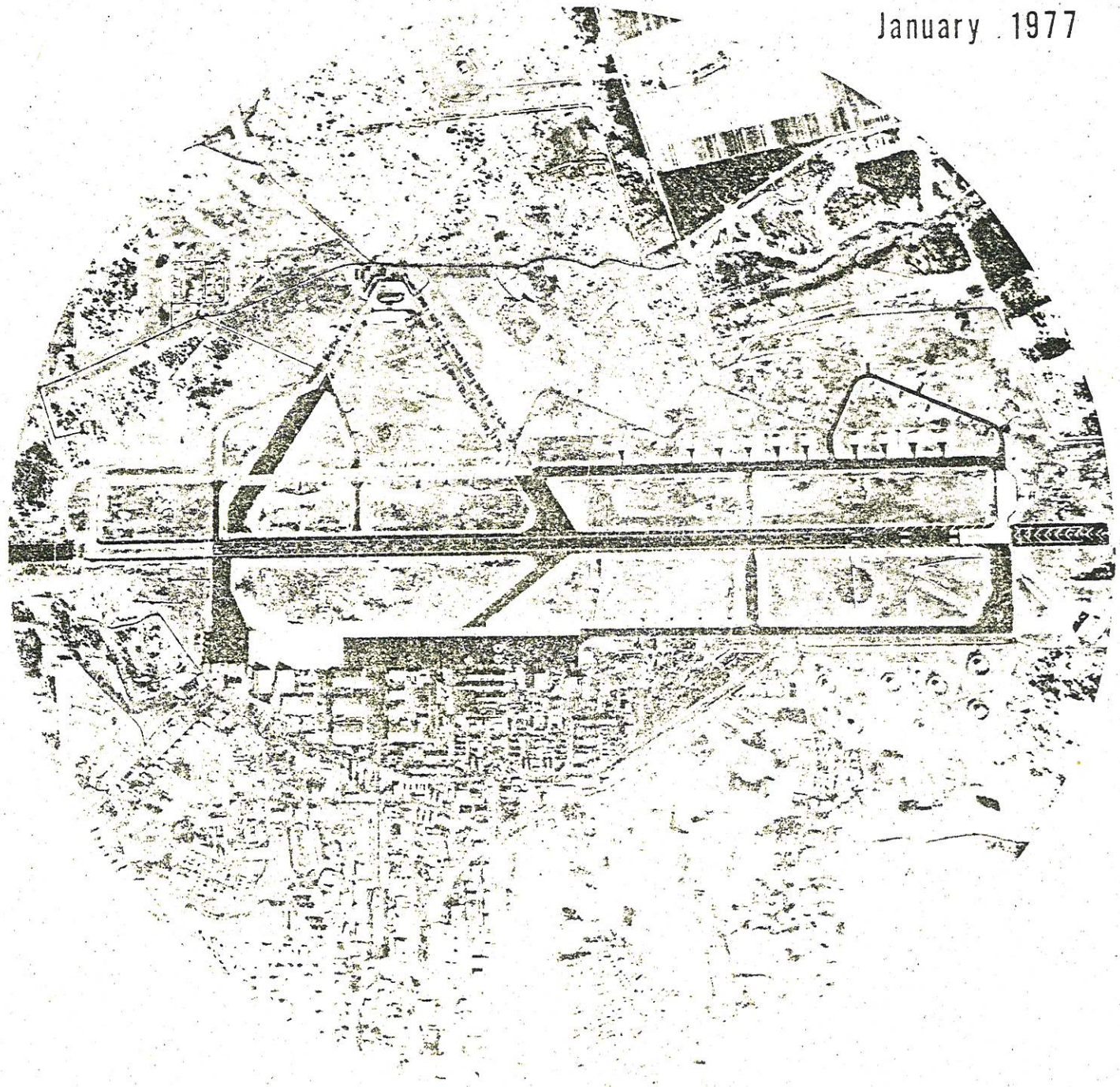
U. S. NAVAL AIR FACILITY MISAWA, JAPAN

PACIFIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND

MASTER PLAN

January 1977



MASTER PLAN

FOR

U. S. NAVAL AIR FACILITY

MISAWA, JAPAN

FINAL

JANUARY 1977

Department of the Navy
Pacific Division
Naval Facilities Engineering Command
Facilities Planning Department

TABLE OF CONTENTS

APPENDICES

LIST OF ILLUSTRATIONS

A. EXECUTIVE SUMMARY

This Master Plan for NAF Misawa was prepared by the Pacific Division, Naval Facilities Engineering Command (PACNAVFACENGCOM) in response to a request from CINCPACFLT in August 1975.

A development plan to meet U. S. Navy (USN) operational requirements is presented, using the real estate granted to the USN by the U. S. Air Force (USAF).

The major proposals of the Plan recommended for approval are:

a. Support joint USN/Japan Air Self-Defense Force (JASDF) use of a single ordnance area.

b. Reserve land for a remote touch-and-go landing pad north of the runway.

c. Site any future commercial air facilities off base.

Upon approval of the above items, the Plan proposes that the 6920th Air Base Group (Misawa Air Base host) and COMUSJAPAN be advised of the USN position so that ongoing aircraft noise studies and U. S./Japan negotiations can be adjusted as appropriate.

The Plan also proposes that a joint USN/USAF master plan for the entire base be authorized. This follow-on master plan should also include input from the JASDF and consider the impact of the Japanese commercial air operations.

B INTRODUCTION

B. INTRODUCTION

1. Location

NAF Misawa was established on 1 October 1975. The activity is located at Misawa Air Base which is situated on the main island of Honshu, 400 miles north-northeast of Tokyo in the Aomori Prefecture (see Figure 1). The geographical coordinates are 40°42'01"N latitude and 141°22'32"E longitude. Misawa Air Base comprises a total of slightly more than 3,900 acres (see Figure 2).

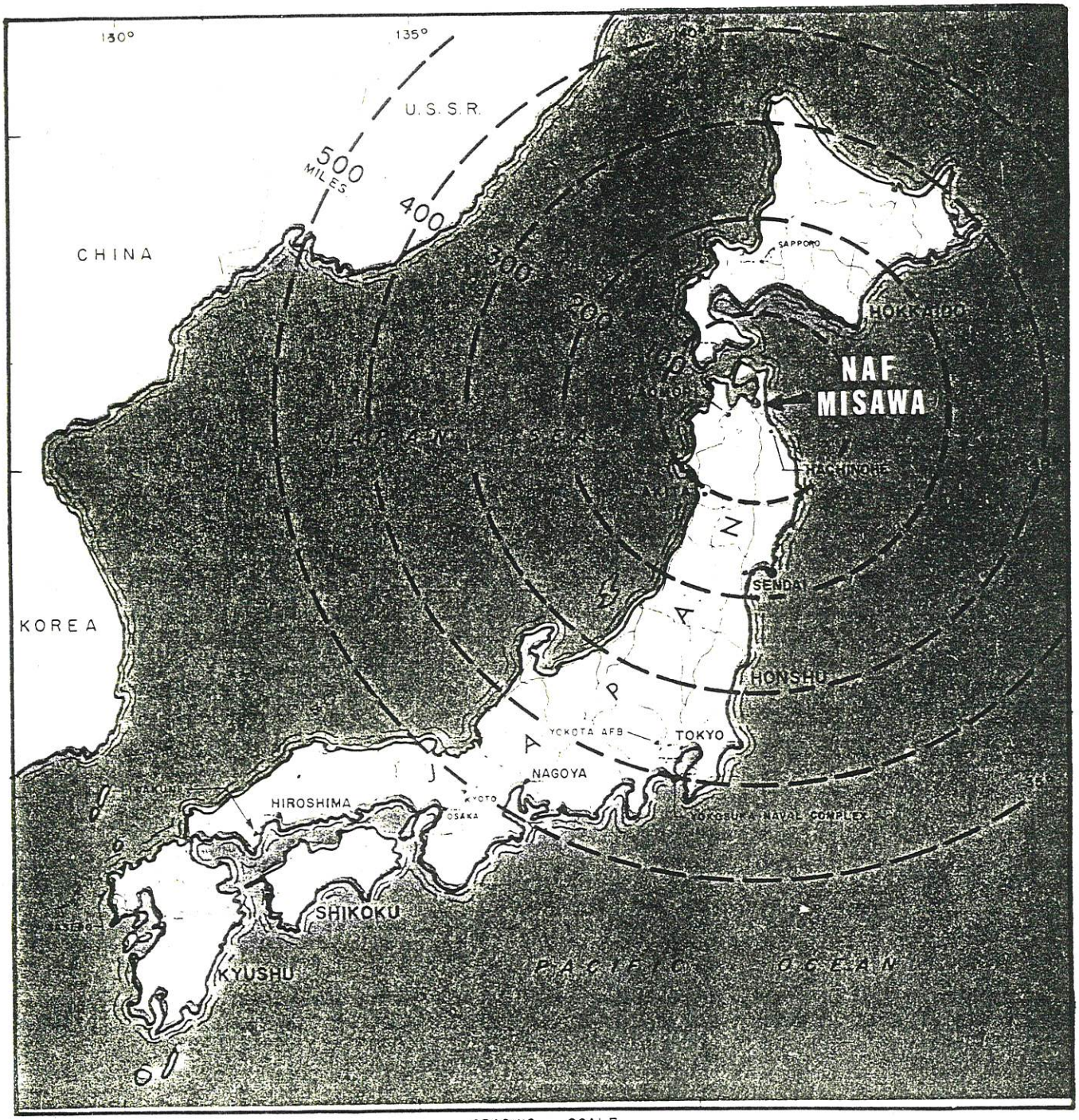
A TACAN Annex is located under the approach path some one and one-half miles east of the base. The USN operates a fuel pier at Hachinohe 16 miles southeast of the base and two connecting 4-inch pipelines. Aerial gunnery training is conducted by permit in three areas: the air-to-ground "ripsaw" range about 10 miles north of the base and the anti-aircraft range a few miles further north (both shown on Figure 3) and a rectangular air-to-air range of about 700 square miles over the ocean to the east about 40 miles off the coast.

On 24 October 1974, a Department of the U. S. Air Force Permit was signed granting the USN use of 1,198 acres of land and 118 buildings having a floor area of 667,634 square feet. A number of these buildings are used by the JASDF.

The USAF host activity is a security unit and has no aircraft. Flight operations are conducted primarily by the USN and JASDF. Daily flights are made by Japanese commercial airlines and periodic flights are made by the USAF Military Airlift Command (MAC).

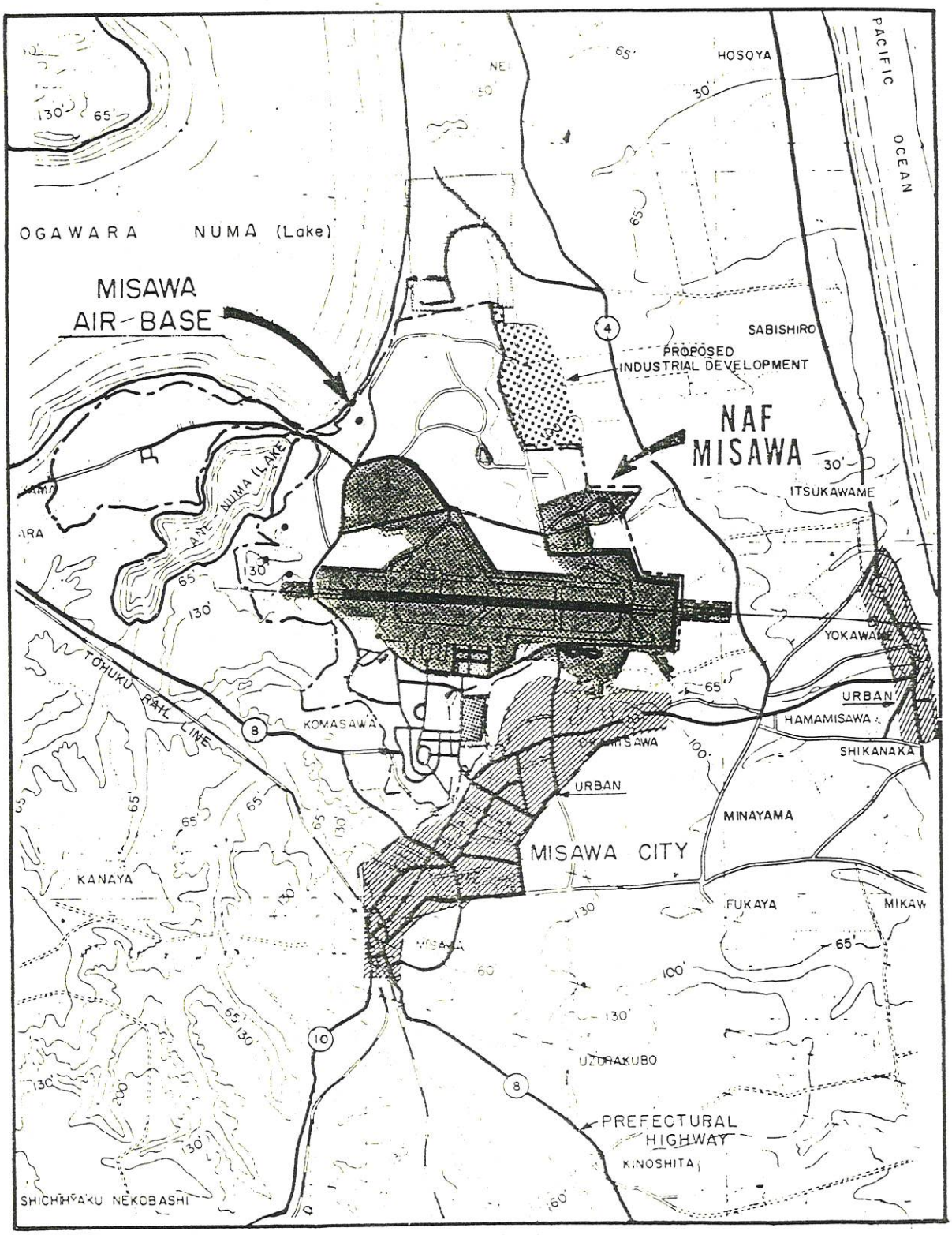
2. Planning Approach

The planning approach used in this Master Plan consisted of establishment of the planning objectives, evaluation of several alternatives to meet with these goals, and development of recommendations giving priority consideration to



REGIONAL MAP

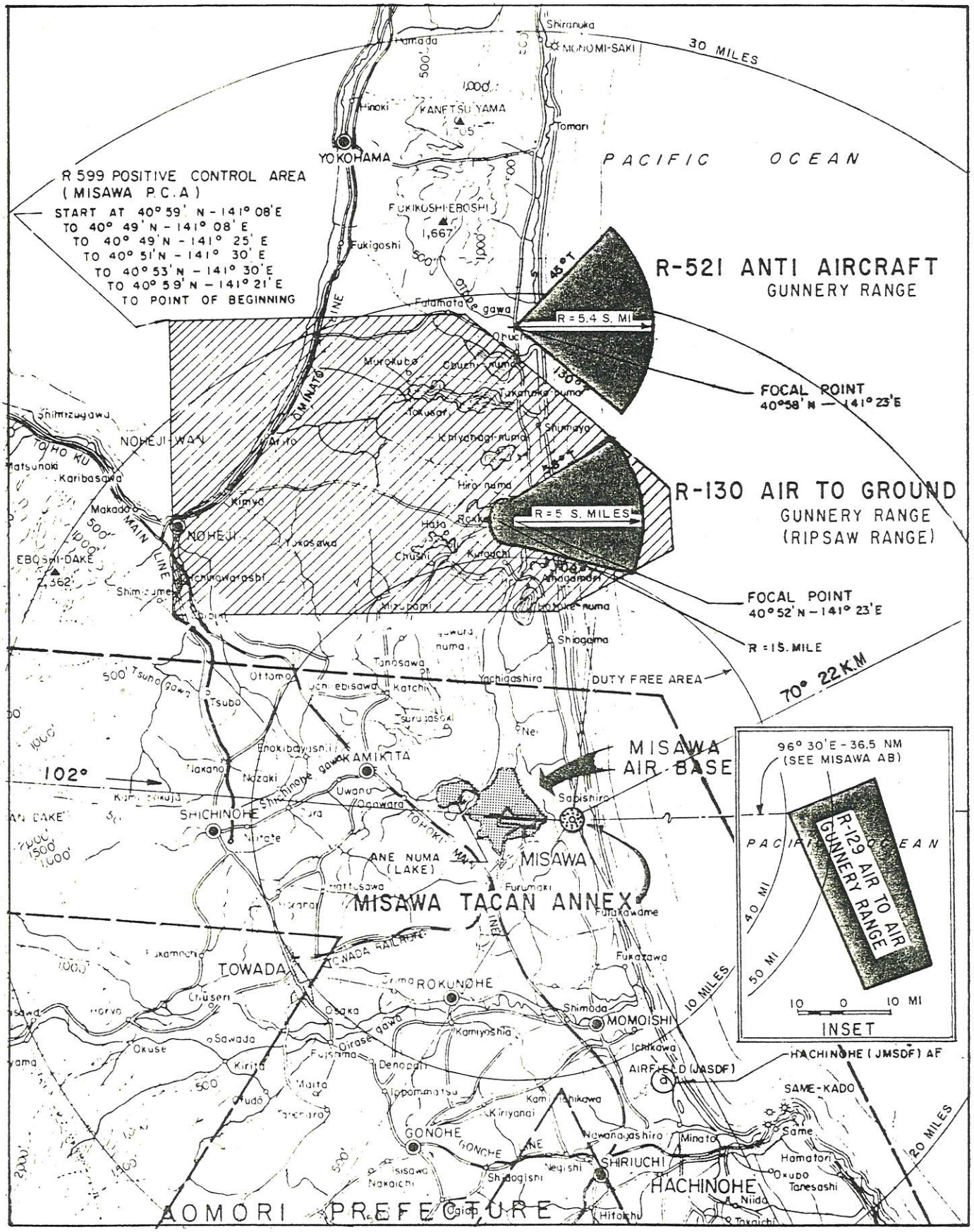
FIGURE 1



LOCATION MAP

VICINITY MAP

FIGURE 2



ADJACENT SUPPORT AREAS

FIGURE 3

Reproduced at Government Expense

the base mission requirements, environmental concerns and fiscal constraints.

Special planning emphasis has been given to two major land use functions: aircraft operations and its attendant noise impact, and ordnance operations/storage which require substantial amounts of real estate for explosive safety.

3. Planning Objectives

The objectives of this Plan are to provide a planning framework which is sensitive to operational requirements within which facilities can be developed that support USN requirements and minimize the impact of USN activities on adjacent areas.

4. Scope

The recent assignment of real estate to the USN and the establishment of the Naval Air Facility at Misawa Air Base generated the need for a Master Plan for USN facilities. CINCPACFLT letter FF1-1 11000 serial 44/4854 of 5 August 1975 tasked PACNAVFACENGCOM to prepare a Master Plan for Misawa. While a Master Plan for Misawa Air Base is the ultimate goal, this Plan was directed at those areas outgranted to the USN. The data included should form the aircraft operations portion of a plan for the entire base. The USAF is the dominant user aboard this multi-service base and has its own Master Plan which was prepared in 1974.

This Plan is based on facility requirements, primarily to support the activity's operational mission, generated by the Shore Facility Planning System (SFPS) as reflected in the June 1975 OPNAV 11000 series documents. The requirements coincide with the base loading reaffirmed by CINCPACFLT in April 1976.

5. Use of the Master Plan

The Plan is intended to be a viable document for developing the areas granted to the USN by the USAF. The land use maps, along with the narrative portion of the study, are directed toward insuring the highest and best utilization of the designated USN areas.

C. METHODOLOGY

The methodology developed for preparing this Master Plan includes the following steps:

1. Data Collection

Misawa Air Base is covered by a current Department of the Air Force Master Plan developed in May 1974. Liberal use was made of the information contained in this Plan, supplemented by historical and regional data available in the Misawa Air Base Library. General data on leases, adjacent land use plans and projected external development was gathered as available through USN and USAF representatives on base. USN base requirements data was available through the 11000 series documents. All this was supplemented by an on-site field investigation. Data collection began before the trip to Japan and extended to some degree into subsequent steps in that "new" data was continually considered in the planning process.

2. Analysis and Development

The various planning concepts emerged during this phase. Data was analyzed and alternative solutions were considered which are included in this Plan as appropriate. The ability of the base to accommodate future requirements was also evaluated.

Steps 1. and 2. overlapped considerably during the master planning process. All available data available at PACNAVFACENGCOM was assembled and analyzed by the Planning Team and broad conceptual schemes were prepared before the field trip to Misawa. The on-site visit portion of Step 1., the balance of analysis and development (Step 2.) and the base presentation were accomplished in one trip. This compressed approach has many advantages. A greater portion of the on-site time can be spent working jointly with the activity in reviewing and developing the planning concepts. The total time to develop the initial report (prefinal) is reduced. The cost of travel and per diem is reduced. The

approval by all local commands of the prefinal report is assured since the concepts are developed jointly and approved by all on-site commands at the final debrief by the PACNAVFAC-ENGCOM planners.

3. Command Review

Once alternative planning schemes were developed, conceptual reviews of the Plan were held for the NAF Misawa personnel. Activity input was solicited for inclusion in or adjustment to the Plan, as appropriate. In addition to the presentation for the CO NAF Misawa, briefings were conducted for the Air Force Base Commander (the Misawa Air Base host), for the COMFAIRWESTPAC and staff, for staff representatives of COMNAVFORJAPAN and COMUSJAPAN, and for the CO PWC Yokosuka and staff.

4. Prefinal Report

The results of Steps 1., 2. and 3. were synthesized and were included in the January 1976 Prefinal Report and distributed to all interested commands within the USN for review and comments.

5. Final Report

The comments from Step 4. have been incorporated into this Final Plan. Upon CNO approval, this Plan will become the guide for development within those portions of the base covered by the Plan.

D. PLANNING ANALYSIS

1. Regional Analysis

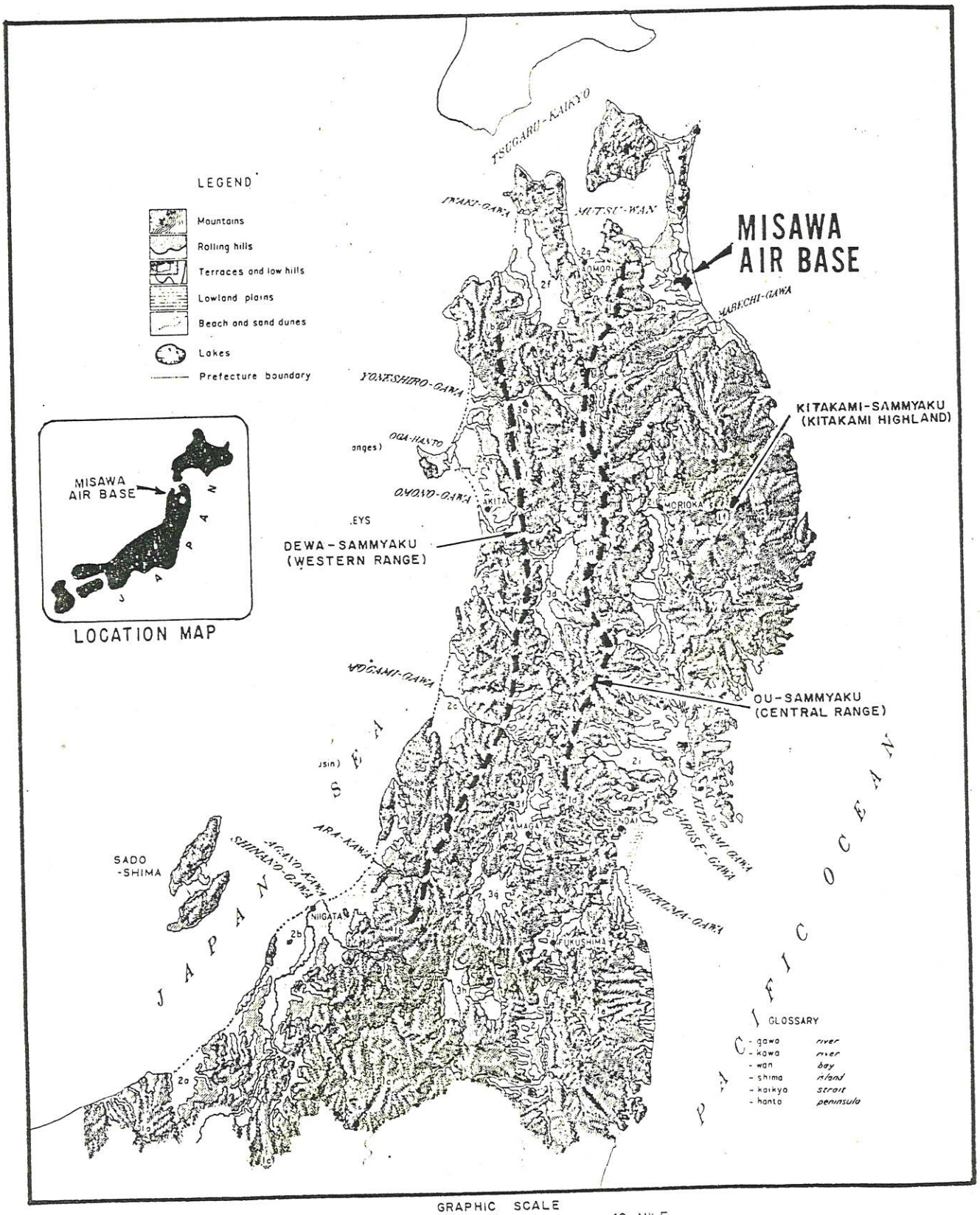
a. Environmental Factors

(1) Topography. Terrain in Japan is predominantly mountainous. The northern Honshu area (see Figure 4) consists primarily of three mountain ranges running in north to south axes separated by major valleys and basins. The Central Mountain Range (Ou-sammyaku) forms the backbone of northern Honshu. This Range is flanked by the Western Mountain Range (Dewa-sammyaku) and the Kitakami Highlands (Kitakami-sammyaku). The ridges of the Central Mountain Range are generally higher than the Western Mountain Range and much higher than the highlands to the east. The Central Mountain Range peak elevations vary from 4,107 feet to 6,696 feet. The terrain is especially rugged near the headwaters of streams. The ridge tops are quite broad and often slightly rounded. Bedrock materials include granite, volcanic and metamorphic rocks; some sediments of tertiary age and younger also occur. The younger rocks usually occur on the lower slopes but, in some instances, carry well up to the tops of the lower ridges.

The terrain in the Misawa area is a flat to rolling plain sloping eastward from the Central Mountain Range to the Pacific Ocean.

(2) Climatology. The climate is similar to that in New England with mildly cold winters and warm summers. The mean annual snowfall is 119 inches. The winter temperature usually hovers in the low 30°F but seldom goes below 20°F.

The summers are mild with an average temperature of 84°F during June, July and August. The mild weather starts about the latter part of April and runs to about the middle of September.



PHYSIOGRAPHIC DIAGRAM
NORTHERN HONSHU

FIGURE 4

Weather does not hinder the normal operation of the base except during the winter months when heavy snowfall is frequent. The snow is removed from runway and ramp areas quickly and efficiently. Normal operations are infrequently suspended during heavy winds in the typhoon season.

Winds in the Misawa area are predominantly from the west during the winter months (October through April) and from the east during the summer months.

Interpreting a crosswind 90° to the runway and blowing at a velocity of 10 knots or less as being "covered" by the runway, the total number of winds covered is 98.2 percent.

Instrument Flight Rule (IFR) conditions are indicated for 7.1 percent of the total weather at Misawa; 99.4 percent of the wind occurring during this 7.1 percent IFR is covered by the runway.

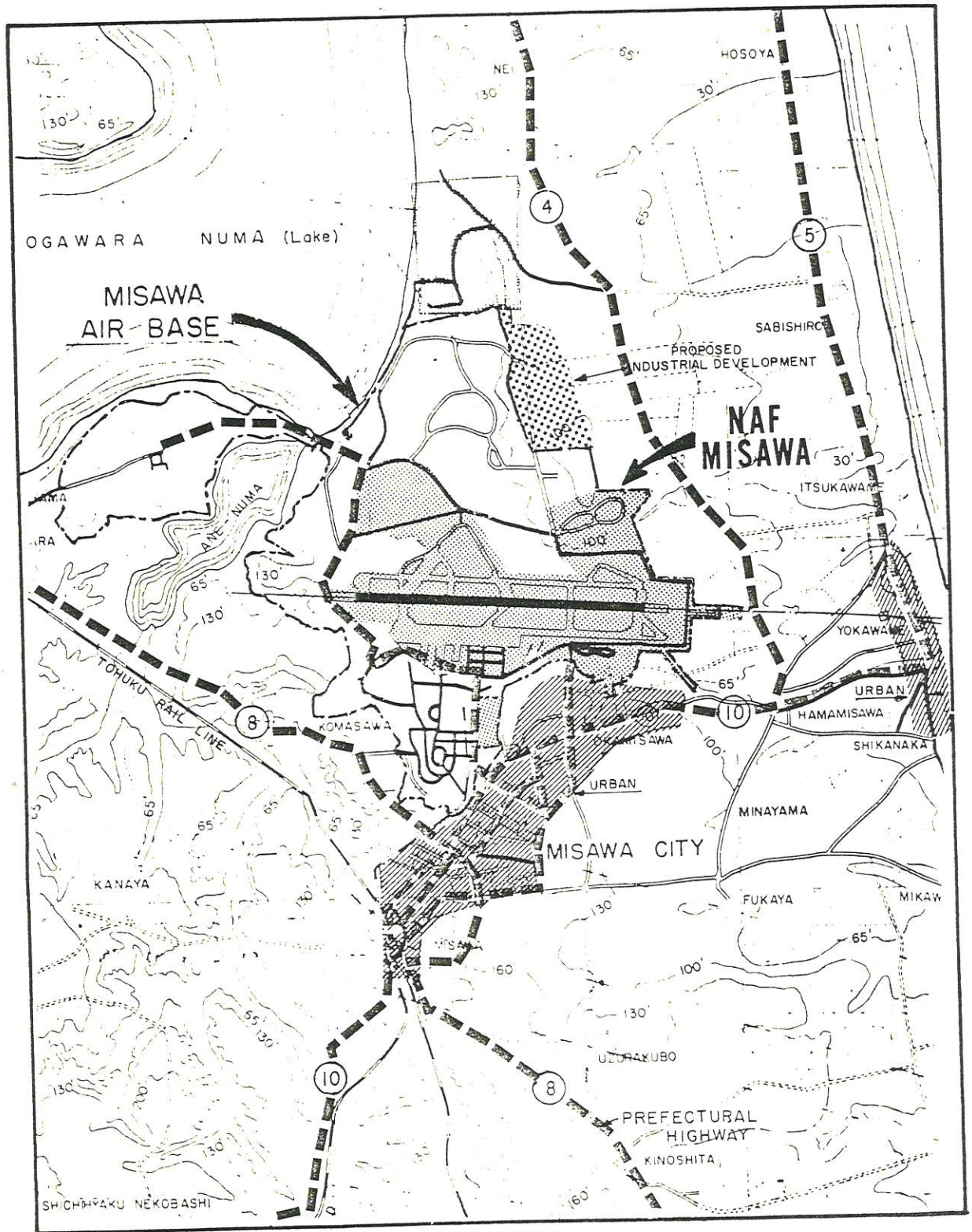
Annual rainfall along the coastline around Misawa averages about 45 inches and increases up to 80 inches in the Central Mountain Range.

b. Support Factors

(1) Transportation Systems

(a) Roads Off Base. Access to the base is maintained by national and prefecture highways. Prefectural Highway 8 and National Highway 4 connect with Aomori to the north and Prefectural Highways 5, 8 and 10 and National Highways 4 and 102 connect with Sendai, Tokyo and to the south (see Figure 5).

It should be noted that the off-base roads in this area are adequate but narrow by U. S. standards. The Japanese Government has undertaken an extensive road building program and many improvements have been made in the past ten years. However, the maximum safe speed on these



PRIMARY ROADS SERVING MISAWA

FIGURE 5

roads is about 35 MPH, and even with improvements, it is still a two-day trip to Tokyo by car. This will be improved when a new expressway (Tohoku Junkan Doro) now being built from Tokyo to Aomori City (about 35 miles west of Misawa) is completed.

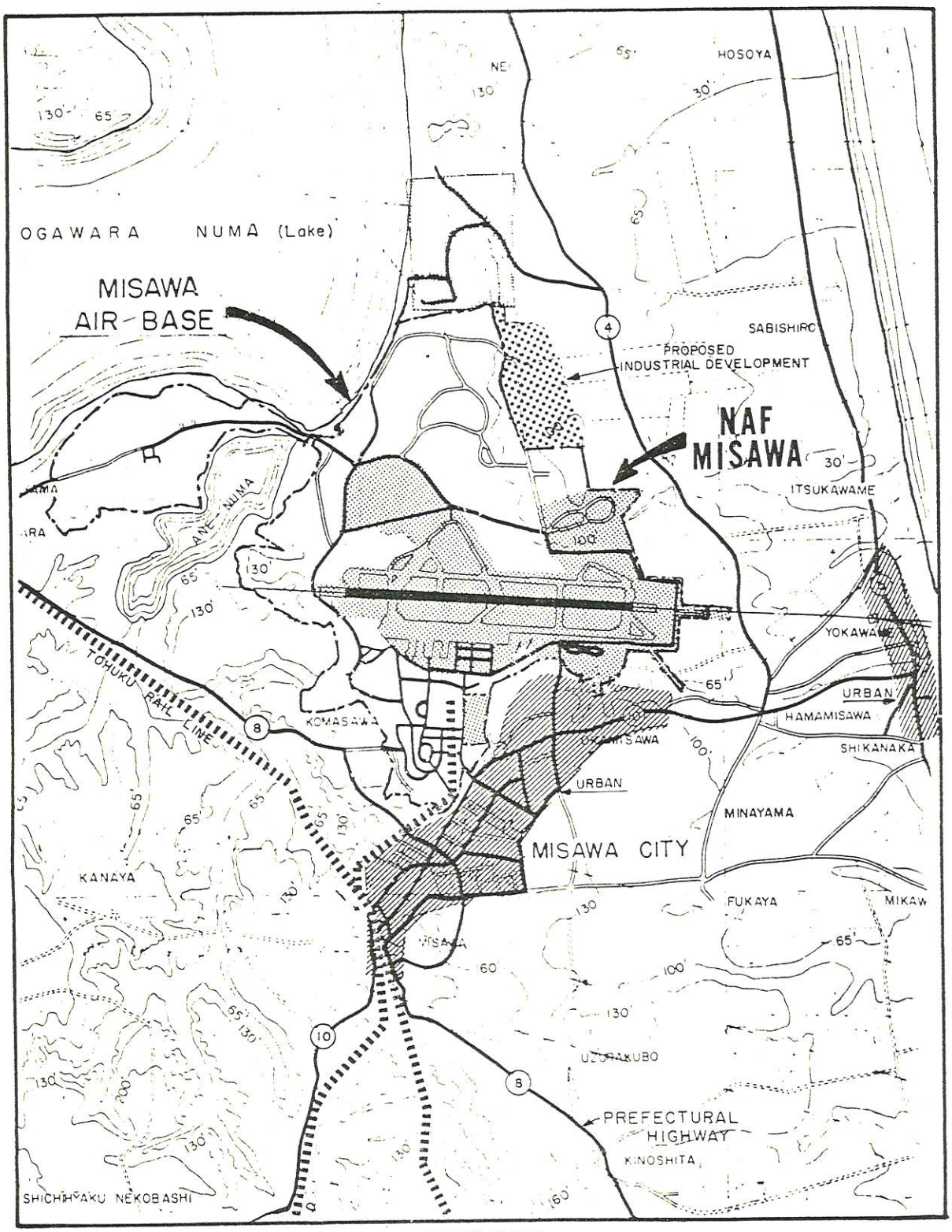
(b) Port Facilities. Hachinohe is the nearest seaport to Misawa Air Base. This port is located approximately 16 miles southeast of the base. The national highway from the base to Hachinohe is a narrow but well paved, all-weather road and takes approximately one hour by car.

Hachinohe has a population of 218,000 and is a major fishing and commercial shipping port of northern Honshu. Docking facilities presently in use consist of several piers and wharfs capable of accommodating ships up to 3,000 tons. Improvements consisting of a breakwater and pier have been constructed over the past ten years. There is now one pier open to 10,000-ton ships. Railway lines extend out onto several piers. Cranes and mechanical conveyors are available for offloading and loading cargo.

Maximum tidal range is approximately five feet.

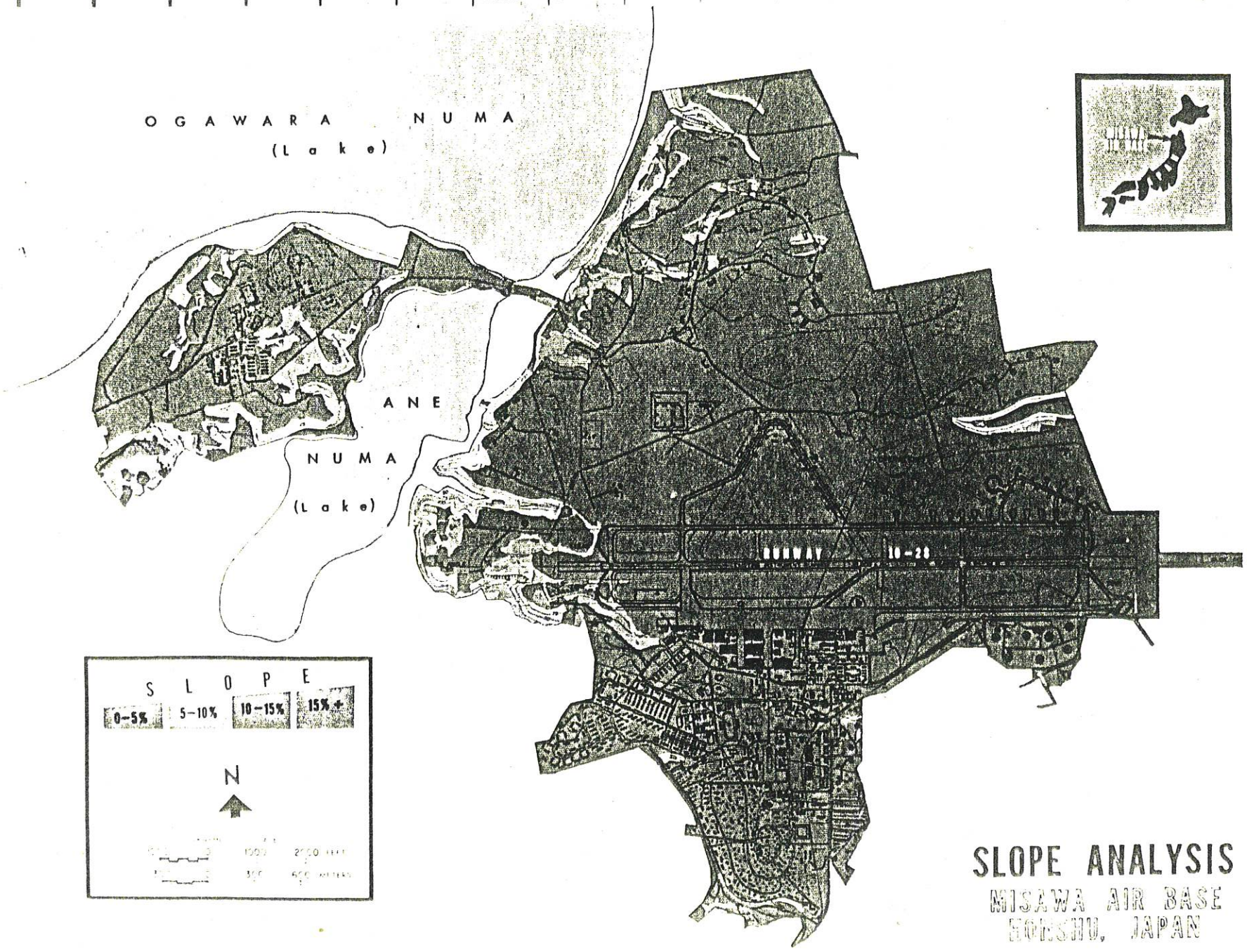
(c) Commercial Air. One commercial air carrier, Toa Domestic Airline (TDA), makes regularly scheduled stops at Misawa Air Base. This airline maintains flights to and from Sapporo to the north and Sendai and Tokyo to the south. Connections to other major cities can be made in Sapporo and Tokyo.

(d) Railroads. Railroad trains leave from Misawa Station several times daily. Misawa Station is on the Tohoku Main Line and is a 15-minute drive from the base (see Figure 6). Prices for rail transport vary within the three classes of travel available. Use of local, express or special express service also determines the rate of fare. Coach fare to Tokyo is approximately $15, while sleeper accommodations range from $21 to $25. Low cost meals are available on the express trains. Travel time between Tokyo and Misawa is between 7 and 12 hours depending on service utilized.



RAILROAD SERVING MISAWA

FIGURE 6

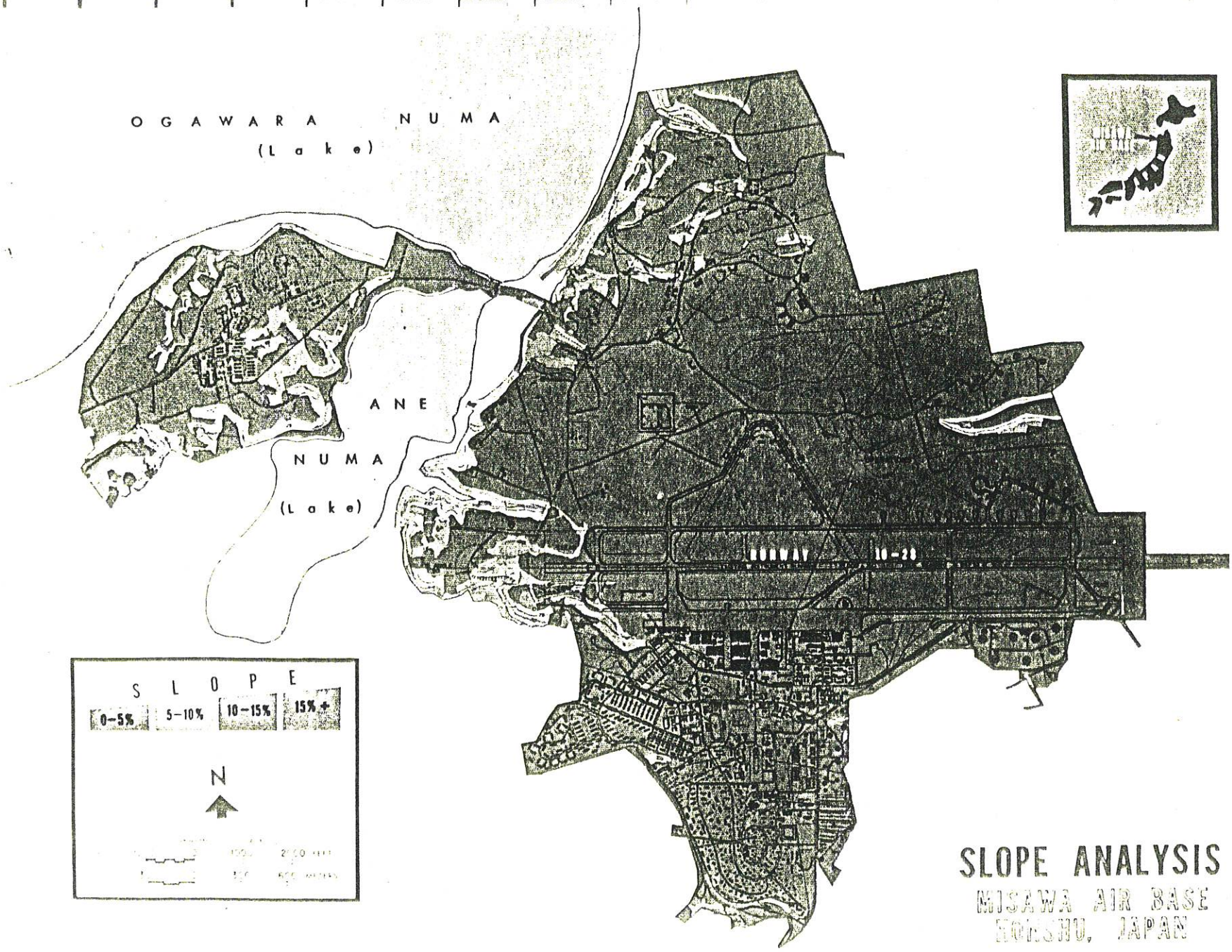


SLOPE ANALYSIS

MISAWA AIR BASE
HONSHU, JAPAN

FIGURE 7

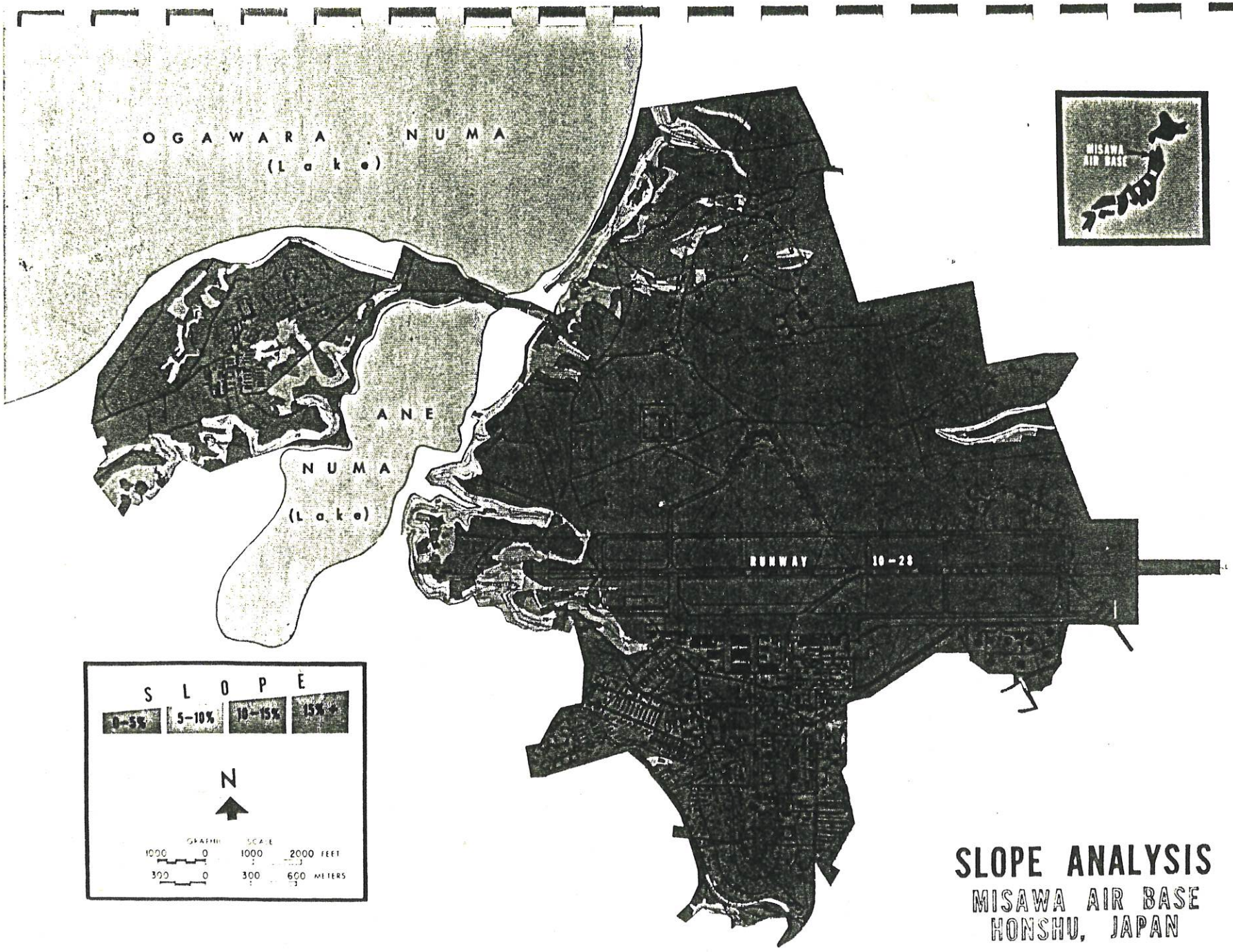
Reproduced at Government Expense



SLOPE ANALYSIS

MISAWA AIR BASE
HONSHU, JAPAN

FIGURE 7



SLOPE ANALYSIS
MISAWA AIR BASE
HONSHU, JAPAN

FIGURE 7

Reproduced at Government Expense

(2) Off-base Recreation. Sightseeing is the main off-base recreational activity. Asamushi, Aomori, Towada and Hachinohe are within 45 minutes to 2 hours driving distance of Misawa. Misawa City supports two theaters and American films are frequently shown at one of the theaters. Base personnel can engage in limited hunting, fishing and skiing in nearby areas.

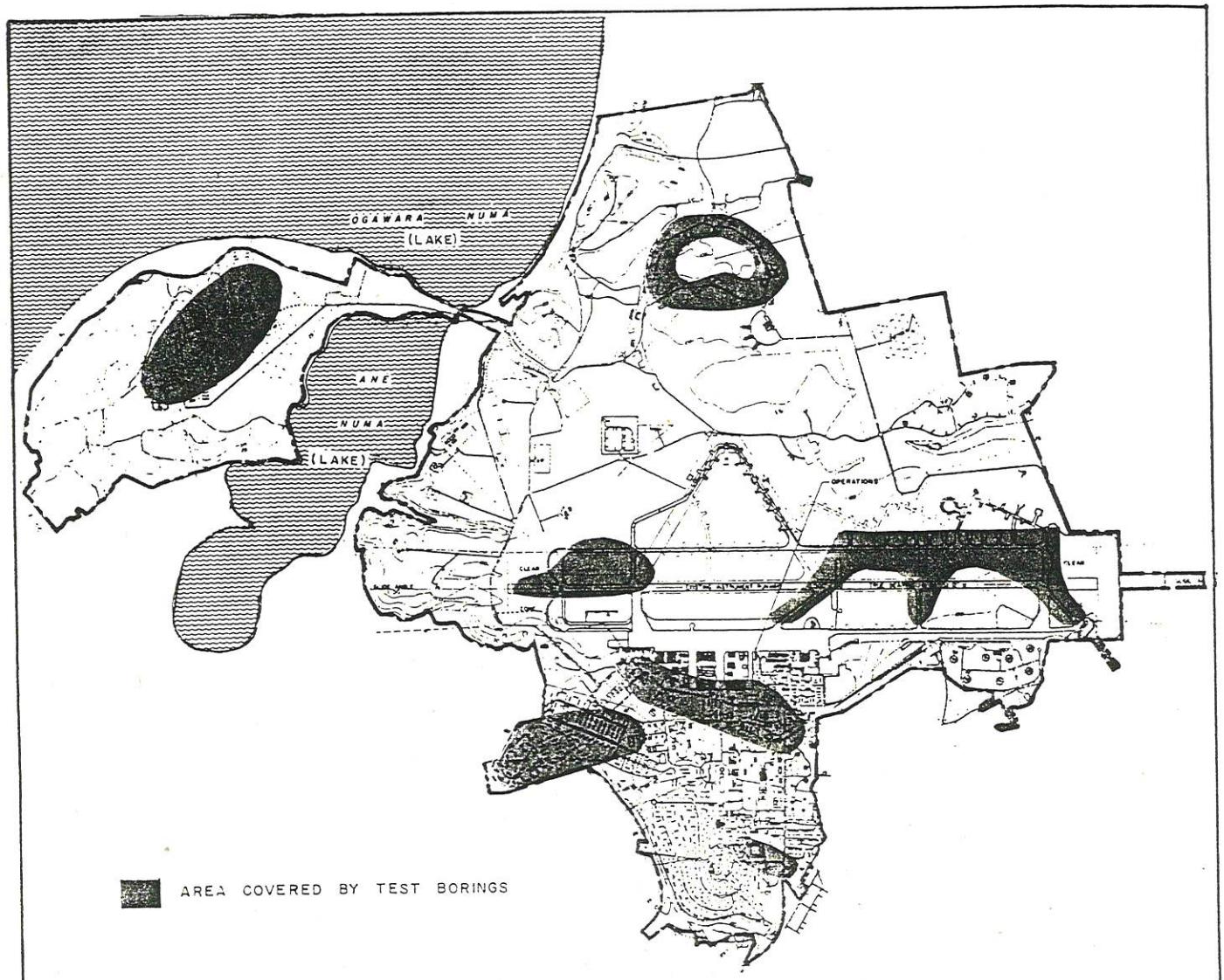
2. Site Analysis

a. Natural Environment

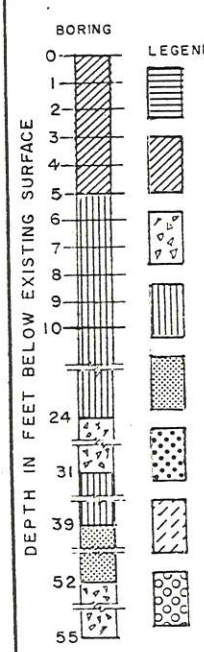
(1) Location. Misawa Air Base is located on a plain approximately 3 miles inland from the Pacific Ocean coastline. Airfield elevation is 119 feet. Lake Ogawara-numa lies northwest of the base and a Game Reserve lies north of the base.

(2) Topography. Misawa Air Base is generally flat, except for relatively steep slopes some 100 feet high along the northwestern boundary. Figure 7 is a slope analysis showing that over 90 percent of the area is substantially flat. The runway itself is at elevation 119 feet and the steep areas on Figure 5 slope downward toward sea level. The highest spot on the base is about elevation 135 feet occurring at two sites--one a knoll about 5,000 feet north of the runway and the other a knoll about 3,000 feet off the end of the runway. Thus, all buildable land can be considered level insofar as potential encroachment into the airspace zones is concerned. There are no hills protruding into any imaginary surfaces around the airfield.

(3) Floodplain/Soils. No areas of Misawa Air Base are subject to flooding and there are no swamps. Based on some 120 test boring logs available, soils are generally silty or sandy clays with some gravel. The sandy clay color varies from light orange to dark brown. Allowable soil bearing pressure for foundations on all areas investigated is approximately 2,000 pounds per square foot. Normal soil investigation procedures should be used prior to construction. Figure 8 shows the areas covered by test borings and a typical boring log.



TYPICAL BORING LOG



LEGEND:

- INORGANIC CLAYEY OR SANDY SILTS
- ORGANIC PLASTIC CLAYS OR SILT-CLAYS OF LOW, MEDIUM TO HIGH PLASTICITY
- WELL-GRADED SANDS AND GRAVELLY SANDS, OR SAND-CLAY MIXTURES
- INORGANIC PLASTIC CLAYS, FAT CLAYS, SANDY, SILTY OR LEAN CLAYS
- POORLY GRADED SANDS, SILTY OR CLAYEY SANDS OR SAND-CLAY MIXTURES
- WELL-GRADED GRAVEL, GRAVEL-SAND, OR GRAVEL-SAND-CLAY MIXTURES
- GRAVEL WITH FINES, CLAYEY OR SILTY GRAVEL, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
- WEATHERED AND/OR HARD CORAL ROCK FORMATION

N

GRAPHIC SCALE

3000 0 3000 FT

900 0 900 METER

SOIL BORING PLAN

FIGURE 8

(4) Vegetation. Approximately 20 to 25 percent of the base is covered by trees--mostly pine but with some broadleaf and cryptomeria. Some parts of the builtup housing areas have large trees, but most of the growth of trees and other vegetation is under 10 feet tall. Figure 9 shows those areas of the base where apparently natural vegetation exists.

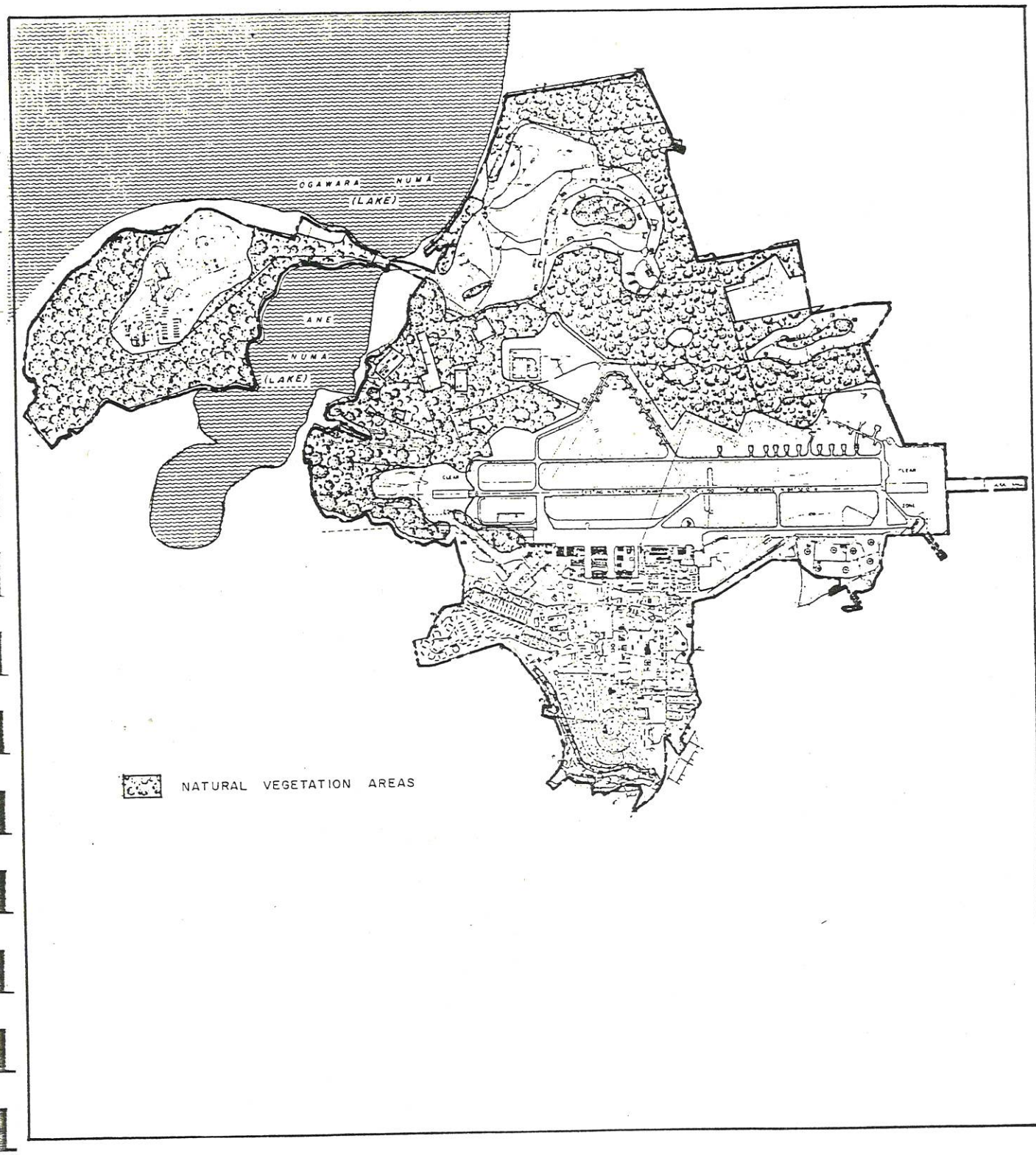
b. Man-made Environment

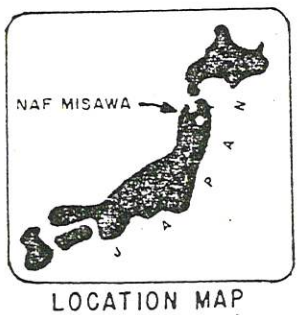
(1) History. Archeological specimens indicate that the area around Misawa City was populated about 8,000 years ago, possibly by the Ainu ancestors of the people now found in Hokkaido.

The Nambu Clan established nine horse farms in this area about 1371. The climate and vegetation of the Misawa area were found to be ideal for horse breeding, and there were once 700 private horse farms located here. During the Meiji Restoration, a National Horse Farm was established, and the area was eventually used as a cavalry training center for the Imperial Army.

On 3 October 1931, Clyde Pangborn and Hugh Herndorn took off from the nearby beach at Sabishiro on their historic nonstop transpacific flight. After 41 hours and 13 minutes, they landed in Wenatchee, Washington, completing their 4,558-mile flight.

In 1938, the Imperial Army laid an airstrip at Misawa. Original plans called for using the airstrip as a base for long-range bombers which could be launched toward the U. S. in the event of war and to protect northern Honshu during the war with China. The mission of the base became research and development when the base was taken over by the Japanese Navy in 1942. In April 1945, shortly before the end of World War II, the Yokosuka Flying Corps took over the base and began tests on new aircraft designs. Misawa Air Base was the site where many improvements on the Zero and other fighter planes were tested.





LOCATION MAP

GRAPHIC SCALE

3000 0 3000 FT

900 0 900 METER

N

AREAS OF NATURAL VEGETATION

FIGURE 9

In July 1945, only one month before the end of World War II, USN fighters bombed and strafed the base before an alarm could be sounded. As a result of this raid, Misawa lost its Aircraft Repair Center, which was located where the BOQs now stand. During the first week of August 1945, B-29 Superforts practically demolished the base; and, in September, Captain Stark and his famous "Wildcat Troops" occupied Misawa, holding it until the 32nd Engineers restored it for use by the Army Air Forces.

Primarily a tactical fighter (TACAIR) base from 1950 through 1971, Misawa Air Base is the largest USAF Security Service overseas installation and is the home of the 6921st Security Wing. Pacific Air Forces (PACAF) transferred official base responsibility to the USAF Security Service on 1 July 1972. On that date, the 6920th Air Base Group was activated to handle support and host responsibility for the Security Wing and all other units located at Misawa Air Base. There are 18 tenant units at Misawa Air Base including NAF Misawa.

The 6920th Air Base Group Commander also serves as the Base Commander and Base Representative to the surrounding Japanese communities.

(2) Mission of NAF Misawa. The mission of NAF Misawa is to maintain and operate facilities and provide services and material to support operations of aviation activities and units of the operating forces of the USN and other units as designated by CNO.

(3) Organization. An approved organization chart was not published as of the date of this Plan. An approved chart will be included when this Plan is updated.

(4) Tenant Activities of NAF Misawa

(a) COMPATWING ONE

(b) NWSED

(c) Patrol Squadron 48

(d) NMCB ONE

(e) TACAIR Units (Carrier Air Groups and Marine Air Wings)

(5) Base Loading. The NAF Misawa base loading used for the Basic Facility Requirements List (BFRL) is based on CINCPACFLT 150820Z April 1976.

(6) Utilities. The USAF provides all utilities except liquid fuel. In general, the utilities systems appear adequate although no field investigation was conducted for this NAF Misawa Master Plan. The following comments were contained in the USAF Master Plan for Misawa Air Base dated May 1974.

(a) Freshwater System. The primary water source for the main base area is Lake Ane-numa. This lake is a 2,700 acre-foot body of freshwater with a watershed area of 11,000 acres. This water supply source meets present requirements; however, projected personnel increases and steady degradation of water quality from surface runoff and sewer treated effluent discharge will require improvements to the system.

The base water treatment plant, located on the east side of Lake Ane-numa, consists of an intake and pumping station and the filter and treatment plant. Capacity of the present plant system is 1,215 GPM.

The USAF Security Service Operations Area has a water system separate from the main base. This system consists of two wells and pumphouses and a 200,000-gallon capacity, elevated, welded steel tank with gravity flow into the distribution network. Well capacities are 160 GPM each. Treatment is limited to chlorination.

(b) Sanitary Sewage System. Substantially all the main base is served by four sewage collection and treatment systems consisting of Imhoff tanks, pump stations and septic tanks. The effluent from these systems does not meet local Aomori Prefecture (State) standards, a situation that is made more critical by the fact that three of the four systems drain into Lake Ane-numa, the lake that provides potable water for the base.

The USAF developed an FY75 MCON project and an FY76 supplement to provide pump stations to tie the four systems together and a single primary and secondary treatment plant. It is anticipated that this 832 TGD system will correct the present substandard condition and will be adequate for projected base loading.

(c) Storm Drainage. Storm drainage in the main base area is handled by open grass and concrete lined ditches and an underground system with outflow to natural drainage channels. The airfield area is drained by open ditches and underground pipes.

(d) Heating System. Heating for the main base area and about 600 family units is furnished by one central heating plant (Building 465). The remaining family housing units utilize individual hot air furnaces.

The USAF Security Service Operations Area heating is furnished from one boiler plant (Building S-1573).

(e) Electric Power Generation and Distribution System. Electric power (3-phase, 50-cycle) is generated and supplied to Misawa Air Base by the Tohoku Electric Power Company. A small portion of this 50-cycle power is converted on base to 60-cycle power and is provided to the Operations Area. On-base power is primarily 50-cycle and any substantial increase in the 60-cycle requirements will necessitate an increase in converter capacity.

Generators are maintained on base to provide standby power to key base facilities.

(f) Telephone System. The base telephone equipment is installed and maintained by contract with the Nippon Electric Company. The base dial telephone system is presently operating below maximum capacity.

(g) Liquid Fuel System. The base receives jet fuel and diesel fuel through two 4-inch transfer lines and MOGAS by tank car from Hachinohe. The USN (USN Fuel Detachment, Tsurumi, Japan) maintains the POL Terminal at Hachinohe and the transfer line to Misawa Air Base. These facilities include:

1) Berthing facilities (pier) for T-1 tanker.

2) Seven 10,000-bbl, aboveground, welded steel, bulk storage tanks.

3) Three pumping stations which include one at the Terminal and two booster stations on the transfer lines (two 500-GPM pumps for each product--jet fuel and diesel fuel--at each station). At Pump Station No. 1, MOGAS can be transferred to either tank trucks or railroad tank cars.

4) Dual 4-inch transfer lines approximately 19.9 miles in length with pumping stations as described above.

The two 4-inch lines enter the east end of the base south of the runway at Tank Farm No. 2.

Liquid fuel bulk storage is contained on base in two tank farms. Tank Farm No. 1 consists of nine underground bulk storage tanks with a total storage capacity of 120,000 bbl and three truck fill stands with six sets of outlets each. Each underground tank is served by a 600-GPM deep well pump. Tank Farm No. 2 consists of seven aboveground bulk storage tanks and one underground bulk storage tank with a total storage capacity of 90,000 bbl. There are two truck fill stands with two outlets at one stand and three outlets at the other.

Reproduced at Government Expense

JP-4, AVGAS and MOGAS can be received from tank cars through rail-side couplings located along the rail spur at the west end of Tank Farm No. 2. Three double couple connections are provided for each of the three fuels. JP-4, AVGAS and MOGAS may be offloaded through the pumphouse and transferred to the assigned bulk storage tanks.

c. Existing Land Use (See Figure 10). Most of the facilities at Misawa Air Base are located south and northwest of the airfield. No facilities violate airspace criteria. The south area contains the bulk of facilities used for air operations, maintenance, supply, medical, administration and community support. The northwest area contains communication facilities, bachelor housing and limited community support facilities. A photo layout (Figure 11) locates aerial views (Figures 12 through 16) of the base.

In the areas assigned to the USN (see Figure 17), maintenance hangars and other aircraft related facilities occupy the area immediately southwest of the existing parking apron. Most of these facilities are of permanent construction and are well maintained. At present, many of the buildings are occupied by JASDF under the terms of the Air Force Permit. These occupied facilities, especially the hangars, will be needed when NAF Misawa reaches full strength.

The aboveground fuel tanks of Tank Farm No. 2 are located southeast of the runway. The underground fuel tanks of Tank Farm No. 1 occupy the noncontiguous parcel located south of the airfield complex.

The "1200" ammunition area northwest of the airfield consists mainly of unused temporary structures built during the mid-fifties. The "1200" ammunition area is now occupied almost entirely by the JASDF in accordance with USN/JASDF agreements. Only Magazine Structure 1233 is being used by the USN for storing ammunition at the present time.

A listing of all buildings assigned to the USN is included as Appendix "A."

EXISTING FACILITY LISTING

TYPE-COND	BLDG NO.	DESCRIPTION
OPERATIONAL/MAINTENANCE AREA		
S-2	531	BEQS
S-2	532	BEQS
S-2	533	BEQS
S-2	535	BEQS
S-2	537	BEQS
T-2	*753	LOX BLDG
T-1	760	WHSE BLDG
S-1	900	ELEC PWR STA BLDG
S-3	*901	SHP, COMM & ELEC A/C PLT OVER 25 TN
P-1	*902	SHLTR A/W CALBR
P-1	*903	SHLTR A/W CALBR
P-1	905	AUTO MAINT SHP
P-1	*906	ADMIN OFC
P-2	909	MAINT HGR
P-2	**911	MAINT HGR
P-2	923	SHP, AVIONICS
P-2	926	GSE/SUP
T-1	*930	SHP, PAINT
P-1	*931	VEH FL STA
T-3	*932	SHED SUP & EQUIP BSE
S-1	*933	SHP AGE
P-1	936	ELEC SWITCH STA
S-2	937	SHP AGE
T-3	938	HAZARD STOR, BSE
P-2	941	MAINT HGR
P-2	946	MAINT HGR
T-1	*950	SHP AGE
P-1	*952	ELEC SWITCH STA
P-2	*954	MAINT
P-1	*956	EX-AERO CLUB HGR
S-2	*958	CRASH FIRE STA
T-1	*959	ADMIN OFC
T-1	960	ELEC PWR STA BLDG
S-1	961	NAF ADMIN
S-1	994	RDR MET SET CBAND
T-1	*995	ELEC PWR STA BLDG
P-1	*998	OPS BSE
P-2	*1060	MAINT HGR
T-1	*1075	STOR SEG MAG
T-1	*1076	HAZARD STOR BSE
S-1	*1077	SPECIALIZED TNG
P-2	**1078	SUP WHSE
S-3	1101	BEQS
S-3	1103	BEQS
S-3	1104	BEQS
S-3	1105	BEQS
P-1	UNNUMBERED	BEQS (348 MN)
P-1	*1115	ELEC SWITCH STA
S-3	1119	AFCS MAINT FAC
S-1	*1121	ELEC PWR STA BLDG
P-3	*1122	CONTR TOWER
P-1	1125	COR CON UTIL STOR
P-1	1130	SHP REFL VEH
S-1	*1480	COMM & TNG BLDG

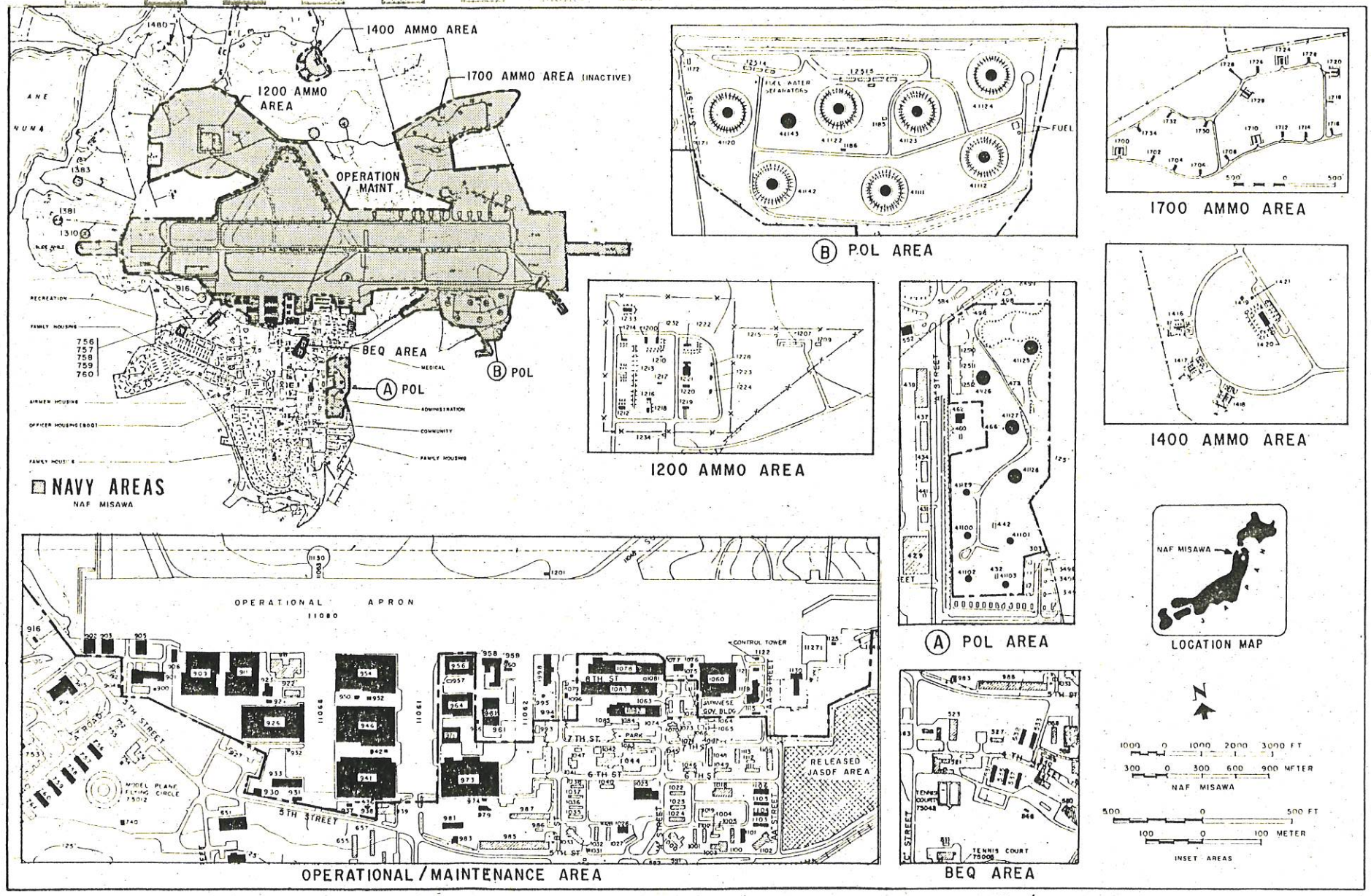
TYPE-COND	BLDG NO.	DESCRIPTION
1200 AMMO AREA		
T-1	1200	AMMO MAINT SHOP
P-1	1203	ELEC PWR STA BLDG
P-1	1210	STOR MU-CUB MAG
T-1	1212	STOR IGLOO
T-1	1213	STOR IGLOO
T-1	1214	STOR IGLOO
T-1	1216	SHED SUP & EQUIP BSE
P-1	1217	STOR MU-CUB MAG
T-1	1218	SHED SUP & EQUIP BSE
T-1	1219	SHED SUP & EQUIP BSE
T-1	1220	SUP ISSUE SHP
S-1	1221	READINESS CRW
T-1	1222	AMMO MAINT SHOP
T-1	1223	LATRINE
T-1	1224	HTG FAC BLDG
T-1	1228	ELEC PWR STA BLDG
T-1	1232	SHP AMMO MAINT
P-1	1233	STOR IGLOO
S-1	1234	SENTRY BLDG
1400 AMMO AREA		
P-1	1416	HE MAG
P-1	1417	HE MAG
P-1	1418	HE MAG
P-1	1420	AMMO REWORK FAC
1700 AMMO AREA		
S-4	1700	STOR MAG
S-4	1702	STOR MAG
S-4	1704	STOR MAG
S-4	1706	STOR MAG
S-4	1708	STOR MAG
S-4	1710	STOR MAG
S-4	1712	STOR MAG
S-4	1714	STOR MAG
S-4	1716	STOR MAG
S-4	1718	STOR MAG
S-4	1720	STOR MAG
S-4	1722	STOR MAG
S-4	1724	STOR MAG
S-4	1726	STOR MAG
S-4	1728	STOR MAG
S-4	1729	STOR MAG
S-4	1730	STOR MAG
S-4	1734	STOR MAG

LEGEND

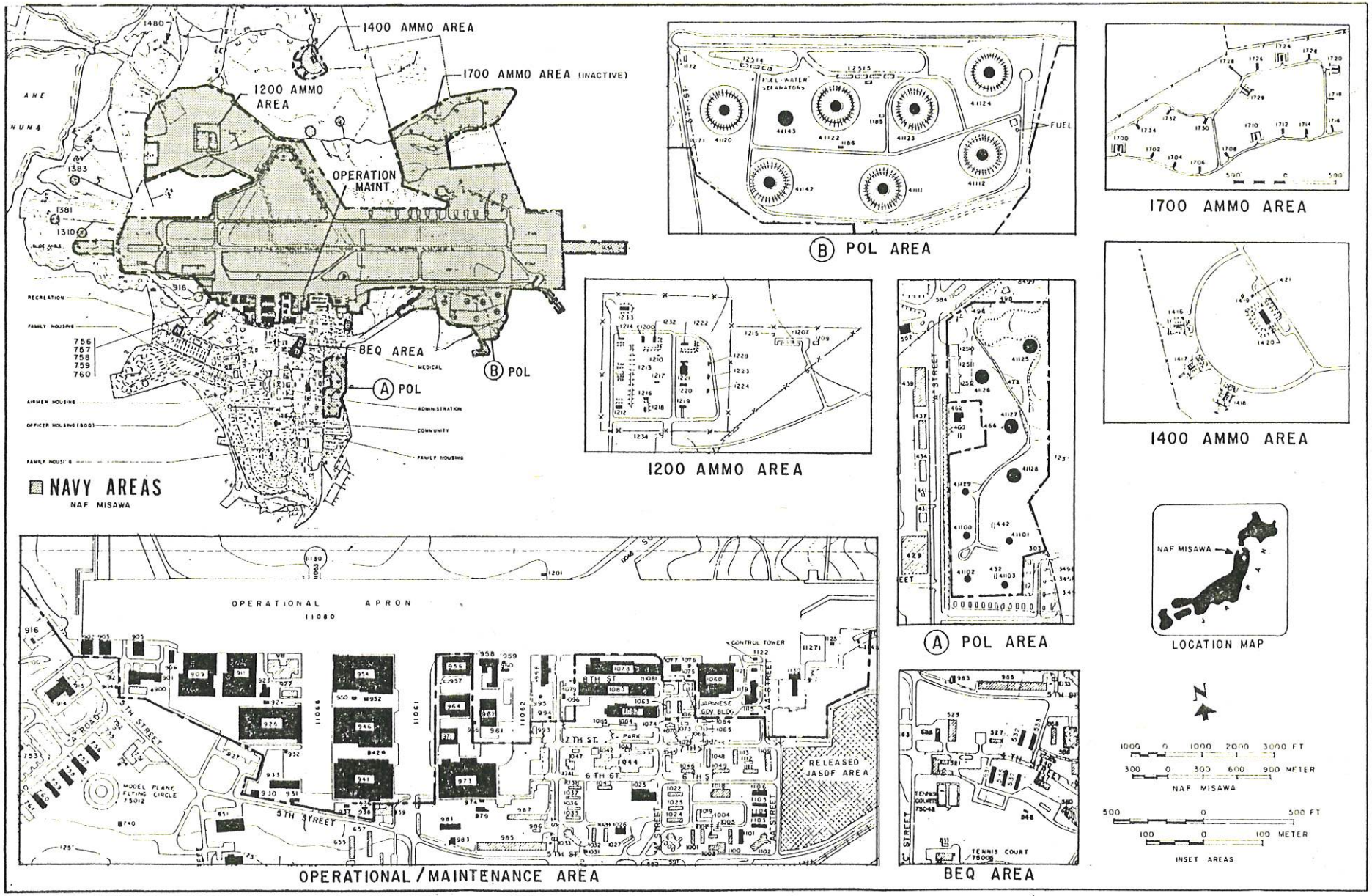
BUILDING TYPE
T - TEMPORARY
S - SEMIPERMANENT
P - PERMANENT

CONDITION CODE
1 - USABLE
2 - USABLE BUT MODERNIZATION REQUIRED
3 - SUBSTANDARD--REQUIRES REPLACEMENT
4 - VACANT

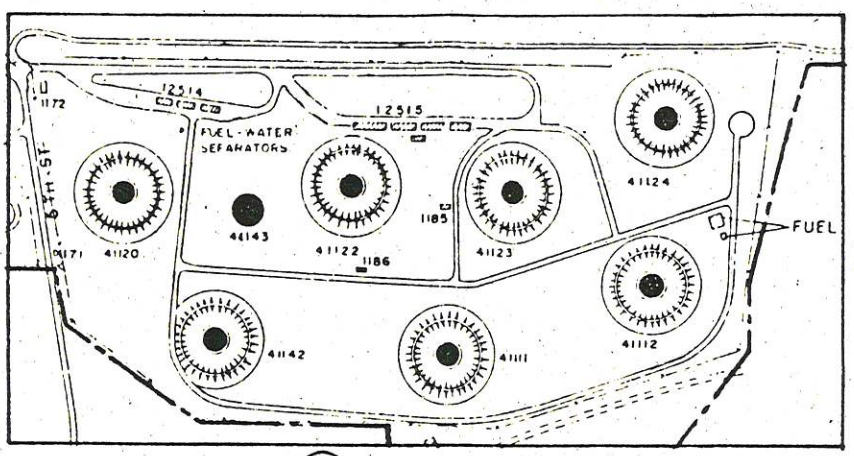
* JASDF USE
** AF USE



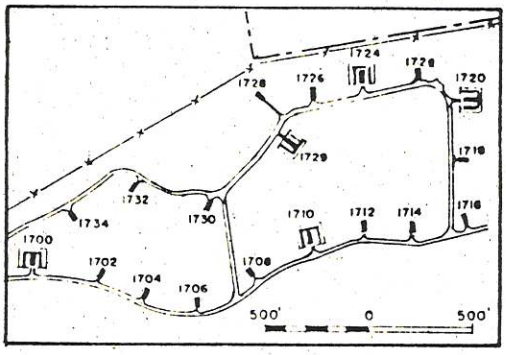
NAVY AREAS / FACILITY LOCATOR MAP FIGURE 17



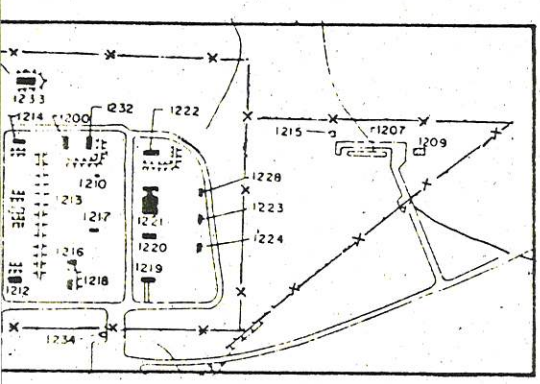
NAVY AREAS / FACILITY LOCATOR MAP FIGURE 17



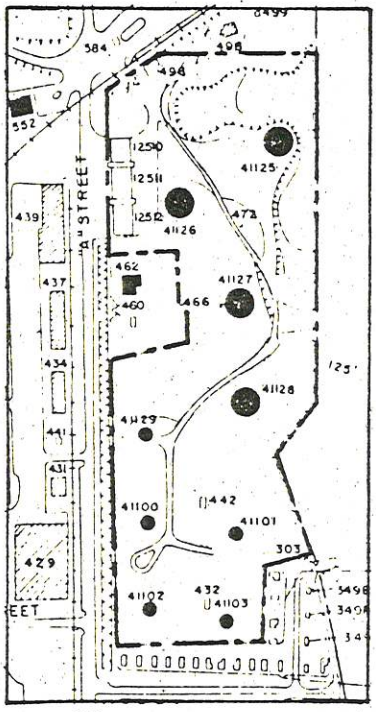
(B) POL AREA



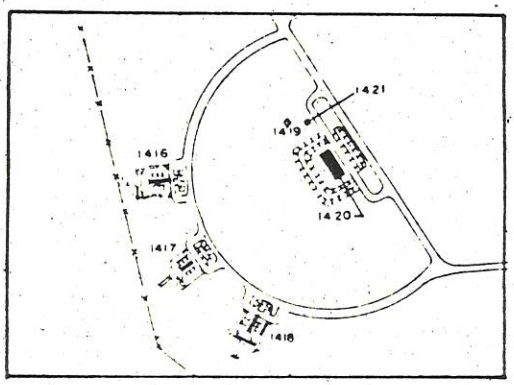
1700 AMMO AREA



1200 AMMO AREA

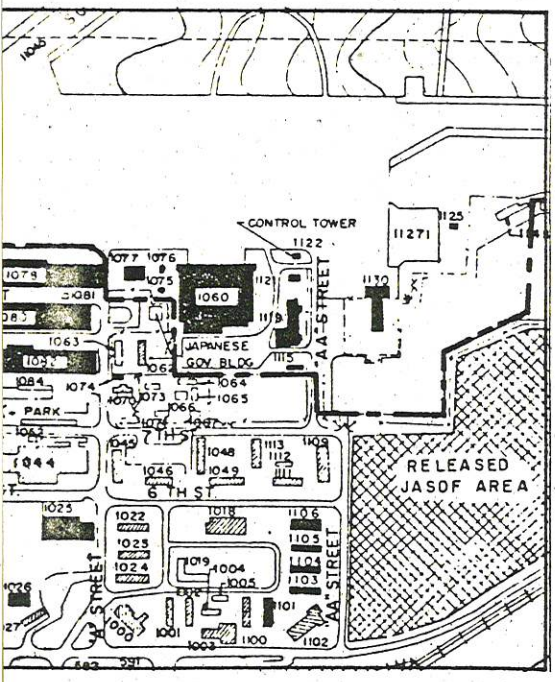


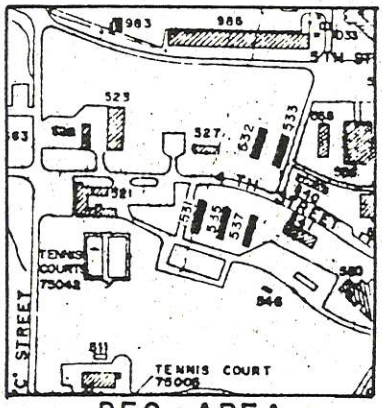
(A) POL AREA



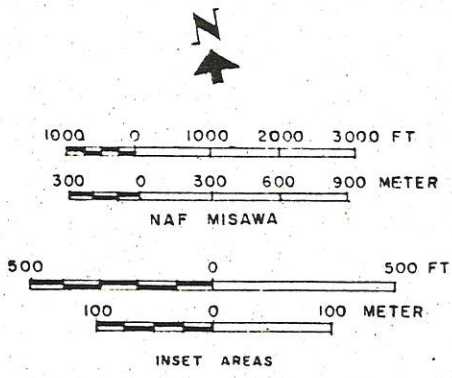
1400 AMMO AREA

LOCATION MAP



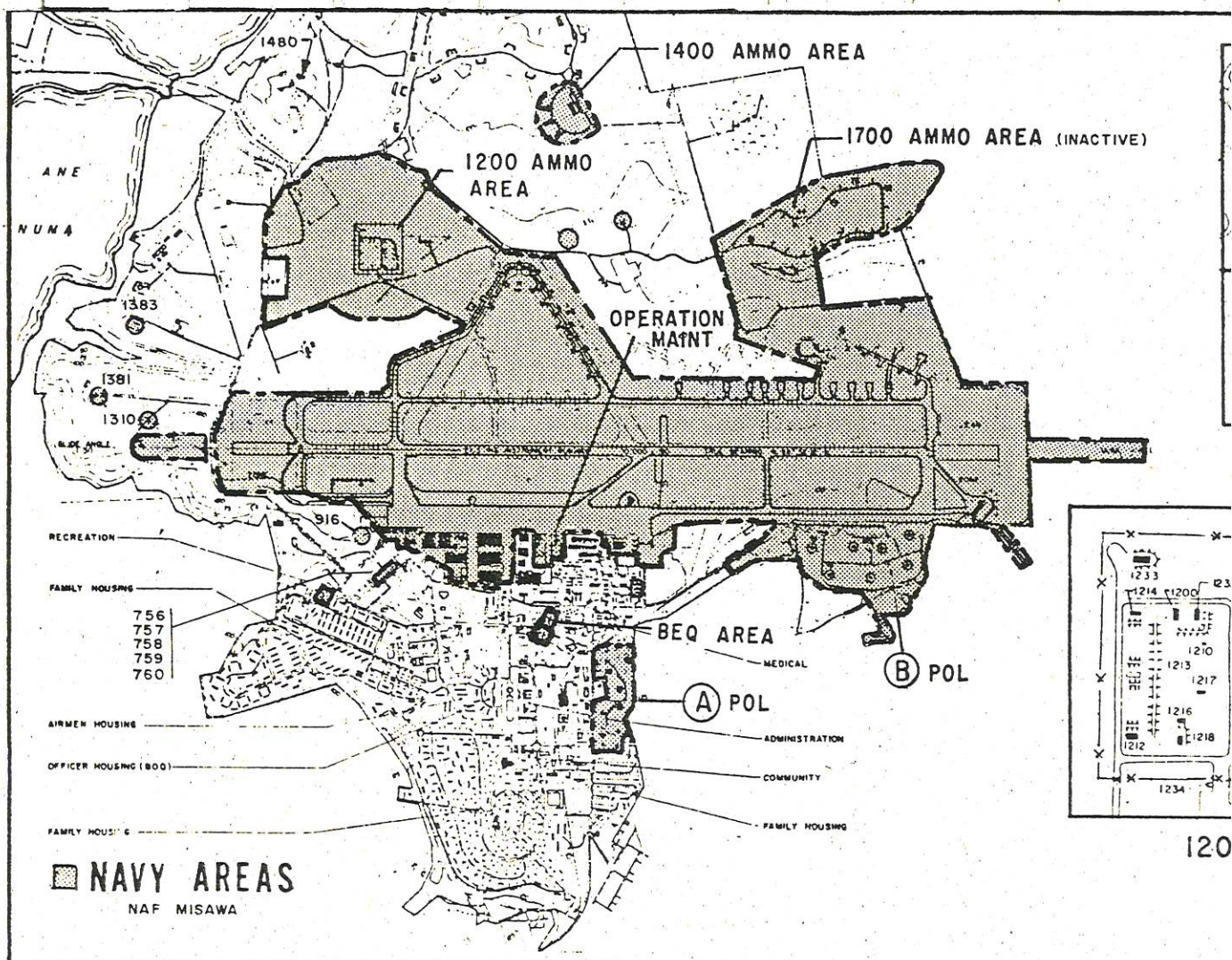


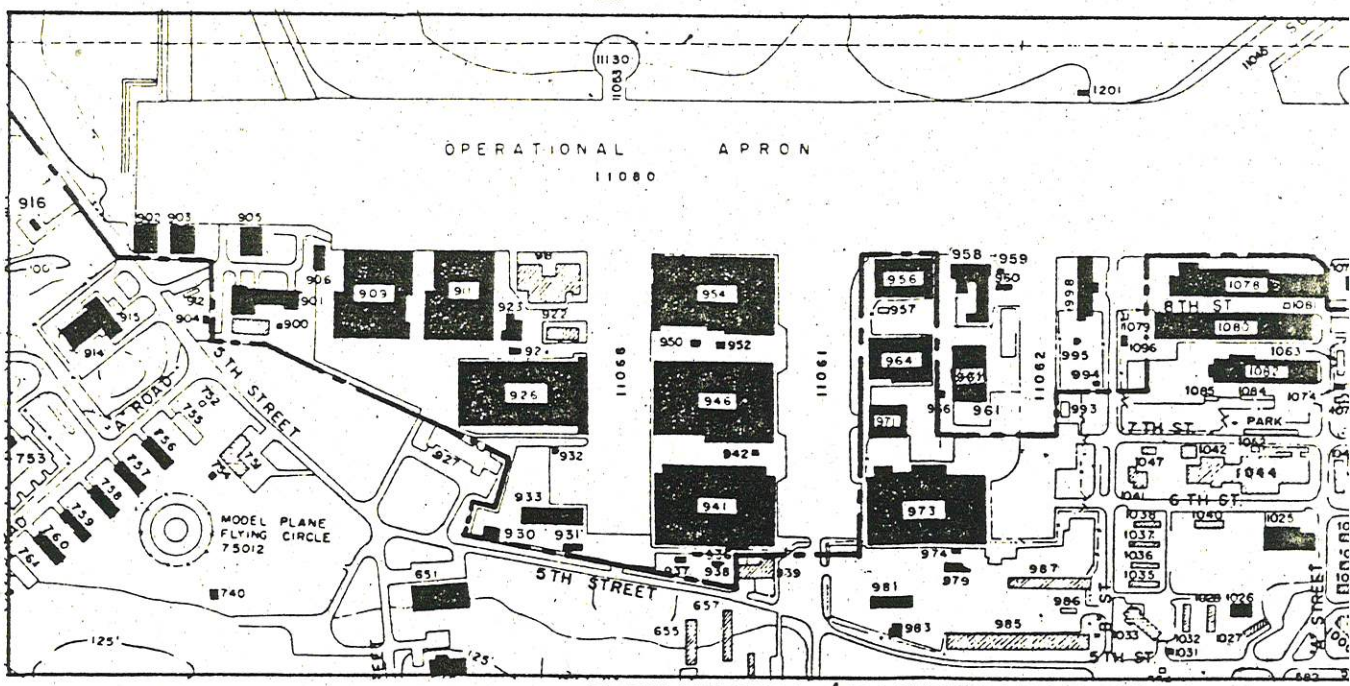
BEQ AREA



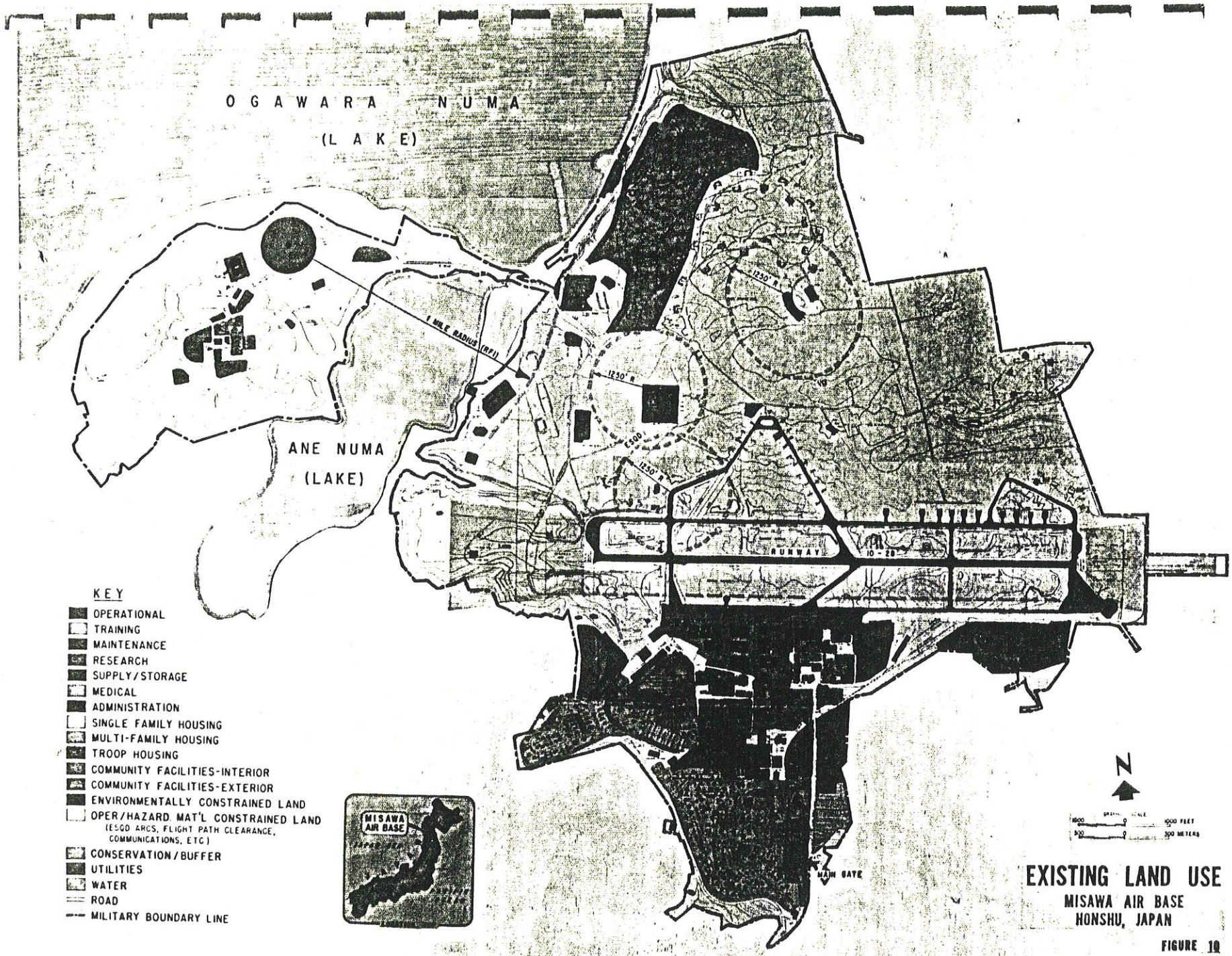
NAVY AREAS / FACILITY LOCATOR MAP

FIGURE 17





OPERATIONAL / MAINTENANCE AREA

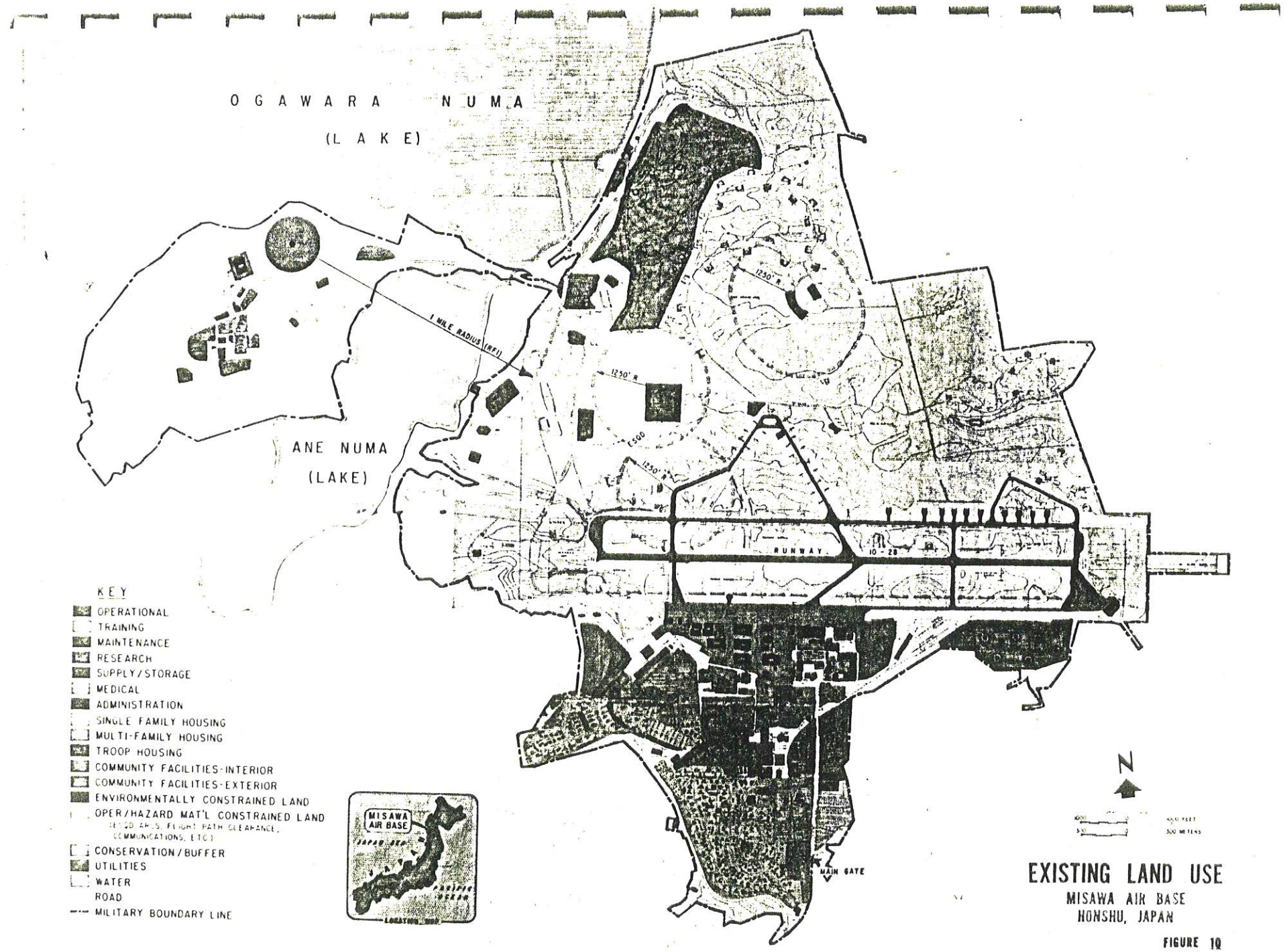


EXISTING LAND USE

MISAWA AIR BASE
HONSHU, JAPAN

FIGURE 10

Reproduced at Government Expense

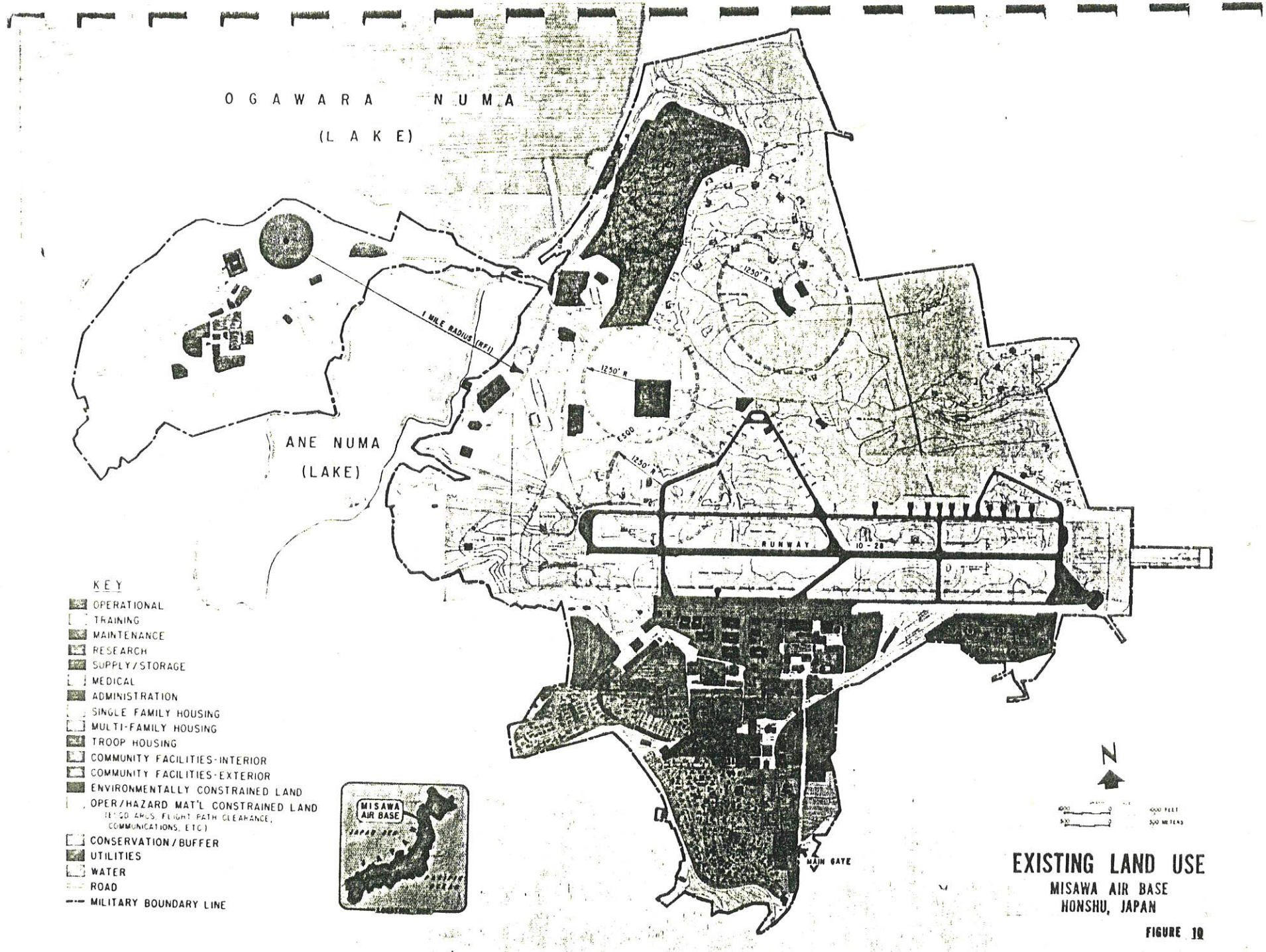


EXISTING LAND USE

MISAWA AIR BASE
HONSHU, JAPAN

FIGURE 10

Reproduced at Government



EXISTING LAND USE

MISAWA AIR BASE
HONSHU, JAPAN

FIGURE 10

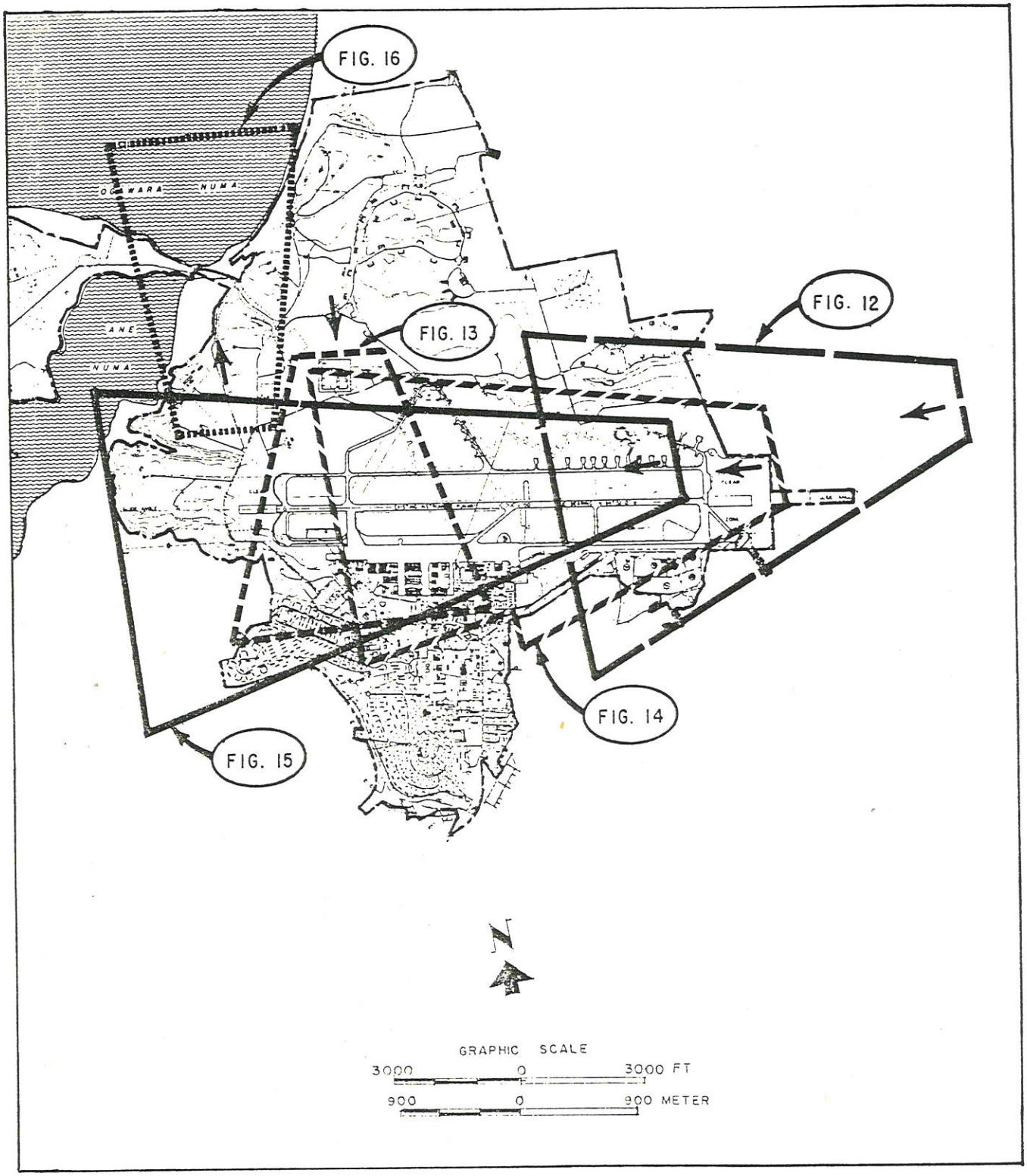


PHOTO LAYOUT
of
MISAWA AIR BASE

FIGURE 11

FIGURE 12

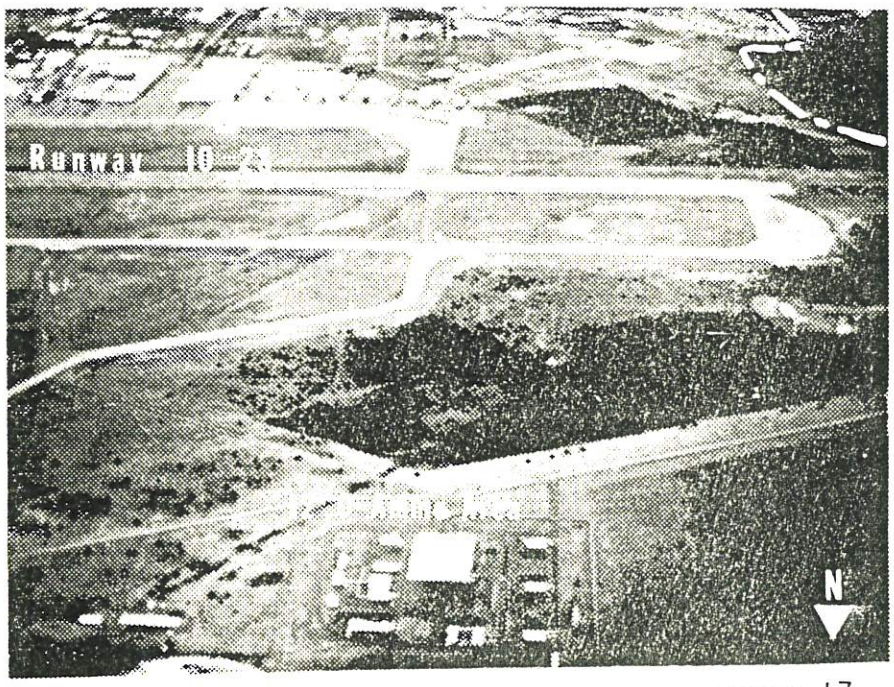


FIGURE 13

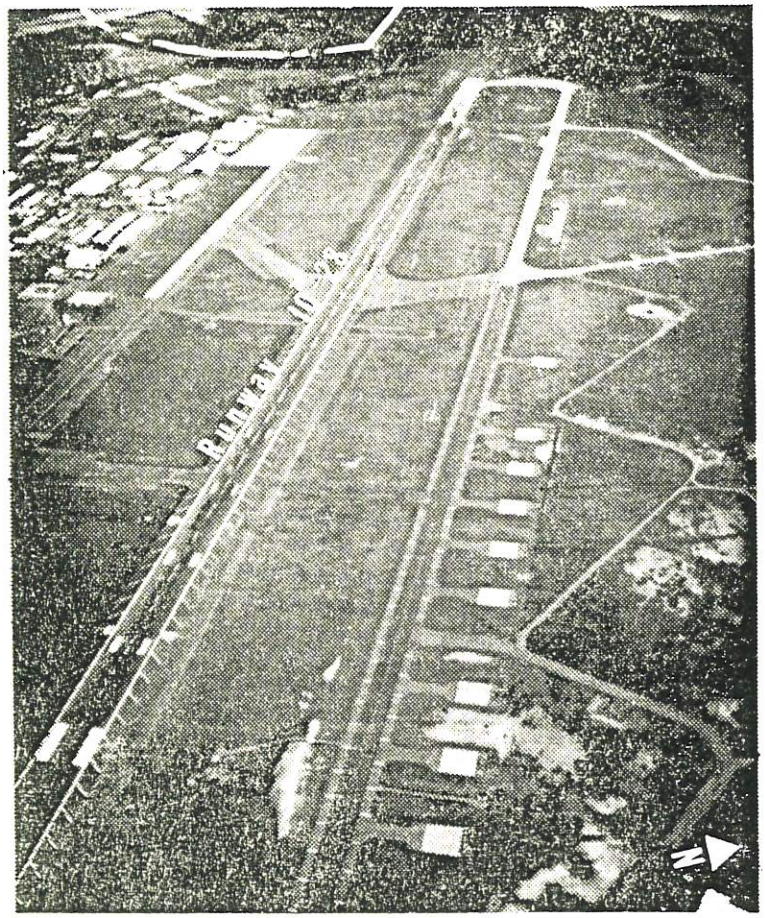


FIGURE 14 15

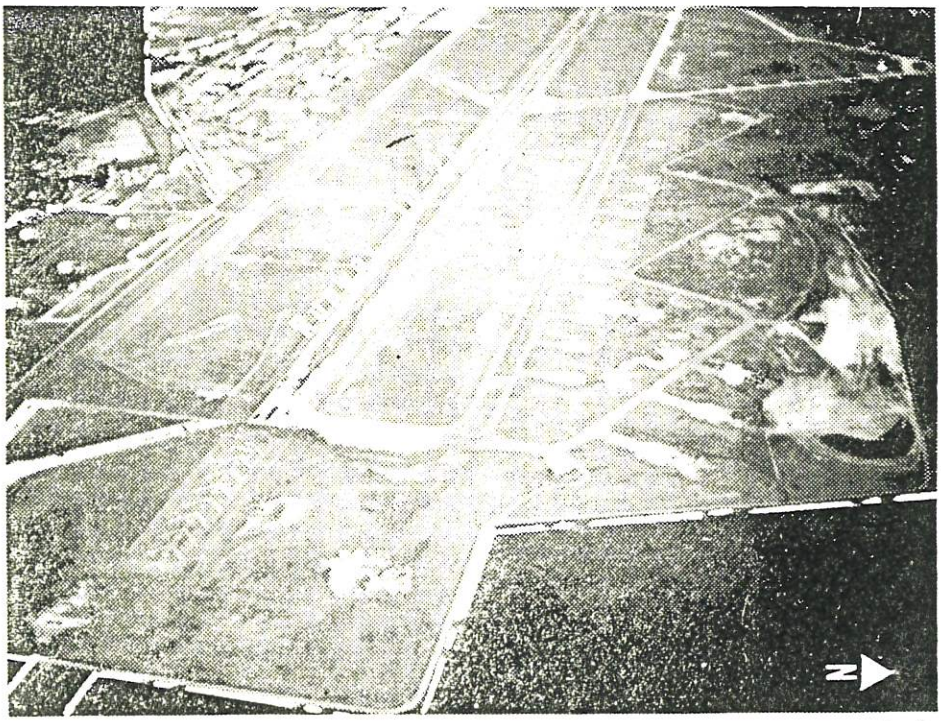


FIGURE 15 14

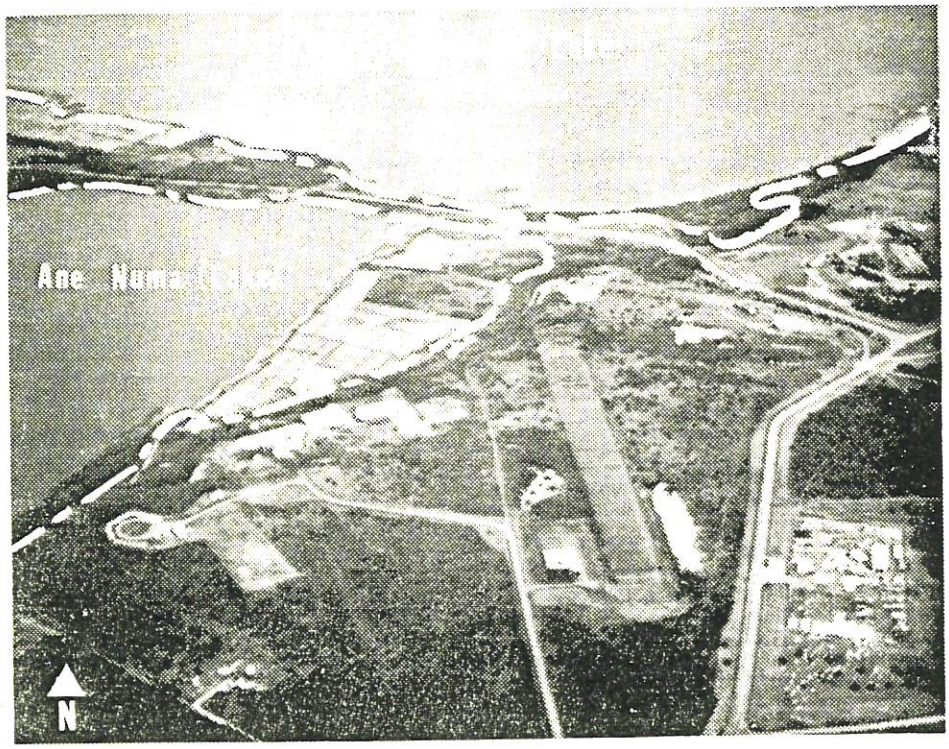


FIGURE 16

According to the USAF Master Plan for Misawa Air Base dated May 1974, airspace in the proximity of the base has been designated as aircraft training areas. These areas shown on Figure 3, Section "B," are described below.

R-129 permits air-to-air firing up to 35,000-foot altitude. R-129 airspace begins at 40°42'N-142°10'E to 40°48'N-142°32'E to 40°12'N-142°45'E to 40°07N-142°27'E to point of beginning.

R-130 (ripsaw) permits air-ground firing up to 23,000-foot altitude. R-130 land area is a 180° semi-circle with a radius of one statute mile with a focal point located at 40°52'N-141°23'E. Semi-circle starts one statute mile 360°T of focal point and counter-clockwise 180° to 180°T. R-130 sea area is a 50° semi-circle with a radius of five statute miles beginning at the true north and south starting points of the land area and extending on a 50° arc, five statute miles to sea between the headings of 58°T and 108°T.

R-521 permits anti-aircraft firing up to 24,000-foot altitude. R-521 firing area is an 85° semi-circle with a radius of 5.4 statute miles. Semi-circle starts at 45°T and clockwise 85° to 130°T with a focal point at 40°58'N-141°23'E.

E. PROGRAM ANALYSIS

1. Methodology

The basic source of the proposed Navy facilities program which supports this Master Plan is the SFPS as reflected in the BFRL (OPNAV Form 11000-1), the Evaluation of Existing Shore Facility Assets (OPNAV Form 11000-2) and the Summary of Facilities Deficiencies and Excess (OPNAV Form 11000-3). This is supplemented by long-range projects provided by the activity and appropriate higher command levels and by general trend projections based on experience at similar activities. Although the development program associated with this Plan is limited to USN facilities, it also must acknowledge any known or projected requirements of others which will affect the operational areas under USN jurisdiction, such as commercial air ramp space, MAC ramp and terminal space and JASDF ramp and ammunition storage space. These latter requirements evolve from various sources as noted in subsequent sections.

2. Summary of Proposed USN Projects

The following list reflects the latest projects of MCON scope supported by the most recent SFPS documents.

Description	Approx. Scope
Runway Widening	55,000 SY
New Aircraft Taxiway	As Required
Aircraft Parking Apron	58,000 SY
Arming and Dearming Pad	10,900 SY
Aircraft Fire and Rescue Station	9,100 SF
Aircraft Weapons Alignment Shelter	15,500 SF
General Warehouse	18,000 SF
BEQ	680 MN*
BOQ	225 MN**

*347 existing spaces substandard plus 333 additional required.

**All additional required.

In addition, subsequent portions of this section address requirements generated by safety considerations and additional land use proposals, including a remote touch-and-go pad, joint use (with JASDF) of ordnance facilities and considerations involving the Commercial Air Terminal.

F. CONCEPT DEVELOPMENT

1. Functional Relationships

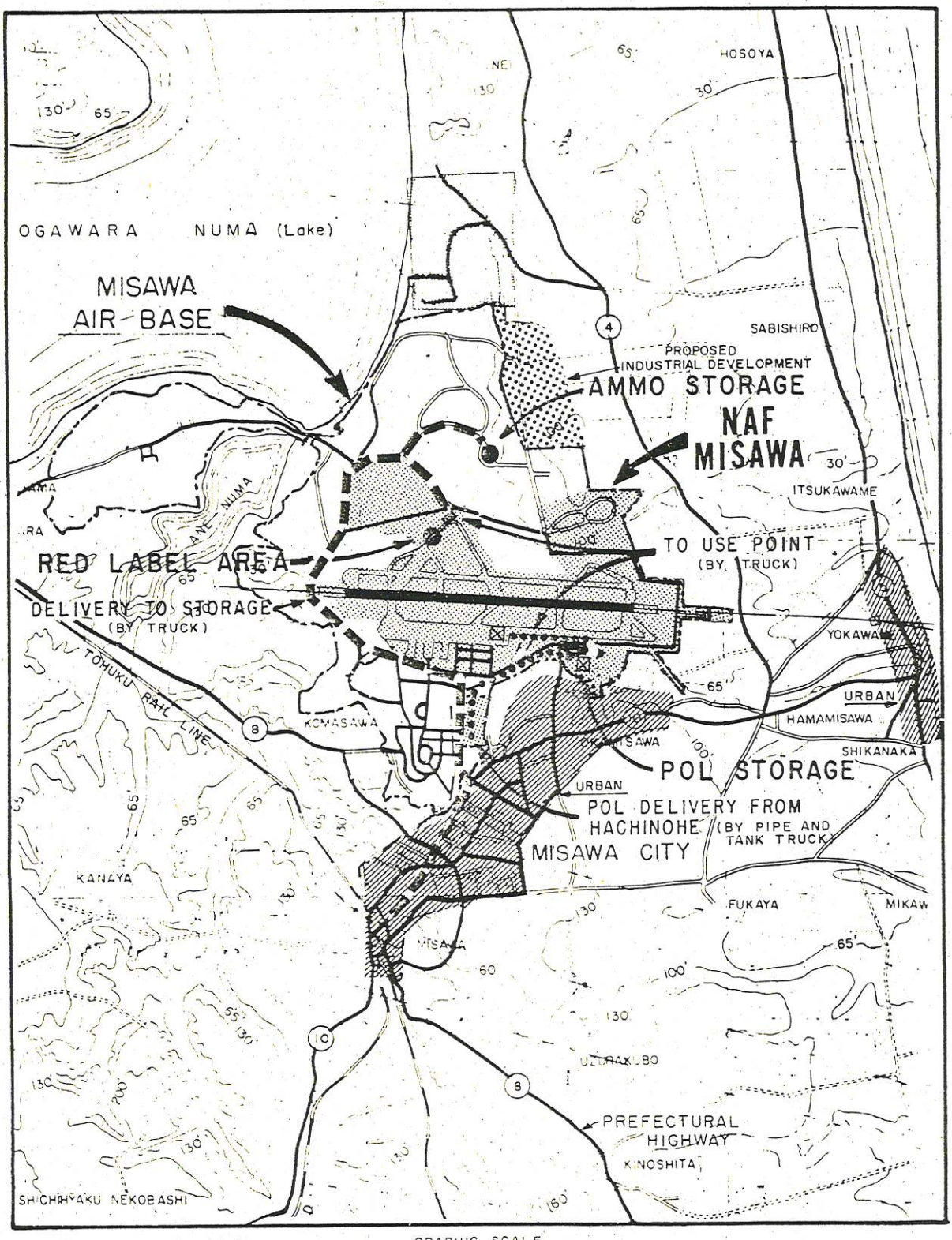
This Plan is limited to the areas outgranted by the USAF to the USN. These areas are primarily operational in nature, but also include fuel storage south of the runway and proposed ammunition storage north of the runway. Functional relationships of POL and ammunition storage to aircraft operations are adequately served by the existing sites (see Figure 18).

A total plan must eventually be developed for Misawa Air Base which considers the requirements of the USAF, the USN, the JASDF and the Japanese commercial airlines.

The impacts of others on the USN facility vary. The commercial requirements are restricted to runway, taxiway, limited ramp space and air terminal with no impact on ground support facilities. The JASDF will be largely self-sufficient but will require real estate for ramp and support area adjacent to the runway. USAF use of the operational area will be minimal, based on the present loading of three MAC aircraft per week, but will involve ramp, support equipment and terminal space.

The impact of USN, commercial and JASDF operations on the host USAF Security Service functions will be very significant. Civilian, JASDF, USAF and USN flight operations will all contribute to the impact of aircraft noise on USAF property. The USN buildup will require additional BOQ, BEQ, family housing and personnel support, as well as possible utilities expansion and an increased flow of supplies.

Accordingly, although this Plan is limited to USN operational areas, it follows that an updated total base plan should be developed at an early date to incorporate the changes which the buildup of non-USAF units will have on support requirements furnished by the USAF host.



LOGISTICS FLOW
(POL & AMMO)

FIGURE 18

G. COMPREHENSIVE SITE DEVELOPMENT

1. Planning Encumbrances

The normal planning encumbrances considered in an air station master plan are those associated with safety distances and noise zones generated by aircraft activities and with Explosives Safety Quantity Distance (ESQD) arcs which surround ordnance storage facilities and handling operations. Ordnance criteria as promulgated by NAVSEA OP-5, Fourth Revision, is considered in this Plan. Aircraft safety and noise zones normally affect the siting of support facilities; however, at NAF Misawa, these are provided by the host USAF. As noted in Section "D," NAF Misawa itself is limited to the runway complex, the fuel storage complex to the south and ordnance storage facilities to the north.

2. Objectives

The objectives of the Plan are to determine the total USN facilities requirements, to provide siting recommendations for operational facilities and to identify and advise the USAF of add-on personnel support and administrative requirements generated by the USN buildup. These support facilities would normally be sited outside the real estate controlled by the USN.

3. Aircraft Operations and Aircraft Noise Zones

a. Existing. The runway at Misawa Air Base is used daily by a commercial airline (TDA) and by military cargo and patrol craft as well as U. S. and Japanese TACAIR.

The most significant military air operation at Misawa Air Base is touch-and-go practice by the JASDF, the U. S. Marine Corps (USMC) and the USN. The estimated noise zones from existing touch-and-go operations are shown on

Figure 19. The smallest noise ellipse is generated by a four-plane touch-and-go pattern and the next larger ellipse is generated by a six- or seven-plane pattern. The largest ellipse is generated by a holding pattern which occurs when tactical practice must be interrupted for conventional landings and takeoffs by military cargo or patrol craft or by commercial aircraft. This outer pattern blankets an area to the northeast which has been identified by the USAF as a future site for family housing.

b. Proposed. The hazards associated with joint use of a single runway for both tactical practice and conventional commercial/military flight operations are of an acceptable level with the present aircraft traffic count of some 16,000 movements per year since the tower can direct the TACAIR into the holding pattern at any time. Several factors point toward increased activity in the future.

(1) There is presently a limit of 18 U. S. TACAIR at Misawa Air Base at one time. This limit was established based on the current availability of bachelor housing. Once additional bachelor housing is available, there will be 40 or more TACAIR on site at a time.

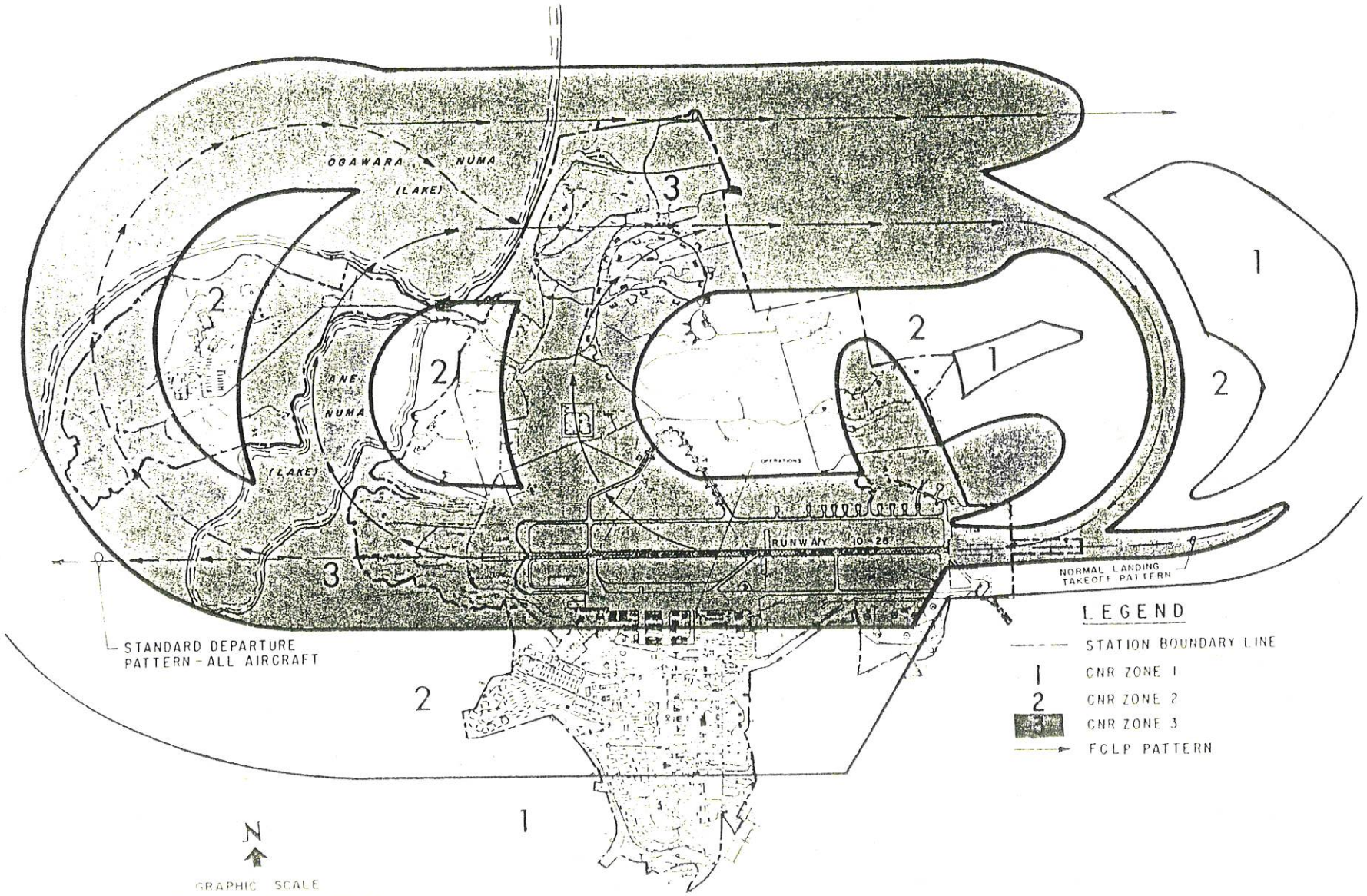
(2) There will be a full squadron of nine P-3 aircraft assigned to Misawa Air Base along with two station aircraft.

(3) It appears that the JASDF will probably increase its aircraft loading at the base.

(4) Commercial operations, while presently closely regulated, may eventually increase if increased activity can be safely absorbed at Misawa Air Base.

The sum total of these factors could result in an unacceptable degradation of flight safety with the single runway being used for both touch-and-go and conventional operations. Accordingly, this Plan proposes that a site for touch-and-go operations be established north of the runway. The initial step would be simply to insure that no facilities are constructed which would violate potential runway clearance criteria.

Reproduced at Government Expense



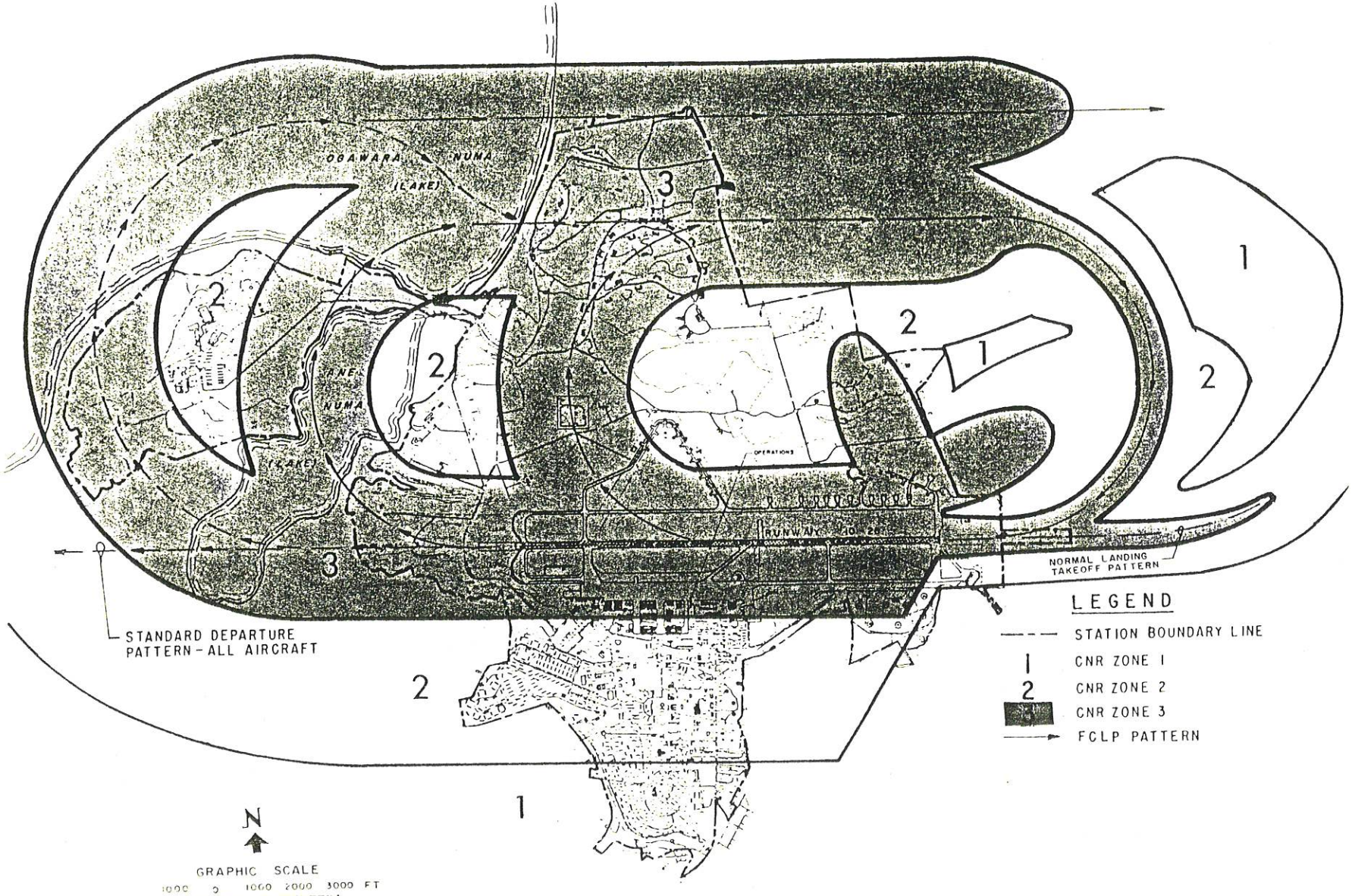
EXISTING AIRCRAFT NOISE ZONES

MISAWA AIR BASE

FIGURE 19

FIGURE 19

Reproduced at Government Expense



EXISTING AIRCRAFT NOISE ZONES

MISAWA AIR BASE

FIGURE 19

FIGURE 19

Reproduced at Government Expense

The major reason for this recommendation is for aircraft safety in the event of increased air activity. There are also other benefits to be derived.

The noise pattern would be moved further north improving the livability of portions of the main base.

The holding pattern would be eliminated, which could reduce the aircraft noise to an acceptable level in the vicinity of the potential USAF housing area to the west.

The flight pattern is further modified by implementing the latest COMNAVAIRPAC instruction to plan a single four-plane pattern for all flight operations. The COMNAVAIRPAC directive is included as Appendix "B." The probable total impact on the noise zone is shown on Figure 20. This is subject to review and adjustment in conjunction with ongoing noise studies being conducted by the USAF. Two sites for the touchdown pad and run-out strip are Items 1 and 2 on Figure 21. (NOTE: Figure 21 follows Page G-10 at the end of this section. It shows all proposed projects and may be left "folded out" for ready reference in support of subsequent paragraphs of this narrative.)

The preliminary submission of this Master Plan proposed that the remote pad consist of a 200 foot by 1,000 foot segment of new concrete on the north taxiway, 750 feet north of the runway, with minimum upgrading of an additional 5,000 feet of the taxiway for emergency run-out. NAVAIR-SYSCOM indicated that if touch-and-go traffic warrants a separate facility, then a new 200-foot wide runway should be programmed, sited to meet current runway separation criteria of 1,000 feet vice the old 750-foot separation distance (see Figure 21, Item 1).

The taxiway proposal has been retained as an alternative because of the obvious cost advantages. Construction of the small pad would require a NAVAIRSYSCOM exemption; however, the 6 to 1 cost differential would appear to warrant serious consideration of such action.

This Plan makes no recommendations regarding timing or funding source for the remote facility. All users of the airfield will contribute to the requirement and all users of the Air Base (flying and non-flying), as well as the civilian city of Misawa, will benefit from use of a separate touchdown pad.

4. Military Aircraft Parking

a. Existing. At present, a maximum of nine P-3 aircraft, one C-141 aircraft, one 727 aircraft, thirty to thirty-five JASDF F-86 TACAIR and eighteen USN TACAIR are on the ground at one time. This loading does not overtax existing aircraft parking facilities, and no formal aircraft parking plan has been necessary.

b. Proposed. The planned loading of 62 USN aircraft will require that the existing aircraft parking apron be widened to permit all of the USN aircraft according to criteria (see Figure 21, Item 3, and Figure 22). Until funds become available for this widening project, aircraft could be parked in a similar configuration but located on existing pavement closer to the hangar complex.

Combat aircraft parking, when required, should be located in the vicinity of the future Red Label Area (see Figure 21, Item 16).

5. Ordnance Storage

a. Existing. U. S. ammunition is stored in Magazine Structure 1233 in the northwest corner of the "1200" ammunition area to the north of the runway (see Figure 21, Item 4). JASDF ordnance is stored in the "1400" ammunition area (see Figure 21, Item 5).

b. Proposed. With the introduction of ASW operations, it was necessary to plan for additions to torpedo maintenance and storage facilities. Prior to the start of this Master Plan, the activity, in conjunction with COMFAIRWESTPAC and COMNAVSEASYSCOM representatives, recommended that a

joint U. S./JASDF storage and rework complex be developed in the "1400" ammunition area. In this case, the JASDF would retain one U. S. constructed magazine (Structure 1415) and one JASDF constructed magazine (Structure 1487). The USN would take over three U. S. constructed magazines and a U. S. constructed rework facility (Building 1420) which were all originally part of a USN Mine Assembly Complex. This would ultimately require construction of two additional ammunition magazines along with security fence. The development of the "1400" ammunition area vice the "1200" ammunition area for ordnance operations offers the following advantages:

(1) The layout of existing facilities in the "1400" ammunition area conforms to the requirements of NAVSEA OP-5.

(2) The "1400" ammunition area is less congested and would eliminate future problems of encumbering existing buildings functionally suitable for non-related ordnance use.

(3) Buildings in the "1400" ammunition area are of permanent construction; the "1200" ammunition area contains many semipermanent structures in poor condition.

(4) Development costs for ordnance operations are about equal for both areas. Negotiations toward joint use are currently underway.

Intraline and intermagazine distances in the "1400" ammunition area are adequate for well over 30,000 pounds Net Explosives Weight (NEW), Class 7 ammunition storage, in each magazine and in the proposed rework facility. Inasmuch as all loadings of U. S. explosives will be well below this amount, the proposal appears sound. Approval of the joint-use concept is supported by this Plan assuming that JASDF ordnance storage limits are compatible and can be controlled.

The proposed rework facility, Building 1420, constructed in 1957, is of permanent concrete construction containing 8,280 square feet of floor area. The building is

barricaded in all directions except for two short segments to provide vehicular access.

Based on a 10,000 pound maximum NEW, the barricaded building will generate an 865-foot ESQD circle in accordance with Table 5-11, NAVSEA OP-5. The building has been located to be 1,215 feet from the east base boundary.

No firm schemes for shipment of ammunition are included in this Plan.

In general, rail shipment is the most efficient means of transporting supplies throughout Japan. The movement of ammunition is controlled by the Japanese Police Department, and since they have control over highways but not the railways, ammunition is shipped via highways. It is shipped in relatively small lots on a pre-arranged basis in highway vehicles in conjunction with special precautions taken by the Japanese Police Department to control intersections and to plot the movement of the ammunition trucks. Although the proposed JASDF parcel includes the rail spurs which were originally identified as ordnance spurs, there are no plans to replace them. The original spurs cannot be used for ordnance without wholesale waivers because of the proximity of inhabited facilities, including civilian housing. It should be noted that plans have been prepared for a civilian industrial park to be located east of the proposed "1400" ammunition area. Although available prints of this development do not indicate any railroad, it would seem logical that, in the long run, railway service to the industrial park will be provided. It is recommended that U. S. forces maintain coordination with the planned Japanese development so that the option of running a rail spur into the north section of the base remains open, particularly if the climate for handling ammunition by rail improves. Another potential haul route for ammunition would be to improve sea access into the adjacent lake. There are two openings to the sea at the northeast edge of the lake, one of which appears to have been built for small boat access.

6. Civilian Air Terminal

a. Existing. The Misawa runway is currently used for commercial flights by TDA. At present, there are three

flights per day, limited to Boeing 727-size aircraft. This joint use has been in effect since June 1975 and both the aircraft size limit and maximum number of flights are a part of the agreement.

Aircraft taxi to the east end of the south taxiway. Passengers are transported to and from a terminal in downtown Misawa by bus.

b. Proposed. Despite the restricted level of operations specified by the present agreement, it is considered reasonable to address future expansion. In this case, because of other compelling needs for available operations areas on the south side of the runway (covered in subsequent paragraphs), it is proposed that any dedicated commercial aircraft parking apron or terminal facilities be sited on civilian land off base. The general area shown on Figure 21, Item 6, south of the east end of the runway is presently undeveloped and is readily accessible to the population center of the city of Misawa.

7. Miscellaneous Planned Operational Facilities

a. Existing Facilities to be Utilized. This Master Plan proposes maximum use of existing operational facilities. The following facility assignments as proposed by the activity are supported (refer to Figure 21, Items 7 through 16):

(1) Item 7. Hangar 909 to be used by U. S. TACAIR.

(2) Item 8. Hangar 911 currently used for MAC storage to be assigned to NAF Misawa for organizational aircraft. Reserve Hangar 911 for TACAIR when expansion to a full wing is implemented.

(3) Item 9. Hangar 926 to continue as Aircraft Intermediate Maintenance and AIMD Supply.

(4) Item 10. Hangar 954 to be transferred from JASDF use to P-3 squadron use.

(5) Item 11. Hangar 946 to continue for P-3 use. (NOTE: Because of the snowy condition during winter months, hangar space for four P-3 type aircraft is recommended.)

(6) Item 12. Hangar 941 to be used for Aircraft Intermediate Maintenance.

(7) Item 13. Hangar 973 to be assigned for NAF Misawa use upon release of Hangar 911 to TACAIR. This will require a replacement furniture storage warehouse for the USAF.

(8) Item 14. Red Label Area--continue to use a remote area on existing pavement to the north of the runway for a hazardous cargo area. A more remote area (Item 14A) will be necessary once the touch-and-go pad is developed north of the runway.

(9) Item 15. Relocate MAC facilities from Building 918 in the proposed USN apron area. Recommended site is to the alert hangar (Building 1275) near the proposed commercial facility on the eastern end of the field.

(10) Item 16. Existing aircraft parking stubs located northeast of the future Red Label Area (Item 14A) could be used for combat aircraft parking if the need arises.

b. New Facilities to be Constructed in USN Area (Refer to Figure 21, Items 17 through 21). The following new projects are recommended to support operational deficiencies:

(1) Item 17, Runway Widening. The BFRL supports a 200-foot wide runway, 10,000 feet long, vice the existing 150-foot wide, 10,000-foot long existing facility. This Plan recommends that the runway be widened to the north to move the centerline away from the main base.

(2) Items 18 and 19, Arming/Dearming Pads. The Plan proposes siting arming pads to the south of the runway (Item 18) and dearming pads to the north of the runway (Item 19).

This precludes sweeping the main base with armed weapons regardless of the direction of landings or takeoffs.

(3) Item 20, Fire Station. A new Fire Station has been sited adjacent to the existing Fire Station.

(4) Item 21, Future Taxiways. A taxiway network is required to support runway extension and to provide an operational taxiway remote from the planned aircraft apron widening.

c. Facilities Requiring Siting Outside the USN Assigned Area. There are USN requirements for 225 additional BOQ spaces, for 330 additional BEQ spaces and for 350 replacement BEQ spaces which cannot be sited on lands assigned to the USN by the USAF.

Additionally, there is a requirement for about 30,000 square feet of general warehouse space (non-aircraft related) for the USN, a similar amount of replacement warehousing for the USAF to replace Hangar 973 and a requirement for a replacement administration building for the USN to meet normal setback criteria from the runway.

The above facilities are shown to scale on the inset of Figure 21.

Item A shows the 680-man BEQ requirement.

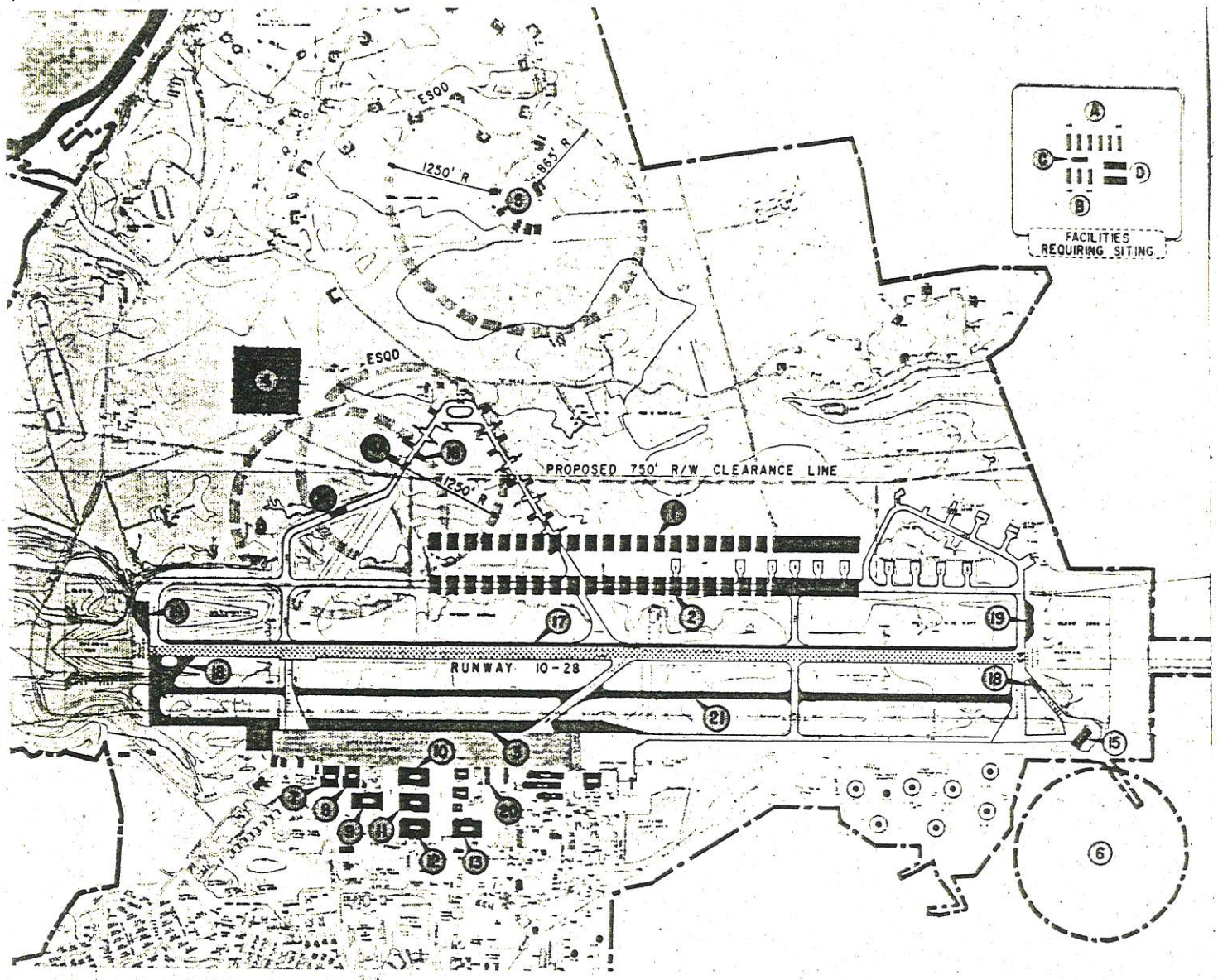
Item B shows the 225± man BOQ requirement.

Item C shows the replacement administration building.

Item D shows two 30,000 square foot warehouses (one for the USN and one for the USAF).

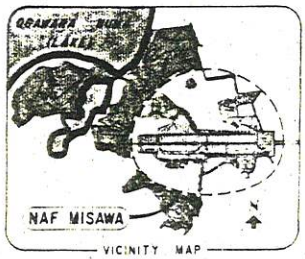
d. Other Support Requirements Impacting on the USAF. Any USN buildup will have an adverse impact on personnel support requirements (Exchange, Commissary, Clubs, courts,

playing fields, etc.) as well as on utilities requirements. These increases have not been quantified in this Plan but must be treated as part of the total base loading for revision or verification of the overall requirements for Misawa Air Base.



PROPOSED PROJECT LISTING

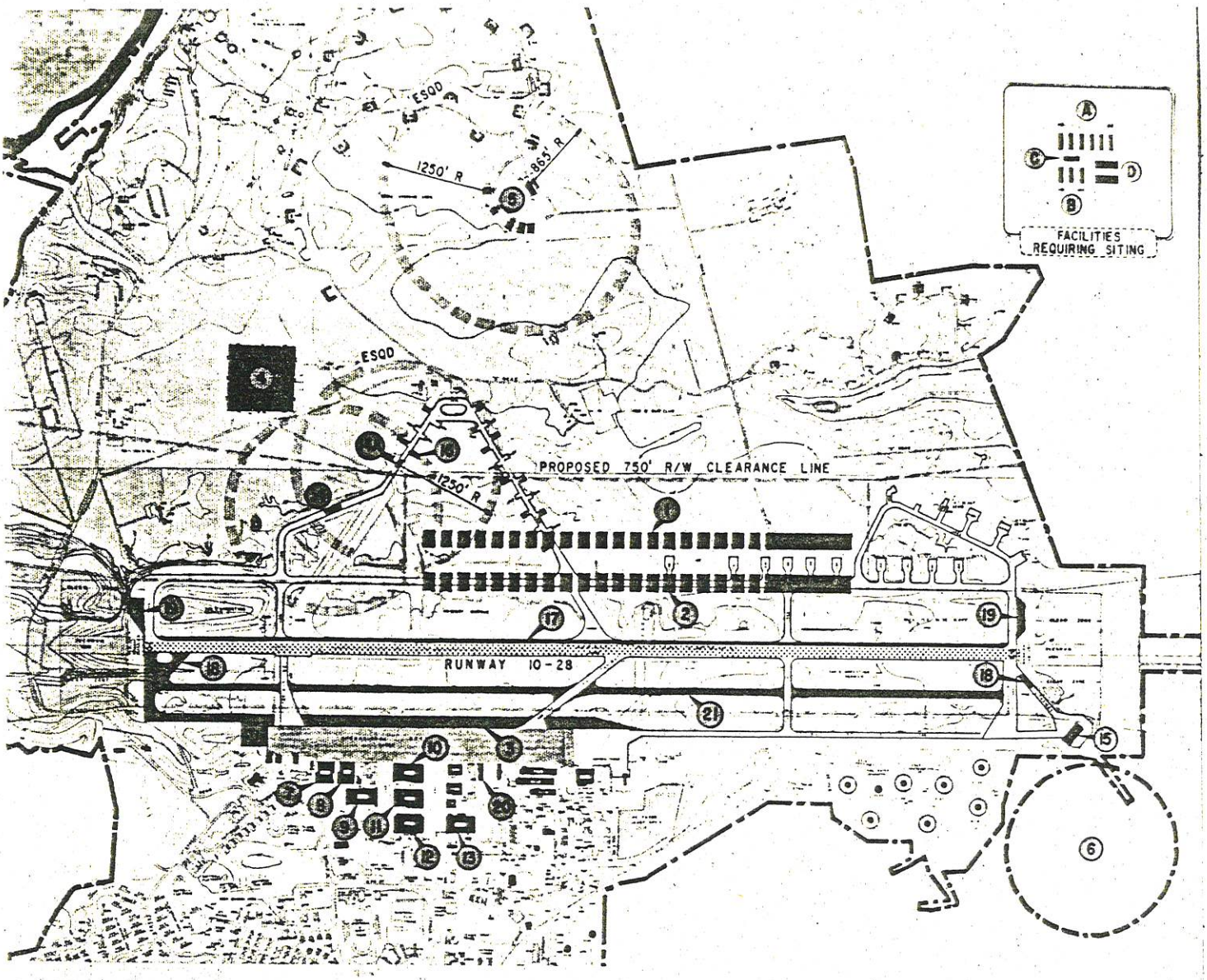
NO	FACILITY
1	REMOTE TOUCHDOWN PAD/RUNOUT STRIP
2	ALTERNATE REMOTE TOUCHDOWN PAD/RS
3	APRON WIDENING
4	1200 STORAGE AREA
5	1400 AMMUNITION AREA
6	PROPOSED CIVILIAN TERMINAL
7	HANGAR 909 - TACAIR
8	HANGAR 911 - NAF (FUTURE TACAIR)
9	HANGAR 926 - AIMD/AVIATION SUPPLY
10	HANGAR 954 - FUTURE VP SQUADRON
11	HANGAR 946 - VP SQUADRON
12	HANGAR 941 - AIMD
13	HANGAR 973 - FUTURE NAF (REQUIRES REPLACEMENT FURNITURE WAREHOUSE)
14 15	RED LABEL AND FUTURE RED LABEL
15	MAC TERMINAL
16	COMBAT AIRCRAFT PARKING AREA
17	RUNWAY WIDENING
18	ARMING PADS
19	DEARMING PADS
20	FIRE STATION
21	TAXIWAY NETWORK
A	BEQ
B	BOQ
C	ADMIN BLDG
D	WAREHOUSE



PROPOSED DEVELOPMENT PLAN

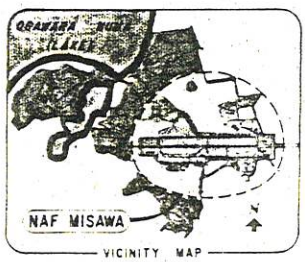
U. S. NAVAL AIR FACILITY
MISAWA, JAPAN

FIGURE 21



PROPOSED PROJECT LISTING

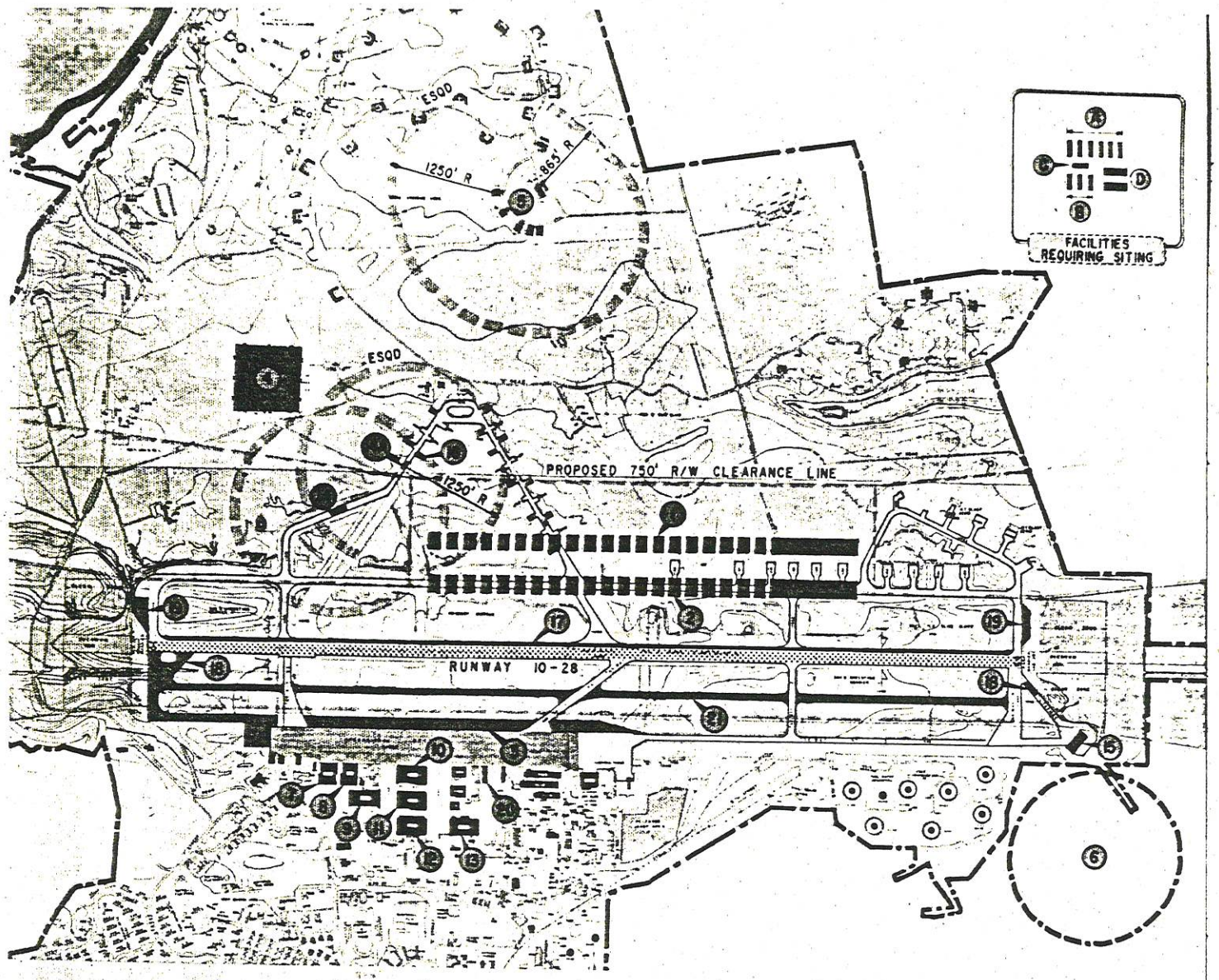
NO	FACILITY
1	REMOTE TOUCHDOWN PAD/RUNOUT STRIP
2	ALTERNATE REMOTE TOUCHDOWN PAD/RS
3	APRON WIDENING
4	1200 STORAGE AREA
5	1400 AMMUNITION AREA
6	PROPOSED CIVILIAN TERMINAL
7	HANGAR 909 - TACAIR
8	HANGAR 911 - NAF (FUTURE TACAIR)
9	HANGAR 926 - AIMD/AVIATION SUPPLY
10	HANGAR 954 - FUTURE VP SQUADRON
11	HANGAR 946 - VP SQUADRON
12	HANGAR 941 - AIMD
13	HANGAR 973 - FUTURE NAF (REQUIRES REPLACEMENT FURNITURE WAREHOUSE)
14	RED LABEL AND FUTURE RED LABEL
15	MAC TERMINAL
16	COMBAT AIRCRAFT PARKING AREA
17	RUNWAY WIDENING
18	ARMING PADS
19	DEARMING PADS
20	FIRE STATION
21	TAXIWAY NETWORK
A	BEQ
B	BOQ
C	ADMIN BLDG
D	WAREHOUSE



PROPOSED DEVELOPMENT PLAN

U. S. NAVAL AIR FACILITY
MISAWA, JAPAN

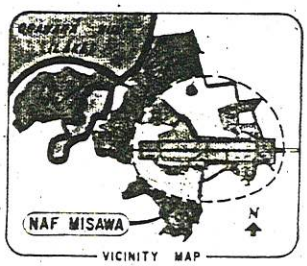
FIGURE 21



PROPOSED PROJECT LISTING

NO	FACILITY
1	REMOTE TOUCHDOWN PAD/RUNOUT STRIP
2	ALTERNATE REMOTE TOUCHDOWN PAD/RS
3	APRON WIDENING
4	1200 STORAGE AREA
5	1400 AMMUNITION AREA
6	PROPOSED CIVILIAN TERMINAL
7	HANGAR 909 - TACAIR
8	HANGAR 911 - NAF (FUTURE TACAIR)
9	HANGAR 926 - AIMD/AVIATION SUPPLY
10	HANGAR 954 - FUTURE VP SQUADRON
11	HANGAR 946 - VP SQUADRON
12	HANGAR 941 - AIMD

NO	FACILITY
13	HANGAR 973 - FUTURE NAF (REQUIRES REPLACEMENT FURNITURE WAREHOUSE)
14 15	RED LABEL AND FUTURE RED LABEL
16	MAC TERMINAL
17	COMBAT AIRCRAFT PARKING AREA
18	RUNWAY WIDENING
19	ARMING PADS
20	DEARMING PADS
21	FIRE STATION
22	TAXIWAY NETWORK
A	BEQ
B	BOQ
C	ADMIN BLDG
D	WAREHOUSE



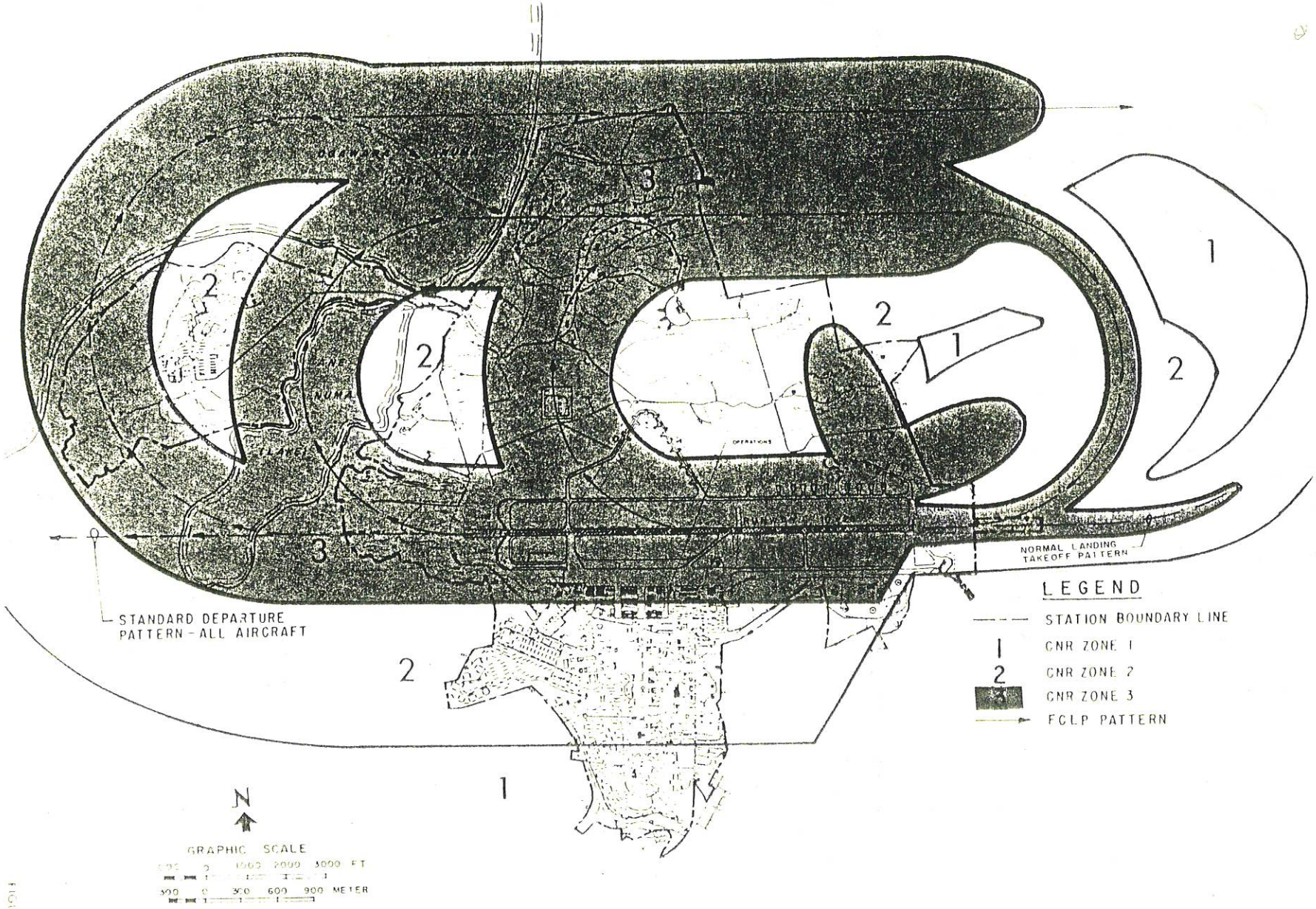
VICINITY MAP

N

1000 0 1000 FEET
300 0 300 METERS

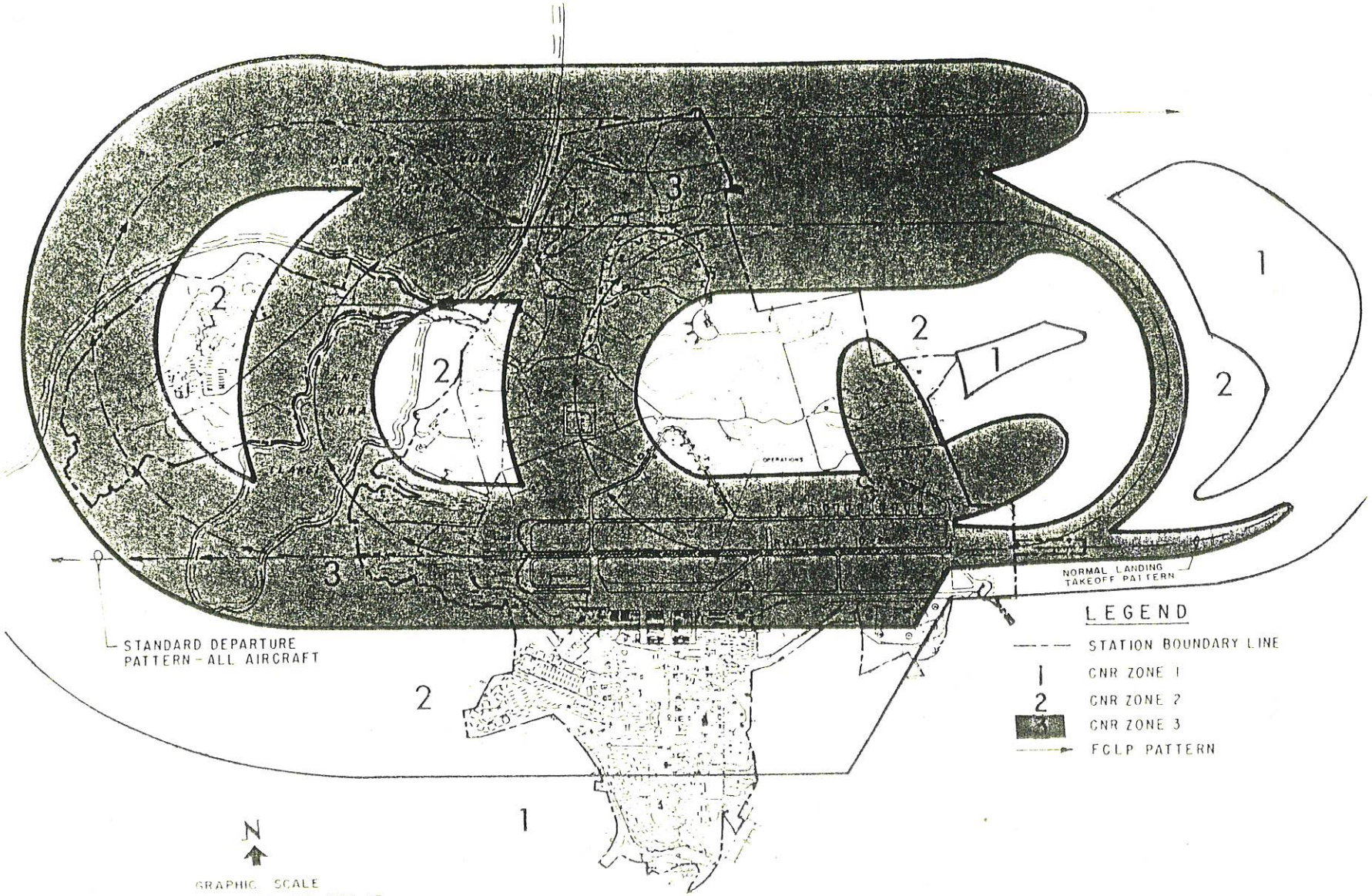
PROPOSED DEVELOPMENT PLAN
U. S. NAVAL AIR FACILITY
MISAWA, JAPAN

FIGURE 21

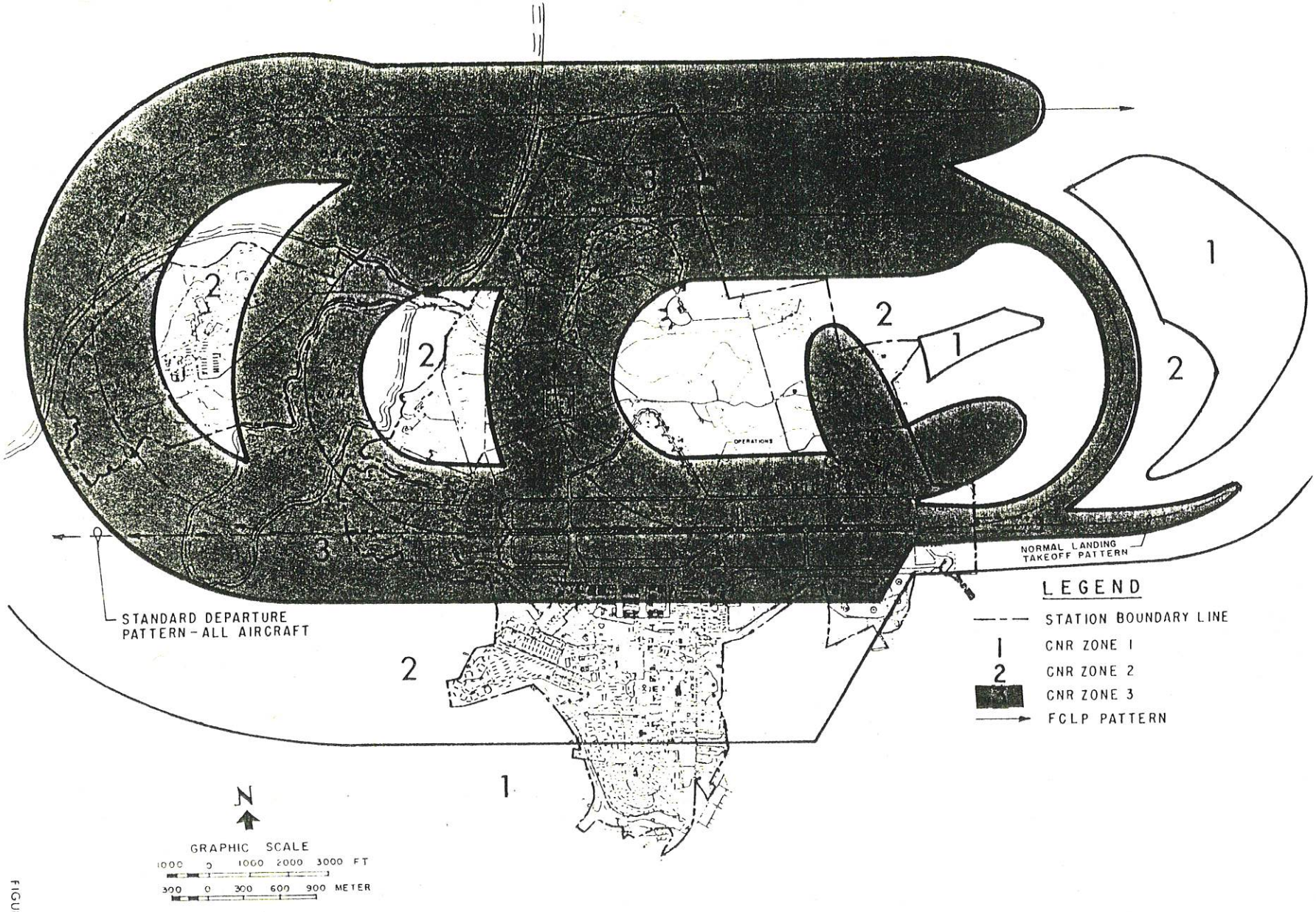


FIGURE

Reproduced by Government Express


STANDARD DEPARTURE
PATTERN - ALL AIRCRAFT
NORMAL LANDING
TAKEOFF PATTERN
LEGEND
STATION BOUNDARY LINE
CNR ZONE 1
CNR ZONE 2
CNR ZONE 3
FCLP PATTERN
N
GRAPHIC SCALE
1000 2000 3000 FT
300 600 900 METER

FIGURE



FIGURE

FIGURE

Reproduced at Government Expense

H. CAPITAL IMPROVEMENTS PLAN

This portion of the Master Plan is intended to include programming, phasing and recommended priorities for implementation of the planning proposals. In the case of NAF Misawa, the operational facilities to support the P-3 mission (primarily the aircraft rinse facility, Aircraft Maintenance Shop modernization, Engine Test Cell, AUW Shop and replacement BEQ) are, inter alia, the subjects of ongoing negotiations between the U. S. and Japanese Governments. Since all projects are in support of a single mission, no priorities among these projects can be set.

Major projects or actions necessary to support an increase in the TACAIR loading may be loosely grouped in three priority categories: those which must be implemented in the near future to assure orderly development regardless of the timing of TACAIR buildup; those which must be implemented before any actual buildup is possible; and those which can be deferred until after some of the buildup has actually been accomplished.

The primary action which must be implemented in the near term to assure orderly development regardless of the timing of future buildup is to reserve space for a remote touch-and-go pad and run-out north of the existing runway. This will assure that no structures will be built which would encroach into the airspace for this new practice pad. Actual construction of the pad would not be mandatory until after some increase in aircraft loading has taken place.

Projects which must be implemented before any actual buildup can be undertaken are:

Additional BEQs and BOQs. The assignment of TACAIR to Misawa for practice is now limited by available bachelor housing spaces. Accordingly, additional facilities are required <u>before</u> any additional TACAIR can be accommodated.

All other projects can be accomplished concurrently or subsequent to buildup in that some buildup is possible before the projects become mandatory.

I. ADDITIONAL RECOMMENDED STUDIES

The following additional studies are recommended for NAF Misawa:

a. An updated aircraft noise study based on modified air traffic patterns suggested in this Plan.

b. An update of the Misawa Air Base Master Plan incorporating data covered by this Plan for NAF Misawa and including long-range plans of the JASDF and commercial air interests.

J. SUMMARY OF RECOMMENDATIONS

This Plan recommends the following actions:

a. Approve the concept of remote touch-and-go facility north of the runway.

b. Request USAF to re-evaluate the existing noise zones based on existing air operations and to establish new noise zones based on modifications to the aircraft flight patterns which will be implemented when the remote facility is available for touch-and-go operations.

c. Advise USAF of impact from planned USN buildup on personnel support facilities and utility systems.

d. Request Department of Defense Explosives Safety Board (DDESB) approval of joint use of "1400" ammunition area for ordnance storage and maintenance.

e. Advise COMUSJAPAN of recommendations regarding operations of commercial air carriers including siting of a ramp in an off-station location south of the east end of the runway.

f. Solicit JASDF and commercial air carrier input concerning total noise, utilities and POL requirements for incorporation into follow-on U. S. plans.

g. Encourage further compatible commercial development off-base to the east of the station and compatible agricultural development (secondary usage) on base within flight clearance zones and ESQD zones.

K. ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

ENVIRONMENTAL IMPACT ASSESSMENT

FOR

MASTER PLAN

U. S. NAVAL AIR FACILITY

MISAWA, JAPAN

FINAL

JANUARY 1977

Prepared by
Pacific Division
Naval Facilities Engineering Command
in accordance with OPNAVINST 6240.3D
24 April 1975 in compliance with
Section 102(2) of the
National Environmental Policy Act of 1969

SECNAV 6240.6E
(77.08.18)

SUMMARY

1. Environmental Impact Assessment (EIA)

Prepared by: PACNAVFACENGCOM for CO NAF Misawa

PACNAVFACENGCOM Contact:

CDR W. C. Connor, CEC, USN
Head, Facilities Planning Department
(Telephone No. (808) 471-3088)

NAF Misawa Contact:

LCDR R. Cook, CEC, USN
Public Works Officer
(Telephone No. 226-3269)

2. Name of Action

NAF Misawa Master Plan

(X) Administrative ( ) Legislative

3. Description of Action

The project is a Master Plan for NAF Misawa, Japan. It is a document which provides guidelines for future land use and facilities development for the areas assigned to the USN at the base.

The major proposals of the Plan are:

a. Support joint USN/JASDF use of a single ordnance area;

Reproduced by U.S. Government Expense

b. Reserve land for a remote touch-and-go landing pad north of the runway;

c. Site any future commercial air complex off base; and

d. Construct horizontal structures to include aircraft parking apron, taxiways, runway widening, and arming and dearming pads. Construct vertical structures to include Aircraft Fire and Rescue Station, bachelor housing, general warehouses and an administration building.

4. Summary of Impacts

a. Environmental Impacts

(1) Economic. Local economic base will expand.

(2) Water. Consumption will increase.

(3) Sewer. Effluent discharge will increase.

(4) Energy. Increased consumption of electricity.

(5) Transportation. Increased use of local roads and on-base bus system.

(6) Noise. Aircraft noise levels in community support/living areas will decrease.

(7) Air. Quality decreased from aircraft and cars.

(8) Aesthetic. Minimal change. New facilities will largely be horizontal construction.

(9) Flora and Fauna. Minimal impact.

(10) Solid Waste. Increased generation on station.

(11) Construction. Temporary noise, dust, drainage and transportation impacts.

b. Adverse Environmental Impacts

(1) Transportation. Increased use of local roads and on-base bus system.

(2) Air. Quality decreased from aircraft and cars.

(3) Solid Waste. Increased generation on station.

(4) Construction. Temporary impacts.

5. Alternatives Considered

a. Recommended actions.

b. No action.

6. Recommendation

A major recommendation of this Master Plan, if implemented, will improve the human environment by reducing the impact of aircraft noise on existing builtup areas. The proposal to use existing facilities is encouraged by the Plan. This will minimize the need for new construction and reduce the impact on the environment. No controversial environmental impacts are expected from the implementation of the Master Plan.

Reproduced at Government Expense

EIA

1. Introduction

a. Project Description. The Plan for NAF Misawa addresses facility development on the area assigned to the USN at Misawa Air Base. The area comprises 1,198 acres and was conveyed by Permit to the USN from the USAF. The Permit provides use of a portion of the facilities by JASDF. This USN acreage compares with a total Misawa Air Base land area of slightly more than 3,900 acres. All services are provided to the USN through a host/tenant agreement with the USAF. Utilities are provided by the USAF on a financially reimbursable basis. The USN areas contain the following functions:

Runway, taxiway and parking aprons
Aircraft maintenance hangars
Training facilities
Supply warehouses
Administrative facilities
Ammunition storage
Liquid oxygen storage
POL storage

This Plan proposes construction within the USN area and states the need for constructing support facilities and bachelor housing in the USAF area. The Plan provides for the possible future expansion of the aircraft parking apron which will extend into USAF property. Major proposals are:

(1) Reserve the area north of the runway for aircraft fleet carrier landing practice (FCLP).

(2) Widen the existing runway from 150 feet to 200 feet.

(3) Increase the aircraft parking apron area by 6,000 square yards.

(4) Construct a 9,000-square foot Aircraft Fire and Rescue Station.

(5) Construct bachelor housing to accommodate 225 officers and 680 enlisted men.

(6) Construct 30,000 square feet of general warehouse space.

(7) Construct 8,700 square feet of administrative space.

b. Existing Site Characteristics. NAF Misawa is located on northern Honshu, the largest of the four main islands of Japan (see Figure K-1). These islands, which are of volcanic origin, are predominantly mountainous with very few level areas. Terrain in the Misawa area is a flat to rolling plain sloping eastward from the Central Mountain Range to the Pacific Ocean coastline.

The base is on a coastal plain approximately three miles inland from the Pacific Ocean coastline. Rice fields abut the base on the east and west boundaries. Misawa City is located south of the base. Lake Ogawara-numa lies to the northwest and a Game Reserve lies to the north. Lake Ane-numa, a 2,700 acre-feet body of freshwater with a watershed area of 11,000 acres, is located at the inner western base boundary. Misawa Air Base is generally flat, except for relatively steep slopes some 100 feet high along the northwestern boundary. Over 90 percent of the area has a slope of 5 percent or less.

No areas of Misawa Air Base are subject to flooding and there are no swamps. Soils are generally silty or sandy clays with some gravel. The sandy clay color varies from light orange to dark brown. Allowable soil bearing pressure for foundations is approximately 2,000 pounds per square foot.

Reproduced by Government Expense

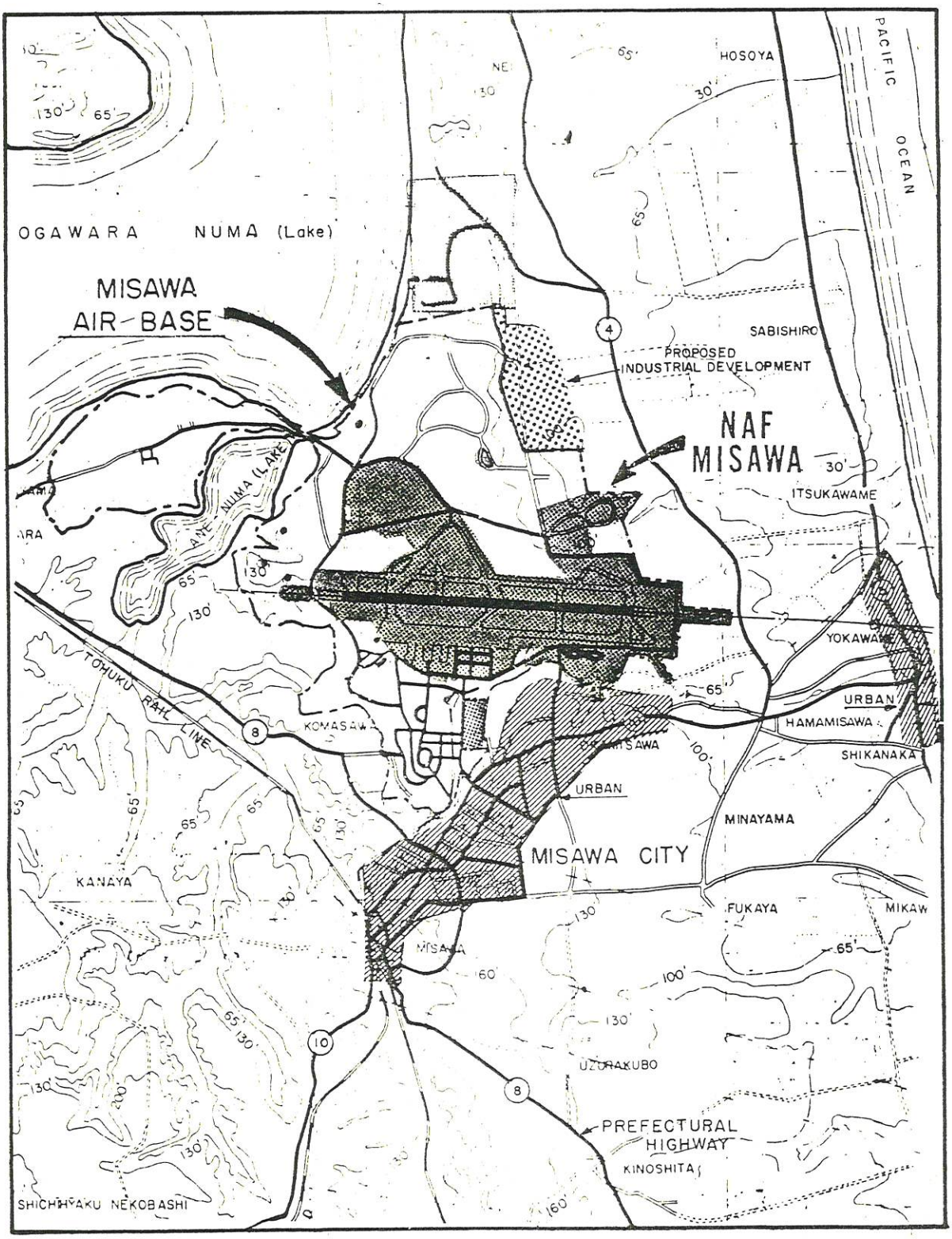

OGAWARA NUMA (Lake)
MISAWA AIR-BASE
PACIFIC OCEAN
HOSOYA
SABISHIRO
PROPOSED INDUSTRIAL DEVELOPMENT
NAF MISAWA
ITSUKAWAME
AHE NUMA (LAKE)
TOHUKU RAIL LINE
KOMASAWA
YOKAWA
URBAN
HAMAMISAWA
SHIKANAKA
MINAYAMA
MISAWA CITY
KANAYA
FUKAYA
MIKAW
UZURAKUBO
PREFECTURAL HIGHWAY
KINOSHITA
SHICHIHYAKU NEKOBASHI
GRAPHIC SCALE
1 MILE
2 KILOMETER
VICINITY MAP
NAF MISAWA
JAPAN
LOCATION MAP

FIGURE K-1

Approximately 20 to 25 percent of the base is covered by trees--mostly pine but with some broadleaf and cryptomeria. Some parts of the builtup housing areas have large trees but most of the growth of trees and other vegetation are under 10 feet tall.

The airfield was constructed in 1938 by the Japanese Imperial Army initially as a base for long-range bombers and was subsequently used for research, test and development of new aircraft designs. After World War II and up to 1971, the base was used for tactical fighter units of the USAF. The mission of the base was radically changed in July 1972 when PACAF transferred official base responsibility to the USAF Security Service. On that date, the 6920th Air Base was activated to handle support and host responsibility for the 6921st Security Wing and all other tenant units, including NAF Misawa, located at Misawa Air Base.

On 24 October 1974, a Department of the U. S. Air Force Permit was signed granting the USN use of 1,198 acres and 118 buildings containing a floor area of slightly more than 667,000 square feet. The Permit provides a number of the above buildings for JASDF.

The USN areas contain an airfield runway, taxiways, parking apron, maintenance hangars, control tower, maintenance shops, administrative spaces, Crash Fire Station, POL fuel farm, utilities and other miscellaneous facilities. The areas are generally level and are used mainly for or in support of aircraft operations.

Development along the shoreline of both lakes has been limited to only a small boat landing and a few recreational facilities at Ogawara-numa; the remaining shoreline has been left relatively undisturbed.

c. Operational Requirements

(1) Present Operations. NAF Misawa provides facilities, services and material to support operations of aviation units of the operating forces of the USN and other units as designated by CNO.

(2) Projected Operational Changes. The Master Plan reserves space for additional aircraft parking areas to support an additional one-half carrier air wing.

d. Other Naval/Federal Installations in the Area. The USAF Security Service has official responsibility for Misawa Air Base. Major tenants include USN and Army Security Units and a USMC support unit. Other major military installations are located a little over 400 miles southwest of the base on the main island of Honshu.

2. Relationship of the Plan to Land Use Plans, Policies and Controls

a. Federal. A USAF Master Plan for Misawa Air Base was prepared in May 1974. The proposals of this Plan impact on the Master Plan in two major areas: increased USN personnel loading and recommended aircraft flight pattern revisions to make available additional real estate for community support facility development.

b. Local. The extent to which land use policies have been established at the local level in Japan is not known. Current plans for development of GOJ real estate around the base, however, appear to be compatible with base functions. For example, the lands located north and northeast of the base boundary, which are covered by CNR Zones 3 and 2, are planned by GOJ for open recreation and private industrial development.

All USN development proposed by this Plan will be in substantial compliance with the applicable GOJ standards.

c. Clean Air Acts and Federal Water Pollution Control Act Amendments of 1972. These Acts have been taken into consideration in the development of this Plan. The proposals of this Master Plan are compatible with these laws and regulations.

Reproduced at Government Expense

3. Probable Impacts of the Plan on the Environment

a. National and International Environment. The Plan will have no impact on the national nor international environment. All impacts are limited to the vicinity of the base.

b. Primary Impacts

(1) Economic. The economic base of Misawa City will expand with the increased USN personnel loading. Local shops and businesses catering to the U. S. forces personnel are likely to expand or increase in numbers.

(2) Water. The USAF provides water on base and is presently examining its system to improve the quality of water. Storm runoff from the additional runway, taxiway and parking apron pavements should have minimal impact on water quality.

Wastewater from the cleaning operations at the new aircraft washrack and rinse rack will flow into oil separators and subsequently drain into drainageways as at present.

(3) Sewer. The USAF presently operates the base sewage collection system and primary treatment plants. A central treatment plant project has been recently funded by the USAF and will eliminate effluent discharge into the lake. This new facility should be able to accommodate the increase in USN personnel loading.

(4) Energy Consumption Rate. Although there will be increased energy consumption after additional facilities are constructed, the impact of the proposed facilities will be minimal compared with that of the base as a whole. Steam and electricity are provided by the USAF and are available in adequate quantities.

(5) Transportation. On-base transportation will be affected. It is believed, however, the existing bus system is adequate to handle the additional personnel loading.

(6) Noise. The existing aircraft noise zones cover a major portion of the base. This Plan recommends revising the aircraft flight pattern to reduce the aircraft noise encumbrance.

(7) Health. The revised aircraft flight patterns recommended by this Plan will reduce the noise problem presently being experienced in some housing and community support areas.

(8) Air Quality. Air pollution will increase with the introduction of additional jet aircraft. The pollution is likely to be only temporary because of the trade winds which constantly blow across the coastal plain.

(9) Aesthetic. Impact will be minimal when compared to existing base development. Further, new facilities will be largely horizontal construction which has little aesthetic impact.

(10) Geology. No impact.

(11) Floodplain/Hydrology. The base is on a plateau. No flooding is anticipated.

(12) Wildlife and Plant Life. The areas planned for development by this Plan are located within or along the periphery of substantially builtup areas. Construction of the aircraft parking apron, washrack and rinse rack will require the conversion of approximately 10 acres of open and level grassland to concrete pavement. There are no known endangered or threatened species of wildlife or plant life in these areas. Impact is considered minimal.

Reproduced at Government Expense

(13) Solid Waste. Solid waste is currently removed by commercial firms under a contract administered by the USAF. The increase in such wastes will have a small impact as it will be only a small fraction of the total solid waste generated on the base.

(14) Construction. Impacts during the construction time frame will be temporary.

(15) Historic or Archeological Sites. There are no known historic or archeological sites within the USN designated areas; however, prior to removal or destruction of any major facility or major alteration to any area, it should be determined if such action will affect any historic or archeological sites.

c. Secondary Impacts

(1) Demand for local community services will increase as a result of the increased base loading.

(2) Increased use of the lake shoreline areas for recreation will occur. Compliance with environmental standards will insure that these areas will not be damaged.

(3) Increased air pollution from increasing the capacity of the sewage treatment plant.

4. Alternatives to the Plan

a. Recommended Actions. Implementation of the recommendations contained in this Plan offers the advantage of minimizing the environmental impact on and around the base, especially the recommendation to construct a remote touch-and-go pad for FCLP which will create safer flight operations and reduce the noise impact over the entire area.

Reproduced at Government Expense

Because most facilities are existing and in use, it must be inferred that any significant environmental degradation has largely taken place, and that nature is in the process of adapting to the impact and repairing any damage.

b. No Action. Not permitting planned development would force continuation of makeshift operations at NAF Misawa and would severely hinder the activity in the performance of its assigned mission. A hazard to aircraft flight safety would continue to exist. The adverse impact of excessive aircraft noise on large developed areas and areas suitable for development will remain.

5. Any Probable Adverse Environmental Effects Which Cannot be Avoided Should the Plan be Implemented

Aircraft noise will continue to adversely affect a large portion of the base. Implementation of this Plan, however, will reduce the impact considerably. Normal temporary adverse environmental effects due to construction, such as noise, dust, drainage and erosion, are anticipated.

6. Relationship between Local Short-Term Use of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

Short-term adverse impacts on the base are involved as a result of the construction of new facilities and the improvement of existing operational procedures. The implementation of this Plan will improve the working and living environment at the base.

7. Any Irreversible and Irretrievable Commitments of Resources That Would be Involved If the Proposed Action Would be Implemented

The only irreversible and irretrievable commitments of resources would involve those materials used in the construction of new facilities and the land that the facilities will occupy.

Reproduced at Government Expense

8. Considerations That Offset the Adverse Environmental Effects

The Plan recognizes the inherent dangers of concurrently conducting FCLP and normal air operations on the same runway and recommends the long-range conversion of a remote touch-and-go pad for FCLP. This will eliminate the flight hazard and will substantially reduce the area affected by aircraft noise. The reduced noise impact will make available large areas of real estate for community support/housing facility development.

Reproduced at Government Expense

APPENDIX "A"

NF(R)-22477

DEPARTMENT OF THE AIR FORCE
PERMIT TO ANOTHER FEDERAL GOVERNMENT
DEPARTMENT OR AGENCY TO USE PROPERTY
ON MISAWA AIR BASE JAPAN

The Department of the Navy, is hereby granted a permit for a term of 5 years, beginning the 5th day of July 1972 and ending the 30th day of June 1977, but revocable at will by the Secretary of the Air Force, (interpreted to mean that Secretary of Navy/appropriate Navy Command coordination will be obtained consistent with the intent of Air Force Regulation 87-3) to occupy and use a portion of Misawa Air Base Japan(FAC 2001) and Misawa Tacan Annex Japan (FAC 2060), substantially as shown on Exhibits "A", "B", "C" attached hereto and made a part hereof and further described as follows:

a. Total of 118 buildings having approximately 668,000 square feet of floor space.

b. Land area consisting of approximately 1,198 acres.

c. Total of 127 other miscellaneous facilities.

d. Common use of base support facilities.

This permit is granted subject to the following provisions and conditions

1. The use and occupation of the said premises shall be without cost or expense to the Department of the Air Force except as defined in the ISSA.

2. The term "permittee" as used herein refers to the United States Navy as the principal agent and the Japan Air Self Defense Force as the Tenant user of a portion of the real property facilities herein outgranted to the United States Navy.

3. The term "real property" herein refers to the land, buildings, structures improvements and appurtenances, that are permanently attached to, integrated into, build into, or under control of the Department of the Air Force. Excluded are those facilities comprising the primary utility, communication systems, common transportation system (as defined in attached maps), of FAC 2060 and FAC 2001.

4. Responsibility for the security, maintenance, and upkeep of the facilities herein outgranted to be used shall be in accordance with Inter-service Support Agreement based upon policies as set forth in appropriate Department of Defense and Joint Service Directives.

5. In accordance with paragraph 7a(5) of Air Force Regulation 172-3/ SECNAVINST 7020.4B, all permanent improvements made by the Navy such as construction of new structures, or additions to existing structures, shall be made available for exclusive Navy use for the duration of the Navy's requirement. Ownership and use rights for facilities constructed by the Permittee shall be in accordance with applicable regulations on such matters. The permittee shall maintain a complete record of U. S. Dollars expenditures for any alteration or modification work accomplished by the permittee in connection with occupancy and use of existing real property referred to herein and will not construct on, demolish or otherwise remove or dispose of said property without prior coordination and concurrence of the Department of the Air Force local representative having real property accountability of the property concerned.

NFR-22477

6. During contingency operations, facilities will be provided for forces listed in approved CINCPAC/JCS contingency plans.

7. The Department of the Air Force will retain exclusive control of Building 911 until such time as USAF requirements no longer exist. With regard to facility 918, the USAF will retain exclusive control of the facility with the exception of Rooms 101, 102, 103, of the building which will be for transient alert operations only. Sufficient ramp space will be made available for MAC and MAC charter flight normally in the immediate area of the terminal consistent with operational priorities of both permittor and permittee.

8. The Department of the Air Force will retain control of a private association known as the "Misawa Duster Club" presently located within the permittee area, utilizing facilities 1205, 1207, 1209, and 1215 as shown on exhibit "B" until such time as the Air Force requirement no longer exists. A 90-day notice will be given to occupant.

9. An explosive ordnance easement prohibiting the building of continually inhabited structure will be in effect in an area bounded on the south by the north taxiway, on the north by the joint transmitter, on the west by facility 1235, on the east by the eastern property boundary.

10. Existing or pending easements, which pertain to that portion of Misawa AB (FAC 2001 and FAC 2060) herein outgranted that are before the Joint Committee, will remain in effect and will not be cancelled or withdrawn by the service holding real estate accountability without prior coordination with the permittee. Additionally, the Air Force will consult with the Navy

on any future matters affecting the outgranted property which come before the Joint Committee as early as practicable. Buildings excess to Air Force needs will be offered to the U. S. Tenants prior to any loan to the JASDF units assigned to Misawa AB. Permanent transfer to GOJ will be in accordance with SOFA provisions.

11. The roads defined in Exhibit "B" and as identified thereon are outgranted to the permittee for their exclusive use.

12. That the United States Navy will enter into a joint use agreement with the Japan Air Self Defense Force to outline the responsibilities for the horizontal facilities outgranted herein. Any changes to JASDF exclusive use of outgranted facilities will require modification of this document.

13. This permit may be amended for minor modification and/or adjustment by mutual agreement of the local USAF/NAVY Commanders concerned.

14. The 6920 ABG will make periodic and annual inspections of outgranted facilities and take appropriate actions in accordance with AFR 87-3(C2), paragraph 11, prior coordination will be accomplished with permittee to ensure minimum interference with permittee's mission.

15. Upon termination of this permit, the permittee will return all outgranted facilities, areas, and systems to the permittor in the original or improved condition, fair wear and tear considered.

NFR-22477

IN WITNESS WHEREOF I have hereunto set my hand by authority of the Commander USAFSS this 24th day of October 1974.

6920th Air Base Group Commander

The above instrument, together with the conditions thereof, is hereby accepted this 24th day of October 1974.

by: [illegible]

Officer-in-Charge, [illegible]
Misawa, Japan (Title)

By Direction of the Commander, Naval Facilities Engineering Command and Acting under Direction of the Secretary of Navy, the above instrument, together with conditions thereof, is hereby executed this 5th day of March, 1975.

by: Carl Cartwright

OFFICER IN CHARGE OF CONSTRUCTION,
FAR EAST (Title)

NFR-22477

MISAWA AIR BASE

Total Buildings - 115

Total Floor Space - 665,141

Total Facilities - 122

Total Land - 1191AC

MISAWA TACAN ANNEX

Total Buildings - 3

Total Floor Space - 2,493 SF

Total Facilities - 5

Total Land - 7 AC

NFR-22477

EXHIBIT A

LG _____

CFMP _____

NAVY OUTGRANTED FACILITIES

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
00432	ELEC PWR STN BLDG ELEC E/PWR GEN PLT	299 SF	60 KW	
00442	ELEC PWR STN BLDG ELEC E/PWR GEN PLT	299 SF	60 KW	
00472	ELEC PWR STN BLDG ELEC E/PWR GEN PLT	299 SF	60 KW	
00496	PETROLEUM BLDG	671 SF		
00531	BEQ	5,500 SF	35 MN	
00532	BEQ	5,600 SF	35 MN	
00533	BEQ	5,500 SF	35 MN	
00535	BEQ	5,600 SF	35 MN	
00537	BEQ	5,600 SF	35 MN	
00753	GX GEN PLT	2,041 SF		
00756	WHSE SUP&EQUIP BSE	4,043 SF		
00757	WHSE SUP&EQUIP BSE	4,043 SF		
00758	WHSE SUP&EQUIP BSE	4,043 SF		
00759	WHSE SUP&EQUIP BSE	4,043 SF		
00900	ELEC PWR STN BLDG	180 SF		
*00901	SHP, COMM & ELCT A/C PLT OVER 25 TN	17,853 SF	1 EA 58 TN	JASDF-12,353 SF
*00902	SHLTR A/W CALBR	4,917 SF	1 EA	JASDF-4,917 SF
*00903	SHLTR A/W CALBR	4,917 SF	1 EA	JASDF-4,917 SF
00905	AUTO MAINT SHP	4,917 SF		
*00906	ADMIN OFFICE	4,874 SF		JASDF-4,055 SF
00909	HG MAINT	45,726 SF		

NF(R-224

EXHIBIT A

LG
CF&P

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
00912	ELEC SWITCH STN FOR HANGERS AND ETC	892 SF	1 EA	
00915	STOR, RKT CHK ASMB	1,320 SF		
00916	HAZ STOR BSE	432 SF		
*00922	SHP PRCHT DINGY	5,112 SF		JASDF-3,942 SF
00923	SHP AVIONICS A/C PLT 5 TO 25 TN	2,292 SF	1 EA 19 TN	
00926	SHP, WPN & RLSE SYS CMPRS AIR PLT	62,252 SF	19 HP	
*00930	SHP, PAINT	1,008 SF		JASDF-1,008 SF
*00931	VEH FL STN	119 SF	3 OL	JASDF-119 SF
*00932	SHED SUP&EQUIP BSE	204 SF		JASDF-204 SF
*00933	SHP AGE CMPRS AIR PLT	12,063 SF	8 HP	JASDF-12,063 SF
00936	ELEC SWITCH STN (FOR 941)	245 SF		
00937	SHP AGE	836 SF		
00938	HAZARD STOR, BSE	169 SF		
00941	HQ MAINT CMPRS AIR PLT	73,863 SF	40 HP	
00946	HQ MAINT	66,384 SF		
*00950	SHP AGE	368 SF		JASDF-368 SF
*00952	ELEC SWITCH STA (FOR BLDG 954)	192 SF	1 EA	JASDF-192 SF
*00954	HQ MAINT	57,270 SF		JASDF-51,959 SF
*00958	FR STN	10,507	8 ST	JASDF-8,589 SF
*00959	ADMIN OFFICE	1,000 SF		JASDF-1,000 SF

EXHIBIT A

2

NFR-22477

LG
CFWP

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
00960	ELEC PWR STN BLDG	35 SF		
00961	SQ OPS	12,480 SF		
*00994	RDR MET SET CBAND	96 SF		
*00995	ELEC PWR STN BLDG	360 SF		JASDF-360 SF
*00998	OPS BSE	8,257 SF		JASDF-7,295 SF
01002	BEQ	5,500 SF	36 MN	
*01060	HG MAINT	38,059 SF		JASDF-37,536 SF
*01075	STOR SEG MAG	78 SF		JASDF-78 SF
*01076	HAZARD STOR BSE	261 SF		JASDF-261 SF
*01077	SPECIALIZED TNG	2,320 SF		JASDF-2,311 SF
01101	BEQ	5,600 SF	34 MN	
01103	BEQ	5,600 SF	34 MN	
01104	BEQ	5,600 SF	34 MN	
01105	BEQ	5,600 SF	34 MN	
UNN	BEQ	55,208 SF	348 MN	AF-1-1R DORM
01106	ADMIN OFFICE (Non USAF)	2,632 SF		
*01115	ELEC SWITCH STA ELEC E/PWR GEN PLT	2,384 SF	16 EA 150 KW	JASDF-2,384 SF
*01119	AFCS MAINT FCLTY A/C PLT 5 TO 25 TN	6,831 SF	 24 TN	
*01121	ELEC PWR STN BLDG ELEC E/PWR GEN PLT	1,069 SF	 180 KW	JASDF-1,066 SF
*01122	TWR CON A/C PLT 5 TO 25 TN	780 SF	1 EA 7 TN	JASDF-755 SF
*01125	COR CON UTIL STOR	240 SF		
01130	SHP REFL VEH	5,274 SF		
*01148	PETROL OPS BLDG	2,394 SF		
01166	PMP STN LF	204 SF		

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
01167	BE STOR SHED	281 SF		
01168	PMP STN LF	800 SF		
01172	PETROL OPS BLDG	272 SF		
01185	PMP STN LF	428 SF		
01186	ELEC SWITCH STA	256 SF	8 EA	
01200	SHP AMMO MAINT	960 SF		

Reproduced at Government Expense

EXHIBIT A

LG

CFWP

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
01201	ELEC PWR STN BLDG	126 SF		
*01203	ELEC PWR STN BLDG ELEC E/PWR GEN PLT	266 SF	60 KW	JASDF-266 SF
01210	STOR MU-CUB MAG	251 SF		
01212	STOR IGLOO	944 SF	1 EA	
01213	STOR IGLOO	994 SF	1 EA	
01214	STOR IGLOO	994 SF	1 EA	
01216	SHED SUP&EQUIP BSE	2,100 SF		
01217	STOR MU-CUB MAG	251 SF		
01218	SHED SUP&EQUIP BSE	994 SF		
01219	SHED SUP&EQUIP BSE	994 SF		
01220	SUP ISSUE SHP	994 SF		
01221	READINESS CRW	3,594 SF	35 MN	
01222	SHP AMMO MAINT	1,986 SF		
01223	SAN LATRINE	608 SF		
01224	HTG FCLTY BLDG HTG PLT 750/3500 MB	330 SF	817-MB	
01228	ELEC PWR STN BLDG ELEC E/PWR GEN PLT	480 SF	75 KW	
01232	SHP AMMO MAINT	960 SF		
01233	STOR IGLOO	2,391 SF	1 EA	

Reproduced at Government Expense

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
01234	SP ENTRY CON BLDG	252 SF		
*01270	TST STD		1 EA	JASDF-1 EA
01274	CAMP CIVILIAN	240 SF	10 MN	
*01275	HQ ALERT ELEC E/PWR GEN PLT CMPRS AIR PLT	23,235 SF	 150 KW 8 HP	JASDF-23,235 SF
*01276	ADMIN OFFICE	960 SF		JASDF-960 SF
*01278	SHED SUP&EQUIP BSE	120 SF		JASDF-120 SF
*01280	TST STD		2 EA	JASDF-2 EA
01284	ELEC PWR STN BLDG (ILS) ELEC E/PWR GEN PLT	294 SF	 10 KW	
01285	CLUB AERO	2,500 SF		
01286	TERM, AIR FRT	4,800 SF		
01287	TERM, AIR PAX	3,198 SF		
01288	AER DELIV FAC	2,695 SF		
*01290	WTR PMP STN	90 SF		JASDF-90 SF
*01301	ELEC PWR STN BLDG ELEC E/PWR GEN PLT	105 SF	 10 KW	JASDF-105 SF
01310	ELEC PWR STN BLDG (ILS) ELEC E/PWR GEN PLT	295 SF	 10 KW	
*01381	DIR FINDING UHF ELEC E/PWR GEN PLT	432 SF	1 EA 15 KW	JASDF-431 SF
*01383	COMM RCVR ELEC E/PWR GEN PLT	1,144 SF	 15 KW	JASDF-1,141 SF
*01480	COMM TMTR ELEC E/PWR GEN PLT	1,144 SF	 30 KW	JASDF-1,141 SF
01700	STOR SEG MAG	960 SF		
01702	STOR SEG MAG	960 SF		
01704	STOR MAG AG A,B&C	960 SF		

EXHIBIT A

LG

CF&P

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
01706	STOR MAG AG A,B&C	960 SF		
01730	STOR MAG AG A,B&C	960 SF		
01732	STOR MAG AG A,B&C	960 SF		
01734	STOR MAG AG A,B&C	960 SF		
11000	RUNWAY	166,667 SY		
11010	OVERRUN PAVED	16,285 SY		
11011	OVERRUN PAVED	27,778 SY		
11020	TAXIWAY	22,870 SY		
11031	TAXIWAY	24,140 SY		
11040	TAXIWAY	87,983 SY		
11041	TAXIWAY	23,237 SY		
11042	TAXIWAY	6,617 SY		
11044	TAXIWAY	7,476 SY		
11045	TAXIWAY	12,412 SY		
11046	TAXIWAY	43,004 SY		
11047	TAXIWAY	9,670 SY		
11048	TAXIWAY	12,756 SY		
11049	TAXIWAY	32,205 SY		
11052	TAXIWAY	21,654 SY		
11053	TAXIWAY	333 SY		
11061	APRON	18,737 SY		
11062	APRON	5,267 (North of road leading to Bldg 961)		
11066	APRON	16,214 SY		
11070	APRON	34,949 SY		

EXHIBIT A

NFR-22477

LG ____
CFWP ____

Reproduced at Government Expense

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
11080	APRON	169,376 SY		
11110	SHLDR, PAVED	121,080 SY		
11111	SHLDR, PAVED	175,808 SY		
11112	SHLDR, PAVED	51,783 SY		
11120	SHLDR, PAVED	278 SY		
11130	PAD CALIBRATION	1,383 SY		
11131	PAD CALIBRATION	555 SY		
11146	APRON	11,000 SY		
11147	APRON	10,600 SY		
11150	APRON	2,429 SY		
11151	APRON	2,429 SY		
11152	APRON	2,429 SY		
11153	APRON	2,429 SY		
11154	APRON	2,429 SY		
11155	APRON	2,429 SY		
11156	APRON	2,429 SY		
11157	APRON	2,429 SY		
11158	APRON	2,429 SY		
11159	APRON	444 SY		
11216	APRON	2,429 SY		
11217	APRON	667 SY		
11218	APRON	444 SY		
11219	APRON	444 SY		
11220	APRON	667 SY		
11221	APRON	667 SY		

NFW-22477 EXHIBIT A
LG
CFR

Reproduced at Government Expense

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
11222	APRON	444 SY		
11223	APRON	444 SY		
11224	APRON	667 SY		
11225	APRON	667 SY		
11226	APRON	444 SY		
11227	APRON	444 SY		
11228	APRON	667 SY		
11229	APRON	444 SY		
11230	APRON	667 SY		
11231	APRON	667 SY		
11232	APRON	444 SY		
11233	APRON	444 SY		
11234	APRON	667 SY		
11235	APRON	667 SY		
11236	APRON	444 SY		
11237	APRON	667 SY		
11238	APRON	444 SY		
11239	APRON	444 SY		
11240	APRON	667 SY		
11250	PAD POWER CHK	1,056 SY		
11251	PAD POWER CHK	2,167 SY		
11260	PAD WRMUP BLDG	13,112 SY		
11261	PAD WRMUP BLDG	5,596 SY		
11262	PAD WRMUP BLDG	18,451 SY		

EXHIBIT A

LG

CFWP

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
11263	PAD WRMUP BLDG	18,083 SY		
11265	PAD EQUIP	25 SY	1 EA	
11271	COR CON ACFT	2,739 SY	1 EA	
11280	ACFT AREST SYS		1 EA	
11281	ACFT AREST SYS		1 EA	
11282	ACFT AREST SYS		1 EA	
11283	ACFT AREST SYS		1 EA	
*11291	DEFLECTOR BLAST		1 EA	JASDF-1 EA
12500	PIPELINE LF		81,374 LF	
*12510	LF FIL STD TRK		6 OL	JASDF-3 OL
12511	LF FIL STD TRK		6 OL	
12512	LF FIL STD TRK		6 OL	
12514	LF FIL STD TRK		2 OL	
12515	LF FIL STD TRK		3 OL	
13410	SP STRU (ILS)		1 EA	
13411	SPT STRU (ILS)		1 EA	
13412	SPT STRUCTURE		1 EA	
13413	ILS, GLIDE SLOPE	308 SF	1 EA	
13420	WIND DIR INDCTR		2 EA	
13600	LIGHT BEACON		1 EA	
13610	LIGHT APPROACH		6,230 LF	
13620	LIGHT OBST		53 EA	
13630	LIGHT RNWY		10,000 LF	

EXHIBIT A

LG
CFWP

MFR-22477

Reproduced at Government Expense

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
13640	LIGHT AFLD SP		502 EA	
13650	LIGHT TWY		55,598 LF	
41100	STOR AVGAS		5,000 BL	
41101	STOR JET FL		5,000 BL	
41102	STOR JET FL		5,000 BL	
41103	STOR JET FL		5,000 BL	
41111	STOR DIESEL		10,000 BL	
41112	STOR DIESEL		10,000 BL	
41120	STOR JET FL		10,000 BL	
41122	STOR JET FL		10,000 BL	
41123	STOR JET FL		10,000 BL	
41124	STOR JET FL		10,000 BL	
*41125	STOR JET FL		20,000 BL	JASDF-20,000 BL
41126	STOR JET FL		20,000 BL	
41127	STOR JET FL		20,000 BL	
41128	STOR JET FL		20,000 BL	
41129	STOR AVGAS		5,000 BL	
41142	STOR MOGAS		10,000 BL	
41143	STOR JET FL		20,000 BL	
45207	OPEN STOR BSE	2,644 SY		
45225	VEH PKNG REFL	8,080 SY		
81251	EXTERIOR AREA LTG		146 EA	
81290	TRAFFIC LIGHTS		4 EA	
*83127	SEWAGE SEPTIC TANK		2 KG	JASDF-1,700 GAL

11

EXHIBIT A

LG

CFWP

NFR-22477

Reproduced at the Government Expense

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
*83128	SEWAGE SEPTIC TANK		1 KG	JASDF-500 GAL
*83129	SEWAGE SEPTIC TANK		2 KG	JASDF-1,600 G
*83155	SEWAGE SEPTIC TANK		98 KG	JASDF-900 GAL
*83156	SEWAGE SEPTIC TANK		113 KG	JASDF-600 GAL
83161	SEWAGE SEPTIC TANK		1 KG	POL
92301	FGN LAND ACMT BSE	1,191 AC		

* - Facilities allocated for Japan Air Self Defense Force sole or joint use by Joint Committee Agreement in MEMOS Nos. 797 and 821.

MISAWA TACAN ANNEX

FAC NO.	NOMENCLATURE	TOTAL AREA	OTHER AMOUNT	REMARKS
00001	RAD BEACON FCLTY	1,639 SF	1 EA	
00002	TACAN STN FIX ELEC PWR GEN PLT A/C PLT 5 TO 25 TN	677 SF	1 EA 60 KW 5 TN	
00003	TRAFFIC CHK HSE	177 SF		
13400	TWR NAVAIR		1 EA	
81255	EXTERIOR AREA LTG		7 EA	
87200	FENCE BOUNDARY		1,984 FT	
89040	UTIL LNE DUCTS		260 FT	
92300	FGN LAND AGMT BSE	7 AC		

EXHIBIT A

LG
CEMP

COMMANDER NAVAL AIR FORCE
UNITED STATES PACIFIC FLEET
NAVAL AIR STATION, NORTH ISLAND
SAN DIEGO, CALIFORNIA 92135

IN REPLY REFER TO:
4101
Ser 534/ 583
20 SEP 1975

From: Commander Naval Air Force, U.S. Pacific Fleet
To: Commander, Pacific Division, Naval Facilities Engineering Command

Subj: Noise Study for NAS Cubi Point

Ref: (a) PACNAVFACENGCOM ltr ser 5009 of 11 July 1975

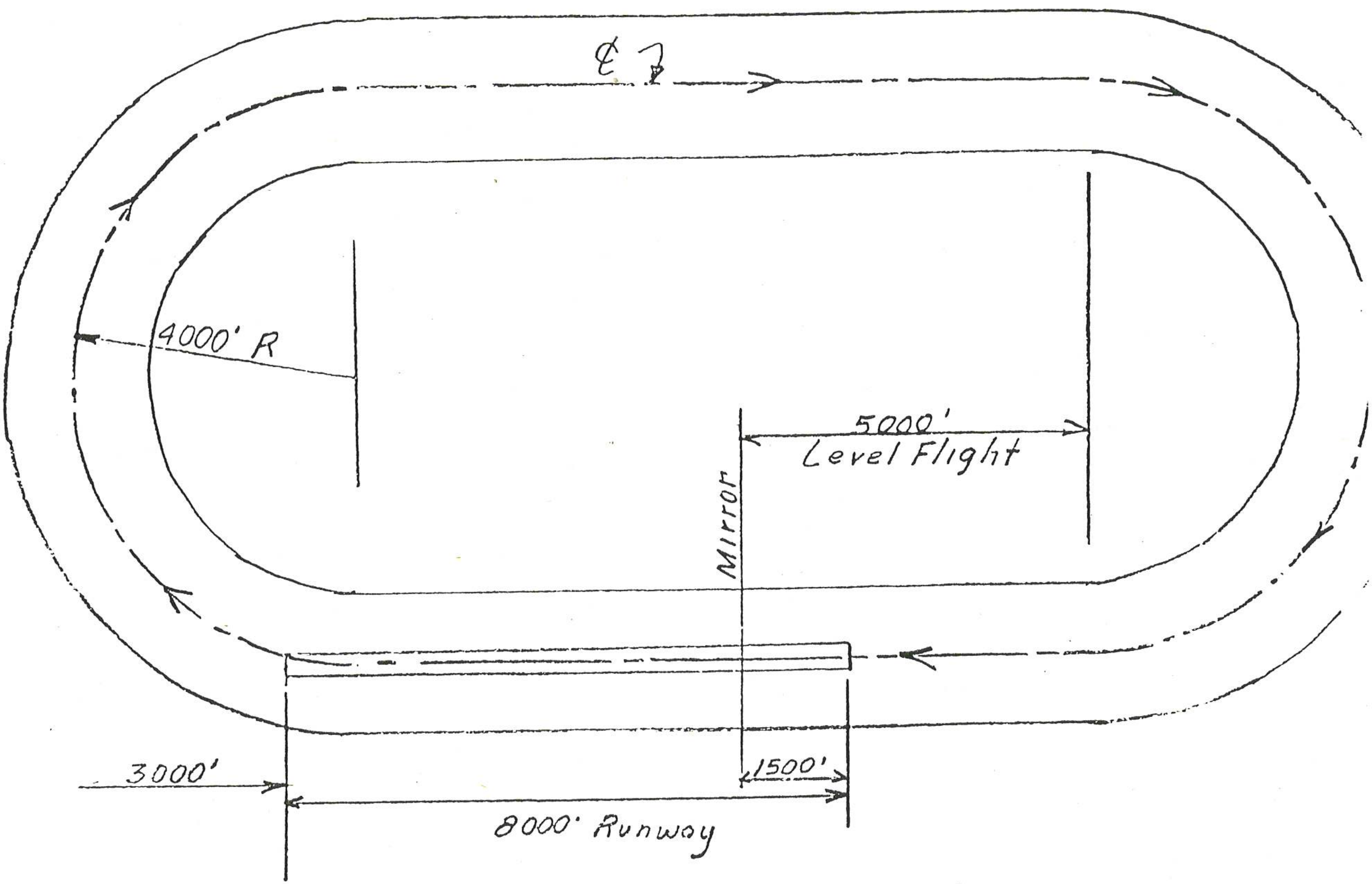
Encl: (1) Cubi Point FCLP Pattern
(2) Standard FCLP Pattern
(3) P-3 Touch & Go Pattern

1. Reference (a) requested assistance in determining the Fleet Carrier Landing Practice (FCLP) flight pattern presently in effect on Runway 25 at NAS Cubi Point. Separate correspondence with NAS Cubi Point has confirmed that the FCLP pattern shown on enclosure (1) should be used for determining aircraft generated noise zones. The Fresnel lens is now located at the mid point of Runway 25 and cannot be moved further west.

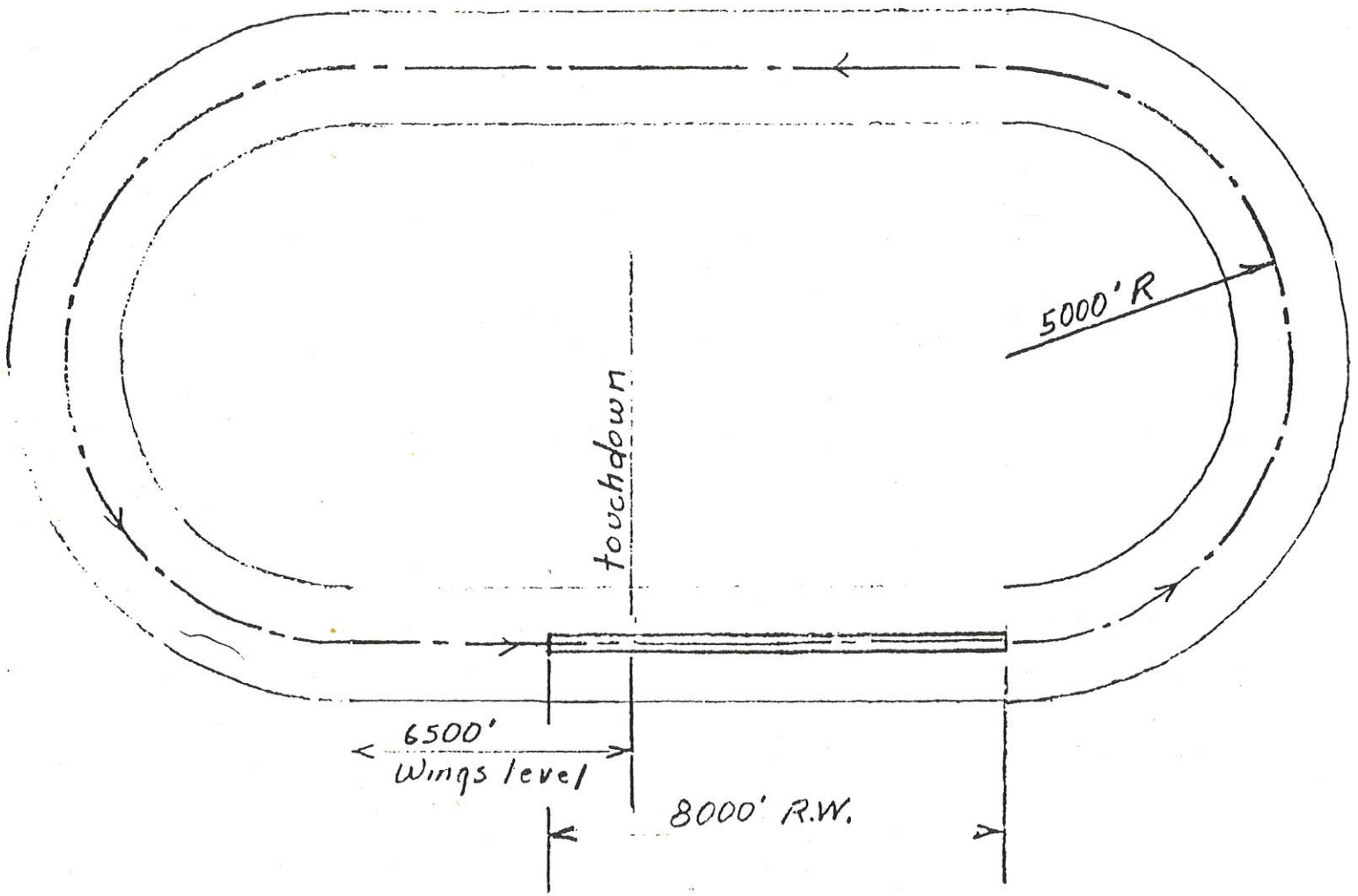
2. Enclosure (2) is provided as a standard FCLP pattern template for use in future noise studies. Enclosure (3) is the standard touch and go pattern for P-3 aircraft and is provided for planning purposes.

C. J. MATHEWS
By direction

Copy to:
AESO (Code 66)



STANDARD FCLP (4 PLANE)



TOUCH & GO P-3

B-111

(3) 12417

U. S. NAVAL AIR FACILITY

MISAWA — JAPAN

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C. 20350

IN REPLY REFER TO

Ser: 04E/401
11 July 1977

From: Chief of Naval Operations
To: Commander, Naval Facilities Engineering Command

Subj: Master Plan for U.S. Naval Air Facility, Misawa, Japan; request for approval of

Ref: (a) NAVFAC ltr 2022A/TE of 11 Apr 77
(b) OPNAVINST 11010.1G of 18 May 76

1. The Master Plan for NAF Misawa, Japan, submitted by reference (a), is approved in accordance with reference (b).

2. The Plan is to be used as the official planning document for the future development of the activity involved. Any significant changes in land use should be submitted to the Chief of Naval Operations for approval; minor changes are to be approved by COMNAVFACENGCOM, as necessary.

D. P. Johnson
By direction

Copy to:
PACNAVFACENGCOM