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From: Commander, Pacific Division, Naval Facilities Engineering Command  
Subj: FINAL MASTER PLAN FOR COMMANDER FLEET ACTIVITIES OKINAWA/U.S. NAVAL AIR FACILITY, KADENA (COMFLEACT OKINAWA/NAF KADENA), OKINAWA, JAPAN  
Ref: (a) NAVFACENGCOMINST 11010.63B  
(b) CNO ltr 11010 Ser 441D/6U392027 of 25 Feb 86

Encl: (1) Subject Master Plan

1. The final master plan for Commander Fleet Activities Okinawa/U.S. Naval Air Facility, Kadena, Okinawa, Japan, completed in accordance with reference (a) and approved by reference (b), is forwarded as enclosure (1).
2. This submittal completes action on the subject plan until subsequent update is required.

J. R. FAUNCE  
Head, Facilities Planning Department

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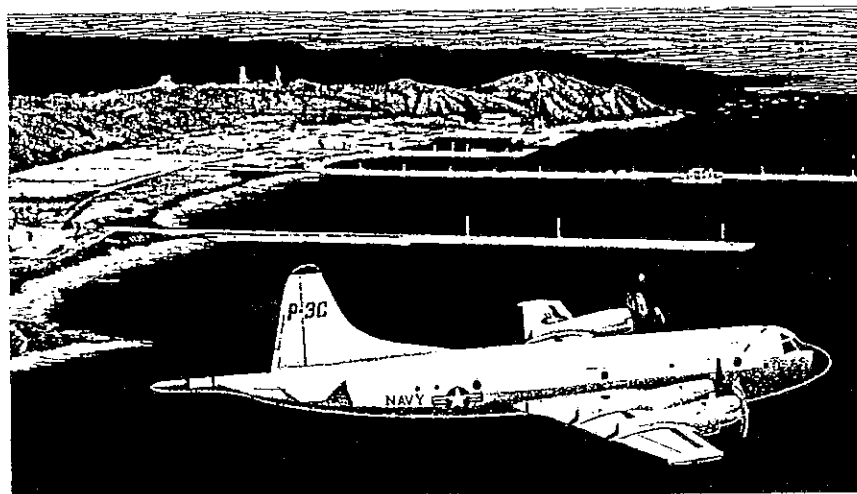
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# **CFA OKINAWA / NAF KADENA**

**MASTER PLAN      OKINAWA, JAPAN**

**SEPTEMBER 1985**



**DEPARTMENT OF THE NAVY**

**PACIFIC DIVISION**

**NAVAL FACILITIES ENGINEERING COMMAND  
FACILITIES PLANNING DEPARTMENT**

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## A. EXECUTIVE SUMMARY

### 1. Introduction

This master plan provides guidelines for land use and facility development for the mid-range (five to eight years) for Commander, Fleet Activities, Okinawa/U.S. Naval Air Facility, Kadena (FLEACT Okinawa/NAF Kadena). The following major areas are covered:

- NAF Kadena at Kadena Air Base which supports Navy patrol aircraft and Marine Corps tactical aircraft.

- White Beach which provides waterfront and personnel support for fleet units, refueling for Navy ships, and mount-out support for Marine Corps units.

- Awase Transmitter Site which provides radio transmission service for Navy units on Okinawa.

- Tengan Pier which provides ammunition handling capability for all DOD activities on Okinawa.

The master plan also provides documentation for five smaller special areas under FLEACT Okinawa. There are no planning proposals for these areas.

This master plan was prepared by the Pacific Division, Naval Facilities Engineering Command (PACNAVFACENGCOM). It is an update of a master plan prepared in March 1979 and approved by the Chief of Naval Operations (CNO) in June 1979.

### 2. Major Planning Proposals

The major planning proposals included in this plan, by area, are:

#### a. NAF Kadena.

- Replace storage space at the Makiminato Service Area Annex to the Sansone Area.

b. White Beach.

- Establish a fleet recreation area near the beach.
- Preserve mount-out staging areas.
- Support surge capability with the helipad area, open recreation areas, and internal circulation roads.
- Request and monitor USCINCPAC and Army action to repair the Army pier.
- Relocate the boat repair shop away from the CTF-76 administrative area.
- Improve physical security by restricting access to the piers by means of barricades.

c. Awase Transmitter Site.

- Improve physical security by repairing sea walls and installing perimeter fencing.

d. Tengan Pier.

- Improve physical security by restricting access to the pier by means of a barricade.

**3. Rationale and Justification**

a. NAF Kadena.

- Storage space at Makiminato Service Area Annex is adequate but malpositioned. Relocation may be feasible if a replacement facility is provided as quid pro quo by the Government of Japan (GOJ).

b. White Beach.

- White Beach is an important DOD asset for fleet rest-and-recreation and limited logistical support.
- The Army pier is required by the DOD to provide a berth for Army contract ships to offload POL, preserve the Navy ship refueling capability on Okinawa, support Navy fleet exercises and USMC mount out, and provide a backup for the Navy pier for maintenance or contingencies.
- A maintenance area separated from administrative functions is required for base appearance and a reduction in land use conflicts.
- Although the threat to physical security in Okinawa is low, some physical security improvements would be prudent measures. A physical security survey to make further recommendations is required.

c. Awase Transmitter Site. The land around Awase Transmitter Site is rapidly becoming urbanized. The resulting incompatible land use may adversely affect the mission capability of the installation unless preventive countermeasures are provided.

#### **4. Advantages of Plan**

- Improves physical security.
- Identifies sites for all major facility shortfalls with a minimum phasing requirement which reduces the dependence of the plan on funding priorities.
- Reduces land use conflicts to improve the relationships between the various operational and support functions.
- Achieves higher levels of efficiency through the consolidation and collocation of functions.
- Enhances the station's amenities and improves the quality of life.

## B. OVERVIEW

### 1. Introduction

a. Study Area (see Figure B-1). Commander, Fleet Activities, Okinawa/Naval Air Facility, Kadena (FLEACT Okinawa/NAF Kadena) is the only Commander in Chief U.S. Pacific Fleet (CINCPACFLT) shore activity on Okinawa. As a result, it has a variety of functions and major areas under its command to perform its mission of servicing the fleet. This master plan provides planning analysis and recommendations for the following major areas under FLEACT Okinawa.

- NAF Kadena at Kadena Air Base (Facility No. 6037). NAF Kadena operates airfield facilities in support of Navy P-3 aircraft conducting training exercises on Okinawa ranges.

- White Beach (Facility No. 6048). White Beach provides waterfront and personnel support facilities for fleet units, refueling for Navy ships, and mount out support for Marine Corps units.

- Awase Transmitter Site (Facility No. 6046). Awase provides radio transmission services for the Navy on Okinawa.

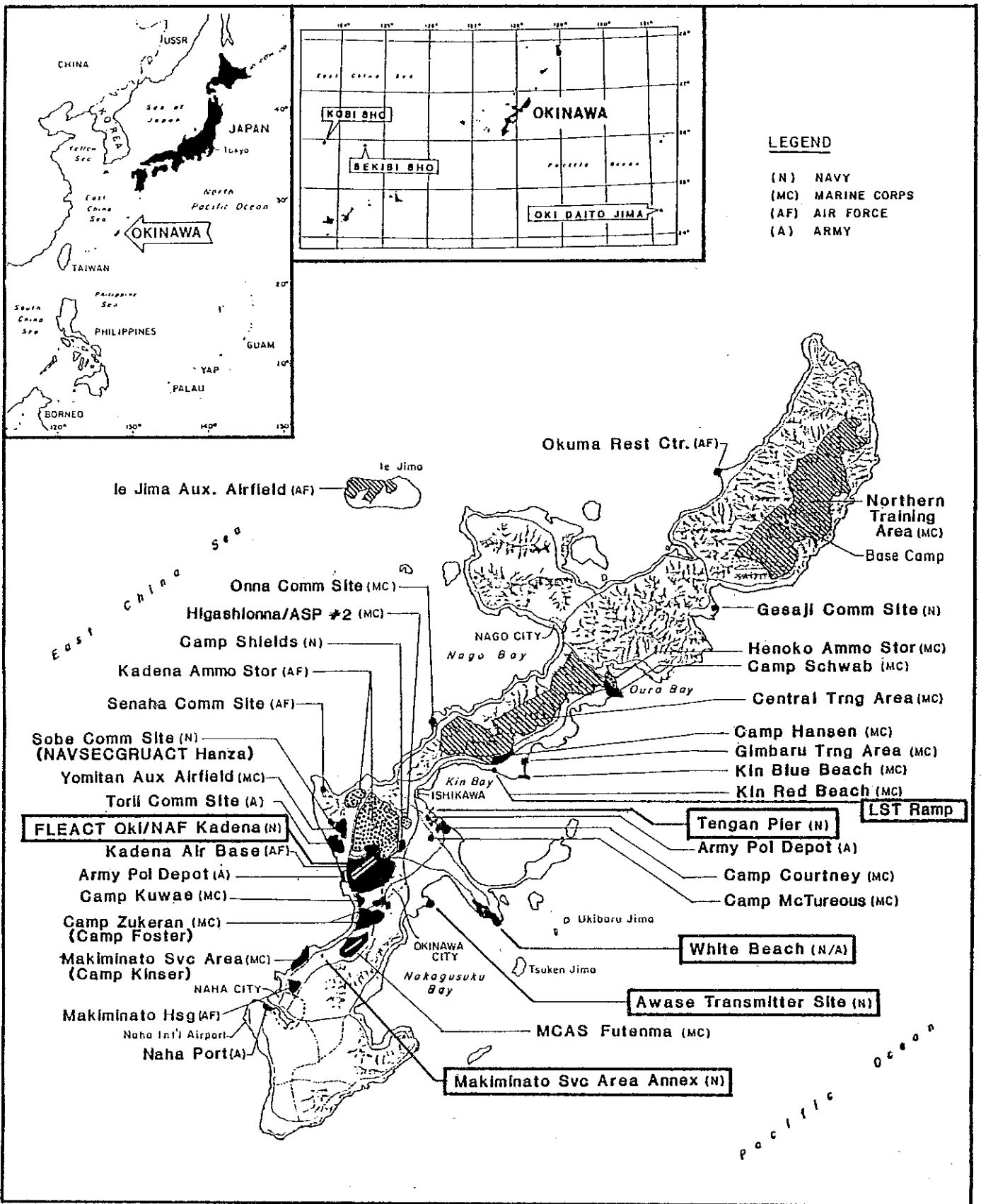
- Tengan Pier (Facility No. 6028). Tengan Pier is the only authorized ammunition pier on Okinawa and supports all services.

The master plan provides documentation for the remaining special areas under FLEACT Okinawa:

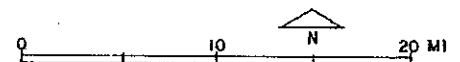
- Makiminato Service Area (MSA) Annex (Facility No. 6057). MSA Annex is used for FLEACT Okinawa general storage.

- Kin Red Training Area LST Ramp (Facility No. 6019). Kin Red is used for Marine Corps training and mount out.

- Kobi Sho (Facility No. 6084), Sekibi Sho (Facility No. 6085), and Oki Daito Jima (Facility No. 6088). These uninhabited islands are used for Navy ship-to-shore and air-to-ground range training.



**LOCATION MAP**  
**FLEACT OKINAWA/NAF KADENA**



**FIGURE B-1**

b. Planning Objectives. The master plan objectives are to provide a realistic and orderly development scheme for each area, taking into account the interrelationships among other military activities on Okinawa and current land use trends in adjacent civilian communities. The plan identifies specific sites for near-term, high priority programmed facility requirements where they exist and provides a land use plan as a guide for future facilities to support activity missions and tasks.

c. Scope. This master plan is based on requirements generated by the most recent planning and programming documents. It considers probable long-range requirements in support of mission changes where applicable. The proposed land use plans allocate sufficient areas to satisfy all basic facility requirements.

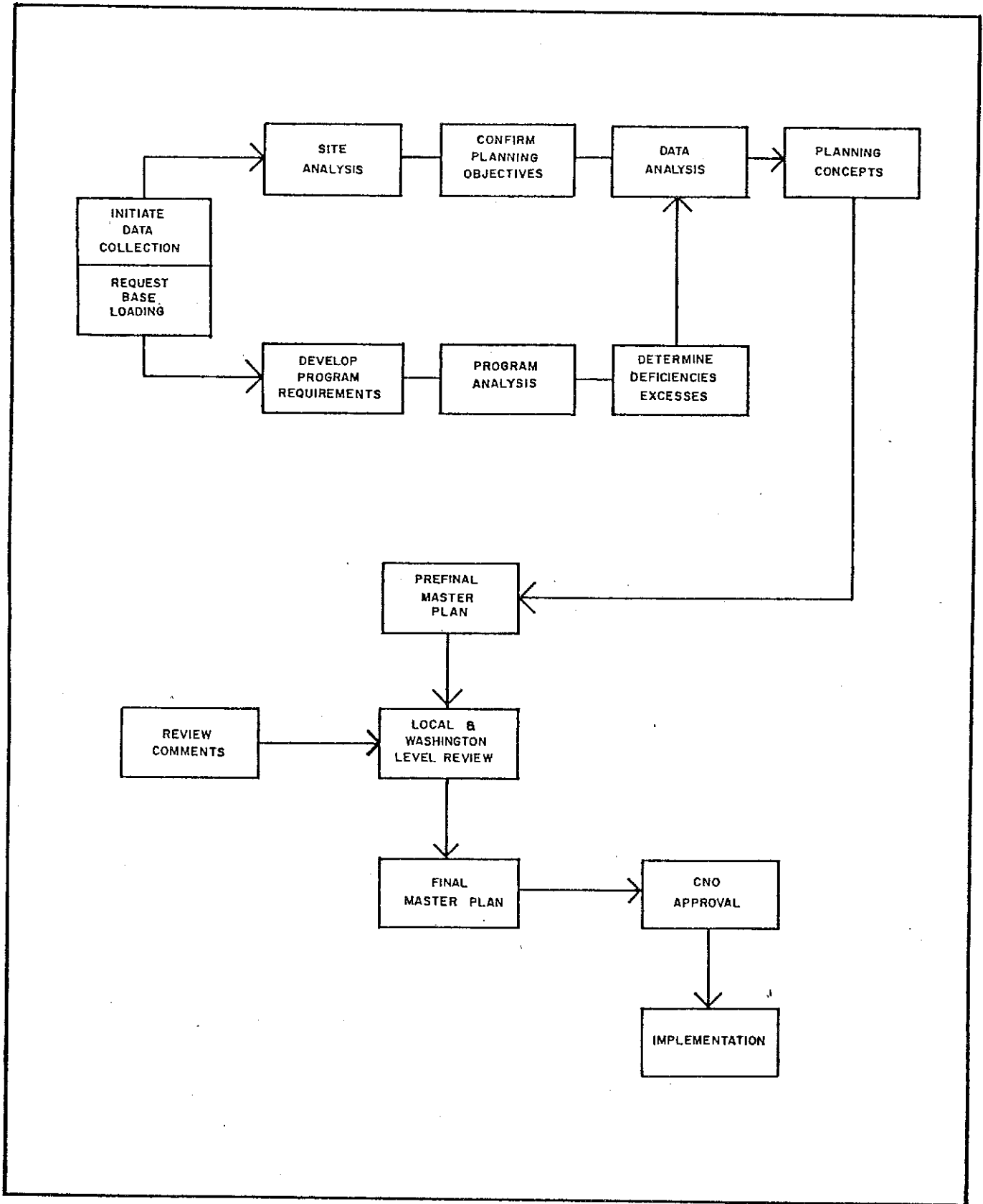
d. Use of the Master Plan. This plan is intended to be a viable document which can be adjusted to accommodate changes. The narrative portion of the plan provides a broad analysis directed toward the orderly development of all near-term and long-term facilities.

## **2. Methodology**

The methodology for preparing this master plan is shown in Figure B-2 and includes the following steps:

a. Data Collection. Data collection consisted of the accumulation of all available information about the activity and surrounding area including the planning documents, maps, and environmental data. Historical data and land use constraints (natural and man-made) were also considered. Finally, the best available projections of future requirements were obtained. This data was supplemented by discussions with appropriate personnel at the activity and the chain of command.





**METHODOLOGY CHART**

**FIGURE B-2**

b. Evaluation and Analysis. An on-site evaluation of existing conditions was made by the planning team. Problem areas were reviewed and alternative solutions were discussed. An analysis was made of the data gathered from existing documents, from the on-site visit and from discussions with personnel from the activity. The ability of the activity to accommodate future requirements was also evaluated. Conclusions and recommendations were developed to support the activity's mission and planning objectives, giving priority consideration to environmental and fiscal constraints. Outbriefs were provided to the station's Commanding Officer; Commander Fleet Air, Western Pacific; Commander U.S. Naval Forces, Japan; and Commander in Chief U.S. Pacific Fleet staff.

c. Preparation of Development Plans. Specific facility requirements were applied to an inventory of buildable areas on-station. Broad concepts about organization, functions, circulation, utilities, land use, and environmental protection were distilled into a conceptual development plan for the station. These broad concepts were applied to individual projects which were then incorporated into a comprehensive site development plan.

d. Draft Report. The results of the above steps were synthesized and are published herein. Distribution to all interested commands within the Navy were made for review comments and discussion.

e. Final Report. Reviews and comments on the draft report have been incorporated into the final plan. Upon approval by the Chief of Naval Operations (CNO), the master plan will become the guide for all future development at FLEACT Okinawa/NAF Kadena.

### **3. Existing Conditions**

a. Background. Okinawa, with 454 square miles in area, is the largest of the Ryukyu Islands and is located about 970 miles southwest of Tokyo (see Figure B-3). The Okinawan population in 1981 was 1,128,000.

All land transportation on Okinawa is by automobile and buses. The road system was decimated by World War II and has been completely rebuilt. Interbase access is adequate, except for peak-hour traffic congestion. The network of existing major roads is shown on Figure B-4.

b. Climate. Okinawa is located at the latitude of Miami Beach and has a similar climate with mild winters and humid summers. Rainfall averages about 83 inches per year, and typhoons are common, especially between May and November. Average monthly rainfall, temperature, and wind conditions are shown on Figure B-5.

c. Geology (See Figure B-6). Okinawa is part of the exposed crest of a large submarine ridge. It has two distinct physiographic provinces--a series of high, discontinuous mountains to the north, and open, rolling uplands to the south. The highest mountain on Okinawa is only about 1,650 feet above sea level.

d. Soils. Soils of the plateau area are well drained clayey soils, porous and suitable for cultivation. A strip of land along the western boundary contains limestone mountains and steep slopes having a few inches of fertile dark-brown crumbly clay or clay loam over bedrock (see Figure B-7 and Table B-1).

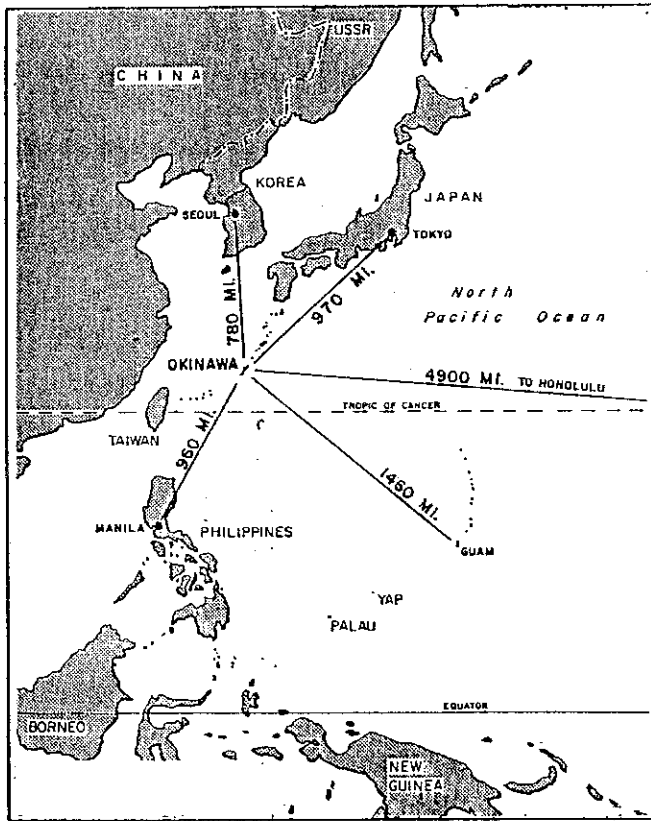
e. Flood Plains. There are no flood plains on FLEACT Okinawa/NAF Kadena.

f. Plant and Animal Life.

(1) Plant Life. The vegetation on Okinawa varies from tropical at sea level to subtropical at elevations above 1,300 feet. Even at lower elevations, however, the climate is not wet enough to support the rain forest type growth of the true tropics. Both trees and shrubs are relatively small, and the natural cover is difficult to penetrate. In the limestone areas especially, normally tall trees are stunted by lack of water, and twisted and bent by winds.

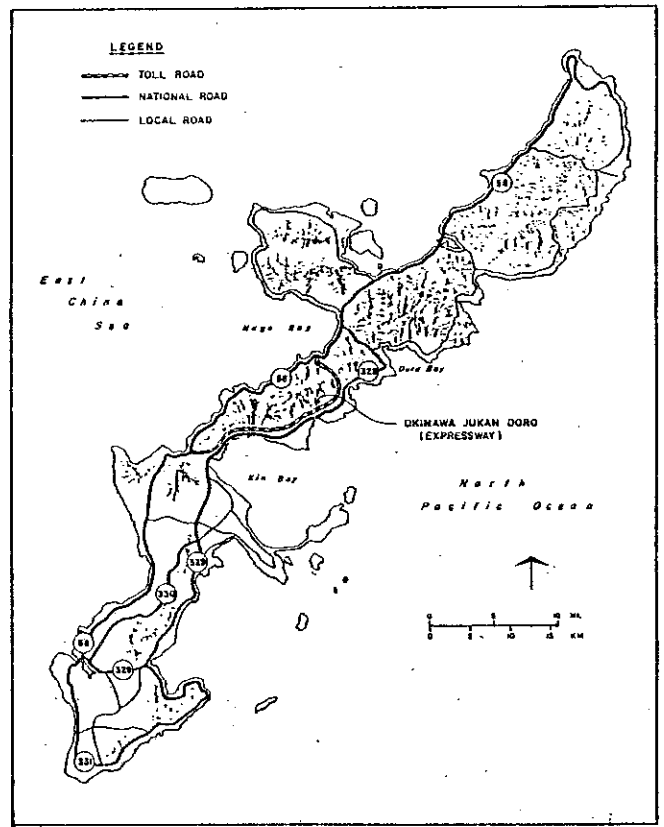
Okinawa may be divided into two separate zones insofar as plant life is concerned. The northern two-thirds contains substantially all of the forests on the island. Pines are the most common, along with a few firs, spruce, juniper and wax trees. There are also hemp palms, cycads, bamboos, bananas, and several species of ferns. The southern third of the island has two types of oak, mountain tea flower and tree ferns, in addition to smaller ferns. There are also mangrove swamps in undisturbed areas.

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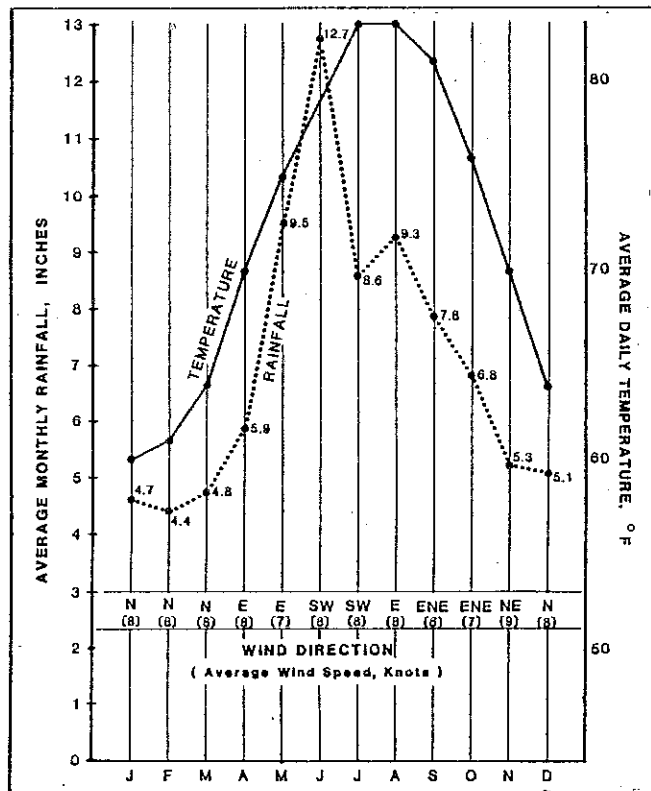
REGIONAL MAP

FIGURE B-3



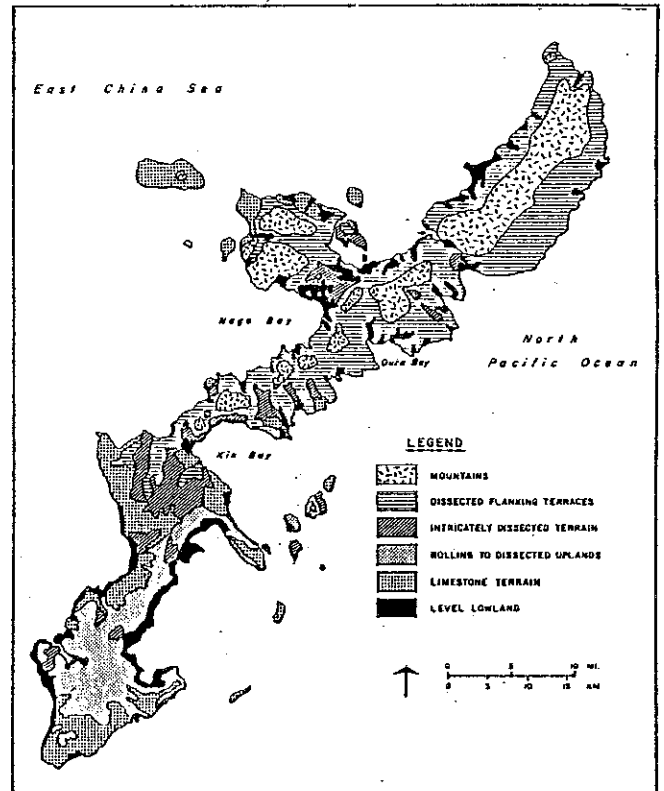
ISLAND ROAD MAP

FIGURE B-4



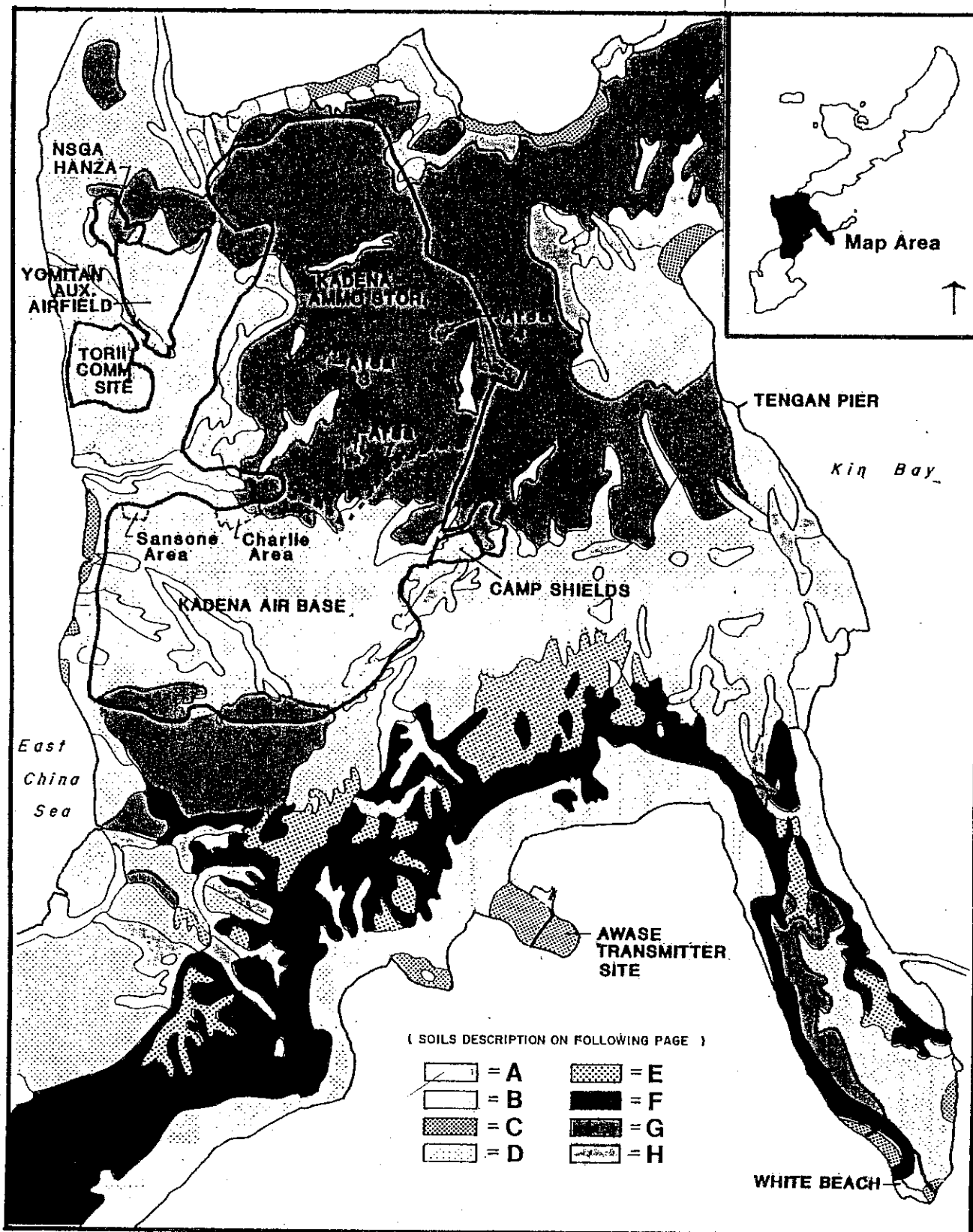
CLIMATE SUMMARY

FIGURE B-5



PHYSIOGRAPHIC MAP

FIGURE B-6



**SOILS MAP**  
Kadena Area, Okinawa



FIGURE B-7

Table B-1

## DOMINANT SOILS AND DESCRIPTION

**A**

Akamaru and Aha soils. Deep, fertile, most poorly drained alluvial soils on coastal flats and flood plains. Slightly to medium acid loam, clay loam, and sandy loam more than 6 feet deep, without distinct topsoil and subsoil layers. Akamaru soils, the gray wet soils of rice paddies, occupy 80 per cent of the unit. During the growing season they are flooded; rarely is the water table more than 2 feet below the surface. The other 20 per cent is of Aha soils, which are brown, well-drained, and generally without water for rice production.

**B**

Awase clay. Alluvial clay on coastal flats and flood plains. Deep fertile crumbly calcareous clay of olive gray color, becoming grayer and distinctly mottled with depth. Slowly permeable and very slowly drained. On the coastal flats the water table generally is within 2 feet, in the interior valleys it is at or near the surface during wet seasons but below 5 feet or absent during dry. Limited water restricts production of rice to about 10 per cent of the total area. Most rice paddies are shallow excavations with their surfaces at the water table.

**C**

Shioya loamy sand. Grayish-brown loamy sand consisting of grains of limestone, minor impurities, and a small amount of organic matter, grading, about 1 foot below the surface, into nearly white impure coral sand. Consists of lime-sand beach deposits darkened with organic matter. Of low fertility; too limy for some crops; too pervious for irrigation of rice.

**D**

Okinawa clay loam and Chinen stony clay. Two related fertile well-drained clayey soils, one deep, the other shallow and stony, occurring together on limestone plains. Both are very crumbly, or strongly granular, although clayey and plastic, they are porous, permeable, and of good tilth. Generally the soil reaction is about neutral, where depth to limestone exceeds 10 or 15 feet, the soil is slightly to medium acid. Okinawa clay loam, the deep soil that occupies 70 per cent of the unit; has surface soil of dark-brown clay loam 5 to 10 inches thick over subsoil of strong-brown to yellowish-red permeable clay, underlain by limestone at depths of 3 to 20 feet. Chinen stony clay, the shallow stony soil occupying 30 per cent of the unit, consists of dark-brown to brown clay or clay loam with loose fragments and outcrops of the limestone bedrock. The effective or average soil depth is about 15 inches; within horizontal distances of a few inches the actual depth fluctuates between 0 and 3 feet or more. In this soil, stone occupies 10 to 30 per cent of the surface and prevents use of agricultural machinery. Neither soil has water for production of rice.

**E**

Shuri clay, gently sloping. Olive-colored crumbly calcareous clay 6 to 20 inches deep over raw bedrock of hard, compact, impervious clay. Slowly drained, moderately fertile; no water is available for rice production.

**F**

Shuri clay and rough broken land. Moderately sloping to steep upland occupied by crumbly clay soils very shallow over bedrock of compact, impervious clay (Shimajiri formation). Moderately sloping areas, which constitute 60 per cent of the unit, are of Shuri clay and similar to soil unit 5 except for greater slope and somewhat less depth of soil, which averages about 7 inches and rarely exceeds 12. The steep areas, 40 per cent of the unit, are a mixture of similar but even shallower soil and outcrops of raw clay bedrock. Water for rice culture is not available.

**G**

Isnikawa loam. Deep, rapidly drained acid soil, low in fertility and mostly steep and nonarable but well-suited for forestry, consisting of a thin surface soil of pale-brown friable loam 3 to 6 inches deep over subsoil of yellowish-red strongly acid permeable clay loam or sandy clay. Developed under forest mostly from thick deposits of acid sandy clays and clayey sands but locally from fine-grained schist or feldspathic sandstone. The soil needs phosphorous, potash, nitrogen, and lime for good yields of most field crops or good pasture. Tea thrives. Almost none of the area has water for culture of rice. Okinawa pine and other forest trees thrive. The areas indicated on the map include many small bodies of other soils including (1) an extensive closely related but slightly more fertile soil, Yagachi clay loam, which has brown to reddish-brown surface soil (2) narrow valley bottoms of Akamaru and Aha soils, and (3) acid soils shallow over schist.

**H**

Rough stony land. Limestone mountains and steep slopes, having a few inches of fertile dark brown crumbly clay or clay loam over bedrock interspersed with bare outcrops of limestone that occupy 20 to 75 per cent of the surface. Nonarable; nutritious grasses will thrive and afford good grazing; good land for forestry; cycads, which have been planted in many areas, afford considerable starch for the natives.

(2) Animal Life. There is the usual assortment of domesticated animals on Okinawa. Additionally, there are Japanese deer, mongooses which have been imported, and the indigenous Ryukyu wild pig and Amami black hare. There are also types of rats, mice, and bats.

There are at least five species of venomous snakes on Okinawa; four pit vipers and one similar to the American copperhead. All are called "habu," locally. There is also a marine snake with poisonous fangs, as well as several species of non-poisonous snakes. There are also frogs, toads, and lizards.

There are many varieties of land and sea birds on Okinawa, from sparrows and finches to ducks and herons. Only two--the Noguchi-Gera woodpecker and the Yambaru Kuina rail have been identified as **exclusively indigenous**; neither bird has been sighted on FLEACT Okinawa/NAF Kadena.

g. Historic Sites. The Cultural Assets Protection Law in Japan establishes the classification of scientific or artistic assets into four categories: tangible cultural assets, intangible cultural assets, folklore materials and monuments. The Okinawa Regional Profile provides a list of historical sites on Okinawa Island with their respective general locations. There are no known historic or archaeological sites on FLEACT Okinawa/NAF Kadena.

h. Water Availability. In order to satisfy the projected demand for water in 1990, the GOJ has developed raw water sources. By 1985, the GOJ will have completed a series of five major dams in the Northern Okinawa region, which will increase the average daily water supply to 127 million gallons per day. By 1990, the GOJ plans to increase the average daily water supply to 165 million gallons per day by improving the **Hijagawa water supply** and constructing additional dams. The storage facilities assures adequate water distribution at times of peak demand.

#### **4. Land Use Compatibility**

The United States Forces in Japan (USFJ) will be subject to increasing pressures to reduce its Okinawa facilities and areas as a result of established Japanese policies. Pressures will be especially severe on facilities located in the southern areas.

## 5. Physical Security

This plan investigated the application of OPNAVINST 5530.14, Physical Security and Loss Prevention Manual, to land use. OPNAVINST 5530.14 requires perimeter fencing around the installation's restricted areas with a 30 FT clear zone inside the fence, a 20 FT clear zone outside the fence, and a perimeter road. On Okinawa, a 20 FT clear zone outside a perimeter fence would virtually invite encroachment by the local farmers. A second fence may, therefore, be required to protect the clear zone from encroachment.

At NAF Kadena, the Air Force is responsible to provide security. Although security measures are generally adequate, in accordance with CINCPACFLT policy,<sup>1/</sup> additional security measures are required on the flight line. Furthermore, within the flight line area, the anti-submarine warfare operations center (ASWOC) has special requirements.

At the White Beach Navy Pier and Tengan Pier, barricades to control vehicular access are required in accordance with CINCPACFLT policy.

At the Awase Transmitter Site, seawall repairs, perimeter fencing, and a perimeter road are required. There is adequate sight distance beyond the existing fence line. However, along the eastern boundary, only a portion of the land is under the control of the Navy while civilian development is occurring on the adjacent land. Coordination with the GOJ to preserve the clear zone over the long-term is required.

No additional land is required to implement security measures. Security planning recommendations are summarized as follows:

- Conduct a physical security survey at each major area.
- Provide double fencing where required to preserve a clear sight distance.
- Install barricades at the White Beach Navy Pier and Tengan Pier.

<sup>1/</sup>CINCPACFLT 212139Z Oct 84



- Pursue early funding for physical security improvements at the Awase Transmitter Site.

- Request the Government of Japan (GOJ) assistance, through appropriate channels, to protect the 20-foot clear sight zone at the Awase Transmitter Site for the long term.

## 6. Base Appearance

Military installations should provide efficient and pleasant physical environments conducive to attracting and retaining skilled and motivated personnel. The physical setting of a base also has an impact on the perceptions and opinions that the general public has towards the base and its personnel. There are three areas in which physical improvements can provide favorable results. These areas are landscaping, building colors, and graphics. The greatest positive visual impacts can be achieved by focusing on the areas providing the highest exposure to visitors and personnel.

The major objective of base appearance improvements is to enhance the station by establishing environmental concepts or basic unifying motifs for the base exterior. These concepts take into account the existing appearance of the station, off-station areas, natural features and operational functions. Visually pleasing vehicular and pedestrian environments can be provided through the use of landscaping, building coloration, and graphic signage.

A base exterior architecture plan is desirable to address improvements to highly visible features of the base, including gates, major roadways, key intersections, parking areas, major walkways, buffers, and activity centers. The following sections provide general guidelines for improvements until such a plan is developed,

a. Landscaping. The objective of landscape improvements should be to enhance and visually unify the various functional and "public" areas of the base. General guidelines in establishing an improved landscaping environment include the following:

- Existing landscaping should be preserved and enhanced where possible.

- Plant selection should be based on minimizing maintenance requirements.

- Aesthetic and functional applications of landscaping should be employed to the extent possible. These applications include: screening unsightly elements, buffering incompatible land uses, reducing noise, providing shade and cooling effects, and defining road networks and base entrances.

NAF Kadena and White Beach are high visibility areas. The landscaping on Kadena Air Base is considered good. Although small improvements can be made within the Navy controlled areas, no major effort is necessary. Except for the areas on the hill and around the All Hands Club, there is minimal landscaping at White Beach. There has been some recent landscaping done, which is a good start. A conceptual landscape plan for White Beach was developed and is shown on Figure B-8.

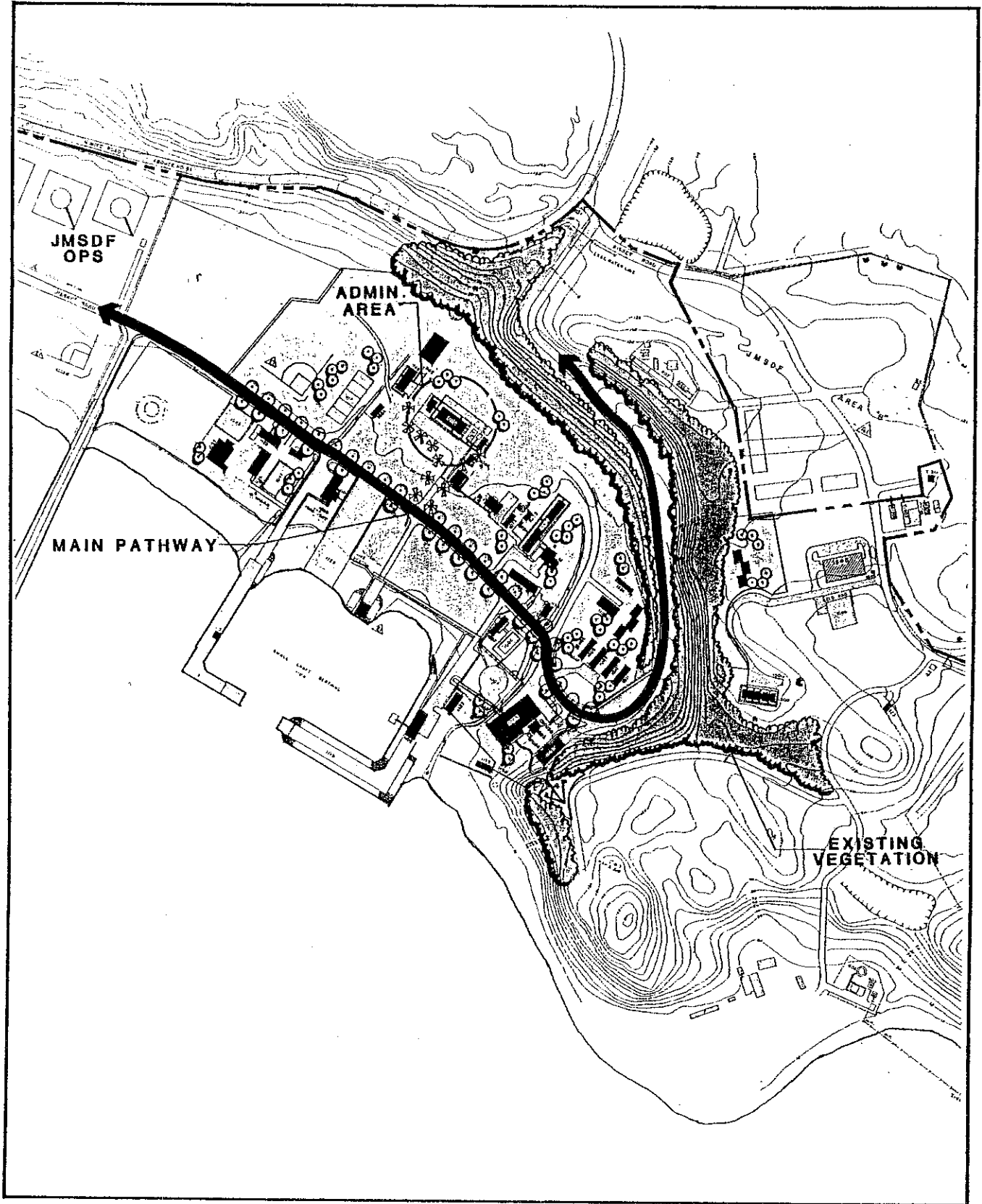
The concept emphasizes the major White Beach circulation route and activity centers. Landscaping should also be provided in the troop housing and recreation areas. In order to highlight the main administration area, a different landscape treatment is proposed.

A professional landscape architect should be retained to provide an installation planting plan to improve base appearance at White Beach.

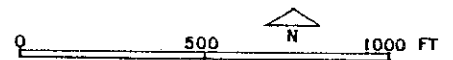
b. Building Coloration. The appropriate selection of building colors can serve to visually unify and enhance the base along with accentuating key buildings or complexes. A consistent color pattern and exterior graphics have been successfully used at White Beach. A coordinated approach would better identify station facilities from those of other commands or would differentiate between departments.

Due to its exposure to salt, moisture, and sunlight, Okinawa's environment creates unique maintenance considerations. It has been found, for example, that certain colors, such as tans and off-whites are much more fade-resistant than blues or greens. FLEACT Okinawa/NAF Kadena has generally avoided the use of these latter colors and should continue to do so.

c. Graphics and Signage. The objective is to develop and implement a coordinated graphics and signage system that will clearly and concisely convey pertinent information through the proper application of signage principles and devices. Signs must not only be designed to serve their intended uses, but they should also be compatible with others conveying similar information, and with their surroundings, including buildings and landscaping. To achieve this, all signs in the system should be coordinated in construction and appearance. They should be simple, practical, and economical to construct and maintain. The entire system of signage and graphics should contribute to the overall image of the base.



**BASE APPEARANCE**  
**WHITE BEACH**



**FIGURE B-8**

## C. NAF KADENA

### 1. Site Analysis

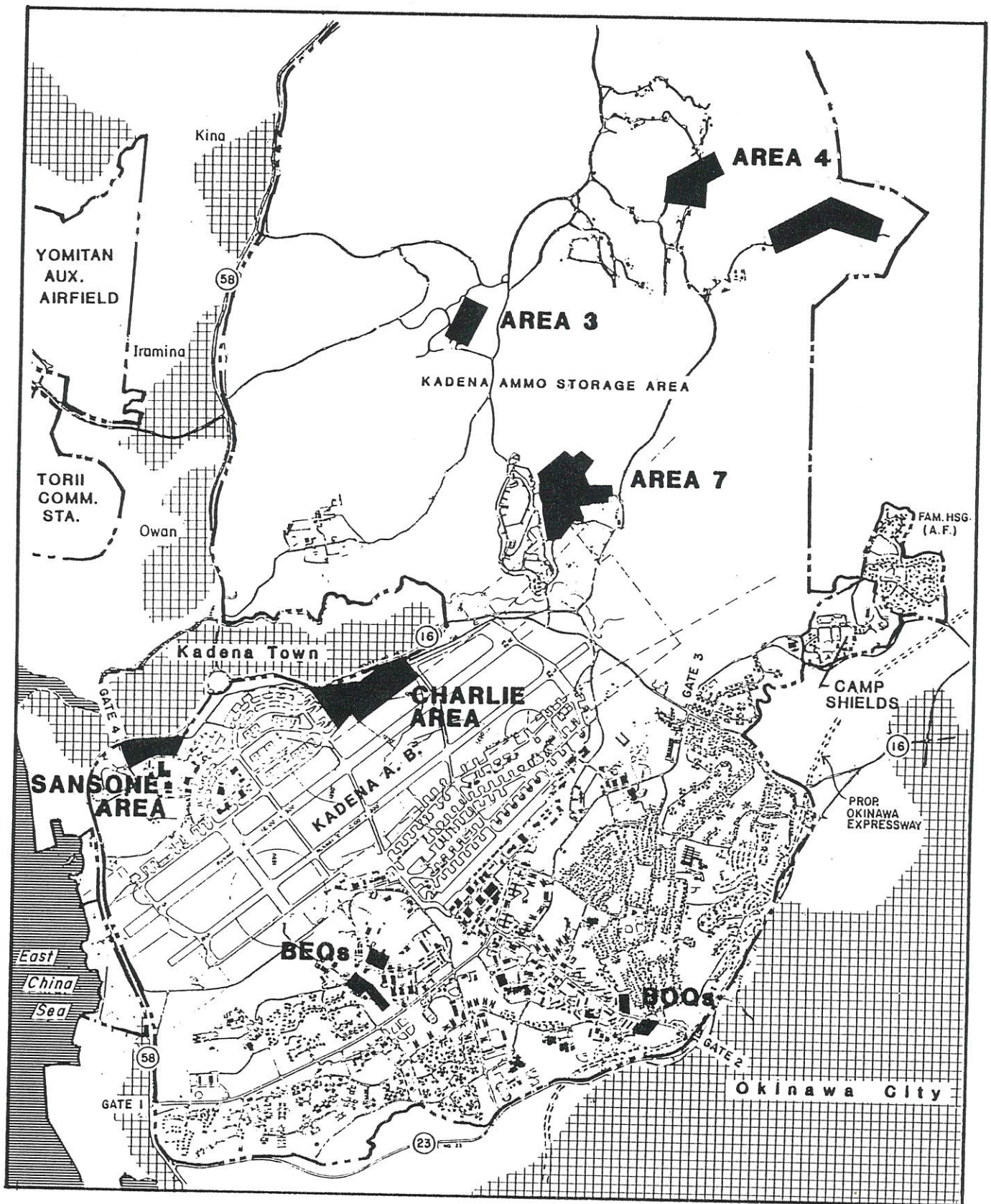
#### a. Introduction.

(1) Background. Kadena Air Base, FLEACT Okinawa/NAF Kadena's host, has been in continuous operation since the afternoon of the first day of the World War II invasion of Okinawa on 1 April 1945. When troops of the U.S. 10th Army came ashore, they found a small coral surfaced airstrip 5,000 feet long, which had been subject to intense bombing and shelling by U.S. air and surface forces prior to the invasion. The strip fell to U.S. forces by midmorning of D-Day, and by evening, Army engineers had filled the craters and restored the coral surface. The airfield has been improved and expanded, until today, it is the Air Force's largest installation in the Western Pacific and the home of the 313th Air Division, which was activated at Kadena in March 1955.

The post World War II Navy air arm in Okinawa (now FLEACT Okinawa/NAF Kadena) was initially U.S. Naval Air Station, Yonabaru (NAS Yonabaru), supporting Naval Air Transport Terminal operations and a deployed patrol squadron (PATRON). NAS Yonabaru was closed in late 1947, and the remaining units were moved to U.S. Naval Air Base, Naha, to become NAF Naha. NAF Naha was deactivated in 1949, but was reactivated in support of the Korean Conflict on 15 February 1951 and commissioned on 18 April of the same year.

The agreement between the U.S. and Japan to return Okinawa to Japanese administration, which became effective on 15 May 1972, provided in a related arrangement that the U.S. flying activity at Naha Air Base would be relocated and the base returned to Japan. Under this arrangement, the GOJ was to fund and construct replacement facilities for the displaced command.

Three years after the original agreement was made, on 7 May 1975, Phase 1 of the relocation became a reality with the move of flight operations from the base at NAF Naha to the Kadena Air Base flight line. In less than 18 months after construction was begun, the Navy facility at Kadena Air Base became operational with the actual move of FLEACT Okinawa station aircraft, Fleet Composite Squadron Five aircraft, and aircraft assigned to the rotational Navy PATRON and Marine Corps rotational training squadron to the new facilities.



**LOCATION MAP**  
**U.S. NAVY ACTIVITIES, OKINAWA**

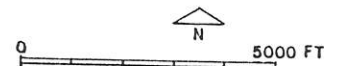


FIGURE C-1

Some of the ammunition facilities were built prior to the move of NAF to Kadena. The other buildings and facilities were either constructed or refurbished by the GOJ as part of the agreement to return NAF Naha to the GOJ.

Additionally, FLEACT Okinawa/NAF Kadena has joint use of the runways, along with appropriate taxiways. Runway 05L/23R is 12,100 feet by 300 feet and Runway 05R/23L is 12,100 feet by 200 feet. Kadena Air Base's tower, navigational and landing aids, including glide slope, localizer and beacon, a precision approach radar, and a radar approach control (RAPCON) center, also support FLEACT Okinawa/NAF Kadena operations.

The two runways are provided with arresting gear. Emergency fire and crash service is provided by the host, as are clubs and other personnel support facilities (see Figure C-2).

(2) Existing Land Use. Existing BEQ, BOQ, aircraft operations, and ordnance storage and operations are adjacent to or inside similar land use areas developed by the host Kadena Air Base. The administrative complex or "Sansone Area" is on the opposite side of the airfield from the Air Force administration area. However, it represents reasonable land use based on an autonomous Navy administration enclave (see Figure C-3).

(3) Circulation. All movement on the base is accomplished by automobiles and buses. Roads are good and relatively lightly traveled. Distances from the Sansone area to the BEQs and BOQs are five miles and seven miles, respectively. The Air Force provides shuttle bus service around the entire base at one-half hour intervals. This service is supplemented by Navy bus service at morning, noon, and evening peak hours. Ordnance movement is accomplished on a dedicated roadway that tunnels under the public highway.

(4) Utilities. All utilities, except telephone service, are provided through the host Air Force. The following information relative to Kadena Air Base utilities is taken from the current (revised Oct 1979) Tab A of the Kadena Air Base Master Plan:

(2) Location (see Figure C-1). FLEACT Okinawa headquarters and all of NAF Kadena are tenants of Kadena Air Base. Kadena Air Base lies in south-central Okinawa, between Route 58 and Okinawa City, about 30 miles north of the southern tip of Okinawa on the western coast. The coordinates of the central tower, which lies south of the runway complex, are 26°21'N, 127°46'E. FLEACT Okinawa/NAF Kadena occupies the "Sansone Area," an administrative complex at the northwest corner of Kadena Air Base; the "Charlie Area", which contains the aircraft hangars and apron area; a BEQ/BOQ area south of the runways; and ammunition storage areas in the Kadena Ammunition Storage Area north of Route 16.

(3) Size. Kadena Air Base occupies about 5,010 acres of land. FLEACT Okinawa/NAF Kadena has exclusive use of some 97 acres of land and 588,000 SF of facilities at Kadena Air Base and joint use of the runways and taxiways.

b. Existing Conditions

(1) Existing Facilities. FLEACT Okinawa/NAF Kadena does not hold plant account responsibility for any real property but is the tenant of Kadena Air Base. They currently have exclusive use of 48 buildings and facilities, with a covered area of about 588,000 SF, as follows

(a) Three BOQs with a total capacity of 99 men and 7 BEQs with a total capacity of 1,066 men.

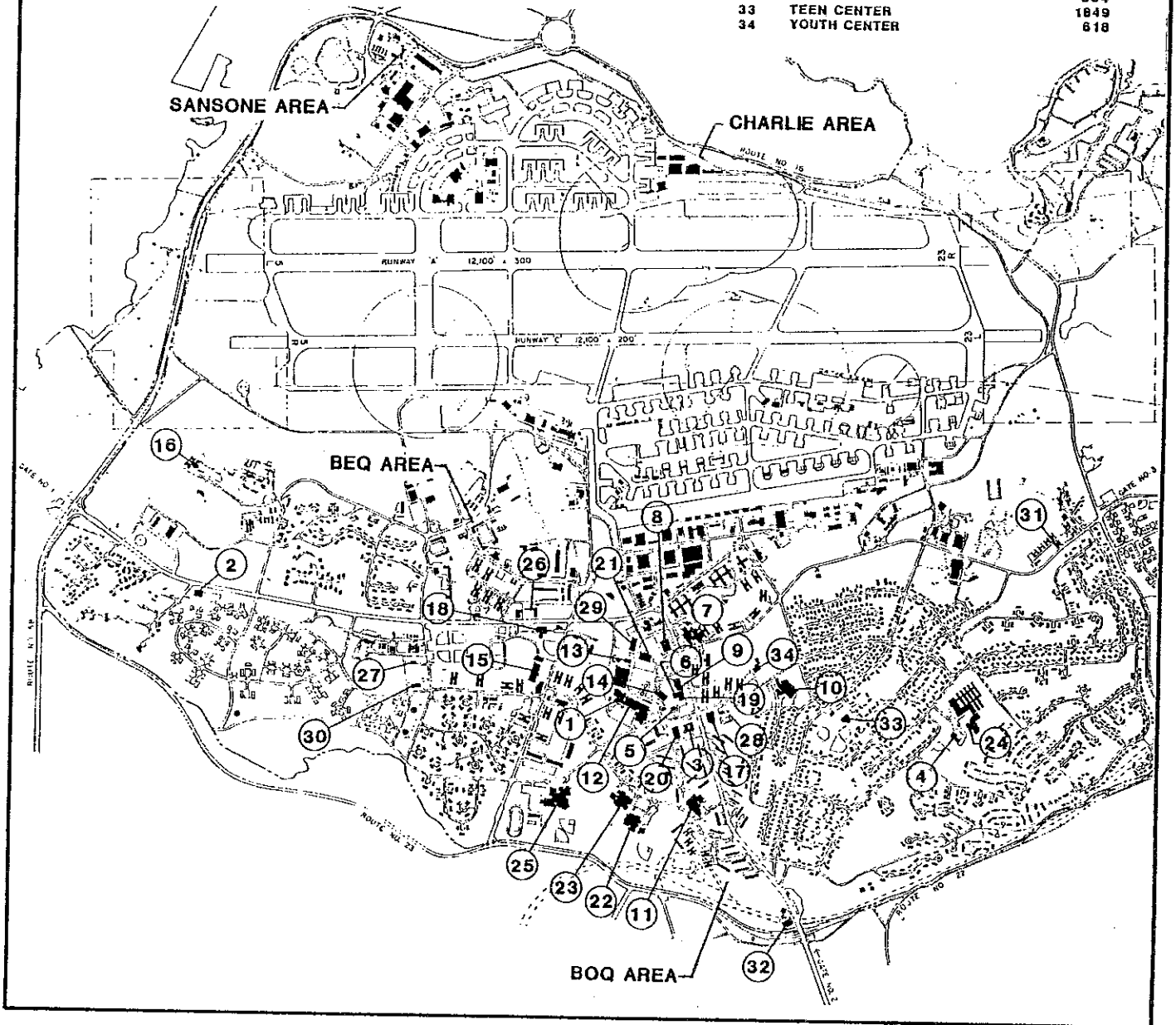
(b) The operational or "Charlie Area" with three hangar buildings, an avionics/armament shop, an aircraft maintenance shop, an air operations building, a ground support equipment (GSE) storage building, a van complex, a communications building, a ready magazine, a hardstand for Marine Corps tactical support vans, a rinse rack, and appropriate aircraft parking aprons and taxiways.

(c) The "Sansone Area" with a public works transportation building, a parachute shop, a warehouse and flammable storage building, and ten buildings housing administrative type functions.

(d) The FLEACT Okinawa/NAF Kadena ammunition storage areas (Areas 3, 4, and 7) with magazines, a mine assembly building, two missile maintenance shops, an Air/Underwater Weapons (AUW) maintenance shop, a paint storage building, three open ammunition storage pads, and four inert storehouses.



INDEX NO.	FACILITY	BLDG. NO.	INDEX NO.	FACILITY	BLDG. NO.
1	BANK/CREDIT UNION	409	16	GOLF COURSE CLUB HOUSE	20
2	CHAPEL	9800	17	GYM	499
3	CHAPEL	425	18	GYM	100
4	CHAPEL	2425	19	GYM	463
5	CHILD CARE CENTER	439	20	LIBRARY	451
6	CLASS VI STORE PACKAGE	432	21	RECREATION CENTER	455
7	MAIN CLINIC	703	22	AMELIA EARHEART ELEM	9481
8	DENTAL CLINIC	428	23	BOB HOPE PRIMARY	9480
9	AIRMAN'S CLUB	431	24	KADENA ELEMENTARY SCHOOL	2515
10	HCO CLUB	621	25	KADENA HIGH	9490
11	OFFICER'S CLUB	313	26	SERVICE STATION	218
12	EXCHANGES/COMMISSARY	414	27	OLYMPIC SHOPPETTE	98
13	MAIN POSTAL OFC	403	28	SNACK BAR	605
13	KEYSTONE SHOPPETTE	403	29	THEATER	446
14	ARTS & CRAFT CENTER	435	30	THEATER	97
15	BOWLING CENTER	113	31	THRIFT SHOP	4068
			32	USO	334
			33	TEEN CENTER	1849
			34	YOUTH CENTER	618



**PERSONNEL SUPPORT  
FACILITY LOCATOR MAP  
KADENA AIR BASE**

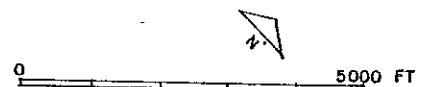
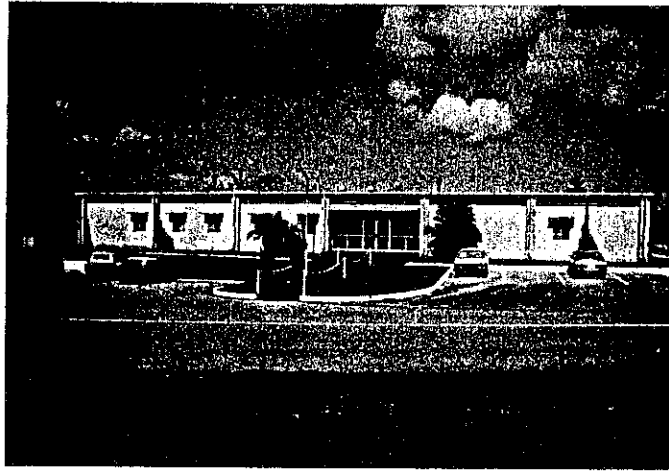
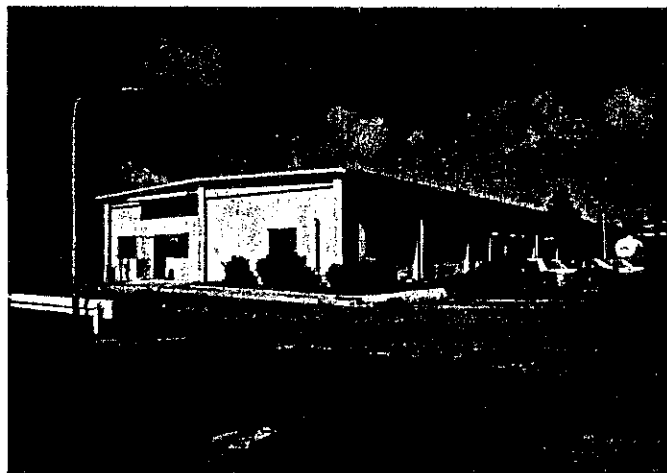


FIGURE C-2

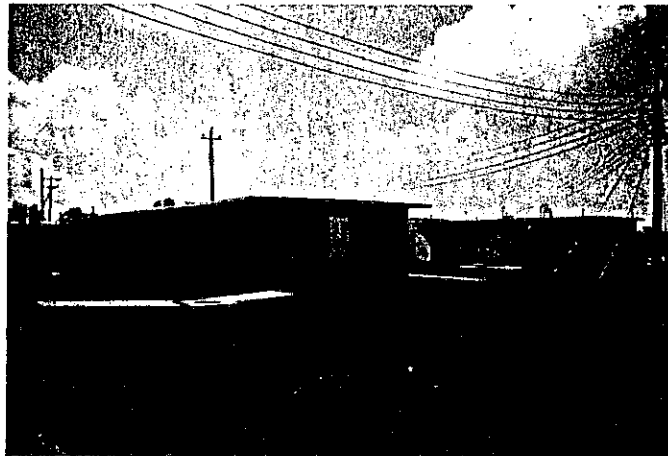
25



**BLDG. 3574, FLEACT OKINAWA/NAF KADENA  
HEADQUARTERS**



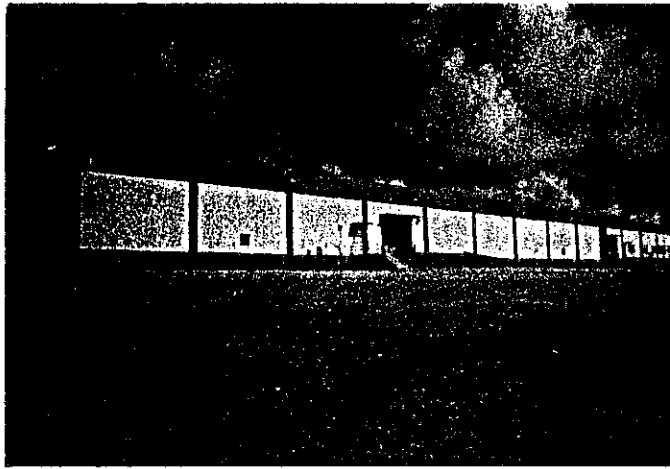
**BLDG. 3573, PUBLIC WORKS, ADMINISTRATION  
AND ENGINEERING**



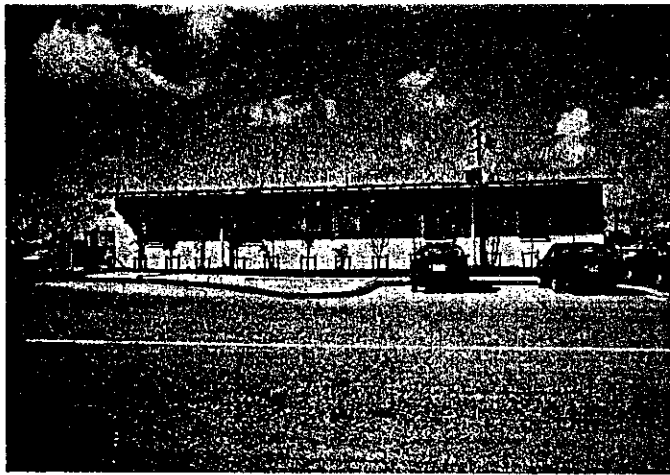
**BLDG. 3592, 3593, ADMINISTRATION**

**SITE PHOTOGRAPHS**  
**SANSONE AREA**

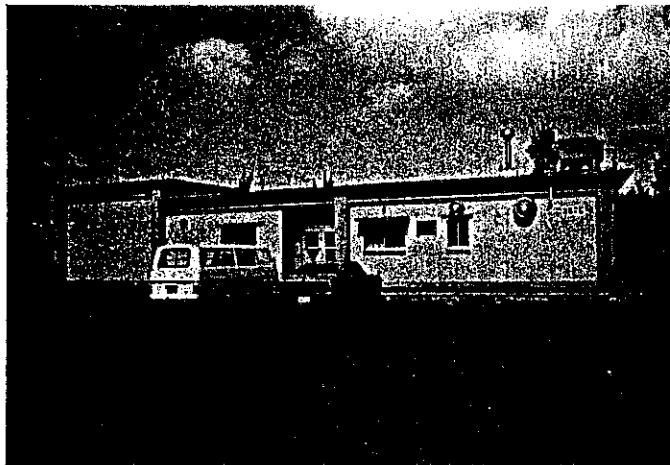
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**BLDG. 3578, SUPPLY ADMINISTRATION/  
WAREHOUSE**



**BLDG 3571, PUBLIC WORKS TRANSPORTATION**



**BLDG 3576, AIMD PARALOFT**

**SITE PHOTOGRAPHS**  
**SANSONE AREA**

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**BLDG. 1498, BEQ - BEQ AREA**



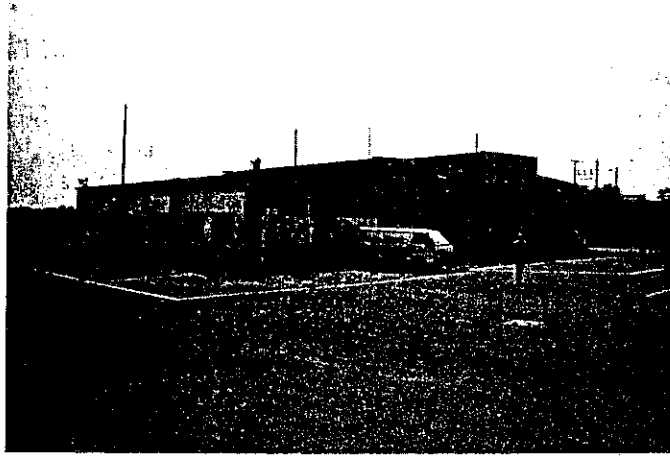
**BLDG. 1463, BEQ - BEQ AREA**



**U.S. NAVY FLIGHTLINE - CHARLIE AREA**

**SITE PHOTOGRAPHS**  
**BEQ AREA, CHARLIE AREA**

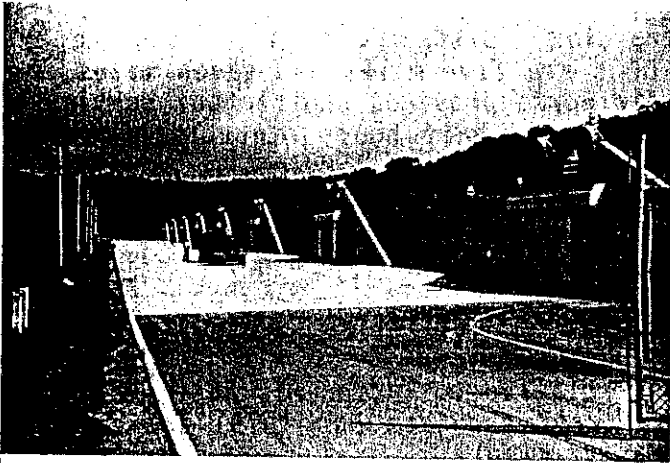
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BLDG. 44100, AUW/ORDNANCE OPERATIONS  
BUILDING - AREA 7



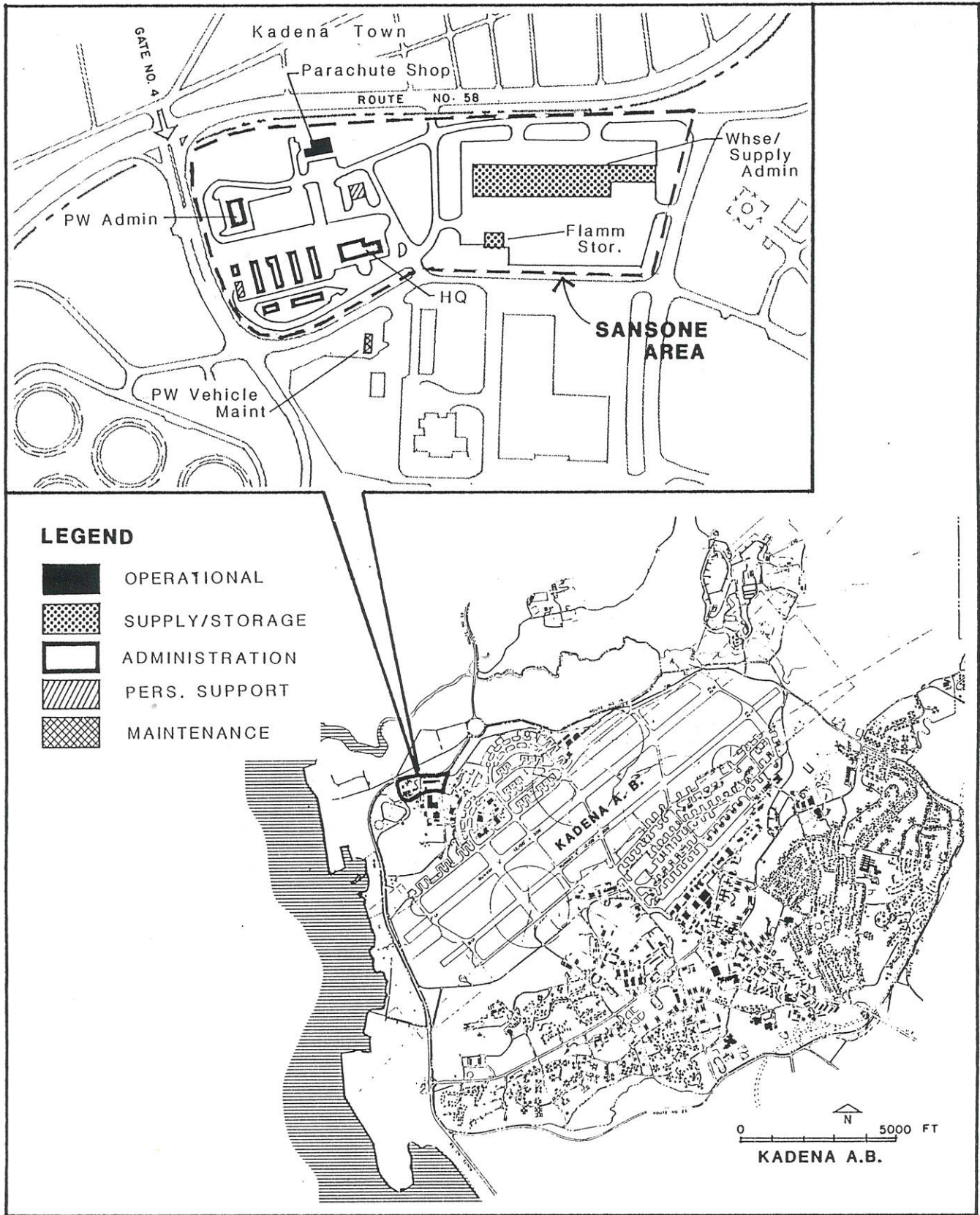
BLDG. 44105, INERT STOREHOUSE - AREA 7



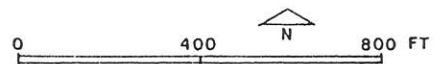
STRUCTURES 44055-44062 - AREA 3

## SITE PHOTOGRAPHS

AREA 7, AREA 3



**EXISTING LAND USE  
SANSONE AREA**



**FIGURE C-3**

(a) Water (see Figure C-4). There is a network of 27 deep water wells on Kadena Air Base that is owned and operated by the OPEB. Raw water is pumped from these wells to the Ty-Base Water Treatment Plant, which is also an on-base facility owned and operated by the OPEB. This treatment plant supplies water to the integrated island water system. The Air Force purchases all water for Kadena Air Base from the Okinawa City Municipal System in accordance with Japanese law which requires U.S. Forces Japan to buy treated water from the nearest municipality.

The standard of treatment is generally that of the U.S. Public Health Service, except that high chlorine residual of 1 to 2 parts per million is maintained to the farthest ends of the system. Treatment of the water is the responsibility of the OPEB.

Kadena Air Base water consumption averages between 3 million and 4 million gallons per day (MGD). About 15 million gallons per month is delivered through the base to adjacent areas.

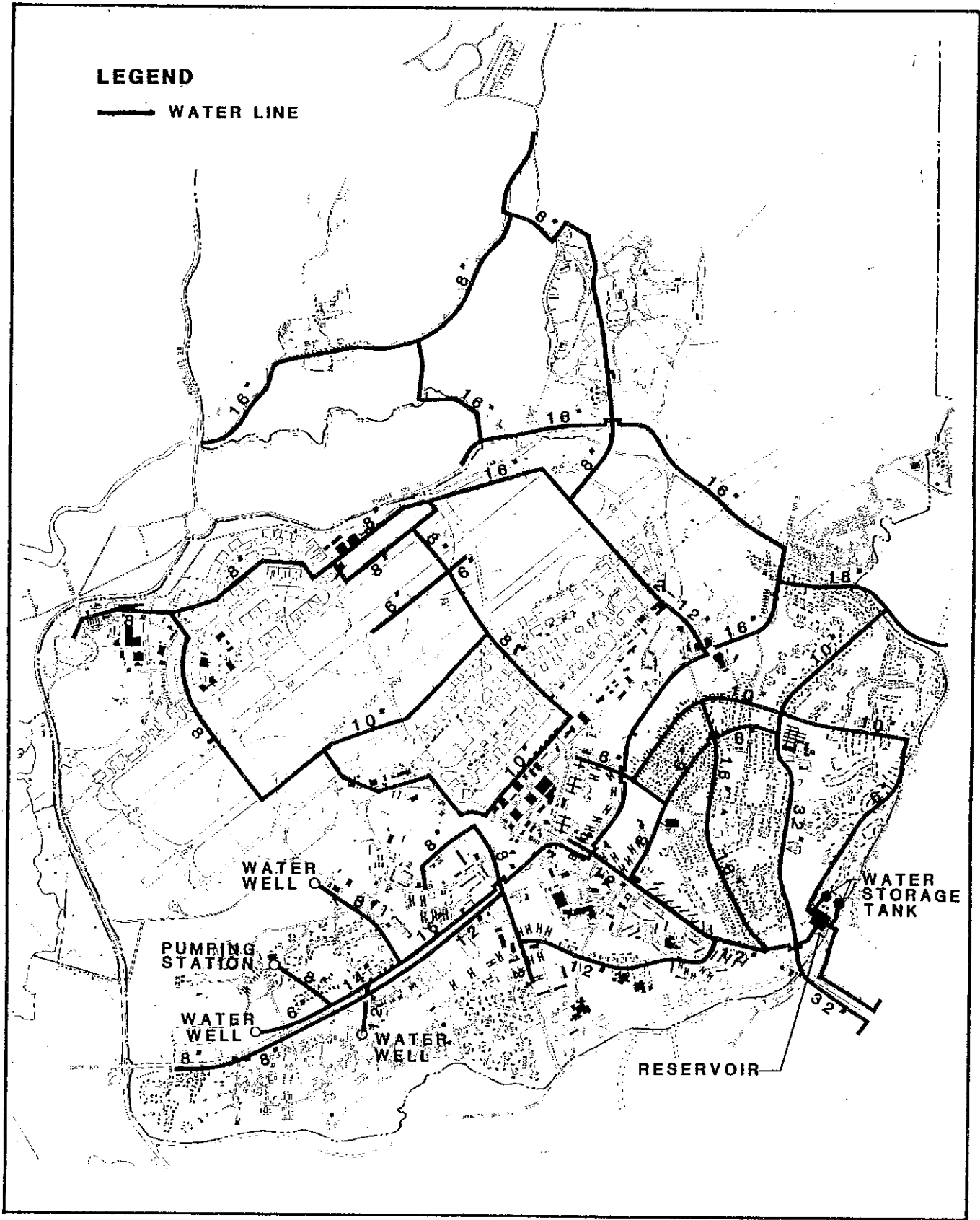
In the past, water rationing was imposed whenever a prolonged dry spell depleted surface sources. Due to improvements in the island water system (discussed in Chapter B, under the subsection entitled Water Availability), rationing measures were lifted in 1982.

(b) Sewage (see Figure C-5). The sanitary/industrial sewage collected on Kadena Air Base averages between 3.5 and 4.0 MGD. Sewage is disposed of through the island-wide sewage system, owned and operated by the Okinawa Prefectural Government (OPG).

The on-base sewage network is connected to the island sewage system at four collection points along Highway 58 which borders Kadena Air Base.

(c) Electricity (see Figure C-6). Electrical power is purchased at 13.8 KV, 3 phase, 60 cycles from the Okinawa Electric Power Corporation (OEPC). It is distributed through two U.S. owned switching stations (Ty-Base and Kadena). The switching stations are considered adequate.

There are two different electrical rates at Kadena--a non-industrial rate which is applied to general power and lighting and a lower cost industrial rate which is applied to industrial loads such as the shops, hangars, and airfield facilities.



**WATER SYSTEM**  
**KADENA AIR BASE**

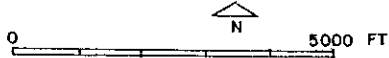
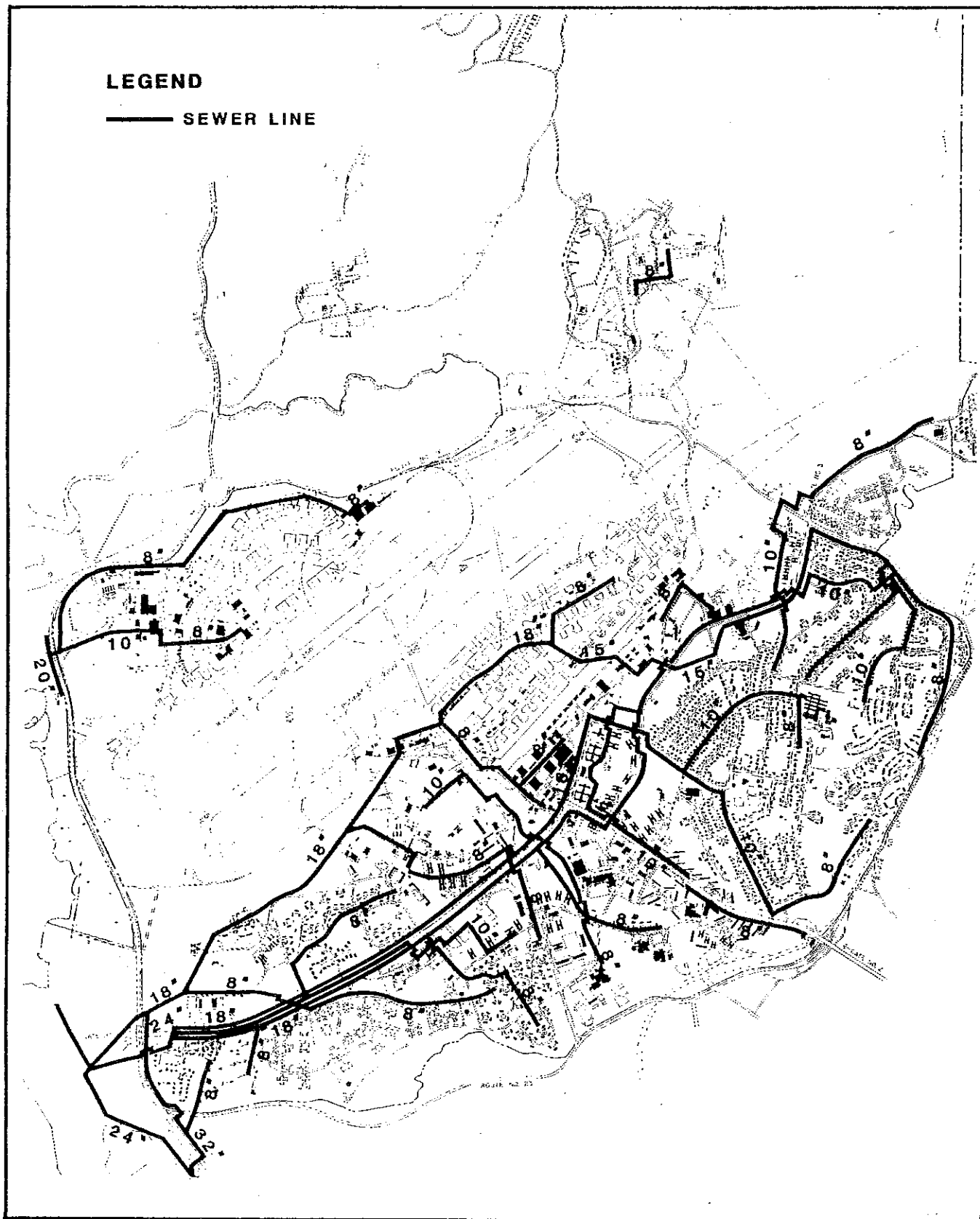


FIGURE C-4

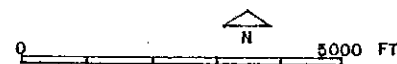


**LEGEND**

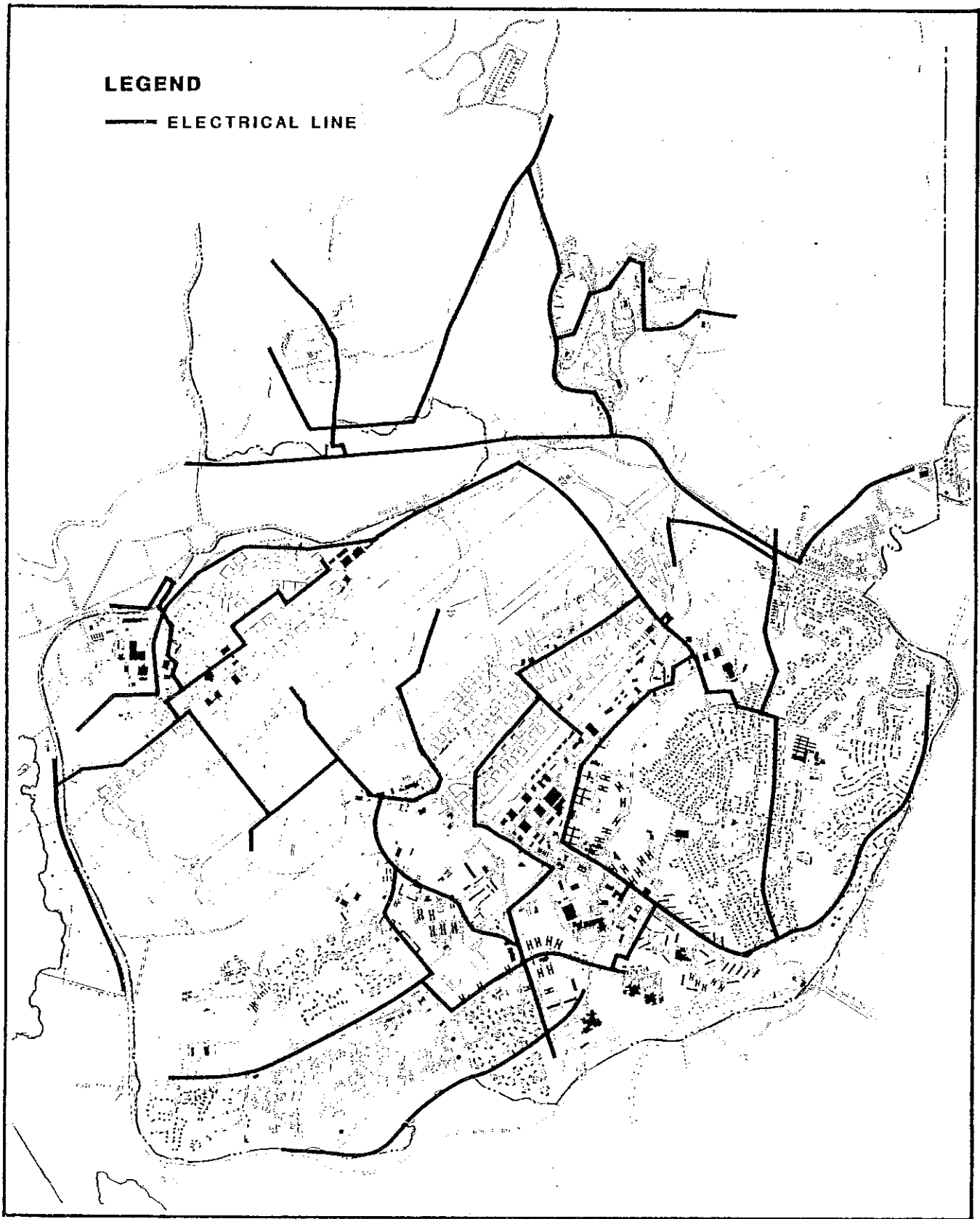
— SEWER LINE



**SEWERAGE SYSTEM**  
**KADENA AIR BASE**



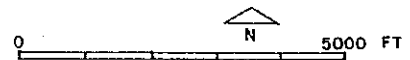
**FIGURE C-5**



**LEGEND**

— ELECTRICAL LINE

**ELECTRICITY SYSTEM  
KADENA AIR BASE**



**FIGURE C-6**

(d) Airfield Lighting. The airfield lighting facilities at Kadena Air Base consist of:

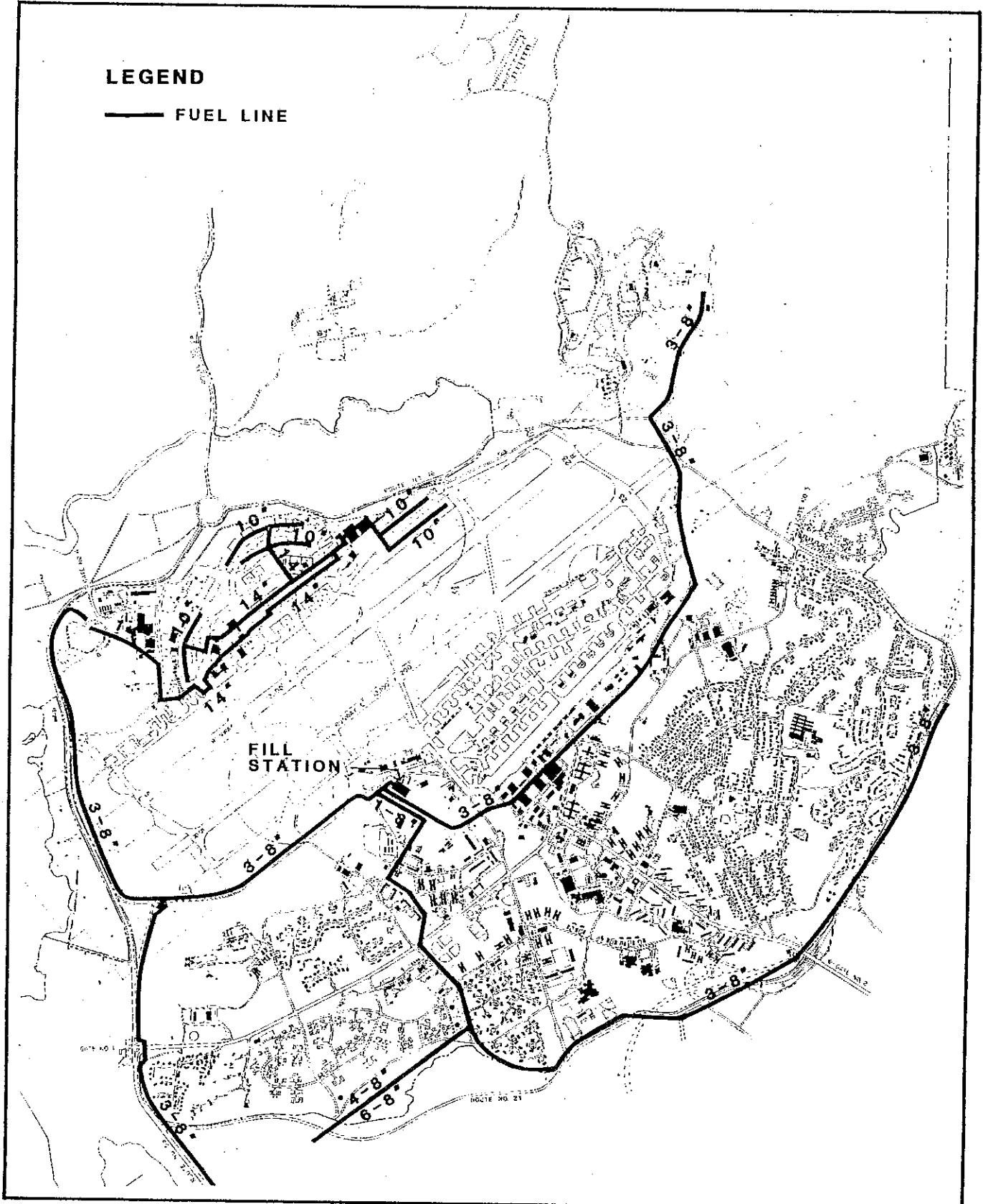
- Runway edge lighting with three 6.6-amp circuits fed from C-3 regulators.
  
- Centerline touchdown zone lighting consists of two 20-amp circuits, fed from two RGU-5/F regulators, for the south end of the runway.
  
- Runway centerline lighting consists of two 20-amp circuits fed from RGU-5/F regulators.
  
- Pre-threshold lighting with two 20-amp circuits, one each for the north and south ends, fed from one MC-1 regulator. A transfer switch permits the one regulator to be switched between the north and south systems.
  
- Approach lighting consists of two 20-amp circuits fed from one MC-1 regulator. A transfer switch permits the one regulator to be switched between the north and south approach systems.
  
- Strobe beacons (sequence flashing lights) are installed as an integral part of the north approach systems. Visual approach slope indicator (VASI) lighting on a 6.6-amp circuit is available at the north and south ends of the runway. Runway distance markers on a 6.6-amp circuit are available on both sides of the runway.
  
- Taxiway lighting consists of fifteen 6.6-amp circuits fed from Type M-1 regulators.

(e) Liquid Fuel (see Figure C-7). The liquid fuel system at Kadena Air Base includes bulk storage facilities for aviation fuel, truck fill stands for loading refueler servicing units, and a hydrant refueling system for refueling and defueling of aircraft at parking hardstands.

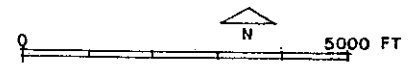
Bulk and ready storage facilities for fuel have an aggregate storage capacity of about 850,000 barrels. Fuel is delivered to the bulk storage tanks through the island-wide liquid fuel system (POL) operated by the Army. A permanent truck fill stand is provided for loading of refueler servicing units. This installation consists of four single outlet truck fill stands, eight

**LEGEND**

— FUEL LINE



**LIQUID FUELS SYSTEM**  
**KADENA AIR BASE**



**FIGURE C-7**

300-GPM water separators and four 600-GPM horizontal centrifugal dispensing pumps. At present, the three 10,000-barrel underground storage tanks in Tank Farm No. 1 serve as immediate operating storage for loading of refueler servicing units.

(f) Summary. Utility systems are currently being expanded or adjusted to meet the new demands of increased construction and population of Kadena Air Base. However, a major problem is beginning to develop in solid waste disposal. Land available for fill use is becoming scarce. Future plans will be developed for a possible joint service solid waste disposal facility, likely to utilize incineration.

## **2. Program Analysis**

a. Introduction. This section presents an analysis of the requirements and existing facilities at NAF Kadena to determine adequacies and deficiencies. The basic source of data for this analysis is the Facilities Requirements Plan (FRP) dated September 1984. The FRP translates the basic mission and tasks of the activity into facility requirements, compares these requirements with existing assets and identifies facilities deficiencies and surpluses. This information is adjusted based on an on-site visit and discussions with station personnel and chain of command representatives.

Terms used to describe facility conditions are adequate, substandard, and inadequate. An "adequate" facility is fully capable of supporting its current use without modifications or repairs which require approval and funding beyond the authority of the activity's commanding officer. "Substandard" describes a facility with deficiencies that require approval and funding beyond the authority of the commanding officer for modifications or repairs to make the facility adequate for its function. "Inadequate" describes a facility that cannot be made adequate for its present use through "economically justifiable means." An inadequate facility could, however, be adequate or substandard for a use other than its assigned category code. The definition of these terms is provided by NAVFACENGINST 11010.44D CH-1, 24 February 1981.

b. Activity Factors.

(1) Mission. The FLEACT Okinawa/NAF Kadena mission is: to maintain and operate facilities and provide services to support operations of aviation activities and units of the operating forces of the Navy; to provide limited logistic support for fleet units on Okinawa; to coordinate the provision of logistic support for all naval activities on Okinawa; to provide other logistic support, coordination and services as tasked by higher authority; and to maintain liaison with other U.S. military services, civil and military administrators on Okinawa as necessary to perform assigned functions and tasks. Finally, FLEACT Okinawa/NAF Kadena is to serve as an effective instrument of the U.S. foreign policy by initiating and continuing action programs which promote positive relations between the command and foreign nationals, and which assist individual members of the Navy and their families to work effectively, live with dignity and satisfaction, and function as positive representatives of the Navy and of the U.S. while overseas.

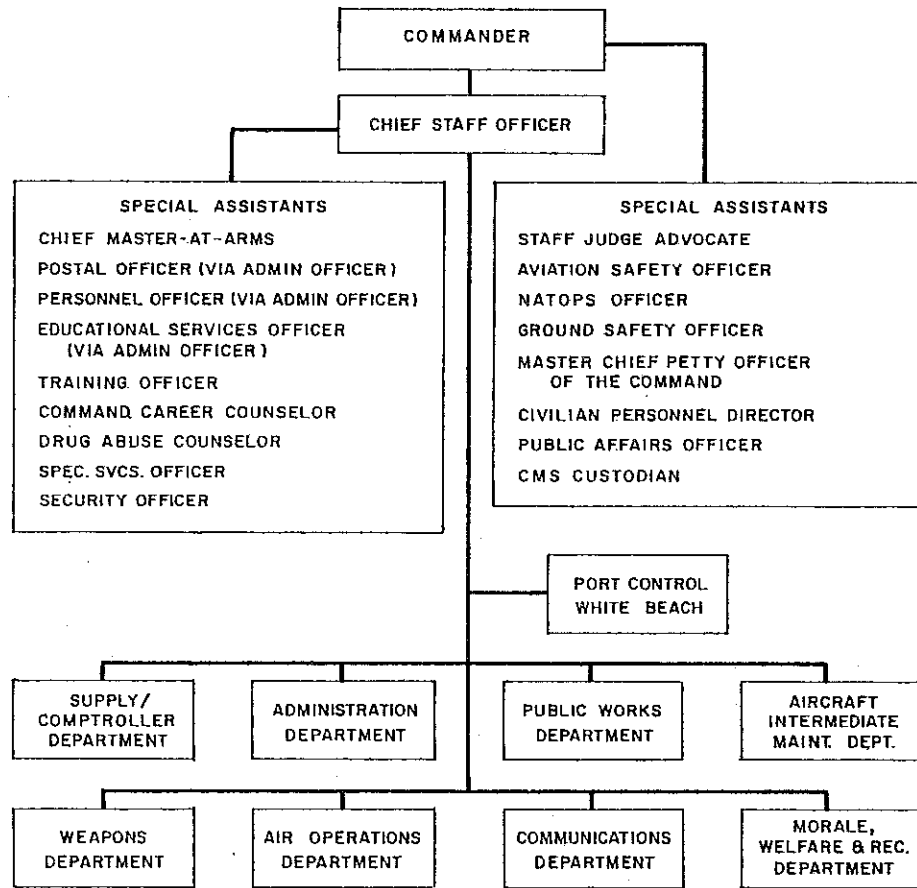
(2) Base Loading.

Personnel

<u>Rank</u>	<u>No.</u>
Officer	174
Enlisted	1,105

(3) Organization and Chain of Command. The organization chart for FLEACT Okinawa/NAF Kadena is shown on Figure C-16. All components are quartered at Kadena Air Base, except for the Port Control at White Beach.

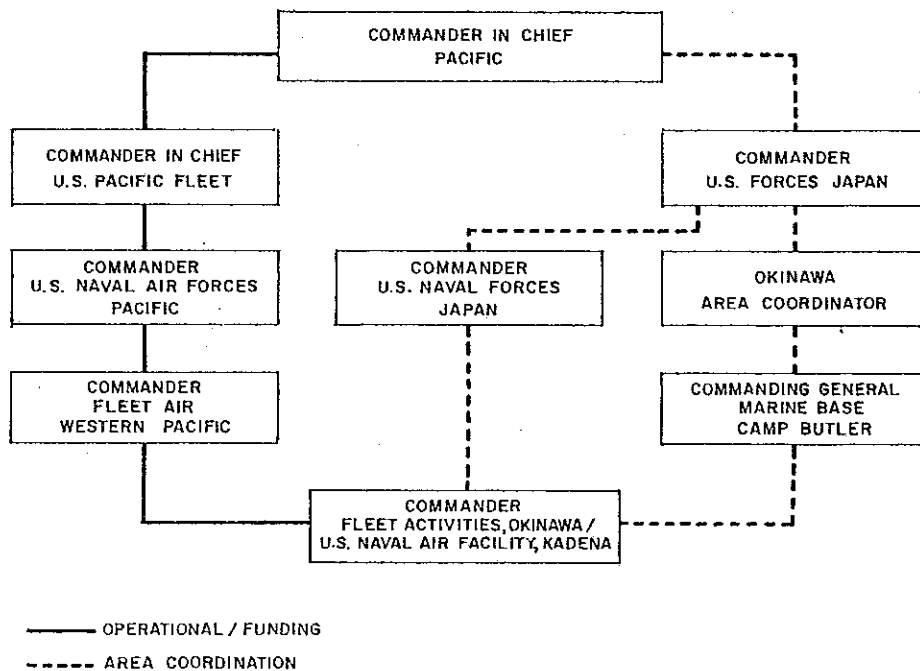
The chain of command is shown on Figure C-17. Note that FLEACT Okinawa/NAF Kadena is under the operational control of Commander Fleet Air, Western Pacific (COMFAIRWESTPAC), at Atsugi, Japan, and Commander Naval Air Force, U.S. Pacific Fleet (COMNAVAIRPAC), at San Diego. However, in matters of on-island coordination, FLEACT Okinawa/NAF Kadena reports to the Commanding General, Marine Corps Base, Camp Smedley D. Butler (CG MCB Camp Smedley D. Butler), who serves as Okinawa area coordinator, and to Commander U.S. Forces, Japan (COMUSJAPAN), who is area coordinator for the Japan area. On purely naval matters, FLEACT Okinawa/NAF Kadena reports to Commander U.S. Naval Forces, Japan (COMNAVFORJAPAN), at Yokosuka for area coordination.



**ORGANIZATION CHART** FLEACT Okinawa / NAF Kadena

FIGURE C-16

C-7  
by [unclear]



**CHAIN OF COMMAND**

FIGURE C-17

c. Facilities Description and Requirements Analysis.

(1) Operational and Training Facilities.

- Aircraft Parking Apron (CCN 113-20). The requirement for aircraft parking apron is 220,800 SY. Existing assets consist of 160,000 SY which are in adequate condition. There is a shortfall of 60,800 SY to provide combat parking areas. However, as previously discussed, there is insufficient real estate to construct additional apron space in conformance with Air Force airfield criteria.

- Tactical Support Van Pad (CCN 116-65). The existing van pad, Structure 3673, consists of 666 SY of hardstand which supports the Anti-Submarine Warfare Operations Center's (ASWOC) relocatable vans. The pad is in adequate condition and satisfies the requirement. However, the vans will be replaced with a permanent structure under Project P-321Z under a CNO directed program.

- Aircraft Operations Building (CCN 141-40). There is a facility shortfall of 1,620 SF in the aircraft operations building. The existing facility, Building 3674, is a permanent building of 8,140 SF which adequately houses the air operations administration, passenger lounge, briefing rooms, weather detachment, and a snack shop. Although an addition to the building is required, the site is constrained by the ESQD arc from the combat aircraft parking areas.

- Liquid Oxygen (LOX) Nitrogen Facility (CCN 141-87). The station requires a 400 SF facility to store the LOX and nitrogen carts in accordance with fire safety criteria. There are no existing assets.

- Academic Instruction Building (CCN 171-10). FLEACT Okinawa/NAF Kadena provides training for all Navy personnel on Okinawa. There is 1,068 SF of space in Building 3597 and the training offices are located in Building 3591. An additional 4,532 SF is required. The shortfall will be satisfied by converting the existing data processing center spaces in Buildings 3596 and 3598 upon completion of a new data processing center.

- Other Operational and Training Facilities. The existing aircraft rinse facility and telecommunications center are adequate and satisfy the requirements. The Navy jointly utilizes the Kadena Air Base runways and taxiways with the



Air Force; these facilities satisfy the Navy requirement. The ordnance operations facility, Building 44075, is substandard and requires renovation, but no additional space is required.

## (2) Aircraft and Facility Maintenance

- Maintenance Hangars (CCN 211-05). The existing hangars (Buildings 3667, 3671, and 3672) satisfy the requirement for aircraft repair space. However, there is a facility shortfall in crew and equipment spaces. Since the rotational Marine Corps aircraft utilize tactical vans as part of their training, no additional construction is required.

- Avionics Shop (CCN 211-45). The avionics shop in Building 3670 is in substandard condition and requires an additional 2,500 SF to expand the Calibration Lab space. Building 3670 lies within the ESQD arc of the combat aircraft parking areas.

- Power Check Pad with Sound Suppression (CCN 211-88). The existing engine test cell, Structure 3677, lacks noise suppression capability and it is isolated from the other maintenance facilities. When replacement of the test cell is necessary, it should be replaced with an acoustical enclosure to reduce the noise levels experienced by the neighboring community. Although a site closer to the flight line is desirable, there is insufficient developable space within the Navy enclave to provide a replacement site; the existing site will, therefore, be retained for construction of a new acoustical enclosure.

- Equipment Holding Shed (CCN 218-61 and 65). A 5,800 SF holding shed is required to protect aircraft ground support equipment (GSE) from the weather. Similarly, a 4,000 SF holding shed is required to shelter ordnance handling equipment. There are no existing assets.

- Other Maintenance Facilities. The following maintenance facilities are adequate and satisfy the requirement: airframes shop, aviation armament shop, and engine maintenance shop (Building 3670); parachute equipment shop (Building 3576); public works vehicle maintenance shop (Building 3571); mine rework shop (Building 44089); AUW shop (Buildings 44100 and 44107); and GSE shop (Buildings 3665 and 3669). The missile shop (Building 44091) is substandard and requires renovation.

### (3) Storage Facilities.

- Fuse and Detonator (F&D) Magazine (CCN 421-12). There are no existing F&D magazines, resulting in a 4,000 SF shortfall. Two 25 feet by 80 feet magazines are required. These magazines should be sited in an area unconstrained by explosives safety criteria so that they can be used for storing all ordnance classes.

- Inert Storehouse (CCN 421-32). Two permanent inert storehouses (Buildings 44104 and 44105) provide 17,761 SF of adequate space. An additional 2,239 SF is required. Two pre-engineered buildings (Buildings 44126 and 44127) with 960 SF each are in inadequate condition and should be replaced.

- General Storage Shed (CCN 441-35). There is a requirement for 4,000 SF of general storage shed. There are no existing assets.

- Other Storage Facilities. Although there is no facility shortfall in high explosives magazines (existing assets previously described in Section 1.c.(2)) actual space utilization indicates a shortfall in storage areas. The requirement will be re-evaluated upon approval of FLEACT Okinawa's Approved Basic Stock Level of Ammunition (ABSLA). Due to a lack of developable space in the existing Navy areas, additional real estate would be required from the Air Force to site any additional magazines.

There are no significant facility shortfalls in the following categories: ready magazine, smokedrum storehouse, small arms magazine, general warehouse, flammable storage, and open storage.

### (4) Administrative Facilities.

- Data Processing Center (CCN 610-20). The existing data processing center is housed in Buildings 3596 and 3598. A consolidated facility collocated with the Supply/Comptroller department in Building 3578 is required.

(5) Troop Berthing.

- Bachelor Officer's Quarters (BOQ) (CCN 724-11/12). COMFLEACT Okinawa has three BOQ's (Buildings 323, 324, and 521) in the Air Force billeting area with a total berthing capacity of 99 persons. Thirty-two berths are substandard and require renovation. An additional 48 berths are required.

Bachelor Enlisted Quarters (BEQs) are adequate and no additional construction is required.

(6) Personnel Support Facilities. The Air Force provides all personnel support for NAF Kadena. Services are generally adequate.

## D. WHITE BEACH

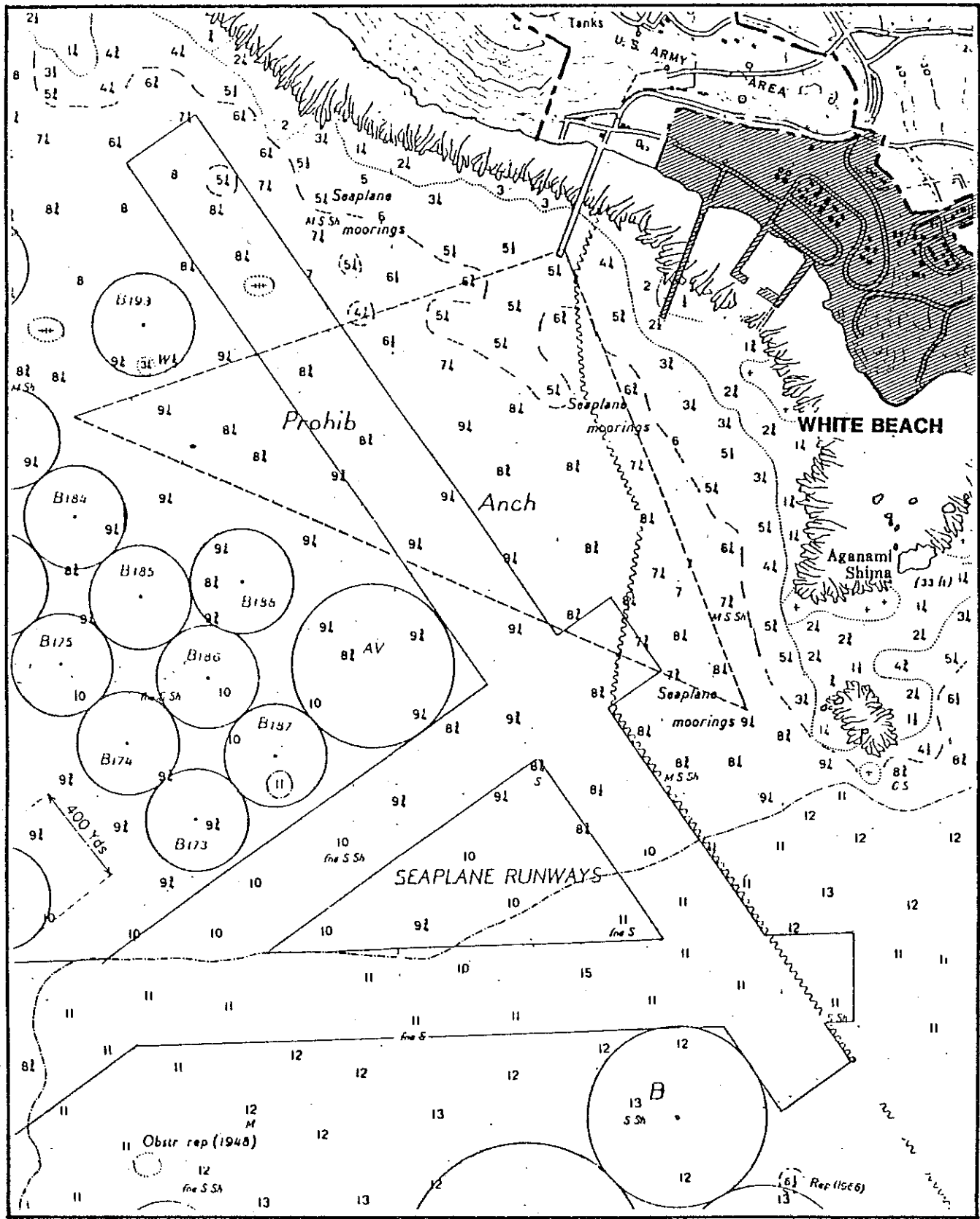
### 1. Site Analysis

#### a. Introduction.

(1) Background. The White Beach Area, including the U.S. Army owned area, is all that remains of a large advance base complex developed in Buckner Bay (Nakagusuku Wan) between April and September 1945. This base was to have served as a springboard for the invasion of Japan. Literally hundreds of anchorages were swept and identified within Buckner Bay, and fuel and cargo piers were constructed (see Figure D-1). White Beach itself was originally established as a seaplane base, with Seabee construction starting 14 June 1945. The base became operational on 1 July of the same year. A fuel pier and a cargo pier were constructed during this same time frame. A large advance base construction depot was established behind and adjacent to White Beach on the Katsuren Peninsula. This depot was later dismantled and the land returned to the Okinawans. The portion of the area with the original piers has remained under U.S. Army control, while the old seaplane base area has remained under Navy control as the port of White Beach.

(2) Location. White Beach is on the southern tip of the Katsuren Peninsula, approximately 10 miles east of Kadena Air Base. The area is within the municipal jurisdiction of Yonagusuku Son. Primary access to White Beach is through Local Highway 8 (see Figure D-2).

(3) Size. The White Beach Area is a 407-acre complex assigned to the Army and the Navy. The Navy's portion contains 197 acres used mainly for port operations, troop housing, administration, and personnel support. White Beach also includes certain water areas as shown in Figure D-3. These are: (a) an exclusive use water area in Buckner Bay for support of surface operations, (b) a target launch safety area, and (c) a target recovery area. There are no restrictions on the exclusive use water area. Use of the target launch and recovery areas are limited to daylight hours not to exceed 144 days per year. However, they are no longer used because the target launch mission has been discontinued.



# ANCHORAGES

## WHITE BEACH

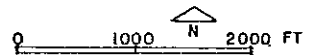
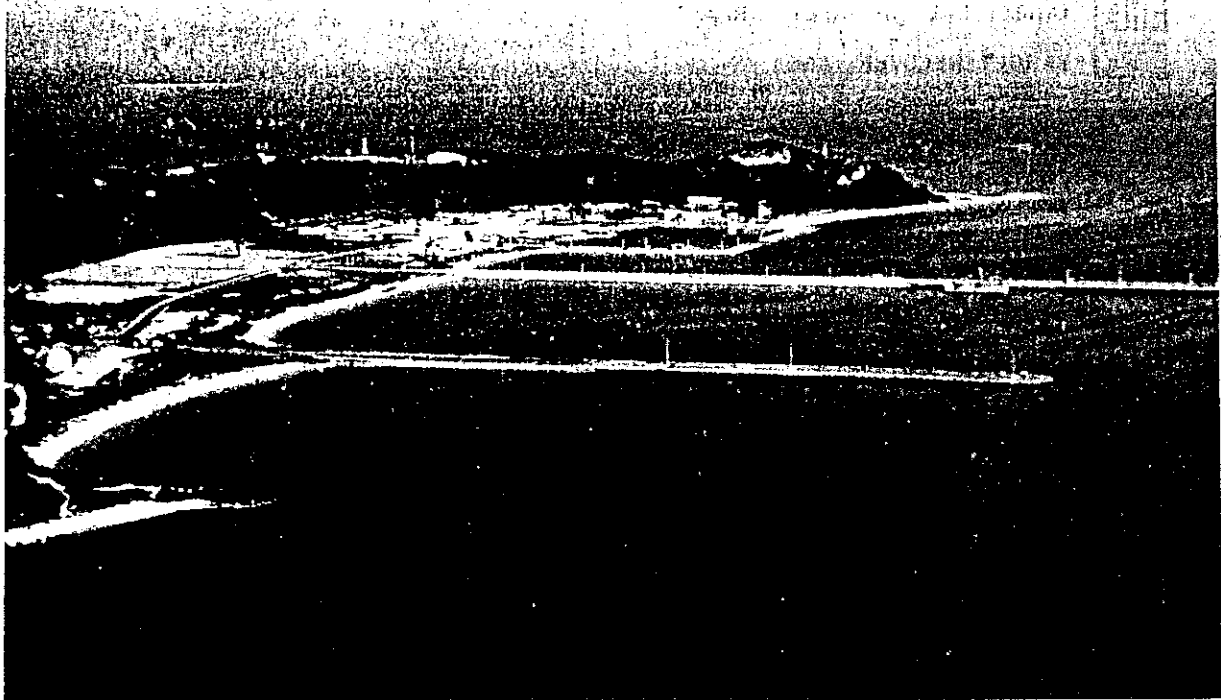
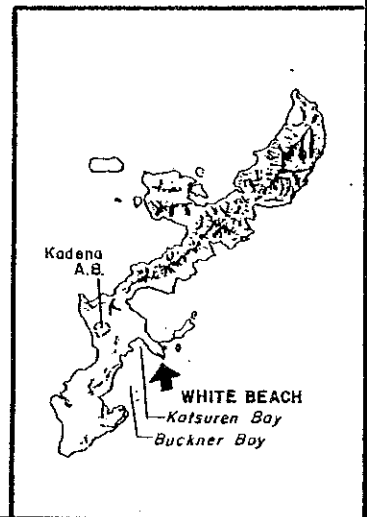
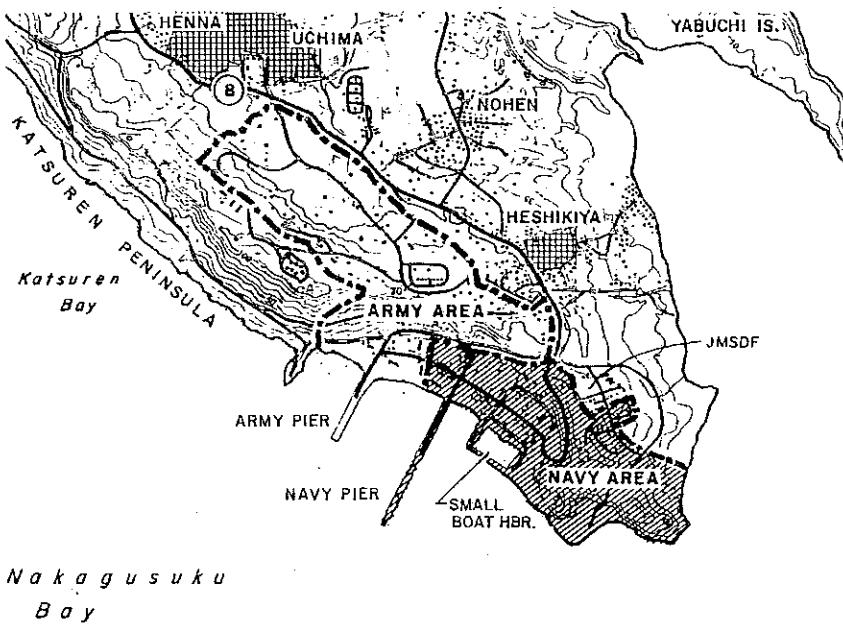


FIGURE D-1

45



VIEW FACING SOUTHEAST, PARALLELING THE COAST. THE ARMY PIER IS IN THE FOREGROUND, THE NAVY PIER AND SMALL BOAT HARBOR IN THE CENTER.



# LOCATION MAP WHITE BEACH

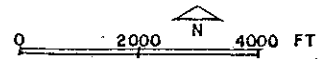



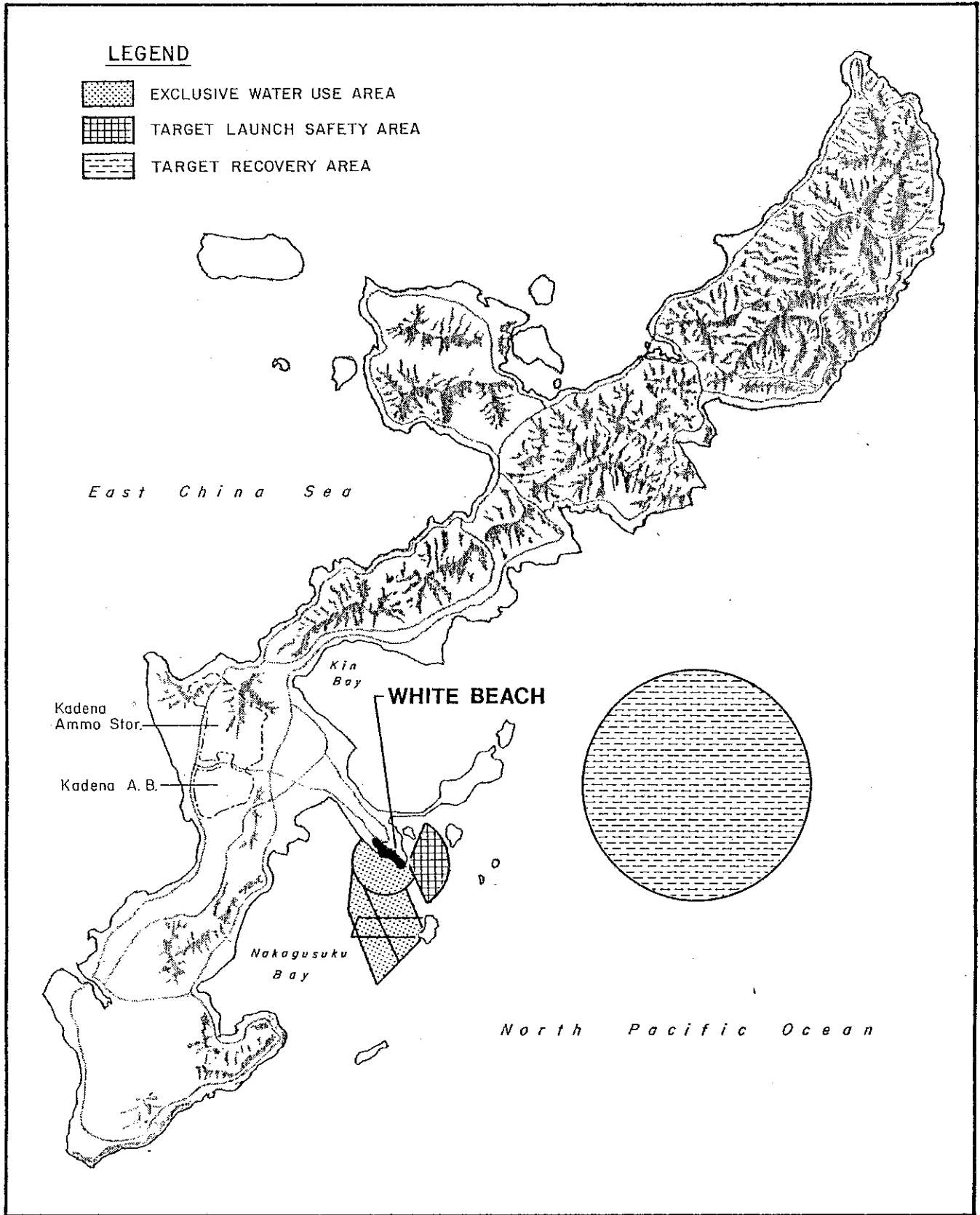


FIGURE D-2

**LEGEND**

-  EXCLUSIVE WATER USE AREA
-  TARGET LAUNCH SAFETY AREA
-  TARGET RECOVERY AREA



**WATER AREAS  
WHITE BEACH**



FIGURE D-3

(4) Topography. Terrain at White beach consists of a low, crescent-shaped flat area fronted by the beach and backed by a relatively steep hill. To the north and east of the level waterfront area lies a relatively rough but usable plateau some 100 to 150 feet above the beach.

(5) Oceanographic Conditions. The White Beach area is well protected from northerly storms and, to a limited extent, is protected by offshore reefs from easterly and southerly storms. Buckner Bay is sufficiently large that storms can generate heavy wave action on the White Beach shoreline and cause turbulence within the small boat basin area. Tidal variation is slightly over seven feet.

b. Existing Conditions.

(1) Existing Facilities (see Figure D-4). There are 61 major buildings at White Beach with an aggregate total of about 123,000 square feet of covered space. Facilities are largely of permanent construction, almost all of which were constructed in the 1950's and 1960's. Construction in the 1970's and 1980's has been very limited.

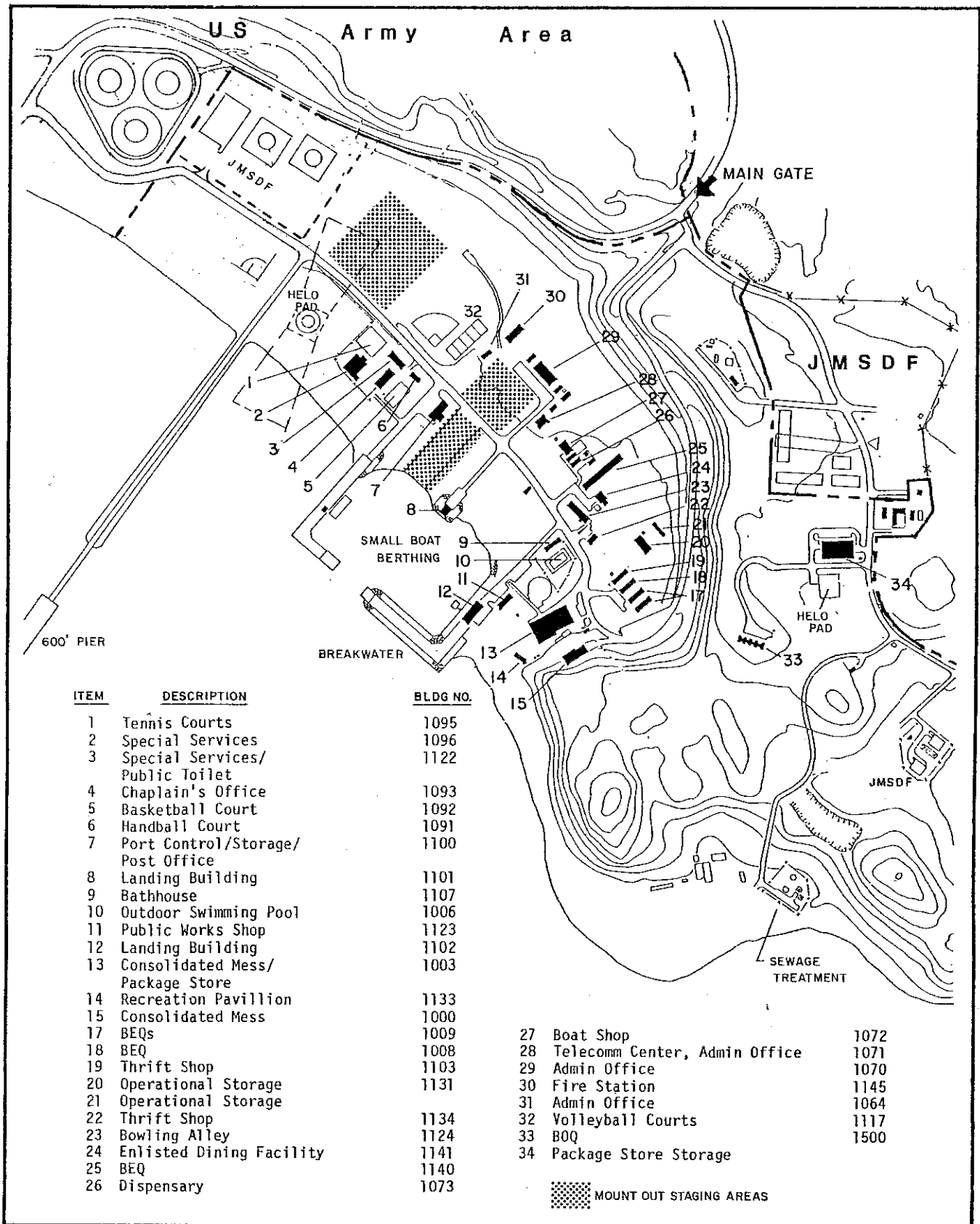
The breakdown by use is as follows:

	<u>Floor Area (SF)</u>
Port Control and Operations	14,900
Maintenance and Storage	4,900
Dispensary	1,000
Admin Spaces	12,000
Troop Hsg (6 off, 59 enl)	15,800
Personnel Suppt (excluding troop hsg)	74,900
TOTAL	123,500

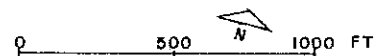
Personnel support facilities also include nine outdoor playing courts, two playing fields, a 25-meter outdoor swimming pool, and various recreational pavillions.

Navy waterfront facilities include a pier with 1,584 feet of berthing and a water depth of 35 feet, a small craft wharf with 450 feet of berthing inside a protected small boat basin, and a landing craft ramp. In addition, the Army operates a POL pier 500 feet long with water depth of 32 feet.





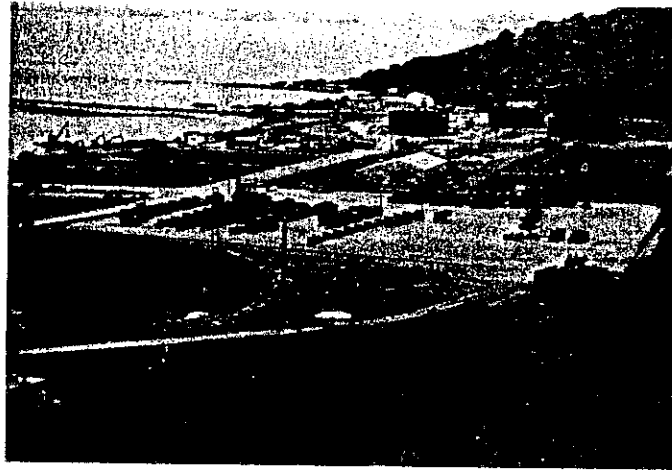
**FACILITY LOCATOR MAP**  
**WHITE BEACH**



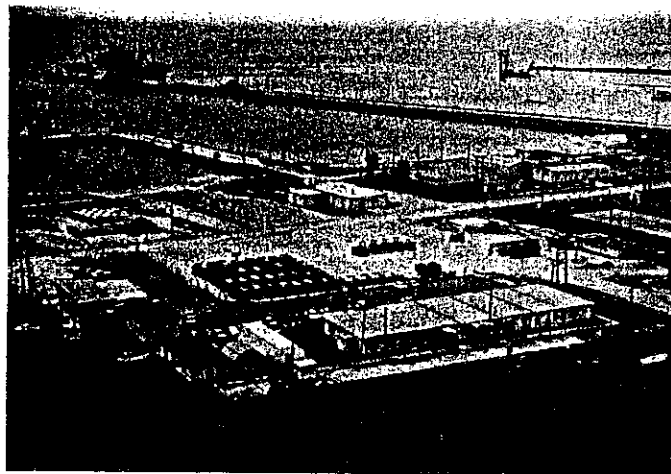
**FIGURE D-4**

53

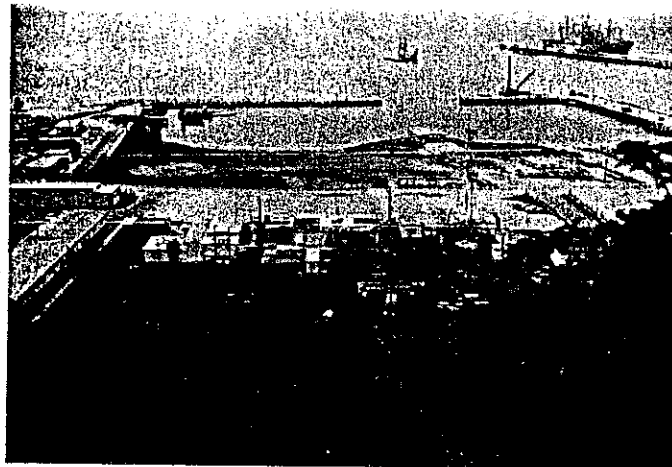
49



FOREGROUND: STAGING AREA  
BACKGROUND: ARMY POL TANKS



FOREGROUND: CTF 76 ADMINISTRATION  
BACKGROUND: STAGING AREA, SMALL  
CRAFT BASIN

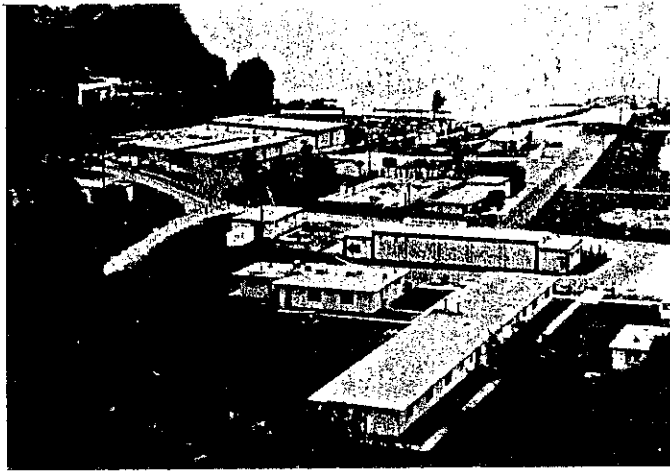


FOREGROUND: BOAT SHOP  
BACKGROUND: SMALL CRAFT BASIN

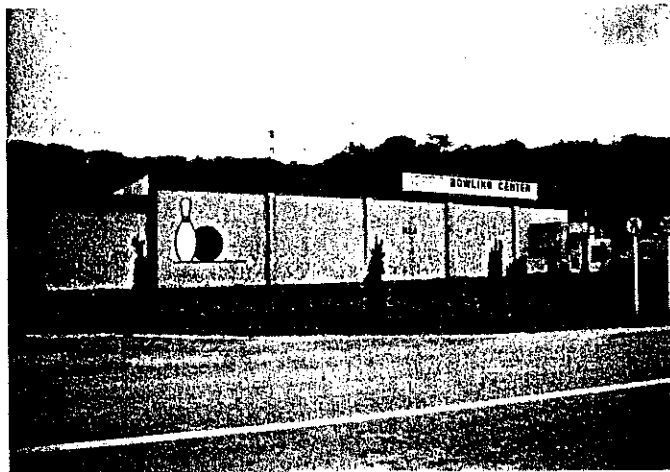
## SITE PHOTOGRAPHS

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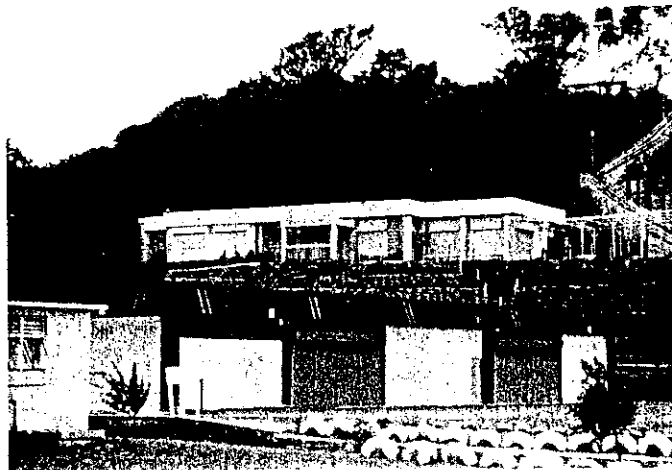
WHITE BEACH



**PERSONNEL SUPPORT AREA**



**BLDG. 1124, BOWLING CENTER**



**FOREGROUND: BLDG. 1003, ALL HANDS CLUB  
BACKGROUND: BLDG. 1000 OFFICERS CLUB**

## **SITE PHOTOGRAPHS**

**WHITE BEACH**

(2) Existing Land Use (see Figure D-5). Approximately 15 acres of the level land adjacent to the waterfront at White Beach is to be used jointly with the JMSDF. This area is used very little by the U.S. Other open areas are used as staging areas for the Marine Corps mount-out. The developed area contains the piers and boat basin along with administration, storage, troop housing, and community support functions. The developed area on the plateau contains a single BOQ. The former target launch area is being used by the JMSDF for troop housing.

(3) Circulation. Access to White Beach is provided primarily by Route 8, a single improved two-lane road, although Route 16 and an unnumbered extension offer partial back-up. In general, Route 8 is adequate, except during peak traffic hours. This road system is a potential bottleneck for Marine Corps mount-out functions.

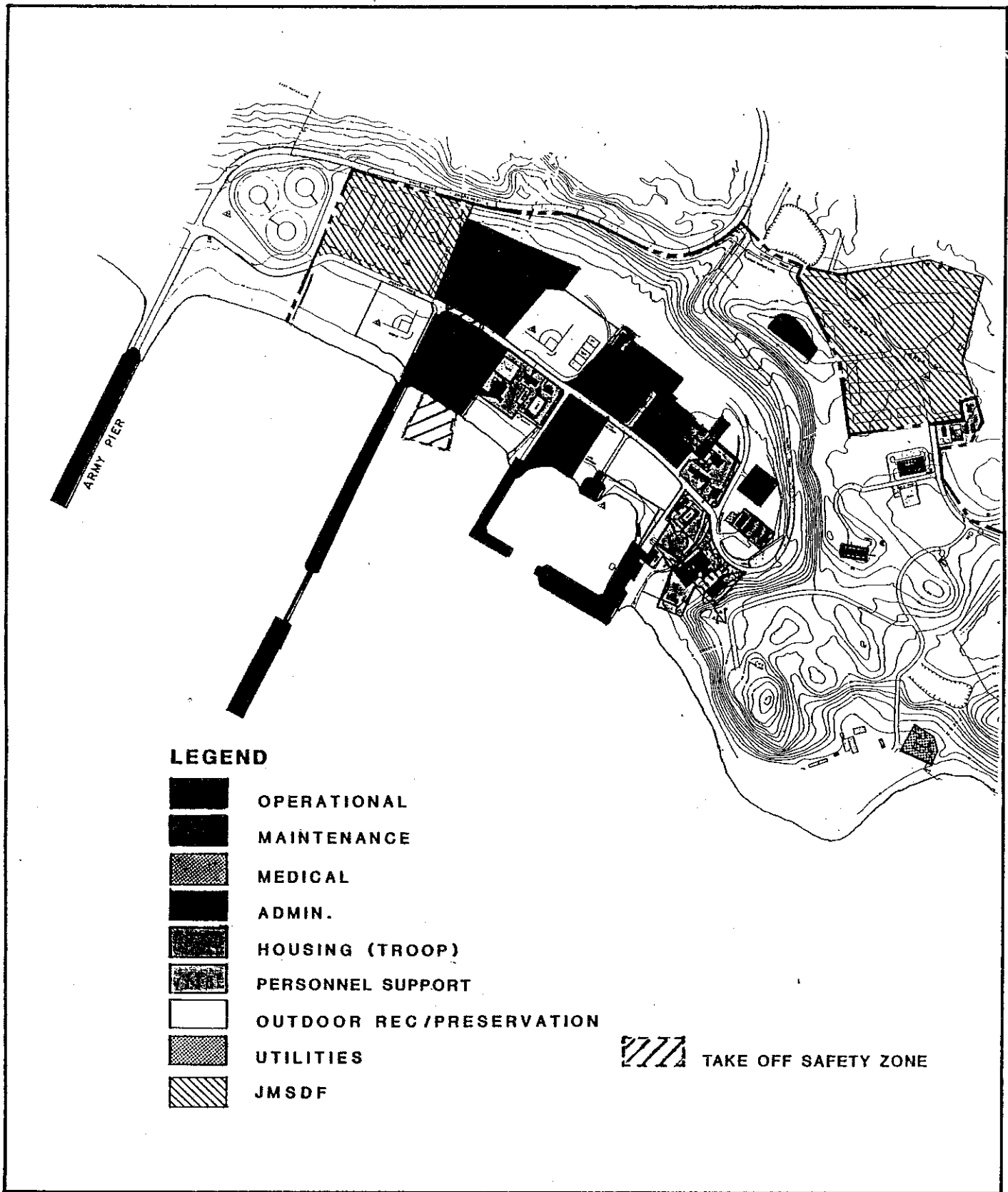
(4) Utilities.

(a) Water (see Figure D-6). The OPEB, through the Katsuren City Municipality, currently supplies the Navy's potable water. The Army portion is provided by the Navy's system under an inter-service support agreement (ISSA). In 1981, the OPEB provided an average of 54,000 gallons per day, about 70 percent of the minimum required. Although the water supply is inadequate, White Beach has effectively lowered water consumption through water rationing and conservation measures.











White Beach has a 40,000 gallon storage tank situated at the top of the hill in the area adjacent to the main gate. The tank elevation provides a system static pressure of about 65 pounds per square inch.

The distribution system consists of 2 to 6 inch pipes of cast iron or galvanized steel. A 6 inch water meter is located approximately 300 feet south of the main gate. This meter, which measures the amount of water actually supplied to White Beach, is operated and maintained by the Katsuren City Municipality.

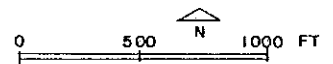
(b) Sewage (see Figure D-7). Sewage at White Beach is carried by force mains to a primary treatment plant. Effluent is discharged to the ocean through a 1,500 foot outfall.



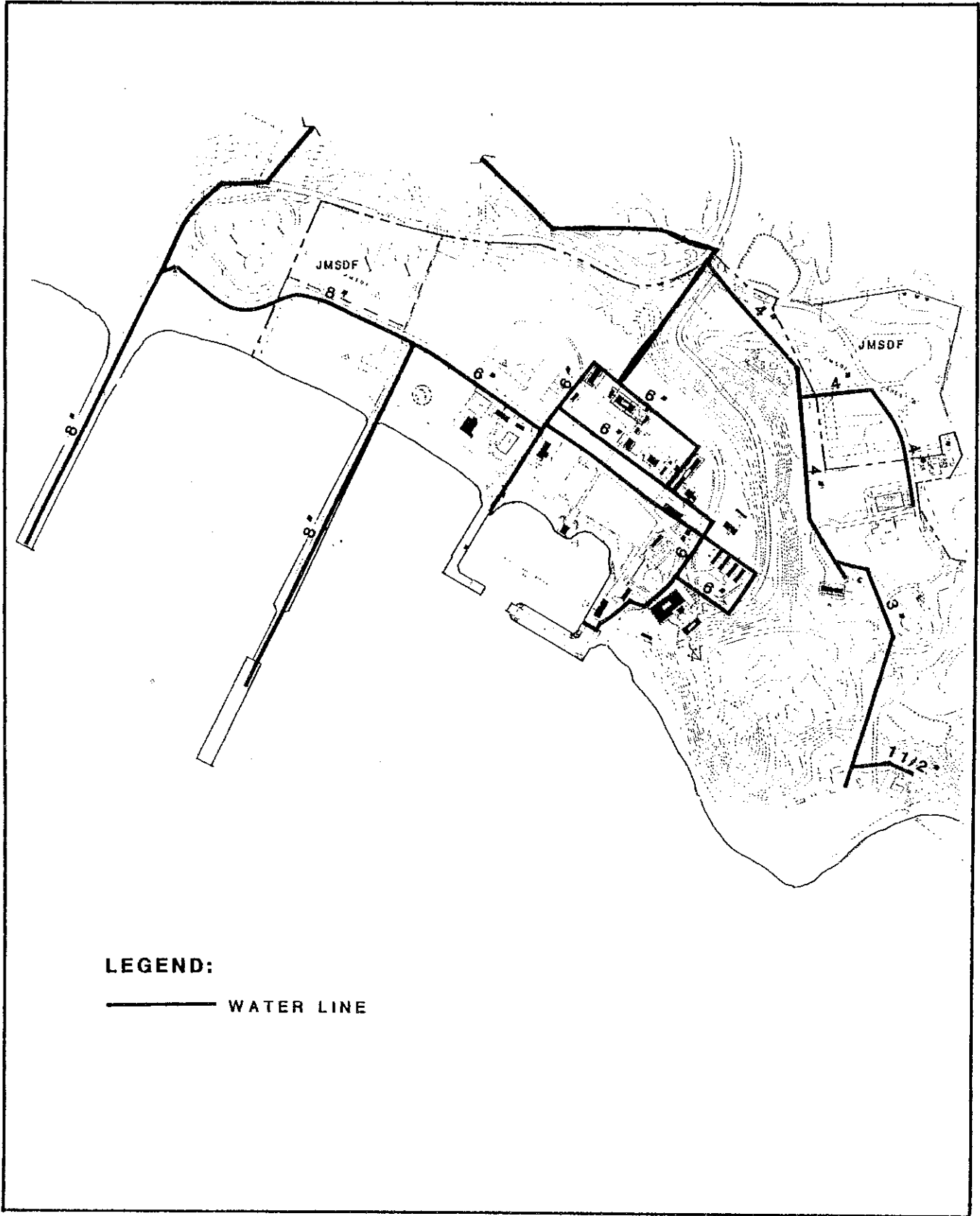
**LEGEND**

-  OPERATIONAL
  -  MAINTENANCE
  -  MEDICAL
  -  ADMIN.
  -  HOUSING (TROOP)
  -  PERSONNEL SUPPORT
  -  OUTDOOR REC/PRESERVATION
  -  UTILITIES
  -  JMSDF
-  TAKE OFF SAFETY ZONE

**EXISTING LAND USE  
WHITE BEACH**



**FIGURE D-5**



**WATER SYSTEM**  
**WHITE BEACH**

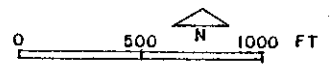
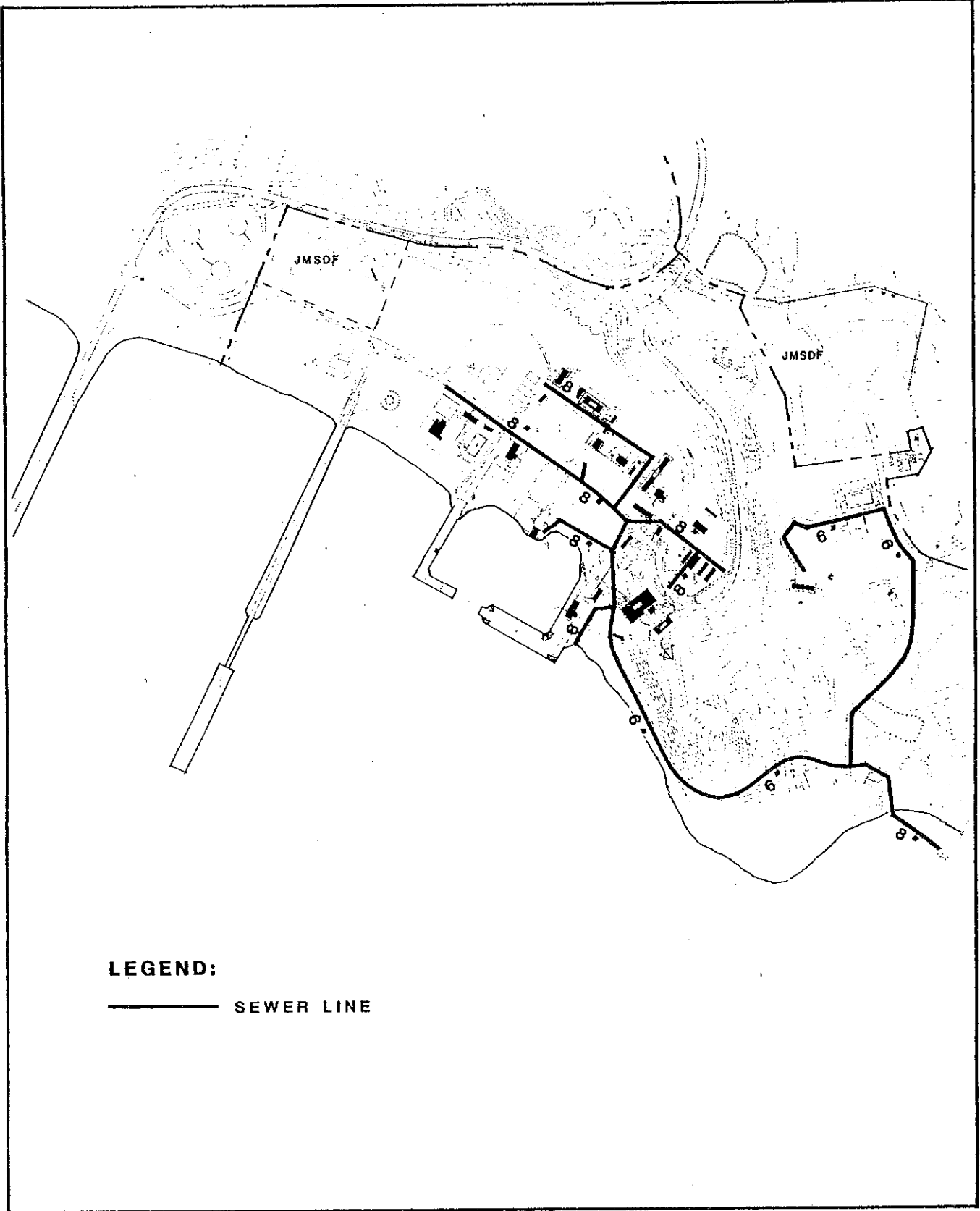


FIGURE D-6

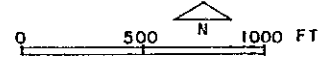
54



**LEGEND:**

———— SEWER LINE

**SEWERAGE SYSTEM  
WHITE BEACH**



**FIGURE D-7**

55

(c) Electricity (see Figure D-8). Electric power is provided to White Beach by the OEPC. Service is via a single 13.8 KV overhead line from a switching station near the Awase Peninsula. The voltage is stepped down to 2.4 KV at several transformer stations within White Beach, and further reduced using service transformers to serve buildings and piers.

(d) Liquid Fuel. POL debunkering and storage are performed by the Army across the pier adjacent to the Navy's portion of White Beach. The Army maintains a small Fuel system independent of the military island-wide system. Storage capacity is 136,000 barrels devoted primarily to diesel fuel marine (DFM). The Army is consolidating its POL storage tanks on the lower beach area. Ship refueling capability is available to the Navy at both the Army and Navy piers which are the only DOD ship refueling piers on Okinawa.

## 2. Program Analysis

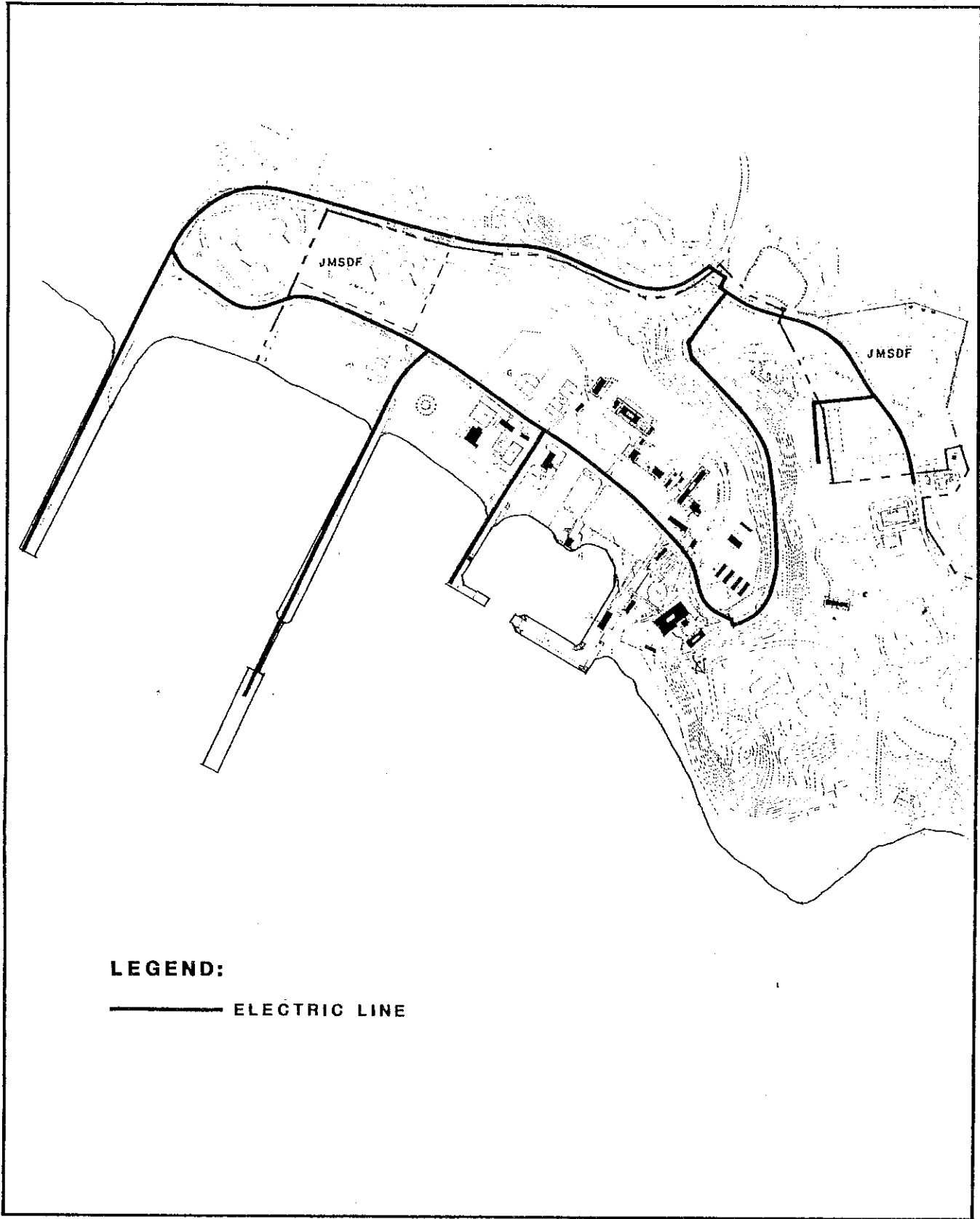
a. Introduction. This section presents an analysis of the requirements and existing facilities at White Beach to determine adequacies and deficiencies.

b. Activity Factors.

(1) Mission and Tasks. The formal mission of White Beach is covered within the framework of the FLEACT Okinawa/NAF Kadena mission listed in the previous chapter. In effect, White Beach is a small "naval station" providing support to ships of the Seventh Fleet, and providing a staging area for Marine Corps ground units embarking and debarking from ships of the Seventh Fleet Amphibious Force. It is also the designated homeport for Commander, Amphibious Force One (COMPHIBGRUONE or CTF-76).

(a) Marine Corps Unit Rotation. White Beach supports the periodic rotation of battalion landing teams arriving and departing Marine Corps Base (MCB) Camp Butler. This operation requires use of the Navy and Army piers, as well as the small boat basin. Generally, four ships are tied up at the piers (typically an LPH, an LKA, an LSD, and an LPD), supplemented by one or more LCUs in the basin, by two LSTs at Kin Red (Camp Hansen Area) and by up to four at Oura Wan (Camp Schwab).

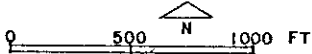




**LEGEND:**

————— ELECTRIC LINE

**ELECTRICITY SYSTEM**  
**WHITE BEACH**



**FIGURE D-8**

57

(b) Refueling Support. White Beach provides the only refueling facilities for ship refueling on Okinawa.

(c) General Seventh Fleet Support. White beach provides naval station type services for all transiting fleet units. The majority of personnel support facilities, including the officers club which is presently inactive, were constructed to support these units.

There have been nearly 1,500 ship visits to White beach since 1972 as shown on Table D-1. Of these, 1,042 or 70% were U.S. Navy ships. The Military Sealift Command (MSC) ship visits are POL tankers supplying the Army POL system.

(d) GOJ Joint Use. The Japanese Maritime Self Defense Force (JMSDF) operates a small shore establishment and conducts shipboard training and shore defense exercises from White Beach. There is also a nuclear radiation monitoring station at the Navy pier which is operated by the GOJ. Table D-1 displays the GOJ ship visits to White Beach.

Future JMSDF development must be balanced against DOD real estate requirements. In particular, the open area fronting the JMSDF boat maintenance facility must be preserved for contingency marine mount-out support.

(2) Base Loading. The following approximate loading figures for the White Beach geographical area consist of shore party and fleet liberty personnel used for planning at White Beach:

<u>RANK</u>	<u>NO.</u>
Shore Party	
Officer	22
Enlisted	87
Fleet Liberty Party	2,166

(3) Organization and Chain of Command. Refer to the FLEACT Okinawa/NAF Kadena organization and chain of command data in the previous chapter for this information (Figures C-16 and C-17).

TABLE D-1

SHIP VISITS TO WHITE BEACH

<u>YEAR</u>	<u>TYPE</u>	<u>NAVY PIER</u>	<u>ARMY PIER</u>
1972	USN	101	38
	JMSDF	6	--
1973	USN	89	26
	JMSDF	5	--
1974	USN	62	38
	JMSDF	4	1
1975	USN	59	38
	MSC	1	8
	JMSDF	8	9
1976	USN	40	40
	MSC	1	4
	JMSDF	11	7
1977	USN	61	27
	MSC	4	8
	JMSDF	10	9
1978	USN	42	20
	MSC	1	9
	JMSDF	22	15
1979	USN	25	37
	MSC	--	3
	JMSDF	14	7
1980	USN	35	20
	MSC	1	19
	JMSDF	10	6
1981	USN	54	38
	MSC	--	10
	JMSDF	34	11
1982	USN	41	11
	MSC	5	13
	JMSDF	36	6
1983	USN	24	39
	MSC	4	11
	JMSDF	23	9
1984	USN	19	18
	MSC	3	7
	JMSDF	36	12
TOTALS		891	574

USN = U.S. NAVY

MSC = MARITIME SEALIFT COMMAND

JMSDF = JAPANESE MARITIME SELF DEFENSE FORCES

c. Facilities Description and Requirements Analysis.

(1) Operational and Training Facilities.

- Helicopter Landing Pad (CCN 111-20). White Beach requires a limited use visual flight rules (VFR) helipad for administrative and limited logistical support. A newly constructed helicopter landing pad of reinforced concrete equipped with lighting system provides an adequate facility for support operations.

- Operational Storage (CCN 143-77). Operational storage of 10,000 SF is required. Three permanent buildings (Buildings 1100, 1103, and 1131) provide 7,027 SF of adequate space. The deficiency of 2,973 SF will be satisfied by a combination of new construction and conversion of existing assets.

- Other Operational and Training Facilities. The telecommunications center (Building 1071), telephone exchange (Building 1142), port control office (Building 1100), fleet landing building, and general purpose pier (Structure 1146) are adequate and satisfy the requirement. The Marine staging areas are substandard and require renovation. Overflow capability is provided by existing open areas. Additional small craft berthing of 314 feet is required to handle overflow berthing. It is recommended that this intermittent requirement be satisfied through a joint use agreement with the JMSDF.

CTF 76 has requested better connectivity and automated message equipment which, if approved, will require upgrading of the telecommunications center (Bldg. 1071).

(2) Maintenance and Storage Facilities.

- Boat Shop (CNN 213-58). The existing boat shop is housed in three inadequate buildings (Building 1067, 1072, and 1073A) with only 2,828 SF of space. These buildings are deteriorated and poorly laid out for its current function. Furthermore, their location adjacent to the CTF-76 administration area creates a poor visual base image and incompatible land use. It is recommended that a new 4,000 SF boat shop be constructed in an appropriate location.

- Public Works Shop (CCN 219-10). The existing public works shop is housed in Building 1123. The facility is permanent, in adequate condition, and satisfies the requirement of 574 SF.

- Cold Storage Warehouse (CCN 431-10). A cold storage warehouse of 500 SF is required to temporarily store perishable items for limited ship replenishment. White Beach is currently satisfying the requirement through a contractor that supplies and stores the provisions.

(3) Administrative Facilities.

- Administrative Offices (CCN 610-10). Office space is housed in six permanent buildings with a total of 10,395 SF. There is a remaining deficiency of 3,555 SF which will be satisfied by conversion of existing assets. A small remaining deficiency will be constructed when required.

(4) Troop Berthing Facilities.

- BEQ (CCN 721-11/12/13). BEQ spaces for 78 enlisted is required. There are 59 adequate spaces in Buildings 1009, 1010, 1011, and 1140. The deficiency of 29 spaces will be provided by new construction.

- BOQ (CCN 724-11/12). BOQ spaces for 11 officers is required. There are 6 substandard spaces in Building 1500. The existing spaces will be renovated and the deficiency of 5 spaces will be provided through new construction.

(5) Personnel Support Facilities.

- Gymnasium (CCN 740-43). A fleet recreation gym with 11,000 SF is required. There are no existing assets.

- Other Personnel Support Facilities. There are no other significant facility shortfalls.

## E. AWASE TRANSMITTER SITE

### 1. Site Analysis

#### a. Introduction.

(1) Background. The Awase Peninsula is the site of one of the airfields constructed by the Seabees during World War II between 23 April and 30 June 1945. It contained a single 5,000 foot runway, running across the base of the peninsula.

The old airfield was an engineering and construction marvel of sorts, as stated in the following excerpt from "Building the Navy's Bases in World War II, Volume II" compiled by NAVFACENCOM (then BUDOCKS) in 1947.

One of the major engineering accomplishments of the Okinawa operation was the rapid construction of Awase Airfield. The field was located in a rice paddy area on the east coast of the island, where drainage was poor and the submarine base was a blue clay which became unstable when wet. The nearest sources of coral for fill and surfacing were located at Gushikawa and Miyazato, three and five miles distant, respectively, although a limited supply of finger coral and coral sand was available on the Awase Peninsula. The field was urgently needed as a base for fighter aircraft conducting the air defense of the island, and the desired operational date was set at 1 July 1945.

The 36th Naval Construction Battalion successfully landed on the east coast of Okinawa and was able to begin construction of Awase on 23 April. Rice paddies were drained; large drainage canals were dug; and tide gates were installed in the seawall. A bypass for the main supply road was constructed next and traffic diverted around the field. These preliminary steps had been nearly completed, and work was underway on the fills when the torrential rains of late May and early June caused the Commanding General of the Tenth Army to divert all heavy earth-moving equipment to the maintenance of main supply roads.

Upon the return of dry weather in mid-June and the return of normal priority to airfields, construction troops redoubled their efforts on Awase. The 36th Naval Construction Battalion was reinforced with all available equipment and operators. Six battalions cooperated in moving coral to the field from the quarries at Gushikawa and Miyazato. The island command provost marshall assisted in the traffic control, and a continuous line of trucks and other earth carriers moved from the quarries to the field and back again.

Work continued night and day, except when enemy aircraft interrupted. The fill material was spread, compacted, shaped and rolled as it was placed; and the strip, taxiways and hardstands rapidly took shape. Control towers and operational buildings were constructed concurrently.

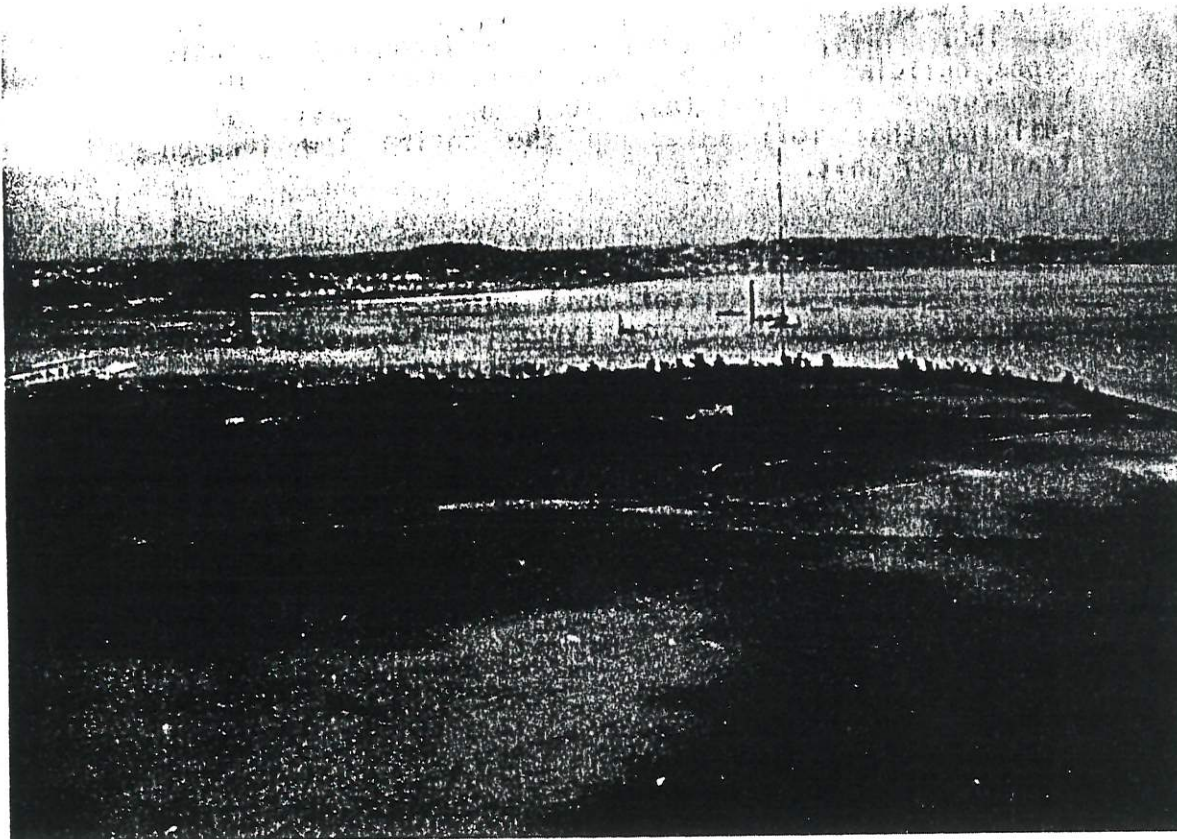
On 30 June, the strip was pronounced ready for initial operation and the desired operational date had been met. The obstacles and difficulties of drainage, material, weather and interference by the enemy had been overcome. The first planes of Marine Air Group 33 landed on the strip that same day.

The Awase Transmitter Facility is located on the extreme tip of Awase Peninsula. This land was formerly used for the U.S. Army's Forward Path Ionospheric Scatter System and portions were provided to the U.S. Navy in 1968 for low frequency communication facilities. The present high frequency communication unit was built in 1975 as a result of the disestablishment of a nearby U.S. Air Force facility. Awase Communication Site began operating in 1976.

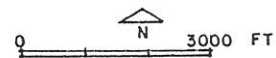
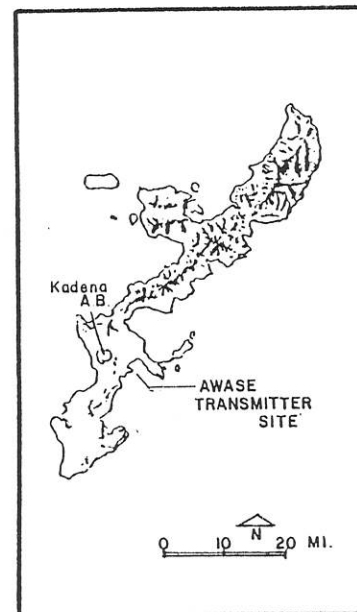
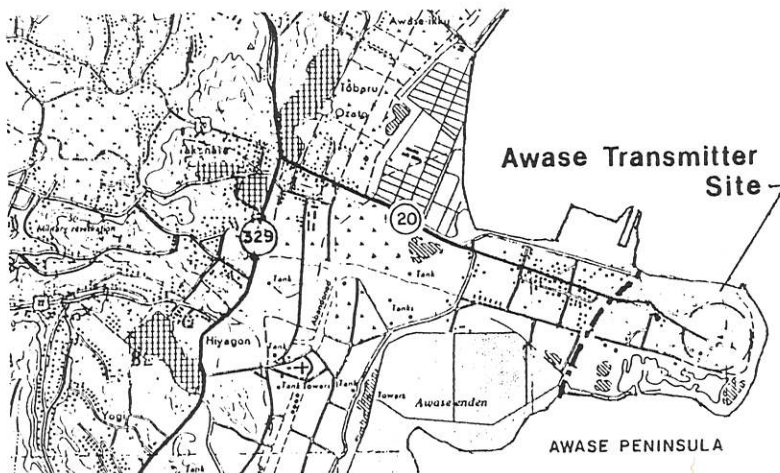
(2) Location. The Awase Transmitter Site is about 7 miles southeast of FLEACT Okinawa/NAF Kadena on the Awase Peninsula which juts out from the east coast of Okinawa. The area is within the municipal jurisdiction of Misato Son. Major north/south access is by Route 329, with local access via Route 20 (see Figure E-1).

(3) Size. The Awase Transmitter Site consists of a single parcel of land about 132 acres in size.

(4) Topography. The Awase Site is flat, with a maximum elevation of less than 30 feet.



VIEW LOOKING NORTH.



**LOCATION MAP**  
**AWASE TRANSMITTER SITE**

FIGURE E-1

54

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b. Existing Conditions

(1) Existing Facilities. The most imposing feature at Awase is the 600 foot tall, low frequency, Antenna Tower No. 150. This, along with the low frequency communications building (No. 100), the helix house (No. 105), a transformer building (No. 102) and a small storage building (No. 101) makes up the entire low frequency transmitter unit.

The transmitter building (Bldg. 1600) is the center of the high frequency transmitter unit which utilizes 10 high frequency antennas of various types (see Figure E-2).

(2) Existing Land Use (see Figure E-3). Nearly all the land and facilities at Awase are used for operational purposes; i.e., antennas and communication buildings. Supporting functions include storage buildings, some administrative areas in the communication buildings and standby generators (utilities). There are no housing or community support facilities.

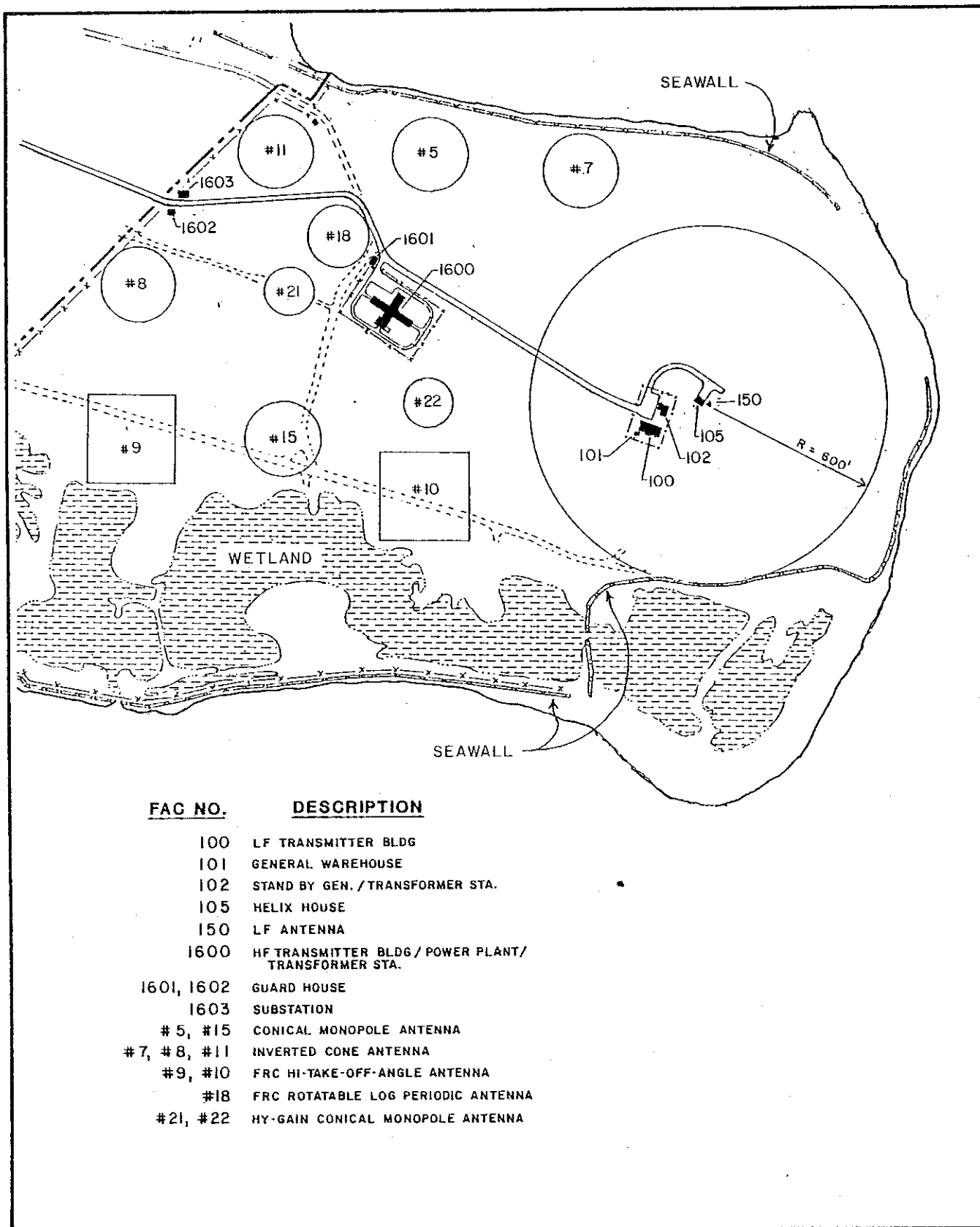
(3) Utilities.

(a) Water (see Figure E-4). Potable water for the Awase Communication Site is supplied by the OPEB through the Okinawa City Municipality. This water is metered by the OPEB and is used primarily by office facilities. The water line from Okinawa City to Awase consists of a 4-inch diameter pipe which extends up to the site perimeter. A 2-1/2 inch diameter pipe runs from the perimeter and feeds the site.

There are no water storage facilities at Awase. The potable water system is not used for fire protection. Instead, chemicals such as CO<sub>2</sub> are used.

(b) Sewage (see Figure E-4). The transmitter building is served by a 1,200 gallon septic tank. Effluent from the septic tank is diverted to the ocean via a 600 foot long, 8 inch diameter concrete pipe.

(c) Electricity (see Figure E-4). Electric power is provided by the OEPC via a single 13.8 KV overhead line.



**FACILITY LOCATOR MAP**  
**AWASE TRANSMITTER SITE**

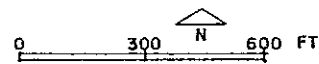
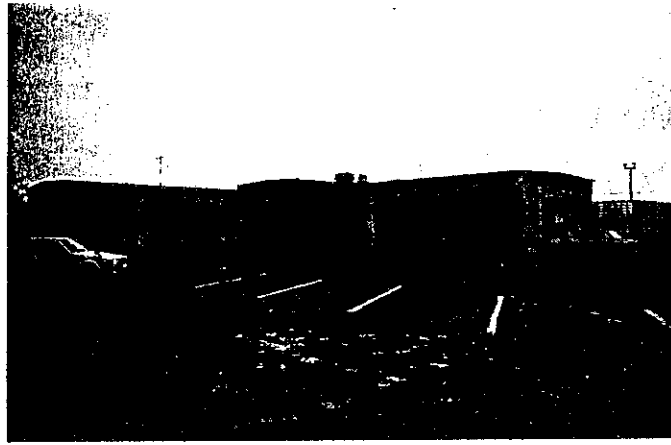


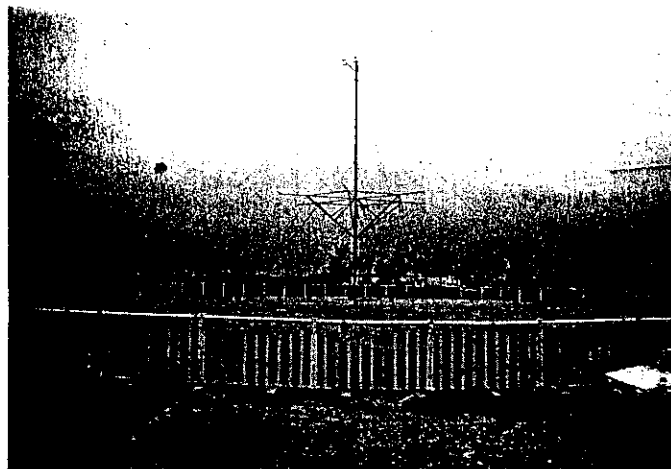
FIGURE E-2



**BLDG. 1600. TRANSMITTER BUILDING**



**LF ANTENNA COMPLEX**



**COMMUNICATIONS ANTENNA WITH PVC FENCING**

*10/22/02*

**SITE PHOTOGRAPHS**  
**AWASE TRANSMITTER SITE**

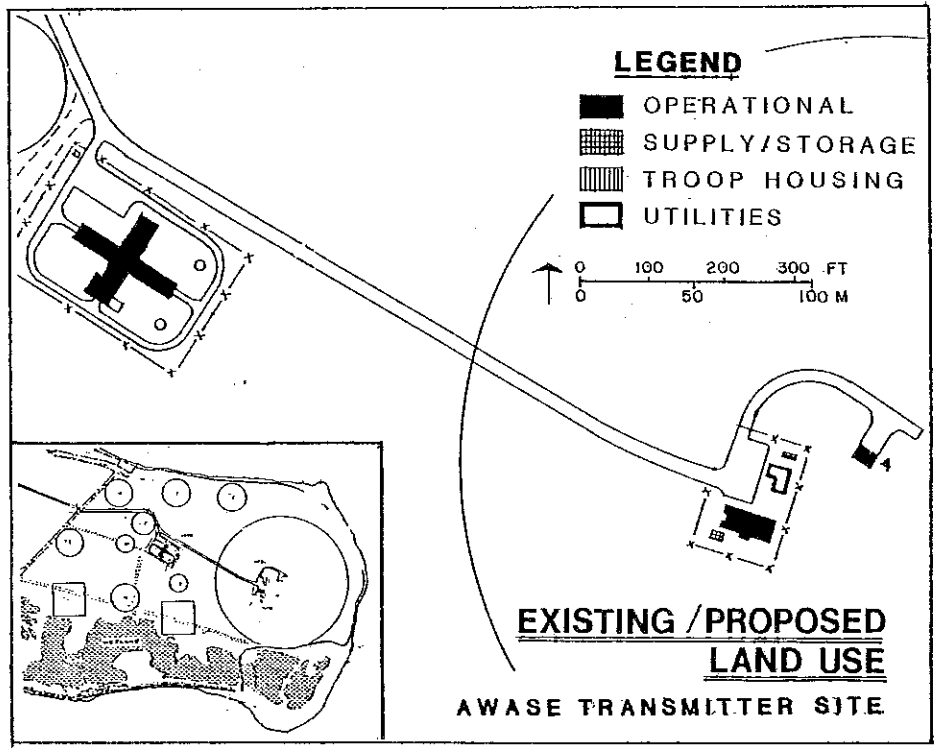
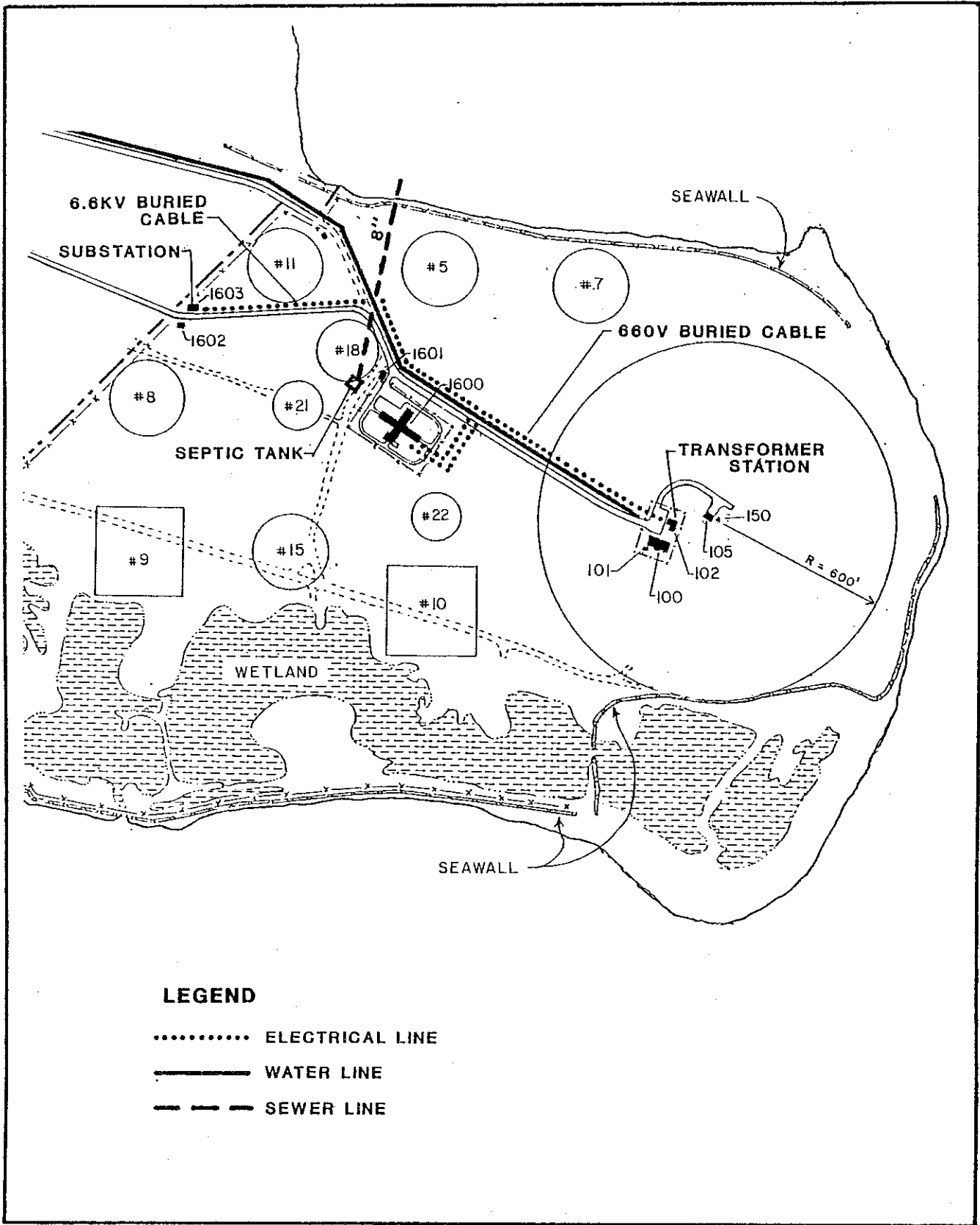


FIGURE E-3



**UTILITY SYSTEMS**  
**AWASE TRANSMITTER SITE**

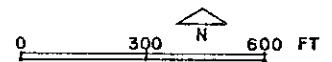


FIGURE E-4

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## 2. Program Analysis

a. Introduction. There are no significant facility deficiencies at the Awase Transmitter Site. No additional development is required.

b. Activity Factors.

(1) Mission. The Awase Transmitter Site is responsible for all Navy radio transmission on Okinawa.

The official mission of the unit at Awase is to manage, operate and maintain those facilities, systems, equipment and devices necessary to provide requisite communications for the command, operational control and administration of the naval establishment; to manage and maintain those facilities of the Defense Communications System as assigned; and to perform such other functions as may be directed by higher authority.

(2) Base Loading. The Awase Transmitter Site is manned by a 22-man division of the Communications Department. The station operates around the clock.

(3) Organizational/Chain of Command. The communication unit at Awase is a part of the Communications Department of FLEACT Okinawa/NAF Kadena (refer to the NAF Kadena Chapter).

## F. TENGAN PIER

### 1. Site Analysis

#### a. Introduction.

(1) Background. The Tengan Pier was completed in 1966, and is now the only authorized ammunition handling pier on Okinawa. The pier remains a Navy facility, but is operated by the Army to serve all DOD activities on Okinawa.

(2) Location. Tengan Pier is about 7 miles northeast of FLEACT Okinawa/NAF Kadena on the east coast of Okinawa (see Figure F-1).

(3) Size. The Tengan Pier land parcel consists of only five acres of staging area to support pier operations.

(4) Topography. The staging area as shown is relatively flat. The surrounding area is hilly.

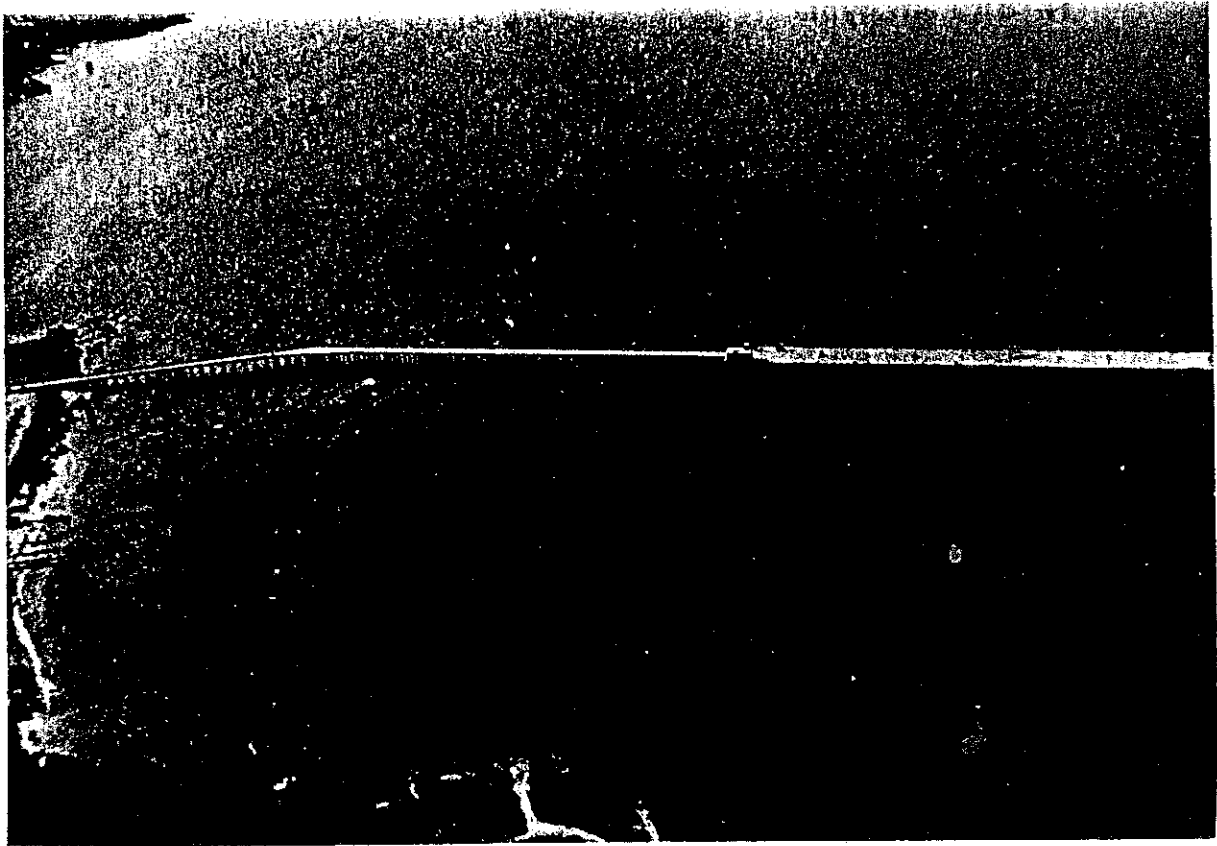
(5) Oceanographic Conditions. The Tengan site is free of wave action from southerly winds but is exposed to waves from the northeast. Waves from this direction are occasionally high enough to disrupt pier activities. Tidal variation is slightly over seven feet.

#### b. Existing Conditions.

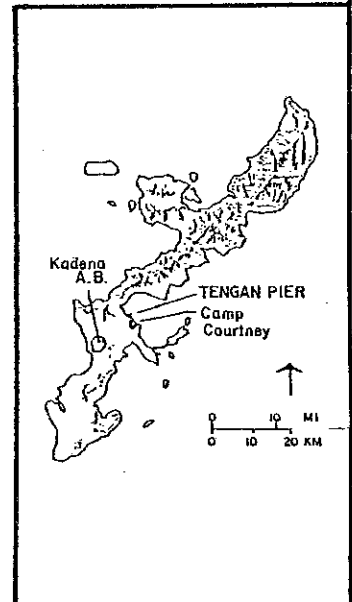
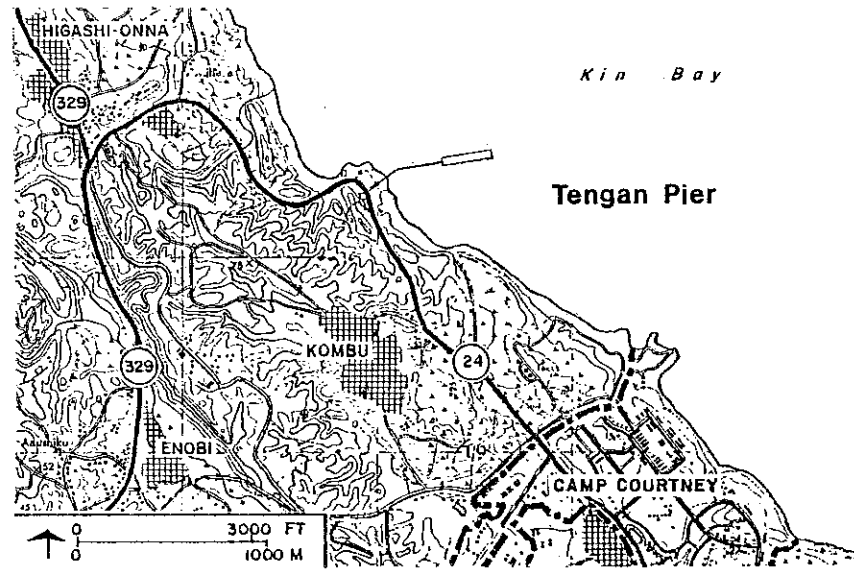
(1) Existing Facilities (see Figure F-2). The pier is 800 feet long and 80 feet wide. Minimum water depth is 37 feet. The pier is a concrete structure supported on concrete piles with steel "H" pile fenders. Shoreside facilities consist of a permanent operation building of 960 SF and a temporary storage building of 4,100 SF.

(2) Existing Land Use. The pier is used for loading and offloading ammunition. The fenced land area (5 acres) is used for staging.

(3) Circulation. Access to the Tengan Pier is from Route 24, an improved two lane road. Access to the Kadena Ammunition Storage Area is provided through the Higashionna Area (ASP-2).



VIEW FROM A POINT DIRECTLY ABOVE CAMP COURTNEY, LOOKING NORTHWEST.



**LOCATION MAP**  
**TENGAN PIER**

FIGURE F-1



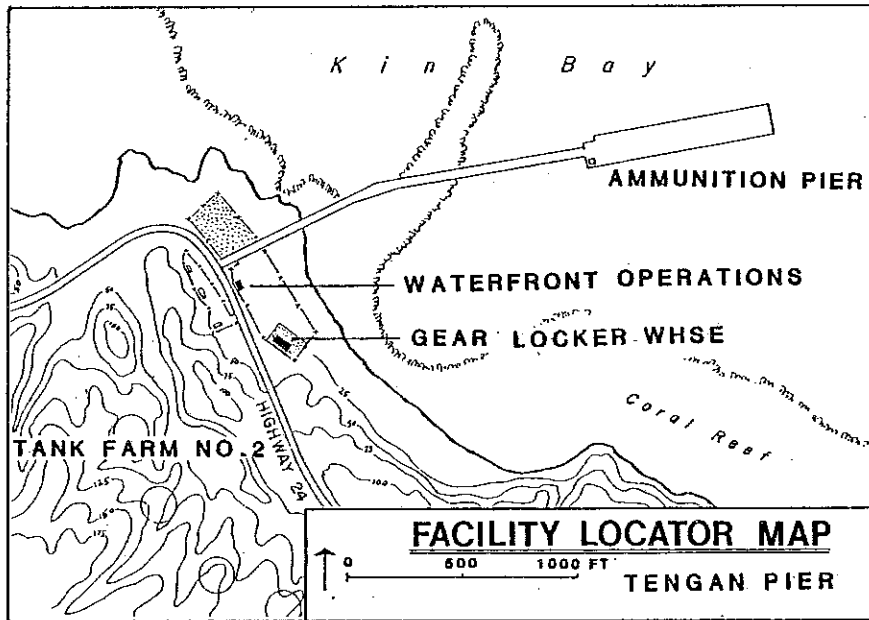


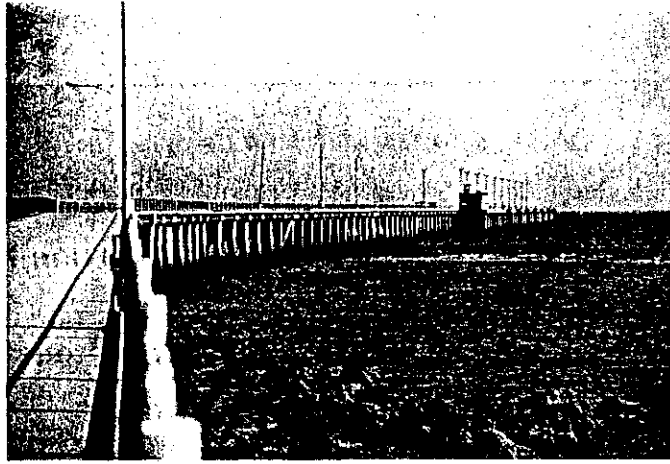
FIGURE F-2

(4) Utilities.

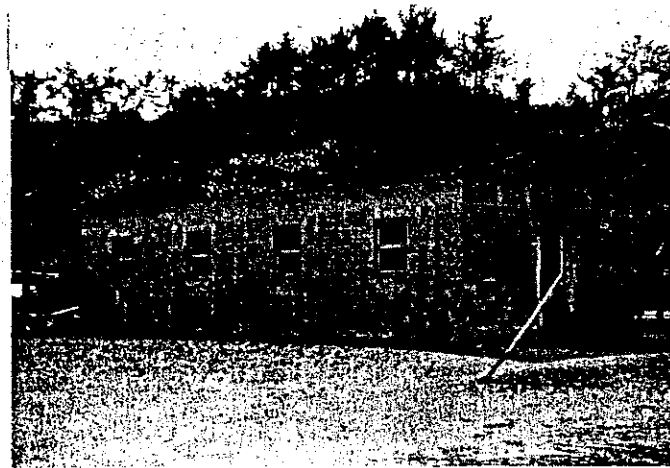
(a) Water. The water system consists of an 8-inch diameter lateral line connecting to the Camp Courtney system. Water is used by personnel for toilet flushing and drinking only, during ship docking operation periods. The transmission line feeding Tengan Pier also supplies the Army's Chimu-wan POL Depot. Supply is limited to the shoreside area and is not available to the ships. Fire protection is provided for the pier by a self-contained salt water fire fighting system.

(b) Sewage. Sewage from the operational building is diverted to a septic tank. The pier is not equipped with a pierside collection system for ship sewage.

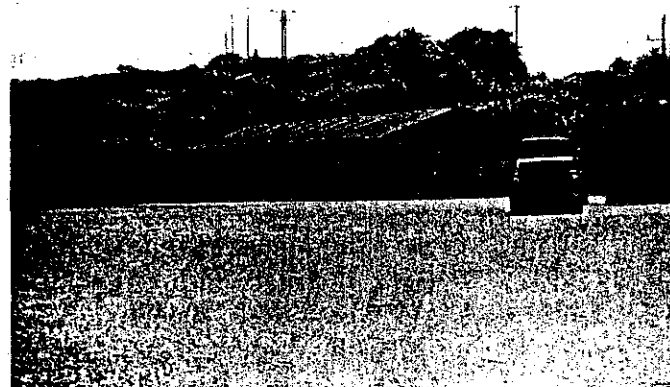
(c) Electricity. Electrical power is provided by the OEPC for pier operation only. No shoreside power is available for ships.



TENGAN PIER



BLDG. 504, WATERFRONT OPERATIONS  
BUILDING



BLDG. 506, WAREHOUSE

## SITE PHOTOGRAPHS

TENGAN PIER

## 2. Program Analysis

a. Introduction. There are no significant facility deficiencies at Tengan Pier. No additional development is required.

b. Activity Factors.

(1) Mission and Tasks. The Tengan Pier operates under CNO Exemption No. CFAO E1B-76, which permits handling up to 2.25 million pounds NEW of Class 1, Division 1 ammunition. The exemption expires 31 March 1989. Ammunition is the principal product handled, although the pier is occasionally used to load or offload large military vehicles such as tanks that cannot be conveniently moved by highway from Naha Port through the congested Naha City area.

(2) Base Loading. Tengan Pier is unmanned except during ship docking and ammunition handling operations.

## **G. OTHER AREAS**

### **1. General**

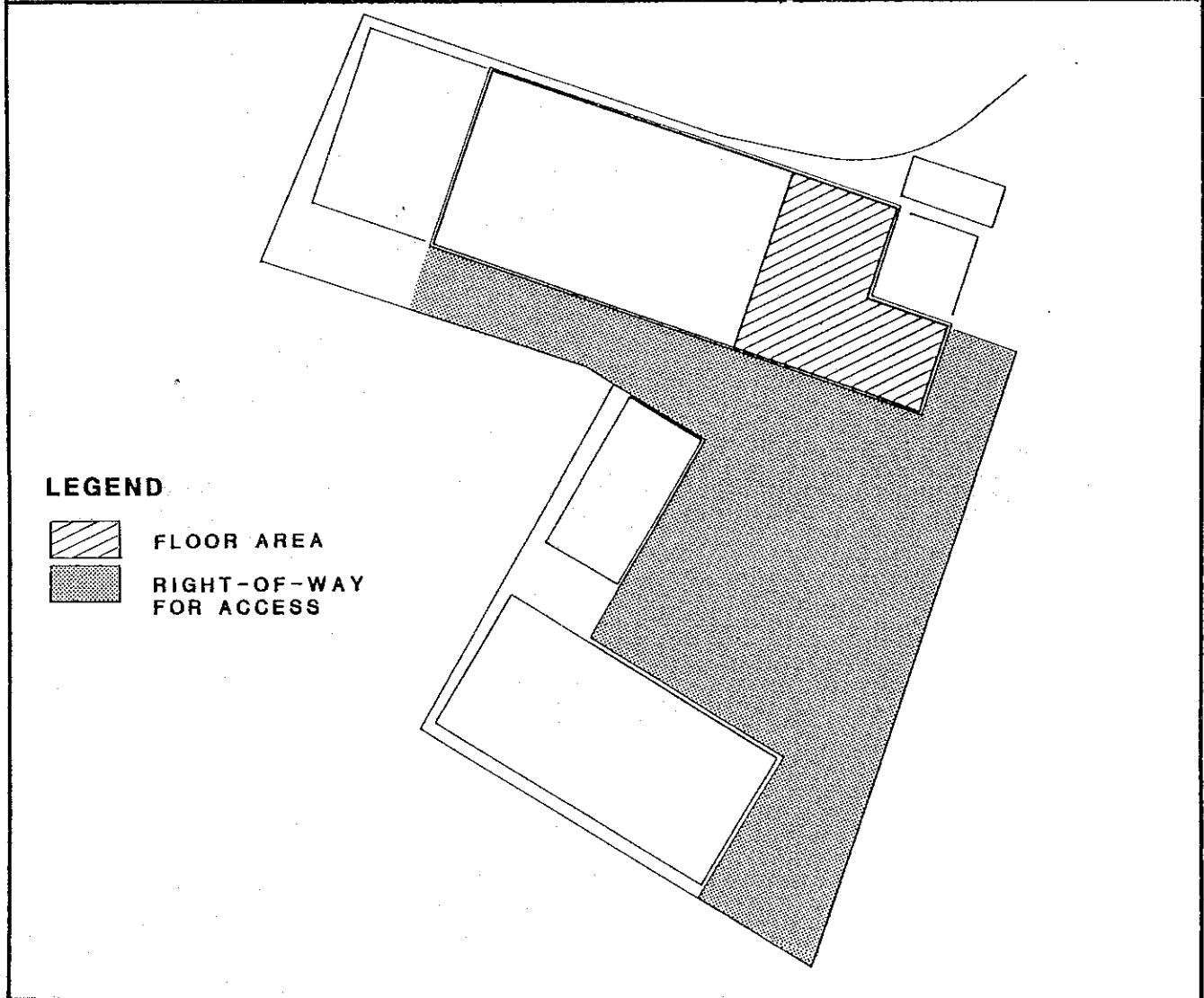
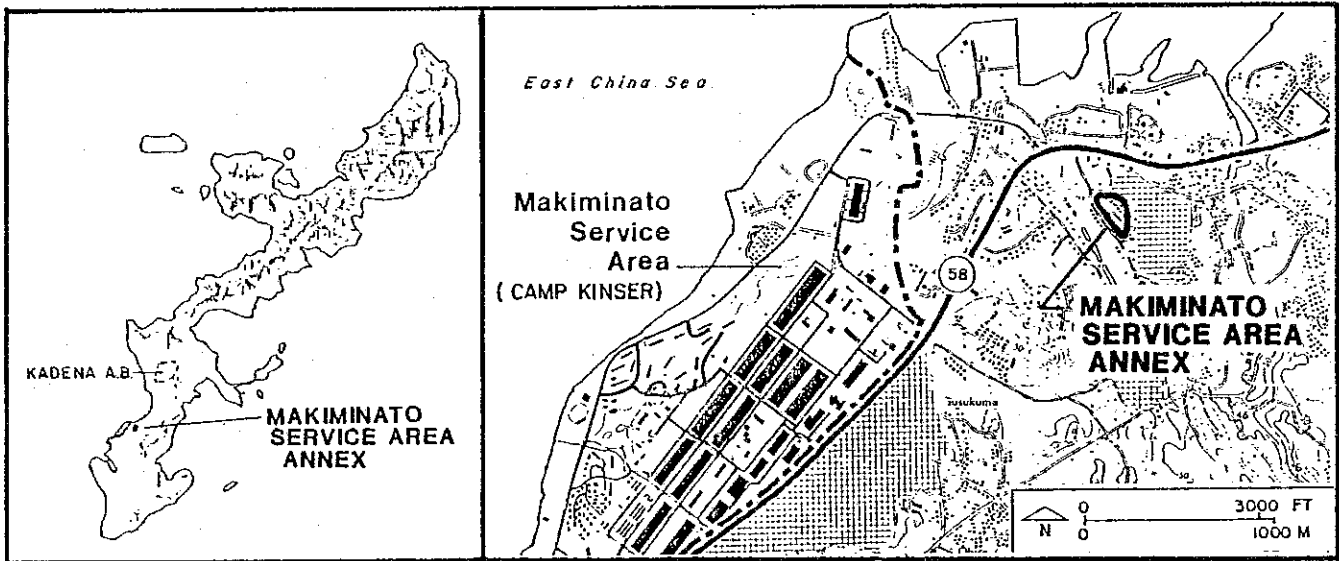
In addition to the major areas discussed earlier, FLEACT Okinawa/NAF Kadena controls the following facilities which are briefly discussed in this chapter:

- Makiminato Service Area Annex
- Kin Red Training Area LST Ramp
- Kobi Sho Range
- Sekibi Sho Range
- Oki Daito Jima Range

## 2. Makiminato Service Area (MSA) Annex

(Facility No. 6057) (see Figure G-1)

The MSA Annex consists of a 0.3 acre parcel of land located 1 mile northeast of the Makiminato Service Area (also called Camp Kinser). The Annex contains one single-story, pre-engineered building with about 13,200 SF of floor space which is used by the Navy for warehousing. The building is adequate but malpositioned. The storage space is required and consideration should be given to releasing the space on the condition that a replacement building is constructed at NAF Kadena.



**LOCATION MAP**  
**MAKIMINATO SERVICE AREA ANNEX**

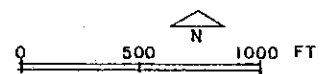


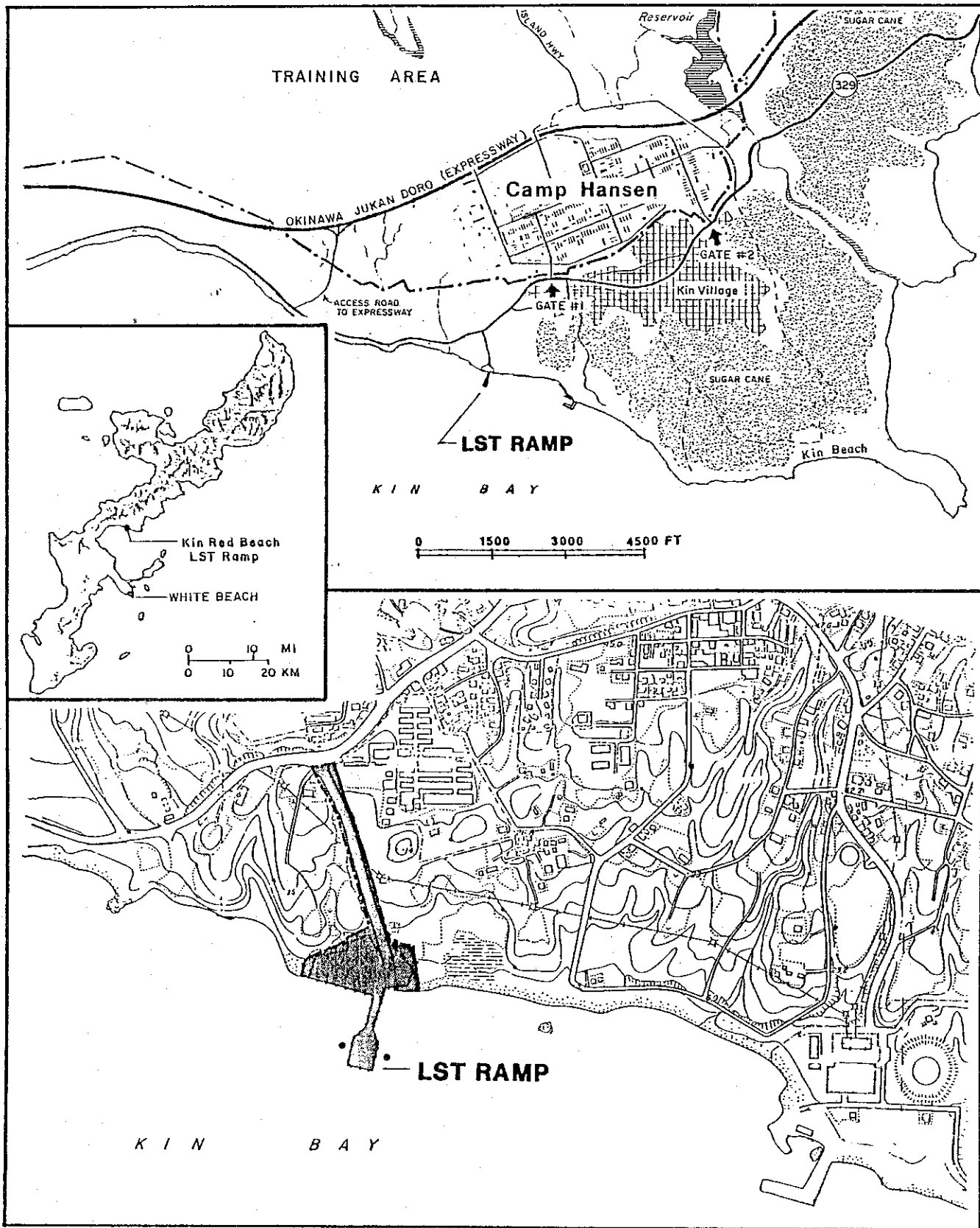
FIGURE G-1

78

### **3. Kin Red Training Area**

(Facility No. 6019) (see Figure G-2)

The Marine Corp's Kin Red Training Area contains 6 acres of land adjacent to Kin Bay and is located on south of Kin Village, about one mile from Camp Hansen. The LST ramp and cargo staging area are operated by the Navy. The Kin Red Training Area is used for embarkation training and small command post exercises (CPX). It can accommodate up to two tank landing ships (LSTs). FLEACT Kadena proposes to provide a water supply line to the LST ramp under a special project.



**LOCATION MAP**  
**KIN RED BEACH LST RAMP**

**FIGURE G-2**



#### 4. Kobi Sho Range

(Facility No. 6084) (see Figure G-3)

This facility consists of an uninhabited island of about 26 acres. The island is circular in shape with a diameter of about 3,600 feet. The island consists of rocky outcroppings rising to the highest elevation of about 390 feet. The island is used as an air-to-ground bombing and gunnery range utilizing all conventional ordnance with which aircraft are equipped. The range hours are 0700 to 1700 daily for the water and air areas.

The range includes the water surface area contiguous to Kobi Sho Island out to a distance of 390 feet. Air space under U.S. control covers the land and water areas. Operations may be carried out up to an altitude of 4,000 feet. The facility will continue to be used as a training target range for the long term.

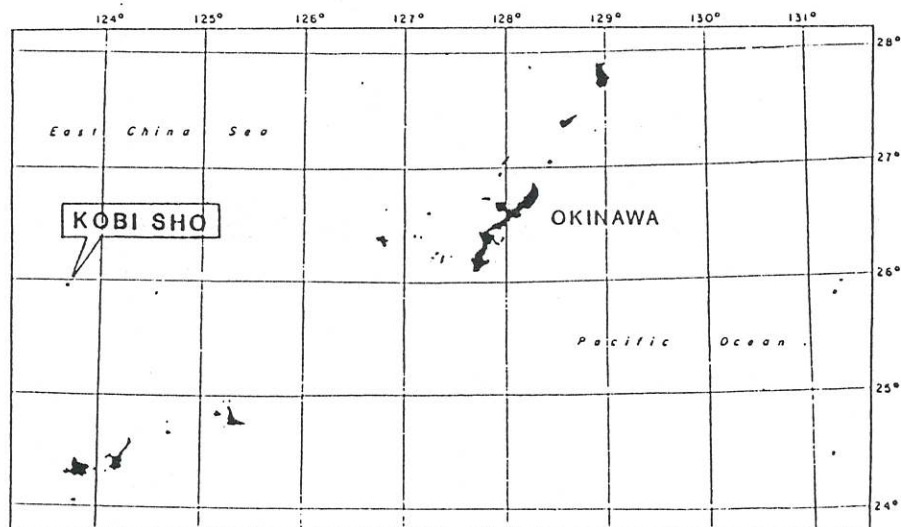
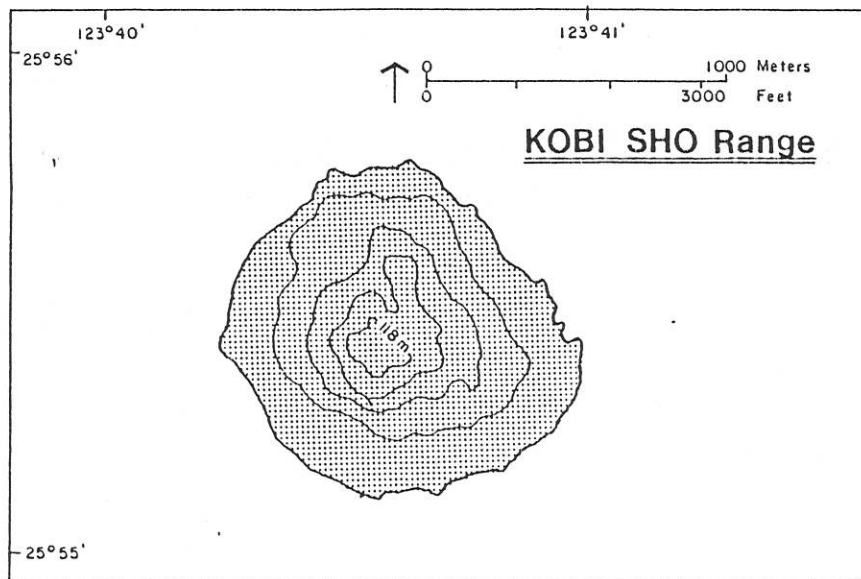


FIGURE G-3

## 5. Sekibi Sho Range

(Facility No. 6085) (see Figure G-4)

This facility consists of an uninhabited island about 10 acres in size. The island is a rocky outcropping rising to an elevation of about 265 feet. The island is used as a ship-to-shore and air-to-ground range for gunnery and bombing by all types of naval ships and aircraft. The range may be used 24 hours a day, about 15 days per month, not to exceed 180 days per year.

The controlled water area is circular and extends out from the island to a distance of 5 nautical miles with the center being at  $2^{\circ}54'00''\text{N}$ ,  $124^{\circ}34'00''\text{E}$ . The air space has the same surface boundary up to an altitude of 4,000 feet. The facility will continue to be used as a training target range for the long term.

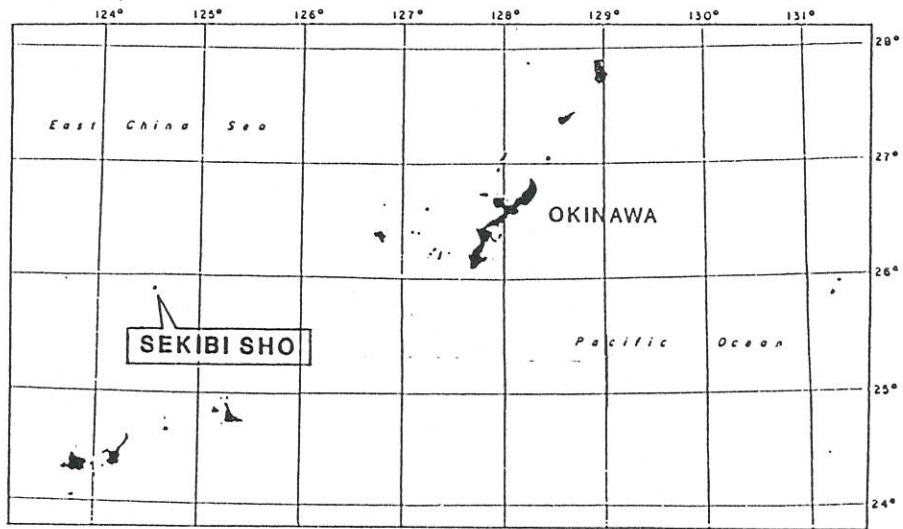
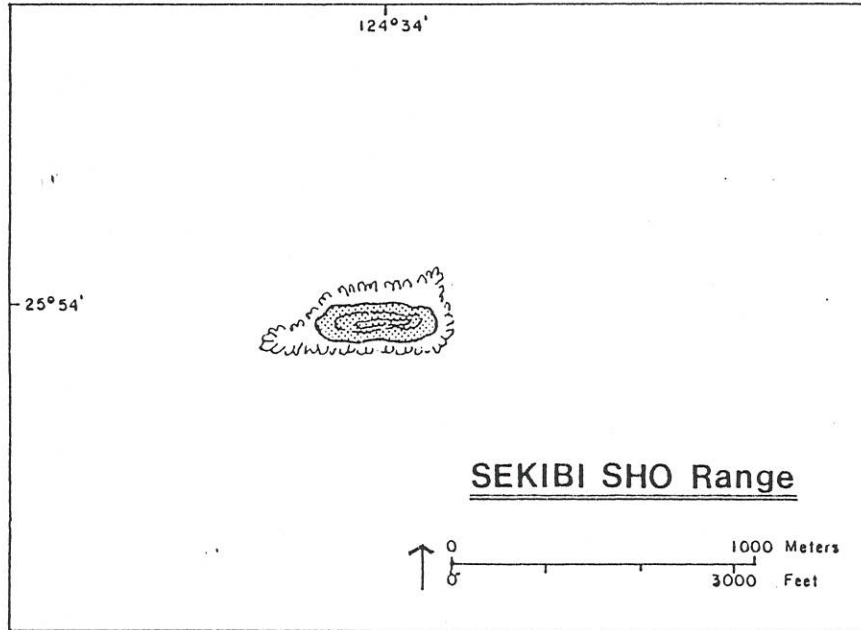


FIGURE G-4

## 6. Oki Daito Jima Range

(Facility No. 6088) (see Figure G-5)

This facility consists of an uninhabited island approximately 283 acres in size. The island is triangular in shape and fairly flat, with the terrain rising to an elevation of about 110 feet. The island is used as a ship-to-shore and air-to-ground range for gunnery and bombing. All conventional naval and aircraft ordnance may be used. The range may be used 24 hours a day, about 15 days per month, not to exceed 180 days per year.

Water and air spaces under U.S. control are circular areas centered at  $24^{\circ}28'00''\text{N}$ ,  $131^{\circ}11'00''\text{E}$ , and extending out to a distance of 5 nautical miles and to an unlimited altitude. The facility will continue to be used as a training target range for the long term.

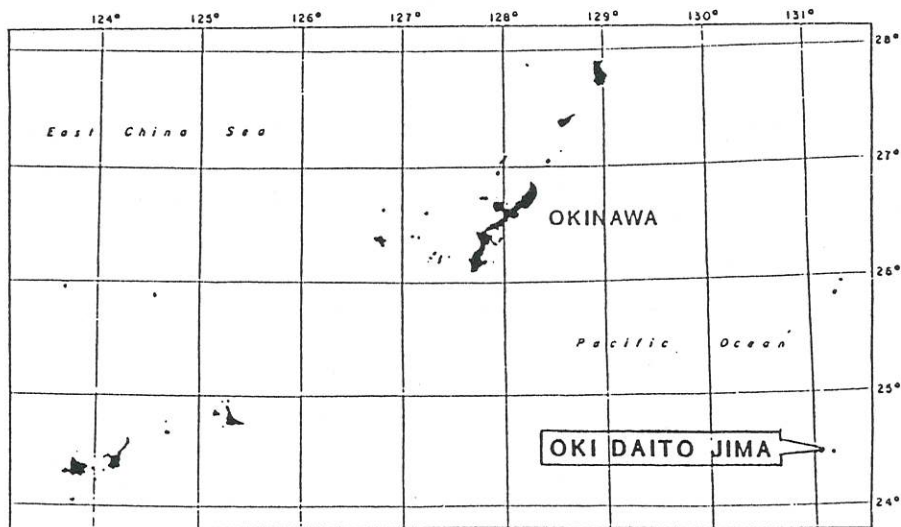
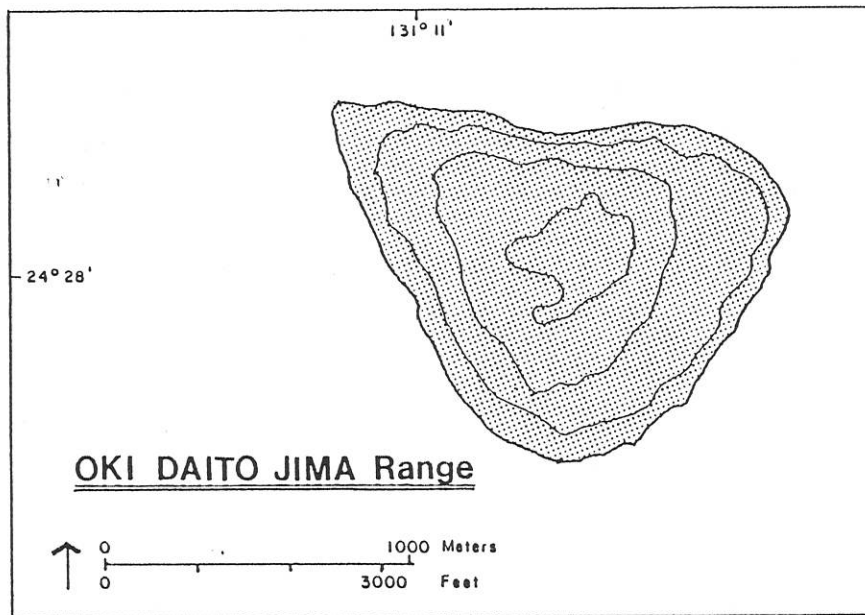


FIGURE G-5

## H. CAPITAL IMPROVEMENTS PLAN (CIP)

The purpose of this CIP is to provide a link between the master plan and the plans for construction of the major individual projects. The CIP should be used as a guide by the activities in short-term planning of projects in terms of funding and construction requirements on a year-to-year basis.

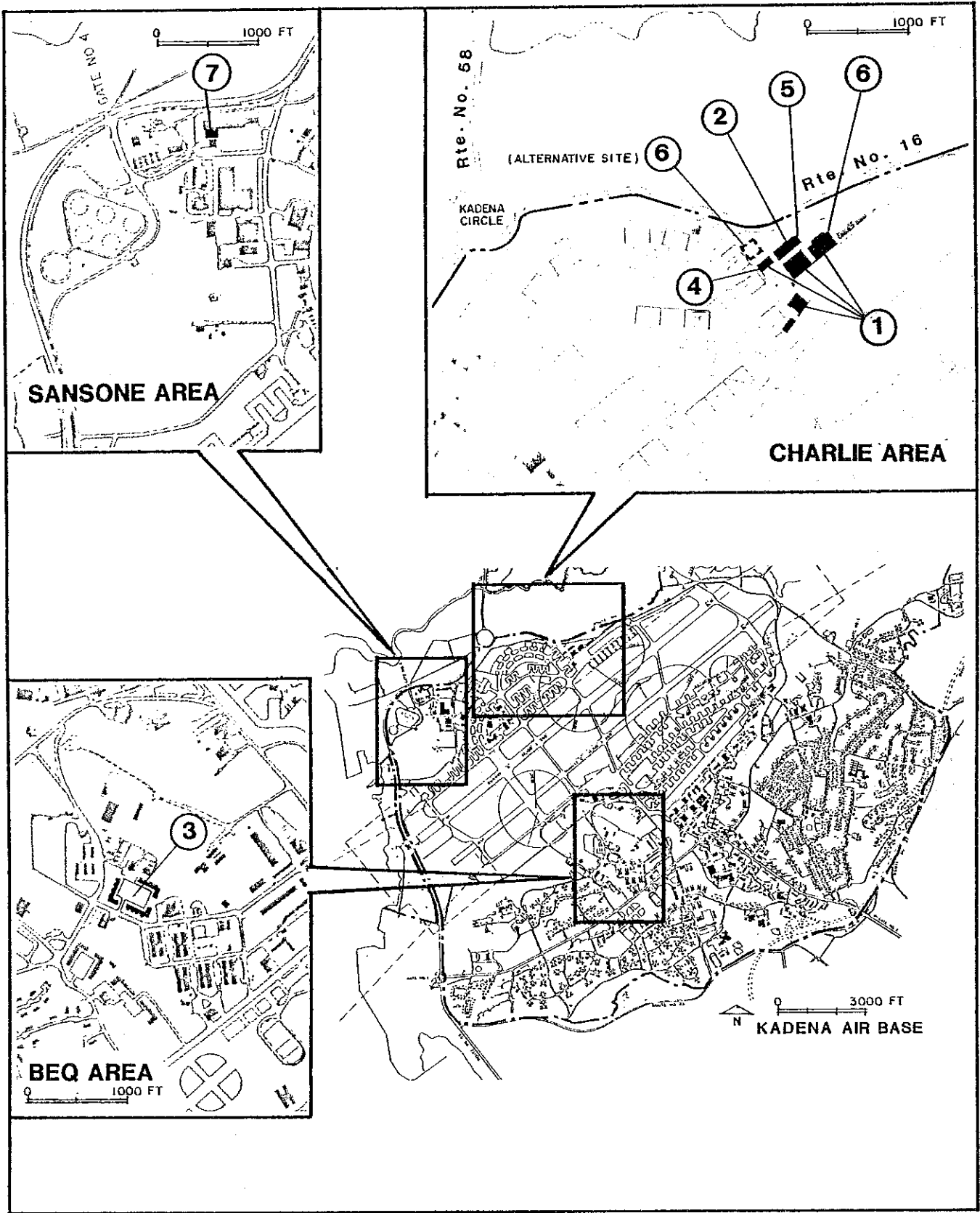
The CIP illustrates the siting of those projects included in the near term (three to five years) construction program of the activities covered by the master plan. In the case of Navy activities on Okinawa, there are no military construction (MCON) projects in FY87 and 88 but there are several special projects. These projects are summarized on Tables H-1, H-2 and H-3 and the sites are shown on Figures H-1, H-2 and H-3.

TABLE H-1  
NAF KADENA

<u>ITEM NO.</u>	<u>PROJ NO.</u>	<u>DESCRIPTION</u>	<u>EST COST (\$000)</u>	<u>PROG YEAR</u>
1	C-6-77*	Standardize 440V Electrical Receptacles, AIMD	20	85
2	C-2-84 "	Miscellaneous Alterations to AIMD, Building 3670	138	86
3	C-5-83	Construct Central Billeting Office	80	UP
4	C-22-83	Construct GSE/Flammable Storage Building	140	UP
5	CE-20-79	Construct PMEL Calibration Lab Addition to Building 3670	60	UP
6	P-321Z	ASWOC Building (1,400 SF)	6,100	90
7	GOJ	Makiminato Service Area Annex Relocation	--	--

\*Under construction





**PROJECT SITING**  
**NAF KADENA**

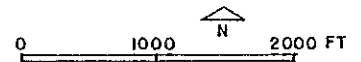


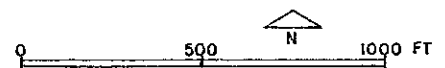
FIGURE H-1

TABLE H-2  
WHITE BEACH CIP

<u>ITEM NO.</u>	<u>PROJ NO.</u>	<u>DESCRIPTION</u>	<u>EST COST (\$000)</u>	<u>PROG YEAR</u>
1	RC-1-81	Repair/Alter Electrical Power Distribution System	450	UP
2	RC-2-83	Repair Paved Road	229	85
3	C-20-83	Construct Marine Railway	60	UP
4	C-1-83	Construct Boat Shop	160	UP
5	C-4-83	Construct Waste Collection System in Navy Pier	80	UP
6	C-3-83	Construct Workshop Warehouse Building T-550	50	UP
7	E-1-83	Install Digital Dial Central Office Equipment	9	UP



**PROJECT SITING**  
**WHITE BEACH**

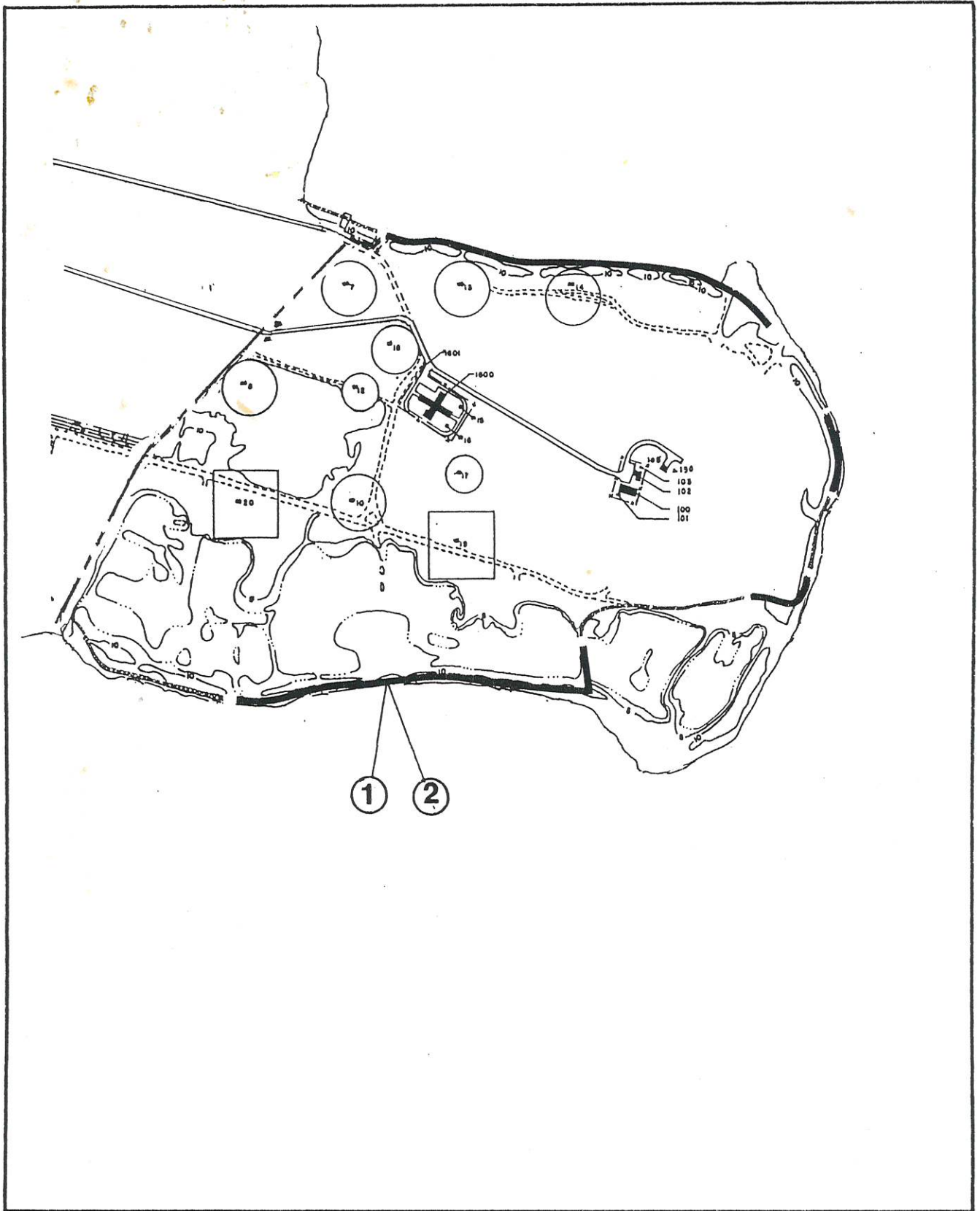


**FIGURE H-2**

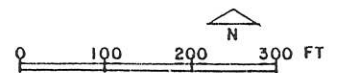
TABLE H-3

AWASE TRANSMITTER SITE CIP

<u>ITEM NO.</u>	<u>PROJ NO.</u>	<u>DESCRIPTION</u>	<u>EST COST (\$000)</u>	<u>PROG YEAR</u>
1	R-1-84	Repair Seawall	279	86
2	C-1-84	Construct Security Fence	38	UP



**PROJECT SITING**  
**AWASE TRANSMITTER SITE**



**FIGURE H-3**

CFA OKINAWA/NAF KADENA -- Master Plan

A. Executive Summary

1. Introduction
2. Major Planning Proposals
3. Rationale and Justification
4. Advantages of Plan

B. Overview

1. Introduction
2. Methodology
3. Existing Condition
4. Land Use Compatibility
5. Physical Security
6. Base Appearance

C. NAF Kadena

1. Site Analysis
  - a. Introduction
  - b. Existing Facilities
2. Program Analysis
  - a. Introduction
  - b. Activity Factors
    - (1) Mission
    - (2) Base Loading
    - (3) Organization and Chain of Command
  - c. Facilities Descriptions and Requirements Analysis
    - (1) Operational and Training Facilities
    - (2) Aircraft and Facility Maintenance
    - (3) Storage Facilities
    - (4) Administrative Facilities
    - (5) Troop Berthing
    - (6) Personnel Support Facilities

- (1) Operational and Training Facilities
- (2) Maintenance and Storage Facilities
- (3) Administrative Facilities
- (4) Troop Berthing Facilities
- (5) Personnel Support Facilities

#### E. Awase Transmitter Site

1. Site Analysis
  - a. Introduction
  - b. Existing Conditions
2. Program Analysis
  - a. Introduction
  - b. Activity Factors
    - (1) Mission
    - (2) Base Loading
    - (3) Organization/Chain of Command

#### F. Tengan Pier

1. Site Analysis
  - a. Introduction
  - b. Existing Conditions
2. Program Analysis
  - a. Introduction
  - b. Activity Factors
    - (1) Mission and Tasks
    - (2) Base Loading

#### G. Other Areas

1. General
2. Makimato Service Area (MSA) Annex
3. Kin Red Training Area
4. Kobi Sho Range
5. Sekibi Sho Range
6. Oki Daito Jima Range