaupapa Airport, Kalaupapa, Molokai, Hawaii. Prepared for Edward K. Noda and Assoc.

Marine Research Consultants, 1989. Marine water quality monitoring program to assess the effects of Kapaanui Subdivision, North Kohala, Hawaii. Prepared for R.H.J. Associates.

Marine Research Consultants, 1989. Marine environmental survey to assess the effects of drainage discharge from the Pikoiloa Cemetery. Prepared for Group 70.

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Marine Research Consultants, 1990. Marine environmental monitoring program at Honolua Bay, Maui, Hawaii; Water Chemistry. Report No. 1-90. Prepared for Mauna Land and Pineapple Co., Inc.

Marine Research Consultants, 1990. Environmental assessment of coral reef community structure at Honolua Bay, Maui, Hawaii. Prepared for Maui Land and Pineapple Co. Inc.

Marine Research Consultants, 1990. Baseline Assessment of the marine environment off West Molokai in the vicinity of the proposed Alpha, U.S.A., Inc. Development. Prepared for Alpha U.S.A., INc.

Marine Research Consultants, 1990. Waikiki Beach restoration project: assessment of Coral Reef community structure at the site of sand replenishment, Waikiki, Oahu, Hawaii. Prepared for O.I. Consultants, Inc.

Marine Research Consultants, 1990. An assessment of nearshore marine community structure at O'oma, North Kona, Hawaii. Prepared for Helbert, Hastert and Kimura, Planners.

Marine Research Consultants, 1990. Baseline assessment of the marine and anchialine pond environments at Awake'e, North Kona, Hawaii. Prepared for Group 70, Ltd.

PROFESSIONAL ORGANIZATIONS

International Society for Reef Studies
American Association for the Advancement of Science
American Society of Limnology and Oceanography
American Geophysical Union
Oceanography Society

SCHOLARSHIPS

Achievement Rewards for College Scientists (ARCS Foundation Inc.) Scholarship Award, 1983 and 1984.

PERSONAL DATA

Born 6-30-49, Single, excellent health, SS# 212-54-0845

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CONCURRENCES
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November 2, 1990

Mr. Owen Miyamoto
Airports Administrator
Airports Division
State of Hawaii, DOT
Honolulu International Airport
Honolulu, Hawaii 96819

Dear Mr. Miyamoto:

This letter is a follow-up to our comments on the Kalaupapa Draft Environmental Statement (DEIS) transmitted to Wally Nishigata on September 7, 1990. It includes additional comments from and clarifies some of the previously transmitted comments.

1. The EIS must include all the impact categories, as appropriate, from FAA Order 5050.4A. We realize that this EIS is written in the format of HRS Chapter 343 and have attempted to adjust our review; however, we are unable to locate three categories - Social Impacts, Water Quality and DOT Section 4(f). All of these must be addressed in the EIS.

2. The notation "airport access road from Kalaupapa Settlement to the airport" is included numerous times in the DEIS. The FAA does not consider the entire road from Settlement as "airport access road". We have continuously stated that the eligible access road only extends to the first connecting road which, in this case, is immediately outside the airport property line. Therefore, the only eligible portion is that on airport property. The EIS should be revised to change the notation "airport access road" to "access road to Kalaupapa Settlement", i.e., deleting the term airport, wherever it appears in the EIS. An acceptable alternative would be to explain the difference on the first page of the EIS.

3. The List of Preparers on page I-23 should not include the FAA and State DOT/DOH personnel, only the actual preparers. The first four names must be removed from this list.

4. The date of the Federal Register Notice for the two public scoping meetings (January 8, 1990) should be noted in the first paragraph. Also, a copy of the formal Notice should be included in the EIS. A copy is attached.

5. A letter from the State Historic Preservation Officer (SHPO) notes that "an acceptable archeological data recovery plan needs to be submitted" for their review and approval. Following their approval, a Memorandum of Agreement (MOA) can be completed, fulfilling the requirements of Section 106 of the National Historic Preservation Act. We note that the EIS must include this MOA as a mitigation measure.

We have also attached copies of review letters from U.S. Department of Housing and Urban Development, U.S. EPA, and National Marine Fisheries Service. If you have any questions regarding our review comments, please call us.

Sincerely,

David J. Welhouse
Airport Engineer/Planner

Henry A. Sumida
Airports District Office Manager

Enclosures

cc:
Ed Hoda & Associates w/encls.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT • HONOLULU, HAWAII 96819

IN REPLY REFER TO:

AIR-EN
91.139

April 5, 1991

Mr. Henry Sumida
Airports District Office Manager
Federal Aviation Administration
Airports District Office
Box 50244
Honolulu, Hawaii 96850-0001

Dear Mr. Sumida:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
Kalaupapa, Molokai, Hawaii
State Project No. AM5011-02

Thank you for your comments to the subject DEIS. This letter addresses your comments. Specific responses to the Environmental Protection Agency (EPA) and National Oceanic and Atmospheric Administration (NOAA) comments are attached and have been sent to the respective agencies.

1. Chapter I, section 2.5, in the Final EIS will be amended to include all of the FAA Order 5050.4A requirements. *(Page I-5 to I-10)*

2. The notation "airport access road" will be deleted or qualified, if used. *(Changed to airport road)*

3. The list of preparers on page I-23 will be revised. *(Page I-30 to I-31)*

4. The dates of the scoping meetings will be included in the first chapter of the Final EIS. *(Page I-26)*

5. My staff will continue to work with your office and State of Hawaii, Historic Preservation Office to obtain the necessary documentation and approvals. Also, the Memorandum of Agreement will be included as a mitigation measure. *(Page III-37)*

AIR-EN 91.139

If you have any question, please contact Mr. Walter Nishigata of my staff at 836-6407.

Very truly yours,

Owen Miyamoto
Airports Administrator

Attachments

Pacific Basin Development Council

Suite 325 ◦ 567 South King Street ◦ Honolulu, Hawaii 96813-3070
Telephone (808) 523-9325 Facsimile (808) 533-6336

Governor Peter Tali Coleman
American Samoa
President

Governor Lorenzo I. De Leon Guerrero
Commonwealth of the Northern Mariana Islands
Vice President

Governor Joseph F. Ada
Guam
Secretary

Governor John Waihee
Hawaii
Treasurer

November 5, 1990

MR. OWEN MIYAMOTO
Airports Administrator
Airports Division
Department of Transportation
State of Hawaii
Honolulu International Airport
Honolulu, HI 96813

Dear Mr. Miyamoto:

Please find enclosed some detailed comments on the June 1990 draft of the Environmental Impact Statement (EIS), Kalaupapa Airport, Roadways and Wharf.

In Chapter V, Public Involvement, page 2 of the notes from the February 13th meeting, specific factors to minimize or reduce the impact of construction on the Kalaupapa settlement were identified. These included items dealing with the construction crews (especially, d.(3) and (4)). Although the Draft EIS does address this matter in some places, a consolidated and more detailed discussion would serve to facilitate mitigation of the substantial impact that any sudden influx of outsiders (16% population change) in a small community would have. The development of a detailed plan would seem to be the best approach; if this cannot be done by the EIS consultants, your Department should make alternative arrangements. I will be happy to help scope this effort if you decide to proceed.

If you or your staff have any questions, please do not hesitate to call me.

With aloha,

CKI
ENCLOSURE

CAROLYN K. IMAMURA
Director of Planning
and Programs

RECEIVED
NOV 2 ', 1990
EDWARD K. NODA & ASSOCIATES

erry B. Norris
Executive Director

Comments on the Kalaupapa Airport Master Plan
DRAFT ENVIRONMENTAL IMPACT STATEMENT (June 1990)

Suggested changes are underlined; [Overprinted material is recommended for deletion]

Page	Comment
CHAPTER 1. INTRODUCTION AND SUMMARY	
I-6/Para 1.	"...confined to wheel chairs, or [are otherwise unable to walk without the aid of crutches] whose ambulatory handicaps present difficulty of movement on uneven surfaces,..." *(Page I-11)*
I-6/Para 1.	"The proposed repairs and rehabilitation work will increase margins of safety and increased operations efficiency..."
I-6/Para 2.	"...the U.S. Department of Transportation and is [expected to be favorably acted upon in the near future] being pursued by the State despite national EAS program reductions." *(Page I-11)*
I-7/Para 1.	"...air service with the de Havilland DHC-6 STOL aircraft." This compromise reconciles and incorporates the community's strong desire to preserve as much of its heritage as possible within the technical standards of safety. *(Page I-12)*
I-9/Para 3.	"[p]The only "in-the-water" work would be the removal of the [seawall] rocks that have been washed into the barge basin during storms." -- Some rocks may not be from the seawall. *(Page I-14)*
I-15/Para 1.	"Kalawao County, [but] administered by the State Director of Health, with some Maui County rules and regulations applicable to the Kalaupapa peninsula." *(Page I-20)*
I-17/Para 1.	"The access road is in poor condition over most of its length." In fact, the road area at the entrance of the terminal area is nearly impassable after normal winter rainfall.
I-18/Para 1.	o. Police and Fire Services -- should be considered significant because of its serious degree of impact in the short-term. Additionally, it must be remembered that there is only 1 full-time law enforcement officer and only a volunteer fire department. *(Page III-68)*
I-19/Para 1.	"...worker comments regarding the EIS." The views of these two sectors of the community are considered to be of the greatest importance, because of the direct impact of these changes on their daily lives. *(Page I-26)*

CHAPTER II. ALTERNATIVES TO THE PROPOSED PROJECT

II-4/Para 1. "...unique tourist destination." The culmination of the canonization of Father Damien de Veuster will compound interest in Kalaupapa as a visitor destination and will place additional demands on the airport facility, with or without these improvements. *(Page II-4)*

II-4/Para 2. "At present, air service to Kalaupapa is not frequent and dependable." A service limitation is the runway crosswind problem, which will be addressed by this project.

II-15/Para 2. "...this alternative unacceptable." Regardless of where a new harbor were to be constructed on the Kalaupapa peninsula, the constraints of open ocean and weather conditions will likely preclude a larger time window for barge operations.

II-16/Para 1. "...a maximum repair alternative in which the wharf would be strengthened and dolphins constructed,..." -- ??? Current plans do include strengthening of the pier. *(Page II-17)*

CHAPTER 3. DESCRIPTION OF THE AFFECTED ENVIRONMENT, PROBABLE ENVIRONMENTAL CONSEQUENCES, AND PROPOSED MITIGATION MEASURES

III-22/Para 2. "None of these species were sighted in the study area during the survey, but are likely to occur." -- note time of year of survey since these species are more visible during the winter months. *(Page II-22)*

III-22/Para 3. "The harbor project, with the exception of minor rock removal from the barge basin, will be performed out of the water." Additionally, this is not an area of high concentrations of reef fish and threatened or endangered species. *(Page III-72)*

III-37/Para 4. "At present, 92 persons are eligible for residency with approximately 75 in residence at present." -- My lists show 98 on the Patient Registry and about 80 in residence at one time. *(Page III-39)*

III-37/Para 6. (move to para 5.) *(Page III-39)*

III-39/Para 1. "Economic activities at the Kalaupapa Settlement are limited at present." Of the total former patient resident population, a 1976 survey showed that about 1/3 were able-bodied. (Source: State of Hawaii, Alternative Study, November 1976, p.53.)

III-40/Para 2. "[~~Nearly all~~] Many of the remaining clearly visible structures are in the Kalaupapa Settlement." *(Page III-41)*

III-40/Para 3. "Similarly, improved harbor facilities will allow barges to tie to the wharf with [~~greater reliability and without the fear that they will be grounded or otherwise stuck in the barge basin~~] longer term pier capacity and avoid unnecessary hardships in cargo handling operations." *(Page III-42)*

III-41/Para 3. "...by Hutch Air and, until recently, others[~~, until recently~~]." *(Page III-43)*

III-41/Para 3. "Because of the unavailability of other modes of transportation (scheduled barge service comes to Kalaupapa only twice a year), equipment and other cargo are often flown in and out of Kalaupapa for replacement or repair." *(Page III-44)*

III-44/Para 2. "...and begins [~~at~~] on private lands adjacent to Pala'au State Park topside..." -- The trail head is 1/4 mile on the Meyer Estate land. *(Page III-45)*

III-44/Para 2. "Another much longer, rougher, poorly-marked trail descends from the top of Waikolu Valley and is nearly impassable at points." *(Page III-45)*

III-53/Para 5. "Nighttime military helicopter operations at Kalaupapa reportedly do annoy residents." The annoyance factor is likely to be due to the abrupt and substantial intrusion of the normal quiet of nighttime Kalaupapa. *(Page III-56)*

III-54/Para 3. "Increased aircraft operations which would be made possible by the project are not expected to significantly increase or affect existing ambient noise levels within Kalaupapa settlement, except for such noise as will be generated from nighttime medical evacuations and which the community finds acceptable." *(Page III-57)*

III-60/Para 3. "...total storage capacity of 172,000 gallons and associated distribution lines." The current daily consumption averages 110,000 gallons; with the existing storage limitations, water must be pumped daily. There have been instances when water rationing was required becuase of electrical transmission disruptions, reservoir transmission line breaks, and mechanical or electrical equipment failures. *(Page III-63)*

III-61/Para 2. If the proposed NPS water system improvements have not been completed prior to the start of this project, a contingency water rationing plan will be prepared.

III-64/Para 1. "...transmission lines from "topside" of the peninsula [~~at Pala'au~~]." *(Page III-66)*

III-65/Para 3. (Suggested replacement: 11.1.1 Existing Conditions) The Sheriff, appointed from among nominees of the Kalaupapa Patient Advisory Council, is the sole full-time law enforcement officer at Kalaupapa. The Sheriff has the legal authority to appoint and deputize as many police officers as deemed necessary by the Department of Health. "The National Park Service does not have any authority to enforce laws, rules and regulations throughout most of the park." *(Page III-68)*

Fire protection is currently the responsibility of the Department of Health. State workers are the designated fire marshall and deputy fire marshall; the fire crew is composed of patient and *(Page III-68)*

worker resident volunteers. The National Park Service is seeking a park ranger position dedicated to fire management tasks. The compliment of fire equipment consists of two older fire trucks, one surplused airport truck as a general community-use backup, and one small truck assigned to the airport. "Fire extinguishers, in compliance with applicable FAA regulations, are also located at the airport."

Additionally, through a formal mutual aid compact, the County of Maui fire and police resources from topside are available to Kalaupapa upon request by the Department of Health.

III-65/Para 4. (new) There is likely to be a small, short-term increase in fire protection and law enforcement services demand with the influx of workers on this project. *(Page III-72)*

III-66/Para 1. The demand for additional law enforcement services during the duration of the construction should be addressed. Mitigation possibilities include hiring of special security services for "non-business hours". *(Page III-72)*

III-66/Para 4. Although minor in scope, the additional costs of medical services for the construction workers should be addressed, recognizing that such expenses are not currently budgeted by DOH, including such contingencies as medical evacuations. *(Page III-72)*

III-68/Para 1. The short-term impact of additional demand which may be placed on recreational facilities by the construction crews should be mentioned and addressed. After all, 25 workers do constitute a 16% increase on existing demand. *(Page III-72)*

Prepared by C.K. Imamura
November 5, 1990

BKNA

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

AIR-EN
91.133

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT • HONOLULU, HAWAII 96819

March 28, 1991

Ms. Carolyn K. Imamura
Director of Planning and Programs
Pacific Basin Development Council
567 South King Street, Suite 325
Honolulu, Hawaii 93813-3070

Dear Ms. Imamura:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
Kalaupapa, Molokai, Hawaii
State Project No. AM5011-02

Thank you for your comments on the subject DEIS. This letter responses to those comments. *(Chapter III)*

General Comment

We will expand the discussion on construction impacts for each applicable section of the Final EIS.

Specific Comments

Unless noted below, your comments or statement of similar content will be incorporated into the Final EIS.

I-6/Para. 1. The increase in operational efficiency, if any, will be very modest and, therefore, this statement will remain as written.

I-17/Para 1. Roadway improvements will not alleviate flooding problems.

II-4/Para 2. Although the crosswind problem is one limitation to the existing runway, other limitations exist. These limitations are addressed in a more appropriate section.

II-15/Para 2. This statement will not be included in the Final EIS. The DOT-Harbors could build a harbor to suit the sea conditions in the area, however, this would be very costly.

III-39/Para 1. The percent of able-bodied workers is not necessary in this discussion and, therefore, will not be included in the Final EIS.

III-61/Para 2. This section pertains to the increase water demands by increase visitors and resident demands. The NPS water supply should adequately address the water problem. The construction impact which you allude to will be discussed in another section in the Final EIS.

If you have any questions, please contact Mr. Walter Nishigata of my staff at 836-6407.

Very truly yours,

Owen Miyamoto
Airports Administrator

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

TAKE PRIDE IN AMERICA

62

L7617(774)
ER-90/0757

DEC 7 1990

Mr. David Wellhouse
Airport Engineer Planner
Federal Aviation Administration
Honolulu Airports District Office
P.O. Box 50344
Honolulu, Hawaii 96850-0001

Dear Mr. Wellhouse:

The Department of the Interior has reviewed the draft environmental impact statement (DEIS) for the Kalaupapa Airport Master Plan, Island of Molokai, Hawaii.

SECTION 4(f) COMMENTS

The proposed airport project is within the boundary of Kalaupapa National Historic Park. The park is a designated National Historic Landmark. It should also be noted that the U.S. Coast Guard lighthouse is a separately listed National Historic Landmark. In addition, many of the buildings, historic sites, and ruins are included in the List of Classified Structures.

The project is therefore subject to the provisions of Section 4(f) (49 USC 303). A Section 4(f) statement should be prepared and closely coordinated with the National Park Service (NPS) prior to its issuance.

It is our understanding that you are currently engaged in discussions with the NPS to arrive at a feasible and prudent alternative. The mutually agreed upon alternative should be clearly reflected in the 4(f) Statement.

ENVIRONMENTAL STATEMENT COMMENTS

The NPS agreed to participate as a cooperating agency in the development of the DEIS since it has jurisdiction by law and by cooperative agreement within the park, as well as special expertise (40 CFR 1501.6 and answers to question 14, 46 FR 18026-18038).

Nevertheless, the DEIS does not adequately reflect NPS concerns in either the development of alternatives or the analyses of environmental consequences. As agreed upon in Cooperative Agreement CA 8896-7-8005 between the Hawaii Department of Transportation and the NPS, the Department agrees "to secure prior

written approval from the Superintendent of Kalaupapa National Historic Park...for alteration or repairs to airport buildings, grounds and facilities,..." (Article II, A (3)). Article II, B(6) and Article II, C (3) contain similar provisions. Until the environmental impact statement (EIS) more adequately represents NPS concerns, the Service cannot provide the requisite written approval.

Specific comments regarding the DEIS are as follows:

1. Introduction and Summary, p. I-1, paragraph 3: It is our understanding from the Notice of Intent (55 FR 690-691) that the Federal Aviation Administration (FAA) is a joint lead agency with the state in the development of the document. We think that their role and participation as a joint lead agency needs to be clearly discussed in the final EIS.

2. Description of Proposed Actions, p. I-7: As currently represented in the DEIS the airport improvements to be implemented do not represent a compromise plan developed with the NPS. We emphasize the need to continue discussions to develop an acceptable alternative.

3. Overview of Airport Alternatives Considered, p. II-2: Relative to constraints on alternatives, the National Historic Preservation Act contains provisions relative to National Historic Landmarks (NHL) that go beyond the language in Section 106. Section 110 (f) of the Act and 36 CFR Part 800.10 contain additional requirements.

   If a Federal agency is involved in an undertaking that will directly and adversely affect an NHL, Section 110 (f) provides that the agency "shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such a landmark." This requirement should be acknowledged on pages II-2, III-76 (first paragraph), and V-2. Additionally, NPS policies and guidelines set relatively high preservation standards for the treatment of National Register properties.

   Page II-3: The ability of any pilot flying overhead to trigger the lights on the runway could inadvertently increase access to the area. A safeguard, such as enabling only doctors and medical personnel to activate the lighting, should be built into the system.

4. Description of Airport Alternatives Considered: The alternative that appears to be the one preferred by Hawaii and the FAA does not have concurrence from the NPS at this point. However, it is likely that further discussions currently ongoing will lead to the framing of an acceptable alternative prior to the issuance of a final EIS. The alternative as may be agreed to should be clearly discussed and analyzed in the final EIS.

5. Environmental Consequences, page III-13: We would appreciate further clarification about the location of the 40 acres of strand vegetation that could be lost from airport construction. As currently explained in the DEIS, it appears to include a portion of the park designated as a historic zone with remnant native plant communities. The protection of the native plants is an important goal. However, we are unsure as to whether it is this area that may be potentially impacted.

6. Air Quality, p. III-47: As explained on page 7 of the Kalaupapa "Statement for Management", the area is a designated Class II area under the Clean Air Act. Under this designation, certain ambient air quality standards (NAAQS) and increments are established. The DEIS should clearly explain whether the proposed project will be in compliance with the standards for Class II areas.

7. Federal Programs, p. III-75: The NPS does not agree with the assertions here that the proposed project is consistent with P.L. 95-565.

8. Potential Visual Effects, pages V-2 and V-3: The potential visual effects on character-defining elements of the NHL should also be considered. These effects should be specific to the character-defining elements of the NHL. The potential eligibility of the existing airport structures and harbor structures for inclusion on the National Register need to be addressed.

9. Section 106 Responsibilities, p. III-79: A reference should be made to 36 CFR 800.11 regarding Section 106 responsibilities in the event that a property is discovered during implementation of an undertaking.

10. Ethnographic Resources: Impacts to any sites that are currently used by native Hawaiians for religious purposes, such as shrines or heiaus, should be fully discussed and avoided.

FISH AND WILDLIFE COORDINATION ACT COMMENTS

Future Federal permits may be required from the U.S. Army Corps of Engineers. The U.S. Fish and Wildlife Service will look at impacts on fish and wildlife resources at that time, and recommend approval or denial of such permits.

SUMMARY COMMENTS

The Section 4(f) Statement comments in this letter are provided to give you an early indication of our views on the Section 4(f) involvement. They do not represent the results of formal consultation by the Department of Transportation with the Department of the Interior, pursuant to the consultative requirements of

Section 4(f). Such requirements would be fulfilled only when the Office of the Secretary of this Department comments separately on any 4(f) Statement which may be prepared and approved for circulation. We encourage you to develop the statement in close cooperation with the National Park Service.

Thank you for the opportunity to provide these comments.

Sincerely,

Jonathan P. Deason
Director
Office of Environmental Affairs

cc:
Mr. Owen Miyamoto
Airports Administrator
State of Hawaii Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Mr. G. Bryan Harry, Director
Pacific Area Office
National Park Service
300 Ala Moana Blvd, Suite 6305
Box 50156
Honolulu, Hawaii 96742

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO:

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

AIR-EN
91.142

Mr. Jonathon P. Deason
Director, Office of Environmental Affairs
United States Department of the Interior
Office of the Secretary
Washington, D.C. 20240

Dear Mr. Deason:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
Kalaupapa, Molokai, Hawaii
State Project No. AM5011-02

Thank you for your comments on the subject DEIS. This letter addresses your comments.

Section 4(f) Comments

A statement regarding Section 4(f) lands will be included in Chapter III, section 12.1.3.2 of the Final EIS and will be reviewed by the National Park Service. The agreed upon Compromise Plan is described in the Draft EIS and will be clarified in the Final EIS. *(Page III-76)*

Environmental Statement Comments

We have been working with the National Park Service and the Kalaupapa Park Superintendent throughout the planning process. The National Park's comments will be included in the Final EIS, and the Cooperative Agreement CA 8896-7-8005 will be honored.

Specific Comments

1. Page I-1, paragraph 3.

The Federal Aviation Administration (FAA) is the Federal lead agency and this will be addressed in Chapter I of the Final EIS. *(Page I-1)*

with emissions below the PSD de minimis emission levels are taken to have no significant impact. Emission estimates for the project indicate that all emissions will be below the de minimis levels. Thus, based on the estimated emission levels for the proposed project relative to the PSD-specified de minimis emission rates, compliance with both the NAAQS and the PSD Class II increments will be achieved.

For your convenience, this letter is being transmitted to you both by fax and by mail. Please call me if you have any questions.

Very truly yours,

Barry D. Neal

Barry D. Neal, CCM
(Certified Consulting
Meteorologist)

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: **ACTION:** Comments on Draft Airport Master Plan/ Draft EIS for Kalaupapa Airport, Kalaupapa, Hawaii

Date: JAN 17 1991

From: Supervisor, Planning Section, AWP-611

Reply to Attn. of: Johnstone:x1621

To: Manager, Airports District Office, HNL-600

Attached are comments received from Lynne S. Pickard (APP-600), and Donald R. Trilling, Director of the Office of Transportation Regulatory Affairs. A brief review of the Draft EIS by our regional staff confirms the comments involving archaeological sites, and the lack of discussion concerning the use of national park lands, are valid. The document offers little or no analysis to support frequent claims of no significant impact on physical and natural resources.

Howard S. Yoshioka

Howard S. Yoshioka

Attachment

Memorandum

U.S. Department of Transportation
Federal Aviation Administration

File:
600
600A
610
611
612
620
621
22
NL-600
O-600

Date: 27 SEP 1990

Subject: APP-600 Comments on Draft EIS for Kalaupapa Airport, Kalaupapa Molokai, Hawaii

Reply to Attn of:

From: Manager, Community and Environmental Needs Division, APP-600

To: Manager, Airports Division, AWP-600

Overall, the draft EIS appears complete and thorough insofar as providing the information required by CEQ. We felt that some supportive data were missing or unclear, as noted below. We also wish to clarify two procedural points.

When the responsible Federal agency circulates the draft EIS, the views contained therein do, indeed, reflect the official views or policy of the FAA (paragraphs 13 and 44, Order 5050.4A). The statement on the second page from the front of the draft EIS needs to be removed. Also, CEQ regulations, section 1501.5(b), states that at least one Federal agency is to be identified as a lead or joint lead agency. Either FAA or NPS needs to be identified in the document as the joint lead agency (or both); the other agency(ies) which are now identified as cooperating agencies may remain so. This is to assign Federal responsibility and jurisdiction in order to ensure compliance with applicable Federal environmental laws and regulations. Also see CEQ 1506.2. (Note that other sections in the EIS will need to be changed as appropriate to identify the Federal lead agency - e.g., paragraph 3, page I-5.)

In order to demonstrate that all the Federal environmental requirements are met, the comments and opinions of the appropriate responsible Federal agencies should be included in the Final EIS and referenced under appropriate category and subcategory headings in the EIS. Order 5050.4A (paragraph 47h(3)) indicates that coordination should have begun prior to issuance of the draft EIS. It would have been helpful to support statements made in the mitigation sections to demonstrate adequate compliance with the applicable Federal and state environmental laws. Also, while we recognize that the EIS was prepared to meet requirements of other agencies in addition to FAA, it would be appropriate to indicate that the 20+ FAA environmental impact categories have been addressed by adding headings or subheadings at the applicable points in the EIS analysis.

DOT

An Airport Layout Plan (ALP) should have been completed as part of this master planning effort and included in this environmental assessment/environmental impact statement. Order 5050.4A requires graphics, including the ALP, in order to get a clear picture of the existing and proposed airport layout (paragraphs 47c(3)(f) and 47d(1)).

We did not find the supplemental graphics adequate to compare the original plan vs. the compromise plan as discussed on page I-7, unless there are other graphics in the document that could be referenced in this section.

The before and after width and length of the runway should be provided on page I-7.

The documentation does not carry through on its discussion of the two alternative taxiway and apron development proposals. Section 2.2 implies that grass block taxiway and apron are preferred, yet page I-7 indicates that these areas will be paved. How was the determination reached to pave these areas?

Statement on page III-7 relative to "construction of any buildings on site should be in conformance with applicable building codes..." is misleading since there are no buildings proposed to be constructed under this project (page I-7). Similarly, a statement on page III-64 implies it is questionable that runway lighting would be provided, which is inconsistent with statements on page I-7.

Something appears to be missing from the discussion on page III-74, 12.3.1.

Some of the references to the P.L. 96-565 are incorrect (II-4, III-75).

The background on how the airport was developed would be helpful in bringing the reader up to date (paragraph 47d - "highlight important backgroumd material, such as previous development"). Headquarters records indicate that the Federal grant for development of the master plan is the first grant from the FAA that the airport has received. How was initial airport development funded? It is also noted that no FAA dollars are being requested for the proposed airport development project (page I-9), although this is contradicted on page I-2. What is FAA's action? Is it ALP approval only?

Specific Impact Categories:

The list of Federal laws in table I-2 does not include the DOT Act, Section 4(f), nor Executive Order 11990, Protection of Wetlands. Because the development will take place in a

public park, the 4(f) issue must be specifically addressed (paragraph 47e(7)).

Relative to the potential for impact on endangered species, make it clear that the requirements of section 47e(10) of Order 5050.4A have been met. Include the response from the jurisdictional Federal agency relative to the conclusions reached in the report contained in Appendix B of the EIS.

We note the EIS indicates there are no wetlands impacts (page V-3). The document also states that there are wetlands on the airport property (III-14). These wetlands should be identified on the ALP and reference made, in a Wetlands category or subcategory under Water Quality, to statements made in the EIS regarding water quality management and wetlands.

Conclusions relative to farmland (page III-5) need to indicate that the requirements of the FPPA have been met (paragraph 47e(16) of 5050.4A).

Please indicate the distance of the landfill from the runway end (paragraph 47e(19), 5050.4A), and show it on the ALP if it's within the boundaries of the ALP.

In accordance with paragraph 95 of Order 5050.4A, the final EIS for this project may be approved at the regional level. Please provide this office with a copy of the completed final EIS.

Lynne Sparks Pickard

Lynne S. Pickard

Memorandum

U.S. Department of Transportation
Office of the Secretary of Transportation

Subject: Draft Environmental Impact Statement
Kalaupapa Airport, ~~Holokai~~, Hawaii

Date: OCT 29 1990

From: Donald R. Trilling
Director, Office of ~~Standards and~~ Regulatory Affairs

Reply to Attn of:

To: Lynne S. Pickard
Manager, Community and Environmental Needs Division, APP-600

We have reviewed the draft EIS for improvement of the Kalaupapa Airport. Improvements would include reconstructing the runway, providing airfield lighting, and other airfield improvements. The EIS also addresses improving the airport access road and rehabilitating the wharf in Kalaupapa Harbor.

The airport is located within the Kalaupapa National Historic Park and Historical Landmark. The draft EIS fails to discuss whether section 4(f) applies to the proposed project; because of the location within the park, section 4(f) would apply to FAA funding of the improvements. A draft section 4(f) evaluation should be prepared and coordinated with the Department of the Interior, and a final evaluation included in the final EIS. To support a finding that there is no feasible and prudent alternative, we suggest expansion of discussion of the no-build alternative.

We note that there are a number of potentially significant archaeological sites which may be impacted by the proposed projects, and that a detailed mitigation plan will be prepared. The final EIS should reflect completion of the 106 process for both the archeological sites and the historic Kalaupapa Hansen's disease settlement.

The draft EIS indicates that the proposed action is consistent with the objectives and policies of the State's Coastal Zone Management Program. The views of the State coastal zone management agency as to consistency should be reflected in the final EIS.

We appreciate the opportunity to review this draft EIS.

JOHN WAIHEE
GOVERNOR

EDWARD Y. HIRATA
DIRECTOR

DEPUTY DIRECTORS
AL PANG
JOYCE T. OMINE
JEANNE K. SCHULTZ
CALVIN M. TSUDA

IN REPLY REFER TO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT • HONOLULU, HAWAII 96819

AIR-EN
91.132

March 25, 1991

Mr. Howard Yoshioka
Planning Section, AWP-611
Federal Aviation Administration
Western-Pacific Region
15000 Aviation Boulevard
Lawndale, California 90260

Dear Mr. Yoshioka:

Subject: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Roadway and Harbor Improvements
State Project No. AM5011-02

Thank you for your comments on the subject report. The following is our response.

RESPONSE TO SECTION AWP-611 COMMENTS

Your general comment on the lack of supporting data to assess impacts is noted. We will review the document and make the necessary modifications. Your specific comments are addressed below.

APP-600 Comments

The comment on the procedural points are duly noted and appropriate changes will be made in the Final EIS. *(Cover Sheet, pages I-1 and I-5 to I-10)*

The ALP will be included in the Final EIS. *(Page I-23)*

The discussion on Page I-7 is a summary of the proposed developments at Kalaupapa Airport and additional graphics showing the existing runway configuration are not necessary. We will clarify the changes in the proposed plan in relation to the existing runway. Graphics showing the existing runway configuration are presented in other sections and on the ALP. *(Page I-12 to I-23)*

The word "paved" is used as a general term in this document and will be clarified in the Final EIS. The taxiway and apron development proposals were not acceptable to the patients or the National Park Service. The Compromise Plan was agreed upon by the NPS, FAA, DOT, Hawaii Department of Health (HDOH), and the Kalaupapa Patients Advisory Council (KPAC). *(Page I-12)*

Although no new buildings will be built, construction of temporary structures and modifications to buildings will be required. This statement will be changed to read "structures" and not "buildings". *(Page III-7)*
The statement on page III-64, on airfield lighting, will be reworded. *(Page III-67)*

Paragraph 12.3.1 will be reworded. *(Page III-79)*

We see no problems with the statement on page II-4, however, the statement on page III-75 will be modified. *(Page III-81)*

A brief historical background will be included in Section I of the document. The statement regarding federal funding will be reworded to reflect the primary reason why the FAA is the lead agency. The FAA role in the EIS will be discussed in Chapter I. The ALP has been approved for airspace and will be submitted for final approval in the near future. *(Page I-2, page I-20 to I-21)*

Specific Impact Categories

A discussion of Section 4(f) will be included in Chapter III, section 12.1.3.2, of the Final EIS. *(Page III-76)*

The comments from applicable Federal agencies will be included in the Final EIS. *(Chapter V)*

There are no wetlands on the airport property. However, there is a wetland close to the airport, and it will not be impacted. The wording on page III-14 will be clarified. *(Page III-16)*

As stated in the document, the area to be impacted is not prime farmland. The ALISH designation is based on the findings of the Soil Conservation Service.

A copy of the Final EIS will be provided to the FAA regional office.

AIR-EN 91.132

Response to the comments from the Office of Transportation Regulatory Affairs

The Final EIS will include a discussion of 4(f) in Chapter III, section 12.1.3.2. *(Page III-76)*

A mitigation plan will be completed under sections 106 and 110 and included in Appendix C of the Final EIS.

A brief discussion on the consistency policy of the Hawaii CZM will be included in Chapter III, section 12.1.3.1 of the Final EIS. *(Page III-74 to III-75) (Page III-84 to III-86)*

If you have any question, please contact Mr. Walter Nishigata of my staff at (808)-836-6407.

Very truly yours,

Owen Miyamoto
Airports Administrator

RECEIVED
MAR 25 1991
EDWARD K. NODA & ASSOCIATES

DOT 1-027
(Rev. 11/68)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

MEMORANDUM

HWY-PS
2.2980

DATE: 07/31/90

O: AIR

OM: HWY

UBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT, KALAUPAPA AIRPORT MASTER PLAN, KALAUPAPA, MOLOKAI, TMK: 2-6-1: 01

We have no comment to offer on the DEIS.

T. HARANO

JT:gm

c: HWY-PS

RECEIVED
AUG 14 1990

EDWARD K. NODA & ASSOCIATES

DIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION

AUG 8 1 40 PM '90

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(P)1646.0

AUG 07 1990

The Honorable John Waihee
Governor
State of Hawaii
c/o Office of Environmental
Quality Control
465 South King Street, Room 104
Honolulu, Hawaii 96813

Federal Aviation Administration
Honolulu Airports District Office
Honolulu International Airport
Honolulu, Hawaii 96819

Gentlemen:

Subject: Kalaupapa Airport Improvements
Draft EIS

Thank you for the opportunity to review the subject document. We have no comments to offer.

Should there be any questions, please contact Mr. Cedric Takamoto of the Public Works Division at 548-7192.

Respectfully,

RUSSEL S. NAGATA
State Comptroller

CT:jk
cc: State Department of Transportation
Edward K. Noda and Associates, Inc.

1689

DOT 1-027 (Rev. 11/68)

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION

MEMORANDUM

HAR-EP 5393.91

DATE: AUG. 7, 1990

TO: AIR

FROM: DEP-T

SUBJECT: KALAUPAPA AIRPORT MASTER PLAN

We have reviewed the draft EIS and have no comments to offer.

The scope of work planned for the harbor and dock repairs reflect comments and recommendations we provided earlier.

EKT:laa

c: HAR-EM

1661

DEPARTMENT OF THE NAVY
COMMANDER
NAVAL BASE PEARL HARBOR
BOX 110
PEARL HARBOR, HAWAII 96860-5020

DIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION

Aug 8 10 31 AM '90

IN REPLY REFER TO:

5090
Ser 00F2/2782
06 AUG 1990

The Honorable John Waihee
Governor, State of Hawaii
c/o Office of Environmental Quality Control
465 S. King St., Room 104
Honolulu, Hawaii 96813

Dear Governor Waihee:

KALAUPAPA AIRPORT IMPROVEMENTS

The Draft Environmental Impact Statement (DEIS) for Kalaupapa Airport, Roadways and Wharf, Kalaupapa, Molokai, Hawaii, has been reviewed, and we have no comments to offer. Since we have no further use for the DEIS, it is being returned to your office.

Thank you for the opportunity to review the draft.

Sincerely,

W. K. LIU
Assistant Base Civil Engineer
By direction of
the Commander

Encl
(1) DEIS

Copy to:
FAA, Honolulu Dist Office
Dept of Transportation
Edward K. Noda & Assoc, Inc.

JOHN WAIHEE
GOVERNOR
ROGER A. ULVELING
DIRECTOR
BARBARA KIM STANTON
DEPUTY DIRECTOR
LESLIE S. MATSUBARA
DEPUTY DIRECTOR

DEPARTMENT OF BUSINESS AND ECONOMIC DEVELOPMENT

ENERGY DIVISION, 335 MERCHANT ST., RM. 110, HONOLULU, HAWAII 96813 FAX: (808) 531-5243

August 14, 1990

Federal Aviation Administration
Honolulu Airports District Office
Honolulu International Airport
Honolulu, Hawaii 96819

Gentlemen:

Subject: DEIS Kalaupapa Airport Improvements
Kalaupapa, Molokai, Hawaii. TMK: 2-6-1:01

We wish to inform you that we have no comments to offer on the subject environmental impact statement.

Thank you for the opportunity to review the document.

Sincerely,

for Roger A. Ulveling

RAU:MHK/hk

cc: Department of Transportation
Edward K. Noda and Associates, Inc.

DEPARTMENT OF
HUMAN CONCERNS
COUNTY OF MAUI

HANNIBAL TAVARES
Mayor
ROBERT AGRES, JR.
Director
MIRIAM K. KAHALEKAI
Deputy Director

200 SOUTH HIGH STREET, WAILUKU, HAWAII 96793
(808) 243-7805

August 15, 1990

Honorable John Waihee, Governor
State of Hawaii
c/o Office of Environmental Quality Control
465 South King Street, #104
Honolulu, Hawaii 96813

Dear Governor Waihee:

Subject: Environmental Impact Statement prepared for the Kalaupapa Airport Improvements

The Office of Economic Development have reviewed the subject Environmental Impact Statement and find that, in general, it has adequately identified and addressed the major environmental impacts which can be anticipated to result from the proposed project.

We have no other comments to offer at this time; however, we thank you for the opportunity to review the Environmental Impact Statement.

Very truly yours,

Fred Matsumoto

FRED MATSUMOTO
Economic Development Coordinator

RECEIVED
AUG 17 1990
EDWARD K. NODA & ASSOCIATES

EDWIN OKUBO, Housing Division Administrator
ROBIN TANAKA, Senior Services Division Administrator
MICHAEL LUXTON, Youth Services Division Coordinator
FRED MATSUMOTO, Economic Development Division Coordinator
ARNOLD BAXA, Immigrant Services Division Coordinator
JAN DAPITAN, Volunteer Action Division Coordinator
ROY FUSATO, Office on Aging Executive on Aging

JOHN WAIHEE
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
3949 DIAMOND HEAD ROAD, HONOLULU, HAWAII 96816-4495

ALEXIS T. LUM
MAJOR GENERAL
ADJUTANT GENERAL

MYLES M. NAKATSU
COLONEL
DEPUTY ADJUTANT GENERAL

DIRECTOR'S OFFICE
DEPT. OF
TRANSPORTATION
AUG 27 10 30 AM '90

August 23, 1990

Engineering Office

Governor, State of Hawaii
c/o Office of Environmental
Quality Control
465 South King Street, #104
Honolulu, Hawaii 96813

Dear Governor:

Kalaupapa Airport Improvements

Thank you for providing us the opportunity to review the above subject project.

We have no comments to offer at this time regarding this project.

Sincerely,

Jerry M. Matsuda

Jerry M. Matsuda
Lieutenant Colonel
Hawaii Air National Guard
Contracting & Engineering Officer

cc: Federal Aviation Administration
✓State Department of Transportation
Edward K. Noda and Associates, Inc.

NATIONAL GUARD
Americans At Their Best.

United States Department of the Interior
FISH AND WILDLIFE SERVICE
PACIFIC ISLANDS OFFICE
P.O. BOX 50167
HONOLULU, HAWAII 96850

DIRECTOR'S OFFICE
DEPT OF
TRANSPORTATION
SEP 17 10 07 AM '90

SEP 14 1990

The Honorable John Waihee
Governor, State of Hawaii
c/o Office of Environmental Quality Control
465 South King Street, Suite 104
Honolulu, Hawaii 96813

Dear Governor Waihee:

Re: Kalaupapa Airport Improvements

Due to current staff limitations, the Pacific Islands Office, Fish and Wildlife Enhancement cannot devote the time to adequately evaluate potential impacts to important fish and wildlife resources from the proposed project. Please understand that this notification does not represent the Fish and Wildlife Service's approval of the proposed activity. We may review future actions related to this project should workload constraints be alleviated, or if significant adverse impacts to trustee fish and wildlife resources are identified.

Sincerely yours,

Ernest Kosaka

Ernest Kosaka
Field Office Supervisor
Fish and Wildlife Enhancement

cc: Federal Aviation Administration
Department of Transportation
Edward K. Noda and Associates, Inc.

JOHN WAIHEE
GOVERNOR

JOSEPH K. CONANT
EXECUTIVE DIRECTOR

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
HOUSING FINANCE AND DEVELOPMENT CORPORATION
SEVEN WATERFRONT PLAZA, SUITE 300
500 ALA MOANA BOULEVARD
HONOLULU, HAWAII 96813
FAX (808) 543-6841

IN REPLY REFER TO:

90:PLNG/4492jt

September 20, 1990

To: Governor, State of Hawaii
c/o OEQC

From: Joseph K. Conant
Executive Director

Subject: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR KALAUPAPA AIRPORT IMPROVEMENTS

Thank you for the opportunity to review the subject report. We have no housing related comments to offer.

Enclosed is the draft EIS.

JT:eks

Enclosure

c: Federal Aviation Administration w/o enclosure
Department of Transportation w/o enclosure
Edward K. Noda and Associates, Inc. w/o enclosure

RECEIVED
SEP 24 1990
EDWARD K. NODA & ASSOCIATES

U.S. Department of Housing and Urban Development
Honolulu Office, Region IX
300 Ala Moana Blvd., Room 3318, Box 50007
Honolulu, Hawaii 96850-4991

90-363

October 12, 1990

Mr. David J. Welhouse
Airport Engineer/Planner
Honolulu Airports District Office
Box 50244
Honolulu, Hawaii 96850-0001

Dear Mr. Welhouse:

SUBJECT: Draft Environmental Impact Statement (DEIS)
Kalaupapa Airport, Kalaupapa, Molokai, Hawaii

We have reviewed the Draft Environmental Impact Statement (DEIS) that addresses the impacts that may result from improving and rehabilitating Kalaupapa Airport, the airport access road and secondary roadways and the wharf at Kalaupapa on Molokai.

Our review was limited to those issues that would impact HUD programs or projects at Kalaupapa. We find that the issues are well covered and that there will not be any impact on HUD programs or projects at Kalaupapa.

We do not need a copy of the final Environmental Impact Statement. If you have any questions, please call Frank Johnson at 541-1327.

Very sincerely yours,

Calvin Lew
Director
Community Planning and
Development Division

PUBLIC HEARING MINUTES

SIGN-IN SHEET

Public Hearing Meeting
Kalaupapa Airport Environmental Impact Statement

November 28, 1990
11:45 a.m.
McVeigh Hall
Kalaupapa, Molokai

NAME	ORGANIZATION	PHONE
[illegible]	[illegible]	
[illegible]	[illegible]	
James Chang	DOT-A	836-6591
Nawan S Uncruri	Design Consultant	2424403
NEAL BORGMEYER	NPS	567 6102
Fe CARPENTER	HOSPITAL DOH	567-6188
SARAH BENJAMIN	Resident	567-6262
[illegible]	"	"
David Welhouse	FAA HNL-ADO	541-1243
RALPH YAFUSO	DOT A Maui	871-9497
JON A. SAKAMOTO	DOT-A Maui	871-0028
CAROLYN K. IMAMURA	PACIFIC BASIN DEV. COUNCIL	523-9325
ELTON TESHIMA	DOT-HARBORS	548-6559
Bernard Schwind	D.O.H-Kalaupapa	567 6320
Diane Hirsch	DOH - Comm. Dis. Div.	548-4581
J Stephen Athens	Internat. Arch. Res. Inst Inc	946 2548
Annie Griffin	DLNR - State Historic Preservation Office	587-0013
GEORGE KRASNICK	GK & ASSOCIATES	528-5228
Gloria Marks	Kalaupapa, MKK	567-6654 Wk place 567-6171 - Bus

SIGN-IN SHEET

Public Hearing Meeting
Kalaupapa Airport Environmental Impact Statement

November 28, 1990
11:45 a.m.
McVeigh Hall
Kalaupapa, Molokai

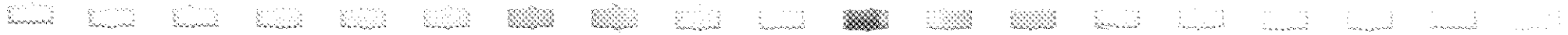
NAME	ORGANIZATION	PHONE
Peter Thompson	NPS KALA	567-[illegible]
John Sanders	Aries [illegible]	[illegible]
Rose Neilson-Nenezich	Aloha Island Air	833-3048
Paul Haraba	Patient	567-6446
Edwin [illegible]	"	567-6556
James A Beale	Sheriff County of Kalawao	567-6300
Boogie Kahilihiwa	PAC MEMBER	567-6320

TESTIMONY SIGN-IN SHEET

Public Hearing Meeting
Kalaupapa Airport Environmental Impact Statement

November 28, 1990
11:45 a.m.
McVeigh Hall
Kalaupapa, Molokai

NAME	ORGANIZATION	PHONE
Peter Thompson	NPS KALA	567-6182



STATE OF HAWAII

ORIGINAL

KALAUPAPA AIRFIELD ENVIRONMENTAL

IMPACT STATEMENT PUBLIC HEARING

_____/

PUBLIC HEARING

was held on Wednesday, November 28, 1990, at the McVeigh Hall, Kalaupapa, Molokai, commencing at 11:59 a.m.

POWERS & ASSOCIATES

(808) 521-7815

APPEARANCES:

OWEN MIYAMOTO, DOTA

JAMES G. DITTMAR

WALTER NISHIGATA, DOTA

JAMES CHANG, DOTA

JAMES DITTMAR, EKNA

BRIAN ISHII, EKNA

DAVE WELHOUSE, FAA

DIANE HIRSCH, DOH

CAROLYN IMAMURA, PBDC

STEVE ATHENS, IARI

ANNIE GRIFFIN, DLNR

GEORGE KRASNICK, GK Associates

JOHN SANDERS, ARIES

WARREN UNEMORI, Warren S. Unemori Engineering, Inc.

BERNARD PUNIKAIA

Reported by: Sandra L. Graff, CSR-T 1142

State of Hawaii

MR. MIYAMOTO: Good morning, ladies and gentlemen. I am the Administrator for the Department of Transportation, State of Hawaii. It is now 11:59 a.m., and I hereby declare this public hearing concerning the Kalaupapa Airport Master Environmental Impact Statement now open, here at McVeigh Hall, on November 28, 1990.

Today we have observers from the community, the consultants from the Department of Transportation, Honolulu Airports Division, as well as the District office from Maui and the Federal Aviation Administration.

The purpose of today's hearing is to afford all interested persons an opportunity to submit data, views or arguments, orally or in writing, with respect to the proposed Environmental Impact Statement.

When your name is called, please state your name, address, organization, if any, and interest. Unless you are called to order by me, or until your time is up, you may speak freely with respect to the subject matter.

Written submissions will also be received until December 21, 1990, at the Engineering Branch, Airports Division, Honolulu International Airport, Honolulu, Hawaii 96819-1898.

In order that each and every interested person may be given a fair opportunity to be heard, we request that you observe the following procedures:

If you wish to speak and have not done so already, please enter your name on the sign-up sheet, together with your address, the organization you represent, if any, and wait your turn.

The general agenda for today is as follows:

First, we will introduce the Consultants working on the program for the Airports Division. The Consultant will make a short presentation, followed by a 15 minute recess. When we resume, we will then receive your testimony.

We will now get into the details of the Kalaupapa Master Plan Environmental Impact Statement. Making the presentation is Mr. Jim Dittmar, Edward K. Noda and Associates, Incorporated.

MR. DITTMAR: Thank you, Owen. Does everyone have a handout?

What we are going to do today is go over some of the alternatives we've looked at on the airfield and the Compromise Plan arrived at last February; and we'll go into the details of that. We'll also go into a little about the groups on the Roadway and Harbor Improvements.

Then Mr. Steven Athens, from the International Archaeological Institute, will talk about the archaeological sites on the project.

If you notice, your handouts list the runway alternatives. Basically, these are the photograph

descriptions we've looked at. This is your existing runway right now, 2,760 feet in length, 50 feet wide. Presently, this runway does not meet FAA criteria -- Federal Aviation Criteria. You'll notice, looking at the runway, that it is not very straight, and it has undulating in it. Looking at the wind information, we found the runway does not meet the 85 percent wind coverage required.

We took a look at the first alternative. Tiling the runway at the time, five degree rotation. The aircraft, Cesna 402, under Air Molokai, based on a normal runway criteria -- what kind of runway lengths, fully loaded, coming in and out.

This is the plan we came up with. The runway length of 3,200 feet; five degree rotation. The runway outside of the airport property on the west side, and outside the east side.

Based on the archaeological considerations on the project, we had an International emissions survey done, showing potentially 14 archaeological sites on this alternative. This is Alternative One.

Basic public information and input from the patients, and the Department of Health, we started looking at a number of other alternatives. We felt the runway would harm too many archaeological sites.

In Alternative Two, we started looking at the other

alternatives. We looked at cutting back 150 feet. One thing we have to show on these runways -- you need safety areas, which are fatter at both ends. These are runway safety areas required by the FAA. Presently, the existing runway would not have these. These add 300 feet. You only count the actual length between them. This adds 300 feet this way and three hundred this way. The runway length is 2,950. You add 2,950 to 300 at the ends. This alternative affects 14 archaeological sites and was deemed unacceptable by the people here in Kalaupapa.

In Alternative Three, we cut back to 2,700, which is the existing runway. Again, the actually length would be 3,000 because you add two to three hundred feet at the ends. Five degree rotation. This time we are disturbing 7 archaeological sites. You can see these sites down here.

MR. PETER THOMPSON: Which ones are those?

MR. MIYAMOTO: Would you please hold your questions, Peter, until we are through.

MR. DITTMAR: This is Alternative number 4. Again, runway length is 2,950. This still impacts heavily down here, in the west end of the airport.

Alternative Five, is again 2,700 feet. What happened is, we just kept the present alternative and added the 300 feet for the safety area, and the impact on the archaeological sites.

In Alternative number six, we look at, again, cutting the runway down to 2,260 feet and add the two or three hundred out of the existing 2,700; and, essentially, repaving the runway. We have one problem with taking existing alignment. One, it is difficult to maintain the runway and make it operational during construction. Two, it does not solve angle into the winds getting the 85 percent coverage.

At a meeting last February, with the EIS, the Compromise Plan was obtained, generally, by all parties at the meeting. The compromise plan is outlined on the third page; and we also have details in the foldout.

This is your existing runway right now. Rotated five degrees keeps the runway on the west and inside the existing airport boundary and comes out here, a hundred feet on the east-end of the airport, maintaining 2,700 feet. This will fit the design air ambulance, Cesna 402. This would allow them to bring nighttime lights in, and allow them to come in at nighttime to pick up patients they need and get out.

We will disturb minimal sites on this one. We will disturb 4 to 7 archaeological sites. I would like to hear from Steven Athens on the archaeological considerations.

As part of the airport project, we are going to go ahead and do harbor improvements and do roadway

improvements. At this time the anticipation is repaving of the existing roadway with existing widths. The National Park Service came up with a plan to re-do the waterlines as part of the roadway project. It could be that the roadway contractor will put sleeves under the roadway. The National Park Service would later come in and put up the pipelines. The Harbor Improvements would be the maintenance and repair and strengthening of the existing pier. Take out the boulders from the turning basin down there and provide mobile lift for small boats. That will be a total package to get and what we anticipate right now.

We hope to start on construction in September of 1991.

At this point, I would like the archaeological considerations presented. I would like to bring Mr. Steven Athens in to discuss the archaeological survey and to talk a little bit about what the objections are how they will be addressed.

MR. ATHENS: I am Steven Athens. The International Archaeological Institute has been involved in an inventory survey of the area around the airport and the potential impact by the improvements. We conducted, initially, a recognizance and full inventory survey. Documents indicated, essentially, all of the sites going back approximately this far on the west end and then survey of the east end was done, as well.

This documentation included mapping the locations of the sites, detailed descriptions of the sites, plan mapping of the sites, and test excavations evaluate the existing subsurface depots. This information was used by Jim Dittmar and his associates in consideration of developing the various alternatives which they've come up with, with this alternative here, at present.

But what we are really considering here are these 7 sites that will be impacted or potentially impacted as a sort of proposed improvement.

There will be no sites on the east end, as I think Jim indicated, that would be impacted as a result of the improvements. The one right here, is what we call a C-shape shelter site. A small structure. Located right here is a residential complex. Our investigations indicated that it dates to the historic period, that is, the arrival of Captain Cook; probably sometime during the 19th century.

Feature three, right here, is a boundary enclosure. And maybe you can see the wall runs down right here. And it is presumably some kind of boundary enclosure. Today this residential complex feature 4, right here consists of a series of small agricultural alignments.

Feature 30, this large enclosure, right here, you can see this on the map. And this is presumably an agricultural feature, as well.

Feature 32 is located in approximately the center of the enclosure and that consists of a small C-shaped shelter.

Feature 3, this one right here, consists of a partial boundary wall that was previously impacted by the previous airport construction. And there appears to be small C-shaped shelters incorporated into this boundary wall. At present, we are involved in preparing a mitigation plan which addresses the issues that will be required to completely mitigate adverse impacts as a result of the constructions.

And this plan will indicate procedures to be used in the mitigation. That is, the excavation that will be performed. Possible additional mapping. How much excavation, the methodology and so forth. And, in general, the mitigation plan will include a substantial amount of archaeological excavations to expose possible subsurface features that we are not able to detect at present; as well as to recover the archaeological deposits associated with these features, to be able to date the features, and to determine their functions. And this plan, as indicated, is presently in preparation and will be submitted to the State Historical Preservation Division for their approval probably in early January.

MR. MIYAMOTO: One other feature we would like to mention, that is a part of the supplemental part of this

project. Because we realized a potential impact on the community by the influx of workers that will be involved in this project.

A lot of construction work will be going on for a while. We have the Pacific Base Study on the impact of worker influx into this area. This will be as part of the supplemental of the EIS that has been prepared by this department on this issue.

I think all of you met Carol Nakamura. She has been to your community several times and knows the community quite well. She will be doing the study as part of the contract on this program. I think that right now would be a good time to take a break to come up and take a look at the drawings, before we take testimony on the issue of the Environmental Impact Statement.

(A brief recess was held in the proceedings).

MR. MIYAMOTO: The hearing will come to order.

Mr. Thompson has signed up to present his testimony.

Mr. Thompson, we will hear your testimony at this time.

MR. THOMPSON: Just briefly, I do have a few comments. I think your final product is going to be acceptable to everyone. It hasn't been easy to arrive at this point, and a number of different agencies have worked with a number of different objectives; and not clearly, all

of the time, understanding what each member of the other agency is all about and what we stand for.

But I think we have come a long way and the final product will be a safer airport, all around, and will serve the needs of this community for the next great many years.

There are a number of other questions that have to be answered, and there is a process to go through beyond this hearing today; that is technical and has to do with bringing the master plan in conformance with the alternative selected. Because that hasn't been done yet.

There are questions that have to be answered and addressed in the final plan, such as, will it be four sites or seven? We get three initially back. That construction on the west-end of the existing airport boundary won't go outside.

Well, there are four sites in side the boundary as you can see. Why is it necessary that three others, outside, be possibly destroyed?

There are questions about the need for pali lights, marker lights. What would they be like? There are questions still to be answered about whether the lighting system at the airport will look like lighting systems at all airports or will they be controlled here or only for the propose that you as a community decide. If you need them. And that was for nighttime medical operations, not

general aviation services. Will the Pali lights, if required, be on only when the airport lights are on or whether they be on all the time?

These are all important questions and they will make a difference to the way Kalaupapa is in the future and whether it is consistent with the way the National Park Service wants it and the way we think we understand the community. Those questions and, perhaps, others need to be answered, and will be answered in the ensuing days and weeks and months prior to beginning of construction.

As I said, I'm pleased to have been a part of the process and involved and have come this far. And I'm happy to be part of that process with you people.

It's an important thing that we have been going through. We have selected an alternative that fulfills everybody's needs. It doesn't make everyone happy all the time, but it does fulfill all our needs one way or another. Thank you very much.

MR. MIYAMOTO: Thank you, Peter.

And let me add that we appreciate your participation in the planning process.

Would anybody else like to present testimony at this time?

MR. PUNIKAIA: I would just like to say that I, also, appreciate the community meeting and the residents

here for participating in this thing that will affect their lifestyles here.

I too have concern about the Hawaiian sites that have special significance to us as Hawaiians; but not just for Hawaiians, but all the people who are here because they believe in the specialness of Hawaii. And these things are part of Hawaii. Any time one is covered up or taken away, I feel like a part of my history has disappeared. So I'm as equally concerned as Peter, as to how many sites are included and covered up.

The other questions he raised, I think, they were very valid questions about the lights. Who controls these things? Again, just to say that we are not satisfied with everything. But we try to make -- to come to something that will benefit our community and have a positive affect on all of us.

Mahalo.

MR. MIYAMOTO: Thank you, Bernard.

Is there anyone else who would like to testify at this time?

If not: The time is 12:37 p.m., and I declare this public hearing closed.

Thank you for your participation.

CERTIFICATE

I, Sandra L Graff, hereby certify that the foregoing is a full, true and correct statement of the proceedings had on 11-28-90, as taken down by me in stenotype and thereafter transcribed into typewriting under my supervision.

Sandra L Graff

TECHNICAL ADVISORY COMMITTEE MEETING MINUTES

Kalaupapa Airport Master Plan
Technical Advisory Committee Meeting
November 15, 1988

I. Introduction - Wally Nishigata, DOT, Airports Division

II. Introduction of Consultants
Jim Dittmar, Edward K. Noda & Associates

III. Self-Introduction of Committee Members

IV. Project Schedule, See attachment

V. Presentation of Issues

1. Potential Airfield Improvements:

- o Relocate lighthouse road off airport AOA
- o Smooth runway; strengthen pavement
- o Widen and straighten runway
- o Lengthen runway; add extended safety areas
- o Realign runway for prevailing winds
- o Provide offshore protection of runway against waves
- o Provide stub taxiway and paved apron; number of simultaneous aircraft?
- o Provide landing aids:
  - * Lighted wind tetrahedron
  - * Pilot activated REIL
  - * Runway lights for emergency MEDIVAC
- o Helipad

2. Potential Terminal Area Improvements:

- o Provide fencing to keep apron area/AOA safe
- o Provide rain shelter for passengers
- o Provide baggage and freight handling/storage facilities

- Provide separate passenger arrival area
- Provide roadway turn-around, drop-off and paved vehicle parking; number of vehicles?
- Improve ARFF, maintenance and storage facilities
- Restore existing building by re-installation of historical divider rail, upgrade electrical wiring to code
- Improve airport graphics
- Landscape terminal area and environs

3. Potential Improvements to Settlement Road:

- Use existing right-of-way (because of possible archeological problems)
- Widen and smooth roadway pavement; strengthen pavement
- Improve roadway drainage
- Provide signage and striping
- Landscape right-of-way

4. Potential Noise Program Actions:

- Make aircraft noise measurements
- Develop Baseline 1988 noise contours; projected noise contours for 1993 and 2008
- Make noise complaint survey to include overflights by fixed and rotary wing aircraft

VI. Questions and Comments

Question: (Suzanne Garcia) You mentioned smoothing the runway, would that be removing what is already there and loosening everything there?

Answer: (Jim Dittmar) Yes, we will try to realign the runway and take out the swells. There are a couple dips in there. There will be a problem of maintaining an operational runway

during construction. We would have to work closely with you folks to coordinate how to maintain the runway and keep it open while we work on it.

Question: (Jim Mooney) On the lengthening the runway, what length do you have in mind?

Answer: (Jim Dittmar) About 3000 feet and widening the runway to about 75 feet. We would also have to take a look at the archeological sites found at the "5" end of the runway.

Question: (Al Baldwin) Jim am I right to assume there is going to be Federal funding involved in this project (FAA money)?

Answer: (Jim Dittmar) There is FAA money involved as far as funding for the Master Plan.

Comment: (Al Baldwin) It would involve 106 funds situation.

Comment: (Keith Davis) The runway now is awfully narrow, it is short and extremely rough. As Sue mentioned, I really doubt that simple resurfacing is the answer. Seems to me that the whole thing has to be dug up and started all over if its done on the existing alignment. A realignment would be great because my experience of over 14 years of flying in there you almost always have a crosswind component of 15 to 20 degrees. The whole plan, here, I hope is just not dreaming.

Comment: (Jim Dittmar) Even for the little airports, we have to go through these steps.

Comment: (Keith Davis) Seems to me the problem right now is the runway itself, its physical condition, its length and the wave action at the far end. I know of at least two cases of airplanes, one taking off and one landing, which have been damaged by waves which you can't see coming when you are sitting at the threshold end of the runway.

Question: (Bill Buevens) We understand you get some rock deposits in the middle?

Answer: (Keith Davis) Once in a while, and in a big winter storm. The northwest swell comes in and deposits rocks and all kinds of debris.

Comment: (Bill Klopp) If you can move the runway back that way (toward the "5" end) it would be a tremendous improvement. However, it will take a lot of fill.

Comment: (Jim Dittmar) Yes, we must look at the cost of fill.

Question: (Webb Dickey) How wide are you going to make it?

Answer: (Jim Dittmar) 75 feet.

Comment: (Webb Dickey) With our aircraft the twin otter we don't have a problem with length, but the width makes a big difference.

Comment: (Jim Dittmar) I wish I could tell you when we are going to build all this. By the time we get done with the Master Plan if it is approved, it will be end of 1989. Design would be done by 1991 so construction could begin in 1991. These are my estimates as a consultant so don't hold the DOTA to these dates.

Comments: (Jim Dittmar) We plan to have a number of meetings like this. Our next meeting will be a public informational meeting at Kalaupapa to get the residents input. They will really determine what will happen. If they say no than it probably won't happen.

Comment: (Keith Davis) From an operational viewpoint it seems to me that the important points are the runway itself and wave action at the "23" end. And at least for us, equally important is some sort of paved access to and from the runway and the terminal building. Now the only way to get to the terminal is to taxi across coral and rocks. It is really hard on tires and in our case propellers where you only have 10 inches of clearance.

Question: (Bill Buevens) How big do you think that apron should be, that is, how many airplanes have been there simultaneously?

Answer: (Keith Davis) I've seen 3 in there pretty common. I think it should accommodate 3 or 4 402 size. (Webb Dickey) we won't have more than one otter in there unless there is a charter and we will take more planes.

Question: (Bill Buevens) Should there be provisions for a helipad there?

Answer: (Marybeth Maul) The marines use the runway a lot during the fall. (Bill Klopp) They use the runway for practices.

Question: (Jim Dittmar) Would a lighted helipad be of use in case of an emergency?

Answer: (Marybeth Maul) Of course. (Bill Klopp) Remember you cannot carry passengers over water in a single engine helicopter. There are no two engine helicopters in the state except for the marines.

Question: (Greg Goetz) Do you know how many people park vehicles at the terminal? About how many spaces would be needed?

Answer: (Marybeth Maul) About 10-15.

Comment: (Shoichi Hamai) In the past thirty years you've resurfaced and smoothed the airstrip 2 or 3 times. As long as the airstrip is on sand and coral, there will be sinking of the airstrip. You only will waste money if you are going to resurface the runway.

Comment: (Bill Klopp) There are some places where it is sand and other places coral. There was no real base course laid.

Question: (Bill Buevens) On the settlement roadway do have drainage problems down there; are there times when the road is flooded?

Answer: (Marybeth Maul) Yes, especially the area just beyond the beach houses.

Question: (Suzanne Garcia) What would the priority be on the items?

Answer: (Jim Dittmar) I would say that the runway and the access road are tied together and would be top priority. Of course it depends also on the funding.

Comments: (Al Baldwin) You will run into a lot of problems trying to widen the access road. But that doesn't mean that all the alternatives should not be looked at.

Question: (Suzanne Garcia) Is there anything outside from this that we can do?

Answer: (Jim Dittmar) You could write a letter to the Director of Transportation saying that the highest priority should be fixing the runway. That it is a critical link to the outside world for the settlement.

Comment: (Bill Buevens) Also, suggest any interim things that can be done to relieve your problems in the short term.

List of Participants

William R. Buevens	Edward K. Noda and Associates
Gregory C. Goetz	Edward K. Noda and Associates
Hardy Spoehr	Hawaiian Home Lands
Marybeth Y. Maul	Department of Health-Kalaupapa Settlement
David Welhouse	FAA HNL-ADO
Wally Nishigata	DOT-Airports Division
Brian Ishii	Edward K. Noda and Associates
William T. Klopp	DOT-Airports Division
Webb Dickey	Aloha Island Air
Shoichi Hamai	Department of Health-Kalaupapa Settlement
Ron Darby	Darby and Associates
Suzanne Garcia	Air Molokai
Keith Davis	Air Molokai
George Young	Army Corps of Engineers
Jim Mooney	Air Line Pilots Association
Al Baldwin	National Park Service
Carolyn Imamura	Pacific Basin Development Council
J. Stephen Athens	International Archeological Research Institute
Thomas Anamizu	Department of Health
Jon A. Sakamoto	DOT-Airports Division, Kahului AIrport

Kalaupapa Airport Master Plan
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November 15, 1988

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- o Provide offshore protection of runway against waves
- o Provide stub taxiway and paved apron; number of simultaneous aircraft?
- o Provide landing aids:
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- o Helipad

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- o Provide roadway turn-around, drop-off and paved vehicle parking; number of vehicles?
- o Improve ARFF, maintenance and storage facilities
- o Restore existing building by re-installation of historical divider rail, upgrade electrical wiring to code
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- o Landscape terminal area and environs

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VI. Questions and Comments

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Answer: (Jim Dittmar) Yes, we will try to realign the runway and take out the swells. There are a couple dips in there. There will be a problem of maintaining an operational runway

during construction. We would have to work closely with you folks to coordinate how to maintain the runway and keep it open while we work on it.

Question: (Jim Mooney) On the lengthening the runway, what length do you have in mind?

Answer: (Jim Dittmar) About 3000 feet and widening the runway to about 75 feet. We would also have to take a look at the archeological sites found at the "5" end of the runway.

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Answer: (Jim Dittmar) There is FAA money involved as far as funding for the Master Plan.

Comment: (Al Baldwin) It would involve 106 funds situation.

Comment: (Keith Davis) The runway now is awfully narrow, it is short and extremely rough. As Sue mentioned, I really doubt that simple resurfacing is the answer. Seems to me that the whole thing has to be dug up and started all over if its done on the existing alignment. A realignment would be great because my experience of over 14 years of flying in there you almost always have a crosswind component of 15 to 20 degrees. The whole plan, here, I hope is just not dreaming.

Comment: (Jim Dittmar) Even for the little airports, we have to go through these steps.

Comment: (Keith Davis) Seems to me the problem right now is the runway itself, its physical condition, its length and the wave action at the far end. I know of at least two cases of airplanes, one taking off and one landing, which have been damaged by waves which you can't see coming when you are sitting at the threshold end of the runway.

Question: (Bill Buevens) We understand you get some rock deposits in the middle?

Answer: (Keith Davis) Once in a while, and in a big winter storm. The northwest swell comes in and deposits rocks and all kinds of debris.

Comment: (Bill Klopp) If you can move the runway back that way (toward the "5" end) it would be a tremendous improvement. However, it will take a lot of fill.

List of Participants

William R. Buevens	Edward K. Noda and Associates
Gregory C. Goetz	Edward K. Noda and Associates
Hardy Spoehr	Hawaiian Home Lands
Marybeth Y. Maul	Department of Health-Kalaupapa Settlement
David Welhouse	FAA HNL-ADO
Wally Nishigata	DOT-Airports Division
Brian Ishii	Edward K. Noda and Associates
William T. Klopp	DOT-Airports Division
Webb Dickey	Aloha Island Air
Shoichi Hamai	Department of Health-Kalaupapa Settlement
Ron Darby	Darby and Associates
Suzanne Garcia	Air Molokai
Keith Davis	Air Molokai
George Young	Army Corps of Engineers
Jim Mooney	Air Line Pilots Association
Al Baldwin	National Park Service
Carolyn Imamura	Pacific Basin Development Council
J. Stephen Athens	International Archeological Research Institute
Thomas Anamizu	Department of Health
Jon A. Sakamoto	DOT-Airports Division, Kahului AIrport

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Kalaupapa Airport Master Plan

Technical Advisory Committee

May 2, 1989

AGENDA

1. Introduction
2. Existing Conditions, Limitations, Opportunities & Concerns - (Working Paper No. 1)
3. Aviation Demand Forecasts & Facility Requirements (Working Paper No. 2)
4. Terminal Area Concept
5. Runway Alignment
6. Adjourn

Please submit formal comments and questions in writing, to:

State Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Attention: Mr. Owen Miyamoto

Consultants:

Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 1000
Honolulu, Hawaii 96814

Telephone: (808) 533-0553

Attention: James G. Dittmar

Minutes of Meeting

Kalaupapa Airport Master Plan

Second Technical Advisory Committee Meeting

Date: May 2, 1989

Time: 1:40 p.m.

Place: Honolulu International Airport, Garden Conference Room

I. Introduction, Dean Nakagawa, DOT - Airports Division

II. Introduction of Consultants and FAA Representative,

- Representing Edward K. Noda and Associates

  James Dittmar

  William Buevens

  Gregory Goetz

  Brian Ishii

- Representing AIRES Consultants Ltd. (sub-consultant)

  R. John Sanders

- Representing the FAA

  Dave Welhouse

III. Self Introduction of Members

IV. Presentation by consultants (see attachment or handout for more detail)

A. Demand / Forecast analysis, John Sanders

- Description of present demand (1988 statistic)
  1. 13,678 passengers (enplaned and deplaned)
  2. Estimated 200 tons of cargo and mail
  3. Estimated 7,500 aircraft operations

     Note: must still verify military operations

- Description of the Forecasted passenger demand

  1. Brief discussion of the forecasting procedure and the fact that this is not so much a forecast but a series of "scenarios".
  2. The forecasted demands included 50 and 100, and what would happen with 200 and 300 visitor per day limits
  3. The forecasted cargo amounts were 250, 300, 400 and 500 tons per day
  4. The forecasted total aircraft operations were 10,500, 14,000, 19,500, and 27,000 based on the above scenarios and the use of similar aircraft which are presently flying

If DHC-7's were used for the forecasted demand at 300 visitors per day the number of operations would be reduced from 27,000 to 20,000 operations per day

- Description of the peak hour demands
  1. The peak hour aircraft operations associated with the forecasted visitors per day were 9, 11, 16, 22, 16.

B. Airfield and Terminal Requirements

- Airfield Requirements

  1. Runway length of 3000 feet
  2. Runway width of 75 feet
  3. Extended safety areas and blast pads
  4. Paved Taxiway and Apron
  5. Landing aids and lighting

- Terminal Requirements

  1. Waiting area and number of seats
  2. Baggage Claim
  3. Security area
  4. Curb and Parking area
  5. Administrative, and Airfield Rescue and Fire Fighting areas

C. Runway Configuration

- Existing Runway Alignment
  1. Smoothing and widening of existing runway
  2. Extension of existing alignment to 3000 feet plus safety areas and blast pads
  3. Closure of runway during construction
  4. Potential archeological sites impacts if runway extended

- New Runway Alignment
  1. Description of new alignment 6 degrees from existing runway
  2. Balancing the cut and fill
  3. Existing runway could remain open
  4. Further away from wave action at 23 end

- Land Requirements
  1. Land acquisition or easements for extension of existing runway
  2. Land acquisition or easements for new alignment

V. Comments and Questions

Al Baldwin: Why are you looking at such high cargo and visitor numbers? The legal limit is presently 100 visitors

per day and I can't see it being raised.

John Sanders: We are tasked to look at forecasted operations for the airfield as part of the planning process. What will happen 15 to 20 years from now, and if the patients are no longer there. Some people have suggested a possibility of higher numbers than 300 visitors per day.

Al Baldwin: Even so, I can't see 300 visitor per day at Kalaupapa. Also, if the patient population is not there the passenger types will change from staff and relatives of the patients to one day park visitors. The cargo will be less in that case.

Carolyn Imamura: The working papers have not adequately discussed the "givens". The papers should have had more details about the limitations and constraints on improvements to the airfield. Also, why aren't the working papers stamped "DRAFT".

Bill Buevens: Working Papers are draft documents by definition.

Keith Davis: Aircraft parked on the apron should be facing into the wind.

Diane Hirsch: In the view of the Department of Health the

per day and I can't see it being raised.

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Al Baldwin: Even so, I can't see 300 visitor per day at Kalaupapa. Also, if the patient population is not there the passenger types will change from staff and relatives of the patients to one day park visitors. The cargo will be less in that case.

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Bill Buevens: Working Papers are draft documents by definition.

Keith Davis: Aircraft parked on the apron should be facing into the wind.

Diane Hirsch: In the view of the Department of Health the

runway lights are critical.

Keith Davis: The new indicated airfield length is good and we will study it to see how it will affect us. Also, moving the runway 23 end to avoid the wave action will be helpful. I know of two incidents where planes were hit by the wave spouts. Also, the paved taxiway would be good for maintenance and safety reasons. I was following a Beech in one day and saw the Beech hit a bump that collapse the landing gear.

Al Baldwin: I had a meeting a while back with the DOT and we discussed the repaving and smoothing of the runway and I was willing to go along with that. However, there was no mention of the lengthening of the runway and I will not accept that until it is shown to be absolutely needed for safety.

Jon Sakamoto: Why wasn't a taxiway added in the runway design to avoid back taxiing on the runway?

Bill Buevens: There is no room to meet the FAA separation distances for a parallel taxiway from the runway.

Jon Sakamoto: Were is the BRL of the new alignment in respect to the old terminal?

Bill Buevens: The old terminal is right on the BRL and it was one of the constraints in realigning the runway.

VI. Conclusion, Dean Nakagawa

KALAUPAPA AIRPORT MASTER PLAN

SECOND TECHNICAL ADVISORY COMMITTEE MEETING

May 2, 1989

SIGN IN SHEET

Name	Organization	Phone Number
Gregory C. Goetz	Edward Noda and Assoc. (EKNA)	533-0553
W.R. Buevens	EKNA	533-0553
John Sanders	ARIES Consultants	(415)593-7150
Diane Hirsch	DOH-Comm.Dis.Div.	548-4581
Darrell Yagodich	Dept.Hawn.Home Lands	548-3261
Brian Ishii	EKNA	533-0553
Jon Sakamoto	DOT-A	877-0078
David Welhouse	FAA HNL-ADO	541-1243
Dean Nakagawa	DOT	836-6443
Carolyn Imamura	PBDC	
Al Baldwin	NPS	

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Kalaupapa Airport Master Plan

Technical Advisory Committee Meeting

October 17, 1989

AGENDA

1. Introduction
2. Review of Alternatives
3. Recommended Plan
4. Update on Archaeological Survey
5. Adjourn

Please submit formal comments and questions in writing, to:

State Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Attention: Mr. Owen Miyamoto

Consultant:

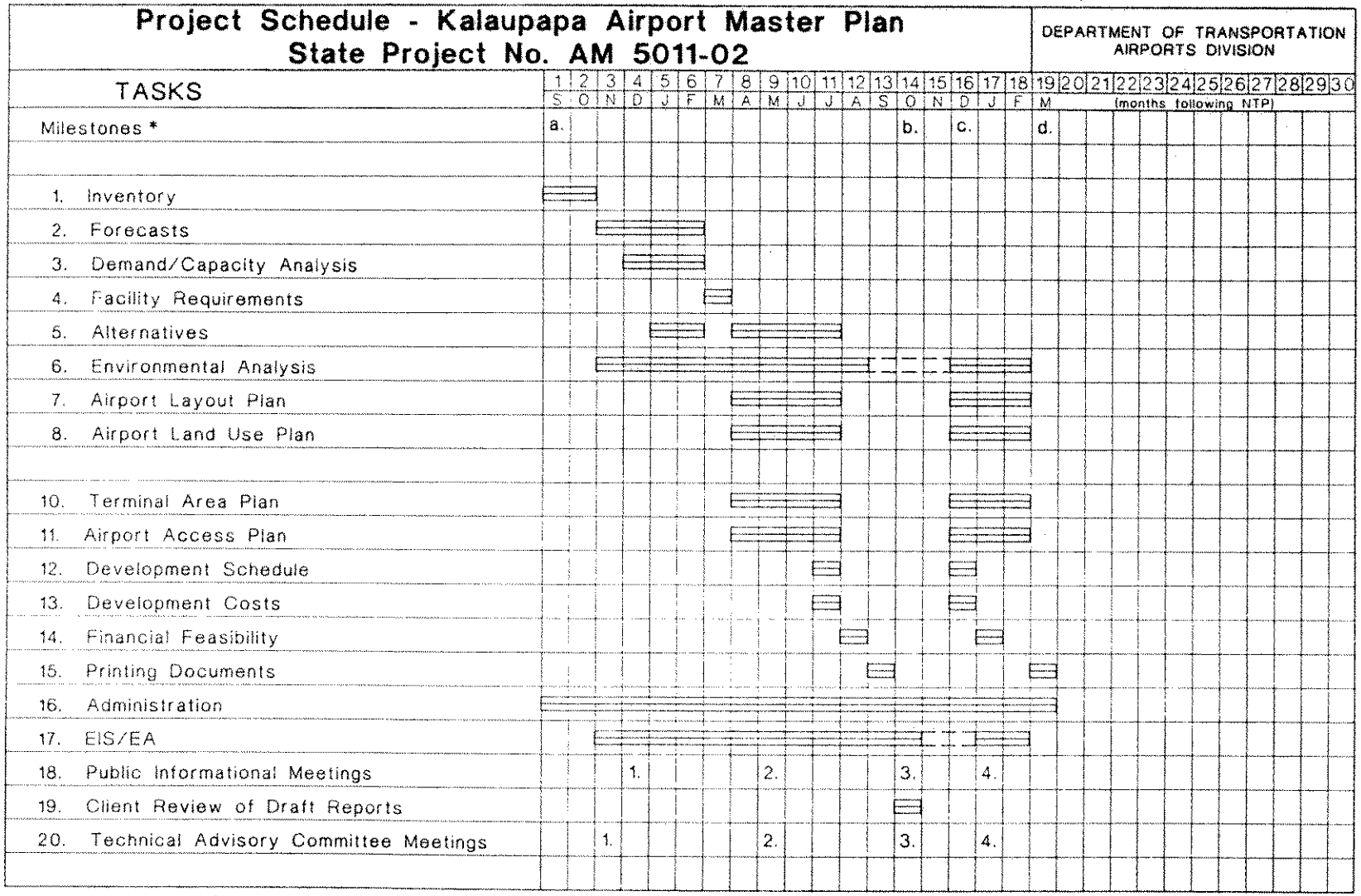
Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 1000
Honolulu, Hawaii 96814

Telephone: (808) 533-0553

Attention: Mr. James G. Dittmar

Project Schedule - Kalaupapa Airport Master Plan
State Project No. AM 5011-02

DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION



* Milestones:
a) Notice to Proceed - 9-88
b) Publish Draft Reports (Master Plan and EA) - 10-89
c) Comments Received from Client - 12-89
d) Publish Final Report - 3-90

DATE: 10-11-89

KALAUPAPA AIRPORT MASTER PLAN

TECHNICAL ADVISORY COMMITTEE MEETING

October 17, 1989

NAME	ORGANIZATION	TELEPHONE
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WALLY NISHIGATA	DOT-A	836-6407
GREGORY C. GOETZ	EKNA	533-0553
JIM DIXON	EKNA	533-0533
BRYAN HARRY	NAT'L PARKS	541-2693
Thegn Ladefoged	IARI	947-2257
MARYBETH K. KAUA	DOH-K/S	567-6613
Bill Klopp	DOT-A	836-6450
HENRY SUMIDA	FAA AIRPORTS DISTRICT OFFICE	541-1230
WEBB DICKEY	ALOHA ISLAND AIR	833-5345
CAROLYN IMAMURA	PBDC	523-9325
M. Tomaka	Com Dev Div	548-4581
Gordon Chapman	Chapman Consulting SVS/EKNA	528-5228
Marie Klein	OEQC	5486415
CALVIN TSUDA	DOT	548-8832

KALAUPAPA AIRPORT MASTER PLAN

TECHNICAL ADVISORY COMMITTEE MEETING

October 17, 1989

NAME	ORGANIZATION	TELEPHONE
Bill Buevens	EKNA	5330553
Brian Ishi	~~EKNA~~	533-0553
Diane Hirsch	DOH / Comm. Dis. Div.	548-4581
Don Tanaka	DOT / STF	5486526
JOHN SANDERS	ARIES CONSULTANTS LTD	(415) 5937152

KALAUPAPA TAC #3

: Thank all the people for coming out today and participating in our Technical Advisory Committee meeting. This is our third meeting. The purpose of this meeting is to review alternatives, recommend programs of improvements, and update you on the archeological survey.

Your comments should sent to us by the end of the month. And final TAC meeting and public hearing is scheduled for December. Final Report publication in February.

This presentation today will be covered in two parts. First we'll give you alternatives and recommendations, and the second will be archeological survey and update. We suggest that you hold questions following each part of the presentation for question and answer period. Before we go any further, we may have put out some wrong signals, I don't know. We got some misunderstanding, I think, that we want to clear up.

First of all, we won't do any improvements on _____ by the airport without the approval and support of the residents of Kalaupapa. Secondly, we have to have a neutral agreement with the National Park Services for any improvements on Kalaupapa. We have a public agreement with them and we are honoring it.

We had a couple of meeting with part of this committee, covering the runway extension. The question of the runway extension came up because of some archeological findings that we have investigated further, and we have the results now. The need for the extension was brought up in a previous meeting for concerns of safety. We have a report we'll point out--National Aeronautical Board has recorded 7 accidents since 1965. Two of them had _____ highways on takeoff.

That's one of the concerns for lengthening your runway for higher elevation for altitude for the aircraft. And one aircraft, there was another accident where the aircraft had landed 38' short of the runway into a pile of lava. That's another safety improvement that we want to make. We want to go ahead and build a safety, runway _____ _____ archeological findings. Even without an extension, FAA design standard calls for a 300' long by 150' wide safety area, runway safety area.

Before we go any further, this is one of the concerns we wanted to address. If there are any questions after this, we can discuss this, after this presentation.

At this time I would like to call on each of you to introduce yourself, and we'll go ahead with the presentation.

: (can't hear names)

Thank you. At this time, I would like to call on Jim Ditmar.

: Why don't you flip the slide. You can't see that very well, but that's basically our schedule for Kalaupapa Airport. I believe the handout also has it. It shows you pretty much where we are in progress right now. We're coming towards the end of the master plan, and.....

..... master plan process right now. We're getting down to the point where recommendations have been made and a draft document has been finalized. As Wally earlier pointed out, there's still a number of hurdles ..... We still have to go through a Federal DIS process. We also have to address 74 of the 1989 DOT Act which says we have to show that there's no other _____ alternative taking Kalaupapa _____ _____. The second thing the FAA will have to go through is Model 6 process towards nation to nation start a preservation act. Kalaupapa is not only a national historical park, but is also an national landmark. The final hurdle will have to be crossed _____ anywhere _____ taken down in Kalaupapa is an agreement between the National Park Service and DOT.

Where we are right now is addressing essentially the alternatives on the airport. Can we go to the next slide. This is basically the airplane that flies into Kalaupapa right now, Aloha Island Air. It carries 18 passengers and costs about $1+ million. It does not have a problem with the present runway length because it's an STOL. These aircrafts are longer being manufactured, but there are some _____ surplus in the United States, if we require more. This is assessment 402 which the majority of flights in and out of Kalaupapa by Air Molokai is really the _____ _____. I understand Aloha Island Air bought the hangar facilities only but did not buy the aircraft or the operating certificate _____. And it is possible that someone may pick up these aircrafts again _____. The 402's been a standard aircraft around here for a long time, and may continue to be unless they go to the mainland. Presently it flies into Kalaupapa, it takes a weight loss of 500# due to the runway length.

This is the assessment 412 Medivac. It has no problem meeting the current runway length because in fact, it can carry less weight. It's also pressurized, the same basic model as the 402; it's pressurized and you fly in pressurized cabins.

This is the scenic air beechcraft. This aircraft particularly does not fly into, but you do get free air traffic, which again _____.

This is another type of aircraft (can't understand).

Talking right now about the runway orientation of Kalaupapa. Some of you already knows, some of you don't. Runways are named for degrees in compass. 5.3 runway vs. 20 degrees north on landing, 230 when the winds blowing the other way. The weather we have in Kalaupapa is 512 runway, runways here in Honolulu is 826s. The apparent wind out of Kalaupapa is about 80 degrees. This is due to the effect of the Pali's on the tradewinds. Essentially we have an airport right now with crosswind factor. Go to the next slide, please.

This shows what happens on a normal approach coming in. Basically the airplane flies in the wind, touches down on the runway and lands. When they're in crosswind approach, the _____ craft _____ gets to the runway straight and slows down. Next slide.

We're talking also down there about runway safety area. We do not have one right now. We're talking about 2-300 safety areas on either side of the runway. Basically they're wider and sometimes _____ can take _____. But there's _____ runs off into the area does not sink, still travels, cannot get damaged. It also wires fire rescue trucks down there, ambulance down here, also the tow gear upon delay. This is probably the _____ thing at Kalaupapa at this point. Next slide.

The objectives here we're looking at the master plan is increase the operating safety margins, leave a lot more reliable and dependable air service in and out of Kalaupapa, allow for nighttime medivac capability, upgrade the passenger facility _____. Next slide.

These are some of things we looked at. From a safety standpoint, a smooth runway. Right now we have 2 dipsy doodles in the runway which are not safe. Also we'd have a more dependable and more affordable runway. Widening the runway would also increase the safety. Lengthening the runway increases the safety, makes it more dependable and affordable. Rotating the runway would have the same affect on safety control. _____ safety areas _____, safety questions. _____ taxi _____ would allow the aircraft to dispurse across the runway to the present terminal where it's safer and more dependable.

Air_____ lighting would be something we would not use for normal passenger service. We anticipate using none of that. Next slide.

This is looking at the existing runway right now. The blue right here is the existing 5.3 runway. In this slide here, we've taken and added 300' safety area at this end of the runway here, and to keep the present runway length of 2700' we have to move the runway down out of the safety area. This is the extent of the runway safety area. As you can see, we're outside the airport boundary into some archeological sites right here. This would be an extended runway of 3200'. Well, the 402 at this point requires 34, we believe we put in a displaced threshold to start right here to allow for _____ _____ full load. We otherwise give a tradeoff vs. field vs. people vs. Hawaii. I think the things to orient yourself to are these: this is a rock _____; this is a possible archeologist's _____. May I have the next slide.

This is the orientation we propose. This would take us about 5 degrees closer to the parent wind, so it will only be about 25. Again this is a runway safety area here, this would be a 2700' runway here, with a 300' extension from safety area. This would be a 3200' to my right here. We tried to avoid this area right in here because 1) it is national park land, we know we have other possible sites (could be burials); 2) we start to get into the mountainside there and the cut & fill becomes alot more expensive. Next slide.

These are the alternatives: we improve the runway on existing alignment because we're not allowed to borrow or take any fillups from the peninsula; we'll have to import fill by barge. We're going to have to construct a smaller _____ to keep the runway operational but we will need less additional airport land. We approve the runway by rotating it, we balance our cut & fill, we can construct in larger increments which would be more efficient for the contractor; in other words, we can use the existing 523, perhaps only shut it down for a limited time during the daytime. The contractor would still be able to construct in a more cost-conscieous manner. We also have some reduction in the cross wind problem. Next slide.

We've proved the existing line, now this is width, runway safety areas, will cost us $4.3 million. If we take the present line and make it to 3200 feet, we go to 4.9. If we rotate the existing runway 5 degrees, keep the length at 2760, with 2-300 safety areas would cost us $3.2. The cost difference is due to the fact that we can balance our cut & fill and we won't have to import fill by barge and we can construct in a more efficent segments. If we go to a 5 degree realignment, and a length of 3200', we're back to $3.6 million. Next slide.

: This shows you right here, this is the total airport plan right here. The total land we would need by extending the runway in the present lineup, we've got 42 acres from DOT,

they'rd be another 16.8 from the Dept. of Health, 1-1/2 acres from the lighthouse area, for a total of 60.3.

The total area to be disturbed outside the airport boundary, is this area here, less than 2 acres. But I think the ideal thing would be to acquire this land in the airport boundary; it could also be done strictly by easements. O.k., next slide.

On the realignment again, 42 acres will be required at the airport; we request 34.6 from DOT, again 4.3 lighthouse area, 81.9. Again we're disturbed about 2 acres outside the present airport boundary. So these areas essentially would be easements areas through here. We'd still allow the public, the public would still have access but during aircraft operations, we would like to keep it clear. Next one.

Thank you. To meet the nighttime Medivac requirements, we've taken a look at the--you understand that some of the Medivac are now done by either the Coast Guard or the Marines. It is not possible to use a commercial helicopter operation in Kalaupapa for Medivac because passenger carrying helicopters must have 2 engines, we have no commercial, 2-engine helicopters in the islands. So to meet the night time requirements from Medivac we looked at putting a runway in threshold lights, _____ hedge lights, _____ edge lights, _____ lights. Rotating the _____ and possibility of obstacle lights. We've also, these may be lights on the cliffs or apparently the pilots take off and complain about going into a black hole. The light will give them a better visual reference. We'd also need emergency electrical generator. Next slide.

These are some of the minimal improvements we're talking about at the terminal. This would be the existing terminal right here. You'd take the baggage covered area out here, this is existing maintenance right in here, parking lot would be over here. Any improvement we would make in this area would have to take into consideration that the terminal building is an historic sight and visually and aesthetically it would have to blend in with what's existing out there right now. We would move the administration and aircraft fire and rescue over here, and this allows _____ and parking for the aircraft. This would all be paved. The roadway here would be realigned also. Can I have the next slide.

This basically shows the realigned airport right here, a 624 runway, 75' wide 3200' long with 2-300' safety areas. This is the existing right now--proposed terminal complex. This terminal complex happens in stages when everyone who are the powers decides. Next slide.

This is the total capital improvement budget for Kalaupapa Airport. Runway improvements, this would be with the realigned, extended runway 3.6, _____ $900,000; terminal area improvements $700,000; the access road improvements that would lead from Kalaupapa Airport into Kalaupapa Town. We would not plan on widening the road; we plan strictly overlay, _____ perhaps consultation with National Park Service, fix some of the drainage problems. That would be all that would be done. We will not disturb the shoulders of the road. The new airfield light construction costs $7.3, with architect and engineer fees about $8.3 million. Next slide.

This is what we have to do if we're going to get construction next summer. We'll get a consultant's plan to start working almost immediately; we're going to meet, we hope to meet, bid processes about July/June next year, with mobilization for the next 2 months and have the contractors begin work in September of 1990. There's no reason why the other work that has to be done to the harbors and other roadway work cannot be combined with this. Basically the roadway work is simply overlay; it's not alot of design work. The harbor work can also be accommodated into the schedule. It would be nice if all of this could be done so we got one package. Right now, as you know in Hawaii, it's a very generous time for construction; we're concerned about getting adequate bids for the project. This is not an easy site to work. Next slide, please.

At this point, we'd like to go to the update and what's happening archeologically with the survey. We originally started out the project, we had International Research Archeological Institute come in and do a reconnaisance survey of the areas we thought would possibly impacted during the process. After getting back the report, sitting down with the National Park Service and other State agencies, it was determined the best thing to do especially to the runway extension, is go out and do a detailed survey of that area that would be impacted. The survey was conducted over the summer; basically we have opening oral report today. I don't think we're going to get the final report until, when...November? November, December. So let's sit down and let the archeologists tell us what they found down in the area.

Arc: Slides, yeah....and maybe some lights, too. As Jim said, we conducted 2 studies down there: the firt one was just an archeological reconnaisance survey. This is essentially just a two-day piece of research and 2 people went in there for 2 days and they recorded the larger architectural features we had in the area. They recorded 33 different architectural features off to the left side; the second study we did was an archeological inventory, and this more in-depth study; the objective of this study is to produce some maps, accurate tipping compass maps, of all the larger

architectural features and do some written descriptions of the features, and to do some sub-surface testing of the archeological features to determine their significance to determine what the features were actually used for. We were in there for about 5 weeks this past summer, with a crew of 4 people. Our study area for that second project was expanded somewhat. We looked at this west area and then we also looked off to the east side of the runway, and we reported 3 additional architectural features, large features over here, so we hat 36 features over here, and off to the east side we recorded 11 features.

On those numbers, I just what to make 1 qualifier on that in that when I say 36 architectural features, I'm talking about the larger house flat forms, the seed shapes. There's a lot of these agricultural walls which you can see in here which obviously aren't in that count. What we're doing now is we're looking at some blowups of aerial photographs and we're inventorying those walls, so by the time we produce our final report, we'll have a fairly accurate count on all the archeological features in the area.

We did, like I mentioned, some sub-surface testing. We did 23 test _____ in 21 of these features. What we tried to do is determine what the features were used for, and the period that they were occupied by driving some radio carbon, some charcoal acts at _____ for radio carbon dates. We can determine that.

: Generally taken as a whole, I think this side here is an agricultural complex. It includes a lot, several different types of features. It includes several house sites, which #2 is and #10 is and #28 is a house site. These are larger platforms and cavings. There also includes some smaller C-shape or U-shape sheltes, temporary shelters and that's what these are: 18, 23, 22, 21. Most of the other features.

We also have a lot of agricultural walls. The whole area actually has walls. In addition we looked at these 2 feasures there and this feature here is (I believe) shrine, now based on that _____ excavation.

What I want to do now is quickly run through about 7 or 8 slides showing some of the general features and then I'll talk about in more specifics about the sale.

First, we're going to look at what we think is a shrine, the possible shrine, and this is feature 13. This is located on the outcrop here, and it's made out the actual pulp crop _____ material, which has been modified to form a wall. Inside of it are a number of different painitings. I'ts about 28' x 25 x 21". (This is an enclosure which is associated with this; there are other walls in between. We dated those of these and this dates to about 1730, this

dates to about 1800, but there are some problems with that which I'll mention later on.

This is our test excavations in the shrine, the one that was on the outcrop. Initially, we opened up a 50 cm. about 1 meter test excavation unit. We did this right off to the edge right off the corner of the platform, on the inside of the feature, and this is one wall coming down here and this is another wall here and they kind of meet in this corner area in here. I'm sorry, I said that wrong, this is the alignment that basically is coming down here, and this is the connection here. We did some test excavations, and once we started remving some of these rocks, we came down on a deposit that had a lot of charcoal in it and it also had a lot of bone in it. And this is one concentration of bone, it's not an articulated skeleton, it's kind of jumbled up, but it is an immature pig. May I have the next slide.

This is just a close-up of the farmer remains. O.k., next slide, please.

After we removed several more of the larger rocks and went down about another 10 cm. or so, we got an even larger area of bones, and we've sent these to a formal expert and we have partial results of his study back now. And he says there's about 7 immature pigs that we found in this 1 meter unit, we expanded it to 1 meter. Next slide, please.

O.k, this is just another example of a feature type. This is one of these love C shapes. The wall coming around here. It was a wind break shelter and behind them, you often find carts or fire pits. Next slide.

This is another C shape, not the same one, which we did excavation on it on the leeside of it, and there was about a 30c.m. cultural deposit. Next slide.

This is that same feature, and this is the cultural deposit. That area is great for excavating because once you get out of the cultural deposit, it's you can clearly see _____. Next slide, please

The other major type of archeological feature is these agricultural walls. And this is the complex that was located up here on the map, if you can remember that, feature 5. And it's made up of a whole series of walls that go across and their oriented perpendicular to the winds, they're wind breaks going across, and then there's a larger, enclosing wall around the whole thing. Next slide.

These are just some other shots of the larger enclosing wall, and some interior walls going across. These are probably used for sweet potatoe production. Sweet potatoe planting. We again excavated a few test beds right behind some of these walls, and there are buried walls underneath

this. So this is the surface map _____ of the sweet potatoe production, and underneath this are other sweet potatoe growing walls. Next slide.

These are just some more walls. And the next slide.

Well, yes, you can barely see it. This is one of these buried walls, as I was mentioning, underneath the surface wall. The next slide.

O.k. real quickly I want to tell you the results of some of our lab work that we need to get back. As I mentioned, I think the area is an agricultural complex. And this really is just one small part of the agrcultural field system that occupies the whole peninsula of Kalaupapa. When you look on these aerial photographs, you can see other agricultural walls spreading throughout the peninsula. It's a dry land field system, a system that's similar in some respects to the field system you find on the Big Island at Lapakahi, or on the Kona field system, you'd find it behyind Kealakekua Bay.

We did dating, as I mentioned. We dated 7 of these features. The earliest date we got was from feature 8 which is inside the agriculural wall down about 3 feet, and that dated to 1400 A.D. The other date we got was this one 1730 A.D., and we got 5 other dates from throughout, one on 13, 18, 28, 23 and another C-shape in there. They're all clustered right around 1800. We all have to remember, though, I said these dates are not precise; that when I say 1400 or 1800, there's a give and tape there of about 100, or even possibility more. On some of our samples, the plus or minus standard deviation is approximately 70 years, so we think that area began to be occupied around 1400; that agricultural intensification up through the last prehistoric period into the proto-historic period. It's debatable now whether this agricultural intensification took place during the prehistoric period or the early proto-historic period. We did find historic artifacts in our excavation, which leads us to believe they are historu. But there's definitely a prehistoric component. In fact, it's a continuum, that's the best way to think about them.

Just briefly, I'd mention 13, (and you saw the slides of this). This is probably one of the most cultural significant and research significant features that we found in the area. It's a shrine of some sort, and has indicated by the pigments, other units would give you more information about it. It's possibility, we have a few hypothesis about it. It's possible _____ would go out on boundary mark. You find _____ markers like that in other places throughout Hawaii--Kuuloa, they excavated one there where it was a completely articulated pig. The current boundary line between I know between Kalaupapa and and Makanalua, Ahu Puaa, comes down and kicks out to the west; out to the day.

And for my reason that I've done so far, that Ahu Puaa boundary line was drawn in 1890, so fairly late in historic era, by a person called Motsorard; he was serving the area there.

But a tentative interpretation is that it's some sort of shrine, possibly _____ boundary marker.

Feature 10 is another significant feature in that this is a very nice historic house site. We didn't do any excavation, actually on the platform. It' a fairly large platform made out of coral. We excavated about 10 feet off to the side there, and found a lot cermanics and bottle glass. Currently some people are using it as a shrine. People are leaving offerings on it when they go out to go fish. Many of the people we take told us about the shrines they visit out there.
Other features in the west side are this historic house site which has been impacted by the bulldozer push already. This is not gone correctly, accurately; it's more out here. And then the C shapes and the historic house site.

On the east side of the runway, we found 11 features, and these are not nearly as well preserved as those on the west side, and I'm not sure at this time, we personally said we didn't do any excavation on the east side. We just mapped them, _____ and compass _____. They're quite close to the ocean and possibly be disturbed by the wave wash action during the winter storms.

Let's go to the next slide, I'd like to show you. The other area where we found a site that might be somewhat significant is this site here. This is about a 15' x 10', very low platform, about a foot high platform, and it could possibly be the foundation of a cattle trough or it could be a small house foundation, or it could be a burial. We'd have to do some excavation here. It's right along the edge of the _____. O.k., that's about it for our current study. Right now, we're doing written analysis and we are doing bottle analysis, as I mentioned, and we're doing historic literature research on it. We should have a report on this by late November, early December. If we did do any more work in there, depending on the approval of the runway, we would like to preserve obviously the goal of any archeologist is to preserve as many features as possible. If there is any more work done, I think as an absolute necessity, this should be preserved, this is a really nice shrine. And this for its current cultural uses is highly significant. The agricultural complex as a whole is significant because it tells us about dry land agriculture and if any further work is done, we have to do a lot of excavation in there to determine just exactly what was going on. Our records just test excavations at this point.
Hollar if you have any questions, I'd be glad answer them if I can.

: Thank you. _____ questions and answers. Anybody have any questions?

: (can't hear the question)

: (can't hear; mumbling)

: They both agree that that was the greater part of _____.

: What's Aloha Island's plans for increased service to Kalaupapa? Are there any at all?

: Oh yeah, we picked up, added extra flights over there. (can't hear). We used to fly 2, 4, now we fly 6 or 8.

: What's the runway _____?

: When we have tradewinds, we can take off fully loaded if _____. Depends on the tradewinds.

: You're flying twin hulls?

: Yeah.

: What's your biggest concern?

: Kalaupapa? We never had a problem, other than we can't go over there at night. But daytime _____. That runway is 10' wider than the one we fly into Princeville. It's a little bit shorter, but it's not a real problem for us. (can't understand). Little bit wider, and (can't understand).

: In other words, you're saying you're going in fully loaded, you can take off _____?

: (can't hear)

: You can take care of all Kalaupapa citizens? Because Air Molokai used to carry 70% of the passengers and freight and everything that goes in.

: Well, we carry freight; we can carry only 800 lbs. of bags. I'm not sure how much Air Molokai can carry. I know we can carry _____. They were flying an average of 70 flights total, and when we put 2 planes on, we added 100 flights a day.

: I really would like to know, can you pick up all the slack and provide the need for Kalaupapa that you're _____.

: We increased our schedule. We have no problem with anyone who needs to get in or out of Kalaupapa.

We had 2 air otters, 3 days of the week we knocked off the tours and fly extra places on Molokai, Kalaupapa and Lanai, Fridays, Sundays and Mondays. Now, we're getting ready to buy 2 more otters in the next 2 or 3 months, so we're probably going to have anywhere from 9 to 11 otters.

: How much is this going to cost?

: A little over 1 million bucks after _____.

: As an alternative, (can't hear or understand; alot of mumbling)

: How do you define shrine _____.

: As I said, maybe I didn't throw in enough tentatives or possibles; that's a tentative interpretation at this point. It's not just one test, and what's leading to think that it is a shrine is it's location _____ significantly higher than the surrounding landscape. And the presence of the 6, 7 immature pig bones, and there's some fish bones in there, as if there was an offering. Normal house structures _____ throughout the islands, you don't find that sort of concentration of pig bones.

: We looked at the agricultural walls, and we notice that if you compared it to areas like in Kona, the quality of the wall is not as good as other areas in Hawaii. Perhaps suggested that there was (can't hear). That's one question; the same question _____?

: Standard deviation. Let me address the first question, I'm not sure I understand the question. The first one is the agricultural complexes in Kalaupapa are really fairly nice. The preservation upon the peninsula is excellent. They're very well constructed, the walls are very nice. They're other agricultural hills that I've seen throughout the islands have nice walls. They're different styles, the walls are slightly, are further apart so you get higher walls; at least in _____ from what I've seen there. I would say that it's an intensification of agricultural use in the area. The walls that we found that were buried, we did 2 test pits in the agricultural field and in both of those tests pits, we found buried walls down 2 meters. So the walls that are subsurface was the initial use of the area for agricultural purposes, and it's being intensified with _____, and intensified _____, by the time you get into the historic period, a lot of the surface remains _____.

: No, it's very similar. What might be different is the intensification. _____ was intensified prehistorically; it began being intensified very heavily since right around 1600-1700. I think Kalaupapa might be unique in that you get this great, historic intensification, for exportation of sweet potatoes to the mainland, to the west coast stream, the Gold Rush, you get some historic accounts about exporting potatoes.

: Did you check your carbon 14 against _____?

: You're talking about volcanic rock? We have money to do that. There's a real big problem with volcanic _____. It's not nearly as accurate as radio carbon dating, which is not all that accurate at all. You get a big error range in there. Most contact workers, most conscientious contact workers I think, don't use volcanic rock anymore, unless _____. It's just not as, it's not viable now. There's too much variation in the rate of hydration in volcanic rock.

: When you started the survey, did you have a plan? You worked out something with some hypothesis, right? What was your hypothesis?

: To essentially look at agricultural intensification through time.

: I was just wondering if we were to expand the airport safety zone, could you show us which structures would be affected?

: Yeah, I think we'd just have to go back to 3 slides.

: And how important that structure is for the initial analysis.

: I think the area that's going to be impacted the greatest comes out to about here. And these structures are important....yeah, I think there's a scale down here. The next slide, if you could go to the next slide. It only shows....this is that house site and this is the wall coming around it; this is the shrine, feature 13; this is the old wooden house and this is these other walls. So this area in here is going to be impacted. I would say that these are the 2 of the most significant features in the area for different reasons. One is that prehistorically this is.....

: It's not going to impact on those?

: No, those should be avoided at all costs. Yes, I believe so. I think people can speak about that, too. But as far as I can tell, those 2 could be easily avoided.

: Whatever is decided near the _____, the contractor's _____ group (can't hear).

: The main thing is those important ones would be _____.

: These other ones would be disturbed and would have to be mitigated.

: And how would you mitigate those?

: By doing that, mitigating is a fancy term for saying you're going to excavate things to recover scientific data about them. Which is in lieu of preserving the features.

: If you look at the contour over there, do you have a profile of the contour?

: It's relatively flat....

: It's relatively flat. Is there any _____ that you don't do any excavation but you could just cover that area.

: We talked about this. The area is low there. You'd be coming in filling out. When you're starting to fill, you'd run _____ and we want to go back and say we're going to keep anything underneath that. The only thing we can't say is if we don't find any burials out there, we're not going to disturb any ground out there, too. If there are any burials, they will be left _____.

: One of the, you take _____ archeology callings tell me that the State Dept., first we look at _____, then we evolve and look _____, but the point I'm trying to make right now is that we don't know too much about it. I mean archeology is involved in fear, so one of the things that's in mitigation there rather than just doing excavation and then recording it, we may miss something, and your theories may be kapakahi. So if it's a low area there, one of the ways of mitigating this, we're talking about walls, just fill over it, and what you do is you map the thing over there, and it's only a mitigated thing, and then you just put that in a time capsule that says burial right there in the monument and these are the sites over here; we buried over it, later on when you get planes that land in 5 feet and they get up.....

: Sometimes the best way is you've got to go out there and try to do it _____ and preserve everything.

: The point is you're going history right now, you're going to destroy it.

: There will be an archeologist out there on site _____.

: You're entirely right, and it's a very ethical point. The archeological research is destructive in nature; it's very destructive in nature, where we destroy the things that we're studying by studying them. And that's why we as archeologists prefer to preserve them for later scientific study or why it's better to do studies on things they get off of the surface. To say you're going to cover an area, though, and that's a way of preserving it, I'm not sure that's entirely true because you're going to run over it with D-9s which you would have to cover it by hand first, and then pile it up with D-9s, because you can't cover it with the D-9 because it's, that's.....

: There must be some way you can cover it.

: You would have to cover it my hand, which would be very labor-intensive. I don't think you're going to save anyone any money by doing that; you are preserving the sites, but the other thing is that once the sites are covered and "preserved" like that, the chances of them ever being excavated or ever being researched I think are fairly slim, and to say that that's mitigating the impacts of the airport are false because we're not getting any information from that; we're covering the features; we're essentially taking care of it without gaining anything from it for the scientific community or for the general public.

: Another point on that is the terms, like when you build something and you run an archeological site in order to build it and you make or it may very well be satisfactory to document it all, put it in a book and stick it in a library at the university, and the knowledge is intact. But in a national, historical park, the idea isn't to take the things that are national, historical park and put it on a library shelf. You seek for people to enjoy. Admittedly these are a few sites that are a part of the whole and any questions of what you give up or what you get, _____ it's worth looking at how many you get, do you wait and save planning versus how much you give up of the historical park to make a rational judgement on what's the best _____.

: _____ plans different than the airport someplace else.

: _____ we want to seek _____.

: Again, based on the _____ historical segment, we won't let some people _____, and document somehow _____.

: How's the funding for this? What position does the National Park have in this, how much money will they be taking into _____?

: Our remedy would be to go to smaller claims more often than go to something that (can't hear).

: What are you going to do with the infrastructure things, like the landing, resurfacing and such?

: I don't follow you.

: O.k., part of the project here was to resurface some of the roads and fix up the _____ landing facilities. Will the National Parks give money to do that, even if they didn't expand the runway?

: I think in an ordinary time resurfacing would be a concern. But I think that the odds that anybody from the National Park Service, they'd want Gramm-Rudman come down _____.

: You see, these are problems that we're all going to have to weigh. You build something here, the ramifications _____.

: Any other questions?

: _____ to know whether that park is essentially going to have _____ from the other _____?

: It's hard to answer that because there hasn't been a whole lot of excavations throughout the _____, so we don't have anything really to judge it against. That's one of the problems, is that this is one of the first projects in the agricultural, or _____ in the Park Service has been _____ _____. It's almost impossible to say whether.....on the surface, it doesn't work _____. In looking at these aerials, you can see similar house complexes throughout the peninsula. In subsurface testing, we only put in, like I say, _____ and so we don't really know _____.

: (can't understand)

: One thing we have to bear in mind here is we've been talking about aircraft that exists now; comments that have been made this afternoon, several of these aircrafts are longer in production. In some cases, the ones actually in Hawaii may be close to the end of their useful life. And all we're looking at here is a long range plan; it's difficult to project exactly what's specific model type of aircraft is likely to be operating not just in Kalaupapa, but operating in Hawaii in the future. So that's why when you look at the report, we looked at some more general categories of aircraft. Just because a particular airline is using this type of aircraft doesn't mean to say that others might be using it; they might be using similar aircraft to say, that serves similar markets so _____.

: The Dash 6 and Dash 7 are no longer in production. The Dash 9; Dash 8....you cannot get a Dash 8, so when you say everyone's different.....

: Figure to go into West Maui, which is only 3,000 and you go in there with 27 people, we can do it, the Havilland's already done it.....

: Well, there's some problems because the building _____ _____ to swap, Kalaupapa, and you have to widen your runway.

: This is your safety area right here. Normally you start measuring the runway from here to the next safety area. What you can do if you want to take a displaced threshold and move your runway back into your safety area to take off. This gives you an extra 200' on the runway surface. Say, this runway is 32, take 200' you could make it 34, the 27 move back to 21. The FAA doesn't like to do it because this is not the way you plan a proper airport. You give them a surface less than in Kalaupapa _____, I'm sure they would be _____ (can't understand). You could ask for a waiver, and that's all you could ask for. No guarantee you'd get it.

: Well, you don't know the _____ kind of aircraft (can't understand). They're old, you can see _____. We can have limitations on those, but the Otter, the latest one we bought 1981 or 82 model. Load time is say 10 years.

: Since we've changed, we see Royal Hawaiian is very dependable _____ here, not because of business reasons.

: Is this Aloha Island Air?

: I think we're going to continue to see an evolution of these airlines here, and it's very difficult to say we're going to fly in 1 airplane, when those air models can disapper _____.

: (incomprehensible)

: That will give you some of the maps.....Ford Island is 4,000; Dillingham 9,000; Lanai has 5,000; Waimea about 5,000; Molokai 4,000; 494 in Hawaii; 3,115 Keole; Kalaupapa is 3,750, and Ford Island is starting from 4,300, but they don't have any commuter air.

: We've been in there on charters but we don't go out there for _____.

: (incomprehensible)

: What are they going to do at Kalaupapa, they're not putting anymore patients in there; after the last one goes, what is it going to be?

: It's going to be a resort area. A historic park.....

: Is there going to be that much business in there? Right now, both of the _____.

: Depends on the National Park, and their money.

: I think it would be a popular national park.....

: Well, we fly tours every day. We fly everyday on tours and some days 2 or 3.

: How many people (can't hear).

: Maybe little less than 100.

: I would guess about 4 or 5 hundred a day. Probably 1/3 of them would _____ (can't understand).

: West Maui's only flying about 8-900 a day right now. More than that?

: You know one of the tests in the future .....the historic park is very significant (can't understand).....and if what we do keeps the historic flavor of that place, people will come. What we do to make it easily accessible to struggle with the darn thing.....

: You're looking at 500 people there. The patients out there will be there for another 40 years, estimated. 30-40 years. So it would be 30-40 years, and the National Park would be there for a long time, so you're planning ahead; but you're looking at 4-500 visitors coming in and say 300 fly in, how many planes would you need?

: What, in a day? 18 planes, 20. Right now, we're flying about 6 in there, with 7 airplanes. (incomprehensible). Our whole day was about 900, with Air Molokai about 300. We just shuttle. That's the max.

: But we also have the environmental problem over there.

: There's been a lot done with the problem. The State Dept. of Health, publications, volunteers, Park Service, there's a lot happening in the area, and that's a neat place. And I perceive it being a major attraction to come to Hawaii.

: (can't hear--airport noise).

: I can't get straight support from the pilots on this....

: I'm a pilot and I land there all the time. I've landed a 402 and I've also landed _____.

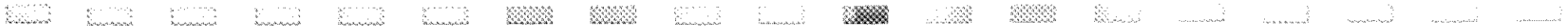
: Is it a safe airfield landing. Your assessment.

: A 402, a Cessna 402, yeah, it's safe if you don't take off too heavy, you got to watch that and then crosswind. But the worst runway to land on is when you have Kona winds on runway 26. With a 402 you can't do it; you cannot do it because of the severe down turbulence in the thrust. And the harder you try to get around it, you get severe turbulence. But on a normal tradewind day, a 402 is safe, but again, the ones you have out here the A and D models with the smaller engines, you have to take off some weight; you're loaded by weight. It's a rough landing because the runway's not smooth. But the _____ has such big tires it absorbs a lot of things. It's not unsafe, as long as you take the weight off.

Well, the 402 is a good plane, you just got to watch the weight. Now when we were flying the _____, we had the 402C which had bigger engines and we didn't have a weight limitation because it had the power, had a bigger engine on it. But the A and B models, the old ones, they don't have the big engines.

: Any more questions? If not, thank you for attending the meeting.

PUBLIC INFORMATION MEETING MINUTES



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Kalaupapa Airport Master Plan

Public Information Meeting

December 28, 1988

AGENDA

1. Convene and Introduction of Consultants
2. Program Schedule
3. Presentation and Discussion of Issues
4. Archeological Survey
5. Adjourn

Please submit formal comments and questions in writing, to:

State Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Attention: Mr. Owen Miyamoto

Consultants:

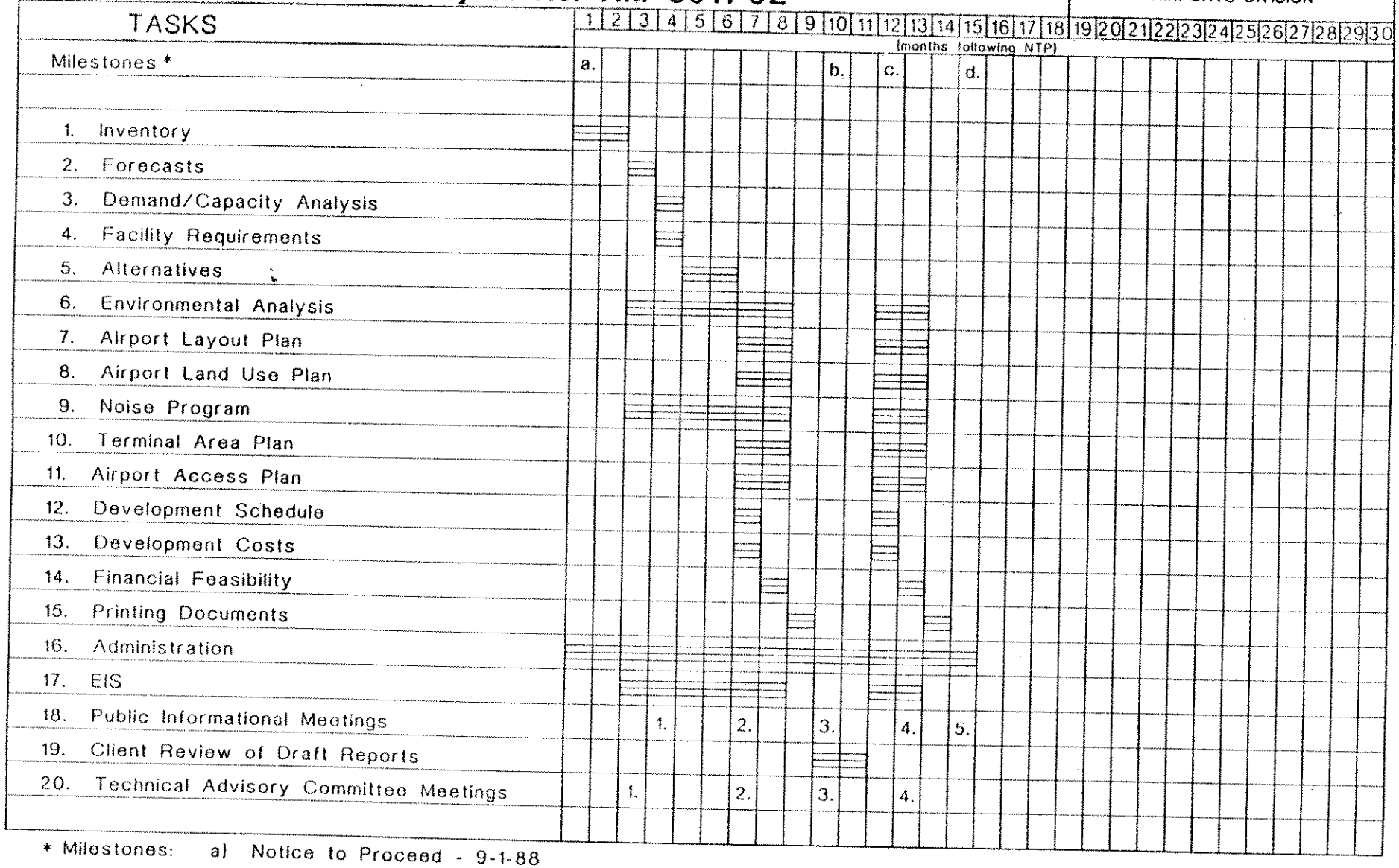
Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 1000
Honolulu, Hawaii 96814

Telephone: (808) 533-0553

Attention: James G. Dittmar

Project Schedule - Kalaupapa Airport Master Plan
State Project No. AM 5011-02

DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION



* Milestones:
a) Notice to Proceed - 9-1-88
b) Publish Draft Reports (Master Plan, Noise, EIS) - 6-1-89
c) Comments Recieved from Client - 8-1-89
d) Publish Final Report - 11-1-89

DATE: 10-18-88

Kalaupapa Airport Master Plan

Public Information Meeting

December 28, 1988

ISSUES FOR DISCUSSION

1. Potential Airfield Improvements:
   - o Relocate lighthouse road off airport AOA
   - o Smooth runway; strengthen pavement
   - o Widen and straighten runway
   - o Lengthen runway; add extended safety areas
   - o Realign runway for prevailing winds
   - o Provide offshore protection of runway against waves
   - o Provide stub taxiway and paved apron; number of simultaneous aircraft?
   - o Provide landing aids:
     - * Lighted wind tetrahedron
     - * Pilot activated REIL
     - * Runway lights for emergency MEDVAC
   - o Helipad
2. Potential Terminal Area Improvements:
   - o Provide fencing to keep apron area/AOA safe
   - o Provide rain shelter for passengers
   - o Provide baggage and freight handling/storage facilities
   - o Provide separate passenger arrival area
   - o Provide roadway turn-around, drop-off and paved vehicle parking; number of vehicles?

- o Improve ARFF, maintenance and storage facilities
- o Restore existing building by re-installation of historical divider rail, upgrade electrical wiring to code
- o Improve airport graphics
- o Landscape terminal area and environs

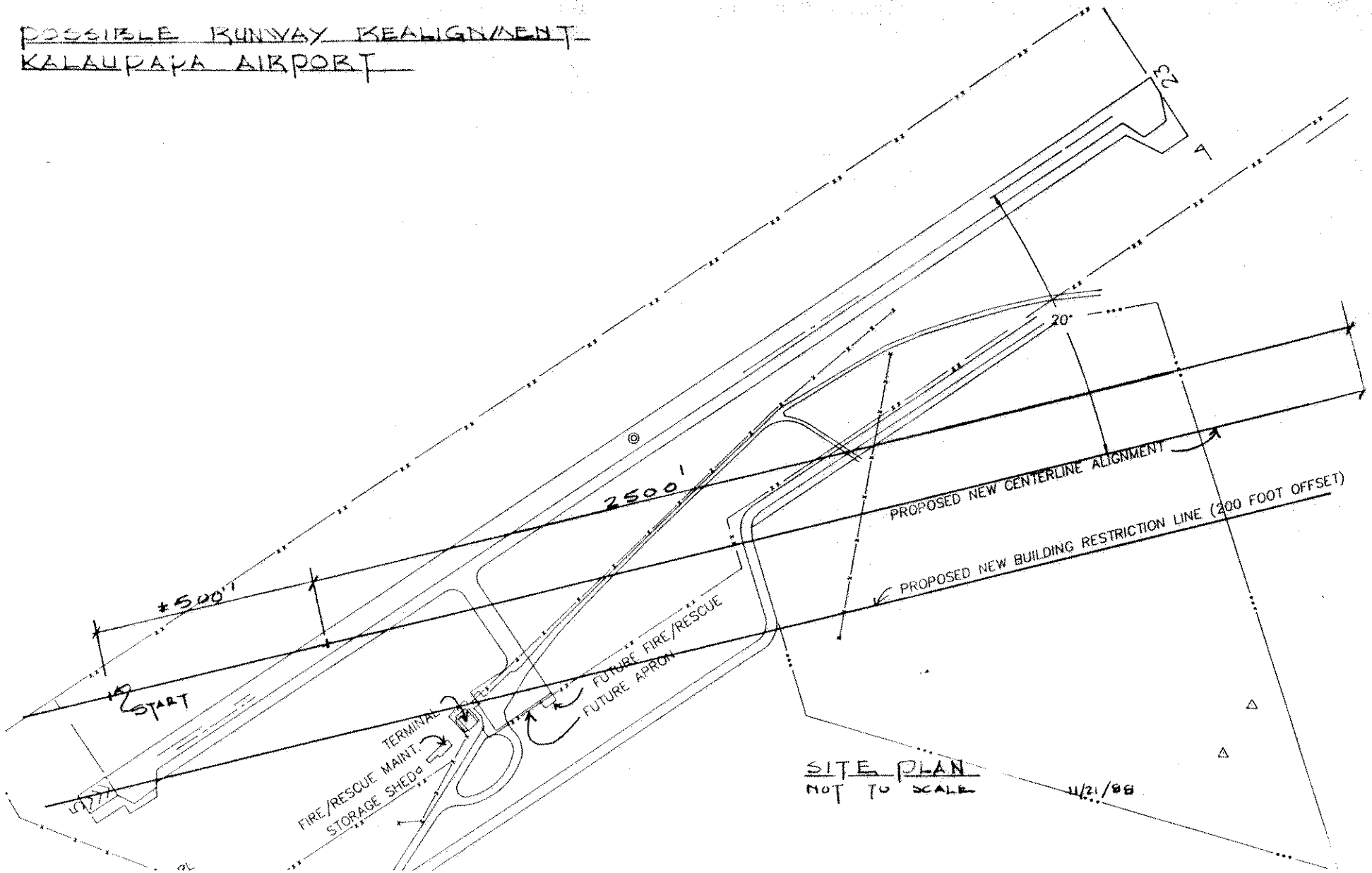
3. Potential Improvements to Settlement Road:

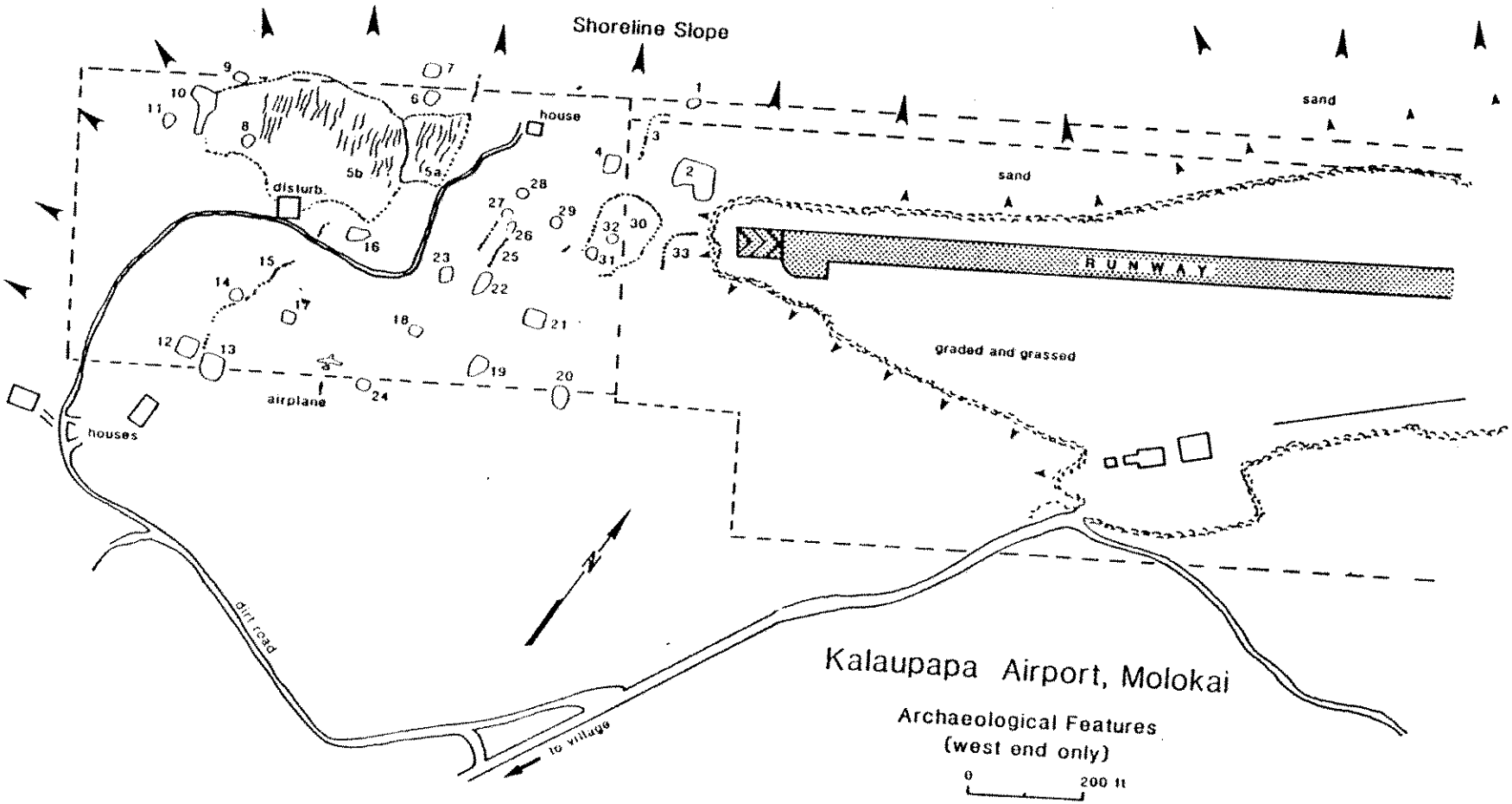
- o Use existing right-of-way (because of possible archeological problems)
- o Widen and smooth roadway pavement; strengthen pavement
- o Improve roadway drainage
- o Provide signage and striping
- o Landscape right-of-way

4. Potential Noise Program Actions:

- o Make aircraft noise measurements
- o Develop Baseline 1988 noise contours; projected noise contours for 1993 and 2008
- o Make noise complaint survey to include overflights by fixed and rotary wing aircraft

POSSIBLE RUNWAY REALIGNMENT
KALAUPAPA AIRPORT




Shoreline Slope
house
disturb.
sand
sand
RUNWAY
graded and grassed
airplane
houses
dirt road
to village
N
Kalaupapa Airport, Molokai
Archaeological Features
(west end only)
0
200 ft

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Kalaupapa Airport Master Plan

Public Information Meeting

May 3, 1989

AGENDA

1. Introduction
2. Existing Conditions, Limitations, Opportunities & Concerns (Working Paper No. 1)
3. Aviation Demand Forecasts & Facility Requirements (Working Paper No. 2)
4. Terminal Area Concept
5. Runway Alignment
6. Adjourn

Please submit formal comments and questions in writing, to:

State Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Attention: Mr. Owen Miyamoto

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Attention: James G. Dittmar

KALAUPAPA - PUBLIC INFO MEETING

: (not audible)

: One of the recommendations is to extend the runway. We had some records from National Transportation Safety _____. (not audible)

: .... Molokai airport we got 4,500 feet. Lanai got 5,000. _____ got 3,600. Waimea-Kohala we have 5,200. _____ we have 3,800. Kalaupapa 2,716. The commercial airport....

The recommendations right now is

We have Jim Ditmar from Edward K. Noda & Associates and _____ with International Archaeological Surveys. And we have _____. I'd also like to introduce from FAA _____. At this time I'd like to turn this program over to Jim Ditmar. We'll have a question and answer session after...

: This is the third public information meeting. Basically what we've done in the first two public information meetings. In the first _____, we explained what the master plan was about. The second one was the proposals and alternatives. Now we've looked at the alternatives and we're going to look at the recommendations.

In your handout we have also a schedule of what we're doing. This is the inventory. We've looked at a forecast and what would happen. Demand and _____ analysis. What is the demand for aircraft at Kalaupapa _____. We took a brief look at some of the facility requirements and most of our work we'll be looking at the alternatives here at Kalaupapa. From the alternatives, we were going into the final Master Plan and the EIS. We would like to show what we've come up. This is the alternatives and people down here can see what you want in your community.

Basically, these are the types of aircrafts that's flying in here. This is the Aloha Island Dash 6 right now. This aircraft is about a million dollar plus aircraft and it's no longer produced. The Dash 6 and the Dash 7 are no longer made. It's not to say production would not increase again. There's about 600 of these aircrafts flying around on the United States. They could get in and out of an airfield about 2,500 or less feet. They carry about 18 passengers.

This is the air, briefly, that Air Molokai Airline, this is the Cessna 402. They carry 9 passengers. Fully loaded they'd need approximately 3,400 feet to take off in to about 0 wind. If they have about 10 nauts, they can take off at 3,200. Normally when they fly out of Kalaupapa, they can either take, they usually take weight reduction in either fuel or passengers. This aircraft is no longer produced. They cost anywhere from $50,000 to $75,000. The Air Molokai flight, the aircraft is now sitting on the ramp in Honolulu and _____ sitting on the ramp. We don't know if (not audible).

This is a Cessna 412 which is, the only difference between this aircraft and the Cessna 402, this is pressurized and this is a medivac aircraft. It can get in and out on the present runway right now carrying less weight. The pressurized doesn't fly patients up higher and we don't have to worry about _____.

The next one. This your Twin Beech right now. Scenic Air Tour, which I believe, no longer comes in here, but the Twin Beech is used for cargo in and out of Kalaupapa. They also take _____ flying in and out of here.

Next one. This is one of your smaller aircraft, the type that carries freight in and out of here, I guess. It does not have a problem get in and out of here.

What we're talking today is partly about the runway. The runway orientation for Kalaupapa is 523. You may have all wondered how we get to these numbers. This means 50 degrees this way and 230 degrees this way. (not audible) So 523, the next one will be 624. Take the one number, add 18 onto it and that's how you get _____ runway. Normally, the pilots are flying in, _____ conditions, coming in the runway 50 degrees. That's the way the runway is oriented. These runways are oriented as a standard runway orientation of tradewinds throughout the state. The problem we have here, though, is because the apparent wind is not the true wind down here. The wind because the pali is actually coming from about 80 degrees of the runway. So we have about a 30 degree crosswind orientation which is (not audible). So what we have is, when the pilot starts to line up, through wind, so we're coming in here, the wind's coming down, we've got no problem. But across the runway, the higher sea, you'll notice the pilot has to fly into the wind and more or less cram his way in and then when he gets down here he can straighten his aircraft out and lands. This is one of the problems we've had on this runway in the past, the crosswinds down there.

One thing we are proposing no matter what happens to the runway wind are two safety areas. These are 300 feet long and 150 feet wide. These are at the end of the runway at both ends so the pilot runs short of runway he'll still have 300 feet to run out on. These can be paved or compacted so in case the pilot plane is out here, we can get fire and rescue equipment, ambulances and other equipment out here too to the pilot, to the airplane. We do not have this right now, but we are recommended that two 300 hundred foot safety areas at each end of the runway no matter what happens.

Some of the objectives we are trying to _____ is increase the operating safety margins at the airport. As you know, Wally said there's been accidents, 8 accidents since 1965 here at this airport. One this last time when the 2 people were killed. We want more dependable. If we think increasing the operating safety margin, therefore will allow more dependable and affordable air service. We want to also look at the night time medivac capability. Presently, if you want to get someone out of here at night time, the only way as we understand it is to do it by helicopter. To carry a passenger in a helicopter, you must have _____ either the Coast Guard or the Marine Corps. We're looking at what could we do to put the night time medivac capability here so we can get the Cessna 412 in and out of here? We want to also upgrade the passenger facility in a very minimal way. Kalaupapa is _____ because the existing terminal building is an historic building. Any upgrading around the building would have to maintain that building's setting and keep it as it is and not downgrade it in any way.

The next slide. So, here's what we're trying to look at. We smooth out the runway. As you know, we have a couple of dips out to the right now. We're going to get a little safer runway. We also looked at widening the runway. The runway right now is 50 feet and we'd like to go to 75 feet. Again, no matter what happens. The length of the runway, we feel we have a little safer runway also. Runway safety areas, we'll make it, again, safer, more affordable. Pave the taxiway. Right now, come off the runway, you got that grassy area. Aloha Island Air doesn't have too much problems, but some of the smaller airplanes like the 402 are getting rocks thrown up in their props and other problems. So we would like to do that. And also look at putting runway airfield lighting.

Can I have the next slide.

This is the present runway right now in the blue. This is

2,760 feet with no runway safety areas. This is the Federal Dept. of Interior National Park property. This is a _____ here. This is a shrine, a possible shrine, that we found during our archaeological survey we'll be talking about a little bit later. It's important we kind of orient yourself _____. We're talking now of putting a runway safety area of 300 feet up here which would be the edge of the airport property and we'd get the present _____, this is where the end of the runway would be with another safety area. So this is the present length. This one would be _____ of about 2,800. _____ and this would then be the end of the runway _____. One thing we will look at if we do that, _____. It is possible by a waiver from the FAA is to take 300 feet of the runway safety area and make that into an additional runway because you need the safety area when you're taking off. So, therefore, you can take 200 feet of this and that would give you an additional 200 feet of runway. The FAA does not like to do this because they feel it's not good policy. But this a special consideration down here and I think we can make a very strong argument here. Because of the archaeological consideration. This is what would happen if we keep the present alignment of the runway.

But we are recommending, though, as we look at realigning the runway, this would bring the runway more within the apparent wind. Again, this is the end of the existing runway, the two end right here. We're recommending a safety area be here, the runway be extended to 3,200 feet with the runway safety area here. You save about 2,800 feet, the runway would end right here. We've tried to miss this area right here. We've looked at orienting the runway more this way. We have, perhaps, an archaeological site here, _____ some burials. Too, we start moving the runway closer to the ocean, we're worried about _____ we'll get over the runway. We'd like to keep the runway as far as possible away from the ocean.

The other problem as we start getting into this area over here, a cut and fill, it would be a lot more expensive. We decided to _____ for the orientation at this point.

The next slide. Okay. These are some of what happens when we look at what'll we do in improving the existing runway or do we go to the rotated _____. If we improve the existing runway, this is the alignment, we're going to have to import fill by barge. We're not going to be allowed to take any _____ area out of Kalaupapa. So that

means more dollars to bring it in. To keep the airport operational, we'll have to construct in smaller increments. In other words, the contractors can't work the full 8 hours a day. You'll have to shut down, fix up the _____ so the airplanes can still get in and out. But we will need less additional land. If we rotate the runway, it appears we can cut the _____ fill in.

We can construct in larger increments and _____ keep the airport operational _____. Resolves the reduction of the _____ problem.

If we improve, if we keep the existing runway length in the same alignment we are right now, it would cost $4.3 million. These are with two 300-foot safety areas. If we realign, we can keep the existing alignment, go to 3,200, we're talking $4.9 million. If we rotate it 5 degrees and keep the existing length, we're talking $3.2 million. Now, this is caused by the fact _____ cut and fill and the contractors can be more efficient in construction. If we rotate it 5 degrees, the effective length is 3,200, we go up $400,000. So there is a significant cost difference between rotating the runway and building it, keeping it on the present alignment. It's kind of like building a house next door rather than trying to rebuild the old house.

Can I have the next slide. We're looking at the land that will be required right now. Presently, within the airport boundary, the Dept. of Transportation has 42 acres. We will also need an additional 16.8 acres of land outside which would be _____ with the Dept. of Health. We would need 1-1/2 acres on the Federal area for a total of 60.3. These areas _____. We'd like to have the land under the State's Airports control. An easement would be sufficient. The area that we actually would be disturbing is less than 2 acres. For instance, this area here _____, there would be no construction and no height. And the same would be happening along here. It would no way restrict the use of the shoreline of people going down there and using the beach except when the airplanes are coming in and out.

If we realign the runway, again we have the 42 acres within the airport boundary, we would need 34.6 from the DOH, 4.3 from the Feds, with a total of 80.9. _____ we just have a bigger area for runway _____. Essentially assurance that nothing would be built here that would cause a safety problem in the aircraft taking off and landing.

We're looking at what we would now for night time medivac facility requirements. These would be basically a lighting system that would be turned on in an emergency situation when needed. It would not be normally lit. We want runway in threshold lights, runway in lights, taxiway apron lights, apron flood lights, rotating beaker, _____ direction, possibly _____ on the pali. (not audible). By putting these up here _____. Also, we need an emergency light generator to power _____.

That's basically what we're looking at for the airfield improvements. Whereas as far as the terminal area, we're looking at perhaps this is the existing terminal right now, running the apron taxiway in here with the apron having a covered baggage claim right here and employee parking lot and straightening up the roadway right here. We would relocate the existing maintenance and storage areas would be here. It's not a very large improvement at all. It's basically very minimal. It will have to be aesthetically treated though to maintain the setting for this building.

This is basically the runway we've recommended -- 3,200 feet long, 75 feet wide, 25 feet wider, with the 2 300-foot safety areas, that's 600 feet, so you're talking about 1,000 feet more than we have right now.

Next slide. Okay. The runway improvements this is based upon now the realignment way of 3,200 feet would be $3.6 million, the new taxiway and apron will be about 9, the terminal improvements $700,000, the access road improvements, and this would be the access road to be improved from the airport all the way to downtown Kalaupapa, and then the airfield lighting. Total construction cost with engineering and management fees that would be about $8.3 million. _____, the State has the money in the budget to go ahead with his program, whatever program you want.

: It's available now.

: Here's we're going into some of our problems. These are not really design problems. These are basically bureaucracy problems. _____. The Master Plan right now is in draft. We'll finish that off, we design, we started and environmental impact study. There are three goals we're going to have to cover before we can start construction. One is going to be the final environmental impact statement because, one, it's a national park, FAA Federal Response _____, we have to reach agreement

on the Master Plan. Also, _____. Two, because this will be a federal undertaking, the National Historic Preservation Act requires an FAA National Parks Services consult with the National _____. Kalaupapa is not only a national historic park, it's also a national landmark. (not audible) have to agree on all improvements _____. Most of these _____ can be conducted simultaneously but all three of those steps have to be satisfied for any construction to take place. So this will have to be done. We hope that it can get done in a very expeditious manner. That will allow us to go out to bid, State to go out to bid. And next spring we can mobilize equipment on the barge for September of 1990. If we miss that date, all construction would probably have to be put off till June of 1991. So, it's very important that we get any of, if any of you folks have recommendations or you want certain _____, of what the community wants we can make the final plans.

Okay, next slides.

: Jim, you want to repeat those three _____ again.

: Okay, one is that we have to get an approved Federal Environmental Impact Statement. We have to complete the 106 processing for the National Historic Preservation. And the last one is any _____ agreement between the Department of Health and also DOT. All capital improvement _____ have to be initially agreed upon. I'm assuming that all these can be done simultaneously. _____ reach an agreement with the National Park Service on the 106 processing for the capital improvement. I would assume that these have to go together.

Turn the next slide. When we first started out the Master Plan, we had an archaeological surveillance done by International Research Archaeological Institute. At that time, they identified particularly down here in the far end of the runway some possible archaeological sites. So after consultation with the National Park Service, Kalaupapa National Historic Park and _____ and some other people, it was recommended that we go in and do a more detailed survey down in this area. _____ is the one who conducted that and I'd like to have him tell you a little bit about what we found down there and what some of their conclusions are.

: Okay. The company I work for has done two projects in the area associated with the runway extension. Like Jim said, the

first one was just a two-day reconnaissance survey and the product of that was this map. Two from our company went to the area and walked around for two days. And their basic objective was just to record the larger architectural features and so they recorded these shelters and walls and house plots. The second project we did is a full archaeological inventory. The objectives of that study were to obtain accurate descriptions and maps of each individual feature and to do some limited subsurface testing to determine the significance of the features and to determine what the features were used for. I was the project director for that project and we did it this past summer. We were on the peninsula for five weeks with a crew of four people. We recorded, initially, the first project recorded 33 archaeological features in the area. When we came back, we recorded an additional three features, and now we have 36 features recorded in this side, the west side of the runway. Our project area expanded to include the east side of the runway and the Coast Guard land. We recorded 11 features, archaeological features on the east side. When I give you these numbers, though, I'd like to put in a disclaimer that this is just the larger architectural features that we're talking about now. We're talking about the larger shelters or the larger house sites. There's a lot, many, many more, probably in the hundreds of these agricultural walls in the area and we haven't done a complete inventory on those walls yet. What we're doing is we're studying the area, photographing, we're going to have a map drawn from the aerial photographs. We have some fairly nice aerial photographs when the vegetation was low and we'll be able to get a fairly complete inventory of all the agricultural walls in the area.

As I said, we did some limited subsurface testing, excavation to determine the significance and what the features were used for. We did excavations, we did 23 test kits in 21 of the features for a total of about 11 square meters. Taken as a whole, we think what this area represents is an agricultural complex. I believe it includes residential features, houses, small temporary field shelters, agricultural walls and alignments, and a shrine, a religious shrine as well. What believe is possible religious shrine.

What I want to do now is briefly run through a few slides, pictures of the sites from the area and then I'll go into more detail about some of these things. Could you go back one minute, back to the map.

I'm going to be talking about Feature 13, 12 and 13, which is 13 is what believe is a religious shrine. This is Feature 10, a house lot _____. And these features in here are the

temporary shelters. This is Feature 13. It's located up on a small outcrop there. It's basically, the outcrop has been modified and constructed some walls and inside there's some internal pavings. Associated with it is this large enclosure off to the side here, just below it.

When we excavated Feature 13, we first opened up 1 meter by 50 centimeters, little test pit and we did this right off the corner of one _____ on the inside. We started going down and this is the wall coming in here and this is the wall coming here. So, it's right on the corner of this. On the surface, it looked like there was a hearth there and a fireplace there, but when we got down, it wasn't really what we expected at all. We started hitting concentrations of bones. And we sent these through _____ analysis and he determined it's immature pig bones. So actually we have concentrated here. (Can I have the next slide.) That's just a close up of it. You can see parts of the skull and the longer bones and the ribs through here. In another area, just to the side of that, we got this larger concentration of pig bones. That was just one pig there. This is a _____, or a concentration of about 6 immature pigs.

Some of the other features we have in the area are these temporary shelters. These are just low wind breaks. Behind many of these we find _____, right in the lee of them.

Next slide please. This is one of those temporary shelters. We did excavation in this right behind the lee of this and we found quite thick cultural deposits, about 2 feet deep, 2 feet thick rather.

Next slide. This is just cultural deposit. You can see the darker area and when you get into the lighter soil, that's this _____.

: Question.

: Yes.

: When you say cultural deposits?

: This is the surface that the people were living on and using and it gets gradually built up through time as they bring in their shell making, as they bring in materials, and they gradually built up through time.

: Did you say that's 2 feet deep?

: Yeah. It's from about here to about here.

: And 2 feet deep, _____ one feet at a time?

: We get to that date a little later on. _____ we gave this feature and dated it to about 1800.

Okay, another significant type of archaeological feature that we find are all of these walls. _____ what we believe to be _____ agricultural walls. A lot of times, as I'm sure you all noted, you have these large surrounding enclosing walls, and then you have the smaller walls that are perpendicular to the direction of the wind, and these were used as wind breaks.

Next slide. We did some excavations. This is just another angle showing these smaller walls going across.

The next slide, and the next slide. We did some excavations within the agricultural complex and we found a couple of interesting things. One of the, what I think is the most interesting things, is we found buried walls beneath the surface walls. So you have the surface agricultural walls and then in our excavations, which I realize this is not a good photograph of, you can see these buried walls. Here's a rock here and here's a rock here and here's a rock here.

Next slide. As I said, we _____ this whole area in here is part of an agricultural complex, is an agricultural complex. And this is really only part of the whole dry land field system that you find throughout the Kalaupapa peninsula. If you look at other aerial photographs of the area, you can see similar house sites to this and this throughout the peninsula. This system, dry land field system that we find on the peninsula is similar in some respects to other dry land field systems that you find throughout Hawaii. _____ one at Lapakahi on the Big Island and the Kona field systems on the Big Island, another dry land field system.

We've done, since our samples from our excavation, and we're starting to get back some of the lab results from that. We did radiocarbon dating of 7 archaeological features and the earliest date we got back was 1400 A.D. and that was from this feature here, Feature 8. What that is is a pit that goes, there was an excavation behind an agricultural wall and the charcoal we got was not from a fireplace or anything. It was loose charcoal _____ in the soil behind the buried wall. So what we're assuming is that these buried walls, the

agriculture was beginning in the area at least by the 15th century, 1400. It should be noted that it could have occurred and wave wash could have taken out the lower levels because the whole area we find about here, we find lots of wave washing in deposits.

Another thing about the radiocarbon dates that I want to mention is that these are not actual dates at all, there's quite a bit of error in these dates. The error could be up to about 50 to 100 years or perhaps even more. So 1400 is like a rough date for the agricultural loam.

Another feature, well, let me just tell you something more about the agriculture. So what we believe is going on here is that you get initial agricultural practices around 1400 and these are being intensified through time, up until the early historic period. A lot of these other features that we dated, the other 6 digs that we got were from various C-shaped shelters in this area and from the religious shrine _____. These dated to, one dated to 1730 and then the others all clustered right around 1800. So, it looks like if we had agricultural intensification over the past 4 centuries up through into the early part of the historic period, which could have occurred in the early the late prehistoric period, but we just don't have _____ info.

Another really interesting feature is one I mentioned before is this shrine where we found the pig bones. I think this is one of the most significant features in the area for its research potential. It's about 24 feet by about 25 feet and in the inside of it, there's a number of different pavings and _____ forms. As I said under the corner of one of them, we found a considerable amount of pig bones which has been associated with ritual offerings. That feature dates to 1800. So it can be late prehistoric or early _____. The feature next to it is an enclosure that dates to about 1730. We're not exactly sure how to interpret that feature and any suggestions are gladly welcome. A tentative interpretation is that _____ a boundary line marker. If you look at the topographic maps today, the boundary, _____ boundary line comes down _____ to here. Our research can tell if _____ that boundary was surveyed in the late 1800s by _____ and that it's conceivable that at one time it extended out further. That's just one very tentative interpretation of what it is. It could be a number of other different types of religious shrines.

Another feature that is remarkable is Feature number 10. This

is a historic house site. It's a high platform made out coral. It has an internal fire pit, _____ fire pit, and internal pavings to it. Some people currently are using it as a religious shrine. We found offerings on it, off the end to it. But at one time, it was indeed a house site. We did excavation off to the side of the house site and found quite a bit of historical material, _____, ceramic _____.

Another house site is Feature 2 which is similar in the _____ and shape of it to Feature 10. It's actually already impacted by the previous runway development, the bulldozers pushed covers about a third of it. Besides those features, the ones in between in this area here, really represent the small temporary field shelters and with the agricultural walls in between those.

The areas on the. Can I have the next slide, please. We were looking at this area in here. This is the shrine, this is that house site of Feature 10. The other area where we looked at was this area right out here and this area in here. We recorded about 11 features throughout this area. These were small C-shaped features, windbreaks, possible temporary shelters. This feature here is a low platform about 10 feet by 8 feet, maybe slightly larger than that and about 2 feet high and we're not at all sure what that feature is. A tentative interpretation could be that it's a foundation for a cattle trough. It could be a foundation for a house. It could even conceivably be a burial. It is on the Coast Guard land and so I think they're going to try and avoid that.

Right now our analysis is just in the last stage. We have people doing the sorting _____ from it. We have people looking at the _____ remains to tell us what _____ they were _____. We have people looking at the bones, the _____ remains. We should have a report on our work sometime in December. If the runway expansion does take place and further work is necessitated, a mitigation plan and a research design should be work out with the appropriate people. At the very least we feel, personally, I feel everything should try to be preserved as much as possible. That's the objective. Try to limit the impact. At the minimum this shrine should be preserved, and this house site should be preserved, and as many of the shelters in between should be preserved as well. The areas that are going to be directly impacted by the construction, we'll have to do a mitigation plan for and do some further excavation in those areas to determine precisely what they are. The work we did before was just the first stages, just

the detecting stages. It was not the full _____.

That's about it. I'll be glad to answer any questions if I can. I'd love to know if anyone else has any information about the areas.

: (Not audible)

: My question is (not audible).

: Yeah, yeah. It's fortunate like that. It's very fortunate that it won't be impacted at all.

: How many hours (not audible).

: Well, we were in the field for five weeks and we were working 8-hour days.

: (not audible)

: No, no, I don't. I may just stress that, that this is just the initial, the testing stage of our project.

: (not audible)

: Before any construction took place in the area, yeah, there would definitely have to be more archaeological work done.

: (not audible)

: Yeah. Not really. For me, personally, I wouldn't.

: Once you destroy it, that's it. (not audible)

: What is it that we're expected to do today? What is your expectation of what we.

: We want to know what you want for the airport.

: (not audible) We are told that this should be done on the site, an archaeological site. Because there are very important things there and I (not audible).

: No, actually, _____ we would need, we would disturb, we need for the long runway extension we would disturb 2 acres. The rest of the _____, we would have to have a restriction placed on it, no other construction can take place on that. We would have to state it just like that. In other words, we ask for a horizontal easement _____.

It would not (not audible).

: (not audible)

: Yeah, we would keep the terminal (not audible).

: This is the existing terminal right now. Let's start with the terminal first, okay. This is the existing terminal. This is the maintenance and storage areas right here. You park your car along in here back of it. We would maintain this building as it is, as it is a historic building. We would add in here an area that's covered, walkway. Pave the parking lot and make it easier access to the people. We would park an aircraft over here and this would all be paved in and out. Okay? So we would maintain the existing terminal because it is an historic site.

: One of the things that struck me is (not audible).

: (not audible) Let's look at the _____ replacement of the alignment. Keep going. Okay, here it is. Here we are. This, right here is the, you can't see it. This is the area that will be disturbed, okay? The rest of the area we would need clearance on. We would need some sort of assurance no other buildings would be built in the area. We wouldn't be physically changing the area. We would simply make that there would be no changes to the existing area.

: So, that red area, what does that mean?

: That means that these are airport, we need the FAA requirements for clearance.

: Is that _____.

: No, we leave it alone. We just can't touch that. We'd only be disturbing. The only area that, if we just extended the runway, the only area we would actually be constructing in would be where it's in color, as far as the runway goes. The areas we show up here are runway clearance areas. Which means you can't have any structures in them, you can't have any obstacles. These are very similar to any airport, as you know, any airport _____. He knows that the airfield has wide clearance, both sides of the runway and the ends of the runway. We would require the same thing here. It's not really important, I don't think any of these _____. Essentially, the area _____. So the area _____ would be approximately two ways. That's the area that, if the decision is made for runway

extension, we would have late data recovery before going and record what's in there for future use.

: How much _____

: All the sites would be

: If you realize that there _____

: How many sites do you have over here to build the extension.

: _____ in the present field, without going into the archaeological site, on your east end.

: There's a complex of C-shaped shelters, probably about four.

: Because with that, we are _____. Then we would have this. One safety feature there would be the waves, yeah?

: Yeah, yeah. One reason for doing this, we will stop, the planes will be taking off further back. It won't be hitting the waves, hopefully.

: (not audible)

: It would. You could take a Cessna 402, fully loaded, and take off. You could not get a Dash 7.

: (not audible)

: No, the Dash 7 requires a hundred foot wide runway. We're talking maybe 75 feet. This runway would be classified too small for a Dash 7 to pass _____.

: (not audible)

: Well, this is something the community would have decide upon. The object of putting the _____. I can't really perceive it to be that much in demand in and out of Kalaupapa at night time.

: You know the reason I say that is because some of us (not audible).

: The reason for the lights _____ is for medical evacuation purposes. How the airfield operates, (not audible).

: (Not audible). That might be one of the reasons (not

audible).

: I think, basically, the way I understand it (not audible).

: (not audible)

: It could be. The main reason _____ for medivac and I don't think _____ any other reason at this point.

: I think the question right now _____ because the biggest question is extending on the left of the picture. I mean to have the present airport as is or extended out, right?

: Well, even if you _____ the same length, we still want to add on two 300-foot safety areas.

: Right, that two 300-feet (not audible).

: If you widen the runway, right now, the airport was built before the Federal _____ Airport Rules and Regulations were formulated. If you widen the runway, the FAA will require safety _____. Presently, the airport does not meet FAA criteria.

: (not audible)

: (not audible)

: Can't widen?

: Because of the archaeological _____. So now the choice is the present field we have and just realign _____.

: Yeah. You mean, _____ like it here?

: And just do it that way.

: Stop here?

: Yeah.

: (not audible)

: You still would go into the, right here is the boundary, too.

: This is the end of the present runway. We have some archaeological stuff right inside the airport. If this went

this far, yes, you would probably hit some of the archaeological sites.

: (not audible)

: So that where it is now is almost an impasse as far as expanding.

: Well, I think the thing was that the archaeologist looked at when they found the areas _____. They didn't find any of the area as unique. There are some unique areas here and up here and alongside the construction site.

: Those areas (not audible)

: There was some areas in the photographs _____.

(Not audible)

: Along the same line,

: Which, which area is that?

: Where the landing strip is. If you look at them _____.

: When they built the runway originally they didn't do any archaeological survey in the area.

: Yeah, yeah, I wouldn't be surprised at all because it's all of the coastal _____ area.

: _____.

: (not audible)

: Obviously, they were looking for burials. We were looking for any _____ area and we didn't find any burials at all. _____ some excavation.

: (not audible)

: Okay, we're not aware of that right now, but I can check on that.

: (not audible)

: _____ cost me 30 bucks, there. (not audible)

: What, what map is that?

: (not audible)

: This was the area _____.

: Talking about the existing runway?

: Yeah.

: Yeah.

: (not audible)

: You now what map was that? You have a name? Which map was that?

: (not audible)

: Right, okay, thank you.

: I have a question. _____ toward the east end side of the runway without touching the historical site. (not audible).

: This way?

: Yeah. Instead of touching the archaeology.

: Can't go any further this way because it's too close to the ocean on this end.

: Well, it could be a little away from where the airport is now. With this extension compensate for the 402 airplane?

: That class of aircraft, yeah.

: Can you tell where the _____, where another airline _____.

: Yeah. That we don't know. But the planes are available right now. Yeah. We don't know if somebody's going to start it up, or they're going to start up again.

: (not audible)

: _____. There's nothing unique. There's not anything like a religious shrine out there.

: (not audible)

: Okay. _____ hopefully on this map for you.

: (not audible)

: We should be able to get the map.

: We'll come back for another public meeting.

: (not audible)

: We'll schedule one.

: Not audible.

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Kalaupapa Airport Master Plan

Public Informational Meeting

October 19, 1989

AGENDA

1. Introduction
2. Review of Alternatives
3. Recommended Plan
4. Update on Archaeological Survey
5. Adjourn

Please submit formal comments and questions in writing, to:

State Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

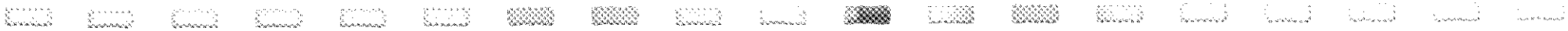
Attention: Mr. Owen Miyamoto

Consultants:

Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 1000
Honolulu, Hawaii 96814

Telephone: (808) 533-0553

Attention: Mr. James G. Dittmar



KALAUPAPA AIRPORT MASTER PLAN

PUBLIC INFORMATIONAL MEETING

October 19, 1989

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KALAUPAPA AIRPORT MASTER PLAN

PUBLIC INFORMATIONAL MEETING

October 19, 1989

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PUBLIC INFO - KALAUPAPA
10//19/89

DN: I saw this morning from Carolyn how we're well ahead of time because she said the article said that the airport clock was 20 minutes slow, so we're getting started even before 1:00. I'd like to thank and welcome all of you here today to join us in this presentation on the Kalaupapa Master Plan Noise Study. My name is Dean Nakagawa with the Airports Division. I think for those of you who were here the last time, there was a Wally Nishigata. Unfortunately, he took ill. He'll be out a little while. Hopefully, he will be back for the next few meetings.

I'd like to begin by also thanking Mary Beth and the staff and the community, you know, the agencies here and the residents' hospitality afforded us to enable us to come in and share with you our Airports program for Kalaupapa. A special thanks to Don. I know, she's been hospitable taking us out and, I think, you've heard these questions over and over, but I think he's maintained his patience and told us again and again what this is, where we are, and described some of the features here. We really appreciate that. Thank you.

At this time, before going in with the presentation, as just a preview to that, some of the things that will be coming out the Master Plan, I think, first of all I'd like to explain a Master Plan. A Master Plan basically a guideline for the Airports Division and we've been tasked by Safety and Service to the various airports that we have we operate in the State. And one of the things we are in charge of is making sure that we meet the demands, the requirements of the communities we serve as well as the users -- the airports people, the ground transportation people. And provide the safety all within the context of the Federal requirements. What are requirements we have under the statutes, whether it's federal or state. And the Master Plan basically gives us some idea, some options what may be insofar as down the line. And that's where we feel that we have retained our consultants to look at different options. So some of the numbers you see, you know, may surprise you. You might be thinking, well, if you're looking at 300 people coming in daily. That doesn't mean that's going to occur. But from a planning standpoint, it's good practice to look down, you know, forecast yourself ahead in the future and see what may be down there.

In the meantime, as we plan for today and the next day, we need to look at, again, the concerns of the users as well as

the community. So, even if you see some big numbers there, don't be offended. Don't be disillusioned. And the thing is, we're provided everybody an opportunity to comment on those numbers. But from a planning perspective, again, we need to look down the line. You know, we can't just look for the next day or two years down the line. We have to look 20 years down the line. Just that qualification, I think.

And if you have any comments, okay, the Master Plan, again, is a guideline. It may be sometimes very conceptual that we will have a terminal facility. Some of the things that you may be looking at in terms of actual facilities within the terminal will coming down the line when we get into design construction. But that does not preclude, that does not prevent you guys from putting in your comments. Because what we'll do is all the comments we get, we'll provide it to the next guys who come in as far as the design and construction. So that will be taken into account.

At this time I'd like to present our consultant team from Edward K. Noda & Associates. We have Jim Ditmar, who is the project manager, Bill Bevins, Greg Getts in the back, Brian Nishii. The gentleman on the far end is from Aries, Ltd., John Sanders. At this time, I'd like to turn it over to Jim.

JD: Thank you very much. It's enjoyable being back here again. We met here last time about December and we talked a little bit about what we were going to do on the Master Plan. Up to this point, we've completed some of our tasks. You can see in here on this second page, basically, these are the various tasks which we have to go through under FAA Master Plan to complete it. Okay, we've gone through and we've completed the inventory, we're done from the Forecast, we've looked at some of the. The Forecast were a little bit different. Normally, in any airport on the mainland, any other situation, we've got to look at what the growth will be. We don't have any real growth here. We've taken a scenario looking at what happens if you have 100 passengers a day; what happens if you have 200 passengers a day. No time periods were assigned to these growth in time. Just saying, if you did have this kind of people coming in, what would the effect be in the airport and the facilities. So that's what we'll be talking about today. We're taking a little bit of a look at the facility requirements, some of the alternatives. And we've started with our environmental analysis. We've had, probably you people have seen some of their, we had a gentleman over here, Phil Bruner, from the University of Laie on Oahu counting birds for us so that we have a fairly good idea of what some of the flora/fauna _____. We've had some water quality

studies being done offshore and some marine biology studies done off there too. We've had an archaeological survey at the west end of the runway to get an idea of what archaeological sites we have out there in case a runway extension is needed. We're bringing all that together and at our next public hearing is September we'll be able to bring all that together for you to take a look at.

At this time I'd like to turn the meeting to John Saunders who's our consultant to talk a little bit about looking at what would the impact on the airfield and facilities at various levels of passenger arrivals. John.

JS: Okay, thank you, Jim, and good afternoon ladies and gentlemen. I'm going to be talking from the second page in the handout that we gave you before we started. You'll see on that in the first column we list what happened at the airport in 1988. In 1988 there were over 13,000 passengers that went through the airport. That's the highest number of passengers that have used the airport based on the records that BRT keeps. That includes visitor travel as well as the resident government travel in and out of the airport and that works out as a total of about 40 a day. And of those 40, about 30 of those are flights by visitors coming in to the airport. The other 10 averages as trips by the residents, by the visitors, and by the government people working here.

Below that you'll see that there's about 200 tons of cargo that comes in to the Kalaupapa airport. this is not only the cargo that comes in under the Department of Health contract, but other cargo that is also brought in to Kalaupapa. And then below that we list the number of aircraft operations that occurred last year based on a combination of records that are kept by the Department of Transportation and estimates in other cases. So the total is about 7,500 operations which translates into about 20 a day. By way of comparison, I believe, there were over 200 on April the 15th here. So, ten times the normal number of aircraft operations in and out of the airport.

What we have been asked to do is then to try and look at what level of activity there might be at the airport in the future looking at different estimates on the number of people that might be visiting here. And as Jim has mentioned, and as Dean has mentioned, we're very sensitive to the hundred visitor a day limit. But in order to look at the long range and other possible impacts on the airport, we also came up with some estimates for higher levels of activity to see what it would mean in terms of the airport and by implication on other

activity here at Kalaupapa. So we have made projections based on different visitor levels. We have looked at 50 visitors a day. Right now, there are, as I mentioned, there are about 15 a day average that come in to Kalaupapa by air. That would increase the passenger total by about threefold and increase the number of aircraft operations by about 50%. We are assuming that the aircraft that come in here will continue to be the same type of aircraft as Air Molokai and Aloha Island Air use at the present time. We looked at combinations of the Cessna 402 aircraft that Air Molokai uses and the Dehavelin 6 that Aloha Island Air uses at present. We have assumed that these aircrafts will continue to be the aircrafts serving Kalaupapa for the projections of the 50, 100, 200, and 300 visitors except for the last column. For the last column, we also looked at the implications of using larger aircraft such as the Devavelin Dash 7 that Hawaiian Airlines uses top side and into Lanai at some of the other airports in the State. The reason we did that was because at that level of activity, you're looking at a level of activity at any other airport such as at Molokai or Lanai might justify service by those larger aircrafts. So we intentionally did that and then we could look at the implications of trying to accommodate that type of aircraft at the airport and as Jim will describe in a few minutes, we have since eliminated consideration of the larger aircraft because of its incompatibility with airport and the type of service that we're looking at. So, we were asked to look at that and that is what is shown in the last column where the passenger totals are almost 20 fold increase over what you have last year. And even though it says at the top of that table, average daily visitors, those numbers include trips by you, the residents, by you, the people who work here at Kalaupapa, those are included in those numbers. So, what we're finding then, we go out to the high level which would be sort of the number that we've used for long range planning for the airport that we're up to over 200,000 passengers a day. By way of contrast, the Molokai airport at the present time handles over 350,000 passengers. Translated that activity into aircraft operations, we end up with a total of about 27,000 aircraft operations in a year. Which would be about 80 a day. Again, that's sort of less than half of what you experienced a couple of weeks ago.

So these are the basic forecasts that we have prepared for the type of activity that we might expect at the airport. These numbers are then translated into facility requirements and Jim will now talk about the implications.

JD: If you would turn to the page that's entitled Airfield Requirements. First, I'd like to explain what the

implications of the forecast are with regard to the airfield itself, but really there's another aspect of the improvements to the airfield which we're discussing and that is to upgrade the safety margins of the operation here at Kalaupapa. And what we have here are objectives that we would like to reach in the case of the runway length. We would like to reach a length of about 3,000 feet and the reason for that is that aircrafts such as the Cessna 400 series flown by Air Molokai and the other airplanes that are flown by Hutch Air and the cargo folks that come in here, have a little trouble with that length of runway. That's getting to the point where they can't quite carry out the full capacity of what their aircraft is built for. So if we could get the length up to around 3,000 feet from about 2,700, then we could operate all of that size aircraft, I think, comfortably.

The second, I think, most important thing, is widening the runway to 75 feet. It is presently 50 feet wide and the 75-foot width is one that is an FAA requirement for the Dash 6 aircraft that we're already operating here. In other words, aircraft of that size, that physical size and weight require a little wider runway than what we have at the present time.

Another thing that we want to do is we want to put some extended runway safety areas at the ends of the runway and really all those are is just a parcel of land right at the end of the runway that is level and it has nothing on it and that it will support the weight of an aircraft or the weight of equipment if something should go wrong and your aircraft should be in that area, we can get equipment out there to assist to do whatever is necessary--the blast pads and the sort of thing that keeps from eroding the earth as the engines warm up and blow air back there. Now, we're thinking about a paved taxiway and a paved apron. As you know, at the present time we have a turf area for the apron and for the taxiway itself there is some grass brick in front by the parking area that you all know about. And that helps with the drainage situation in wet weather and it does help a little bit. But really the operation of the small aircraft on turf areas is a little bit hard from a maintenance point of view and they tend to have problems with landing gear, propeller and things like that, so we think it's appropriate to install a paved taxiway leading from the runway down to the area of the terminal and then providing a paved area at the terminal so the aircraft can be parked there. And the size of the apron would be based on the requirements developed by John. For example, at the 100 visitor a day level, which is our present maximum allowable, we would have enough room to park three of the Cessna 400 series aircraft and one of the Dash

6, one of the bigger, simultaneously at one time. In other words, there'd be enough area to park that many. And I'll show you a little more about that in just a moment.

Now, we have discussed a situation here that can be solved in more ways than one and that is the problem of night time medivac. And we have, there are several ways that that can be handled. One of them would be to provide runway lighting and landing aids that would permit a conventional aircraft, a fixed wing aircraft, to operate there at night. And that would mean putting some lights around the edges of the runway and the taxiway and some lights to indicate where the ends of the runway are and perhaps a few other things.

Now, there might be another solution to that which can be considered and that would be a helicopter landing pad which could be lit here and if we had two-engine helicopters, such as perhaps the Coast Guard could provide us that could operate at night time from that helipad. If not, perhaps a single-engine helicopter that could remove the patient to topside and from there they could do a night time operation. The reason for looking at the thing two ways is that we feel that the night time operation of a fixed wing airplane is difficult in this area because there are no landing aids and lights. And what the pilots describe this situation is here is sort of a black hole. When they take off in the airfield and the airfield lights fall behind, they have no reference, there are no lights, no nothing, no navigational aids of any kind. And for a moment they're flying essentially something other than under visual flight rules. So, it's not that it's an impossible thing to do. It isn't; it can be done. So I think we have to look at ways to handle that. And I think there are probably some administrative factors that would figure into that that we would have to consider. So, anyway, one of the options is to provide for night time medivac, however we do it.

If you turn to the next page, there's a little table there which gives you some ideas of what would happen to the facilities at the airport if we were to provide the facilities for the hundred visitor a day level which we're not experiencing that at the present time and then the other ones. And in the case of the hundred visitor per day level, if you'll look at that, we need about 780 square feet in our waiting lobby and about 40 seats. We need a little place for security inspection because we feel that sometime in the future it might be necessary for the commuter folks to x-ray baggage. That's not a requirement at the present time as you know, but it might become one. We provide enough floor space

so that you could a machine there if you had to do that. And then we feel that there probably should be a baggage claim area in the arrival area so that baggage can be brought from the aircraft into a covered area and picked up there by passengers. Right now, it's usually either the pilots bring the baggage in for the folks or they pick it up at the aircraft and we think maybe there should be a little more than that provided.

Now, if you look at those requirements for the hundred visitor a day level of the terminal that we have at the present time which is about 1,200 square feet in floor space, is adequately sized to take care of that, so we wouldn't have to add any building space but we would propose to build that baggage claim unit and do a few other things and I'll show a couple of pictures in just a minute. In the case of the parking situation out front, we think there should be a little curb where a van or a couple of automobiles can pull up at the curb and unload baggage to go out to the aircraft and we've got a little requirement for that lineal feet of curb space, 85 at the 100 visitor per day up to maybe twice that for 300 visitors per day and about 15 parking spaces out front for public and employees. Right now, I'm talking to the airport manager, and he says, well, about the worst he's seen on weekends are about a dozen vehicles out there when visitors are leaving and park their vehicles out there. So, you can see that about what would be required. If we went up to this very high level, we might need parking for as many as forty vehicles.

Okay, we think also that in the case of the support facilities, that is, the little fire rescue building and the administration and maintenance building, that more floor space is required for that. And if we have to build more space for those buildings right now, we would build enough space to support the hundred a day level and beyond. In other words, it's hard to put an actual figure for what's required for those.

Okay, if you'll move over to the next page, there's a little chart there to orient you a little bit on so that the next two pictures that you look at you'll know what you're looking at. First, there's the existing runway down at the bottom of the page and then the paved taxiway that we pave over to the apron area and the little cross there is where the existing terminal is and the road then going to the Settlement on your right and on to the lighthouse and goes to your left as you look at the picture. So, now, if you'll look at the next page, what you're looking at is that little dotted area and it's just a

conceptual sketch to show you the kind of thing that can be done. We haven't spent a lot of time on this, but we wanted to get some ideas out for you as early as we can. If you look at the, on your left there, there's the taxiway coming over from the apron, from the runway that I showed you and then a paved apron out there in front on which we could park the aircraft and the existing building is shown there at a slight angle to this building restriction line that we got marked down there. But you can see the existing building. And what we would propose to do is to build this covered baggage claim area right out about in the middle of the exit and entrance to apron area. And that's the area where people could take their bags and put them down there to be taken out and put in the aircraft or they could be picked up there once the airplane comes in so that there wouldn't be so many people moving back and forth on the apron when the airplanes are coming in and parking. It would be a convenience and a safety thing.

And then over on the right there you notice some little dotted lines underneath the parking area and that's where the existing buildings are. There's the little shed on the right, the small square, and the other one. We would propose removing those and putting them over to the left of the apron there. You see the maintenance storage, office, and fire rescue area over on the far left of your picture. And then we would kind of straighten out that roadway. At the present time the roadway kind of cuts a little bit too close to the runway so we'd probably move that back a little bit and straighten it out. And we put paved parking for about 15 vehicles in that area that you see.

Now, if you'll go to the next picture, you can see what would happen if we went on to a higher levels of activity here. It would be necessary beyond the hundred visitor level area to be a build another small building about the same size as the one we have. We'd probably divide up the functions of the building so that the existing building would be an arrivals building and then we'd build another little departures building. Architecturally, something that would work architecturally with that. And we would increase the baggage claim area that you have in the center. It would stay right where it is but there would just be more places to put bags and things and the parking out in front would be expanded and this is the paved parking area. And then if we had to expand the apron, we'd expand that over to your left as you would go.

So those are a couple of thoughts as to what might be done and we would invite your comments on that but we have a lot of

ideas to _____. So with that, I'll turn it back over to Jim and he'll tell you a little about the runway and what we're thinking about here.

JD: If you look on the next to the last page we've got a couple of diagrams in there to show you the existing runway and _____ right here about 2,700 feet. _____ for this class of aircraft flying in and out the minimum FAA requirement is 3,000 feet. Right now we have 2,700. This means that the 402's right now are not taking off fully loaded. They're taking off at a weight disadvantage. In addition to that we'd also like to see 300 foot safety area, so if you add in the 2,700 feet and the two 300 safety areas, plus the additional 300 foot additional, we're really talking about 900 feet additional that we would _____ the end of the runway this would be the beginning of the safety area, we would come down 300 feet and that would be the start of the runway. So, if we are to expand the runway to meet the minimum requirement, we will have to expand to the west here. The _____ will _____ this way right now because of environmental conditions. So we're looking at expanding the runway and taking a look at what it would take to expand the runway. We've already done an archaeological survey out here. We notice there are something like 30 different archaeological _____.

If the State goes ahead with the decision to look at it, what we'd probably do is do a preliminary _____ at the same time to carry out a more detailed archaeological survey out here to determine what is actually out here besides what we've identified. And if those archaeological (not audible).

We also took a look at what happens if using this. We have right now 250 foot clearance and the center line of the runway which is right here in this building. _____ if we have to extend the runway, we're going to redo the surface. We cannot just get by with repaving any more. You folks all know the runway is not quite level; there's a couple of dipsy doodles in there and we'd like to take those out. The only way to do that would be by cut and fill. So we're faced with the fact that if we extend the existing runway right here, we cut and fill, there may be some times when the runway would have to be shut down for some of the time. The problem _____, to maintain the runway.

We know the runway right now is not facing the apparent winds, about 23. _____ the runway about 6 degrees this way and extend it out to here. What would be the impact? We're going to take a look at the economic impact a little

shortly. We just want you to know right now what would happen. If we did that, it would have the advantage that we could probably maintain this runway here while we're working on this end down in here and this one down in here. So it would be from an operational standpoint _____. But like I said the decision has not been made yet, but we will be looking at that. In addition we'll need some, probably additional land needed down here _____. The State has presently about 42 acres total and the airport has got 32 acres. We would, I think, about another 18 acres _____. On the lighthouse area, right now the Coast Guard and the U.S. Park land goes right down to the edge. We would probably ask them for an easement through here, saying there would be no construction and no obstacles 250 feet from the center line here. It would not mean taking any land that's basically _____. I don't think you folks have any plans down here.

So that's where we are right now. We do feel with the extension that we would have a safer airport. It's not to say the airport is not safe right now, but we would have a safer airport that would allow the 402s to get off with a full load and be more economical for them to fly. This would not really affect the Dash 6s, because this runway is adequate to them right now. This would also increase the runway with 50 to 75 feet. As one of the airline pilots said today, landing in this airport is the closest you ever come to landing in _____ runway, it's so skinny.

So those are the improvements we're looking at on their airfield right now. You know, I think the group is small enough. So if you folks have any questions you want to bring up or if you have any concerns about the plan so far, we'd certainly like to hear them.

A: If we could go back to the parking area plan, here, you notice the aircraft are facing the.

B. They're facing the wrong way.

A: Why would you put the parking on the left side and the aircraft parking on the right side? In other words, the aircraft parking on the west? That way you could come in and face right into the wind. If the airplanes are turned around, you're going to blow the baggage area getting out of there. And that they have problems with that here right now with some of the pilots that taxi out with the power and they blow dust inside the terminal. Whereas if you just transpose the parking with the aircraft it might be. If this is still in

just the thinking stage.

B: I don't any reason why we couldn't. We mainly placed that taxi where it were just to kind of get it toward the middle. But I think the taxiing time, since we're probably not going to be able to put in a parallel taxiway because of the constraints of space, if we have these little levels of activity, I see no problem with that and I don't see why we couldn't consider that.

A: And on the runway we're talking about as we discussed yesterday, we have worked out the figures of the 3,000 foot runway, we still cannot take off.

B: You can't take off.

A: Unless there's wind. Now, this is based only on the temperature average of about 80 degrees and the study doesn't address any temperature or wind conditions, does it?

B: No.

A: I guess there's no data on it, is there?

B: There are data and we haven't really looked at. What we're looking at here is what we can do. Like, if we found out we could make it 3,100 feet without disturbing any of the constraints that we're talking about, we'd certainly make it. My preference would be to make it the 3,100 feet. And we're shooting for the 3,000 just because we think that physically that's about all we can get in there without getting into trouble at both ends. But if we could get more, we'd get more.

A: Well, for your information, if you need.... We're shot 400 pounds. So you could essentially take another person out of here with 3,000 feet?

B: Oh yes, oh yes. And again, we always compute this on a no wind factor because occasionally there is, we can adjust for that, but any wind at all. For every 10 nauts or miles an hour wind, we can take a hundred extra pounds. So with 20 miles an hour, we could take our full load out of here with a landing weight of 6,200. So that any bit would help.

And we will check that sort of wind condition for, you know, for that class of aircraft just to see what.

A: Where would they get the data from?

B: We have. The FAA has published a bunch of data on runway length, you know, for the various aircraft types based on their...

A: No, I meant the temperature in the wind.

B: Oh, yeah, we have some, we have some wind data.

A: Do you?

B: Yeah, we do. We have wind data, we have wind data that's how we found our rate. The runway is 20 degrees off the apparent wind. I'm not sure if we have temperature data, though. That's the thing.

A: The Dash 7 and the Dash 6s also and the Dash 7s require temperature.

B: I don't think we've looked at the Dash 7 in this airport. If we get a Dash 7 in here, you'd have to have 500 foot separation which means we'd either have to the existing terminal which is.

A: 75 feet...

B: We need 100 feet width, we need 500 feet separation and I just, to me, that's not the airport that we would want right now. You're getting to be, you know, we can't put it in. We are physically constrained. And someone said if you're going to bring in that kind of aircraft then you'd better look for another site. Well that throws that out right now. This is the airport. This is the site. I think the best we can do is get a 3,000-foot out of the whole thing and that would be it. And that's basically what the residents want to do down here.

C: If you angle that the way how you propose to angle, then you would impact very little of the archaeological. Because it would.

B: Yeah, it would minimize, Paul.

D: I think the thing is we're going to have to look at. Another thing we have a problem.

B: We're doing it we have to cut and fill, okay. If we do it this way, we can pretty much minimize our cut and fill. Being this is a National Historic Park, any fill we need for this

construction project, is going to have to be brought in. That's my understanding so. If we do it this way, we can cut and fill. It will help balance it out a little bit better. Like I said we don't really know what's out there in those archaeological sites. We didn't have a chance to really get down and dig. I'm going to take the positive approach whatever we find out there, we can really pour it in here. It can be saved that way so that we could extend the runway. We should be reaching a recommendation. This is right now a consultant speaking. The State has not said yes or now or indifferent. What we're doing is saying this is what we're looking at. We will be making a recommendation shortly. You folks will be involved in the final decision on that.

E: What we've found on the studies of the runway, the alternative of just taking and lengthening the runway on its present alignment is that in getting the swells smoothed out as much as we can, getting that runway as smooth as we can make it as Jim pointed out, we have to bring in some fill outside probably by barge for that which would be expensive. As we tip it a little bit to one side there, we begin to cut into that hillside as you get toward the lighthouse and so the amount that we dig out over there will fill up the hole down at the other end. So, those are the kind of tradeoffs that we're looking at will actually put some cost figures on those and make some estimates.

F: The thing that we have to look at too, Paul, is the fact is that if we do use the existing runway or just say we don't do anything, we just recut this and get this level, the airport, airlines and airport service here is disrupted. We may have to go with something like having helicopter service in here. A helicopter service during the construction period. I don't think it's going to be convenient to _____.

G: Jim, you might want to point out the water spout and where it would be in relation to this.

JD: Well, it would be further this way. So a couple of pilots from Air Molokai are concerned about the fact and starting to take off there's water spouts. There have been two airplanes that have been hit on the other side as they take off.

G: It's just high surf.

JD: Yeah, high surf. The point is, airplanes are not built to get water underneath them when they take off. We've not had a serious accident yet, but by moving it this way, you'd be that much farther away from the edge of the ocean so additionally

you'd be that much farther, taking off farther inland so you should clear the surf.

B: The most dangerous situation would be landing to the southwest over that high surf. You'd have to come in high with that.

JD: You'd be more over this way. We're not saying the runway now is not safe. No one's been killed out here. We had a few accidents but basically it's not the airport's, but perhaps pilot error.

I think this would be. I know some people say, "I don't feel. I'm not worried about going out of here."

B: It helps to relieve that mid-runway condition (not audible).

JD: I just heard from Carolyn yesterday. I understand from Carolyn that money has been appropriated for harbor improvements and roadway improvements for Kalaupapa. Do you know anything about that, Mary Beth?

What we're trying to do is stage the construction so we would try and put the construct. Try and look and see if we can get some construction of the airport started next summer. At the same time put a package together with the harbor improvements, the roadway improvements. We've already talked to the National Parks Services, about seeing if we couldn't get some money identifying the National Parks Service budget for roadway improvements. And we've talked to Senator Inouye's office and they said if we can identify, they can show us where the National Park Service money is, they would see if they can get a priority put on it. So we can maybe get everything together so when we're going to have some construction down here, construction would happen in all one period.

B: Does anybody recall whether that dip about two-thirds down the runway has gradually increased or was it that way in the very beginning.

JD: Nobody knows. The only one might know would be Paul.

: I suspect you were around here when they built the road to go through. I took the foundation out there. It's fairly good.

: When they built the runway out there, what's the foundation? What's the ground look like out there? Is it pretty much rock?

: No, it's all sand.

: Sand.

: Sand and gravel.

: The retired Operating Engineer topside used to be an administrator here. His name was _____. He was the former administrator here back.

: You know the 100 feet (not audible).

: Okay. Usually you find bad foundations for runways not so much in sand. It's when you have clay, like the _____ length at the end of Hickam Air Force Base. So I think the foundation might be fairly good. There might be some pukas out there that have to be filled up.

: _____ Cessna. When you go out with a heavy load, you're going into that dip and _____ the struts out and it's quite a dip.

: It seems like if you angle it, that would be the best proposition. You won't have to bring in fills. You won't have to disturb archeological sites and then you would go straight into the wind then the height of that surf would be maybe about, oh even, 200 feet away, 300 feet away.

: I think also it would be easier to maintain the airport operational. Because last time I think. Teddy, last time they _____ the airport, didn't they. They just put like a layer of asphalt.

: The last 500 feet they put cement (not audible).

: They kept the airport operational the whole time, right? Well, whatever happens, I've been told we'll keep the airport. Some way you'll be able to get out of here.

: Either that or bring one boat.

: We understand there's a good deal on mules down in Oklahoma.

: Any more questions or concerns? I know for some of you these terminology we've used -- air carrier, _____. If there's any questions, we've got the experts here, we'll be around here for a little while afterwards so come up and ask them. And if there's any clarification needed. Also along that line, I know all of you got the handouts, you also have

a Working Paper I and II. A little more details provided in terms of what was discussed today. Again, these are working papers, okay. They're discussion papers. Papers to go back, look at and discuss with. What I'll do is I'll leave a complete set here with Mary Beth and I'll ask Mary Beth, you know, I found that you have a State Library here. Maybe you can leave one here. And what the people here in the community can do is when you go back, talk to your fellow workers, the fellow residents, tell them, hey, the airports are looking at fixing up Kalaupapa. If there are any questions, any concerns, let us know. Okay? Again, the reports would be available at the library. They can go back in, take a look at it. If there's any questions, give us a call. Our consultants, there's a mailing list in front on the blue sheet. So drop us a line. Any questions that you may have, any concerns, any issues. We'll look at it and we'll try to respond to you. If we can't get it to you through the mail or something or some other way, there will be additional meetings forthcoming. Again, the consultants will be here for a little while, so if you have any questions.

Also, in terms of submitting your comments. You know, we always give the excuse "Hawaiian time," but we want to try and do this on a very timely basis, you know. Get the mass printout and then we can go directly into design construction to get things going as fast as we can. So, as much as we use Hawaiian time, if you have any comments, again, and concerns, please submit it as timely as possible.

If not, thank you very much, again.

: Excuse me. There's one correction. The tower's hours of operation in Molokai over in Lehua _____ are now 0700 to 1830. It says 0800 to 6:00.

: That will be well noted. Again, thank you very much for allowing us to come in and discuss our program with you. Thank you.

Edward K. Noda
and
Associates, Inc.

Oceanographic
Engineers
and
Environmental
Consultants

Engineering
Planning
Surveys
Computer
Modeling

615 Piikoi Street
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(808) 524-1126

Kalaupapa Airport Master Plan
Paschoal Hall, Kalaupapa
Public Informational Meeting

November 28, 1989
1:00 p.m.

AGENDA

1. Introduction

2. Discussion of Issues

   a. Alternative Concept Plan

3. Adjourn

Please submit formal comments and questions in writing, to:

State Department of Transportation
Airports Division
Honolulu International Airport
Honolulu, Hawaii 96819

Attention: Mr. Owen Miyamoto

Consultants:

Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 1000
Honolulu, Hawaii 96814

Telephone: (808) 533-0553

Attention: Mr. James G. Dittmar

KALAUPAPA AIRPORT MASTER PLAN

PUBLIC INFORMATIONAL MEETING

November 28, 1989

NAME	ORGANIZATION	TELEPHONE
Annie Griffin	DLNR - SHPO	548-7460
Diane Hirsch	DOH - CDD	548-4581
Al Baldwin	NPS	541-2693
David Welhouse	FAA HNL-ADO	541-1243
Marydeph Y. Marl	DOH-CDD-KS	567-6613
Wally Nishigata	DOT-A	836-6407
Jim Dittmar	Edwards K. Noda & Assc.	533-0553
Theya Ladetoger	IARII	946-2548
Drake Wells	E. HIRF	552 2650
Clarence Kahilihiwa		
Blossom Kawan		
Joseph Mollena		
Gloria Marks	Damien Tour	567-6171
Ronnie Lelepali		567-6556
Edwin Lelepali		567-6556
Mike Carver	State	
Pat Colburn	State	
Sebastiana Fernandez	State	567-6485
Winifred Harada	"	
Kuulei Bell		
David Wal[illegible]	State	567-6787
Hyman Fujinaga		567-6760
[illegible]		
Penny Burton	[illegible]	567-6187

KALAUPAPA AIRPORT MASTER PLAN

PUBLIC INFORMATIONAL MEETING

November 28, 1989

NAME	ORGANIZATION	TELEPHONE
David DeCosta	DOH	567-6516
[illegible]	DOH	"
Edward K. English	DOH	567-6603
Theodore Dudoit	DOH	567-6613
Shirley Reed	DOH	
Bernard Schwing	DOH	
Peter Wall	DOH	567-6663
NEAL BORGMEYER	NPS	567 6102
Pat HARTMAN, M.D.	DOH	567 6588
CAROLYN K. IMAMURA	PBDC	523-9325

EIS SCOPING MEETING MINUTES

Kalaupapa Scoping Meeting
Feb. 13, 1990
Sign Up Sheet

Name	Agency or Organization	Phone
[illegible]	Office of [illegible]	946-2642
DEAN S. NAKAGAWA	Hawaii DOT-A	836 6526
BRIAN ISHII	EDWARD K. NODA & ASSOC.	533-0553
Annie Griffin	DLNR - SHPD	543-6438
Jim Dittmar	Edward K. Noda, Associates	533-0553
Stacy Otomo	Warren S. Unemori Eng., Inc.	242-4403
Warren S. Unemori	Warren S. Unemori Eng. Inc.	242-4403
James Chang	Hawaii DOT-ED	836-6591
Wally Nishigata	DOT-A	836-6407
Peter Thompson	NPS Kalaupapa	567-6102
Al Baldwin	NPS Honolulu	541-2693
BRYAN HARRY	NPS HONOLULU	541.2693
CAROLYN IMAMURA	PBDC	523-9325
DIANE HIRSCH	DOH - Comm Dis. Div.	548-4581

Kalaupapa Scoping Meeting
Feb. 15 1990
Sign Up Sheet

Name	Agency/Organization	Phone
Ben Kahikina	Patient	N/A
Chris Hanapi	Bus. Off. Clerk	567-6320
Jim Dittmar	Edward K. Noda & Associates	533-0553
Lorraine Noda	" " "	"
Brian Ishii	" " " "	"
Gordon Chapman	" " "	"
Gloria Marks	Kalaupapa Patient	567-6171
Blas Miguel	Kualapuu Molokai	567 6218
James Chang	State of Hawaii Airports Div	836-6591
Marybeth Y. Maul	State of Hawaii - Dept of Health Kalaupapa	567-6613 / 6320
NM Malakaua	Kalaupapa Patient	567-6494
Leroy J. Deardorff	Pastor/Kaiwana Hsu U.C.C.	567-6313
Peter Thompson	NPS Kalaupapa	567 6102
Lucy K Whiting	" "	" "
Bernard Schwind	D.O.H. Kalaupapa	567 6530
Bob Worth	" CDD	548-4580
[illegible]	Kalaupapa	
Shoichi Hamai	Kalaupapa	567-6298
Edward K. English	D.O.H. Kalaupapa	567-6603
[illegible] Sagaris	DOH Kalaupapa	
[illegible]	" "	567-6787
Winifred Harada	" "	567-6720
Dana J. Hiapo	" "	
[illegible] Benjamin	" "	567 6260
[illegible]	" "	567.6057
NEAL BORGMEYER	NPS	567 6102

CLARENCE KAHILIHIWA	DOH KALAUPAPA	UNLISTED
Tom Dunmire	PBDC	396-0094
CAROLYN IMAMURA	PBDC	523-9325
James A Beede	D.O.H Kalaupapa	
Bernard K. Punikaia	[illegible] 96826	943-8540
Kuulei Bell	189 Kaulani St. Kalaupapa 96742	
[illegible] Harada		567-6[illegible]
Nally Nishigata	DOT-A	836-6407

4/30/90

KALAUPAPA AIRPORT
Scoping Meetings
February 13 and 15, 1990

To assist in the preparation of an Environmental Impact Statement (EIS) for improvements to the Kalaupapa Airport, Scoping Meetings were held on February 13, 1990, in the Prince Kuhio Federal Building in Honolulu and on February 15, 1990, in Paschoal Hall in Kalaupapa, Molokai. Both meetings were opened with a welcome and an explanation for holding the scoping meetings. The Notice in the Federal Register was noted, an attendance sheet was circulated (copy attached), and participants were introduced. The explanation of the meeting purpose included the seven airfield alternatives identified thus far, plus outlining the four major impact categories of the twenty required in FAA Order 5050.4A which will be specifically addressed in the EIS. After this opening, each meeting was opened for discussion.

February 13:

Peter Thompson (NPS) stated they had met with the Patients Advisory Council at Kalaupapa on February 9 who expressed a desire for a compromise of alternatives 3 and 6. They wanted the realignment of the runway but within the existing boundaries of the airport. They also wish to impact as few archeological sites as possible, preferably none. Other changes to the alternatives would include no paved apron or taxiway (grass block would be acceptable); repave the auto parking lot as is, no expansion or relocation; and add runway lights for nighttime emergency evacuations.

The compromise was endorsed by the patients to alleviate the concern for interruption of air service if the existing runway was repaved. The possibility of a minor extension to the east off airport property to achieve 2700' was discussed. The 2700' minimum length was established to allow operation by an air ambulance service using a Cessna 414A. The eastern extension would be necessary to reach 2700' while avoiding the archeological sites on the western runway end. Four sites were identified on airport property (2, 3, 30, 33) which would be adversely affected, most probably destroyed, by the runway improvement as proposed. The loss of these sites can be mitigated through appropriate archeological research measures.

The possibility of a waiver for a displaced threshold on the west end was discussed. This waiver would move the landing threshold approximately 150' to use part of the runway safety area (300' off each runway end) as runway for takeoff distance. David Welhouse (FAA) noted that DOT Airports could request such a waiver but there was no guarantee one would be granted. For EIS processing, it would be better to assume no waiver, i.e., worst case scenario of the compromised alternative.

The participants generally agreed to pursue the compromise alternative as the recommended proposal for processing of the EIS. Specific questions to be answered regarding this compromise prior to, or during, EIS processing are:

1. What runway length and safety areas are required and could a waiver be granted for a displaced threshold on the west end?

2. How much, if any, additional land is required on the east end to obtain the required runway length?

3. Will any archeological sites be impacted? If so, will it be adverse, i.e., destruction?

4. What impacts, especially construction, must be identified so they may be addressed in EIS?

Environmental impact categories that will be greatly affected by the proposed improvements includes Section 4(f) of the DOT Act, Section 106 of the National Historic Preservation Act, Coastal Zone Management Program and Construction Impacts. These four categories were discussed as follows:

a. Section 4(f) - Since the airport is located within the confines of a National Historic Park, the EIS must address the impacts and the statement of "no feasible and prudent alternative" must be reached.

b. Section 106 - Consultation with the SHPO, ACHP, and all other interested parties will be undertaken to reach a Memorandum of Agreement (MOA) with respect to identified archeological sites and mitigation measures.

c. Coastal Zone Management - A Special Management Area permit will be requested from the appropriate agency.

d. Construction - Several items must be resolved with all parties to prevent or reduce the impact of construction on the settlement, the park and the entire peninsula. Specific questions arising from the meeting included:

   (1) Where will the asphalt plan and stock piles be located?

   (2) What is the size of the construction crew?

   (3) What about housing, security, transportation, etc., for the crew?

   (4) What restrictions will be placed on the crew regarding fishing, store use, etc.?

   These items will all be addressed in the EIS, resolved to the satisfaction of the affected parties, and can then be included in the construction contract to require the contractor to follow them.

Other items discussed at the meeting beyond the alternatives and impact categories included the following questions and comments:

(1) No relocation, expansion, or improvement will be accomplished for the terminal or maintenance building; however, the option to install a covered baggage claim area will be preserved.

(2) Funding from DOH will lapse for improvements at Kalaupapa if a contract is not awarded by June 30, 1991. - Diane Hirsch (DOH)

(3) The community does not want burials to be paved over. No excavation will take place on the road resurfacing. The MOA must include a plan for what action will be taken if burials are found on the airport. - Lynn Lee (OHA)

Contact the Corps of Engineers to determine if a permit is needed to perform the pier reconstruction.

February 15

The meeting in Kalaupapa outlined the compromise alternative previously discussed on February 13 together with the impact categories to be addressed in the EIS. Agreement was reached on the compromise and questions/comments on the impact categories were similar.

Additional questions and comments are as follows:

1. Rotating the runway more than 5° will require taking of Federal land plus destruction of more archeological sites. An 8° realignment was looked at under the Master Plan but dropped. The 5° alignment will give the recommended 95% wind coverage which is not possible with the present alignment.

2. Can the roads be improved first and sidewalks added? Road improvement timing will depend on construction contract. Sidewalks are not included in this proposal as a different Department is responsible.

3. To minimize impact on settlement, the fuel storage area was proposed as construction site for asphalt plant, storage area, and contractors base yard. Contractor would provide his own water, food, electrical, sewage, security, etc. Another site was suggested at the old slaughter house, but fuel storage area may be better to eliminate construction traffic through town.

4. There should be no increase of noise from aircraft due to proposed improvements.

5. Lights can be added to the runway for night flights, especially emergency evacuation.

6. The realigned runway will have less impact on the air service than resurfacing the existing runway. The only time flights may have to be rescheduled is when new runway crosses the existing.

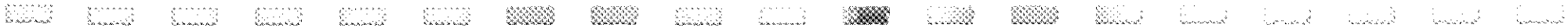
7. The old runway will be demolished and that area regrassed.

8. Consideration should be given to plantings near the west runway end to limit the erosion due to storms.

9. The proposed compromise alternative will be processing in the EIS as the preferred alternative with no waiver of FAA standards. If circumstances dictate a revision decreasing the proposed scope, a waiver may be requested by DOT Airports. This should be considered as a last resort as there is no guarantee a waiver would be granted. This is especially important if the 2700' length is to be realized for air ambulance capability.

10. If burials are found during construction, work will stop and proper procedures will be followed. The MOA drawn up under the Section 106 process will outline the required steps to be taken as will the EIS. These measures will be included in the construction specifications.

KALAUPAPA AIRPORT BALLOT



KALAUPAPA AIRPORT MASTER PLAN

RUNWAY IMPROVEMENT PROGRAM

January 1990

PATIENT BALLOT

PLEASE VOTE AND RETURN BALLOT TO MS. MARYBETH MAUL NO LATER THAN FEBRUARY 9, 1990

Hawaii State Department of Transportation

Airports Division

Edward K. Noda and Associates, Inc.

INTRODUCTION

The Airports Division of the Hawaii State Department of Transportation has conducted a master plan study of Kalaupapa Airport and has made recommendations for improvements to the Airport's facilities. The study includes an evaluation of effects on the environment that might be caused by construction activities connected with proposed improvements.

The State's recommendations for improvements are based on the objective of providing the Kalaupapa Community with safe and dependable air transportation service. They are based on technical and economic considerations, with cultural and environmental factors taken into account to the extent such judgements can be made by planners.

Environmental studies conducted as part of the master plan process indicate that in order to construct the State's proposed improvements, (specifically improvements to the runway), it will be necessary to disturb certain archaeological sites that are located in the airport area. Potentially disturbed archaeological sites are identified herein. Because proposed runway improvements require earth fill rather than excavation, any subsurface archaeological sites will remain undisturbed.

Alternative runway improvements were developed in accordance with master planning procedures and to assess the effect of lesser or greater disturbance of archaeological sites. These alternatives are described herein.

It is the State's opinion that the decision about runway improvements at Kalaupapa Airport should be made by the Kalaupapa Community. Accordingly, the patients and resident workers who are members of the Community are requested to review the runway improvement alternatives described herein, cast a vote using the ballot enclosed in the back of this packet, and return to Ms. Marybeth Maul, Administrator of Kalaupapa Settlement on or before February 9, 1990.

DISCUSSION

The material in this brochure has been provided to assist Community members in making decisions about runway improvements planned for Kalaupapa Airport. It contains descriptions of proposed alternative improvements, identifies archaeological sites located in the Airport area, and lists the principal advantages and disadvantages of each alternative improvement.

Community members are encouraged to visit the Airport and examine the archaeological sites that have been located by the archaeological surveyors. The enclosed orientation map and ground markings will help members find sites of interest to them.

All potentially significant archaeological sites are located at the western (Runway 5 approach) end of the runway. Those likely to be disturbed by facility construction, or associated construction activities, are shown on the illustrations which have been created to show the affect of each Alternative runway configuration on archaeological sites.

Advantages and disadvantages of the six proposed alternatives are described in terms explained in detail in the Kalaupapa Airport Master Plan Draft Report; they have also been discussed in public informational meetings held at Kalaupapa. Copies of the Draft Report are available at the Settlement's Administrative Office. Direct questions about technical matters may be addressed to the State's planning consultant, Mr. James Dittmar, at (Honolulu) 533-0553.

ALTERNATIVE 1

(State's Recommendation)

Runway Length 3,200 ft., 5 Degree Rotation

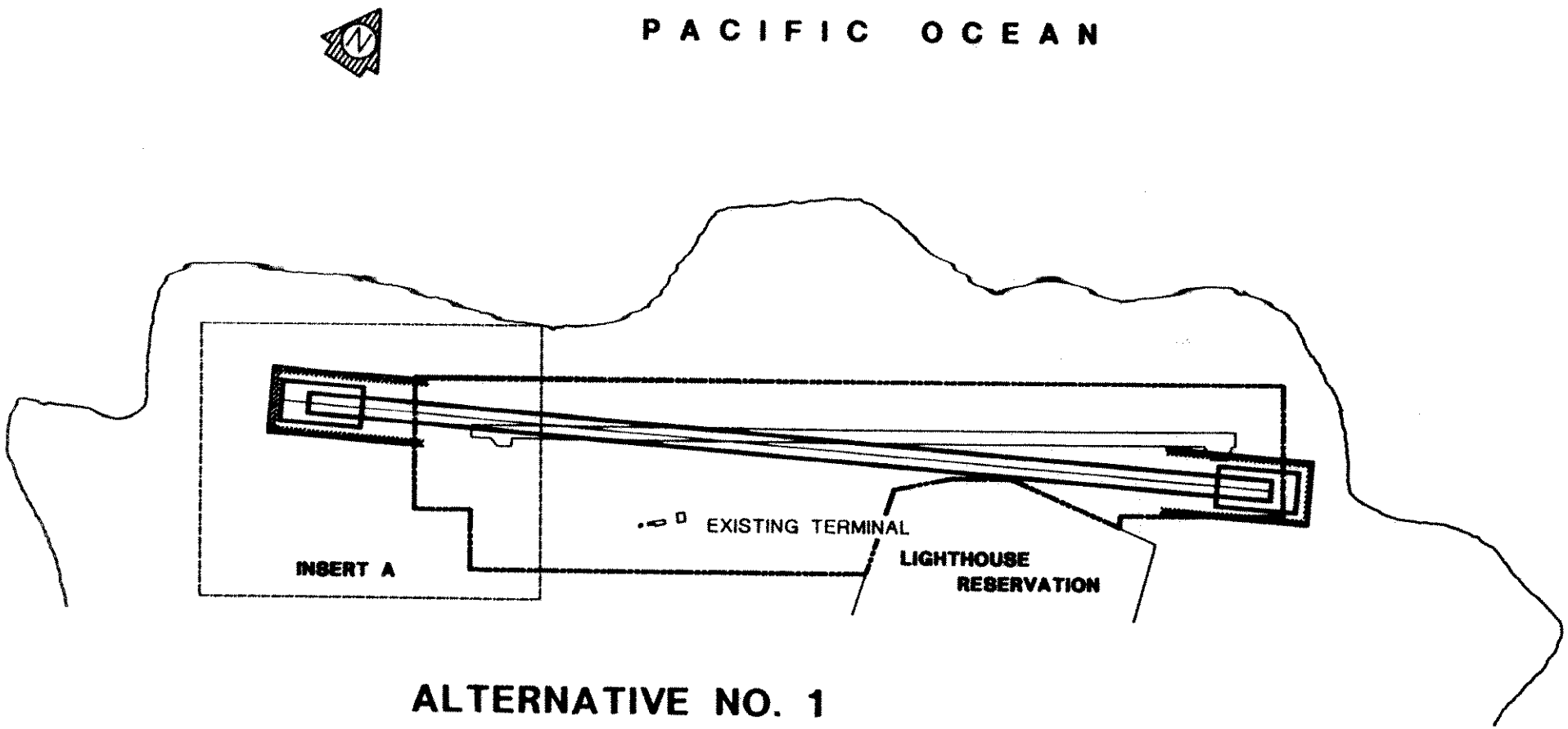
(Effective Takeoff Length 3,400 ft.)

Advantages:

- Provides best margin of safety for aircraft operations.
- Imposes least weight penalty on aircraft expected to serve Kalaupapa.
- Reduces crosswind problem for aircraft expected to serve Kalaupapa.
- Causes less interference with air service during construction than if improvements are made on the existing runway alignment.
- Construction costs is less than a similar alternative utilizing the existing runway alignment.

Disadvantages:

- Causes disturbance to 14 archaeological sites.

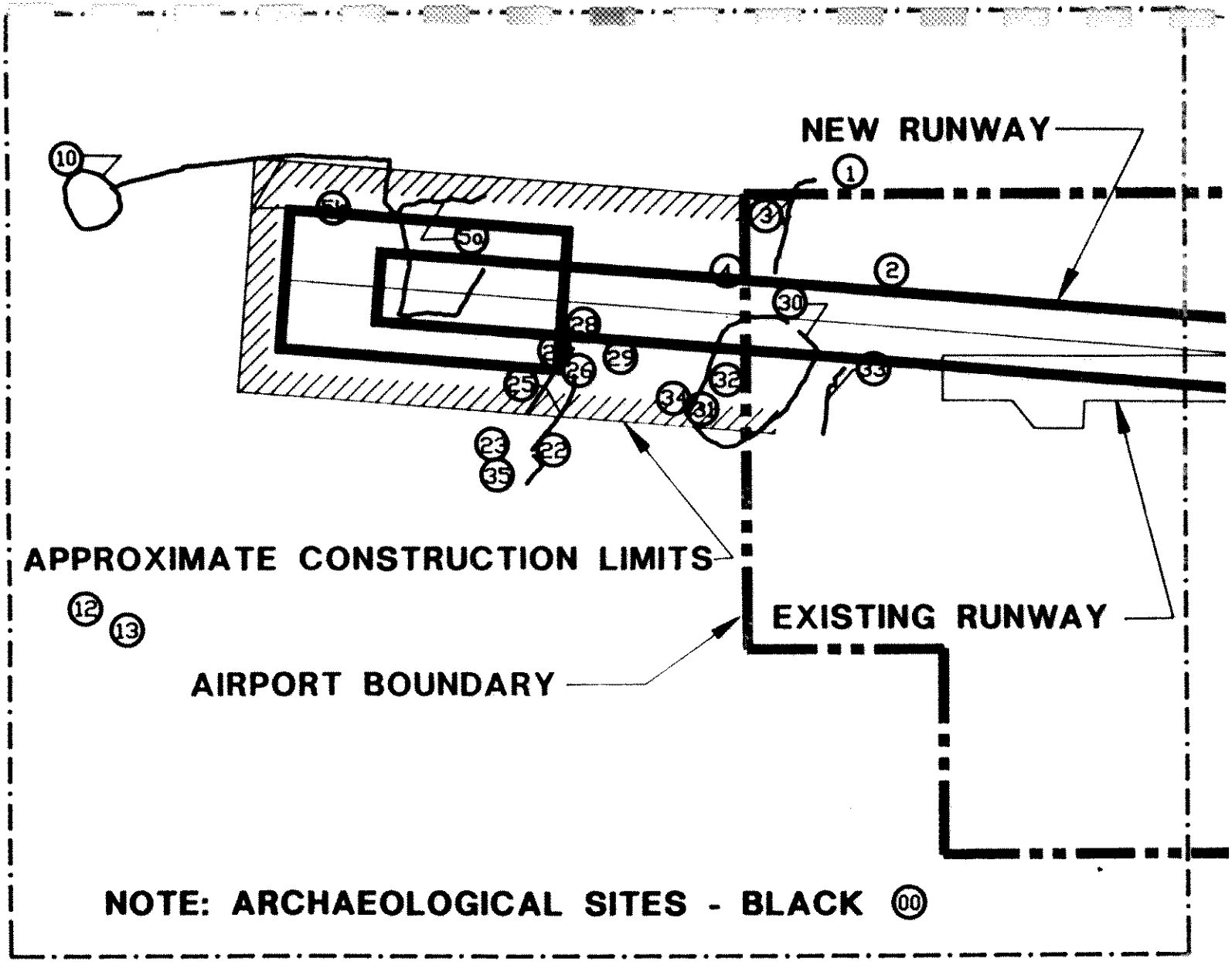


ALTERNATIVE NO. 1

3,200 FT. LENGTH - 5 DEGREE ROTATION

(EFFECTIVE LENGTH 3,400 FT.)

PLAN - KALAUPAPA AIRPORT


NEW RUNWAY
APPROXIMATE CONSTRUCTION LIMITS
EXISTING RUNWAY
AIRPORT BOUNDARY
NOTE: ARCHAEOLOGICAL SITES - BLACK 00

INSERT A

ALTERNATIVE 2

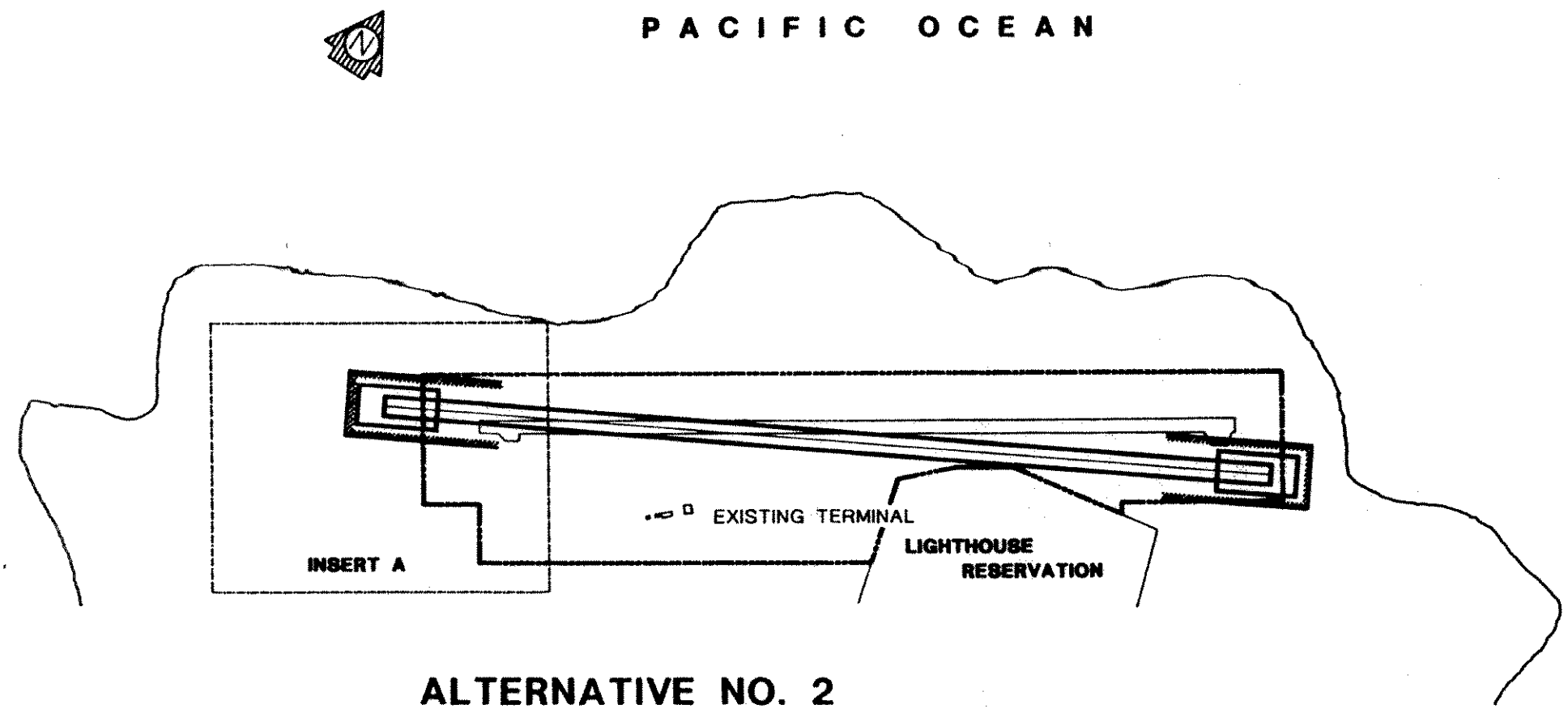
Runway Length 2,950 ft.; 5 Degree Rotation
(Effective Takeoff Length 3,150 ft.)

Advantages:

- Reduces crosswind problem for aircraft expected to serve Kalaupapa.
- Causes less interference with air service during construction than if improvements are made on the existing runway alignment.
- Construction costs is less than a similar alternative utilizing the existing runway alignment.
- Operational safety margins are improved over existing runway.
- Weight penalty is less than required for existing runway.

Disadvantages:

- Causes disturbance to 14 archaeological sites.

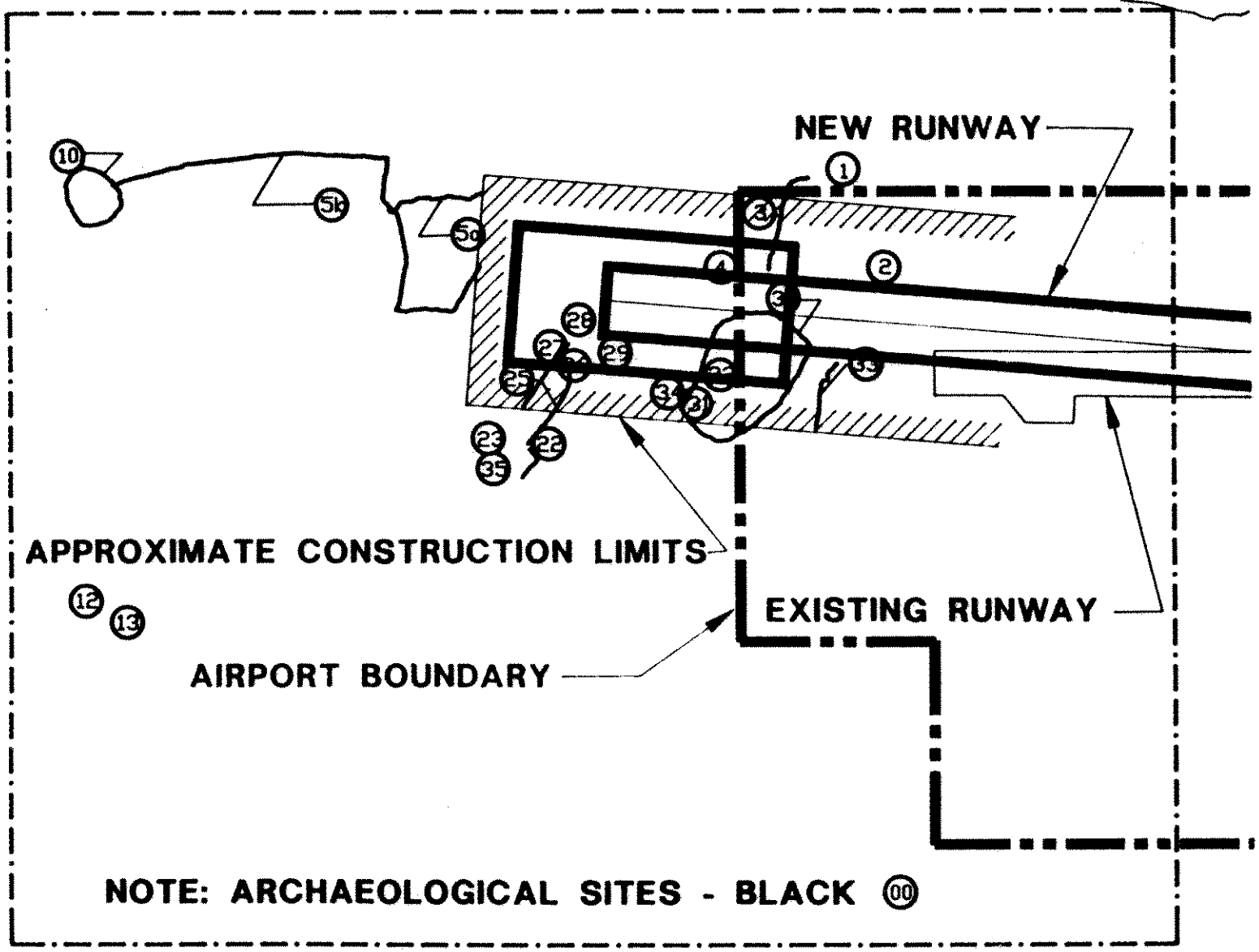


ALTERNATIVE NO. 2

2,950 FT. LENGTH - 5 DEGREE ROTATION

(EFFECTIVE LENGTH 3,150 FT.)

PLAN - KALAUPAPA AIRPORT


NEW RUNWAY
APPROXIMATE CONSTRUCTION LIMITS
EXISTING RUNWAY
AIRPORT BOUNDARY
NOTE: ARCHAEOLOGICAL SITES - BLACK 00

INSERT A

ALTERNATIVE 3

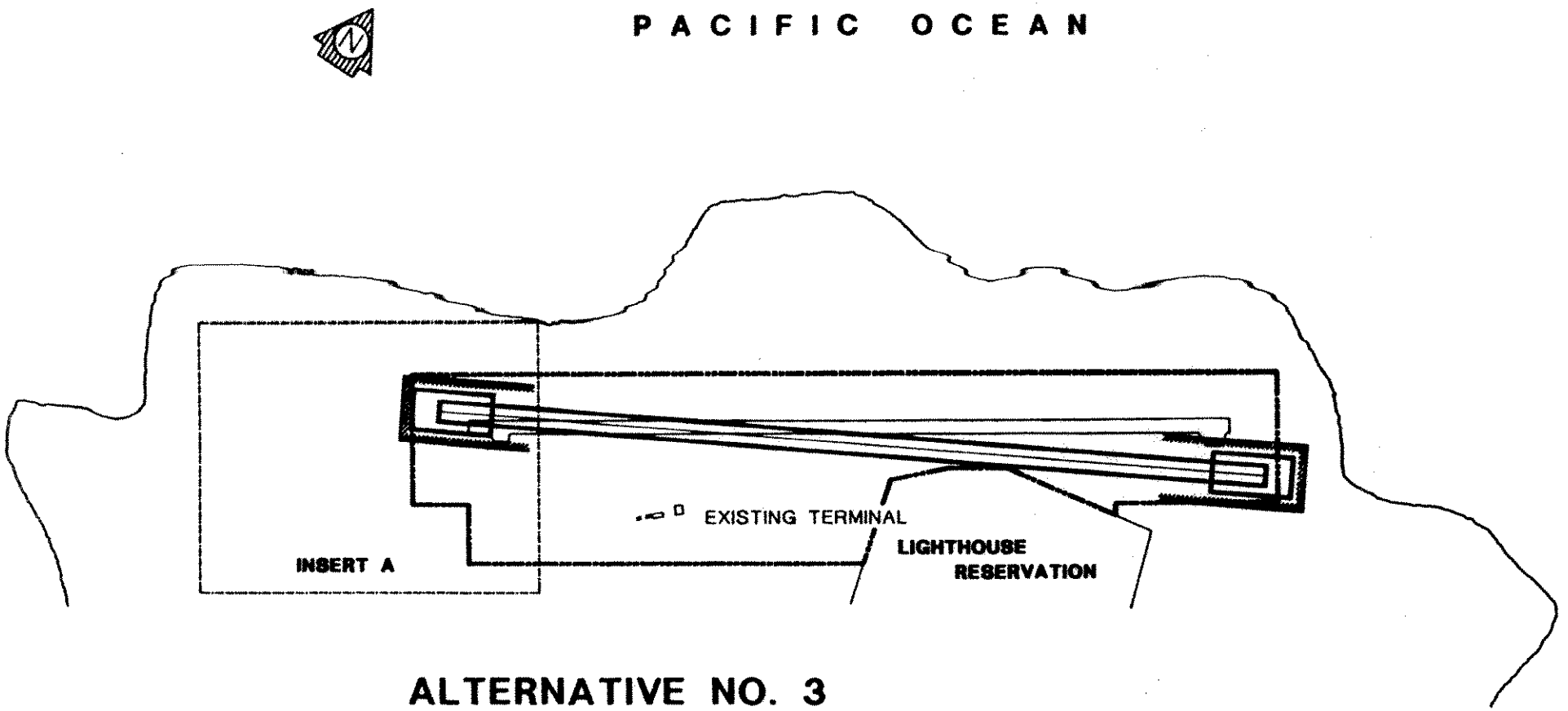
Runway Length 2,700 ft.; 5 Degree Rotation
(Effective Takeoff Length 2,900 ft.)

Advantages:

- Reduces crosswind problem for aircraft expected to serve Kalaupapa.
- Causes less interference with air service during construction than if improvements are made on the existing runway alignment.
- Construction costs is less than a similar alternative utilizing the existing runway alignment.

Disadvantages:

- Operational safety margins are not improved over existing runway.
- Weight peanlty is not improved over existing runway.
- Causes distrubance to 7 archaeological sites.

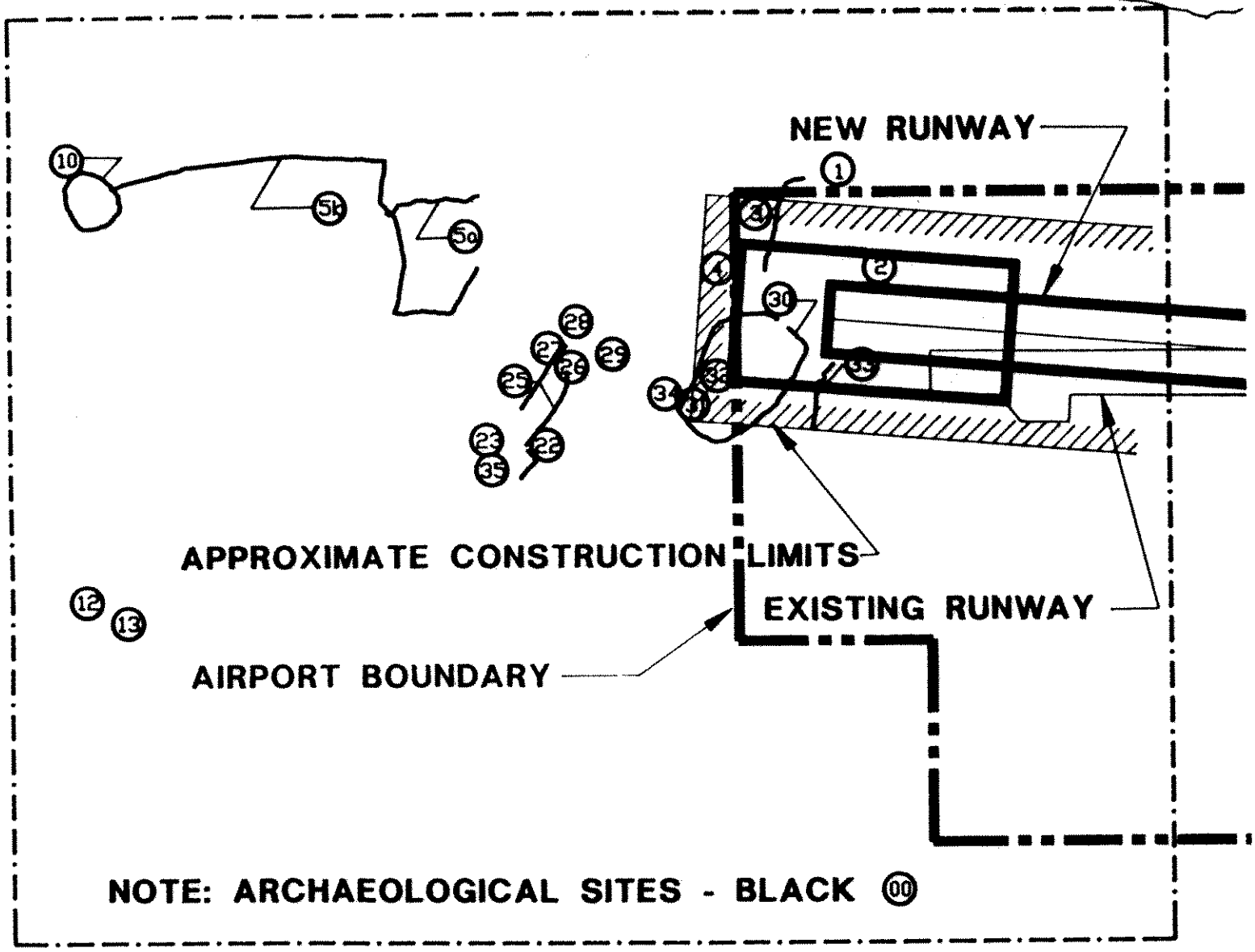


ALTERNATIVE NO. 3

2,700 FT. LENGTH - 5 DEGREE ROTATION

(EFFECTIVE LENGTH 2,900 FT.)

PLAN - KALAUPAPA AIRPORT


NEW RUNWAY
APPROXIMATE CONSTRUCTION LIMITS
EXISTING RUNWAY
AIRPORT BOUNDARY
NOTE: ARCHAEOLOGICAL SITES - BLACK ⑩⑩

INSERT A

ALTERNATIVE 4

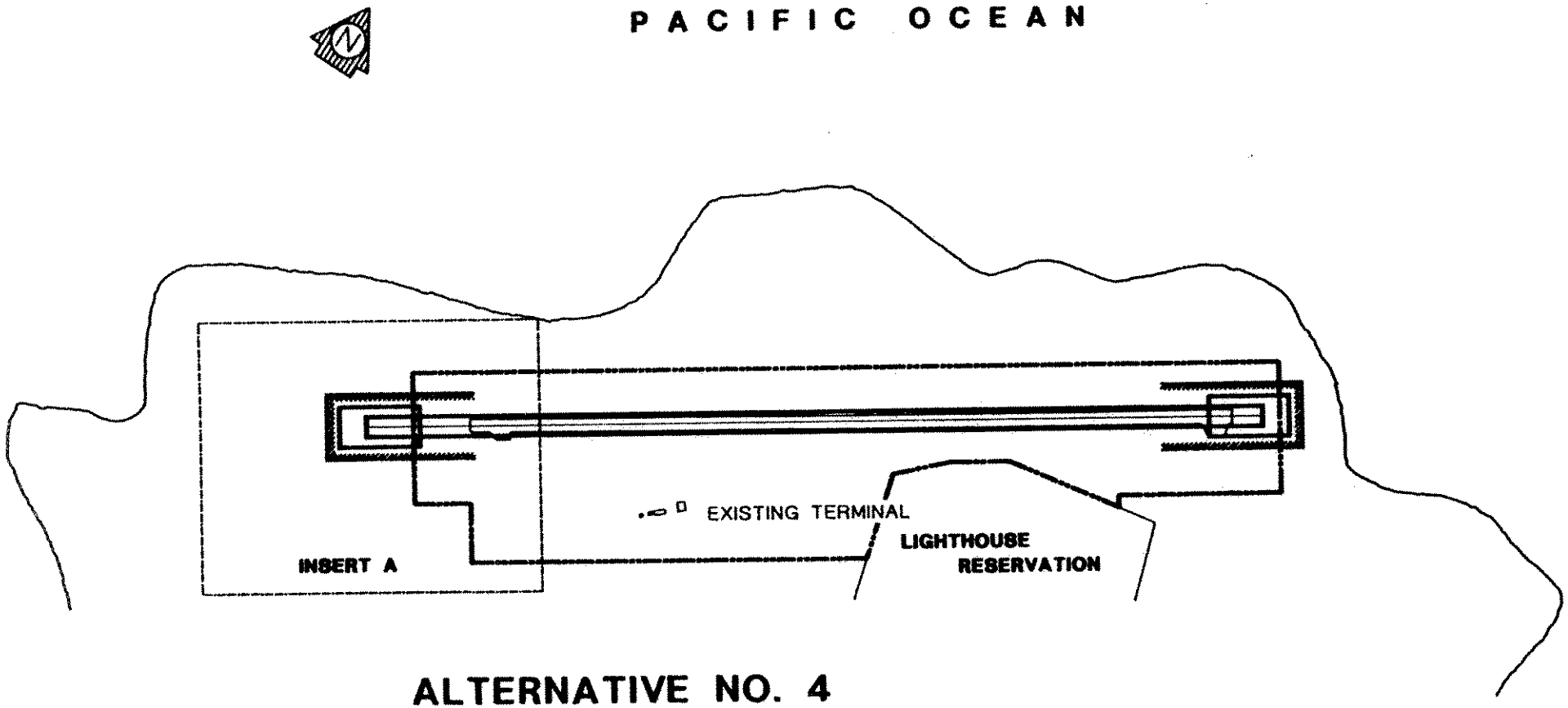
Runway Length 2,950 ft.; Present Alignment
(Effective Takeoff Length 3,150 ft.)

Advantages:

- Improvement in margin of safety for aircraft operations over existing runway.
- Less weight penalty on aircraft than existing runway.

Disadvantages:

- Causes disturbance to 17 archaeological sites.
- Does not reduce existing crosswind problem for aircraft serving Kalaupapa.
- Construction costs are higher than for alternatives which rotate runway.
- Construction causes more interference to air service than do alternates which rotate runway.

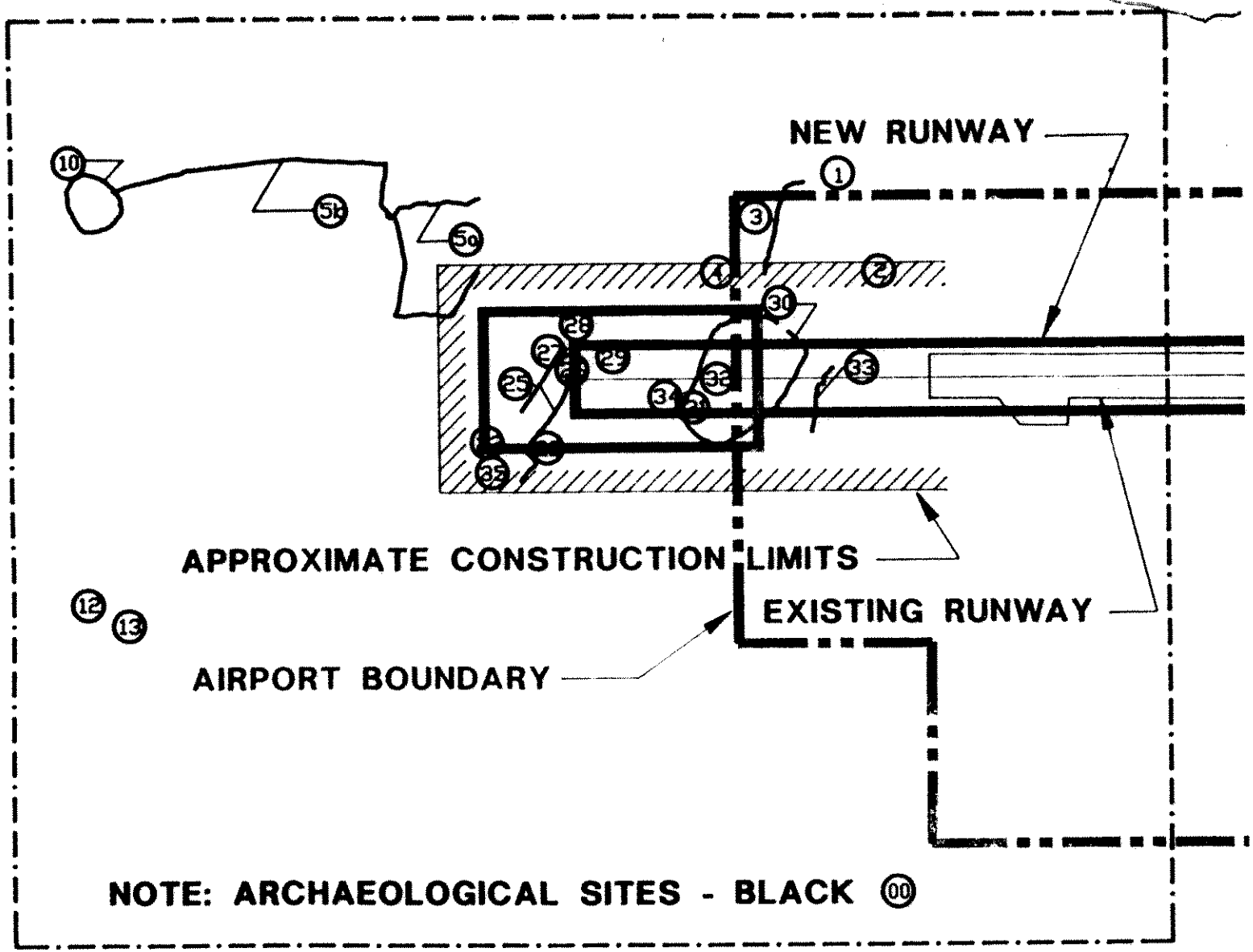


ALTERNATIVE NO. 4

2,950 FT. LENGTH - PRESENT ALIGNMENT

(EFFECTIVE LENGTH 3,150 FT.)

PLAN - KALAUPAPA AIRPORT


NEW RUNWAY
APPROXIMATE CONSTRUCTION LIMITS
EXISTING RUNWAY
AIRPORT BOUNDARY
NOTE: ARCHAEOLOGICAL SITES - BLACK 00

INSERT A

ALTERNATIVE 5

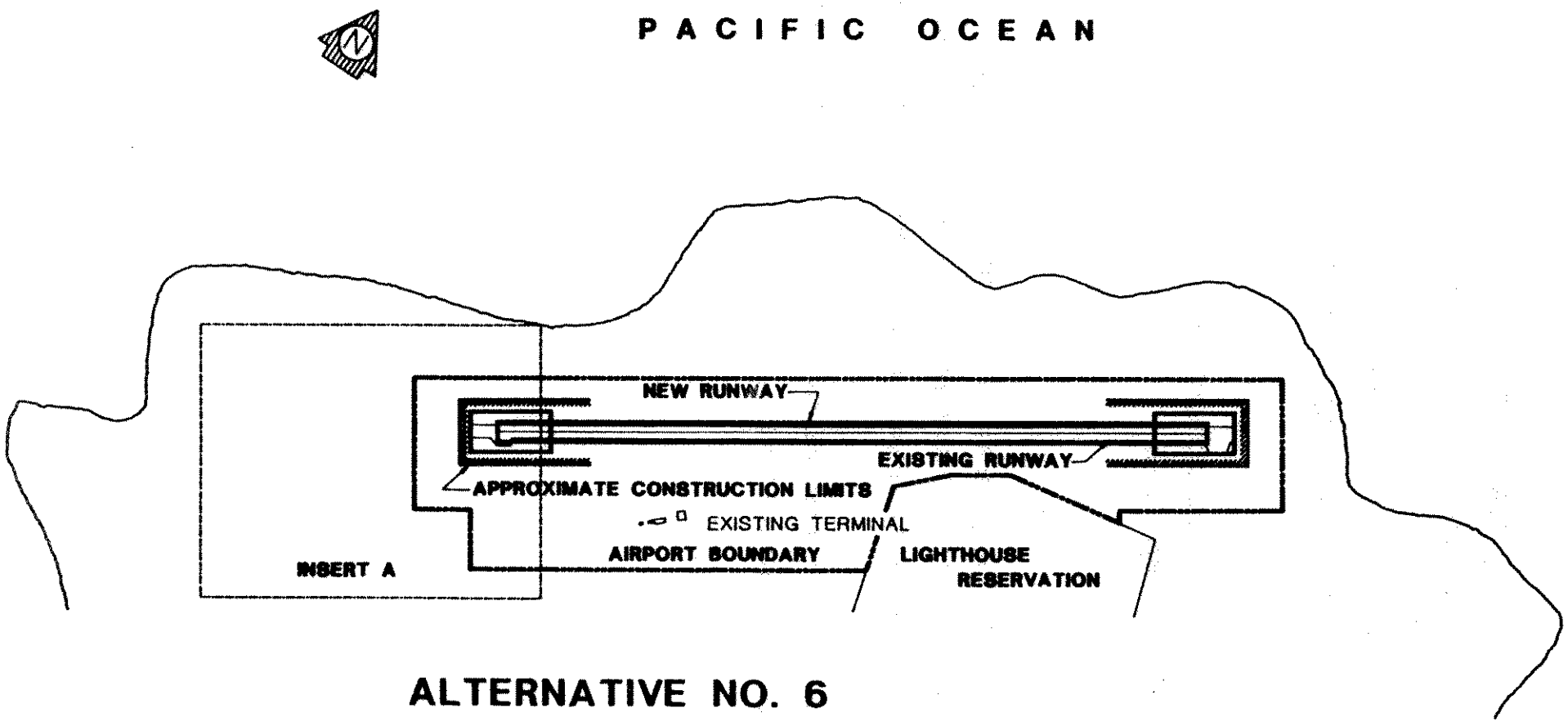
Runway Length 2,700 ft.; Present Alignment
(Effective Takeoff Length 2,900 ft.)

Advantages:

- None.

Disadvantages:

- Causes disturbance to 7 archaeological sites.
- Does not reduce existing crosswind problem for aircraft serving Kalaupapa.
- Construction causes more interference to air service than do alternatives which rotate runway.
- Does not substantially reduce existing weight penalty on aircraft expected to serve Kalaupapa.
- No improvement in margin of safety for aircraft operations over existing runway.



ALTERNATIVE NO. 6

2,260 FT. LENGTH - PRESENT ALIGNMENT
(EFFECTIVE LENGTH 2,460 FT.)

PLAN - KALAUPAPA AIRPORT

APRON AND TAXIWAY OPTIONS

1. Asphalt Concrete Taxiway and Apron

   Advantages:

   - Smooth, even, load bearing surface.
   - Easy to maintain.
   - More distinguishable for night operations.

   Disadvantages:

   - Changes rural nature of airport.

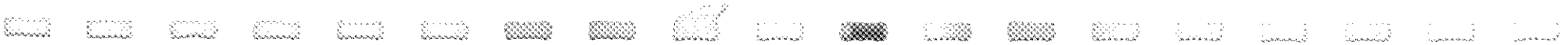
2. Grass Block Taxiway and Apron

   Advantages:

   - Retains rural nature of airport.

   Disadvantages:

   - Rougher surface.
   - Aircraft subject to damage from loose soil and stones.
   - Less distinguishable for night operations.
   - More difficult to maintain.



ARCHAEOLOGICAL FEATURES AND COMPONENTS RECORDED IN THE STUDY AREA OF THE KALAUPAPA RUNWAY EXPANSION PROJECT

FEATURE NUMBER	FUNCTIONAL CLASSIFICATION OF FEATURE	QUANTITY AND MORPHOLOGICAL CLASSIFICATION OF ARCHITECTURAL COMPONENTS
1	shelter	1 C-shape 1 platform
2	residential	6 pavings 1 platform 2 alignments 1 enclosure
3	boundary enclosure	1 enclosure
4	agricultural	3 alignments
5A	agricultural	1 enclosures multiple alignments
5B	agricultural	1 enclosures multiple alignments
6	residential	1 enclosure 1 alignment 1 slablined hearth
7	shelter	1 C-shape 1 cupboard
8	shelter	1 alignment
9	cupboards	4 cupboards
10	residential	3 pavings 1 enclosure 1 slablined hearth 1 slablined pit
11	shelter	1 L-shape 1 paving 1 slablined hearth
12	enclosure/shrine	1 enclosure