BENJAMIN J. CAYETANO
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STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:
AIR-P
99.0688

October 25, 1999

'99 OCT 27 A9:05

TO: GENEVIEVE SALMONSON, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM: KAZU HAYASHIDA
DIRECTOR OF TRANSPORTATION

SUBJECT: FINDING OF NO SIGNIFICANT IMPACT (FONSI)
WAIMEA-KOHALA AIRPORT MASTER PLAN
TMK 6-07-01:8, 9, 12, 17, 23 and 25
SOUTH KOHALA, HAWAII
STATE PROJECT NO. AH3011-02

The State of Hawaii, Department of Transportation, Airports Division has reviewed the comments received during the 30-day public comment period which began on April 8, 1999. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish this notice in the November 8, 1999, Office of Environmental Quality Control (OEQC) Environmental Notice.

We have enclosed a completed OEQC Publication Form and four (4) copies of the final Environmental Assessment (EA).

Please have your staff contact Lynette Kawaoka, Planner, at 838-8812 to clarify any questions you may have. Thank you for your assistance in this matter.

Enclosures: Final EA (4 copies)
OEQC Publication Form

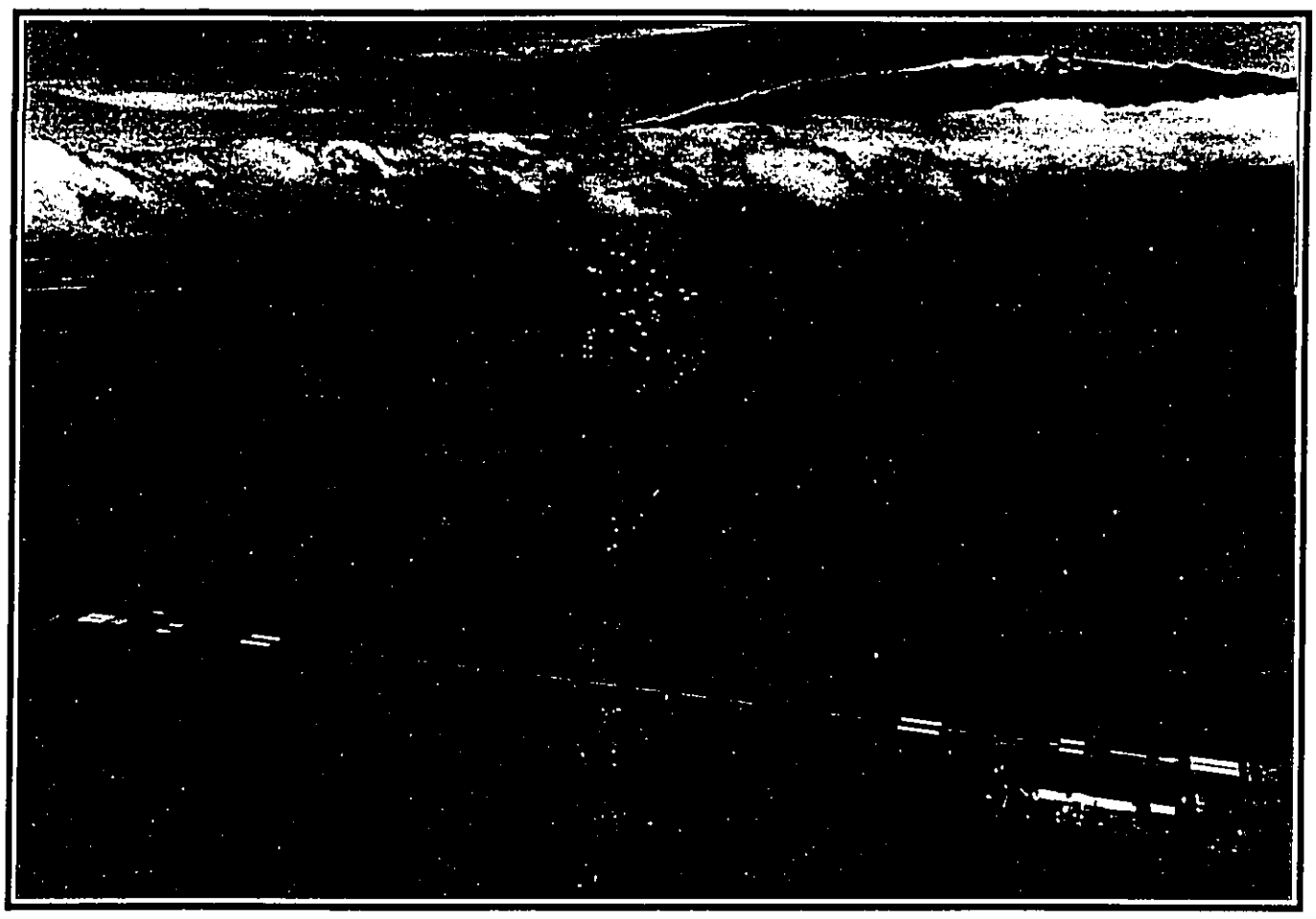
c: Edward K. Noda and Associates, Inc. (B. Ishii)

1999-11-08-HA-FEA-

FILE COPY

FINAL ENVIRONMENTAL ASSESSMENT

WAIMEA-KOHALA AIRPORT



BENJAMIN J. CAYETANO, GOVERNOR
STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION

OCTOBER 1999

Prepared By:
Edward K. Noda & Associates, Inc.

FINAL ENVIRONMENTAL ASSESSMENT

WAIMEA-KOHALA AIRPORT
MASTER PLAN AND
NOISE COMPATIBILITY PROGRAM

South Kohala District, Island of Hawaii
Tax Map Keys: 6-7-01: 8, 9, 12, 17, 23 & 25
State Project No. AH3011-02

Proposing Agency: **STATE OF HAWAII**
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
HONOLULU INTERNATIONAL AIRPORT
HONOLULU, HAWAII 96819

Responsible Official: Kazu Hayashida — 10/9/99
Kazu Hayashida
Director
Date

Prepared By:
Edward K. Noda and Associates, Inc.
615 Piikoi St. Suite 300
Honolulu, Hawaii 96814

October 1999

This document is prepared pursuant to Hawaii Revised Statutes, Chapter 343.

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SECTION 1.0
PROJECT DESCRIPTION

This Environmental Assessment (EA) is a product of the Waimea-Kohala Airport Master Plan and FAR Part 150 Noise Compatibility Program. Funding for this program was provided through the State of Hawaii, Department of Transportation, Airports Division (HDOT-AIR) under State Contract 42016, State Project No. AH3011-02, and a planning grant from the Federal Aviation Administration (FAA).

1.1 *BACKGROUND AND DESCRIPTION OF AIRPORT FACILITIES*

Waimea-Kohala Airport is located in the northern portion of the island of Hawaii, in the South Kohala District (Figure 1-1). It is one of four airports on the Big Island, the other three are Hilo International Airport, Kona International Airport at Keahole, and Upolu Airport. The Airport is located approximately one mile south of Waimea town on 89.718 acres of land and occupies Tax Map Keys 6-7-01 parcels 8, 9, 12, 17 and 23. The Proposed Project will impact a portion of Tax Map Key parcel 6-7-01 : 25.

The Airport was constructed by the Territory of Hawaii in the early 1950s, and opened for air service on July 2, 1953. Originally known as the Kamuela Airport, in 1970 it was renamed as the Waimea-Kohala Airport.

The Waimea-Kohala Airport (labeled MUE in the airport designation system) is one of fifteen airports operated by the Department of Transportation, Airports Division. It is designated as an eligible point to receive Essential Air Service (EAS) under the Airline Deregulation Act of 1978, and currently receives EAS subsidized air taxi (commuter) service. Other users of the Airport include air cargo operators, air ambulance, scenic tour operators, flight training schools, private and business aircraft owners, and the military.

According to the *National Plan of Integrated Airport Systems, 1990 - 1999* (Section 6.0, Reference 1) Waimea-Kohala is designated as a "Commercial-Other" airport,[1] that accommodates short haul (less than 1,500 miles) routes. In addition, DOT has an avigation easement over portions of Parker Ranch, Department of Hawaiian Home Lands parcels, and private land parcels in Waimea Town.

Existing airfield facilities are shown on Figure 1-2. The airport has a single runway (4-22) which is 5,197 feet long and 100 feet wide, with a true azimuth of 232° 00' 40". The magnetic declination in 1998 is 11° 30' east. The airport elevation is 2,671 feet Mean Sea Level (MSL). There are three entry/exit taxiways located near the southwest end of the runway that connect the runway to the apron.

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[1] A Commercial-Other airport designation is defined as an airport receiving scheduled passenger service and having less than 10,000 annual enplanements, but greater than 2,500 enplanements.

The *Airport Master Record* (Section 6.0, Reference 2) indicates a gross landing wheel load for the runway of 55,000 pounds for single wheel aircraft, 90,000 pounds for dual wheel aircraft, and 150,000 pounds for dual tandem wheel aircraft.

There is a blast pad (100 feet by 120 feet) on the 4 end of the runway and no blast pad on the 22 end of the runway. There are no designated runway safety areas as the runway was constructed prior to the implementation of the runway safety area criteria.

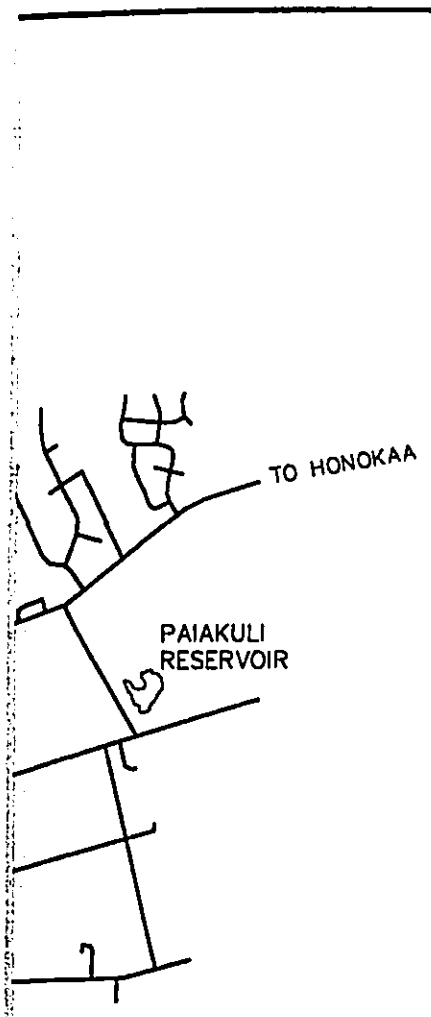
The apron fronting the terminal building provides parking for two aircraft and there are twelve tiedown positions for general aviation and transient aircraft located at the edges of the apron. Two tiedown positions are reserved for transient aircraft. The Building Restriction Line to the northwest is 340 feet from the centerline of the runway.

Runway 4-22 is painted with non-precision runway markings and equipped with medium intensity runway lights (MIRL), including threshold lights and runway end lights. Runway 4 has Runway End Indicator Lights, and both Runways 4 and 22 are equipped with visual approach slope indicators (VASI-4). The Kamuela Very High Frequency Omnidirectional Range/Distance Measuring Equipment (VOR/DME) is located at the Waimea-Kohala Airport. The Airport is uncontrolled as there is no Air Traffic Control Tower or UNICOM.

The airport has a rotating beacon on the terminal building, lighted wind indicator and segmented circle, and wind sock. The two outer apron taxiways are illuminated with entry/exit lights, while the middle taxiway has entry/exit reflectors. There are no apron edge or taxiway edge lighting, and the apron area is not illuminated.

Existing terminal area facilities are shown on Figure 1-3. The passenger terminal has a floor area of 11,200 square feet and contains facilities for airline ticket counters, passenger lounges, baggage handling, rental car counters, concessionaires, cargo space, storage areas and tenant administrative space. The terminal area consists of 3,670 square feet of office space and 80 square feet of ticketing areas.

The Aircraft Rescue and Fire Fighting (ARFF) is combined with the airport maintenance facility. The ARFF /Maintenance building located southwest of the passenger terminal provides a floor area of 2,538 square feet and parking, maintenance and storage space for fire fighting equipment. Currently, maintenance vehicles are parked and stored under the covered area adjacent to and airside of the terminal building. Aircraft fire fighting equipment consists of a truck with a skid mounted twin agent unit. The twin unit consists of a 500 pound dry chemical system, and a 100 gallon tank system filled with a mixture of water and three (3) percent aqueous film forming foam (AFFF) agent. The fire-fighting and rescue services provided at the airport are performed on a voluntary basis and available from 1730 to 0215 Zulu (7:30 a.m. to 4:15 p.m. HST).



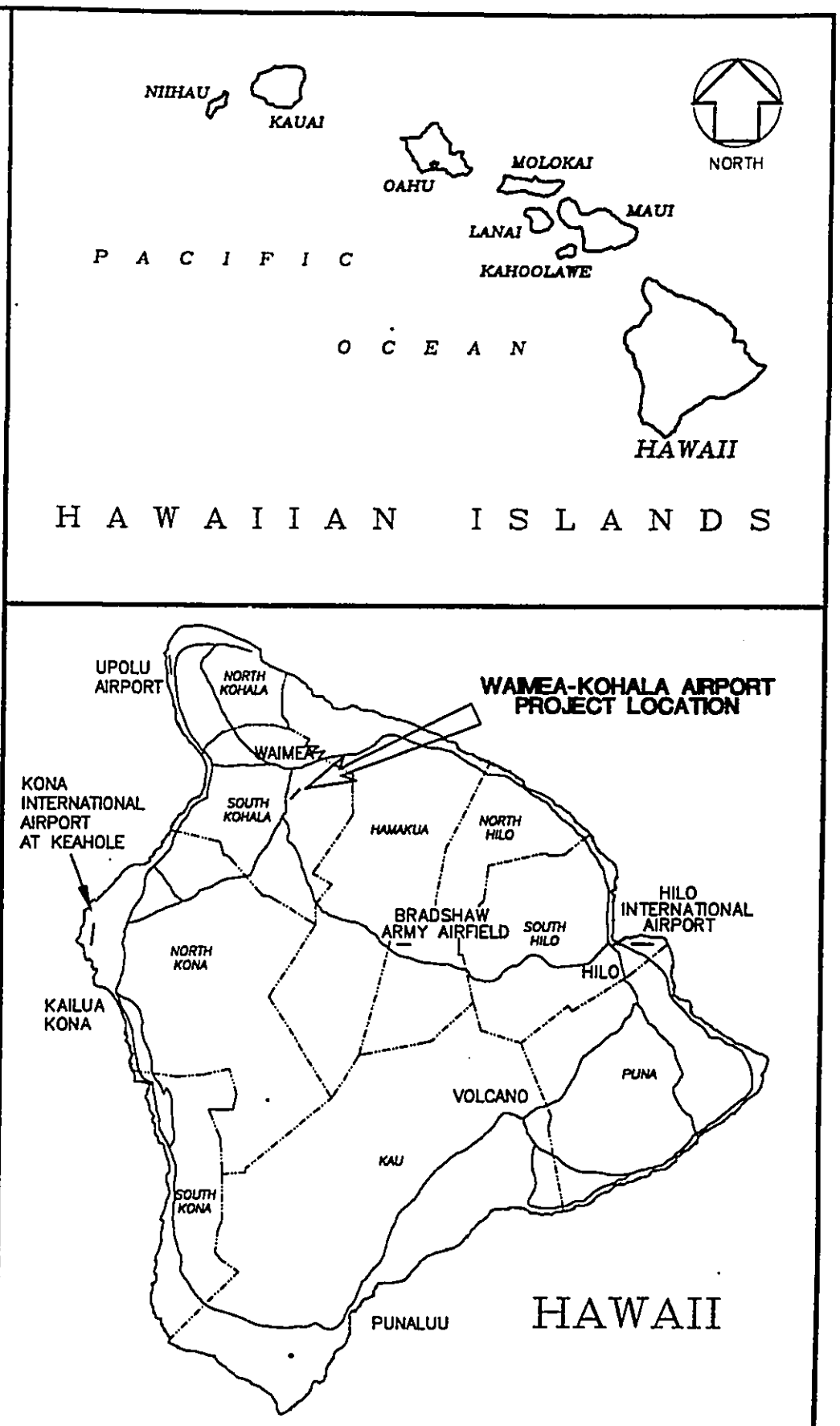


FIGURE 1-1
VICINITY MAP

LA AIRPORT
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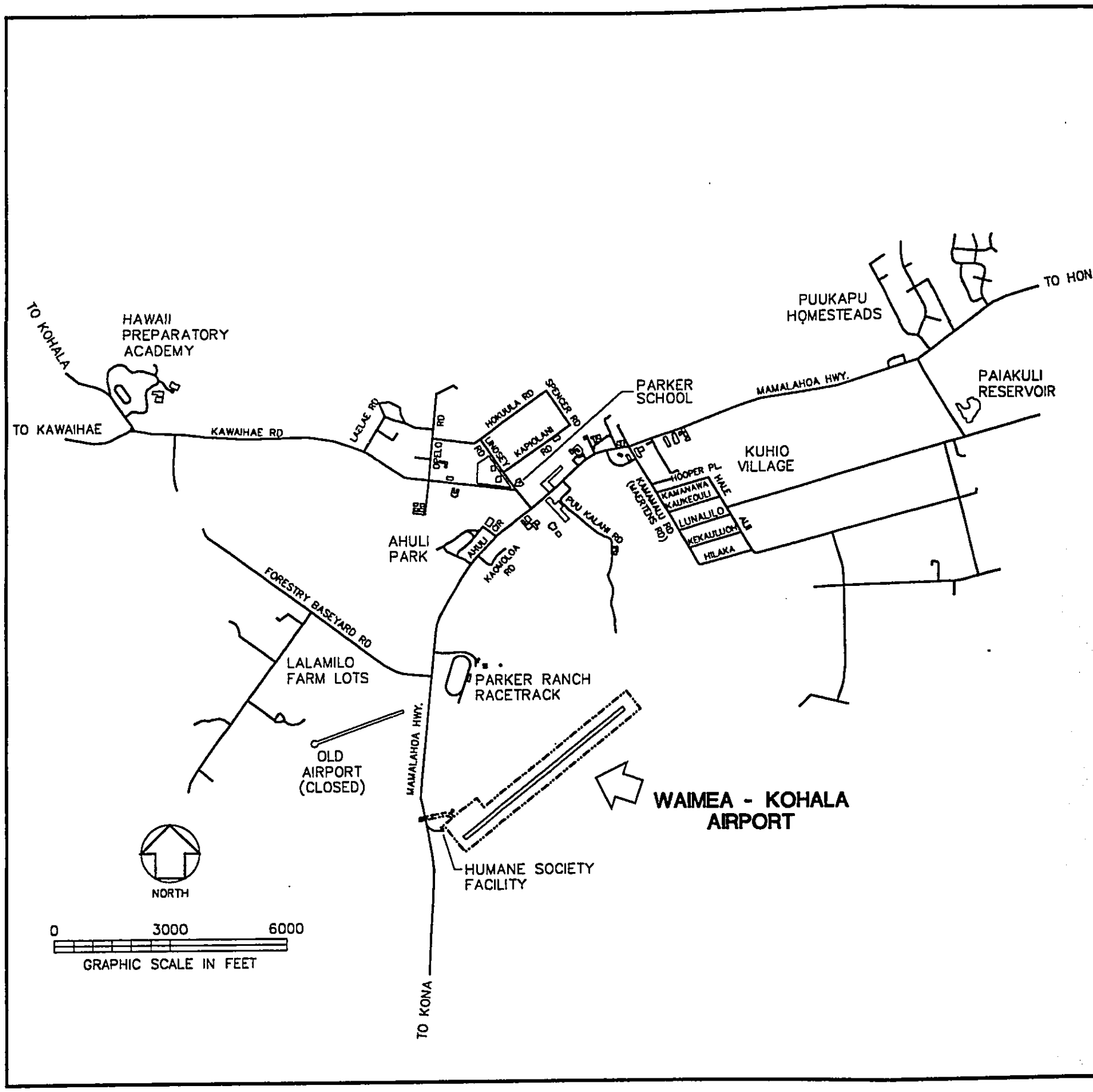

Airports Division

WAIMEA-KOHALA AIRPORT
ENVIRONMENTAL ASSESSMENT

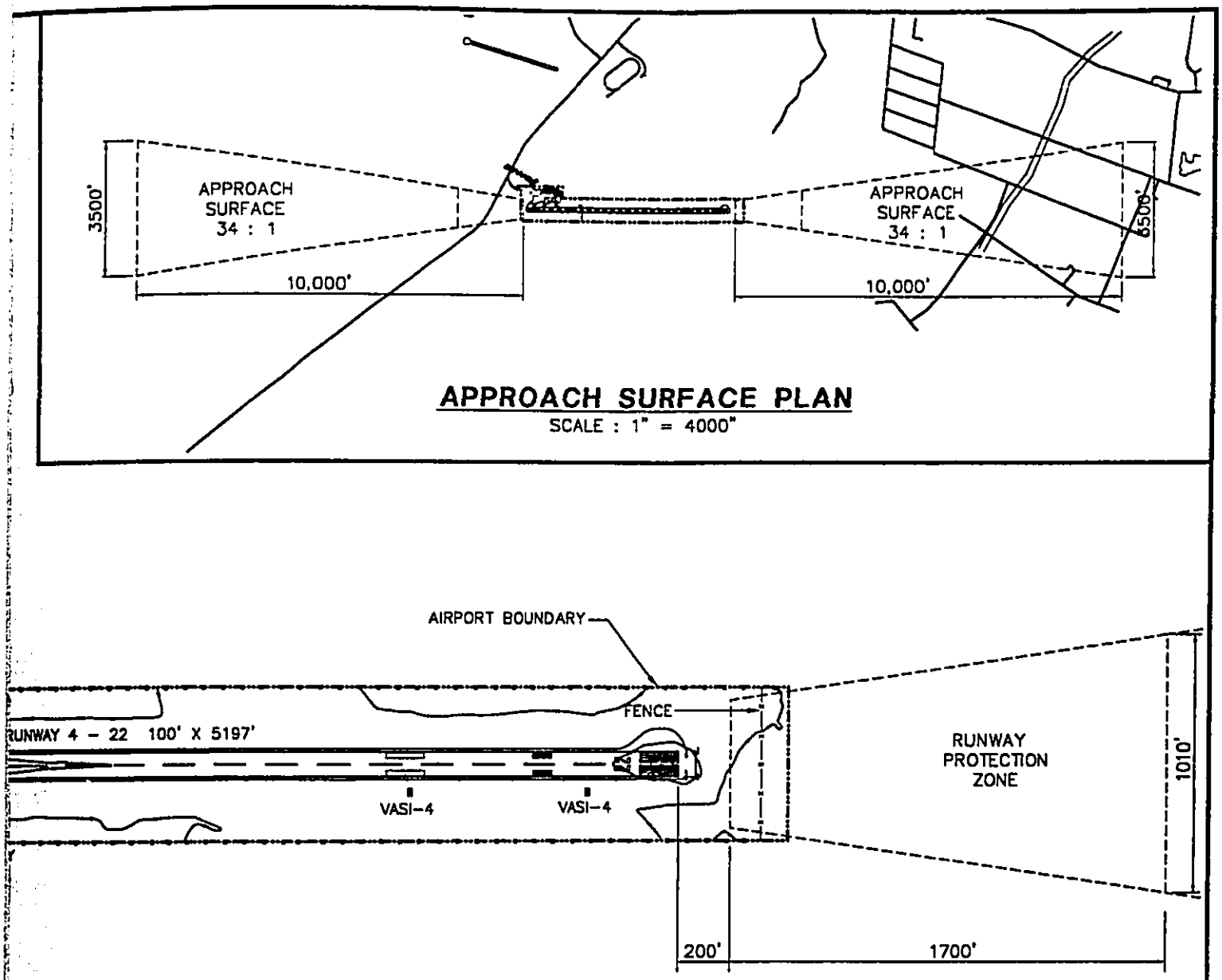

FIGURE 1-2
EXISTING AIRFIELD FACILITIES

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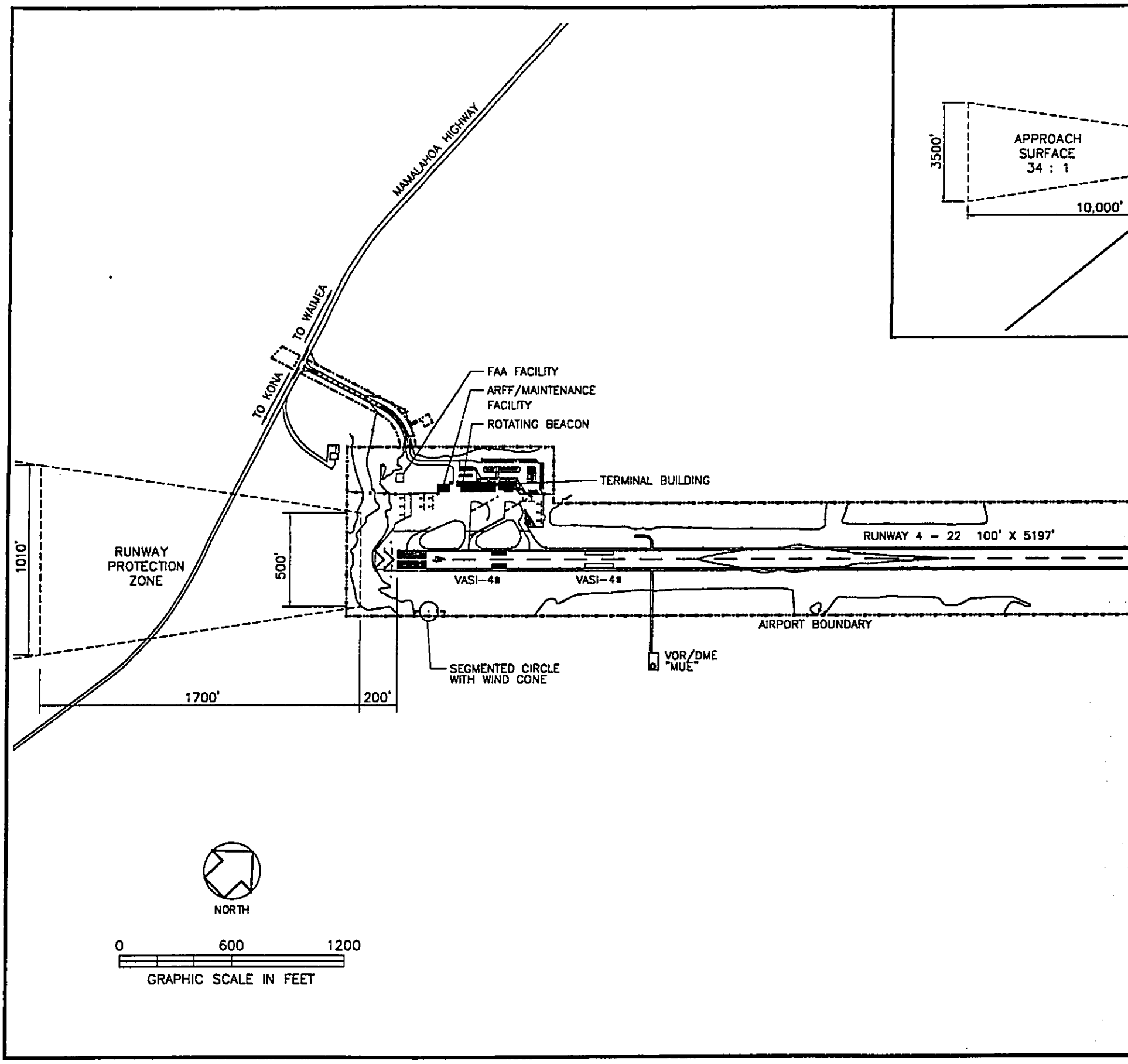

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WAIMEA-KOHALA AIRPORT
ENVIRONMENTAL ASSESSMENT

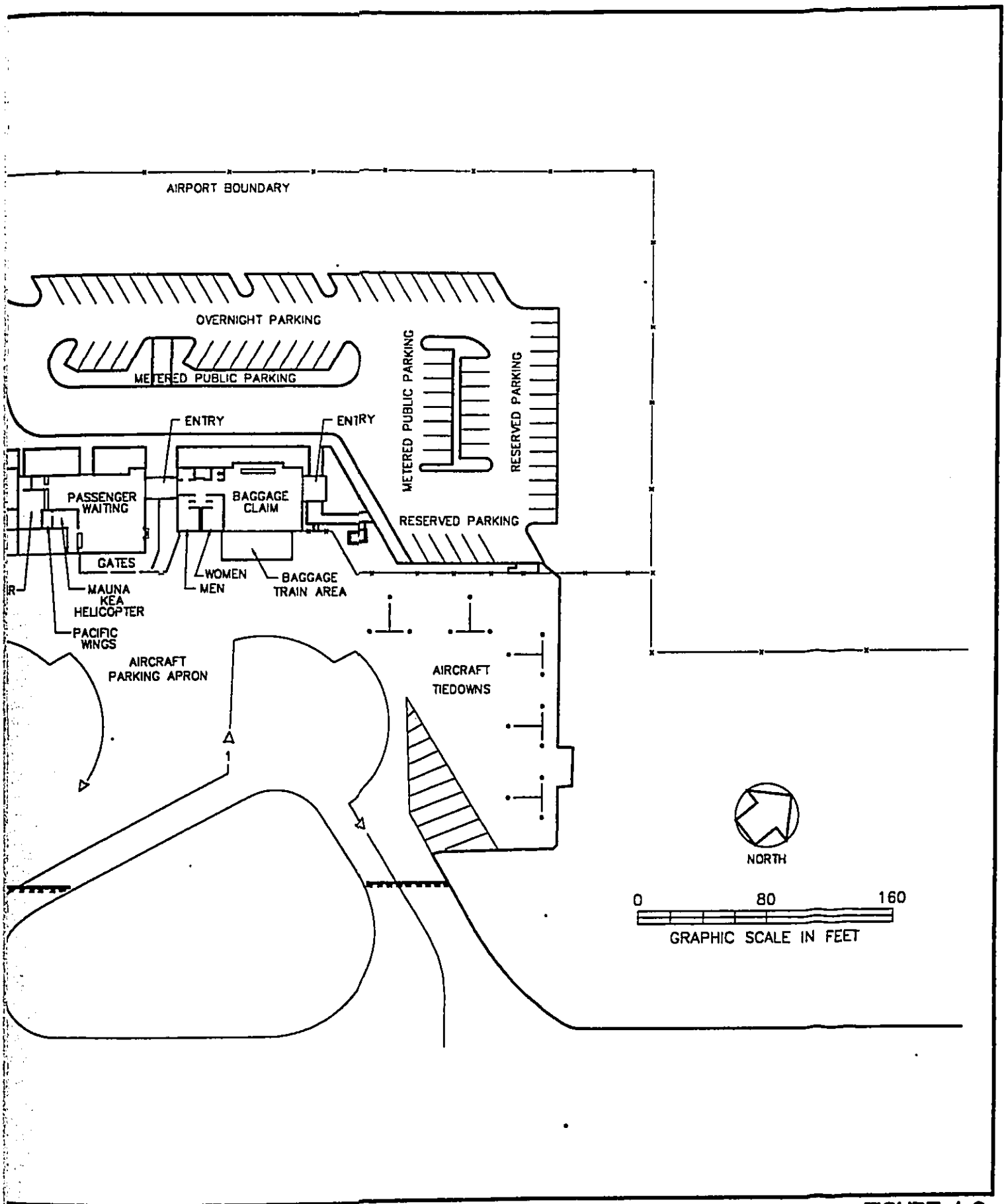

FIGURE 1-3
EXISTING TERMINAL AREA FACILITIES

LA AIRPORT
ASSESSMENT

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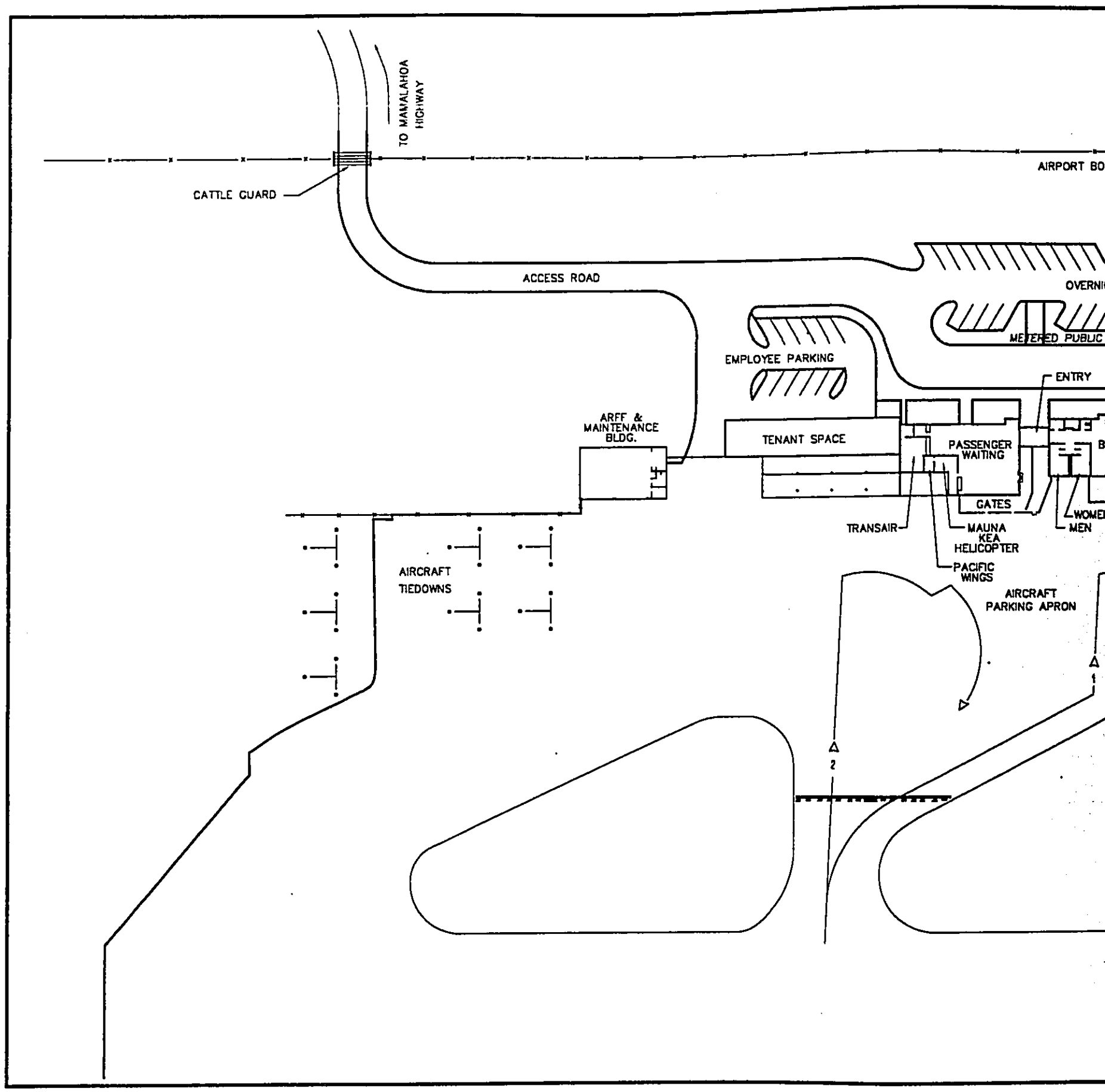

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WAIMEA - KOHALA AIRPORT
ENVIRONMENTAL ASSESSMENT

There are no public fuel storage facilities at the airport. Mauna Kea Helicopters provides fuel service for their aircraft with a 4,000 gallon fuel truck (JET-A) located at the airport. Other aircraft fueling is performed at other airports.

1.2 PLANNING ASSUMPTIONS

The following assumptions have been made to provide guidelines in the planning process and aid in future development of the Waimea-Kohala Airport. These assumptions are based on informal interviews and meetings conducted during the initial planning process, and the *Update of Hawaii Aviation Demand Forecasts* (Section 6.0, Reference 3). The assumptions which have been made are:

- overseas domestic, international and interisland air carriers[2] will continue to use Kona International Airport at Keahole, and Hilo International Airport, for efficiency and economic reasons;

- there will be adequate aviation capacity at Kona and Hilo International Airports within the planning period;

- the airport service area will benefit from growth in tourism, in the areas of air taxi and general aviation sectors, including private aircraft serving South Kohala resort destinations, scenic air tours, recreational flying and flight training; and

- the airport will continue to receive scheduled air service from air taxi and cargo aircraft.

1.3 PROPOSED ACTION

The *Waimea-Kohala Airport Master Plan* (Section 6.0, Reference 4) considered forecasts of aviation demand, facility requirements to meet forecast aviation demand, and alternative development concepts to satisfy the projected facility requirements. The Master Plan emerged from the master planning process and comments received from the Technical Advisory Committee and the public. Improvements are planned to the Airfield, Terminal Area and Terminal Building to respond to: the need to implement safety measures in response to FAA directives; to provide for operational efficiency; and to meet existing and forecast demand. The Master Plan for Airport improvements are presented in Figure 1-4.

The Master Plan envisions improvements to be constructed in three phases: Phase I from present through year 2004; Phase II from 2005 through 2009, and Phase III from 2010 through 2020. Implementation of the proposed improvements in phases will allow HDOT-AIR to upgrade Airport facilities in response to future events and forecast Airport usage. In addition, the implementation schedule is

---

[2] An air carrier aircraft is defined as a commercial aircraft having more than sixty passenger seats. An air taxi aircraft is defined as a commercial aircraft with sixty passenger seats or less.

dependent on the availability of funds, safety requirements and aviation demand. The following describes the proposed airfield, terminal area, and terminal building improvements.

1.3.1 Airfield Land Acquisition and Designation

- Delineate land use zones within airport boundaries;
- Acquire land from Parker Ranch;
- Acquire avigation easements[3]; and
- Redesignate the State Land Use classification of airport lands from "Agriculture" to "Urban."

Four land use categories are proposed to be established within the Waimea-Kohala Airport: Aircraft Operating Area, Terminal Area, Aviation Commercial Area and Aviation Reserve-Buffer Area. The following is an explanation of the different land use categories within the airport:

- **Aircraft Operating Area** is the area set aside for the operation of aircraft, including areas reserved for protection from obstructions or facilities;
- **Terminal Area** is the area set aside for terminal buildings, hangars, airport support facilities, parking and roadways;
- **Aviation Commercial Area** is the area set aside for aviation services including aircraft maintenance, aircraft servicing, aircraft fuel and lubricants, and the sale of aircraft accessories; and
- **Aviation Reserve/Buffer Area** is the area held in reserve for future facility expansion, airport support activities, and noise and activity buffers including areas not suitable for development because of size, shape, topography or environmental protection.

The areas assigned to each land use type are shown in Figure 1-5 and a tabular summary of the land areas is presented in Table 1-1.

The Master Plan proposes the acquisition of several parcels of land from Parker Ranch, totaling approximately 20.5 acres. The land to be acquired is shown on Figure 1- 6. The Airport is located on land currently designated "Agriculture" by the State Land Use Commission (LUC).

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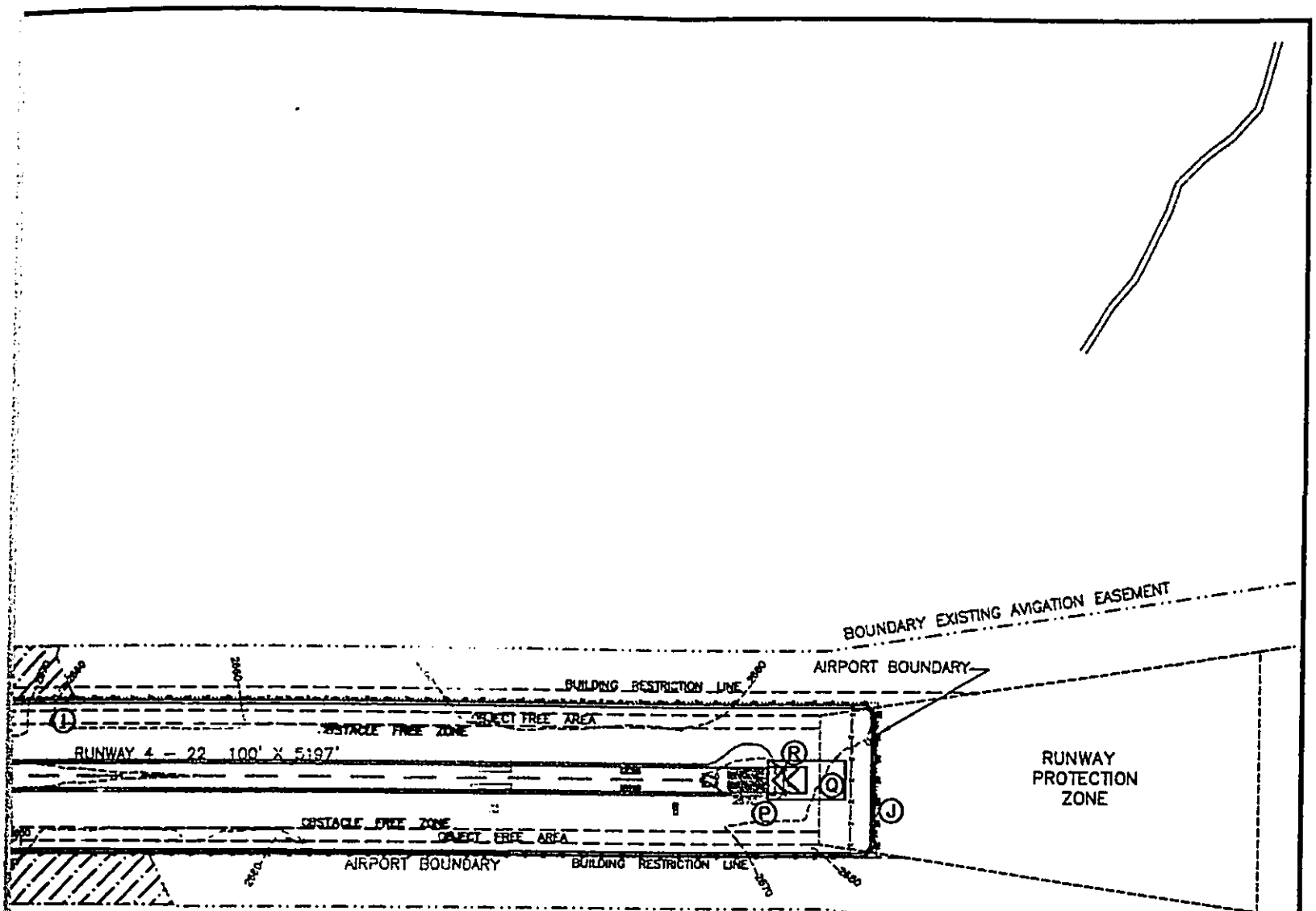
[3] An avigation easement would be obtained to protect the airspace surrounding the airport to allow for the right of aircraft overflights and to maintain aviation safety.



LEGEND

- (A) LAND TO BE ACQUIRED IN FEE
- (B) EASEMENT TO BE ACQUIRED
- (C) FIXED–WING LEASE LOTS (4)
- (D) HELICOPTER LEASE LOTS
- (E) FBO LEASE LOT
- (F) PARALLEL TAXIWAY
- (G) TRANSIENT APRON
- (H) TAXIWAY LIGHTING
- (J) REMOVE OBSTRUCTIONS
- (K) RELOCATED FENCE
- (L) TERMINAL IMPROVEMENTS
- (M) MARK/UNDERGROUND OVERHEAD UTILITY LINES
- (M) NEW ACCESS ROADWAY
- (N) TENANT AUTOMOBILE PARKING
- (O) REPAVE RUNWAY
- (P) INSTALL NAVAIDS
- (Q) RUNWAY SAFETY AREA
- (R) BLAST PAD
- (S) TAXIWAY TO AIRPARK (AIRPARK BY OTHERS)
- (T) LEASE LOT
- (U) PERIMETER ROAD
- (V) AUTOMATED WEATHER OBSERVING SYSTEM (LOCATION PURSUANT TO FAA STANDARDS)
- (W) UTILITY IMPROVEMENTS (INCLUDING TERMINAL FIRE PROTECTION SYSTEM)

KOHALA AIRPORT
NTAL ASSESSMENT

FIGURE 1-4
RECOMMENDED WAIMEA-KOHALA AIRPORT MASTER PLAN
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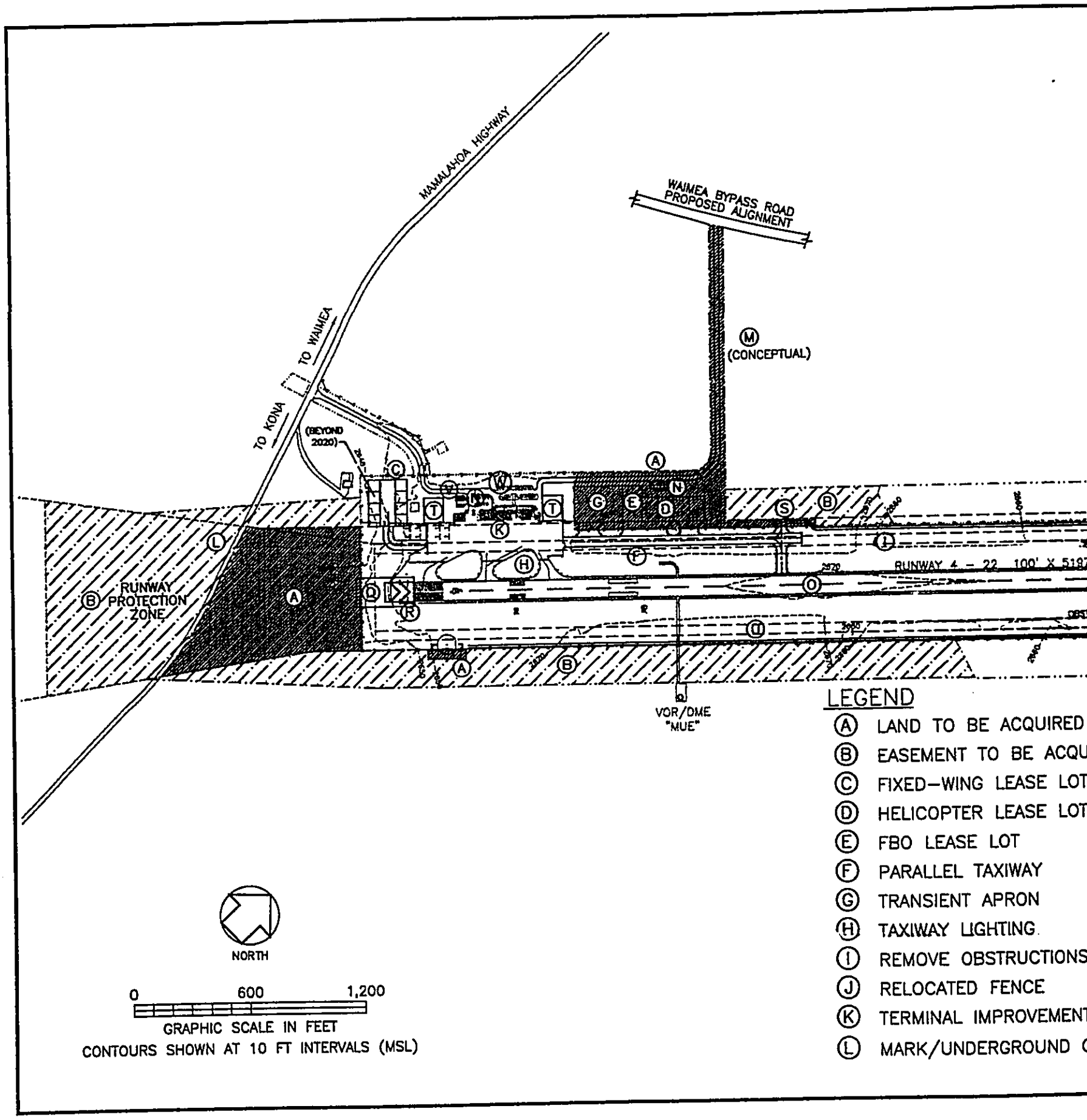

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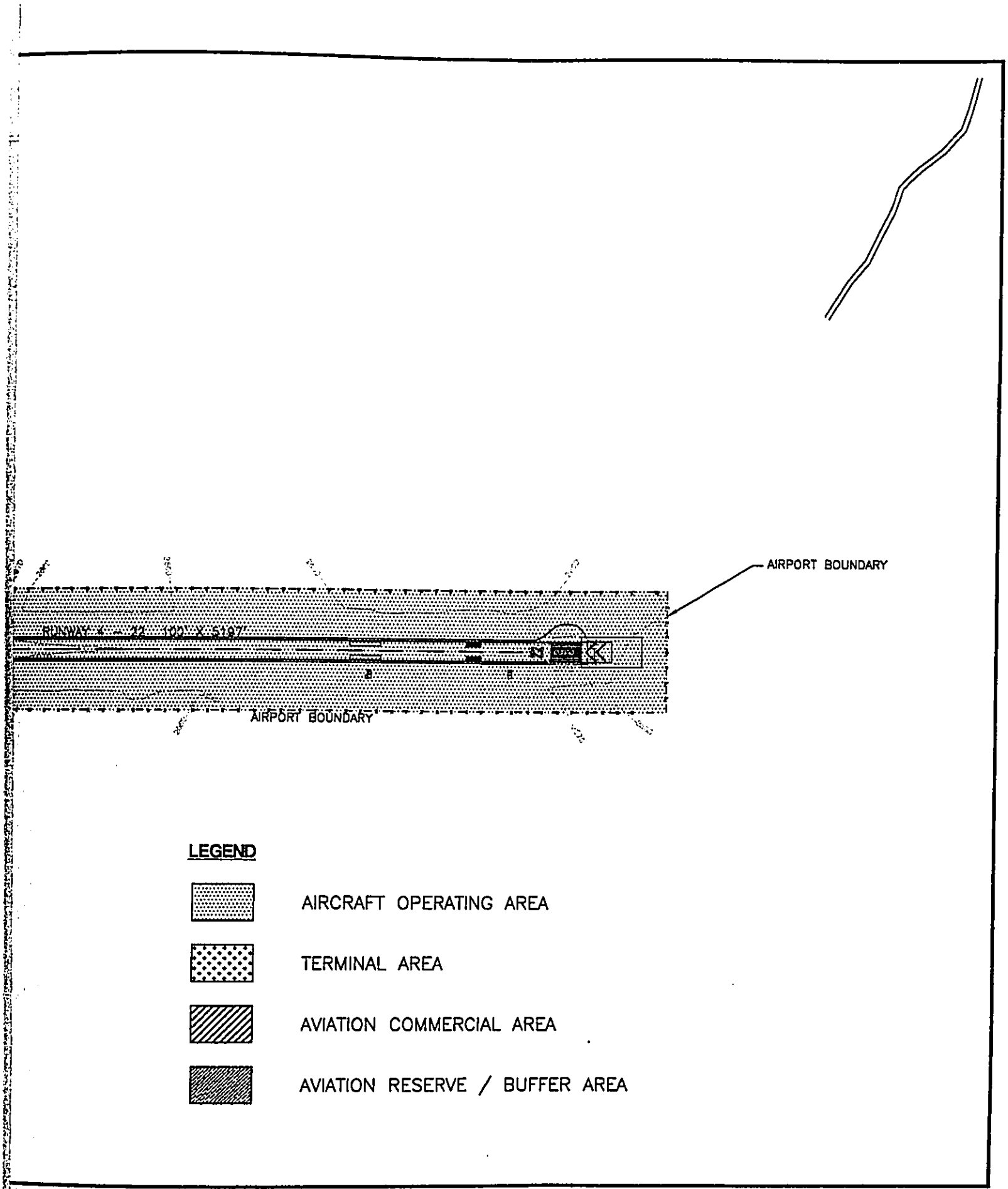

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FIGURE 1-5
AIRPORT LAND USE PLAN

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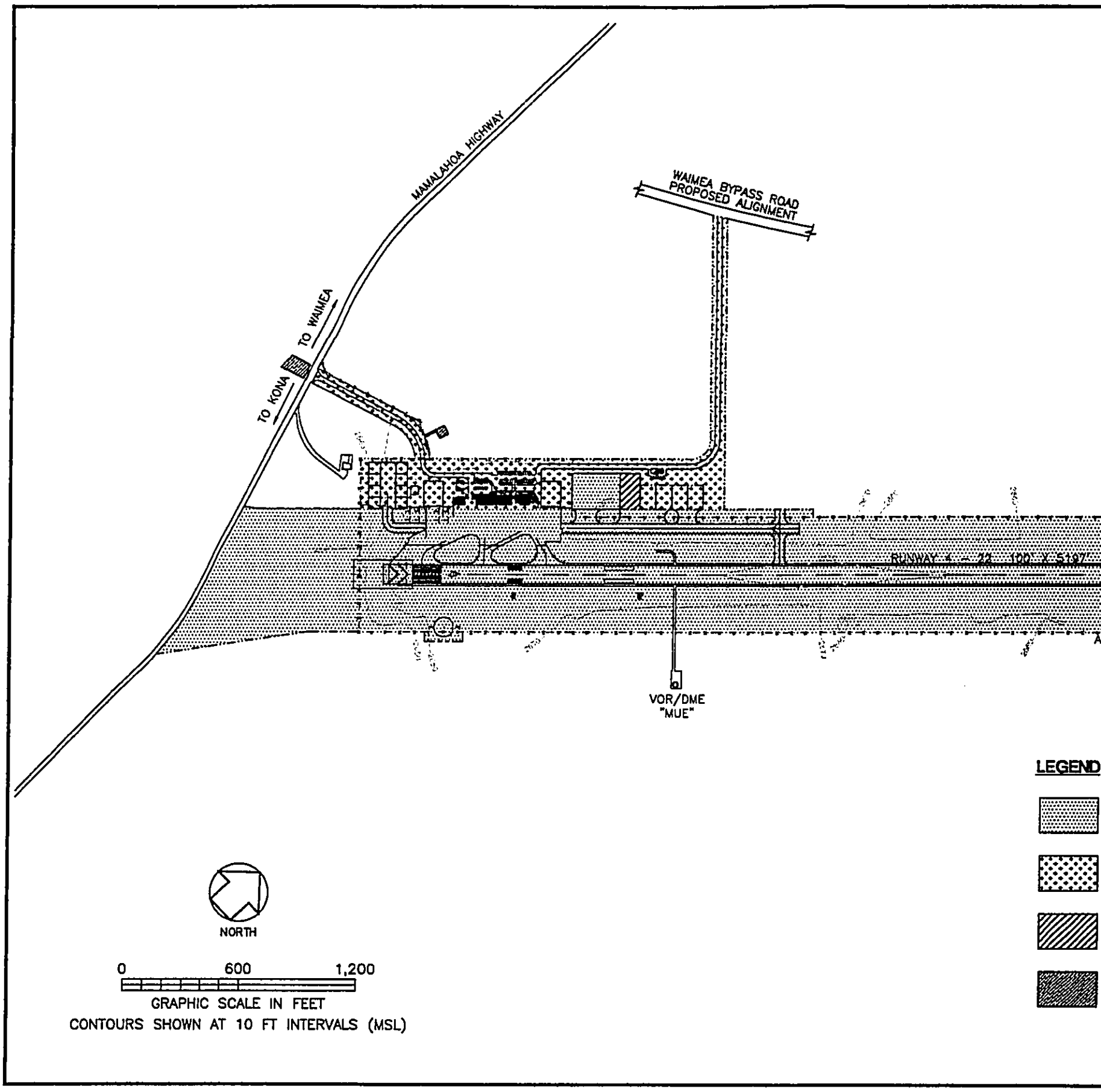

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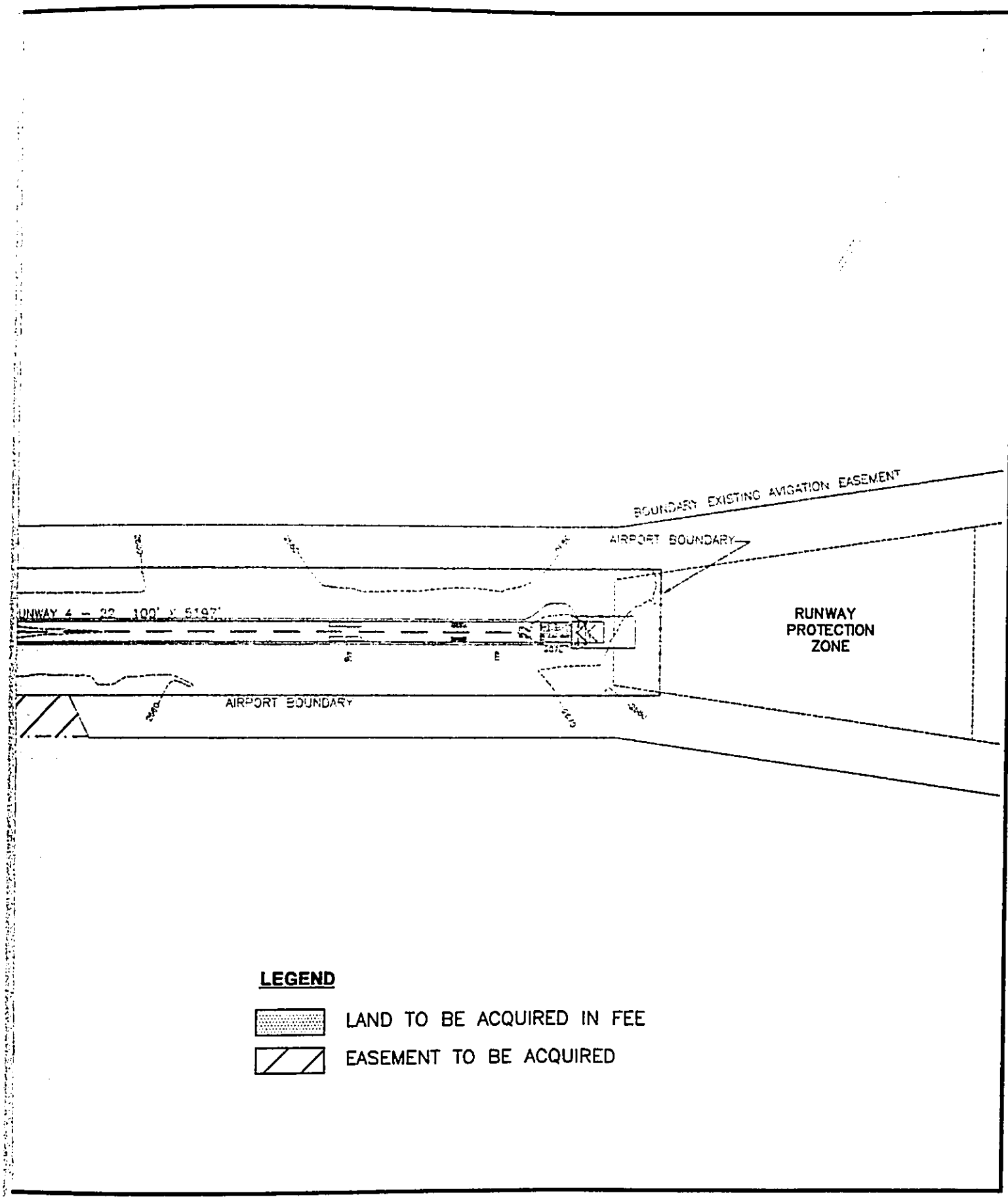
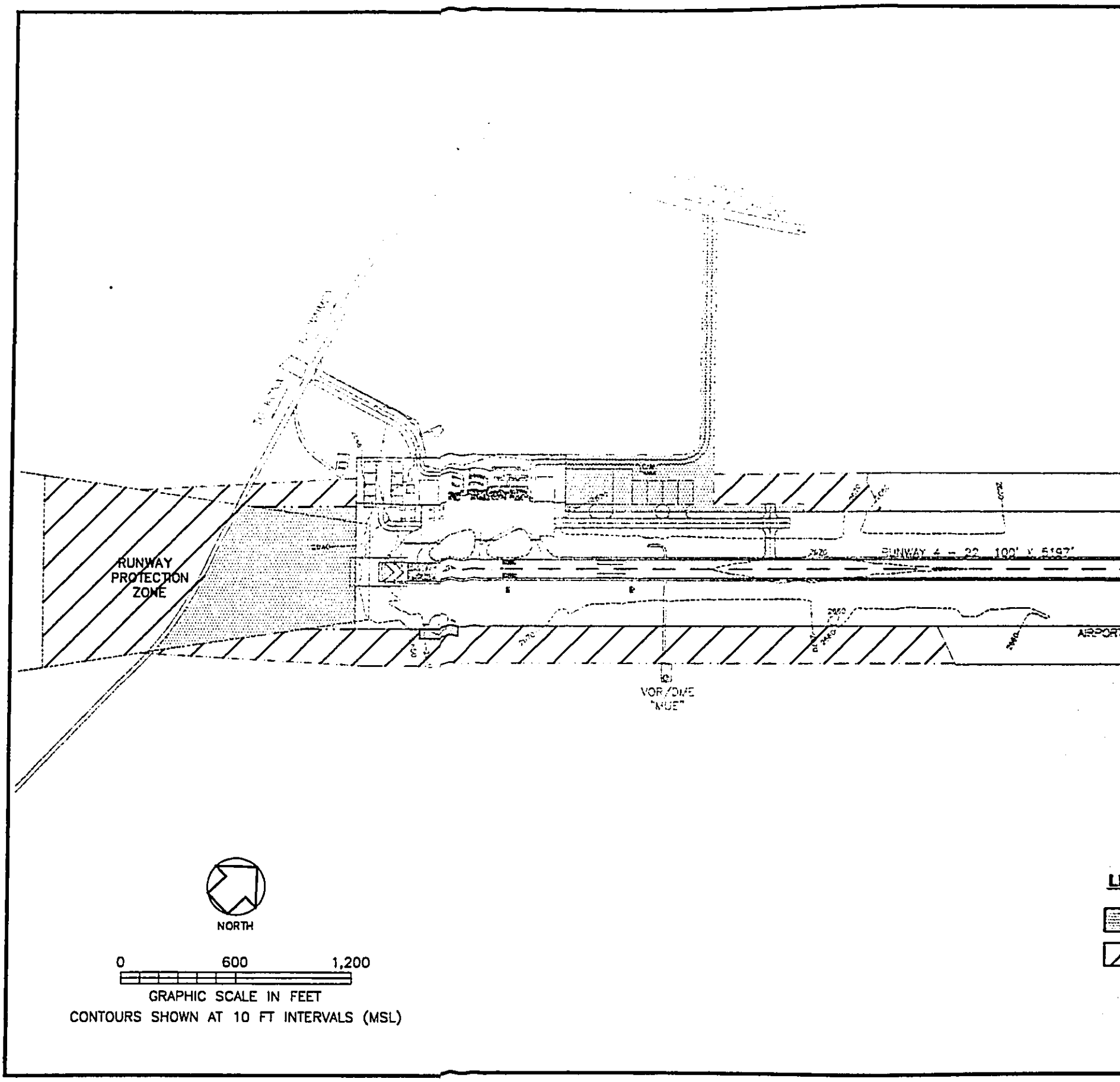


FIGURE 1-6
LAND ACQUISITION PLAN



Airports Division

WAIMEA-KOHALA AIRPORT
ENVIRONMENTAL ASSESSMENT

Airport facilities are not allowed under this land use type, however, following purchase of the Parker Ranch lands, HDOT-AIR will petition the LUC to redesignate the Airport lands Urban. This Environmental Assessment will be used in support of the land use redesignation petition. However, the existing airport use within Agricultural land is permitted as the Airport was constructed prior to the establishment of the Land Use designations.

Table 1-1
SUMMARY OF ON-AIRPORT LAND USE

ON-AIRPORT LAND USE	EXISTING (Acres)	PROPOSED (Acres)
Aircraft Operating Area	80	97
Terminal Area	8	13
Aviation Commercial Area	0	0.2
Aviation Reserve/Buffer Area	2	0.3
TOTAL	90	110.5

The Hawaii County General Plan designates current airport lands as Industrial and the County zoning designation is Agriculture (A-40a). Because of the Agricultural District zoning, improvements on Airport lands may require a special permit from the Planning Commission. In addition, land to be acquired is also zoned A-40a and the zoning will need to be changed to "General Industrial or Limited Industrial". The Hawaii County General Plan shows the area to be used for Industrial purposes, thus the General Plan will not need to be amended.

1.3.2 Airfield Improvements

- Extend runway safety areas beyond runway ends;
- Construct blast pads;
- Remove on-airport obstructions, including relocating the fence on the Runway 22 end;
- Mark/underground overhead utility lines;
- Install Automated Weather Observing System;
- Re-initiate non-precision instrument approach;
- Install Runway End Indicator Lights on Runway 4;
- Install lighted Distance-To-Go markers along runway;
- Install taxiway lights;
- Construct perimeter road;
- Construct a partial parallel taxiway;

- Repave runway; and
- Add taxi lanes to new fixed-wing hangars and lease lots.

The airfield facilities consist of the runway, taxiways, blast pads, navigational aids and associated safety areas and object/obstruction free areas. The Master Plan is based on accommodating aircraft in the FAA design group II and approach category B. The Shorts 360 is the design aircraft[4], however, it is expected that larger aircraft may infrequently use the airport. The existing runway length is adequate for this aircraft type and their expected short-haul operations. Runway capacity is more than adequate to meet the forecast aviation demand, and the Master Plan did not recommend airfield capacity improvements. Proposed improvements are intended to upgrade the airfield (originally constructed in the mid-1950s) to meet current FAA requirements. In the long term, the runway should be repaved, and appropriate non-precision runway marking should be applied.

The Master Plan includes currently planned and proposed future navigational aids. The most important navigational aid improvement in the Master Plan is the installation of the Automated Weather Observing System (AWOS), which will allow for the re-initiation of the non-precision instrument approach to the Airport. The airfield currently has airfield lights, VOR/DME, and lighted wind cone and segmented circle.

A partial parallel taxiway is included to minimize entry/exit taxiways to the runway. The parallel taxiway will provide access to the new facilities, including the transient aircraft apron, helicopter hangars and the future airpark. Taxi lanes are provided to the new fixed-wing hangars, and the two lease lots for private operators.

Associated with the runway and taxiways are several areas which primarily function as safety areas. These areas and their dimensions are shown in Table 1-2.

1.3.3 Terminal Area and Building Improvements

- Reconfigure terminal building;
- Reduce aircraft parking apron fronting passenger gates;
- Add transient aircraft apron;
- Add tenant automobile parking;
- Exterior and interior landscaping; and
- Extend Airport access roadway.

Major facilities in the passenger terminal complex at the Waimea-Kohala Airport include the passenger terminal building and office spaces, and the aircraft parking apron. In addition, a civil

[4] The Shorts 360 is manufactured by Shorts Brothers PLC of Northern Ireland and has a Maximum Takeoff Weight of 27,100 pounds.

defense "EAS" receiver and an optional siren simulator will be installed for the State Civil Defense. HDOT-AIR should coordinate the final alignment of the Waimea bypass road with DOT-Highways Division to maintain the operational capacity of the Airport.

Table 1-2
ASSOCIATED RUNWAY AND TAXIWAY SAFETY AREAS

DESCRIPTION	WIDTH (Feet)	LENGTH (Feet)
Runway Safety Area	150	Extends 300 feet beyond Runway end
Runway Shoulders	10	Length of Runway
Runway Blast Pad	100	150
Runway Object Free Area	500	Extends 300 feet beyond Runway end
Runway Obstacle Free Zone	400	Extends 200 feet beyond Runway end
Runway Protection Zone	Inner width: 500 Outer width: 1,010	1,700 feet in length
Taxiway Safety Area	79	Length of taxiway
Hover Taxi	14.2	Not Applicable
Hover Taxi Route	80	Not Applicable
Building Restriction Line	west side: 340 east side: 300	Until intersects with the Runway Protection Zone

The passenger terminal building will be reconfigured to meet existing and forecast demand, with additional space provided for ticketing areas and concession space. The major renovation will reconfigure the existing baggage claim area into a new ticketing area for the commuter and scenic air tour companies. In addition, a concession space will be provided in the current ticketing area and will be adjacent to the passenger holdroom. The newly configured terminal building will be designed to meet applicable Federal and State accessibility requirements, such as those prescribed by the Americans with Disabilities Act (ADA). The proposed terminal building layout is shown on Figure 1-7.

The aircraft parking apron fronting the passenger gates will be reduced in size due to the current FAA safety criteria for the object free area. However, the apron will be able to accommodate two aircraft with wingspans up to 79 feet and two smaller aircraft. In addition, the

improvements include a transient apron which can accommodate one aircraft with a wingspan up to 140 feet, or two smaller aircraft.

1.3.4 General Aviation Facilities

- Add aircraft tiedowns; and
- Add fixed-wing lease lots.

The proposed improvements include a mix of tiedowns and fixed-wing lease lots for aircraft hangars. By the year 2020, there will be eight tiedowns and space for five fixed-wing lease lots. As the forecast demand only requires twelve fixed-wing parking positions, the additional area should be reserved for future (beyond 2020) fixed-wing lease lots. These lease lots will be located at the southwest corner of the Airport and will be connected to the runway by a taxi lane. Four of the lease lots will have a size of 3,500 square feet, while the fifth would be approximately 13,000 sq. ft. New hangars for general aviation activities would be constructed by lease lot tenants in conformance with applicable HDOT-AIR, State and County codes and standards, including accessibility requirements. Two (2) aircraft tie-downs will be relocated as part of this development.

1.3.5 Helicopter Facilities

- Add helicopter lease lots.

Four new 10,000-square foot helicopter lease lots will be provided, located to the northwest of the transient apron. The lease lots will include space for a hangar or aircraft parking apron that is connected to the runway via the parallel taxiway. It is possible that with the adjacent apron space, two aircraft could be stored on the lease lot. Development of the lease lots would be by the tenants in conformance with applicable HDOT-AIR, State and County codes and standards, including accessibility requirements. In addition, a fifth lease lot is located northeast of the terminal and will have 13,000 square feet.

1.3.6 Fixed Base Operator Facilities

- Provide Fixed Base Operator (FBO) lease lot.

Provide a 20,000 square foot lease lot for a FBO, located next to the transient apron. The lease lot will have a fronting apron. The development of the lease lot would be by the tenants in conformance with applicable HDOT-AIR, State and County codes and standards, including accessibility and aesthetic requirements.

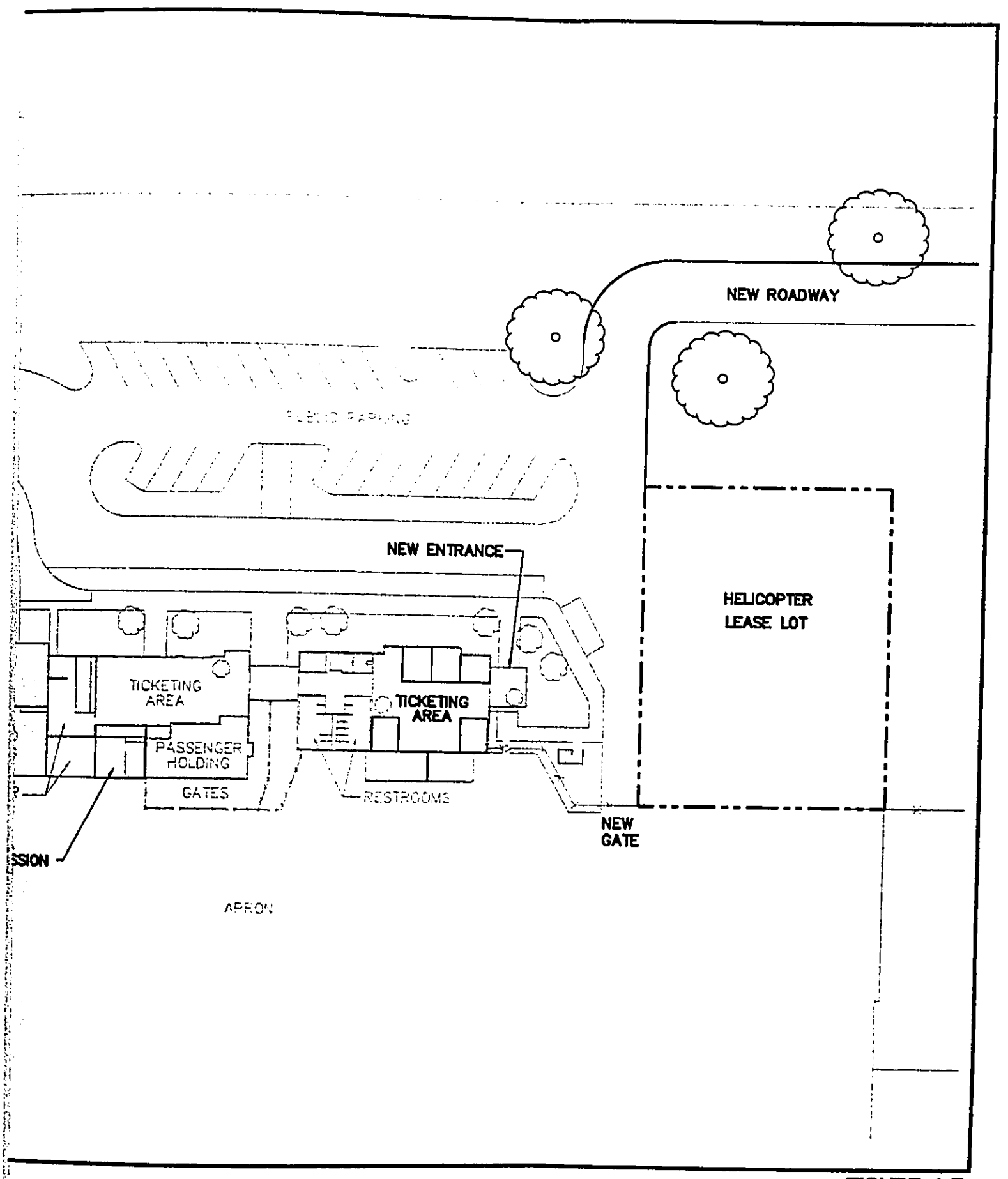


FIGURE 1-7
PROPOSED TERMINAL BUILDING LAYOUT

ALA AIRPORT
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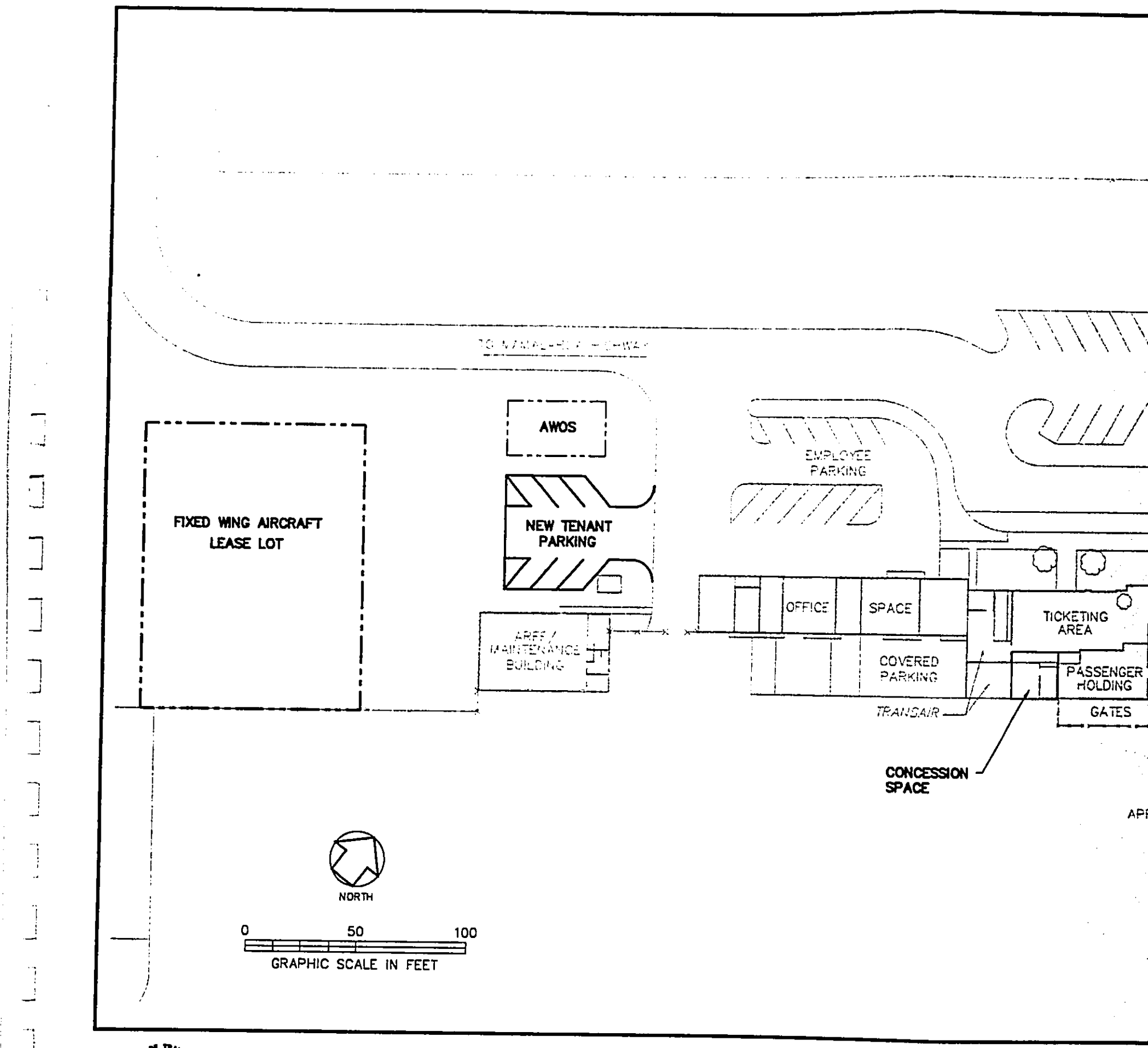


Airports Division

WAIMEA - KOHALA AIRPORT
ENVIRONMENTAL ASSESSMENT

1.3.7 Airpark

- Provide stub taxiway to future airpark.

The Master Plan provides a stub taxiway to an airpark which would be developed by private interests. The type of airpark which may be developed could range from an aviation- oriented residential subdivision to an industrial park, potentially associated with aviation-related activities. The airpark, as it will be developed by private interest, will need to be in compliance with all applicable federal, state and county rules and regulations, including, but not limited to, FAA's Airpark development regulations, a General Plan Amendment, a State Land Use Boundary Amendment and Change of Zone.

1.3.8 Utilities

- Extend County of Hawaii water line and upgrade on-airport water system;
- Develop septic tank and leach field; and
- Upgrade telephone and electrical service.

To meet the current requirements for fire protection water supply imposed by the County of Hawaii, the existing County 12-inch water transmission line along Mamalahoa Highway must be extended to the Airport access road. An 8-inch water line and fire hydrants are recommended in the Master Plan to meet fire protection flow requirements for the Airport.

HDOT-AIR is planning to construct a fire protection water supply system, that includes a water reservoir, mains and hydrant. These facilities are intended to be constructed in 2001 and will suffice to provide adequate protection for the existing terminal structures and anticipated lease lot developments.

The Master Plan recommends a septic tank and 600 square feet leach field be constructed to accommodate existing and future wastewater flows.

Additional telephone and electric service will be required. Power to new facilities will be supplied from the overhead lines located along the Airport's access road and will be provided by GTE Hawaiian Tel and Hawaii Electric Light Company (HELCO). Overhead electrical transmission, distribution and phone lines along Mamalahoa Highway are obstructions to airspace and will be marked (e.g. orange spheres) to provide visual reference to pilots using the runway. In the future, these overhead lines should be placed underground to remove the obstructions.

All of the proposed Airport improvements would be designed, constructed and operated in conformance with applicable Federal, State and County building and environmental protection codes and standards, including the use of best available control technologies.

1.4 PURPOSE AND NEED FOR PROPOSED ACTIONS

The purposes of the proposed actions are to improve the overall operating efficiency and safety of the Airport, and to meet existing and forecast aviation and passenger demand within the planning period. In addition, some of the proposed actions are required to meet current FAA directives and standards. The forecast of aviation demand for the planning period was prepared for the Master Plan and presented in Table 1-3. The forecast is based on the 1997 existing demand, the existing user waiting list, and the forecast growth of tourism and resident population.

Table 1-3
1997 AVIATION DEMAND FORECASTS, WAIMEA-KOHALA AIRPORT

DESCRIPTION	1997 (ESTIMATED)	2000	2005	2010	2015	2020
PASSENGERS (1) (enplaned and deplaned)	10,400	14,800	17,500	20,300	23,300	26,600
AIRCRAFT OPERATIONS						
Commuter/Air Taxi (EAS)	3,600	4,100	4,200	4,200	4,200	4,200
Scenic Air Tours (1)	5,900	9,300	10,400	11,500	12,800	14,200
General Aviation	900	1,200	1,300	1,400	1,500	1,600
Military	100	100	100	100	100	100
TOTAL OPERATIONS	10,500	14,700	16,000	17,200	18,600	20,100
CARGO AND MAIL (tons)	243[a]	256	275	298	324	351
BASED AIRCRAFT (1)	10[a]	16	17	17	18	19

(1) Includes helicopter and fixed wing statistics.

(a) actual statistics from State of Hawaii, Department of Transportation, Airports Division

In general, the forecast predicts a slow growth of aviation activities at the airport. The aviation demand analysis estimated that 10,400 passengers enplaned or deplaned at the Airport in 1997, and the passengers demand will increase to 14,800 by the year 2000 and to 26,600 by the year 2020. It is estimated that eighty-five (85) percent of the passengers will be enplaned and deplaned on helicopter/fixed wing scenic air tours operations. The analysis also shows that the amount of cargo and mail to be processed through the

Airport will increase from 243 tons in 1997 to 351 tons by the year 2020. Likewise, the aircraft operations are forecast to increase from a annual total operations of 10,500 to 20,100 over the next 23 years.

The aviation operations (i.e. commuter/air taxi, general aviation, scenic air tours and military) and the type of aircraft used for the forecast operations would be similar to those used currently at the Airport. It is assumed that the level of Essential Air Service (EAS) will remain constant during the planning period. Currently, Pacific Wings is the Essential Air Service air carrier and has the contract January 31, 2000. Their contract provides for twelve (12) nonstop round trips per week, six (6) to Honolulu International Airport and six (6) to Kahului Airport.

The based aircraft shows a large increase within the first three years (1997 to 2000) that will accommodate the Airport's waiting lists. In the subsequent years, the rate of increase is reduced to follow the growth of aircraft operations. The number of based aircraft will increase during the planning period, from 10 in 1997 to 19 in the year 2020, and a breakdown is shown on Table 1-4.

Table 1-4
1997-2020 BASED AIRCRAFT MIX
WAIMEA-KOHALA AIRPORT

AIRCRAFT TYPE	1997	2000	2005	2010	2015	2020
Fixed-wing	7	9	10	10	11	12
Helicopters	3	7	7	7	7	7
TOTAL	10	16	17	17	18	19

1.5 PROJECT COST AND IMPLEMENTATION SCHEDULE

Improvements to the airfield, land acquisition, terminal building, general aviation and helicopter facilities, an air park, and utility infrastructure are proposed to be implemented in three phases: Phase I from present through year 2004; Phase II from 2005 through 2009, and Phase III from 2010 through 2020. The improvements discussed previously have been allocated to three phases, however implementation will be dictated by the availability of funding, safety requirements and customer demand. Summary costs in 1998 dollars for each of the three planned phases are: Phase I, $3,800,000; Phase II, $1,3850,000, and Phase III, $2,880,000.

1.5.1 Phase I Improvements: Present through Year 2004

Figure 1-8 shows the Phase I improvements that are planned to be in place by the year 2004. Phase I improvements include:

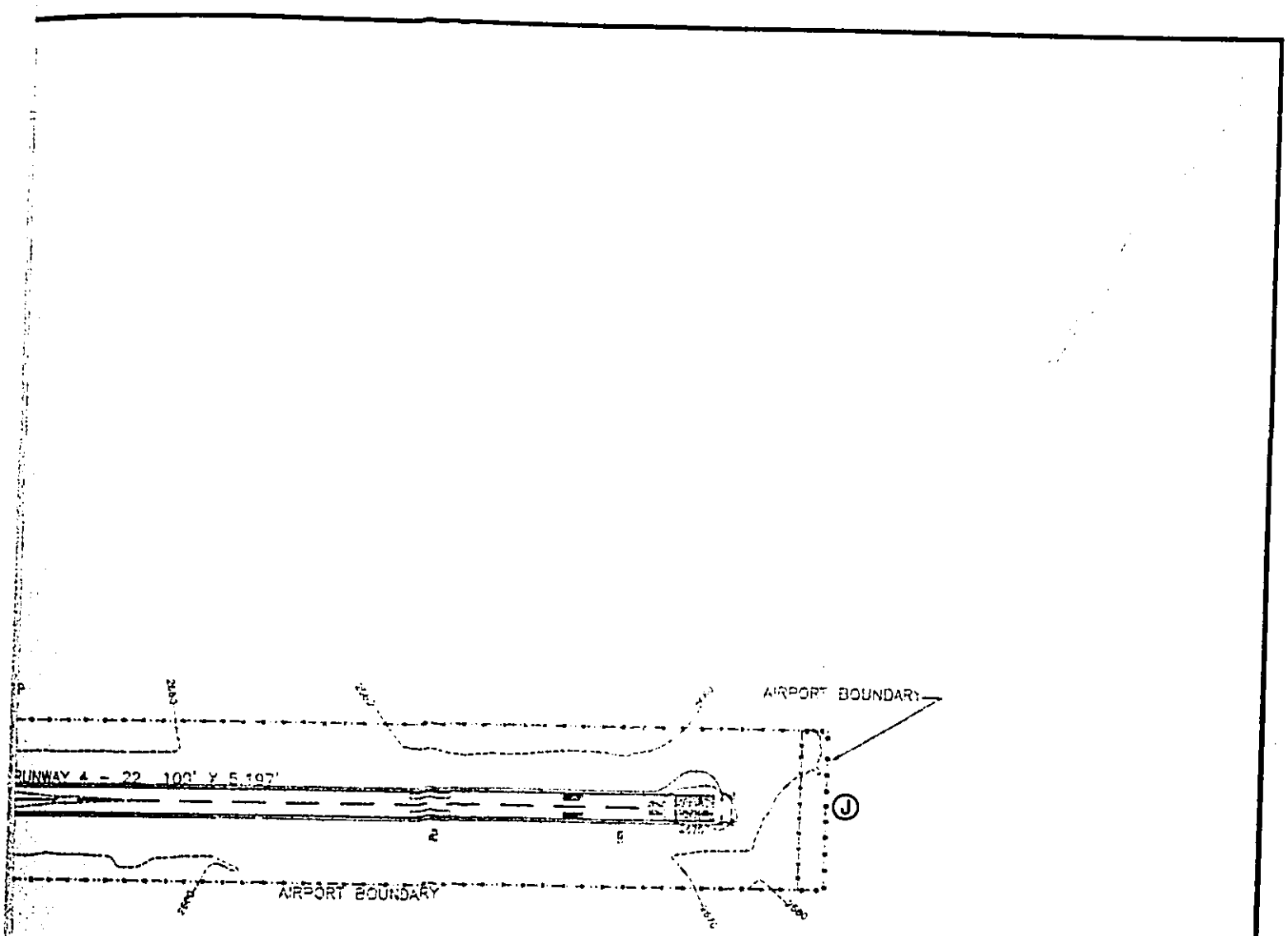
- land acquisition for helicopter lease lots and transient apron;
- construction of the fixed-wing aircraft parking apron, lease lots and taxilane;
- partial removal of the berm and relocation of the airport fence;
- construction of the parallel taxiway up to the end of the helicopter lease lots;
- construction of the transient apron;
- taxiway lighting;
- marking overhead lines within proposed Runway Protection Zone;
- landscaping around and in the terminal building;
- construction of the Fixed Base Operator (FBO) lease lot and helicopter lease lots; and
- upgrading the water supply system for the Airport and others.

The estimated total cost for the Phase I improvements is $3.8 million. A breakdown of planned improvements in Phase I by estimated cost is presented in Table 1-5.

Cost sharing options for the water line extension would be discussed with the County Department of Water Supply and other private developers. The portion of the water line extension serving the Airport would be eligible for FAA funding.

Table 1-5
ESTIMATED COST OF PHASE I IMPROVEMENTS

PROPOSED IMPROVEMENT	ESTIMATED COST (1998 Dollars)	FAA ELIGIBILITY
Land Acquisition	$75,000	90%
Transient Apron	$470,000	90%
Helicopter Lease Lots	$450,000	0%
FBO Lease Lot	$150,000	0%
Fixed-Wing Aircraft Lease Lots	$150,000	0%
Parallel Taxiway (incl. lighting)	$210,000	90%
Relocate Airport Fence	$35,000	90%
Mark Overhead Lines	$10,000	90%
Terminal Area Landscaping	$250,000	0%
Upgrade Water Line (including fire protection system)	$2,000,000	To be determined
TOTAL	$3,800,000	



LEGEND

- Ⓐ LAND TO BE ACQUIRED IN FEE
- Ⓒ FIXED–WING LEASE LOTS
- Ⓓ HELICOPTER LEASE LOTS
- Ⓔ FBO LEASE LOT
- Ⓕ PARALLEL TAXIWAY
- Ⓖ TRANSIENT APRON
- Ⓗ TAXIWAY LIGHTING
- Ⓙ RELOCATED FENCE
- Ⓚ TERMINAL IMPROVEMENTS (APRON LIGHTING)
- Ⓛ MARK OVERHEAD UTILITY LINES
- Ⓣ LEASE LOT
- Ⓥ AUTOMATED WEATHER OBSERVING SYSTEM
- Ⓦ UTILITY IMPROVEMENTS (INCLUDING TERMINAL FIRE PROTECTION SYSTEM)

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FIGURE 1-8
PHASE I IMPROVEMENTS

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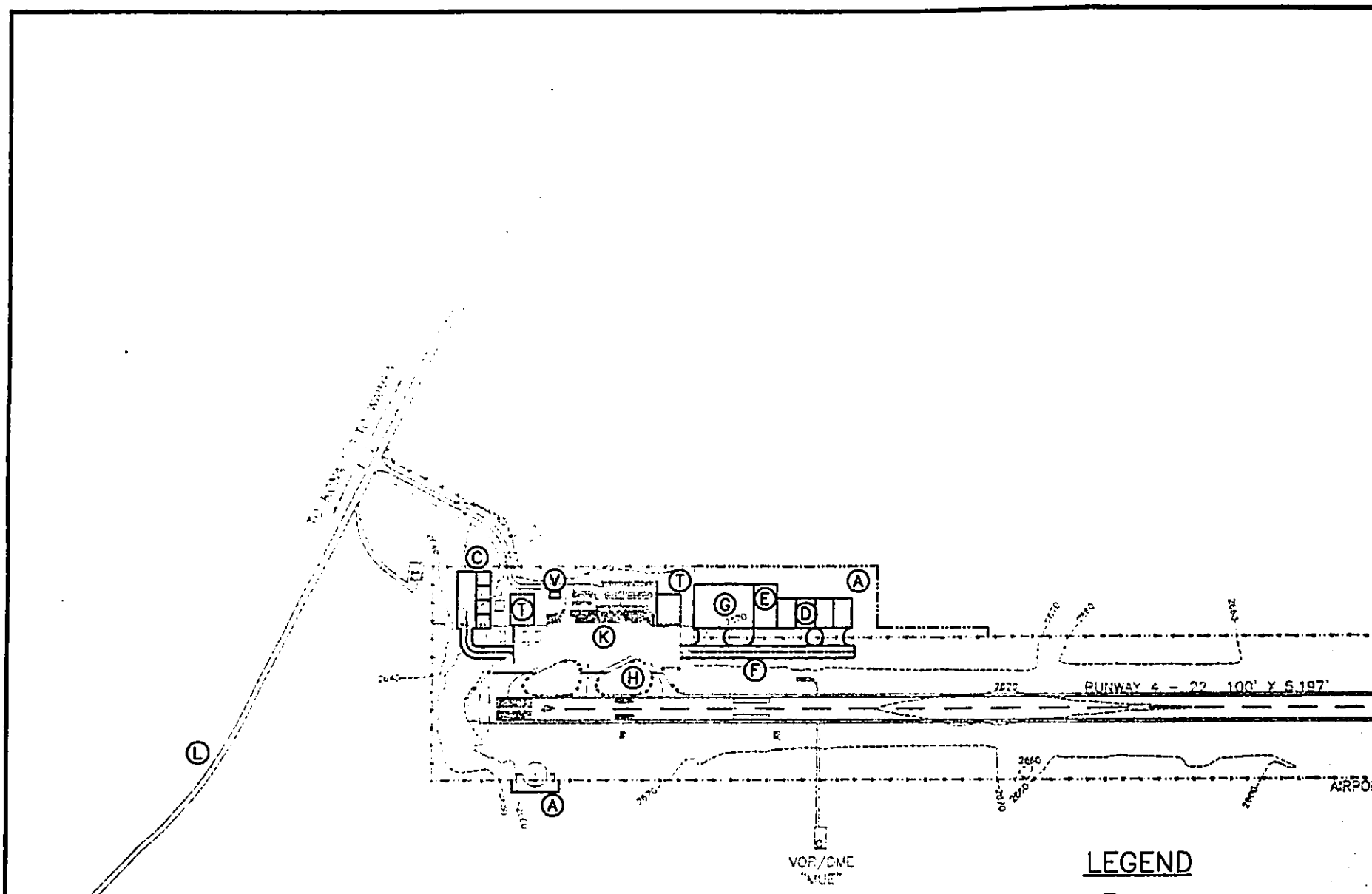

LEGEND

- (A) LAND TO BE ACQUIRE
- (C) FIXED–WING LEASE L
- (D) HELICOPTER LEASE L
- (E) FBO LEASE LOT
- (F) PARALLEL TAXIWAY
- (G) TRANSIENT APRON
- (H) TAXIWAY LIGHTING

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1.5.2 Phase II Improvements: Years 2005 through 2009

Figure 1-9 shows the Phase II improvements planned to be in place by the year 2009. The improvements included in this phase are:

- renovation of the terminal building to accommodate the additional ticketing spaces and concession space;
- acquire avigation easements;
- construction of a portion of the new access roadway;
- construction of the tenant parking lots;
- acquire land for the runway safety areas and runway protection zones;
- removal of the berm obstruction and grade the northwest side of the runway;
- construction of the perimeter roadway; and
- miscellaneous utility improvements.

The estimated total cost for the Phase II improvements is $1.4 million. A breakdown of planned improvements in Phase II by estimated cost is presented in Table 1-6.

Table 1-6
ESTIMATED COST OF PHASE II IMPROVEMENTS

PROPOSED IMPROVEMENT	ESTIMATED COST (1998 Dollars)	FAA ELIGIBILITY
Renovation of Terminal Building	$25,000	75%
New Roadway and Parking Areas	$130,000	Access Roadway - 90% Parking - ineligible
Removal of Berm (Obstruction)	$250,000	90%
Land Acquisition	$320,000	90%
Perimeter Road	$610,000	90%
Miscellaneous Utility Improvements	$50,000	To be determined
TOTAL	$1,385,000	

1.5.3 Phase III Improvements: Years 2010 through 2020

Figure 1-10 shows the Phase III improvements planned to be in place by the year 2020. The proposed improvements are:

- repave runway;
- install REILS and Distance-to-go-markers;
- construction of runway safety areas and blast pads beyond the runway ends;
- relocation of overhead lines along Mamalahoa Highway or placing lines underground;
- construction of the remaining portion of the parallel taxiway to the airpark, if there is a commitment to develop an airpark;
- initiation of a GPS instrument approach; and
- construction of a new access roadway to the proposed Waimea Bypass Road.

The estimated total cost for the Phase III improvements is $2.9 million. A breakdown of planned improvements in Phase III by estimated cost is presented in Table 1-7. Construction of the four remaining fixed-wing lease lots is expected to occur beyond the year 2020 and therefore not included in the implementation plan.

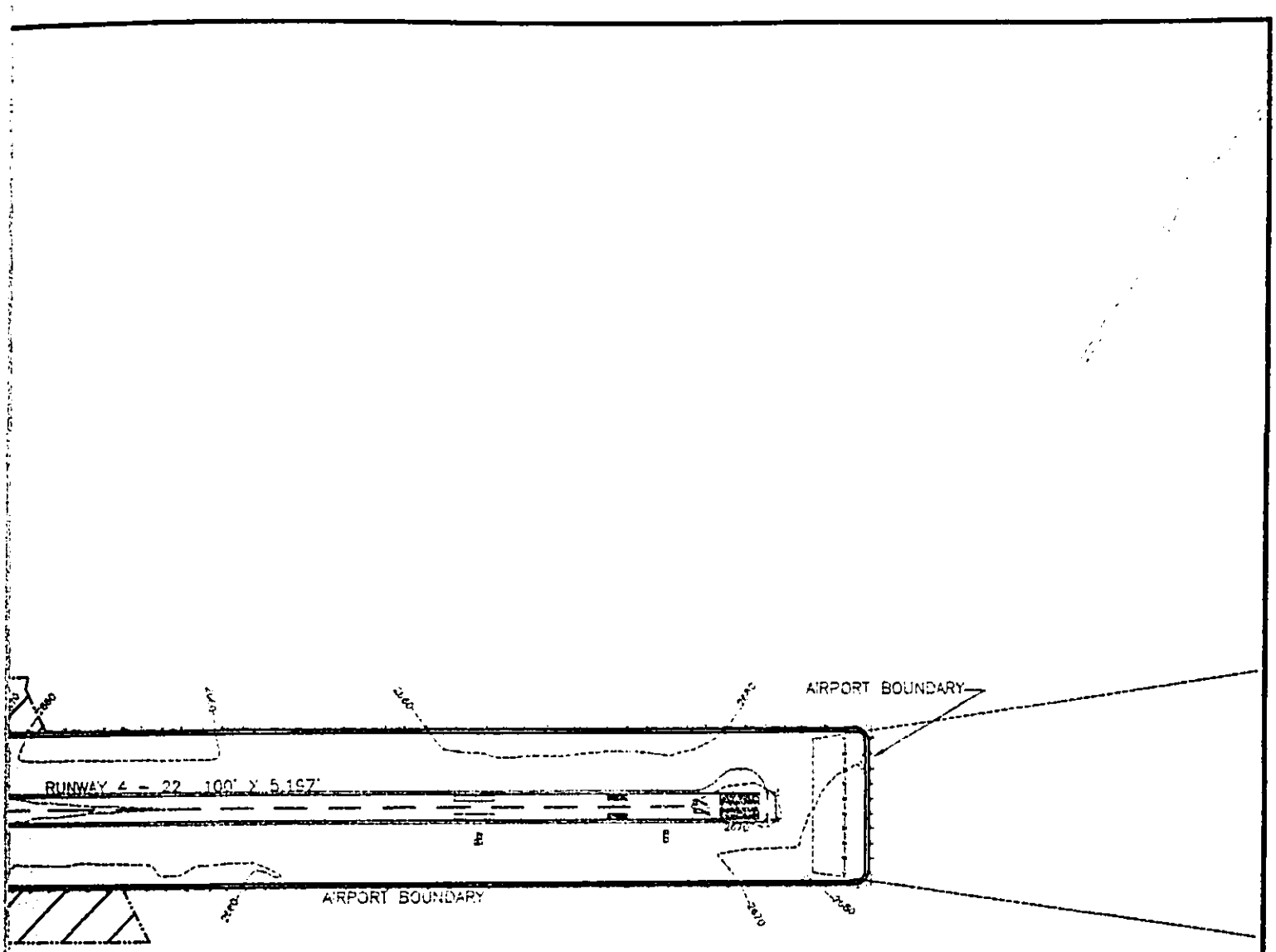
Table 1-7
ESTIMATED COST OF PHASE III IMPROVEMENTS

PROPOSED IMPROVEMENT	ESTIMATED COST (1998 Dollars)	FAA ELIGIBILITY
Repave Runway	$1,100,000	90%
Install NAVAIDS	$50,000	90%
Runway Safety Areas & Blast Pads	$680,000	90%
Underground Utility (Obstructions) Lines	$30,000	90%
Extend Parallel Taxiway	$180,000	90%
Land Acquisition and Construct Access Roadway	$840,000	0%
TOTAL	$2,880,000	

1.6 LAND USE

Land use on the island of Hawaii is controlled by the State Land Use Commission, and the County of Hawaii Planning Department. Land use in the airport environs is principally agriculture and mainly used for cattle ranching. Figure 1-11 shows State of Hawaii Land Use designations around the Airport. The Airport is outside the County Special Management Area (SMA).

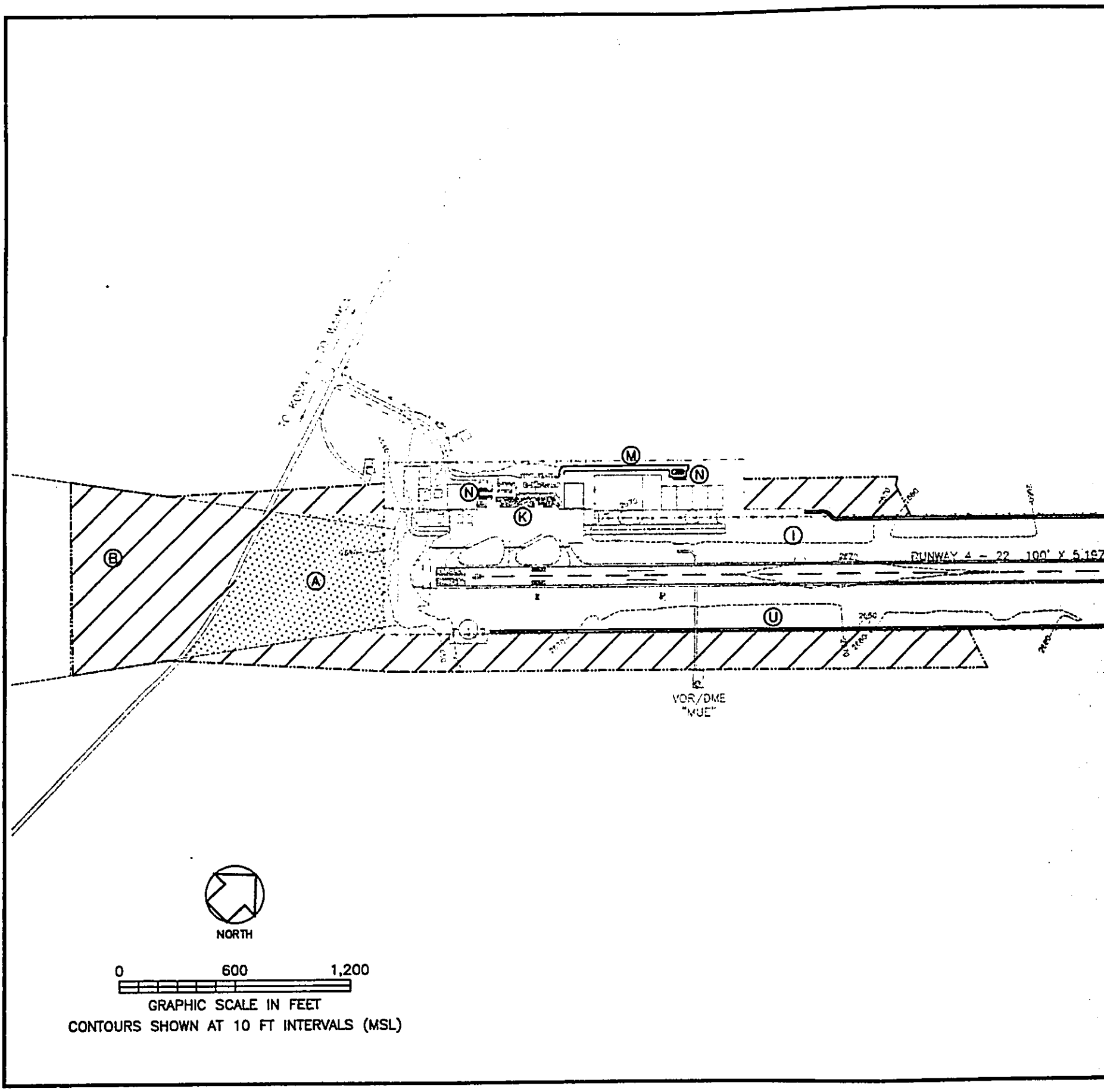
Table 1-8 lists Governor's Executive Orders for the Waimea-Kohala Airport, and Figure 1-12 shows the Executive Order boundaries. Approximately forty-five percent of the Airport is on ceded lands. The



LEGEND

- (A) LAND TO BE ACQUIRED IN FEE
- (B) EASEMENT TO BE ACQUIRED
- (I) REMOVE OBSTRUCTION
- (K) TERMINAL IMPROVEMENTS
- (M) NEW ACCESS ROADWAY
- (N) TENANT AUTOMOBILE PARKING
- (U) PERIMETER ROAD

FIGURE 1-9
PHASE II IMPROVEMENTS



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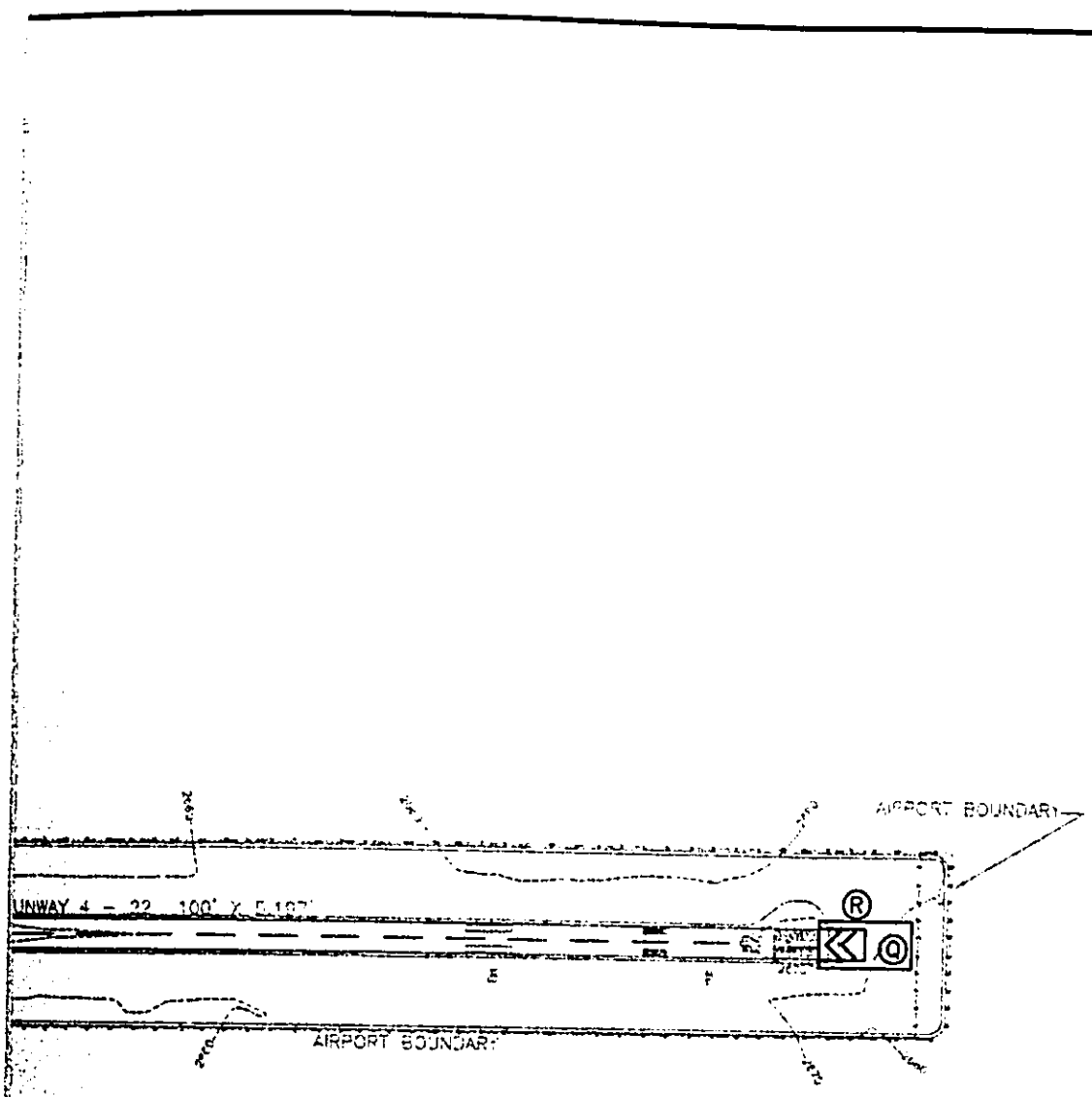

LEGEND

- Ⓐ LAND TO BE ACQUIRED IN FEE
- Ⓒ FIXED-WING LEASE LOTS (BEYOND 2020)
- Ⓕ PARALLEL TAXIWAY
- Ⓗ TAXIWAY LIGHTING
- Ⓛ UNDERGROUND/OVERHEAD UTILITY LINES
- Ⓜ NEW ACCESS ROADWAY (CONCEPTUAL)
- Ⓞ REPAVE RUNWAY
- Ⓟ INSTALL NAVAIDS
- Ⓠ RUNWAY SAFETY AREA
- Ⓡ BLAST PAD
- Ⓢ TAXIWAY TO AIRPARK (AIRPARK BY OTHERS)

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FIGURE 1-10
PHASE III IMPROVEMENTS

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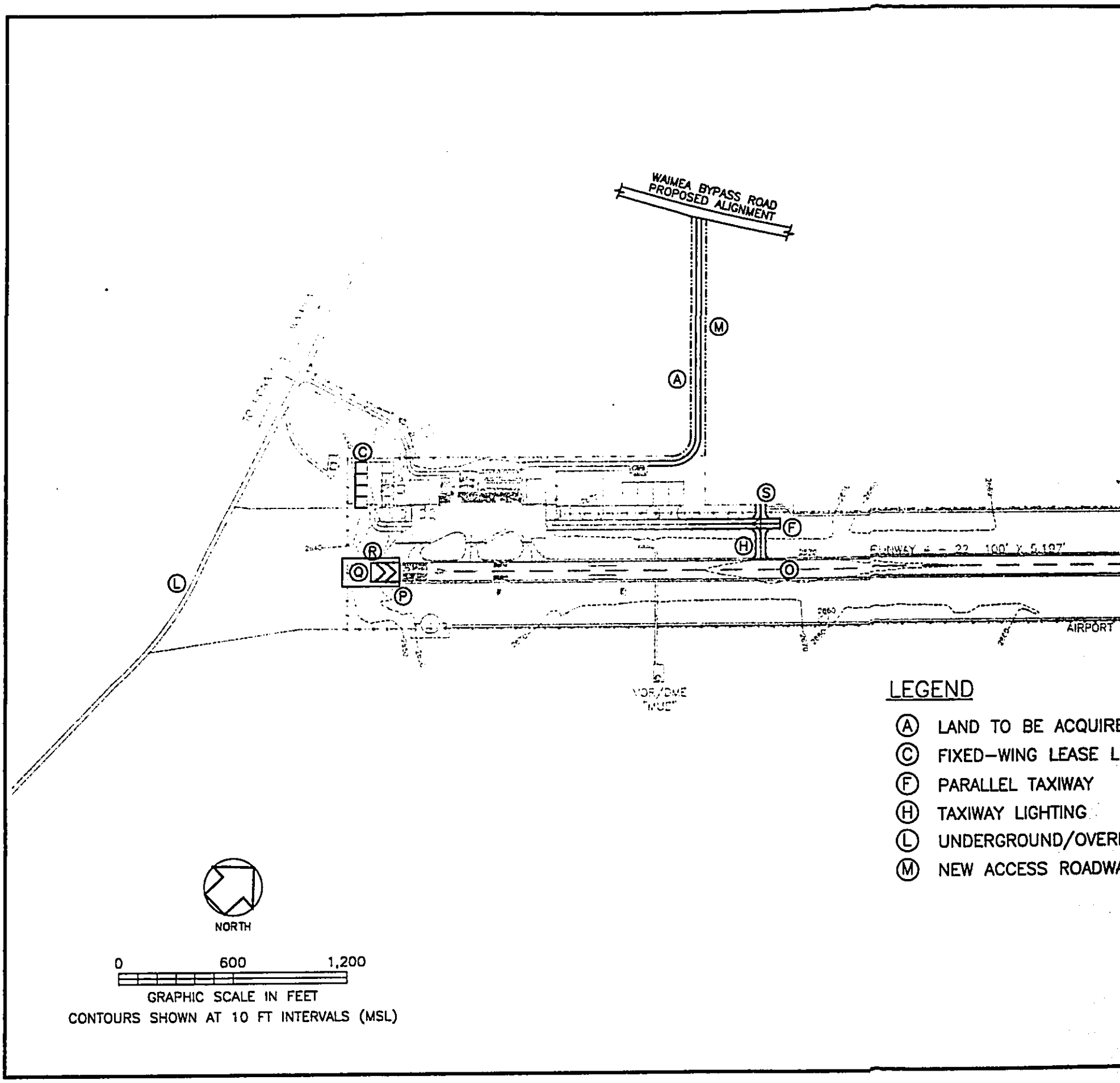

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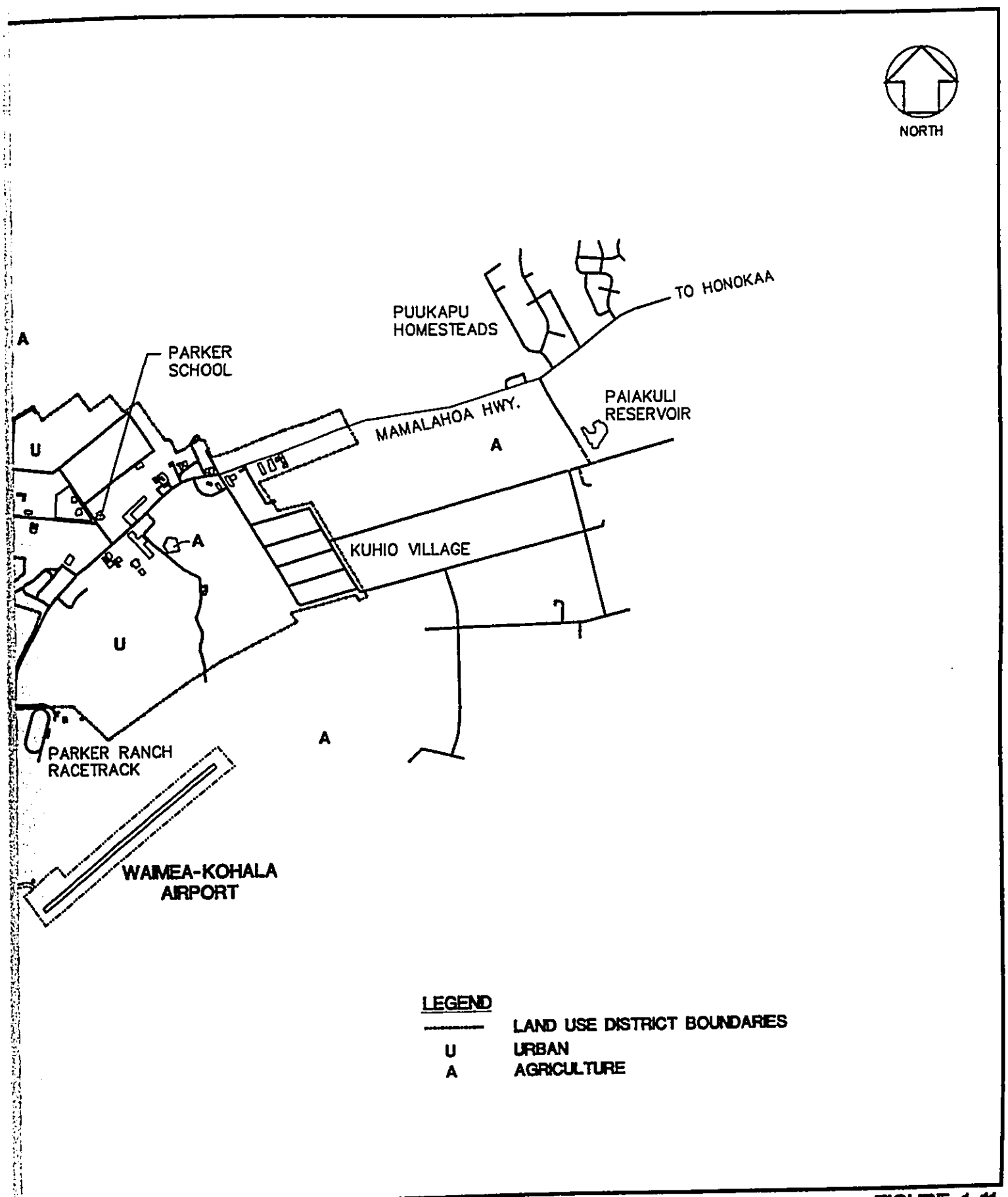

FIGURE 1-11
STATE OF HAWAII LAND USE DESIGNATIONS

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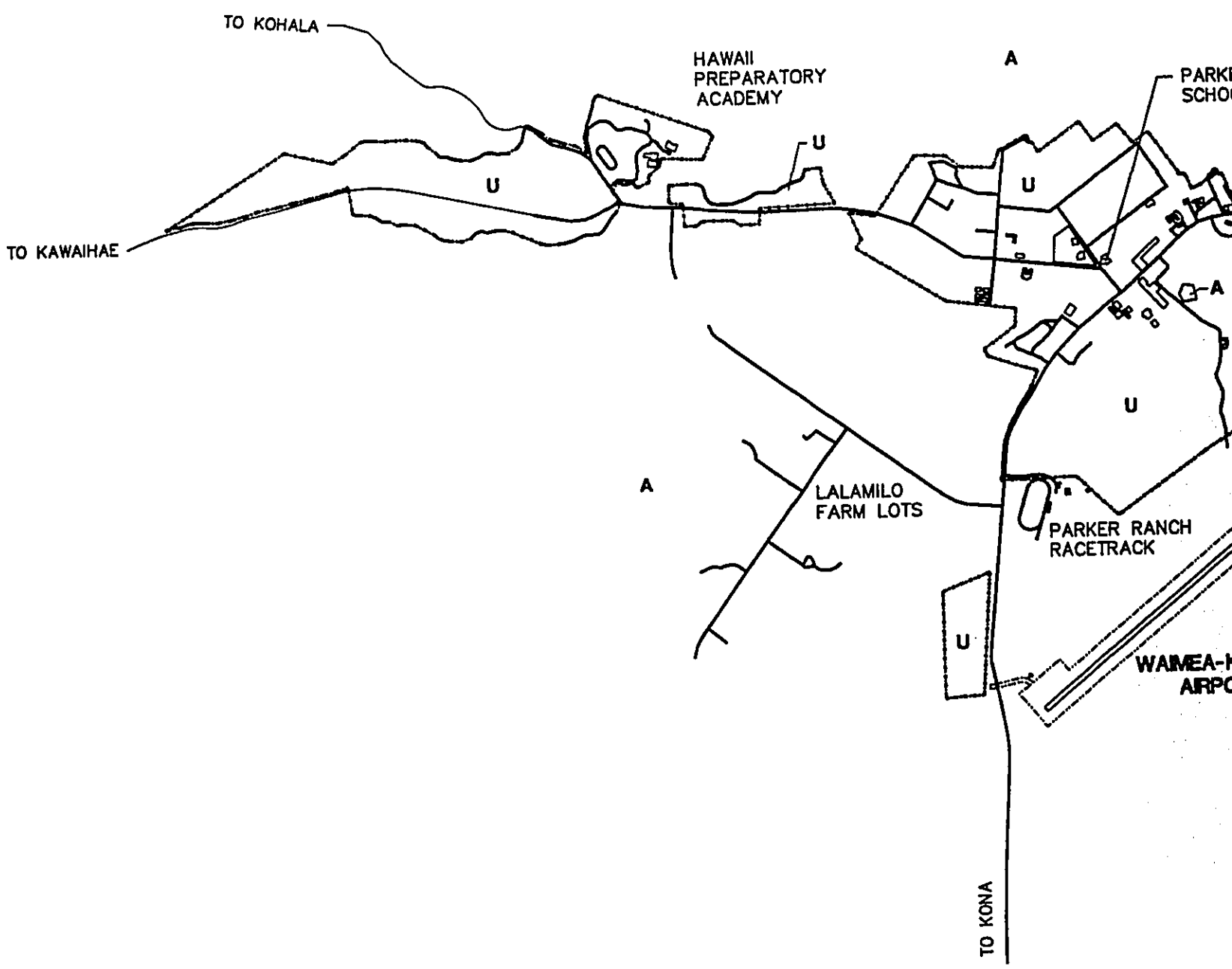

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land was acquired by the State of Hawaii, from Richard Smart and transferred to the HDOT-AIR's predecessor, the Hawaii Aeronautics Commission. However, 40.682 acres of the Airport were originally from the Department of Hawaiian Homes Lands (DHHL) and shown on Figure 1-12. The 1984 Tri-partite Land Exchange, a land transfer between the Department of Land and Natural Resources (DLNR), DHHL, and DOT, included the Airport's DHHL lands. The 40.682 acres were owned by DHHL prior to statehood and were considered to be ceded lands under Section 5(b) of the Admissions Act. Under the 1984 Tri-partite agreement, these lands were part of a land exchange for lands at Molokai Airport, Hilo International Airport (previously known as General Lyman Field), and Kahului Airport. Some of these lands involved in the land exchange were Section 5(f) lands. In addition, as part of the Tri-partite agreement, HDOT-AIR paid $6.0 million to DLNR to account for the short-fall in the appraised value of the lands. Therefore, there are undivided interests for portions of the 40.682 acres as Section 5(b), Section 5(f) and fee lands.

In addition, when the land for the "new" Kamuela Airport was purchased from Richard Smart, the Territory of Hawaii also purchased an avigation easement over portions of Hawaiian Home Lands in Puukapu. The lands affected by the avigation easement are shown on Tax Maps and are reproduced in Figures 1-13 and 1-14.

Table 1-8
GOVERNOR'S EXECUTIVE ORDERS

GOVERNOR'S EXECUTIVE ORDER	DATE	PURPOSE
1744	July 9, 1956	Kamuela Airport Rotating Beacon Site, addition of 0.72 acres.
1789	May 21, 1957	Control and management of Kamuela Airport to the Hawaii Aeronautics Commission, Territory of Hawaii, addition of 89.718 acres.
1859	September 2, 1958	Set aside land for Avigation Beacon Lights sites, two (2) sites (Sites B & C) at 1,600 sq. ft. each. Avigation Beacon Light, Site A included on map only (1,600 sq. ft.).
3183	March 18, 1983	Cancellation of Governor's Executive Order No. 1859. Avigation Beacon Light Sites, release of three (3) sites (Sites A, B, & C) at 1,600 sq. ft. each (total 0.11 acres).

The Airport lands are currently designated "Agriculture" by the State Land Use Commission and "Industrial" in the County of Hawaii General Plan, *Land Use Pattern Allocation Guide* (Section 6.0, Reference 5). The Airport is zoned by the County of Hawaii as "Agricultural 40 acres (A-40a)." The use of Agriculturally zoned land is permitted with the issuance of a Special Permit by the County of Hawaii, Planning Commission. However, following acquisition of the Parker Ranch lands, HDOT-AIR will petition the LUC to redesignate the Airport lands to "Urban" to conform to existing and planned usage.

In addition to the State Land Use Law, land use within Hawaii County is regulated by the County's General Plan and the Zoning Code. The General Plan was adopted in 1989 and amended by Ordinance 89-142. The General Plan is a long-range, comprehensive document that serves as a guide to the overall future development of the County and is currently being updated. The Hawaii County General Plan states: "*The State Department of Transportation should continue the use of the Waimea-Kohala airport as an inter-island facility serving North and South Kohala and Hamakua and should improve existing facilities to handle inter-island aircraft at maximum load capacity.*" The County's Zoning Code (Section 6.0, Reference 6) provides detailed development and use standards for land within the regulatory control of the County. The purpose of zoning is to provide or promote the health, safety, morals and general welfare of the community.

Land use planning by the State and County are coordinated with HDOT-AIR to ensure compatibility with current and forecast aircraft operations.

Current and future developments near the Airport are shown on Figure 1-15. Currently, neighboring lands are primarily used for agricultural purposes. The Hawaii Island Humane Society, Kohala Section has a facility southwest of the Airport Terminal. At the intersection of the Airport Access Road, and Mamalahoa Highway, there is an Urban tract of land slated for industrial uses. An automotive repair business is the current tenant of the northwest section of this tract.

The Parker Ranch Foundation Trust is the largest landowner in the Hamakua, South Kohala and North Kohala Districts. Their long term plan, called "Parker Ranch 2020," includes 729 residential units, commercial and industrial facilities, and parks and recreational facilities. The Parker School has an educational facility planned near the Airport as shown on Figure 1-15. The type of educational facility is currently under study, and is anticipated to be constructed within the next five years. Other large landowners include: Chalon International of Hawaii, Inc., with 19,000 acres of land in the North Kohala District; the Kamehameha Schools/Bernice Pauahi Bishop Estate, which owns the Waipio Valley area in the Hamakua District; the State of Hawaii; and the Department of Hawaiian Home Lands.

The State of Hawaii, Department of Transportation, Highways Division is presently considering the Waimea Bypass Road from Mud Lane to Kamuela Race Track which will bypass Waimea town (see Figure 1-15). Three alternate routes are being considered and will be evaluated by the HDOT-AIR for compatibility with aircraft operations at the airport.

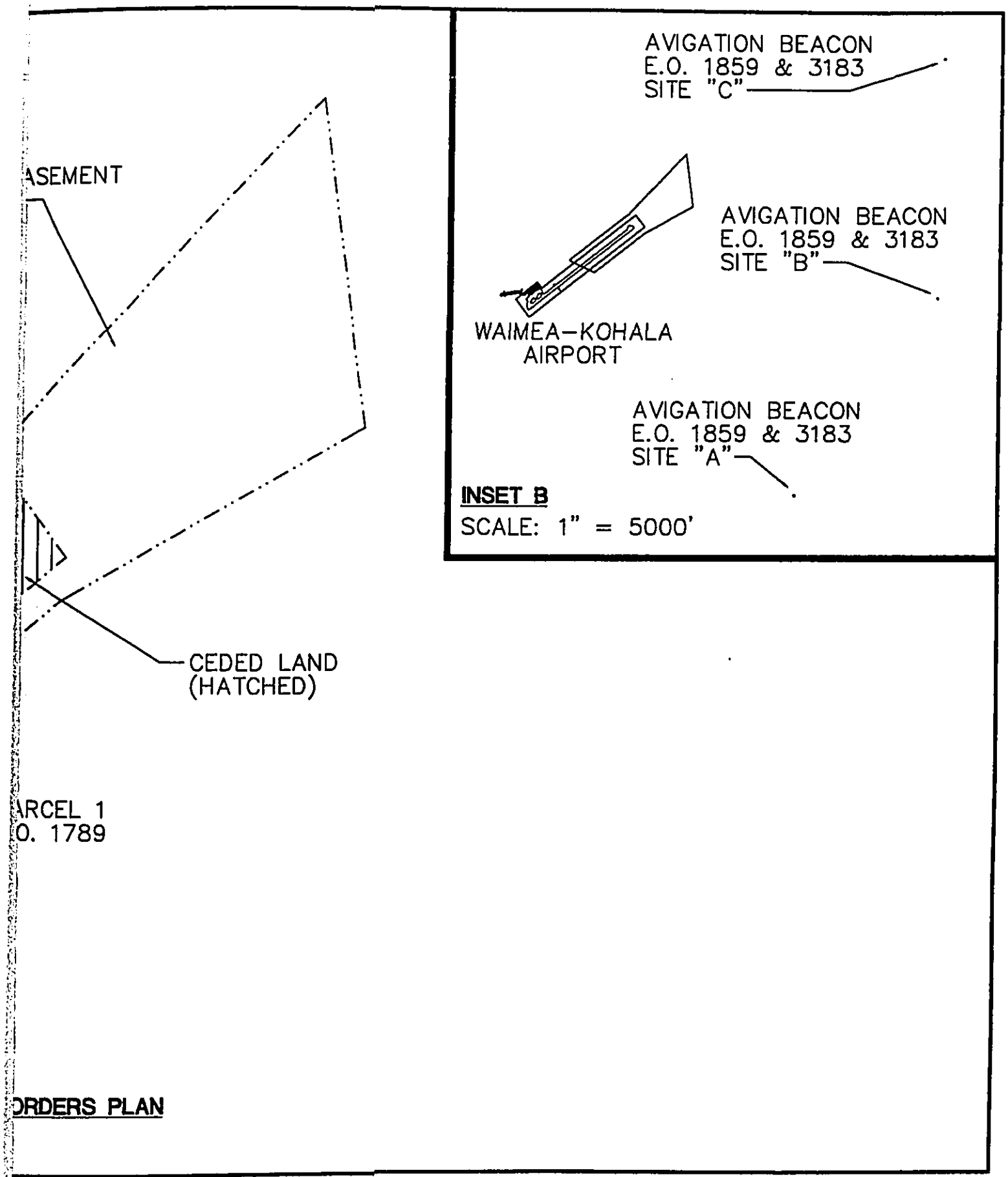

FIGURE 1-12
GOVERNOR'S EXECUTIVE ORDERS BOUNDARIES

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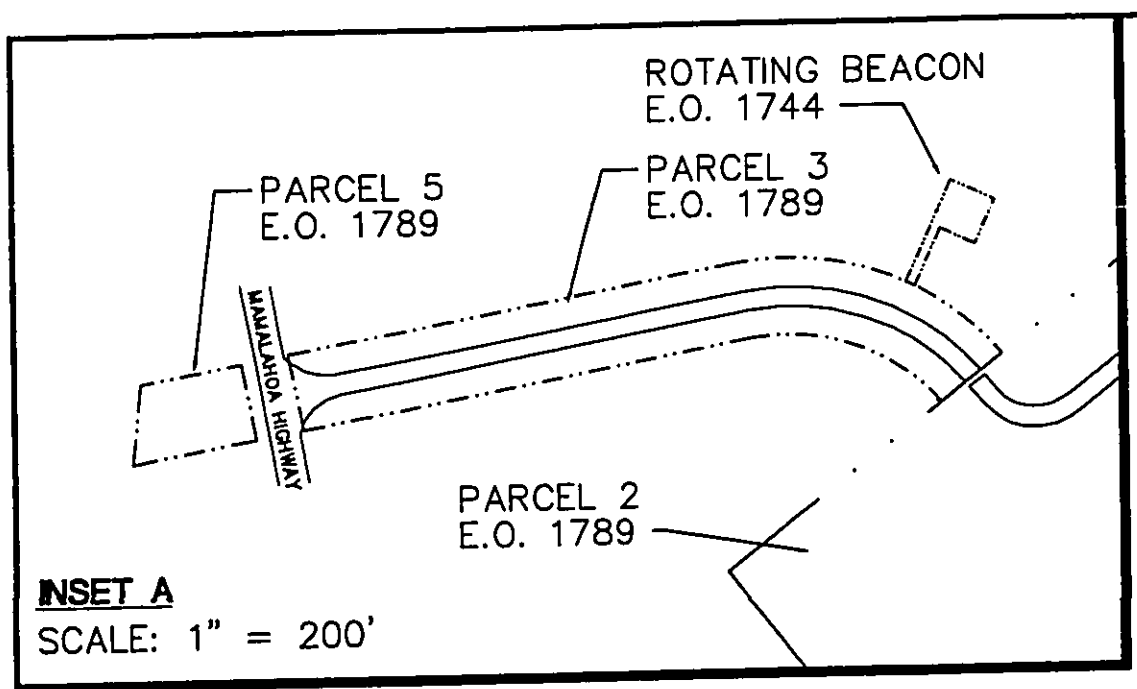
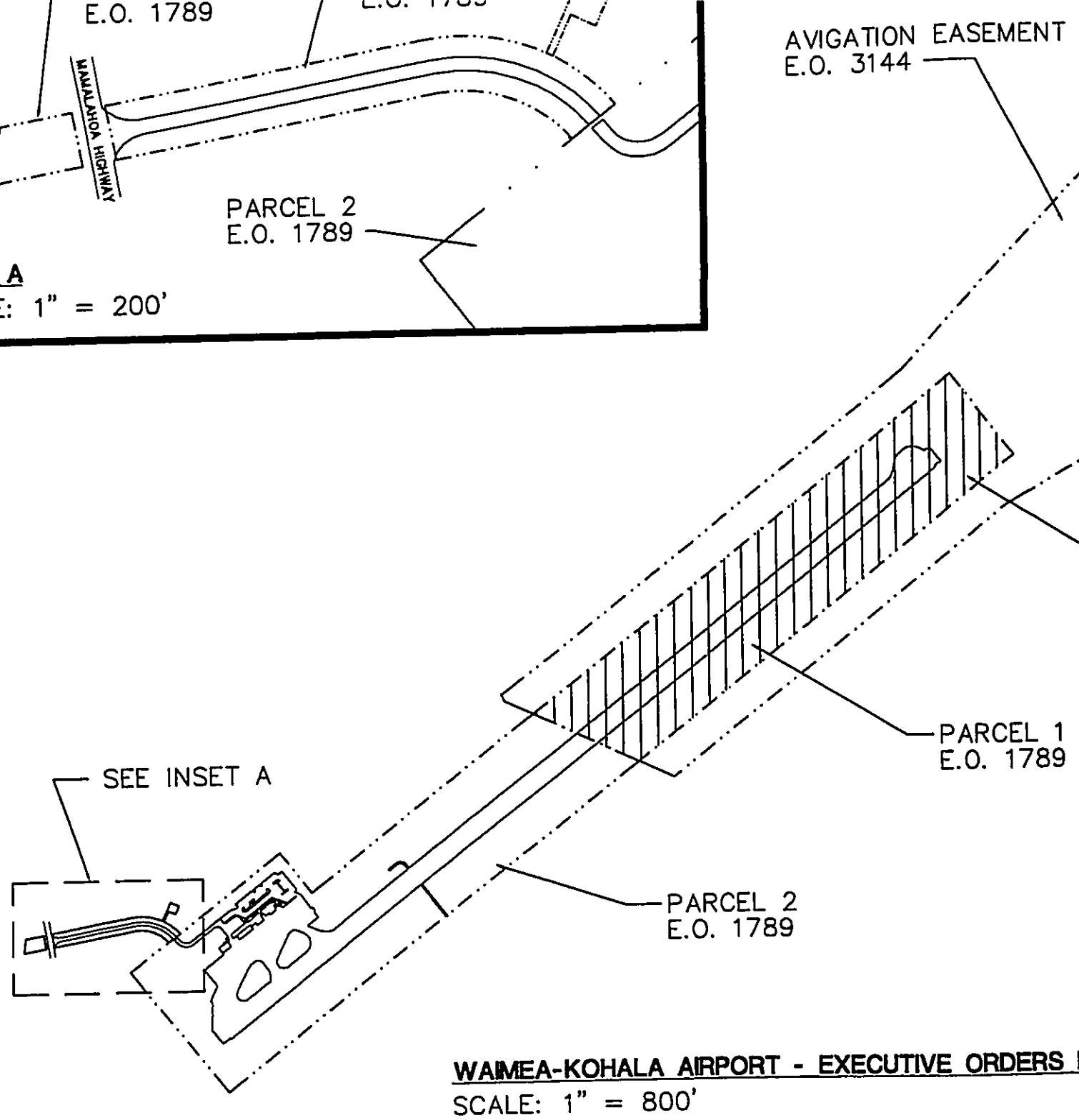


INSET A
SCALE: 1" = 200'



WAIMEA-KOHALA AIRPORT - EXECUTIVE ORDERS PLAN
SCALE: 1" = 800'

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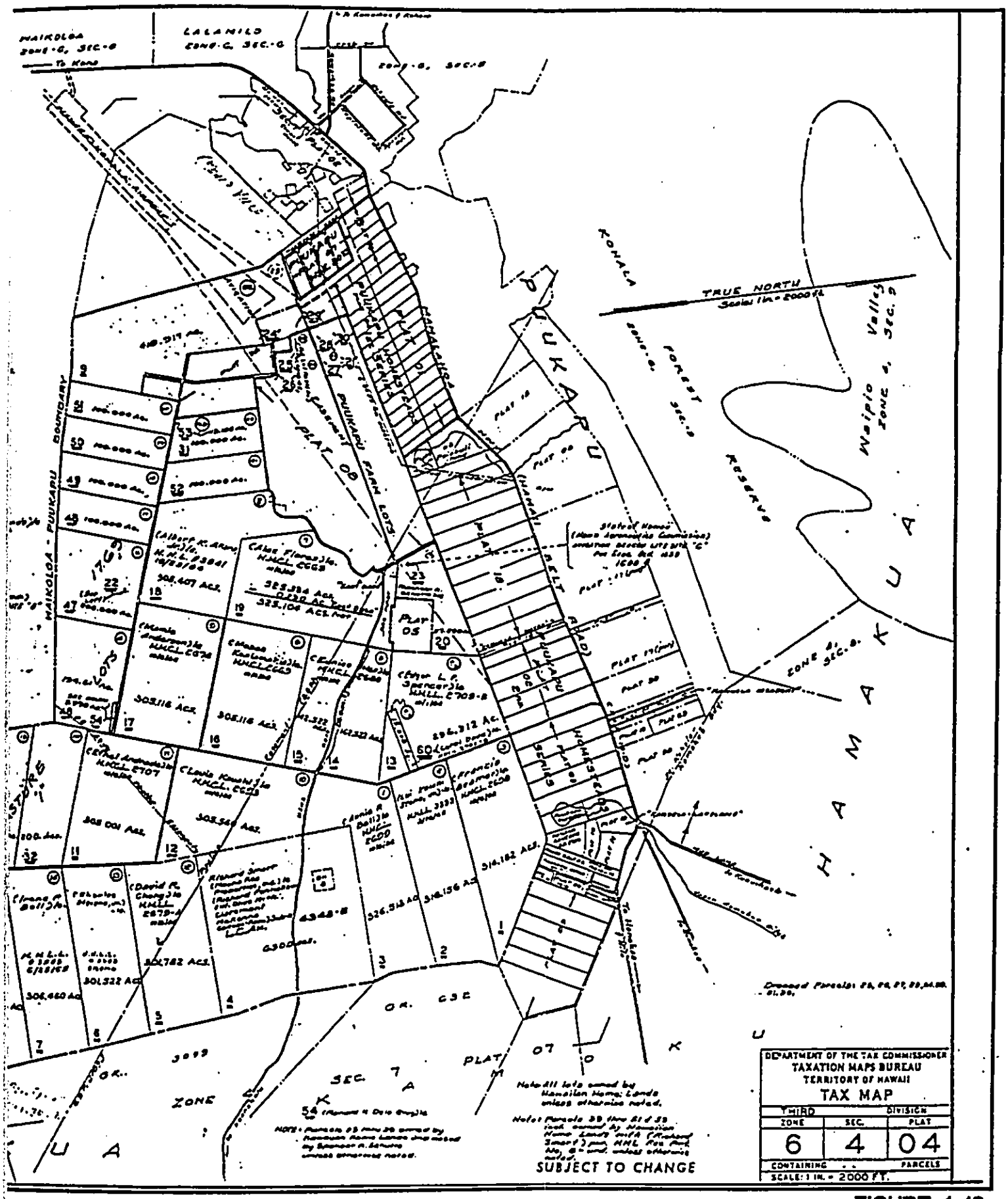

FIGURE 1-13
TAX MAP KEY - 6:4:04

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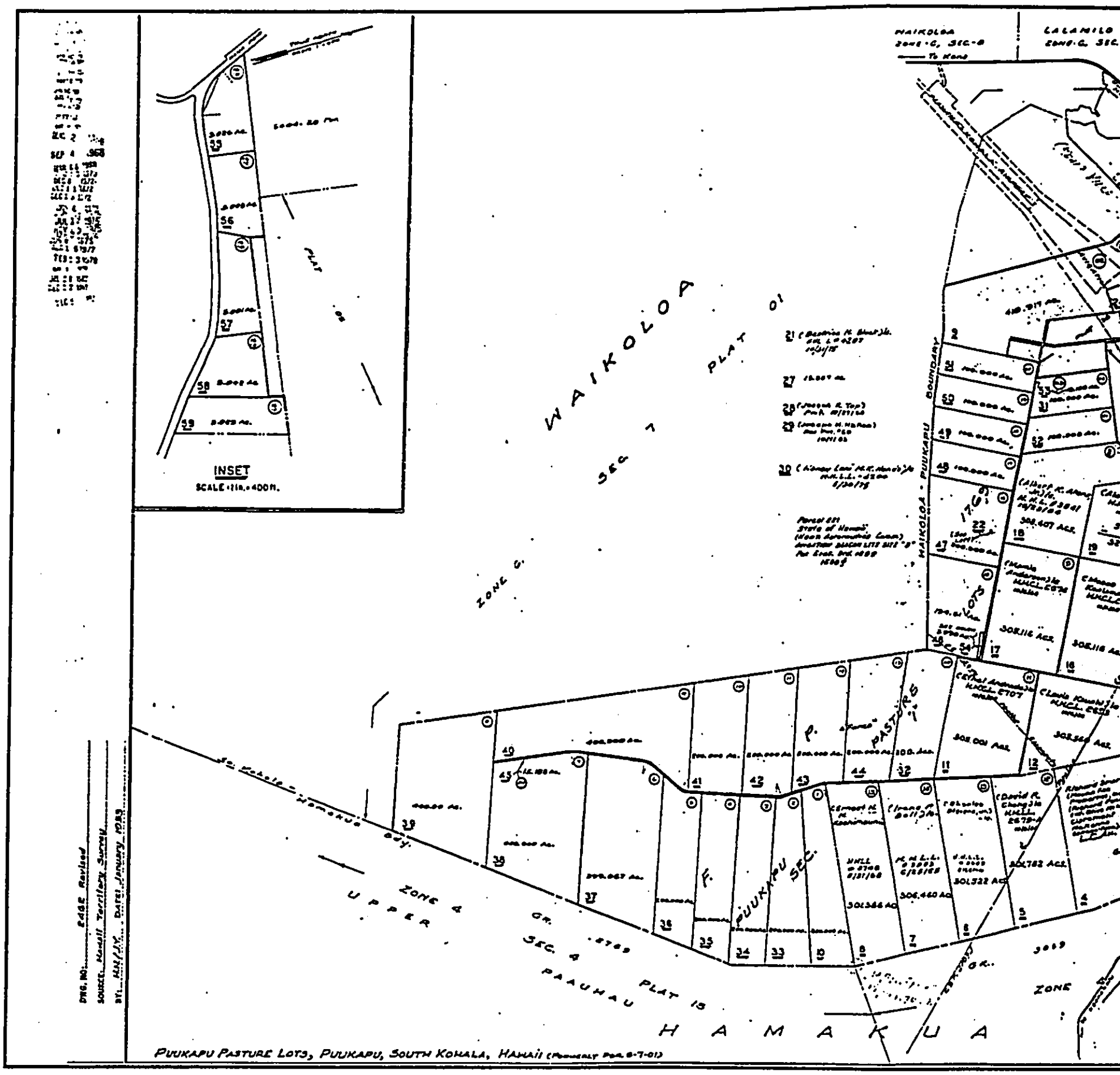

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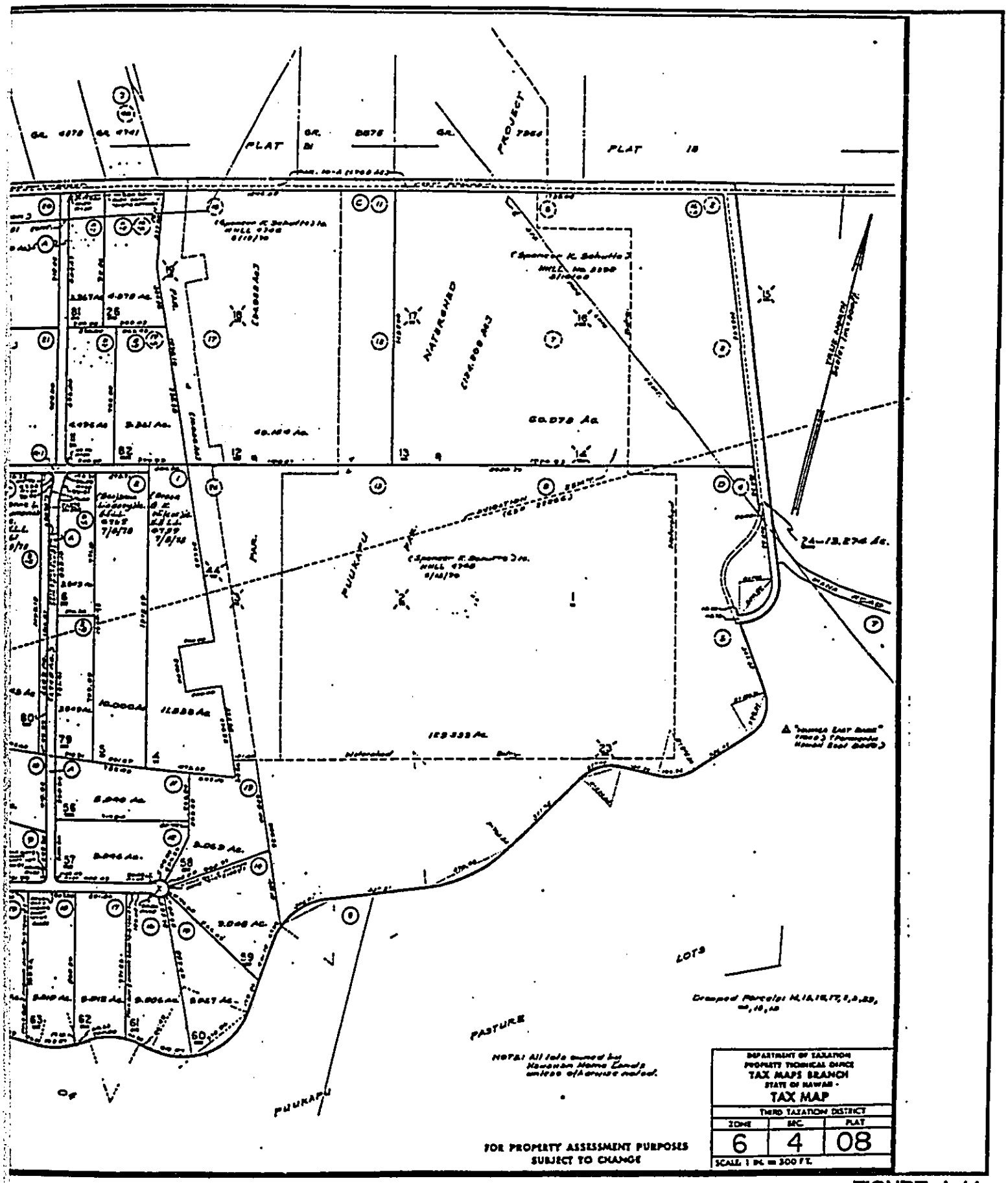

FIGURE 1-14
TAX MAP KEY - 6:4:08

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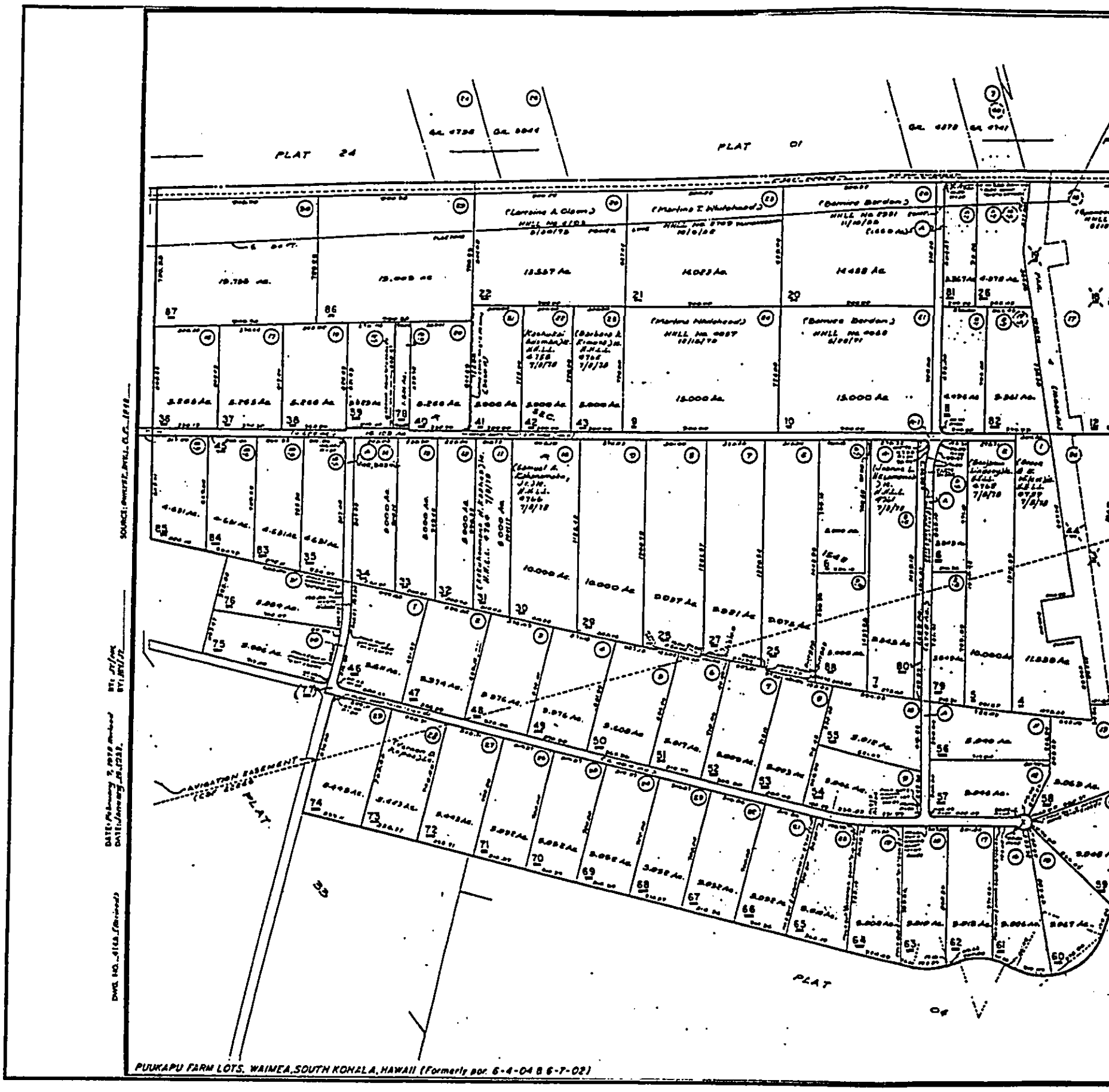

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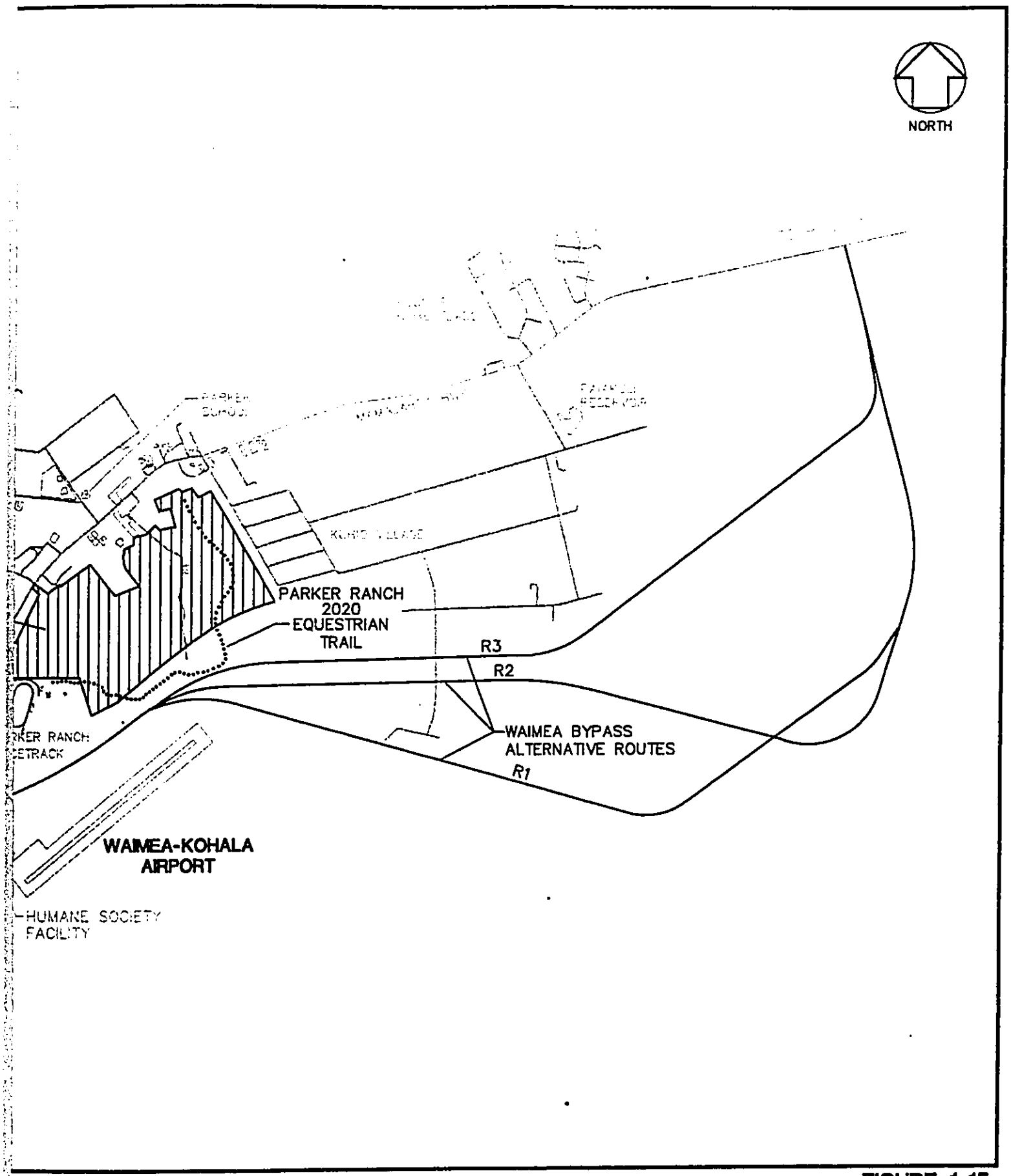

FIGURE 1-15
FUTURE OFF-AIRPORT DEVELOPMENTS

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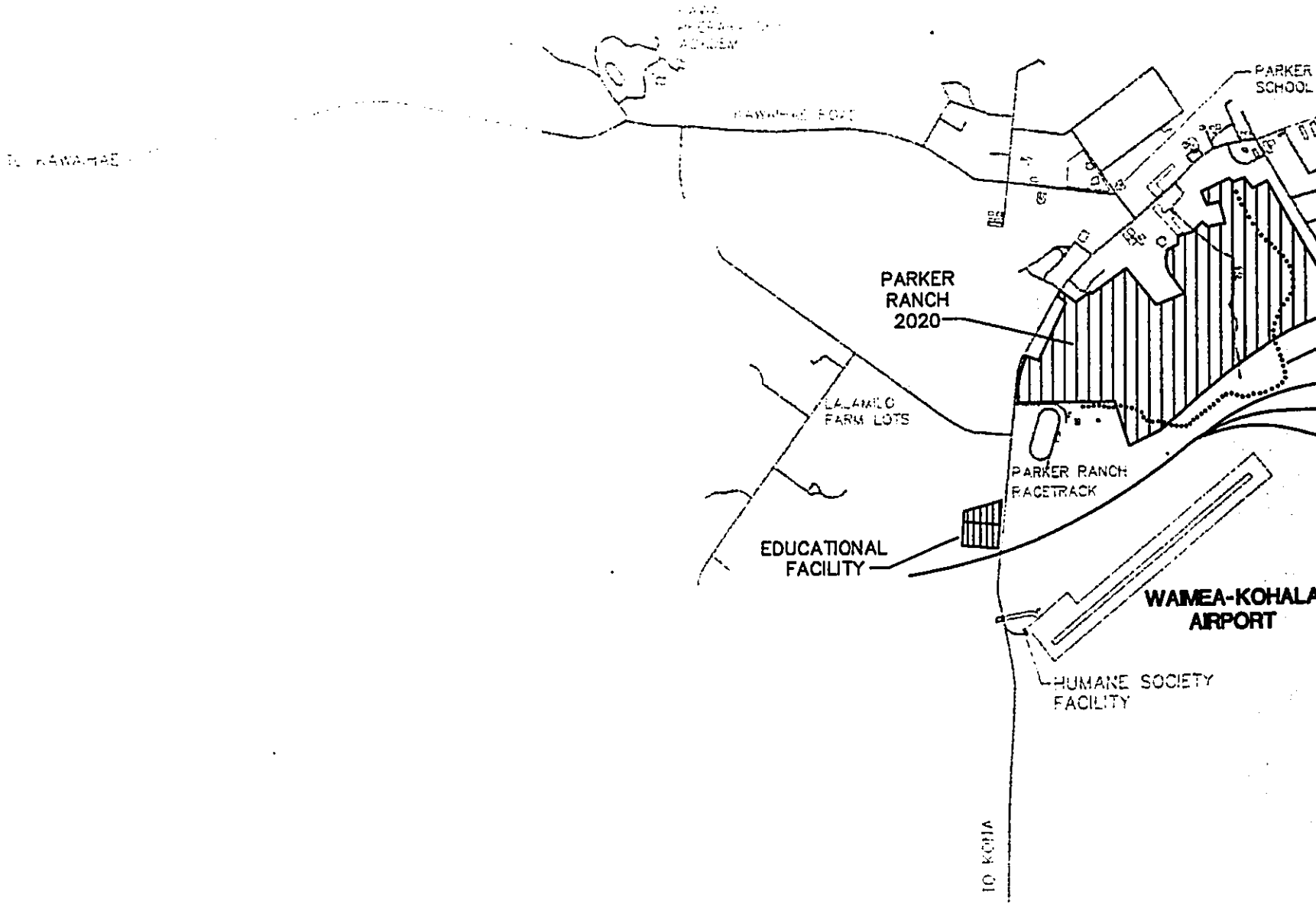

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1.7 PERMITS AND APPROVALS

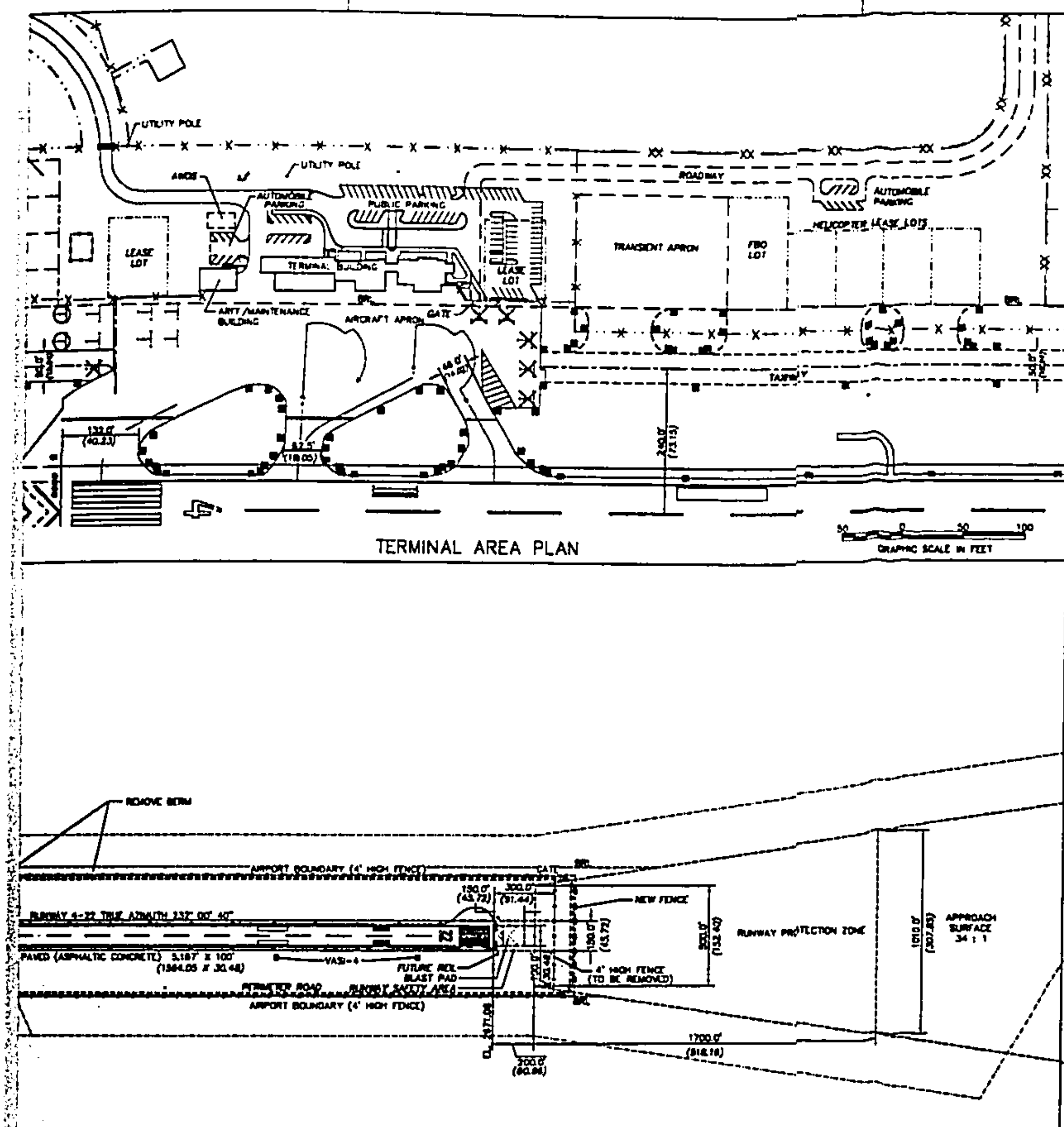
A change of the State land use designation from "Agriculture" to "Urban" will be requested from the State Land Use Commission following acquisition of the 20.5 acres of Parker Ranch lands. In addition, lands to be acquired are zoned A-40a and the Hawaii County zoning will need to be changed to "General Industrial" or "Limited Industrial." As the Hawaii County General Plan designates current Airport lands Industrial, the General Plan will not need to be amended.

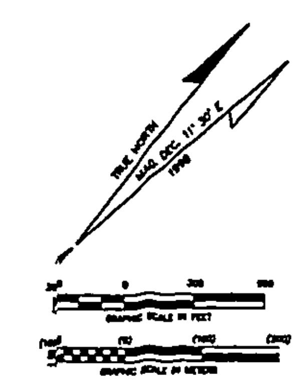
The Airport Layout Plan (ALP) is a required Federal Aviation Administration (FAA) planning document and is a public document. It depicts existing facilities and proposed improvements and is prepared in accordance with FAA Advisory Circular 150/5300-13 and the HDOT-AIR guidelines. The ALP was prepared (see Figure 1-16) as part of the Airport Master Plan, and will be submitted to the FAA by the HDOT-AIR for approval.

The Hawaii State Department of Health (DOH) has adopted regulations limiting construction of new cesspools, and is encouraging owners to convert to other means of sanitary sewage treatment and disposal. The County Department of Public Works reviews plans for new construction and modifications to existing structures and through their review process enforces the DOH regulations. There is no regulation requiring cesspool owners to convert their systems and the existing cesspool may continue in use. The proposed septic tank and leach field system design will be submitted to DOH for approval prior to construction. In addition, DOH will review and approve all State buildings for compliance with the applicable accessibility requirements of the Americans with Disabilities Act.

Airport improvements will be required to conform to current State laws. The design process usually allows for courtesy review by County authorities. Typically, proposed improvements on Airport property would be subject to County review for conformance to building safety, zoning and grading ordinances. Consolidation or subdivision of lands are also subject to County review.

Hangars and other improvements made by lease lot tenants will require County building and grading permits and HDOT-AIR approval. No other permits or approvals are required for the proposed improvements.





ULTIMATE	RUNWAY DATA		EXISTING		ULTIMATE	
SAME	RUNWAY		4	22	4	22
SAME	RUNWAY END COORDINATES	LATITUDE	19° 59' 46.86"	20° 00' 20.38"	SAME	SAME
SAME		LONGITUDE	155° 40' 28.83"	155° 39' 43.72"	SAME	SAME
SAME	APPROACH SURFACES (FAR PART 77)		34:1	34:1	SAME	SAME
SEG. CIRCLE	APPROACH LIGHTING AIDS		VASI-4	REIL, VASI-4	REIL, VASI-4	SAME
WIND CONE	RUNWAY SAFETY AREAS	WIDTH	NONE	NONE	150'	150'
ROTATING BCN.	LENGTH BEYOND RUNWAY END		NONE	NONE	300'	300'
VASI-4, REIL	NAVIGATIONAL AND VISUAL AIDS		NONE	NONE	VOR/DME	VOR/DME
MIRL, MITL	EFFECTIVE GRADIENT (%)		0.18		SAME	
111	WIND COVERAGE (%) (12 MPH/10.5 KNOTS)		78		SAME	
	INSTRUMENT RUNWAY		NONE		NON-PRECISION +3/4	
	RUNWAY LIGHTING		MIRL, MITL		SAME	
	RUNWAY MARKING		NON-PRECISION	NON-PRECISION	SAME	
	RUNWAY SURFACE		ASPHALT		SAME	
	PAVEMENT STRENGTH (IN 1,000 LBS.)		(S) 55 (D) 80 (DT) 150		SAME	
	RUNWAY GROOVING		NO		SAME	
	RUNWAY DIMENSIONS		5,187' X 100'		SAME	
	AIRPORT CLASSIFICATION		TRANSPORT COMMERCIAL SERVICE OTHER SHORT HAUL (12,500 lbs)		SAME	
	AIRCRAFT DESIGN GROUP		II		SAME	
	DESIGN AIRCRAFT		SHORT BROTHERS 360		BIZJET, e.g. DASSAULT FALCON 900	

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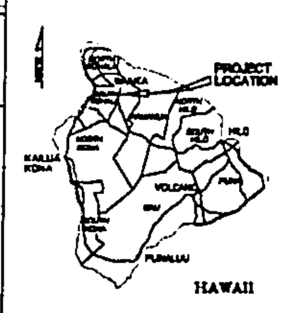
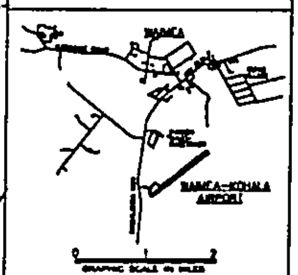
DSGN.	DRWN.	CHKD.	APPD.

KEY PLAN / NOTES :



LOCATION MAP
NO SCALE



VICINITY MAP

NO.	DATE	REVISIONS

PROJECT TITLE :

WAIMEA – KOHALA AIRPORT
WAIMEA, HAWAII
AIRPORT LAYOUT PLAN

PROJECT NO. :

AH3011-02

SHEET TITLE :

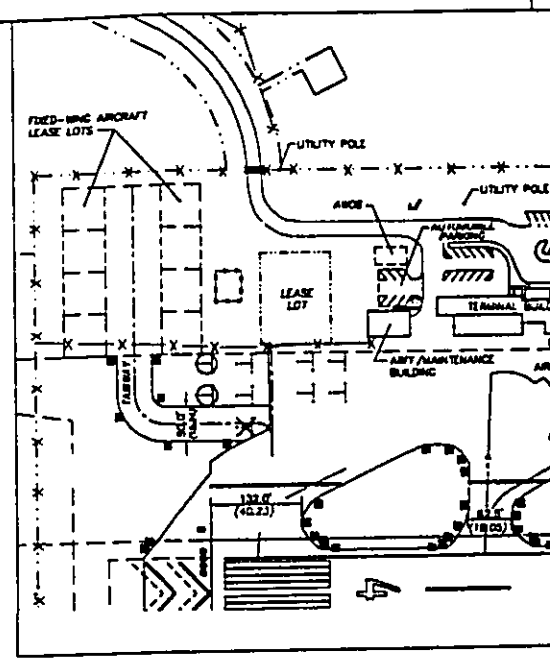
AIRFIELD PLAN

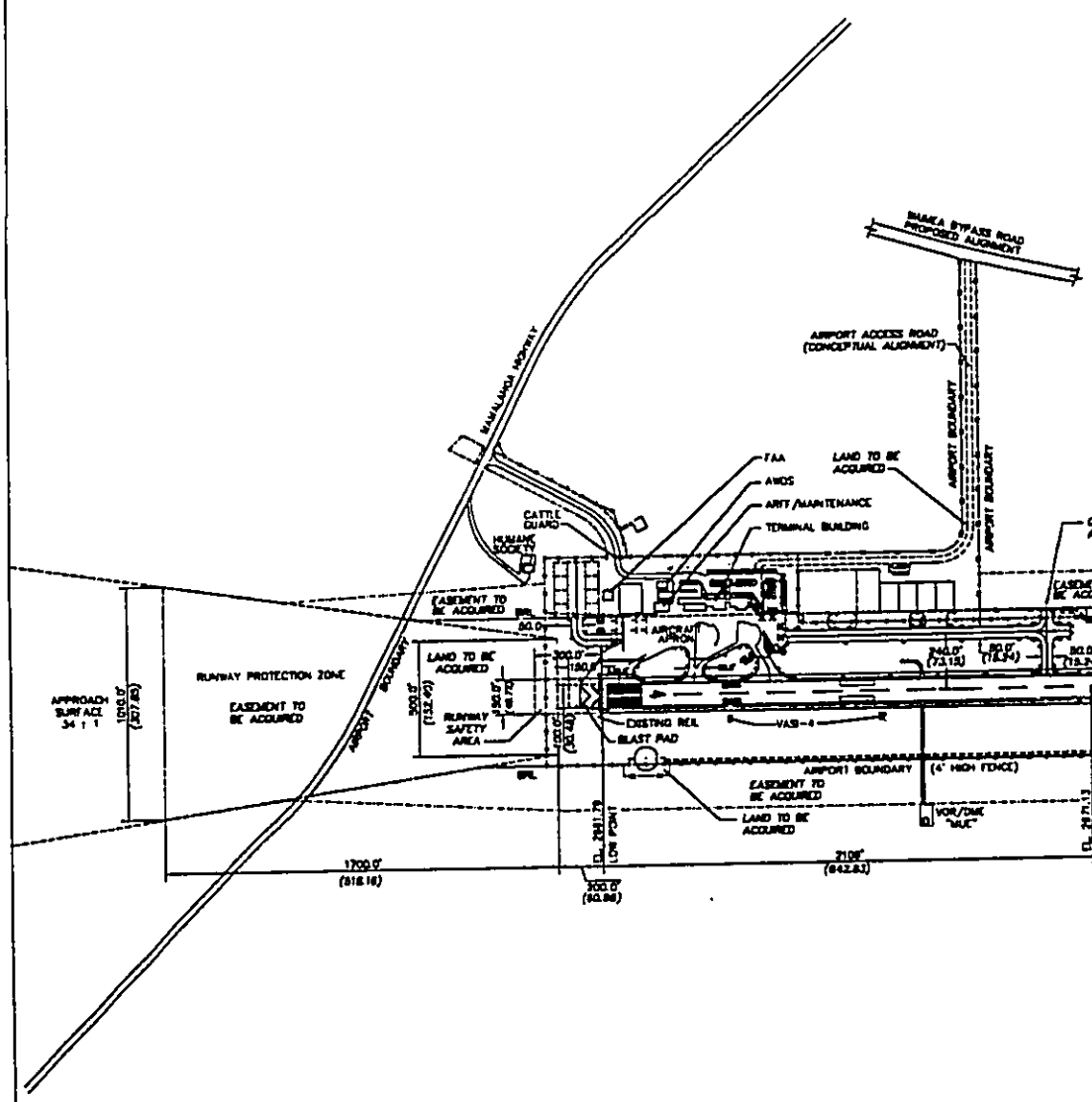
DATE: OCTOBER, 1999

DWG. NO.:

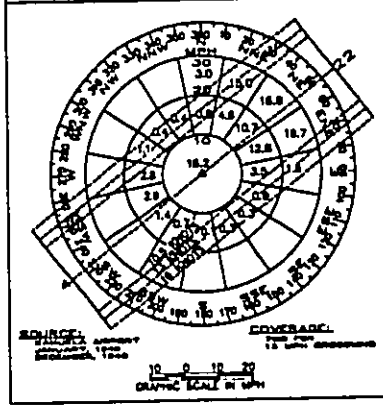
FIGURE 1-16

AIRFIELD PLAN





WIND ROSE



LEGEND

	EXISTING	ULTIMATE
AIRPORT BOUNDARY		
BUILDING RESTRICTION LINE	BRL	BRL
AVIGATION EASEMENT		
BUILDINGS		
BUILDINGS TO BE REMOVED OR RELOCATED		
FACILITIES (RUNWAYS, TAXIWAYS, APRONS, ETC.)		
APPROACH SURFACE		
FENCE LINE		
GROUND CONTOURS		
REILS		
THRESHOLD LIGHTS		
RUNWAY LIGHTS		
TAXIWAY LIGHTS		
TIEDOWN		
TIEDOWN TO BE REMOVED		
VASI		
AIRPORT REFERENCE POINT		
TREES		

AIRPORT DATA

		EXISTING	ULTIMATE
AIRPORT REFERENCE POINT	LAT.	20° 00' 4.74"	SAME
(ARP) COORDINATES	LONG	155° 40' 5.19"	SAME
NORMAL MAXIMUM TEMPERATURE - HOTTEST MONTH		87°	SAME
AIRPORT ELEVATION		2671.33'	SAME
AIRPORT AND TERMINAL NAVAGATIONAL AIDS		SEG. CIRCLE AND WIND CONE	SEG. CIRCLE AND WIND CONE
		ROTATING BCN.	ROTATING BCN.
		VASI-4, REIL	VASI-4, REIL
		MIRL	MIRL, MITL
AIRPORT AREA (ACRES)		80	111

RUNWAY DATA

RUNWAY	
RUNWAY END COORDINATES	LATITUDE
	LONGITUDE
APPROACH SURFACES (FAR PART 77)	
APPROACH LIGHTING AIDS	
RUNWAY SAFETY AREAS	WIDTH
LENGTH BEYOND RUNWAY END	
NAVIGATIONAL AND VISUAL AIDS	
EFFECTIVE GRADIENT (%)	
WIND COVERAGE (%) (13 MPH/10.9 KNOTS)	
INSTRUMENT RUNWAY	
RUNWAY LIGHTING	
RUNWAY MARKING	
RUNWAY SURFACE	
PAVEMENT STRENGTH (IN 1,000 LBS.)	
RUNWAY GROOVING	
RUNWAY DIMENSIONS	
AIRPORT CLASSIFICATION	
AIRCRAFT DESIGN GROUP	
DESIGN AIRCRAFT	

SECTION 2.0
ALTERNATIVES

2.1 NO-ACTION ALTERNATIVE

This alternative assumes no action will be taken to modify or improve facilities at the Waimea-Kohala Airport. Immediate airfield deficiencies, operational limitations, and actions proposed to enable the future expansion of the Airport would not occur. The Airport would not meet existing or forecast future demand. Though individual projects could be advanced in response to immediate need, to do so would impede progress and offers the possibility of haphazard and uncoordinated development.

In the No-action alternative, existing airfield deficiencies would not be remedied, although these may still be implemented as single projects. Identified airfield deficiencies include:

- removal of on-airport obstructions (removal of the berm and relocation of the airport fence);
- taxiway lighting;
- marking overhead lines within the proposed Runway Protection Zone;
- insufficient runway safety areas beyond the runway ends; and
- no airfield perimeter roadway.

The No-action alternative could prevent removal of certain Airport capacity limitations by not allowing for the implementation of the proposed improvements in the Master Plan. The proposed improvements which are related to reducing Airport capacity limitations and providing for future expansion include:

- construction of the parallel taxiway up to the end of the helicopter lease lots;
- land acquisition for helicopter lease lots and transient apron, and construction of the transient apron;
- construction of the fixed-wing aircraft parking apron, lease lots and taxi lane; and
- construction of the FBO lease lot and helicopter lease lots.

2.2 DEVELOPMENT ALTERNATIVES

Alternative development concepts were advanced and considered in the Master Plan. Two alternatives were proposed for the airfield, and three each for the Terminal Area and Terminal Buildings. The alternatives were formulated in response to actual and perceived needs of present and future users, Federal Aviation Regulation (FAR) and safety concerns, enhancement of the functional aspects of airport operations, and user and community input. Alternatives advanced in the Master Plan are presented below.

2.2.1 Airfield Alternatives

Both Airfield Alternatives provide the following basic safety and operational improvements:

- installation of an Automated Weather Observing System (AWOS) to allow the initiation of the non-precision instrument approach procedures;
- removal of obstructions on the airport;
- construction of Runway Safety Areas beyond the runway ends in accordance with *Advisory Circular AC 150/5300-13* (FAA 1997);
- construction of blast pads on both runway ends;
- installation of Runway End Indicator Lights (REILS) on Runway 4;
- installation of Distance-to-go Markers along the runway;
- removal of the berm and filling the depression on the northwest side of the runway;
- relocation of the fence on the Runway 22 end to the Airport property line;
- placement of markers on the overhead lines within the Runway Protection Zone to aid with visibility; and
- provide a perimeter road around the airport.

Airfield Alternative No. 1, shown in Figure 2-1, is based on the existing runway location, length and width. In addition to the proposed improvements listed above, this alternative would require fee acquisition of approximately thirteen acres of land from Parker Ranch. Additionally, HDOT-AIR should obtain easements for approximately 43 acres of land from Parker Ranch. The estimated construction cost of Airfield Alternative No.1 is approximately $2.2 million in mid-1998 dollars.

Airfield Alternative No. 2, shown in Figure 2-2, is similar to Airfield Alternative No. 1 but the runway is relocated 150 feet northeast along the present runway alignment, with a runway length of 5,200 feet and the same runway width. Airfield Alternative No. 2 would require fee acquisition of approximately fifteen acres of land from Parker Ranch. Additionally HDOT-AIR should obtain easements for approximately 39 acres of land from Parker Ranch. The estimated construction cost of Airfield Alternative No.2 is approximately $2.1 million in mid-1998 dollars.

Because the proposed improvements for either alternative would be constructed within or immediately adjacent to the existing airfield boundaries, the environmental effects of either alternative evaluated would be minimal. Alternative No. 1 requires the acquisition of two less acres of land than Alternative No. 2 but four more acres for avigation easements. All of the land to be acquired is currently used for pasture. Parker Ranch has indicated their preference for Alternative No. 1.

2.2.2 Terminal Area Alternatives

Three terminal area alternatives were formulated to present development concepts for the aircraft parking apron, automobile parking and access roadways. Each alternative includes new lease lots for a commercial helicopter operator (1 lot) and for a fixed-wing operator (1 lot), which were assigned prior to the completion of the master planning process. Other elements common to the three terminal area alternatives include:

- provision for parking four aircraft (two helicopters and two Design Group II aircraft);
- installation of taxiway edge and apron edge lighting;
- provision of an eight (8) inch water line with fire hydrants; and
- provision for a future leach field and septic system.

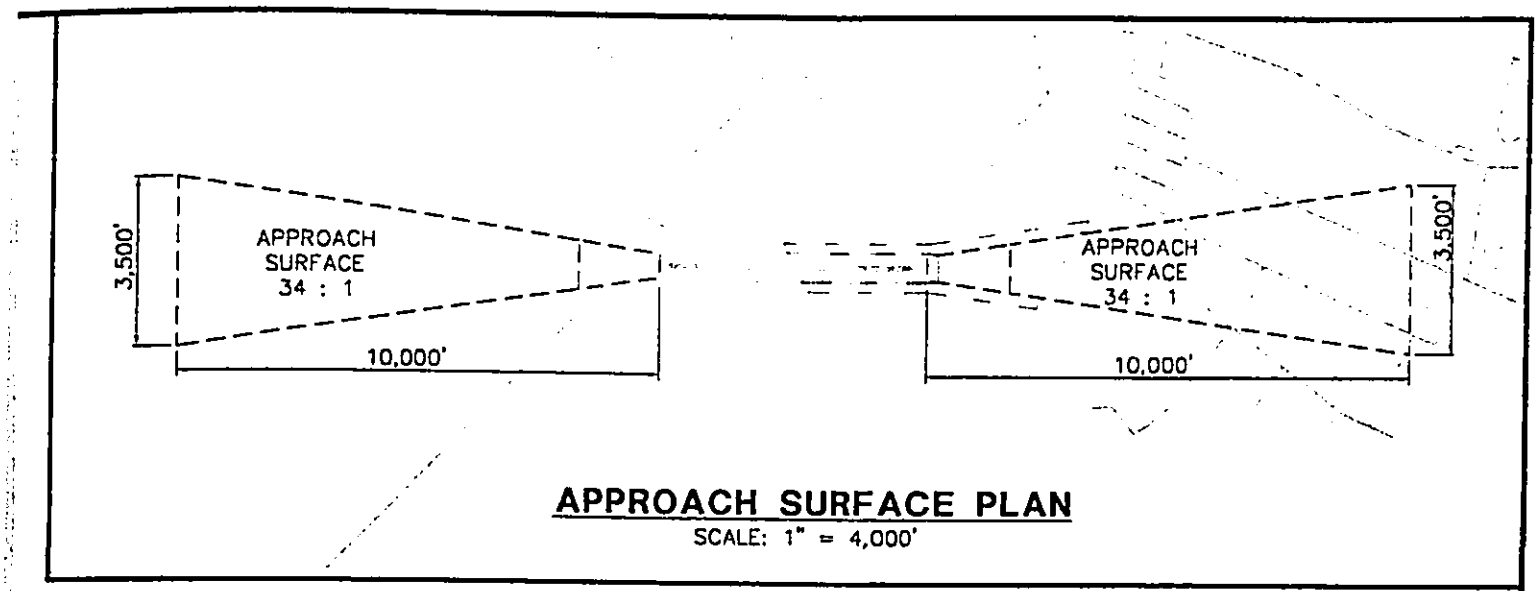
Terminal Area Alternative No. 1 is shown on Figure 2-3. The improvements considered in this alternative are as follows:

- creation of four general aviation lease lots southwest of the terminal building, with hangars to be constructed by lessees, and two tiedowns (total 8 tiedowns and 5 lease lots);
- creation of helicopter lease lots northeast of the terminal building, with hangars to be constructed by the lessees;
- construction of a transient aircraft apron, northeast of the terminal building;
- construction of a partial parallel taxiway to minimize entry/exit taxiways;
- creation of a lease lot adjacent to the transient aircraft apron to serve a Fixed Base Operator;
- fee acquisition of approximately eight acres of land from Parker Ranch;
- construction of additional automobile parking;
- construction of a stub taxiway for access into an airpark; and
- construction of a new access roadway from the proposed Waimea Bypass Road (the final alignment would be determined upon selection of the Waimea Bypass Road final alignment).

The estimated construction cost of Terminal Area Alternative No. 1 improvements is approximately $2.7 million (in mid-1998 dollars).

Terminal Area Alternative No. 2 is shown on Figure 2-4. The improvements considered in this alternative are as follows:

- creation of eight general aviation lease lots northeast of the terminal building (total of 4 tiedowns and 9 lease lots);



APPROACH SURFACE PLAN
SCALE: 1" = 4,000'

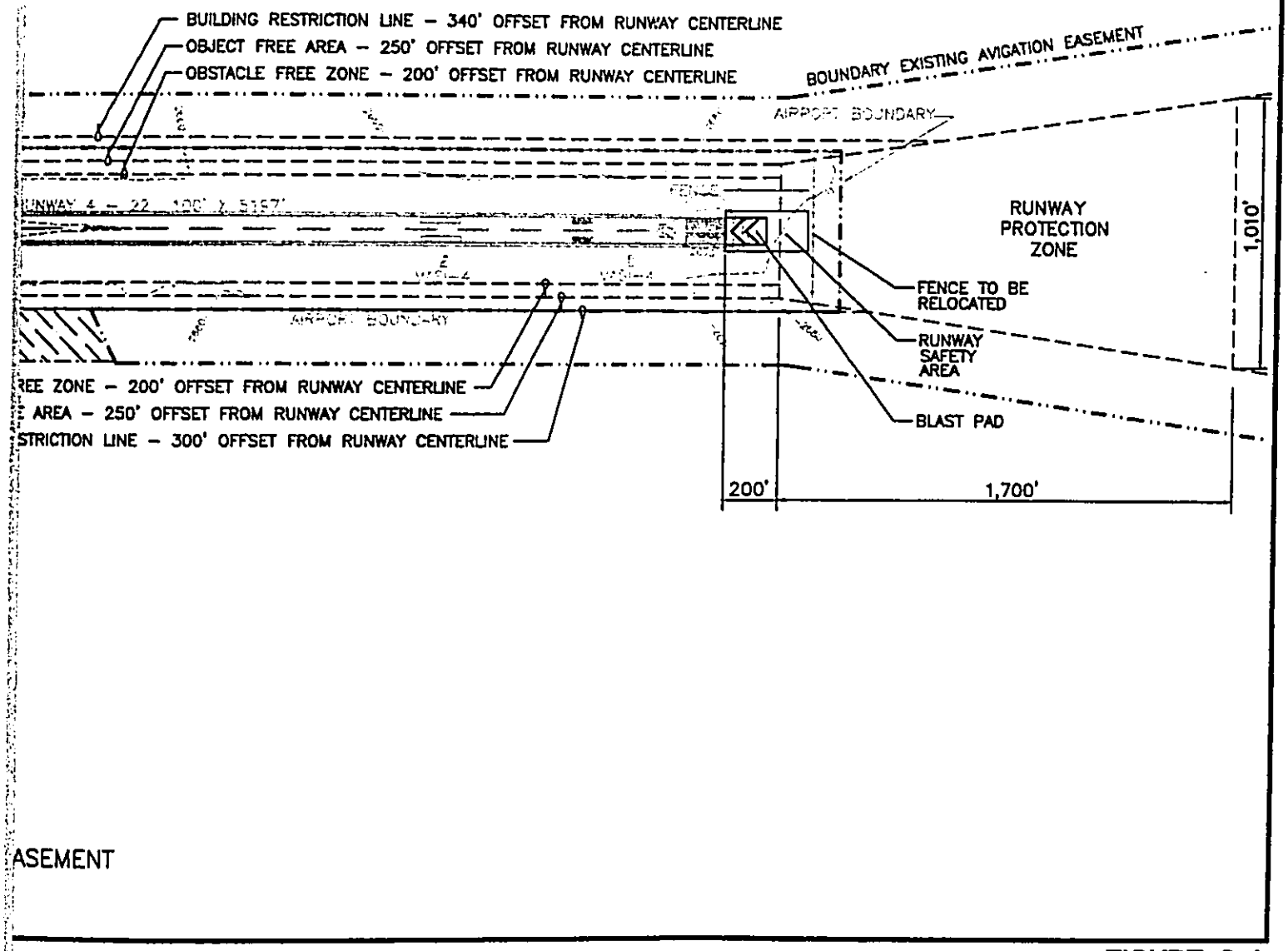


FIGURE 2-1
AIRFIELD FACILITIES ALTERNATIVE 1

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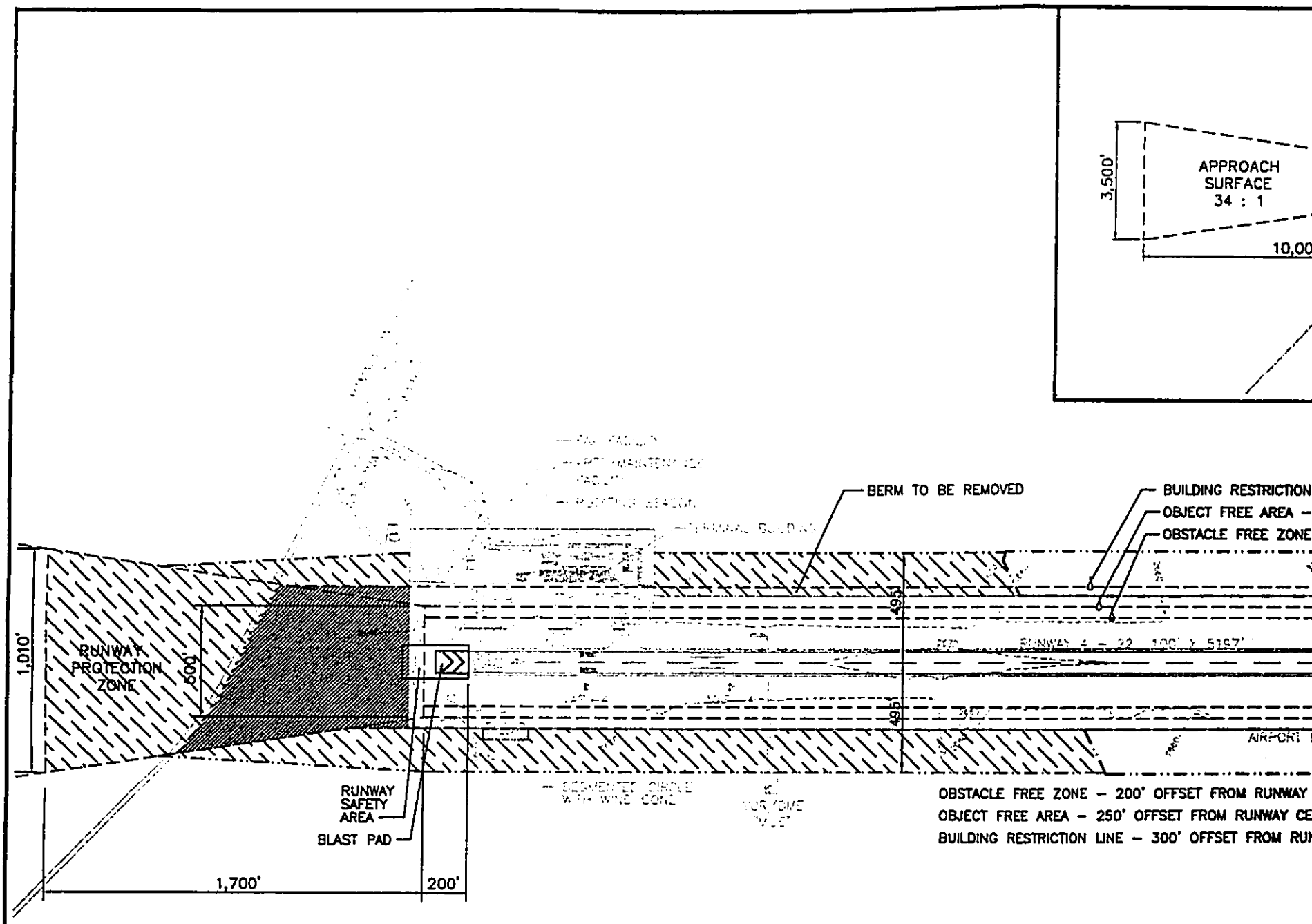

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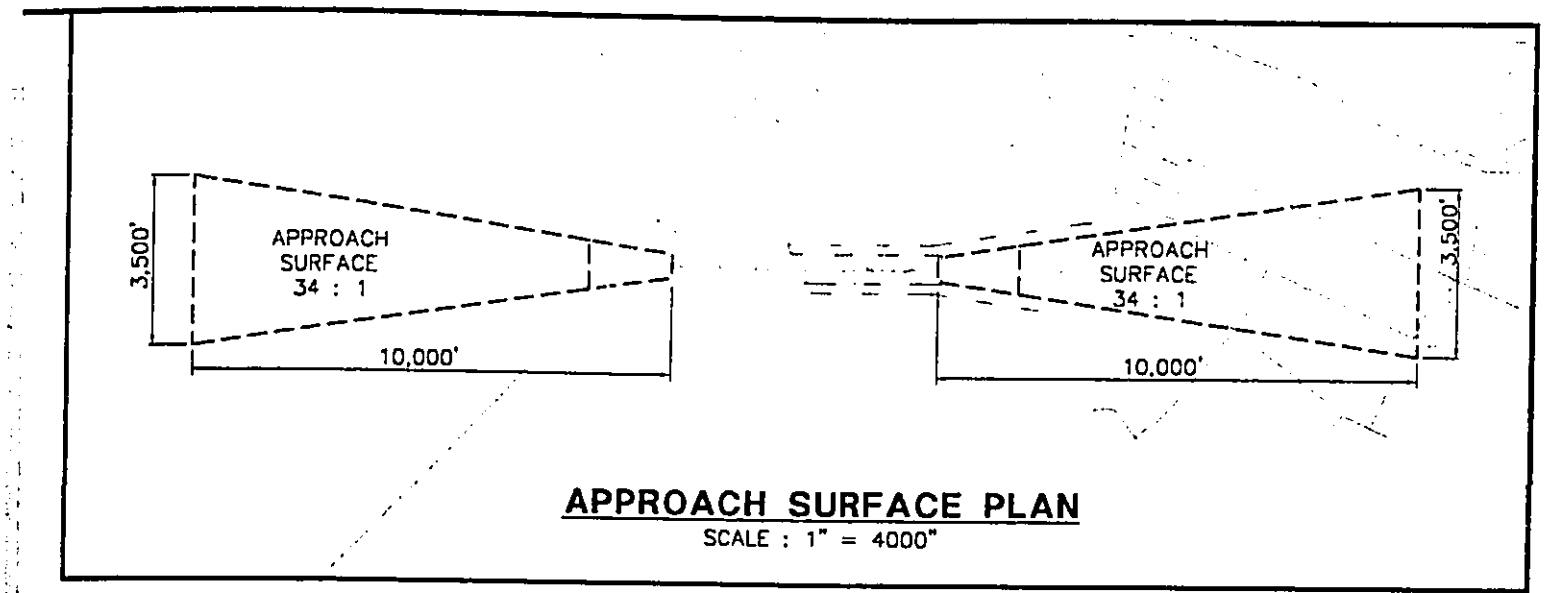

APPROACH SURFACE PLAN

SCALE : 1" = 4000"

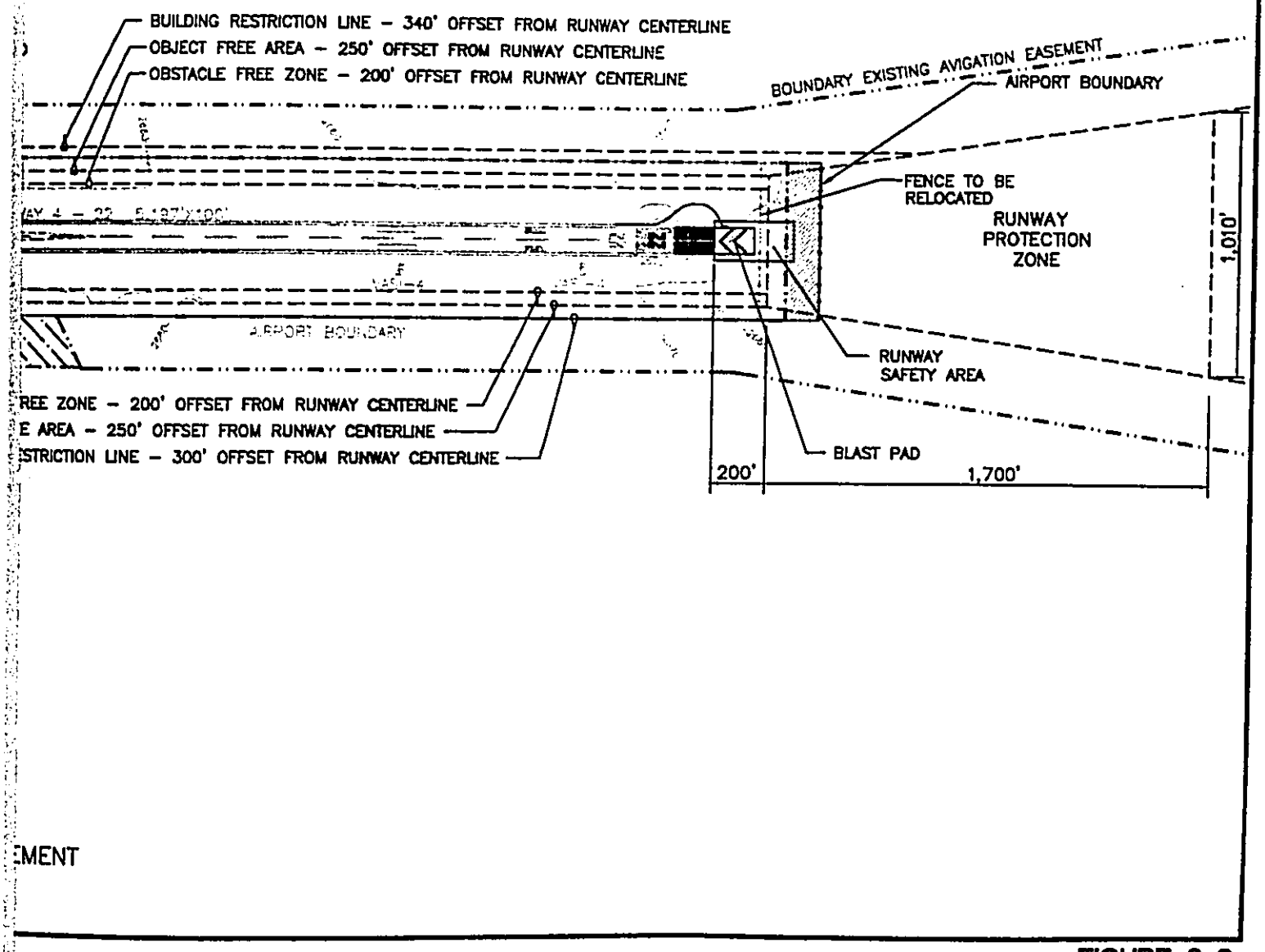

FIGURE 2-2
AIRFIELD FACILITIES ALTERNATIVE 2

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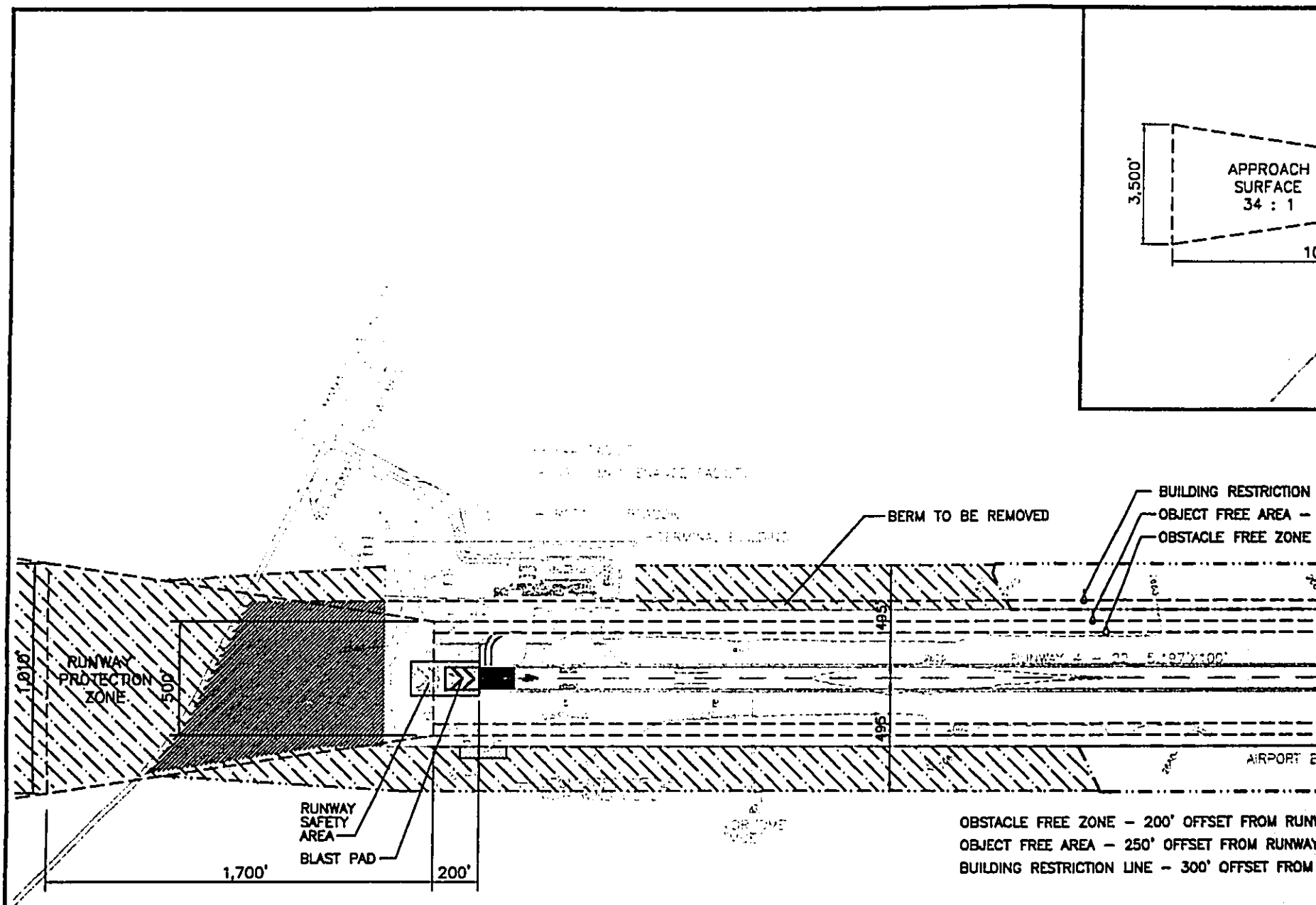

NORTH

0 600 1,200

GRAPHIC SCALE IN FEET

CONTOURS SHOWN AT 10 FT INTERVALS (MSL)

AWOS WILL BE LOCATED PER FAA STANDARDS

LEGEND

LAND TO BE ACQUIRED IN FEE

LAND TO BE ACQUIRED IN FEE OR EASEMENT

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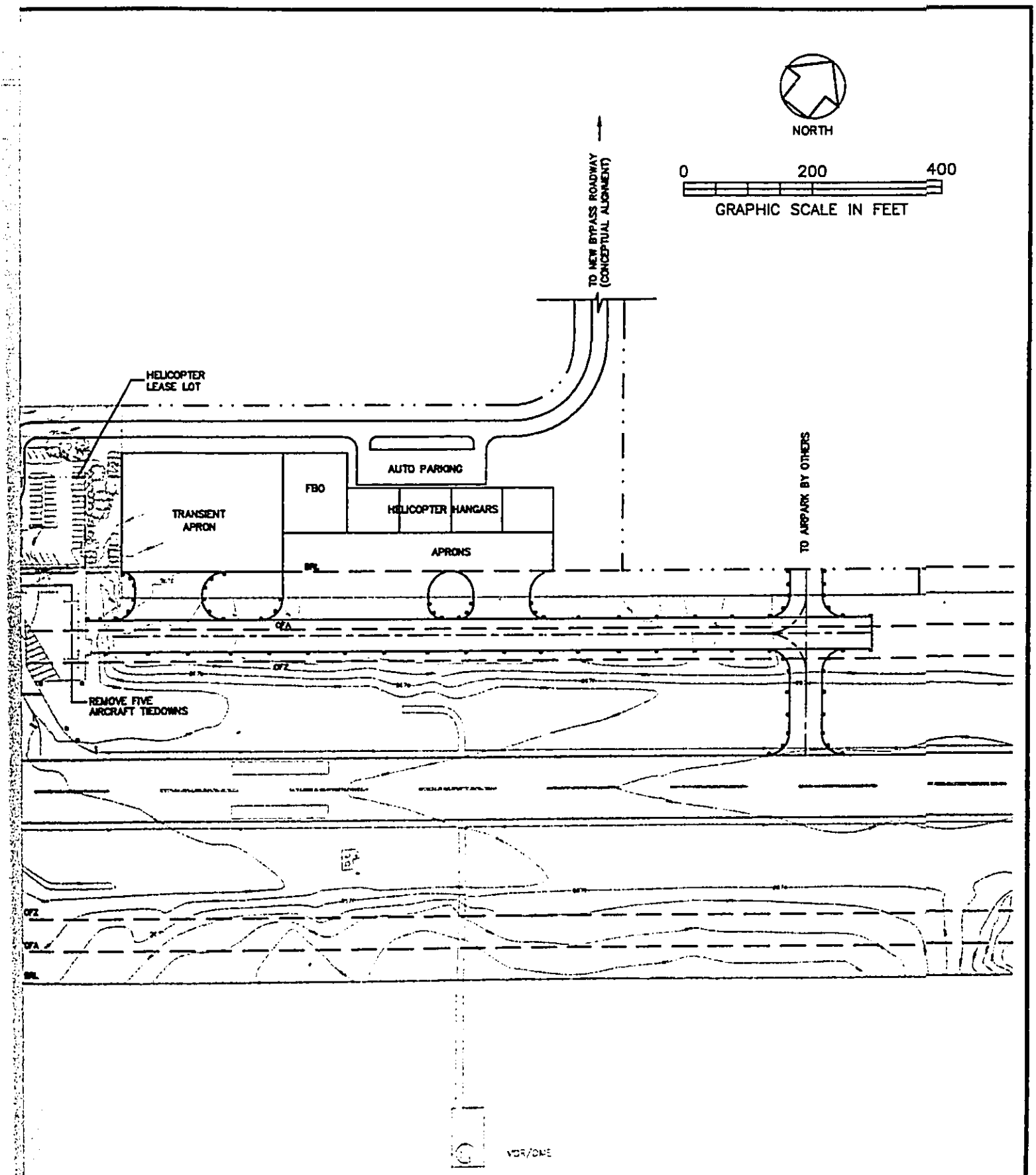
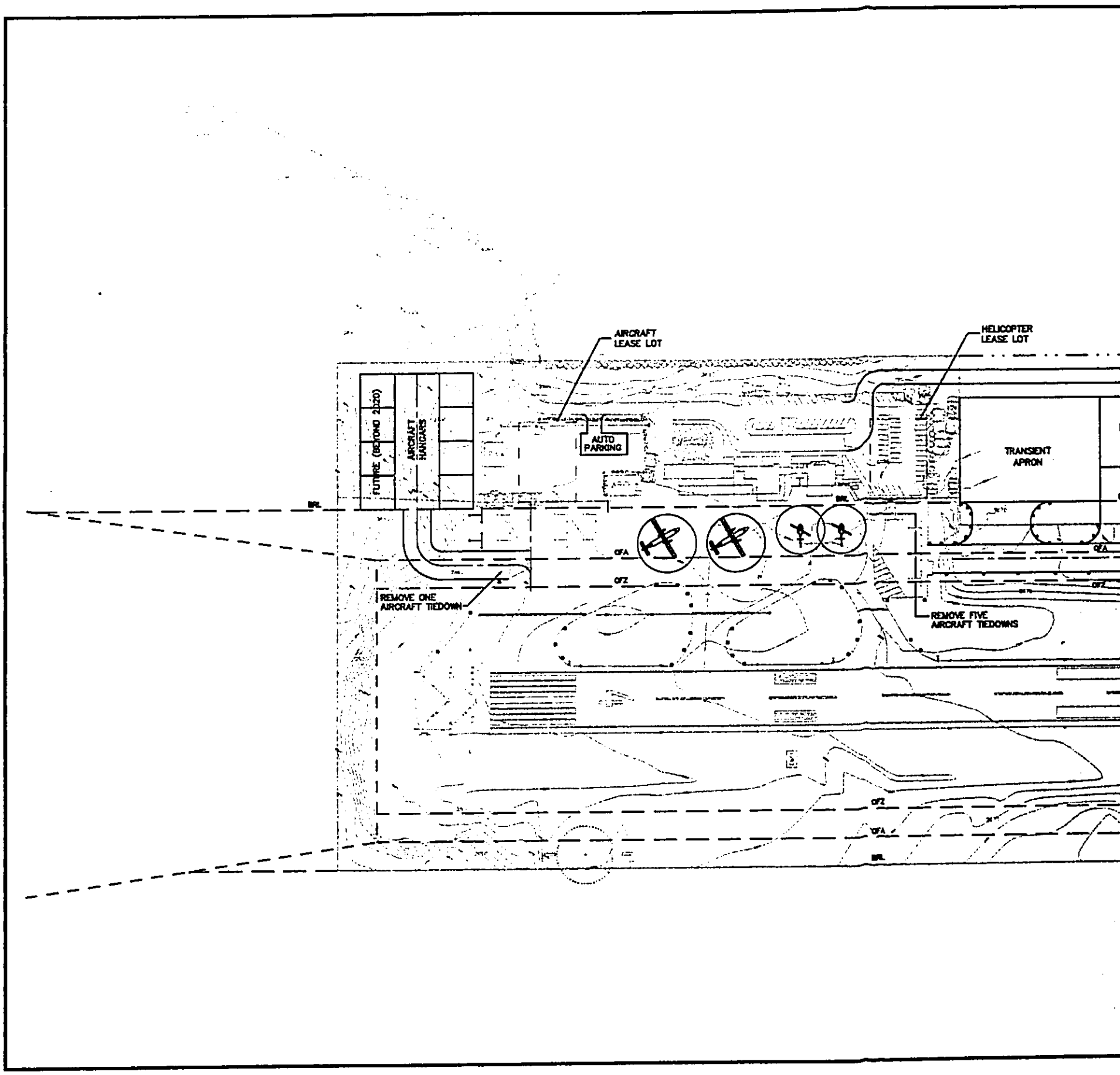


FIGURE 2-3
TERMINAL AREA ALTERNATIVE 1



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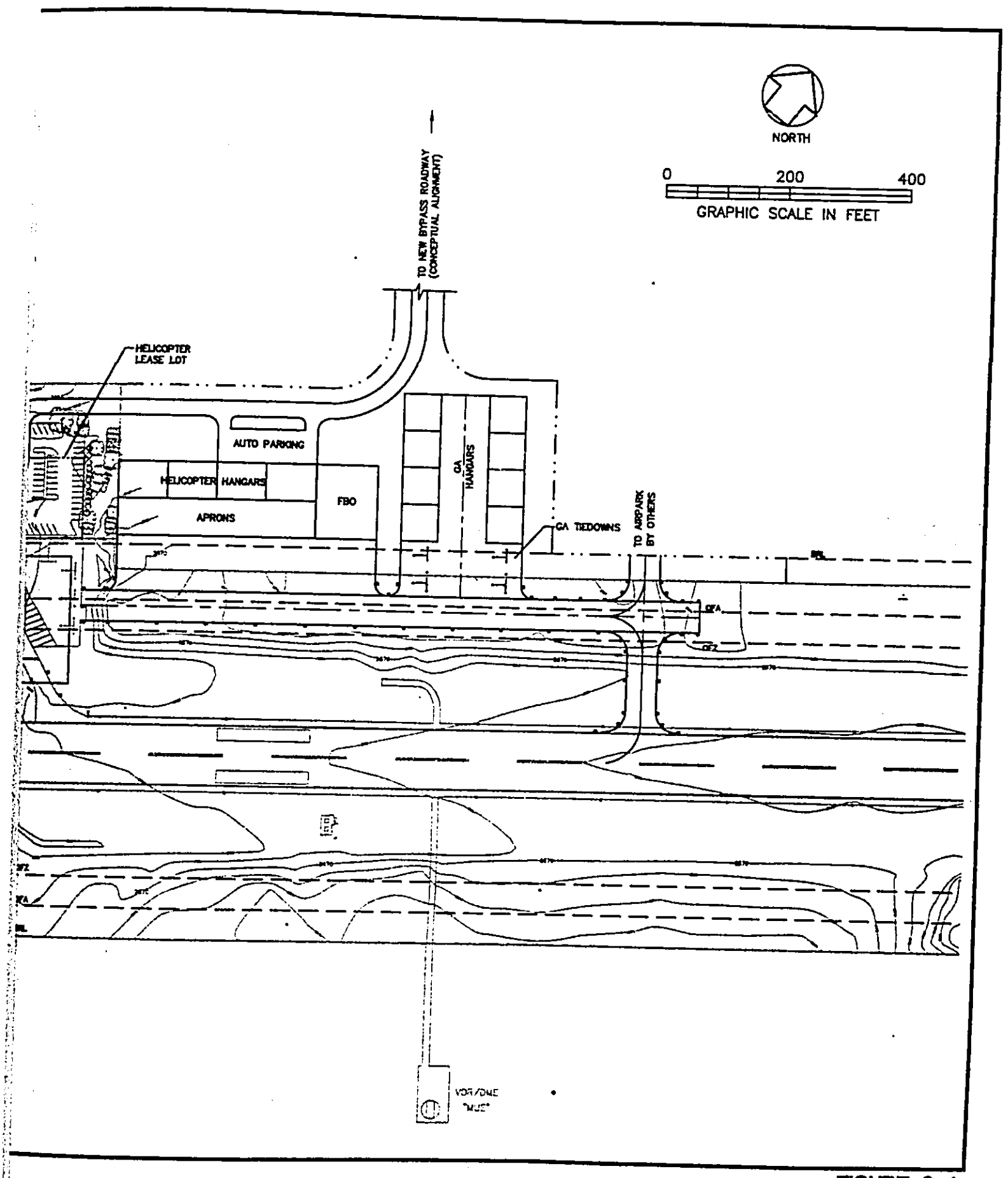

FIGURE 2-4
TERMINAL AREA ALTERNATIVE 2

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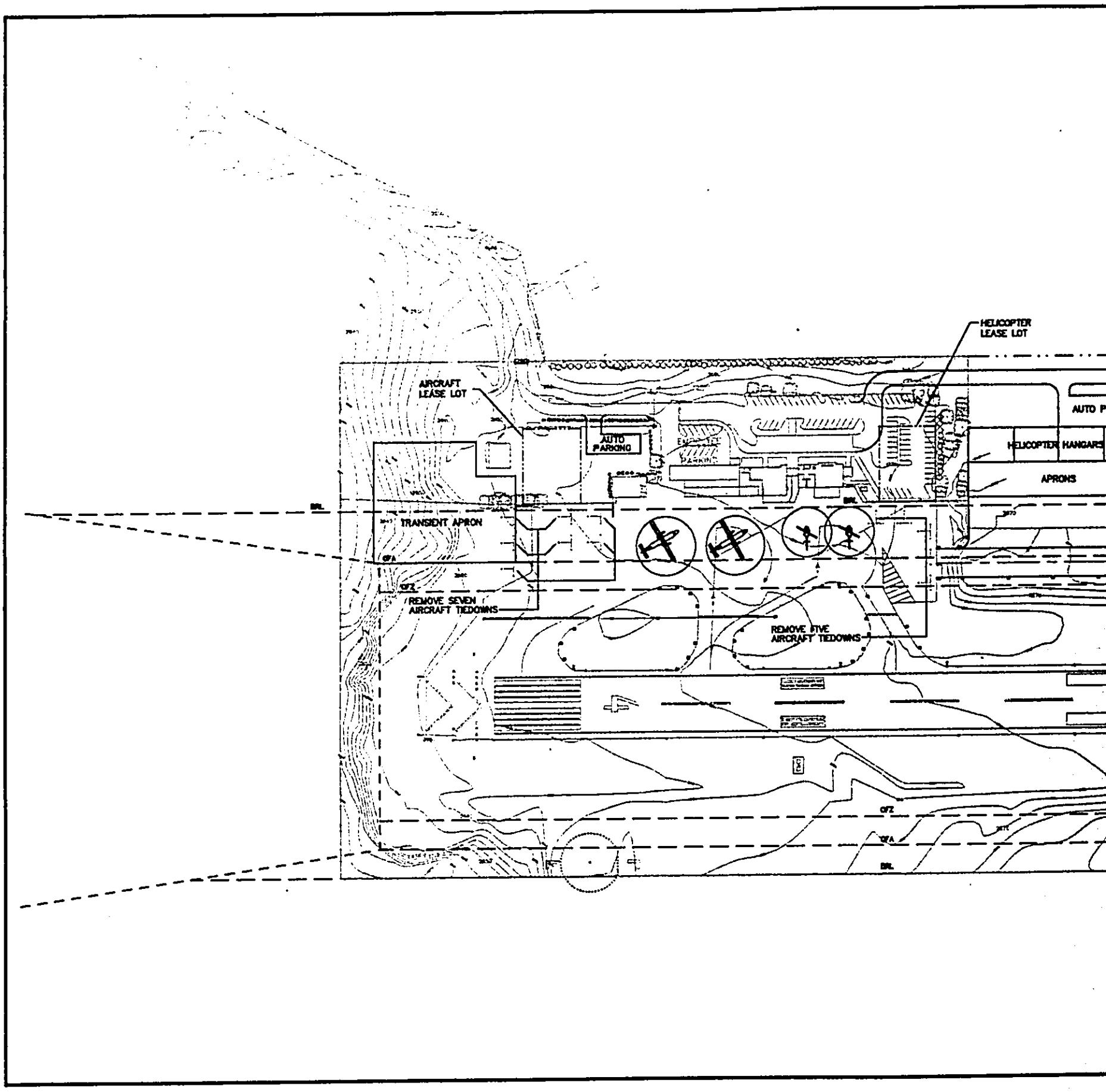

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- creation of Helicopter Lease Lots northeast of the terminal building with hangars constructed by the lessees;
- construction of a transient aircraft apron southwest of the terminal building;
- construction of a partial parallel taxiway to minimize entry/exit taxiways;
- construction of a lease lot adjacent to the transient aircraft apron to serve a Fixed Base Operator;
- fee acquisition of approximately seven acres of land from Parker Ranch;
- construction of additional automobile parking;
- construction of a stub taxiway for access into an airpark; and
- construction of a new access roadway from the proposed Waimea Bypass Road (the final alignment would be determined upon selection of the final Waimea Bypass Road alignment).

The estimated construction cost of Terminal Area Alternative No. 2 improvements is approximately $3.0 million (in mid-1998 dollars).

Terminal Area Alternative No. 3 is shown on Figure 2-5. This alternative would retain the existing six aircraft tiedowns at the southwest end of the aircraft apron. The improvements considered in this alternative are as follows:

- construction of a transient aircraft apron to the northeast of the terminal building;
- fee acquisition of approximately two acres of land from Parker Ranch; and
- construction of a stub taxiway for access into an airpark.

All other facility requirements will be built in the airpark by a private developer. The estimated construction cost of Terminal Area Alternative No. 3 improvements is approximately $2.1 million (in mid-1998 dollars).

The environmental effects of either alternative would be minimal in that the proposed terminal area alternatives are all within the existing airport boundaries. The addition of lease lot lighting could have an effect on the astronomical observatory activities on Mauna Kea. Therefore, all lighting will be designed and operated to conform with County of Hawaii lighting ordinances.

2.2.3 Terminal Building Alternatives

Terminal building area alternatives embody development concepts for usage of the terminal building interior spaces. All of the terminal improvements provide for the forecast number of users and the facility requirements. The facility requirements show no requirement for a large baggage claim area. Therefore, as the baggage claim area is currently vacant, it will be reused for other purposes. As helicopter companies relocate their office functions (excluding ticketing) to the

aircraft hangars, office space within the terminal building will become available. All the Terminal Building Area alternatives include the following improvements:

- minor repairs to the terminal building;
- landscaping for the interior and exterior portions of the terminal area in accordance with the *Cultural Enhancements at Hilo and Kona International Airports* (Section 6.0, Reference 7); and
- relocation of the aircraft apron lights.

Terminal Building Alternative No. 1 is shown on Figure 2-6 and is planned to minimize impacts on the existing building layout. It places the concession space and several ticketing spaces into the existing baggage claim area. The estimated cost of constructing these improvements for Terminal Building Alternative No.1 is approximately $24,000 (in mid-1998 dollars).

Terminal Building Alternative No. 2 is shown on Figure 2-7. It consolidates ticketing spaces into the current ticketing area. The baggage claim area becomes the concession space and the relocated passenger holdroom. The gates are relocated to correspond to the relocation of the passenger holdroom. The estimated construction cost for Terminal Building Alternative No.2 is approximately $29,000 (in mid-1998 dollars).

Terminal Building Alternative No. 3 is shown on Figure 2-8. It proposes to consolidate the ticketing of passengers in one area and places the concession space adjacent to the passenger holdroom. The estimated construction cost of Terminal Building Alternative No.3 is approximately $26,000 (in mid-1998 dollars).

The terminal building alternatives would have minimal if any affect on the natural environment of the airport area in that they would be implemented within the existing terminal building. However, the proposed improvements would have positive social and economic benefits in that they would allow for more efficient and economical operations. Similarly, all terminal building improvements would be designed and constructed to meet with applicable accessibility requirements including those specified by the Americans with Disabilities Act.

2.3 EVALUATION OF ALTERNATIVES

Advantages and disadvantages of each of the Airfield, Terminal Building and Terminal Area alternatives were considered in terms of their impact on existing facilities, surrounding landowners and the environment, utilization of existing facilities versus creation of new improvements, difficulty and cost of construction, the degree to which each proposal enhanced airfield functionality, operations, and terminal safety. The advantages and disadvantages of each alternative are identified below, and the recommended alternatives identified.

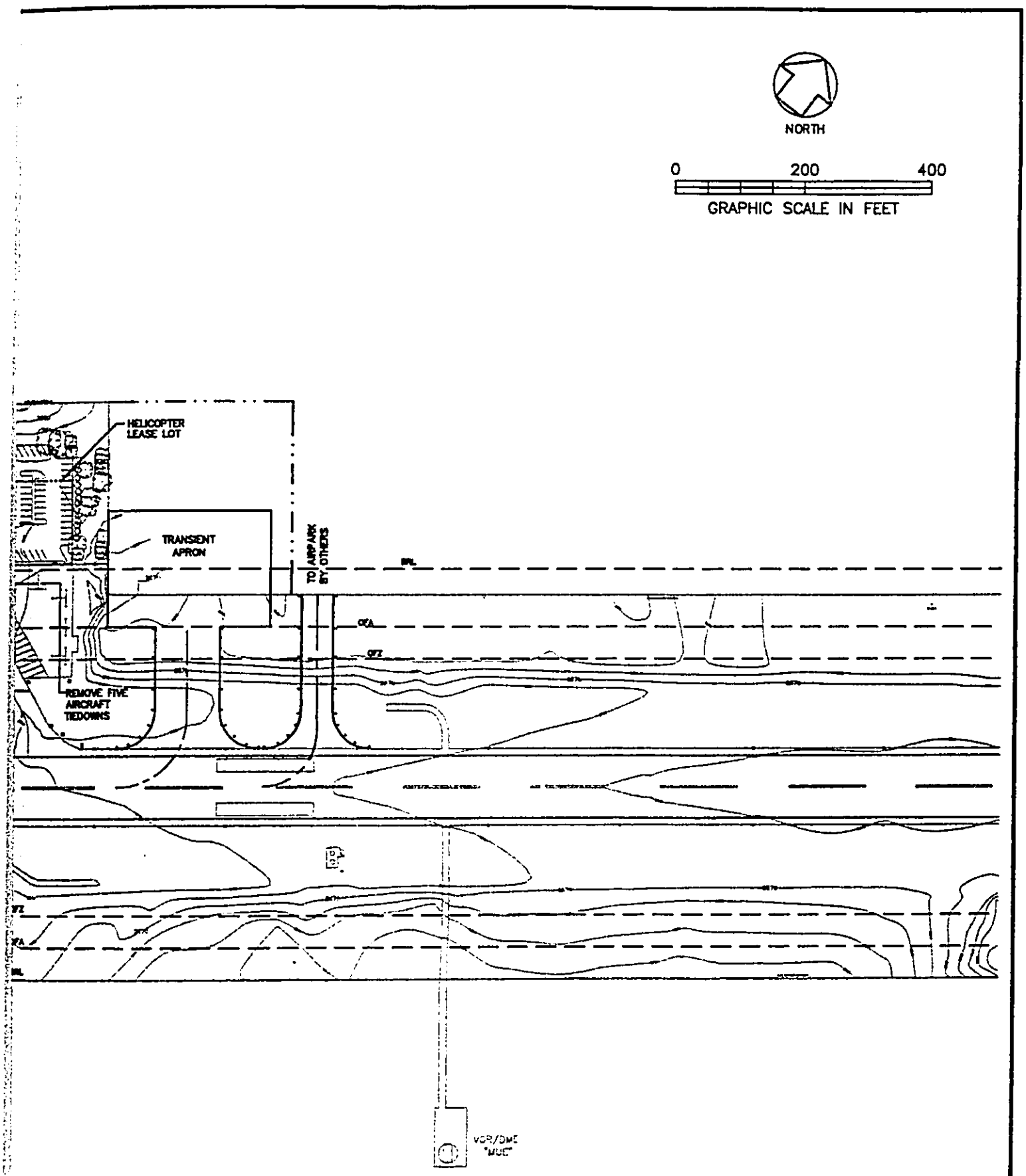

FIGURE 2-5
TERMINAL AREA ALTERNATIVE 3

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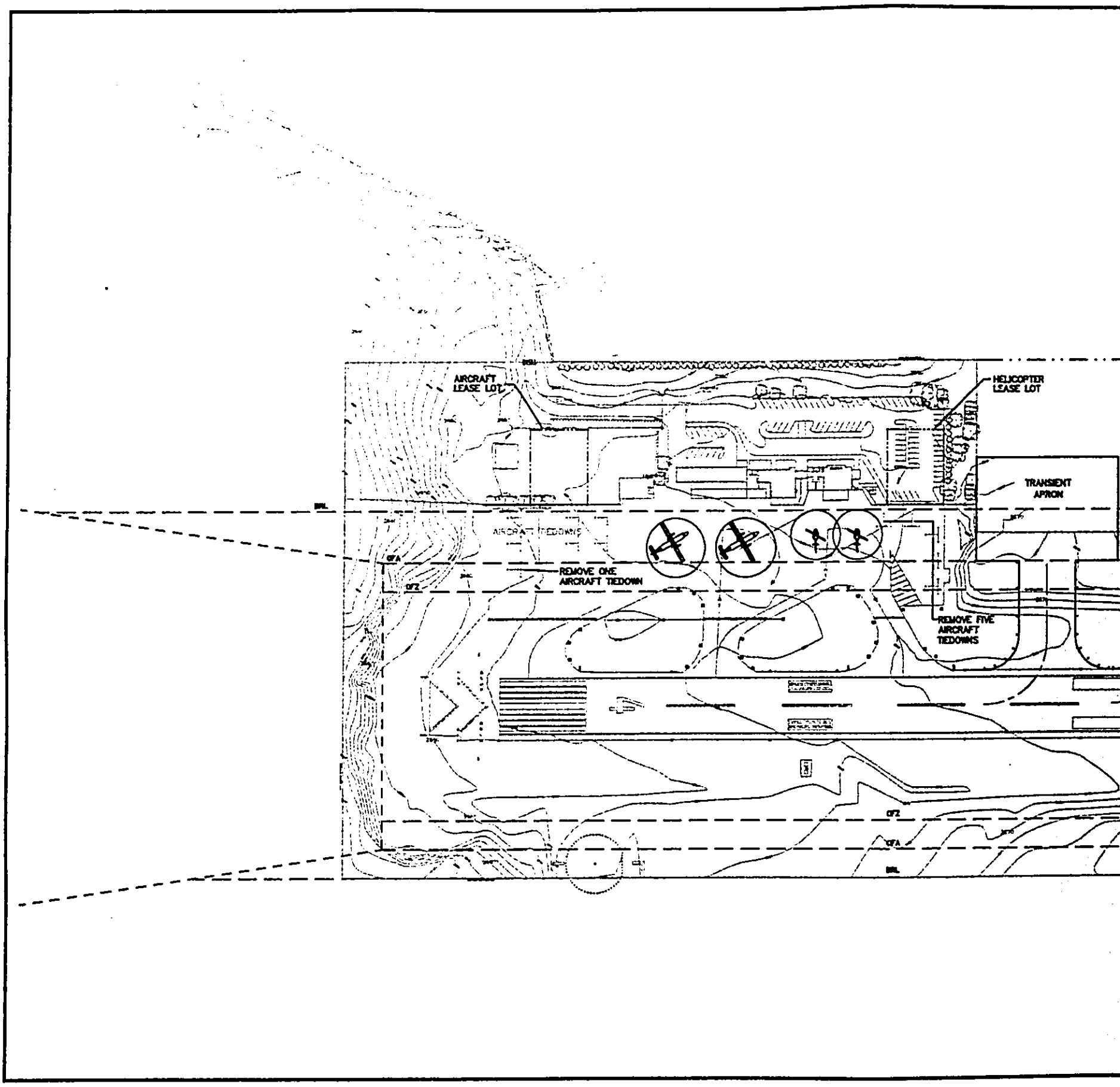

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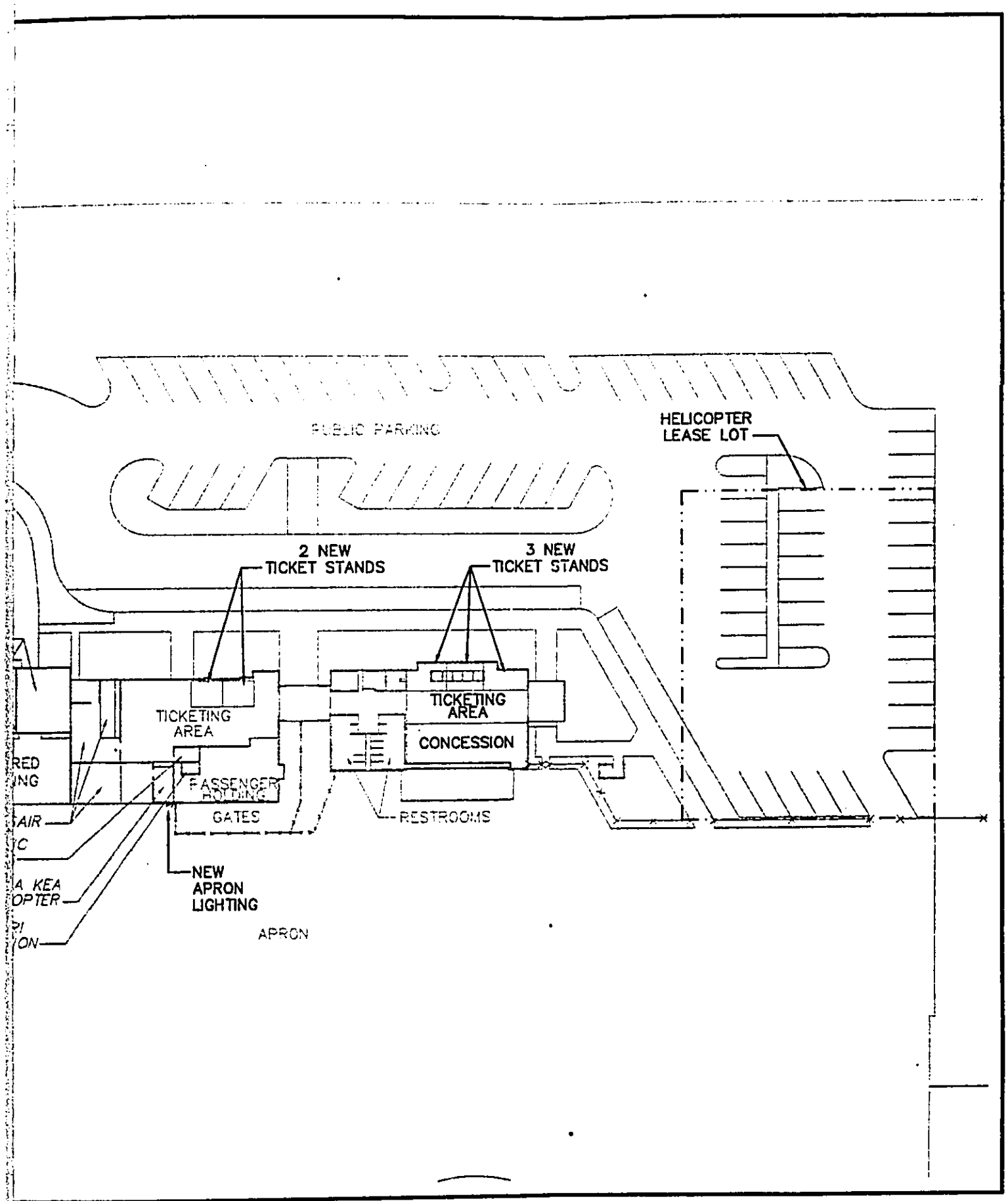

FIGURE 2-6
TERMINAL BUILDING ALTERNATIVE 1

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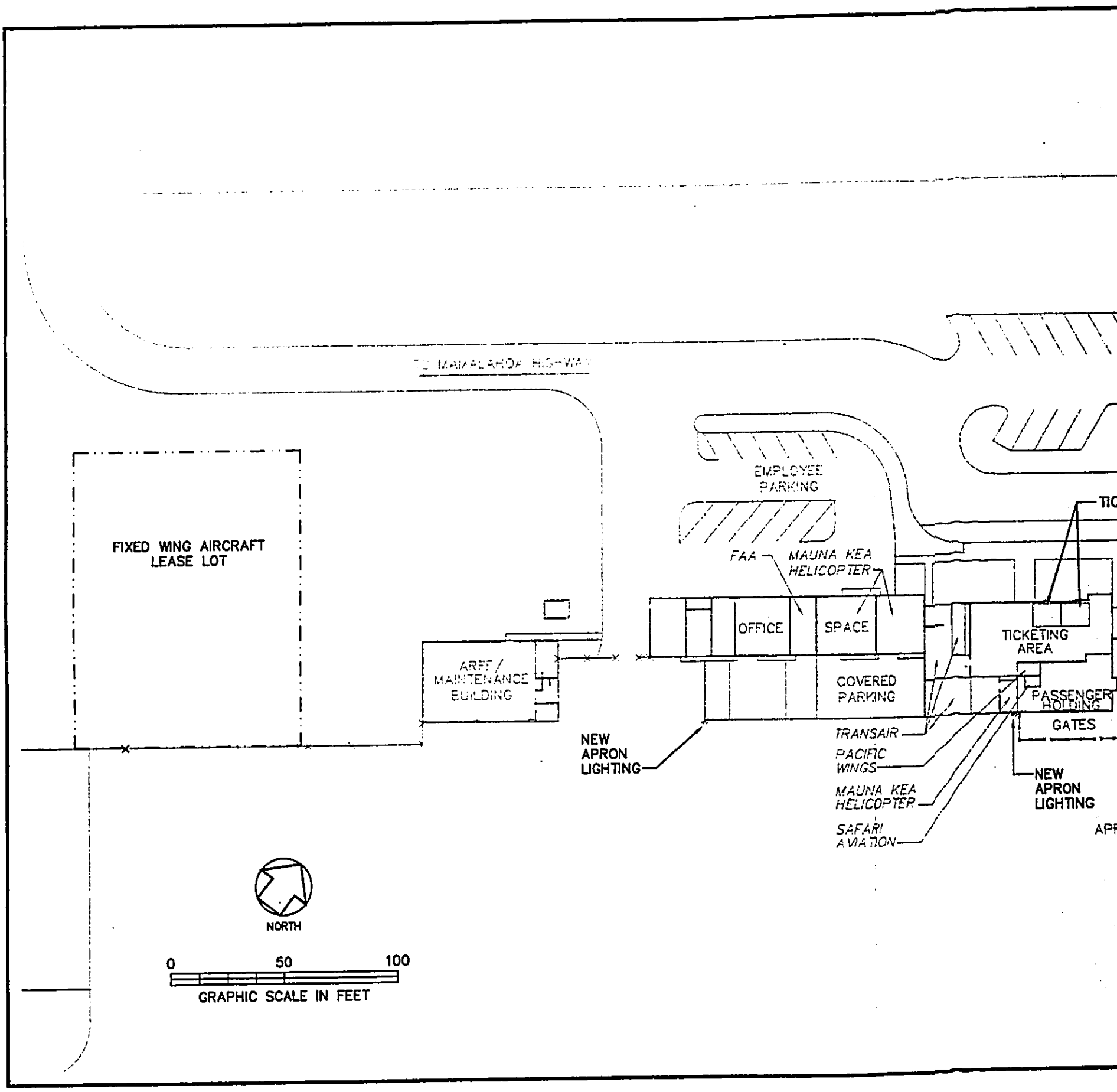

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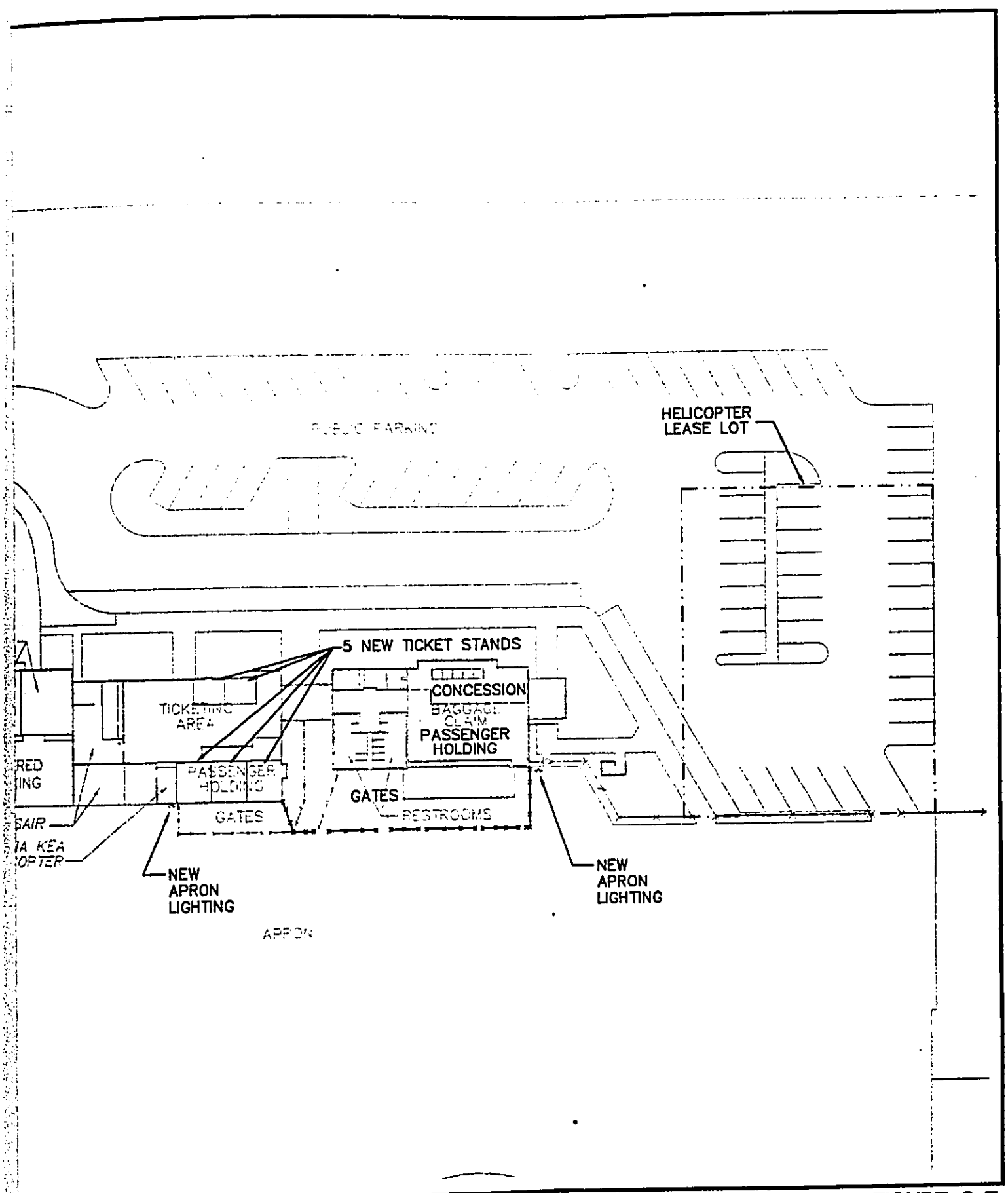

FIGURE 2-7
TERMINAL BUILDING ALTERNATIVE 2

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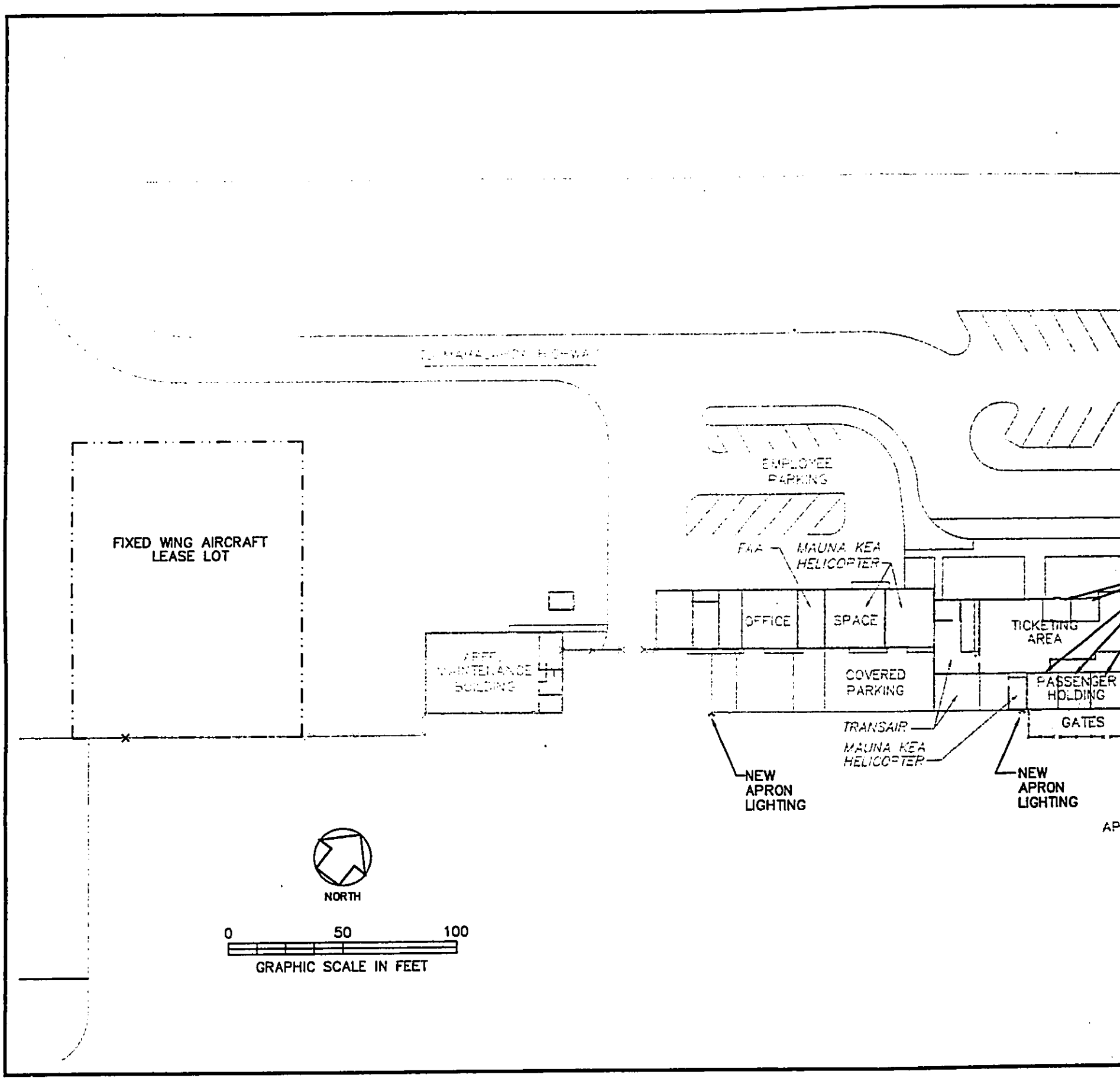

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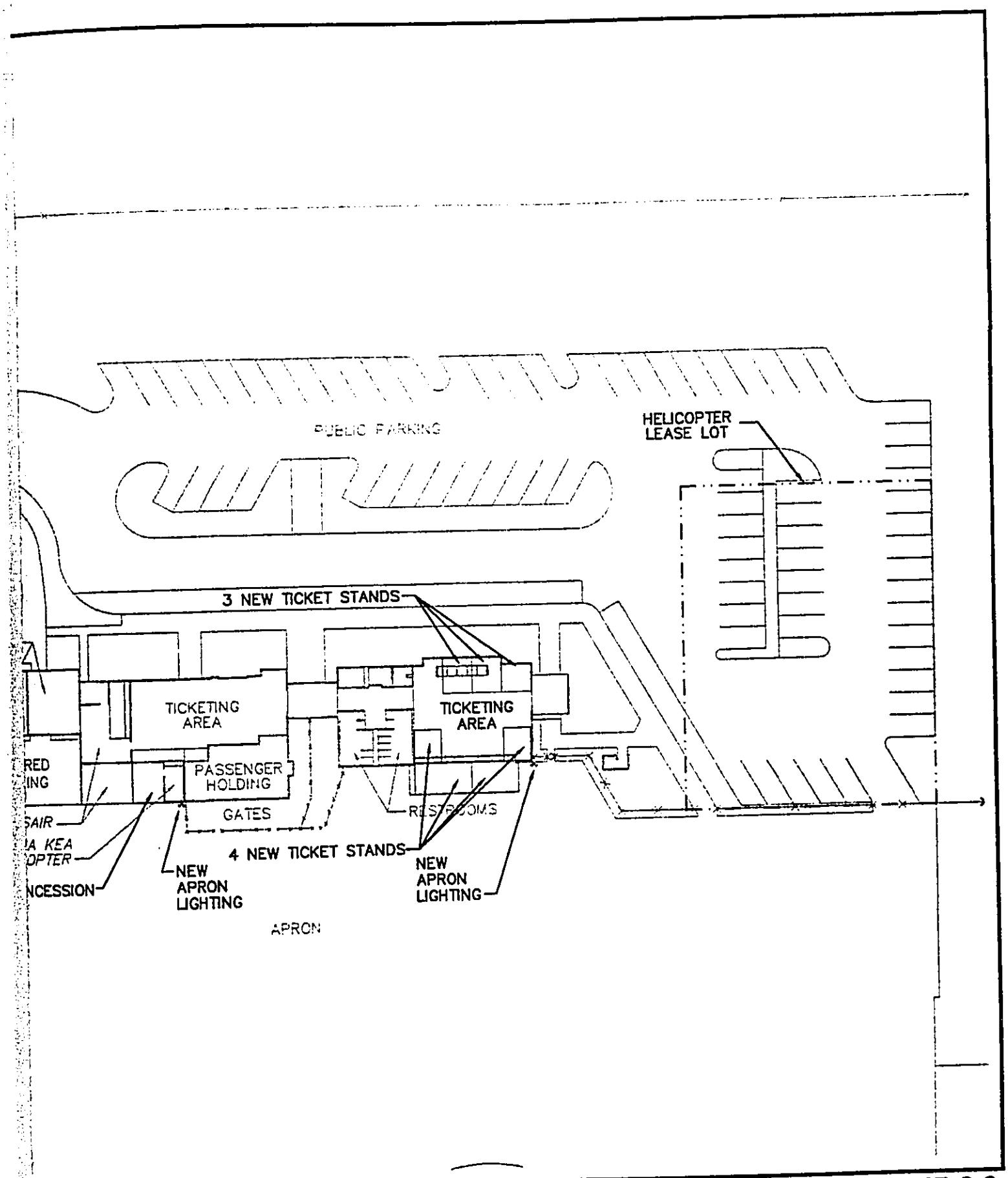

FIGURE 2-8
TERMINAL BUILDING ALTERNATIVE 3

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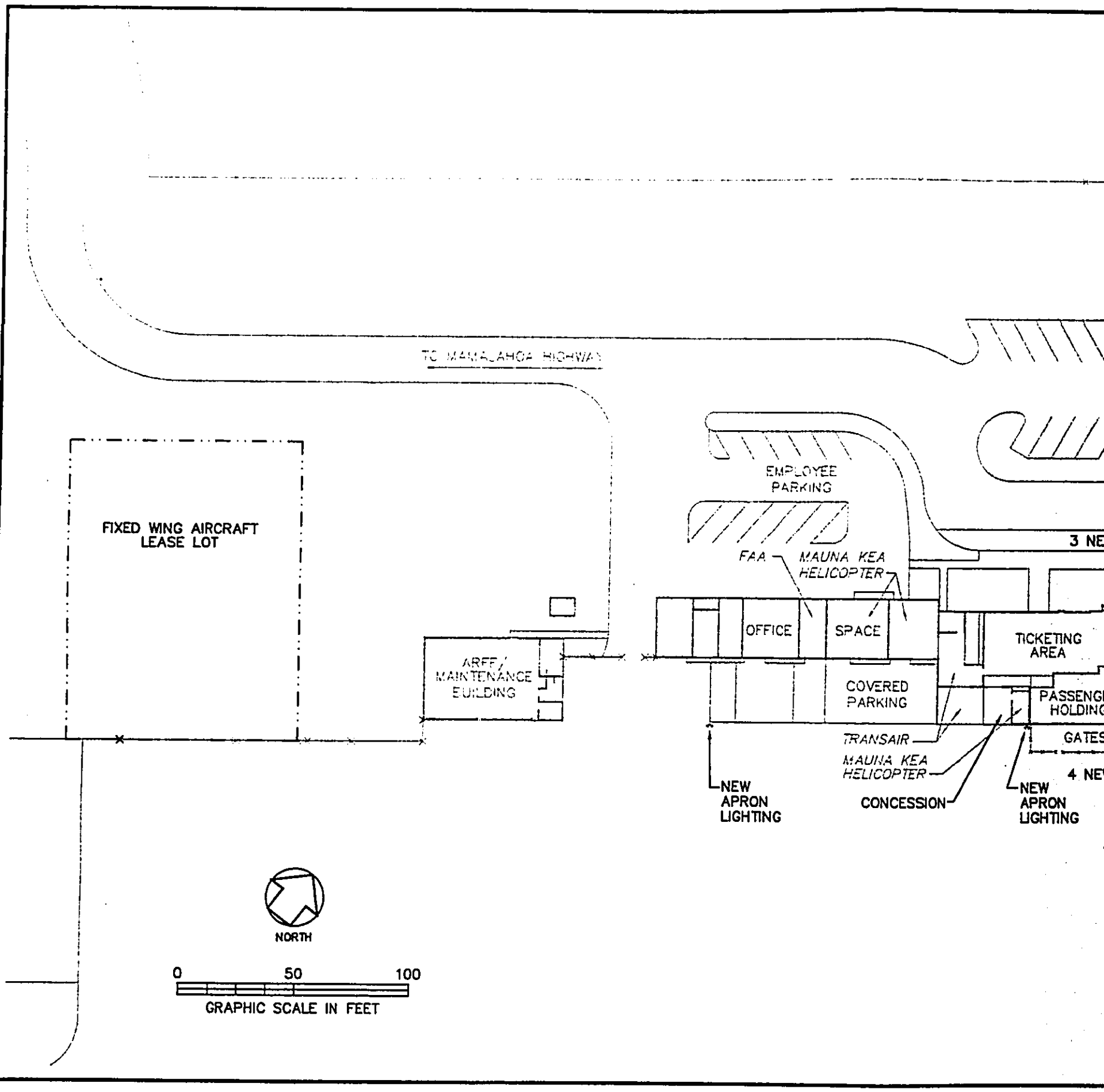

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2.3.1 Comparison of Airfield Alternatives

Airfield Alternative No. 1:

Advantage: Runway location remains the same as existing, thus ancillary runway facilities need not be relocated.

Disadvantage: Large fill would be required to extend the safety area to the southeast.

Airfield Alternative No. 2:

Advantages: Runway safety areas would be constructed on relatively flat topography.

Provides increased vertical separation between overhead electrical lines along Mamalahoa Highway and aircraft approaching Runway 4.

Disadvantages: Longer runway closures due to the relocation of ancillary runway facilities.

Moves the runway closer to the agricultural and residential subdivision and to the proposed alignments of the Waimea Bypass Road.

The estimated construction costs were found to be similar in both Airfield Alternatives. The Master Plan chose Airfield Alternative No. 1 as the preferred alternative, because it provides minimal disruption to runway and airfield. Therefore, Airfield Alternative No.1 is the proposed airfield improvement action.

2.3.2 Comparison of Terminal Area Alternatives

Terminal Area Alternative No. 1:

Advantages: Provides large separation between fixed wing aircraft taxi and helicopter operations.

It is a moderate build up of facilities for the planning period and allows for inclusion of a privately developed airpark in the future.

Retains use of existing tiedowns on the south end of the aircraft parking apron.

Disadvantage: Large construction cost for fixed-wing lease lots.

Terminal Area Alternative No. 2:

Advantages: It is a moderate build up of facilities for the planning period and allows for an inclusion of a privately developed airpark in the future.

Moderate construction costs compared to Alternative No. 1.

Disadvantages: Separation between fixed-wing and helicopter operations is less than in Terminal Area Alternative No. 1.

All of the existing tiedowns are removed from use.

Terminal Area Alternative No. 3:

Advantages: Provides for a minimal capital expenditure by HDOT-AIR.

Minimizes acquisition of private lands.

Existing tiedowns are used, except for those removed by the taxi lane to Mauna Kea Helicopters lease lot and 1 tie-down due to encroachment into the Obstacle Free Area.

Disadvantages: Future development depends on locating a private airpark developer, negotiations with the FAA to produce an airpark agreement, and compliance with applicable rules and regulations of the County of Hawaii and HDOT-AIR.

The timeframe for airpark development is unknown and beyond DOT-AIR control.

Increases the number of entry/exit taxiways on the runway.

For the Terminal Area, Alternative No. 1 was recommended in the Master Plan as the preferred alternative, and is the proposed action. It provides separation between the smaller fixed-wing aircraft and the larger fixed-wing aircraft and rotor-wing aircraft operating areas. This alternative provides for tiedowns and lease lots, thus providing flexibility to the aircraft owners. In addition, the fixed-wing aircraft lease lots could be expanded in the same areas, if needed in the future.

2.3.3 Comparison of Terminal Building Alternatives

Terminal Building Alternative No. 1:

Advantage: Minimizes changes to the existing tenant spaces in the terminal.

Disadvantages: Separates ticketing spaces into two different areas.

The concession space is not as conveniently located next to the passenger waiting area as with the other alternatives.

Terminal Building Alternative No. 2:

Advantages: Creates one area for ticketing.

Places concession space in close proximity to passenger holdroom, decreasing the need for an eating area in the concession space and maximizing concession/passenger interaction.

Disadvantages: Relocation of the passenger holdroom and gates.

Most costly alternative.

Terminal Building Alternative No. 3:

Advantages: Consolidates air passenger ticketing into one area.

Provides a concession space next to the passenger holdroom.

Moderate cost.

Creates space for increased future expansion, if necessary.

Disadvantages: Relocation of existing tenants.

Requires new exterior walls for concessionaire.

For the Terminal Building, Alternative No. 3 was recommended in the Master Plan and is the proposed action. It provides needed improvements at moderate cost, and locates ticketing areas for air tour companies into one space. The location of concessionaire and passenger waiting areas maximizes concession revenue potential, and in addition, this alternative has capability for some expansion if needed in the future.

The airfield, terminal area, and terminal building improvements selected as a result of the master planning process will allow the airport and tenants to operate efficiently and economically and increase the margins of safety associated with the Airport. Based on the environmental analyses conducted for the proposed improvements (see Section 3), the proposed actions will result in minimal impacts on the natural environment of the airport area and provide positive social and economic benefits to HDOT-AIR, *airport tenants*, and airport users.

SECTION 3.0
SUMMARY DESCRIPTION OF THE AFFECTED ENVIRONMENT, POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This Environmental Assessment provides analyses of the potential impacts of the preferred airfield, terminal area, and terminal building alternatives identified in the Master Plan. It has been prepared in accordance with the Hawaii Revised Statutes, Chapter 343, as amended, State of Hawaii, Department of Health, Administrative Rules, Title 11, Chapter 200, National Environmental Policy Act (NEPA), and FAA Order 5050.4a.

The following environmental categories may be potentially affected by the proposed recommended improvements identified in the Master Plan:

- Land Use and Regulatory Status
- Historic, Architectural, Archaeological and Cultural Resources
- Social and Economic Environment
- Utilities and Infrastructure
- Noise
- Climate and Air Quality
- Topography
- Geology and Soils
- Water Quality and Water Resources
- Biotic Communities, Flora and Fauna
- Endangered and Threatened Species of Flora and Fauna
- Wetlands
- Natural Disasters
- Coastal Zone Management Area
- Coastal Barriers
- Wild and Scenic Rivers
- Farmland
- Energy Supply and Natural Resources
- Light Emissions
- Solid Waste
- Aesthetic Considerations
- Construction Impacts
- U.S. Department of Transportation Act, Section 4(f)

3.1 LAND USE AND REGULATORY STATUS

As indicated in Section 1.6, the present airfield area is designated Agriculture by the Land Use Commission (LUC). Similarly, the area is designated Industrial in the County of Hawaii General Plan and zoned as Agricultural 40 acres (A-40) under County zoning.

Following acquisition of 20.5 acres of Parker Ranch lands for the airfield improvements, HDOT-AIR will petition the LUC for a change of land use designation to Urban to conform with existing and planned land usage. Similarly, the County of Hawaii will be requested to amend the designation of these acquired lands to Industrial to conform to the remainder of the Airport lands.

The proposed property acquisition does not imply or require changes to lands outside the areas to be acquired, nor does the acquisition and use of additional land for Airport facilities require changes to County or State land use policies or planning.

The redesignation of the State lands to Urban and County designation to Industrial will not result in any environmental effects because the lands are currently used for airport purposes and/or immediately adjacent to airport lands. The redesignation of the lands from Agriculture to Urban is merely a "housekeeping" task that will have no affect on surrounding lands.

3.2 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Based on a review of State Historic Preservation Division records, there are no historical or recorded archaeological resources within the Airport boundaries or in the area to be acquired, thus no effects on historical or archaeological resources are anticipated. Design and construction of the improvements will be in compliance with all Federal and State rules and regulations. State regulations require construction activities to be halted in case potentially sensitive items are uncovered or observed, and the discovery reported to proper State authorities. These regulations will be applicable to the proposed Airport improvement.

The existing Airport has been an existing use since the mid-1950's. The lands to be acquired have been used for agricultural purposes and fenced for probably two centuries. As the access to these areas have been limited and the area used extensively for at-least several decades, there are no significant impacts on native customary and traditional rights for subsistence, cultural or religious purposes.

3.3 SOCIAL AND ECONOMIC ENVIRONMENT

The primary social concerns regarding the development of Waimea-Kohala Airport are improvement of the reliability and convenience of air service, providing for safer airport operations for both airport users and the surrounding communities, and better accommodation of emergency aircraft. In an airport which does not service sufficient flights to earn regular service by commercial airlines, the proposed action will

better support Essential Air Service activity and the impact of proposed improvements is positive. In addition, the proposed action is not expected to have a significant adverse impact on any communities, and therefore, will not have a disproportionately high and adverse impacts on minority populations and low-income population.

During the public comment period, a group of residents and the County of Hawaii expressed interest in having inter-island air carriers Aloha Airlines and Hawaiian Airlines service this Airport. Service to Waimea-Kohala Airport by Aloha and Hawaiian is a business decision made by those airlines, and subsequent discussions with them indicated there is insufficient business to warrant service at this time. If business should expand significantly in the future, scheduled air carrier service may be reconsidered.

3.4 UTILITIES AND INFRASTRUCTURE

Information pertaining to Airport utilities was obtained from as-built plans, field notes, and the topographic survey. The layout of the on-airport utilities is shown on Figure 3-1. Airport tenants are responsible for their utility connections, and are governed by the "Tenant Improvement Guidelines" of the HDOT-AIR, as well as by local codes and national standards.

3.4.1 Water

The Airport is connected to the County of Hawaii water system. Water consumed in the Waimea area is drawn from perennial streams in the Kohala Mountain range at the northern end of the island and collected in three open, lined reservoirs lying above Waimea town. Stored water is purified and disinfected in a plant above Waimea and flows into two, twelve-inch transmission lines and the distribution system. The water treatment plant serves Waimea and a major portion of the Hamakua District.

One of the twelve-inch transmission lines from the treatment plant connects to a six inch line constructed by the Army along the Mamalahoa Highway right-of-way. Portions of the line are more than forty-five years old and the internal condition of the line is not known, however no breaks in the line have been reported. The former Army line extends along Mamalahoa Highway to the Airport access road, where a six-inch distribution line along the access road leads to the Airport facilities.

All water entering the Airport property passes through a three-inch meter and a pressure reducing valve (PRV) station located a short distance inside the Airport property line. The PRV station consists of two (2) three-inch and one 1 ½ inch pressure reducing valves mounted in parallel, and set at 60, 65 and 70 psi, respectively.

Delivery capacity of the Airport water system is limited by the size of the water meter and flow capacity of the PRV station. Friction losses through the six-inch main along Mamalahoa

Highway further limits the delivery capacity of the Airport water system. The American Water Works Association standards limit the maximum delivery of the three-inch meter to 320 gallons per minute (gpm).

Records provided by the HDOT-AIR for the Airport meter show the average monthly demands during fiscal year 1996 and 1997 were 35,200 and 18,800 gallons per month respectively. Water consumption records spanning this period are presented in the Table 3-1. The monthly figures indicate high consumption variability which is attributed to landscape irrigation, dependent on local rainfall.

Table 3-1
AIRPORT WATER USAGE

MONTH	F.Y. 1996 Usage (gallons)	F.Y. 1997 Usage (gallons)
July	35,000	10,000
August	94,000	11,000
September	42,000	40,000
October	64,000	74,000
November	28,000	41,000
December	22,000	8,000
January	19,000	1,000
February	64,000	8,000
March	13,000	4,000
April	6,000	11,000
May	28,000	8,000
June	7,000	9,000
Total	422,000	225,000
Average	35,200	18,800

Limited fire suppression water is provided through a new four-inch line to two hose cabinets in the terminal building. Each cabinet is equipped with seventy-five feet of hose. The existing hose cabinets in the terminal and ARFF/Maintenance buildings satisfy the spacing criteria for the County of Hawaii standards. However, the delivery rate would not meet the County of Hawaii standard for similar applications. For similar applications, such as schools, neighborhood businesses, and small

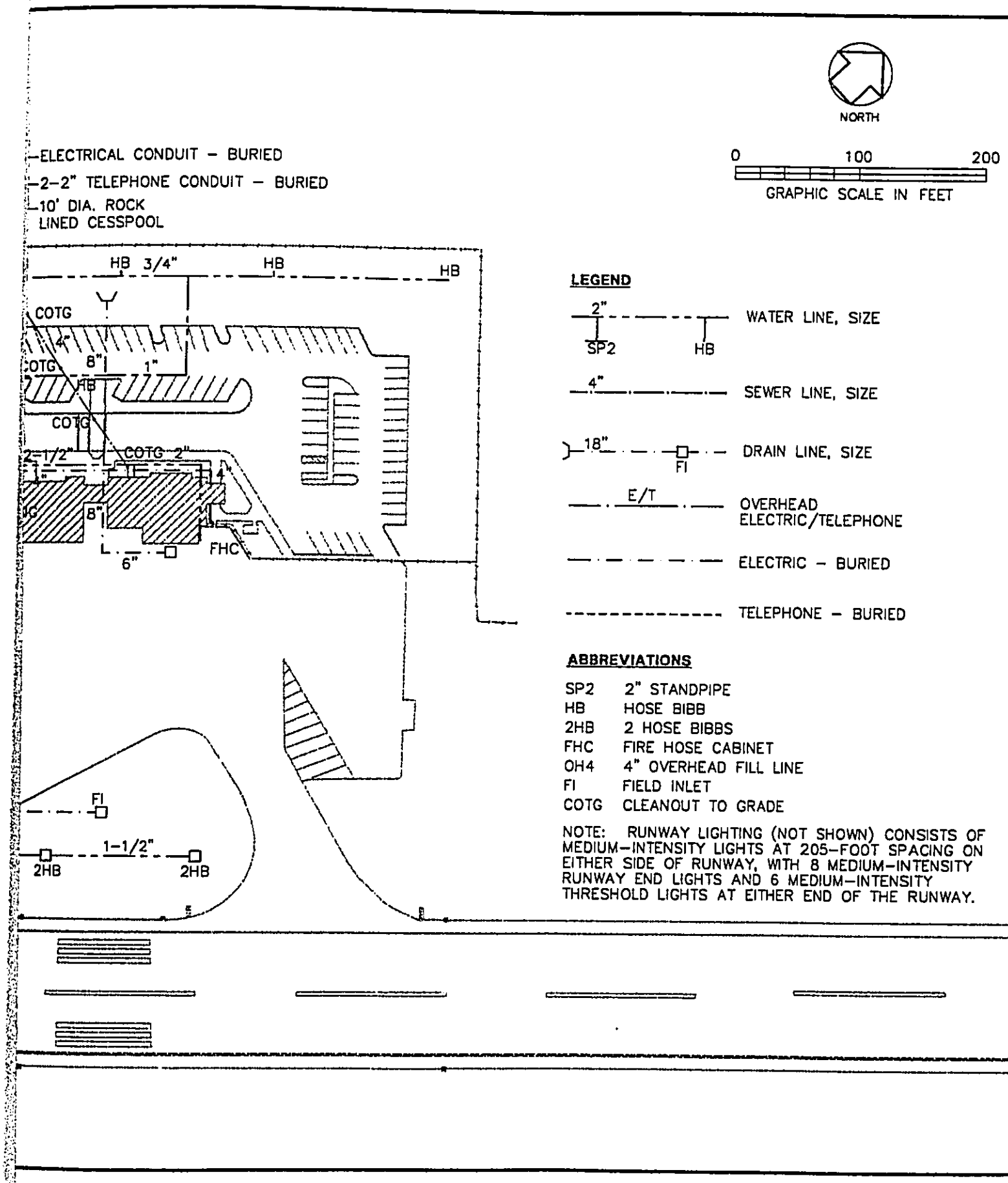

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FIGURE 3-1
AIRPORT UTILITIES

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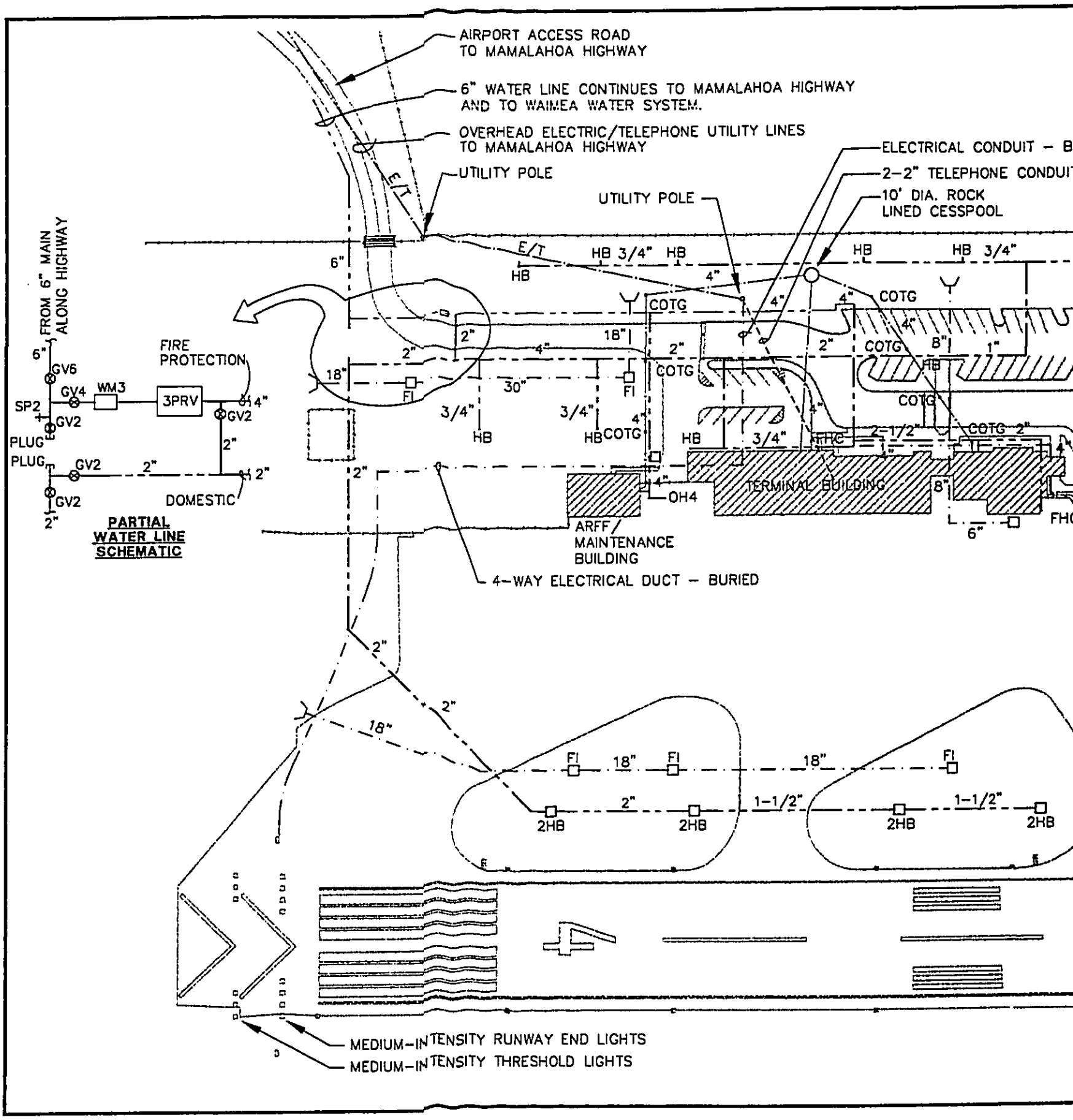

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shopping centers, the County of Hawaii standard is 2,000 gpm flow or 750 gpm typically accepted for hose delivery.

None of the Airport buildings are equipped with fire sprinkler systems. In addition to the above mentioned hose cabinets in the terminal building, a standpipe for a 2½ inch hose is located immediately upstream of the Airport water meter on the six-inch pipeline along the Airport's access road.

Fire protection water supply is severely limited by the small (six-inch diameter) transmission line serving the Airport and the length of the line.

The ARFF/Maintenance facility has a four-inch overhead fill line for a fire truck. The current fire truck is a pickup with a skid mounted twin agent unit and pump. This equipment is intended to provide fire suppression for aircraft, but could be used in the event of a structure fire as well.

Four hose bibbs (primarily for irrigation) are located in boxes in the grassed islands between the aircraft apron and the runway. Several more irrigation hose bibbs are located in the parking and terminal area. These bibbs are fed by two inch and 1 ½ inch lines tapping into the domestic water system.

There is no alternate transmission or distribution system. A break in the transmission or distribution main lines, or a system outage would require emergency water transport by tanker trucks.

Existing limitations to the fire suppression water supply are planned to be eliminated in the year 2001 through a separate project which will provide a new onsite fire water reservoir, mains and hydrants. This project will not provide an alternate on-airport source of fire suppression water. Until these separate improvements are constructed, the Airport water supply for fire suppression purposes will continue to be severely limited. Because fire water storage is static, construction of these improvements will have no effect on the collection, storage, treatment or distribution system serving Waimea.

Construction of the proposed improvements will draw a small amount of additional water for consumption and general use within the improvements, as those improvements which provide space for additional users are developed. Generally the proposed improvements will provide functional upgrades to Airport operations, through construction of physical amenities to enhance and expand aircraft usage. These will require no additional water commitment. Improvements requiring water service under Phase I will provide space for a concession stand in the passenger ticketing area and landscaping around the terminal building.

Water consumption is generally estimated from average daily consumption guidelines stated in the "*Water System Standards of the Board of Water Supply.*" Because the County of Hawaii does not publish average consumption figures for small commercial food preparation operations, typical consumption guidelines from Kauai, Maui and Oahu Counties have been used to estimate average daily consumption. These usage figures for "commercial/industrial mix" uses range from 0.1 to 0.14 gallons per 100 square feet, thus, it is estimated daily average water consumption for a 3,000-square foot concession may range from 300 to 420 gpd.

Water consumption by the concession will generally occur during daylight hours, while irrigation is generally scheduled for off-peak demand times.

Landscape irrigation is generally estimated to consume an inch and a half per week, without allowance for rainfall. Thus daily irrigation of an acre of landscaping is estimated to be approximately 5,800 gallons per day or 17,400 gallons per month. Irrigation of an additional one acre of landscaping is thus estimated to increase the average monthly Airport consumption by almost sixty-five percent. To reduce the consumption of water, the HDOT-AIR should use native plants and xeriscaping techniques and plants in the Airport's landscaping.

Proposed Phase II and III improvements do not require water service but may indirectly affect the water system. For example, improved airport access and tenant parking may encourage more use of Airport facilities including water service. These ancillary impacts will be insignificant.

3.4.2 Sanitary Sewer

Sanitary facilities are provided within the terminal building. The men's restroom provides two toilets, four lavatories and four urinals. The women's restroom provides five toilets and four lavatories. Each restroom is provided with one floor drain, and two additional floor drains are located outside the restrooms. All wastewater is directed in a northwest direction through four-inch diameter sanitary sewer lines to a ten-foot diameter rock-lined cesspool in an open grassy area near the parking lot. Currently, there is no sanitary sewer system within the Airport's vicinity and there are no plans, by the County, to construct one in the near future.

The existing sanitary sewer system has been adequate to support present airport traffic levels which are significantly less than historic levels. Provision of a concession area under Phase I is not considered to increase sewage generation above levels successfully disposed to the existing cesspool during historically higher traffic levels. The improvements in the Master Plan call for a septic tank system to replace the existing cesspool system.

3.4.3 Drainage

The Waimea-Kohala Airport drainage system consists of a series of drain inlets and culverts which collect runoff from the terminal and apron area and direct it away from the airport to open ground within the Airport property. Runoff from the taxiway islets and apron are directed to an eighteen-inch diameter drain line which empties to an open area on Airport property near the southwest end of the runway. Runway runoff is directed as surface flow to open ground by grading. Terminal structure roofs have gutters and downspouts which discharge to the surrounding grounds or into the drainage system. Two inlets adjacent to the access road collect runoff and discharge in an unimproved area of the Airport, southwest of the terminal facilities.

Construction of Phase I lease lots and a parallel taxiway will approximately double the impervious area in the vicinity of the terminal. Runoff from the increased impervious area may be allowed to sheet flow away from the runway and improvements to undeveloped areas west of the planned expansion, or a portion may be combined and discharged with runoff from existing terminal area facilities.

A small increase in impervious area is proposed under Phase II, to be created by provision of tenant parking and an access roadway. The same collection and disposal opportunities are available for runoff from these proposed improvements.

During Phase III improvements, a parallel taxiway extension and a taxiway to an air park will be constructed. Each of these projects will result in an increase in impervious area. Runoff generated from these narrow extensions of existing facilities may be allowed to sheet flow to adjacent undeveloped lands within the Airport boundary.

In summary, runoff from proposed improvements under Phases I, II and III should be allowed to sheet flow to undeveloped land within the Airport property or collected and disposed with existing runoff to the area south of the present terminal. Disposal of the additional runoff will have negligible impact on these lands or in the overall drainage system in the area. An NPDES permit is not required for the Waimea-Kohala Airport facility for the following reasons: i) the absence of significant industrial activity; and ii) the absence of runoff from the Airport into any State receiving waters. The increased runoff may temporarily encourage vegetation growth, but this impact would be insignificant.

3.4.4 Electrical

Electricity is provided through pole-mounted transformers which supply 120/240 volt 3-phase electricity generated at the Hawaii Electric Light Company (HELCO) substation located at Lalamilo. Power is brought to the airport on overhead lines and carried in underground ducts on

airport property. During the period from July 1996 to May 1997, electrical power consumption at the Airport was 57,412 kwh, or an average of 5,219 kilowatt-hours (kwh) per month.

Emergency power is provided by a generator through underground conduits to the terminal, ARFF/maintenance building, and runway lights. Fuel for the emergency generator is supplied from a 400 gallon tank in the lighting (electrical) vault. The emergency generator and transfer switch are tested twice a month. The FAA VOR/DME system, is provided with a separate emergency power generator.

The proposed improvements will consume a small amount of additional electric power, within the generating capacity of the Waimea power plant and the existing transmission lines. The proposed improvements will have an insignificant impact on the Waimea area power grid.

3.4.5 Telephone

Telephone service is supplied to Airport area customers by GTE Hawaiian Telephone, via overhead lines along Mamalahoa Highway and through new two-inch diameter concrete encased underground ducts within Airport property. The overhead lines consist of twenty-five cable pairs serving the Airport area, of which eight B1 lines and one 3002 circuit are working. Nine additional cable pairs are available for future service. The Airport area is served by the Kamuela Central Office switching station, which can provide a wide range of standard and special services.

Construction of the proposed improvements will probably result in a few additional customers requesting service. Airport tenants are responsible for contacting GTE Hawaiian Telephone to arrange for communication. The addition of a few new customers will not impact the service capabilities of the telephone company.

3.5 NOISE

3.5.1 Aircraft Noise

Concurrent with the Master Plan, a FAR Part 150, Noise Compatibility Program (Section 6.0, Reference 8) is being completed to assess aircraft noise impacts. The Noise Compatibility Program uses the cumulative noise metric known as the Day-Night Sound Level or DNL. A field measurement study of aircraft noise completed in 1997 as part of the Noise Compatibility Program indicated that ambient noise levels around the Airport range from 47 to 61 DNL.

During public informational meetings, several residents complained about aircraft overflights of their homes. These were characterized as single noise events. There are no recorded noise complaints for aircraft operations at Waimea-Kohala Airport.

The forecast increase in aviation operations may increase the potential for noise complaints, especially since there is a forecast increase in the scenic air tour operations. However, the additional aircraft operations and associated aircraft generated noise are not expected to be significant and all noise sensitive areas fall outside the 60 to 65 DNL noise contours (Figure 3-2). To minimize noise complaints, aircraft operators should avoid, if possible, overflight of noise sensitive areas.

DOT has identified Waimea Town as a noise sensitive area, which should be avoided if possible. This noise sensitive area is depicted as an avoidance area in the *Hawaii Airports and Flying Safety Manual* (Section 6.0, Reference 9).

3.5.2 Ground Vehicle Noise

Ground vehicle noise will not constitute a significant factor as there are no noise sensitive areas or habitations within hearing distance of ground vehicles operating at the Airport.

3.6 CLIMATE AND AIR QUALITY

The mean annual rainfall in the Waimea area is thirty-one inches per year, and the rainfall distribution is highly variable. The drier portions of Waimea receive about 20 inches of rainfall a year while the wetter portions receive approximately 75 inches per year. At the Lalamilo Field Office, the average annual rainfall from 1984 to 1994 was 17.66 inches. The area experiences an average of two days of full cloud cover and three-and-one-half days of partly cloudy skies each month.

A wind rose for the Airport developed in 1949 is shown on Figure 3-3. The wind rose shows that about eighty-eight percent of the wind is from the northeast quadrant, and approximately eight percent from the southwest quadrant. The average wind speed is twenty miles per hour from the east-northeast direction, and wind speeds exceeds twenty miles per hour more than fifty percent of the time.

Average monthly temperature in the Waimea area varies 61.3 to 66.8 degrees Fahrenheit. Observed temperatures range from 34 to 90 degrees Fahrenheit.

Air quality may be temporarily affected by aircraft operations at the airport. The impacts will be negligible as the nearly constant winds of the Waimea area disperse aircraft exhaust quickly.

3.7 TOPOGRAPHY

The Airport site lies above Mamalahoa Highway by approximately thirty feet, on a relatively flat land area. This change in elevation produces a sharp drop-off of approximately 30 feet within 150 feet of the south end of the runway. At the north end of the runway, uneven terrain starts as a berm approximately six feet above the runway elevation, and runs along the runway from the apron area to approximately 1,600 feet to the northeast. From the end of the berm to the end of the runway, there is a longitudinal depression

approximately eight to ten feet lower then the runway elevation. The terminal has an unobstructed view of Mauna Kea and a view of the Mauna Loa summit.

The airport generally lies at the 2,671 foot elevation above mean sea level (MSL) and slopes toward the southwest. The site is mainly covered with asphalt and grass with several structures (terminal buildings) located on the property. The region is described as a sloping upland area with widely spaced erosional gullies. There are areas of exposed soil located throughout the open grassy areas which surround the airport. Dominant grass species are Kikuyu and fountain grasses.

The proposed Airport improvements will have insignificant impact on the topographic features of the airport area.

3.8 GEOLOGY AND SOILS

The island of Hawaii is composed largely of five shield volcanoes: Kohala, Mauna Kea, Hualalai, Mauna Loa, and Kilauea. The latter three volcanoes have been active in the historic period. The Airport overlies the boundary between lava flow hazard zones 8 and 9, the lowest hazard zones for the island. Lava flow hazard zones for the northern portion of the island of Hawaii are shown on Figure 3-4.

The Waimea-Kohala Airport is situated in the saddle between the Kohala Mountains and Mauna Kea, and is underlain by rocks of the upper member of the Hamakua series of Mauna Kea. The eruptions which deposited these rocks extruded viscous lavas which formed the thick beds of relatively dense rock.

The upper member of the Hamakua series is mantled by a surface layer of ash (Pahala Ash). This ash is generally very fine and can range twenty feet or more in depth. Surface soils in the Airport area consist of light to medium brown silts, formed from weathering volcanic ash. Their permeability is believed to be moderate to rapid.

The proposed Airport improvements will not significantly impact the soils or geological character of the Airport area because there will be minimal disturbance of existing conditions.

3.9 WATER QUALITY AND WATER RESOURCES

Precipitation falling onto the site either infiltrates into the ground or flows into drain outlets located on airport property and then to open ground surrounding the airport. There is no surface water within the existing or proposed Airport boundaries. The nearest surface water is Waikaloa Stream, a perennial watercourse approximately one mile to the north. According to the Flood Insurance Rate Maps, the Airport is located outside of the 500-year flood plain. The proposed improvements will not have an impact on water quality or water resources.

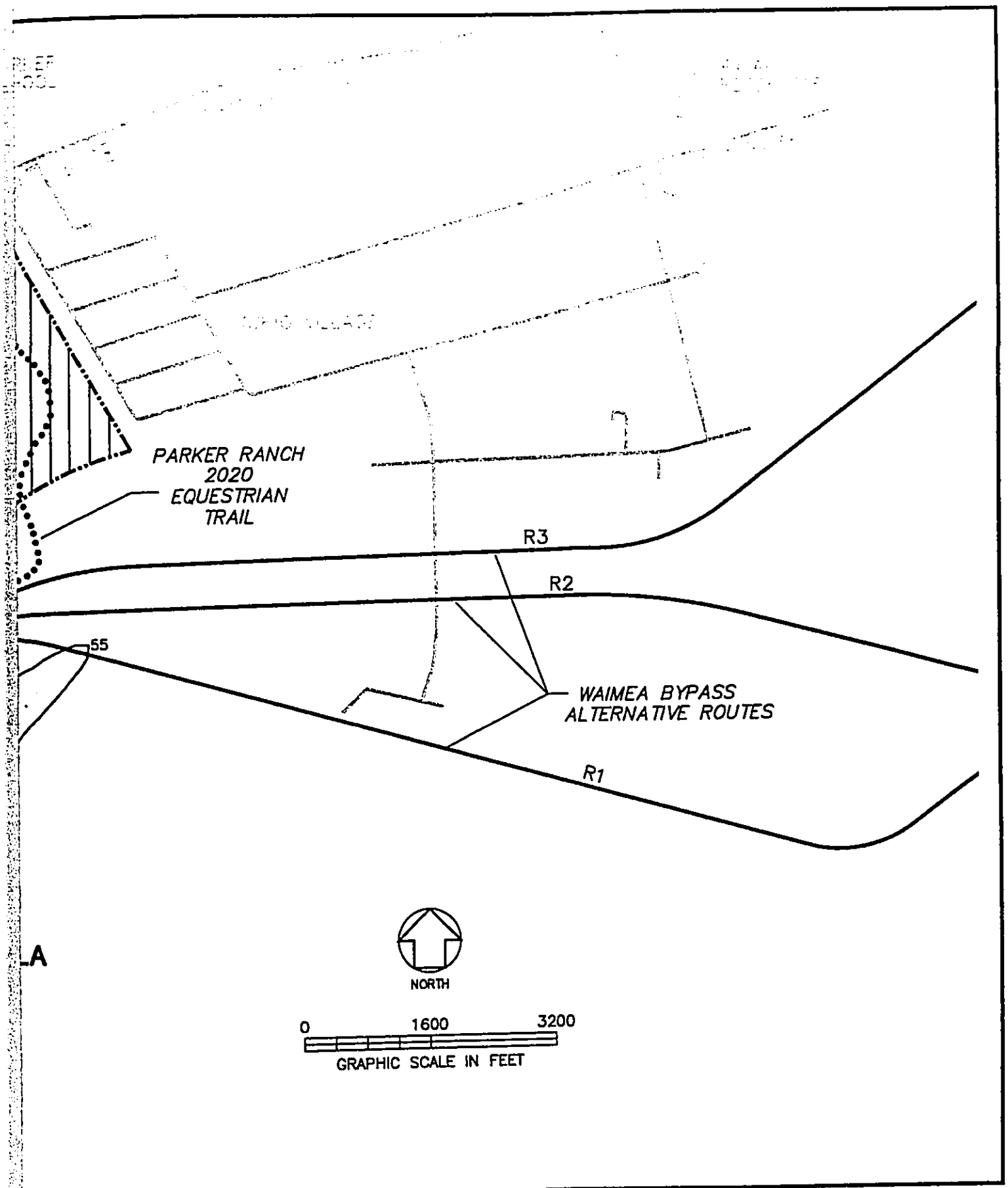

FIGURE 3-2
2002 DNL CONTOURS
WITH PROPOSED DEVELOPMENTS
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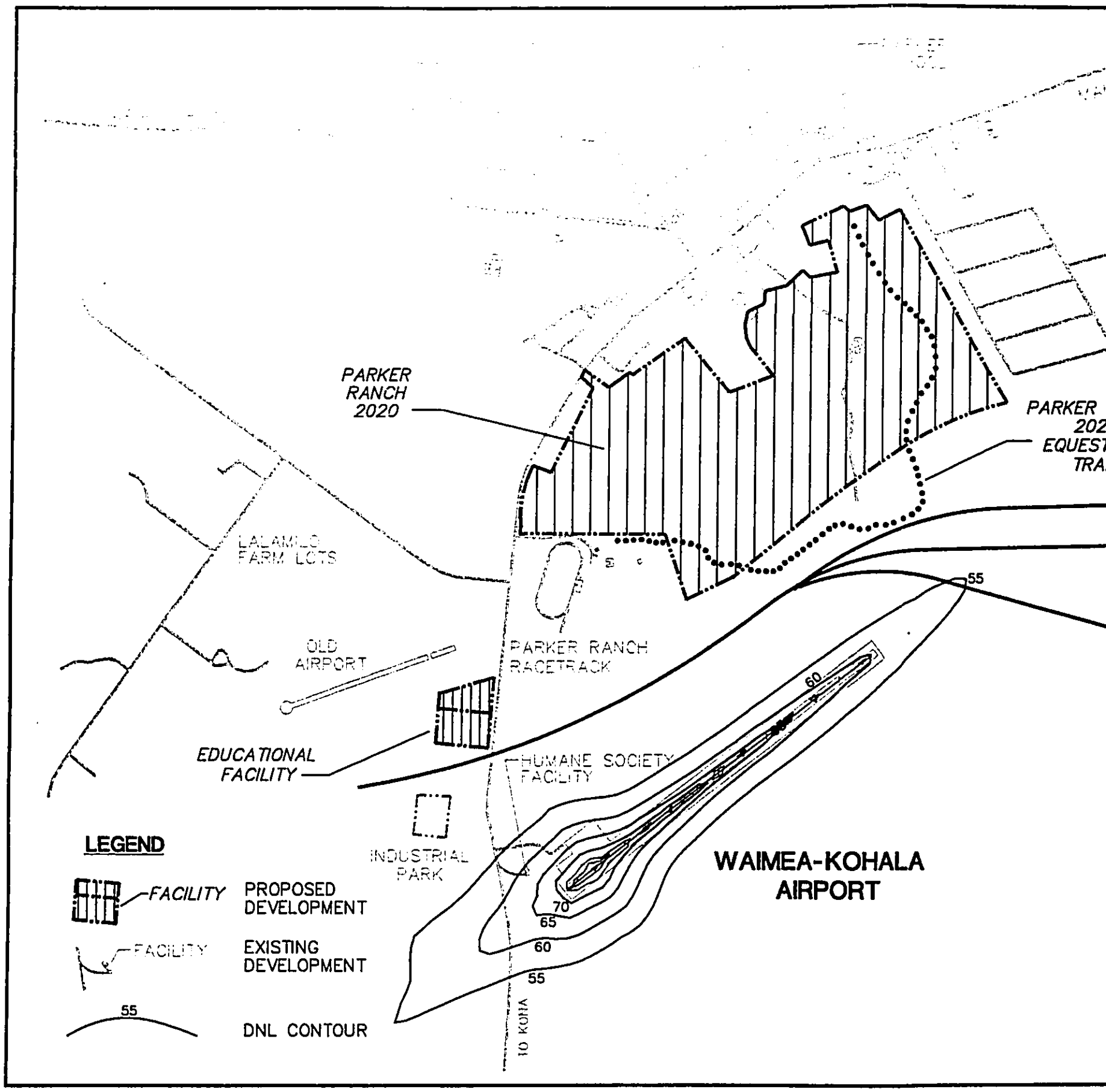

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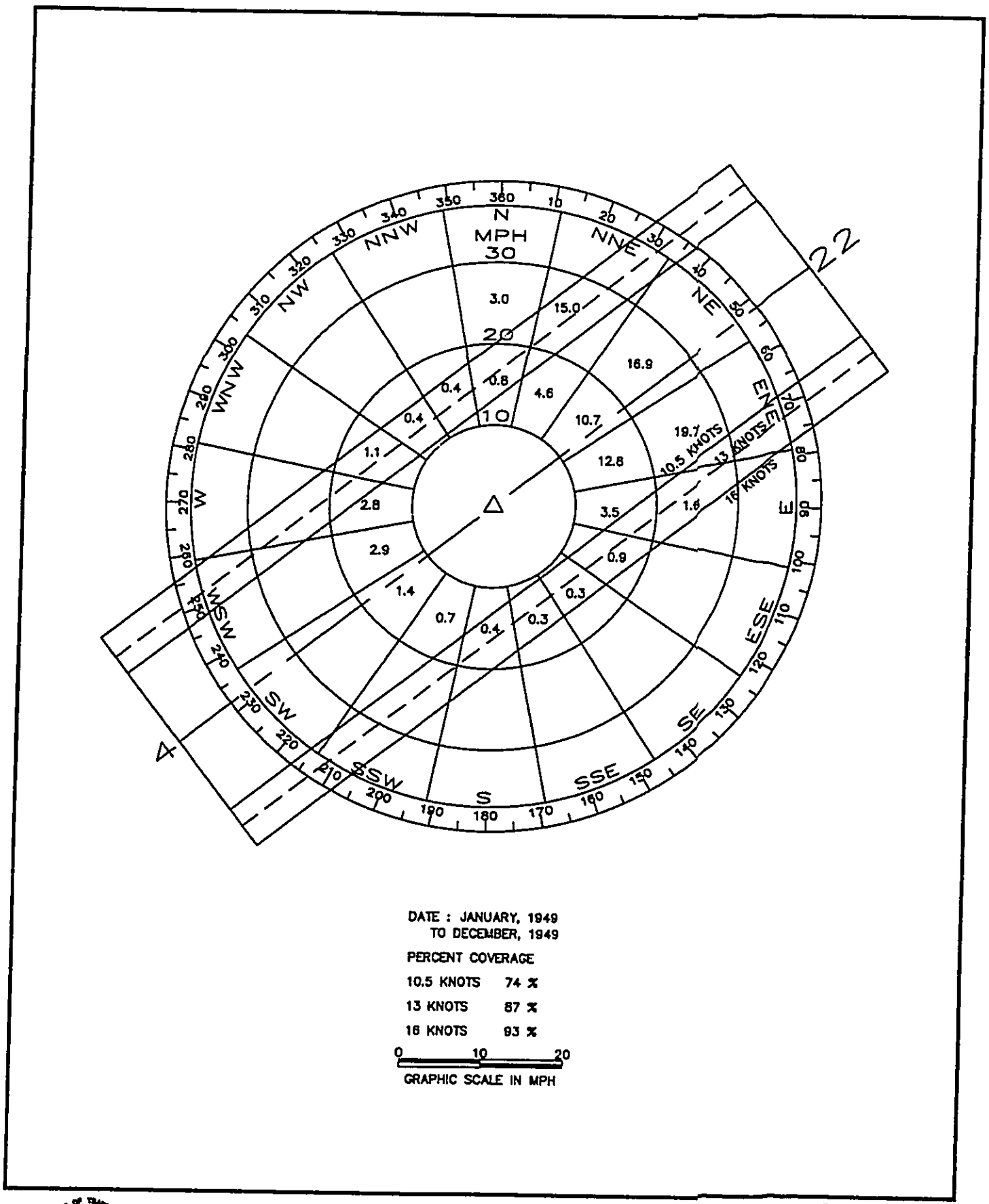

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FIGURE 3-3
WIND ROSE

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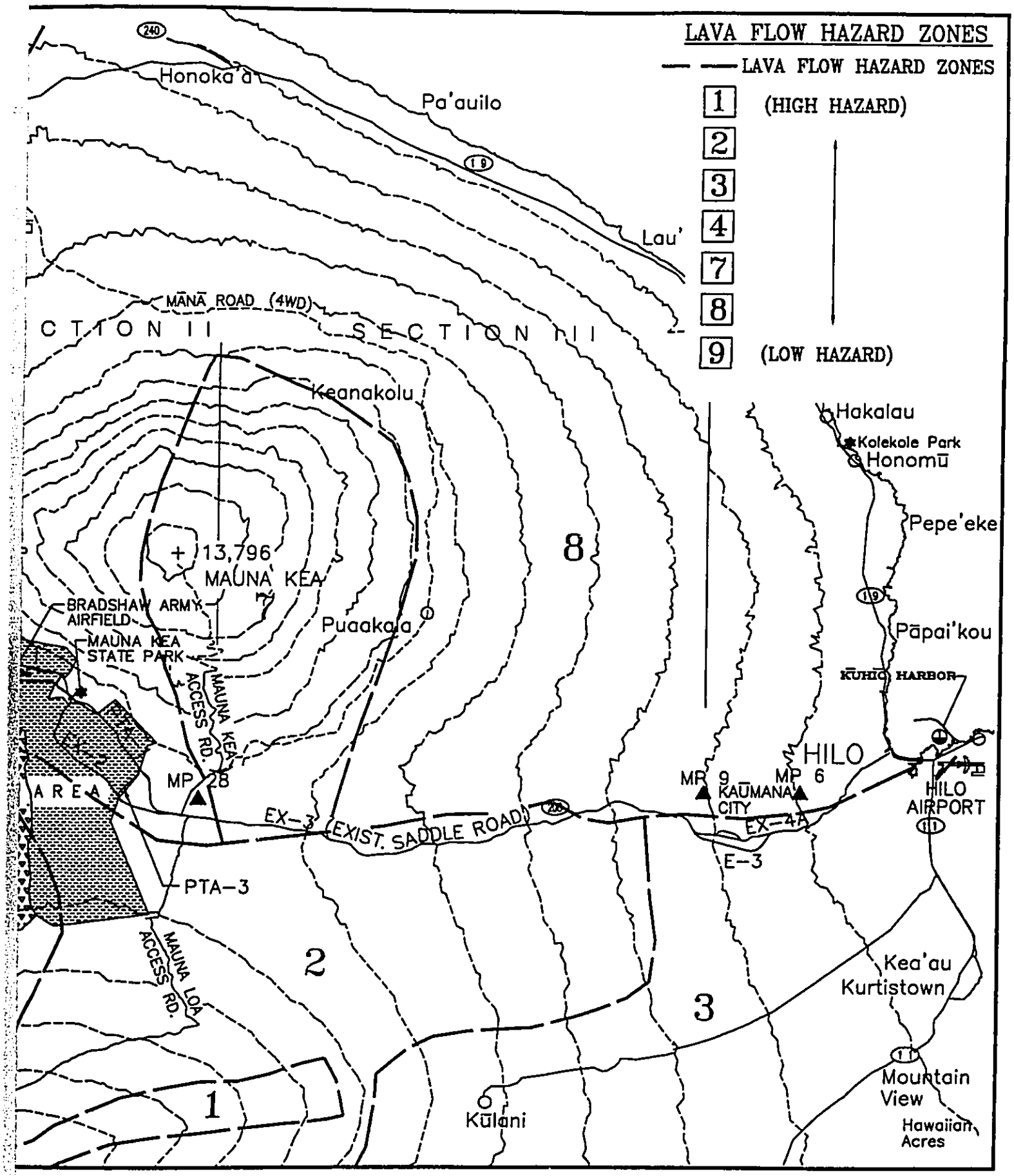

FIGURE 3-4
LAVA HAZARD ZONES
(Reference : Okahara & Associates, Inc.)
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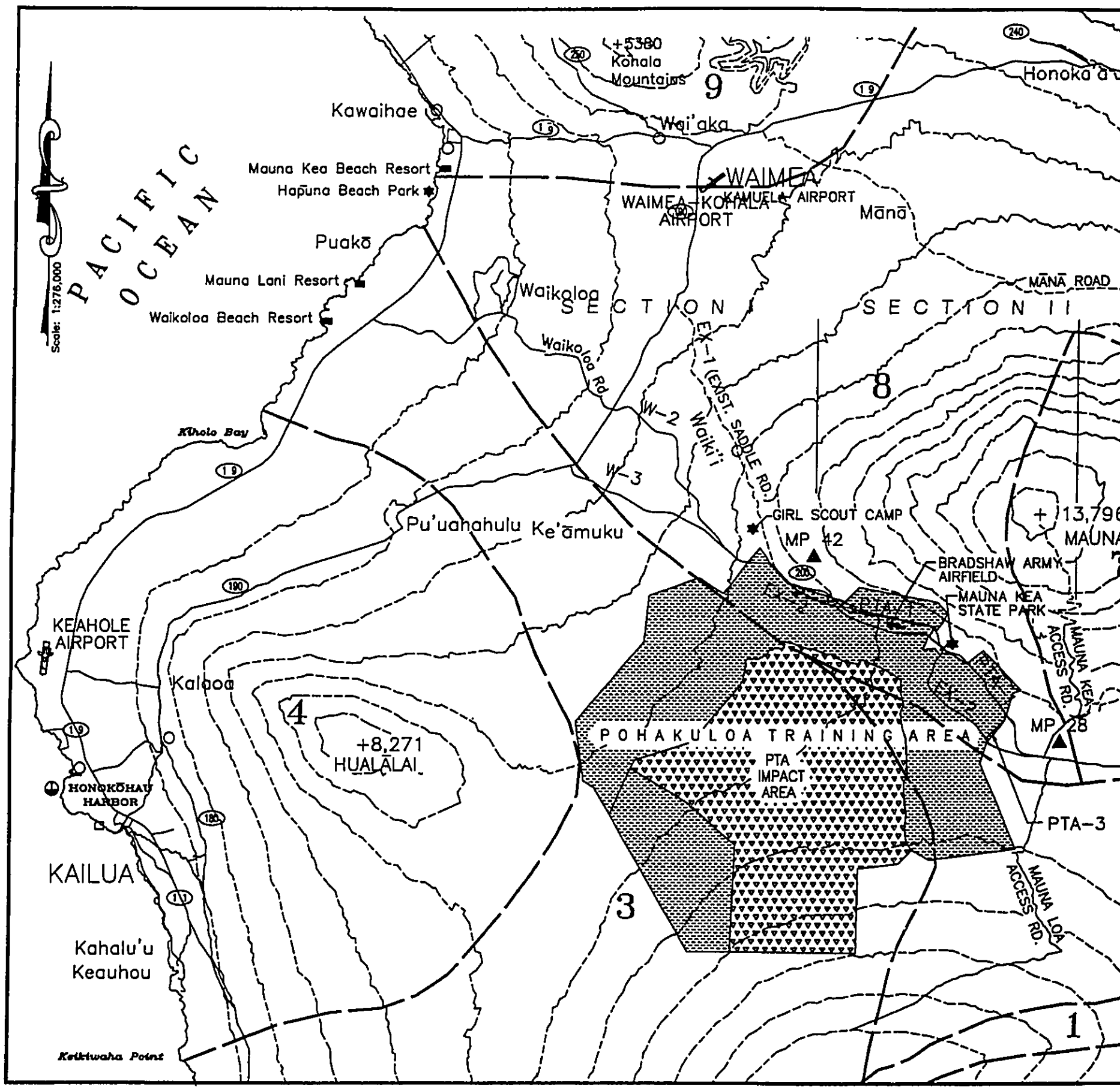

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3.10 BIOTIC COMMUNITIES

3.10.1 Flora

A botanical survey for the Airport was performed and is presented in Appendix B. The survey characterizes the Airport into two vegetation types; Landscape Vegetation, and Open Grasslands.

Landscape Vegetation is found along the access road, parking lot and various buildings in the terminal area. It includes planted trees, shrubs and mowed grasses. Open Grassland vegetation is found surrounding the runway and taxiway areas and extending to the boundary fence. The dominant species in this vegetation type are kikuyu grass (*Pennisetum clandestinum* Chiov.) and fountain grass (*Pennisetum setaceum* (Forssk.) Chiov.). Kikuyu grass is found in areas with deeper soil, and fountain grass where the soil is thinner and harsher. Scattered through the Open Grasslands are eucalyptus trees. There is a low percentage occurrence of native species on the Airport and there are no candidate, proposed or listed threatened or endangered species present.

The proposed Airport improvements will result in minimal disturbance of the landscape and open grassland vegetation communities and no significant impacts to the vegetative character of the area will occur. New landscaping will be in conformance with applicable guidelines, and include native and drought tolerant plant species to the extent possible.

3.10.2 Fauna

An avifauna and mammal study, including surveys during summer and winter, was performed for the Airport and is presented in Appendix C. The study recorded the appearance of the short-eared owl or pueo, and two migrant species, the plover and ruddy turnstone. Several introduced bird species and feral mammals recorded during the surveys are typical of the region. The native and endangered Hawaiian Hoary Bat was not recorded during the surveys, but could potentially forage this area.

Additional information was gathered from the database of The Nature Conservancy of Hawaii. The information provided, indicates that the Hawaiian Goose or Nene, which is a listed endangered species, has been seen in the pastures within the Airport vicinity. In addition, rock doves (pigeons) are nesting under the eaves of the terminal building.

Because there will be minimal disturbance to existing wildlife habitat, the proposed Airport improvements are not expected to result in significant impacts to the fauna of the airport area. There are several native trees, in the Airport areas, which should be relocated if impacted by the proposed improvements.

3.11 ENDANGERED AND THREATENED SPECIES OF FLORA AND FAUNA

There are no listed or candidate endangered or threatened species of plants within the airport boundaries. Therefore, the proposed Airport improvements will not affect sensitive plant species.

The database of The Nature Conservancy of Hawaii indicates that the Hawaiian Goose or Nene, listed as an endangered species, has been seen in the pastures within the Airport vicinity, however none were noted during the survey conducted for this study. According to the Hawaii Natural Heritage database, of The Nature Conservancy of Hawaii, the observation of the Nene goose was in the 1977 to 1978 period, and was within one and one-half (1 ½) miles from the Parker Ranch Race Track. No sitings have been reported on Airport property. Because the proposed Airport improvements will minimally affect existing wildlife habitat, no significant impacts to sensitive wildlife species are expected to occur as a result of the proposed improvements.

3.12 WETLANDS

There are no wetlands within the current or proposed Airport boundaries.

3.13 NATURAL DISASTERS

Severe rainfall events have occurred in the Waimea area, however the slope and grading of the existing improvements (generally higher than surrounding terrain) have not produced any direct impediment to Airport operations.

Proposed improvements which increase the impervious area through construction of roofed structures or paving, will increase runoff from improved areas. Design and construction of the proposed improvements will consider generation, transport and disposal of storm runoff. It is anticipated that the additional runoff generated will not affect Airport operations.

The Airport is located in Seismic Zone 4 as defined in the Hawaii County Uniform Building Code (UBC). Buildings in this zone are at risk of major earthquake damage, however structures at the Waimea-Kohala Airport have successfully withstood all earthquakes to date, including those with Richter magnitudes up to 7.5 measured elsewhere on the island, without significant damage. Proposed improvements will be designed and constructed in compliance with the requirements of the code for earthquake resistance. There will be negligible impacts from the proposed improvements.

3.14 COASTAL ZONE MANAGEMENT AREA

The proposed Airport improvements will not impact known Coastal Zone Management Area programs, activities, plans, or policies.

1. Provide coastal recreational opportunities accessible to the public.

Comment: The Proposed Project is removed from the coast by approximately fifteen miles and therefore does not apply. There will be no impact on coastal recreational opportunities.

2. Protect, preserve and where desirable, restore those natural and man-made historic and prehistoric resources in the CZM area that are significant in Hawaiian and American history and culture.

Comment: The Proposed Project will not impact any natural or man-made historical or pre-historical resource.

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

Comment: The Proposed Project will not impact coastal scenic or open space resources, as the Airport is an existing use. Aesthetics for the new construction and landscaping will be used to further minimize visual impacts.

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

Comment: The Proposed Project is far removed from any coastal ecosystem and will not directly impact the shoreline and beach systems.

5. Provide public or private facilities and improvements important to the State's economy in suitable locations.

Comment: The Proposed Project provides improvements to the Airport, which is a component of the local transportation system and a link to the State at an existing Airport site.

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

Comment: The Proposed Project is outside of the tsunami zone and flood zones. The Proposed Project will not cause erosion, subsidence or pollution.

7. Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Comment: The Proposed Project has included a public involvement process, and has responded to public input with plan changes.

8. Stimulate public awareness, education, and participation in coastal management.

Comment: Not applicable as no coastal management problems were identified due to the inland location of the airport.

9. Protect beaches from public use and recreation.

Comment: The Proposed Project is far removed from the beach area and therefore, will not impact the shoreline area.

10. Implement the State's ocean resources management plan.

Comment: Not applicable.

3.15 COASTAL BARRIERS

The proposed project is located approximately 15 miles inland and will not impact or be impacted by coastal barriers.

3.16 WILD AND SCENIC RIVERS

No wild and scenic rivers are located within, or will be influenced by, the proposed project.

3.17 FARMLAND

The 20.5 acres of land proposed to be acquired in fee are zoned Agricultural by the County of Hawaii. The property is owned by the Parker Ranch and presently used for cattle grazing. The agricultural capability of the land is limited by rolling terrain and thin, rocky soil in some areas, and the lack of sufficient reliable rainfall. The land is rated good for grazing but poorly suited for commercial crops. Loss of the acreage will not impact the operations of Parker Ranch.

3.18 ENERGY SUPPLY AND NATURAL RESOURCES

Energy used at the airport consists primarily of electrical power for operation of terminal lights, and fuel used by aircraft. Electrical power is provided by Hawaii Electric Light Company through overhead service lines to the terminal buildings.

There are no public fuel storage facilities at the airport. Mauna Kea Helicopters provides fuel service for their aircraft (two Astar 350 and one McDonnell Douglas 500D helicopters and one fixed wing Cessna 337 aircraft) with a 4,000 gallon fuel truck (JET-A) located at the airport. Other aircraft fueling is performed at other airports.

Fuel for the emergency generator is supplied from a 400-gallon tank in the electrical vault. The FAA VOR/DME system, is provided with a separate emergency power generator and fuel supply.

The electrical requirements for the proposed Airport improvements are well within the generation capabilities of HELCO and will not result in significant effects on the area or island electrical energy supply or delivery systems. Further, wind farming may be restricted through land use ordinances by the County of Hawaii.

There are no other energy sources or significant consumers within the scope of the proposed improvements. Therefore, the proposed improvements will have an insignificant impact on energy supply and natural resources.

Natural resources consist mainly of potential agricultural uses as the surrounding lands are primarily used for crop growing or cattle ranching. The relatively cool temperature prevailing in Waimea assists growing crops which cannot be successfully cultivated in warmer climates prevalent through most of the State. The proposed Airport improvements will not significantly affect either existing grazing or crop cultivation in the airport area.

3.19 LIGHT EMISSIONS

Light emissions from new construction on the Big Island is limited by a Hawaii County ordinance intended to protect and maintain a dark night sky and enhance the attractiveness of the island as a prime astronomical observatory location. Plans for new construction are reviewed by Hawaii County Department of Public Works, Building Division, to assess whether excessive light emissions may impact astronomical observation. The design of the proposed Airport improvements will be subject to County review for conformance to the County's lighting ordinance, and should also be designed to meet the applicable DLNR guidelines for the Newell's Shearwater, entitled *The Newell's Shearwater Light Attraction Problem, A Guide for Architects, Planners, and Resort Managers*. This publication provides guidance to minimize the light emissions, in general, and is available from DLNR. Therefore, the proposed improvements will have an insignificant impact on light emissions.

3.20 SOLID WASTE

The County of Hawaii does not provide municipal refuse services. Residents and businesses in Waimea and throughout the island contract with private service providers to pick up and haul refuse to municipal transfer stations, or haul trash themselves. The nearest such transfer station operates at the site

of the former Waimea open dump, approximately three miles from the Airport. Solid wastes generated at the Airport are hauled by private contractor to the Waimea transfer station. The County provides periodic transfer to the County-owned Puuanahulu landfill. The proposed improvements will have an insignificant impact on the solid waste facilities on the island.

3.21 AESTHETIC CONSIDERATIONS

The Airport structures presently consist of single-story wooden structures built at grade on concrete foundations. Though industrial in function, they participate well in the open, rural character of the Waimea area.

Final sizes and locations of terminal improvements will be determined during the development or design stages of each facility. The final designs will incorporate features which retain the aesthetic qualities and character of the Airport. As there are no neighboring structures, Airport buildings will not block scenic views of Mauna Kea, Mauna Loa or Hualalai. Adequate vegetative landscaping and consideration of grading should be provided in the design, to perpetuate the aesthetic quality and character existing at Waimea-Kohala Airport, and minimize the impact.

3.22 CONSTRUCTION IMPACTS

Noise and dust are the primary impacts which are closely associated with construction. Both are subject to control by County and State ordinances. These impacts will be temporary and all work will be in conformance with applicable State and County rules, regulations, and ordinances.

3.23 U.S. DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)

Section 4(f) provides in part that the Secretary of Transportation may approve a transportation project requiring use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land of a historic site only if there exists no prudent and feasible alternative.

None of the land areas proposed to be acquired or used by the proposed action are included in the categories identified in Section 4(f). Therefore, there will be no impact on Section 4(f) lands.

SECTION 4.0
SUMMARY OF MAJOR IMPACTS

Direct impacts of implementing the proposed improvements to the Waimea-Kohala Airport include:

- Acquisition and withdrawal of 20.5 acres of privately-held land with agricultural potential;
- Limited short-term air quality impacts during construction and small increase in vehicular traffic and aircraft operation;
- A small increase in the amount of solid waste generation, water consumption, sewage generation;
- Short term increase in employment during construction of the improvements; and
- Enhancement of Airport operational efficiency and safety.

Indirect impacts of implementing the proposed improvements to the Waimea-Kohala Airport include:

- Short-term stimulation of the local economy resulting from construction employment; and
- Long-term enhancement of local agricultural producers resulting from better access to markets.

SECTION 5.0
DETERMINATION AND JUSTIFICATION

The "Significance Criteria", Section 12 of the Hawaii Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed as they apply to the proposed action. Based on the analysis, the following were concluded:

1. *No irrevocable commitment to loss or destruction of any natural or cultural resource would result.* Natural resources within lands proposed for improvements will be impacted. No historical or cultural resources were located within the Airport boundaries or the lands to be acquired. Land proposed to be acquired in fee (approximately 20.5 acres at the south end of the runway) contains no significant natural or cultural resources which would be lost or destroyed. Much of the area affected by the proposed improvements is already Airport property, and thus reserved for Airport control and use.

2. *The proposed action would not curtail the range of beneficial uses of the environment.* Land use on neighboring lands and surrounding properties will not change. Much of the area affected by the proposed improvements are already Airport property, and thus reserved for Airport control and use. The affected lands proposed to be acquired in fee or easement are already subject to FAA regulations which limit land usage.

3. *The proposed action does not conflict with the State's long-term environmental policies or goals and guidelines.* The State's environmental policies and guidelines are set forth in Chapter 344, HRS "State Environmental Policy." Two broad policies are presented: conservation of natural resources, and enhancement of the quality of life. With regard to the former, the proposed project does not consume significant natural resources. Design of proposed improvements would address aesthetic aspects to provide improvements which are designed in keeping with the rural character of the Waimea area while at the same time serving their intended use. The proposed improvements will enhance the utility of Waimea-Kohala Airport, thus providing a higher quality of life for Waimea residents.

4. *The proposed action does not substantially affect the economic or social welfare of the community or state.* Improvements to the Waimea-Kohala Airport include those required by the FAA, as well as those dictated by user requirements. In the former case, the proposed action will increase the safety of the Airport; in the latter, use of the Airport will be enhanced.

5. *The proposed action does not substantially affect public health.* The proposed project will have no significant impact on public health. It will improve overall safety and some of the functional and operational characteristics at the Waimea-Kohala Airport.

6. *No substantial secondary impacts, such as population changes or effects on public facilities, are anticipated.* The phased approach to the proposed action provide for safety and operational improvements, acquisition of land, and construction of improvements which allow, but do not require, greater use of the airfield.

7. *No substantial degradation of environmental quality is anticipated.* No major environmental impacts are expected. There will be temporary, minor impacts in the areas of construction noise and dust.

8. *The proposed action does not involve a commitment to larger actions, nor would cumulative impacts result in considerable effects on the environment.* Improvements considered to be constructed are intended to decrease operational hazards and provide for future uses. The improvements are incremental in nature and are not inter-related to the extent that implementation of one element requires implementation of others. Aircraft operations at the Waimea-Kohala Airport are forecast to increase only slowly, and the cumulative effect of full implementation of improvements recommended in the Master Plan will enhance the usage of the Airport without drawing in or creating a substantial increase in operations.

9. *No rare, threatened or endangered species or their habitats would be affected.* There are no rare, threatened or endangered species within the Airport or proposed land acquisition areas.

10. *Air quality, water quality or ambient noise levels would not be detrimentally affected.* Construction of the proposed improvements will not affect air quality. There are no surface water resources within the project area. Ambient noise levels may increase during construction, but will be controlled by employing properly muffled equipment.

11. *The project would not affect environmentally sensitive areas, such as a flood plain, tsunami zones, beach, erosion-prone areas, geologically hazardous land, estuaries, fresh water or coastal water.* There are no environmentally sensitive areas located within the scope of the proposed improvements.

12. *The project does not substantially affect scenic vistas and viewplanes identified in county or state plans or studies.* The project (Airport) is not located in any county or state scenic vistas or veiwplanes, and no significant impacts are expected. To minimize aesthetic impact, the DOT-AIR should require landscaping on the new projects.

13. *The project requires no substantial energy consumption.* Other than energy required for construction, the improvements are largely passive. The number of flight operations per day is not forecast to change significantly with or without the improvements.

In consideration of the limited effects of the project, it is concluded that the proposed project will not have a significant impact on the environment. Therefore preparation of an environmental impact statement is not required.

SECTION 6.0
LIST OF REFERENCES

1. *National Plan of Integrated Airport Systems, 1990-1999*, U.S. Department of Transportation, 1991.

2. *FAA Form 5010335-1, Airport Master Record*, Federal Aviation Administration, July 22, 1993.

3. *Update of Hawaii Aviation Demand Forecasts*, Aries Consultants, Ltd., 1994.

4. *Master Plan, Waimea-Kohala Airport*, Edward K. Noda and Associates, Inc., December 1998.

5. *The General Plan*, Hawaii County, November 1989.

6. *The Hawaii County Code Chapter 25*, County of Hawaii, 1983, Revised 1995.

7. *Cultural Enhancements at Hilo and Kona International Airports*, Paul S. Osumi, Jr. AIA, March 1998.

8. *FAR Part 150 - Noise Exposure Maps and Noise Compatibility Program, Waimea-Kohala Airport*, Edward K. Noda and Associates, Inc., November 1998.

9. *Hawaii Airports and Flying Safety Manual*, State of Hawaii, Department of Transportation, Airports Division, 1997-1998.

SECTION 7.0
CONSULTATION

7.1 PRE-ASSESSMENT CONSULTATION

The HDOT-AIR provided the public and agencies input into the planning process by holding a series of Technical Advisory Committee (TAC) and Public Informational Meetings. The meetings were advertised in the local papers, "Hawaii Tribune Herald," "West Hawaii Today," and the two Oahu papers, the "Honolulu Star Bulletin," and the "Honolulu Advertiser," and through the TAC members. The TAC has a diverse membership including: Federal, State and County agencies, and community organizations (See Appendix A). The TAC reviewed and commented on the proposed improvements through a series of working papers and meetings. Inputs from the general public were obtained through a series of Public Informational Meetings that were held throughout the planning period in Waimea.

7.2 COMMENTS RECEIVED ON THE DRAFT ENVIRONMENTAL ASSESSMENT

The list of individuals, agencies and organizations which offered comments are listed below. The ** indicate substantive comments and are included in Appendix D. The others commentator's offered no comments.

FEDERAL AGENCIES

Federal Aviation Administration, Airports District Office**

STATE OF HAWAII AGENCIES

Office of the Director of Civil Defense, Department of Defense**
Office of Planning, Department of Business, Economic Development and Tourism**
Department of Health**
Department of Hawaiian Homes Lands**
Office of Environmental Quality Control**
Office of Hawaiian Affairs**

COUNTY OF HAWAII AGENCIES

Department of Public Works
Department of Water Supply
Planning Department**
Police Department

APPENDIX A
TECHNICAL ADVISORY COMMITTEE

APPENDIX A
TECHNICAL ADVISORY COMMITTEE MEMBERS

Federal Government

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Kamuela, Hawaii 96743

Commander
Pohakuloa Training Area
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Bradshaw Army Airfield
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State Government

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Mr. Galen M. Kuba, Engineering Division Chief
County of Hawaii Public Works Department
25 Aupuni Street
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Ms. Diane S. Quitiquit, Director
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Ms. Katherine Kohler, President
Waimea Outdoor Circle
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Kamuela, Hawaii 96743

Mr. Larry Nakamoto, President
Kohala County Farm Bureau
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Mr. Steve Bess
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APPENDIX B
BOTANICAL SURVEY

BOTANICAL SURVEY REPORT FOR THE WAIMEA-KOHALA AIRPORT AREA

FOR
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HONOLULU, HAWAII 96814-3139

BY
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BOTANICAL CONSULTANTS
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TABLE OF CONTENTS

INTRODUCTION

The Waimea-Kohala Airport is located about one mile south of Waimea, Hawaii between 2400 and 2600 feet elevation (800 m to 850 m). The fenced area including the runway and the access road consists of just under ninety acres of land. A botanical survey of this area was carried out in April 1997. The purpose of the survey was to describe the vegetation of the site, to determine if any proposed or listed threatened or endangered plant species are growing on the site, and to prepare a list of all plant taxa found in the area.

BOTANICAL HISTORY

For about one-hundred and fifty years, most of the area around Waimea, Hawaii has been in agricultural use, namely in cattle production. Therefore, the botanical history of the area is limited. U.S. Department of Transportation and the State of Hawaii (Dept. Public Works 1976), in an early environmental impact statement for the Mud Lane Waimea-Kawaihae Road declared that "the highway will be constructed with minimum adverse effects on the environment". A checklist of birds that may be found in the area was presented. There was no mention of the vegetation.

In 1991, in an environmental impact statement for a North Kohala Community Hospital (Wilson Okamoto 1991), reference was made to "a botanical survey conducted for the Boundary District Amendment which examined 600 acres" in the Waimea area and found nothing of significance. The document, the Richard Smart Revocable Personal Trust - State of Hawaii Land Use Commission Boundary Change petition Docket #86601, contained a botanical survey of a large site just west of the Airport across Mamalahoa Highway and a 404 acre site just north of the Airport. The third parcel covered in this survey was located west of Waimea near the Hawaii Preparatory Academy. The conclusion drawn from this extensive

survey was that "the area has been greatly modified by grazing and planting activities" and that "no plants considered rare or endangered were found within the property"' (State of Hawaii Land Use Commission 1987).

METHODS

A walk through survey by a two person team was carried out on the site in April 1997. The study site is approximately one mile long and six-hundred feet wide. Many forays were made from the runway to the perimeter fence and into the undeveloped areas. All parts of the site were canvassed and the results are presented here.

RESULTS

Two vegetation types are found on the Waimea-Kohala Airport site, Landscape Vegetation and Open Grasslands. Landscape Vegetation is found along the access road, around the parking lot and the various ancillary buildings of the airport. It consists of planted trees, shrubs and mowed grasses. Landscape vegetation is not included in the species list.

Open Grassland vegetation is found from the edge of the paved runway to the periphery fence. Along the northern and southern edges of the runway the Grassland is approximately two-hundred fifty feet wide and along the eastern and western ends it is approximately four hundred feet wide. The dominant species are kikuyu grass (*Pennisetum clandestinum* Chiov.) and fountain grass (*Pennisetum setaceum* (Forssk.) Chiov.). In addition there are intermittent patches of other weed species and frequent rock outcrops. The distribution of the kikuyu grass and fountain grass appears to be soil related. In areas where soil is deepest, kikuyu grass is found, where the soil is thin and harsher conditions prevail, fountain grass is found. Scattered about in the grassland can be found planted eucalyptus trees

(*Eucalyptus* sp.), panini (*Opuntia ficus-indica* (L.) Mill.), lantana (*Lantana camara* L.), Monterey cypress (*Cupressus macrocarpa* Hartweg ex Gordon), false olive (*Olea europaea* L. subsp *europaea*), and, surprisingly, two native Hawaiian species, 'akia (*Wikstroemia pulcherrima* Skottsb.) and 'a'ali'i (*Dodonaea viscosa* Jacq.).

Other native taxa found in very low numbers are 'Ilima (*Sida fallax* Walp.), aheahea (*Chenopodium oahuense* (Meyen) Aellen), 'akulikuli (*Portulaca pilosa* L.), and one koa seedling (*Acacia koa* A. Gray), but by and large, the most prominent vegetative feature of this site is the grasses.

ENDANGERED SPECIES

No candidate, proposed, or listed threatened or endangered species as set forth in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543), are known from the Waimea-Kohala Airport area and none were found during this survey.

SPECIES LIST OF PLANTS FOUND ON THE WAIMEA-KOHALA AIRPORT SITE

WAIMEA, HAWAII

The plant families in the following species list have been alphabetically arranged within four groups, Ferns, Gymnosperms, Monocotyledons, and Dicotyledons. The genera and species are arranged alphabetically within families. The taxonomy and nomenclature follow that of St. John (1973) and Wagner, Herbst and Sohmer (1990). For each taxon the following information is provided:

1. An asterisk before the plant name indicates a plant introduced to the Hawaiian Islands since Cook or by the aborigines.
2. The scientific name.
3. The Hawaiian name and or the most widely used common name.
4. Abundance ratings are for this site only and they have the following meanings:

   Uncommon = a plant that was found less than five times.

   Occasional = a plant that was found between five to ten times.

   Common = a plant considered an important part of the vegetation

   Locally abundant = plants found in large numbers over a limited area. For example the plants found in grassy patches.

This species list is the result of an extensive survey of this site during the wet season (April 1997) and it reflects the vegetative composition of the flora during a single season. Minor changes in the vegetation will occur due to introductions and losses and a slightly different species list would result from a survey conducted during a different growing season.

Scientific Name	Common Name	Abundance
FERNS		
POLYPODIACEAE - Common Fern Family		
**Nephrolepis exaltata* (L.) Schott	Sword fern	Locally abundant
GYMNOSPERMS		
CUPRESSACEAE - Cypress Family		
**Cupressus macrocarpa* Hartweg ex Gordon	Monterey cypress	Uncommon
MONOCOTYLEDONES		
COMMELINACEAE - Spiderwort Family		
**Commelina diffusa* N. L. Burm.	Honohono	Common
GRAMINEAE - Grass Family		
**Avene sativa* L.	Common oats	Occasional
**Cenchrus ciliaris* L.	Buffelgrass	Uncommon
**Chloris barbata* (L.) Sw.	Swollen fingergrass	Common
**Chloris divaricata* R. Br.	Stargrass	Occasional
**Chloris virgata* Sw.	Feather fingergrass	Uncommon
**Cynodon dactylon* (L.) Pers.	Bermuda grass	Locally abundant
**Pennisetum clandestinum* Chiov.	Kikuyu grass	Locally abundant
**Pennisetum setaceum* (Forssk.) Chiov.	Fountain grass	Locally abundant
**Rhynchelytrum repens* (Willd.) Hubb.	Natal redtop	Common
**Sporobolus diander* (Retz.) P. Beauv.	Indian drop seed	Common
**Sporobolus indicus* (L.) R. Br.	West Indian dropseed	Common
**Vulpia myuros* (L.) C.C. Gmelin	Rat tail fescue	Locally abundant
DICOTYLEDONES		
AMARANTHACEAE - Amaranth Family		
**Amaranthus viridis* L.	Slender amaranth	Occasional
ASTERACEAE - Sunflower Family		
**Ambrosia artemisiifolia* L.	Common ragweed	Locally abundant
**Bidens alba* (L.) DC		Uncommon
**Bidens cynapiifolia* Kunth		Common
**Conyza bonariensis* (L.) Cronq.	Hairy horseweed	Occasional
**Conyza canadensis* (L.) Cronq.	Horseweed	Occasional
**Cotula australis* (Sieber ex Spreng.) J. D. Hook.	Australian brass buttons	Common
**Emilia coccinea* (Sims) G. Don	Flora's paintbrush	Common

Scientific Name	Common Name	Abundance
ASTERACEAE - Sunflower Family con't		
**Hypochoeris radicata* L.	Haairy cat's ear	Common
**Sonchus oleraceus* L.	Sow thistle	Occasional
**Taraxacum officinale* W. W. Weber	Dandelion	Occasional
BRASSICACEAE - Mustard Family		
**Brassica nigra* (L.) W. Koch	Black mustard	Occasional
**Lepidium virginicum* L.		Common
CACTACEAE - Cactus Family		
**Opuntia ficus-indica* (L.) Mill.	Panini	Common
CARYOPHYLLACEAE - Pink Family		
**Petrorhagia velutina* (Guss.) P. Ball & Heyw.		Locally abundant
**Polycarpon tetraphyllum* (l.) L.		Locally abundant
**Silene gallica* L.	Small flowered catchfly	Occasional
CHENOPODIACEAE - Goosefoot Family		
**Chenopodium murale* L.	Aheahea	Occasional
Chenopodium oahuense (Meyen) Aellen	Aheahea	Occasional
CONVOLVULACEAE - Morning Glory Family		
**Ipomoea purpurea* (L.) Roth	Common morning glory	Common
EUPHORBIACEAE - Spurge Family		
**Chamaesyce hirta* (L.) Millsp.	Hairy spurge	Locally abundant
**Ricinus communis* L.	Castor bean	Occasional
FABACEAE - Bean Family		
Acacia koa A. Gray	Koa	Uncommon
**Acacia mearnsii* De Wild.	Black wattle	Uncommon
**Desmodium sandwicense* E. Mey.	Spanish clover	Occasional
**Leucaena leucocephala* (Lam. de Wit	Koa haole	Occasional
**Melilotus indica* (L.) all.		Occasional
**Trifolium repens* L. var. repens	Rabitfoot clover	Locally aabundant
**Vicia sativa* L.	Common vetch	Occasional
GENTIANACEAE - Gentian Family		
**Centaurium erythraea* Raf.	Bitter herb	Common

Scientific Name	Common Name	Abundance
GERANIACEAE - Geranium Family		
**Erodium cicutarium* (L.) L'Her	Pin clover	Occasional
MALVACEAE - Hibiscus Family		
**Albutilon grandifolium* (Willd.) Sweet	Hairy abutilon	Occasional
**Sida fallax* Walp.	'Ilima	Occasional
MYRTACEAE - Myrtle Family		
**Eucalyptus* sp.	Eucalyptus	Uncommon
OLEACEAE - Olive Family		
**Olea europaea* L. *subsp europaea*	False olive	Common
OXALIDACEAE - Wood Sorrel Family		
**Oxalis corniculata* L.	Yellow wood sorrel	Occasional
PLANTAGINACEAE - Plantain Family		
**Plantago lanceolata* L.	Narrow-leafed plantain	Locally abundant
PORTULACACEAE - Purslane Family		
**Portulaca pilosa* L.	'Akulikuli	Occasional
PRIMULACEAE - Primrose Family		
**Anagallis arvensis* L.	Scarlet pimpernel	Locally abundant
SAPINDACEAE - Soapberry Family		
Dodonaea viscosa Jacq.	A'ali'i	Common
STERCULIACEAE - Cacao Family		
**Waltheria indica* L.	Uhaloa	Locally abundant
THYMELAEACEAE - 'Akia Family		
Wikstroemia pulcherrima Skottsb.		Common
VERBENACEAE - Verbena Family		
**Lantana camara* L.	Lantana'	Occasional
**Verbena litoralis* Kunth	Owi	Occasional

BIBLIOGRAPHY

Department of Public Works, Hawaii County. 1976. Mud Lane Waimea-Kawaihae Road. F.E.I.S.

Haselwood, E. L. and G. G. Motter. 1976. Handbook of Hawaiian Weeds. Lyon Arboretum Assn.

Neal, M. C. 1965. In Gardens of Hawaii. 2nd. ed. Special Publ. Bernice P. Bishop Mus.

State of Hawaii Land Use Commission. 1987. Richard Smart Revocable Personel Trust Boundary Change Petition. Docket #86601.

USFWS. 1996. Endangered and Threatened Wildlife and Plants. 50 CFR 17.11 & 17.12. U.S. Government Printing Office. Wash. DC

_____. 1994b. Plants, Hawaiian Islands, Listed, Proposed or Candidate Species Under the U.S. Endangered Species Act. Unpublished List. Pacific Islands Office. Hon. Ha.

Wagner, W. L., D. R. Herbst and S. H. Sohmer. 1990. Manual of the Flowering Plants of Hawaii. Bishop Museum Special Publication #83. Univer. Hawaii Press. Vols. 1 & 2.

Wilson Okamoto and Associates. 1991. Site Selection Report and Environmental Impact Statement For a North Hawaii Community Hospital DAGS Job #11-20-4111

APPENDIX C
AVIFAUNA AND MAMMAL STUDY

AVIFAUNAL AND FERAL MAMMAL SURVEY OF WAIMEA-KOHALA AIRPORT, HAWAII

Prepared for

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by

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3 November 1997

INTRODUCTION

The purpose of this report is to summarize the findings of a bird and mammal field survey of Waimea-Kohala Airport for the Master Plan and Noise Compatibility Program State Project No. AH 3011-02. Figure One shows the location of the survey. Also included in the report are references to pertinent literature and unpublished reports.

The objectives of the field survey were to:

1- Document what bird and mammal species occur on the property or may likely occur given the available habitats and limitations imposed by predators and disturbance.

2- Provide current baseline information on the relative abundance of each species.

3- Note the presence or likely occurrence of any native fauna particularly any that are considered "Endangered" or "Threatened".

GENERAL SITE DESCRIPTION

Waimea-Kohala Airport contains a limited array of habitats. Grass and other low growing vegetation dominate the site. A few trees adjoin the parking area and associated buildings. Pasture lands surround the airport property. Northeast tradewinds are often brisk. During the course of the survey air traffic was light.

STUDY METHODS

Two separate surveys were conducted (11-13 August, 10-12 October). On each occasion the entire site was traversed on foot. Field observations were made with binoculars and by listening for vocalizations. These observations were concentrated during the peak bird and mammal activity periods of early morning and late afternoon/dusk. Attention was also paid to the presence of tracks and scats as indicators of bird and mammal activity. The early evening hours were devoted to looking for bats (Lasiurus cinereus semotus).

All birds and mammals seen or heard were tallied. These data provide the basis for the relative abundance estimates given in this report. Published and unpublished resources were also consulted (Hawaii Audubon Society 1993; Pratt et al. 1987; Bruner 1997). Observations of feral mammals were limited to visual sightings and evidence in the form of scats and tracks. No attempts were made to trap mammals in order to obtain data on their relative abundance and distribution. An effort of this magnitude was considered unnecessary for the purpose of this survey.

Scientific names used in this report follow those given in Pyle (1997) and Honacki et al. (1982). The data are separated in the Results and Discussion section into Summer (11-13 August) and Fall (10-12 October).

RESULTS AND DISCUSSION

SUMMER Data (11-13 August 1997)

Native Birds:

The only native species recorded on the summer survey was the Short-eared Owl or Pueo (Asio flammeus). Two to six owls were recorded on each survey day. They were observed foraging and resting. Periodic mice infestations probably account for the localized abundance of owls. No wetlands or native forest occurs on or near the site. The only other native bird that might be expected in this area is the 'Io or Hawaiian Hawk (Buteo solitarius). This species forages widely on the Big Island but is most common in forested habitats.

Migratory Birds:

Migratory shorebirds breed in the arctic and winter in Hawaii. Some individuals, usually young birds, may oversummer their first year and do not return to the breeding grounds until their second year of life. The Pacific Golden-Plover (Pluvialis fulva) is the most abundant migratory shorebird in Hawaii. They forage on lawns, pastures, and natural grasslands as well as along shorelines. Extensive research on this species, both in Hawaii and Alaska, has yielded much information on their life history (Johnson et al. 1981, 1989, 1993). An average of 22 plover were tallied on the two survey days in August. Approximately half were in non-breeding plumage and were likely oversummering juveniles. The others were adults that had just returned from the arctic and still had remnants of

breeding plumage. Another migrant which could occur at this site is the Ruddy Turnstone (Arenaria interpres). This species forages in small flocks along shorelines, mudflats, lawns and fields (Hawaii Audubon Society 1993).

Introduced Birds:

A total of 19 species of non-native (introduced) birds were recorded on the summer survey. Table One gives the names of these species and indicates their relative abundance. Other species seen on surrounding lands during the course of the survey include: Wild Turkey (Meleagris gallopavo), Chukar (Alectoris chukar). Pratt et al. 1987 and Hawaii Audubon Society 1993 provide additional information on introduced birds in Hawaii.

Feral Mammals:

Small Indian Mongoose (Herpestes auropunctatus), Cats (Felix catus), Roof Rats (Rattus rattus) and House mouse (Mus musculus) were all seen on and around the site. These species are abundant in Hawaii (Tomich 1986). An active, ongoing trapping program is in place along the perimeter fenceline near the terminal and other buildings. The native Hawaiian Hoary Bat is fairly common on the Big Island, despite its endangered status (Kepler and Scott 1990). They forage in a wide variety of habitats from forest to urban and even at high elevation (10,000 feet). None were recorded on the summer survey.

FALL DATA (10-12 October 1997)

Native Birds:

Pueo was the only bird recorded on the fall survey. Only one individual was seen on 12 October. Apparently mice populations were down during the time of this survey. Employees at the airport commented that localized infestations did attract owls.

Migratory Birds:

Pacific Golden-Plover and Ruddy Turnstone, two common migratory shorebirds, were both present on the Fall Survey. Plover counts averaged 33 birds within the airport fence line. Many more were seen on the surrounding pasture lands. No large roosting aggregations of plover were seen on night surveys. By contrast Upolu Airport supports a large roosting plover population of 400+ (Bruner 1997). Plover typically roost in flocks in areas were they are relatively safe from disturbance. Roof tops, parking lots, airfields and lava flows are often the preferred sites.

Ruddy Turnstones were much less abundant. The fall counts for this species averaged only four birds.

Introduced Birds:

Table Two gives the species of introduced birds and their relative abundance recorded on the fall survey. A total of 11 species were tallied. Somewhat surprisingly eight species noted in August were not observed in October. Either they were present in low numbers and went undetected or they occur in this area only on a seasonal basis.

Feral Mammals:

House Mouse, cat and mongoose were again present on the fall survey. Two evenings were devoted to looking for the Hawaiian Hoary Bat. None were seen.

CONCLUSIONS

The Waimea-Kohala Airport is located in open habitat *bounded* by pasture lands. Native birds recorded on the surveys were confined to the Short-eared Owl. Migrants included the two most common species. Areas of low grass such as mowed lawns and grazed pastures support wintering plover. Ruddy Turnstone, a less abundant migrant, also forages in this area. The introduced species of birds found on the surveys were those typical of this region. No unusual or unexpected species were recorded. Feral mammals were also the usual, common introduced species. The native and endangered Hawaiian Hoary Bat was not found on any of the surveys, however, they potentially could forage in this area.

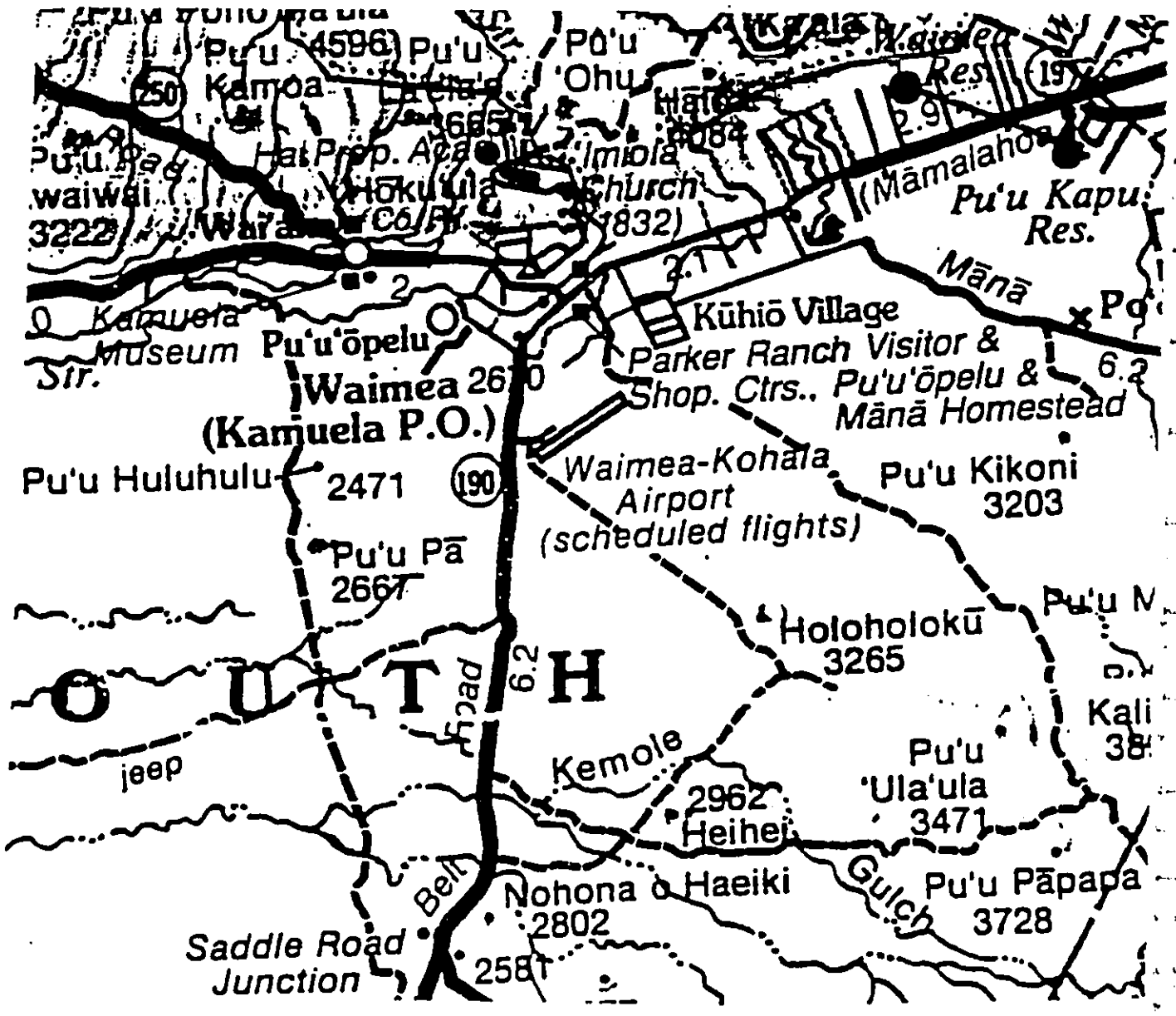

Fig. 1. Location of faunal survey (Waimea-Kohala Airport.

TABLE 1

Introduced birds recorded at Waimea-Kohala Airport, Hawaii during 11-13 August 1997. Relative Abundance = number of birds observed on each survey day. A = abundant 20+, C = common 10-19, U = uncommon 5-9, R = rare (less than 5 recorded over the entire survey period).

COMMON NAME	SCIENTIFIC NAME	RELATIVE ABUNDANCE
Black Francolin	Francolinus francolinus	C
Gray Francolin	Francolinus pondicerianus	C
Erckel Francolin	Francolinus erckelii	R
Chukar	Alectoris chukar	R
Ring-necked Pheasant	Phasianus colchicus	R
California Quail	Callipepla californica	R
Chestnut-bellied Sandgrouse	Pterocles exustus	R
Rock Dove	Columba livia	C
Spotted Dove	Streptopelia chinensis	C
Zebra Dove	Geopelia striata	C
Sky Lark	Alauda arvensis	A
Northern Mockingbird	Mimus polyglottos	R
Common Myna	Acridotheres tristis	A
Japanese White-eye	Zosterops japonicus	U
Saffron Finch	Sicalis flaveola	U
House Finch	Carpodacus mexicanus	C
Yellow-fronted Canary	Serinus mozambicus	R
House Sparrow	Passer domesticus	A
Warbling Silverbill	Lonchura malabarica	C

TABLE 2

Introduced birds recorded at Waimea-Kohala Airport, Hawaii during 10-12 October 1997. Relative Abundance = number of birds observed on each survey day. A = abundant 20+, C = common 10-19, U = uncommon 5-9, R = rare (less than 5 recorded over the entire survey period).

COMMON NAME	SCIENTIFIC NAME	RELATIVE ABUNDANCE
Black Francolin	Francolinus francolinus	R
Gray Francolin	Francolinus pondicerianus	R
Ring-necked Pheasant	Phasianus colchicus	R
Rock Dove	Columba livia	C
Spotted Dove	Streptopelia chinensis	C
Zebra Dove	Geopelia striata	C
Sky Lark	Alauda arvensis	A
Common Myna	Acridotheres tristis	A
Japanese White-eye	Zosterops japonicus	U
House Finch	Carpodacus mexicanus	C
House Sparrow	Passer domesticus	A

SOURCES CITED

Bruner, P.L. 1997. Avifaunal and feral mammal survey of Upolu Airport, North Kohala, Hawaii. Prep. for Belt Collins and Associates, Honolulu.

Hawaii Audubon Society. 1993. Hawaii's Birds. Fourth Edition. Hawaii Audubon Society, Honolulu.

Honacki, J.H., K.E. Kinman and J.W. Koeppl ed. 1982. Mammals species of the World: A taxonomic and geographic reference. Allen Press Inc., and the Association of Systematic Collections, Lawrence, Kansas.

Johnson, O.W.,P.M. Johnson, and P.L. Bruner. 1981. Wintering behavior and site-faithfulness of Golden-Plovers on Oahu. 'Elepaio 41(12):123-130.

Johnson, O.W., M.L. Morton, P.L. Bruner and p.M. Johnson. 1989. Fat cyclicity, predicted migratory flight ranges, and features of wintering behavior in Pacific Golden-Plovers. Condor 91:156-177.

Johnson, O.W., P.L. Bruner, P.G. Connors, and J.L. Maron. 1993. Breeding ground fidelity and mate retention in the Pacific Golden-Plover. Wilson Bull. 105(1):60-67.

Kepler, C.B. and J.M. Scott. 1990. Notes on distribution and behavior of the endangered Hawaiian Hoary Bat (Lasiurus cinereus semotus). 1964-1983. 'Elepaio 50(7):59-64.

Pratt, H.D., P.L. Bruner, and D.G. Berrett. 1987. A field guide to the birds of Hawaii and Tropical Pacific. Princeton Univ. Press.

Pyle, R.L. 1997. Checklist of Birds of Hawaii - 1997. 'Elepaio 57(7):129-138.

Tomich, P.Q. 1986. Mammals in Hawaii. Bishop Museum Press, Honolulu.

APPENDIX D
COMMENTS RECEIVED ON DRAFT EA

U.S Department
of Transportation
Federal Aviation
Administration

Western-Pacific Region
Airports District Office

300 Ala Moana Blvd., Room 7-128
Honolulu, Hawaii 96813
MAIL: Box 50244
Honolulu, Hawaii 96850-0001
Phone: (808) 541-1232
FAX: (808) 541-3462

June 7, 1999

Mr. Jerry M. Matsuda
Airports Administrator
DOT, State of Hawaii
400 Rodgers Blvd., Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Matsuda:

We have reviewed the Draft Environmental Assessment (EA) for Waimea-Kohala Airport dated February 1999. Our review has determined that the Phase I projects are Categorically Excluded from the requirement for a formal environmental assessment in accordance with Paragraph 23 of FAA Order 5050.4A. Therefore, FAA processing of this EA culminating in the preparation of a Finding of No Significant Impact (FONSI) is not required.

We have enclosed several comments on the enclosed pages to assist in the State's Chapter 343 processing of the EA.

If you have any questions regarding this schedule, please call David Welhouse at 541-1243.

Sincerely,

Daniel S. Matsumoto

Daniel S. Matsumoto
Civil Engineer

Enclosure

SECTION 1.0
PROJECT DESCRIPTION

This Environmental Assessment (EA) is a product of the Waimea-Kohala Airport Master Plan and FAR Part 150 Noise Compatibility Program. Funding for this program was provided through the State of Hawaii, Department of Transportation, Airports Division (HDOT-AIR) under State Contract 42016, State Project No. AH3011-02, and a planning grant from the Federal Aviation Administration (FAA).

1.1 BACKGROUND AND DESCRIPTION OF AIRPORT FACILITIES

Waimea-Kohala Airport is located in the northern portion of the island of Hawaii, in the South Kohala District (Figure 1-1). It is one of four airports on the Big Island, the other three are Hilo International Airport, Kona International Airport at Keahole, and Upolu Airport. The Airport is located approximately one mile south of Waimea town on 89.718 acres of land and occupies Tax Map Keys 6-7-01 parcels 8, 9, 12, 17 and 23. The Proposed Project will impact Tax Map Key parcel 6-7-01 : 25.

The Airport was constructed by the Territory of Hawaii in the early 1950s, and opened for air service on July 2, 1953. Originally known as the Kamuela Airport, in 1970 it was renamed as the Waimea-Kohala Airport.

The Waimea-Kohala Airport (labeled MUE in the airport designation system) is one of sixteen airports operated by the Department of Transportation, Airports Division. It is designated as an eligible point to receive Essential Air Service (EAS) under the Airline Deregulation Act of 1978, and currently receives EAS subsidized air taxi (commuter) service. Other users of the Airport include air cargo operators, air ambulance, scenic tour operators, flight training schools, private and business aircraft owners, and the military.

According to the *National Plan of Integrated Airport Systems, 1990 - 1999* (Section 6.0, Reference 1) Waimea-Kohala is designated as a "Commercial-Other" airport,[1] that accommodates short haul (less than 1,500 miles) routes. In addition, DOT has an avigation easement over portions of Parker Ranch, Department of Hawaiian Home Lands parcels, and private land parcels in Waimea Town.

Existing airfield facilities are shown on Figure 1-2. The airport has a single runway (4-22) which is 5,197 feet long and 100 feet wide, with a true azimuth of 232° 00' 40". The magnetic declination in 1985 is 11° 12' east. The airport elevation is 2,671 feet Mean Sea Level (MSL). There are three entry/exit taxiways located near the southwest end of the runway that connect the runway to the apron.

Later date

[1] A Commercial-Other airport designation is defined as an airport receiving scheduled passenger service and having less than 10,000 annual enplanements, but greater than 2,500 enplanements.

Table 1-2
ASSOCIATED RUNWAY AND TAXIWAY SAFETY AREAS

DESCRIPTION	WIDTH (Feet)	LENGTH (Feet)
Runway Safety Area	150	Extends 300 feet beyond Runway end
Runway Shoulders	10	Length of Runway
Runway Blast Pad	100	150
Runway Object Free Area	500	Extends 200 feet beyond Runway end
Runway Obstacle Free Zone	400	Extends 200 feet beyond Runway end
Runway Protection Zone	Inner width: 500 Outer width: 1,010	1,700 feet in length
Taxiway Safety Area	79	Length of taxiway
Hover Taxi	14.2	Not Applicable
Hover Taxi Route	80	Not Applicable
Building Restriction Line	west side: 340 east side: 300	Until intersects with the Runway Protection Zone

300'

The passenger terminal building will be reconfigured to meet existing and forecast demand, with additional space provided for ticketing areas and concession space. The major renovation will reconfigure the existing baggage claim area into a new ticketing area for the commuter and scenic air tour companies. In addition, a concession space will be provided in the current ticketing area and will be adjacent to the passenger holdroom. The newly configured terminal building will be designed to meet applicable Federal and State accessibility requirements, such as those prescribed by the Americans with Disabilities Act (ADA). The proposed terminal building layout is shown on Figure 1-7.

The aircraft parking apron fronting the passenger gates will be reduced in size due to the current FAA safety criteria for the object free area. However, the apron will be able to accommodate two aircraft with wingspans up to 79 feet and two smaller aircraft. In addition, the improvements include a transient apron which can accommodate one aircraft with a wingspan up to 140 feet, or two smaller aircraft.

- renovation of the terminal building to accommodate the additional ticketing space and concession space;
- construction of a portion of the new access roadway;
- construction of the tenant parking lots;
- acquire land for the runway safety areas and runway protection zones;
- removal of the berm obstruction and grade the northwest side of the runway; and
- construction of the perimeter roadway.

The estimated total cost for the Phase II improvements is $1.4 million. A breakdown of planned improvements in Phase II by estimated cost is presented in Table 1-6.

Table 1-6
ESTIMATED COST OF PHASE II IMPROVEMENTS

PROPOSED IMPROVEMENT	ESTIMATED COST (1998 Dollars)	FAA ELIGIBILITY
Renovation of Terminal Building	$25,000	75%
New Roadway and Parking Areas	$130,000	75%
Removal of Berm (Obstruction)	$250,000	90%
Land Acquisition	$320,000	90%
Perimeter Road	$610,000	90%
Miscellaneous Utility Improvements	$50,000	90%
TOTAL	$1,385,000	

Access Road 90% Parking is Not Elig.

Elig. will depend on use of the utility; Not all may be Elig.

1.5.3 Phase III Improvements: Years 2010 through 2020

Figure 1-10 shows the Phase III improvements planned to be in place by the year 2020. The proposed improvements are:

- repave runway;
- install REILS and Distance-to-go-markers;
- construction of runway safety areas beyond the runway ends;
- relocation of overhead lines along Mamalahoa Highway or placing lines underground;
- construction of the remaining portion of the parallel taxiway to the airpark, if there is a commitment to develop an airpark;

- initiation of a GPS instrument approach; and
- construction of a new access roadway to the proposed Waimea Bypass Road.

The estimated total cost for the Phase III improvements is $2.9 million. A breakdown of planned improvements in Phase III by estimated cost is presented in Table 1-7. Construction of the four remaining fixed-wing lease lots is expected to occur beyond the year 2020 and therefore not included in the implementation plan.

Table 1-7
ESTIMATED COST OF PHASE III IMPROVEMENTS

PROPOSED IMPROVEMENT	ESTIMATED COST (1998 Dollars)	FAA ELIGIBILITY
Repave Runway	$1,100,000	90%
Install NAVAIDS	$50,000	90%
Runway Safety Areas & Blast Pads	$680,000	90%
Underground Utility Lines (Obstruction)	$30,000	90%
Extend Parallel Taxiway	$180,000	90%
Construct Access Roadway	$840,000	0%
TOTAL	$2,880,000	

1.6 LAND USE

Land use on the island of Hawaii is controlled by the State Land Use Commission, and the County of Hawaii Planning Department. Land use in the airport environs is principally agriculture and mainly used for cattle ranching. Figure 1-11 shows State of Hawaii Land Use designations around the Airport. The Airport is outside the County Special Management Area (SMA).

Table 1-8 lists Governor's Executive Orders for the Waimea-Kohala Airport, and Figure 1-12 shows the Executive Order boundaries. Approximately forty-five percent of the Airport is on ceded lands. The land was acquired by the State of Hawaii, from Richard Smart and transferred to the HDOT-AIR's predecessor, the Hawaii Aeronautics Commission. However, 40.682 acres of the Airport were originally from the Department of Hawaiian Homes Lands (DHHL) and shown on Figure 1-12. The 1984 Tri-partite Land Exchange, which completed the land transfer between the Department of Land and Natural Resources (DLNR), DHHL, and DOT, included the Airport's DHHL lands. Therefore, as a result of the 1984 Land Exchange, the 40.682 acres were designated ceded lands and part of the Public Land Trust for ceded lands under Section 5 of the Admissions Act.

2.2.1 Airfield Alternatives

Both Airfield Alternatives provide the following basic safety and operational improvements:

- installation of an Automated Weather Observing System (AWOS) to allow the initiation of the non-precision instrument approach procedures;
- removal of obstructions on the airport;
- construction of Runway Safety Areas beyond the runway ends in accordance with *Advisory Circular AC 150/5300-13* (FAA 1997);
- construction of blast pads on both runway ends;
- installation of Runway End Indicator Lights (REILS) on Runway 4;
- installation of Distance-to-go Markers along the runway;
- removal of the berm and filling the depression on the northwest side of the runway;
- relocation of the fence on the Runway 22 end to the Airport property line;
- placement of markers on the overhead lines within the Runway Protection Zone to aid with visibility; and
- provide a perimeter road around the airport.

Airfield Alternative No. 1, shown in Figure 2-1, is based on the existing runway location, length and width. In addition to the proposed improvements listed above, this alternative would require fee acquisition of approximately thirteen acres of land from Parker Ranch. Additionally, HDOT-AIR should obtain easements for approximately 43 acres of land from Parker Ranch. The estimated construction cost of Airfield Alternative No.1 is approximately $2.2 million in mid-1998 dollars.

Airfield Alternative No. 2, shown in Figure 2-2, is similar to Airfield Alternative No. 1 but is translated 150 feet northeast along the present runway alignment, with a runway length of 5,200 feet and the same runway width. Airfield Alternative No. 2 would require fee acquisition of approximately fifteen acres of land from Parker Ranch. Additionally HDOT-AIR should obtain easements for approximately 39 acres of land from Parker Ranch. The estimated construction cost of Airfield Alternative No.2 is approximately $2.1 million in mid- 1998 dollars.

Because the proposed improvements for either alternative would be constructed within or immediately adjacent to the existing airfield boundaries, the environmental effects of either alternative evaluated would be minimal. Alternative No. 1 requires the acquisition of two less acres of land than Alternative No. 2 but four more acres for avigation easements. All of the land to be acquired is currently used for pasture. Parker Ranch has indicated their preference for Alternative No. 1.

3.1 LAND USE AND REGULATORY STATUS

As indicated in Section 1.6, the present airfield area is designated Agriculture by the Land Use Commission (LUC). Similarly, the area is designated Industrial in the County of Hawaii General Plan and zoned as Agricultural 40 acres (A-40) under County zoning.

Following acquisition of 20.5 acres of Parker Ranch lands for the airfield improvements, HDOT-AIR will petition the LUC for a change of land use designation to Urban to conform with existing and planned land usage. Similarly, the County of Hawaii will be requested to amend the designation of these acquired lands to Industrial to conform the remainder of the Airport lands.

The proposed property acquisition does not imply or require changes to lands outside the areas to be acquired, nor does the acquisition and use of additional land for Airport facilities require changes to County or State land use policies or planning.

The redesignation of the State lands to Urban and County designation to Industrial will not result in any environmental effects because the lands are currently used for airport purposes and/or immediately adjacent to airport lands. The redesignation of the lands from Agriculture to Urban is merely a "housekeeping" task that will have no affect on surrounding lands.

3.2 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Based on a review of State Historic Preservation Division records, there are no historical or recorded archaeological resources within the Airport boundaries or in the area to be acquired, thus no effects on historical or archaeological resources are anticipated. Design and construction of the improvements will be in compliance with all Federal and State rules and regulations. State regulations require construction activities to be halted in case potentially sensitive items are uncovered or observed, and the discovery reported to proper State authorities. These regulations will be applicable to the proposed Airport improvement.

3.3 SOCIAL AND ECONOMIC ENVIRONMENT

The primary social concerns regarding the development of Waimea-Kohala Airport are improvement of the reliability and convenience of air service, providing for safer airport operations for both airport users and the surrounding communities, and better accommodation of emergency aircraft. In an airport which does not service sufficient flights to earn regular service by commercial airlines, the proposed action will better support Essential Air Service activity and the impact of proposed improvements is positive.

During the public comment period, a group of residents and the County of Hawaii expressed interest in having inter-island air carriers Aloha Airlines and Hawaiian Airlines service this Airport. Service to Waimea-Kohala Airport by Aloha and Hawaiian is a business decision made by those airlines, and

3.4.5 Telephone

Telephone service is supplied to Airport area customers by GTE Hawaiian Telephone, via overhead lines along Mamalahoa Highway and through new two-inch diameter concrete encased underground ducts within Airport property. The overhead lines consist of twenty-five cable pairs serving the Airport area, of which eight B1 lines and one 3002 circuit are working. Nine additional cable pairs are available for future service. The Airport area is served by the Kamuela Central Office switching station, which can provide a wide range of standard and special services.

Construction of the proposed improvements will probably result in a few additional customers requesting service. Airport tenants are responsible for contacting GTE Hawaiian Telephone to arrange for communication. The addition of a few new customers will not impact the service capabilities of the telephone company.

3.5 NOISE

3.5.1 Aircraft Noise

Concurrent with the Master Plan, a FAR Part 150, Noise Compatibility Program (Section 6.0, Reference 8) is being completed to assess aircraft noise impacts. The Noise Compatibility Program uses the cumulative noise metric known as the Day-Night Sound Level or DNL. A field measurement study of aircraft noise completed in 1997 as part of the Noise Compatibility Program indicated that ambient noise levels around the Airport range from 47 to 61 DNL.

During public informational meetings, several residents complained about aircraft overflights of their homes. These were characterized as single noise events. There are no recorded noise complaints for aircraft operations at Waimea-Kohala Airport.

The forecast increase in aviation operations may increase the potential for noise complaints, because the forecast increased operations by scenic air tour businesses. However, the additional aircraft operations and associated aircraft generated noise are not expected to be significant and all noise sensitive areas fall outside the 60 to 65 DNL noise contours (Figure 3-2). To minimize noise complaints, aircraft operators should avoid, if possible, overflight of noise sensitive areas.

DOT has identified Waimea Town as a noise sensitive area, which should be avoided if possible. This noise sensitive area is depicted as an avoidance area in the *Hawaii Airports and Flying Safety Manual* (Section 6.0, Reference 9).

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

IN REPLY REFER TO:

AIR-P
99.0403

June 28, 1999

Mr. Daniel S. Matsumoto
Civil Engineer
Federal Aviation Administration
Western-Pacific Region
P. O. Box 50244
Honolulu, Hawaii 96850-0001

Dear Mr. Matsumoto:

Subject: Draft Environmental Assessment
Waimea-Kohala Airport
South Kohala, Hawaii

Thank you for your letter of June 7, 1999, commenting on the subject document. Your comments will be incorporated into the final Environmental Assessment.

Please have your staff contact Lynette Kawaoka, Planner, at 838-8812 to clarify any questions you may have.

Sincerely,

Jerry M. Matsuda

JERRY M. MATSUDA, P.E.
Airports Administrator

c: Edward K. Noda and Associates, Inc. (B. Ishii)

LK:nf

BENJAMIN J. CAYETANO
GOVERNOR

MAJOR GENERAL EDWARD V. RICHARDSON
DIRECTOR OF CIVIL DEFENSE

ROY C. PRICE, SR.
VICE DIRECTOR OF CIVIL DEFENSE

STATE OF HAWAII
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OFFICE OF THE DIRECTOR OF CIVIL DEFENSE
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

PHONE (808) 733-4300
FAX (808) 733-4287

July 27, 1999

TO: Mr. Jerry M. Matsuda, P.E.
Airports Administrator
400 Rodgers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

THROUGH: Department of Accounting and General Services

FROM: Roy C. Price, Sr.
Vice Director of Civil Defense

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) WAIMEA-KOHALA AIRPORT MASTER PLAN, SOUTH KOHALA, HAWAII

We appreciate the opportunity to comment on the State of Hawaii, Department of Transportation, Airports Division, EA for the Waimea-Kohala Airport Master Plan, South Kohala, island of Hawaii, Hawaii, TMK: 6-7-01: 8, 9, 12, 17, 23 and 25.

State Civil Defense (SCD) requests that an "EAS" receiver and optional civil defense siren simulator be included and purchased as part of the ARFF and Maintenance Building. These two devices will give the airport facility a warning, just as an outdoor warning siren would.

Just as parks, schools, fire hydrants, underground/overhead utilities and sidewalks are planned as integral parts of planned developments, so must an emergency warning system and support infrastructure be purchased and installed by the developer for the safety and well-being of the residents.

Reference paragraph 3, Section 3.13, Natural Disasters. In June 1999, the County Council adopted a local ordinance which upgraded the building code designation from Seismic Zone 3 to Zone 4. This represents the highest U.S. construction design standards for earthquake resistance.

We appreciate your consideration and such expressions of interest you may have on this matter.

Our SCD planners and technicians are available to discuss any concerns your staff may have. Please contact Mr. Norman Ogasawara of my staff at 733-4300.

c: Mr. Gary Gill, Interim Director
Office of Environmental Quality Control
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813-2437

Mr. Brian Ishii
Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 300
Honolulu, Hawii 96814-3116

Hawaii Civil Defense Agency

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

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

IN REPLY REFER TO:
AIR-P
99.0519

August 30, 1999

TO: ROY C. PRICE, SR., VICE DIRECTOR OF CIVIL DEFENSE
DEPARTMENT OF DEFENSE

FROM: KAZU HAYASHIDA
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
WAIMEA-KOHALA AIRPORT MASTER PLAN
SOUTH KOHALA, HAWAII

Thank you for your letter of July 27, 1999, commenting on the subject document.

We acknowledge your recommendation that an "EAS" receiver and optional siren simulator should be included as part of the ARFF and Maintenance Building at the Airport. Coordination will be made with your Department prior to installation of the equipment.

Additionally, we have incorporated your comment on the building code designation to reflect Seismic Zone 4.

Please have your staff contact Lynette Kawaoka, Planner, of the Airports Division at 838-8812 to clarify any questions you may have.

c: Edward K. Noda & Associates, Inc. (B. Ishii)

LK:nf

DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM

OFFICE OF PLANNING
235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
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Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-8115

May 27, 1999

To: Kazu Hayashida, Director
Director of Transportation

From: David W. Blane
Director, Office of Planning

Subject: Draft Environmental Assessment (EA)
Waimea-Kohala Airport Master Plan
South Kohala, Hawaii

We have the following comments to offer on the draft EA for the Waimea-Kohala Airport Master Plan.

Section 3.14 states that "The proposed Airport improvements will not impact known Coastal Zone Management Area programs, activities, plans, or policies." The Coastal Zone Management (CZM) area encompasses all lands and waters of the State. Therefore, the project is situated in the CZM area and is required to comply with the CZM objectives and policies. A detailed assessment of the project's consistency and compliance with the CZM objectives and policies of Chapter 205A, Hawaii Revised Statutes, should be included in the EA as required by the Office of Environmental Quality Control's administrative rules.

According to Section 3.10.2, information gathered from The Nature Conservancy of Hawaii's database "indicates that the Hawaiian Goose or Nene, which is an endangered species, has been seen in the pastures within the Airport vicinity." The draft EA does not clearly describe the dates or frequency of the sightings. Additional information on this should be provided. Extreme care should also be exercised to avoid adverse impacts on the goose or its habitat.

In light of declining numbers of tourists, the figures used to forecast passenger demand for years 2000 and 2020 may need to be revised. The Department of Transportation (DOT) should consult with DBEDT's Research and Economic Analysis Division for revised figures to determine whether the assumptions or phased expansion plans should be revised.

Although there are lands slated for acquisition and reclassification from agricultural to urban, they are presently used for cattle ranching. Relative to future agricultural viability, we recommend that a discussion of the project's impacts be proposed.

The DOT Airports Division policy on avigation easements should be thoroughly discussed.

Impacts to ceded lands and existing Hawaiian Home Lands property in Puukapu due to both airport use/expansion and the avigation easement shouid be addressed.

The lease lot lighting could have some effect on Mauna Kea observatory activities. Since activities on Mauna Kea will be expanded, there should be direct consultation with the operators so that any lighting is appropriately designed. Adherence to County of Hawaii lighting ordinances may be insufficient to address potential impacts.

On page 23, there is reference to "privately developed airpark in the future." This should be discussed in the environmental impact statement.

The use of surface water sources for public consumption (domestic usage, i.e., in-passenger terminal or concessions) may be subject to future restrictions by federal requirements. This issue should be addressed, as alternate sources of water for this project appear limited.

Landscaping considerations should take into account native and indigenous species that are locally adapted to the area in order to minimize irrigation demands.

There should also be a discussion on potential impacts (or lack thereof) to any ongoing customary or traditional practices.

If there are any questions, please contact Lynn Nakagawa of our CZM Program at 587-2898 or Scott Derrickson of our Land Use Division at 587-2805.

cc: Lynette Kawaoka, Airports Division

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

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

IN REPLY REFER TO:

AIR-P
99.0402

June 30, 1999

TO: DAVID W. BLANE, DIRECTOR
OFFICE OF PLANNING
DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT AND TOURISM

FROM: KAZU HAYASHIDA
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
WAIMEA-KOHALA AIRPORT MASTER PLAN
SOUTH KOHALA, HAWAII

Thank you for your letter dated May 27, 1999, commenting on the subject document. We would like to offer the following responses to your comments:

1. Coastal Zone Management (CZM) Assessment. The final Environmental Assessment will include an assessment of the CZM objectives and policies.

2. Hawaiian Goose or Nene. According to the Hawaii Natural Heritage database of the Nature Conservancy of Hawaii, the observation of the Nene goose occurred in 1977 and 1978 and was within one and one-half (1½) miles from the Parker Ranch Race Track. The Parker Ranch Race Track is near the airport; therefore, this siting was reported in the draft Environmental Assessment. This information will be placed in the final Environmental Assessment

3. Forecasts. The Department of Transportation, Airports Division (DOTA) tracks the actual aircraft operations and passengers and will change the phasing of the projects as necessary. In addition, the DOTA will revisit the forecasts for the various airports within the Statewide System and make necessary adjustments to the phasing at that time.

4. Farmland. The impact on the farmland is stated in the draft Environmental Assessment on page 38, Section 3.17. The owners of the property (Parker Ranch) concur with the proposed improvements at the airport.

5. Avigation Easements. A discussion on avigation easements will be included.

6. Ceded Lands and Hawaiian Home Lands. The impact on ceded lands is discussed throughout the draft Environmental Assessment, as the airport is partially on ceded lands. The airport improvements are not expected to impact the Department of Hawaiian Home Lands (DHHL) Puukapu subdivision.

7. Light emissions. The light emissions from the proposed improvements are addressed on page 39, Section 3.19. Although the new lights will have an insignificant impact, the designers of the proposed project should follow the Department of Land and Natural Resource (DLNR) guidelines for the Newell's Shearwater. *The Newell's Shearwater Light Attraction Problem, A Guide for Architects, Planners, and Resort Managers* is available from DLNR and will further minimize the light emission impacts on the observatories and night avifauna.

8. Air Park. The air park is a conceptual development which may be developed by private developer(s) in the future, and is not part of this Environmental Assessment. The taxiway is proposed to allow access from the Airpark at the time one is developed. As the extent or timing of this project is unknown and not part of the proposed development, it cannot be addressed in this Environmental Assessment. At an appropriate time, the private developers will need to perform the appropriate environmental studies for their development.

   Note: The current document is an Environmental Assessment and not an Environmental Impact Statement.

9. Water Supply. As the airport is currently served by the County of Hawaii water system, the airport will comply with applicable requirements of the County of Hawaii.

10. Landscaping with native plants. This is addressed on Page 37, Section 3.10.1.

11. Customary and traditional practices. In regards to customary and traditional practices, the land has been developed since the 1950s and the proposed improvements are on the existing airport property. In addition, the land to be acquired has been in agricultural use (cattle grazing) for about two centuries and has very limited access as the area is fenced. Therefore, there will be no new impact from the proposed improvements on gathering rights and the *Public Access Shoreline Hawaii* (PASH) does not apply. The public, including the Hawaiian community, was invited to participate in the planning process as part of the Technical Advisory Meetings, public informational meetings and a public hearing. In fact, several participants in the meetings were of Hawaiian ancestry.

Please have your staff contact Lynette Kawaoka, Planner, at 838-8812 to clarify any questions you may have.

c: Edward K. Noda and Associates, Inc. (B. Ishii)

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

May 26, 1999

In reply, please refer to:
File:

99-066/epo

Mr. Jerry M. Matsuda, P.E.
Airports Administrator
Airports Division
Department of Transportation
Honolulu International Airport
400 Rogers Boulevard, Suite 700
Honolulu, Hawaii 96819-1880

Dear Mr. Matsuda:

Subject: Draft Environmental Assessment
Waimea-Kohala Airport Master Plan and Noise Compatibility Program (State Project No. AH3011-02)
South Kohala District, Hawaii
TMK: 6-7-1: 8, 9, 12, 17, 23 & 25

Thank you for allowing us to review and comment on the subject plan. We have the following comments to offer:

Wastewater

Wastewater treatment and disposal have not been completely addressed in the subject document. However, as there is no existing sewer service system in the area and none will be constructed in the near future, the Department of Health concurs with the proposed upgrade of the existing cesspool to a treatment individual wastewater system (IWS), such as a septic tank system, to handle the domestic wastewater generated by the airport facilities.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems," and we reserve the right to review these detailed wastewater plans.

Should you have any questions on this matter, please contact the Planning/Design Section of the Wastewater Branch at (808) 586-4294.

Solid Waste

We are offering the enclosed, "Waste Minimization Measures for Implementation in the Design and Construction of New Developments" for information and use by the contractor.

Sincerely,

GARY GILL
Deputy Director for
Environmental Health

Enclosure

c: WWB
SHWB
OEQC
Edward Noda & Associates

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
AIRPORTS DIVISION
400 RODGERS BOULEVARD, SUITE 700
HONOLULU, HAWAII 96819-1880

IN REPLY REFER TO:
AIR-P
99.0401

June 28, 1999

TO: GARY GILL, DEPUTY DIRECTOR
ENVIRONMENTAL HEALTH
DEPARTMENT OF HEALTH

FROM: JERRY M. MATSUDA, P.E.
AIRPORTS ADMINISTRATOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
WAIMEA-KOHALA AIRPORT MASTER PLAN
SOUTH KOHALA, HAWAII

Thank you for your letter dated May 26, 1999, commenting on the subject document. Based on your comments, the final Environmental Assessment will note that there is no existing sanitary sewer system and that none will be constructed within the planning period. A septic tank system should be sufficient to handle the domestic wastewater generated by the airport facilities.

Please contact Lynette Kawaoka, Planner, at 838-8812 to clarify any questions you may have.

c: Edward K. Noda and Associates, Inc. (B. Ishii)

BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

RAYNARD C. SOON
INTERIM CHAIRMAN
HAWAIIAN HOMES COMMISSION

JOBIE M. K. M. YAMAGUCHI
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P O. BOX 1879
HONOLULU, HAWAII 96805

April 13, 1999

To: The Honorable Kazu Hayashida, Director
Department of Transportation

Attn: Jerry M. Matsuda, Administrator
Airports Division

From: Raynard C. Soon, Interim Chairman
Hawaiian Homes Commission

Subject: Waimea-Kohala Airport Master Plan and Noise Compatibility Program, Draft Environmental Assessment, AIR-EP 99.0165, TMK 6-7-1:08, 09, 12, 17, 23 & 25, South Kohala, Hawaii, Dated February, 1999

Thank you for the opportunity to review the subject application. The Department of Hawaiian Home Lands (DHHL) has substantial property interest north, east, and west of the airport.

DHHL is concerned that the subject application does not identify the impact of aircraft noise upon Hawaiian home lands. DHHL recommends that a map showing an overlay of the Day-Night Sound Level (DNL) contours on Hawaiian home lands be included in the environmental assessment along with an analysis of its impact.

DHHL also recommends that departure procedures be established for noise abatement and to prevent possible community nuisance.

If you have any questions, please call me at 586-3001 or Daniel Ornellas, of our Planning Office, at 586-3836.

c: OEQC
Edward K. Noda and Associates, Inc.

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

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

IN REPLY REFER TO:

AIR-P
99.0395

June 30, 1999

TO: RAYNARD C. SOON, DIRECTOR
DEPARTMENT OF HAWAIIAN HOME LANDS

FROM: KAZU HAYASHIDA
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
WAIMEA-KOHALA AIRPORT MASTER PLAN
SOUTH KOHALA, HAWAII

Thank you for your comments in your memorandum dated April 13, 1999. We are aware of the Department of Hawaiian Home Lands (DHHL) properties in the airport vicinity. The aircraft noise impacts from the airport operations are discussed in Section 3.5.1 and the Day-Night Sound Level (DNL) contours are shown on Figure 3-2. The 60 DNL contour is within close proximity of the airport and does not impact DHHL properties.

As no aircraft noise impacts were found on noise sensitive uses, noise abatement procedures for aircraft operations are not warranted. As stated in the draft Environmental Assessment and the Hawaii Airports and Flying Safety Manual, the Department of Transportation, Airports Division (DOTA) recommends to pilots to avoid overflight of noise sensitive areas, such as residential areas. In addition, DOTA does have avigation easements over certain DHHL parcels as shown on Figures 1-13 and 1-14.

Please have your staff contact Lynette Kawaoka, Planner, at 838-8812 to clarify any questions you may have.

c: Edward K. Noda and Associates, Inc. (B. Ishii)

LK:nf

BENJAMIN J. CAYETANO
GOVERNOR

GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
236 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

May 7, 1999

Mr. Kazu Hayashida, Director
State Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Hayashida:

Subject: Draft EA for the Waimea-Kohala Airport Master Plan, Hawaii

Thank you for the opportunity to review the above project. We have the following questions and comments.

1. Please discuss the findings and reasons for supporting the FONSI determination based on all 13 significant criteria listed in §11-200-12 of the EIS rules.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185. Mahalo.

Sincerely,

for Gary Gill
Director

c: Ed Noda & Assoc.

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

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

IN REPLY REFER TO:

AIR-P
99.0399

June 30, 1999

TO: GENEVIEVE SALMONSON, DIRECTOR
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

FROM: KAZU HAYASHIDA
DIRECTOR OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
WAIMEA-KOHALA AIRPORT
SOUTH KOHALA, HAWAII

Thank you for your letter of May 7, 1999, commenting on the subject document. We inadvertently omitted the significance criteria regarding scenic vistas and viewplanes identified in county or state plans or studies. We do not anticipate any significant impact to visual resources as stated in Section 3.21, "Aesthetic Considerations." All 13 significant criteria will be addressed in the final Environmental Assessment.

Please have your staff contact Lynette Kawaoka, Planner, at (808) 838-8812 to clarify any questions you may have.

c: Edward K. Noda and Associates, Inc. (B. Ishii)

1301

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

May 10, 1999

Mr. Jerry M. Matsuda, P.E.
Airports Administrator
State of Hawaii, Department of Transportation
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, HI 96819-1880

EIS 292

Re: Draft Environmental Assessment for Waimea-Kohala Airport Master Plan and Noise Compatibility Program, South Kohala District
(State Project No. AH3001-02)
TMKs (3) 6-7-01:008, 009, 012, 017, 023 & 025

Dear Mr. Matsuda:

Thank you for the opportunity to comment on the draft environmental assessment for the Waimea-Kohala Airport Master Plan and Noise Compatibility Program. The Office of Hawaiian Affairs has the following comments regarding this draft EA.

Clarifying the Ceded Lands Issue

The draft EA lacks detail on the ceded lands status of the DOT parcels. The explanations on page 14 of the EA about the 1984 Tri-partite Land Exchange between DOT, Department of Hawaiian Homes Lands (DHHL), and Department of Land and Natural Resources (DLNR) does not sufficiently clarify how the Land Exchange caused 40.682 acres to become ceded lands, or if those lands were already deemed ceded prior to the transaction.

If this property is indeed ceded land, we request more details of the transaction that reportedly caused the transfer or creation of such ceded lands. OHA strongly suggests that Hawaiians be consulted before any efforts to use, lease, transfer, destroy, or otherwise modify ceded lands.

Impacts on Fauna

The draft EA is surprisingly shallow in its consideration of the impacts of the project on local fauna. The analysis is lacking, particularly with respect to reported sightings of the Hawaiian Goose or *Nene* in the airport vicinity, as described on page 37 of the draft EA. Endangered species such as the *Nene* should be guarded with the utmost care. Merely stating that "none (*Nene*) were noted during the survey conducted for this study," does not lead to the conclusion that "[b]ecause the proposed Airport improvements will minimally affect existing wildlife habitat, no significant impact to sensitive wildlife species are expected to occur as a result of the proposed improvements." (Draft EA, p. 37).

The document does not fully explore all of the potential adverse impacts of airport expansion on the *Nene* and other fauna. Potential impacts include noise, disturbance of flora, increased traffic, and isolating areas of an existing cohesive habitat through construction of artificial barriers such as runways. While some of these impacts are mentioned in the draft EA, the document is silent about their impacts on fauna. It deals with these potential impact and natural resources as separate issues, without thoroughly investigating the interaction effect between the two groups, as in the case with the *Nene*. A mitigation plan for fauna that takes these and other potential impacts into serious consideration must be included in the document.

OHA would like also the draft EA to address the possibility that native Hawaiian gathering rights may exist on the project site. The Hawaii Supreme Court has ruled that the existence of native rights must be addressed. We suggest that DOT actively seek expert opinion among the local Hawaiian community to avoid conflict in areas that may be of importance to Hawaiians.

Thank you for your attention in this matter. Should you have any questions concerning our comments, please contact Nami Ohtomo, Natural Resources Specialist at 594-1755. Please refer to the document number noted at the top of this letter in any future correspondence.

Sincerely,

Randall K. Ogata
Administrator

Sebastian Aloot
Land and Natural Resources Division Officer

cc: BOT
CAC, Kona

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

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

IN REPLY REFER TO:
AIR-P
99.0400

June 30, 1999

TO: RANDALL K. OGATA, ADMINISTRATOR
SEBASTIAN ALOOT, LAND AND NATURAL RESOURCES
DIVISION OFFICER
OFFICE OF HAWAIIAN AFFAIRS

FROM: JERRY M. MATSUDA, P E.
AIRPORTS ADMINISTRATOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
WAIMEA-KOHALA AIRPORT
SOUTH KOHALA, HAWAII

Thank you for your letter dated May 10, 1999, commenting on the subject document. We would like to offer the following responses to your comments:

1. Clarifying the Ceded Lands Issue. The 40.682 acres were owned by the Department of Hawaiian Home Lands (DHHL) prior to statehood and were considered to be ceded lands under Section 5(b) of the Admissions Act. Under the 1984 land exchange agreement between DHHL, Department of Land and Natural Resources (DLNR) and Department of Transportation, Airports Division (DOTA), these lands were part of a land exchange for lands at Molokai Airport, Hilo International Airport (previously General Lyman Field), and Kahului Airport. Some of these lands involved in the land exchange were Section 5(f) lands. In addition, as part of the agreement, DOTA paid $6.0 million to DLNR to account for the short fall in the appraised value of the lands. Therefore, there is an undivided interest for portions of the 40.682 acres as Section 5(b), Section 5(f) and fee lands.

   The public (including Hawaiians) did comment and participate in the Technical Advisory Committee meetings and Public Informational meetings for the Master Plan and Noise Compatibility Program, and the Public Hearing for the Noise

Compatibility Program. These meetings were held in Waimea and advertised in the local newspapers. The lands in question are already used for airport purposes and no new ceded lands are being acquired for airport use. Therefore, the *Public Access Shoreline Hawaii* (PASH) does not apply.

2. Impacts on Fauna. According to the Hawaii Natural Heritage database of the Nature Conservancy of Hawaii, the observation of the Nene goose occurred in 1977 and 1978 and was within one and one-half (1½) miles from the Parker Ranch Race Track. The Parker Ranch Race Track is near the airport; therefore, this siting was reported in the draft Environmental Assessment. There have been no observations of the Nene on the airport proper or within the close vicinity of the airport. The airport has been at this site for more than 40 years and the new construction will be similar to what exists at this time. The improvements will not change the operation of the airport; therefore, it will not change any existing impacts to the Nene, if any. Based on this limited siting more than 20 years ago, a mitigation plan is not warranted at this time.

   In regards to native Hawaiian gathering rights, the lands have been developed since the 1950s and the proposed improvements are on the existing airport property. The lands to be acquired are lands which have been in agricultural use (cattle grazing) for about two centuries and access is limited, as the area is fenced. As stated above, the public, including the Hawaiian community, was invited to participate in the planning process as part of the Technical Advisory Committee, public informational meetings and a public hearing. In fact, several participants in the meetings were of Hawaiian ancestry.

Please have your staff contact Lynette Kawaoka, Planner, at (808) 838-8812 to clarify any questions you may have.

c: Edward K. Noda and Associates, Inc. (B. Ishii)

Stephen K. Yamashiro
Mayor

Virginia Goldstein
Director

Russell Kokubun
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

April 21, 1999

Mr. Jerry M. Matsuda, P.E.
Airports Administrator
State of Hawaii, Department of Transportation
Airports Division
Honolulu International Airport
400 Rodgers Boulevard, Suite 700
Honolulu, HI 96819-1880

Dear Mr. Matsuda:

Draft Environmental Assessment for the Waimea-Kohala Airport Master Plan and Noise Compatibility Program
TMK: 6-7-01: 8, 9, 12, 17, 23 & 25; South Kohala, Hawaii

Thank you for your letter dated March 25, 1999, accompanied by the above-described draft environmental assessment for our review and comment.

We have only one comment to offer at this time, which is in regards to Section 1.3.7-Airpark. We would like to recommend that any reference to the development of a proposed airpark also include its compliance with all state and county land use requirements, including, but not limited to, a General Plan Amendment, a State Land Use Boundary Amendment and Change of Zone. The current land use designations of lands situated outside of the airport property will not accommodate the development of an airpark.

Please feel free to contact Daryn Arai of this office should you have any questions.

Sincerely,

VIRGINIA GOLDSTEIN
Planning Director

DSA:gp
f:\wp60\Ch343\1999\LMatsu01.dsa

c: Director
Office of Environmental Quality Control
235 South Beretania Street, Room 702
Honolulu, HI 96813-2437

Mr. Brian Ishii
Edward K. Noda and Associates, Inc.
615 Piikoi Street, Suite 300
Honolulu, HI 96814-3116

BENJAMIN J. CAYETANO
GOVERNOR

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

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

IN REPLY REFER TO:

AIR-P
99.0397

June 29, 1999

Ms. Virginia Goldstein
Planning Director
County of Hawaii
Planning Department
25 Aupuni Street, Room 109
Hilo, Hawaii 96720-4252

Dear Ms. Goldstein:

Subject: Draft Environmental Assessment
Waimea-Kohala Airport
South Kohala, Hawaii

Thank you for your letter of April 21, 1999, commenting on the subject document. Your comment will be incorporated into the final Environmental Assessment.

Please have your staff contact Lynette Kawaoka, Planner, at (808) 838-8812 to clarify any questions you may have.

Very truly yours,

Kazu Hayashida

KAZU HAYASHIDA
Director of Transportation

c: Edward K. Noda and Associates, Inc. (B. Ishii)