MCAS FUTENMA
OKINAWA, JAPAN

MASTER PLAN

Prepared for:
Department of the Navy
PACIFIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
Facilities Planning and Real Estate Department
Pearl Harbor, Hawaii

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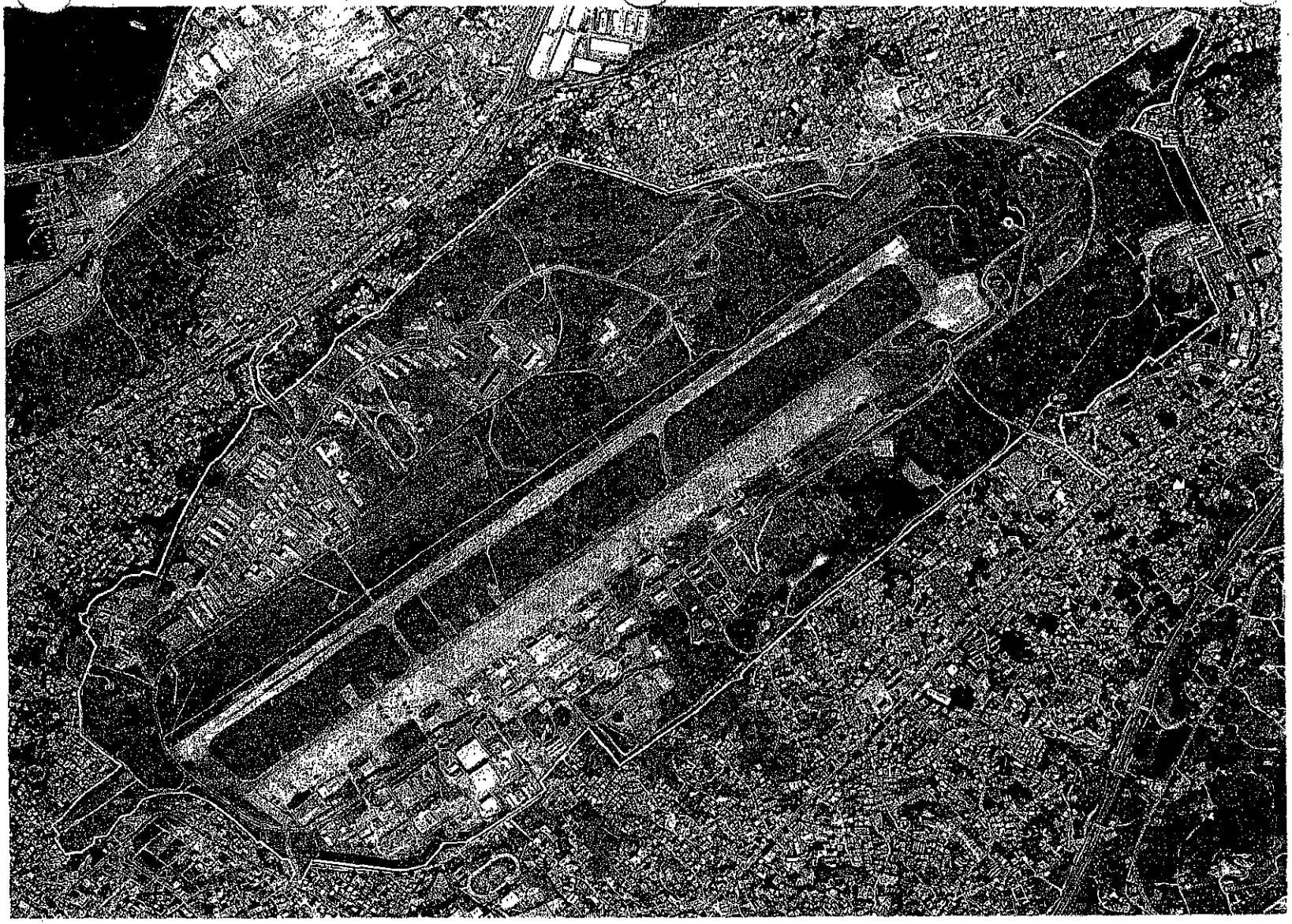
Contract No. N62742-89-C-0038

JUNE 1992



MCAS FUTENMA MASTER PLAN **AERIAL VIEW**

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A. EXECUTIVE SUMMARY

1. Introduction

This Master Plan is an update of the 1980 Master Plan for Marine Corps Air Station (MCAS) Futenma. (A Draft Master Plan was also prepared in 1985, but was never adopted.) It covers in detail the Marine Corps and Navy activities located at the Air Station.

Included in the Plan are guidelines on land use and a basis for the siting of facilities for both the mid-range (3-7 years) and long-range (beyond 7 years) time frames. Its purpose is to promote orderly development of Marine Corps facilities based on mission requirements, current planning criteria and development constraints.

The Master Plan was prepared by Group 70 International, Inc. of Honolulu, Hawaii, a planning and architectural consulting firm, under the guidance of Pacific Division Naval Facilities Engineering Command (PACNAVFACENGCOM). Also assisting with its preparation was the Office of Public Works, Facilities Engineer Division, MCB Camp S. D. Butler.

2. Major Planning Proposals

Major proposals of this Plan to meet operational, maintenance, housing and community service needs include the following:

a. Upgrade and expand the aircraft parking and access aprons to accommodate aircraft base loading.

b. Provide a new air traffic control tower, aircraft compass calibration pad, Runway 6 paved overrun and Runway 24 instrument landing lights to improve operational safety and efficiency.

c. Construct two new Type I hangars for the HMM Squadrons based at MCAS Futenma.

d. Provide a tactical air operations center, a moving target simulator, four aircraft full motion simulators, and a combat training pool to fulfill operational training capability requirements at the Air Station.

e. Build new wing and group headquarters buildings, and expand squadron/battalion and

detachment/battery headquarters space as necessary to satisfy current requirements.

f. Reduce the shortage of warehousing space by constructing new consolidated unit storage warehouses.

g. Improve station security through the provision of a central guardhouse and a flightline security fence and patrol road.

h. Construct two new bachelor officers (O-3 and above) quarters (172 total rooms) and a new 196-room staff non-commissioned officers (SNCO) quarters to correct existing shortfalls in bachelor housing.

i. Increase community support services through the addition of a gas station, alcohol and drug rehabilitation center, and an arts and crafts hobby shop. In the long term, construct a new community services center which includes the full range of exchange facilities, a bank, a post office, and a theater.

j. Significantly expand indoor and outdoor recreational opportunities by providing a new physical fitness center, outdoor swimming pool, bathhouse complex, 10 new outdoor playing courts, and 4 new outdoor playing fields.

k. Upgrade the Air Station's entire electrical distribution system in order to provide the level of reliability, security, and stability necessary to properly service operations and support functions.

3. Advantages of the Plan

The advantages of adoption and implementation of this plan include:

- Satisfaction of the Air Station's facility requirements.
- Enhanced unit integrity.
- Improved operational efficiency.
- Reduced land use conflicts and improvement of the relationship between operational and support functions.
- Efficient use of vacant land.
- Enhanced quality of life for military personnel working and living on the Air Station.

B. INTRODUCTION

This document describes the existing physical and operational setting, development constraints, functional relationships, and the planning concepts and objectives which guide the formulation of the Master Plan for Marine Corps Air Station (MCAS) Futenma. Implementation proposals are provided for projects which fulfill current shortfalls at the Air Station. Sites are also identified for projects which meet long-range needs.

The Okinawa Regional Profile, dated September 1985 and prepared by Pacific Division, Naval Facilities Engineering Command, is considered a companion document to this Master Plan. Readers are invited to review the regional profile for general background on Okinawa and the U.S. military holdings located on the island.

1. Camp Butler Overview

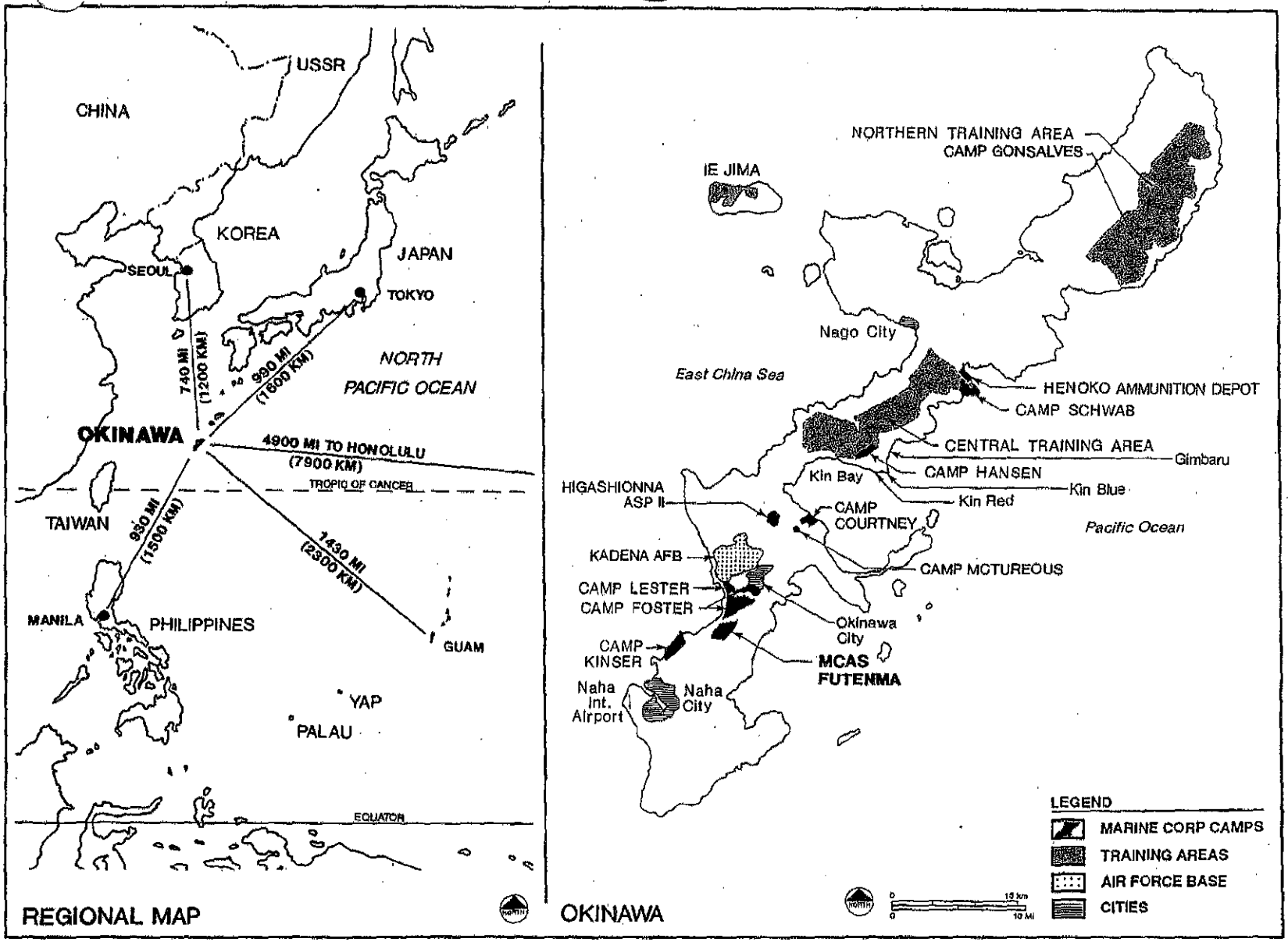
MCB Camp Smedley D. Butler is the base support command for U.S. Marine Corps ground forces on Okinawa and at Camp Fuji on Honshu Island, Japan. The major facilities on Okinawa are Camps Kinser, Foster, Lester, McTureous, Courtney, Hansen, and Schwab. Camp Butler also includes the Central Training Area, the Northern Training Area/Camp Gonsalves, Henoko Ammunition Depot, Higashionna Ammunition Storage Point II (ASPII), Kin Blue Beach, Kin Red Beach, Gimbaru Training Area, and Ie Jima Auxiliary Airfield (Figure B-1).

Marine Corps Air Station (MCAS) Futenma, also located on Okinawa, has an operational chain of command which is separate from MCB Camp Butler. However, support services such as facilities engineering and maintenance, fire department, post office and MWR, etc. are operated by Camp Butler.

The mission of MCB Camp Butler is to provide training facilities, limited logistic support and limited administrative support for Fleet Marine Force units located on Okinawa and at Camp Fuji, Japan. The Headquarters for MCB Camp Butler is located at Camp Foster.

a. III Marine Expeditionary Force (III MEF)

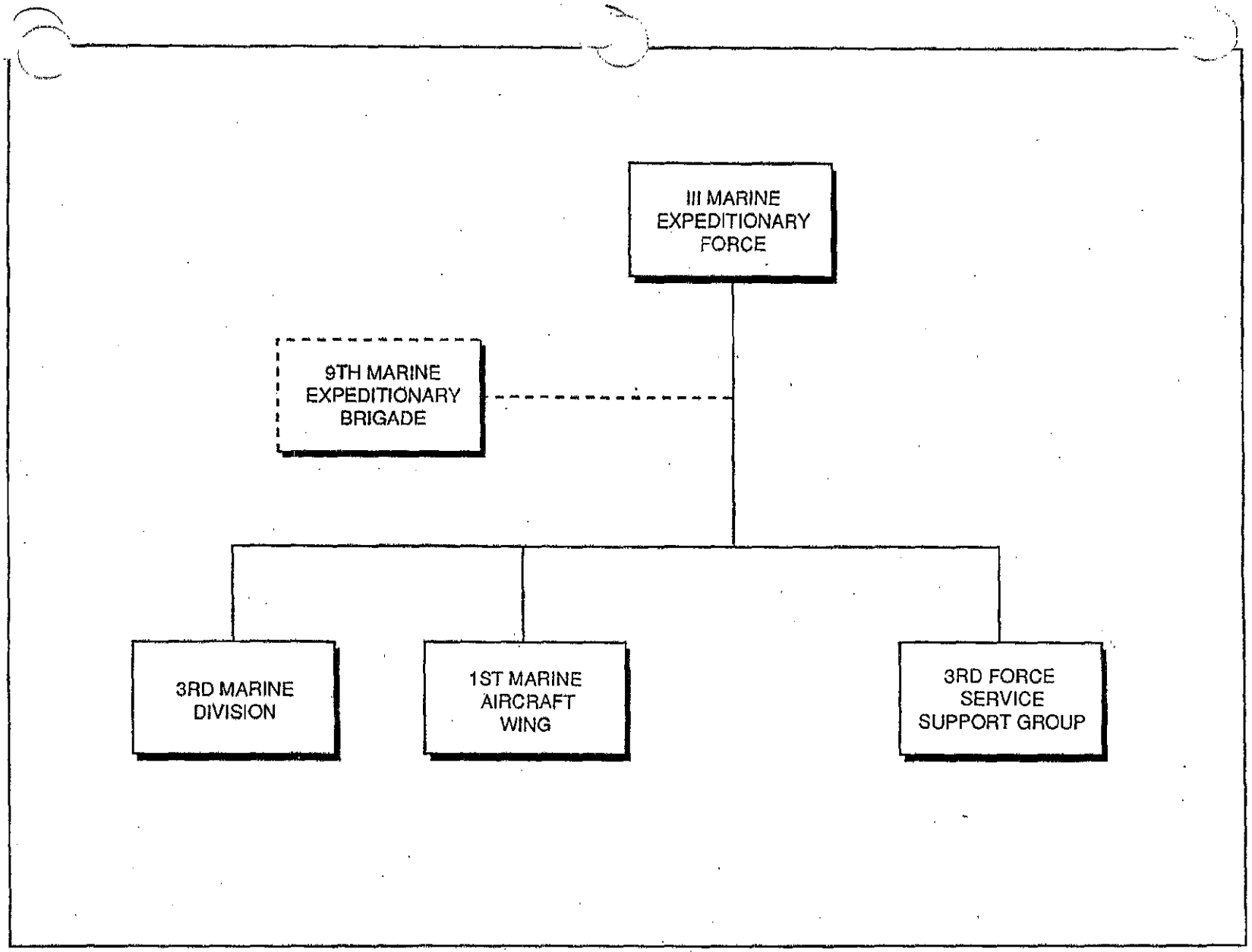
The III Marine Expeditionary Force is the major tenant of MCB Camp S. D. Butler. The major units comprising the III MEF are shown in Figure B-2. III MEF Headquarters is located at Camp Courtney.



MCAS FUTENMA MASTER PLAN

MCB CAMP S.D. BUTLER - CAMP LOCATIONS ON OKINAWA

FIGURE B-1



III MARINE EXPEDITIONARY FORCE ORGANIZATION

FIGURE B-2

b. 3rd Marine Division (3rd MARDIV)

The 3rd MARDIV Headquarters is also located at Camp Courtney. Its three regiments are located at Camps Schwab, Hansen, and Foster. (The 12th Marine Regiment will relocate from Camp Foster to Camp Hansen in 1995.) The Division's mission is to execute amphibious assault operations that are supported by Marine Corps aviation and U.S. Navy forces. Its primary function is to maintain a combat ready force of Marine Corps personnel capable of attacking, closing with, and destroying or capturing the enemy.

c. 1st Marine Aircraft Wing (1st MAW)

The 1st MAW Headquarters is currently located at Camp Foster, but is scheduled to move to MCAS Futenma. Approximately one-half of the 1st MAW is located at MCAS Futenma, with the remainder divided between Camp Foster and MCAS Iwakuni. Its primary mission is to participate as the air component of III MEF in the seizure and defense of advanced naval bases and to conduct such land operations as may be essential to the prosecution of a naval campaign.

d. 3rd Force Service Support Group (3rd FSSG)

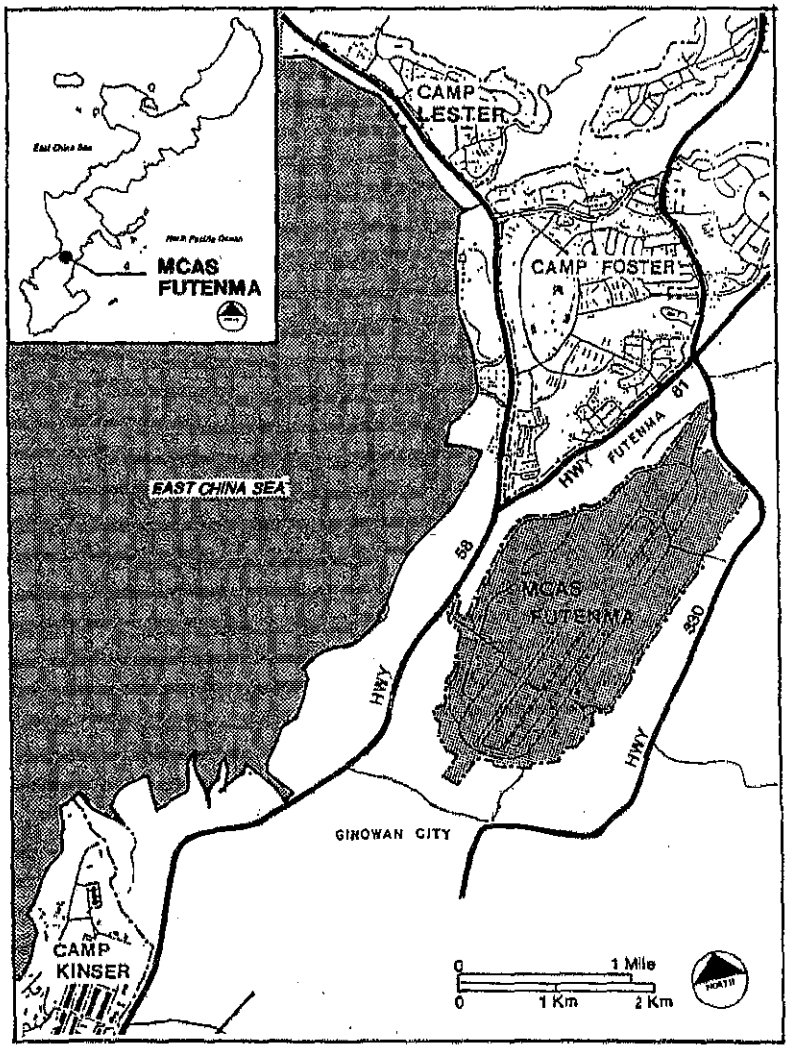
The 3rd FSSG Headquarters is located at Camp Kinser, along with the majority of its units. Two battalions each are located at Camps Foster and Hansen. The Group's mission is to provide sustained combat service support (maintenance, supply, engineering and medical support) to the 1st MAW and 3rd MARDIV.

2. MCAS Futenma Location and Mission

a. Location

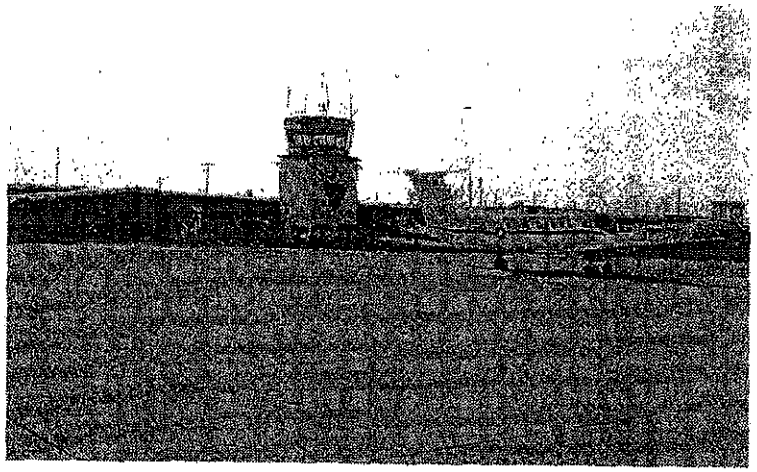
MCAS Futenma is located near the southwestern coast of Okinawa, 7 kilometers south of Kadena Air Base. It is between National Highway 58 (along the coast), National Highway 81 (to the north), and National Highway 330 (inland to the east). (See Figure B-3.)

The Air Station contains 1,188 acres of land and is completely surrounded by the extensive urban development of Ginowan City. Approximately 480 acres (40 percent) of the land is utilized for runways, clear zones, taxiways and aircraft parking aprons. The remaining portions of the Air Station are dedicated to air operations facilities, personnel support facilities,



LOCATION MAP

FIGURE B-3



MCAS Futenma Air Operations

bachelor housing, and administrative functions. For additional information regarding existing land use, see Section C.

b. Mission

The mission of the Air Station is to maintain and operate facilities and provide services and materials to support operations of elements of a Marine Aircraft Wing or units thereof, and other activities and units as designated by Commandant of the Marine Corps (CMC) in coordination with the Chief of Naval

Operations (CNO). In addition, MCAS Futenma is a designated United Nations Command Air Base.

The Air Station is tasked to provide facilities to support operations of the Fleet Marine Force aircraft in support of ground forces; to provide organizational and intermediate aircraft maintenance facilities; and to provide operational, logistical and administrative support for tenants.

3. Organization and Base Loading

The Commandant of the Marine Corps (CMC) exercises command and provides support to MCAS Futenma via the Commander, Marine Corps Bases, Pacific (COMMARCORBASESPAC) and the Commander, Marine Corps Bases, Japan (COMMARCORBASESJAPAN). Facilities utilization, planning and military or Government of Japan (GOJ) construction at the Air Station are coordinated through COMMARCORBASESJAPAN. In addition, area coordination is provided by the Commander, Naval Forces Japan via COMMARCORBASESJAPAN. Consolidated support in 14 functional areas for MCAS Futenma is provided by the Commanding General, Marine Corps Base, Camp S. D. Butler. Figure B-4 shows these command relationships.

a. Station Command

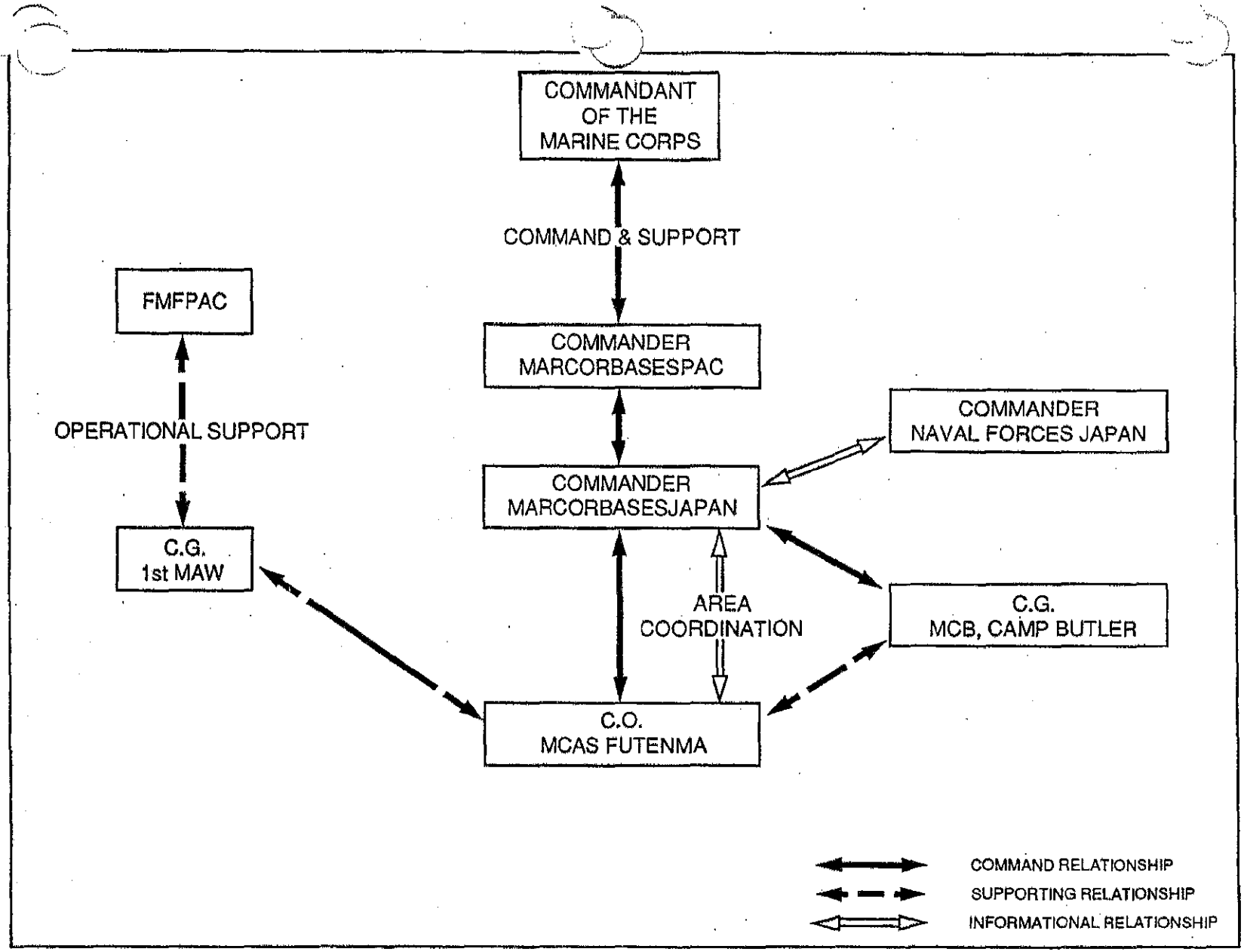
Staff responsible for the operation of MCAS Futenma are organized under the structure shown in Figure B-5.

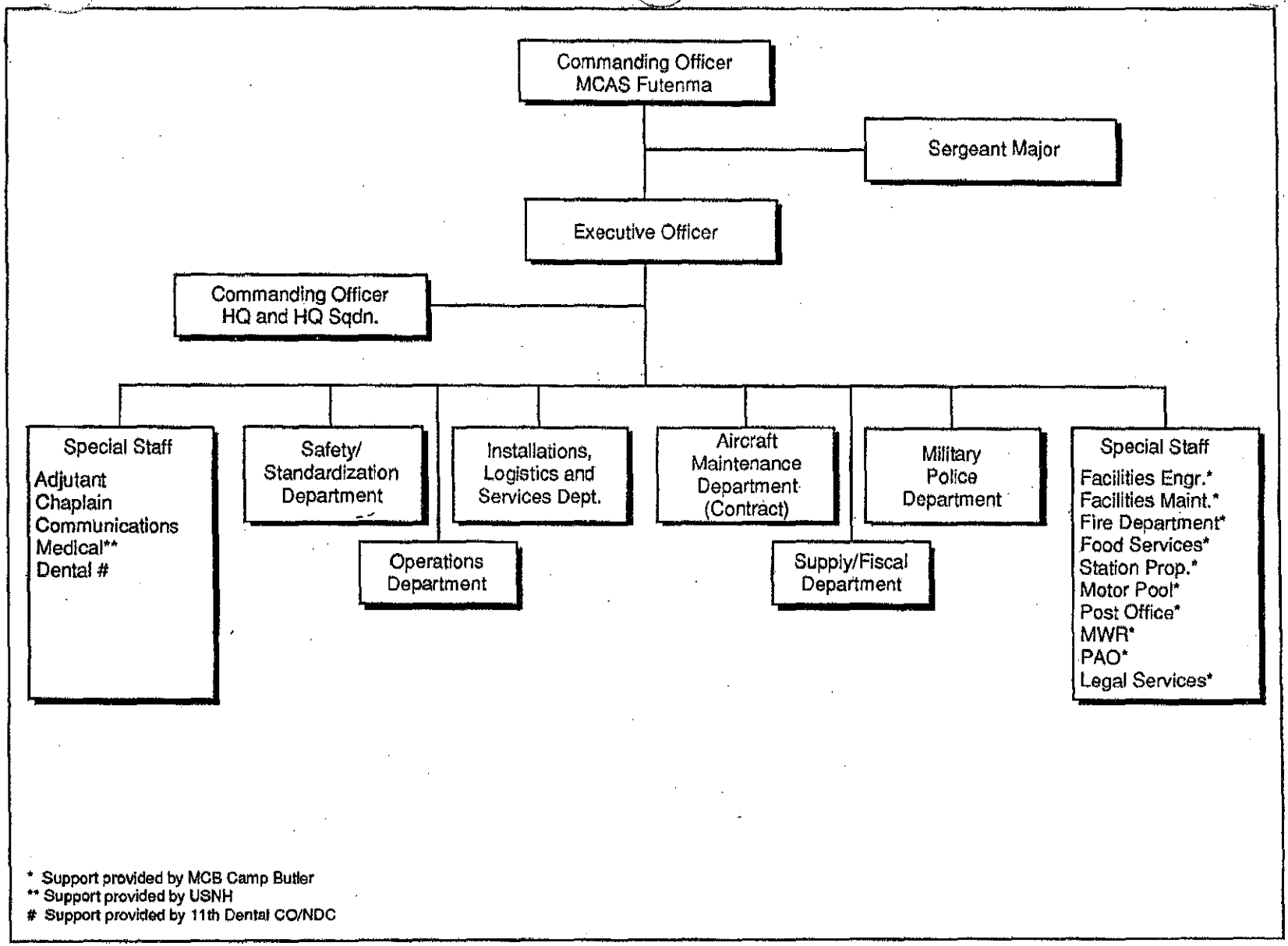
b. 1st Marine Aircraft Wing

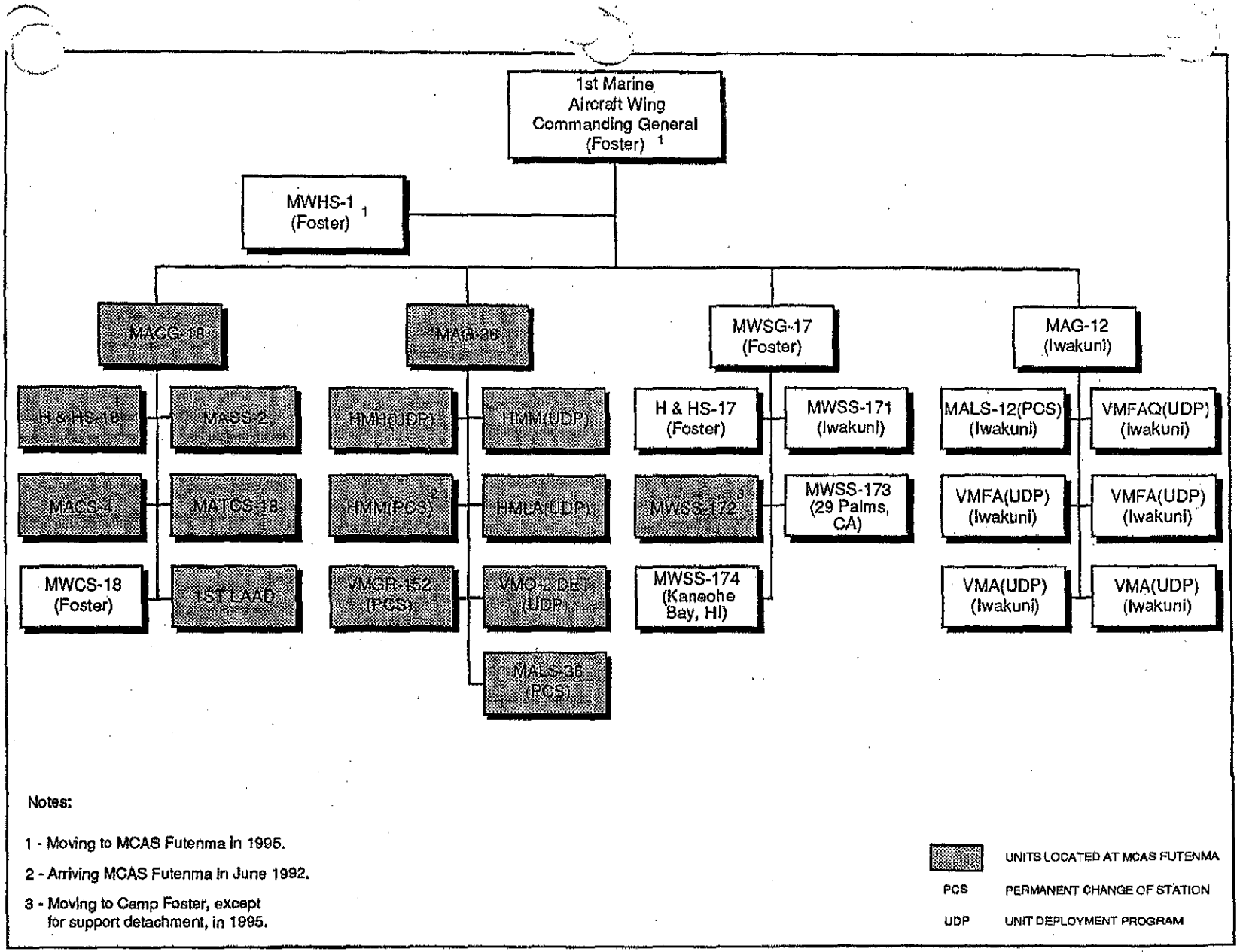
Figure B-6 shows the organization and unit locations for the 1st Marine Aircraft Wing (1st MAW). As indicated in this chart, three of the seven squadrons within Marine Aircraft Group-36 (MAG-36) are Permanent Change of Station (PCS) units, and four are part of the Unit Deployment Program (UDP). These terms are defined as follows:

- PCS units are those that have personnel on both one year dependents-restricted tours and three year dependents-accompanied tours. Personnel movement/assignment is done on an individual, rather than unit basis.

- UDP units are FMF units where personnel are assigned three year dependent-accompanied tours stateside but the unit deploys to Okinawa for approximately six months, while dependents remain stateside.


COMMANDANT OF THE MARINE CORPS
COMMAND & SUPPORT
FMFPAC
OPERATIONAL SUPPORT
COMMANDER MARCORBASESPAC
COMMANDER NAVAL FORCES JAPAN
COMMANDER MARCORBASESJAPAN
C.G. 1st MAW
AREA COORDINATION
C.G. MCB, CAMP BUTLER
C.O. MCAS FUTENMA
COMMAND RELATIONSHIP
SUPPORTING RELATIONSHIP
INFORMATIONAL RELATIONSHIP


Commanding Officer
MCAS Futenma
Sergeant Major
Executive Officer
Commanding Officer
HQ and HQ Sqdn.
Special Staff
Adjutant
Chaplain
Communications
Medical**
Dental #
Safety/
Standardization
Department
Operations
Department
Installations,
Logistics and
Services Dept.
Aircraft
Maintenance
Department
(Contract)
Supply/Fiscal
Department
Military
Police
Department
Special Staff
Facilities Engr.*
Facilities Maint.*
Fire Department*
Food Services*
Station Prop.*
Motor Pool*
Post Office*
MWR*
PAO*
Legal Services*
* Support provided by MCB Camp Butler
** Support provided by USNH
# Support provided by 11th Dental CO/NDC



MCAS FUTENMA MASTER PLAN **1ST MARINE AIRCRAFT WING ORGANIZATION**

FIGURE B-6

1st MAW's operational units are for the most part divided between MCAS Futenma and MCAS Iwakuni, with most support group units stationed at Camp Foster. The Wing Headquarters and its Headquarters Squadron (MWHS-1) are also presently located at Camp Foster. However, their relocation to the Air Station is planned for 1995, when a new wing headquarters building is to be completed.

The major activities under the 1st MAW that are located on the Air Station include the following:

Marine Air Control Group 18 (MACG-18): MACG-18's mission is to coordinate air command and control for 1st MAW. Units stationed at the Air Station are:

- Headquarters and Headquarters Squadron 18 (H&HS-18) -- administrative support and operation of the Tactical Air Control Center (TACC).
- Marine Air Support Squadron 2 (MASS-2) -- provision of facilities for control of aircraft operating in close or direct support of Fleet Marine Force operations.
- Marine Air Control Squadron 4 (MACS-4) -- provision of air surveillance and control of aircraft and surface-to-air missiles for anti-air warfare.
- Marine Air Traffic Control Squadron 18 (MATCS-18) -- provision of tactical air traffic control for the 1st MAW.
- 1st Low Altitude Air Defense Battalion (1st LAAD) -- provision of low altitude air defense for Fleet Marine Force operations.

Marine Aircraft Group 36 (MAG-36): Support of MAG-36 is the primary mission of the Air Station. MAG-36 provides tactical fixed and rotary-wing support for Fleet Marine Force operations. Just over one-half of the U.S. military personnel and 71 of the 74 aircraft at the Air Station are under the control of MAG-36. Units at MCAS Futenma and their primary tasks are:

- Marine Heavy Helicopter (HMH) Squadron -- transport of equipment, supplies, and combat troops during amphibious operations and subsequent operations ashore
- Two (2) Marine Medium Helicopter (HMM) Squadrons -- transport of troops during ship-to-shore movement.

- Marine Light Attack Helicopter (HMLA) Squadron -- airborne control of tactical air support operations (UH-1); and attack helicopter fire support for aerial and ground forces (AH-1).

- Fixed-Wing Marine Refueling Transport Squadron 152 (VMGR-152) -- transport of fuel and supplies to forward areas, and provision of aerial refueling capability.

- Detachment from Marine Observation Squadron 2 (VMO-2 Det.) -- day/night observation, reconnaissance, and fire support coordination.

- Marine Aviation Logistics Squadron 36 (MALS-36) -- provision of air base facilities and services to other units in the Group.

c. Base Loading

Programmed personnel (PN) loading of all units at MCAS Futenma is 3,640 PN. A breakdown between 1st MAW and Air Station personnel is shown in Table B-1. The Aircraft Base Loading for the Air Station is given in Table B-2.

TABLE B-1

MCAS FUTENMA BASE LOADING

Organization	Marines	Others	Civilians
1st Marine Aircraft Wing Personnel			
Officers	502	14	N/A
Enlisted	2,709	53	N/A
Subtotal	3,211 PN	67 PN	0 PN
Air Station Personnel			
Officers	17	15	N/A
Enlisted	150	79	N/A
Subtotal	167 PN	94 PN	101 PN
Total	**3,378 PN**	**161 PN**	**101 PN**

Source: MCB Camp S. D. Butler, 17 April 1991

4. Planning Objectives

The reasons for preparing and adopting this master plan are to:

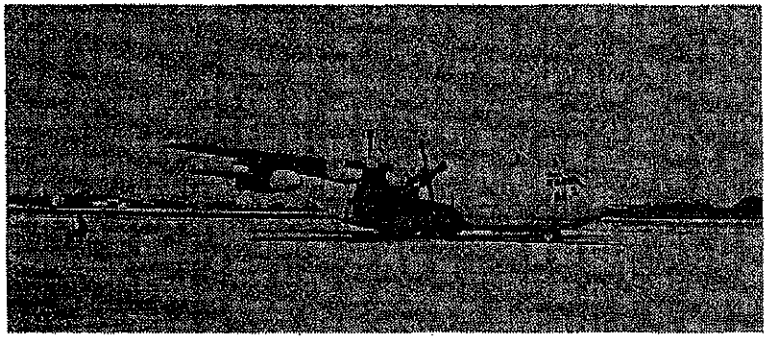
- Establish a comprehensive plan for the orderly and efficient development of all required new facilities.

TABLE B-2

MCAS FUTENMA AIRCRAFT

Unit	Aircraft Type	Quantity
MCAS	UC-12F	2
MCAS	CT-39G	1
HMM(PCS)	CH-46F	12
HMM(UDP)	CH-46F	12
HMH(UDP)	CH-53E	12
HMLA(UDP)	AH-1W	8
HMLA(same as above)	UH-1N	9
VMGR-152(PCS)	KC-130T	12
VMO-2(UDP)	OV-10D	6
Total		**74 Aircraft**

Source: MCB Camp S. D. Butler, April 1991



KC-130T Aircraft

- Identify sites for all facilities needed to fulfill mission requirements and enhance quality of life.
- Eliminate incompatible land use and maintain compatibility between adjacent land uses.
- Provide a five year Capital Improvements Plan with detailed project sitings.

Further considerations in carrying out these objectives are to:

- Retain as much land area as possible for future expansion while providing adequate sites for current mission requirements.
- Avoid "domino" construction by siting planned facilities in vacant areas or in areas occupied by facilities which are to be demolished by the time planned projects are funded.

5. Methodology

The methodology for preparing this master plan is shown on Figure B-7. It included the following steps:

a. Data Collection

Data collection consisted of the accumulation of all available information about the activity and surrounding area, including planning documents, maps, and environmental data. Land use constraints (natural and man-made) and historical data were also considered. An Engineering Evaluation was then conducted to update the records on all existing assets. Lastly, the Basic Facilities Requirements (BFRs), the Facilities Planning Document (FPD), and the Facilities Requirements Plan Summary (FRPS) were all updated to identify projects to be included in the Air Station's Development Plan.

b. Development of Planning Objectives

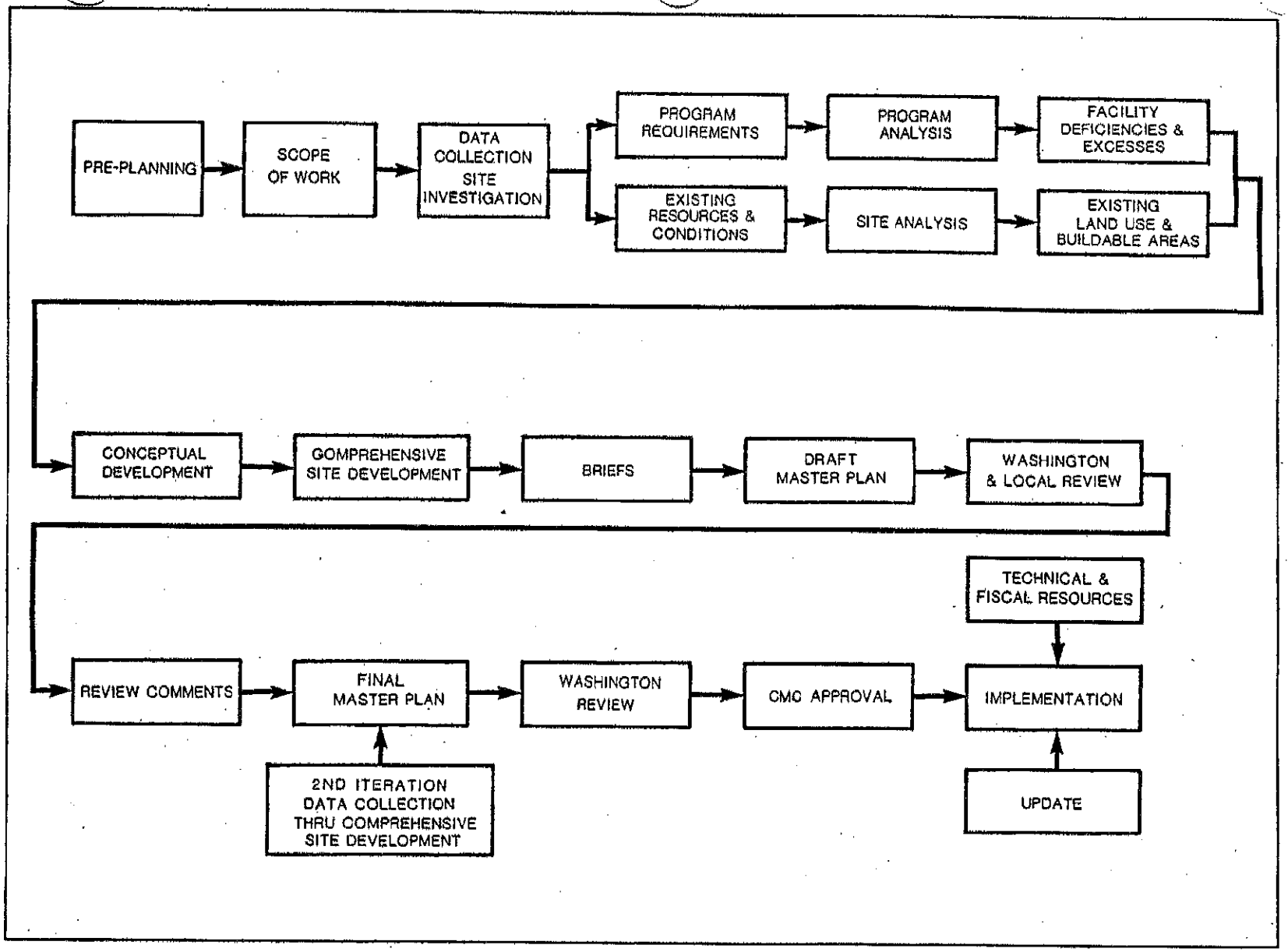
These were developed in coordination with the activity following review of the basic data.

c. Evaluation and Analysis

On-site visits were made by the planning team to review problem areas and discuss alternative solutions with personnel from each activity. The data gathered from existing documents, the on-site visits, the BFR/FPD/FRPS updates, and discussions with activity personnel were then analyzed to determine the ability of each activity to accommodate future requirements. Conclusions and recommendations were developed to support the activity's mission and planning objectives, with priority consideration given to environmental and fiscal constraints.

d. Draft and Final Master Plans

The results of the above steps were included in a Draft Master Plan, which was distributed to all interested commands within the Marine Corps and Navy for review and comment. Comments on the Draft Plan have been incorporated in this Final Master Plan. Upon approval by the Commandant of the Marine Corps (CMC), the Master Plan becomes the guide for all future development at MCAS Futenma.



MASTER PLAN METHODOLOGY CHART

FIGURE B-7

C. EXISTING CONDITIONS

This section describes the legal and physical characteristics of MCAS Futenma and its relationship to the existing and proposed land uses of the adjacent Ginowan City.

Legal characteristics include land ownership and the current off-station land use adjacent to the Air Station. Physical characteristics include both natural and manmade attributes such as topography and utility systems. Individual buildings and land areas are classified by eleven use categories and mapped to show the overall land use pattern. The location and groupings of buildings are also mapped by user and type of facility.

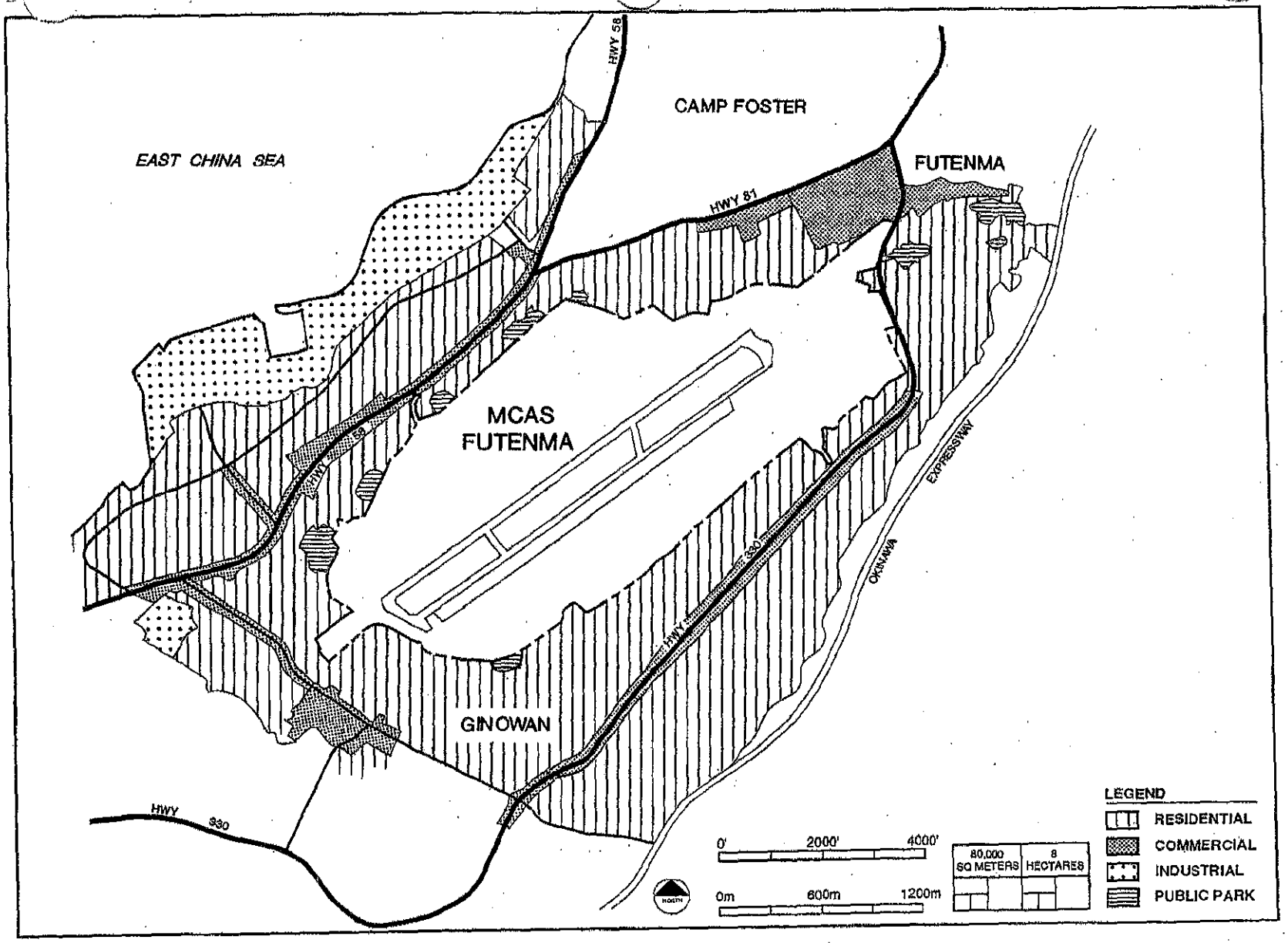
1. Land Ownership and Control

The land at MCAS Futenma is leased from 2,047 private owners by the Government of Japan (GOJ), and is provided at no cost to the United States. The official GOJ name for MCAS Futenma is Futenma Air Station (FAC 6051). This arrangement has existed since the Okinawa Reversion Agreement of June 1971, and has as its basis the 1960 Treaty of Mutual Cooperation and Security between the United States and Japan.

2. Off-Station Land Use/Development

The Air Station is located in Ginowan City, which is densely populated. In recent years much development has occurred around and up to the edges of the Air Station, leaving little open space around it. Most of the development consists of residential and commercial uses. (Figure C-1.)

Off-Station Residential Development
(at upper right)



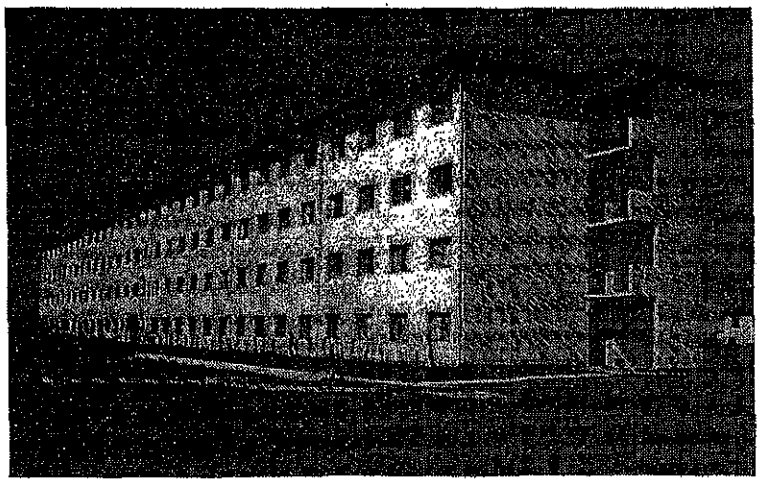
MCAS FUTENMA MASTER PLAN

OFF-STATION LAND USE

FIGURE C-1

3. Existing Facilities

Existing facilities on MCAS Futenma house operational, or work related, functions, unaccompanied personnel housing, and community support activities. Air Station and 1st MAW operational facilities are shown on Figure C-2. Housing and community support facilities include those operated by MCB Camp S. D. Butler and the Army Air Force Exchange Service (AAFES). Their locations are shown on Figure C-3.



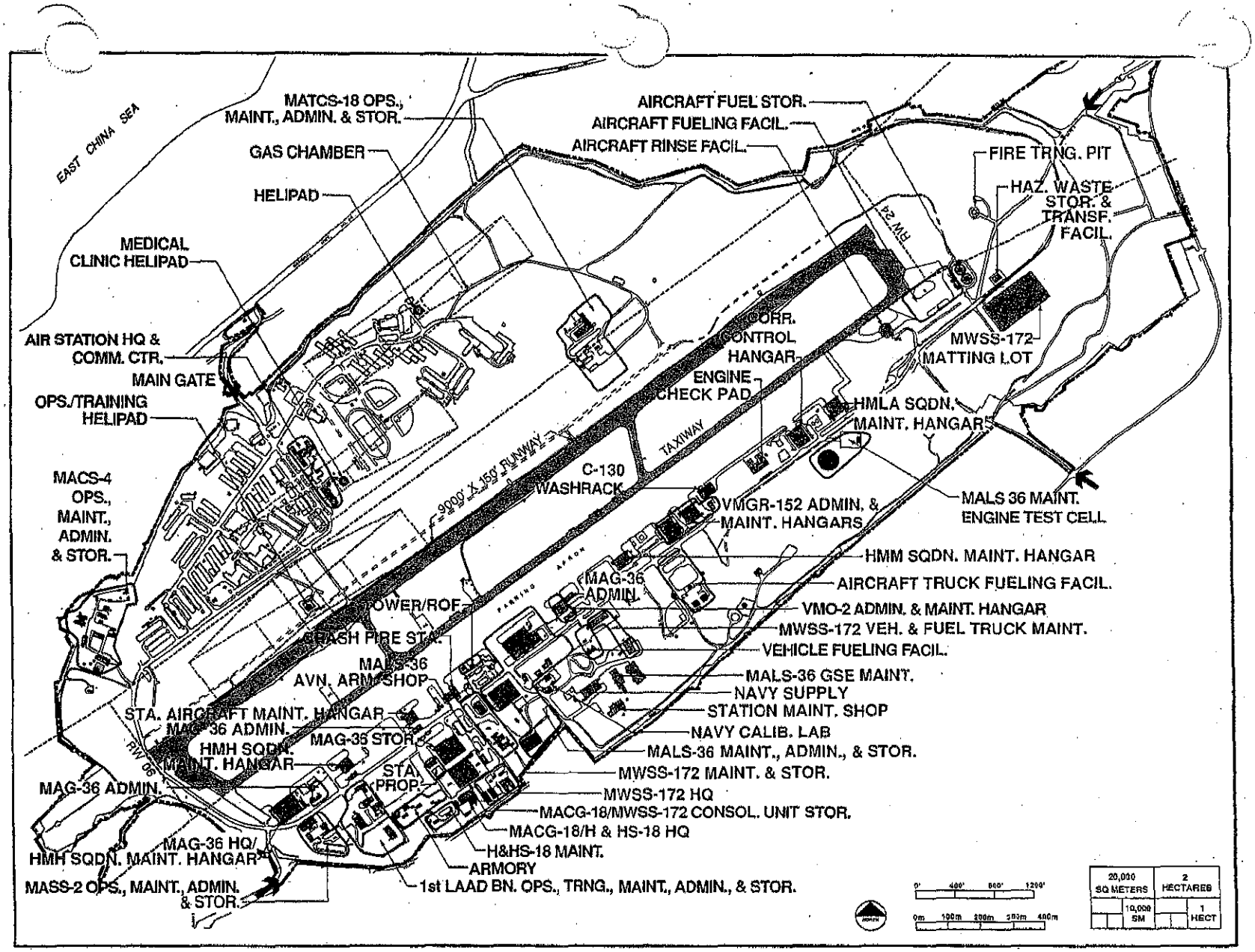
Troop Housing

4. Existing Utilities

a. Electrical Distribution System

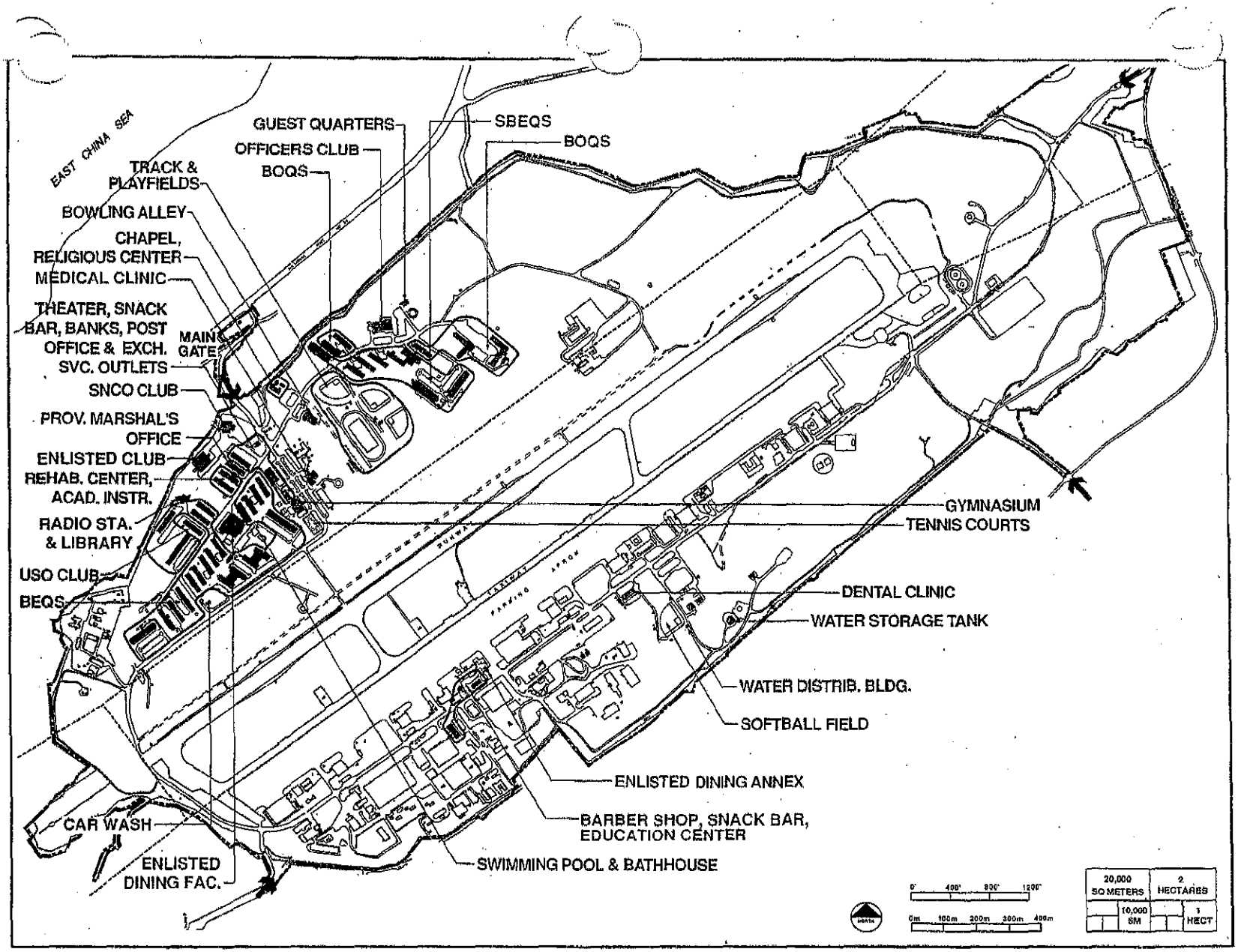
MCAS Futenma receives power from the Okinawa Electric Power Company (OEPC) through its Futenma Substation. Power to the Substation is from the 66 KV, 60 Hz Zukeran transmission line. The Substation has a 16/21/26 MVA, OA/FA/FA, 66KV delta - 13.8 KV wye transformer, from which three feeders supply power to MCAS Futenma. Feeder F-1 supplies power to the administration, BEQ/BOQ and community support areas; Feeder F-2 supplies the air operations area on the southeast side of the Air Station; and Feeder F-3 supplies MACS-4 and MACG-18, and also a portion of Camp Foster. Most of the electrical distribution system is overhead, except for a portion of the air operations area which is underground.

The circuit breakers and meters for the MCAS Futenma feeders in the OEPC substation are inaccessible to the base electricians. With only one transformer serving MCAS Futenma, it is vulnerable to an extended power outage should that transformer fail. The lack of an automatic load tap changer for the transformer also causes undesirable voltage



MCAS FUTENMA MASTER PLAN **CURRENT FACILITY LOCATIONS - 1ST MAW/STATION OPERATIONS**

FIGURE C-2



MCAS FUTENMA MASTER PLAN **CURRENT FACILITY LOCATIONS - HOUSING/COMMUNITY SUPPORT**

FIGURE C-3

fluctuations. In addition, the overhead lines are vulnerable to lightning, typhoons, and corrosion from salt air.

A further problem is limited capacity. Feeders F-1 and F-2 are near maximum capacity, and Feeder F-3 is already overloaded. Construction of the Japanese Facility Improvement Program (JFIP) projects will place additional loads on the feeders.

To improve reliability and maintainability of the electrical distribution system, dual underground feeders with interspersed vacuum switches to backfeed or to isolate small sections of the circuits are required. Two projects in the CIP address this need. The locations of the existing substation and feeders are shown on Figure C-4.

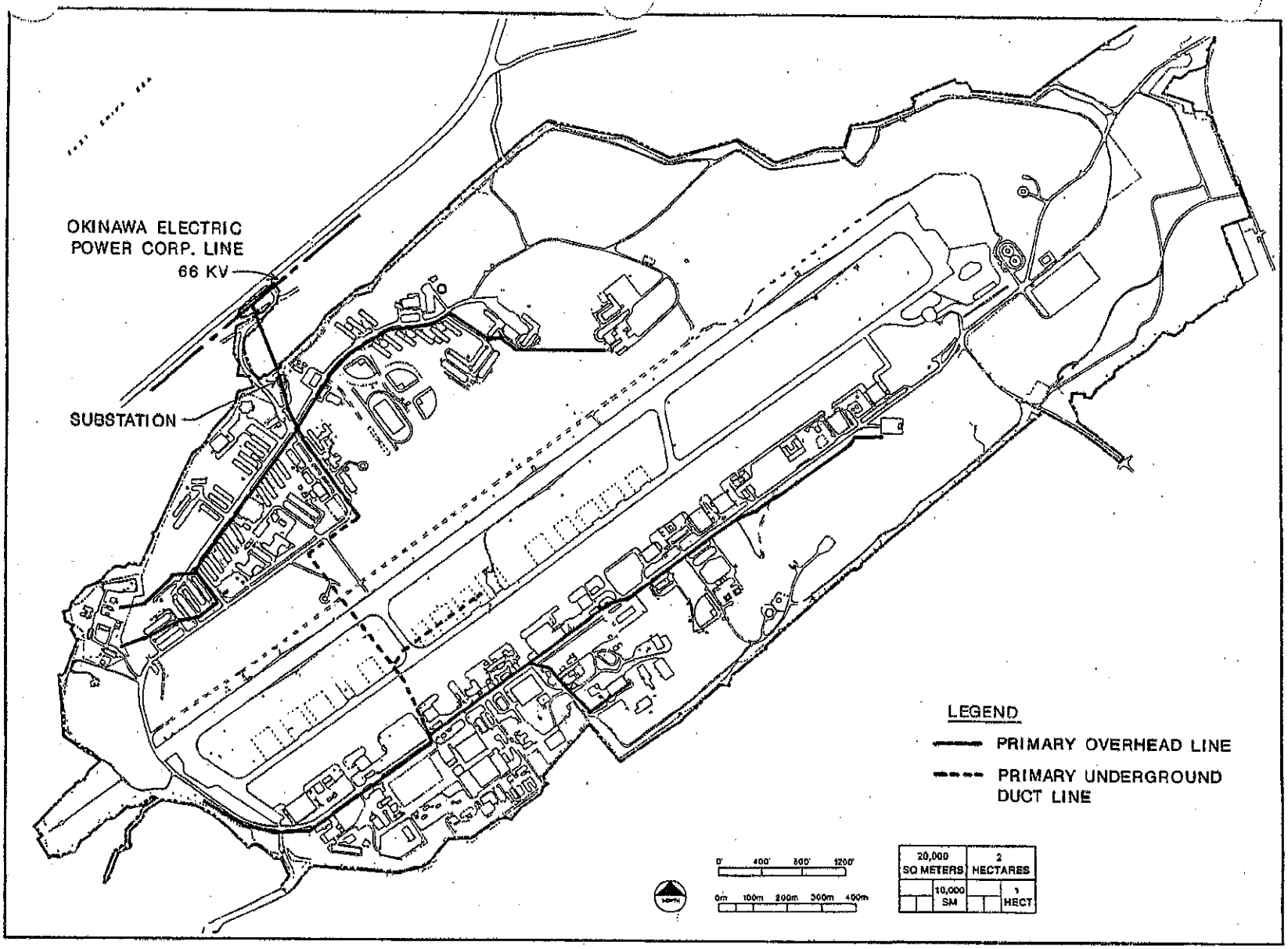
b. Water Supply System

Potable Water System -- Potable water to MCAS Futenma is provided by Ginowan City from the existing Okinawa Prefecture Enterprise Bureau (OPEB) island-wide system.

Water is supplied from a 750,000 gallon storage tank which is fed from an 8-inch main from Highway 330 in Ginowan City. An Officer In Charge of Construction (OICC) Far East contract completed in April 1990 replaced or increased the size of the main water distribution system. Two parallel 14-inch mains were constructed, replacing the single 18-inch main from the water storage tank to the water distribution system. A single 14-inch main was also constructed at the western end of the runway, replacing a 10-inch main which crossed the runway. Except at isolated locations, all potable water distribution lines at MCAS Futenma are closed loop systems with the capability of providing potable water to each facility from more than one direction.

The current water distribution system is inadequate for present and planned requirements of the Capital Improvements Plan (CIP) included in this Master Plan. To meet the maximum fireflow requirements of the planned hangars, their designs must incorporate in-line booster pump systems to provide the minimum 100 PSI residual pressure in their sprinkler systems.

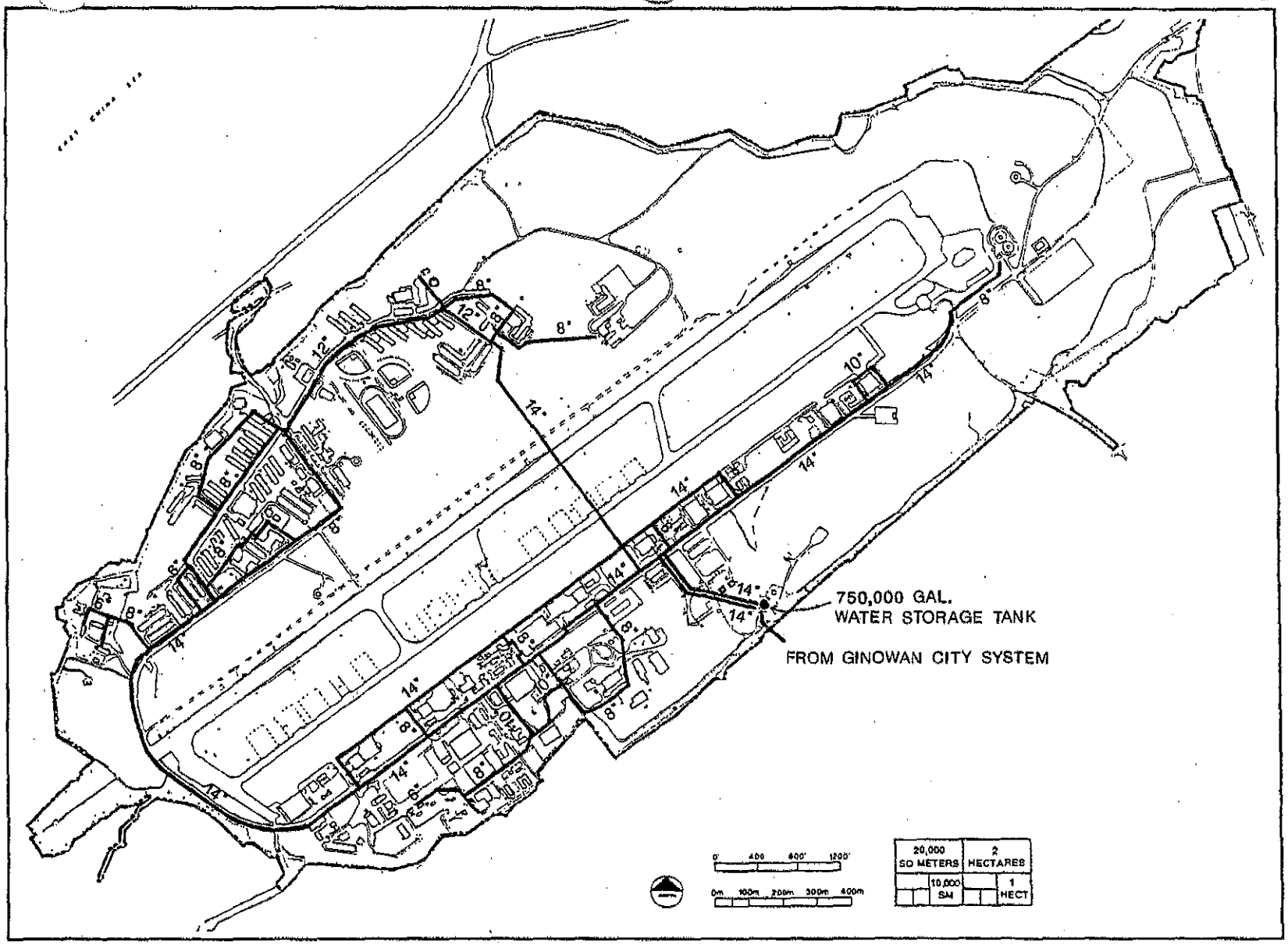
Additional storage capacity will be required to supply all proposed projects. A project is included in the CIP to take care of this need. The existing water supply system for the Air Station is shown in Figure C-5.



MCAS FUTENMA MASTER PLAN

ELECTRICAL DISTRIBUTION SYSTEM

FIGURE C-4


750,000 GAL.
WATER STORAGE TANK
FROM GINOWAN CITY SYSTEM
20,000 SQ METERS
2 HECTARES
10,000 SM
1 HECT

Non-Potable Water System -- There are no existing sources of non-potable water at MCAS Futenma, and none are planned for the foreseeable future.

Conservation Measures -- As with all of the camps that make up MCB Camp Butler, MCAS Futenma is subject to water use goals and procedures established by the Prefecture government. During periods of water rationing, the Prefectural government normally enacts consumption reduction measures to stretch available supplies.

MCAS Futenma follows the conservation measures of Camp Butler's Utilities Conservation Advisory Board. In addition, water meter readings are monitored regularly in an effort to reduce losses through leaks. The Air Station has consistently been able to meet its conservation goals during all past periods of water rationing. As such, existing water conservation measures appear to be effective.

c. Sewerage System

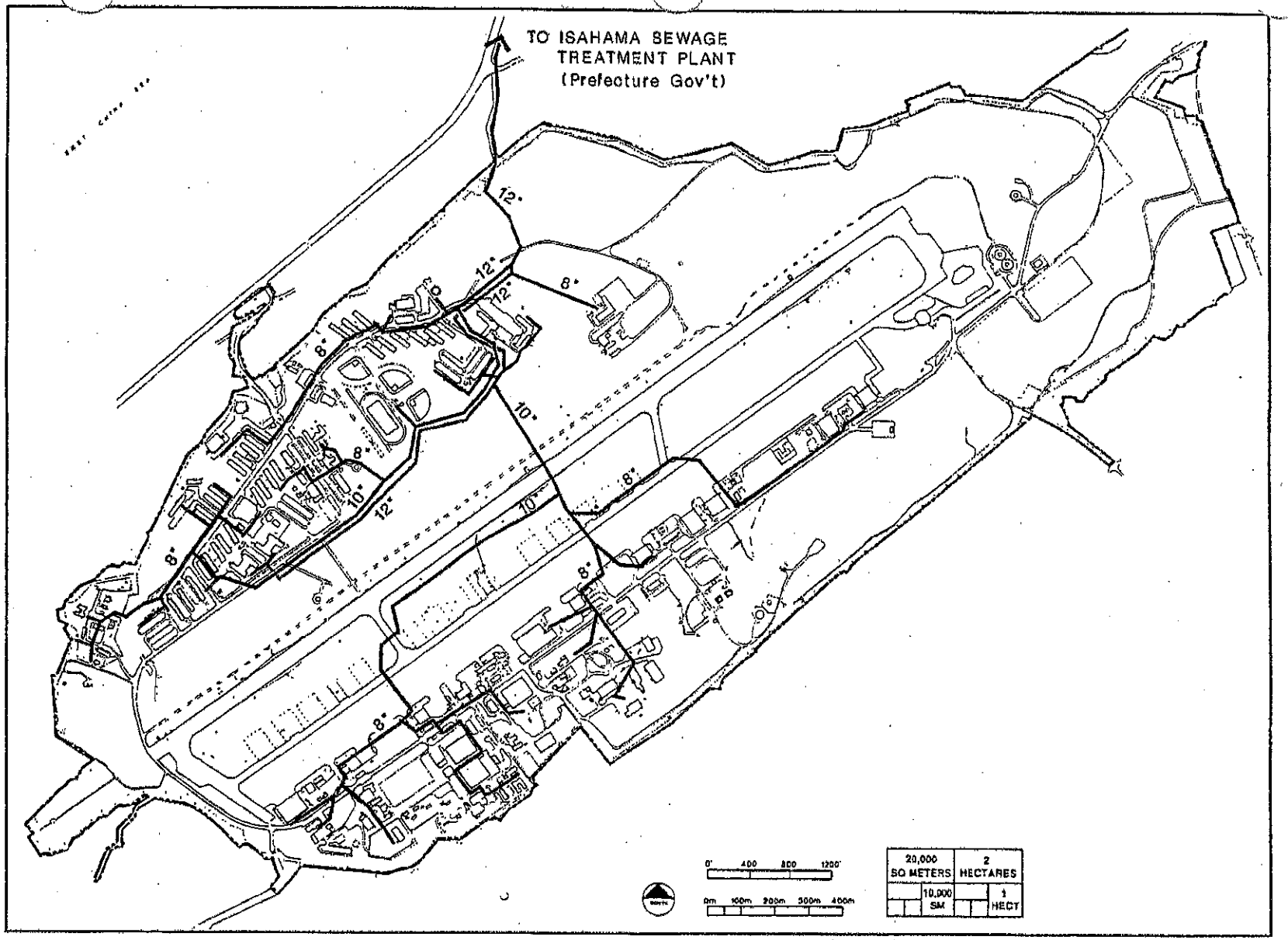
Sewage from MCAS Futenma is treated by the Okinawa Prefectural Government (OPG) Sewage Treatment Plant located near the southern end of the former Hamby Airfield. The current treatment rate is 27 yen/cubic meter of potable water consumed.

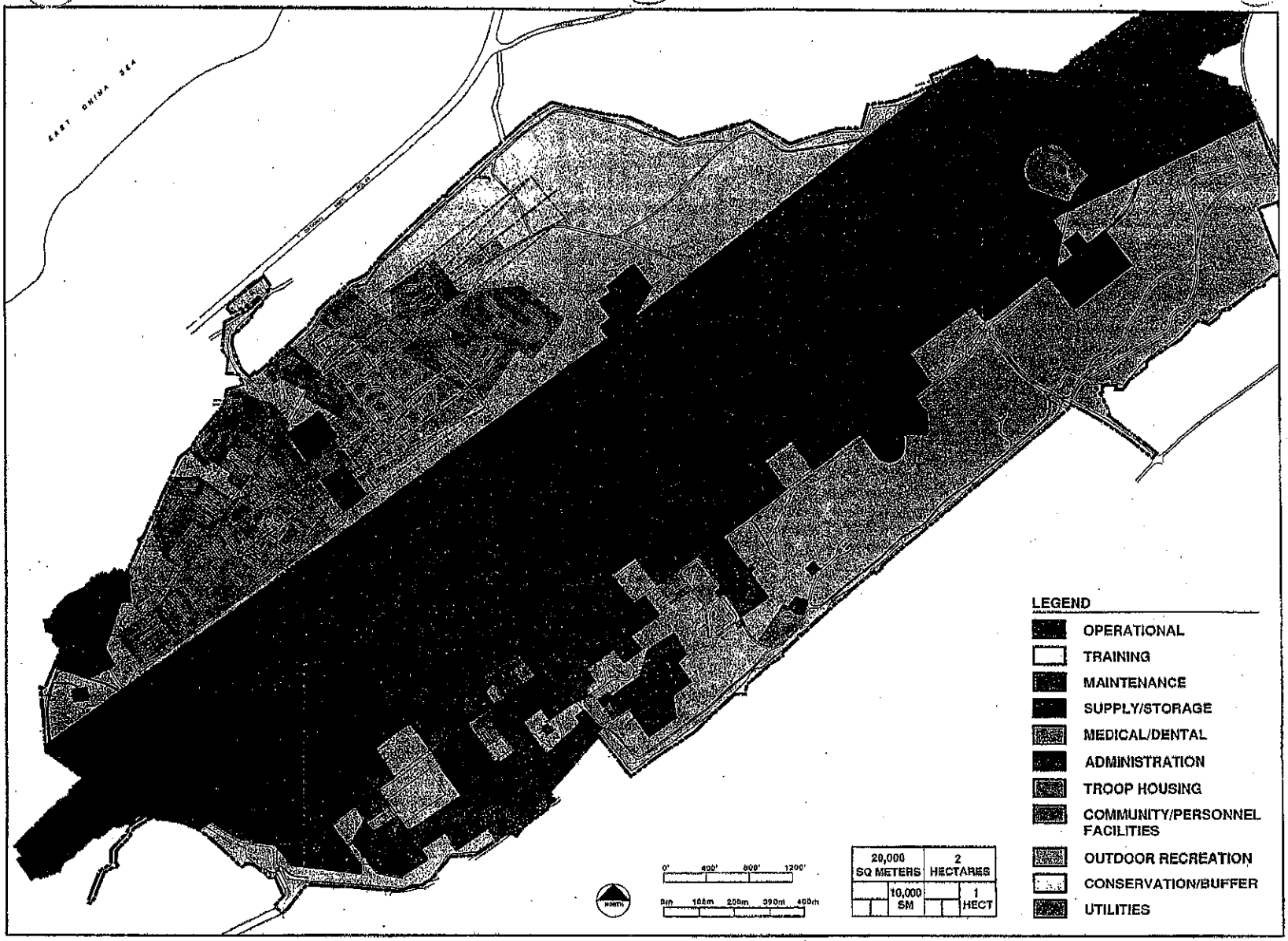
The existing sanitary sewerage system has the capacity to support the immediate and long-range projects proposed for the Air Station. The existing Air Station sewerage system is shown in Figure C-6.

5. Existing Land Use

Figure C-7 shows existing land use for MCAS Futenma according to function. As can be seen, the largest single land use is the runway and the surrounding clear zone which run through the center of the Air Station. Maintenance, supply/storage and troop housing utilize large pieces of land, while community/personnel facilities and outdoor utilities take up smaller pieces.

Most air operations facilities are located along the southeast (inland) side of the Air Station, with aircraft maintenance operations adjacent to the parking aprons, and supply and support activities to the rear. Air Station command and administration elements, and community support facilities are centrally located on the opposite (northwest) side of the runway, with unaccompanied officer and enlisted personnel


TO ISAHAMA SEWAGE
TREATMENT PLANT
(Prefecture Gov't)
12"
8"
10"
0' 400 800 1200'
0m 100m 200m 300m 400m
20,000 SQ METERS
2 HECTARES
10,000 SM
1 HECT



MCAS FUTENMA MASTER PLAN

EXISTING LAND USE

FIGURE C-7

quarters on either side. Beyond the quarters areas, at each end of the airfield, are compounds for the MATC-18 and MACS-4 air control squadrons.

Aircraft Maintenance Operations

D. DEVELOPMENT CONSTRAINTS

Land development at MCAS Futenma includes consideration of operational, natural and socio-cultural constraints, and environmental effects. These constraints provide an important framework for the evaluation of alternative sites for future facilities.

For example, in some instances, such as the clear zone, land use restrictions have been set forth by DOD regulations and criteria which clearly prohibit most uses. In other instances, such as in high noise areas, mitigation measures can sometimes be implemented to permit compatible development within the zones.

Awareness of these and other constraints during the evaluation of a potential development site will help to avoid possible future problems during the design and construction of a project.

1. Operational Constraints

a. Air Installations Compatible Use Zones (AICUZ)

The AICUZ program was initiated by the Department of Defense to recommend land uses which may be compatible with noise levels, accident potential and flight clearance requirements associated with military airfield operations. It is detailed in OPNAVINST 11010.36A and is applied to all U.S. Navy and Marine Corps airfields within the United States.

Although AICUZ studies may be prepared for U.S. airfield activities in foreign countries, it is not a requirement. The recommendations contained in the OPNAVINST are included in this Master Plan for consideration in the on-station land use decision making process along with other relevant factors, such as availability of real property and existing land use.

The initial step in the AICUZ process is preparation of a noise study which shows approximate noise level boundaries, measured in Day-Night Average Sound Level (Ldn). Ldn is generated by a weighted averaging of all aircraft operations, jet engine runups and the flight patterns flown over a 24-hour period. The contours are interpreted to mean that over time the short bursts of high noise and long periods of low noise are equal to a continuous noise level. Because the contours' values are weighted, only a radical change in type of operations, aircraft mix or flight patterns will affect their configuration.

Figure D-1 depicts the noise level boundaries at MCAS Futenma, and Appendix G-2 shows land use compatibility in noise zones. (Other constraints shown on Figure D-1 are discussed in later sections of this plan.) Noise levels below 65 Ldn have essentially no impact on land use, while noise levels of 65 to 75 Ldn require some land use controls and/or noise attenuation.

Figure D-2 depicts arrival flight tracks, and Figure D-3 shows departure flight tracks at the Air Station.

b. Aircraft Accident Potential Zones

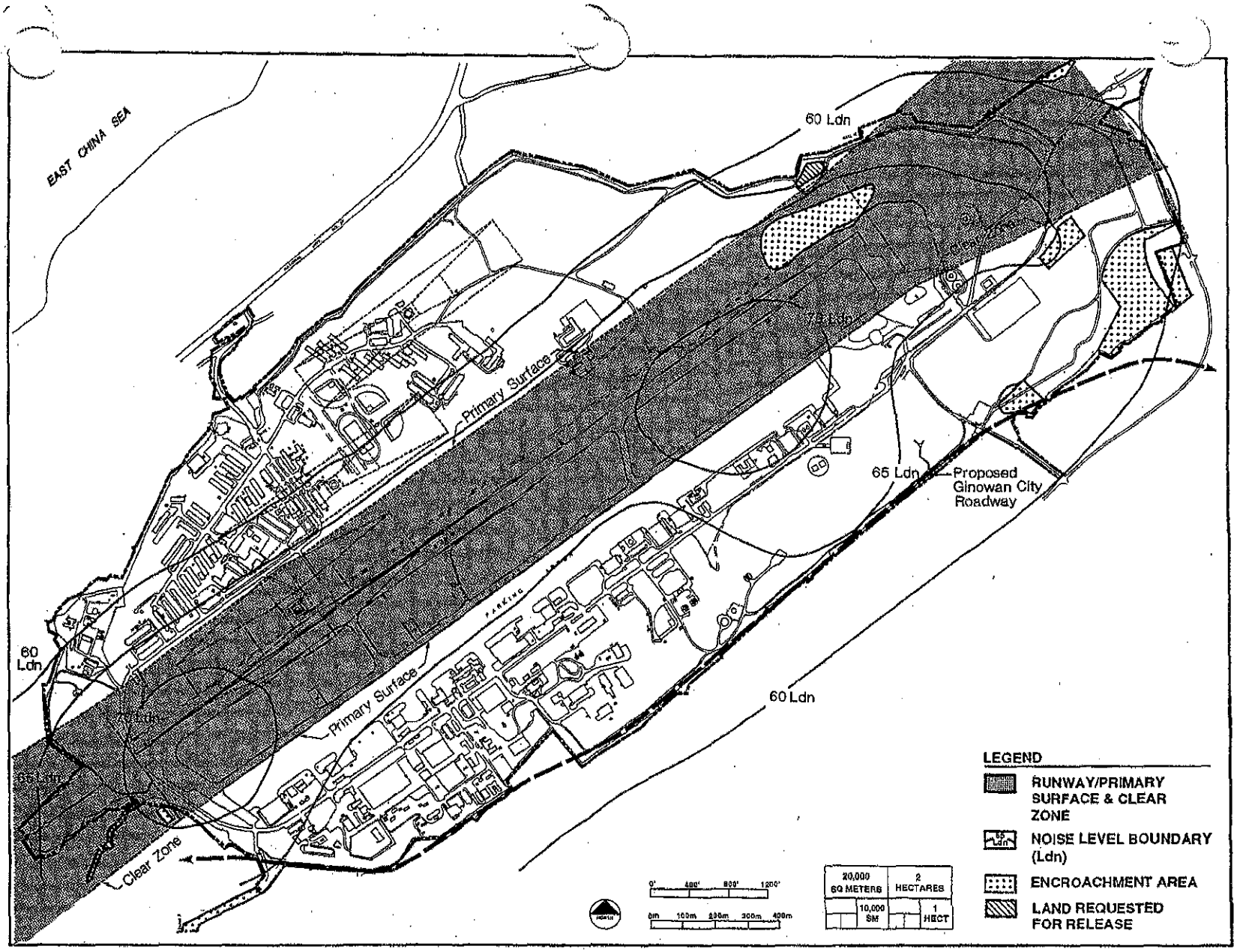
Accident Potential Zones (APZs) are another component of the AICUZ program. APZs extend beyond runway clear zones, and describe the probable impact area if an accident were to occur, based on historical accident data. While established for military airfields in the United States, the APZ concept is not applied in foreign countries.

c. Airfield Safety Clearances

Airfield clear zones have been established at MCAS Futenma on either side of the runway centerline, and beyond the ends of the runway, to preclude vertical obstructions for arriving and departing aircraft. The clear zones at each end of the runway are trapezoidal in shape, with widths of 1,500 feet at the end of the runway and 2,312 feet at a distance of 3,000 feet beyond the end of the runway. These clear zones are development constraints. Suggested land use compatibility is provided in Appendix G-2.

Beyond the clear zones, outwardly and upwardly sloping imaginary surfaces have been delineated to identify where there may be potential obstructions to navigation (Figure D-4). These zones primarily relate to the heights of proposed structures/objects. The imaginary surfaces include:

- The primary surface, extending 750 feet on either side of the runway center line and 200 feet past each runway end, at runway elevation.
- The approach surfaces which are fan shaped inclined and horizontal planes at each end of the primary surface. The inclined surfaces have 50:1 slope and the horizontal surface is 500 feet above the runway. They mark the approach and departure patterns of aircraft.



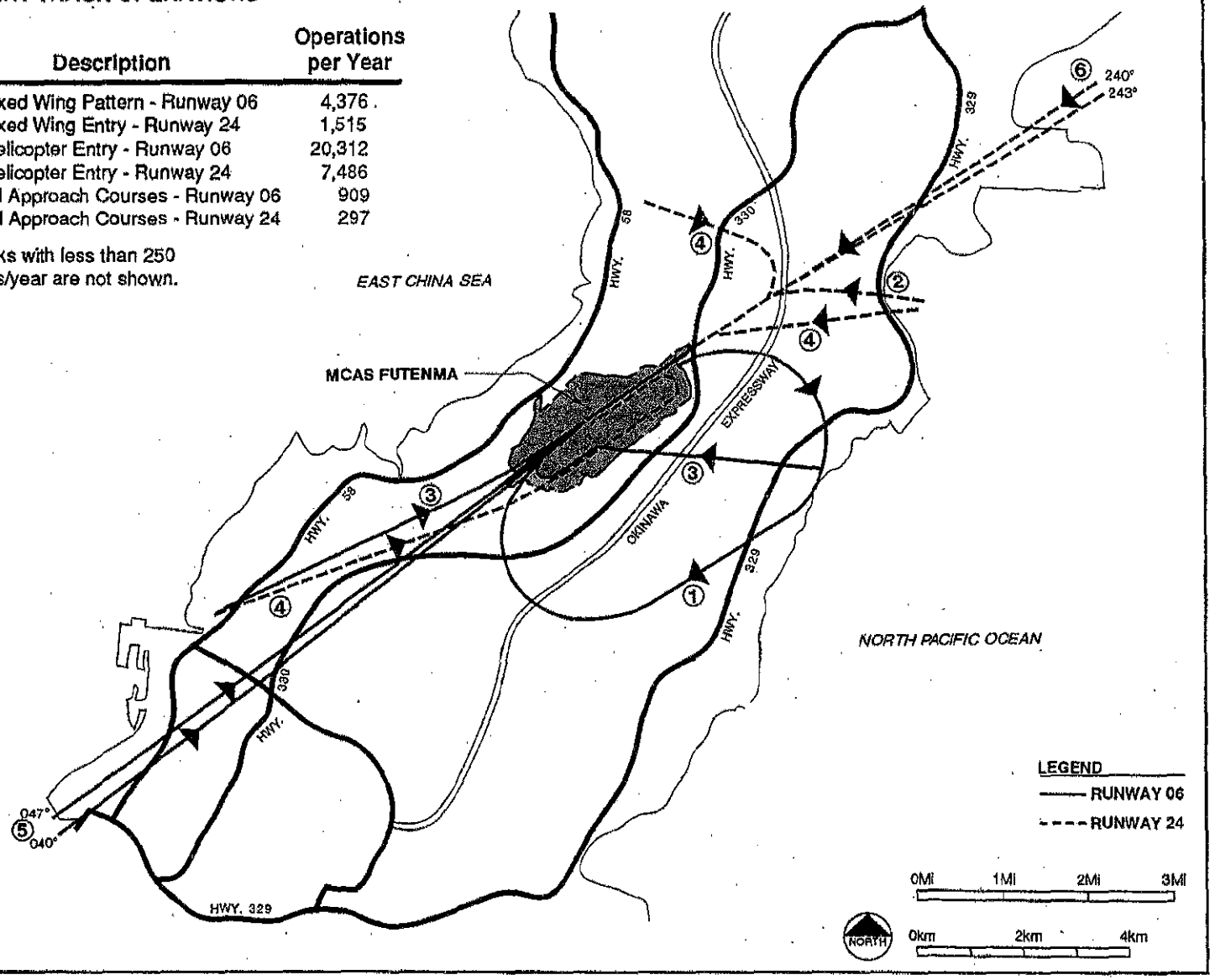
MCAS FUTENMA MASTER PLAN **OPERATIONAL CONSTRAINTS AND ENCROACHMENTS**

FIGURE D-1

ARRIVAL FLIGHT TRACK OPERATIONS

Track No.	Description	Operations per Year
1	VFR Fixed Wing Pattern - Runway 06	4,376
2	VFR Fixed Wing Entry - Runway 24	1,515
3	VFR Helicopter Entry - Runway 06	20,312
4	VFR Helicopter Entry - Runway 24	7,486
5	TACAN Approach Courses - Runway 06	909
6	TACAN Approach Courses - Runway 24	297

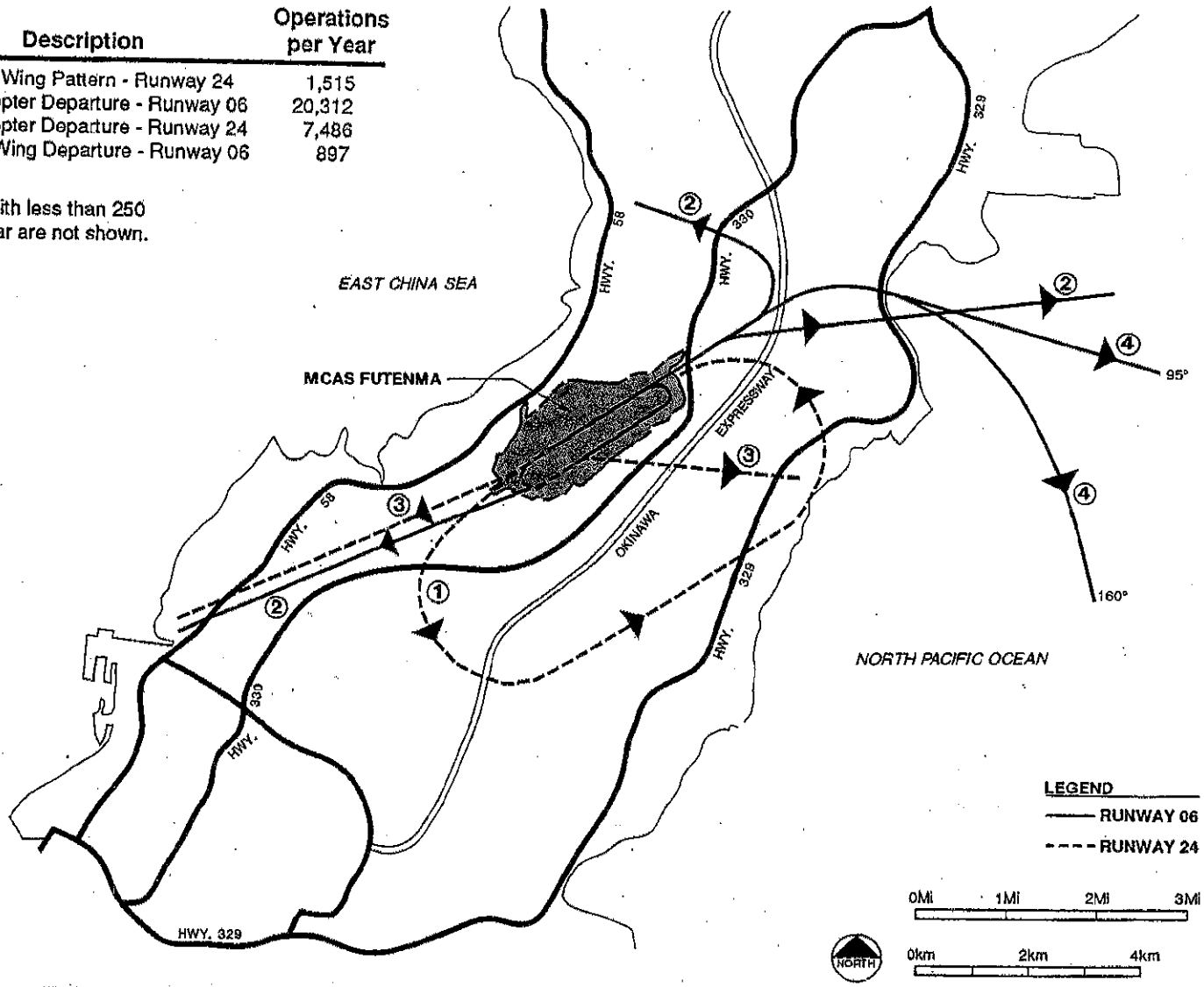
Note: Flight tracks with less than 250 operations/year are not shown.

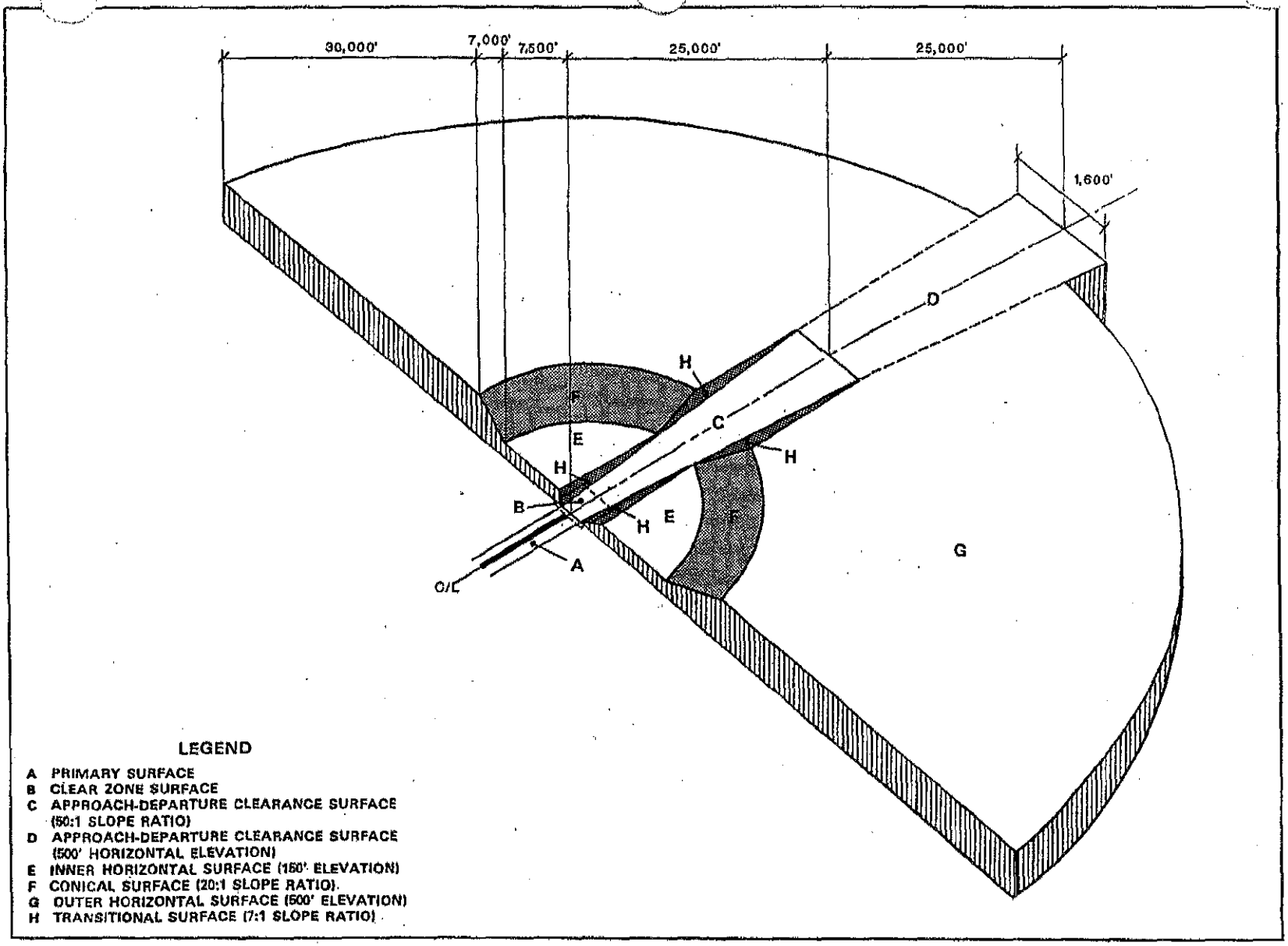


ARTURE FLIGHT TRACK OPERATIONS

Track No.	Description	Operations per Year
1	VFR Fixed Wing Pattern - Runway 24	1,515
2	VFR Helicopter Departure - Runway 06	20,312
3	VFR Helicopter Departure - Runway 24	7,486
4	IFR Fixed Wing Departure - Runway 06	897

Note: Flight tracks with less than 250 operations/year are not shown.





LEGEND

A PRIMARY SURFACE
B CLEAR ZONE SURFACE
C APPROACH-DEPARTURE CLEARANCE SURFACE (50:1 SLOPE RATIO)
D APPROACH-DEPARTURE CLEARANCE SURFACE (500' HORIZONTAL ELEVATION)
E INNER HORIZONTAL SURFACE (150' ELEVATION)
F CONICAL SURFACE (20:1 SLOPE RATIO).
G OUTER HORIZONTAL SURFACE (500' ELEVATION)
H TRANSITIONAL SURFACE (7:1 SLOPE RATIO)

- The transitional surface which is an inclined surface connecting the primary and approach surfaces to the inner horizontal surface. Slope is 7:1.

- The inner horizontal surface which is an oval plane 150 feet above runway elevation extending out 7,500 feet from the runway.

- The conical surface which connects the inner and outer horizontal surfaces at a slope of 20:1.

- The outer horizontal surface which is an oval plane 500 feet above runway elevation extending out 30,000 feet from the outer periphery of the conical surface, or about 44,500 feet from the runway.

Existing airfield safety waivers for clear zone violations are found in Appendix G-3.

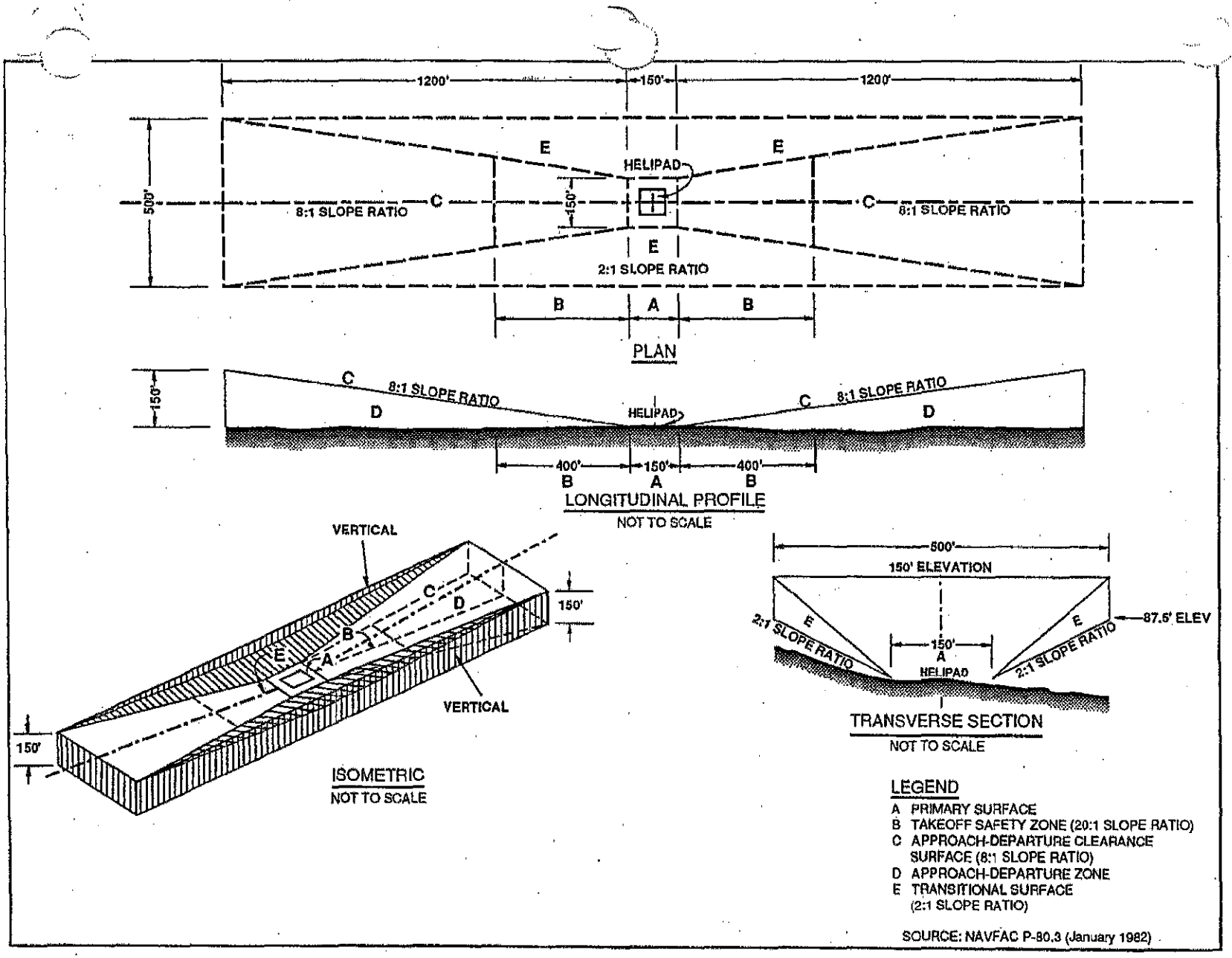
Imaginary surfaces, as shown in Figures D-5, D-6 and D-7, define the airspace required for helipads. Objects must be sited outside of the imaginary surfaces to prevent the obstruction of airspace.

d. Electromagnetic Radiation/Interference

MCAS Futenma has fixed, mobile, portable and hand-held transmitting units. Electromagnetic radiation (EMR) and electromagnetic interference (EMI) constraints include all of the various impacts on personnel, ordnance and fuels caused by the emissions of transmitting antennas.

EMR hazards are evaluated for their impact on Ordnance (HERO), to Personnel (HERP), and to Fuels or other volatile liquids (HERF). A Radiation Hazard Analysis for MCAS Futenma was conducted by Naval Electronics Engineering Activity Pacific (NEEACT PAC), located at Pearl Harbor, in 1991. The fixed transmitter sites and HERP and HERF separation distances are listed in Appendix G-4.

A HERO survey has also been conducted for MCAS Futenma by the Naval Surface Warfare Center, located in Dahlgren, Virginia. The survey conclusions were as follows: "While station's fixed transmitters pose no threat to ordnance in the hangar areas, analysis shows that mobile HF (high frequency) transmitters erected in proximity to hangar areas, where electric cartridges are installed, could pose a threat to HERO susceptible cartridges. Worst case calculations indicate the need



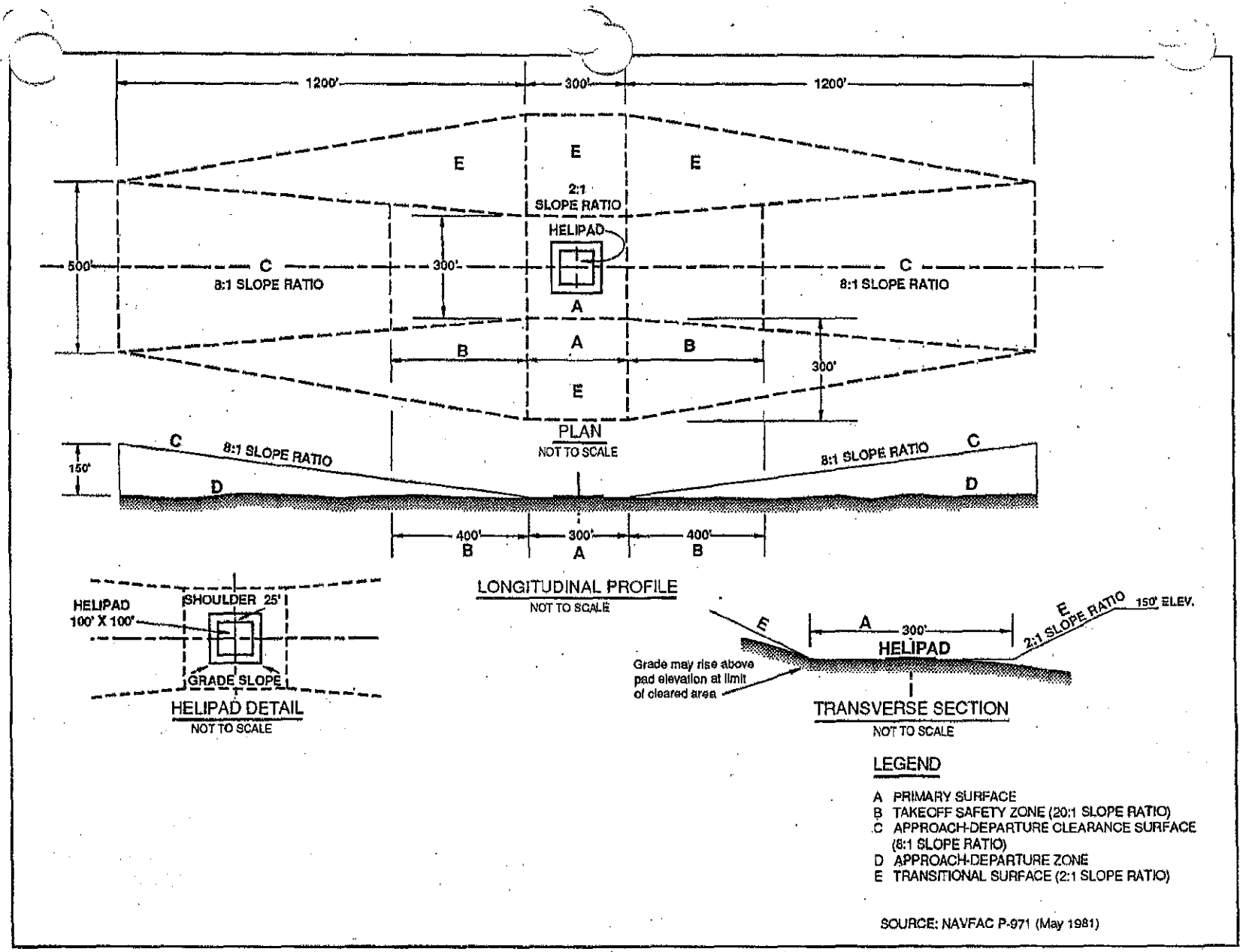
LEGEND

A PRIMARY SURFACE
B TAKEOFF SAFETY ZONE (20:1 SLOPE RATIO)
C APPROACH-DEPARTURE CLEARANCE SURFACE (8:1 SLOPE RATIO)
D APPROACH-DEPARTURE ZONE
E TRANSITIONAL SURFACE (2:1 SLOPE RATIO)

SOURCE: NAVFAC P-80.3 (January 1982)

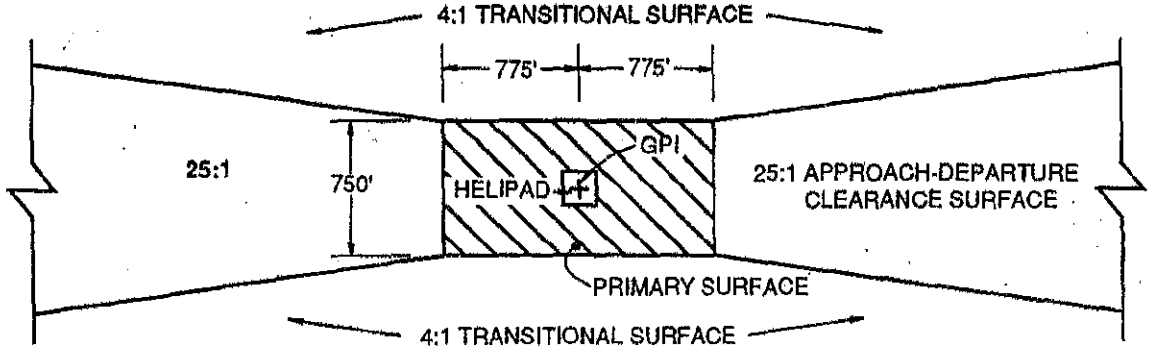
AIRSPACE CLEARANCES - LIMITED USE VFR HELIPAD

FIGURE D-5



AIRSPACE CLEARANCES - STANDARD USE VFR HELIPAD

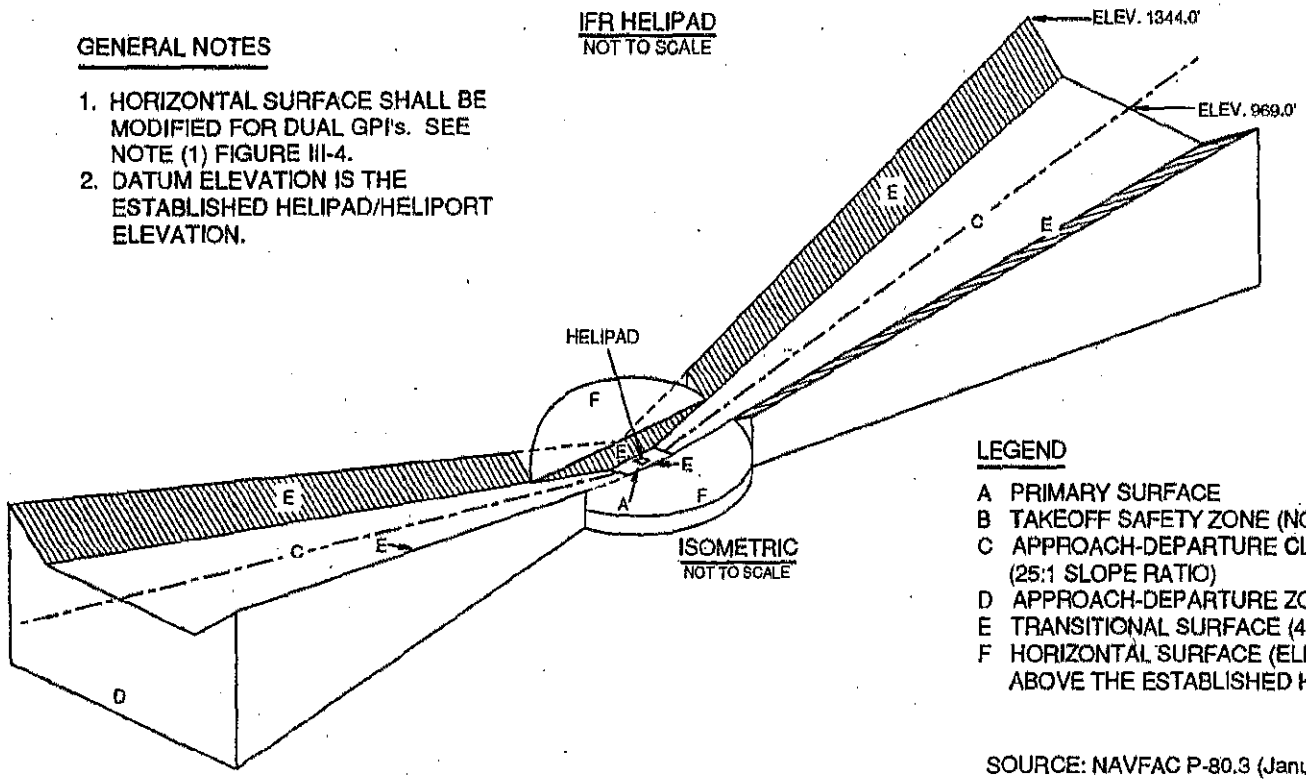
FIGURE D-6



IFR HELIPAD
NOT TO SCALE

GENERAL NOTES

1. HORIZONTAL SURFACE SHALL BE MODIFIED FOR DUAL GPI's. SEE NOTE (1) FIGURE III-4.
2. DATUM ELEVATION IS THE ESTABLISHED HELIPAD/HELIPORT ELEVATION.



ISOMETRIC
NOT TO SCALE

LEGEND

A PRIMARY SURFACE
B TAKEOFF SAFETY ZONE (NOT APPLICABLE)
C APPROACH-DEPARTURE CLEARANCE SURFACE (25:1 SLOPE RATIO)
D APPROACH-DEPARTURE ZONE
E TRANSITIONAL SURFACE (4:1 SLOPE RATIO)
F HORIZONTAL SURFACE (ELEVATION 150 FEET ABOVE THE ESTABLISHED HELIPORT ELEVATION)

SOURCE: NAVFAC P-80.3 (January 1982)

for a minimum separation distance of 715 feet (218 meters) between the transmitter and HERO susceptible ordnance. HERO EMCON (emission control) is necessary for mobile HF transmitters when electric cartridges are being installed on or removed from aircraft."

EMR safety certification and site approval must be obtained for any proposed on-shore installations that (1) include transmitters/antennas or (2) involve personnel, fueling operations, explosives/ordnance, sensitive electronic equipment or military electronics in areas illuminated by electromagnetic radiation.

Areas exist around transmitting antennas within which electronic equipment can experience interference or performance degradation. The Engineering Field Activity (EFA) at NEEACT PAC Pearl Harbor should be consulted, during the project siting process, for advice and guidance concerning the potential for EMI and the prevention of EMI.

e. Explosives Safety Hazard Zones

Storage or handling of aviation ordnance (except for electric cartridges) is not conducted at MCAS Futenma. Consequently, there are no explosives safety hazard zones.

2. Socio-Cultural Constraints

a. Encroachments

Tacit Farming -- Encroachment on MCAS Futenma consists mainly of agricultural plots tended by local farmers. These areas are located in the primary surface, adjacent to Runway 06 at the northwest end of the Air Station (Figure D-1). Relocation of the farm plots is planned to a site which, while in the clear zone, will be adjacent to the Air Station boundary, closer to Gate 3, and in an area of lessened accident potential.

Highways -- A highway proposed by the Okinawa Prefecture (Figure D-1) will also encroach on some perimeter areas, if built as planned.

Buildings -- There are no laws in Okinawa prohibiting the owners of properties beyond each end of the runway from erecting buildings which pierce the airfield clearance surfaces (Figure D-4) extending over their property. In one instance such a building was constructed, and it had to be subsequently purchased and torn down. While cultural values in Japan usually cause most landowners to voluntarily refrain from such actions, it is possible that this could happen again.

b. Land Release Requests

Land release requests consist of approximately 10 acres along the east side of the Air Station for road improvements (Figure D-1), and approximately one acre at the southern end of the runway for private development. Eight acres at the northern end of the runway have also been requested for release (Figure D-1). This area is adjacent to the clear zone.

c. Cultural/Historical/Archaeological Sites

A listing of cultural sites and areas at MCAS Futenma, and a cultural overview are found in the document, "Cultural, Historical and Archaeological Documentation - MCB Camp Smedley D. Butler and MCAS Futenma, Okinawa, Japan," prepared by Paul H. Rosendahl, Ph.D., Inc. (PHRI) in 1991. Their locations are indicated on Figure D-8.

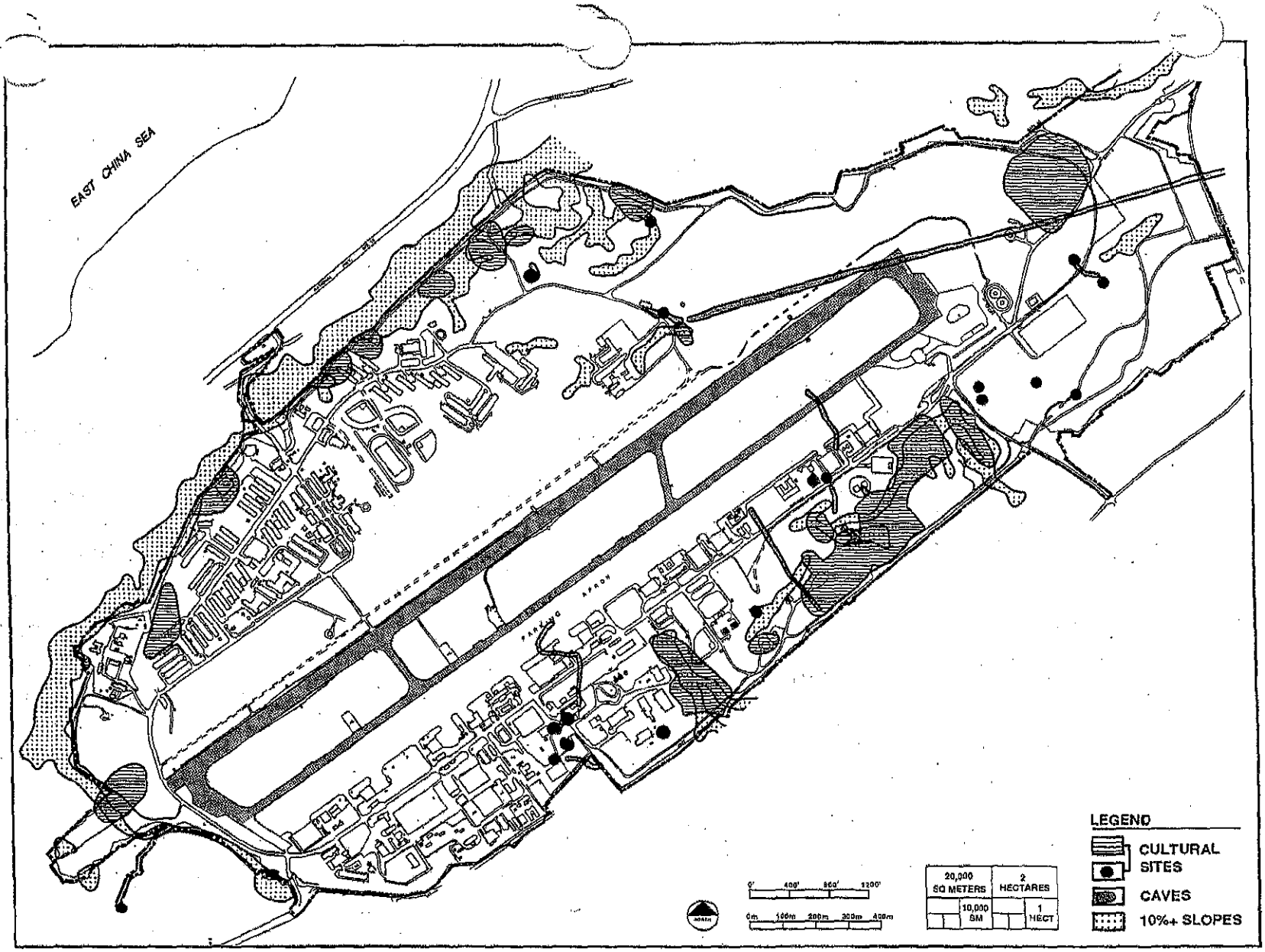
Cultural sites are categorized into two groups, each with its own review procedures:

- Assets of scientific value. These include shell mounds, village and agricultural remains, castle remains, and ancient tombs. Review and preservation procedures are clearly defined by the Government of Japan.
- Assets of cultural value. These may be further categorized as tombs, sacred or religious sites, and natural monuments (such as springs, wells, and caves). Procedures for these non-designated sites of cultural value are less clearly defined by the Government of Japan.

A total of 55 cultural sites were located at MCAS Futenma. These include burials, village ruins with sacred areas and alters, agricultural wells, a spring, and memorials. None of these is officially registered as an archaeological site. However, when their cultural potential is considered within the context of several important archaeological finds in the Municipality of Ginowan, these sites may contribute to the understanding of human habitation and the evolution of the native culture over a very long period.

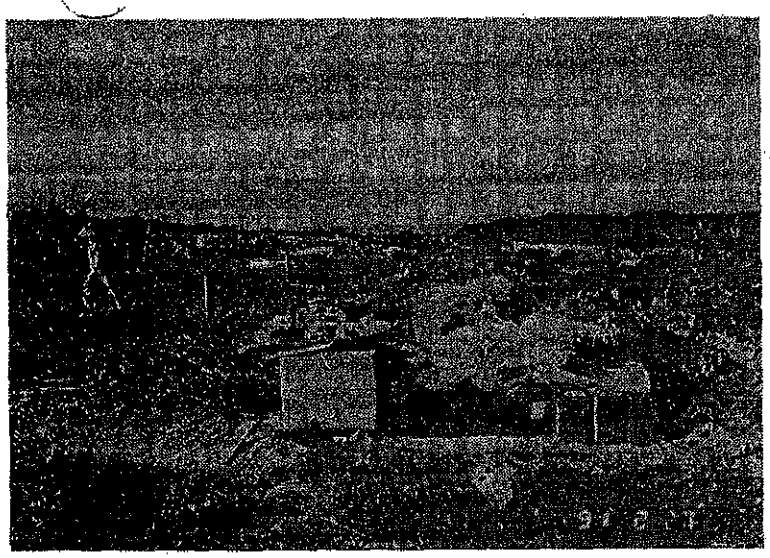
c. Underground Caves

Natural cave formations have been found to exist under MCAS Futenma, with some yielding pottery shards and other evidence of early human habitation. Fossilized human and animal bones of the Pleistocene



MCAS FUTENMA MASTER PLAN **NATURAL AND CULTURAL CONSTRAINTS**

FIGURE D-8



Agricultural Plots

Turtleback Tomb

Worship Area

Opening to Natural Cave

Period (2-1/2 million to 8,000 years ago) have also been found.

There are 21 identified caves which contain cultural deposits, midden deposits and burials. Seven caves have a scientific value, with 14 other caves having a cultural value. Approximate locations of major caves are depicted on Figure D-8.

3. Natural Constraints

a. Topography

MCAS Futenma is sited on a plateau, with elevations from 195 feet (60 meters) along the northwestern boundary to 330 feet (100 meters) along the south-eastern boundary. The runway area is level, with an airfield elevation of 245 feet (75 meters). A 65 foot (20 meters) high bluff runs along the western boundary and physically separates the Air Station from Ginowan City. There is also a strip of moderately sloping terrain along the southeastern boundary.

Land that has a slope gradient of greater than ten percent is generally considered unsuitable for construction. Areas with these relatively steep slopes are shown on Figure D-8.

b. Flood Prone Areas

Some flood prone areas do exist on MCAS Futenma, but they are not considered severe enough to hinder development.

4. Consideration of Environmental Effects

The National Environmental Policy Act (NEPA) of 1969, as amended, requires all federal agencies to give appropriate consideration to the environmental effects of their proposed actions, if these actions are within the United States, its territories and possessions. This consideration is documented in an Environmental Impact Statement (EIS), when the action is one which will significantly affect the environment; or in an Environmental Assessment (EA), when the action is one for which the impacts are not known or may not be significant. There are also specific categories of actions that either have no potential for significant impacts or provide beneficial impacts, which are excluded from further NEPA documentation.

DOD Directive 6050.7, which implements Executive Order 12114 of 4 January 1979 (Environmental Effects Abroad of Major Federal Actions), requires DOD to

take account of environmental considerations when authorizing or approving certain federal actions that may significantly harm the environments of places outside the United States. Procedural requirements of DOD Directive 6050.7 must be followed if the proposed action (i.e., MILCON, Special and NAF Projects) is to be implemented or funded directly by the U.S. Government. However, the following are not federal actions covered by DOD Directive 6050.7.

- actions in which the U.S. participates in an advisory capacity, but does not fund the action;
- actions taken by a foreign government or in a foreign country in which the U.S. is a beneficiary, but does not fund the action;
- actions in which foreign governments use funds derived indirectly from U.S. funding.

This Master Plan, in and of itself, does not comprise a federal action. However, as planning documents are developed and submitted to higher authority decision-makers for possible implementation, each proposal in the master plan must be individually evaluated to determine the appropriate level of environmental documentation required to comply with NEPA regulations.

E. PLANNING ANALYSIS

This section discusses idealized and existing functional relationships, investigates use constraints, describes the concepts that underlie this Master Plan, and recommends a land use plan which will promote continuity in the development of future facilities at MCAS Futenma.

1. General Requirements

The major components for an air station such as MCAS Futenma are runways, taxiways, parking aprons, flight operations and maintenance facilities, personnel billeting facilities and miscellaneous facilities such as administration, public works, community support and recreation facilities. The Facilities Requirements Plan Summary (FRPS), developed from the U.S. Navy's Shore Facilities Planning System (SFPS), translates the basic mission, tasks and base loading of an activity into facility requirements, and then compares these requirements with existing assets to identify facility shortfalls and surpluses. A copy of the FRPS for MCAS Futenma is included as Appendix G-5.

2. Idealized Functional Relationships

Since the major mission of an air station is to provide the facilities needed for aircraft operation and maintenance, the primary functional elements are the operational pavements. The orientation and the number of runways affect the relationship and siting of all other facilities, with taxiways and parking aprons being an integral part of the aircraft pavement complex.

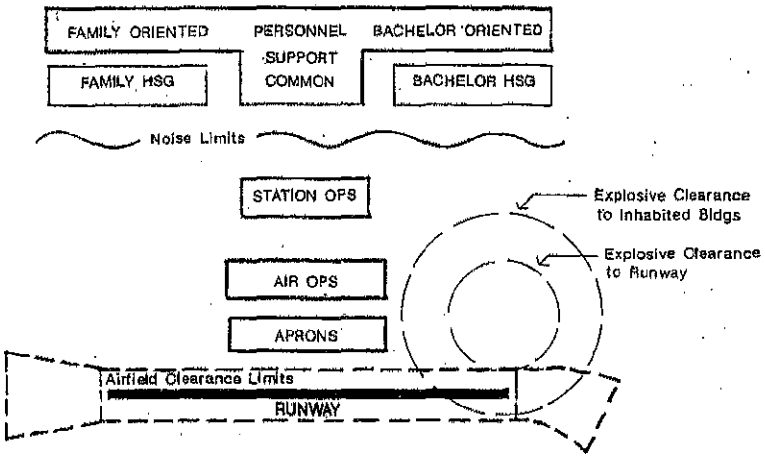
Today's aircraft require sophisticated support complexes. These aircraft support complexes have a direct functional relationship to the pavement areas, with each type of support related to a specific pavement function (i.e., maintenance to parking aprons, fueling to aircraft taxiways, airspace control to runway utilization, etc.).

Facilities associated with the personnel who fly or support aircraft operations do not require a direct "tie-in" with the aircraft pavement complex. Housing is a basic function in this area. While there is no direct functional relationship between housing and aircraft operations, housing should be sited within a reasonable commuting distance. At the same time it should be far enough away to minimize the potential

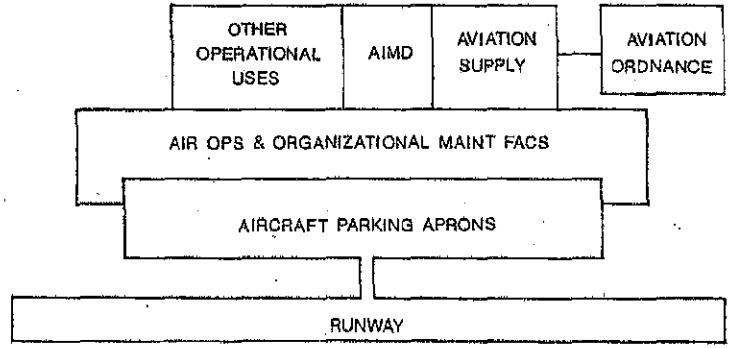
impact of negative aspects of aviation, such as noise. All other personnel support facilities have direct relationships to either family housing or bachelor housing, with certain facilities being oriented toward both bachelors and families.

Figure E-1 is a diagrammatic scheme for a typical air station that shows the functional elements discussed above in an idealized layout. Those encumbrances that form an integral part of any airfield development have been added. Their impact on the basic functions is graphically illustrated.

Figure E-2 shows a refinement in the airfield area of the idealized development scheme. Air operations and aircraft maintenance facilities are usually located near the aircraft parking aprons so that aircraft are easily accessible to flight crews and maintenance personnel. Ideally, the aircraft parking aprons are fronted by organizational maintenance facilities (squadron hangars) and air operations buildings (control tower, air operations, passenger terminal, etc.) since these functions require direct access to the aircraft. The organizational maintenance/air operations area is supported, in turn, by the intermediate maintenance activities, aviation supply, and other functions.



IDEALIZED AIR STATION DIAGRAMMATIC FUNCTIONAL RELATIONSHIPS FIGURE E-1



AIRFIELD AREA IDEALIZED FUNCTIONAL LAYOUT FIGURE E-2

3. Existing Functional Relationships

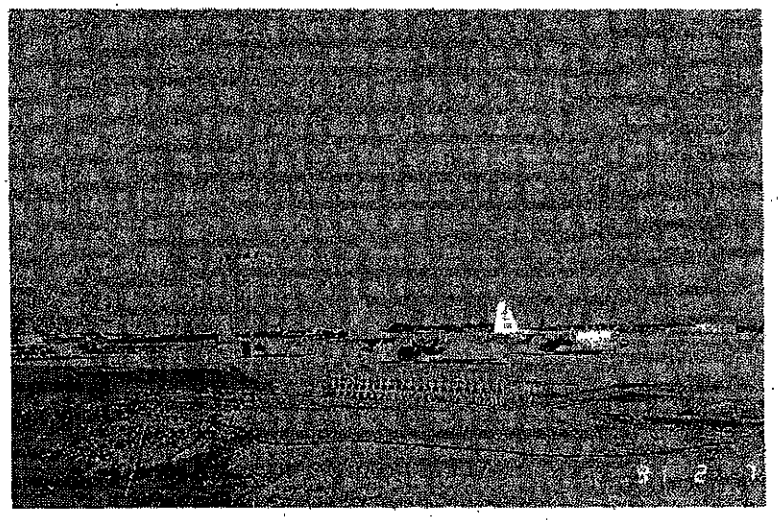
Figure E-3 illustrates the existing functional relationships at MCAS Futenma. These relationships follow the basic principles of the "ideal" pattern, with the main difference being that the runway is located in the center of the Air Station. Most air operations facilities are located along its southeast side, with aircraft operations and maintenance activities adjacent to the parking aprons, and additional supply and support activities to the rear.

Rather than being behind air operations, the Air Station's command and administration elements, and the community support facilities are centrally located on the opposite (northwest) side of the runway, with unaccompanied officer and enlisted quarters located on either side of these facilities. Beyond the quarters areas at each end of the runway is the compound for an air control squadron.

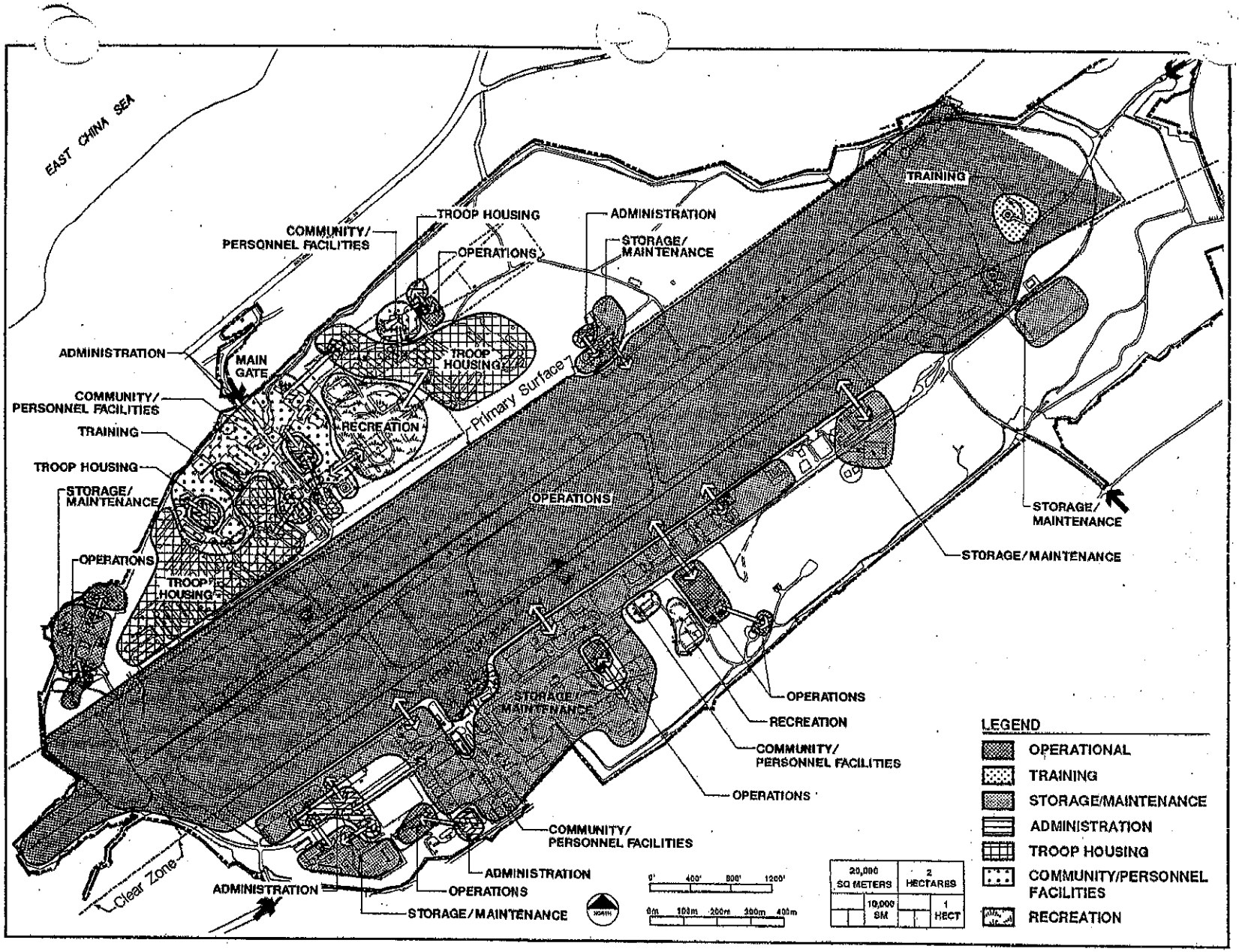
The considerable distance between the living (barracks) and work (air operations) zones exceeds convenient walking distance. However, this situation cannot be improved because of the fixed location of the runway and the lack of vacant land.

Due to land availability constraints, there are no family housing units at MCAS Futenma. This need is met at nearby installations, particularly Camp Foster, Camp Lester, Camp Kinser, and Kadena Air Base.

Another departure from the idealized pattern is the considerable distance between related functions for several units. This is particularly significant for the two air control squadrons located across the runway from other air operations activities.



Aircraft Parking Apron



MCAS FUTENMA MASTER PLAN

EXISTING FUNCTIONAL RELATIONSHIPS

FIGURE E-3

For example, an auto vehicle maintenance facility programmed to serve these two and other MACG-18 units will be on the opposite side of the airfield from them, and in one of these cases more than two miles away. A similar situation exists for major warehousing space as a result of the consolidation of several units' spaces into a few large buildings. The lack of land and the limitations on its use imposed by the runway location are also the reasons for these departures from the idealized pattern.

4. Planning Concepts

The relatively small land area, the inability to extend the Air Station's boundaries due to the encroachment of private development right up to its perimeter, and the further constraints imposed by the terrain and cultural sites together severely limit the options for siting new projects at MCAS Futenma. The few remaining pieces of vacant land should be preserved and conservatively used to support unmet requirements. Wherever possible, new development should be sited in areas that become available when substandard facilities are replaced with new construction.

These conditions, along with the existing shortfalls and projected future requirements, give rise to the following three broad planning concepts:

a. Minimization of Required Land

Four techniques are proposed for keeping to a minimum the land area required for siting new facilities:

- Consolidate individual unit components (e.g., operations, maintenance and administration) into a single building.
- Consolidate compatible functions (e.g., vehicle maintenance or supply/storage) for several different units within an air group into a single building.
- Utilize multi-story construction where this will not compromise mission accomplishment.
- Locate new facilities on vacant sites within developed areas, or on sites occupied by substandard and surplus buildings.

In addition to reducing land coverage, each of these techniques will in many cases improve operational efficiency. Siting new buildings in vacant areas along the Air Station boundary will also help to prevent further encroachment.

b. Provision for Future Requirements

To maintain some flexibility to meet new or expanded operational requirements, as many potential development sites as possible need to be held in reserve. For master planning to be truly comprehensive and effective, it must look beyond the mid-range time frame and reflect all projects for which there is a foreseeable need. Projects which are currently not supported by the SFPS should also be included as long-range (beyond 7 years) proposals where there is an apparent future need to reduce land use incompatibility, improve functional relationships, or satisfy future facility shortfalls.

Specifically, the northwest corner of the Air Station needs to be held in reserve for future development. This area will be needed to accommodate a maintenance hangar and parking apron for a squadron of MV-22 Osprey aircraft, should they be approved for deployment. Existing facilities are not adequate or adaptable for this purpose, and there are no other suitable alternate sites at the Air Station.

c. Enhanced Quality of Life

High priority should be placed on enhancing the quality of life for those who live and work at MCAS Futenma. One of the most effective means of accomplishing this, especially given the shortfalls at the Air Station, will be by expanding community support and both indoor and outdoor recreational facilities. Specific recommendations are to:

- Satisfy requirements for an exchange cafeteria and food store, a credit union, a rehabilitation center, and an arts and crafts hobby shop, all facilities which currently do not exist.
- Consolidate and centralize compatible functions, such as education services and the library, and exchange service and retail outlets.
- Group outdoor recreation facilities near the users they serve.
- Provide open spaces to preserve the existing vegetation and natural landscape, including cultural sites.

- Link the outdoor recreation clusters and the open space areas with jogging paths.

5. Proposed Land Use

Figure E-4 illustrates proposed land use for MCAS Futenma. It shows the planned functional uses for each portion of the Air Station, and is based on planning principles, projected base loading and mission requirements. Also reflected are the planning concepts discussed in the previous section.

Primary emphasis is placed on providing for SFPS supported projects which are likely to be constructed in the three (3) to seven (7) year, or mid-range, time frame. However, sites are also proposed for meeting more long-range needs, even though they may not be SFPS supported at this time.

a. Parameters

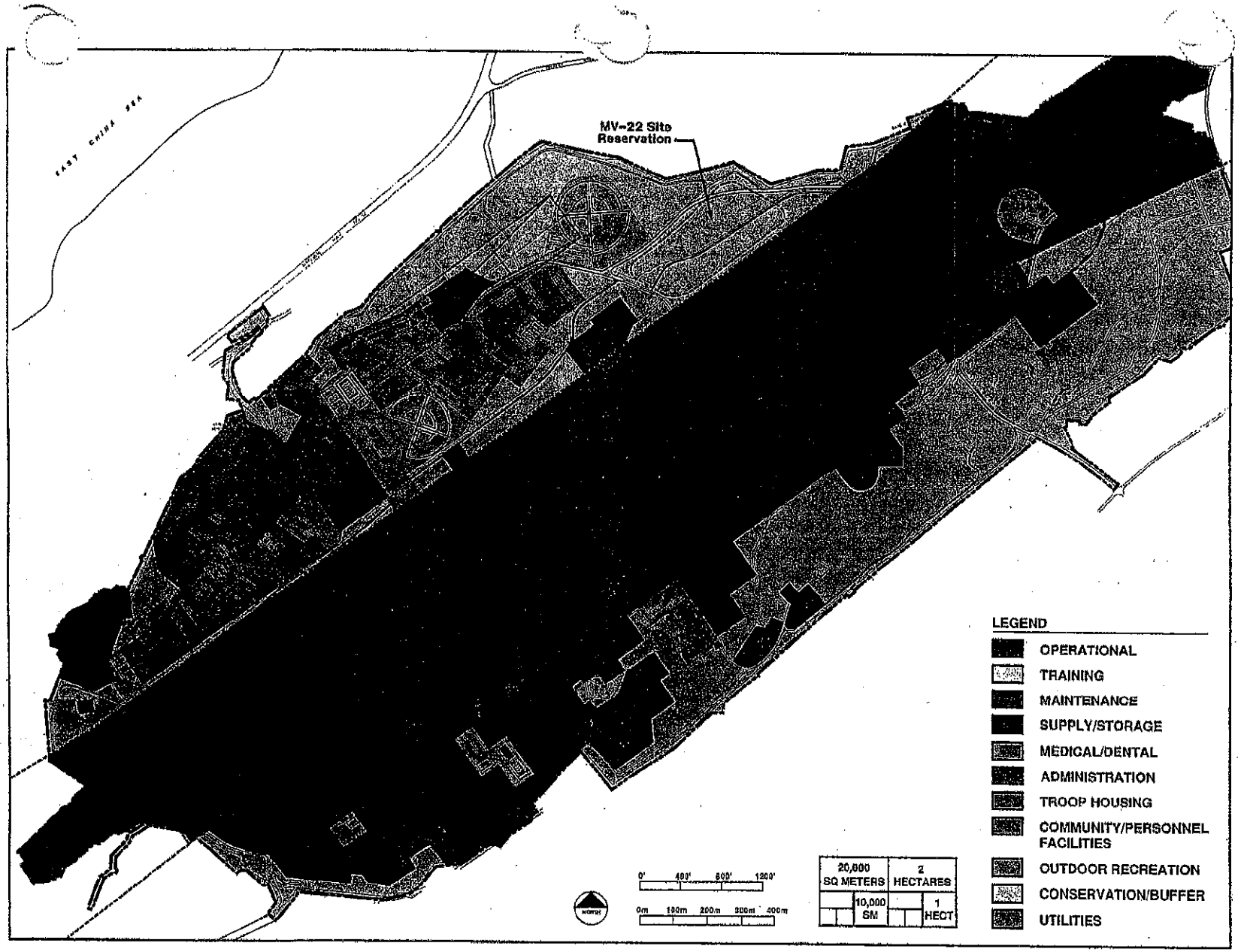
The basic parameters for preparing the proposed land use pattern are as follows:

- It should be as close to an ideal plan as is practical, taking into consideration natural and man-made constraints, existing patterns of development, and available funding.
- It should be used as a framework for the preparation of development plans and for making future land use decisions. The designation of specific uses for land will help to prevent the uncontrolled development of facilities at MCAS Futenma and will reduce conflicting land uses. Because the proposed land use pattern will be used to influence the siting of all new facilities at MCAS Futenma, it is the major product of the Master Plan.
- It should require only minor modification from one update to the next.

b. Major Proposals for Change

Comparison of the existing and proposed land use patterns (Figures C-7 and E-4, respectively) shows that no major shifts in the basic use pattern are envisioned. Most changes have to do with the expansion of existing functional areas to meet current and projected requirements. These include:

- Major expansions to facilities for the four largest functions located on the northwest side of the



MCAS FUTENMA MASTER PLAN

PROPOSED LAND USE

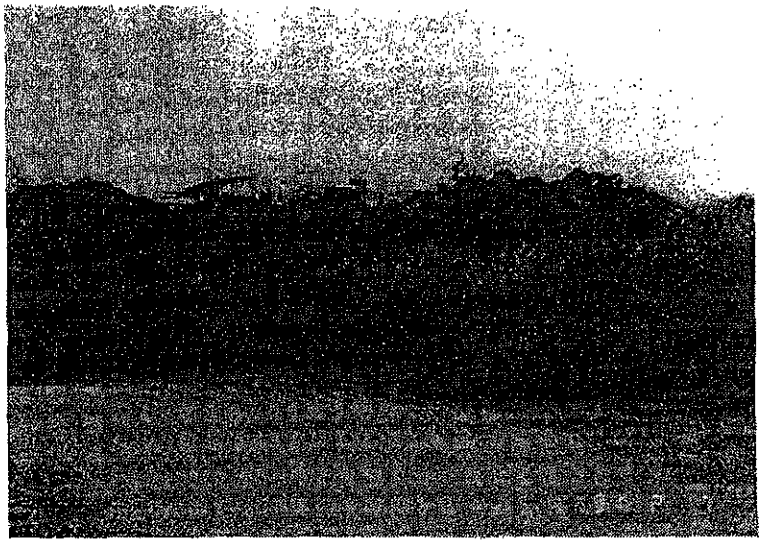
FIGURE E-4

runway -- community support facilities, recreation space, troop housing, and headquarters (administration) space.

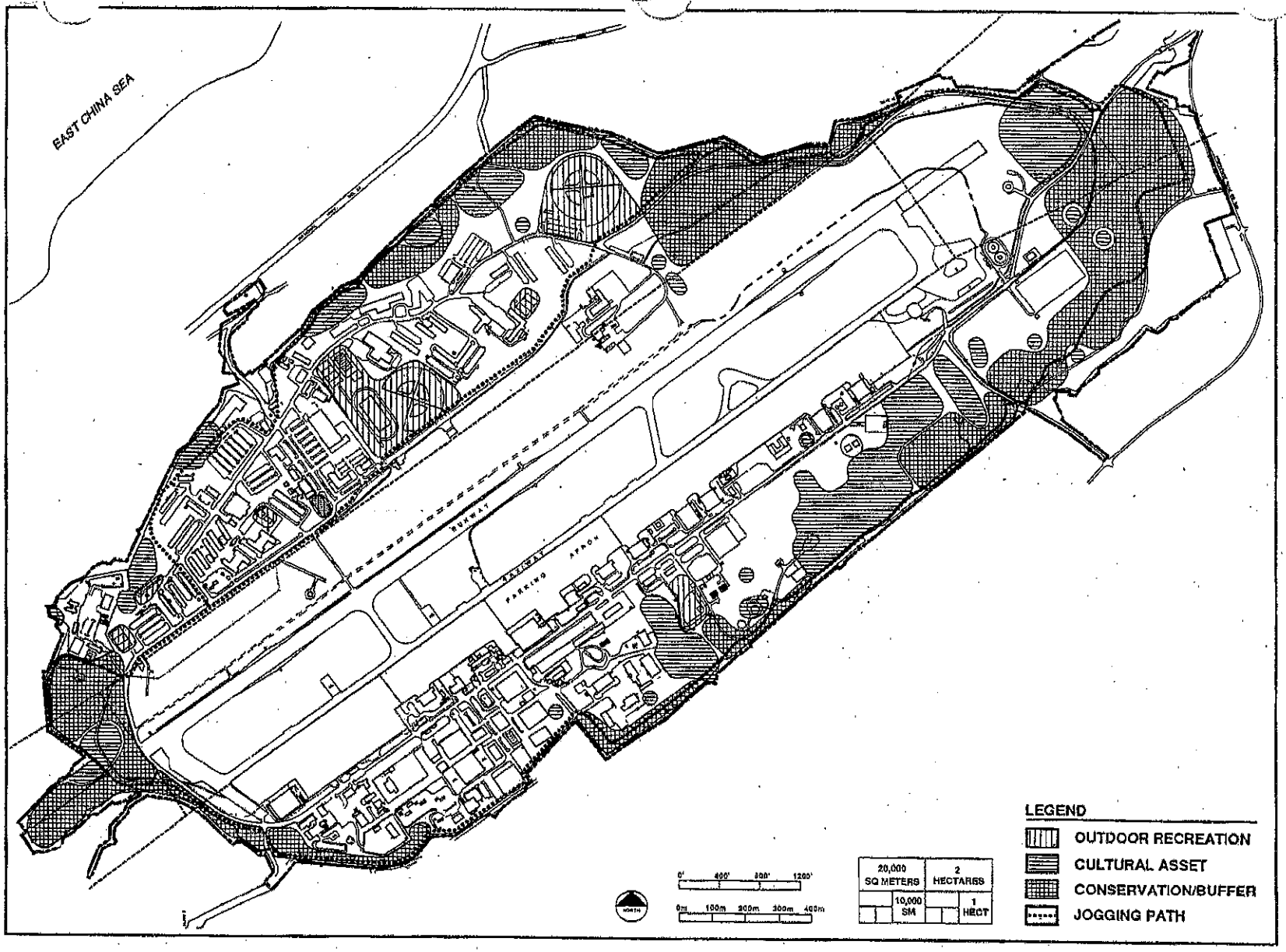
- Relocation of the medical clinic to the operations side of the runway, next to the dental clinic.
- Infill of vacant areas along the flightline with additional hangars and other maintenance facilities, and with aircraft parking space.
- Further consolidation of supply/storage functions in large warehouses located behind the flightline maintenance facilities.
- Consolidation of academic and applied instruction facilities in a centrally located complex behind the flightline.
- Reservation of a site at the northwest corner of the Air Station to accommodate operations and maintenance facilities for the MV-22 Osprey, in the event that this aircraft is developed and stationed at MCAS Futenma.

c. Proposed Open Space/Pathway Network

A proposed land use element which is highlighted by Figure E-5 is an open space and pathway network for MCAS Futenma. The establishment of this network is intended to play a major role in beautifying and enhancing the quality of life at the Air Station.



Habu Trail/Jogging Path



MCAS FUTENMA MASTER PLAN

PROPOSED OPEN SPACE/PATHWAY NETWORK

FIGURE E-5

F. CAPITAL IMPROVEMENTS PLAN

The Capital Improvements Plan (CIP) provides a link between the mid- to long-range plan presented in the previous chapter, and the individual projects already programmed for construction over the next two years. While the proposed land use map is intended to be a planning tool leading to optimum facility development, the CIP focuses more on projects that are considered critical by the activity and its chain of command, and which appear viable for funding within the mid-range time period of three (3) to seven (7) years.

The five-year CIP is subject to updates and revisions as necessary. It is anticipated that the activity will periodically initiate changes as priorities change and projects are authorized, funded and constructed.

1. CIP Project Siting Objectives

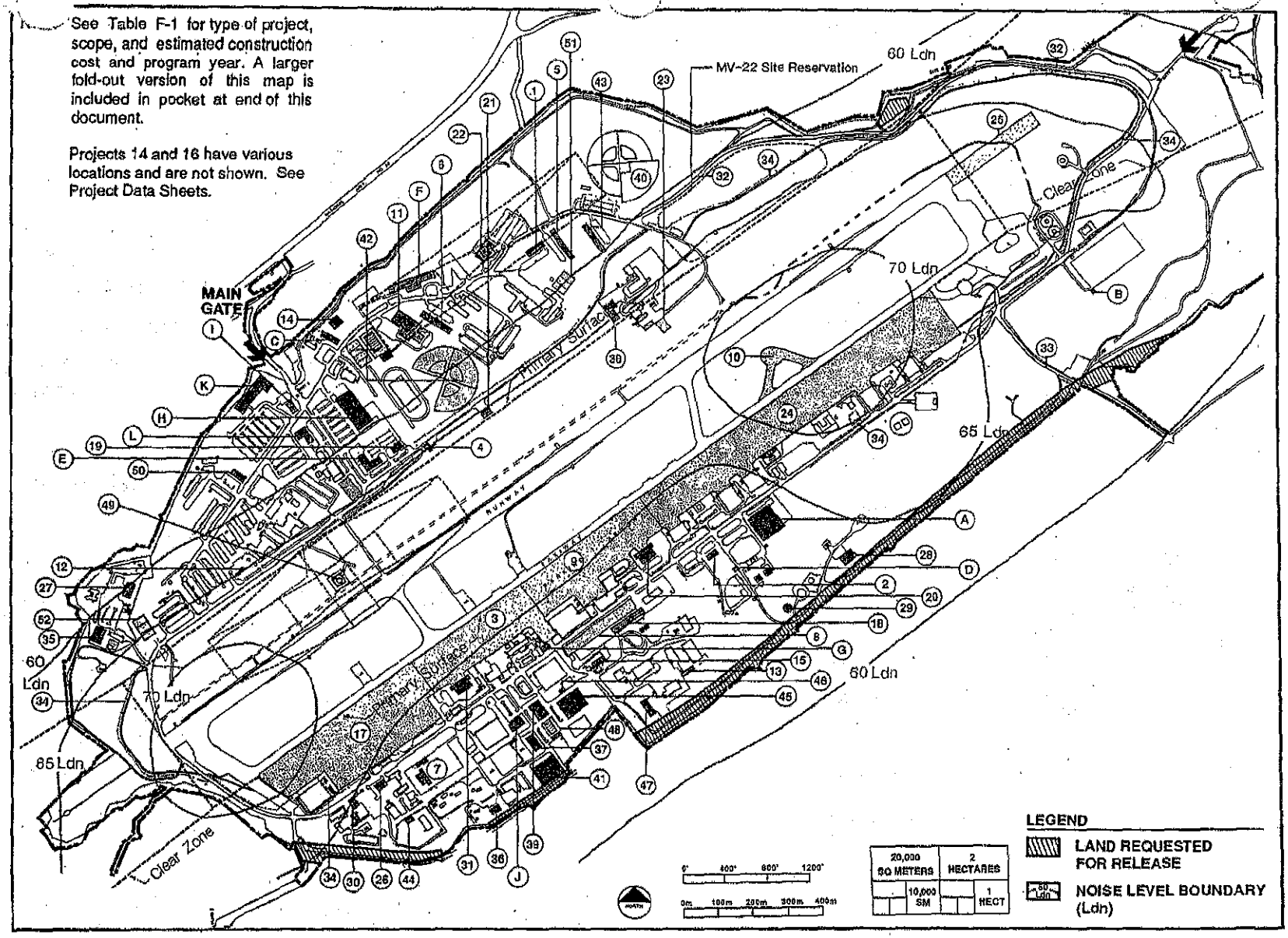
The formulation of projects for inclusion in the CIP is based on requirements as determined in the Facilities Requirements Plan Summary (FRPS). Project form and location are based on the planning concepts and proposed land use pattern presented in the previous chapter, and on the following siting objectives:

- Maintain compatibility between adjacent land uses.
- Minimize environmental impacts by preserving areas with highly valued environmental or cultural resources.
- Retain as much land area as possible for future operational requirements/expansion, while providing adequate sites for meeting current mission requirements.
- Consolidate related functions and facilities, where feasible, to improve efficiency.
- Avoid "domino" construction by siting planned facilities on vacant sites or in areas occupied by facilities which are likely to be demolished by the time planned projects are funded.

2. Development Plan

A site development plan has been prepared to show the approximate size, location and orientation of all proposed facilities which require siting, and their relationship to existing structures (Figure F-1).

Map Ref. No.	Project No.	Project Title
PROGRAMMED PROJECTS		
1	MC-215	Bachelor Officers Quarters (O2 & Below)
2	NA-252	Medical Clinic
3	MC-269	Aircraft Parking Apron Upgrade (Phase I)
4	MC-273	Central Guardhouse
5	MC-287	Bachelor Officers Quarters (O3 & Above)
6	MC-299	Bachelor Enlisted Quarters (SNCO)
7	MC-221	Auto Vehicle Maintenance Shop
8	MC-309	Mobile Van Maintenance Facility (Phase I)
9	MC-305	Aircraft Parking Apron Upgrade (Phase II)
10	MC-320	Aircraft Compass Calibration Pad
11	MC-321	Physical Fitness Center
12	MC-326	Gas Station
13	MC-332	Ground Support Equipment Shop
14	MC-333	Electrical Distribution Upgrade (Phase I)
15	NA-450	Navy Calibration Lab
16	MC-378	Electrical Distribution Upgrade (Phase II)
17	MC-348	Aircraft Parking Apron Upgrade & Expansion (Phase III)
18	MC-347	Mobile Van Maintenance Facility (Phase II)
19	MC-368	MAG-36 Group Headquarters
20	MC-370	HMM Squadron Aircraft Maintenance Hangar
21	MC-216	Control Tower/ROF
22	MC-379	Wing/Squadron Headquarters & Helicopter Landing Pad
PROPOSED MID-RANGE PROJECTS		
23	MC-XX1	MATCS-18 Mobile Van Pad
24	MC-XX2	Aircraft Parking Apron Upgrade & Expansion (Phase IV)
25	MC-XX3	Runway 24 Approach Lights & Runway 6 Paved Overrun
26	MC-XX4	Academic Instr., Moving Target Simulator & Battery HQ Bldg.
27	MC-XX5	Comm./Elec. Maintenance Shop & Organic Unit Storage
28	MC-XX6	Aviation Support Maintenance Shop
29	MC-XX7	Potable Water Storage Tank
30	MC-XX8	MACS-4 Comm./Elec. Maintenance Shop
31	MC-XX9	HMM Squadron Maintenance Hangar
32	MC-X10	Turner Road Extension
33	MC-X11	Gate 4E Access Road Upgrade
34	MC-X12	Flight Line Security Fence & Patrol Road
35	MC-X13	MACS-4 Squadron Headquarters & Tactical Air Operations Center
36	MC-X14	MACG-18 Admin.& H&HS-18 Comm./Elec. Maintenance Shop
37	MC-X15	Hazardous/Flammable Materials Storehouse
38	MC-X16	MATCS-18 Operations, Comm./Elec. Maintenance Shop, & Detachment Headquarters Building
39	MC-X17	Aircraft Full Motion Simulators Building
40	MC-X18	Outdoor Recreation Complex (Pavilion, 1Baseball & 3 Softball Fields)
41	MC-X19	Consolidated Unit Storage Warehouse
42	MC-X20	Outdoor Recreation Complex [Swimming Pool, Bathhouse, 4 Outdoor Playing Courts (1 Tennis, 2 Basketball & 1 Volleyball) & 3 Softball Fields]
43	MC-X21	BOQ (O3 & above)
44	MC-X22	Vehicle Holding Shed & Wash Platforms
45	MC-X23	Consolidated Unit Storage Warehouse
46	MC-X24	Communications Control Link Building & Antenna
47	MC-X25	Station Facility Maintenance Shop (Shop & Storage Space, Vehicle Wash Platform & Motor-T Parking Lot)
48	MC-X26	Combat Training Pool & Locker Room
49	MC-X27	Helicopter Landing Pad Upgrade
50	MC-X28	Arts & Crafts Hobby Shop
51	MC-X29	Outdoor Playing Courts-2 Basketball & 1 Volleyball
52	MC-X30	Outdoor Playing Courts-2 Basketball & 1 Volleyball
PROPOSED LONG-RANGE PROJECTS		
A		Station Property Warehouse & Locker Room
B		Gas Chamber
C		Community Support Center
D		POL Operations, Sampling & Test Building
E		Station HQ, Legal Services & Communications Center
F		Officers/SNCO Club
G		Enlisted Dining Facility Annex
H		Community Services Center
I		Provost Marshal's Office
J		Academic & Applied Instruction Building
K		Enlisted Personnel Service Club
L		Educational Services/Library Complex



MCAS FUTENMA MASTER PLAN **DEVELOPMENT PLAN**

FIGURE F-1

(Projects involving utility system improvements are not shown.) They are keyed to the list of projects presented in Table F-1. Programmed (short-range) projects and proposed mid-range projects are indicated by a map reference number, and proposed long-range projects by a letter, on Figure F-1. In addition to Figure F-1, large size black-line and color copies of the Development Plan are provided in an inset pocket inside the back cover of this report.

The basis for the projects lists contained in this Master Plan is a list of proposed projects which was developed in consultation with activity representatives during an on-site visit in February 1991. These initial project proposals are described in the final brief (Appendix G-1). Subsequent discussions and analysis have in some cases led to a refinement in the project scope. Up-to-date descriptions of the projects are provided in the sections below.

3. Projects Lists

Included in the Projects List (Table F-1) are the MCAS Futenma JFY 90/91 projects which were not completed by March 1992, the JFIP programmed projects for 1992 and 1993, and all proposed mid-range projects, along with their scope, estimated construction cost and funding year. Proposed long-range projects are also listed, but specifics concerning their scope, cost, and program year have not been developed.

a. JFY 90/91 Projects

Projects which are programmed and funded for JFY 90/91, but which were not completed by March 1992, are briefly described below. The *"Project __"* numbers used below are the map reference numbers as shown on the Development Plan (Figure F-1 and the full-size copies inside the back cover).

Project 1 -- Bachelor Officers Quarters (MC-215)

This project will replace existing inadequate quarters for unaccompanied officers between grades W-1 and O-2. The site is vacant and near the Officers Club and other BOQs.

Project 2 -- Medical Clinic (NA-252)

The existing clinic is in a badly deteriorated building that was not originally built for this use. It is also on the opposite side of the airfield from the operations areas, where most of the personnel who will use the clinic

Table F-1: Projects List for MCAS Futenma

Map Ref. No.	Project No.	Title	Scope	UM	Cost ($000)	Program Year
1	MC-215	Bachelor Officers Quarters (O-2 and Below) (60 PN)	60	RM	2,822	90
2	NA-252	Medical Clinic	15,800	SF	2,819	90
3	MC-269	Aircraft Parking Apron Upgrade (Phase I)	54,600	SY	2,854	91
4	MC-273	Central Guardhouse	1,600	SF	360	91
5	MC-287	Bachelor Officers Quarters (O-3 & Above) (74 PN)	74	RM	4,700	91
6	MC-299	Bachelor Enlisted Quarters (SNCO) (98 PN)	196	RM	6,100	91
7	MC-221	Auto Vehicle Maintenance Shop	11,400	SF	1,585	91
8	MC-309	Mobile Van Maintenance Facility (Phase I)	7,600	SY	2,186	92
9	MC-305	Aircraft Parking Apron Upgrade (Phase II)	60,300	SY	7,572	92
10	MC-320	Aircraft Compass Calibration Pad	6,200	SY	275	92
11	MC-321	Physical Fitness Center	42,100	SF	4,801	92
12	MC-326	Gas Station	660	SF	107	92
13	MC-332	Ground Support Equipment Shop	4,100	SF	432	92
14	MC-333	Electrical Distribution Upgrade (Phase I)	23,600	LF	5,851	92
15	NA-450	Navy Calibration Lab	9,200	SF	1,352	92
16	MC-378	Electrical Distribution Upgrade (Phase II)	33,600	LF	5,223	93
17	MC-348	Aircraft Parking Apron Upgrade and Expansion (Phase III)	97,600	SY	11,225	93
18	MC-347	Mobile Van Maintenance Facility (Phase II)	17,800	SF	2,369	93
19	MC-368	MAG-36 Group Headquarters	17,600	SF	2,155	93
20	MC-370	HMM Squadron Aircraft Maintenance Hangar	38,800	SF	5,493	93
21	MC-216	Control Tower/ROF	4,700	SF	980	93
22	MC-379	Wing/Squadron Headquarters and Helicopter Landing Pad	66,200 1	SF EA	7,701	93

Table F-1: Projects List for MCAS Futenma

Map Ref. No.	Project No.	Title	Scope	UM	Cost ($000)	Program Year
23	MC-XX1	MATCS-18 Mobile Van Pad	1,000	SY	100	94*
24	MC-XX2	Aircraft Parking Apron Upgrade and Expansion (Phase IV)	165,400	SY	20,800	94*
25	MC-XX3	Runway 24 Approach Lights and Runway 6 Paved Overrun	16,700	SY	935	94*
26	MC-XX4	Academic Instr., Moving Target Simulator and Battery HQ Bldg.	12,300	SF	2,500	95*
27	MC-XX5	Comm./Elec. Maintenance Shop and Organic Unit Storage	11,500	SF	1,900	95*
28	MC-XX6	Aviation Support Maintenance Shop	10,300	SF	1,950	95*
29	MC-XX7	Potable Water Storage Tank	500,000	GA	527	95*
30	MC-XX8	MACS-4 Comm./Elec. Maintenance Shop	6,000	SF	1,150	95*
31	MC-XX9	HMM Squadron Aircraft Maintenance Hangar	38,800	SF	5,839	96*
32	MC-X10	Turner Road Extension	19,400	SY	970	96*
33	MC-X11	Gate 4E Access Road Upgrade	2,600	SY	130	96*
34	MC-X12	Flight Line Security Fence and Patrol Road	28,000	LF	1,255	96*
35	MC-X13	MACS-4 Squadron Headquarters and Tactical Air Operations Center	7,100	SF	1,590	97*
36	MC-X14	MACG-18 Admin. & H&HS-18 Comm./Elec. Maintenance Shop	7,500	SF	1,450	97*
37	MC-X15	Hazardous/Flammable Materials Storehouse	12,300	SF	2,360	97*
38	MC-X16	MATCS Operations, Comm./Elec. Maint. Shop., & Det. HQ	14,100	SF	4,056	97*
39	MC-X17	Aircraft Full Motion Simulators Building	18,000	SF	4,750	98*
40	MC-X18	Outdoor Recreation Complex (Pavilion, 1 Baseball and 3 Softball Fields)	2,700 4	SF EA	722	98*
41	MC-X19	Consolidated Unit Storage Warehouse	50,000	SF	6,700	98*
42	MC-X20	Outdoor Recreation Complex [Swimming Pool, Bathhouse, 4 Outdoor Playing Courts (1 tennis, 2 basketball, and 1 volleyball), and 3 Softball Fields]	50 7,800 7	M SF EA	3,140	98*

*Preliminary determination by Public Works Office, MCB Camp S.D. Butler, as of 23 October 1991.

Table F-1: Projects List for MCAS Futenma

Map Ref. No.	Project No.	Title	Scope	UM	Cost ($000)	Program Year
43	MC-X21	BOQ (O-3 and Above) (98 PN)	98	RM		UP
44	MC-X22	Vehicle Holding Shed and Wash Platforms	2,100 2	SF EA		UP
45	MC-X23	Consolidated Unit Storage Warehouse	50,000	SF		UP
46	MC-X24	Communications Control Link Building and Antenna	170 1	SF EA		UP
47	MC-X25	Station Facility Maintenance Shop (Shop and Storage Space, Vehicle Wash Platform, and Motor-T Parking Lot)	9,400 1 3,100	SF EA SY		UP
48	MC-X26	Combat Training Pool and Locker Room	17,500	SF		UP
49	MC-X27	Helicopter Landing Pad Upgrade	1,100	SY		UP
50	MC-X28	Arts and Crafts Hobby Shop	8,100	SF		UP
51	MC-X29	Outdoor Playing Courts - 2 basketball and 1 volleyball	3	EA		UP
52	MC-X30	Outdoor Playing Courts - 2 basketball and 1 volleyball	3	EA		UP
A		Station Property Warehouse and Locker Room				
B		Gas Chamber				
C		Community Support Center				
D		POL Operations, Sampling and Test Building				
E		Station Headquarters, Legal Services & Communications Center				
F		Officers/SNCO Club				
G		Enlisted Dining Facility Annex				
H		Community Services Center				
I		Provost Marshal's Office				
J		Academic and Applied Instruction Building				
K		Enlisted Personnel Service Club				
L		Educational Services/Library Complex				

UP=Unprogrammed

during normal duty hours are located. Helicopter medical evacuation operations will utilize the runway. The project site is vacant and adjacent to the Dental Clinic.

Project 3 -- Aircraft Parking Apron Upgrade (Phase I) (MC-269)

Deteriorating conditions due to many years of heavy usage and excessive loading from most current aircraft necessitate the upgrading of the entire access and parking apron. The addition of a second HMM Squadron will also require the apron's expansion. To maintain airfield operations, this upgrade and expansion will be done in four phases. The first phase involves the area between Hangars 503 and 505.

Project 4 -- Central Guardhouse (MC-273)

This facility is needed to secure and protect the airfield and supporting facilities from internal terrorist threat, theft, vandalism, and sabotage. The site is vacant and located close to the flightline in order to allow personnel to visually monitor all activities on the flightline and respond rapidly to any incident.

Project 5 -- Bachelor Officers Quarters (MC-287)

This facility will replace existing inadequate quarters for unaccompanied officers at grades O-3 and above. The site is vacant, next to other existing and planned officers quarters, and near the Officers Club.

Project 6 -- Bachelor Enlisted Quarters (MC-299)

This facility is for E-6/E-9 bachelor enlisted personnel. It will replace existing open bay, non-air conditioned BEQ's which do not meet current DOD criteria. The site is adjacent to existing BEQs and the programmed Physical Fitness Center (MC-321).

Project 7 -- Auto Vehicle Maintenance Shop (MC-221)

Currently, vehicle maintenance functions for the Marine Air Control Group-18 (MACG-18) are divided into independent operations for each squadron. Many of these operations are split between two or more buildings some of which were not built to house this function. In one case, the maintenance facility is about two miles from the squadron compound.

This project will provide a consolidated maintenance facility for the MACG-18 units which now have substandard facilities. The site is vacant and centrally

located. Adequate facilities for vehicle maintenance will then be available to all squadrons in the group, and operational efficiency will be greatly improved.

b. JFY 92/93 and Proposed Mid-Range Projects

Project Data Sheets (PDS) are provided in the last section of this chapter for the 15 projects that are already programmed JFY 92 and JFY 93, and for 20 proposed mid-range (3-7 year) projects that are candidates for JFY 94 through JFY 98 funding. Each PDS provides detailed information on project need, scope, cost, and siting rationale.

It should be noted that the project funding years presented in this Master Plan are only preliminary and approximate determinations. Changes should be anticipated and will most likely occur as a result of further analyses and/or changes in conditions that take place following the publication of this document.

c. Potential Additional Mid-Range Projects

Briefly described below are ten proposed projects which are potential additional (or alternate) candidates for funding in the 3 to 7 year mid-range time frame.

Project 43 -- Bachelor Officers Quarters (O-3 & Above)

This project is proposed to meet the deficiency that will remain following completion of two programmed BOQs. The site is vacant and near the Officers Club and other BOQs.

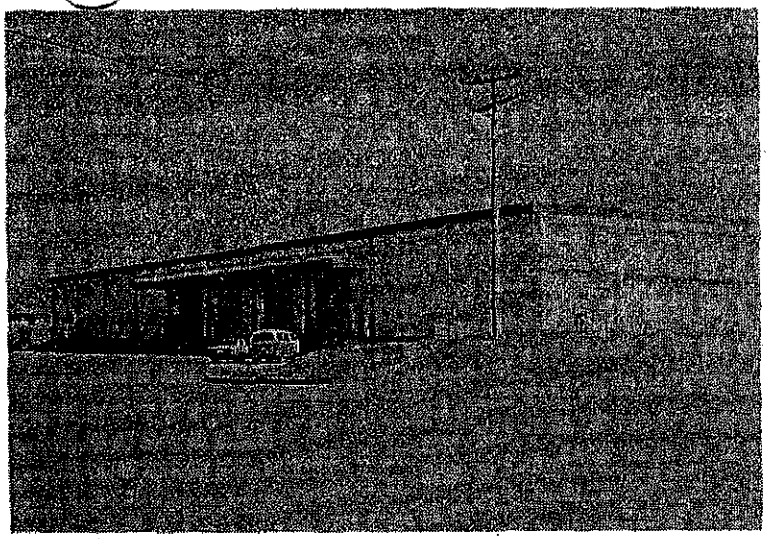
Project 44 -- Vehicle Holding Shed & Wash Platforms

This project is proposed for a vacant site within 1st LAAD's existing compound. It would fulfill the unit's remaining requirements for vehicle-related maintenance facilities. The proposed site is immediately adjacent to the recently completed vehicle maintenance shop.

Project 45 -- Consolidated Unit Storage Warehouse

The existing deficiency in consolidated unit storage space is well over 100,000 SF. About 60 percent of this total is scattered in substandard and inadequate facilities, and the remainder does not exist.

A new central warehouse containing about 50,000 SF of space is proposed to eliminate approximately one-half of this deficiency. The site is centrally located in the same general area as two recently completed warehouse structures (Buildings 682 and 683).



A Consolidated Unit Storage Warehouse

Future Medical Clinic Site

Locating this facility on this site would also help to define the Air Station's perimeter and prevent future encroachment.

Project 46 -- Communications Control Link & Antenna

The existing control tower does not have a direct line of sight to Kadena AFB, thus the need for a comm-link tower nearby at a higher elevation. Both the tower and trailer housing the equipment are substandard and need to be replaced.

Project 47 -- Station Facility Maintenance Shop and Storage

This project would address multiple deficiencies in station maintenance facilities by providing additional shop maintenance space (9,400 SF), a parking area for 50 vehicles (25,000 SF) and one vehicle wash platform. Vacant land adjacent to the existing shop building would be used. Use of this site would also help to better define the Air Station's perimeter.

Project 48 -- Combat Training Pool and Locker Room

This project would be adjacent to the flight simulators. It would displace existing temporary and surplus buildings.

Also proposed as part of this project is a 4,000 SF locker room facility. This would provide a place for personnel from nearby units to change uniforms when required during the workday. It would satisfy one-half of the space requirements for locker rooms.

Project 49 -- Helicopter Landing Pad Upgrade

Two helipads are required for MCAS Futenma. This project involves upgrading an existing pad because of its substandard condition. The existing pad is in an excellent location for meeting training and other needs, and it fits all siting criteria.

Project 50 -- Arts and Crafts Hobby Shop

There is no Arts and Crafts Hobby Shop at MCAS Futenma at this time. The proposed new facility would be easily accessible to personnel living in the BEQs, and would displace existing inadequate and surplus facilities.

Projects 51 & 52 -- Outdoor Playing Courts

The gradual replacement of substandard BOQs and BEQs has not been accompanied by replacement of the volleyball/basketball courts that were interspersed between the old buildings. Two new three-court complexes -- one within the BOQ area and the other in the BEQ area -- are proposed to reduce this deficiency.

d. Proposed Long-Range Projects

Proposed long-range projects are those for which there is a foreseeable need, but which are currently not supported, or are only partially supported, by the SFPS. They are not currently justified because they are housed in facilities that right now are in reasonably good condition. However, this situation is considered likely to change in the not-too-distant future, because the buildings are relatively old and are becoming increasingly costly to maintain.

A primary reason for formulating these projects is to identify and tentatively reserve sites which will be suitable locations for them. In this way, if there should be a need to re-site any of the other projects identified in this Plan, these long-range sites can be avoided.

Long-range projects proposed for MCAS Futenma are briefly described below.

Project A -- Station Property Warehouse

There is a need for 64,000 SF of station property warehouse space, yet no such facility exists. A 60,000 SF consolidated warehouse structure is proposed on one of the few remaining vacant areas along Geiger Road which is large enough to accommodate such a facility.

Also proposed for this building is a 4,000 SF locker room. As with the one incorporated into the combat training pool project, it will provide a place for personnel from nearby units to change uniforms during duty hours when required.

Project B -- Gas Chamber

The existing gas chamber will need to be replaced because of its proximity to the new 1st MAW Headquarters. The proposed site is vacant and in a non-populated areas where the predominant downwind drift is over the Air Station.

Project C -- Community Support Center

The Air Station's existing rehabilitation center is housed in a converted facility that is less than one-half the required size. Two buildings currently used for religious education are substandard and provide less than one-third the needed space.

It is proposed that both of these needs be met through the construction of a single "community support center" adjacent to the existing chapel. By consolidating these related activities and emphasizing their community support purpose, the GOJ's objectives to funding religious facilities can hopefully be overcome. The recommended site is centrally located and would result in the demolition of two substandard, temporary buildings.

Project D -- POL Operations, Sampling and Test Building

At 830 SF, the existing POL building provides only slightly more than one-half the 1600 SF of required space. The existing structure would be replaced by the new building.

Project E -- Air Station Headquarters, Legal Services & Communications Center

The existing Air Station Headquarters functions are split between two buildings which together provide less than two-thirds of the required space. The construction of an expanded and consolidated facility

would both meet space needs and permit more efficient operations.

Construction of the new facility on the site of Building 110 is recommended. This would maintain Station Headquarters in a central location and near the main gate. The functions in Building 110 can be temporarily housed in Building 106 while construction is taking place.

Project F -- Officers/SNCO Club

Currently, the SNCO Club is in a substandard building that provides only one-fourth the required space. Space in the Officers Club is also less than required. Both facilities lack a large enough ballroom to hold major social events that include both groups or all Air Station personnel.

A combined Officers/SNCO Club is proposed to allow for the provision of a ballroom which can be divided and used separately, or combined for larger functions. Kitchen and other facilities which are the same for both clubs can also be combined where appropriate to reduce operating costs.

Construction of the new facility on the site of the existing Officers Club and adjoining inadequate and surplus BOQs is recommended. This site is near to existing officer and SNCO quarters and offers a panoramic view of the East China Sea.

This would require the temporary relocation of the Officers Club during construction. Alternatively, the new club could be built in two phases, with the first phase completed on the BOQ and vacant area before it becomes necessary to demolish the existing club.

Project G -- Enlisted Dining Facility Annex

The existing annex is located in a temporary building which is in poor condition and is too small to adequately serve the number of personnel who use it. The proposed new facility is on a vacant site next to the existing building, and thus maintains its central location.

Project H -- Community Services Center

Shopping, financial and personal service establishments at MCAS Futenma are currently split between two separate facilities. Space available to most existing uses is undersized, and there is no exchange cafeteria, food store or package store. In addition, the existing theater has less than one-half the required number of seats.

A new 54,800 SF "community services center" which consolidates these facilities in a single convenient location is proposed. The selected site is centrally located and near the main gate and existing quarters. Buildings 101 and 106, which are currently on the site, are substandard and will become surplus when the new Air Station Headquarters is completed. The "community services center" building would be constructed on vacant land, and the parking area would go where the existing buildings are located.

Project I -- Provost Marshal's Office

The Provost Marshal's Office is currently in converted space that is about one-half the required size. The proposed new facility would meet the space needs and be both centrally located and well situated to control access through the main gate.

Project J -- Academic and Applied Instruction Building

This project will provide 22,700 SF of academic and applied instruction space for the use of 1st MAW units.

Project K -- Enlisted Personnel Service Club

The existing Enlisted Service Club provides only about one-third the space needed to adequately support the personnel stationed at MCAS Futenma. An entirely new club is proposed so that it can be designed to fully meet the needs of service personnel with maximum efficiency and minimum operating costs. Once the new Officers/SNCO Club is completed, the existing SNCO Club can be demolished and this prominent view site used for the new Enlisted Club.

Project L -- Educational Services/Library Complex

Both the existing library and educational services building are less than one-half their required size, and the educational services building is located on the opposite side of the Air Station from existing quarters. A new facility which provides adequate space and consolidates these related activities is proposed on the site of the existing base exchange.

Once the new community services center is completed, the existing exchange building will be surplus and can be demolished. Related parking will displace inadequate and surplus BEQs.

4. Demolition Plan

Figure F-2 identifies all facilities that will need to be demolished to accommodate the development of programmed and proposed projects as described in this Master Plan. Table F-2 identifies by number the specific facilities that will be affected. Demolition of a facility is justified when its physical condition is inadequate and renovation costs exceed 50 percent of the replacement costs, or when the facility no longer meets the activity's mission and cannot be economically utilized to satisfy other facility deficiencies.

5. Phasing

The Master Plan provides direction for consolidating and integrating activities at MCAS Futenma. Due to the extent of development and the extensive areas constrained by steep topography or cultural sites, there are few unconstrained sites remaining at the Air Station. Consequently, many projects are sited over existing inadequate assets, thereby serving to remove these assets and to place the proposed project on a suitably located site.

Additionally, several projects will be implemented in two or more phases. Phase one is fully supported by the SFPS. Although not supported at this time, sites are also designated for later phases so that they can be held in reserve until such time as they are supported by future asset evaluations.

6. U.S. Construction Projects Funding Programs

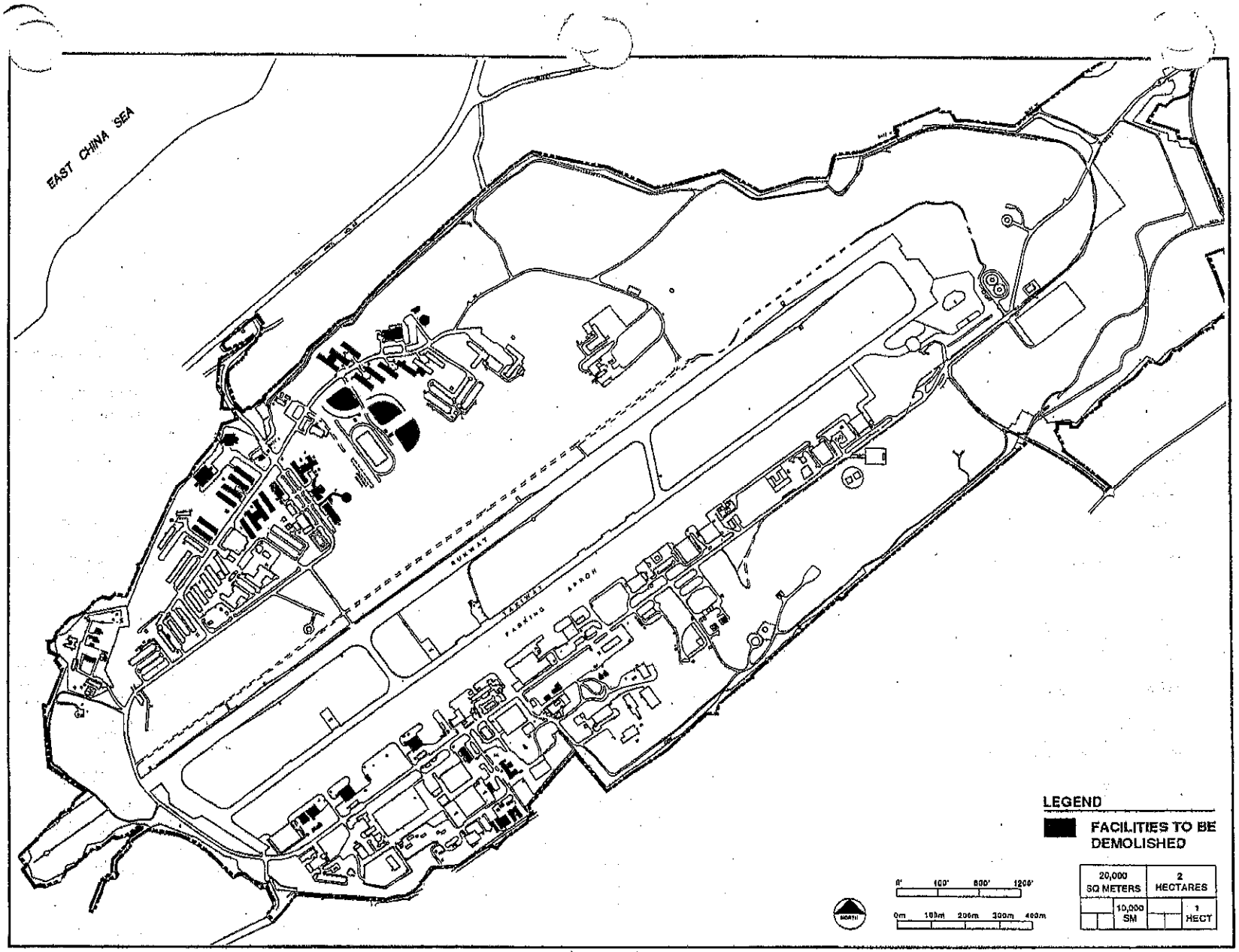
There are a number of funding programs available for accomplishing projects. These include the Military Construction (MILCON) program, non-appropriated fund (NAF) program, and the Special Projects program. In Japan another potential source of funding is the GOJ Host Nation Funded Construction Program which consists primarily of two subordinate programs:

- The GOJ Facilities Improvement Program (FIP)
- The GOJ Relocation Construction Program

This Master Plan is intended only to serve as a guide for the development of projects. Brief descriptions of sources of funds are provided below for information purposes only. However, no actual funding programs

TABLE F-2
MCAS FUTENMA FACILITIES PROPOSED FOR DEMOLITION

Facil. No.	Description	Facil. No.	Description	Facil. No.	Description
101	Sta. Admin. Bldg./Comm. Ctr.	221	Helicopter Landing Pad	514	Runway Lighting Regulator
104	Snack Stand	222	Wind Direction Indicator	521	Warehouse
104A	Garbage House	301	Exchange/Snack Bar	522	Warehouse
106	Medical Clinic	401	SNCO Club	522A	Garbage House
107	Dispensary Storage	401A	Garbage House	523	Warehouse
107A	Garbage House	401B	Reefer Shed	536	Group Headquarters
109	Standby Generator Bldg.	402	Enlisted Club	537	Group Headquarters
110	Station Headquarters	402A	Reefer Shed	538	Public Toilet
110A	Garbage House	404	Community Service Center	550	Vehicle Maintenance Shop
114	Helicopter Landing Pad	405	Station PMO Headquarters	552	Vehicle Maintenance Shop
116	Medical Clinic Supply	406	NBC/Driver Train. Classroom	553	Storage
117	General Storage	406A	Garbage House	553A	Basketball Court
149	Picnic Shelter	407	Drug/Alcohol Center	554	Storage
151	Softball Field	408	BEQ	557	Warehouse
151A	Flagpole	408A	Garbage House	M558	Haz./Flam. Storage
152	Softball Field	409	BEQ	568	Vehicle Maintenance Shop
153	Softball Field	424	BEQ	605	Tank Truck Loading Facility
155	Picnic Shelter	425	BEQ	611	Vehicle Wash Rack
156	Public Toilet	425A	Garbage House	614	Grease Rack
201	Officers Mess	426A	Garbage House	616	Public Works Shop
201A	Garbage House	426	BEQ	616A	Garbage House
202	BOQ	427	BEQ	617	Vehicle Maintenance Shop
205	BEQ	437	Haz/Flam Storage	618	Aviation Armament Shop
205A	Garbage House	437A	Haz/Flam Storage	621	Gasoline Service Station
206	BEQ	440	Organic Unit Storage	622	POL Building
207	BEQ	443	Vehicle Maintenance Shop	627	Instruction Building
207A	Garbage House	444	Vehicle Maintenance Shop	627A	Garbage House
208	BEQ	452	Retail Service Outlet	631A	Power Plant Building
211	BEQ	454	Play Courts	631B	Public Toilet
211A	Garbage House	500	Flight Line Storage	635	Haz./Flam. Storage
212	BOQ	501	Aircraft Maintenance Hangar	641	General Warehouse
212A	Garbage House	501A	Garbage House	642	Avionics Shop
213	BOQ	503	Aircraft Maintenance Hangar	650	Avionics Shop
214	Gas Chamber	503A	Garbage House	656	Van Pad
215	Volleyball Court	512	Haz./Flam. Storage	656A	Microwave Antenna
216	Volleyball Court	513	Haz./Flam. Storage		



MCAS FUTENMA MASTER PLAN **DEMOLITION PLAN**

FIGURE F-2

or priorities for projects are being proposed in this document.

a. Military Construction Program (MILCON)

MILCON is a funding program for major projects. It includes special investment programs such as Energy Conservation, Pollution Abatement, and Occupational Safety and Health Improvements. Within the United States and its territories, it is the primary program for funding capital improvements needed to replace substandard facilities, correct facility deficiencies, or provide facilities for our new mission requirements. It is a highly scrutinized program, and Congress has stated that MILCON will not be used to fund large construction programs in Japan since host nation funds are available.

As a result, the MILCON Program has not been considered a viable funding source by activities in Japan except for the most critical projects. MILCON funds should be pursued only for:

- Sensitive/classified projects
- Projects that are not funded by the Host Nation Construction Program

b. Special Projects Program

This program deals with maintenance, repairs, minor construction, alteration, and equipment installation projects which are not of MILCON scope. These projects generally have very little impact on an activity development plan with the exception of some minor construction or alteration projects which may change land use. Special projects are initially proposed by the activity and are reviewed through the chain of command until final selection for implementation and funding is made by CMC.

c. Non-Appropriated Fund (NAF) Program

A NAF program is funded through MWR Support Activity Central Construction Fund and is exclusively used to fund personnel and community support projects. However, NAF will generally not be used to fund projects that are potentially eligible for host nation funded construction.

d. Facilities Improvement Program (FIP)

Over the last few years, the FIP has been the primary source of funds for facility construction in Japan. It is a GOJ initiated and funded program which provides

replacement facilities or new facilities for U.S. Forces in Japan. Elaboration of this guidance can be found in USCINCPAC 11010.2F.

General USCINCPAC guidance is that the FIP is the preferred source for construction in Japan, excluding those MILCON type projects discussed above, for the following categories of projects:

- Military family housing and community support facilities.
- Bachelor housing.
- New mission support facilities.
- Replacement of existing facilities or construction of new facilities due to environmental, security, or safety deficiencies.

The following categories of projects normally will not receive FIP funding:

- Repair and renovation of existing facilities.
- Expansion or alteration of existing facilities.
- Ammunition storage.
- New petroleum storage.
- Those involving politically contentious and/or sensitive issues.

e. Relocation Construction Program

The Relocation Construction Program is based on the principle of "quid pro quo" or "this for that". Under this principle, the U.S. releases U.S. controlled real estate (buildings and other improvements, as well as land) to the GOJ. In exchange, the GOJ constructs new U.S. facilities elsewhere to replace existing facilities lost by the real estate release. The facilities are replaced on a square foot for square foot and function for function basis.

7. Project Data Sheets

Presented on the following pages are Project Data Sheets (PDS) for 35 programmed and proposed mid-range projects at MCAS Futenma. Those with an "EST. YEAR" of JFY 92 and JFY 93 have already been programmed; those indicated for JFY 94 through JFY 98 are proposed for this mid-range time frame. As previously noted, the funding years for proposed mid-range projects are preliminary and subject to change.

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PROJECT DATA SHEET INDEX

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Mobile Van Maintenance Facility (Ph. I) MCAS Futenma	**PROJECT NO.** MC-309

DATE	EST. YEAR	CURRENT COST ($000)
NOV 1989	JFY 92	2,186

CATEGORY CODE	PROGRAM ELEMENT
116-65	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	7,625	80.00	610
SUP FACILITIES	LS	-	-	1,576
SUBTOTAL				2,186
CONTINGENCY (5%)				0
TOTAL CONTR. COST				2,186
SIOH (6.5%)				0
TOTAL REQUEST				2,186
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Reinforced concrete pads for mobile vans and open storage area, and two guardhouses. Concrete pads are to be equipped with anchor hooks, utility hook-ups and grounding rods. Special features include generator/converter and transformer stations for special electrical power requirements, and communication system distribution.

Support facilities include site preparation, all required utilities, security fencing/area lighting, asphalt paving, landscaping, sidewalks, trash enclosure, and demolition of Buildings 611 and 621. Construction needs to be phased, with north portion being completed first.

REQUIREMENT:

276 mobile vans are authorized to support aircraft maintenance, supply and avionics functions of Marine Aviation Logistics Squadron-36 (MALS-36). Because of existing space and electrical power limitations, only 217 vans can now be supported. Portable generators must be used to power some vans, which seriously impairs operations. Instead of the required placement of vans over reinforced concrete pads, vans are placed over asphalt pavement which does not meet support/transport requirements. Without an adequate facility, MALS-36 is unable to meet its full operational requirements and must continue to perform all required functions under highly restrictive conditions which adversely affect mission efficiency and readiness.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
116-65	Tact. Supt. Van Pad	6,890	SY		
852-40	Misc. Open Storage/ Laydown Pads	735	SY		
852-35	Asphalt Pavement	8,850	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:

Proximity to aircraft parking aprons and maintenance hangars in order to efficiently support aircraft maintenance, supply and avionics functions.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

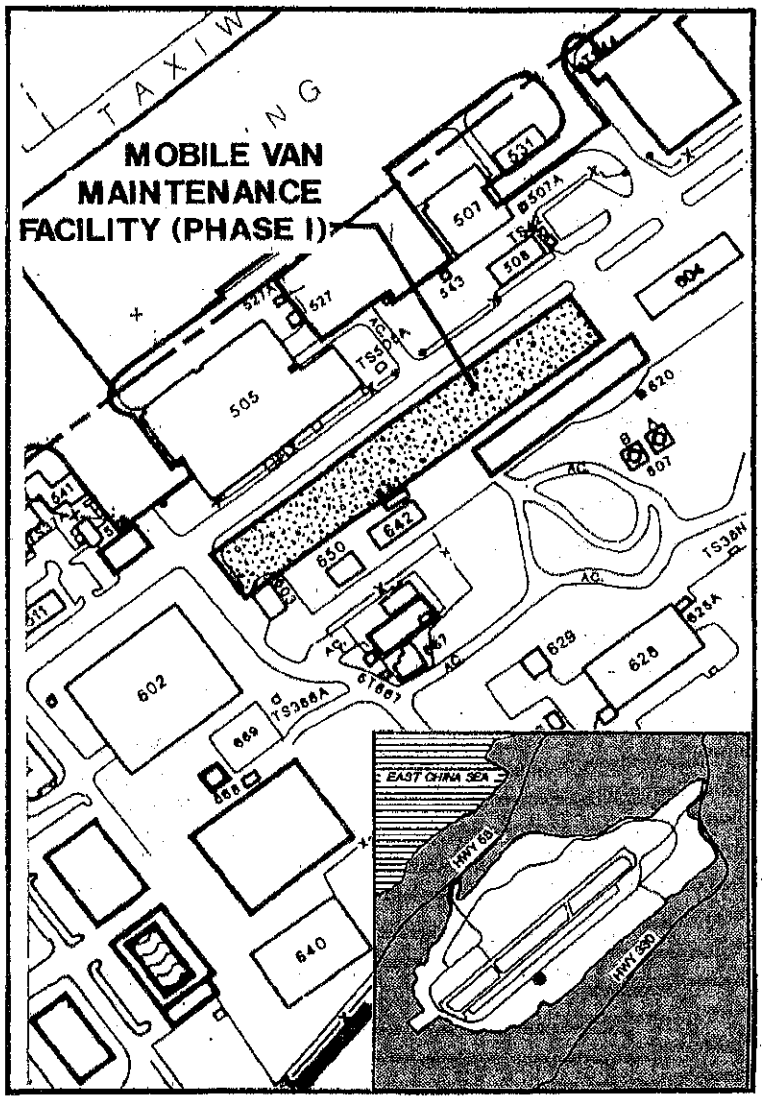
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: July 1989

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps

PROJECT TITLE	PROJECT NO.
Aircraft Parking Apron (Ph. II) MCAS Futenma	MC-305

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1990	JFY 92	7,572

CATEGORY CODE	PROGRAM ELEMENT
113-20	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	60,300	108.74	6,557
SUP FACILITIES	LS	-	-	1,015
SUBTOTAL				7,572
CONTINGENCY (5%)				0
TOTAL CONTR. COST				7,572
SIOH (6.5%)				0
TOTAL REQUEST				7,572
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Reconstruction of approximately 53,000 SY of aircraft parking apron and 7,300 SY of access aprons. Includes demolition and reconstruction of the existing pavement, structure with an approximate 10" thick reinforced concrete pavement, and construction of a utility trench for electrical and communication lines to cross the apron at the south end of Phase 2. Additionally, replacement of padeyes (aircraft tiedown anchors), grounding points, lighting, flush-mounted fire hydrants and utility conduits and lines removed or damaged during demolition. Also, stabilization of shoulders and upgrade of drainage for the pavement to be reconstructed.

To maintain airfield operations, the parking apron must be upgraded in phases. A total of four phases is required to minimize disruption of daily operations.

REQUIREMENT:

MCAS Futenma's mission is to maintain and operate facilities and provide services and materials to support operations of the Fleet Marine Force (FMF), 1st Marine Aircraft Wing and subordinate and tenant units; to provide facilities to the FMF aircraft in support of ground forces; and to provide operational, logistical and administrative support to tenant units. The Station is also used as a divert field for Kadena Air Base, 7th Fleet Aircraft, and is designated as a United Nations Airfield. An upgrade of the concrete parking and access aprons is required to support the majority of aircraft types that apply excessive loading on the existing 7" thick concrete aprons.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
113-20	Aircraft Parking Apron	53,000	SY		
113-40	Aircraft Access Apron	7,300	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Project site is the existing parking apron and access aprons and the areas adjacent to the existing aprons.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

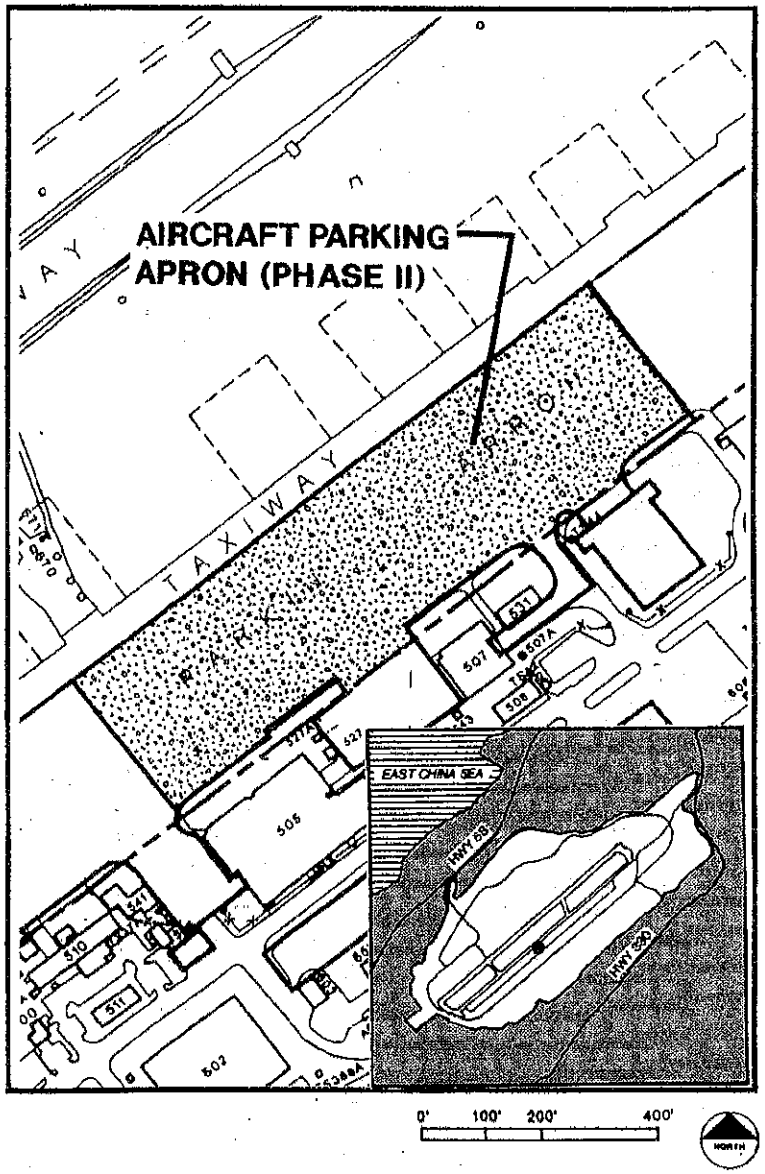
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: April 1990

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Aircraft Compass Calibration Pad MCAS Futenma	**PROJECT NO.** MC-320

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1990	JFY 92	275

CATEGORY CODE	PROGRAM ELEMENT
116-20	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	6,200	34.03	211
SUP FACILITIES	LS	-	-	64
SUBTOTAL				275
CONTINGENCY (5%)				0
TOTAL CONTR. COST				275
SIOH (6.5%)				0
TOTAL REQUEST				275
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A 1,600 SY compass calibration pad and a 4,600 SY access taxiway of concrete pavement with adequate substructure to ensure structural soundness under all loading conditions. Support facilities include site preparation, storm drainage system, stabilized shoulders, pavement markings, bronze compass marking inserts, and hydroseeding.

REQUIREMENT:

To be accurate for successful navigation, an aircraft's compass must be calibrated 2-3 times a year. A minimum of one pad is required at each station, and each pad handles one aircraft at a time. The time required to calibrate one aircraft compass is two hours. The maximum size aircraft to use this facility would be KC-130 fixed wing aircraft and CH53E rotary wing aircraft.

Compass calibration is currently conducted on Taxiway 3, which is consequently committed to this purpose approximately 200 days per year. This delays aircraft arrivals and departures, increases refueling time, and hinders KC-130 aircraft traffic. Also, Taxiway 3 was not designed to support the dead load of the heavier aircraft that now use it for compass calibration.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
116-20	Aircraft Comp. Cal. Pad	1,600	SY		
113-40	Aircraft Acc. Apron	4,600	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:

Allows all taxiways to be used, thereby improving aircraft operations. The access taxiway to the calibration pad is oriented to facilitate moving the aircraft onto the pad, headed toward magnetic north. Minimum distances from potential magnetic interference are met.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

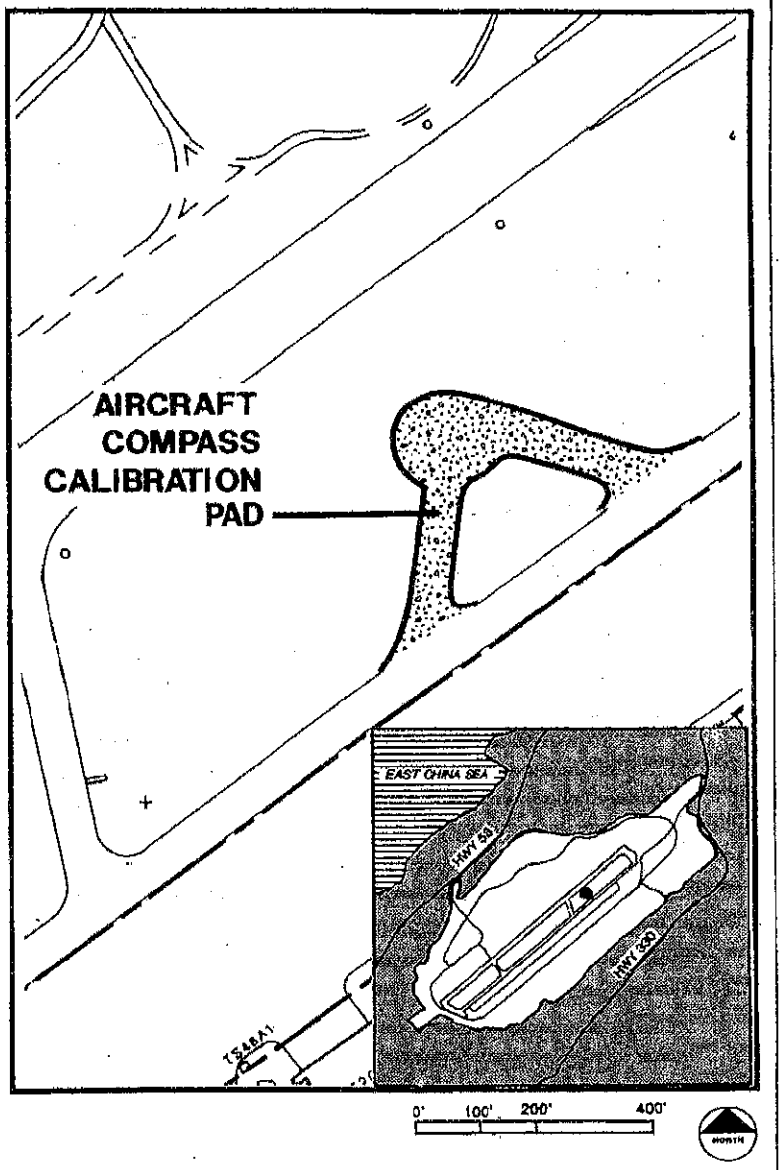
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: April 1990

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Physical Fitness Center MCAS Futenma	**PROJECT NO.** MC-321

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1990	JFY 92	4,801

CATEGORY CODE	PROGRAM ELEMENT
740-43	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	42,100	106.96	4,503
SUP FACILITIES	LS	-	-	298
SUBTOTAL				4,801
CONTINGENCY (5%)				0
TOTAL CONTR. COST				4,801
SIOH (6.5%)				0
TOTAL REQUEST				4,801
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Construct a one-story, reinforced concrete building. Functional spaces include 3 volleyball/basketball courts, 4 indoor play courts, weight room, martial arts room, locker rooms, restrooms, sauna room, steam room, storage, laundry, issue room, administrative and office spaces, lobby, snack bar, corridors and mechanical equipment room.

Support facilities include site preparation, all required utilities, parking, landscaping, sidewalks, equipment and trash enclosures, parking lot lighting, relocation of a transformer station, and demolition of Buildings 207, 207A and 208.

REQUIREMENT:

Current deficiencies exist in gymnasium space, indoor play courts, and special services issue and office space. The existing gymnasium is overcrowded and many individuals are forced to travel to other military installations to meet their physical fitness and athletic needs. These problems have an adverse effect on morale and hamper the Marine Corps' ability to retain quality personnel.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
740-43	Physical Fitness Center	30,000	SF		
740-84	Indoor Playing Courts	4,800	SF		
740-37	Sp.Svcs.Issue & Office	7,300	SF		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Proximity to BEQs, BOQs and existing outdoor recreation facilities.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety	X		Note (1)
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

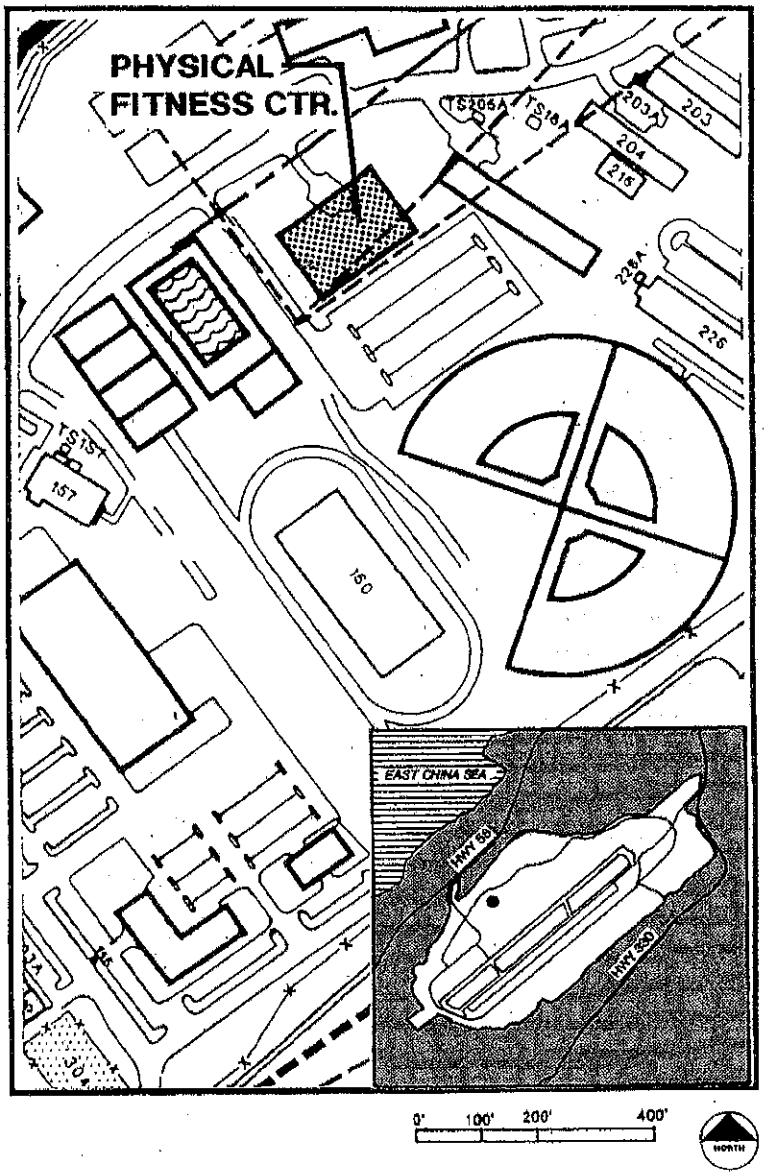
Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: April 1990

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Airfield safety review required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Gas Station MCAS Futenma	**PROJECT NO.** MC-326

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1990	JFY 92	107

CATEGORY CODE	PROGRAM ELEMENT
740-31	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	660	115.15	76
SUP FACILITIES	LS	-	-	31
SUBTOTAL				107
CONTINGENCY (5%)				0
TOTAL CONTR. COST				107
SIOH (6.5%)				0
TOTAL REQUEST				107
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story, reinforced concrete service building and a one island gas/air/water dispensing area with reinforced concrete canopy. Functional spaces to include sales area, office, storage room, restroom, and mechanical space.

Special features include 10,000 gallon underground fuel storage tank and fuel, air and water dispensing units, and oil/water separator.

Support facilities include site preparation, all required utilities, landscaping, sidewalks, and trash enclosure.

REQUIREMENT:

To provide a supplemental gas station for military personnel and DOD civilian employees. Current DOD regulations authorize the provision of supplemental gas stations in cases where (a) the authorized population exceeds 3,000 and (b) the installation's layout is such that a single main station cannot properly satisfy the needs of the customer. MCAS Futenma has a population of over 4,000 PN and is physically separated from Camp Foster by Futenma town. The gas/service station at Camp Foster is considered the main station for both the Camp and the Air Station. Thus, a supplemental gas station will eliminate a current deficiency.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
		READINESS RATING:	
INVESTMENT CATEGORY:		MOBILIZATION INDICATOR:	
SAVINGS TO INVEST. RATIO:		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
740-31	Exch. Suppl. Gas Station	660	SF		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Proximity to troop housing area and existing car care center.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

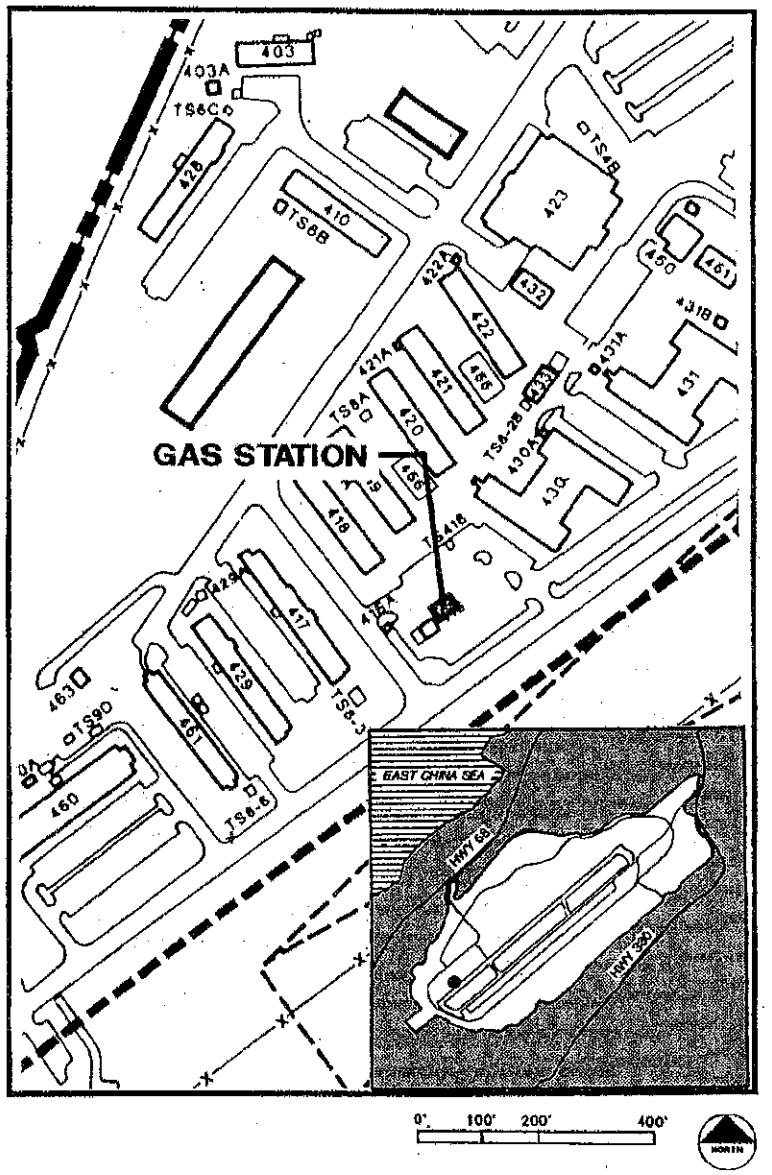
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: April 1990

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Ground Support Equipment Shop MCAS Futenma			PROJECT NO. MC-332
DATE	EST. YEAR	CURRENT COST ($000)	
JUL 1990	JFY 92	432	
CATEGORY CODE	PROGRAM ELEMENT		
218-60			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	4,100	85.37	350
SUP FACILITIES	LS	-	-	82
SUBTOTAL				432
CONTINGENCY (5%)				0
TOTAL CONTR. COST				432
SIOH (6.5%)				0
TOTAL REQUEST				432
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story reinforced concrete Ground Support Equipment Shop to perform abrasive blasting and painting. Functional areas include tool room, storage room, paint booth and drying room, preparation room, abrasive blasting room, battery shop, administrative space, restrooms/shower/locker rooms and mechanical equipment room.

Support facilities include site preparation, all required utilities, hazardous/flammable storage shed, security fence/lights, paved open storage, sidewalks and trash enclosure.

REQUIREMENT:

Marine Aviation Logistics Squadron-36 (MALS-36) requires a ground support equipment shop for corrosion control maintenance work on its inventory of over 16,000 pieces of ground support equipment. There are no facilities on MCAS Futenma where this equipment can be systematically refurbished (rust removed and repainted) to maintain acceptable levels of equipment serviceability and readiness.

This facility will provide the necessary equipment and work space for corrosion removal and equipment repainting.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
		FLEP PRIORITY:	
INVESTMENT PROGRAM:		READINESS RATING:	
INVESTMENT CATEGORY:		MOBILIZATION INDICATOR:	
SAVINGS TO INVEST. RATIO:		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
218-60	Arcft.Gr.Supt.Equip.Shop	2,990	SF		
218-50	Battery Shop	1,110	SF		
143-78	Haz./Flam. Storage Shed	260	SF		
852-40	Open Storage Area	250	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Proximity to existing MALS-36 maintenance facilities for operational efficiency.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact	X		Note (1)
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

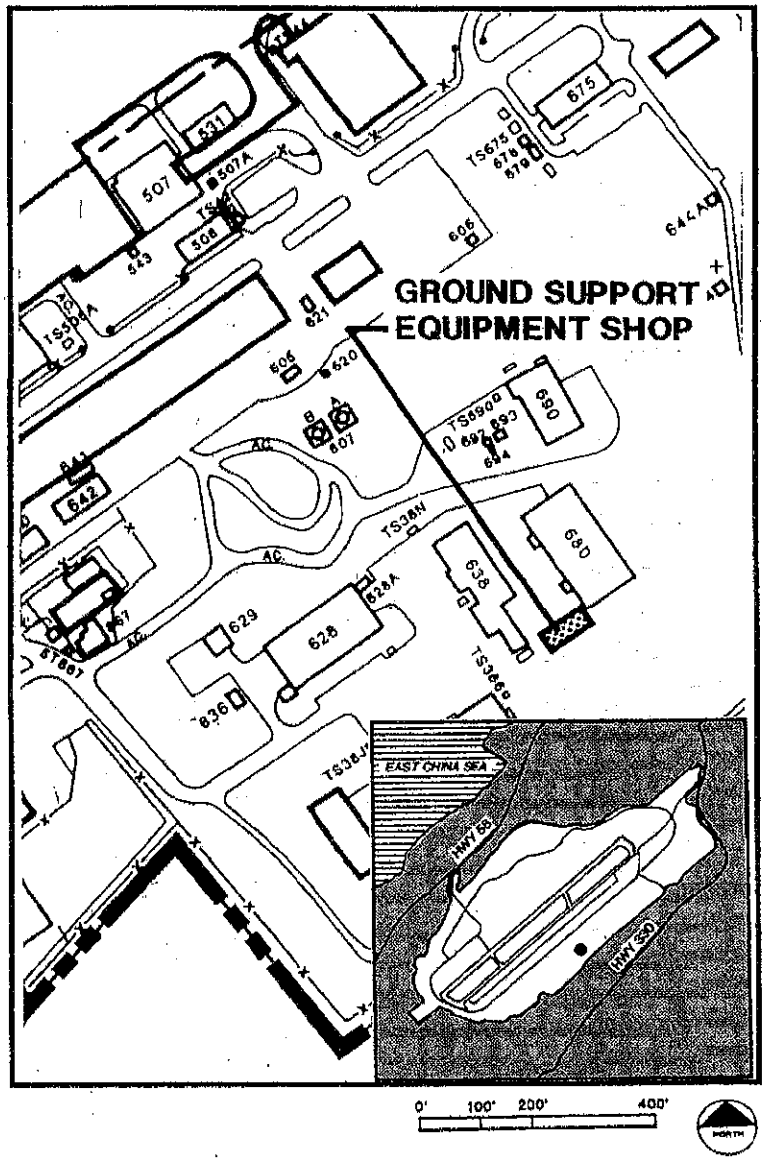
Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: June 1990

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Potential cultural resource site.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Electrical Distribution Upgrade (Ph. I) MCAS Futenma	**PROJECT NO.** MC-333

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1990	JFY 92	5,851

CATEGORY CODE	PROGRAM ELEMENT
813-20	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	LS	-		1,820
SUP FACILITIES	LS	-	-	4,031
SUBTOTAL				5,851
CONTINGENCY (5%)				0
TOTAL CONTR. COST				5,851
SIOH (6.5%)				0
TOTAL REQUEST				5,851
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A new electrical substation with two 10,000 KVA, 66 KV-13.8 KV transformers with automatic tap changers. Equipment will be provided for connection to a future supervisory control and data acquisition (SCADA) system, with the main console at MCB Camp S. D. Butler. The substation will be an enclosed concrete structure.

The distribution system will consist of underground concrete encased ducts and manholes. At least two fully rated circuits will be provided to each area so that either can carry the entire load. Vacuum isolation switches will allow interconnection of the two circuits and isolation of small areas for repairs and maintenance. Distribution transformers and isolation switches will be housed in weather proof concrete enclosures. This phase will provide the portion of the distribution system located on the westerly coastal side of the Air Station.

The existing overhead distribution system will be removed after completion of the new construction.

REQUIREMENT:

The existing electrical distribution system does not provide the reliability, security and stable voltage necessary for a multi-faceted air station with its intricate and sophisticated air space control, fueling, maintenance and other support complexes. It is also difficult and expensive to maintain.

The new substation with automatic tap changers is required to eliminate unacceptable voltage fluctuations. New underground electrical distribution lines with sectionalizing switches and transformers will make its electrical system less vulnerable to lightning, typhoons and corrosion, as well as allow for isolating sections of the system for repair and maintenance.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
813-20	500+ KVA Substation	1	EA		
813-30	Switching Station	5	EA		
813-10	Substation Building	3,000	SF		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The new substation station is sited close to the station boundary and away from other existing or planned facilities.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact	X		Note (1)
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

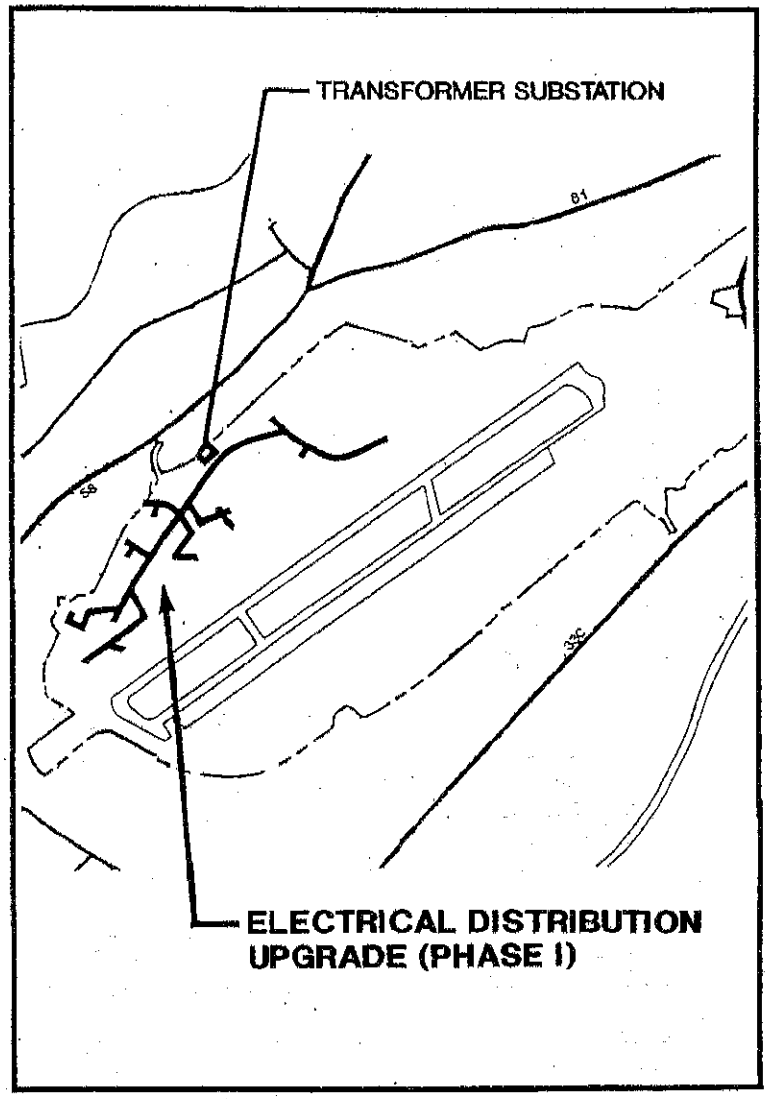
Site Approved: YES: X NO: Deferred: _____

Name: Lt. Col. Godwin, USMC Date: July 1990

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Potential cultural resource site.



NOT TO SCALE

NORTH

LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Navy
PROJECT TITLE Navy Calibration Lab MCAS Futenma	**PROJECT NO.** NA-450

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1990	JFY 92	1,352

CATEGORY CODE	PROGRAM ELEMENT
218-45	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	9,200	124.89	1,149
SUP FACILITIES	LS	-	-	203
SUBTOTAL				1,352
CONTINGENCY (5%)				0
TOTAL CONTR. COST				1,352
SIOH (6.5%)				0
TOTAL REQUEST				1,352
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story reinforced concrete building. The facility will be equipped with a fire/security alarm system connected to the nearest USG fire and security department, HVAC system designed for calibration labs, tinted windows for energy conservation, fluorescent lighting, and vinyl ashaltic composition floor tile. Functional spaces include electronic test laboratories, maintenance shop, administrative offices, research library, and mechanical equipment room.

Support facilities include site preparation, all required utilities, asphalt paving, sidewalks, landscaping, security fencing/area lighting, and demolition of Buildings 631 and 631-B.

REQUIREMENT:

The existing 23 aged, metal mobile vans are deteriorating, inefficient in space utilization, and require constant costly maintenance. Although originally the lab was expected to be located at MCAS Futenma only temporarily, its mission has changed to become permanent. A permanent facility is required to perform its functions efficiently.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
218-45	Instrument Calibration Lab	9,200	SY		
852-10	Parking Area	960	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Utilizes existing site.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

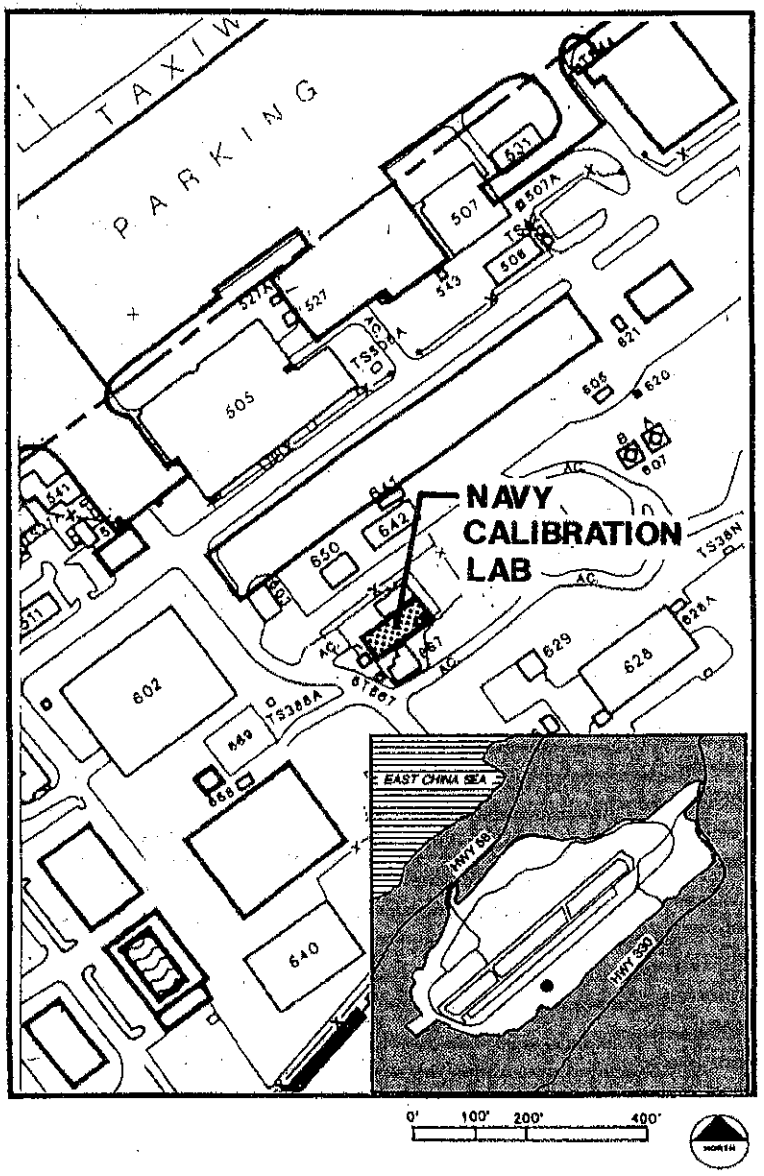
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. McDonald, USMC Date: March 1989

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Electrical Distribution Upgrade (Ph. II) MCAS Futenma			PROJECT NO. MC-378
DATE	EST. YEAR	CURRENT COST ($000)	
JUL 1991	JFY 93	5,223	
CATEGORY CODE	PROGRAM ELEMENT		
812-30			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	LF	33,600	42.98	1,444
SUP FACILITIES	LS	-	-	3,779
SUBTOTAL				5,223
CONTINGENCY (5%)				0
TOTAL CONTR. COST				5,223
SIOH (6.5%)				0
TOTAL REQUEST				5,223
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Installation of new underground electrical distribution feeder circuits in new ducting with new manholes, concrete enclosed distribution transformers, sectionalizing switches, and capacitors. Equipment will be identical to that provided in MC-333.

This phase will provide the portion of the distribution system located on the easterly (inland) side of the Air Station. The existing overhead distribution system will be removed after completion of the new construction.

REQUIREMENT:

The existing electrical distribution system at MCAS Futenma does not provide the reliability, security, and stability necessary to support the air station's intricate and sophisticated air space control, fueling, maintenance, and other ground support functions.

New underground electrical distribution lines with sectionalizing switches and transformers will make its electrical system less vulnerable to lightning, typhoons and corrosion, as well as allow for isolating sections of the system for repair and maintenance.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
812-30	Electrical Distribution Lines	33,600	LF		
812-12	Transformer Station (<500KVA)	50	EA		

REQUIREMENT CERTIFICATION:

ACTIVITY:		DATE:	
COMMARCORBASESJAPAN:		DATE:	
CMC:		DATE:	

SITING RATIONALE:
Replacement of existing deteriorated equipment and wires.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

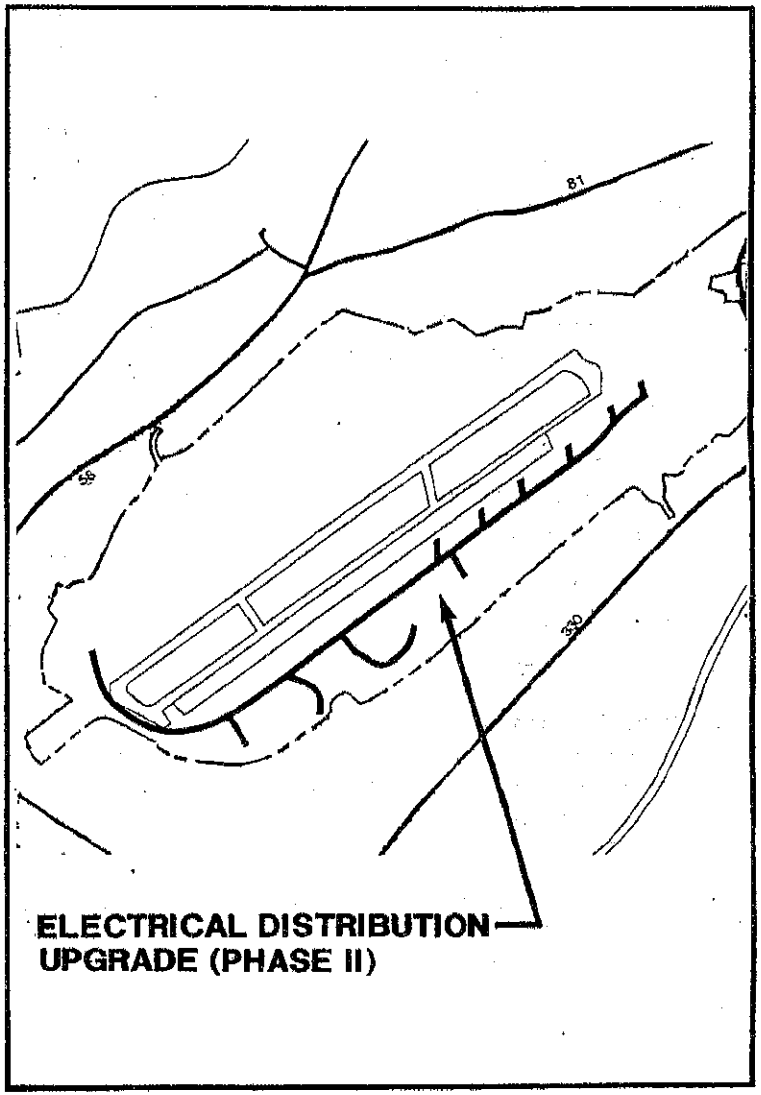
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Lt. Col. Godwin, USMC Date: July 1990

Project Supported by SFPS: YES: X NO:

NOTES:



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LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Aircraft Parking Apron Upgrade (Ph. III) MCAS Futenma			PROJECT NO. MC-348
DATE	EST. YEAR	CURRENT COST ($000)	
JUL 1991	JFY 93	11,225	
CATEGORY CODE	PROGRAM ELEMENT		
113-20			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	97,600	96.17	9,386
SUP FACILITIES	LS	-	-	1,839
SUBTOTAL				11,225
CONTINGENCY (5%)				0
TOTAL CONTR. COST				11,225
SIOH (6.5%)				0
TOTAL REQUEST				11,225
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Reconstruction of approximately 53,900 SY of existing parking apron and new construction of an additional 43,700 SY of parking apron in the area adjoining the current parking apron and between Buildings 503 and 539. Project includes demolition of existing pavement and several facilities in the area between Buildings 503 and 539. Also includes removal and replacement of sub-base and base course, and reconstruction of pavement structure with approximately 10" thick reinforced concrete pavement.

In addition, padeyes (aircraft tiedown anchors), grounding points, lighting, flush mounted fire hydrants and utilities affected by demolition will be replaced. Shoulders will be stabilized and drainage upgraded for the pavement to be reconstructed.

REQUIREMENT:

The parking apron subject to upgrading has deteriorated badly and has missing or badly corroded tie-down padeyes. To prevent further deterioration, these areas are limited to the use of lighter aircraft, which hinders airfield operations involving heavier aircraft.

Additional parking apron space is needed to meet NAVFAC P-80 requirements for spacing between parked aircraft and to provide required taxiways around parking areas.

This project will allow the air station to have full operational capability to fulfill its mission.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
		FLEP PRIORITY:	
INVESTMENT PROGRAM:		READINESS RATING:	
INVESTMENT CATEGORY:		MOBILIZATION INDICATOR:	
SAVINGS TO INVEST. RATIO:		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
113-20	Aircraft Parking Apron	97,600	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Project site is the existing parking apron and access aprons and the areas adjacent to the existing aprons.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

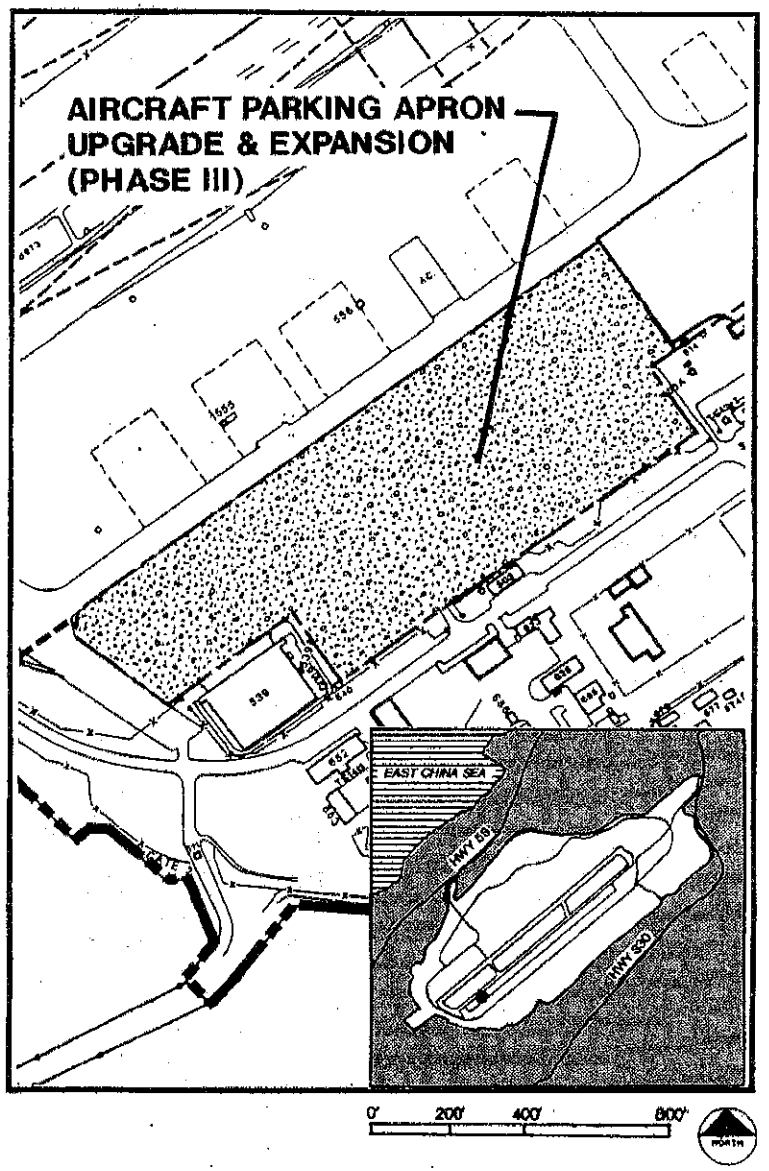
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: April 1991

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Mobile Van Maintenance Facility (Ph. II) MCAS Futenma	**PROJECT NO.** MC-347

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1991	JFY 93	2,369

CATEGORY CODE	PROGRAM ELEMENT
211-45	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	17,800	85.90	1,529
SUP FACILITIES	LS	-	-	840
SUBTOTAL				2,369
CONTINGENCY (5%)				0
TOTAL CONTR. COST				2,369
SIOH (6.5%)				0
TOTAL REQUEST				2,369
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story high-bay reinforced concrete building. Functional spaces include maintenance area, sandblasting room, paint room, air conditioning repair room, office/administrative spaces, parts storage room, restrooms, and mechanical equipment room. Also includes separate organic storage and hazardous/flammable storage buildings.

Support facilities include site preparation, all required utilities (including a 50 pair communication cable), asphalt paving, landscaping, a trash enclosure, and demolition of Building 605.

REQUIREMENT:

To provide facilities for maintenance of the avionics vans that will be using the van pads constructed under Phase I. Both projects will together provide MCAS Futenma with a complete, permanent facility in support of the aircraft maintenance, supply and avionics functions of Marine Aircraft Logistics Squadron-36 (MALS-36).

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
211-45	Avionics Shop	7,600	SF		
143-78	Ops. Haz./Flam. Storage	600	SF		
441-12	Organic Unit Storage	9,600	SF		
852-10	Parking Area	9,160	SY		
852-35	Other Paved Area	1,140	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The site is close to the MALS-36 mobile maintenance vans that are to be maintained.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	N/A
Airfield Safety		X	
Electromagnetic Radiation		X	N/A
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

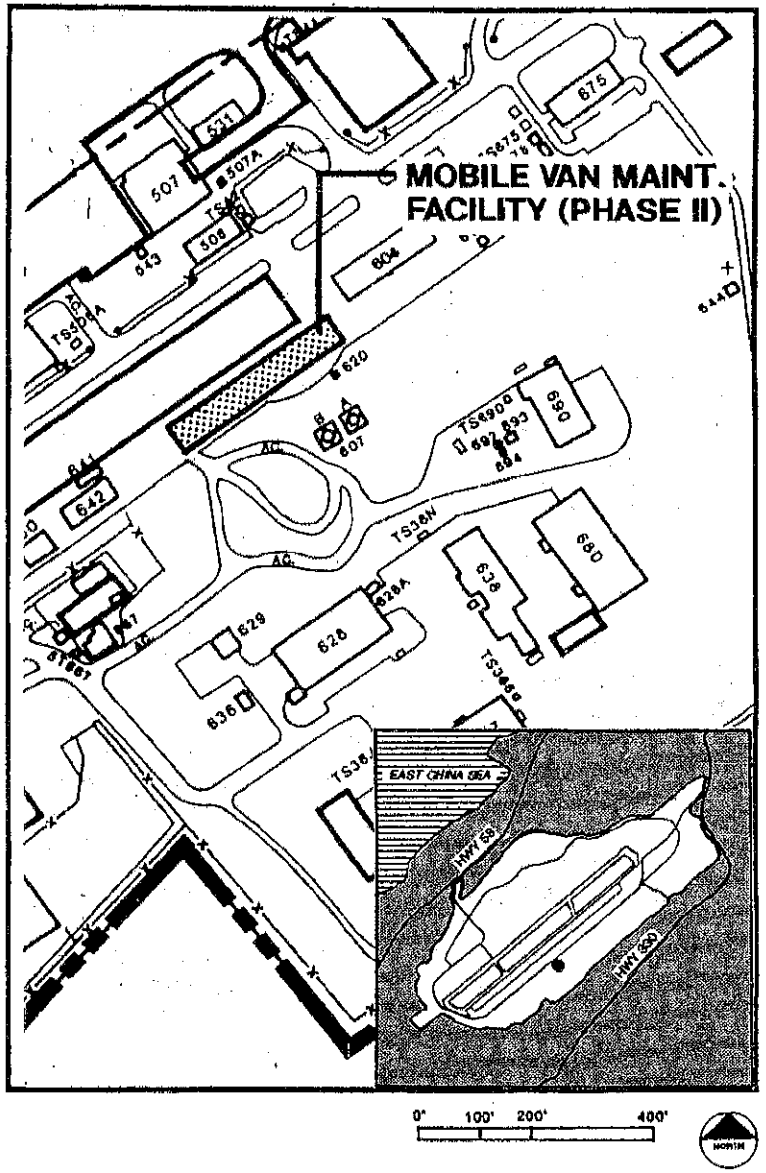
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. Schwanda, USMC Date: April 1991

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Aircraft Group Headquarters MCAS Futenma	**PROJECT NO.** MC-368

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1991	JFY 93	2,155

CATEGORY CODE	PROGRAM ELEMENT
610-71	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	17,600	107.95	1,900
SUP FACILITIES	LS	-	-	255
SUBTOTAL				2,155
CONTINGENCY (5%)				0
TOTAL CONTR. COST				2,155
SIOH (6.5%)				0
TOTAL REQUEST				2,155
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A two-story reinforced concrete building with central air conditioning and heating, electrical power with interior and exterior lighting, plumbing, fire protection system, telephone system and energy monitoring/control provisions. Functional spaces include administrative spaces, staff legal office, training/conference room, chaplain's office, publication library, data processing equipment room, classified materials storage vault, storage rooms, and restrooms/locker rooms.

Support facilities include site preparation, all required utilities (including a 100 pair communication cable), asphalt paving, landscaping, sidewalks, and trash enclosures.

REQUIREMENT:

The facility currently occupied by MAG-36 Group Headquarters -- the upper floor of Hangar 539 -- does not meet the unit's space requirements. In addition, the existing deficiency in 01 (crew and equipment) and 02 (administrative) space available to the HMH Squadron occupying Hangar 539 approximately equals this upper floor area. This project will enable both units to better fulfill their missions by providing the required space and enhancing unit integrity.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
610-71	Aircraft Group Headquarters	17,600	SF		
852-10	Parking Area	3,040	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The site is vacant, centrally located, and offers a direct line of sight to Group operations up and down the flightline.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

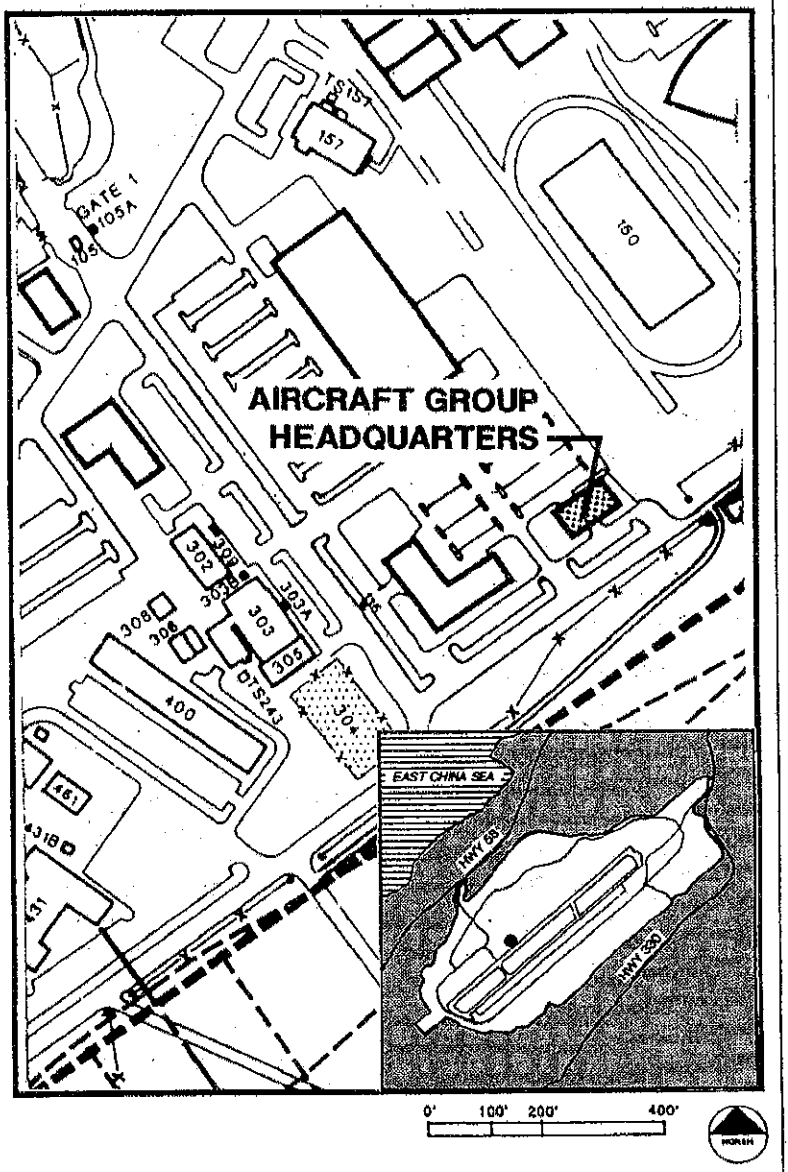
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Lt. Col. Godwin, USMC Date: April 1991

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Aircraft Maintenance Hangar MCAS Futenma			PROJECT NO. MC-370
DATE	EST. YEAR	CURRENT COST ($000)	
JAN 1992	JFY 93	5,493	
CATEGORY CODE	PROGRAM ELEMENT		
211-05			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	38,800	126.37	4,903
SUP FACILITIES	LS	-	-	590
SUBTOTAL				5,493
CONTINGENCY (5%)				0
TOTAL CONTR. COST				5,493
SIOH (6.5%)				0
TOTAL REQUEST				5,493
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Type I aircraft maintenance hangar with combination of two-story 01 and 02 spaces and a high maintenance bay (OH) space, all of reinforced concrete. Included are central heating and air conditioning (01 and 02 spaces only), lighting (including emergency and special hangar lighting), foam/water fire protection system, insulation, communication cables, and energy monitoring control system (EMCS) provisions.

Special features include bird proof overhead netting, 10-ton capacity overhead monorail bridge cranes in hangar bay and machine shop, air compressor system, and power operated hangar doors.

Support facilities include concrete aircraft access apron, detached CH-46 fuel tank storage building, and detached hazardous/flammable storage shed. Also included are site preparation, all required utilities (including a 40-pair communications cable), asphalt paving, lighting, landscaping, sidewalks and trash enclosure.

REQUIREMENT:

MCAS Futenma is deficient in adequate weather-protected maintenance space for the helicopter squadrons assigned to MAG-36. This hangar will provide the required servicing and repair accommodations, crew and equipment space, and administrative space for one HMM (CH-46) Squadron. In addition, it will provide essential emergency shelter space for protecting aircraft during damaging weather conditions prevalent in Okinawa.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
211-05	Maintenance Hangar-OH	20,000	SF		
211-06	Maintenance Hangar-01	10,200	SF		
211-07	Maintenance Hangar-02	8,600	SF		
113-40	Aircraft Access Apron	1,300	SY		
852-10	Parking Area	2,000	SY		
852-35	Other Paved Area	300	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The site is vacant and located where parking apron space can be provided within reasonable proximity of the hangar.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

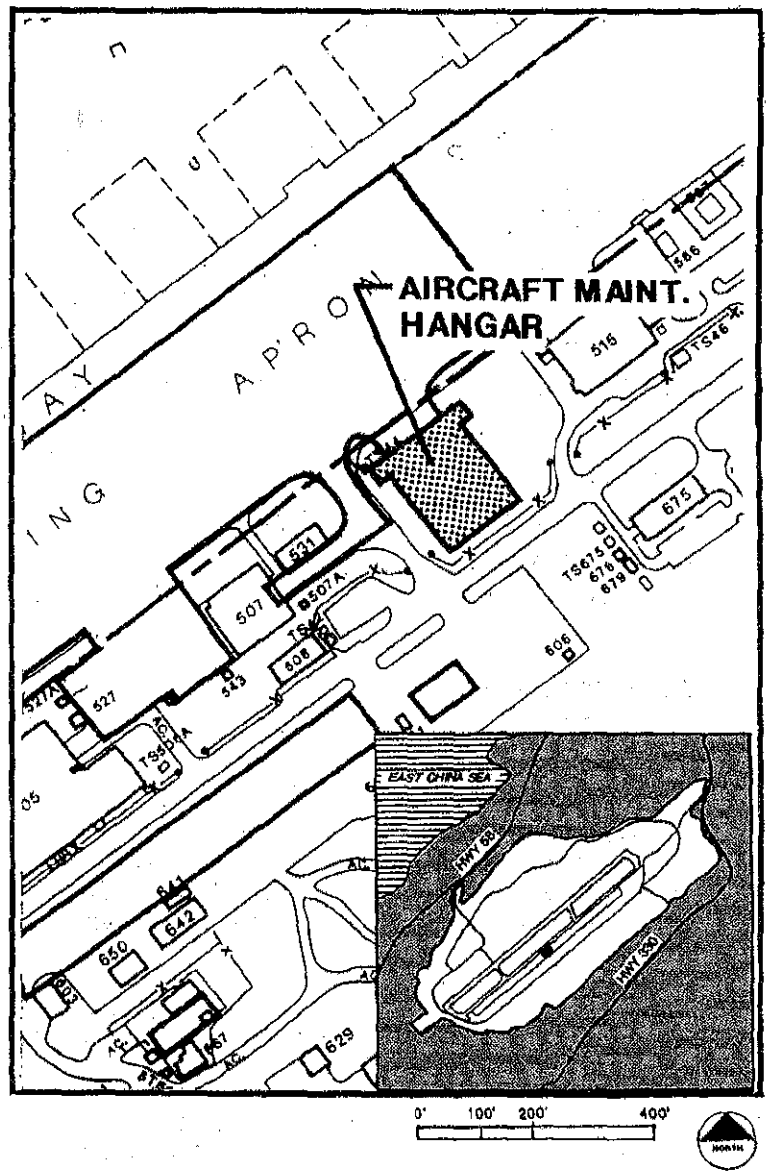
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Lt. Col. Godwin, USMC Date: April 1991

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Control Tower/ROF MCAS Futenma	**PROJECT NO.** MC-216

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1988	JFY 93	995

CATEGORY CODE	PROGRAM ELEMENT
141-70	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	4,700	90.00	423
SUP FACILITIES	LS	-	-	572
SUBTOTAL				995
CONTINGENCY (5%)				0
TOTAL CONTR. COST				995
SIOH (6.5%)				0
TOTAL REQUEST				995
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A reinforced concrete building combining a seven-story Air Traffic Control Tower and a one-story Radar Operations Facility (ROF). Construction includes central air conditioning and heating, fire protection system and security alarm system. Special features include emergency generator, sound proofing, external fire escape, and typhoon shutters on tower windows.

Functional spaces in the Control Tower include a radar air traffic control room, elevator; communication equipment room, instrument control and back-up equipment room and restroom. ROF functional spaces include radar control room, equipment room, ground electronics maintenance shop, ready room, offices, break room, and restroom.

Support facilities include site preparation, all required utilities (including 15-pair communications cable), underground communications ductline, parking, landscaping, sidewalks, trash enclosure, and two-lane asphalt access road.

REQUIREMENT:

The existing control tower is inadequate due to height, location and interior space deficiencies. Current problems include air surveillance difficulties and restricted visibility of the C-130 area.

The existing ROF is located in three portable vans where structural deficiencies, such as corrosion and leaks, seriously jeopardize equipment integrity.

Co-location of the Control Tower and ROF is necessary to provide a complete, integrated air traffic control facility, thus maximizing air traffic control operations efficiency and effectivenes.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
141-70	Control Tower	3,000	SF		
133-72	Radar Operations Facility	1,700	SF		
852-10	Parking Area	1,040	SY		
851-10	Access Road	3,950	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The site is vacant, is located on the side of the runway which allows the maximum opportunity for maintaining visual contact with aircraft, and is situated where it will be possible to maintain direct communications with Kadena Air Force Base.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety	X		
Electromagnetic Radiation	X		
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

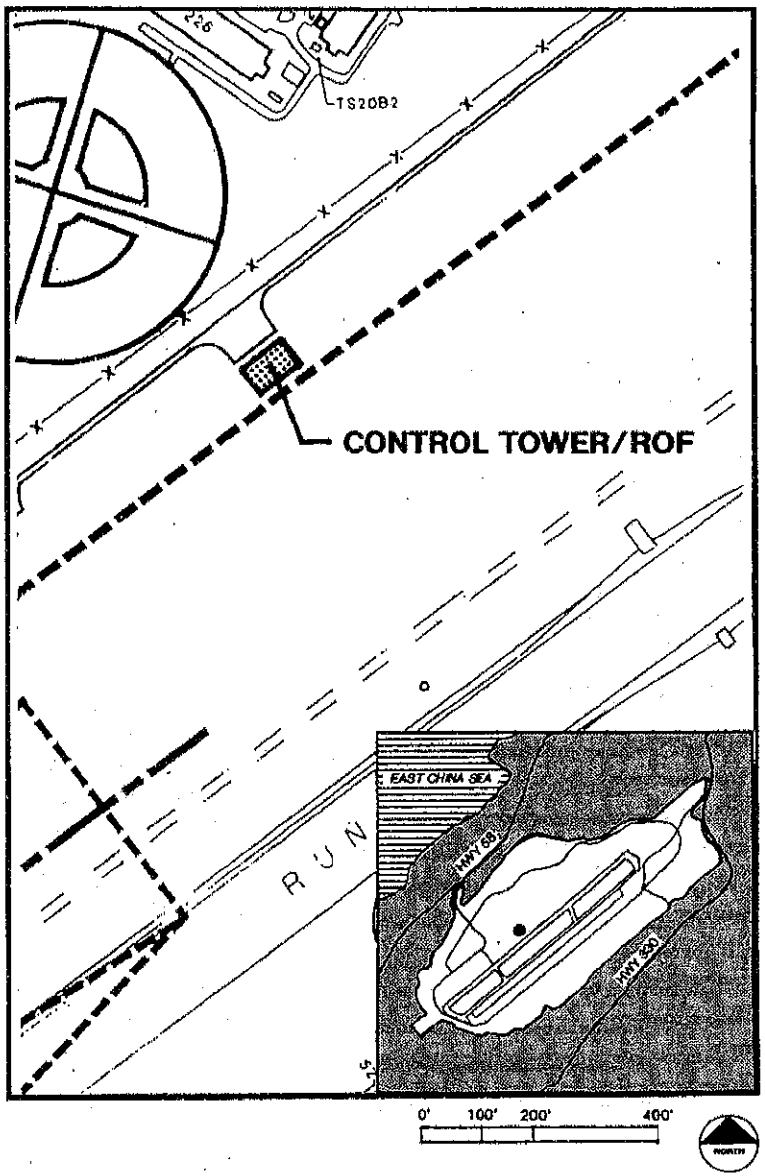
HQMC VALIDATION:

Site Approved: YES: X NO: Deferred: _____

Name: Col. McDonald, USMC Date: June 1988

Project Supported by SFPS: YES: X NO:

NOTES:



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE 1st MAW/MWHS-1 Headquarters MCAS Futenma	**PROJECT NO.** MC-379

DATE	EST. YEAR	CURRENT COST ($000)
JUL 1991	JFY 93	7,701

CATEGORY CODE	PROGRAM ELEMENT
610-70	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	66,200	107.72	7,131
SUP FACILITIES	LS	-	-	570
SUBTOTAL				7,701
CONTINGENCY (5%)				0
TOTAL CONTR. COST				7,701
SIOH (6.5%)				0
TOTAL REQUEST				7,701
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A three-story, with basement, reinforced concrete headquarters building. Functional spaces include private offices, administrative areas, conference rooms, classrooms, library, storage rooms, locker/toilet/shower rooms, lounges, barber shop, snack bar and mechanical rooms. Also included is one helipad to be located on the roof of the building.

Secure spaces of minimum 8" thick walls and roof deck, vault type doors, cypher locks, and iron bars on the windows are required.

Support facilities include site preparation, all required utilities (including a 1,000-pair communication cable), asphalt paving for parking, area lighting, security fencing, landscaping, sidewalks, and trash enclosure.

REQUIREMENT:

The 1st Marine Air Wing is the parent command of all Marine Wing activities on Okinawa. MWHS-1 provides administrative support to the 1st MAW. 1st MAW and MWHS-1 activities are currently located at Camp Foster in inadequate facilities. The current FSR requires these activities to be located at MCAS Futenma. However, MCAS Futenma is deficient in headquarters facilities. This project will provide adequate spaces to conduct day-to-day operations and improve operational efficiency by consolidating these functions in one facility on MCAS Futenma.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
610-70	Wing Headquarters	55,700	SF		
610-72	Squadron Headquarters	10,500	SF		
852-10	Parking Area	8,520	SY		
852-35	Other Paved Area	1,140	SY		
111-20	Helicopter Landing Pad	1	EA		

REQUIREMENT CERTIFICATION:

ACTIVITY:		DATE:	
COMMARCORBASESJAPAN:		DATE:	
CMC:		DATE:	

SITING RATIONALE:
Vacant site located near the main gate for easy access.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety	X		(1)
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

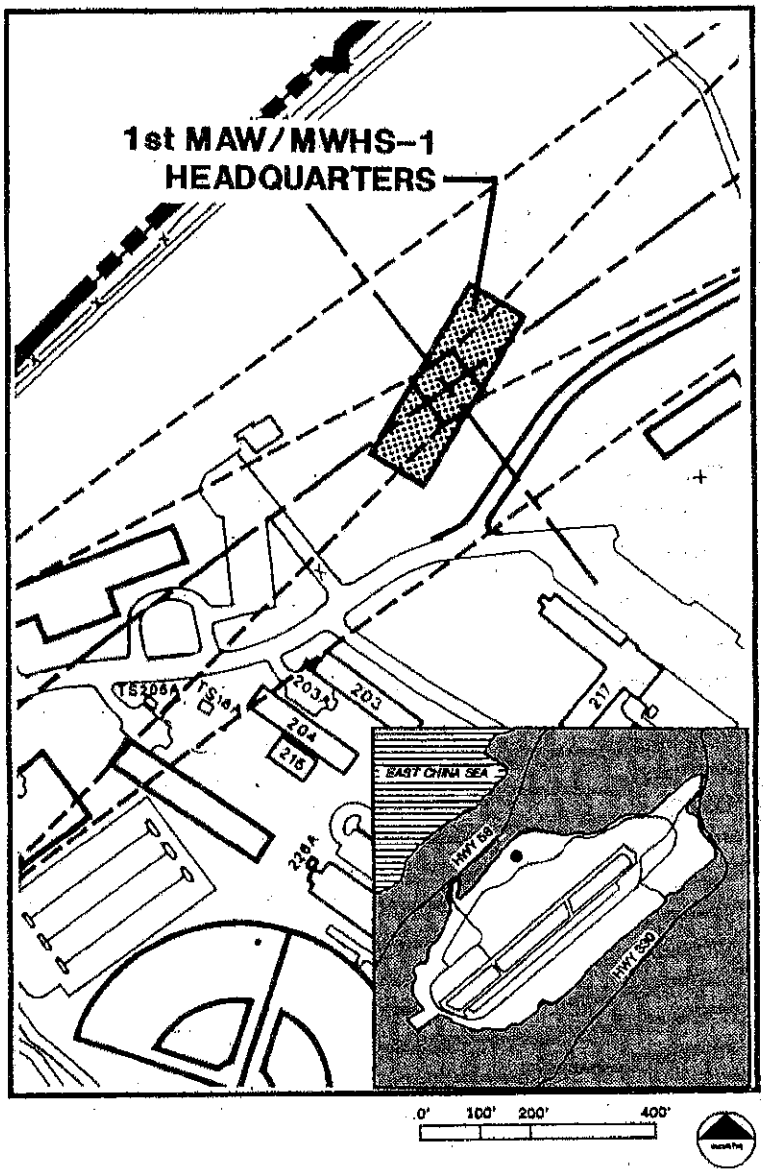
Site Approved: YES: X NO: Deferred: _____

Name: Lt. Col. Godwin, USMC Date: April 1991

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Waiver required for rooftop helipad.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE MATCS-18 Mobile Van Pad MCAS Futenma			PROJECT NO. MC-XX1
DATE	EST. YEAR	CURRENT COST ($000)	
JAN 1992	JFY 94	100	
CATEGORY CODE	PROGRAM ELEMENT		
116-65			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	1,000	80.00	80
SUP FACILITIES	LS	-	-	20
SUBTOTAL				100
CONTINGENCY (5%)				0
TOTAL CONTR. COST				100
SIOH (6.5%)				0
TOTAL REQUEST				100
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Concrete pads 10 inch thick with a 6-inch base course of gravel. Concrete pads include van tiedown anchors and flush-mounted conduits and lines.

Support facilities include site preparation (including excavation of a high area to remove a visual obstruction), all required utilities, lighting, and landscaping.

REQUIREMENT:

Marine Air Traffic Control Squadron-18 (MATCS-18) is responsible for operation of the airfield at MCAS Futenma two days a week. The mobile air traffic control station also provides emergency and backup airfield control when the control tower operations go down, as well as training for Marines. The mobile vans and generators necessary to fulfill this mission currently sit on bare ground, thus decreasing their useful life and increasing possiblity of damage by typhoons. The van pad will alleviate these problems.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
		READINESS RATING:	
INVESTMENT CATEGORY:		MOBILIZATION INDICATOR:	
SAVINGS TO INVEST. RATIO:		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
116-65	Tact. Supt. Van Pad	1,000	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The site is vacant and is located where it will permit the visual surveillence of the runway required for effective operations.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety	X		Note (1)
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

Site Approved: YES: NO: X Deferred: _____

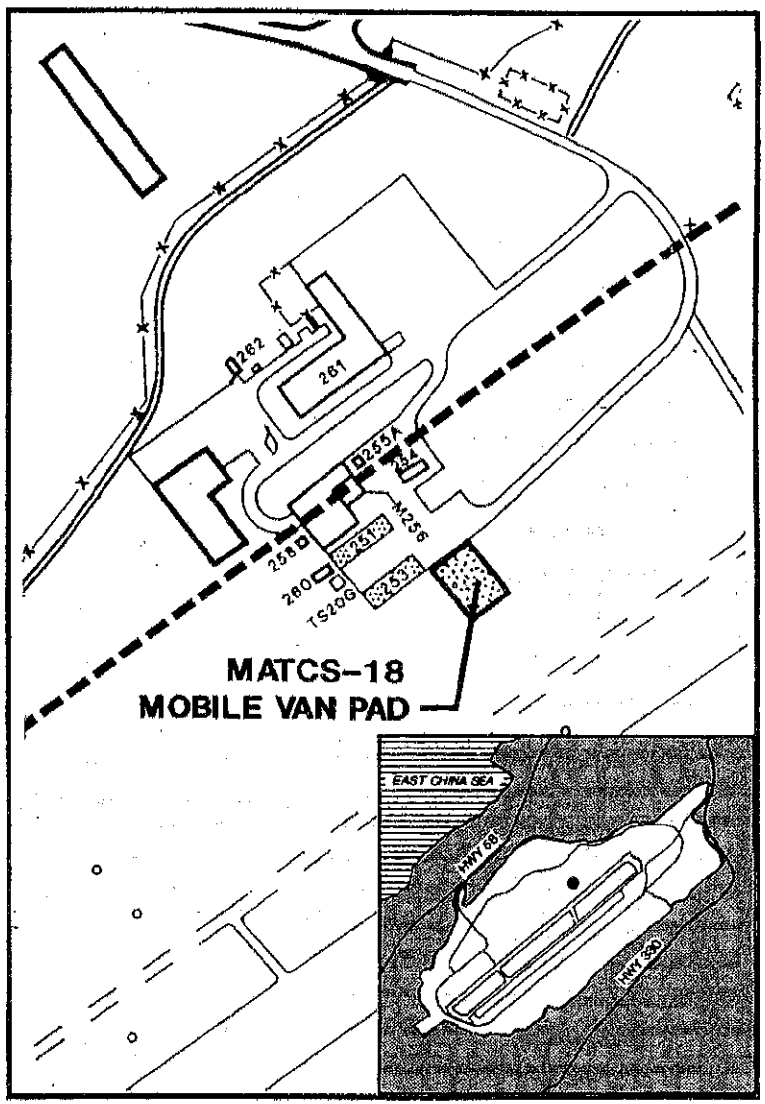
Name: Note (2) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) A waiver to allow this activity to occur in the clear zone is required.

(2) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Aircraft Parking Apron Upgrade (Phase IV) MCAS Futenma			PROJECT NO. MC-XX2
DATE JAN 1992	EST. YEAR JFY 94	CURRENT COST ($000) 20,800	
CATEGORY CODE 113-20	PROGRAM ELEMENT		

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	165,400	108.83	18,000
SUP FACILITIES	LS	-	-	2,800
SUBTOTAL				20,800
CONTINGENCY (5%)				0
TOTAL CONTR. COST				20,800
SIOH (6.5%)				0
TOTAL REQUEST				20,800
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Reconstruction of approximately 116,300 SY of existing parking apron and new construction of an additional 49,100 SY of parking apron in the area adjoining the current parking apron. Project includes removal and replacement of sub-base and base course, and reconstruction of pavement structure with approximately 10-inch thick reinforced concrete pavement.

In addition, padeyes (aircraft tiedown anchors), grounding points, lighting, flush mounted fire hydrants and utilities affected by demolition will be replaced. Shoulders will be stabilized and drainage upgraded for the pavement to be reconstructed.

REQUIREMENT:

The parking apron subject to upgrading has deteriorated badly and has missing or badly corroded tie-down padeyes. To prevent further deterioration, these areas are limited to the use of lighter aircraft, which hinders airfield operations involving heavier aircraft.

Additional parking apron space is needed to meet NAVFAC P-80 requirements for spacing between parked aircraft and to provide required taxiways around parking areas.

This project will allow the Air Station to have full operational capacity to fulfill its mission.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
113-20	Aircraft Parking Apron	165,400	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:

Project site is the last remaining portion of the parking apron requiring upgrade, and the area immediately beyond the end of the existing apron.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

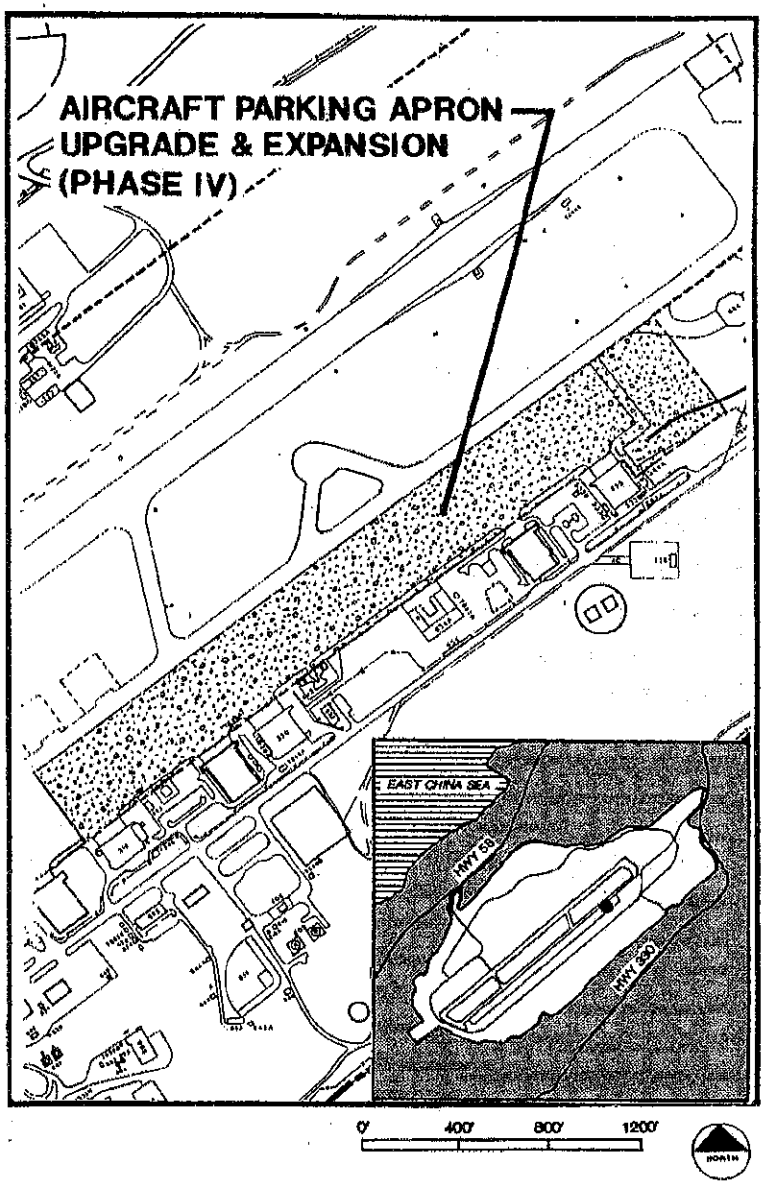
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Rnwy.24 Appr.Lights & Rnwy.6 Pvd.Ovrn. MCAS Futenma			PROJECT NO. MC-XX3
DATE	EST. YEAR	CURRENT COST ($000)	
JAN 1992	JFY 94	935	
CATEGORY CODE	PROGRAM ELEMENT		
111-10			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	16,700	50.00	835
SUP FACILITIES	LS	-	-	100
SUBTOTAL				935
CONTINGENCY (5%)				0
TOTAL CONTR. COST				935
SIOH (6.5%)				0
TOTAL REQUEST				935
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A 1,000-foot long 150-foot wide paved overrun extension of Runway 6, and instrument approach lighting system on Runway 24. The overrun extension will consist of reinforced concrete pavement on gravel base course.

REQUIREMENT:

The paved overrun is needed to minimize the potential for damage should an aircraft require additional runway to stop in an emergency.

Currently, instrument landings are possible only on Runway 6, under prevailing wind conditions. Approach lights are needed on Runway 24 to also allow instrument landings on this runway during other than prevailing wind conditions.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
111-10	Runway/Fixed Wing	16,700	SY		
134-30	Grnd. Control Appr. Sys.	1	EA		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Sites are vacant, and are the only locations which meet operational requirements for accomplishing the intended purposes of each project.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

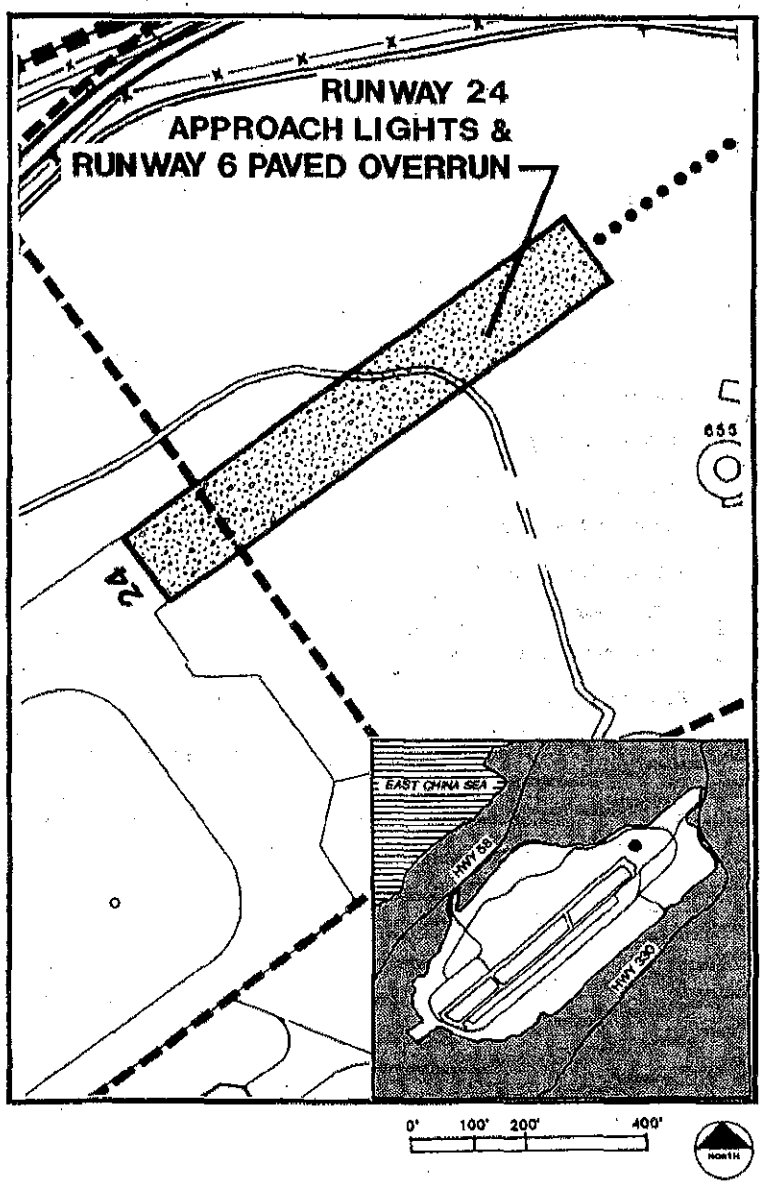
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Acad.Instr./MTS/Btry.HQ MCAS Futenma	**PROJECT NO.** MC-XX4

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 95	2,500

CATEGORY CODE	PROGRAM ELEMENT
171-10	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	12,300	170.00	2,091
SUP FACILITIES	LS	-	-	409
SUBTOTAL				2,500
CONTINGENCY (5%)				0
TOTAL CONTR. COST				2,500
SIOH (6.5%)				0
TOTAL REQUEST				2,500
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A two-story reinforced concrete facility. Functional spaces include classrooms, faculty and administrative offices, restrooms, and a 2-story Moving Target Simulator (MTS) room. Also included are administrative offices, a conference room, and restrooms for the battery headquarters.

Support facilities include site preparation, all required utilities, area lighting, asphalt paving, sidewalks, landscaping, and trash enclosure.

REQUIREMENT:

Currently, instruction space for the 1st LAAD Battalion is located in a substandard, semi-permanent building and does not include a required Moving Target Simulator(MTS). Marines from MCAS Futenma must be transported to Korea to undergo training at an MTS. Headquarters space for one battery of 1st LAAD Battalion is also lacking.

The new building would meet these deficiencies in a single consolidated facility.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
		READINESS RATING:	
INVESTMENT CATEGORY:		MOBILIZATION INDICATOR:	
SAVINGS TO INVEST. RATIO:		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
171-10	Academic Instruction	4,800	SF		
171-35	Operational Trainer Facility	4,400	SF		
610-73	Battery Headquarters	3,100	SF		
852-10	Parking Area	1,840	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Vacant site within the battalion's existing compound. Maintains unit integrity and functional efficiency.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

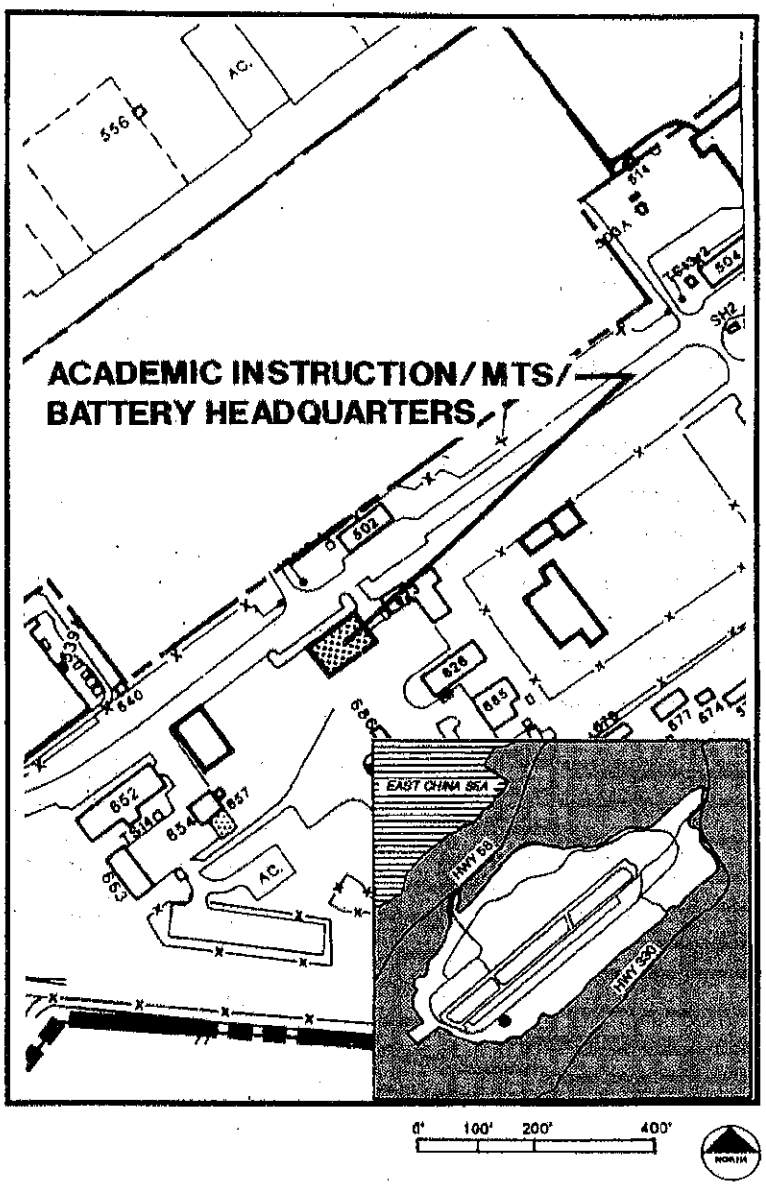
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) _____ Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Comm./Elec.Maint. Shop & Org.Unit Storage MCAS Futenma			PROJECT NO. MC-XX5
DATE	EST. YEAR	CURRENT COST ($000)	
JAN 1992	JFY 95	1,900	
CATEGORY CODE	PROGRAM ELEMENT		
217-10			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	11,500	134.96	1,552
SUP FACILITIES	LS	-	-	348
SUBTOTAL				1,900
CONTINGENCY (5%)				0
TOTAL CONTR. COST				1,900
SIOH (6.5%)				0
TOTAL REQUEST				1,900
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story, reinforced concrete building. Functional spaces include radio equipment storage and work areas, administration space, supply room, training room, restrooms, and mechanical equipment room for the Communications/Electronics Maintenance Shop. Within the building is an additional area for organic unit storage, including an office for administration.

Support facilities include site preparation, all required utilities, asphalt paving, landscaping, sidewalks, and trash enclosure.

REQUIREMENT:

Marine Air Control Squadron-4 (MACS-4) activities are currently split between many small, substandard buildings, which severely compromises their operational efficiency. The existing Comm./Elec. Shop (Building 439) is too small and not appropriately configured for the variety of activities and functions (i.e., repair and maintenance, training, storage, administration) that must be accommodated.

The existing warehouse is substandard in construction.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
217-10	Comm/Elec. Maint. Shop	7,500	SF		
441-12	Organic Unit Storage	4,000	SF		
852-10	Parking Area	800	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Vacant site within the MACS-4 compound. Unit integrity is maintained without disrupting existing operations.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

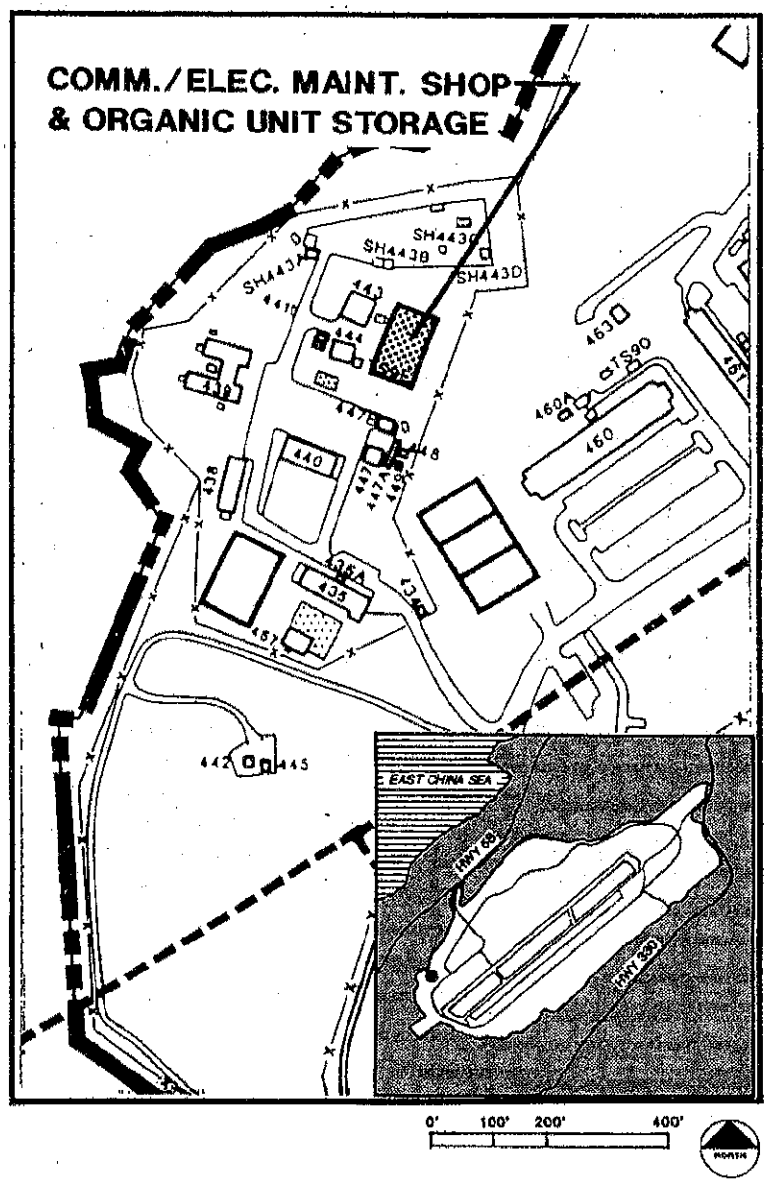
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) _____ Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Aviation Support Maintenance Shop MCAS Futenma	**PROJECT NO.** MC-XX6

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 95	1,850

CATEGORY CODE	PROGRAM ELEMENT
211-54	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	10,300	150.00	1,545
SUP FACILITIES		-	-	305
SUBTOTAL				1,850
CONTINGENCY (5%)				0
TOTAL CONTR. COST				1,850
SIOH (6.5%)				0
TOTAL REQUEST				1,850
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story reinforced concrete building. Functional spaces include an armament weapons support equipment work center, armament equipment holding shed, training/conference room, administrative offices (including technical representatives), storage, restrooms, and mechanical equipment room.

Support facilities include site preparation, all required utilities, lighting, asphalt paving, landscaping, sidewalks and trash enclosure.

REQUIREMENT:

The existing MALS-36 Aviation Armament Shop is in a substandard building which provides less than one-half the required space. This building will fulfill MCAS Futenma's total requirement for such facilities.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
211-54	Aviation Armament Shop	10,300	SF		
823-10	Parking Area	960	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Sited in a relatively remote location from other buildings and personnel.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

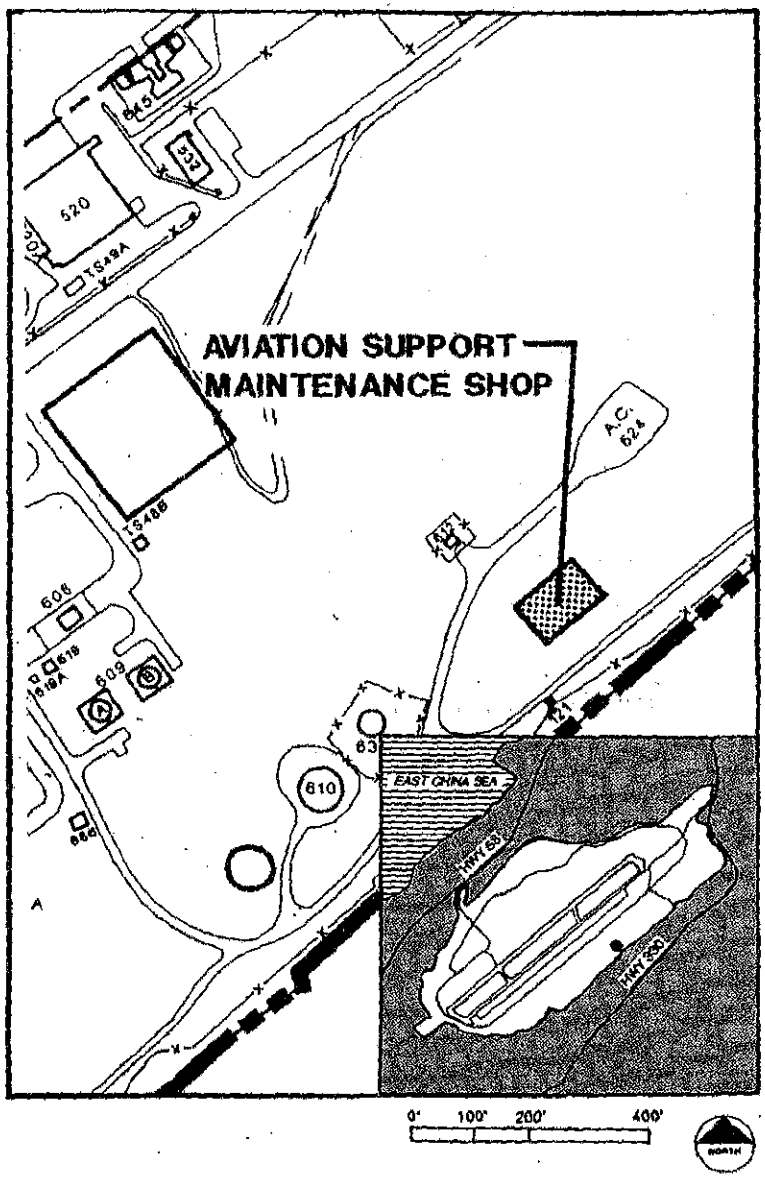
Site Approved: YES: X NO: Deferred: _____

Name: Note (1) _____ Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Potable Water Storage Tank MCAS Futenma	**PROJECT NO.** MC-XX7

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 95	527

CATEGORY CODE	PROGRAM ELEMENT
841-40	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	GA	500,000	0.91	455
SUP FACILITIES	LS	-	-	72
SUBTOTAL				527
CONTINGENCY (5%)				0
TOTAL CONTR. COST				527
SIOH (6.5%)				0
TOTAL REQUEST				527
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A ground level steel potable water storage tank. Support facilities include site preparation and all required utilities connections.

REQUIREMENT:

The gradual expansion of MCAS Futenma has resulted in the steady increase in the demand for potable water and an adequate storage capacity.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
		FLEP PRIORITY:	
INVESTMENT PROGRAM:		READINESS RATING:	
INVESTMENT CATEGORY:		MOBILIZATION INDICATOR:	
SAVINGS TO INVEST. RATIO:		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
841-40	Water Storage Tank	500,000	GA		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The location near to and at the same elevation as the existing water tank will allow the two tanks to be used in tandem, as a single storage system.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact	X		Note (1)
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

Site Approved: YES: NO: X Deferred: _____

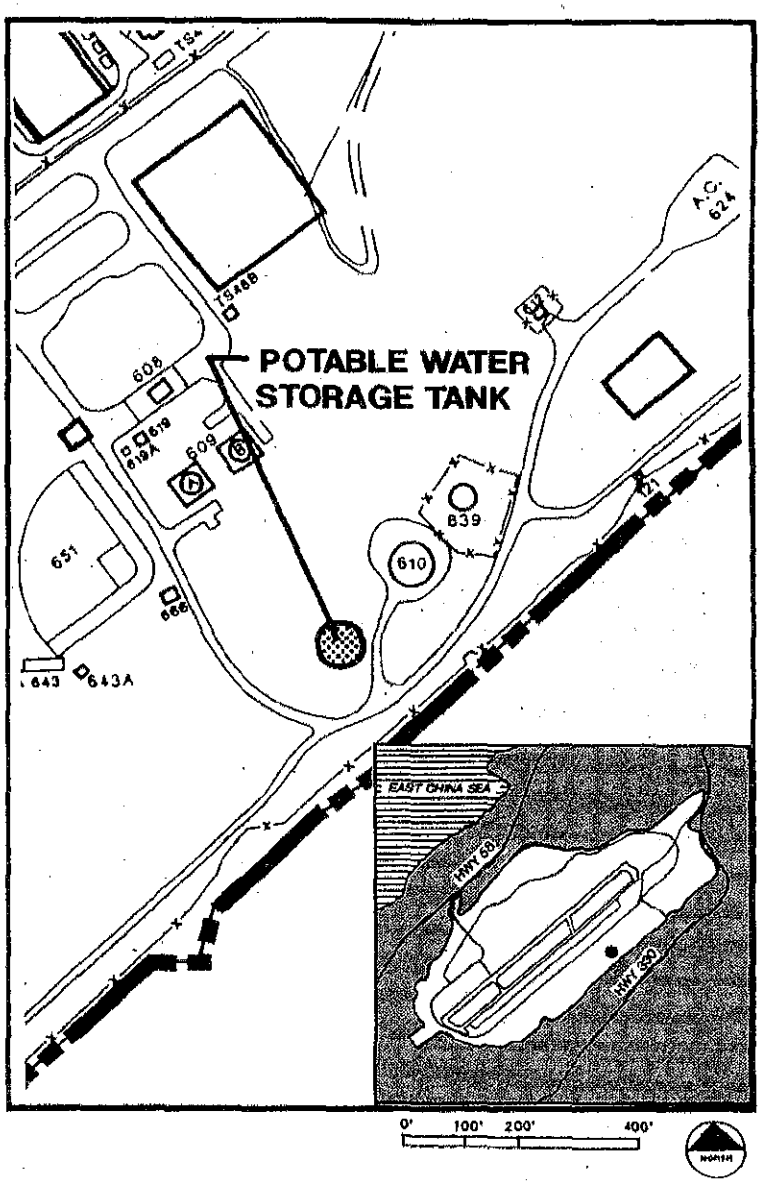
Name: Note (2) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Potential cultural resource site.

(2) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps

PROJECT TITLE	PROJECT NO.
Comm./Elec. Maintenance Shop MCAS Futenma	MC-XX8

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 95	1,150

CATEGORY CODE	PROGRAM ELEMENT
217-10	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	6,000	160.00	960
SUP FACILITIES	LS	-	-	190
SUBTOTAL				1,150
CONTINGENCY (5%)				0
TOTAL CONTR. COST				1,150
SIOH (6.5%)				0
TOTAL REQUEST				1,150
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story, reinforced concrete building. Functional spaces include radio equipment storage and work area, administration space, supply room, training room, restrooms, and mechanical equipment room.

Support facilities include site preparation, all required utilities, lighting, asphalt paving, landscaping, sidewalk and trash enclosure.

REQUIREMENT:

Communications and electronics maintenance for MASS-2 is currently crowded into insufficient space in the unit's headquarters building. The new facility resolves the communications/electronics maintenance space deficiency and also relieves the shortage of administration space. The existing space will be converted back battalion headquarters, its assigned use.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
217-10	Comm./Elec.Maint.Shop	6,000	SF		
852-10	Parking Area	560	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASES$JAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The site is vacant and within the MASS-2 compound, thus maintaining integrity and operational efficiency without disrupting existing operations.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

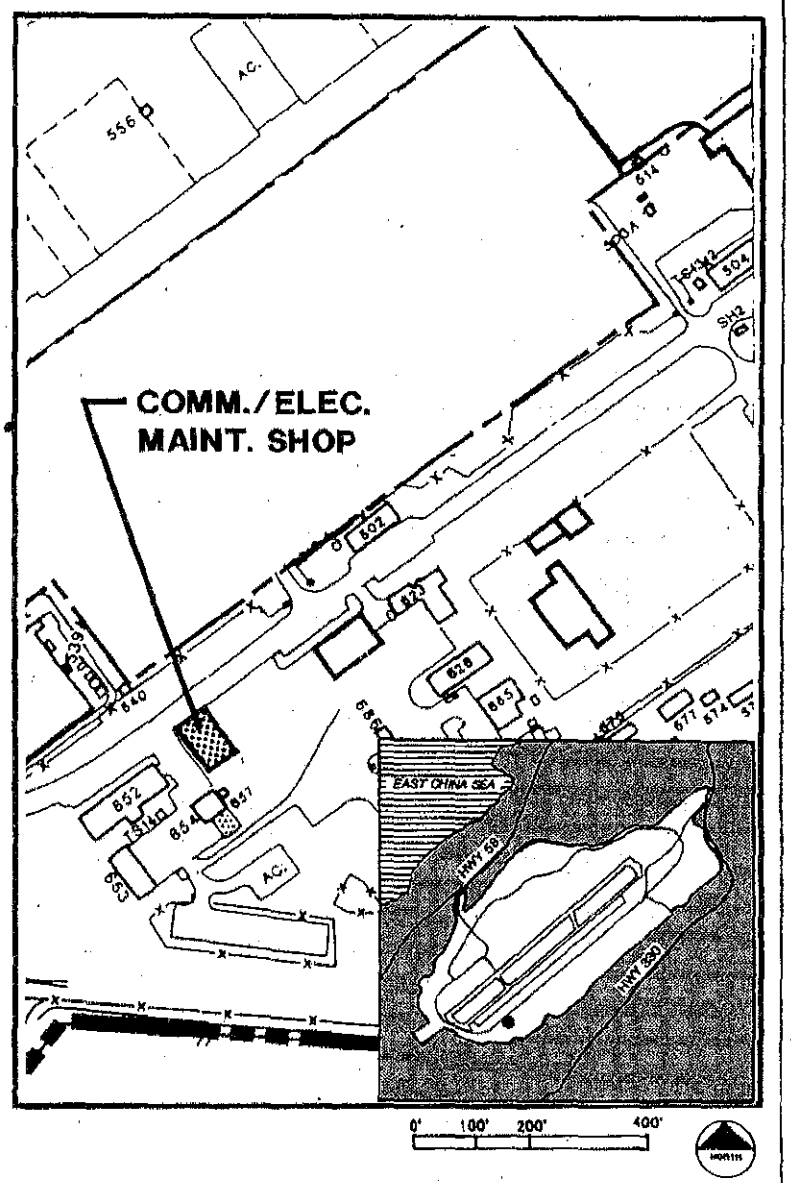
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) _____ Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Aircraft Maintenance Hangar MCAS Futenma			PROJECT NO. MC-XX9
DATE	EST. YEAR	CURRENT COST ($000)	
JAN 1992	JFY 96	5,839	
CATEGORY CODE	PROGRAM ELEMENT		
211-05			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	38,800	134.33	5,212
SUP FACILITIES				627
SUBTOTAL				5,839
CONTINGENCY (5%)				0
TOTAL CONTR. COST				5,839
SIOH (6.5%)				0
TOTAL REQUEST				5,839
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Type I aircraft maintenance hangar with combination of two-story 01 and 02 spaces and a high maintenance bay (OH) space, all of reinforced concrete. Included are central heating and air conditioning (01 and 02 spaces only), lighting (including emergency and special hangar lighting), foam/water fire protection system, insulation, communication cables, and energy monitoring control system (EMCS) provisions.

Special features include bird proof overhead netting, 10-ton capacity overhead monorail bridge cranes in hangar bay and machine shop, air compressor system, and power operated hangar doors.

Support facilities include concrete aircraft access apron, detached CH-46 fuel tank storage building, and detached hazardous/flammable storage shed. Also included are site preparation, all required utilities (including a 40-pair communications cable), asphalt paving, lighting, landscaping, sidewalks and trash enclosure.

REQUIREMENT:

MCAS Futenma is deficient in adequate weather-protected maintenance space for the helicopter squadrons assigned to MAG-36. This hangar will provide the required servicing and repair accommodations, crew and equipment space, and administrative space for one HMM (CH-46) Squadron. In addition, it will provide essential emergency shelter space for protecting aircraft during damaging weather conditions prevalent in Okinawa.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
211-05	Maintenance Hangar-OH	20,000	SF		
211-06	Maintenance Hangar-01	10,200	SF		
211-07	Maintenance Hangar-02	8,600	SF		
113-40	Aircraft Access Apron	1,300	SY		
852-10	Parking Area	2,000	SY		
852-35	Other Paved Area	300	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The site is vacant and located where parking apron space can be provided within reasonable proximity of the hangar.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

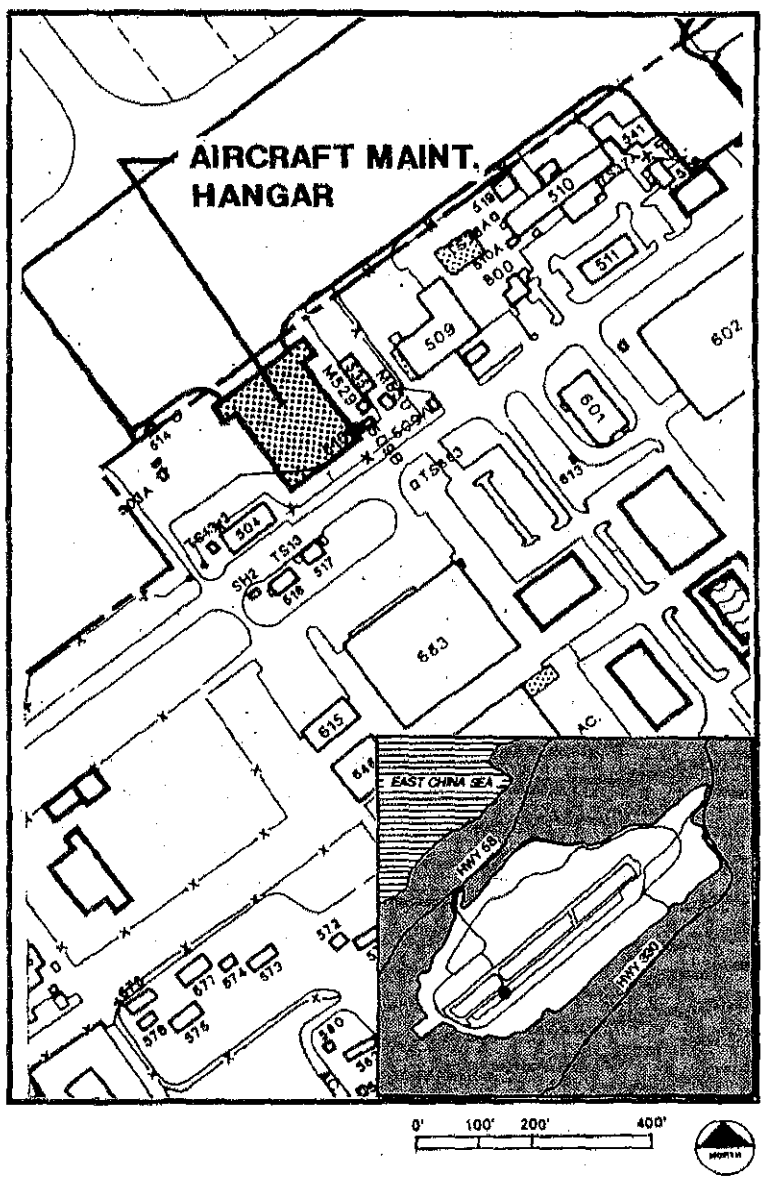
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Turner Road Extension MCAS Futenma			PROJECT NO. MC-X10
DATE JAN 1992	EST. YEAR JFY 96	CURRENT COST ($000) 970	
CATEGORY CODE 851-10	PROGRAM ELEMENT		

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	19,400	50.00	970
SUP FACILITIES	LS	-	-	0
SUBTOTAL				970
CONTINGENCY (5%)				0
TOTAL CONTR. COST				970
SIOH (6.5%)				0
TOTAL REQUEST				970
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Upgrade and extension of approximately 19,400 SY of gravel road, from the current terminus of Turner Road near the Officers Club, on to Geiger Road in the vicinity of Gate 3. The new pavement will be 24-foot wide and constructed of asphalt on a gravel base course.

Support facilities include site preparation, all required utilities, and landscaping.

REQUIREMENT:

Currently, there is only a single roadway connecting traffic from the MATCS-18, MVR and troop housing areas on the northwesterly (shore) side of the runway with operations on the opposite (inland) side of the runway. Vehicles traveling between the northwest and northeast ends of the installation must take a lengthy and roundabout route around the southerly end of the runway. Planned construction of a new 1st MAW Headquarters will further aggrevate this problem.

The new route will improve access, reduce driving time, and decrease emergency response time to the northerly area of the Air Station.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
851-10	Road	19,400	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The road follows the route of the existing security patrol road and links the facilities at the northwest and northeast ends of the Air Station.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

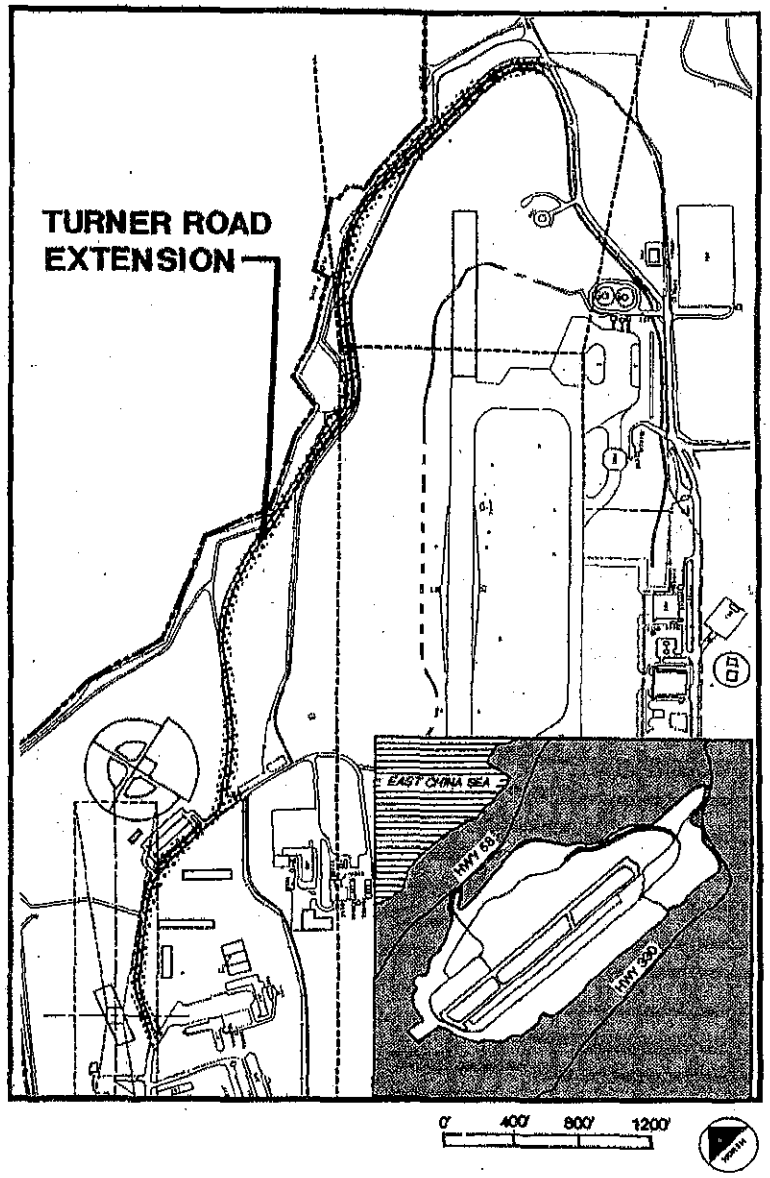
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Gate 4E Access Road Upgrade MCAS Futenma	**PROJECT NO.** MC-X11

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 96	130

CATEGORY CODE	PROGRAM ELEMENT
851-10	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SY	2,600	50.00	130
SUP FACILITIES				0
SUBTOTAL				130
CONTINGENCY (5%)				0
TOTAL CONTR. COST				130
SIOH (6.5%)				0
TOTAL REQUEST				130
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Paving and any necessary widening of Gate 4E Access Road. The new pavement will be 24 feet wide and constructed of asphalt on a gravel base course.

Support facilities include site preparation, all required utilities, and landscaping.

REQUIREMENT:

Gate 3 is the current access road to MCAS Futenma from the north and east side of Ginowan City. However, since this gate is within the runway clear zones, it should be closed to regular use. Gate 4E can function equally well as the point of access to MCAS Futenma from the surrounding portions of Ginowan City, and will also conform to airfield safety criteria.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
851-10	Road	2,600	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Existing, seldom used gate which can be upgraded at minimum cost, and without disruption to existing operations. Convenient to same portions of Ginowan City as Gate 3. Outside of airfield clear zone.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

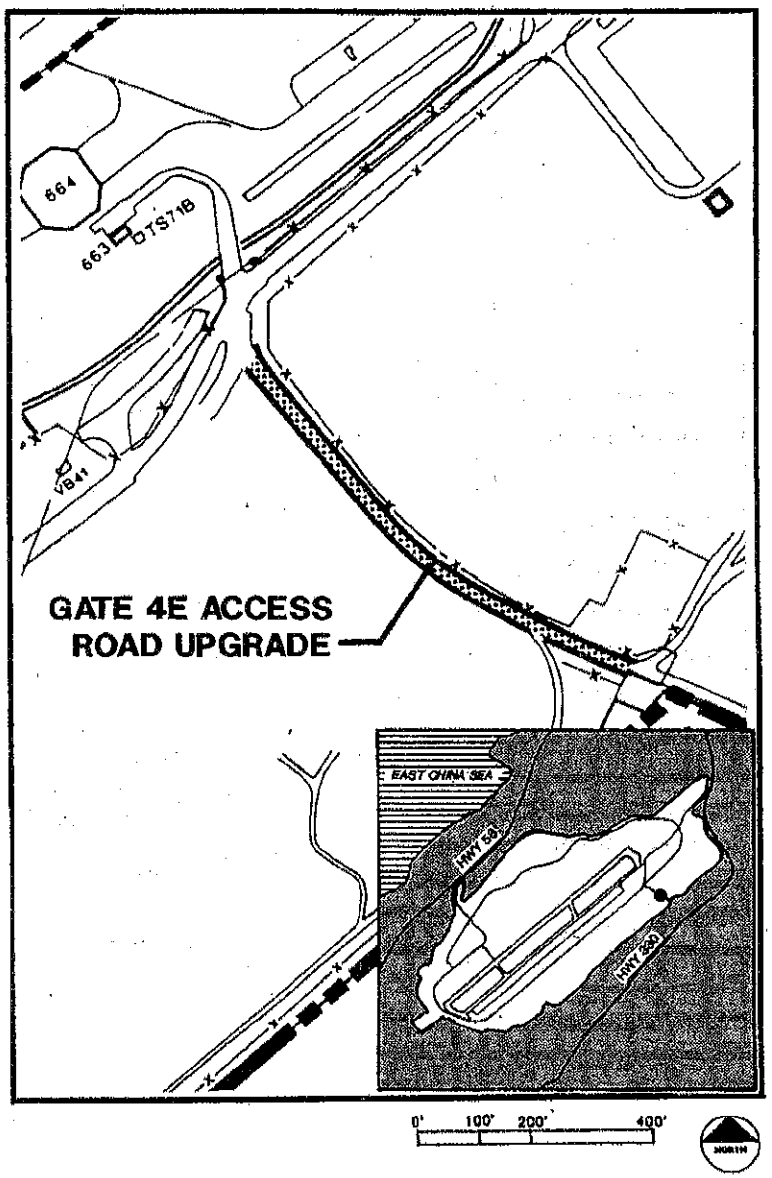
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Flight Line Security Fence & Patrol Rd. MCAS Futenma	**PROJECT NO.** MC-X12

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 96	1,255

CATEGORY CODE	PROGRAM ELEMENT
851-10	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	LF	28,000	40.00	1,120
SUP FACILITIES	SY	2,700	50	135
SUBTOTAL				1,255
CONTINGENCY (5%)				0
TOTAL CONTR. COST				1,255
SIOH (6.5%)				0
TOTAL REQUEST				1,255
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

Approximately 28,000 linear feet of security fencing to enclose the runway, taxiways and aircraft parking aprons, flight line operations and maintenance structures adjacent to the parking apron. Also approximately 2,000 linear feet of a 12-foot wide patrol road constructed of asphalt pavement on a gravel base course. (Roadway to be provided in areas where existing roads are not available to provide access to and along the security fence.)

Support facilities include site preparation and landscaping.

REQUIREMENT:

Safety and security of the flightline require that access to this area be prohibited to many who otherwise have legitimate reasons to be on the Air Station. The fencing and patrol road will meet the need for a barrier to such access, and will provide for its efficient patroling to maintain proper security.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
872-10	Security Fencing	28,000	LF		
851-10	Road	2,700	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
The security fence and patrol road are sited where required to adequately protect Air Station flight line operations.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	Note (2)

HQMC VALIDATION:

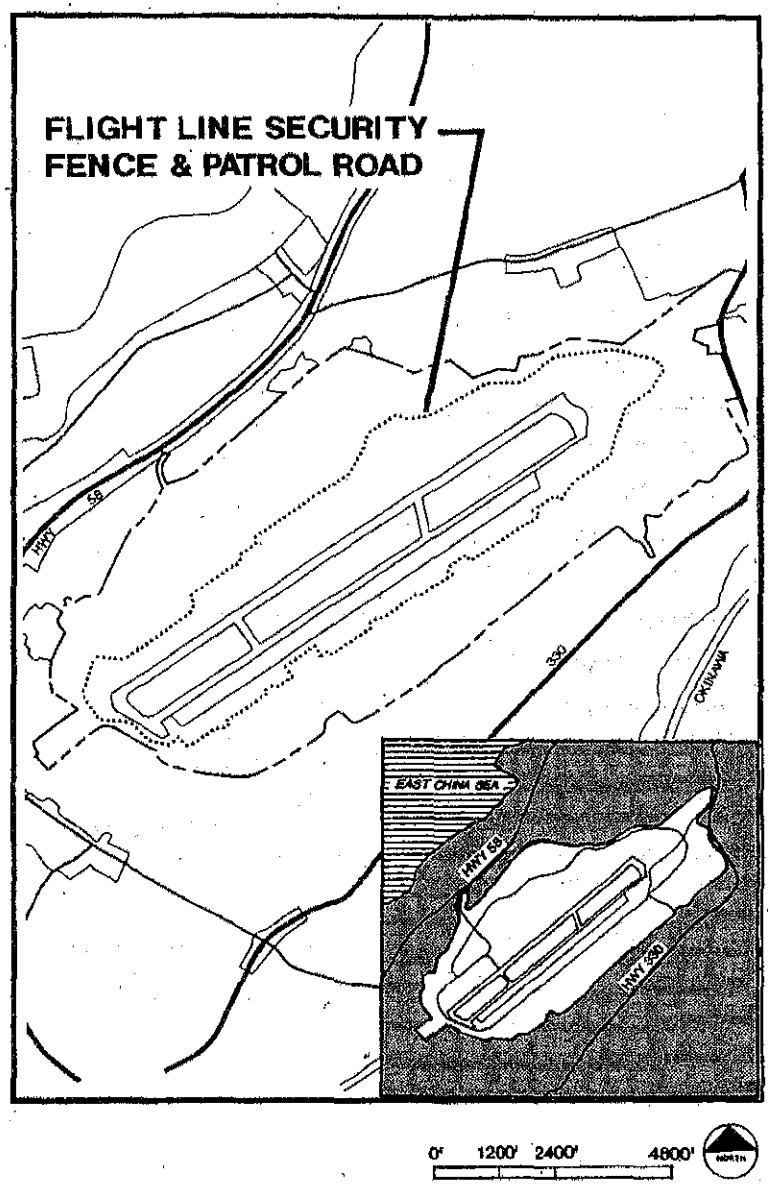
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) _____ Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.
(2) Relocation of tacit farm land required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Squadron HQ/Tact. Air Ops. Center MCAS Futenma	**PROJECT NO.** MC-X13

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 97	1,580

CATEGORY CODE	PROGRAM ELEMENT
610-72	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	7,100	180.00	1,278
SUP FACILITIES	LS	-	-	302
SUBTOTAL				1,580
CONTINGENCY (5%)				0
TOTAL CONTR. COST				1,580
SIOH (6.5%)				0
TOTAL REQUEST				1,580
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A two-story reinforced concrete building. Functional spaces include squadron administrative offices, conference room, tactical air operations center, equipment room, restrooms, and mechanical equipment room.

Support facilities include site preparation, all required utilities, asphalt paving, landscaping, sidewalks, trash enclosure, demolition of buildings 437, 437A, 437-B, and construction of a replacement hazardous/flammable storage facility.

REQUIREMENT:

Many small buildings which were not originally built for their current use house MACS-4 functions, and as a result many functions are split between two or more buildings. To increase operational efficiency and eliminate deficiencies, functions should where possible be consolidated into a single building.

The Tactical Air Operations Center is required to control air traffic approaching MCAS Futenma prior to control of landings and takeoffs by MATCS-18. At 1,392 square feet, the existing facility (Building 457) provides less than one-third of the required 4,425 square feet of space. The squadron presently has only 6,500 SF of its required 10,600 SF of headquarters space.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
610-72	Squadron Headquarters	4,100	SF		
171-35	Operational Trainer Facility	3,000	SF		
852-10	Parking Area	1,040	SY		
143-78	Ops. Haz./Flam. Storage	200	SF		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:

Vacant site (after the demolition of three small, substandard haz./flam. storage buildings) within and near the entrance to the MACS-4 compound; permits construction of new facility without disrupting existing operations.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

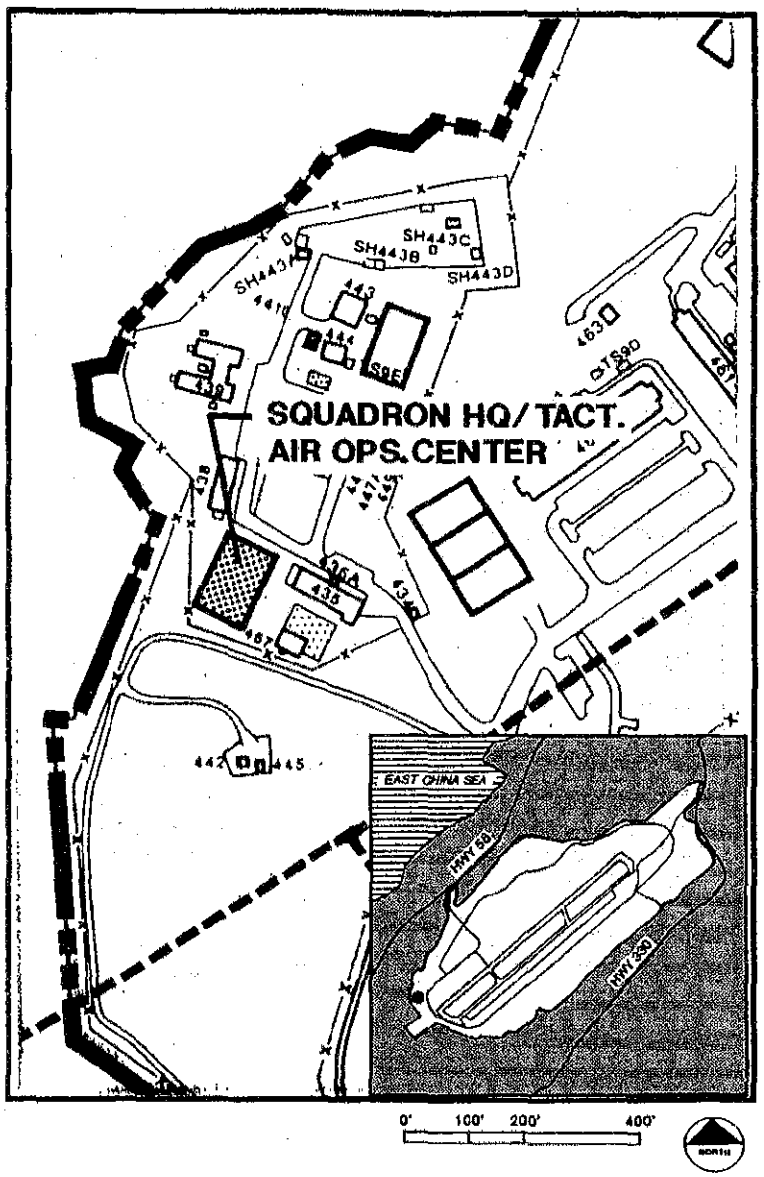
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE MACG-18 Admin./H&HS-18 Comm./Elec. MCAS Futenma	**PROJECT NO.** MC-X14

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 97	1,450

CATEGORY CODE	PROGRAM ELEMENT
610-71	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	7,500	160.00	1,200
SUP FACILITIES	LS	-	-	250
SUBTOTAL				1,450
CONTINGENCY (5%)				0
TOTAL CONTR. COST				1,450
SIOH (6.5%)				0
TOTAL REQUEST				1,450
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A two-story reinforced concrete building. Functional spaces include administrative offices, a conference room, radio equipment storage and work area, supply room, training room, restrooms, and mechanical equipment room.

Support facilities include site preparation, all required utilities, asphalt paving, landscaping, sidewalks, and trash enclosure.

REQUIREMENT:

Most administrative space for MACG-18 Group Headquarters and H&HS-18 is housed in a new two-story building. However, remaining functions are scattered in several small and substandard facilities. The new building will address the remaining administrative space deficiency. It will also provide adequate space for H&HS-18's Communication/Electronics Maintenance Shop, which is presently housed in a substandard building inappropriately configured for its functions.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
610-71	Group Headquarters	5,100	SF		
217-10	Comm./Elec.Maint.Shop	2,000	SF		
217-17	Electronics Spares Storage	400	SF		
852-10	Parking Area	1,120	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Near the existing headquarters building, thus maintaining unit integrity, and operational efficiency. Existing facilities on the site are programmed for replacement and will become surplus.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

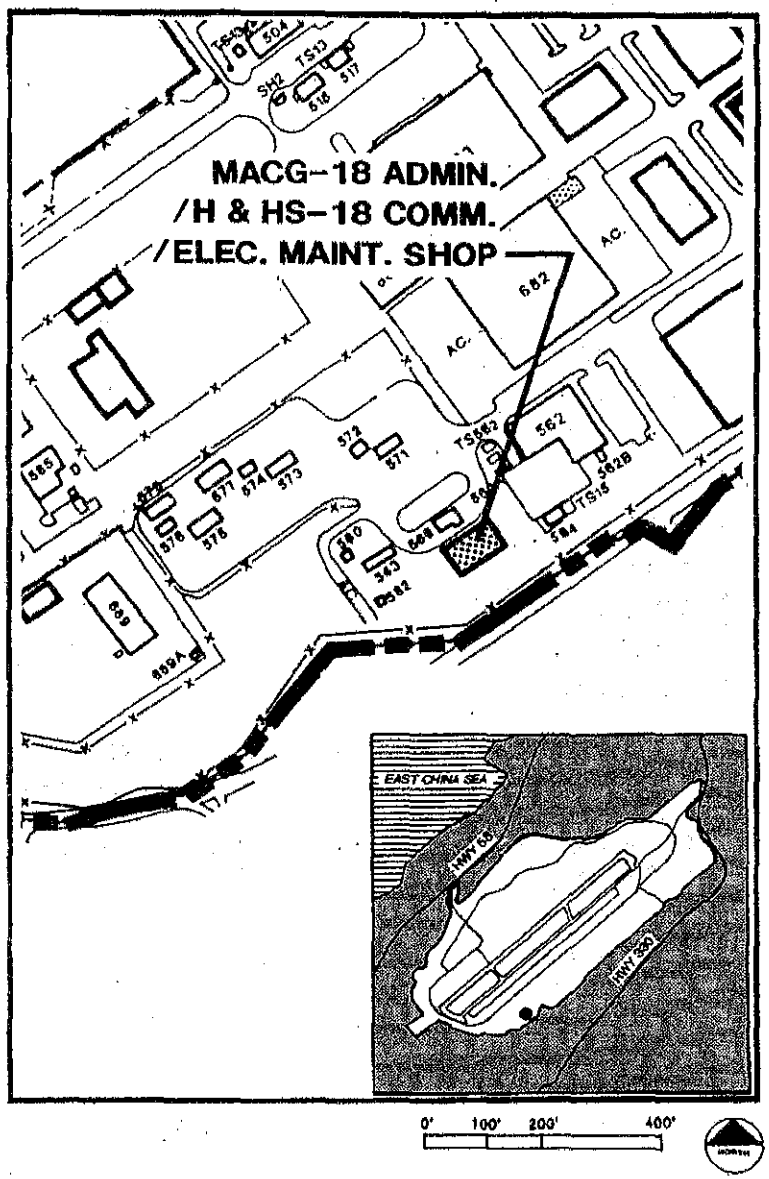
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Hazardous/Flammable Storehouse MCAS Futenma	**PROJECT NO.** MC-X15

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 97	2,360

CATEGORY CODE	PROGRAM ELEMENT
441-30	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	12,300	160.00	1,968
SUP FACILITIES	LS			392
SUBTOTAL				2,360
CONTINGENCY (5%)				0
TOTAL CONTR. COST				2,360
SIOH (6.5%)				0
TOTAL REQUEST				2,360
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story, high bay reinforced concrete building. Equipped with foam/water fire protection system and temperature and humidity control. Functional spaces include storage rooms, administrative offices, restrooms, loading dock and mechanical equipment room.

Support facilities include site preparation, all required utilities, lighting, asphalt paving, truck loading ramp, landscaping, and trash enclosure.

REQUIREMENT:

The existing storehouse at MCAS Futenma is too small to meet requirements. As a result, supplies of paints, petroleum, oil products, and other hazardous/flammable materials must be delivered on-call to MCAS Futenma from other bases on Okinawa. This process is inefficient and leads to untimely deliveries which, in turn, adversely affect the efficiency and responsiveness of operations and maintenance functions.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
441-30	Haz./Flam. Storehouse	12,300	SF		
852-10	Parking Area	240	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:

Central location on operations/maintenance side of runway; meets minimum safety distances; away from high population areas and heavily travelled roads; and existing facility on site is substandard and programmed for replacement.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

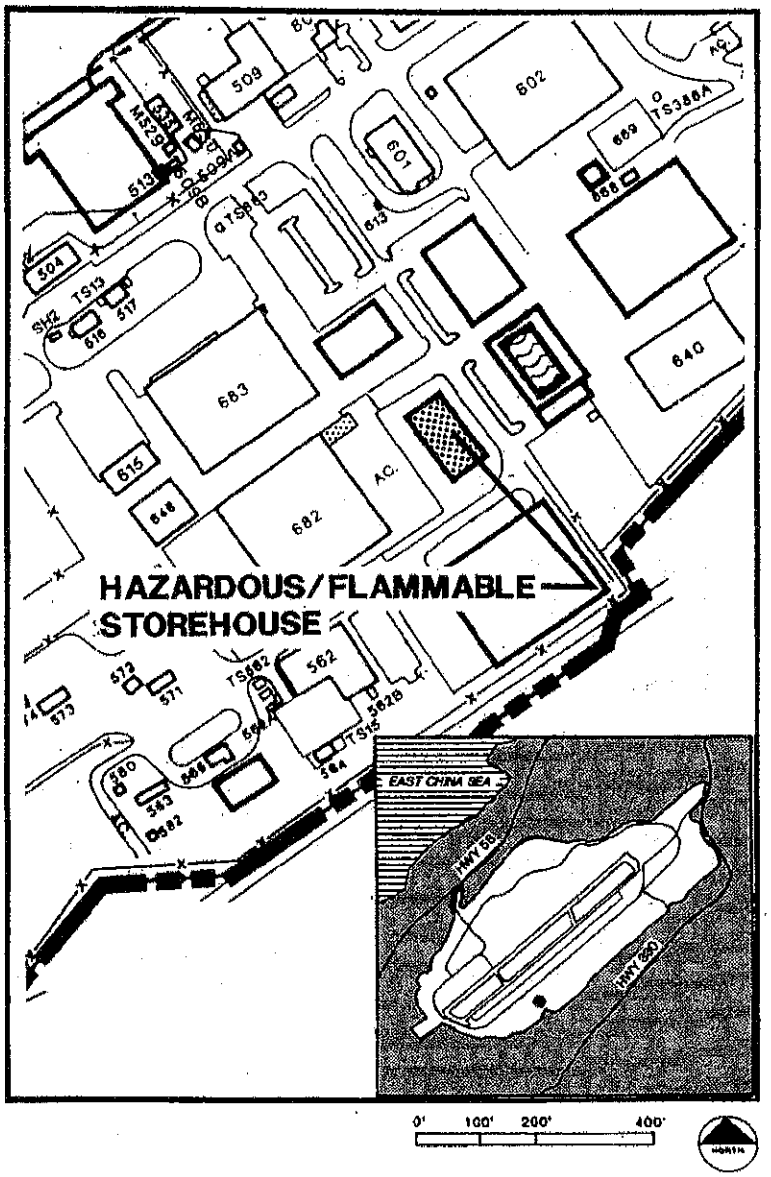
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps

PROJECT TITLE	PROJECT NO.
Ops. Facil.,Comm./Elec. Shop. & Det. HQ MCAS Futenma	MC-X16

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 97	4,056

CATEGORY CODE	PROGRAM ELEMENT
610-73	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	14,100	160.00	2,256
SUP FACILITIES	LS	-	-	1,800
SUBTOTAL				4,056
CONTINGENCY (5%)				0
TOTAL CONTR. COST				4,056
SIOH (6.5%)				0
TOTAL REQUEST				4,056
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story reinforced concrete building. Functional spaces include administrative offices, conference room, storage room, radio/electronic equipment, storage and work area, supply room, training room, flight operations room, restrooms, and mechanical equipment room.

Support facilities include site preparation, all required utilities, lighting, asphalt paving, landscaping, sidewalks, and trash enclosure.

REQUIREMENT:

The existing MATCS-18 Building 261 is too small to adequately serve all of its present functions. The two on-site detachments in the squadron each have no designated administrative space and must presently borrow space from other uses or work out of their vans. The existing operations center and comm./elec. maintenance shop are significantly smaller than required.

This project will meet these deficiencies and provide the facilities required for all squadron functions to fulfill their mission.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
610-73	Detachment HQ	7,600	SF		
217-10	Comm./Elec. Maint. Shop	3,500	SF		
141-41	MATCU Ops. Facility	3,000	SF		
852-10	Parking Area	1,720	SY		
852-35	Other Paved Area	26,000	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:

Vacant site that can be utilized with a minimum amount of fill and regrading. Its proximity to Building 261 will maintain unit integrity and operational efficiency.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety	X		Note (1)
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

Site Approved: YES: NO: X Deferred: _____

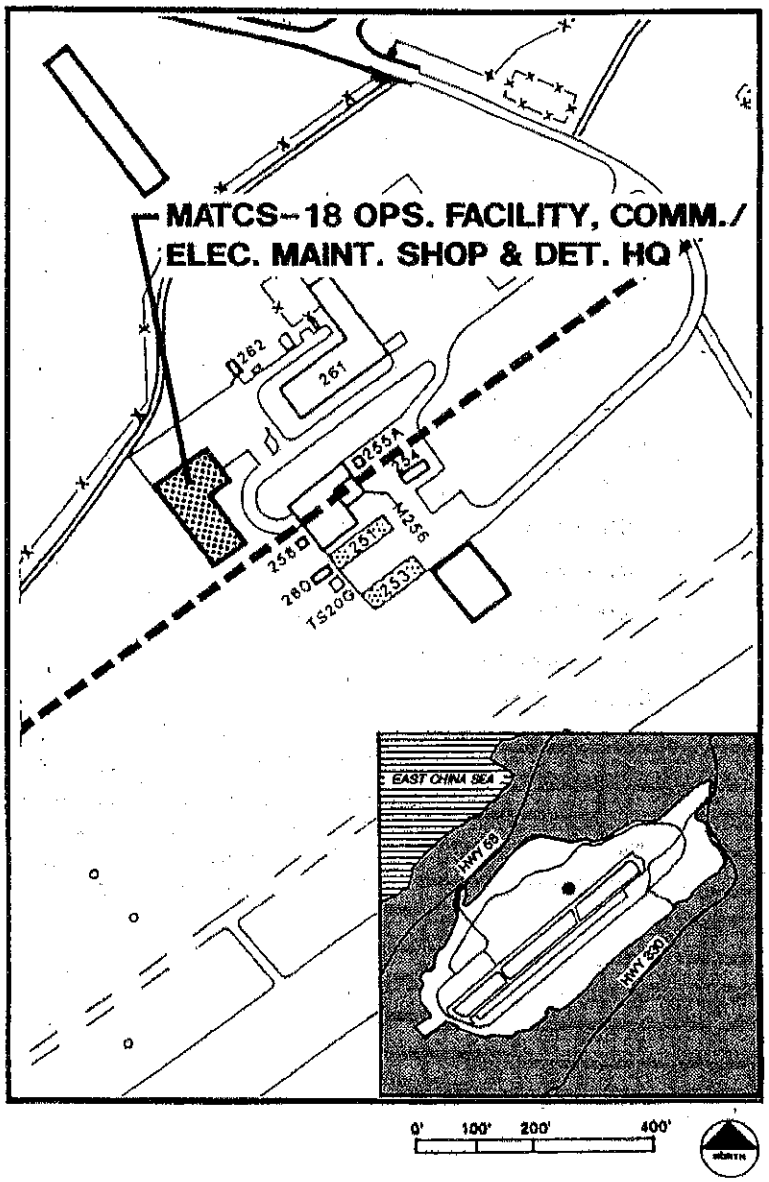
Name: Note (2) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Airfield safety review required.

(2) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION			COMPONENT
Camp Butler, Okinawa, Japan			Marine Corps
PROJECT TITLE Aircraft Full Motion Simulators Building MCAS Futenma			PROJECT NO. MC-X17
DATE	EST. YEAR	CURRENT COST ($000)	
JAN 1992	JFY 97	4,750	
CATEGORY CODE	PROGRAM ELEMENT		
171-35			

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	18,000	220.00	3,960
SUP FACILITIES	LS			790
SUBTOTAL				4,750
CONTINGENCY (5%)				0
TOTAL CONTR. COST				4,750
SIOH (6.5%)				0
TOTAL REQUEST				4,750
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story reinforced concrete building to house one HMH aircraft full motion simulator, one HMM aircraft full motion simulator, one HMLA aircraft full motion simulator, and one VMGR-152 aircraft full motion simulator. Also included are restrooms and a mechanical equipment room.

Support facilities include site preparation, all required utilities, lighting, asphalt paving, landscaping, sidewalks, and trash enclosure.

REQUIREMENT:

There are no flight simulators currently at the Air Station. Flight simulators are required to upgrade personnel capabilities, maintain individual and unit proficiency and insure operational readiness.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
171-35	Ops Trainer Facility	18,000	SF		
852-10	Parking Area	920	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY:		DATE:	
COMMARCORBASESJAPAN:		DATE:	
CMC:		DATE:	

SITING RATIONALE:
Central location for the units being served; will be vacant upon relocation of MWSS-172 to Camp Foster.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

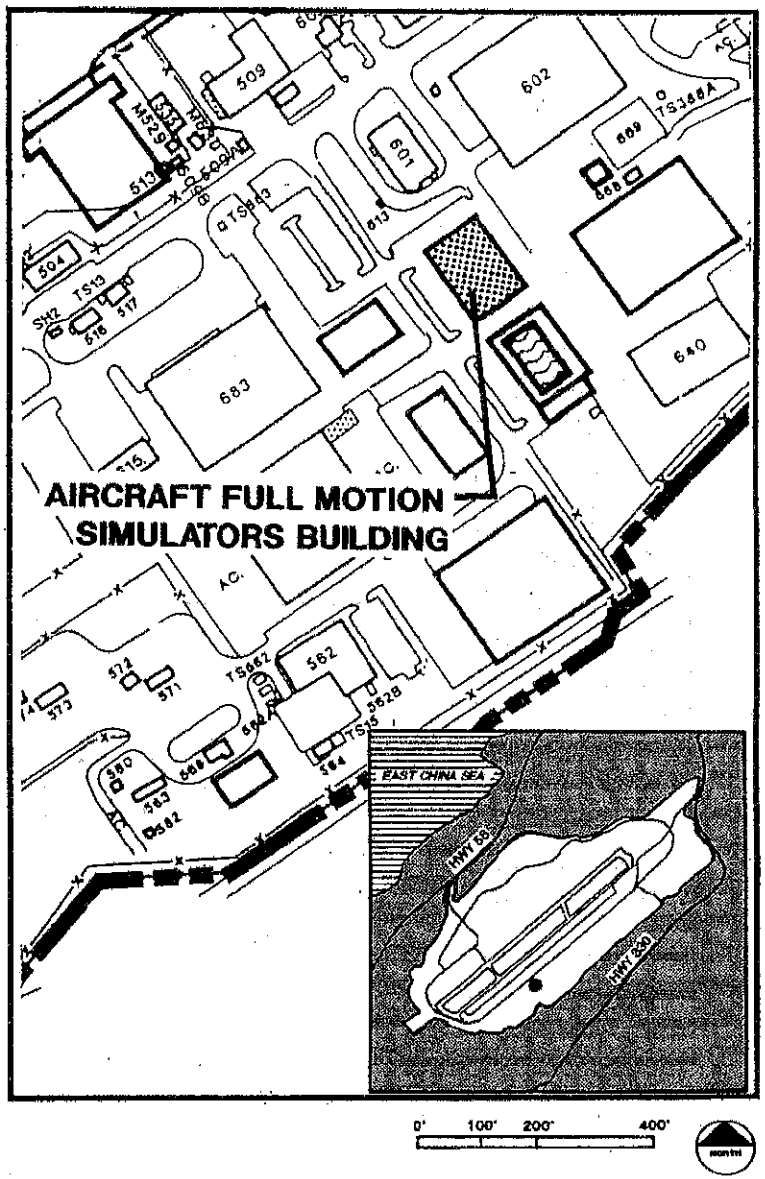
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Outdoor Recreation Complex MCAS Futenma	**PROJECT NO.** MC-X18

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 98	722

CATEGORY CODE	PROGRAM ELEMENT
740-78	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	2,700	45.19	122
SUP FACILITIES	LS	-	-	600
SUBTOTAL				722
CONTINGENCY (5%)				0
TOTAL CONTR. COST				722
SIOH (6.5%)				0
TOTAL REQUEST				722
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story reinforced concrete recreation pavilion, three softball fields and one baseball field, including reinforced concrete dugouts.

Support facilities include site preparation, all required utilities, lighting, spectator stands, backstops, fencing, asphalt paving, landscaping, and trash enclosure.

REQUIREMENT:

MCAS Futenma has only four of eight required softball fields, and lacks a required baseball field and recreation pavilion. Facilities for off-hours relaxation and sports activities are important to maintaining troop morale and to retention of qualified personnel in the Marine Corps.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
740-78	Recreation Pavilion	2,700	SF		
750-20	Playing Field	4	EA		
852-10	Parking Area	4,000	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY:		DATE:	
COMMARCORBASESJAPAN:		DATE:	
CMC:		DATE:	

SITING RATIONALE:
Proximity to troop housing and the only vacant area large enough to accommodate such a complex.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact	X		Note (1)
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

Site Approved: YES: NO: X Deferred: _____

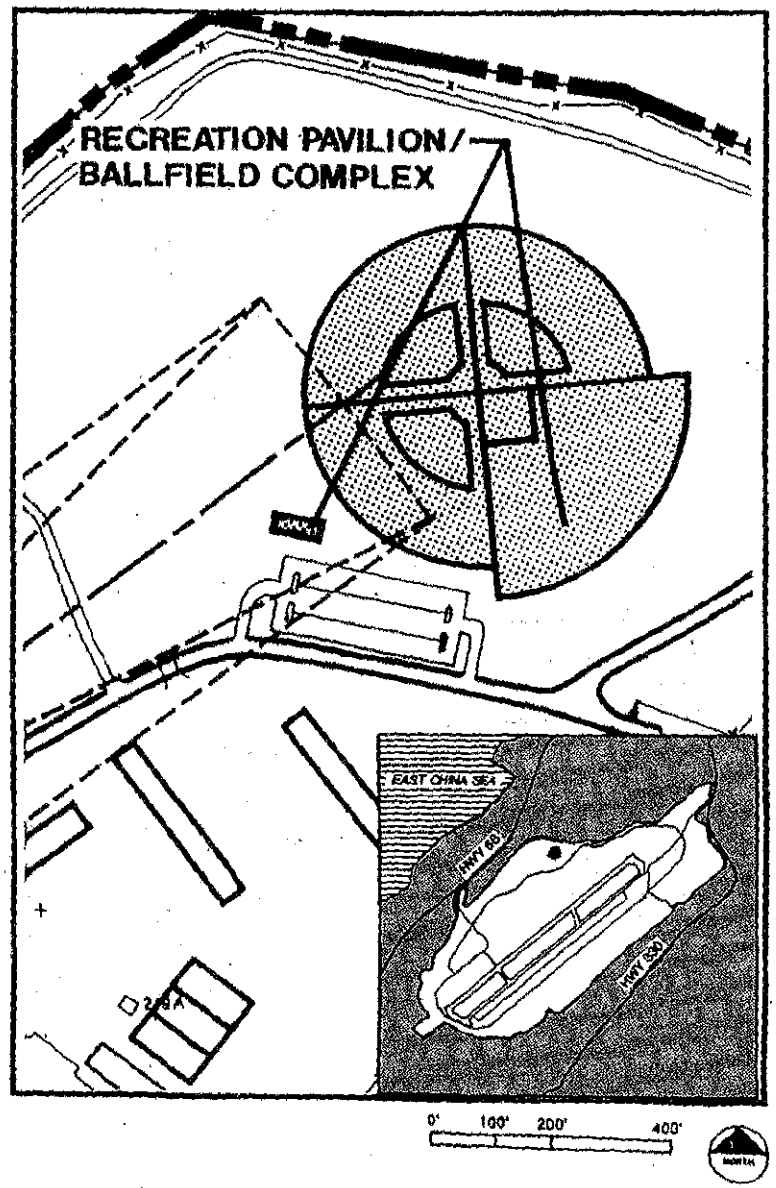
Name: Note (2) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Potential cultural resource site.

(2) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Consolidated Unit Storage Warehouse MCAS Futenma	**PROJECT NO.** MC-X19

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 98	6,700

CATEGORY CODE	PROGRAM ELEMENT
441-12	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	50,000	110.00	5,500
SUP FACILITIES	LS	-	-	1,200
SUBTOTAL				6,700
CONTINGENCY (5%)				0
TOTAL CONTR. COST				6,700
SIOH (6.5%)				0
TOTAL REQUEST				6,700
EQUIP FR OTH APPR.				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A one-story, high-bay reinforced concrete building. Functional spaces include administrative office, loading dock and receiving area, restrooms, and mechanical equipment room.

Supporting facilities include site preparation, all required utilities, asphalt paving, truck loading ramp, fencing, lighting, landscaping and trash enclosure. Also included is the demolition of buildings, 550, 552, 553, 554, 557 and M558, and outdoor play court 553-A.

REQUIREMENT:

The existing deficiency in unit storage space is over 100,000 SF at MCAS Futenma. About 60 percent of this total is scattered in substandard and inadequate facilities, while the remaining deficiency is not built. Adequate storage space will increase usable life of stored supplies and equipment and reduce maintenance costs.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
441-12	Organic Unit Storage	50,000	SF		
852-35	Other Paved Area	2,800	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:

Centrally located for units to be served, and in the same general area as two recently completed warehouse structures (Buildings 682 and 683). Location also helps to define the Air Station perimeter and prevent future encroachment.

EFD REVIEW/ANALYSIS:

	REQUIRES FURTHER ACTION? YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact	X		Note (1)
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

Site Approved: YES: NO: X Deferred: _____

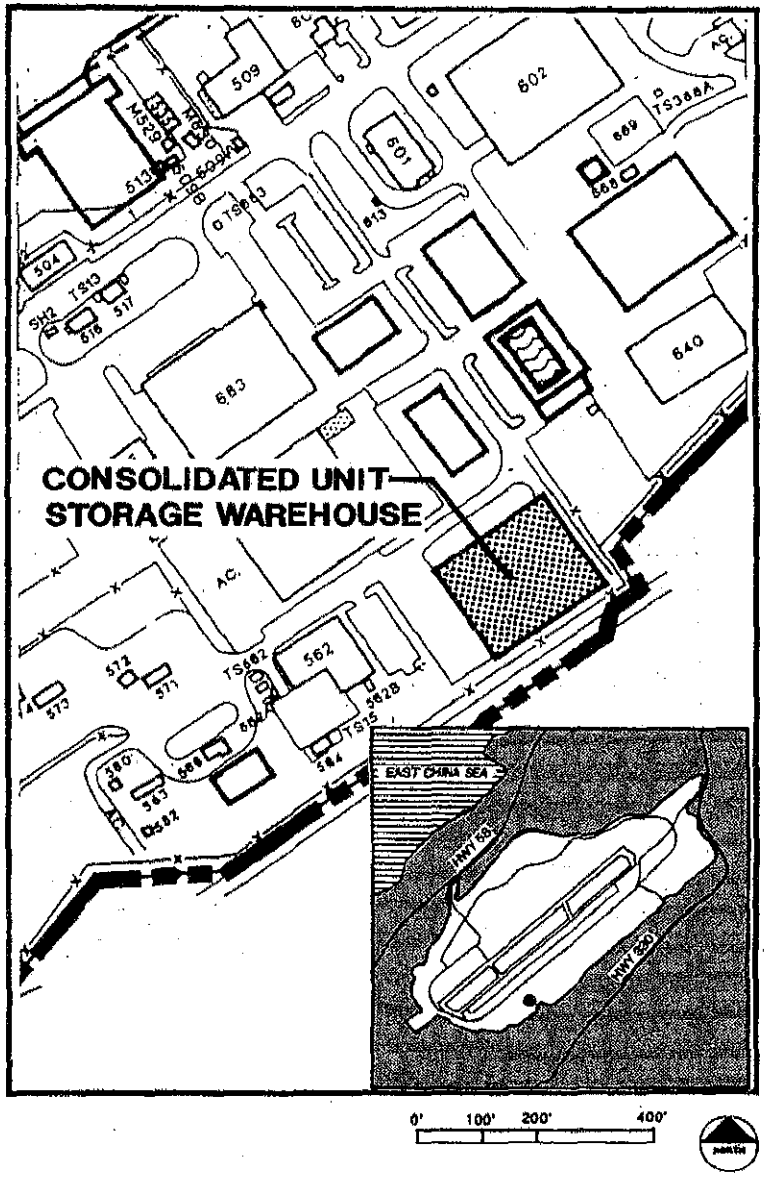
Name: Note (2) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Potential cultural resource site.

(2) Site approval request required.



LOCATION AND SITE PLAN

PROJECT DATA SHEET

INSTALLATION & LOCATION	COMPONENT
Camp Butler, Okinawa, Japan	Marine Corps
PROJECT TITLE Outdoor Recreation Complex MCAS Futenma	**PROJECT NO.** MC-X20

DATE	EST. YEAR	CURRENT COST ($000)
JAN 1992	JFY 98	3,140

CATEGORY CODE	PROGRAM ELEMENT
750-30	

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITY	SF	7,800	120.00	936
SUP FACILITIES		-	-	2,204
SUBTOTAL				3,140
CONTINGENCY (5%)				0
TOTAL CONTR. COST				3,140
SIOH (6.5%)				0
TOTAL REQUEST				3,140
EQUIP FR OTH APPR				0

DESCRIPTION OF PROPOSED CONSTRUCTION:

A 50 meter reinforced concrete swimming pool, bathhouse, one tennis court, two basketball courts, and one volleyball court.

Support facilities include site preparation, all required utilities, lighting, fencing, asphalt pavement, landscaping and trash enclosure. Also included is the relocation of three existing softball fields.

REQUIREMENT:

Only one of two required outdoor recreation swimming pools are available at the Air Station. Outdoor playing courts are also in short supply. The existing facilites are often overcrowded, forcing many individuals to travel to other military installations to meet their physical fitness and athletic needs. These problems have an adverse effect on morale and hamper the Marine Corps' ability to retain quality personnel.

PROGRAMMING DATA:

ACTIVITY UIC:	M67400	SPEC. AREA:	AS
ALTERNATE HOST:		ACTIVITY PRIORITY:	
SUP. UNIT:		CMC PRIORITY:	
INVESTMENT PROGRAM:		FLEP PRIORITY:	
INVESTMENT CATEGORY:		READINESS RATING:	
SAVINGS TO INVEST. RATIO:		MOBILIZATION INDICATOR:	
		MAJOR/ SUBCLAIMANT:	

PROJECT DETAIL DATA:

CCN	DESCRIPTION	SCOPE	U/M	CC/ MC	VAL IND
750-30	Swimming Pool	50	M		
740-89	Bathhouse	7,800	SF		
750-10	Playing Courts	4	EA		
750-20	Playing Fields	3	EA		
852-10	Parking Area	1,000	SY		

REQUIREMENT CERTIFICATION:

ACTIVITY: _____ DATE: _____

COMMARCORBASESJAPAN: _____ DATE: _____

CMC: _____ DATE: _____

SITING RATIONALE:
Vacant area adjacent to the new Physical Fitness Center programmed for FY 1992; also adjacent to SNCO and bachelor officers quarters area and within walking distance of BEQs.

EFD REVIEW/ANALYSIS:

REQUIRES FURTHER ACTION?	YES	NO	COMMENTS
Explosives Safety		X	
Airfield Safety		X	
Electromagnetic Radiation		X	
AICUZ Violation		X	
Change to Approved MP/CIP		X	
Coastal Zone Management		X	
Natural Resources Plan		X	
Dredging/Filling Permits		X	
Wetland/Floodplain		X	
Hazardous Wastes on Site		X	
Cultural Resources Impact		X	
Utilities Support		X	
Road, Parking		X	
Environmental Documentation		X	
Prelim. Hazards Analysis		X	
Others (List)		X	

HQMC VALIDATION:

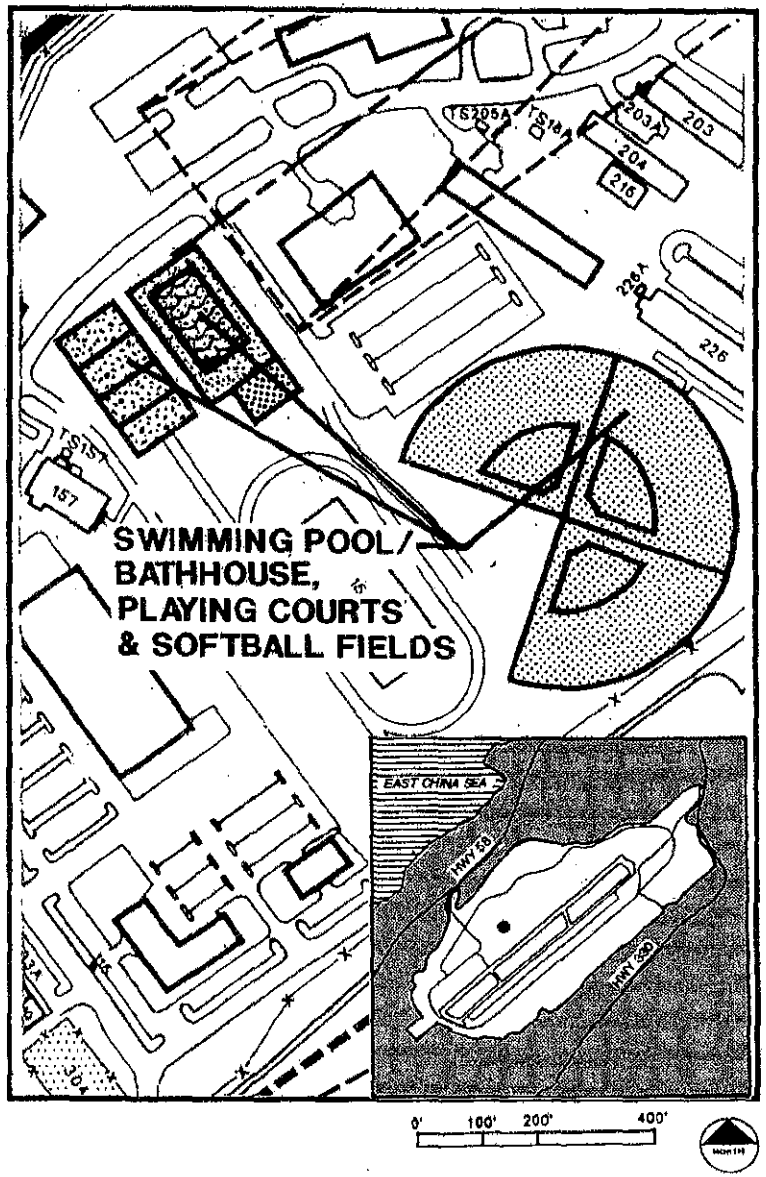
Site Approved: YES: NO: X Deferred: _____

Name: Note (1) Date: _____

Project Supported by SFPS: YES: X NO:

NOTES:

(1) Site approval request required.



LOCATION AND SITE PLAN

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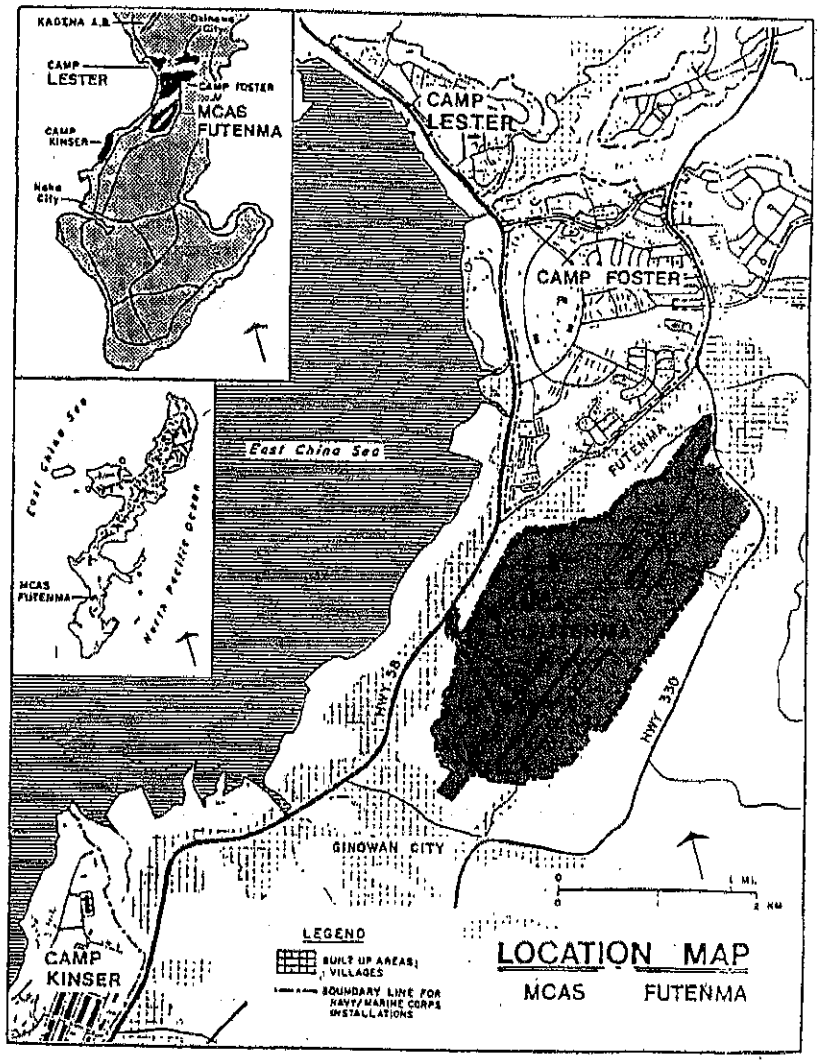
STUDY AREA

MCAS Futenma



OUT-BRIEF AGENDA

Project Overview

- Master Plan Objectives
- Team Organization

Facility Development Plans

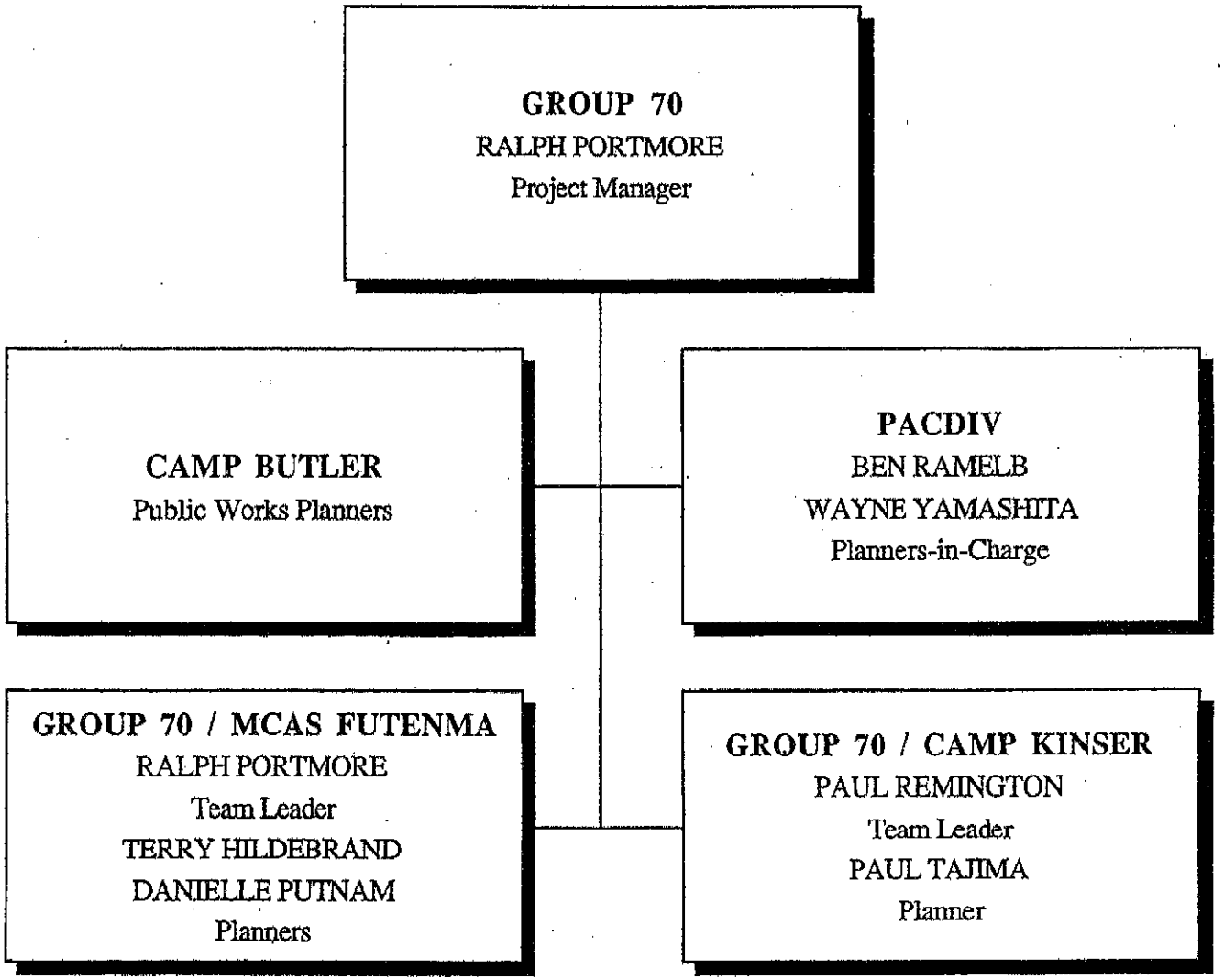
- Existing Land Use
- Planning Issues
- Land Use Constraints
- Proposed Projects

POA&M

- Draft Master Plan
- Final Master Plan

TEAM ORGANIZATION

MCAS Futenma/Camp Kinser Master Plans



MASTER PLAN OBJECTIVES

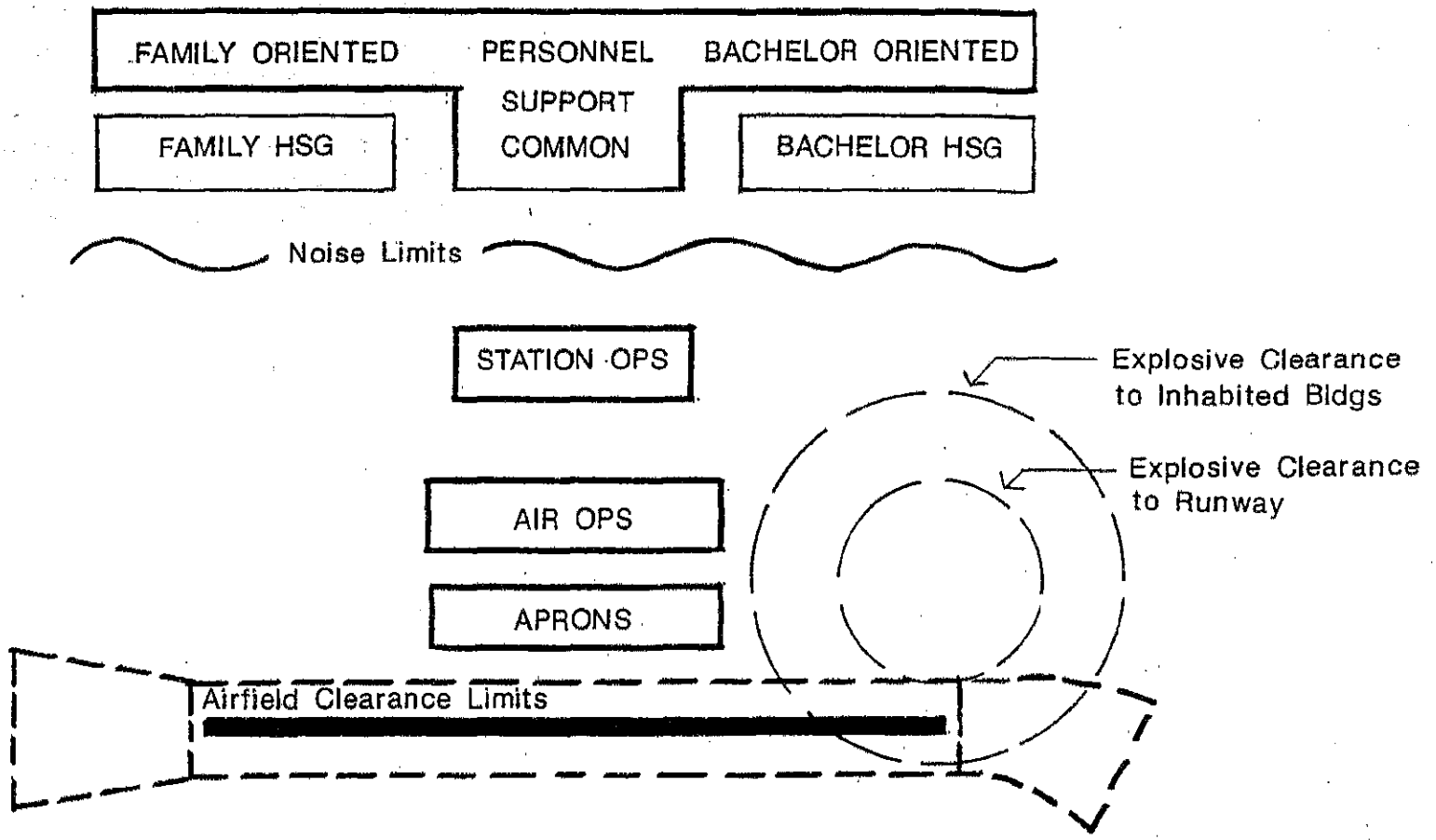
- Establish a 3-8 year comprehensive plan for the orderly development of all needed new facilities.

- Specify changes to facility assets which will:
  - fulfill mission requirements,
  - enhance the quality of life, and
  - improve the activity's visual image.

- Develop a 5-year (FY 93-97) Capital Improvements Plan with detailed sitings and an order of priority for all projects.

This figure shows diagrammatically the "ideal" relationships between land uses on an air station. Typically, operational activities are located on the edge of the runway, just outside the clear zone, in order to minimize the distance aircraft must taxi after landing. The distance of other activities from the runway will generally increase as proximity to the aircraft matters less, and as sensitivity to noise matters more.

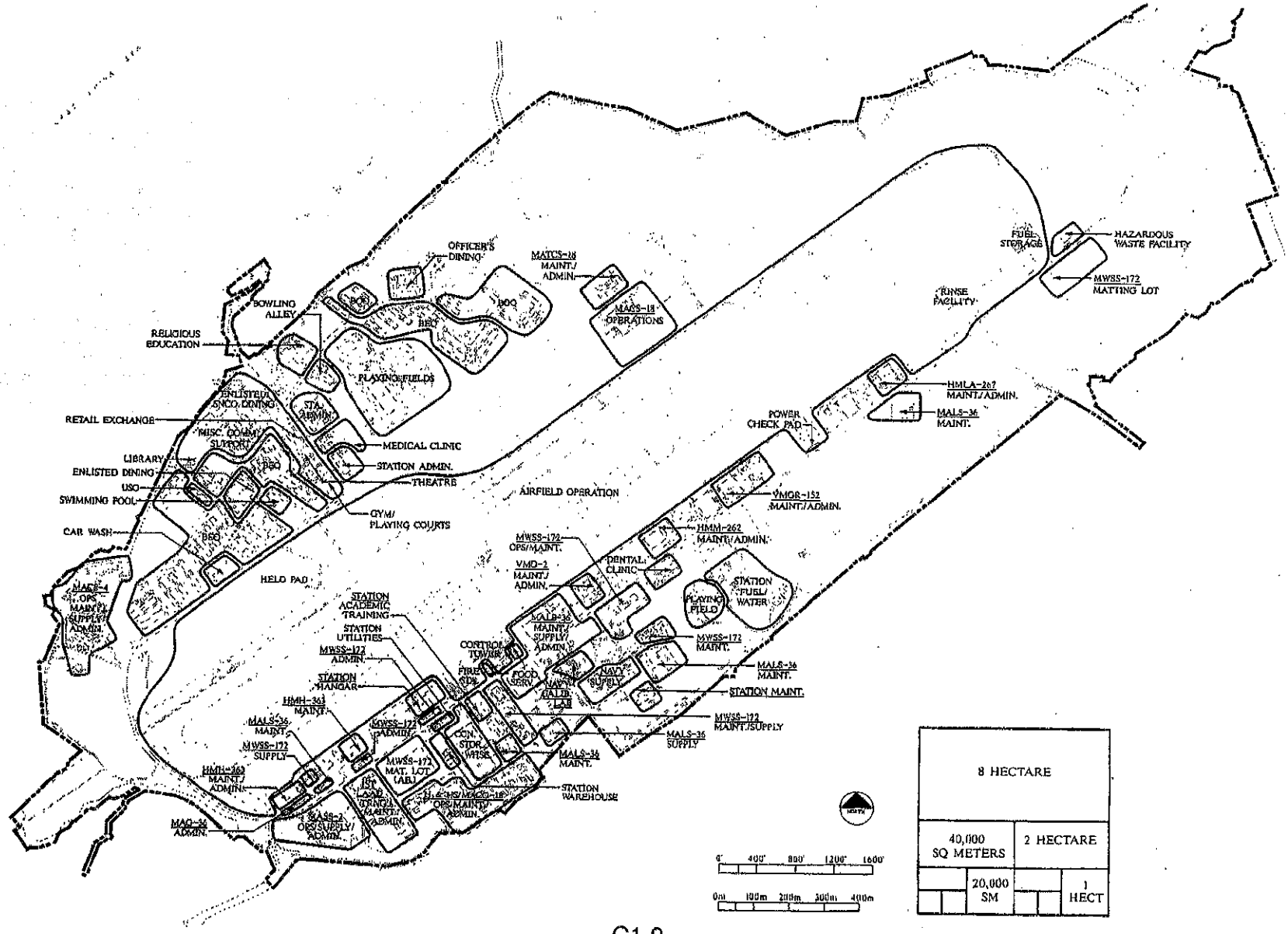
AIR STATION IDEALIZED FUNCTIONAL RELATIONSHIPS



For MCAS Futenma, functional relationships follow the basic principles of the "ideal" pattern, with the main difference being that the runway runs down the center of the Air Station. Most air operations facilities are located along its southeast side, with aircraft maintenance operations adjacent to the parking aprons, and supply and support activities to the rear.

Station operations and community support facilities are centrally located on the opposite (northwest) side of the runway, with officer and enlisted quarters on either side. Beyond the quarters areas are the compounds for two air control squadrons.

EXISTING LAND USE
Functional Relationships



The analysis of facility requirements and assets conducted in October-November 1990 indicated major shortfalls in nine different areas. These range from aircraft operations and maintenance space to unit administrative and storage space. Deficiencies were also registered for many types of community support facilities.

Two facility surpluses -- auto vehicle maintenance space and BEQs -- were registered. These can be attributed to the recent decision to relocate MWSS-172 to Camp Foster.

PLANNING ISSUES

MCAS Futenma

Requirements Shortfalls

1. Aircraft Parking Apron Space
2. Control Tower Location/Space
3. Training Instruction Space, Simulators & Pool
4. Aircraft Maintenance Hangar Space
5. Organic Unit & Hazardous/Flammable Storage Space
6. Station Maintenance & Warehouse Space
7. New Wing Headquarters
8. Group, Squadron & Battery HQ Space
9. Community Support Facilities

Facility Surpluses

1. Auto Vehicle Maintenance Space
2. Programmed BEQ Space

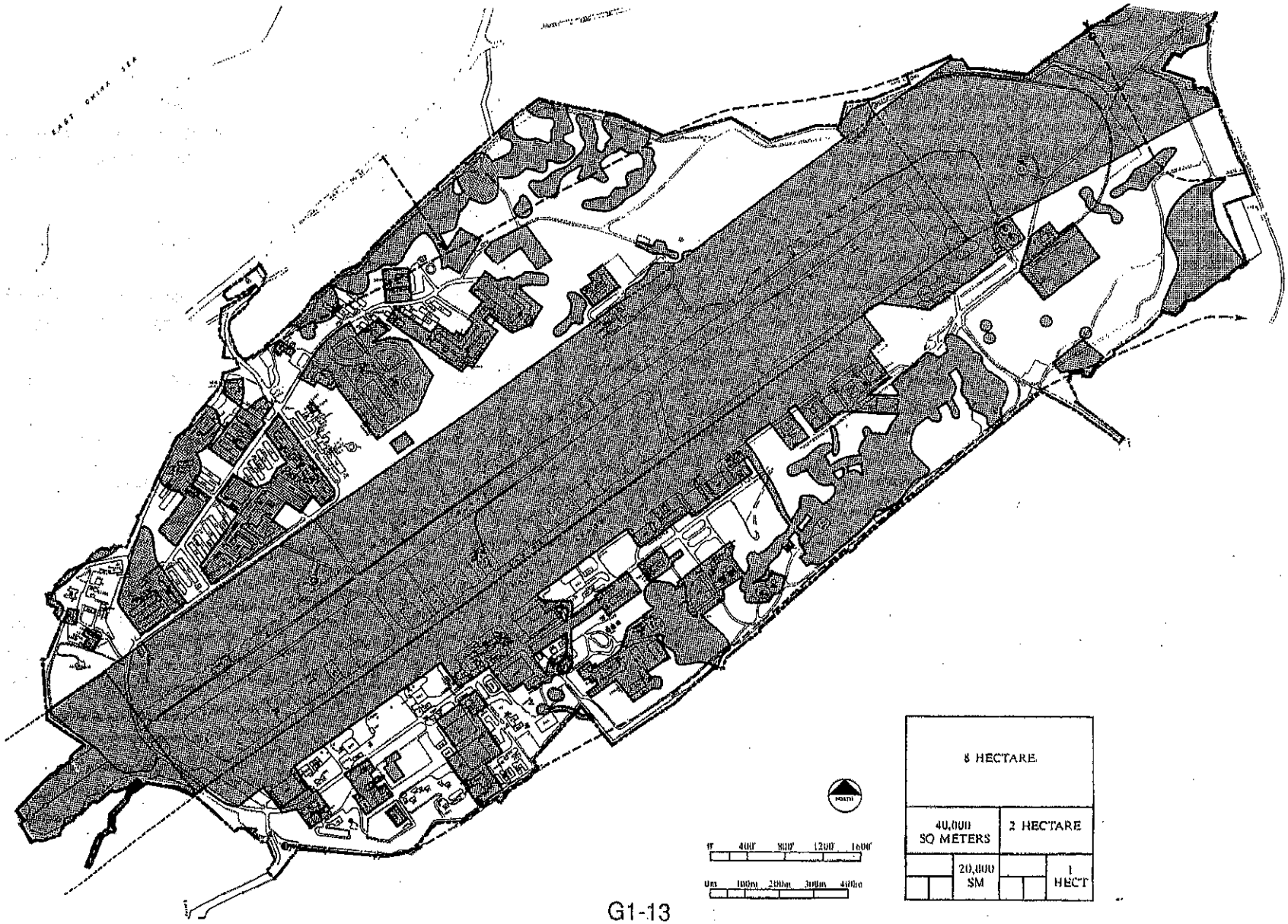
Composited in the shaded pattern on this figure are areas which possess various characteristics that constrain their possible future development. Six different types of constraints are reflected:

- Airfield runway and clear zones.
- Facilities designated as adequate and suitable for continued use in the Engineering Evaluation.
- Areas to be occupied by programmed facilities.
- Lands with a slope of 10 percent or more.
- Cultural/historic/archaeological sites.
- Areas with caves beneath them.

The non-shaded areas are available for future development. They consist of vacant land and areas occupied by substandard or inadequate assets. As can be seen, very little area remains available for future expansion, or for building the facilities needed to meet existing deficiencies.

LAND USE CONSTRAINTS

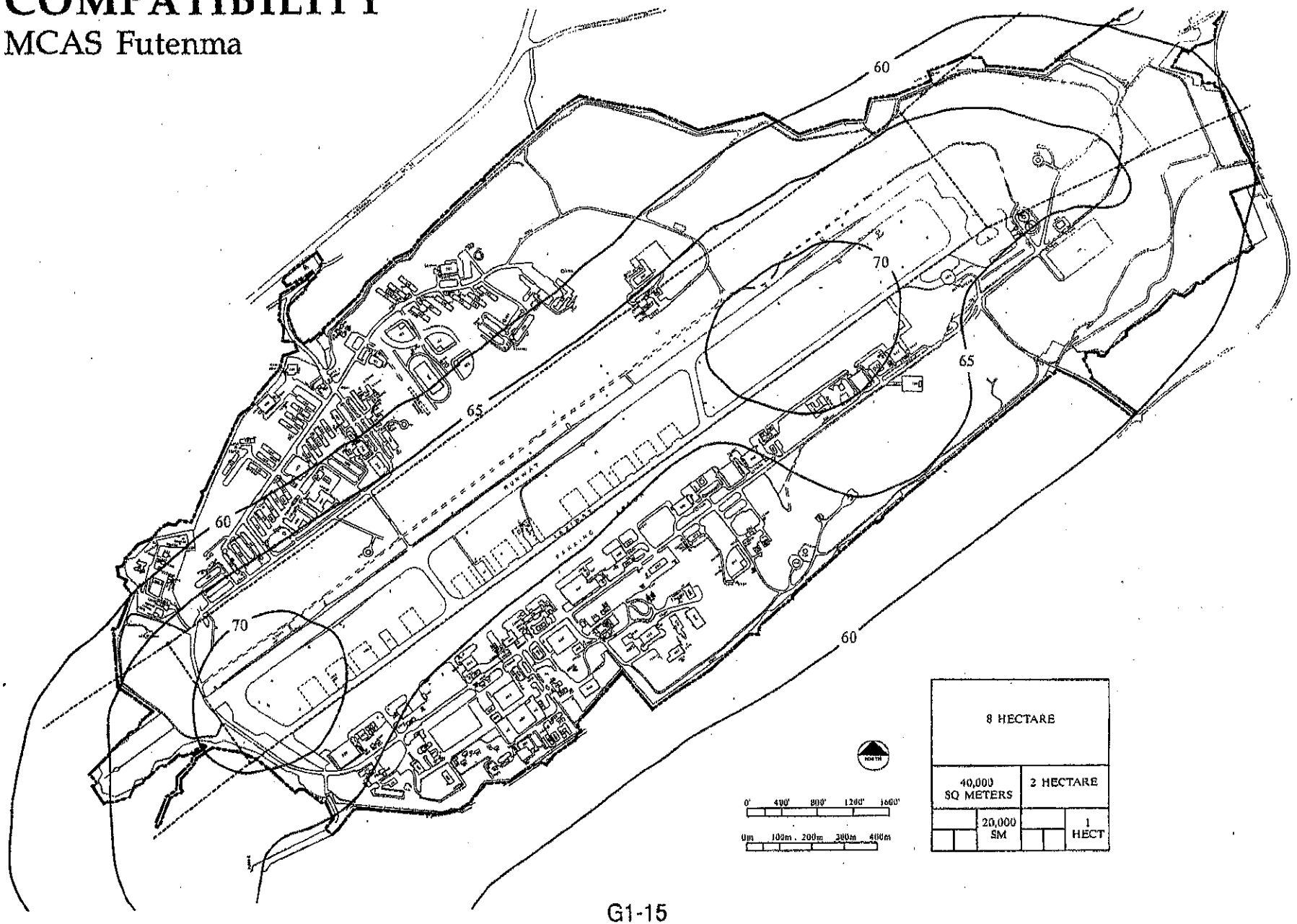
Composite Diagram



Noise is an additional constraint on development. In particular, all non-operational activities should be located outside of the 65 decibel average day-night noise level contour.

NOISE COMPATIBILITY

MCAS Futenma



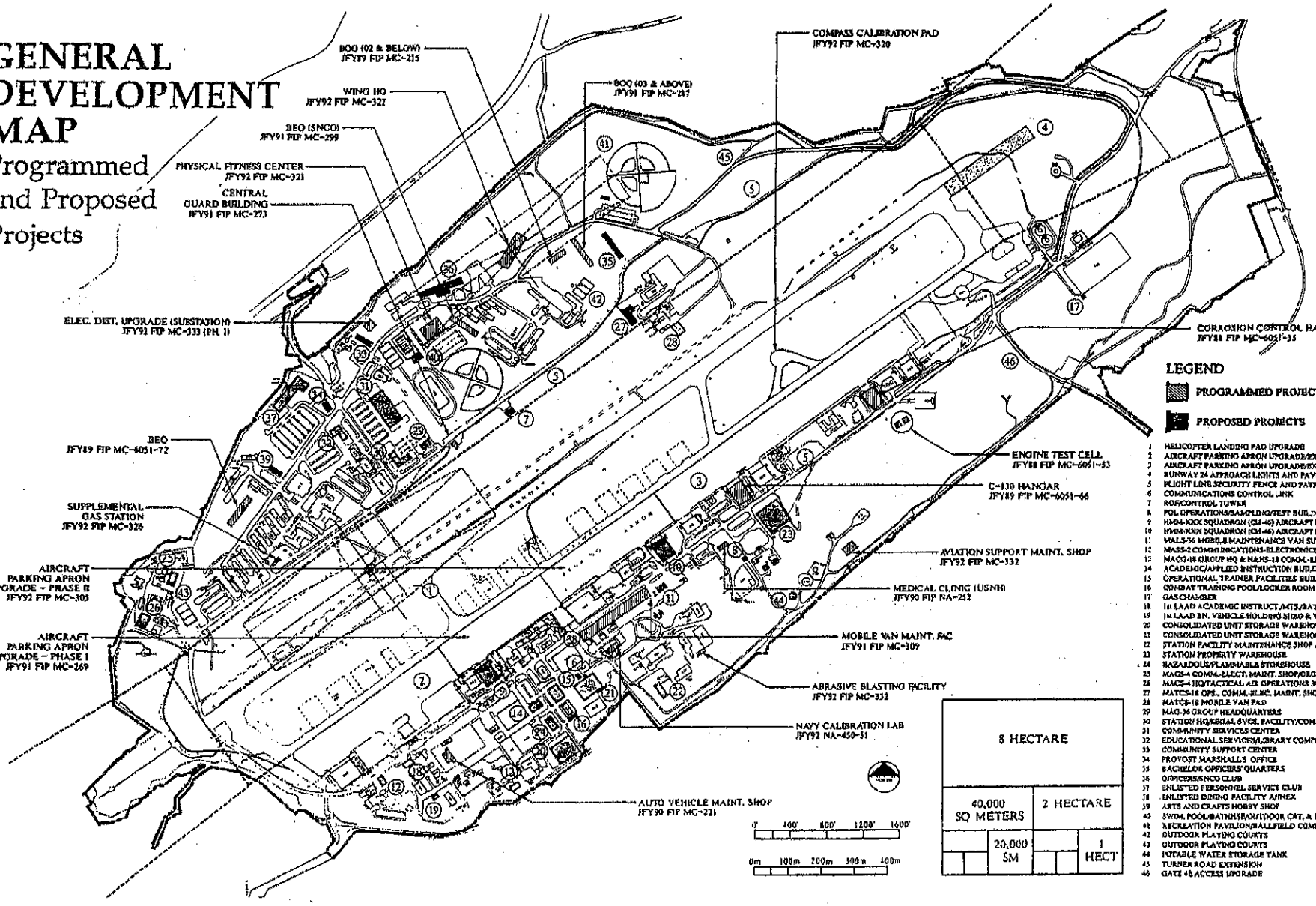
On this map are located:

- 20 projects which are currently programmed as part of the FY88-92 Capital Improvements Plan.
- 46 projects which are proposed for completion over the next 3-8 years (FY93-98) to fulfill the remaining major facility needs.

The proposed projects are distinguished by a number in a circle. A narrative which briefly describes each project and the basis for its need is presented on the following pages. Tabular summaries of both programmed and proposed projects are provided at the end of this Brief.

GENERAL DEVELOPMENT MAP

Programmed and Proposed Projects



LEGEND

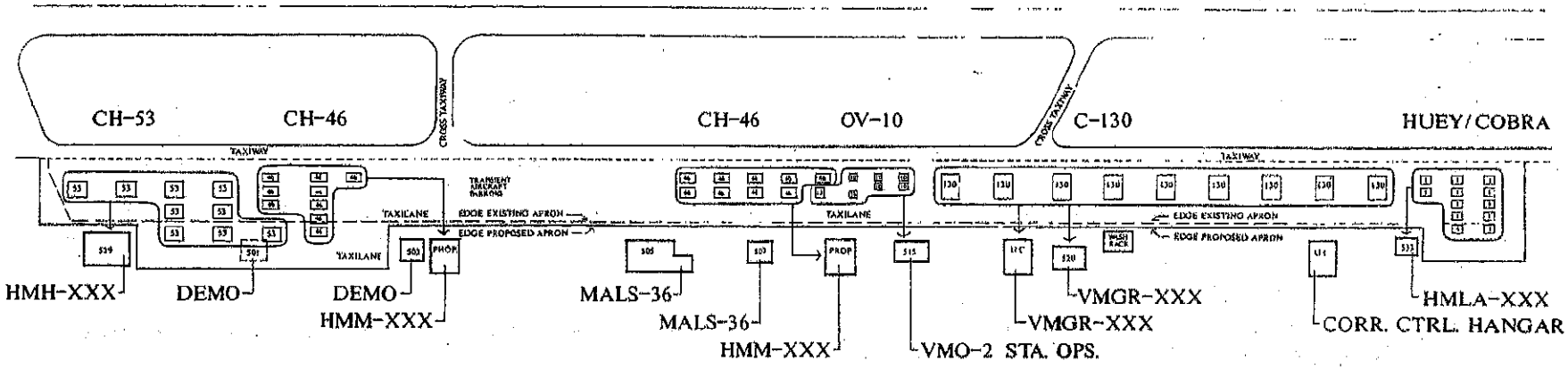
PROGRAMMED PROJECTS

PROPOSED PROJECTS

1 HELICOPTER LANDING PAD UPGRADE
2 AIRCRAFT PARKING APRON UPGRADE/EXPAN. - PHASE III
3 AIRCRAFT PARKING APRON UPGRADE/EXPAN. - PHASE IV
4 RUNWAY 24 APPROACH LIGHTS AND PAVED OVERRUN
5 FLIGHT LINE SECURITY FENCE AND PATROL ROAD
6 COMMUNICATIONS CONTROL LINK
7 ROF/CONTROL TOWER
8 POL OPERATIONS/SAMPLING/TEST BUILDING
9 HMM-XXX SQUADRON (CH-46) AIRCRAFT MAINT. HANGAR
10 HMM-XXX SQUADRON (CH-46) AIRCRAFT MAINT. HANGAR
11 MALS-36 MOBILE MAINTENANCE VAN SUPPORT BUILDING
12 MASS-2 COMM/NICATIONS-ELECTRONICS MAINT. SHOP
13 MACG-18 GROUP HQ & MASS-18 COMM.-ELECT. MAINT. SHO
14 ACADEMIC/APPLIED INSTRUCTION BUILDING
15 OPERATIONAL TRAINER FACILITIES BUILDING
16 COMBAT TRAINING POOL/LOCKER ROOM
17 GAS CHAMBER
18 1st LAAD ACADEMIC INSTRUCT./MTS./BATTALION HQ BLDG
19 1st LAAD BN. VEHICLE HOLDING SHED & WASH PLATFORMS
20 CONSOLIDATED UNIT STORAGE WAREHOUSE
21 CONSOLIDATED UNIT STORAGE WAREHOUSE
22 STATION FACILITY MAINTENANCE SHOP AND STORAGE
23 STATION PROPERTY WAREHOUSE
24 HAZARDOUS/FLAMMABLE STOREHOUSE
25 MACS-4 COMM.-ELECT. MAINT. SHOP/ORGANIC UNIT STORA
26 MACS-4 HOT/TACTICAL AIR OPERATIONS BUILDING
27 MATCS-18 OPS., COMM., ELEC. MAINT. SHOP & DET. HQ BLD
28 MATCS-18 MOBILE VAN PAD
29 MAG-36 GROUP HEADQUARTERS
30 STATION HQ/REGAL SVCS. FACILITY/COMMUN. CENTER
31 COMMUNITY SERVICES CENTER
32 EDUCATIONAL SERVICES/LIBRARY COMPLEX
33 COMMUNITY SUPPORT CENTER
34 PROVOST MARSHALL'S OFFICE
35 BACHELOR OFFICERS' QUARTERS
36 OFFICERS/NCO CLUB
37 ENLISTED PERSONNEL SERVICE CLUB
38 ENLISTED DINING FACILITY ANNEX
39 ARTS AND CRAFTS HOBBY SHOP
40 SWIM. POOL/BATHHSE/OUTDOOR CRT. & BALLFIELD CMPLX
41 RECREATION PAVILION/BALLFIELD COMPLEX
42 OUTDOOR PLAYING COURTS
43 OUTDOOR PLAYING COURTS
44 POTABLE WATER STORAGE TANK
45 TURNER ROAD EXTENSION
46 GATE 4/ACCESS UPGRADE

PROPOSED APRON PARKING LAYOUT

MCAS Futenma



Project 1 -- Helicopter Landing Pad Upgrade

Two helipads are required for MCAS Futenma. One new pad is programmed for construction on the roof on the new MAG-36 Headquarters. This project involves upgrading an existing pad because of its substandard condition. The existing pad is in an excellent location for meeting training and other needs, and it fits all siting criteria.

Projects 2 & 3 -- Aircraft Parking Apron Upgrade and Expansion - Phase III and IV

Deteriorating conditions due to many years of heavy usage and excessive loading from most current aircraft necessitate the upgrading of the entire access and parking apron. The addition of a second HMM Squadron will also require the apron's expansion.

To maintain airfield operations, this upgrade and expansion will be done in four phases. The first two phases, involving the central portion, are already programmed for FY91 and FY92. Phases III and IV will complete the southwest and northeast ends, respectively.

Proposed Apron Parking Layout

This figure shows the proposed aircraft parking layout and hangar locations once the parking apron upgrade and expansion, and all programmed and proposed hangars, are completed.

To achieve this plan, two new hangars are proposed to house the HMM Squadrons (Projects 9 and 10). Once these are completed, Building 515, which houses the HMM Squadron currently based at MCAS Futenma, will become available and provide adequate maintenance space for VMO-2 and Station Operations.

The substandard Buildings 501 and 503 can then be demolished to provide needed space for the parking apron expansion. Hangar 507 will be retained and reassigned to MALS-36. All other hangars will remain as presently assigned.

Projects 4a & 4b -- Runway 6 Paved Overrun & Runway 24 Approach Lights

Project 4a is a 1000-foot long extension of Runway 6. It is intended as a safety measure, to minimize the potential for damage should an aircraft require additional runway to stop in an emergency. Currently, instrument landings are possible only on Runway 6, or during prevailing wind conditions. Project 4b is needed to also permit such landings on Runway 24.

Project 5 -- Flight Line Security Fence and Patrol Road

Safety and security of the flight line require that access be prohibited to many who otherwise have legitimate reasons to be on the Air Station. This project will meet the need for a barrier to such access, and will provide for its efficient patrolling to maintain proper security.

Project 6 -- Communications Control Link

The existing control tower does not have a direct line of sight to Kadena AFB, thus the need for a comm-link tower nearby at a higher elevation. Both the tower construction and trailer housing the equipment are substandard and need to be replaced.

Project 7 -- ROF/Control Tower

A top priority project is the construction of a new control tower on the northwest side of the runway. This is the proper side of the airfield for maintaining visual contact with aircraft. Direct communications with Kadena AFB would also be possible.

However, JFIP funding of the project has been denied because of local opposition. Because of its importance, MILCON funding should be pursued if the GOJ continues to refuse to fund it.

Project 8 -- POL Operations/Sampling/Test Building

At 830 SF, the existing POL building provides only slightly more than one-half the 1600 SF of required space. The existing structure will be replaced by the new building.

Projects 9 & 10 -- HMM Squadron Aircraft Maintenance Hangars

New Type I Hangars are required to provide adequate maintenance, shop and administrative space for the two HMM (CH-46) Squadrons that will be based at MCAS Futenma. The proposed sites are vacant and are located so that parking apron space can be provided within reasonable proximity.

Project 11 -- MALS-36 Mobile Maintenance Van Support Building

Construction of a MALS-36 Avionics Shop had been programmed to occur along with the required van pads. However, the site had to be abandoned because of the discovery of a cave beneath it. The proposed new location maintains the required proximity to the vans, avoids all known caves, and reuses the site of a surplus facility.

Project 12 -- MASS-2 Communications/Electronic Maintenance Shop

Communications and electronics maintenance for MASS-2 is currently crowded into 2,400 SF of space in the unit's headquarters building. The proposed facility would resolve both the comm./elec. space deficiency and the shortage of administrative space.

Project 13 -- MACG-18 Group HQ & H&HS-18 Communications/Electronics Maintenance Shop

Most administrative space for MACG-18 Group Headquarters and H&HS-18 is housed in a new two-story building. However, remaining functions are scattered in several small and substandard facilities. A new building is proposed to address the remaining administrative space deficiency and provide adequate space for H&HS-18's Comm./Elec. Shop. The proposed site is near the existing headquarters building and is occupied by surplus facilities.

Projects 14 - 16 -- Academic/Applied Instruction Building, Operational Trainer Facilities Building and Combat Training Pool/Locker Room

These three projects are proposed to consolidate into one centrally located complex most of the academic and applied instruction space and operational trainer facilities required

by 1st MAW units. Current instructional space is less than one-half of what is required, and there are no flight simulators or combat training pool at the Air Station.

Project 14 would replace a substandard instruction facility and eliminate the existing space deficiency. The new building would be located on vacant land, and the parking area built after the existing building is demolished.

Project 15 would provide four required flight simulators in a single facility on vacant land across the street from Project 14.

Project 16, a combat training pool, would be adjacent to the flight simulators. It would displace existing temporary and surplus buildings.

Also proposed as part of Project 16 is a 4,000 SF locker room facility. This would provide a place for personnel from nearby units to change uniforms when required during the work day. It would satisfy one-half of the space requirements for locker rooms.

Project 17 -- Gas Chamber

The existing gas chamber will need to be replaced because of its proximity to the new 1st MAW Headquarters. The proposed site is vacant and in a non-populated area where the predominant downwind drift is over the Air Station.

Project 18 -- 1st LAAD Academic Instruction/MTS/Battalion Headquarters Building

Instruction space for the 1st LAAD Battalion is located in a substandard, semi-permanent building and does not include a required moving target simulator. There is also a shortage of more than 3,000 SF in administrative space.

The proposed new building would meet these deficiencies in a single consolidated facility. The selected site is vacant and within the battalion's existing compound.

Project 19 -- 1st LAAD Battalion Vehicle Holding Shed & Wash Platforms

This project, also proposed for a vacant site within 1st LAAD's existing compound, would fulfill the remaining requirements for vehicle-related maintenance facilities. The proposed site is immediately adjacent to the recently completed vehicle maintenance shop.

Projects 20 & 21 -- Consolidated Unit Storage Warehouse

The existing deficiency in unit storage space is well over 100,000 SF. About 60 percent of this total is scattered in substandard and inadequate facilities, and the remainder does not exist.

Two new central warehouses, each containing about 50,000 SF of space, are proposed to reduce this deficiency. Both sites are centrally located in the same general area as the two recently completed warehouse structures (Buildings 682 and 683). The locations for these facilities would also help to define the Air Station perimeter and prevent future encroachment. In each case the new structure would displace existing substandard and surplus buildings.

Project 22 -- Station Facility Maintenance Shop and Storage

This project would address multiple deficiencies in station maintenance facilities by providing additional shop maintenance space (9,400 SF), a parking area for 50 vehicles (±25,000 SF) and one vehicle wash platform. Vacant land adjacent to the existing shop building would be used. Use of this site would also help to better define the Air Station's perimeter.

Project 23 -- Station Property Warehouse

There is a requirement for 64,000 SF of station property warehouse space, yet no such facility exists. A ±60,000 SF consolidated warehouse structure is proposed on one of the few remaining vacant areas along Geiger Road which is large enough to accommodate such a facility.

Also proposed for this building is a 4,000 SF locker room. As with the one incorporated into the combat training pool project, it will provide a place for personnel from nearby units to change uniforms during duty hours when required.

Project 24 -- Hazardous/Flammable Storehouse

The existing hazardous/flammable storehouse (Building 603) provides only a little more than 10 percent of the required space, and is located right off a major thoroughfare (Geiger Road).

The proposed new facility is sited in a central location, yet away from high concentrations of people and traffic. It would displace an existing substandard and surplus facility.

Projects 25 and 26 -- MACS-4 Communications/Electronics Maintenance Shop/Organic Unit Storage & MACS-4 Headquarters/Tactical Air Operations Building

The various MACS-4 functions, while for the most part consolidated in a single compound, are scattered in many small buildings which, with one exception, were not built to house their current uses. In addition to general space deficiencies, many activities are split between two or more buildings, severely compromising their operational efficiency.

Two projects are proposed to replace all but one of the existing facilities. The first would provide a new building for a Comm./Elec. Maintenance Shop and 4,000 SF of unit storage. Following its completion, a new building housing the squadron headquarters and tactical air operations center would be built.

In order to minimize the disruption of ongoing activities, both new facilities would be sited so they do not require the demolition of existing buildings. Once they are completed, the central area would be cleared and paved to provide a badly needed parking area.

Project 27 -- MATCS-18 Ops., Comm./Elec. Maint. Shop, & Det. HQ Building

A single project is proposed to address MATCS-18 deficiencies. It would include 3,000 SF of operations space, 3,500 SF of Comm./Elec. Maintenance Shop space and 7,600 SF of space for two detachment headquarters

The proposed site is vacant, near the existing building, and can be utilized with a minimum amount of filling and regrading.

Project 28 -- MATCS-18 Van Pad

Currently, vans housing the personnel and equipment used to operate the airfield sit on the bare ground. This proposed project will provide a suitable pad for operating vans and support equipment. Its location in the clear zone is essential to effective operations, and a waiver of the prohibition against locating the vans in this area will have to be obtained.

Project 29 -- MAG-36 Group Headquarters

MAG-36 Group Headquarters is currently located on the upper floor of Hangar 539. The proposed new headquarters building would both meet the Group's space deficiency and make space available to fill the needs of the HMH Squadron occupying the remainder of this building.

The recommended site is vacant, centrally located, and offers a direct line of sight to Group operations up and down the flight line.

Project 30 -- Station Headquarters/Legal Services Facility/ Communications Center

The existing Station Headquarters functions are split between two buildings which together provide less than two-thirds of the required space. The construction of an expanded and consolidated facility would both meet space needs and permit more efficient operations.

Placement of the new facility on the site of Building 110 is recommended. This would maintain Station Headquarters in a central location and near the main gate. The functions in Building 110 can be temporarily housed in Building 106 while construction is taking place.

Project 31 -- Community Services Center

Shopping, financial and personal service establishments at MCAS Futenma are currently split between two separate facilities. Space available to most existing uses is undersized, and there is no exchange cafeteria, food store or package store. In addition, the existing theater has less than one-half the required number of seats.

The construction of a "community services center" which consolidates these facilities in a single convenient location is proposed. The selected site is centrally located and near the main gate and existing quarters. Buildings 101 and 106, which are currently on the site, are substandard and will become surplus when the new Station Headquarters is completed. The "community services center" building would be constructed on vacant land, and the parking area would go where the existing buildings are located.

Project 32 -- Educational Services/Library Complex

Both the existing library and educational services building are less than one-half their required size, and the educational services building is located on the opposite side of the Air Station from existing quarters. A new facility which provides adequate space and consolidates these related activities is proposed on the site of the existing post exchange.

Once the new community services center is completed, the existing exchange building will be surplus and can be demolished. Related parking will displace inadequate and surplus BEQs.

Project 33 -- Community Support Center

The installation's existing rehabilitation center is housed in a converted facility that is less than one-half the required size. Two buildings currently used for religious education are substandard and provide less than one-third the needed space.

It is proposed that both of these needs be met through the construction of a single "community support center" adjacent to the existing chapel. By consolidating these related activities and emphasizing their community support purpose, the GOJ's objections to funding religious facilities can hopefully be overcome. The recommended site is centrally located and would result in the demolition of two substandard, temporary buildings.

Project 34 -- Provost Marshall's Office

The Provost Marshall's Office is currently in converted space that is about one-half the required size. The proposed new facility would meet the space needs and be both centrally located and well situated to control access through the main gate.

Project 35 -- Bachelor Officers Quarters (03 and Above)

This project is proposed to meet the deficiency that will remain after completion of the two programmed BOQs. The recommended site is vacant and near the Officers Club and other BOQs.

Project 36 -- Officers/SNCO Club

Currently, the SNCO Club is in a substandard building that provides only one-fourth the required space. Space in the Officers Club is also less than required. Both facilities lack a large enough ballroom to hold major social events that include both groups or all Air Station personnel.

A combined Officers/SNCO Club is proposed to allow the provision ballroom space which can be divided and used separately, or combined for larger functions. Kitchen and other facilities which are the same for both clubs can also be combined where appropriate to reduce operating costs.

Construction of the new facility on the site of the existing Officers Club and adjoining inadequate and surplus BOQs is recommended. This site is near to existing officer and SNCO quarters and offers a panoramic view of the South China Sea.

This would require the temporary relocation of the Officers Club during construction. Alternatively, the new club could be built in two phases, with the first phase completed on the BOQ and vacant area before it becomes necessary to demolish the existing club.

Project 37 -- Enlisted Personnel Service Club

The existing Enlisted Service Club provides only about one-third the space needed to adequately support the personnel stationed at MCAS Futenma. An entirely new club is proposed so that it can be designed to fully meet the servicemen's needs with maximum efficiency and minimum operating costs.

Once the new Officers/SNCO Club is completed, the existing SNCO building can be demolished and this prominent view site used for the new Enlisted Club.

Project 38 -- Enlisted Dining Facility Annex

The existing annex is located in a temporary building which is in poor condition and is too small to adequately serve the number of personnel who use it. The proposed new facility is on a vacant site next to the existing building, and thus maintains its central location.

Project 39 -- Arts and Crafts Hobby Shop

There is no Arts and Crafts Hobby Shop at MCAS Futenma at this time. The proposed new facility would be easily accessible to personnel living in the BEQs, and would displace existing inadequate and surplus facilities.

Project 40 -- Sports Complex

It is proposed that, to the extent possible, facilities in the existing playfield area between Station Headquarters and SNCO quarters be expanded to provide a wide variety of recreational opportunities in this central location. Existing in the area are a track, football/soccer field, and three softball fields.

A new physical fitness center is also programmed for FY 92. In addition, it is proposed that the softball fields be rebuilt so they take less space, and a swimming pool/bathhouse and four outdoor playcourts be added.

Project 41 -- Recreation Pavilion/Ballfield Complex

Currently there is no baseball field on MCAS Futenma, and the four existing softball fields are only one-half of what is required. A new four-ballfield complex (one baseball and three softball fields) is proposed to meet most of this need. The recommended site is the only vacant area which is large enough to accommodate such a complex.

Projects 42 & 43 -- Outdoor Playing Courts

The gradual replacement of substandard BOQs and BEQs has not been accompanied by replacement of the volleyball/basketball courts that were interspersed between the old buildings. Two new three-court complexes -- one each within the BOQ and BEQ areas -- are proposed to reduce this deficiency.

Project 44 -- Potable Water Storage Tank

With the gradual expansion of Air Station facilities has come a steady increase in the demand for potable water. The proposed new storage tank is needed to maintain adequate storage capacity. Its location near to and at the same elevation as the existing tank will allow them to act in tandem, as a single storage system.

Project 45 -- Turner Road Extension

Currently, there is only a single roadway at the southwesterly end of the Air Station which connects facilities on each side of the runway. Vehicles traveling between the northwest and northeast ends of the installation have no choice but to take this very roundabout route.

To correct this situation, it is proposed that Turner Road be extended from its current terminus, near the Officers Club and BOQS, on to Geiger Road in the vicinity of Gate 3. This connection will be especially needed once the new 1st MAW Headquarters is completed. It will also provide access to the one remaining area which could accommodate a major expansion of facilities for a new unit and/or aircraft.

Project 46 – Gate 4E Access Road Upgrade

Because Gate 3 is located within the runway clear zone, it should be closed to regular use. It is proposed that the Gate 4E access road be improved so that it can function as the point of access to the Air Station from this side of Ginowan City.

Non-Sited Projects

Five potential projects have not been sited on the General Development Map. Quantative data on each is provided in the attached Proposed Projects List. The potential projects and the reasons for not siting them are:

Electrical Distribution Upgrade - Phase II

The nature and location of the required improvements are not known at this time. This will be the subject of a utilities study to be conducted by PACNAVFACENGCOM engineers later this year.

Operational Hazardous/Flammable Storage Facilities

The existing 3,000 SF deficiency reflects that fact that many units lack an appropriate storage facility for their own use. Because the individual facilities are typically small (100-200 SF) and can vary considerably in terms of specific requirements, they are best provided through separatel minor construction projects.

Weather Shelters

These are also best sited through individual minor construction projects, as specific needs are determined, rather than by attempting to define a single master pl[illegible]ject for all 18 shelters.

Outdoor Playing Courts and Playing Fields

Projects are already proposed which would involve the construction of ten (10) new outdoor playing courts and four (4) new ballfields. Master planning of additional facilities should await an evaluation of the type and location of any remaining needs once these projects are completed.

LIST OF PROPOSED PROJECTS

MCAS FUTENMA MASTER PLAN
February 1991

Proj. No.	CCN/ Use		Scope	Unit
Project 1	*Helicopter Landing Pad Upgrade*			
	111-20	Helicopter Landing Pad	1,100	SY
Project 2	*Aircraft Parking Apron Upgrade/Expansion- Phase III*			
	113-20	Aircraft Parking Apron	60,200	SY
Project 3	*Aircraft Parking Apron Upgrade/Expansion- Phase IV*			
	113-20	Aircraft Parking Apron	148,800	SY
Project 4	*Runway 24 Approach Lights and Paved Overrun*			
	111-10	Runway Pavement	53,300	SY
Project 5	*Flight Line Security Fence and Patrol Road*			
	851-10	Road	±20,000	SY
	872-10	Station Security Fencing	±28000	LF
Project 6	*Communications Control Link*			
	131-20	Communications Control Link Building	170	SF
	134-10	Antenna Navigation-Aircraft	1	EA
Project 7	*ROF/Control Tower*			
	133-72	Radar Operations Facility (ROF)	1,700	
	141-70	Control Tower	3,000	
			4,700	SF
Project 8	*POL Operations/Sampling/Test Building*			
	143-75	POL Operations/Sampling/Test Building	1,600	SF
Project 9	*HMM-XXX Squadron (CH-46) Aircraft Maintenance Hangar*			
	211-05	Maint. Hangar -O/H Space	19,970	
	211-06	Maint. Hangar -01 Space	8,690	
	211-07	Maint. Hangar -02 Space	8,640	
			37,300	SF
Project 10	*HMM-XXX Squadron (CH-46) Aircraft Maintenance Hangar*			
	211-05	Maint. Hangar -O/H Space	19,970	
	211-06	Maint. Hangar -01 Space	8,690	
	211-07	Maint. Hangar -02 Space	8,640	
			37,300	SF
Project 11	*MALS-36 Mobile Van Maintenance Support Building*			
	211-45	Avionics Shop	6,500	SF

LIST OF PROPOSED PROJECTS

MCAS FUTENMA MASTER PLAN
February 1991

Proj. No.	CCN/ Use		Scope	Unit
Project 12	*MASS-2 Communications/Electronics Maintenance Shop*			
	217-10	MASS-2 Comm./Elec.Maint. Shop	6,000	SF
Project 13	*MACG-18 Group HQ & H&HS-18 Communications-Electronics Maintenance Shop*			
	610-71	MACG-18 Group Headquarters	3,600[??]	
	217-10	H&HS-18 Comm./Elec. Maint. Shop	2,000	
	217-77	Electronics-Spares and Storage	400	
			6,000	SF
Project 14	*Academic/Applied Instruction Building*			
	171-10	Academic Instruction Facility	13,900	
	171-20	Applied Instruction Facility	8,800	
			22,700	SF
Project 15	*Operational Trainer Facilities Building*			
	171-35	HMH Aircraft Full Motion Simulator	5,000	
	171-35	HMM Aircraft Full Motion Simulator	4,000	
	171-35	HMLA Aircraft Full Motion Simulator	4,000	
	171-35	VMGR-152 Aircraft Full Motion Simulator	5,000	
			18,000	SF
Project 16	*Combat Training Pool/Locker Room*			
	179-55	Combat Training Pool	13,000	
	730-35	Locker Room	4,500	
			17,500	SF
Project 17	*Gas Chamber*			
	171-35	Gas Chamber	800	SF
Project 18	*1st LAAD Academic Instruction/MTS/Battalion Headquarters Building*			
	171-10	Academic Instruction Facility	4,800	
	171-35	Moving Target Simulator (MTS)	4,400	
	610-72	Battalion Headquarters	3,100	
			12,300	SF
Project 19	*1st LAAD Bn. Vehicle Holding Shed & Wash Platforms*			
	214-40	Vehicle Holding Shed (5 bays)	2,100	SF
	214-55	Vehicle Wash Platform	2	EA
Project 20	*Consolidated Unit Storage Warehouse*			
	441-12	Organic Unit Storage	±50,000	SF
Project 21	*Consolidated Unit Storage Warehouse*			
	441-12	Organic Unit Storage	±50,000	SF

LIST OF PROPOSED PROJECTS

MCAS FUTENMA MASTER PLAN
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Proj. No.	CCN/ Use		Scope	Unit
Project 22	*Station Facility Maintenance Shop and Storage*			
	219-10	Public Works Shop	3,700	
	219-77	Public Works Maintenance Storage	5,700	
			9,400	SF
	214-55	Vehicle Wash Platform	1	EA
	214-	Motor-T Parking Lot	±25,000	SF
Project 23	*Station Property Warehouse*			
	441-11	General Purpose Warehouse	±60,000	SF
	730-35	Locker Room	4,000	SF
			±64,000	SF
Project 24	*Hazardous/Flammable Storehouse*			
	441-30	Hazardous/Flammable Storehouse	12,300	SF
Project 25	*MACS-4 Communications/Electronics Maintenance Shop & Organic Unit Storage*			
	217-10	Comm.-Elec. Maintenance Shop	7,500	
	441-12	Organic Unit Storage	4,000	
			11,500	SF
Project 26	*MACS-4 Headquarters/Tactical Air Operations Building*			
	171-35	Tactical Air Operations Center	4,400	
	610-72	Squadron Headquarters	10,600	
			15,000	SF
Project 27	*MATCS-18 Ops., Comm./Elec. Maint. Shop, & Det. HQ Building*			
	141-41	MATCS Operations Facility	3,000	SF
	217-10	Comm./Elec. Maintenance Shop	3,500	SF
	610-73	Detachment Headquarters	7,600	SF
			14,100	SF
Project 28	*MATCS-18 Van Pad*			
	116-65	Mobile Van Pad	1,000	SY
Project 29	*MAG-36 Group Headquarters*			
	610-71	Group Headquarters	17,600	SF
Project 30	*Station Headquarters/Legal Services Facility/Communications Center*			
	131-15	Communications Center	2,600	
	610-10	Administrative Office	34,000	
			36,600	SF

LIST OF PROPOSED PROJECTS

MCAS FUTENMA MASTER PLAN
February 1991

Proj. No.	CCN/ Use		Scope	Unit
Project 31	*Community Services Center*			
	730-85	Post Office	4,700	
	740-02	Location Exchange	7,500	
	740-04	Exchange Cafeteria	8,600	
	740-08	Exchange Food Store	1,900	
	740-09	Exchange Service Outlets	2,000	
	740-18	Bank	3,800	
	740-19	Credit Union	1,500	
	740-56	Theater - 1,000 seats	18,500	
	740-71	Class VI Package Store	6,300	
			54,800	SF
Project 32	*Educational Services/Library Complex*			
	740-76	Library	8,600	SF
	740-88	Educational Services Office	15,800	SF
			24,400	SF
Project 33	*Community Support Center*			
	730-81	Rehab. Center for Drugs &/or Alcohol	12,300	
	730-84	Religious Education Building	6,100	
			18,400	SF
Project 34	*Provost Marshall's Office*			
	730-20	Police Station	12,000	SF
Project 35	*Bachelor Officers Quarters (03 and Above)*			
	724-12	BOQ (03 and Above)	98	PN
Project 36	*Officers/SNCO Club*			
	740-60	Officers' Club	17,200	
	740-66	SNCO Club	18,100	
			35,300	SF
Project 37	*Enlisted Personnel Service Club*			
	740-63	Enlisted Personnel Service Club	44,100	SF
Project 38	*Enlisted Dining Facility Annex*			
	722-10	Enlisted Dining Facility	3,400	SF
Project 39	*Arts and Crafts Hobby Shop*			
	740-36	Hobby Shop - Arts/Crafts	8,100	SF

LIST OF PROPOSED PROJECTS

MCAS FUTENMA MASTER PLAN
February 1991

Proj. No.	CCN/ Use		Scope	Unit
Project 40	*Swimming Pool/Bathhouse/Outdoor Court and Softball Field Complex*			
	740-89	Bathhouse	7,800	SF
	750-10	Playing Courts - 1 tennis, 2 basketball, and 1 volleyball	4	EA
	750-20	Playing Fields - softball	3	EA
	750-30	Swimming Pool	50	M
Project 41	*Recreation Pavilion/Ballfield Complex*			
	740-78	Recreation Pavilion	2,700	SF
	750-20	Playing Fields - 1 baseball and 3 softball	4	EA
Project 42	*Outdoor Playing Courts*			
	750-10	Playing Courts - 2 basketball and 1 volleyball	3	EA
Project 43	*Outdoor Playing Courts*			
	750-10	Playing Courts - 2 basketball and 1 volleyball	3	EA
Project 44	*Potable Water Storage Tank*			
	841-40	Ground Level Potable Water Storage Tank	500,000	GA
Project 45	*Turner Road Extension (From 1st MAW HQ to Gate 3)*			
	851-10	Road	±15,000	SY
Project 46	*Gate 4E Access Road Upgrade (From Geiger Road to Gate 4E)*			
	851-10	Road	±2,600	SY
NON-SITED PROJECTS				
–	*Electrical Distribution Upgrade - Phase II*			
	812-12	Transformer Station (<500 KV)	?	EA
	812-30	Electrical Distribution Lines	?	LF
–	*Operational Hazardous/Flammable Storage*			
	143-78	Operational Hazardous/Flammable Storage	3,000	SF
–	*Weather Shelters*			
	730-66	Weather Shelters - 13 bus stops	100	SF
	730-66	Weather Shelters - 5 recreation sites	500	SF
–	*Playing Courts*			
	750-10	Playing Courts - outdoor volleyball	3	EA
–	*Playing Fields*			
	750-20	Playing Fields - 3 football/soccer & 1 softball	4	EA

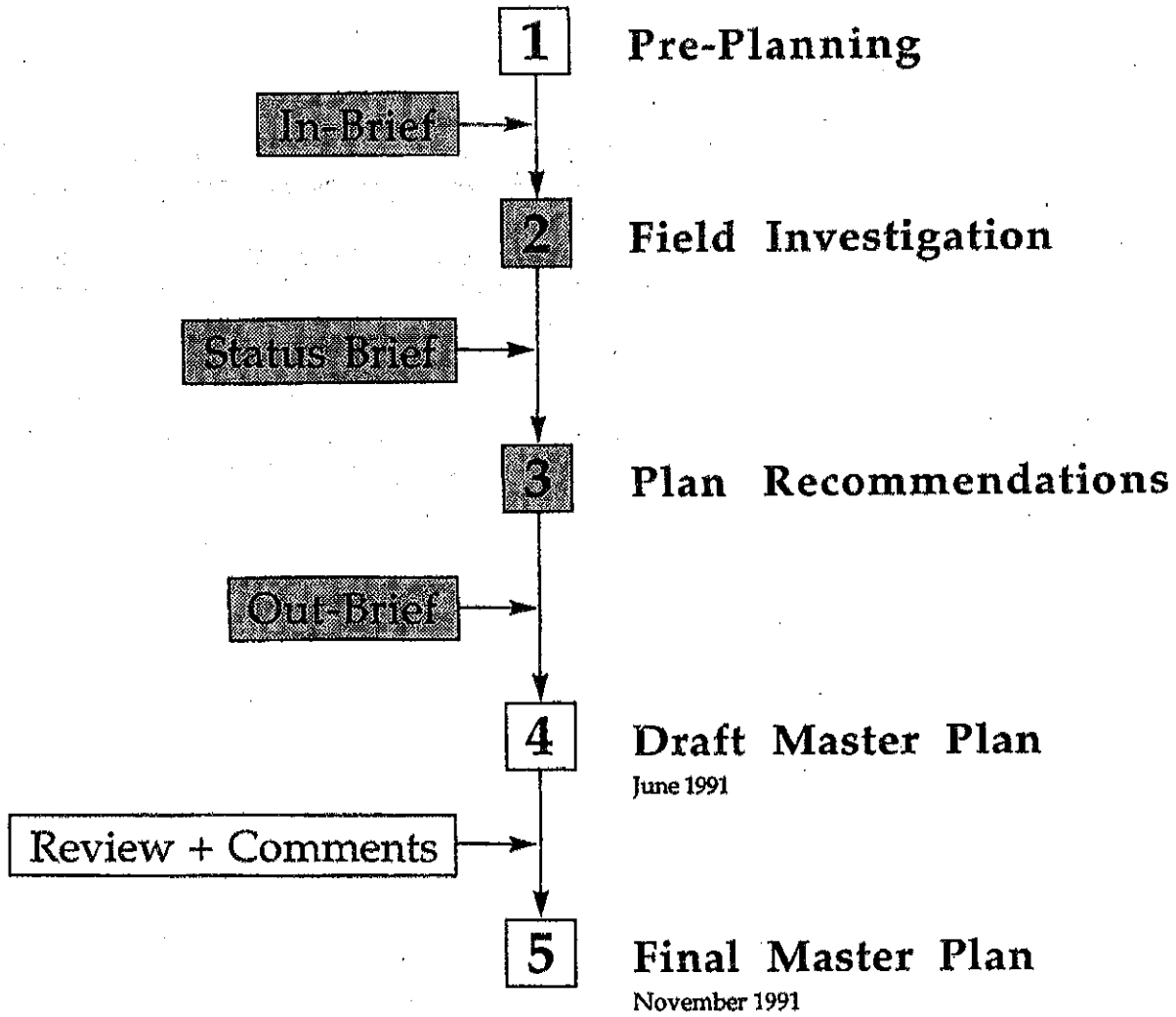
POA&M

This briefing summarizes the plan recommendations which have been developed over the past two weeks.

Our next step will be to prepare a draft Master Plan for your review and comment. This is scheduled for circulation in June 1991.

Modifications will then be made based on your comments, and the final Master Plan document will be prepared. Its approval, printing and distribution is scheduled for November 1991.

POA&M


1
Pre-Planning
In-Brief
2
Field Investigation
Status Brief
3
Plan Recommendations
Out-Brief
4
Draft Master Plan
June 1991
Review + Comments
5
Final Master Plan
November 1991

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APPENDIX G-2
Land Use Compatibility Tables

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Suggested Land Use Compatibility in Noise Zones

Facility	Noise Zones/DNL Levels (in Ldn)						
	1		2		3		
	0-55	55-65	65-70	70-75	75-80	80-85	85+
Residential - Single & two units, apartments, group quarters & residential hotels	Y	Y*	25[1]	30[1]	N	N	N
Transient lodgings	Y	Y*	25[1]	30[1]	35[1]	N	N
Manufacturing	Y	Y	Y	Y[2]	Y[3]	Y[4]	N
Transportation - railroad, rapid rail, motor vehicle, aircraft, marine craft, auto parking	Y	Y	Y	Y[2]	Y[3]	Y[4]	N
Communication	Y	Y	Y	25[5]	30[5]	N	N
Utilities	Y	Y	Y	Y[2]	Y[3]	Y[4]	N
Other transportation, communication and utilities	Y	Y	Y	25[5]	30[5]	N	N
Retail trade - general merchandise, food, automotive, marine craft, apparel & accessories, furniture & home furnishings, eating & drinking establishments, other retail	Y	Y	Y	25	30	N	N
Services - personal, finance, insurance, real estate	Y	Y	Y	25	30	N	N
Hospitals, nursing homes	Y	Y*	25*	30*	N	N	N
Other medical facilities	Y	Y	Y	25	30	N	N
Educational services	Y	Y*	25*	30*	N	N	N
Cultural activities (including churches)	Y	Y*	25*	30*	N	N	N
Public assembly	Y	Y	Y	N	N	N	N
Auditoriums, concert halls	Y	Y	25	30	N	N	N
Outdoor music shells, amphitheaters	Y	Y*	N	N	N	N	N
Outdoor sports arenas, spectator sports	Y	Y	Y[7]	Y[7]	N	N	N
Recreational activities (incl. golf courses, riding stables, water recreation)	Y	Y*	Y*	25*	30*	N	N
Parks	Y	Y*	Y*	Y*	N	N	N
Agriculture (except livestock)	Y	Y	Y[8]	Y[9]	Y[10]	Y[10,11]	Y[10,11]
Livestock farming and animal breeding	Y	Y	Y[8]	Y[9]	N	N	N

KEY:

Y (Yes)	Land Use and related structures compatible without restrictions.
N (No)	Land Use and related structures are not compatible and should be prohibited.
NLR (Noise Level Reduction)	Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
Y^X (Yes with restrictions)	Land Use and related structures generally compatible; see notes 2 through 4.
25, 30, or 35	Land Use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 must be incorporated into design and construction of structure.
25*, 30* or 35*	Land Use generally compatible with NLR; however, measures to achieve an overall noise reduction do not necessarily solve noise difficulties and additional evaluation is warranted.
DNL	Day-Night Average Sound Level.
Ldn	Mathematical symbol for DNL.

FOOTNOTES:

1. a) Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in DNL 65-70 and strongly discouraged in DNL 70-75. The absence of viable alternative development options should be determined and an evaluation should be conducted prior to approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones.

   b) Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least dB (DNL 65-70) and 30 dB (DNL 70-75) should be incorporated into building codes and be considered in individual approvals. Normal construction can be expected to provide a NLR of 20 dB, thus the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. Additional consideration should be given to modifying NLR levels based on peak noise levels or vibrations.

   c) NLR criteria will not eliminate outdoor noise problems. However, building location and site planning, design and use of berms and barriers can help mitigate outdoor noise exposure particularly from ground level sources. Measures that reduce noise at a site should be used wherever practical in preference to measures which only protect interior spaces.

2. Measures to achieve NLR of 25 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
3. Measures to achieve NLR of 30 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
4. Measures to achieve NLR of 35 must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.
5. If project or proposed development is noise sensitive, use indicated NLR; if not, land use is compatible without NLR.
6. No buildings.
7. Land use compatible provided special sound reinforcement systems are installed.
8. Residential buildings require a NLR of 25.
9. Residential buildings require a NLR of 30.
10. Residential buildings not permitted.
11. Land use not recommended, but if community decides use is necessary, hearing protection devices should be worn by personnel.

* The designation of these uses as 'compatible' in this zone reflects individual Federal agencies' consideration of general cost and feasibility factors as well as past community experiences and program objectives. Localities, when evaluating the application of these guidelines to specific situations, may have different concerns or goals to consider (Guidelines for Considering Noise in Land Use Planning and Control, June 1980).

Source: OPNAVINST 11010.36A of 11 April 1988

SUGGESTED LAND USE COMPATIBILITY IN ACCIDENT POTENTIAL ZONES

LAND USE		CLEAR ZONE	APZ-1	APZ-2
SLUCM NO.	NAME			
10	Residential			
11	Household units			
11.11	Single units; detached	N	N	Y[1]
11.12	Single units; semidetached	N	N	N
11.13	Single units; attached row	N	N	N
11.21	Two units; side-by-side	N	N	N
11.22	Two units; one above the other	N	N	N
11.31	Apartments; walk up	N	N	N
11.32	Apartments; elevator	N	N	N
12	Group quarters	N	N	N
13	Residential hotels	N	N	N
14	Mobile home parks or courts	N	N	N
15	Transient lodgings	N	N	N
16	Other residential	N	N	N[1]
20	Manufacturing			
21	Food & kindred products; manufacturing	N	N[2]	Y
22	Textile mill products; manufacturing	N	N[2]	Y
23	Apparel and other finished products made from fabrics, leather, and similar materials; manufacturing	N	N	N[2]
24	Lumber and wood products (except furniture); manufacturing	N	Y[2]	Y
25	Furniture and fixtures; manufacturing	N	Y[2]	Y
26	Paper & allied products; manufacturing	N	Y[2]	Y
27	Printing, publishing, and allied industries	N	Y[2]	Y
28	Chemicals and allied products; manufacturing	N	N	N[2]
29	Petroleum refining and related industries	N	N	N

SUGGESTED LAND USE COMPATIBILITY IN ACCIDENT POTENTIAL ZONES

LAND USE SLUCM NO.	NAME	CLEAR ZONE	APZ-1	APZ-2
30	Manufacturing (cont'd)			
31	Rubber and misc. plastic products; manufacturing	N	N[2]	N[2]
32	Stone, clay and glass products; manufacturing	N	N[2]	Y
33	Primary metal industries	N	N[2]	Y
34	Fabricated metal products; manufacturing	N	N[2]	Y
35	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks - manufacturing	N	N	N[2]
39	Miscellaneous manufacturing	N	Y[2]	Y[2]
40	Transportation, communi- and utilities			
41	Railroad, rapid rail transit and street railway transportation	N[3]	Y[4]	Y
42	Motor vehicle transportation	N[3]	Y	Y
43	Aircraft transportation	N[3]	Y[4]	Y
44	Marine craft transportation	N[3]	Y[4]	Y
45	Highway & street right-of-way	N[3]	Y	Y
46	Automobile parking	N[3]	Y[4]	Y
47	Communication	N[3]	Y[4]	Y
48	Utilities	N[3]	Y[4]	Y
49	Other transportation, communication and utilities	N[3]	Y[4]	Y
50	Trade			
51	Wholesale trade	N	Y[2]	Y
52	Retail trade - building materials, hardware and farm equipment	N	Y[2]	Y
53	Retail trade - general merchandise	N	N[2]	Y[2]
54	Retail trade - food	N	N[2]	Y[2]
55	Retail trade - automotive, marine craft, aircraft and accessories	N	Y[2]	Y
56	Retail trade - apparel and accessories	N	N[2]	Y[2]
57	Retail trade - furniture, home furnishings and equipment	N	N[2]	Y[2]
58	Retail trade - eating and drinking establishments	N	N	N[2]
59	Other retail trade	N	N[2]	Y[2]

SUGGESTED LAND USE COMPATIBILITY IN ACCIDENT POTENTIAL ZONES

LAND USE		CLEAR ZONE	APZ-1	APZ-2
SLUCM NO.	NAME			
60	Services			
61	Finance, insurance and real estate services	N	N	Y[6]
62	Personal services	N	N	Y[6]
62.4	Cemeteries	N	Y[7]	Y[7]
63	Business services	N	Y[8]	Y[8]
64	Repair services	N	Y[2]	Y
65	Professional services	N	N	Y[6]
65.1	Hospitals, nursing homes	N	N	N
65.1	Other medical facilities	N	N	N
66	Contract construction services	N	Y[6]	Y
67	Governmental services	N	N	Y[6]
68	Educational services	N	N	N
69	Miscellaneous services	N	N[2]	Y[2]
70	Cultural, entertainment and recreational			
71	Cultural activities (including churches)	N	N	N[2]
71.2	Nature exhibits	N	Y[2]	Y
72	Public assembly	N	N	N
72.1	Auditoriums, concert halls	N	N	N
72.11	Outdoor music shells, amphitheaters	N	N	N
72.2	Outdoor sports arenas, spectator sports	N	N	N
73	Amusements	N	N	Y[8]
74	Recreational activities (incl. golf courses, riding stables, water recreation)	N	Y[8,9,10]	Y
75	Resorts and group camps	N	N	N
76	Parks	N	Y[8]	Y[8]
79	Other cultural, entertainment and recreation	N	Y[9]	Y[9]
80	Resource production and extraction			
81	Agriculture (except livestock)	Y	Y	Y
81.5) 81.7)	Livestock farming and animal breeding	N	Y	Y
82	Agricultural related activities	N	Y[5]	Y
83	Forestry activities and related services	N[5]	Y	Y
84	Fishing activities and related services	N[5]	Y[5]	Y
85	Mining activities and related services	N	Y[5]	Y
89	Other resource production and extraction	N	Y[5]	Y

NOTES TO TABLE 4

1. Suggested maximum density 1-2 dwelling units per acre, possibly increased under a Planned Unit Development (PUD) where maximum lot coverage is less than 20 percent.

2. Within each land use category, uses exist where further evaluation may be needed due to the variation of densities of people and structures. For example, where a small neighborhood retail store may be compatible in APZ-II, a shopping center or strip shopping mall would be incompatible due to the density of development and concentration of people.

3. The placing of structures, buildings or above-ground utility lines in the clear zone is subject to severe restrictions. In a majority of the clear zones, these items are prohibited. See NAVFAC P-80.3 (NOTAL) for specific guidance.

4. No passenger terminals and no major above-ground transmission lines in APZ-I.

5. Factors to be considered: labor intensity, structural coverage, explosive characteristics, air pollution.

6. Low-intensity office uses only. Meeting places, auditoriums, etc., not recommended.

7. Excludes chapels.

8. Facilities must be low intensity.

9. Clubhouse not recommended.

10. Large classes not recommended.

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APPENDIX G-3
Airfield Safety Waivers

MCAS FUTENMA AIR[illegible] SAFETY WAIVERS

Waiver No.	Description	Remarks
F-1	a. Parking clearance for helicopters of 2-rotor diameters in longitudinal direction and 1/2 rotor diameter in transverse direction. b. Peripheral taxiway width of 121' on one side of parking apron and none provided on other sides. Criteria of 150' peripheral taxiway on all sides required. c. Basic parking apron length of 4,754' and width of 338' plus existing taxiway of 75' or 413' total does not conform to criteria of multiples of 75'. d. Slope of existing parking apron is 2%. Criteria is 1.5% maximum. e. Operations tower 90' from edge of parking apron. Criteria is 100' from edge of apron.	Current
F-2	To permit meteorological equipment to be located where it violates airfield criteria.	Current
F-8	a. To permit operation of fixed - wing aircraft with the following existing structures projecting into the required airspace beyond the transitional surfaces: B-505, Parachute Loft - 10' B-505, Hangar - 5' B-515, Hangar - 5' B-510, Control Tower - 8' b. To permit use of the station's perimeter road crossing the runway end zones and crash strip. c. To permit use of a 150' wide runway in lieu of a 200' wide runway.	
F-9	To permit construction of a four-story UEPH. Note the top 12' which violates the 7:1 transition surface from the runway clearance line.	Current
F-10	Construction of Antennas 3 and 4, protruding 3' and 5', respectively, above the inner horizontal surface of the runway.	Current
F-11	To permit construction of two 18' high AN/TPN-8A antennas 500' and 575', respectively, northwest of Runway 6/24 centerline and approximately 3,180' from the Runway 24 end. The obstruction marking lighting of the antennas shall be elevated 264', which is 24' above the runway elevation, all as shown on MCAS (H) Futenma TWO Dwg. 71-21, enclosure	Current

Waiver No.	Description	Remarks
	(1) of CO MCAS (H) Futenma ltr PW:CBT:mi ser 3722 of 18 Jun 1971.	
F-12	To permit the following violations and/or deficiencies in Types I, II and III clear zone criteria for the north and south ends of Runway 6/24 to remain: a. Housing in the Types II and III clear zone starting at about 1,600' from the south end and 2,000' from the north end of Runway 6/24. b. The station boundary fence to be located 1,600' from the south end and 2,000' from the north end of Runway 6/24. c. Type I clear zone to be only 500' long at the south end of Runway 6/24. d. Type I clear zone to be only 800' long at the north end of Runway 6/24.	Current
F-13	To permit two 20-ft. high AN/FTN-361 quad radars to be located 3,190 ft. inboard Runway 6 end and 510 ft. east of the Runway 6/24 centerline.	Current; will no longer be needed after installation of proposed AN/TPN-22 radar equipment
F-14	To permit a 15-ft. high antenna of automatic weather station (AN/GHQ-29B) to be located 500 ft. inboard the centerline of Runway 6/24, 2,875 ft. from the approach end of Runway 6 and 6,125 ft. from the approach end of Runway 24.	Current
F-15	To permit a 72 ft. high aircraft maintenance hangar to penetrate the 7:1 transitional slope of Runway 6/24. The hangar is located 1,135 ft. south of Runway 6/24 centerline and 8,250 ft. inboard the threshhold end of Runway 24.	Current
F-17	To permit the Fort Buckner Microwave Tower to penetrate the 150 ft. inner horizontal surface of Runway 6/24 by 114'. The tower is located 5,400 ft. outboard Runway 24 threshold end and 2,340 ft. south of the Runway 6/24 centerline.	Current
F-18	To permit a 140 ft. high microwave tower to penetrate the 7:1 transitional slope of Runway 6/24 by 34.5 ft. The tower is located 3,100 ft. inboard the threshhold end of Runway 6 and 1,875 ft. south of Runway 6/24	Current

Waiver No.	Description	Remarks	Waiver No.	Description	Remarks
	centerline.			on, shall not exceed 311 feet.	
F-19	To permit an AN/FPN-63 and its associated reflectors to remain located as follows: a. A 24 ft. high AN/FPN-63, 430 ft. south of the Runway 6/24 centerline and 3,500 ft. inboard the threshold end of Runway 6. b. Centerline reflectors both 7 ft. above runway threshold elevation and on centerline extended; 1 ft. outboard the threshold end of Runway 6, the other 457 ft. outboard the threshold end of Runway 24. c. End of runway reflectors - Runway 24 reflector located at Runway 24 threshold end and 76 ft. north of the Runway 6/24 edge; Runway 6 reflector located at Runway 6 threshold end and 75 ft. north of the Runway 6/24 edge.	Current	Requested	To permit the siting of the proposed Marine Air Traffic Control and Automatic Landing System (MATCALS) as follows: a. AN/TPN-22 Site - 200 ft. from the center of runway; 1,880 ft. from the approach end of Runway 6; 7,200 ft. from the approach end of Runway 24; runway elevation of 242.9 feet; finished floor elevation 248.9 feet; TPN-22 height 15.5 feet; total elevation 264.4 feet. b. MATCALS Equipment Site - 450 ft. from the center of runway; 2,075 ft. from the approach end of Runway 6; 7,000 ft. from the approach end of Runway 24; runway elevation 242.9 feet; finished floor elevation 247.9 feet (5 foot high PAD for AN/TSQ-107B mount); AN/TSQ-107B height 18.0 feet; total elevation 265.9 feet.	Readdressed and forwarded, recommending approval
F-22	To permit the construction of a 56 foot high hangar 1,175 feet south of the runway centerline, 7,200 feet from the approach end of Runway 6, and 1,800 feet from the approach end of Runway 24. The elevation of the top of the building, or anything located there-	Current	Requested	To permit siting of the AN/TPN-22 Ground Control Approach (GCA) radar equipment. The equipment is sited 341 ft. from center of runway, at a ground elevation of 250.1 ft.; it has a height of 16.0 ft.	Forwarded, recommending approval

MCAS FUTENMA AIRFIELD SAFETY WAIVERS

Waiver No.	Description	Remarks
Requested	To permit siting of a new Control Tower and ROF. The tower and ROF are sited approximately 800 feet from the center of the runway; 4,480 feet from the approach end of Runway 6; and 4,720 feet from the approach end of Runway 24. The height of the control tower will be 80 feet. The tower's height above runway ground elevation will be approximately 67 feet. Therefore, the control tower will project above the 7 to 1 lateral transition slope by approximately 60 feet.	Forwarded, recommending approval